



FCC RADIO TEST REPORT

Applicant	: Beijing Xiaomi Electronics Co.,Ltd
Address	: Room 707,7F,Building 5,No 58,Jinghai Wulu Road, Beijing economic and Technological Development Zone,100176 Beijing City,China
Equipment	: XIAOMI TV Stick
Model No.	: MDZ-27-AA
Trade Name	: Xiaomi
FCC ID.	: 2AIMRMITVMDZ27AA
Standard	: FCC part 15 Subpart E §15.407

I HEREBY CERTIFY THAT :

The sample was received on Jul. 10, 2021 and the testing was completed on Aug. 10, 2021 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Leevin Li /Supervisor



CONTENTS

1.	Summary of Test Procedure and Test Results	5
1.1.	Applicable Standards	5
2.	Test Configuration of Equipment under Test	6
2.1.	Feature of Equipment and Model Description.....	6
2.2.	Carrier Frequency of Channels	7
2.3.	Test Mode and Test Software	8
2.4.	Description of Test System.....	9
2.5.	General Information of Test.....	10
2.6.	Measurement Uncertainty	10
3.	Test Equipment and Ancillaries Used for Tests	11
4.	Antenna Requirements	13
4.1.	Standard Applicable	13
4.2.	Antenna Construction and Directional Gain.....	13
5.	Test of AC Power Line Conducted Emission	14
5.1.	Test Limit	14
5.2.	Test Procedures	14
5.3.	Typical Test Setup	14
5.4.	Test Result and Data.....	15
6.	Test of Spurious Emission (Radiated).....	17
6.1.	Test Limit	17
6.2.	Test Procedures	17
6.3.	Typical Test Setup	18
6.4.	Test Result and Data (9kHz ~ 30MHz).....	19
6.5.	Test Result and Data (30MHz ~ 1GHz)	19
6.6.	Test Result and Data (1GHz ~ 40GHz).....	21
6.7.	Restricted Bands of Operation	58
7.	On Time, Duty Cycle and Measurement methods	59
7.1.	Test Limit	59
7.2.	Test Procedure	59
7.3.	Test Setup Layout	59
7.4.	Test Result and Data.....	59
7.5.	Measurement Methods	59
8.	6dB Bandwidth & 99% Occupied Bandwidth	61
8.1.	Test Limit	61
8.2.	Test Procedure	61
8.3.	Test Setup Layout	61
8.4.	Test Result and Data (6dB Bandwidth)	61
8.5.	Test Result and Data (99% Occupied Bandwidth)	62
9.	26dB Bandwidth & 99% Occupied Bandwidth	71
9.1.	Test Limit	71
9.2.	Test Procedure	71
9.3.	Test Setup Layout	71
9.4.	Test Result and Data (26dB Bandwidth)	72



9.5.	Test Result and Data (99% Occupied Bandwidth)	73
10.	Average Power	86
10.1.	Test Limit	86
10.2.	Test Procedure	87
10.3.	Test Setup Layout	87
10.4.	Test Result and Data	88
11.	Maximum Power Spectral Density	90
11.1.	Test Limit	90
11.2.	Test Procedure	90
11.3.	Test Setup Layout	90
11.4.	Test Result and Data	91
12.	Frequency Stability	108
12.1.	Test Procedure	108
12.2.	Test Setup Layout	108
12.3.	Test Result and Data	109



History of this test report

Report No.	Issue Date	Description
DEDG2106033	Aug. 13, 2021	Original



1. Summary of Test Procedure and Test Results

1.1. Applicable Standards

ANSI C63.10:2013

FCC Rules and Regulations Part 15 Subpart E §15.407

KDB 789033

FCC Rule	Description of Test	Result
15.203	Antenna Requirement	PASS
15.207(a)	AC Power Line Conducted Emission	PASS
15.407(b) 15.209	Radiated Spurious Emission	PASS
15.407(a)	26 dB & Occupied Bandwidth	PASS
15.407 (a) & (a)(3)	Average Power	PASS
15.407(a)	Power Spectral Density	PASS
15.407(g)	Frequency Stability	PASS
15.407(c)	Automatically Discontinue Transmission	PASS
Note: Deviations Yes ☐ No ☒ *The lab has reduced the uncertainty risk factor from test equipment, environment and staff technicians which according to the standard on contract. Therefore, the test result will only be determined by standard requirement.		



2. Test Configuration of Equipment under Test

2.1. Feature of Equipment and Model Description

Equipment	XIAOMI TV Stick
Model Name	MDZ-27-AA
Model Discrepancy	N/A
Frequency Range	BT/BLE/ WIFI 2.4G: 2402MHz-2483.5MHz WIFI 5G: 5150MHz-5350MHz, 5470-5725MHz, 5725MHz -5850MHz
Modulation Type	BT: GFSK, $\pi/4$ -DQPSK, 8DPSK BLE: GFSK 802.11b: CCK, DQPSK, DBPSK 802.11a/g: 64-QAM,16-QAM, QPSK, BPSK 802.11n: 64-QAM,16-QAM, QPSK, BPSK 802.11ac: 256-QAM,64-QAM,16-QAM, QPSK, BPSK
Data Rate	BT: GFSK:1Mbps, $\pi/4$ -DQPSK: 2Mbps, 8DPSK:3Mbps BLE: GFSK: 1Mbps WIFI 2.4G: 802.11b: 1, 2 ,5.5,11Mbps 802.11g: 6,9,12,18,24,36,48,54Mbps 802.11n: HT20 reach up to 144.4Mbps, HT40 reach up to 300Mbps WIFI 5G: 802.11a: 6,9,12,18,24,36,48,54Mbps 802.11n: HT20 reach up to 144.4Mbps, HT40 reach up to 300Mbps 802.11ac: VHT20 reach up to 173.3Mbps, VHT40 reach up to 400Mbps, VHT80 reach up to 866.7Mbps
Antenna Type	BT/BLE:PCB Antenna WIFI 2.4G/5G: PCB Antenna for Antenna A; PCB Antenna for Antenna B
Power Source	POWER ADAPTER A319-050100U-US1 Input:100-240V~ 50/60Hz 0.2A Max. Output:5V---1A

Note: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.



2.2. Carrier Frequency of Channels

Band : 5150MHz-5250MHz

802.11a, 802.11n HT 20, 802.11ac VHT20

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*36	5180	*44	5220
40	5200	*48	5240

802.11n HT 40, 802.11ac VHT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*38	5190	*46	5230

802.11ac VHT80

Channel	Frequency(MHz)
*42	5210

Band: 5250MHz -5350MHz

802.11a, 802.11n HT20, 802.11ac VHT20

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*52	5260	*60	5300
56	5280	*64	5320

802.11n HT 40, 802.11ac VHT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*54	5270	*62	5310

802.11ac VHT80

Channel	Frequency(MHz)
*58	5290

Band: 5470MHz -5725MHz

802.11a, 802.11n HT20, 802.11ac VHT20

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*100	5500	*116	5580
104	5520	132	5660
108	5540	136	5680
112	5560	*140	5700

802.11n HT40, 802.11ac VHT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*102	5510	*134	5670
*110	5550		

802.11ac VHT80

Channel	Frequency(MHz)
*106	5530

Band : 5725MHz -5850MHz

802.11a, 802.11n HT 20, 802.11ac VHT20

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*149	5745	161	5805
153	5765	*165	5825
*157	5785		

802.11n HT 40, 802.11ac VHT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*151	5755	*159	5795

802.11ac VHT80

Channel	Frequency(MHz)
*155	5775

Note: Channels remarked * are selected to perform test.



2.3. Test Mode and Test Software

- During testing, the interface cables and equipment positions were varied according to ANSI C63.10.
- The complete test system included Notebook, LCD Monitor, Adapter and EUT for RF test.
- An executive program, "cmd.exe" under Windows 7 system was executed to transmit and receive data via WLAN.
- The following test modes were performed for the test:

e. Conducted Emissions from the AC mains power ports	
Test Mode	Operating Description
1	802.11a (6Mbps) for 120V
2	802.11n HT20 (6.5Mbps) for 120V
3	802.11n HT40 (13.5Mbps) for 120V
4	802.11ac VHT20 (6.5Mbps) for 120V
5	802.11ac VHT40 (13.5Mbps) for 120V
6	802.11ac VHT80 (29.3Mbps) for 120V
7	802.11a (6Mbps) for 240V
caused "Test Mode 1 at CH36:5180MHz" generated the worst case, it was reported as the final data.	
Radiation Emissions (9KHz ~30MHz & 30MHz ~ 1GHz)	
Test Mode	Operating Description
1	802.11a (6Mbps)
2	802.11n HT20 (6.5Mbps)
3	802.11n HT40 (13.5Mbps)
4	802.11ac VHT20 (6.5Mbps)
5	802.11ac VHT40 (13.5Mbps)
6	802.11ac VHT80 (29.3Mbps)
caused "Test Mode 1 at CH36:5180MHz" generated the worst case, they were reported as the final data.	
Radiation Emissions (1GHz ~ 40GHz)	
Test Mode	Operating Description
1	802.11a (6Mbps)
2	802.11ac VHT20 (6.5Mbps)
3	802.11ac VHT40 (13.5Mbps)
4	802.11ac VHT80 (29.3Mbps)
caused "Test Mode 1~4" generated the worst case, they were reported as the final data.	

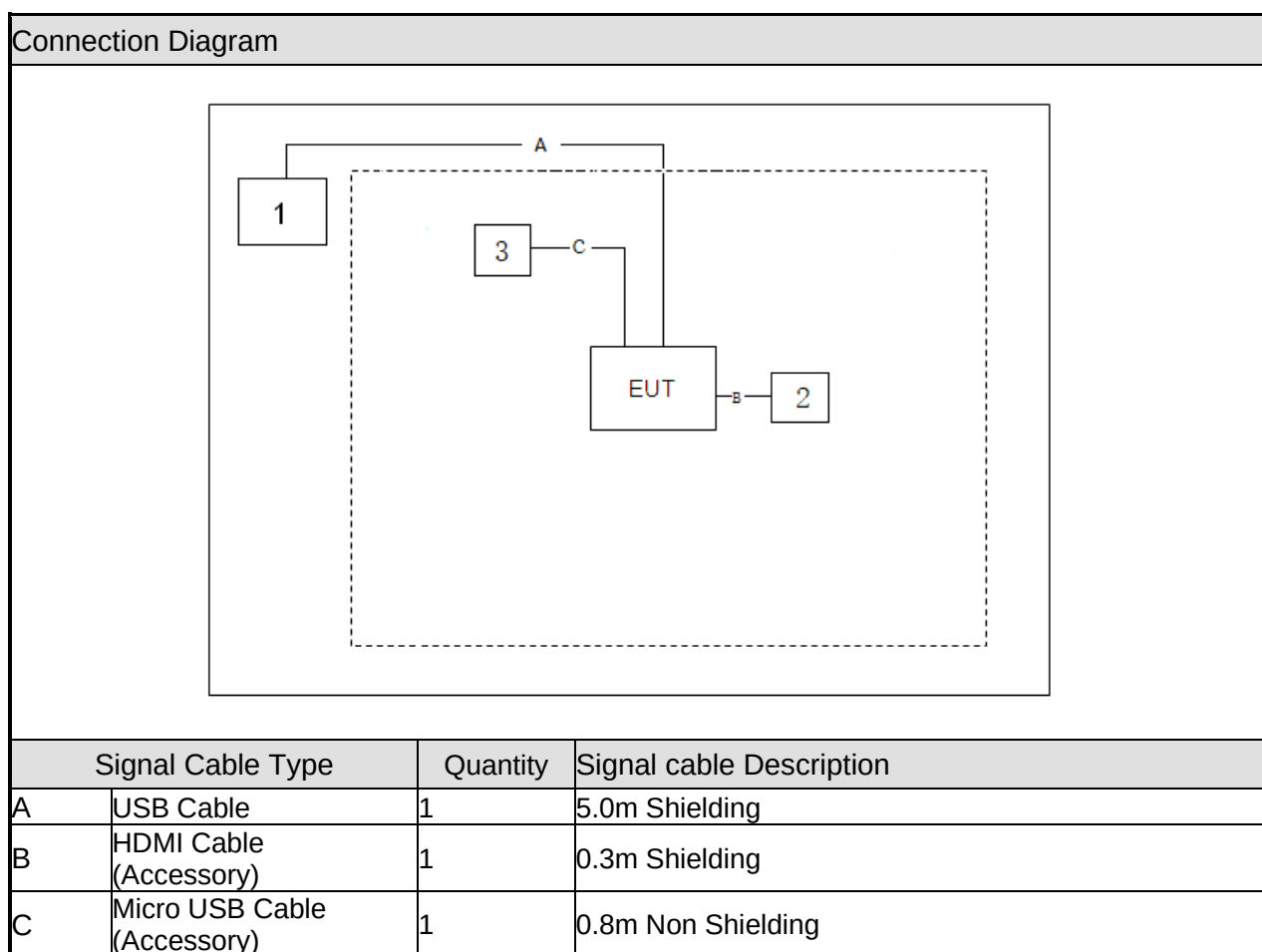
The EUT incorporates a MIMO function

Modulation Type	TX CONFIGURATION
802.11a	2TX
802.11n HT20	2TX
802.11n HT40	2TX
802.11ac VHT20	2TX
802.11ac VHT40	2TX
802.11ac VHT80	2TX



2.4. Description of Test System

Product	Manufacturer	Model No.	Serial No.	Power Cord
1 Notebook	Dell	Latitude 3500	N/A	Non-Shielded, 1.8m
2 LCD Monitor	DELL	U2713HMT	N/A	Non-Shielded, 1.8m
3 Adapter	XIAOMI	A319-050100U-US1	N/A	N/A





2.5. General Information of Test

Test Site	CerpPASS Technology Corporation(CerpPASS Laboratory) Address: Room 102, No. 5, Xing'an Road, Chang'an Town, Dongguan City, Guangdong Province Tel: +86-769-8547-1212 Fax: +86-769-8547-1912
FCC Designation No.:	CN1288
Frequency Range Investigated:	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 40,000MHz
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON01-DG	2021/07/10~2021/08/10	22~25℃ / 50~60%	Amos Zhang
Radiated Emissions	3M02-DG	2021/07/10~2021/08/10	22~25℃ / 50~60%	Amos Zhang
AC Power Line Conducted Emission	CON01-DG	2021/07/10~2021/08/10	22~25℃ / 50~60%	Amos Zhang

2.6. Measurement Uncertainty

Measurement Item	Uncertainty
AC Power Line Conduction(150K~30MHz)	±2.88dB
Radiated Spurious Emission(9KHz~30MHz)	±2.15dB
Radiated Spurious Emission(30MHz~1GHz)	±4.95dB
Radiated Spurious Emission(1GHz~18GHz)	±3.24dB
Radiated Spurious Emission(18GHz~40GHz)	±5.43dB
6dB Bandwidth&26dB Bandwidth	±4.422%
Occupied Bandwidth	±4.244%
Peak Output Power(Conducted Power Meter)	±1.4 dB
Power Spectral Density	±1.387 dB
Frequency Stability	±0.6338Hz



3. Test Equipment and Ancillaries Used for Tests

Test Item	AC Power Line Conducted Emission				
Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Test Receiver	R&S	ESCI	100564	2021.01.07	2022.01.06
LISN	SCHWARZBECK	NSLK 8127	8127748	2021.01.07	2022.01.06
LISN	SCHWARZBECK	NSLK 8127	8127749	2021.01.07	2022.01.06
ISN	TESEQ	ISN T800	42809	2021.05.10	2022.05.09
Pulse Limiter with 10dB Attenuation	SCHWARZBECK	VTSD 9561-F	9561-F106	2021.01.07	2022.01.06
Temperature/ Humidity Meter	GEMLEAD	STH200A	N/A	2020.08.20	2021.08.19

Test Item	Radiated Emissions				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
EMI Test Receiver	R&S	ESCI	100563	2021.05.14	2022.05.13
H64 Preamplifier	HP	8447F	3113A05582	2021.01.07	2022.01.06
Loop Antenna	R&S	HFH2-Z2	100150	2020.06.08	2022.06.07
Bilog Antenna	Sunol Science	JB1	A072414-1	2020.06.08	2022.06.07
Preamplifier	EMEC	EM01G18G	060739	2021.05.14	2022.05.13
Preamplifier	COM-POWER	PA-840	711885	2021.05.14	2022.05.13
Horn Antenna	Sunol	DRH-118	A072913	2019.09.07	2021.09.06
Standard Gain Horn Antenna	TRC	HA-2640	18050	2020.06.08	2022.06.07
Standard Gain Horn Antenna	TRC	HA-1726	18051	2020.06.08	2022.06.07
FSQ Signal Analyzer	R&S	FSQ40	200012	2021.05.14	2022.05.13
Temperature/ Humidity Meter	GEMLEAD	STH200A	N/A	2020.08.20	2021.08.19



Test Item	RF Conducted				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
MXA Signal Analyzer	KEYSIGHT	N9020A	US46220290	2021.05.14	2022.05.13
ESG VECTOR SIGNAL GENERATOR	Agilent	E4438C	MY45092582	2021.05.14	2022.05.13
MXG VECTOR SIGNAL GENERATOR	Agilent	N5182B	MY53050127	2021.05.14	2022.05.13
USB Wideband Power Sensor	Boonton	55006	9778	2021.01.07	2022.01.06
Temperature/ Humidity Meter	mingle	ETH529	N/A	2021.01.07	2022.01.06



4. Antenna Requirements

4.1. Standard Applicable

For intentional device, according to FCC 47 CFR Section 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.

And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.2. Antenna Construction and Directional Gain

WIFI 5G:

Antenna Type	PCB Antenna for Antenna A; PCB Antenna for Antenna B
Antenna Gain	5150MHz - 5250MHz: ANT A: 3.3dBi; ANT B: 4.1dBi 5250MHz - 5350MHz: ANT A: 3.3dBi; ANT B: 3.9dBi 5470MHz - 5725MHz: ANT A: 3.5dBi; ANT B: 3.4dBi 5725MHz - 5850MHz: ANT A: 2.8dBi; ANT B: 3.1dBi

(Non-Beamforming)

5150MHz - 5250MHz
For Power directional gain= Gant= 4.1 dBi For PSD directional gain = $10 \log[(10G1 / 20 + 10G2 / 20 + \dots + 10GN / 20)^2 / NANT]$ = 6.72 (dBi)
5250MHz - 5350MHz
For Power directional gain= Gant=3.9 dBi For PSD directional gain = $10 \log[(10G1 / 20 + 10G2 / 20 + \dots + 10GN / 20)^2 / NANT]$ = 6.62(dBi)
5470MHz - 5725MHz
For Power directional gain= Gant=3.5 dBi For PSD directional gain = $10 \log[(10G1 / 20 + 10G2 / 20 + \dots + 10GN / 20)^2 / NANT]$ = 6.46(dBi)
5725MHz - 5850MHz
For Power directional gain= Gant= 3.1 dBi For PSD directional gain = $10 \log[(10G1 / 20 + 10G2 / 20 + \dots + 10GN / 20)^2 / NANT]$ = 5.96 (dBi)



5. Test of AC Power Line Conducted Emission

5.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz, according to the methods defined in ANSI C63.4-2014. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

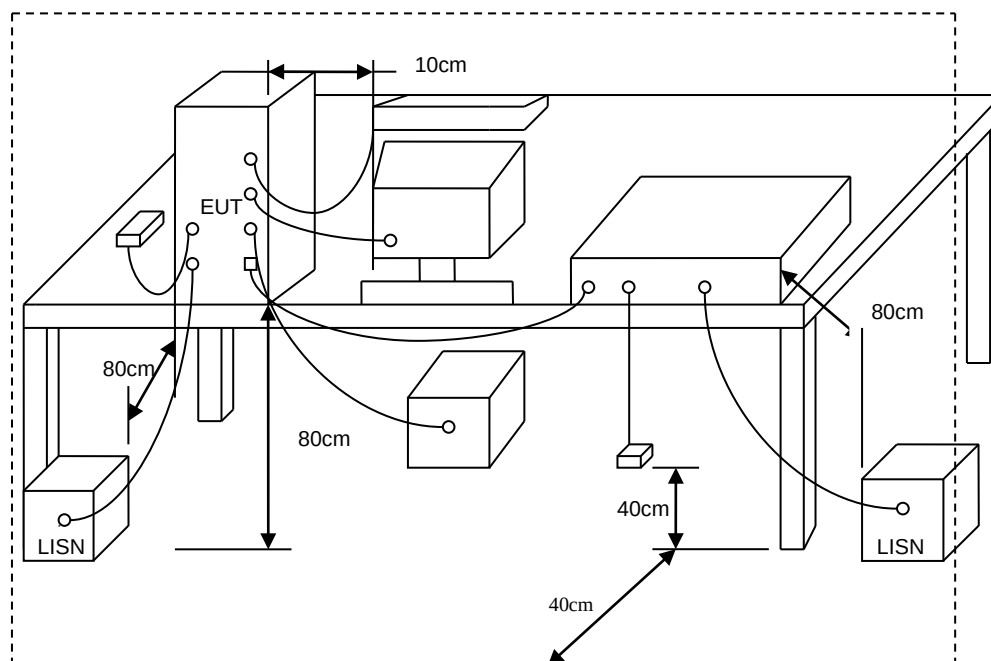
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

5.2. Test Procedures

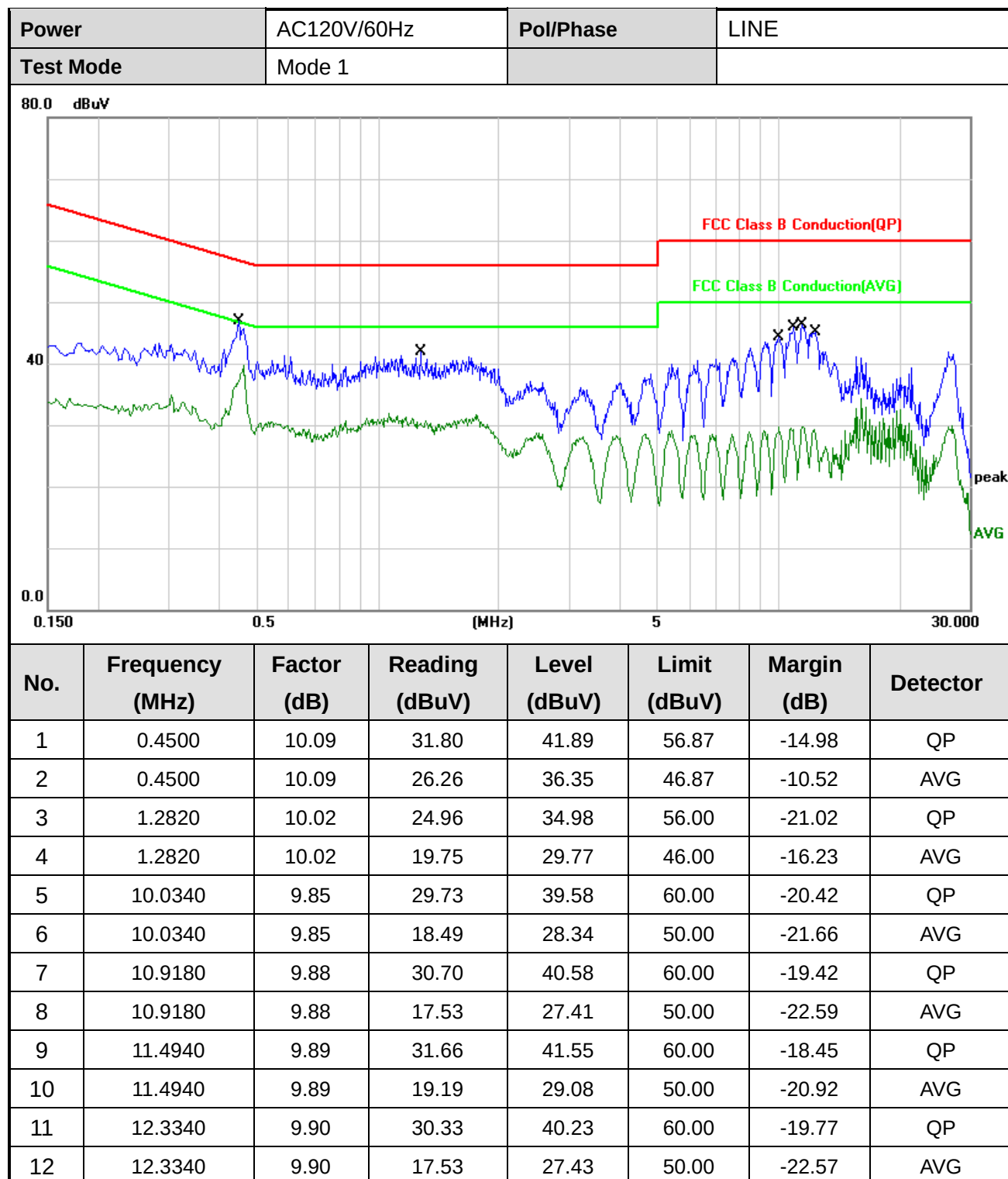
- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- All the support units are connecting to the other LISN.
- The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

5.3. Typical Test Setup





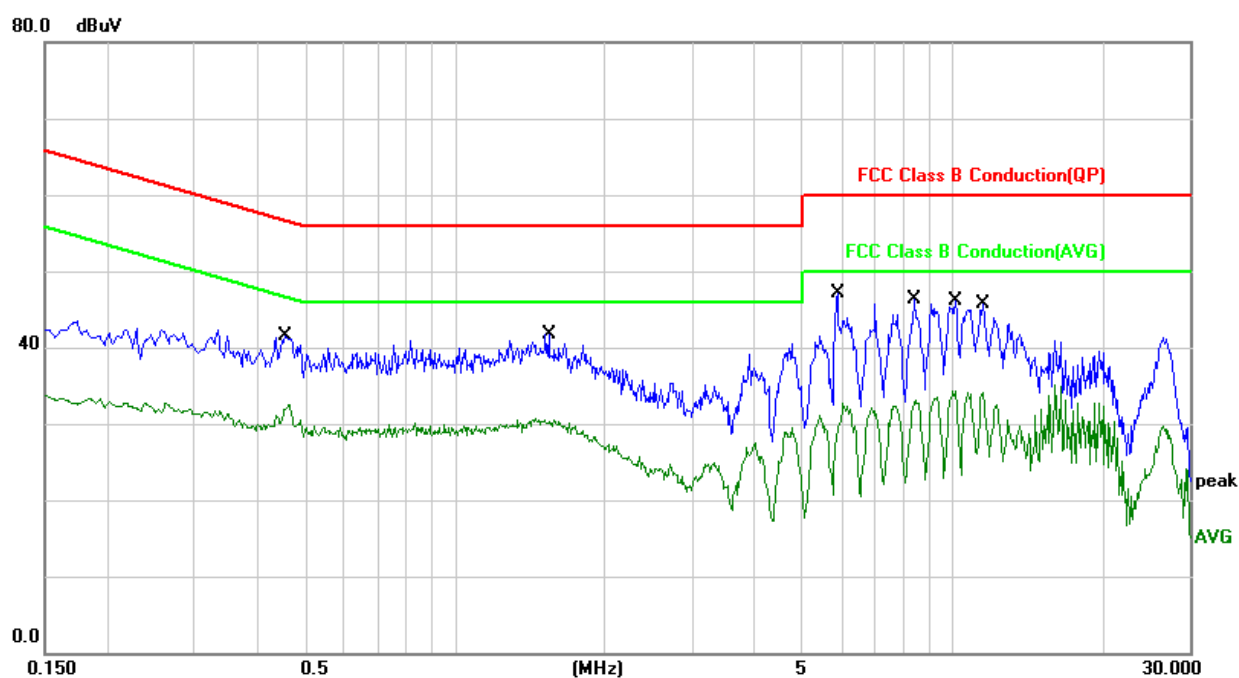
5.4. Test Result and Data



Note: Measurement Level = Reading Level + Correct Factor



Power	AC120V/60Hz	Pol/Phase	NEUTRAL
Test Mode	Mode 1		



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4580	10.13	27.84	37.97	56.73	-18.76	QP
2	0.4580	10.13	22.17	32.30	46.73	-14.43	AVG
3	1.5500	10.07	25.23	35.30	56.00	-20.70	QP
4	1.5500	10.07	19.88	29.95	46.00	-16.05	AVG
5	5.8900	9.95	23.59	33.54	60.00	-26.46	QP
6	5.8900	9.95	15.32	25.27	50.00	-24.73	AVG
7	8.3860	9.90	30.29	40.19	60.00	-19.81	QP
8	8.3860	9.90	21.04	30.94	50.00	-19.06	AVG
9	10.1340	9.88	28.69	38.57	60.00	-21.43	QP
10	10.1340	9.88	20.43	30.31	50.00	-19.69	AVG
11	11.5020	9.90	30.44	40.34	60.00	-19.66	QP
12	11.5020	9.90	21.96	31.86	50.00	-18.14	AVG

Note: Measurement Level = Reading Level + Correct Factor



6. Test of Spurious Emission (Radiated)

6.1. Test 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 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band:
All emissions 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 25MHz 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 27dBm/MHz at the band edge.
- (5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
- (6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.
- (7) The provisions of §15.205 apply to intentional radiators operating under this section.
- (8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

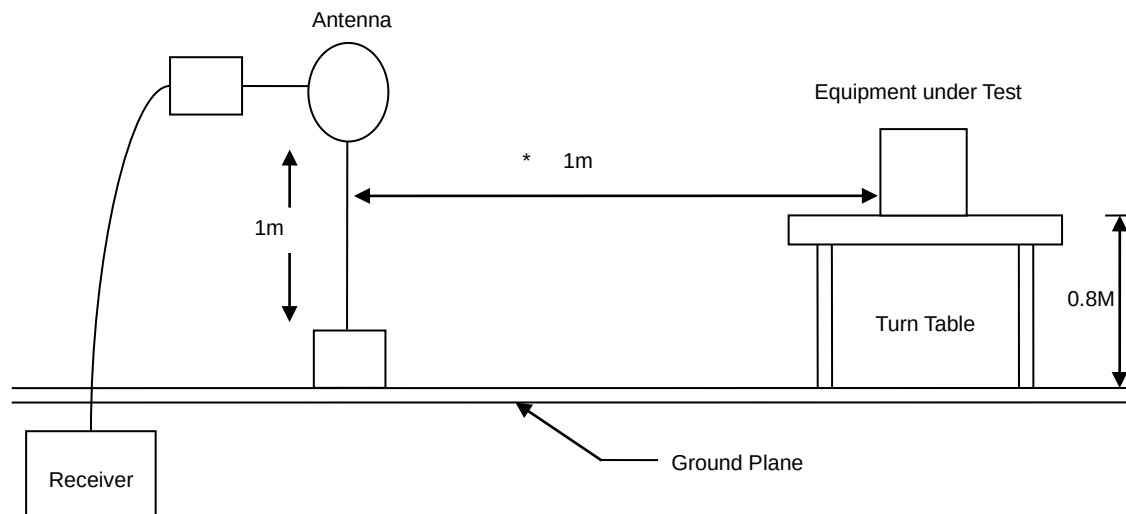
6.2. Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- i. "Cone of radiation" has been considered to be 3dB bandwidth of the measurement antenna.

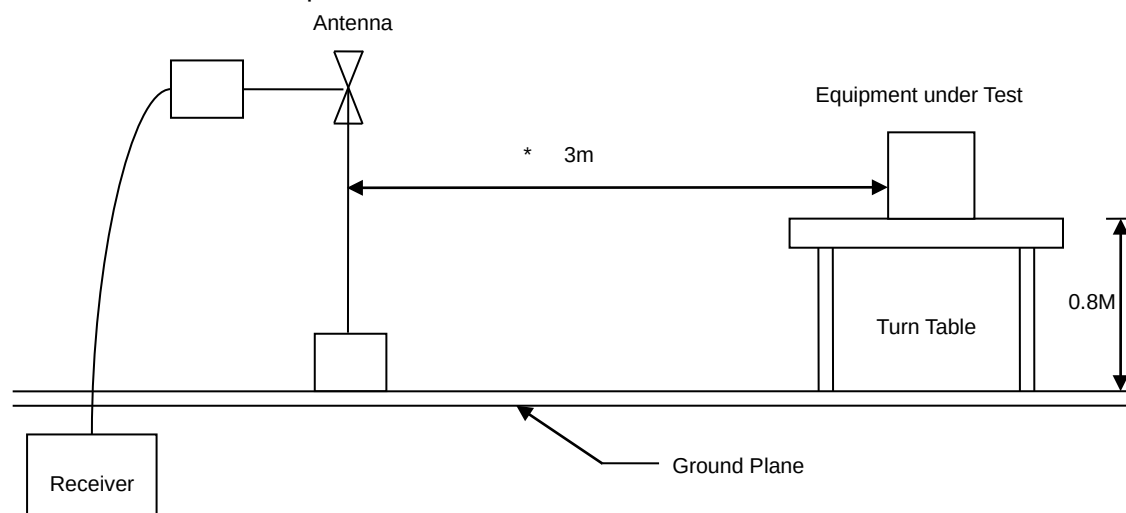


6.3. Typical Test Setup

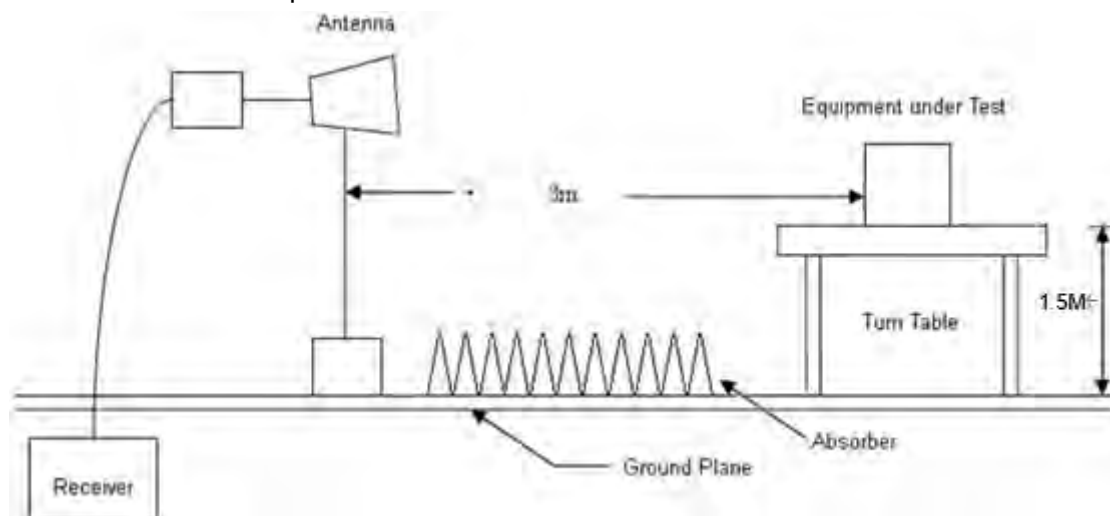
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup

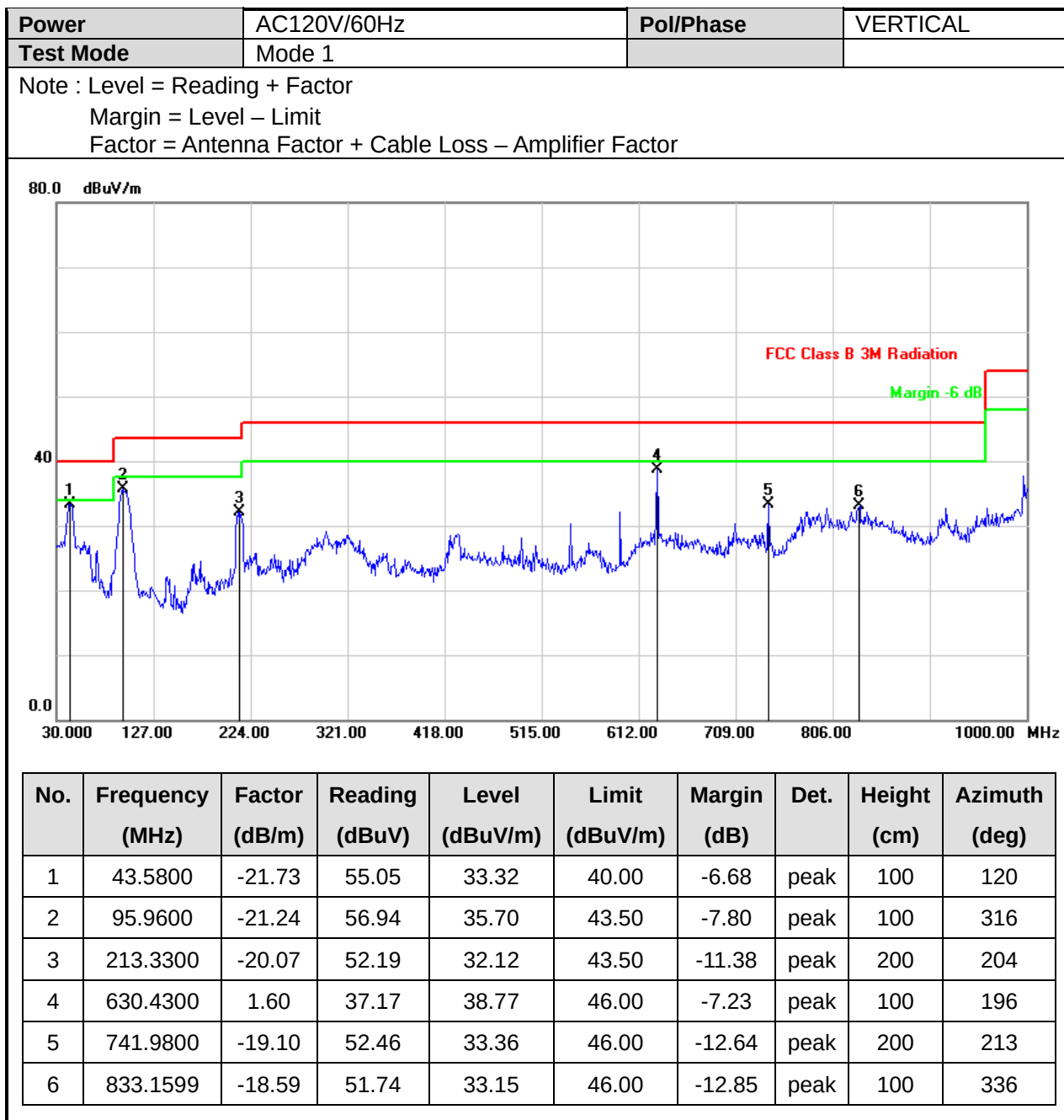


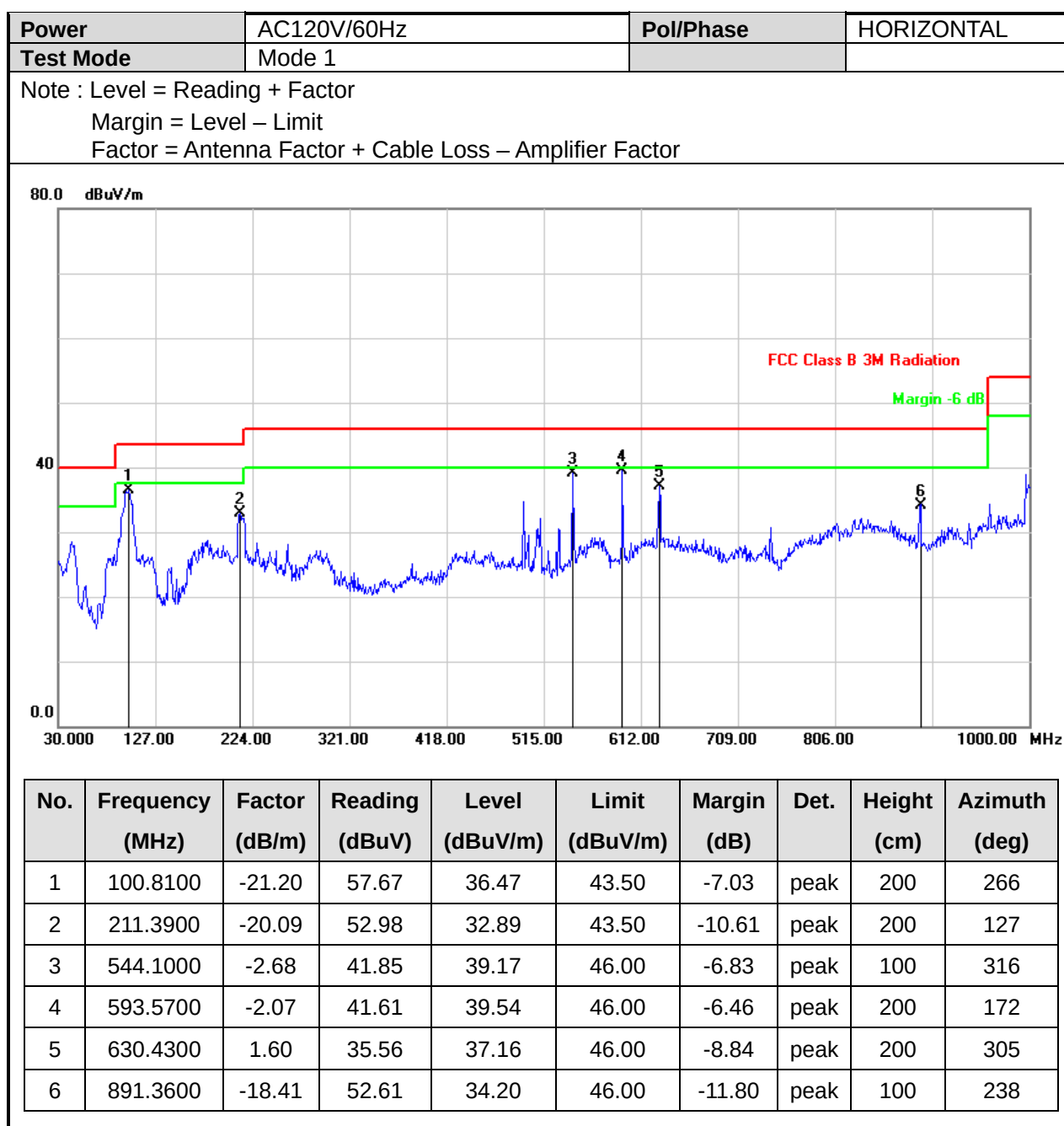


6.4. Test Result and Data (9kHz ~ 30MHz)

The 9kHz - 30MHz spurious emission is under limit 20dB more.

6.5. Test Result and Data (30MHz ~ 1GHz)





**6.6. Test Result and Data (1GHz ~ 40GHz)**

Power	AC120V/60Hz
Test Mode	Mode 1, 802.11a CH36 UNII-1
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5150.000	1.73	61.54	63.27	74.00	-10.73	peak	H
2	5150.000	1.73	45.80	47.53	54.00	-6.47	AVG	H
3	10360.000	12.85	30.80	43.65	68.20	-24.55	peak	H
4	15540.000	25.25	28.09	53.34	74.00	-20.66	peak	H
5	15540.000	25.25	15.09	40.34	54.00	-13.66	AVG	H
1	5150.000	1.73	58.54	60.27	74.00	-13.73	peak	V
2	5150.000	1.73	44.50	46.23	54.00	-7.77	AVG	V
3	10360.000	12.85	33.07	45.92	68.20	-22.28	peak	V
4	15540.000	25.25	28.12	53.37	74.00	-20.63	peak	V
5	15540.000	25.25	16.80	42.05	54.00	-11.95	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 1, 802.11a CH44 UNII-1
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5150.000	1.73	41.62	43.35	74.00	-30.65	peak	H
2	5150.000	1.73	28.45	30.18	54.00	-23.82	AVG	H
3	5350.000	1.89	41.47	43.36	74.00	-30.64	peak	H
4	5350.000	1.89	28.25	30.14	54.00	-23.86	AVG	H
5	10440.000	13.03	33.26	46.29	68.20	-21.91	peak	H
6	15660.000	25.30	24.78	50.08	74.00	-23.92	peak	H
7	15660.000	25.30	16.03	41.33	54.00	-12.67	AVG	H
1	5150.000	1.73	40.54	42.27	74.00	-31.73	peak	V
2	5150.000	1.73	28.31	30.04	54.00	-23.96	AVG	V
3	5350.000	1.89	40.37	42.26	74.00	-31.74	peak	V
4	5350.000	1.89	29.20	31.09	54.00	-22.91	AVG	V
5	10440.000	13.03	34.00	47.03	68.20	-21.17	peak	V
6	15660.000	25.30	26.34	51.64	74.00	-22.36	peak	V
7	15660.000	25.30	14.42	39.72	54.00	-14.28	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 1, 802.11a CH48 UNII-1
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5350.000	1.89	40.87	42.76	74.00	-31.24	peak	H
2	5350.000	1.89	29.18	31.07	54.00	-22.93	AVG	H
3	10480.000	13.12	33.23	46.35	68.20	-21.85	peak	H
4	15720.000	25.33	26.15	51.48	74.00	-22.52	peak	H
5	15720.000	25.33	5.04	30.37	54.00	-23.63	AVG	H
1	5350.000	1.89	40.87	42.76	74.00	-31.24	peak	V
2	5350.000	1.89	28.79	30.68	54.00	-23.32	AVG	V
3	10480.000	13.12	33.02	46.14	68.20	-22.06	peak	V
4	15720.000	25.33	25.82	51.15	74.00	-22.85	peak	V
5	15720.000	25.33	16.74	42.07	54.00	-11.93	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 2, 802.11ac VHT20 CH36 UNII-1
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5150.000	1.73	65.86	67.59	74.00	-6.41	peak	H
2	5150.000	1.73	49.19	50.92	54.00	-3.08	AVG	H
3	10360.000	12.85	32.77	45.62	68.20	-22.58	peak	H
4	15540.000	25.25	25.70	50.95	74.00	-23.05	peak	H
5	15540.000	25.25	15.88	41.13	54.00	-12.87	AVG	H
1	5150.000	1.73	60.42	62.15	74.00	-11.85	peak	V
2	5150.000	1.73	45.59	47.32	54.00	-6.68	AVG	V
3	10360.000	12.85	32.83	45.68	68.20	-22.52	peak	V
4	15540.000	25.25	27.12	52.37	74.00	-21.63	peak	V
5	15540.000	25.25	16.01	41.26	54.00	-12.74	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 2, 802.11ac VHT20 CH44 UNII-1
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5150.000	1.73	43.60	45.33	74.00	-28.67	peak	H
2	5150.000	1.73	29.76	31.49	54.00	-22.51	AVG	H
3	5350.000	1.89	42.02	43.91	74.00	-30.09	peak	H
4	5350.000	1.89	27.93	29.82	54.00	-24.18	AVG	H
5	10440.000	13.03	33.31	46.34	68.20	-21.86	peak	H
6	15660.000	25.30	28.31	53.61	74.00	-20.39	peak	H
7	15660.000	25.30	16.34	41.64	54.00	-12.36	AVG	H
1	5150.000	1.73	43.90	45.63	74.00	-28.37	peak	V
2	5150.000	1.73	28.65	30.38	54.00	-23.62	AVG	V
3	5350.000	1.89	40.06	41.95	74.00	-32.05	peak	V
4	5350.000	1.89	26.28	28.17	54.00	-25.83	AVG	V
5	10440.000	13.03	33.49	46.52	68.20	-21.68	peak	V
6	15660.000	25.30	30.18	55.48	74.00	-18.52	peak	V
7	15660.000	25.30	18.07	43.37	54.00	-10.63	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 2, 802.11ac VHT20 CH48 UNII-1
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5350.000	1.89	41.56	43.45	74.00	-30.55	peak	H
2	5350.000	1.89	26.98	28.87	54.00	-25.13	AVG	H
3	10480.000	13.12	32.41	45.53	68.20	-22.67	peak	H
4	15720.000	25.33	26.94	52.27	74.00	-21.73	peak	H
5	15720.000	25.33	16.29	41.62	54.00	-12.38	AVG	H
1	5350.000	1.89	41.46	43.35	74.00	-30.65	peak	V
2	5350.000	1.89	28.81	30.70	54.00	-23.30	AVG	V
3	10480.000	13.12	33.50	46.62	68.20	-21.58	peak	V
4	15720.000	25.33	27.94	53.27	74.00	-20.73	peak	V
5	15720.000	25.33	17.16	42.49	54.00	-11.51	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 3, 802.11ac VHT40 CH38 UNII-1
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5150.000	1.73	60.90	62.63	74.00	-11.37	peak	H
2	5150.000	1.73	46.98	48.71	54.00	-5.29	AVG	H
3	10380.000	12.89	34.28	47.17	68.20	-21.03	peak	H
4	15570.000	25.26	26.02	51.28	74.00	-22.72	peak	H
5	15570.000	25.26	15.50	40.76	54.00	-13.24	AVG	H
1	5150.000	1.73	55.95	57.68	74.00	-16.32	peak	V
2	5150.000	1.73	42.02	43.75	54.00	-10.25	AVG	V
3	10380.000	12.89	34.85	47.74	68.20	-20.46	peak	V
4	15570.000	25.26	28.39	53.65	74.00	-20.35	peak	V
5	15570.000	25.26	17.78	43.04	54.00	-10.96	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 3, 802.11ac VHT40 CH46 UNII-1
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5150.000	1.73	48.19	49.92	74.00	-24.08	peak	H
2	5150.000	1.73	32.28	34.01	54.00	-19.99	AVG	H
3	5350.000	1.89	41.73	43.62	74.00	-30.38	peak	H
4	5350.000	1.89	27.28	29.17	54.00	-24.83	AVG	H
5	10460.000	13.07	32.54	45.61	68.20	-22.59	peak	H
6	15690.000	25.32	27.45	52.77	74.00	-21.23	peak	H
7	15690.000	25.32	17.02	42.34	54.00	-11.66	AVG	H
1	5150.000	1.73	44.54	46.27	74.00	-27.73	peak	V
2	5150.000	1.73	30.61	32.34	54.00	-21.66	AVG	V
3	5350.000	1.89	41.19	43.08	74.00	-30.92	peak	V
4	5350.000	1.89	27.91	29.80	54.00	-24.20	AVG	V
5	10460.000	13.07	33.33	46.40	68.20	-21.80	peak	V
6	15690.000	25.32	28.43	53.75	74.00	-20.25	peak	V
7	15690.000	25.32	16.70	42.02	54.00	-11.98	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 4, 802.11ac VHT80 CH42 UNII-1
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5150.000	1.73	61.64	63.37	74.00	-10.63	peak	H
2	5150.000	1.73	46.34	48.07	54.00	-5.93	AVG	H
3	5350.000	1.89	54.42	56.31	74.00	-17.69	peak	H
4	5350.000	1.89	39.29	41.18	54.00	-12.82	AVG	H
5	10420.000	12.98	32.73	45.71	68.20	-22.49	peak	H
6	15630.000	25.29	25.24	50.53	74.00	-23.47	peak	H
7	15630.000	25.29	16.98	42.27	54.00	-11.73	AVG	H
1	5150.000	1.73	64.84	66.57	74.00	-7.43	peak	V
2	5150.000	1.73	50.43	52.16	54.00	-1.84	AVG	V
3	5350.000	1.89	55.53	57.42	74.00	-16.58	peak	V
4	5350.000	1.89	41.83	43.72	54.00	-10.28	AVG	V
5	10420.000	12.98	31.58	44.56	68.20	-23.64	peak	V
6	15630.000	25.29	26.43	51.72	74.00	-22.28	peak	V
7	15630.000	25.29	17.29	42.58	54.00	-11.42	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 1, 802.11a CH52 UNII-2A
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5350.000	1.89	61.45	63.34	74.00	-10.66	peak	H
2	5350.000	1.89	46.50	48.39	54.00	-5.61	AVG	H
3	10520.000	13.22	33.70	46.92	68.20	-21.28	peak	H
4	15780.000	25.36	32.39	57.75	74.00	-16.25	peak	H
5	15780.000	25.36	18.56	43.92	54.00	-10.08	AVG	H
1	5350.000	1.89	60.38	62.27	74.00	-11.73	peak	V
2	5350.000	1.89	46.94	48.83	54.00	-5.17	AVG	V
3	10520.000	13.22	32.30	45.52	68.20	-22.68	peak	V
4	15780.000	25.36	29.13	54.49	74.00	-19.51	peak	V
5	15780.000	25.36	18.71	44.07	54.00	-9.93	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 1, 802.11a CH60 UNII-2A
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5350.000	1.89	44.77	46.66	74.00	-27.34	peak	H
2	5350.000	1.89	29.29	31.18	54.00	-22.82	AVG	H
3	10600.000	13.46	36.46	49.92	74.00	-24.08	peak	H
4	15900.000	25.41	33.43	58.84	74.00	-15.16	peak	H
5	15900.000	25.41	20.86	46.27	54.00	-7.73	AVG	H
1	5350.000	1.89	43.74	45.63	74.00	-28.37	peak	V
2	5350.000	1.89	30.38	32.27	54.00	-21.73	AVG	V
3	10640.000	13.58	37.39	50.97	74.00	-23.03	peak	V
4	15900.000	25.41	31.27	56.68	74.00	-17.32	peak	V
5	15900.000	25.41	14.60	40.01	54.00	-13.99	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 1, 802.11a CH64 UNII-2A
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5350.000	1.89	43.87	45.76	74.00	-28.24	peak	H
2	5350.000	1.89	31.39	33.28	54.00	-20.72	AVG	H
3	10640.000	13.58	35.04	48.62	74.00	-25.38	peak	H
4	10640.000	13.58	21.91	35.49	74.00	-38.51	peak	H
5	15960.000	25.44	29.04	54.48	74.00	-19.52	peak	H
6	15960.000	25.44	7.93	33.37	54.00	-20.63	AVG	H
1	5350.000	1.89	44.73	46.62	74.00	-27.38	peak	V
2	5350.000	1.89	30.48	32.37	54.00	-21.63	AVG	V
3	10640.000	13.58	35.24	48.82	74.00	-25.18	peak	V
4	10640.000	13.58	23.34	36.92	54.00	-17.08	AVG	V
5	15960.000	25.44	27.87	53.31	74.00	-20.69	peak	V
6	15960.000	25.44	18.81	44.25	54.00	-9.75	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 2, 802.11ac VHT20 CH52 UNII-2A
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5350.000	1.89	64.74	66.63	74.00	-7.37	peak	H
2	5350.000	1.89	50.39	52.28	54.00	-1.72	AVG	H
3	10520.000	13.22	33.40	46.62	68.20	-21.58	peak	H
4	15780.000	25.36	24.71	50.07	74.00	-23.93	peak	H
5	15780.000	25.36	16.77	42.13	54.00	-11.87	AVG	H
1	5350.000	1.89	61.46	63.35	74.00	-10.65	peak	V
2	5350.000	1.89	46.95	48.84	54.00	-5.16	AVG	V
3	10520.000	13.22	33.40	46.62	68.20	-21.58	peak	V
4	15780.000	25.36	28.25	53.61	74.00	-20.39	peak	V
5	15780.000	25.36	17.72	43.08	54.00	-10.92	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 2, 802.11ac VHT20 CH60 UNII-2A
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5350.000	1.89	44.04	45.93	74.00	-28.07	peak	H
2	5350.000	1.89	29.26	31.15	54.00	-22.85	AVG	H
3	10600.000	13.46	46.46	59.92	74.00	-14.08	peak	H
4	10600.000	13.46	32.78	46.24	54.00	-7.76	AVG	H
5	15900.000	25.41	31.24	56.65	74.00	-17.35	peak	H
6	15900.000	25.41	17.93	43.34	54.00	-10.66	AVG	H
1	5350.000	1.89	42.43	44.32	74.00	-29.68	peak	V
2	5350.000	1.89	26.92	28.81	54.00	-25.19	AVG	V
3	10600.000	13.46	34.29	47.75	74.00	-26.25	peak	V
4	10600.000	13.46	22.03	35.49	54.00	-18.51	AVG	V
5	15900.000	25.41	31.41	56.82	74.00	-17.18	peak	V
6	15900.000	25.41	19.32	44.73	54.00	-9.27	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 2, 802.11ac VHT20 CH64 UNII-2A
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5350.000	1.89	42.59	44.48	74.00	-29.52	peak	H
2	5350.000	1.89	28.18	30.07	54.00	-23.93	AVG	H
3	10640.000	13.58	34.15	47.73	74.00	-26.27	peak	H
4	10640.000	13.58	20.49	34.07	54.00	-19.93	AVG	H
5	15960.000	25.44	31.23	56.67	74.00	-17.33	peak	H
6	15960.000	25.44	17.89	43.33	54.00	-10.67	AVG	H
1	5350.000	1.89	43.68	45.57	74.00	-28.43	peak	V
2	5350.000	1.89	30.37	32.26	54.00	-21.74	AVG	V
3	10640.000	13.58	35.29	48.87	74.00	-25.13	peak	V
4	10640.000	13.58	20.87	34.45	74.00	-39.55	peak	V
5	15810.000	25.37	31.25	56.62	74.00	-17.38	peak	V
6	15810.000	25.37	18.01	43.38	54.00	-10.62	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 3, 802.11ac VHT40 CH54 UNII-2A
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5150.000	1.73	51.64	53.37	74.00	-20.63	peak	H
2	5150.000	1.73	46.89	48.62	54.00	-5.38	AVG	H
3	5350.000	1.89	52.93	54.82	74.00	-19.18	peak	H
4	5350.000	1.89	47.15	49.04	54.00	-4.96	AVG	H
5	10540.000	13.28	33.63	46.91	68.20	-21.29	peak	H
6	15810.000	25.37	26.88	52.25	74.00	-21.75	peak	H
7	15810.000	25.37	16.89	42.26	54.00	-11.74	AVG	H
1	5150.000	1.73	57.09	58.82	74.00	-15.18	peak	V
2	5150.000	1.73	42.72	44.45	54.00	-9.55	AVG	V
3	5350.000	1.89	58.08	59.97	74.00	-14.03	peak	V
4	5350.000	1.89	43.18	45.07	54.00	-8.93	AVG	V
5	10540.000	13.28	33.44	46.72	68.20	-21.48	peak	V
6	15810.000	25.37	27.77	53.14	74.00	-20.86	peak	V
7	15810.000	25.37	16.91	42.28	54.00	-11.72	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 3, 802.11ac VHT40 CH62 UNII-2A
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5350.000	1.89	42.97	44.86	74.00	-29.14	peak	H
2	5350.000	1.89	28.05	29.94	54.00	-24.06	AVG	H
3	10620.000	13.52	35.31	48.83	74.00	-25.17	peak	H
4	10620.000	13.52	21.10	34.62	54.00	-19.38	AVG	H
5	15930.000	25.43	32.28	57.71	74.00	-16.29	peak	H
6	15930.000	25.43	18.65	44.08	54.00	-9.92	AVG	H
1	5350.000	1.89	42.56	44.45	74.00	-29.55	peak	V
2	5350.000	1.89	28.18	30.07	54.00	-23.93	AVG	V
3	10620.000	13.52	34.39	47.91	74.00	-26.09	peak	V
4	10620.000	13.52	19.30	32.82	54.00	-21.18	AVG	V
5	15930.000	25.43	29.04	54.47	74.00	-19.53	peak	V
6	15930.000	25.43	16.81	42.24	54.00	-11.76	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 4, 802.11ac VHT80 CH58 UNII-2A
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5150.000	1.73	61.61	63.34	74.00	-10.66	peak	H
2	5150.000	1.73	44.89	46.62	54.00	-7.38	AVG	H
3	5350.000	1.89	55.82	57.71	74.00	-16.29	peak	H
4	5350.000	1.89	41.73	43.62	54.00	-10.38	AVG	H
5	10580.000	13.40	32.18	45.58	68.20	-22.62	peak	H
6	15870.000	25.40	24.67	50.07	74.00	-23.93	peak	H
7	15870.000	25.40	15.74	41.14	54.00	-12.86	AVG	H
1	5150.000	1.73	66.02	67.75	74.00	-6.25	peak	V
2	5150.000	1.73	51.03	52.76	54.00	-1.24	AVG	V
3	5350.000	1.89	56.95	58.84	74.00	-15.16	peak	V
4	5350.000	1.89	41.73	43.62	54.00	-10.38	AVG	V
5	10580.000	13.40	32.13	45.53	68.20	-22.67	peak	V
6	15870.000	25.40	27.94	53.34	74.00	-20.66	peak	V
7	15870.000	25.40	19.05	44.45	54.00	-9.55	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 1, 802.11a CH100 UNII-2C
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5460.000	1.99	44.63	46.62	74.00	-27.38	peak	H
2	5460.000	1.99	30.28	32.27	54.00	-21.73	AVG	H
3	5470.000	1.99	47.95	49.94	68.20	-18.26	peak	H
4	11000.000	14.67	37.60	52.27	74.00	-21.73	peak	H
5	11000.000	14.67	25.27	39.94	54.00	-14.06	AVG	H
6	16500.000	29.95	24.48	54.43	68.20	-13.77	peak	H
1	5460.000	1.99	44.68	46.67	74.00	-27.33	peak	V
2	5460.000	1.99	30.05	32.04	54.00	-21.96	AVG	V
3	5470.000	1.99	46.83	48.82	68.20	-19.38	peak	V
4	11000.000	14.67	36.00	50.67	74.00	-23.33	peak	V
5	11000.000	14.67	25.79	40.46	54.00	-13.54	AVG	V
6	16500.000	29.95	23.43	53.38	68.20	-14.82	peak	V



Power	AC120V/60Hz
Test Mode	Mode 1, 802.11a CH116 UNII-2C
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5460.000	1.99	44.63	46.62	74.00	-27.38	peak	H
2	5460.000	1.99	28.05	30.04	54.00	-23.96	AVG	H
3	5470.000	1.99	43.58	45.57	68.20	-22.63	peak	H
4	5725.000	2.58	44.03	46.61	68.20	-21.59	peak	H
5	11160.000	15.05	37.22	52.27	74.00	-21.73	peak	H
6	11160.000	15.05	24.89	39.94	54.00	-14.06	AVG	H
7	16740.000	29.65	23.69	53.34	68.20	-14.86	peak	H
1	5460.000	1.99	43.58	45.57	74.00	-28.43	peak	V
2	5460.000	1.99	30.30	32.29	54.00	-21.71	AVG	V
3	5470.000	1.99	43.52	45.51	68.20	-22.69	peak	V
4	5725.000	2.58	43.66	46.24	68.20	-21.96	peak	V
5	11160.000	15.05	35.02	50.07	74.00	-23.93	peak	V
6	11160.000	15.05	22.90	37.95	54.00	-16.05	AVG	V
7	16740.000	29.65	24.06	53.71	68.20	-14.49	peak	V



Power	AC120V/60Hz
Test Mode	Mode 1, 802.11a CH140 UNII-2C
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5725.000	2.58	46.25	48.83	68.20	-19.37	peak	H
2	11400.000	15.62	34.42	50.04	74.00	-23.96	peak	H
3	11400.000	15.62	22.37	37.99	54.00	-16.01	AVG	H
4	17100.000	29.73	24.68	54.41	68.20	-13.79	peak	H
1	5725.000	2.58	48.34	50.92	68.20	-17.28	peak	V
2	11400.000	15.62	37.72	53.34	74.00	-20.66	peak	V
3	11400.000	15.62	23.98	39.60	54.00	-14.40	AVG	V
4	17100.000	29.73	25.70	55.43	68.20	-12.77	peak	V



Power	AC120V/60Hz
Test Mode	Mode 2, 802.11ac VHT20 CH100 UNII-2C
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5460.000	1.99	44.63	46.62	74.00	-27.38	peak	H
2	5460.000	1.99	30.28	32.27	54.00	-21.73	AVG	H
3	5470.000	1.99	51.38	53.37	68.20	-14.83	peak	H
4	11000.000	14.67	35.37	50.04	74.00	-23.96	peak	H
5	11000.000	14.67	23.08	37.75	54.00	-16.25	AVG	H
6	16500.000	29.95	22.99	52.94	68.20	-15.26	peak	H
1	5460.000	1.99	45.75	47.74	74.00	-26.26	peak	V
2	5460.000	1.99	31.93	33.92	54.00	-20.08	AVG	V
3	5470.000	1.99	52.44	54.43	68.20	-13.77	peak	V
4	11000.000	14.67	35.40	50.07	74.00	-23.93	peak	V
5	11000.000	14.67	23.12	37.79	54.00	-16.21	AVG	V
6	16500.000	29.95	24.77	54.72	68.20	-13.48	peak	V



Power	AC120V/60Hz
Test Mode	Mode 2, 802.11ac VHT20 CH116 UNII-2C
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5460.000	1.99	41.35	43.34	74.00	-30.66	peak	H
2	5460.000	1.99	28.05	30.04	54.00	-23.96	AVG	H
3	5470.000	1.99	42.08	44.07	68.20	-24.13	peak	H
4	5725.000	2.58	42.96	45.54	68.20	-22.66	peak	H
5	11160.000	15.05	36.12	51.17	74.00	-22.83	peak	H
6	11160.000	15.05	28.29	43.34	54.00	-10.66	AVG	H
7	16740.000	29.65	24.47	54.12	68.20	-14.08	peak	H
1	5460.000	1.99	42.47	44.46	74.00	-29.54	peak	V
2	5460.000	1.99	29.08	31.07	54.00	-22.93	AVG	V
3	5470.000	1.99	43.54	45.53	68.20	-22.67	peak	V
4	5725.000	2.58	44.06	46.64	68.20	-21.56	peak	V
5	11160.000	15.05	36.12	51.17	74.00	-22.83	peak	V
6	11160.000	15.05	24.07	39.12	54.00	-14.88	AVG	V
7	16740.000	29.65	22.38	52.03	68.20	-16.17	peak	V



Power	AC120V/60Hz
Test Mode	Mode 2, 802.11ac VHT20 CH140 UNII-2C
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5725.000	2.58	46.26	48.84	68.20	-19.36	peak	H
2	11400.000	15.62	34.45	50.07	74.00	-23.93	peak	H
3	11400.000	15.62	22.10	37.72	54.00	-16.28	AVG	H
4	17100.000	29.73	24.75	54.48	68.20	-13.72	peak	H
1	5725.000	2.58	47.45	50.03	68.20	-18.17	peak	V
2	11400.000	15.62	36.65	52.27	74.00	-21.73	peak	V
3	11400.000	15.62	24.32	39.94	54.00	-14.06	AVG	V
4	17100.000	29.73	24.75	54.48	68.20	-13.72	peak	V



Power	AC120V/60Hz
Test Mode	Mode 3, 802.11ac VHT40 CH102 UNII-2C
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5460.000	1.99	51.35	53.34	74.00	-20.66	peak	H
2	5460.000	1.99	37.18	39.17	54.00	-14.83	AVG	H
3	5470.000	1.99	58.08	60.07	68.20	-8.13	peak	H
4	11020.000	14.72	34.81	49.53	74.00	-24.47	peak	H
5	11020.000	14.72	25.20	39.92	54.00	-14.08	AVG	H
6	16530.000	29.91	25.62	55.53	68.20	-12.67	peak	H
1	5460.000	1.99	51.35	53.34	74.00	-20.66	peak	V
2	5460.000	1.99	37.62	39.61	54.00	-14.39	AVG	V
3	5470.000	1.99	62.43	64.42	68.20	-3.78	peak	V
4	11020.000	14.72	36.45	51.17	74.00	-22.83	peak	V
5	11020.000	14.72	22.22	36.94	54.00	-17.06	AVG	V
6	16530.000	29.91	22.11	52.02	68.20	-16.18	peak	V



Power	AC120V/60Hz
Test Mode	Mode 3, 802.11ac VHT40 CH110 UNII-2C
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5460.000	1.99	42.52	44.51	74.00	-29.49	peak	H
2	5460.000	1.99	30.28	32.27	54.00	-21.73	AVG	H
3	5470.000	1.99	42.06	44.05	68.20	-24.15	peak	H
4	5725.000	2.58	44.04	46.62	68.20	-21.58	peak	H
5	11100.000	14.91	37.36	52.27	74.00	-21.73	peak	H
6	11100.000	14.91	23.48	38.39	54.00	-15.61	AVG	H
7	16650.000	29.76	23.37	53.13	68.20	-15.07	peak	H
1	5460.000	1.99	44.63	46.62	74.00	-27.38	peak	V
2	5460.000	1.99	30.08	32.07	54.00	-21.93	AVG	V
3	5470.000	1.99	44.63	46.62	68.20	-21.58	peak	V
4	5725.000	2.58	43.35	45.93	68.20	-22.27	peak	V
5	11100.000	14.91	36.26	51.17	74.00	-22.83	peak	V
6	11100.000	14.91	22.83	37.74	54.00	-16.26	AVG	V
7	16650.000	29.76	24.86	54.62	68.20	-13.58	peak	V



Power	AC120V/60Hz
Test Mode	Mode 3, 802.11ac VHT40 CH134 UNII-2C
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5725.000	2.58	43.70	46.28	68.20	-21.92	peak	H
2	11340.000	15.48	37.86	53.34	74.00	-20.66	peak	H
3	11340.000	15.48	27.89	43.37	54.00	-10.63	AVG	H
4	17010.000	29.37	23.97	53.34	68.20	-14.86	peak	H
1	5725.000	2.58	44.04	46.62	68.20	-21.58	peak	V
2	11340.000	15.48	34.14	49.62	74.00	-24.38	peak	V
3	11340.000	15.48	23.36	38.84	54.00	-15.16	AVG	V
4	17010.000	29.37	25.06	54.43	68.20	-13.77	peak	V



Power	AC120V/60Hz
Test Mode	Mode 4, 802.11ac VHT80 CH106 UNII-2C
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5460.000	1.99	60.28	62.27	74.00	-11.73	peak	H
2	5460.000	1.99	44.54	46.53	54.00	-7.47	AVG	H
3	5470.000	1.99	63.28	65.27	68.20	-2.93	peak	H
4	5725.000	2.58	43.47	46.05	68.20	-22.15	peak	H
5	11060.000	14.81	36.47	51.28	74.00	-22.72	peak	H
6	11060.000	14.81	24.03	38.84	54.00	-15.16	AVG	H
7	16590.000	29.84	23.77	53.61	68.20	-14.59	peak	H
1	5460.000	1.99	61.35	63.34	74.00	-10.66	peak	V
2	5460.000	1.99	45.76	47.75	54.00	-6.25	AVG	V
3	5470.000	1.99	63.54	65.53	68.20	-2.67	peak	V
4	5725.000	2.58	44.02	46.60	68.20	-21.60	peak	V
5	11060.000	14.81	37.46	52.27	74.00	-21.73	peak	V
6	11060.000	14.81	24.03	38.84	54.00	-15.16	AVG	V
7	16590.000	29.84	23.47	53.31	68.20	-14.89	peak	V



Power	AC120V/60Hz
Test Mode	Mode 1, 802.11a CH149 UNII-3
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5650.000	2.39	42.43	44.82	68.20	-23.38	peak	H
2	5700.000	2.52	45.10	47.62	105.20	-57.58	peak	H
3	5720.000	2.57	56.27	58.84	110.80	-51.96	peak	H
4	5725.000	2.58	63.01	65.59	122.20	-56.61	peak	H
5	11490.000	15.84	34.09	49.93	74.00	-24.07	peak	H
6	11490.000	15.84	21.03	36.87	54.00	-17.13	AVG	H
7	17235.000	30.26	19.78	50.04	68.20	-18.16	peak	H
1	5650.000	2.39	43.04	45.43	68.20	-22.77	peak	V
2	5700.000	2.52	46.40	48.92	105.20	-56.28	peak	V
3	5720.000	2.57	56.70	59.27	110.80	-51.53	peak	V
4	5725.000	2.58	62.05	64.63	122.20	-57.57	peak	V
5	11490.000	15.84	33.53	49.37	74.00	-24.63	peak	V
6	11490.000	15.84	22.78	38.62	54.00	-15.38	AVG	V
7	17235.000	30.26	22.02	52.28	68.20	-15.92	peak	V



Power	AC120V/60Hz
Test Mode	Mode 1, 802.11a CH157 UNII-3
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5650.000	2.39	42.23	44.62	68.20	-23.58	peak	H
2	5700.000	2.52	42.65	45.17	105.20	-60.03	peak	H
3	5720.000	2.57	42.81	45.38	110.80	-65.42	peak	H
4	5725.000	2.58	43.14	45.72	122.20	-76.48	peak	H
5	5850.000	2.89	43.73	46.62	122.20	-75.58	peak	H
6	5855.000	2.90	43.95	46.85	110.80	-63.95	peak	H
7	5875.000	2.95	42.97	45.92	105.20	-59.28	peak	H
8	5925.000	3.07	43.66	46.73	68.20	-21.47	peak	H
9	11570.000	16.00	29.24	45.24	74.00	-28.76	peak	H
10	11570.000	16.00	18.83	34.83	54.00	-19.17	AVG	H
11	17355.000	30.74	20.43	51.17	68.20	-17.03	peak	H
1	5650.000	2.39	41.99	44.38	68.20	-23.82	peak	V
2	5700.000	2.52	42.55	45.07	105.20	-60.13	peak	V
3	5720.000	2.57	44.15	46.72	110.80	-64.08	peak	V
4	5725.000	2.58	43.69	46.27	122.20	-75.93	peak	V
5	5850.000	2.89	42.49	45.38	122.20	-76.82	peak	V
6	5855.000	2.90	42.14	45.04	110.80	-65.76	peak	V
7	5875.000	2.95	41.97	44.92	105.20	-60.28	peak	V
8	5925.000	3.07	42.80	45.87	68.20	-22.33	peak	V
9	11570.000	16.00	29.38	45.38	74.00	-28.62	peak	V
10	11570.000	16.00	20.27	36.27	54.00	-17.73	AVG	V
11	17355.000	30.74	22.54	53.28	68.20	-14.92	peak	V



Power	AC120V/60Hz
Test Mode	Mode 1, 802.11a CH165 UNII-3
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5850.000	2.89	60.75	63.64	122.20	-58.56	peak	H
2	5855.000	2.90	51.58	54.48	110.80	-56.32	peak	H
3	5875.000	2.95	47.12	50.07	105.20	-55.13	peak	H
4	5925.000	3.07	44.06	47.13	68.20	-21.07	peak	H
5	11650.000	16.16	31.56	47.72	74.00	-26.28	peak	H
6	11650.000	16.16	20.46	36.62	54.00	-17.38	AVG	H
7	17475.000	31.21	15.66	46.87	68.20	-21.33	peak	H
1	5850.000	2.89	54.39	57.28	122.20	-64.92	peak	V
2	5855.000	2.90	49.74	52.64	110.80	-58.16	peak	V
3	5875.000	2.95	44.58	47.53	105.20	-57.67	peak	V
4	5925.000	3.07	44.65	47.72	68.20	-20.48	peak	V
5	11650.000	16.16	32.17	48.33	74.00	-25.67	peak	V
6	11650.000	16.16	20.45	36.61	54.00	-17.39	AVG	V
7	17475.000	31.21	21.13	52.34	68.20	-15.86	peak	V



Power	AC120V/60Hz
Test Mode	Mode 2, 802.11ac VHT20 CH149 UNII-3
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5650.000	2.39	43.52	45.91	68.20	-22.29	peak	H
2	5700.000	2.52	48.65	51.17	105.20	-54.03	peak	H
3	5720.000	2.57	63.47	66.04	110.80	-44.76	peak	H
4	5725.000	2.58	63.40	65.98	122.20	-56.22	peak	H
5	11490.000	15.84	34.20	50.04	74.00	-23.96	peak	H
6	11490.000	15.84	19.52	35.36	54.00	-18.64	AVG	H
7	17235.000	30.26	21.01	51.27	68.20	-16.93	peak	H
1	5650.000	2.39	43.14	45.53	68.20	-22.67	peak	V
2	5700.000	2.52	50.40	52.92	105.20	-52.28	peak	V
3	5720.000	2.57	61.17	63.74	110.80	-47.06	peak	V
4	5725.000	2.58	67.26	69.84	122.20	-52.36	peak	V
5	11490.000	15.84	30.78	46.62	74.00	-27.38	peak	V
6	11490.000	15.84	17.53	33.37	54.00	-20.63	AVG	V
7	17235.000	30.26	18.66	48.92	68.20	-19.28	peak	V



Power	AC120V/60Hz
Test Mode	Mode 2, 802.11ac VHT20 CH157 UNII-3
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5650.000	2.39	42.24	44.63	68.20	-23.57	peak	H
2	5700.000	2.52	42.85	45.37	105.20	-59.83	peak	H
3	5720.000	2.57	44.25	46.82	110.80	-63.98	peak	H
4	5725.000	2.58	43.39	45.97	122.20	-76.23	peak	H
5	5850.000	2.89	43.72	46.61	122.20	-75.59	peak	H
6	5855.000	2.90	44.34	47.24	110.80	-63.56	peak	H
7	5875.000	2.95	43.67	46.62	105.20	-58.58	peak	H
8	5925.000	3.07	43.32	46.39	68.20	-21.81	peak	H
9	11570.000	16.00	32.27	48.27	74.00	-25.73	peak	H
10	11570.000	16.00	20.83	36.83	54.00	-17.17	AVG	H
11	17355.000	30.74	19.30	50.04	68.20	-18.16	peak	H
1	5650.000	2.39	42.24	44.63	68.20	-23.57	peak	V
2	5700.000	2.52	42.86	45.38	105.20	-59.82	peak	V
3	5720.000	2.57	45.15	47.72	110.80	-63.08	peak	V
4	5725.000	2.58	43.65	46.23	122.20	-75.97	peak	V
5	5850.000	2.89	43.29	46.18	122.20	-76.02	peak	V
6	5855.000	2.90	43.48	46.38	110.80	-64.42	peak	V
7	5875.000	2.95	43.48	46.43	105.20	-58.77	peak	V
8	5925.000	3.07	42.95	46.02	68.20	-22.18	peak	V
9	11570.000	16.00	29.17	45.17	74.00	-28.83	peak	V
10	11570.000	16.00	16.17	32.17	54.00	-21.83	AVG	V
11	17355.000	30.74	19.33	50.07	68.20	-18.13	peak	V



Power	AC120V/60Hz
Test Mode	Mode 2, 802.11ac VHT20 CH165 UNII-3
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5850.000	2.89	59.40	62.29	122.20	-59.91	peak	H
2	5855.000	2.90	53.37	56.27	110.80	-54.53	peak	H
3	5875.000	2.95	45.42	48.37	105.20	-56.83	peak	H
4	5925.000	3.07	44.97	48.04	68.20	-20.16	peak	H
5	11650.000	16.16	30.46	46.62	74.00	-27.38	peak	H
6	11650.000	16.16	18.88	35.04	54.00	-18.96	AVG	H
7	17475.000	31.21	17.70	48.91	68.20	-19.29	peak	H
1	5850.000	2.89	57.03	59.92	122.20	-62.28	peak	V
2	5855.000	2.90	50.44	53.34	110.80	-57.46	peak	V
3	5875.000	2.95	43.73	46.68	105.20	-58.52	peak	V
4	5925.000	3.07	42.90	45.97	68.20	-22.23	peak	V
5	11650.000	16.16	29.98	46.14	74.00	-27.86	peak	V
6	11650.000	16.16	17.26	33.42	54.00	-20.58	AVG	V
7	17475.000	31.21	21.06	52.27	68.20	-15.93	peak	V



Power	AC120V/60Hz
Test Mode	Mode 3, 802.11ac VHT40 CH151 UNII-3
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5650.000	2.39	43.13	45.52	68.20	-22.68	peak	H
2	5700.000	2.52	47.44	49.96	105.20	-55.24	peak	H
3	5720.000	2.57	59.73	62.30	110.80	-48.50	peak	H
4	5725.000	2.58	65.56	68.14	122.20	-54.06	peak	H
5	11510.000	15.88	30.85	46.73	74.00	-27.27	peak	H
6	11510.000	15.88	19.50	35.38	54.00	-18.62	AVG	H
7	17265.000	30.38	19.69	50.07	68.20	-18.13	peak	H
1	5650.000	2.39	44.88	47.27	68.20	-20.93	peak	V
2	5700.000	2.52	46.31	48.83	105.20	-56.37	peak	V
3	5720.000	2.57	57.35	59.92	110.80	-50.88	peak	V
4	5725.000	2.58	62.95	65.53	122.20	-56.67	peak	V
5	11510.000	15.88	32.95	48.83	74.00	-25.17	peak	V
6	11510.000	15.88	18.58	34.46	54.00	-19.54	AVG	V
7	17265.000	30.38	21.89	52.27	68.20	-15.93	peak	V



Power	AC120V/60Hz
Test Mode	Mode 3, 802.11ac VHT40 CH159 UNII-3
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5850.000	2.89	49.38	52.27	122.20	-69.93	peak	H
2	5855.000	2.90	45.93	48.83	110.80	-61.97	peak	H
3	5875.000	2.95	45.39	48.34	105.20	-56.86	peak	H
4	5925.000	3.07	44.18	47.25	68.20	-20.95	peak	H
5	11590.000	16.04	32.03	48.07	74.00	-25.93	peak	H
6	11590.000	16.04	19.02	35.06	54.00	-18.94	AVG	H
7	17385.000	30.85	21.43	52.28	68.20	-15.92	peak	H
1	5850.000	2.89	45.96	48.85	122.20	-73.35	peak	V
2	5855.000	2.90	44.71	47.61	110.80	-63.19	peak	V
3	5875.000	2.95	42.68	45.63	105.20	-59.57	peak	V
4	5925.000	3.07	42.45	45.52	68.20	-22.68	peak	V
5	11590.000	16.04	33.90	49.94	74.00	-24.06	peak	V
6	11590.000	16.04	18.64	34.68	54.00	-19.32	AVG	V
7	17385.000	30.85	23.57	54.42	68.20	-13.78	peak	V



Power	AC120V/60Hz
Test Mode	Mode 4, 802.11ac VHT80 CH55 UNII-3
Note : Level = Reading + Factor Margin = Level – Limit Factor = Antenna Factor + Cable Loss – Amplifier Factor	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector mode (PK/AVG)	AntPol. H/V
1	5650.000	2.39	50.95	53.34	68.20	-14.86	peak	H
2	5700.000	2.52	59.76	62.28	105.20	-42.92	peak	H
3	5720.000	2.57	63.70	66.27	110.80	-44.53	peak	H
4	5725.000	2.58	70.80	73.38	122.20	-48.82	peak	H
5	5850.000	2.89	62.62	65.51	122.20	-56.69	peak	H
6	5855.000	2.90	60.44	63.34	110.80	-47.46	peak	H
7	5875.000	2.95	55.88	58.83	105.20	-46.37	peak	H
8	5925.000	3.07	49.14	52.21	68.20	-15.99	peak	H
9	11550.000	15.96	33.94	49.90	74.00	-24.10	peak	H
10	11550.000	15.96	21.79	37.75	54.00	-16.25	AVG	H
11	17325.000	30.62	21.65	52.27	68.20	-15.93	peak	H
1	5650.000	2.39	49.53	51.92	68.20	-16.28	peak	V
2	5700.000	2.52	58.65	61.17	105.20	-44.03	peak	V
3	5720.000	2.57	63.71	66.28	110.80	-44.52	peak	V
4	5725.000	2.58	66.59	69.17	122.20	-53.03	peak	V
5	5850.000	2.89	59.35	62.24	122.20	-59.96	peak	V
6	5855.000	2.90	57.06	59.96	110.80	-50.84	peak	V
7	5875.000	2.95	50.39	53.34	105.20	-51.86	peak	V
8	5925.000	3.07	43.68	46.75	68.20	-21.45	peak	V
9	11550.000	15.96	32.86	48.82	74.00	-25.18	peak	V
10	11550.000	15.96	18.18	34.14	54.00	-19.86	AVG	V
11	17325.000	30.62	20.56	51.18	68.20	-17.02	peak	V



6.7. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.150
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz



7. On Time, Duty Cycle and Measurement methods

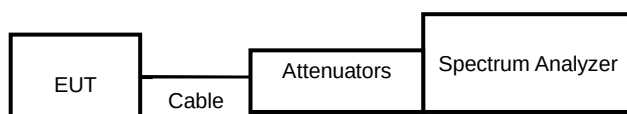
7.1. Test Limit

None; for reporting purposes only.

7.2. Test Procedure

KDB 789033 Zero-Span Spectrum Analyzer Method.

7.3. Test Setup Layout



7.4. Test Result and Data

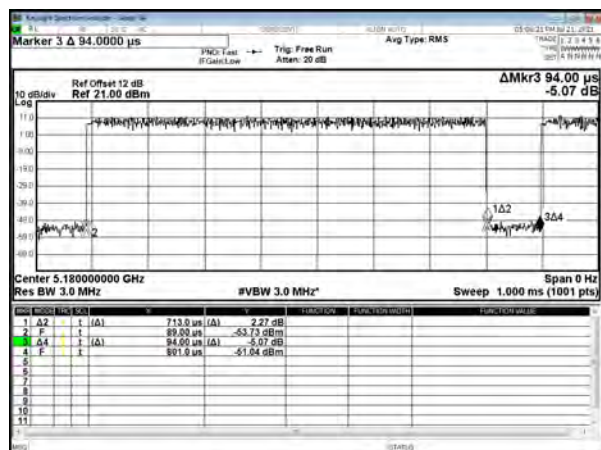
Modulation Mode	On Time (msec)	Period Time (msec)	Duty Cycle (%)
802.11a	0.71	0.81	88.35%
802.11ac VHT20	0.15	0.24	62.70%
802.11ac VHT40	0.09	0.18	50.00%
802.11ac VHT80	0.07	0.16	43.29%

7.5. Measurement Methods

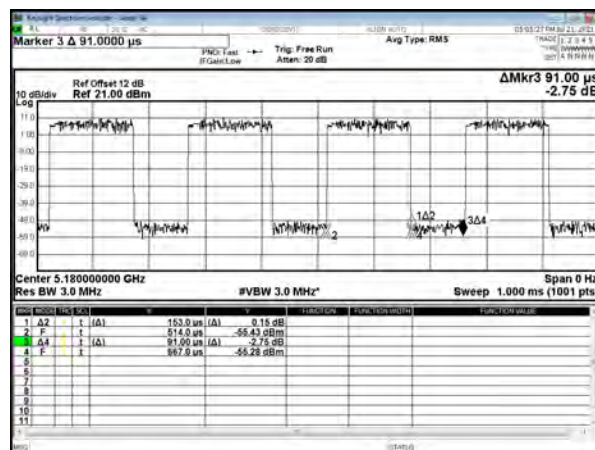
26 dB and 6dB Emission BW	KDB 789033 D02 v01, Section C
99% Occupied BW	KDB 789033 D02 v01, Section D
Conducted Output Power	KDB 789033 D02 v01, Section E.2.d and E.3.b (Method PM-G)
Power Spectral Density	KDB 789033 D02 v01, Section F
Unwanted emissions in restricted bands	KDB 789033 D02 v01, Sections G and H
Unwanted emissions in non-restricted bands	KDB 789033 D02 v01, Sections G and H



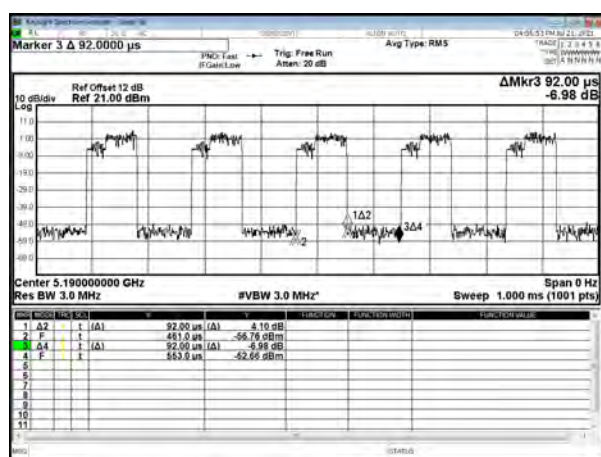
Modulation Type: 802.11a (6Mbps)



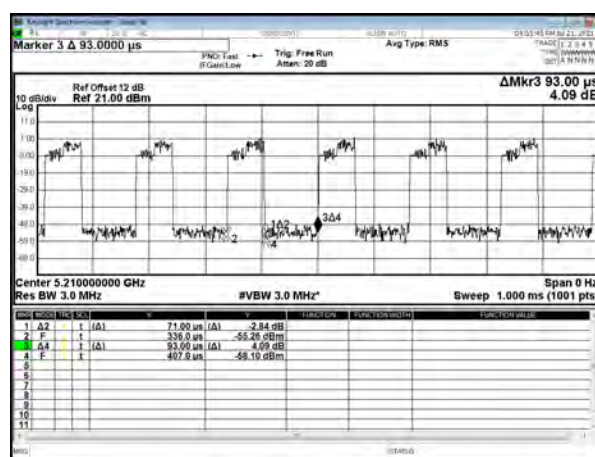
Modulation Type: 802.11ac VHT20 (6.5Mbps)



Modulation Type: 802.11ac VHT40 (13.5Mbps)



Modulation Type: 802.11ac VHT80 (29.3Mbps)





8. 6dB Bandwidth & 99% Occupied Bandwidth

8.1. Test Limit

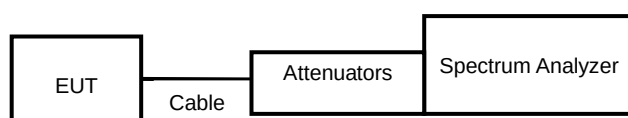
FCC §15.407

The minimum 6 dB bandwidth shall be at least 500 kHz.

8.2. Test Procedure

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100KHz, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

8.3. Test Setup Layout



8.4. Test Result and Data (6dB Bandwidth)

In the 5.8GHz Band

Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)
			ANT A	ANT B	
802.11a	149	5745	14.08	15.13	0.50
	157	5785	15.08	15.12	0.50
	165	5825	16.42	15.41	0.50
802.11ac VHT20	149	5745	17.63	17.64	0.50
	157	5785	17.49	17.51	0.50
	165	5825	17.58	17.63	0.50
802.11ac VHT40	155	5755	35.90	35.70	0.50
	159	5795	36.32	35.99	0.50
802.11ac VHT80	155	5775	76.49	76.46	0.50

**8.5. Test Result and Data (99% Occupied Bandwidth)****In the 5.8GHz Band**

Mode	Channel	Frequency (MHz)	99% Bandwidth(MHz)	
			ANT A	ANT B
802.11a	149	5745	16.47	16.52
	157	5785	16.46	16.53
	165	5825	16.53	16.51
802.11ac VHT20	149	5745	17.72	17.72
	157	5785	17.75	17.68
	165	5825	17.70	17.67
802.11ac VHT40	155	5755	36.16	36.34
	159	5795	36.31	36.34
802.11ac VHT80	155	5775	75.93	75.96

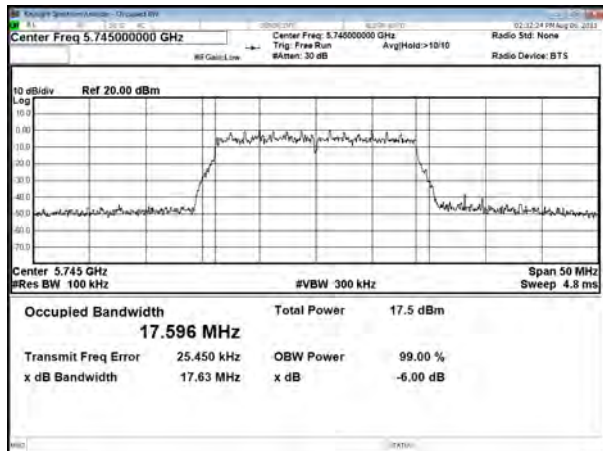


ANT A

6dB Bandwidth

Modulation Type: 802.11a (6Mbps)

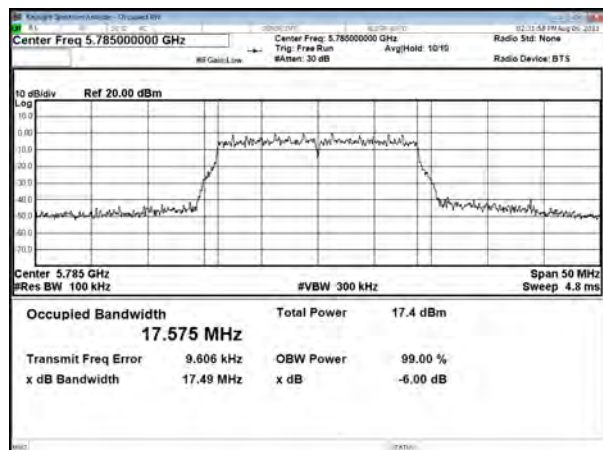
CH149

Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149

CH157



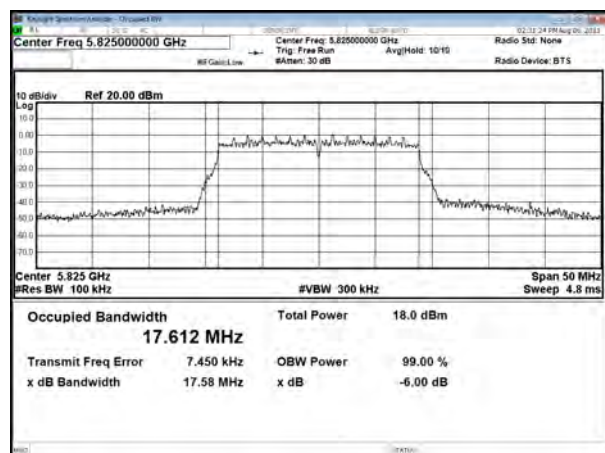
CH157



CH165



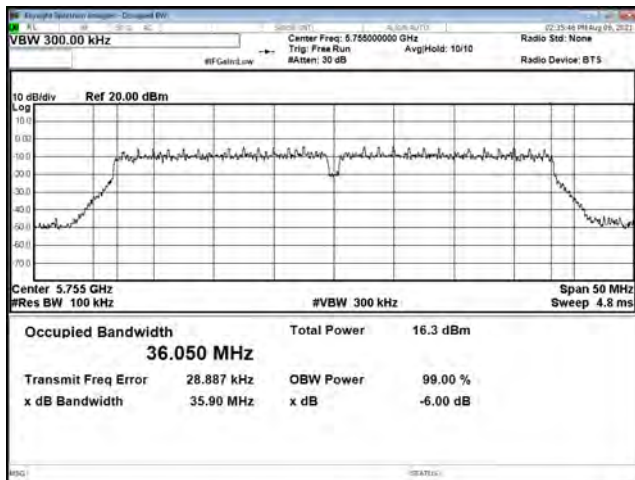
CH165



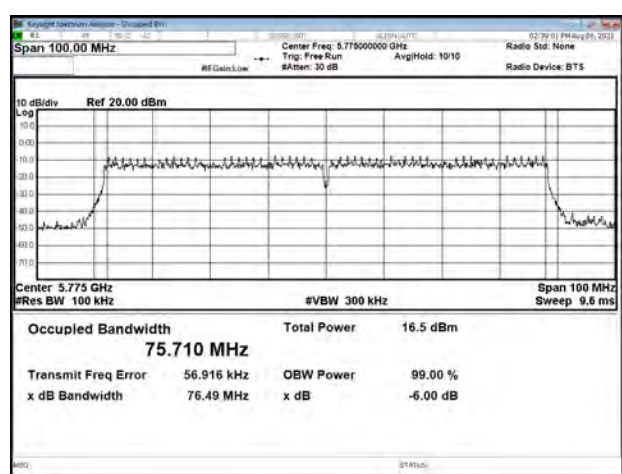


6dB Bandwidth

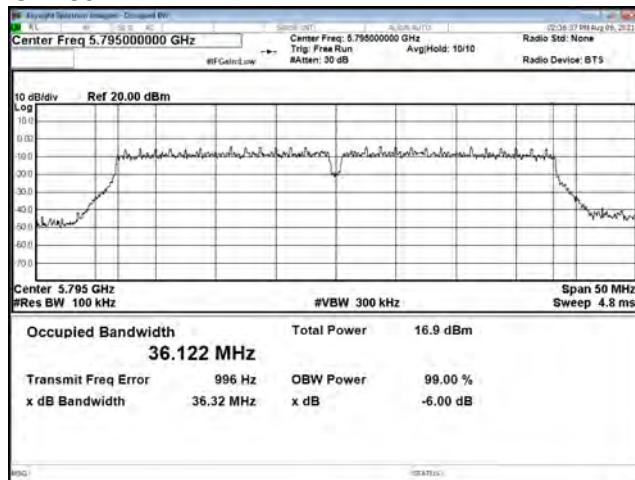
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155



CH159



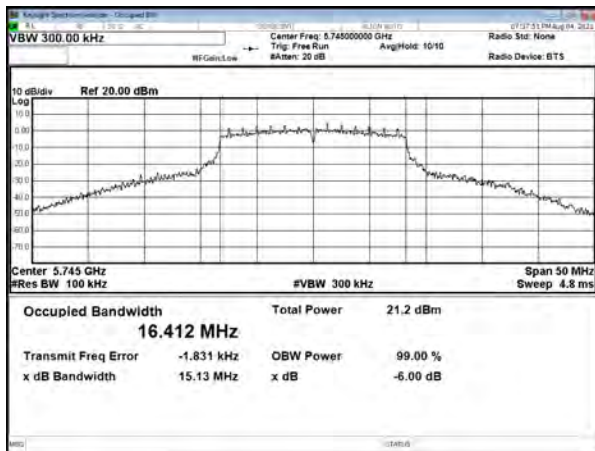


ANT B

6dB Bandwidth

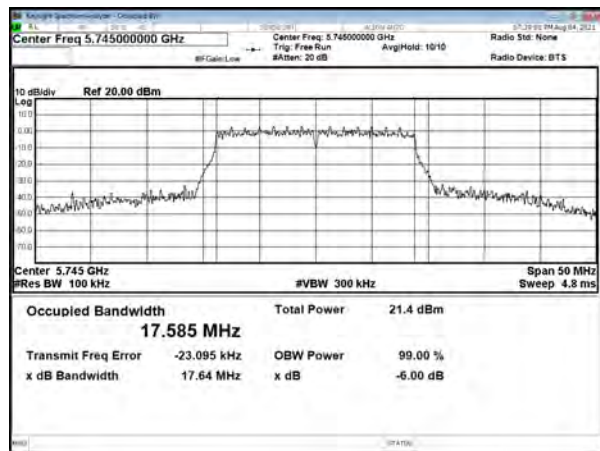
Modulation Type: 802.11a (6Mbps)

CH149



Modulation Type: 802.11ac, VHT20 (6.5Mbps)

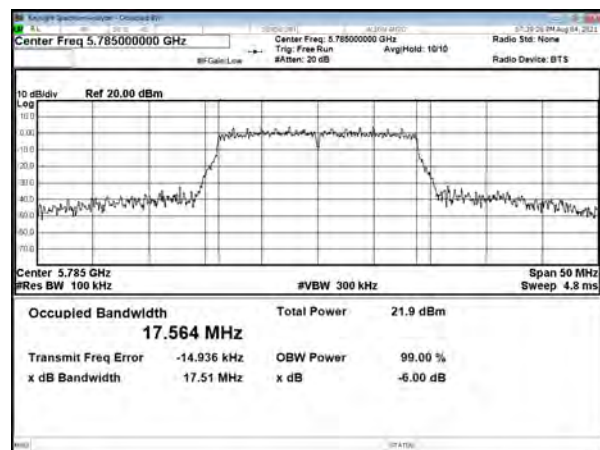
CH149



CH157



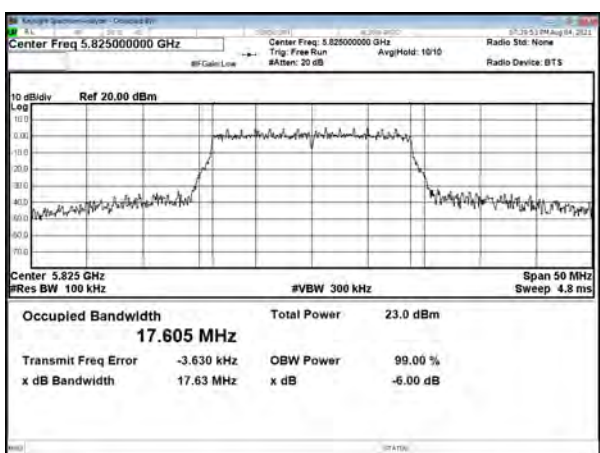
CH157



CH165

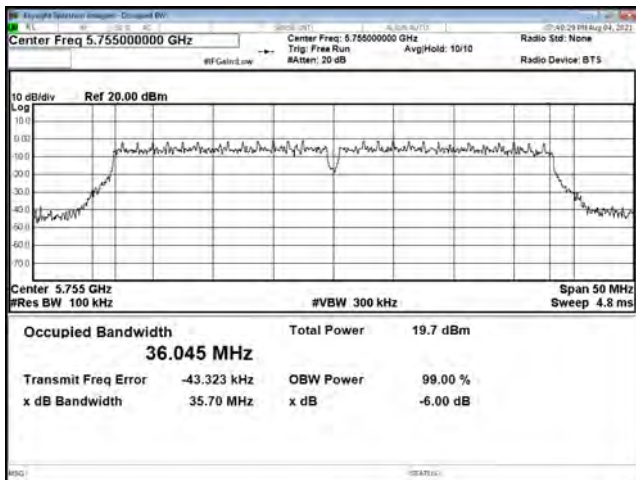


CH165

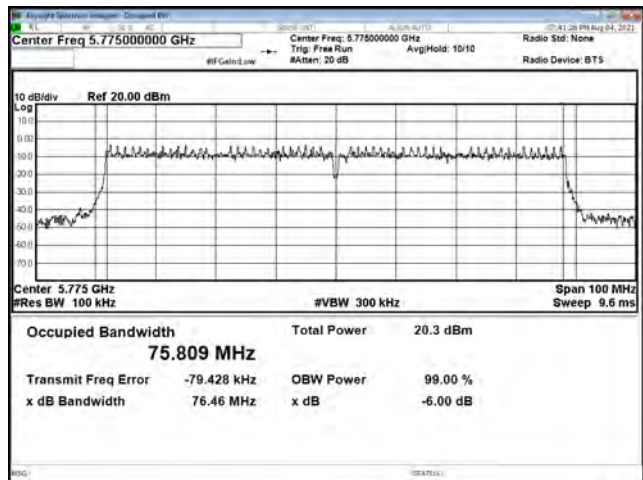




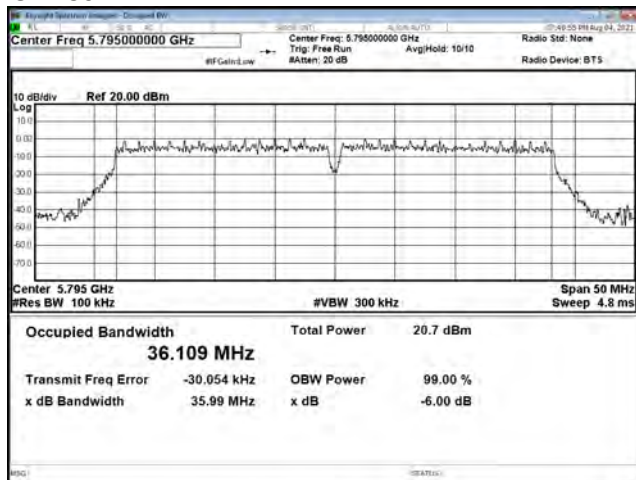
6dB Bandwidth
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155



CH159



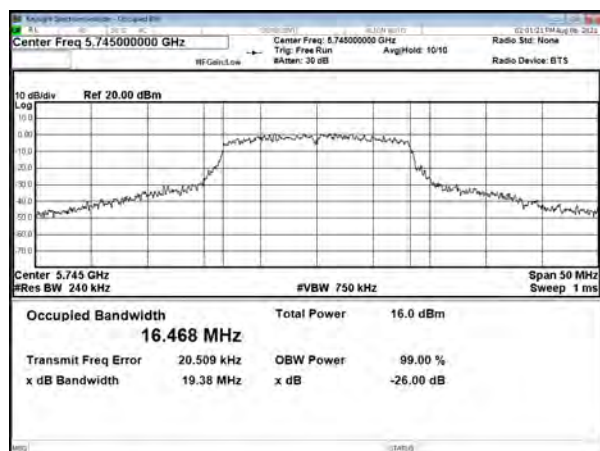
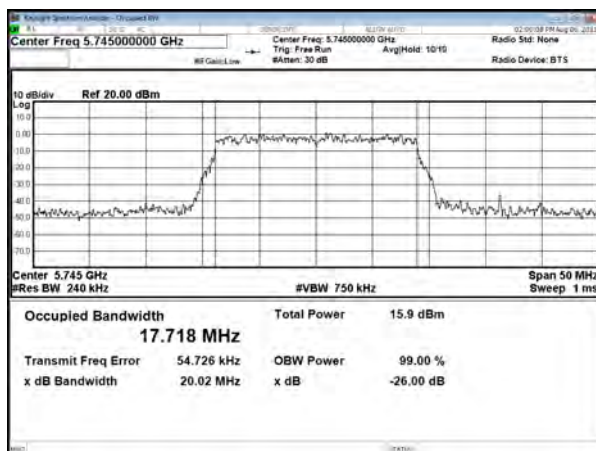


ANTA

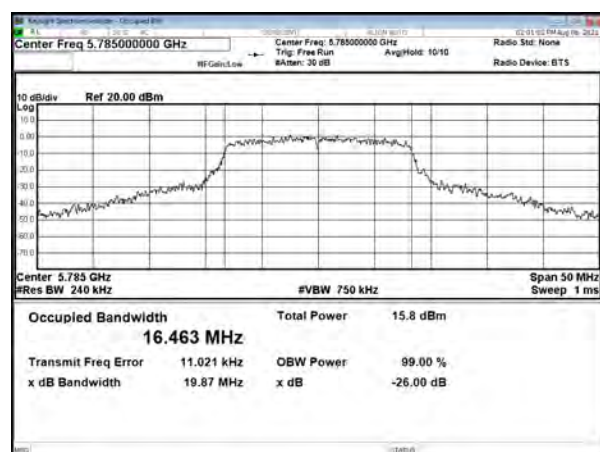
99% Occupied Bandwidth

Modulation Type: 802.11a (6Mbps)

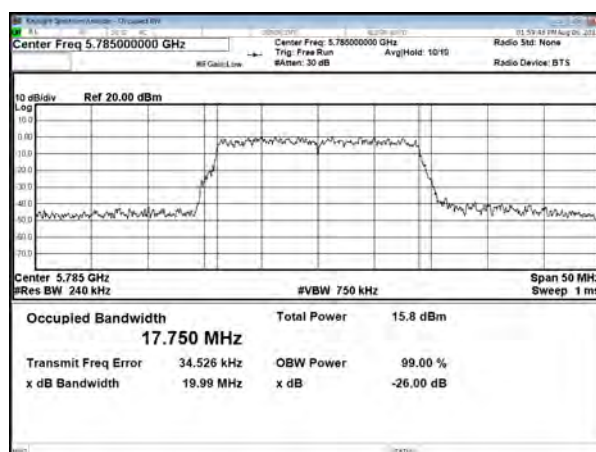
CH149

Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149

CH157



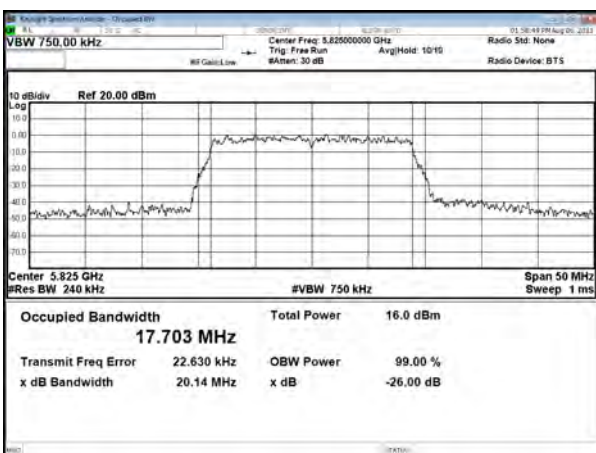
CH157



CH165

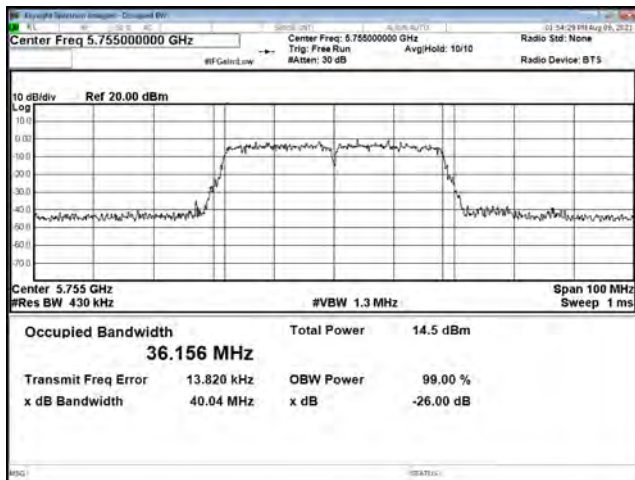


CH165





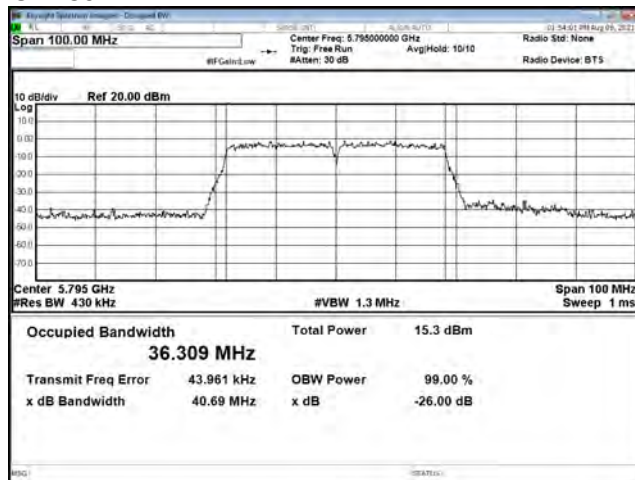
99% Occupied Bandwidth
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155



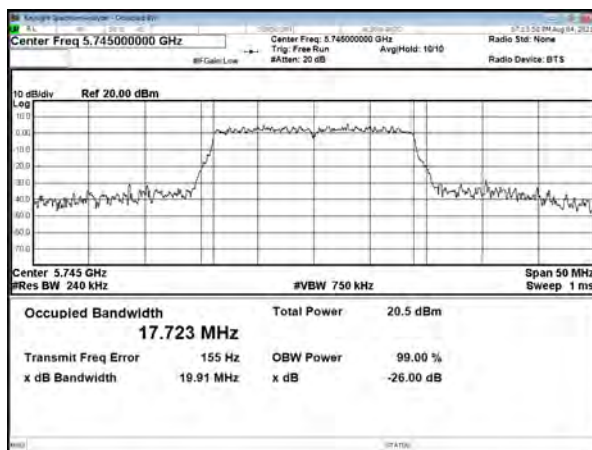
CH159



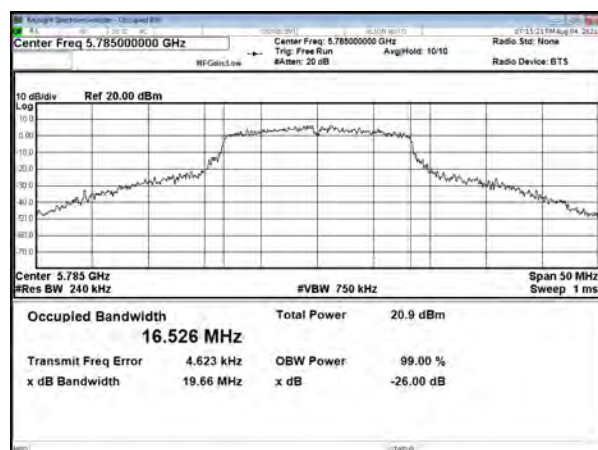


ANT B

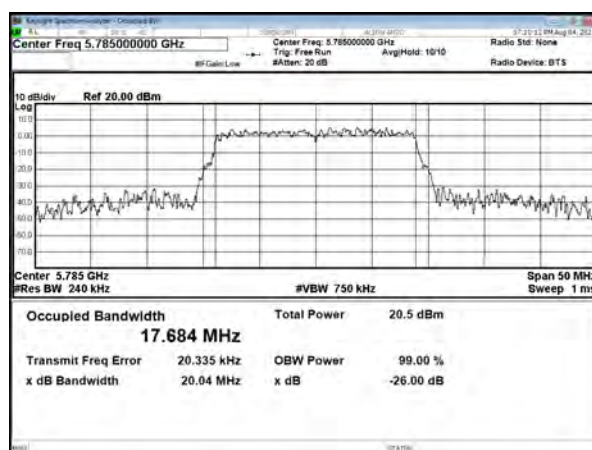
99% Occupied Bandwidth

Modulation Type: 802.11a (6Mbps)
CH149Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149

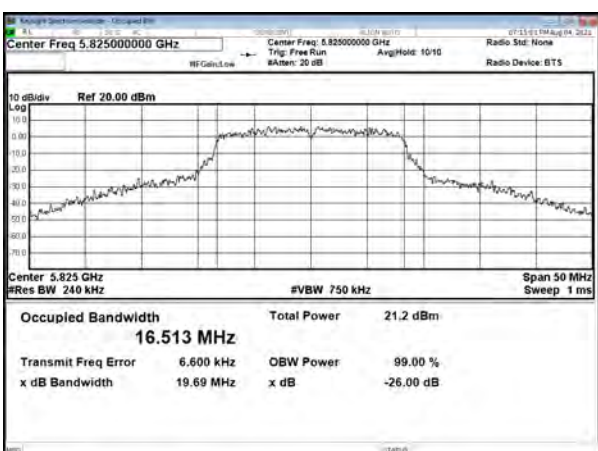
CH157



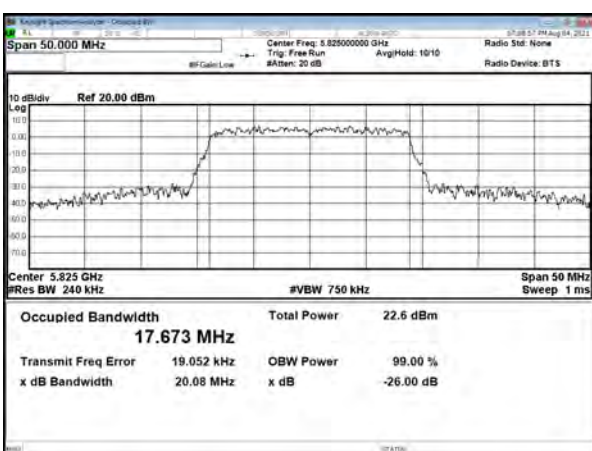
CH157



CH165

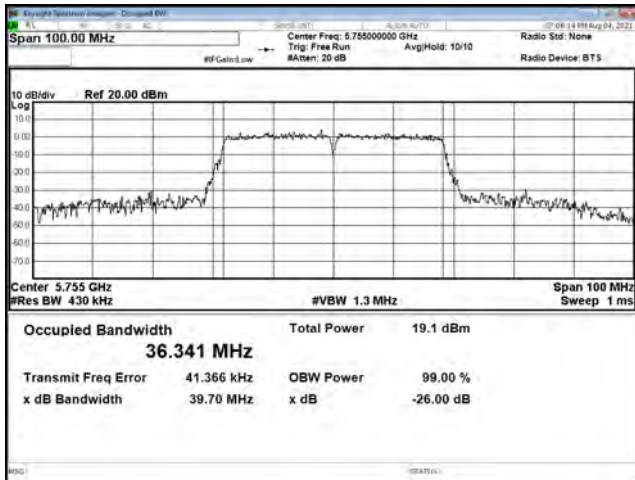


CH165

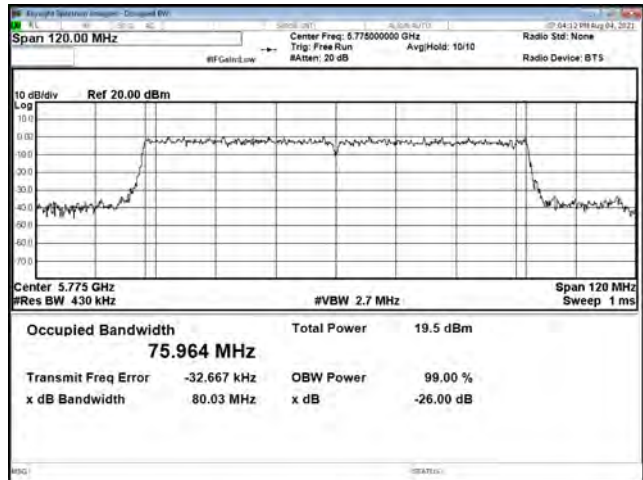




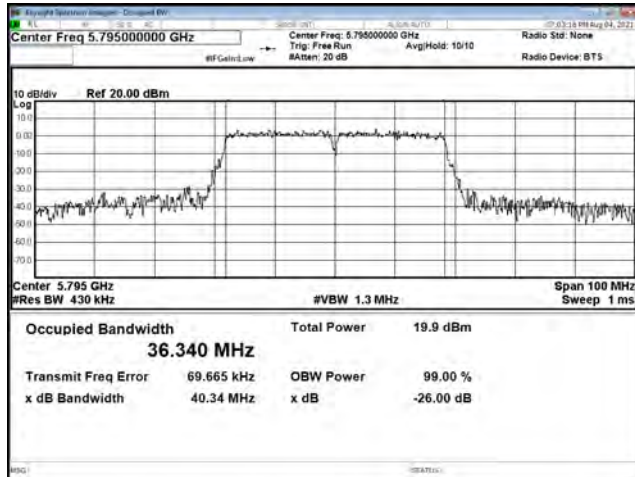
99% Occupied Bandwidth
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155



CH159





9. 26dB Bandwidth & 99% Occupied Bandwidth

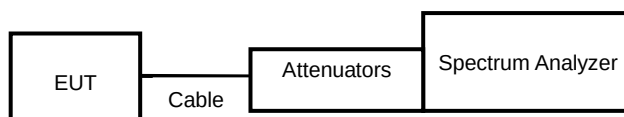
9.1. Test Limit

None; for reporting purposes only.

9.2. Test Procedure

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW = approximately 1% of the emission bandwidth, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

9.3. Test Setup Layout





9.4. Test Result and Data (26dB Bandwidth)

In the 5.2G Band

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
			ANT A	ANT B
802.11a	36	5180	19.62	19.8
	44	5220	19.33	19.5
	48	5240	19.42	19.25
802.11ac VHT20	36	5180	20.09	19.92
	44	5220	20.02	19.89
	48	5240	20.25	20.04
802.11ac VHT40	38	5190	40.72	40.6
	46	5230	39.53	39.52
802.11ac VHT80	42	5210	80.88	80.45

In the 5.3G Band

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
			ANT A	ANT B
802.11a	52	5260	19.41	19.4
	60	5300	19.6	19.61
	64	5320	19.41	18.99
802.11ac VHT20	52	5260	19.95	19.78
	60	5300	20.12	19.89
	64	5320	19.99	19.93
802.11ac VHT40	54	5270	40.68	40.5
	62	5310	40.44	40.42
802.11ac VHT80	58	5290	80.92	80.76

In the 5.5G Band

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
			ANT A	ANT B
802.11a	100	5500	19.51	20.14
	116	5580	19.27	22.08
	140	5700	19.41	19.83
802.11ac VHT20	100	5500	20.11	19.99
	116	5580	19.99	19.68
	140	5700	19.73	19.82
802.11ac VHT40	102	5510	40.76	40.52
	110	5550	40.72	39.92
	134	5670	40.25	40.63
802.11ac VHT80	106	5530	80.94	79.97



9.5. Test Result and Data (99% Occupied Bandwidth)

In the 5.2G Band

Mode	Channel	Frequency (MHz)	99% Bandwidth(MHz)	
			ANT A	ANT B
802.11a	36	5180	16.47	16.44
	44	5220	16.40	16.44
	48	5240	16.44	16.45
802.11ac VHT20	36	5180	17.66	17.66
	44	5220	17.65	17.70
	48	5240	17.71	17.72
802.11ac VHT40	38	5190	36.36	36.28
	46	5230	36.36	36.28
802.11ac VHT80	42	5210	76.06	75.97

Mode	Channel	Frequency (MHz)	99% Bandwidth(MHz)	
			ANT A	ANT B
802.11a	52	5260	16.45	16.43
	60	5300	16.47	16.45
	64	5320	16.44	16.35
802.11ac VHT20	52	5260	17.64	17.67
	60	5300	17.67	17.71
	64	5320	17.65	17.67
802.11ac VHT40	54	5270	36.26	36.37
	62	5310	36.43	36.31
802.11ac VHT80	58	5290	75.93	75.97

In the 5.5G Band

Mode	Channel	Frequency (MHz)	99% Bandwidth(MHz)	
			ANT A	ANT B
802.11a	100	5500	16.49	16.47
	116	5580	16.45	16.56
	140	5700	16.47	16.51
802.11ac VHT20	100	5500	17.74	17.66
	116	5580	17.68	17.62
	140	5700	17.68	17.70
802.11ac VHT40	102	5510	36.28	36.21
	110	5550	26.27	36.24
	134	5670	36.31	36.28
802.11ac VHT80	106	5530	76.06	75.97



ANT A

26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

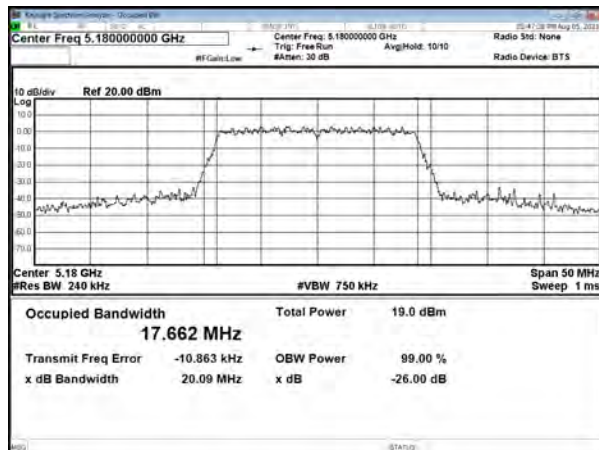
Modulation Standard: 802.11a (6Mbps)

CH36



Modulation Standard: 802.11ac VHT20 (6.5Mbps)

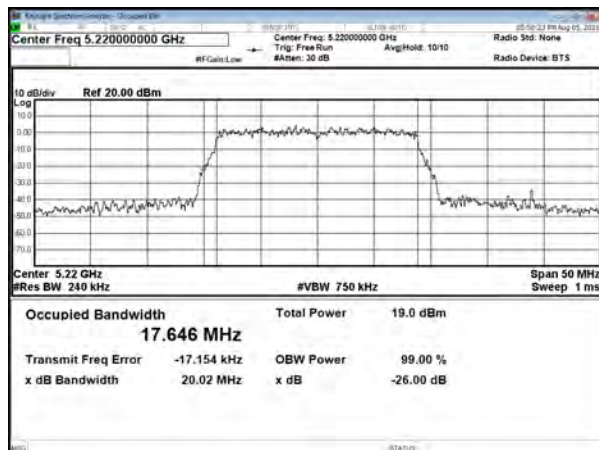
CH36



CH44



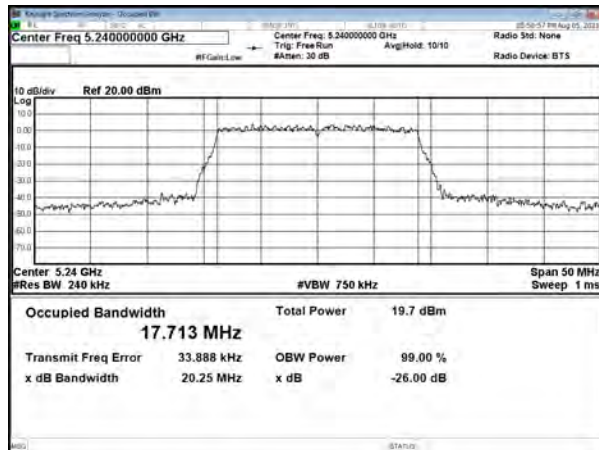
CH44



CH48



CH48

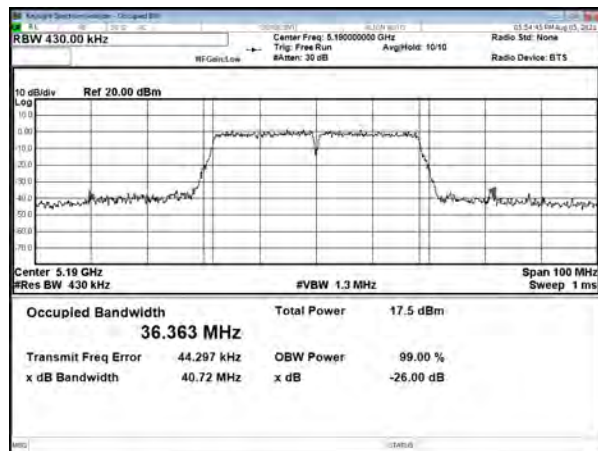




26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

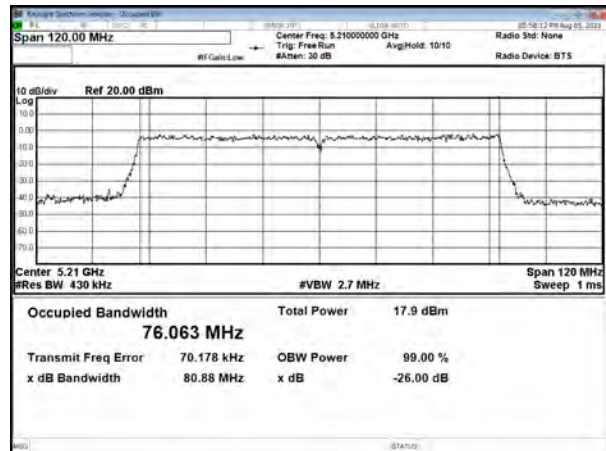
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

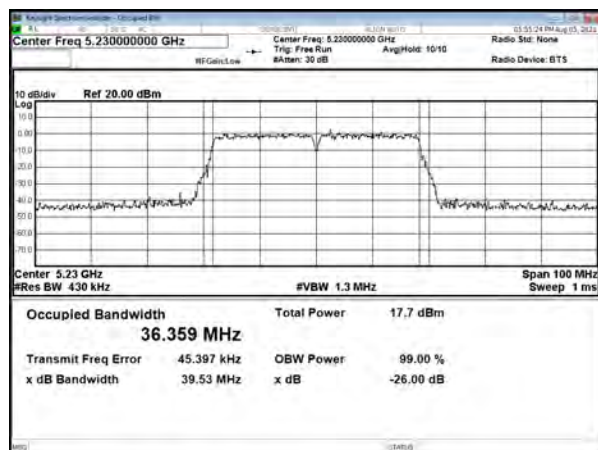


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46





26dB Bandwidth & 99% Occupied Bandwidth, UNII-2A

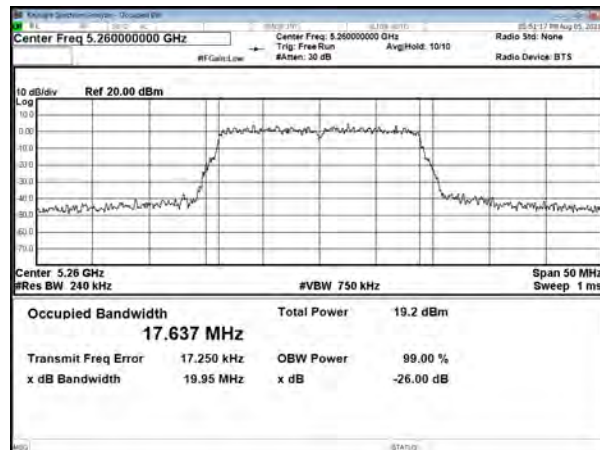
Modulation Standard: 802.11a (6Mbps)

CH52



Modulation Standard: 802.11ac VHT20 (6.5Mbps)

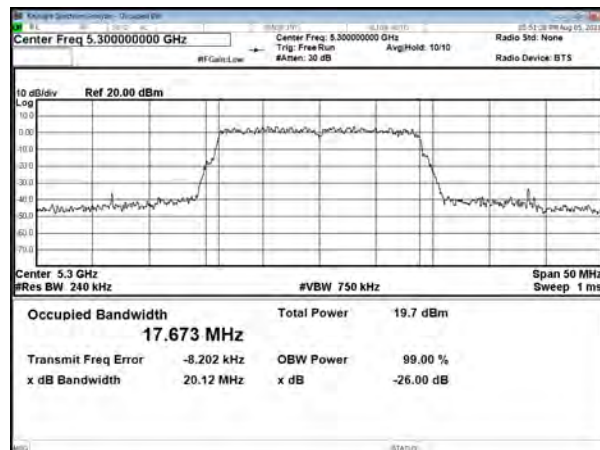
CH52



CH60



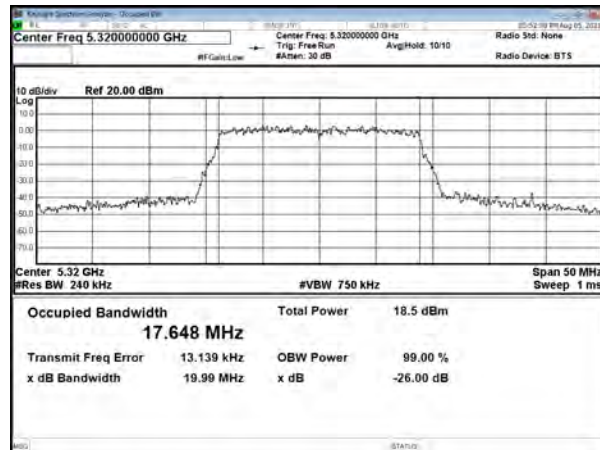
CH60



CH64



CH64





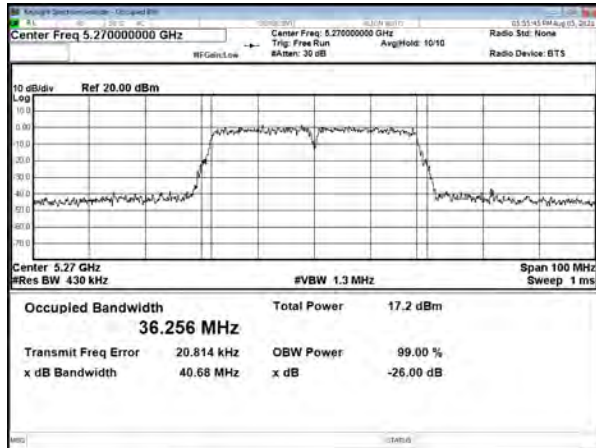
26dB Bandwidth & 99% Occupied Bandwidth, UNII-2A

Modulation Standard: 802.11ac VHT40 (13.5Mbps)

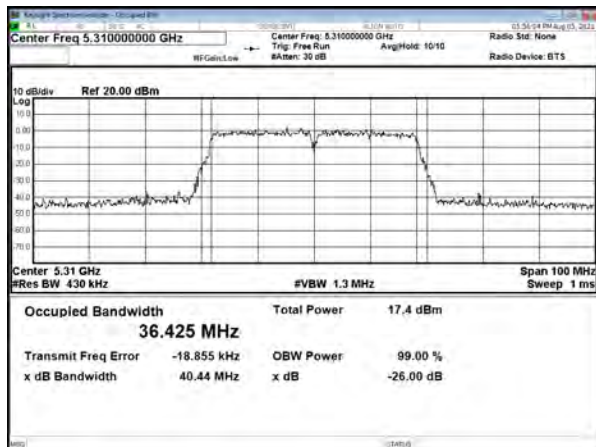
Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH54

CH58



CH62





26dB Bandwidth & 99% Occupied Bandwidth, UNII-2C

Modulation Standard: 802.11a (6Mbps)

CH100



Modulation Standard: 802.11ac VHT20 (6.5Mbps)

CH100



CH116



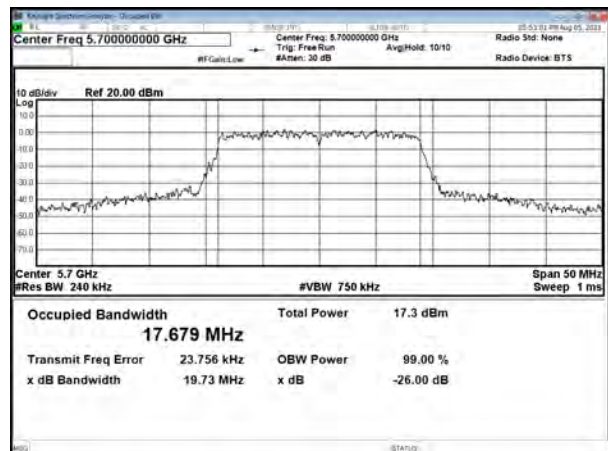
CH116



CH140



CH140

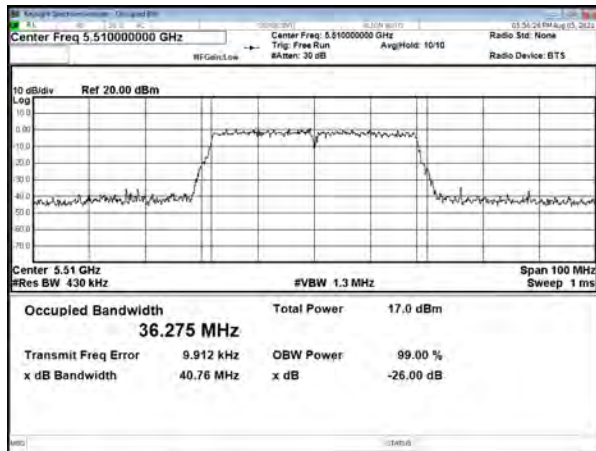




26dB Bandwidth & 99% Occupied Bandwidth, UNII-2C

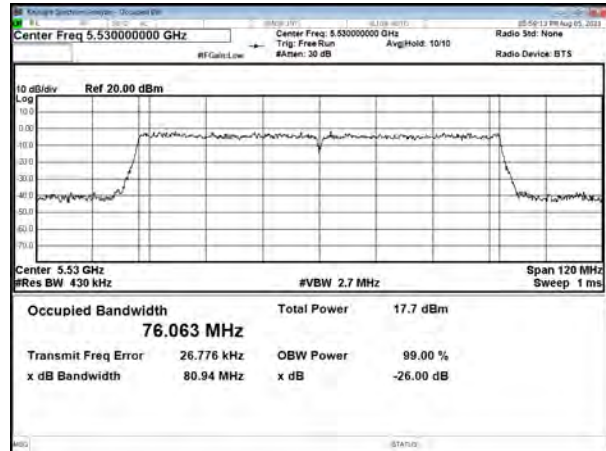
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH102



Modulation Standard: 802.11ac VHT80 (29.3Mbps)

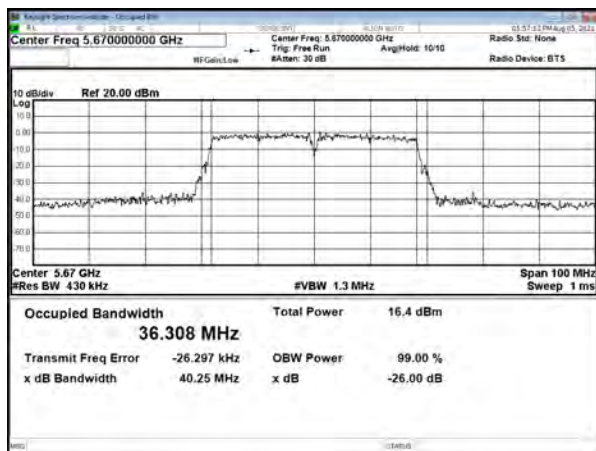
CH106



CH1110



CH134



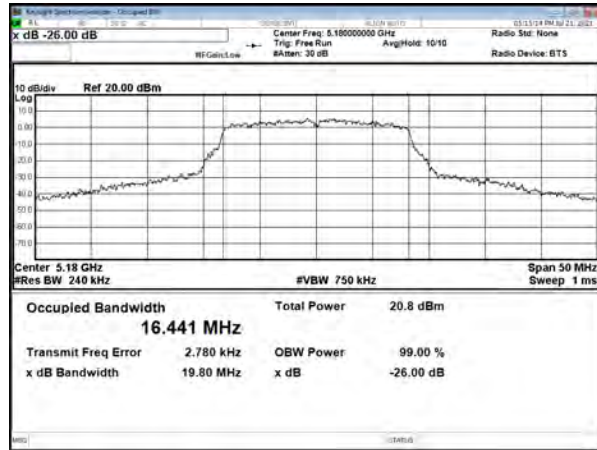


ANT B

26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

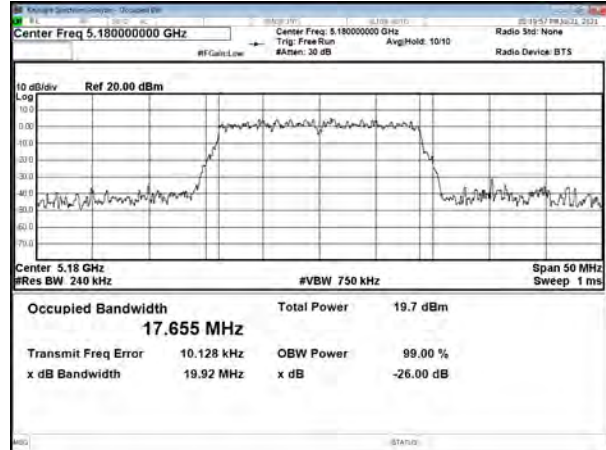
Modulation Standard: 802.11a (6Mbps)

CH36



Modulation Standard: 802.11ac VHT20 (6.5Mbps)

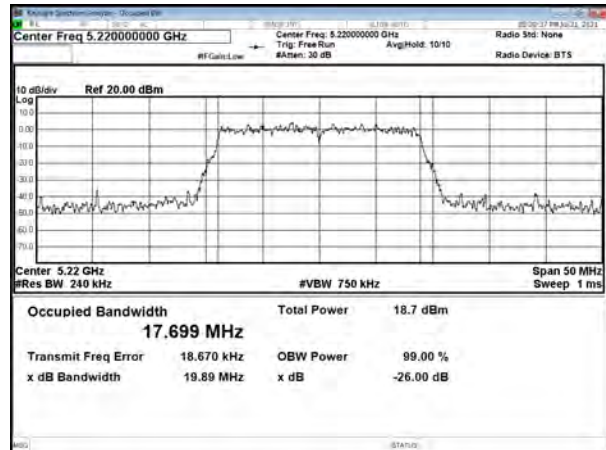
CH36



CH44



CH44



CH48



CH48

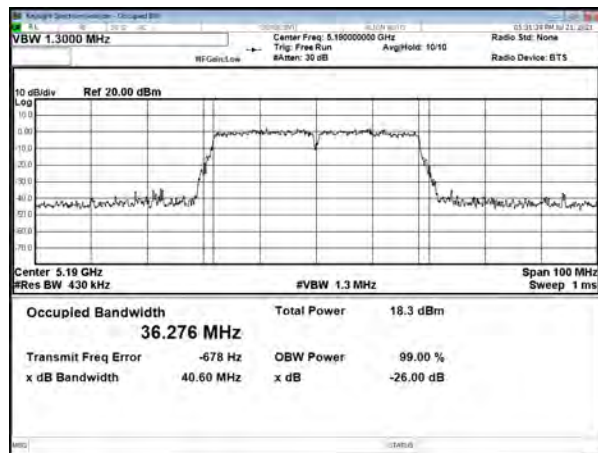




26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

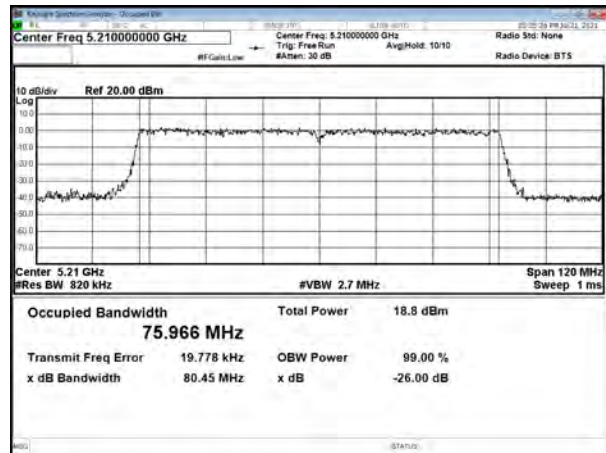
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

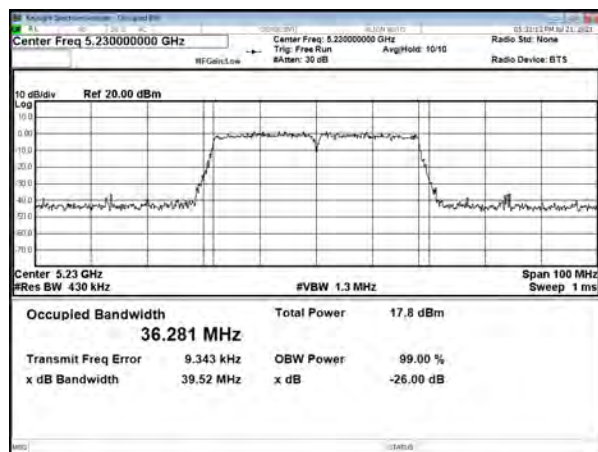


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46





26dB Bandwidth & 99% Occupied Bandwidth, UNII-2A

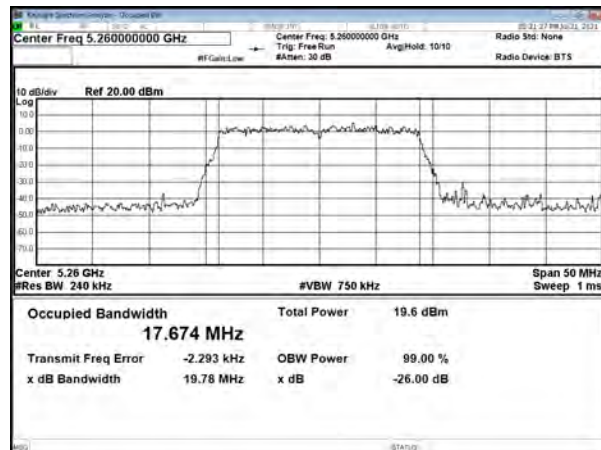
Modulation Standard: 802.11a (6Mbps)

CH52

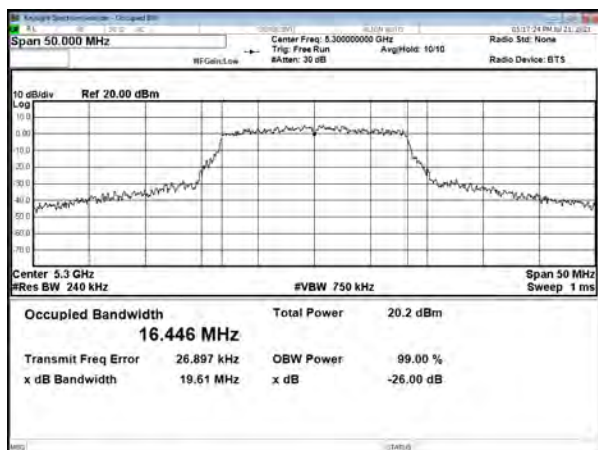


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

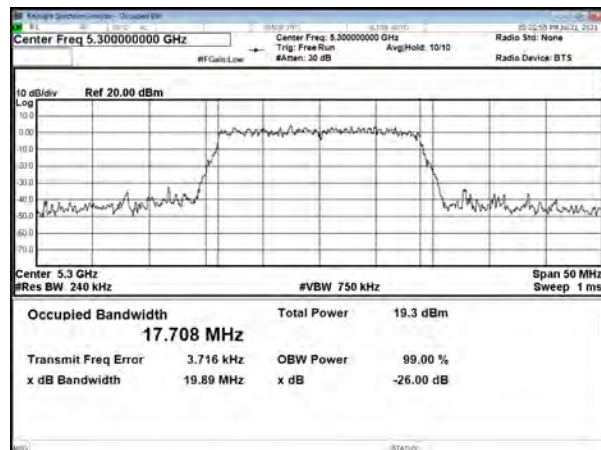
CH52



CH60



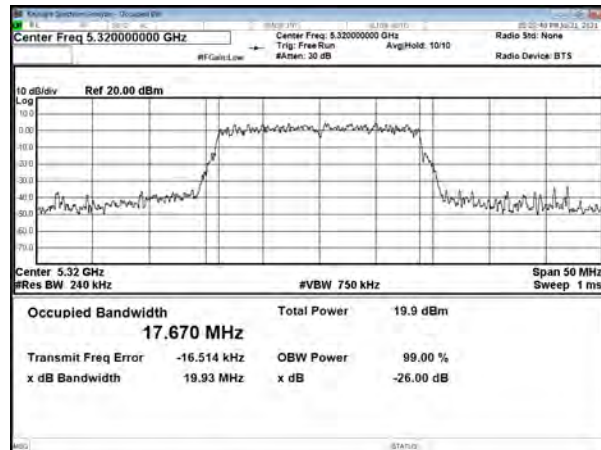
CH60



CH64



CH64





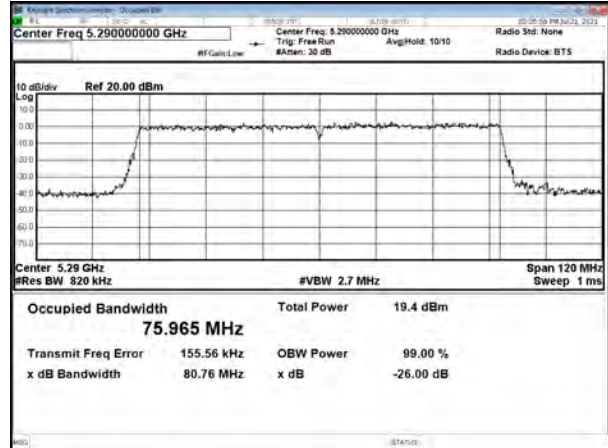
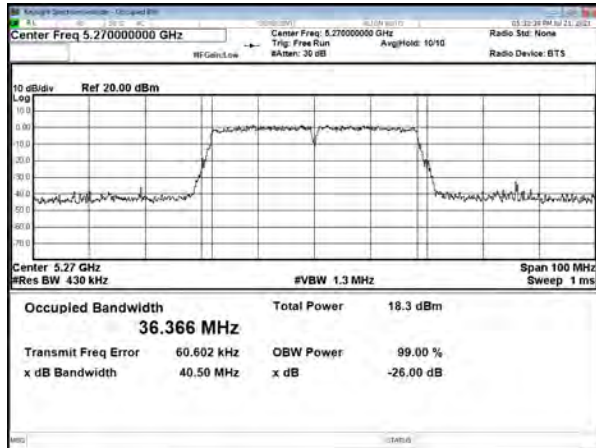
26dB Bandwidth & 99% Occupied Bandwidth, UNII-2A

Modulation Standard: 802.11ac VHT40 (13.5Mbps)

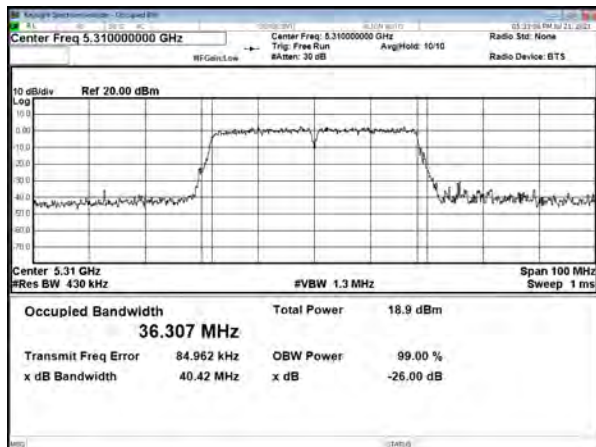
Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH54

CH58



CH62





26dB Bandwidth & 99% Occupied Bandwidth, UNII-2C

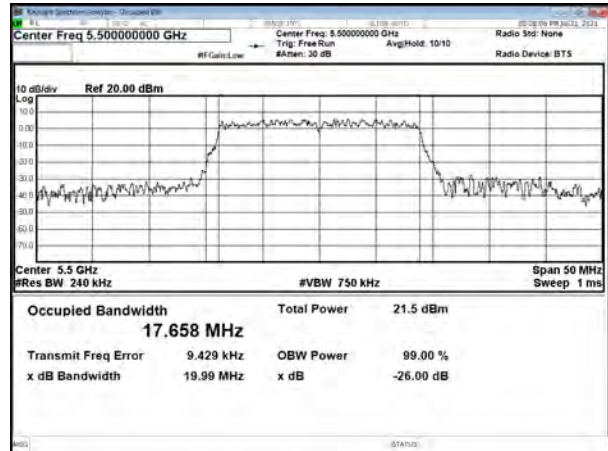
Modulation Standard: 802.11a (6Mbps)

CH100



Modulation Standard: 802.11ac VHT20 (6.5Mbps)

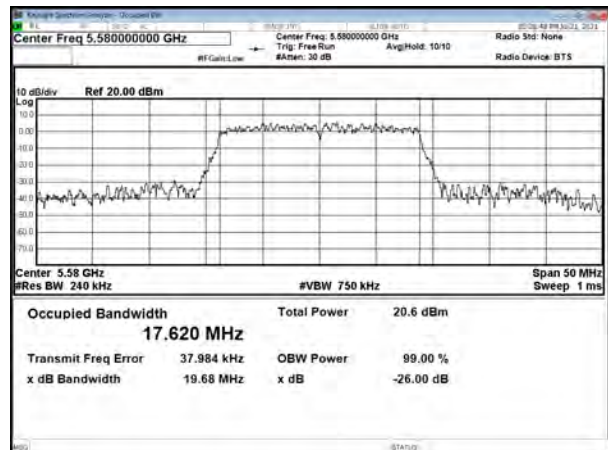
CH100



CH116



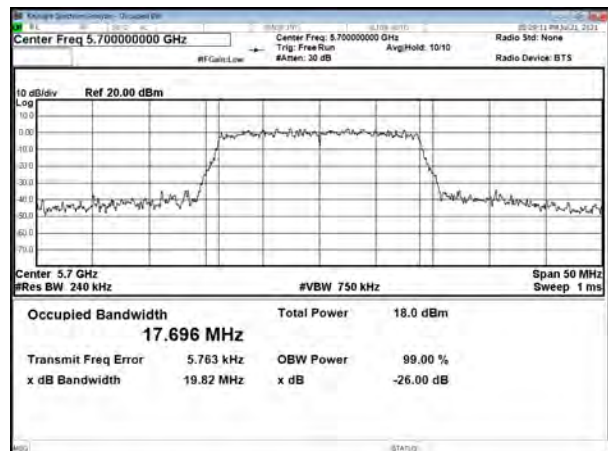
CH116



CH140



CH140

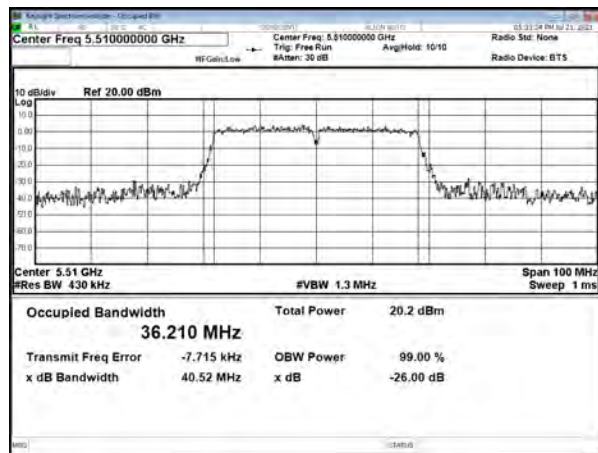




26dB Bandwidth & 99% Occupied Bandwidth, UNII-2C

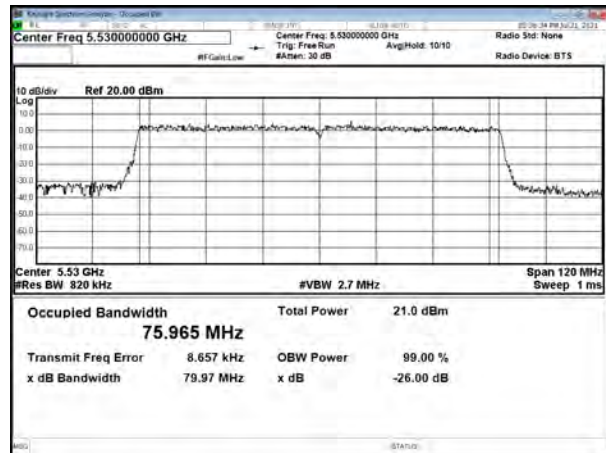
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH102

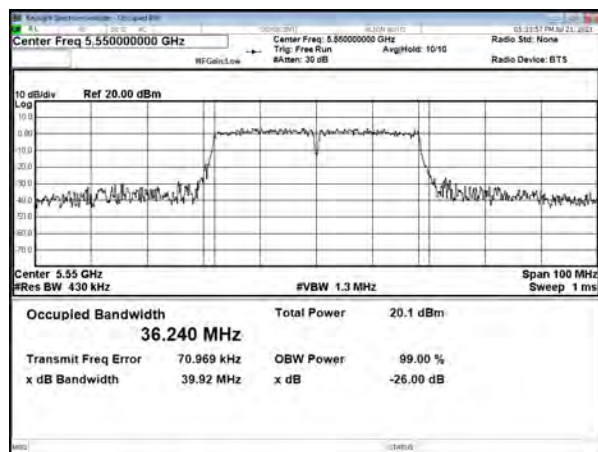


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

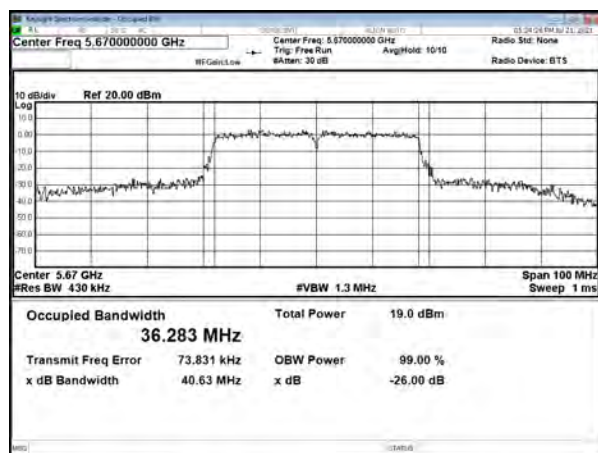
CH106



CH1110



CH134





10. Average Power

10.1. Test Limit

Output Power:

Frequency Band		Limit
☒	5.15~5.25GHz	
	Operating Mode	
☐	Outdoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. 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 30degrees as measured from the horizon must not exceed 125 mW (21 dBm).
☐	Indoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. 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.
☐	Fixed point-to-point access points	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). 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.
☒	client devices	The maximum conducted output power over the frequency band of operation shall not exceed 250 mW (24dBm) provided the maximum antenna gain does not exceed 6 dBi. 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.



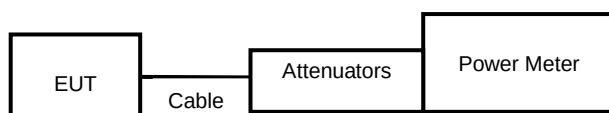
Frequency Band		Limit
☒	5.25-5.35 GHz	The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm $10 \log B$, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are 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.
☒	5.470-5.725 GHz	
☒	5.725~5.85 GHz	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

10.2.Test Procedure

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

10.3.Test Setup Layout



**10.4. Test Result and Data****In the 5.2G Band**

Modulation Type	Data Rate	Setting	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
					ANT A	ANT B	A+B	A+B	
11a	6 Mbps	62	36	5180	14.39	13.48	16.97	49.763	24.00
11a	6 Mbps	62	44	5220	13.78	14.79	17.32	54.008	24.00
11a	6 Mbps	62	48	5240	13.86	15.19	17.59	57.359	24.00
11n HT20	MCS 0	62	36	5180	12.06	12.17	15.13	32.551	24.00
11n HT20	MCS 0	62	44	5220	12.17	13.11	15.68	36.946	24.00
11n HT20	MCS 0	62	48	5240	12.21	13.54	15.94	39.228	24.00
11n HT40	MCS 0	62	38	5190	10.30	10.50	13.41	21.935	24.00
11n HT40	MCS 0	62	46	5230	10.15	10.54	13.36	21.675	24.00
11ac VHT20	NSS1-MCS0	62	36	5180	13.03	12.41	15.74	37.509	24.00
11ac VHT20	NSS1-MCS0	62	44	5220	12.46	13.16	15.83	38.321	24.00
11ac VHT20	NSS1-MCS0	62	48	5240	12.40	13.69	16.10	40.766	24.00
11ac VHT40	NSS1-MCS0	62	38	5190	10.48	10.58	13.54	22.597	24.00
11ac VHT40	NSS1-MCS0	62	46	5230	10.50	10.61	13.57	22.728	24.00
11ac VHT80	NSS1-MCS0	62	42	5210	10.28	10.90	13.61	22.969	24.00

In the 5.3G Band

Modulation Type	Data Rate	Setting	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
					ANT A	ANT B	A+B	A+B	
11a	6 Mbps	62	52	5260	13.99	15.35	17.73	59.338	23.88
11a	6 Mbps	62	60	5300	14.62	14.81	17.73	59.243	23.92
11a	6 Mbps	62	64	5320	15.39	14.69	18.06	64.038	23.79
11n HT20	MCS 0	62	52	5260	12.27	13.35	15.85	38.493	24.00
11n HT20	MCS 0	62	60	5300	12.90	13.48	16.21	41.783	24.00
11n HT20	MCS 0	62	64	5320	13.48	13.40	16.45	44.162	24.00
11n HT40	MCS 0	62	54	5270	10.94	12.25	14.65	29.205	24.00
11n HT40	MCS 0	62	62	5310	11.27	11.52	14.41	27.587	24.00
11ac VHT20	NSS1-MCS0	62	52	5260	12.65	13.86	16.31	42.730	23.96
11ac VHT20	NSS1-MCS0	62	60	5300	13.12	13.61	16.38	43.473	23.99
11ac VHT20	NSS1-MCS0	62	64	5320	13.93	13.61	16.78	47.679	24.00
11ac VHT40	NSS1-MCS0	62	54	5270	11.04	12.40	14.78	30.084	24.00
11ac VHT40	NSS1-MCS0	62	62	5310	11.59	11.63	14.62	28.976	24.00
11ac VHT80	NSS1-MCS0	62	58	5290	10.80	11.35	14.09	25.668	24.00

In the 5.5G Band

Modulation Type	Data Rate	Setting	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
					ANT A	ANT B	A+B	A+B	
11a	6 Mbps	62	100	5500	16.21	15.08	18.69	73.994	23.90
11a	6 Mbps	62	116	5580	15.48	16.73	19.16	82.416	23.85
11a	6 Mbps	62	140	5700	12.77	14.46	16.71	46.849	23.88
11n HT20	MCS 0	62	100	5500	14.18	13.75	16.98	49.896	24.00
11n HT20	MCS 0	62	116	5580	14.07	14.76	17.44	55.450	24.00
11n HT20	MCS 0	62	140	5700	11.30	13.07	15.28	33.766	24.00
11n HT40	MCS 0	62	102	5510	12.04	11.47	14.77	30.024	24.00
11n HT40	MCS 0	62	110	5550	12.18	12.25	15.23	33.308	24.00
11n HT40	MCS 0	62	134	5670	11.33	13.08	15.30	33.907	24.00
11ac VHT20	NSS1-MCS0	62	100	5500	14.54	13.83	17.21	52.599	24.00
11ac VHT20	NSS1-MCS0	62	116	5580	14.17	15.04	17.64	58.037	23.94
11ac VHT20	NSS1-MCS0	62	140	5700	11.48	13.23	15.45	35.098	23.95
11ac VHT40	NSS1-MCS0	62	102	5510	12.19	11.64	14.93	31.146	24.00
11ac VHT40	NSS1-MCS0	62	110	5550	12.37	12.38	15.39	34.557	24.00
11ac VHT40	NSS1-MCS0	62	134	5670	11.74	13.14	15.51	35.534	24.00
11ac VHT80	NSS1-MCS0	62	106	5530	12.31	11.43	14.90	30.921	24.00

**In the 5.8G Band**

Modulation Type	Data Rate	Setting	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
					ANT A	ANT B	A+B	A+B	
11a	6 Mbps	62	149	5745	10.34	14.30	15.77	37.730	30.00
11a	6 Mbps	62	157	5785	10.21	15.14	16.35	43.154	30.00
11a	6 Mbps	62	165	5825	10.36	16.20	17.21	52.551	30.00
11n HT20	MCS 0	62	149	5745	8.99	12.95	14.42	27.649	30.00
11n HT20	MCS 0	62	157	5785	8.51	13.38	14.60	28.873	30.00
11n HT20	MCS 0	62	165	5825	9.04	15.00	15.98	39.640	30.00
11n HT40	MCS 0	62	151	5755	8.64	10.37	12.60	18.201	30.00
11n HT40	MCS 0	62	159	5795	7.29	11.26	12.72	18.724	30.00
11ac VHT20	NSS1-MCS0	62	149	5745	9.04	13.07	14.52	28.294	30.00
11ac VHT20	NSS1-MCS0	62	157	5785	8.79	13.86	15.04	31.890	30.00
11ac VHT20	NSS1-MCS0	62	165	5825	9.07	15.21	16.16	41.262	30.00
11ac VHT40	NSS1-MCS0	62	151	5755	8.77	10.97	13.02	20.027	30.00
11ac VHT40	NSS1-MCS0	62	159	5795	7.58	11.93	13.29	21.323	30.00
11ac VHT80	NSS1-MCS0	62	155	5775	6.66	11.48	12.72	18.695	30.00



11. Maximum Power Spectral Density

11.1. Test Limit

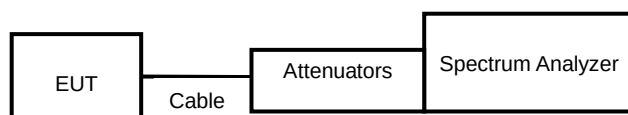
PSD:

Frequency Band		Limit
☒	5.15~5.25GHz	
	Operating Mode	
☐	Outdoor access point	17 dBm/MHz
☐	Indoor access point	17 dBm/MHz
☐	Fixed point-to-point access points	17 dBm/MHz
☒	client devices	11 dBm/MHz
☒	5.250~5.350 GHz	11 dBm/MHz
☒	5.470~5.725 GHz	11 dBm/MHz
☒	5.725~5.85 GHz	30 dBm/500kHz

11.2. Test Procedure

Reference to KDB789033 D02 General UNII Test Procedures New Rules v02r01

11.3. Test Setup Layout



**11.4. Test Result and Data****In the 5.2G Band**

Modulation Type	CH	Freq. (MHz)	Meas PPSP (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PPSP (dBm/MHz)	PPSP Limit (dBm/MHz)
			ANT A	ANT B				
11a	36	5180	2.54	3.47	6.04	0.54	6.58	10.28
11a	44	5220	2.57	3.03	5.82	0.54	6.36	10.28
11a	48	5240	2.87	2.78	5.83	0.54	6.37	10.28
11ac VHT20	36	5180	-0.96	-0.09	2.51	2.03	4.54	10.28
11ac VHT20	44	5220	-0.94	-0.45	2.32	2.03	4.35	10.28
11ac VHT20	48	5240	-0.88	-0.70	2.22	2.03	4.25	10.28
11ac VHT40	38	5190	-6.87	-5.78	-3.28	3.01	-0.27	10.28
11ac VHT40	46	5230	-6.35	-6.26	-3.30	3.01	-0.29	10.28
11ac VHT80	42	5210	-10.62	-9.43	-6.97	3.64	-3.33	10.28

In the 5.3G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSP (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PPSP (dBm/MHz)	PPSP Limit (dBm/MHz)
			ANT A	ANT B				
11a	52	5260	2.83	3.17	6.01	0.54	6.55	10.38
11a	60	5300	2.74	3.70	6.26	0.54	6.80	10.38
11a	64	5320	2.48	4.30	6.49	0.54	7.03	10.38
11ac VHT20	52	5260	-0.76	-0.41	2.43	2.03	4.46	10.38
11ac VHT20	60	5300	-1.12	0.14	2.57	2.03	4.60	10.38
11ac VHT20	64	5320	-1.29	0.58	2.76	2.03	4.79	10.38
11ac VHT40	54	5270	-6.86	-6.24	-3.52	3.01	-0.51	10.38
11ac VHT40	62	5310	-7.18	-5.39	-3.19	3.01	-0.18	10.38
11ac VHT80	58	5290	-11.07	-9.57	-7.25	3.64	-3.61	10.38

In the 5.5G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSP (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PPSP (dBm/MHz)	PPSP Limit (dBm/MHz)
			ANT A	ANT B				
11a	100	5500	2.00	5.04	6.79	0.54	7.33	10.54
11a	116	5580	2.57	4.59	6.71	0.54	7.25	10.54
11a	140	5700	0.91	1.98	4.49	0.54	5.03	10.54
11ac VHT20	100	5500	-1.56	1.66	3.36	2.03	5.39	10.54
11ac VHT20	116	5580	-1.16	0.96	3.04	2.03	5.07	10.54
11ac VHT20	140	5700	-2.68	-1.40	1.02	2.03	3.05	10.54
11ac VHT40	102	5510	-7.18	-4.18	-2.42	3.01	0.59	10.54
11ac VHT40	110	5550	-6.98	-4.27	-2.40	3.01	0.61	10.54
11ac VHT40	134	5670	-8.60	-5.63	-3.86	3.01	-0.85	10.54
11ac VHT80	106	5530	-11.00	-8.13	-6.32	3.64	-2.68	10.54

In the 5.8G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSP (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	10log(500K Hz/RBW) CF (dB)	Total Corr'd PPSP (dBm/500kHz)	PPSP Limit (dBm/500kHz)
			ANT A	ANT B					
11a	149	5745	0.05	3.30	4.98	0.54	-3.01	2.51	30.00
11a	157	5785	-0.15	3.99	5.41	0.54	-3.01	2.94	30.00
11a	165	5825	-0.20	4.98	6.13	0.54	-3.01	3.66	30.00
11ac VHT20	149	5745	-3.09	-0.08	1.68	2.03	-3.01	0.70	30.00
11ac VHT20	157	5785	-3.54	0.73	2.11	2.03	-3.01	1.13	30.00
11ac VHT20	165	5825	-3.46	1.66	2.82	2.03	-3.01	1.84	30.00
11ac VHT40	151	5755	-9.17	-6.06	-4.33	3.01	-3.01	-4.33	30.00
11ac VHT40	159	5795	-9.52	-5.16	-3.80	3.01	-3.01	-3.80	30.00
11ac VHT80	155	5775	-13.47	-9.52	-8.05	3.64	-3.01	-7.42	30.00

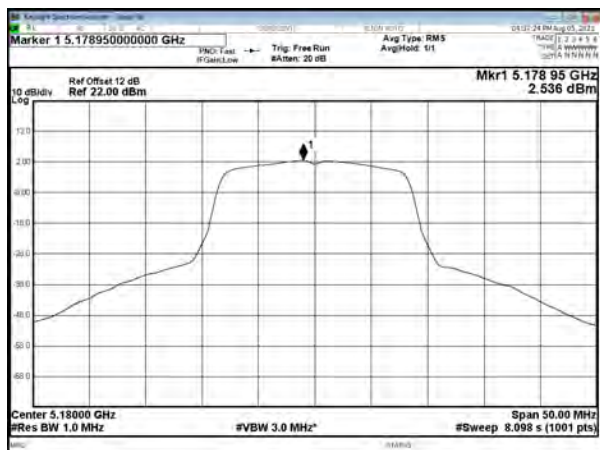


ANT A

5.2G, UNII-1

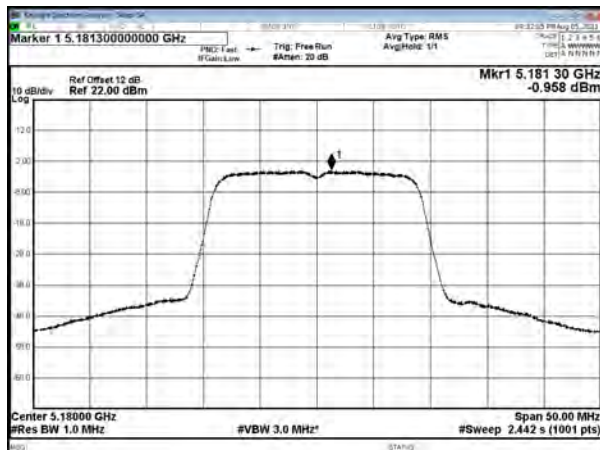
Modulation Standard: 802.11a (6Mbps)

CH36

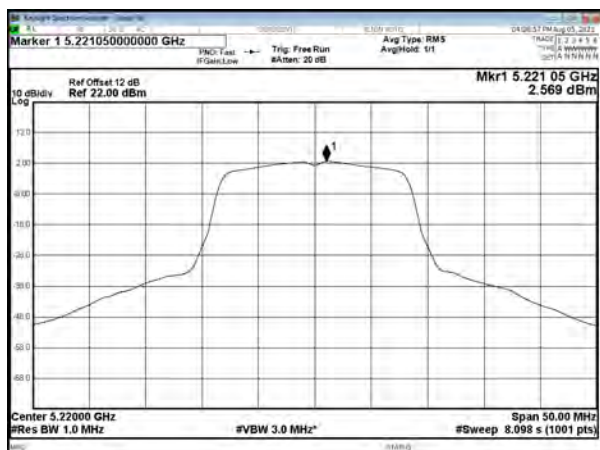


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

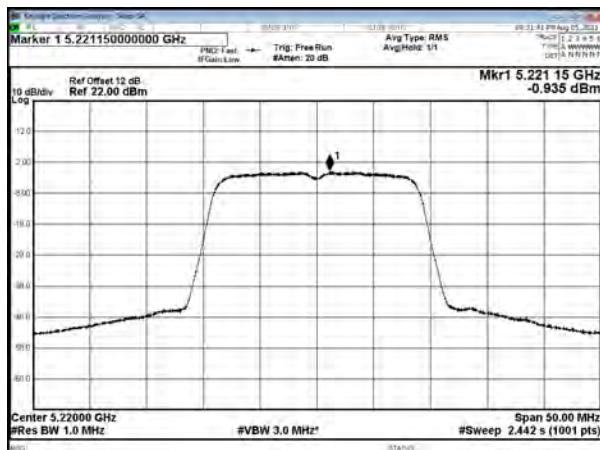
CH36



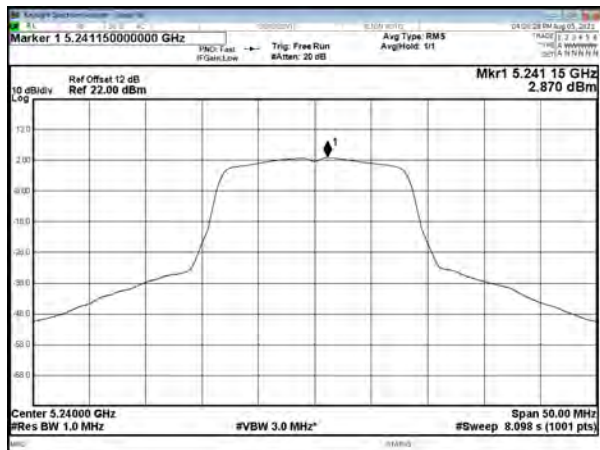
CH44



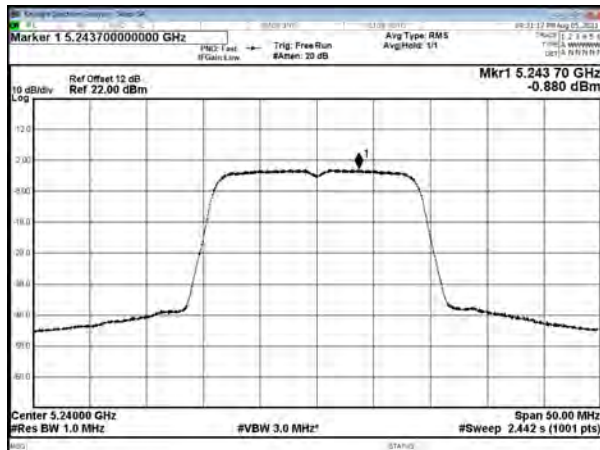
CH44



CH48



CH48

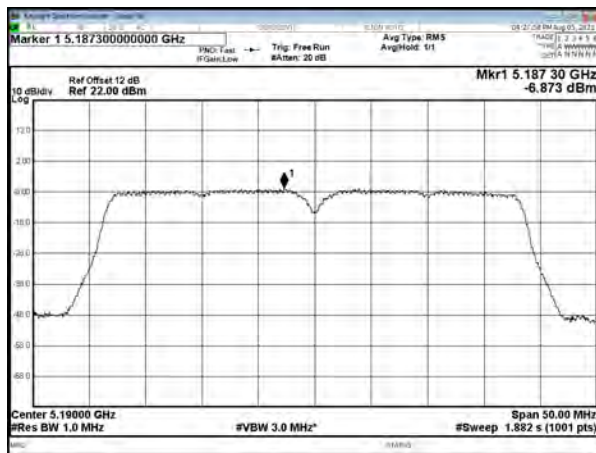




5.2G, UNII-1

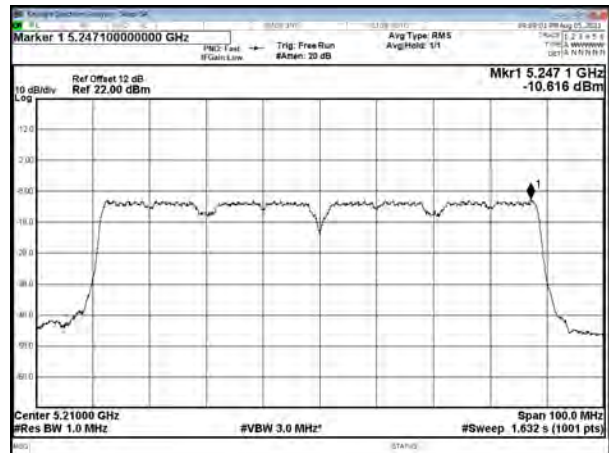
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

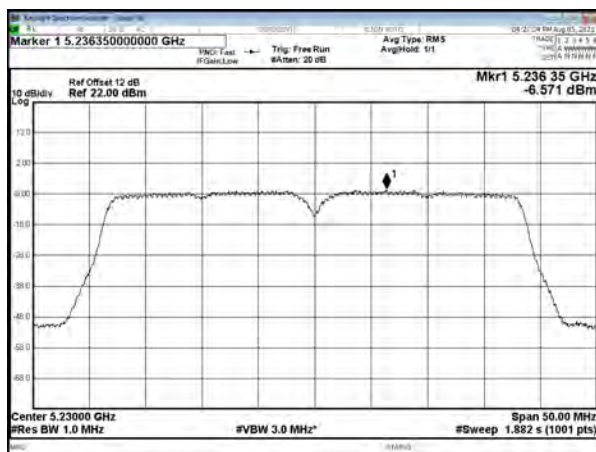


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46

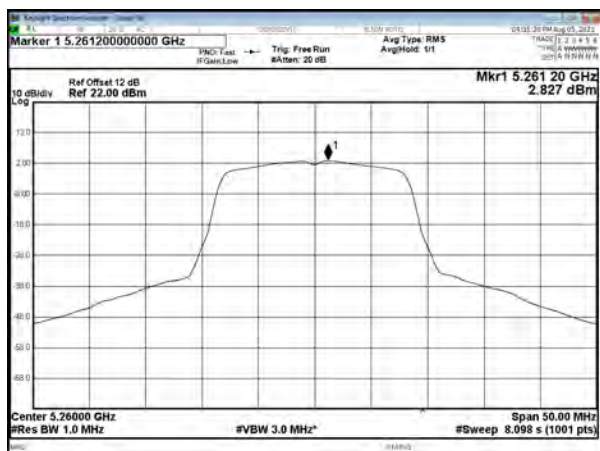




5.3G, UNII-2A

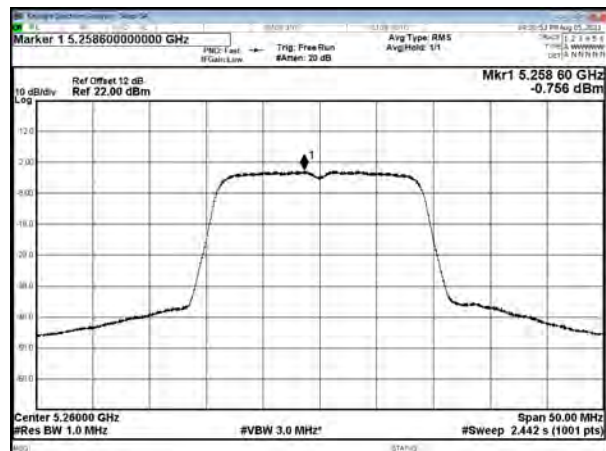
Modulation Standard: 802.11a (6Mbps)

CH52

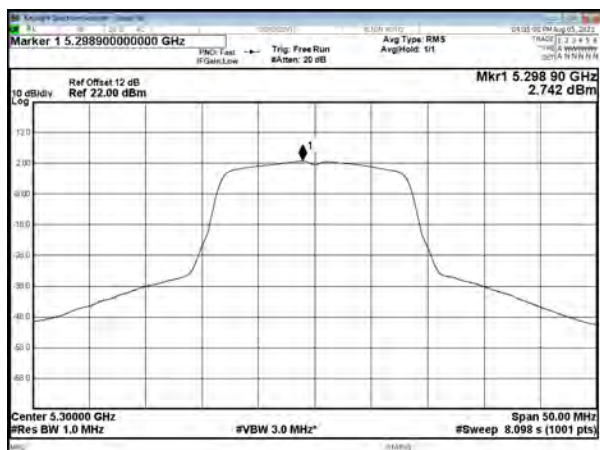


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

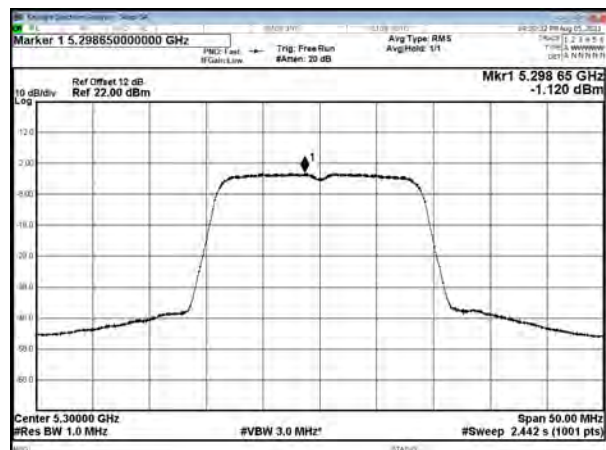
CH52



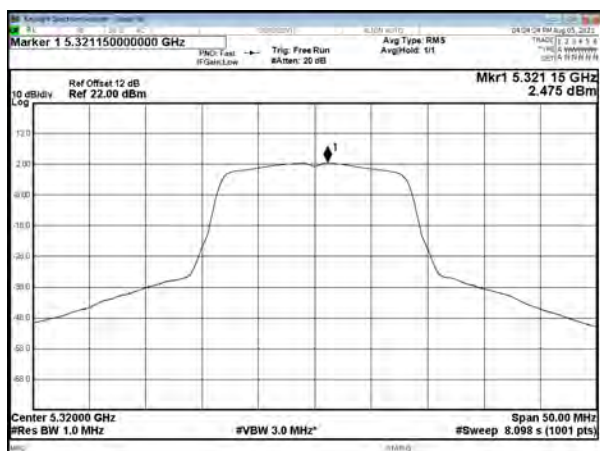
CH60



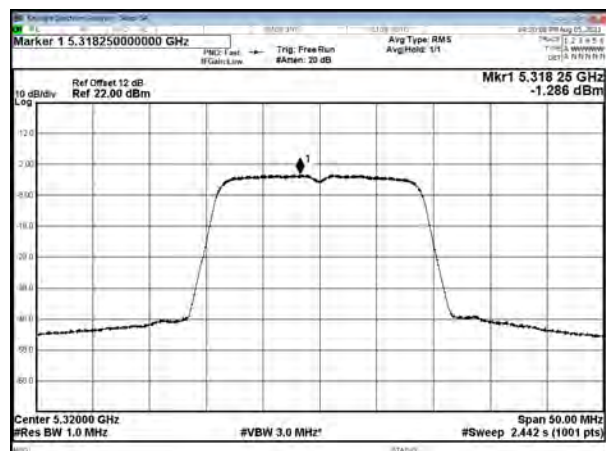
CH60



CH64



CH64

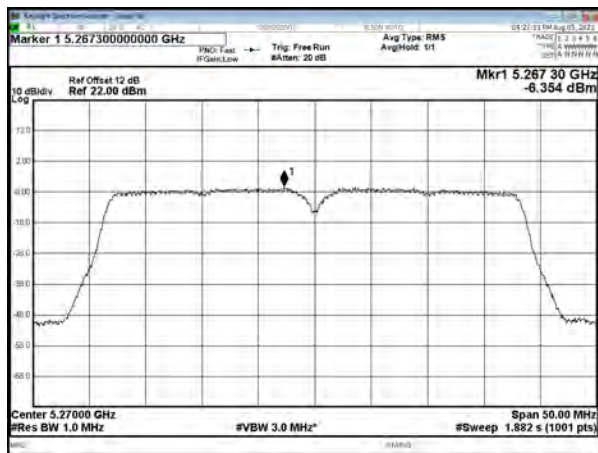




5.3G, UNII-2A

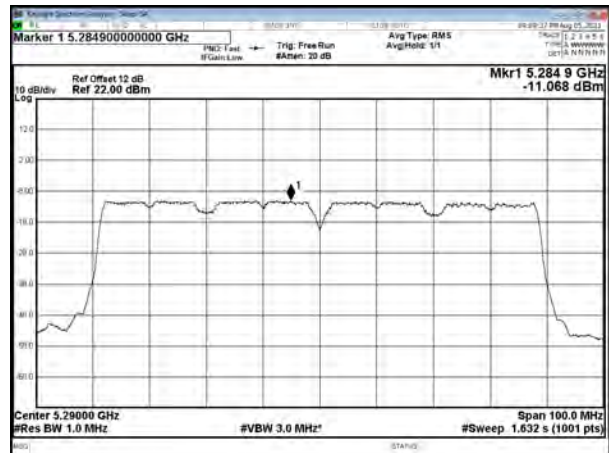
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH54

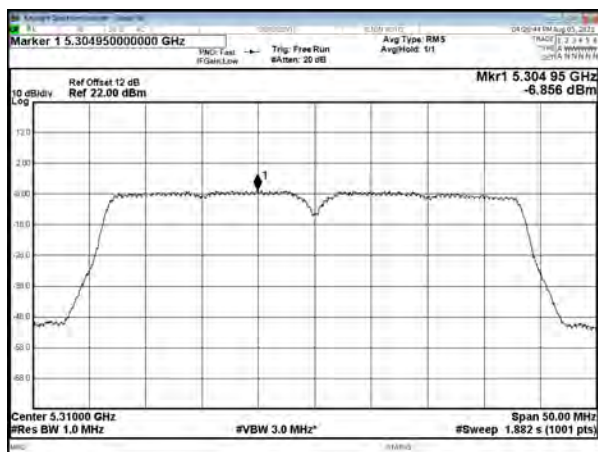


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH58



CH62

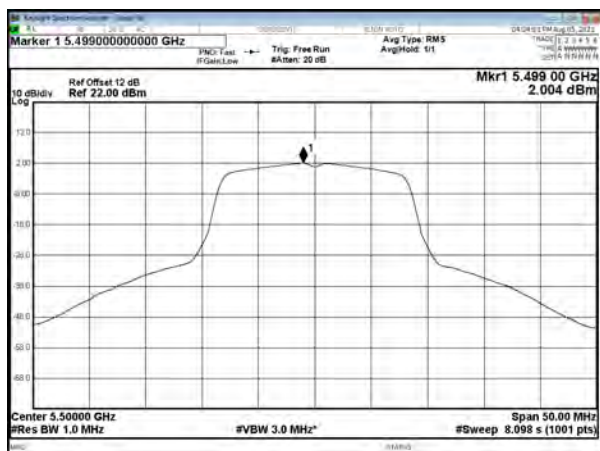




5.5G, UNII-2C

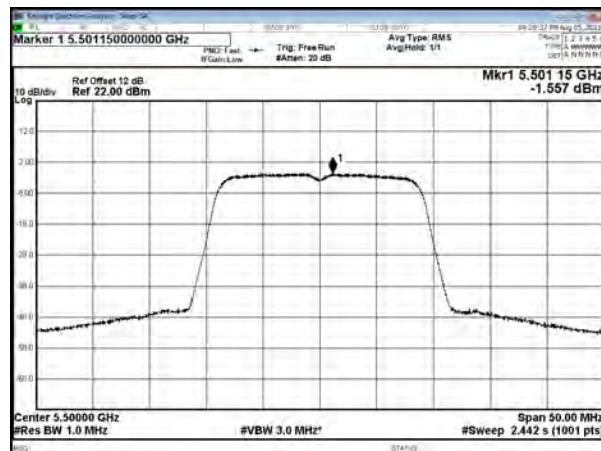
Modulation Standard: 802.11a (6Mbps)

CH100

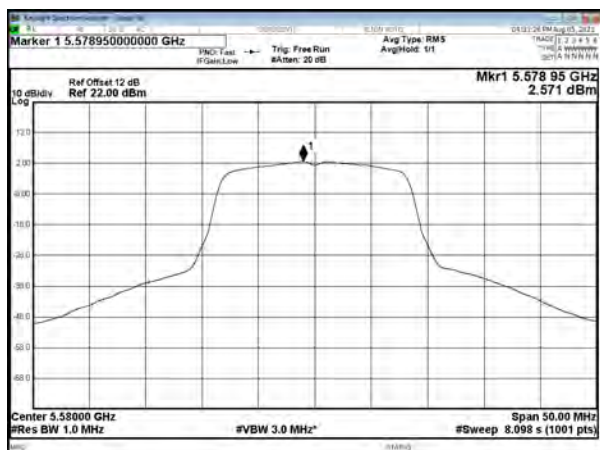


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

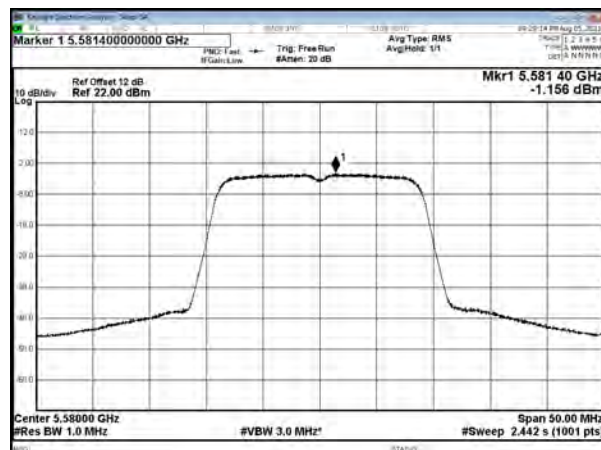
CH100



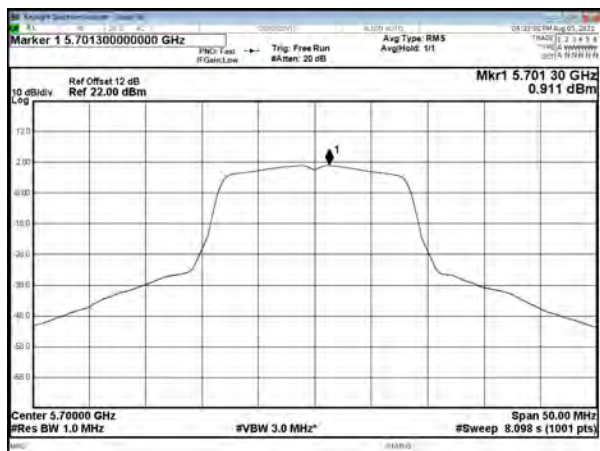
CH116



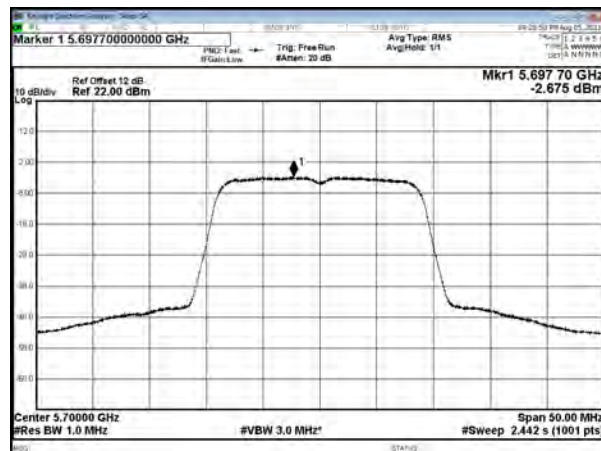
CH116



CH140



CH140

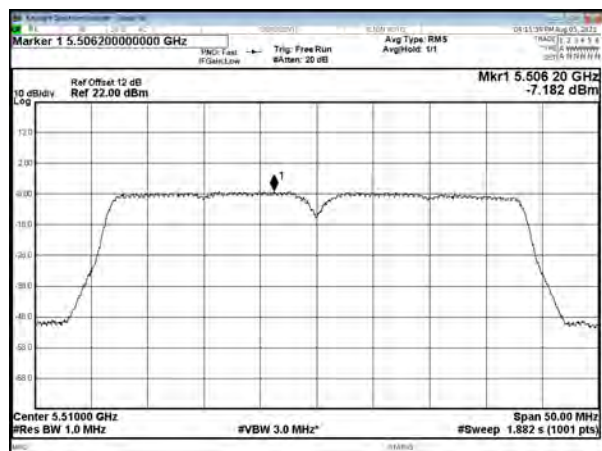




5.5G, UNII-2C

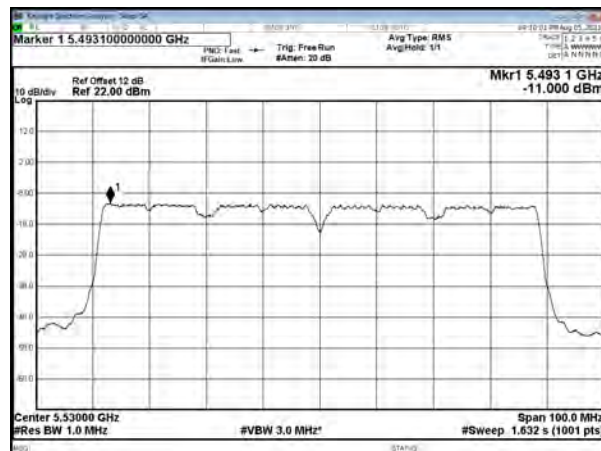
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH102

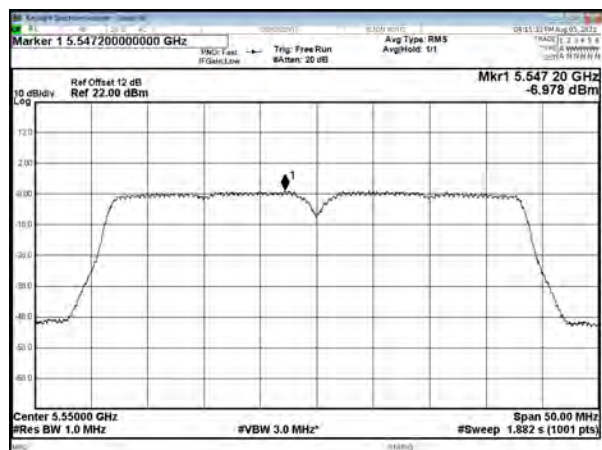


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

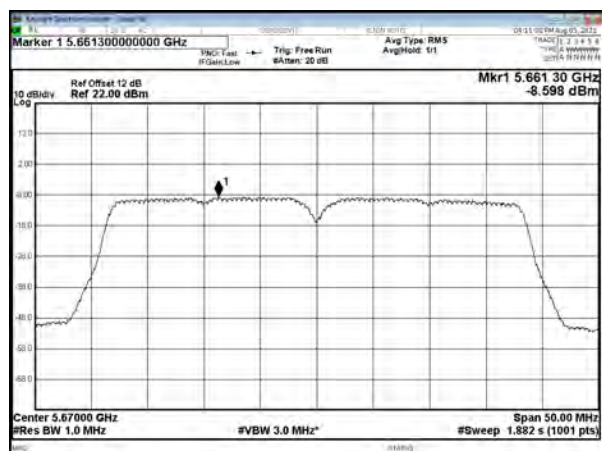
CH106



CH1110



CH134

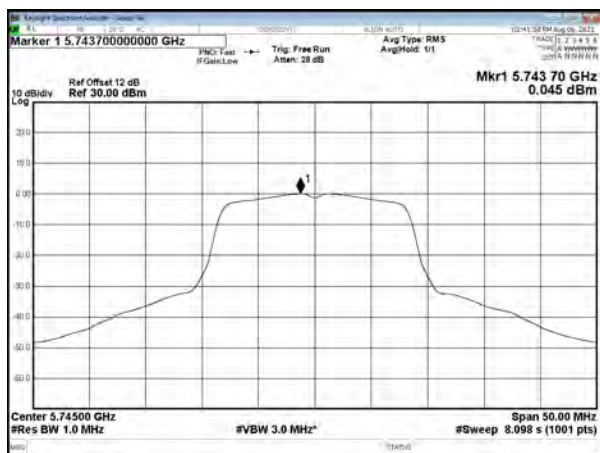




5.8G, UNII-3

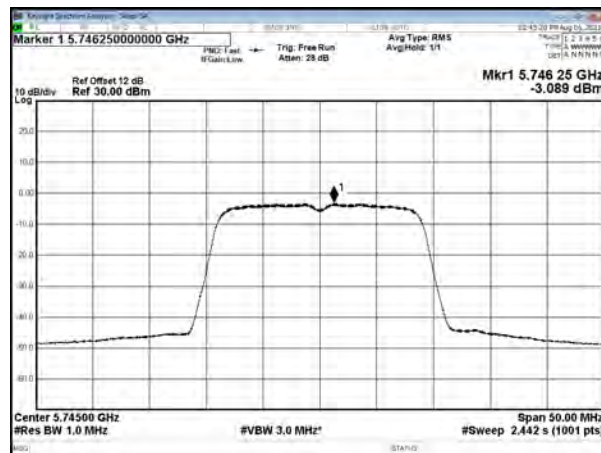
Modulation Standard: 802.11a (6Mbps)

CH149

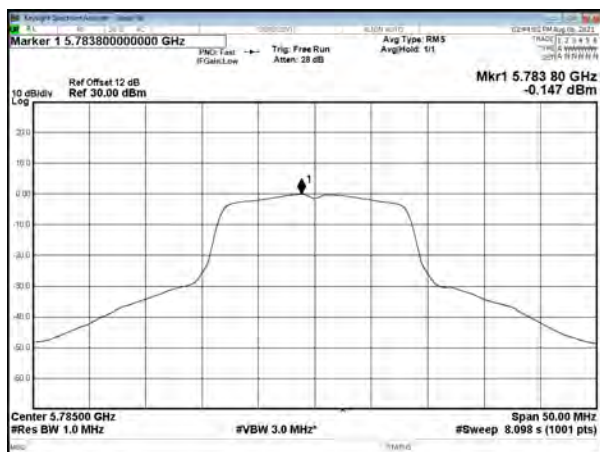


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

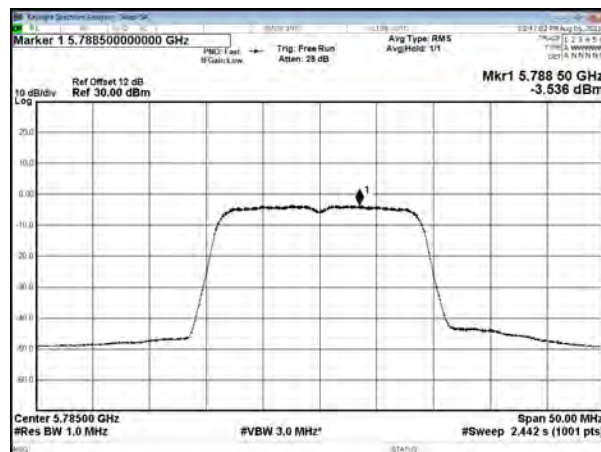
CH149



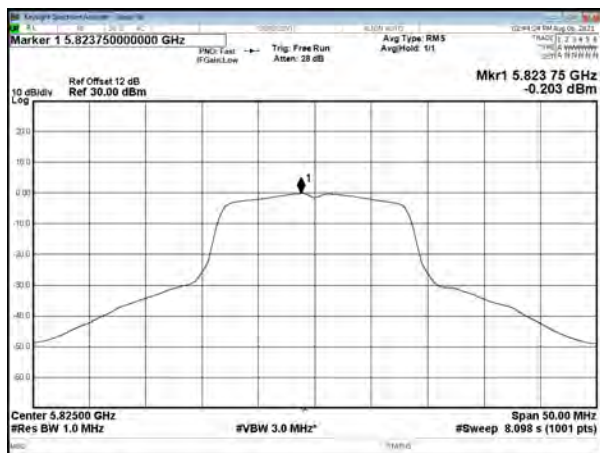
CH157



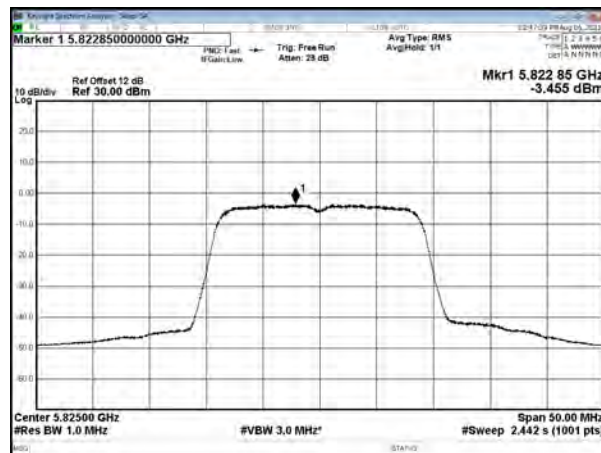
CH157



CH165



CH165

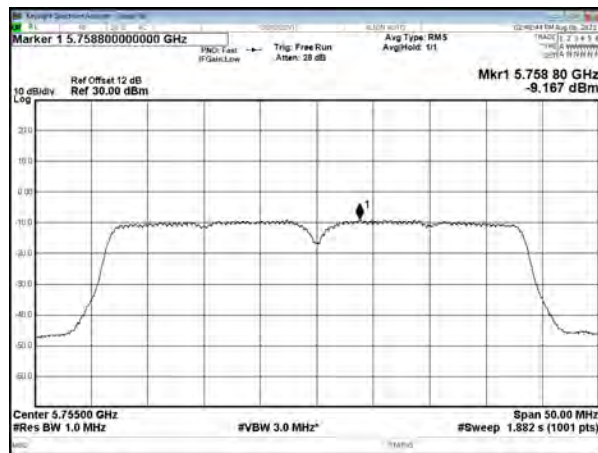




5.8G, UNII-3

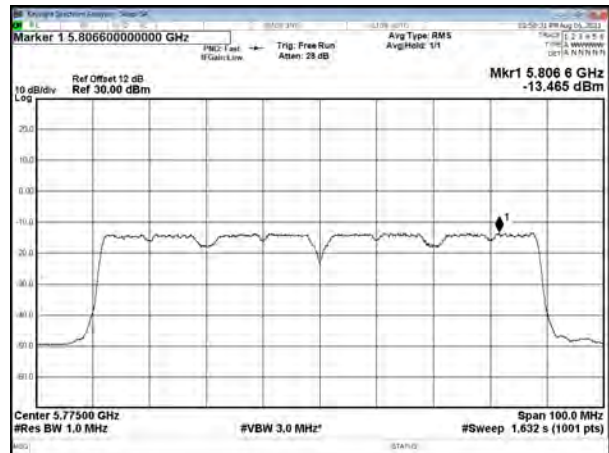
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH151

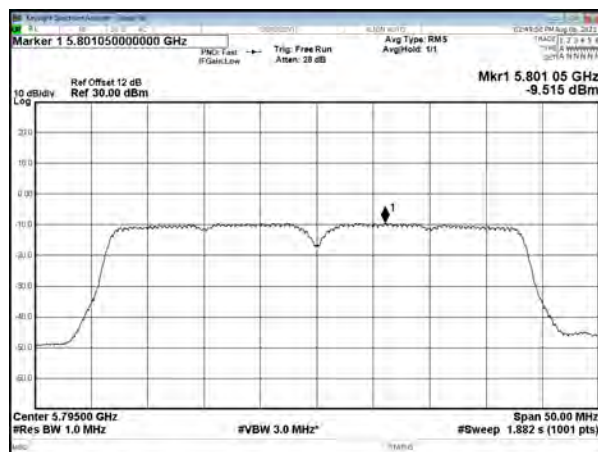


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH155



CH159



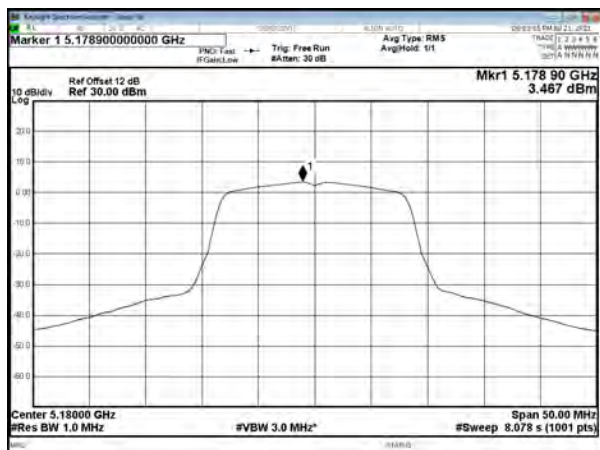


ANT B

5.2G, UNII-1

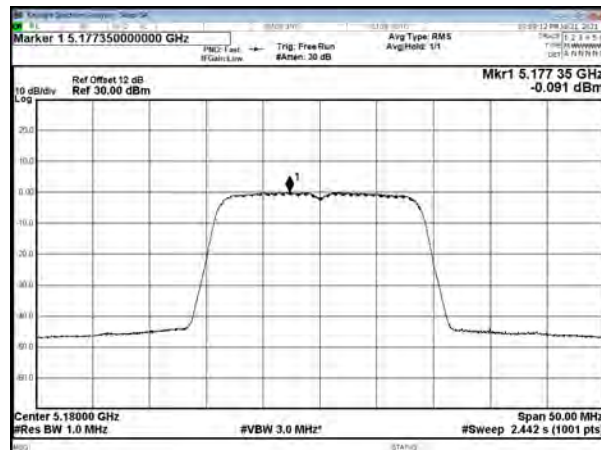
Modulation Standard: 802.11a (6Mbps)

CH36

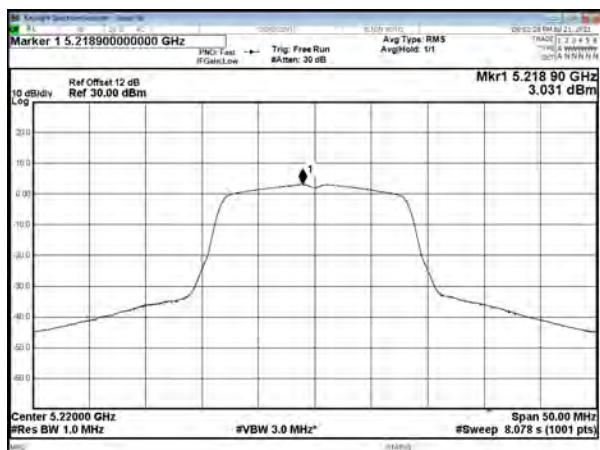


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

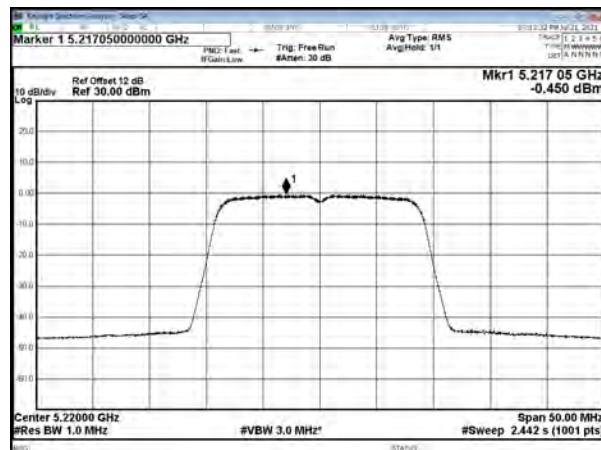
CH36



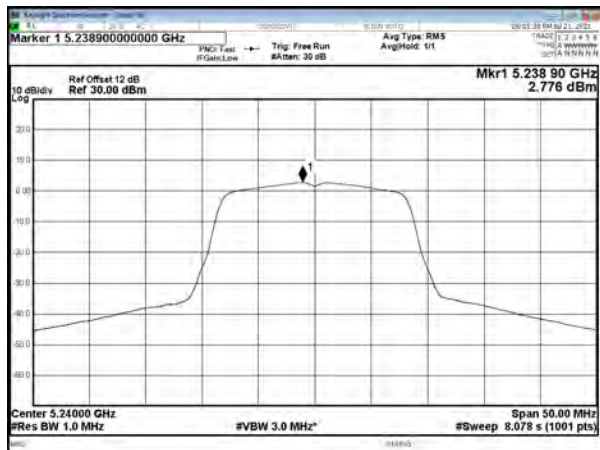
CH44



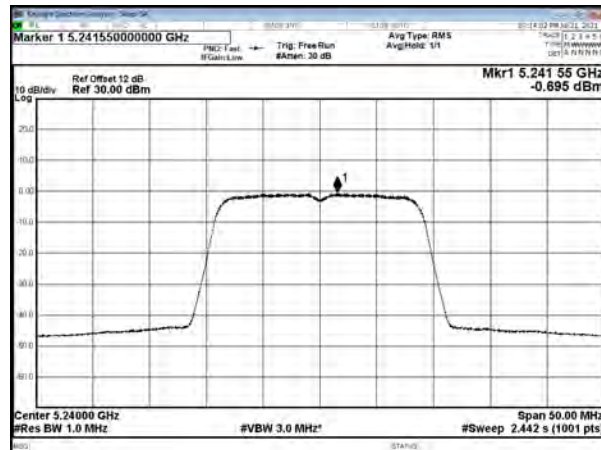
CH44



CH48



CH48

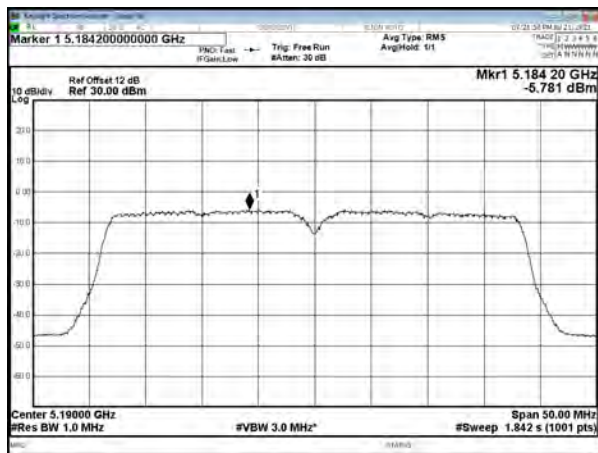




5.2G, UNII-1

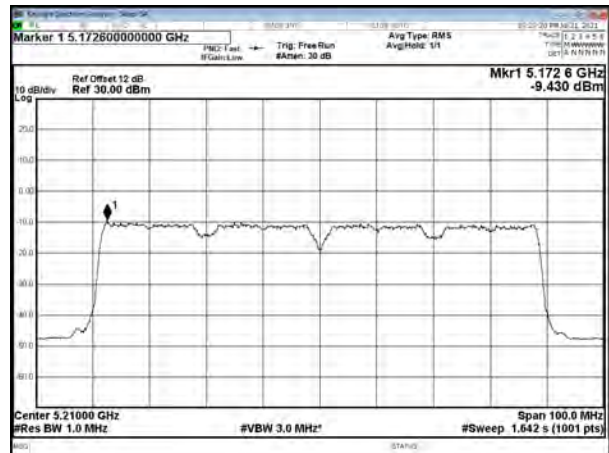
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

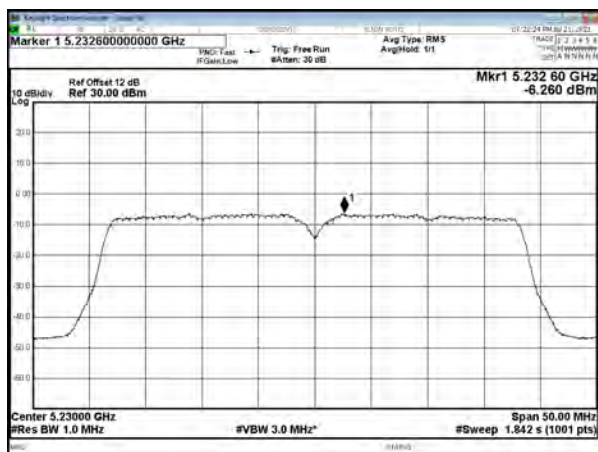


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46

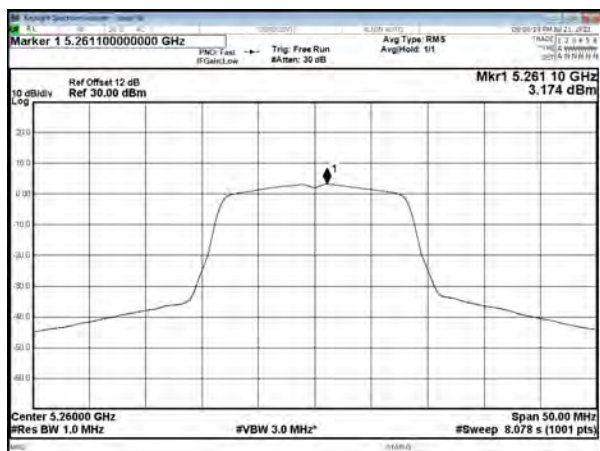




5.3G, UNII-2A

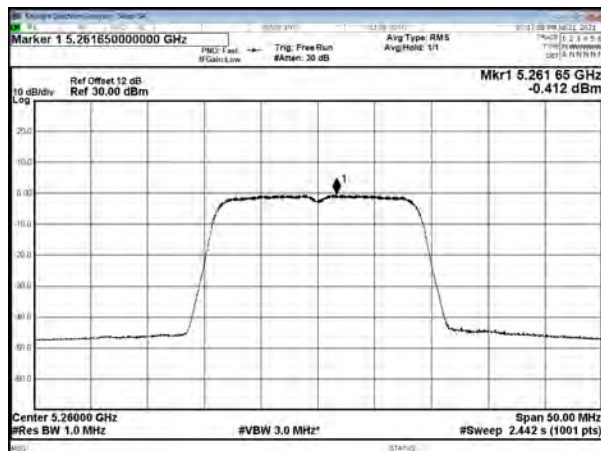
Modulation Standard: 802.11a (6Mbps)

CH52

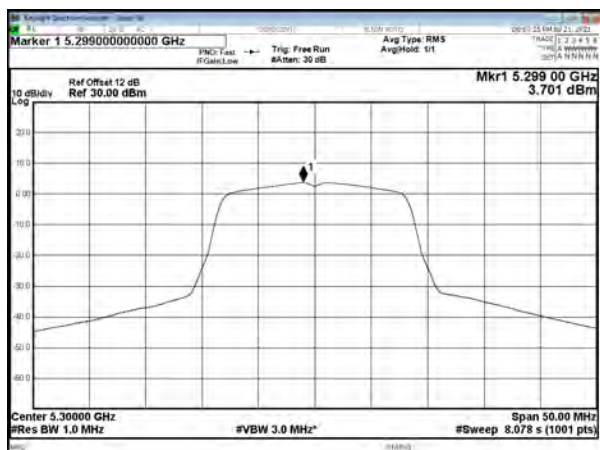


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

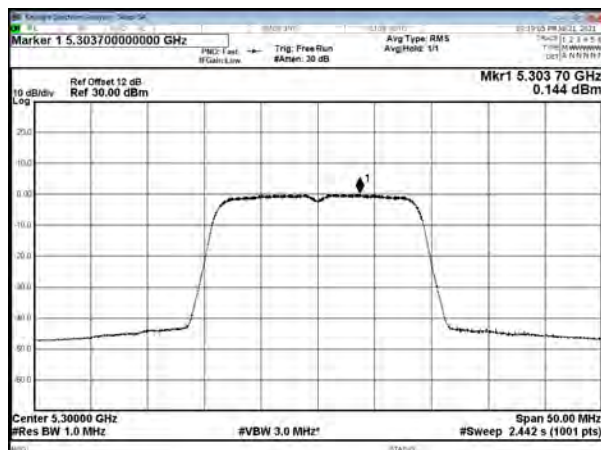
CH52



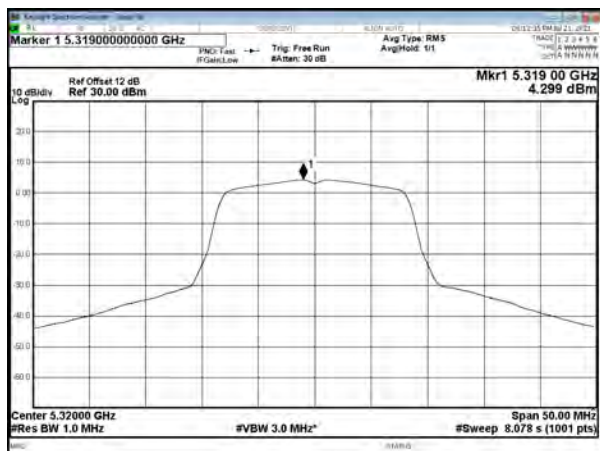
CH60



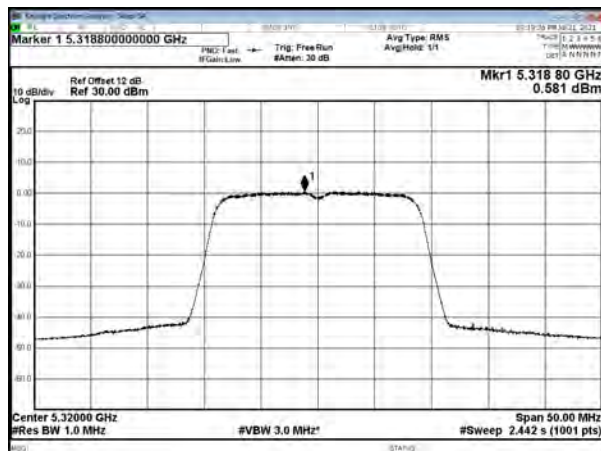
CH60



CH64



CH64

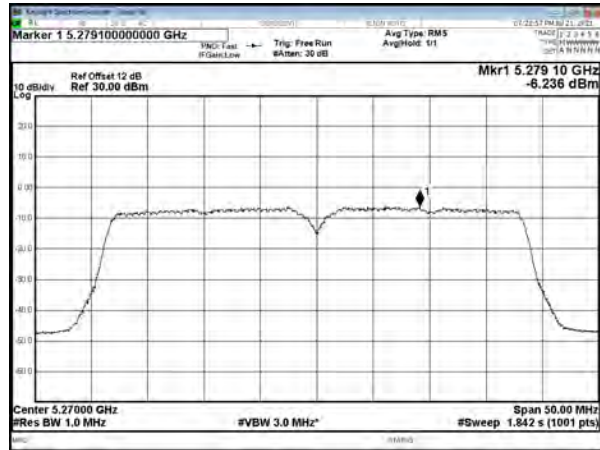




5.3G, UNII-2A

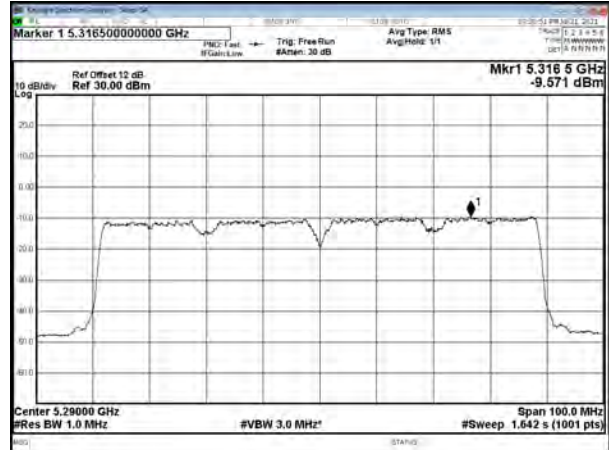
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH54

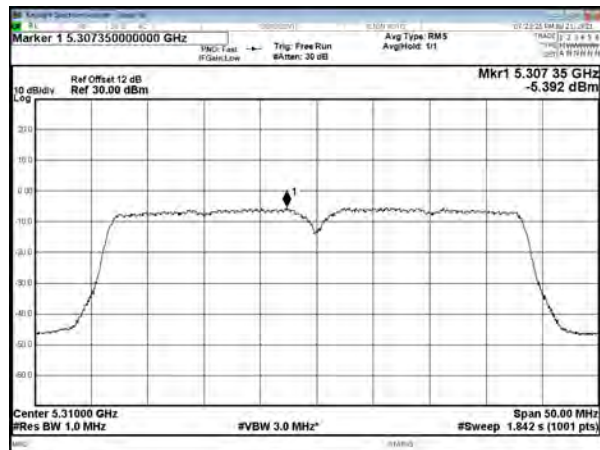


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH58



CH62

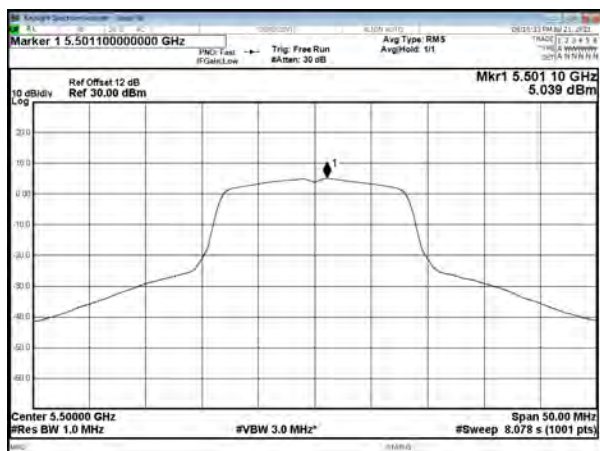




5.5G, UNII-2C

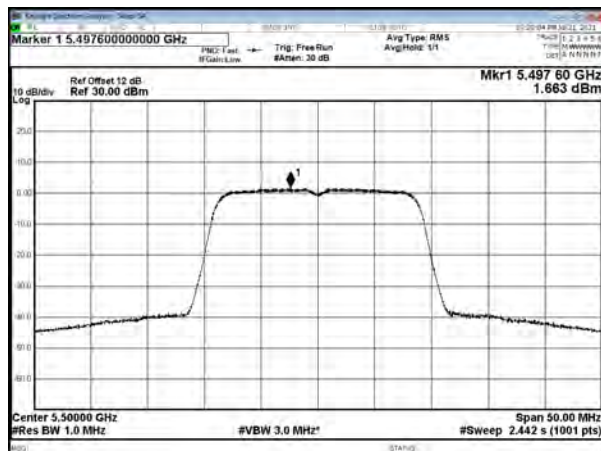
Modulation Standard: 802.11a (6Mbps)

CH100

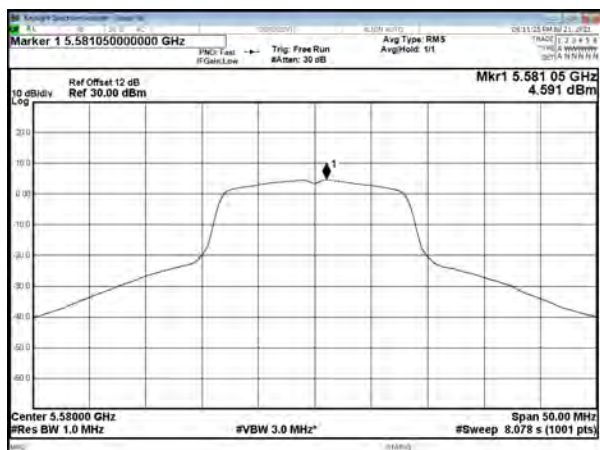


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

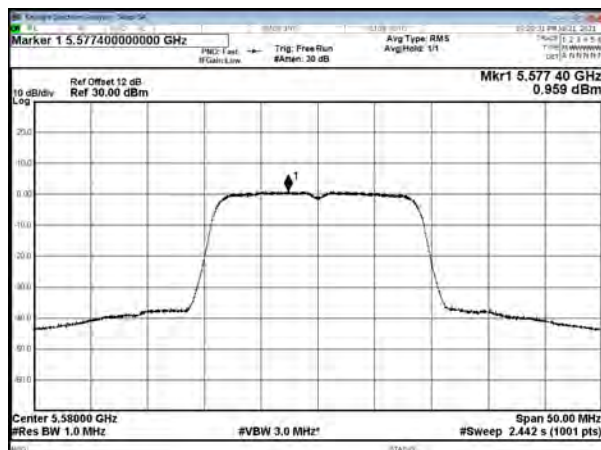
CH100



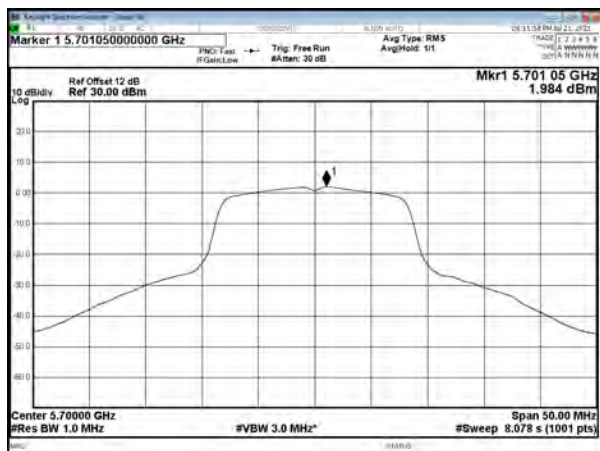
CH116



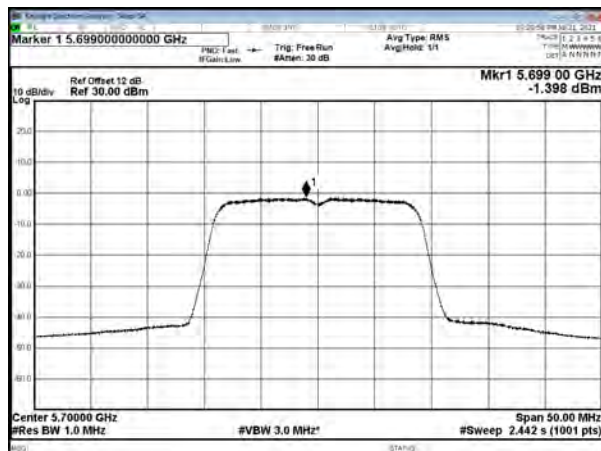
CH116



CH140



CH140

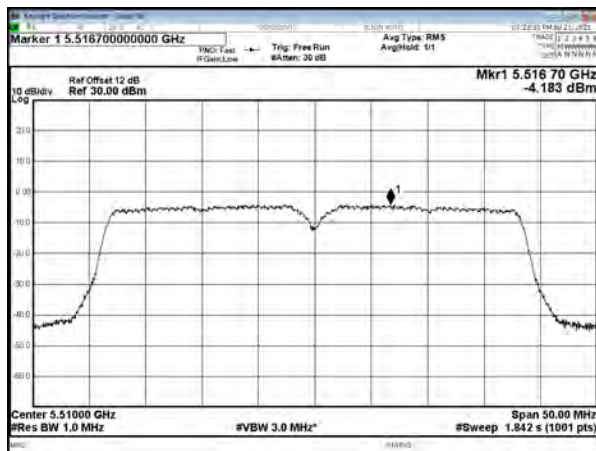




5.5G, UNII-2C

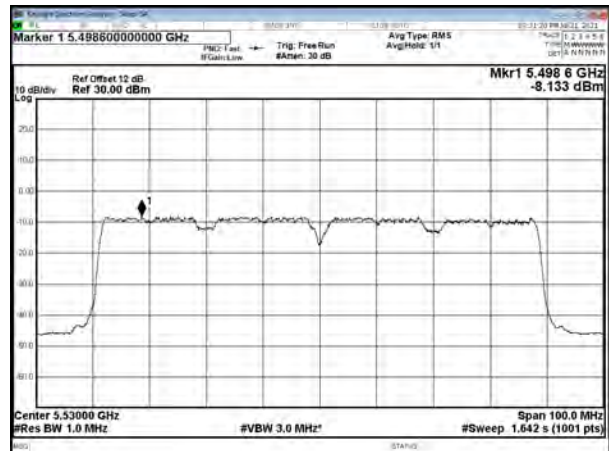
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH102

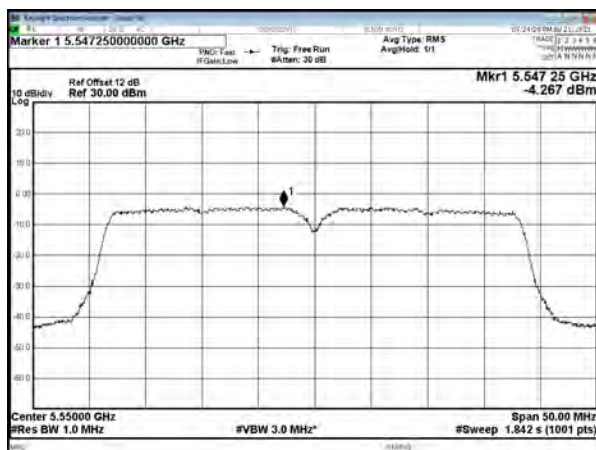


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

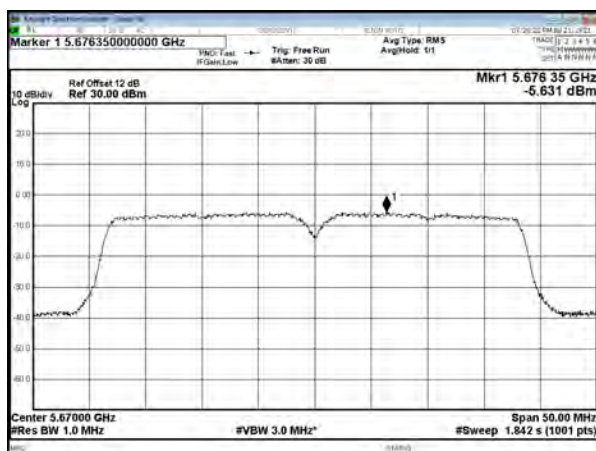
CH106



CH1110



CH134

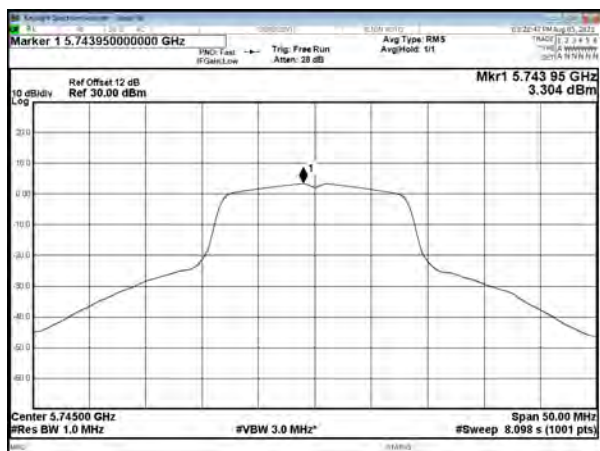




5.8G, UNII-3

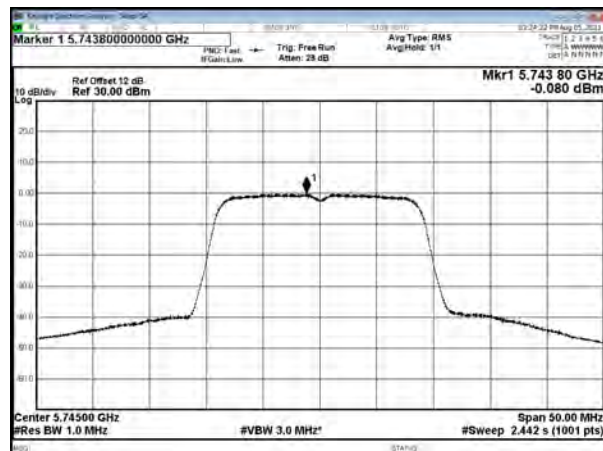
Modulation Standard: 802.11a (6Mbps)

CH149

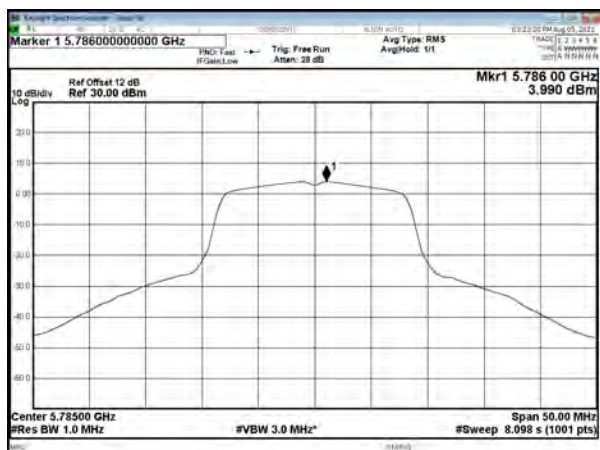


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

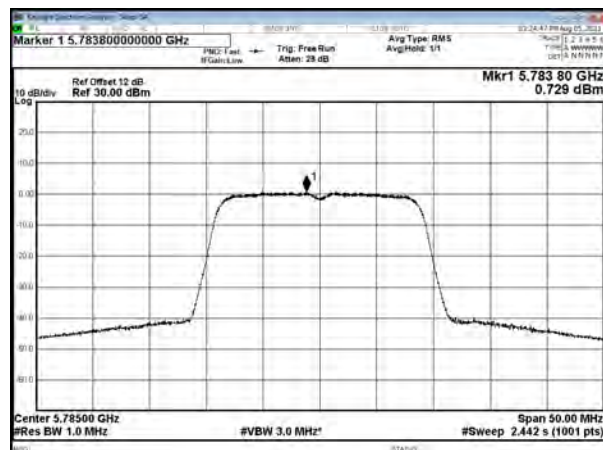
CH149



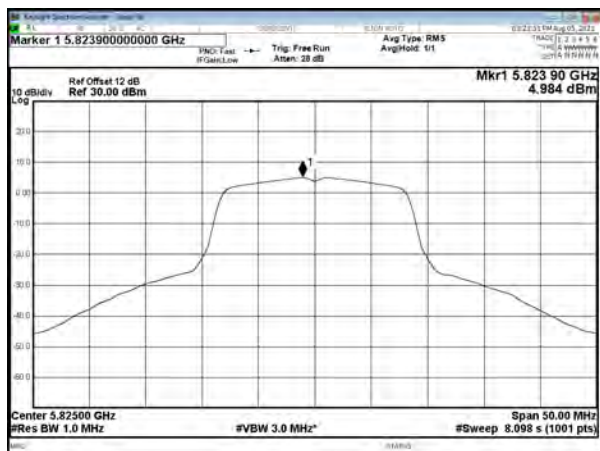
CH157



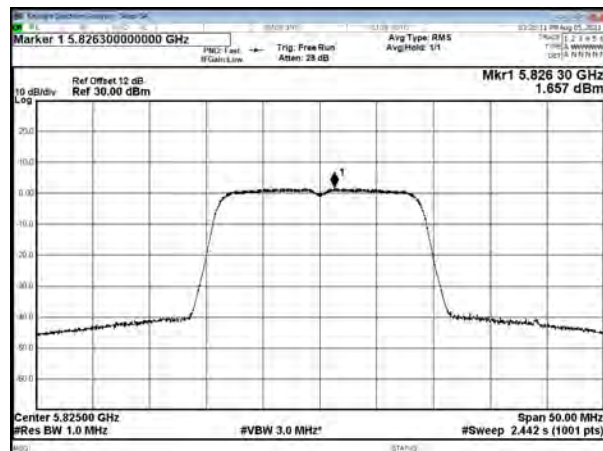
CH157



CH165



CH165

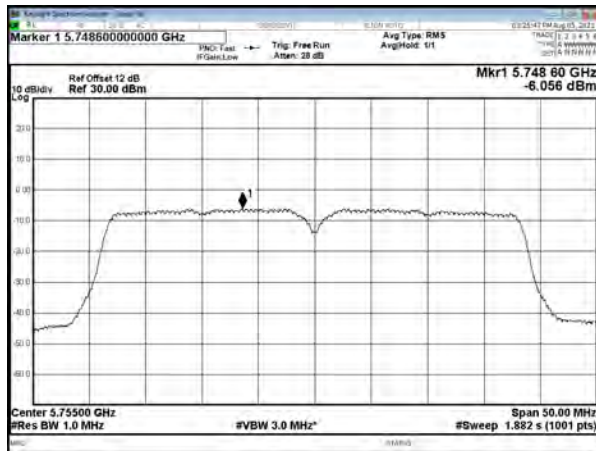




5.8G, UNII-3

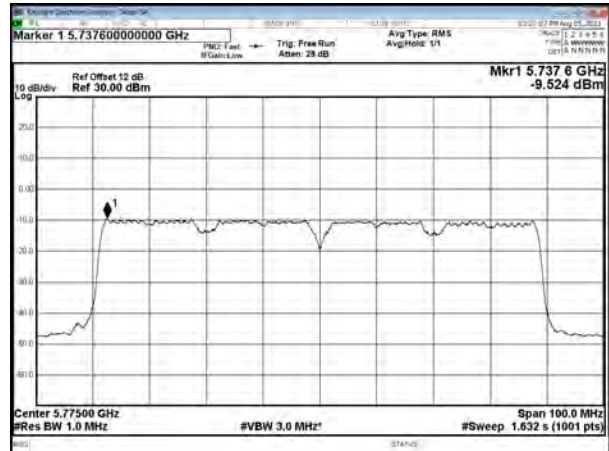
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH151

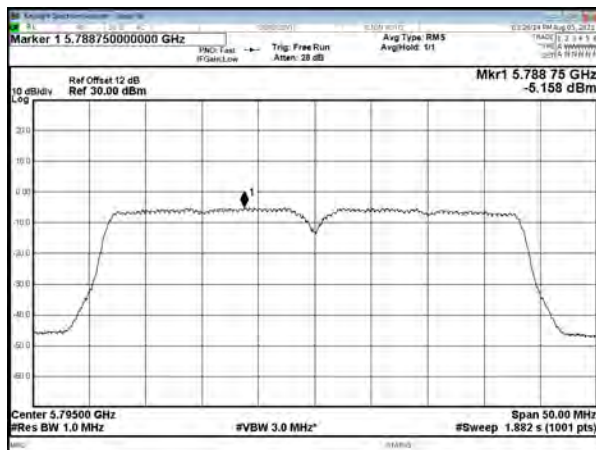


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH155



CH159



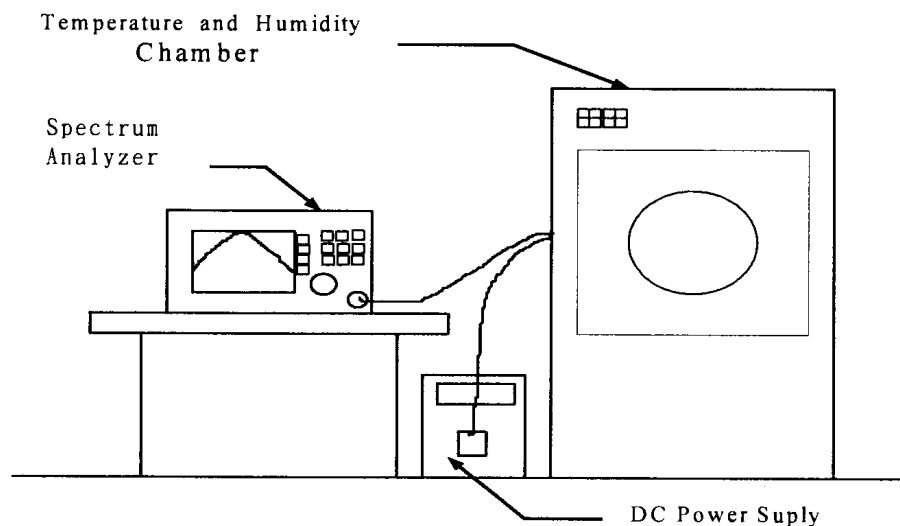


12. Frequency Stability

12.1. Test Procedure

1. The EUT was placed inside the Temperature and Humidity chamber.
2. The transmitter output was connected to spectrum analyzer.
3. Turn the EUT on and couple its output to a spectrum analyzer.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
6. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
7. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

12.2. Test Setup Layout



**12.3. Test Result and Data**

Operating frequency: 5180 MHz							
Temp	Power supply	2 minute		5 minute		10 minute	
(°C)	(V)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
40	138	5179.9958	-0.000081	5179.9987	-0.000025	5180.0074	0.000143
	120	5179.9951	-0.000095	5179.9984	-0.000031	5180.0071	0.000137
	102	5179.9954	-0.000089	5179.9983	-0.000033	5180.0077	0.000149
30	138	5179.9962	-0.000073	5179.9974	-0.000050	5180.0067	0.000129
	120	5179.9967	-0.000064	5179.9971	-0.000056	5180.0065	0.000125
	102	5179.9964	-0.000069	5179.9975	-0.000048	5180.0062	0.000120
20	138	5179.9952	-0.000093	5179.9969	-0.000060	5180.0054	0.000104
	120	5179.9957	-0.000083	5179.9972	-0.000054	5180.0051	0.000098
	102	5179.9955	-0.000087	5179.9967	-0.000064	5180.0056	0.000108
10	138	5179.9959	-0.000079	5179.9978	-0.000042	5180.0063	0.000122
	120	5179.9956	-0.000085	5179.9982	-0.000035	5180.0062	0.000120
	102	5179.9952	-0.000093	5179.9981	-0.000037	5180.0065	0.000125
0	138	5179.9949	-0.000098	5179.9985	-0.000029	5180.0058	0.000112
	120	5179.9953	-0.000091	5179.9987	-0.000025	5180.0062	0.000120
	102	5179.9951	-0.000095	5179.9984	-0.000031	5180.0061	0.000118

Limit:

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

-----End of the report -----