



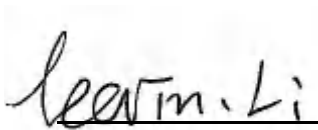
FCC RADIO TEST REPORT

Applicant : SHENZHEN Hitevision Technology Co., Ltd.
Address : Honghe Mansion No. 1 Building A, 1 Danzi North Road,
Shatian, Kengzi Street, Pingshan District, Shenzhen
Equipment : Wireless Module
Model No. : AZ932-HN
Trade Name : N/A
FCC ID. : 2ACYT-AZ932
Standard : FCC part 15 Subpart E §15.407

I HEREBY CERTIFY THAT :

The sample was received on Oct. 28, 2022 and the testing was completed on Nov. 23, 2022 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

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History of this test report

☒ Original.

☐ Additional attachment as following record:

Report No.	Issue Date	Description
DEDG2210072-79824	Nov. 25, 2022	Initial Issue



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	Wireless Module
Model Name	AZ932-HN
Model Discrepancy	N/A
Chipset	RTL8852BU& RTL8811CU
Frequency Range	RTL8852BU BT/BLE/ WIFI 2.4G: 2400MHz-2483.5MHz WIFI 5G: 5150MHz-5250MHz, 5725MHz -5850MHz
	RTL8811CU WIFI 2.4G: 2400MHz-2483.5MHz WIFI 5G: 5150MHz-5250MHz, 5725MHz -5850MHz
Modulation Type	RTL8852BU BT: GFSK, $\pi/4$ -DQPSK, 8DPSK BLE: GFSK 2.4GHz 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 5GHz 802.11a/n: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
	RTL8811CU 2.4GHz 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM 5GHz 802.11a/n: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM
Data Rate	RTL8852BU BT: GFSK:1Mbps, $\pi/4$ -DQPSK: 2Mbps, 8DPSK:3Mbps BLE: GFSK: 1Mbps, 2Mbps, 125kbps, 500kbps WIFI 2.4GHz: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0-MCS15, HT20/HT40 802.11ax: MCS0-MCS11, HE20/HE40 WIFI 5GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0-MCS15, HT20/HT40 802.11ac: MCS0-MCS9, VHT20/40/80 802.11ax: MCS0-MCS11, HE20/HE40/HE80
	RTL8811CU WIFI 2.4GHz: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: HT20 reach up to 72.2Mbps, HT40 reach up to 150Mbps WIFI 5GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps



	802.11n: HT20 reach up to 72.2Mbps, HT40 reach up to 150Mbps 802.11ac: VHT20 reach up to 86.7Mbps, VHT40 reach up to 200Mbps, VHT80 reach up to 433.3Mbps
Antenna Type	Dipole Antenna
Working Temperature	0°C to +45°C
Storage Temperature	-40°C to +70°C
Operating Voltage	DC 12V from adapter

Note: 1) This report is for RTL8852BU. For other features of this EUT, test report will be issued separately.

2) RTL8852BU supports CDD mode and 11AX supports FULL RU only.

3) 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, 802.11ax HE20

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

802.11n HT 40, 802.11ac VHT40, 802.11ax HE40

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

802.11ac VHT80, 802.11ax HE80

Channel	Frequency(MHz)
*42	5210

Band : 5725MHz -5850MHz

802.11a, 802.11n HT 20, 802.11ac VHT20, 802.11ax HE20

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

802.11n HT 40, 802.11ac VHT40, 802.11ax HE40

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

802.11ac VHT80, 802.11ax HE80

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 ,adapter and EUT for RF test.
- An executive program, “MP AX.exe(Ver.: 1.0.0.0)” under Windows 10 system was executed to transmit and receive data via WLAN.
- The following test modes were performed for the test:

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	802.11ax HE20 (7.3Mbps) for 120V
8	802.11ax HE40 (14.6Mbps) for 120V
9	802.11ax HE80 (30.6Mbps) for 120V
10	802.11ax HE20 (7.3Mbps) for 240V
caused “Test Mode 7 at CH149:5745MHz” generated the worst case, it was reported as the final data.	
Radiated emission (below 1GHz)	
Test Mode	Operating Description
1	802.11a (6Mbps)
2	802.11n HT20 (6.5Mbps)
3	802.11n HT20 (13.5Mbps)
4	802.11ac VHT20 (6.5Mbps)
5	802.11ac VHT40 (13.5Mbps)
6	802.11ac VHT80 (29.3Mbps)
7	802.11ax HE20 (7.3Mbps)
8	802.11ax HE40 (14.6Mbps)
9	802.11ax HE80 (30.6Mbps)
caused “Test Mode 7 at CH149:5745MHz” generated the worst case, it was reported as the final data.	
Radiation Emissions (1GHz ~ 40GHz)	
Test Mode	Operating Description
1	802.11a (6Mbps)
2	802.11n HT20 (6.5Mbps)
3	802.11n HT20 (13.5Mbps)
4	802.11ac VHT20 (6.5Mbps)
5	802.11ac VHT40 (13.5Mbps)
6	802.11ac VHT80 (29.3Mbps)
7	802.11ax HE20 (7.3Mbps)
8	802.11ax HE40 (14.6Mbps)
9	802.11ax HE80 (30.6Mbps)
caused “Test Mode 1,4~9” generated the worst case, it was reported as the final data.	



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
802.11ax HE20	2TX
802.11ax HE40	2TX
802.11ax HE80	2TX
* VHT20/VHT40 covers HT20/HT40, due to same modulation. 802.11ac mode is the worst case for final tests except RF output power test after pretesting all modulation type.	

2.4. Power Parameter Value of the test software

Band: 5150MHz-5250MHz					
Mode	Frequency (MHz)	Setting level			
		Ant 1	Ant 2	Ant 1+2	
				Ant 1	Ant 2
802.11a	5180	N/A	N/A	Default	Default
	5220	N/A	N/A	Default	Default
	5240	N/A	N/A	Default	Default
802.11n HT20	5180	N/A	N/A	Default	Default
	5220	N/A	N/A	Default	Default
	5240	N/A	N/A	Default	Default
802.11n HT40	5190	N/A	N/A	Default	Default
	5230	N/A	N/A	Default	Default
802.11ac VHT20	5180	N/A	N/A	Default	Default
	5220	N/A	N/A	Default	Default
	5240	N/A	N/A	Default	Default
802.11ac VHT40	5190	N/A	N/A	Default	Default
	5230	N/A	N/A	Default	Default
802.11ac VHT80	5210	N/A	N/A	Default	Default
802.11ax HE20	5180	N/A	N/A	Default	Default
	5220	N/A	N/A	Default	Default
	5240	N/A	N/A	Default	Default
802.11ax HE40	5190	N/A	N/A	Default	Default
	5230	N/A	N/A	Default	Default
802.11ax HE80	5210	N/A	N/A	Default	Default



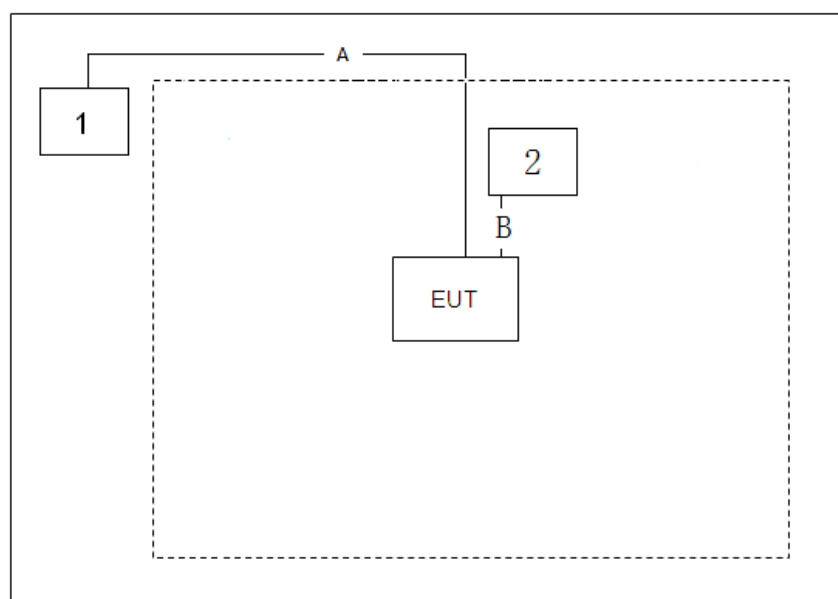
Band: 5725MHz -5850MHz					
Mode	Frequency (MHz)	Setting level			
		Ant 1	Ant 2	Ant 1+2	
				Ant 1	Ant 2
802.11a	5745	N/A	N/A	Default	Default
	5785	N/A	N/A	Default	Default
	5825	N/A	N/A	Default	Default
802.11n HT20	5745	N/A	N/A	Default	Default
	5785	N/A	N/A	Default	Default
	5825	N/A	N/A	Default	Default
802.11n HT40	5755	N/A	N/A	Default	Default
	5795	N/A	N/A	Default	Default
802.11ac VHT20	5745	N/A	N/A	Default	Default
	5785	N/A	N/A	Default	Default
	5825	N/A	N/A	Default	Default
802.11ac VHT40	5755	N/A	N/A	Default	Default
	5795	N/A	N/A	Default	Default
802.11ac VHT80	5775	N/A	N/A	Default	Default
802.11ax HE20	5745	N/A	N/A	Default	Default
	5785	N/A	N/A	Default	Default
	5825	N/A	N/A	Default	Default
802.11ax HE40	5755	N/A	N/A	Default	Default
	5795	N/A	N/A	Default	Default
802.11ax HE80	5775	N/A	N/A	Default	Default



2.5. Description of Test System

Product	Manufacturer	Model No.	Power Cord
1 Notebook	SONY	PCG-71811P	Non-Shielded, 1.8m
2 Adapter	Asian	WA-36WFU	N/A

Connection Diagram



Signal Cable Type	Quantity	Signal cable Description
A USB Cable	1	5.0m Shielding
B DC Cable	1	1.5m Non-Shielding



2.6. 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	2022/11/15~2022/11/23	24~25°C / 51~53%	Amos Zhang
Radiated Emissions	3M01-DG	2022/11/19~2022/11/23	23~26°C / 51~55%	Amos Zhang
AC Power Line Conducted Emission	CON01-DG	2022/11/16	24°C / 54%	Amos Zhang

2.7. Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Measurement Item	Uncertainty
AC Power Line Conduction(150K~30MHz)	±3.17dB
Radiated Spurious Emission(9KHz~30MHz)	±4.99dB
Radiated Spurious Emission(30MHz~1GHz)	±4.39dB
Radiated Spurious Emission(1GHz~18GHz)	±5.36dB
Radiated Spurious Emission(18GHz~40GHz)	±5.43dB
6dB Bandwidth&26dB Bandwidth	±4.4%
Occupied Bandwidth	±4.4%
Peak Output Power(Conducted Power Meter)	±0.57 dB
Power Spectral Density	±1.01 dB
Frequency Stability	±99.743Hz



3. Test Equipment and Ancillaries Used for Tests

AC Power Line Conducted Emission					
Test Site	CON01-DG				
Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Test Receiver	R&S	ESCI	100564	2022.01.08	2023.01.07
LISN	SCHWARZBECK	NSLK 8127	8127748	2022.01.08	2023.01.07
LISN	R&S	ENV216	100024	2022.01.08	2023.01.07
ISN	TESEQ	ISN T800	42809	2022.05.07	2023.05.06
Pulse Limiter with 10dB Attenuation	SCHWARZBECK	VTSD 9561-F	9561-F106	2022.01.08	2023.01.07
Temperature/ Humidity Meter	GEMLEAD	STH200A	N/A	2022.08.05	2023.08.04

Radiated Emissions					
Test Site	3M01-DG				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
EMI Test Receiver	R&S	ESCI	100565	2022.05.07	2023.05.06
Amplifier	EMCI	EMC330	980082	2022.05.07	2023.05.06
Loop Antenna	R&S	HFH2-Z2	100150	2022.05.11	2024.05.10
Bilog Antenna	Sunol Science	JB1	A072414-2	2022.05.25	2024.05.24
Preamplifier	Agilent	8449B	3008A02342	2022.01.08	2023.01.07
Preamplifier	COM-POWER	PA-840	711885	2022.05.07	2023.05.06
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120 D	9120D-619	2022.05.22	2024.05.21
Standard Gain Horn Antenna	TRC	HA-2640	18050	2022.05.09	2024.05.08
Standard Gain Horn Antenna	TRC	HA-1726	18051	2022.05.09	2024.05.08
FSQ Signal Analyzer	R&S	FSQ40	200012	2022.05.07	2023.05.06
Temperature/ Humidity Meter	GEMLEAD	STH200A	N/A	2022.08.05	2023.08.04

RF Conducted					
Test Site	RFCON01-DG				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
MXA Signal Analyzer	KEYSIGHT	N9020A	US46220290	2022.05.07	2023.05.06
EXA Signal Analyzer	KEYSIGHT	N9010A	MY53400169	2022.05.07	2023.05.06
ESG VECTOR SIGNAL GENERATOR	Agilent	E4438C	MY45092582	2022.05.07	2023.05.06
MXG VECTOR SIGNAL GENERATOR	Agilent	N5182B	MY53050127	2022.05.07	2023.05.06
USB Wideband Power Sensor	Boonton	55006	9778	2022.01.08	2023.01.07
Temperature/ Humidity Meter	mingle	ETH529	N/A	2022.01.08	2023.01.07



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	Dipole Antenna
Antenna Gain	5150MHz - 5250MHz: ANT A:3.62dBi; ANT B: 3.68dBi 5725MHz - 5850MHz: ANT A:3.79dBi; ANT B: 3.79dBi

(Non-Beamforming)

For 2TX

5150MHz - 5250MHz
For Power directional gain= 3.68 (dBi) For PSD directional gain = $10 \log[(10G1 / 20 + 10G2 / 20 + \dots + 10GN / 20)^2 / NANT]$ = 6.66 (dBi)
5725MHz - 5850MHz
For Power directional gain= 3.79 (dBi) For PSD directional gain = $10 \log[(10G1 / 20 + 10G2 / 20 + \dots + 10GN / 20)^2 / NANT]$ = 6.80 (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.

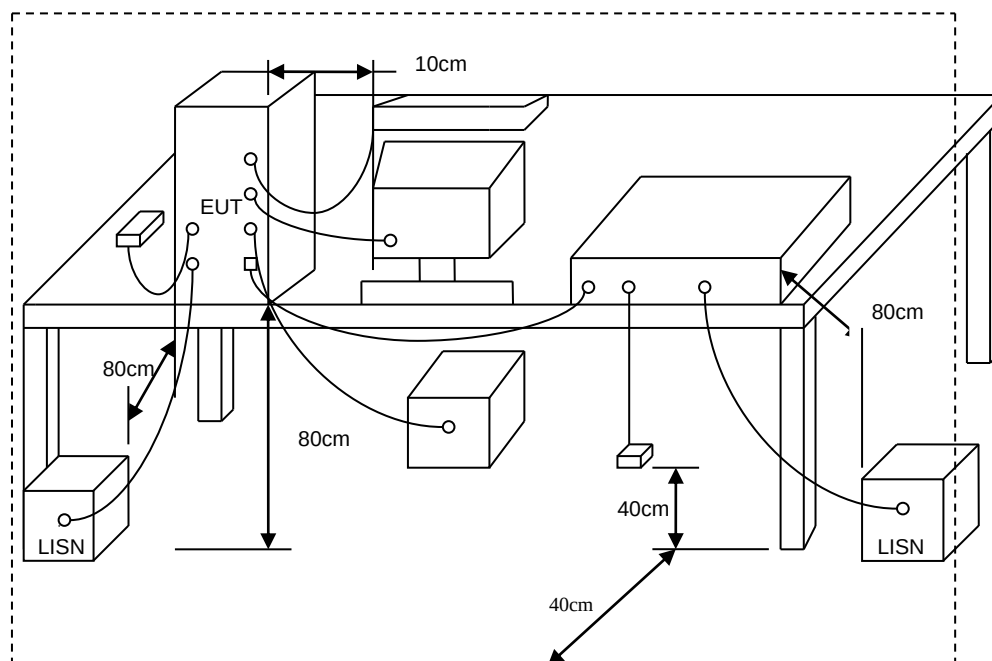
Frequency (MHz)	Quasi Peak (dBμV)	Average (dBμV)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

5.2. Test Procedures

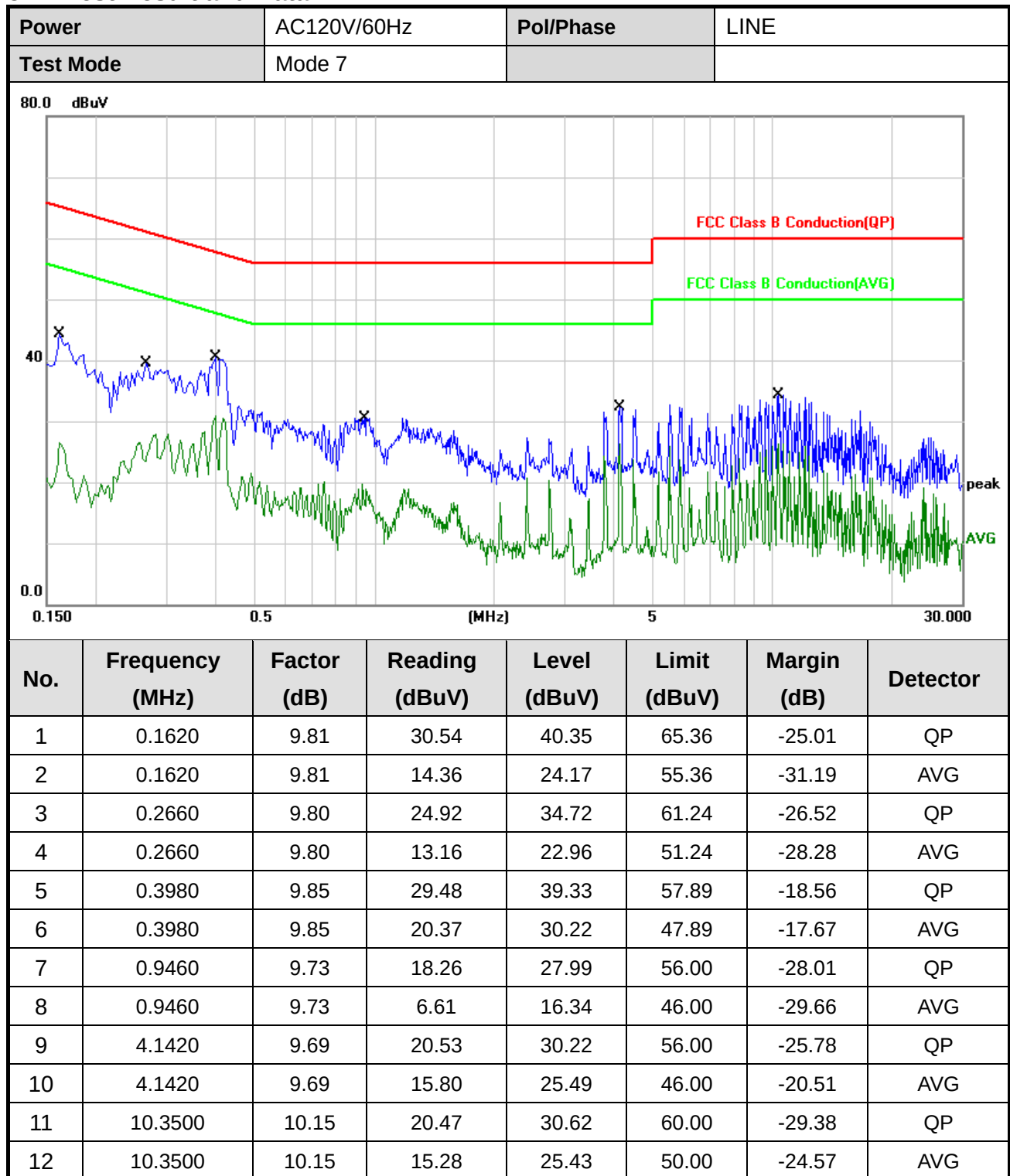
- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- c. All the support units are connecting to the other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

5.3. Typical Test Setup

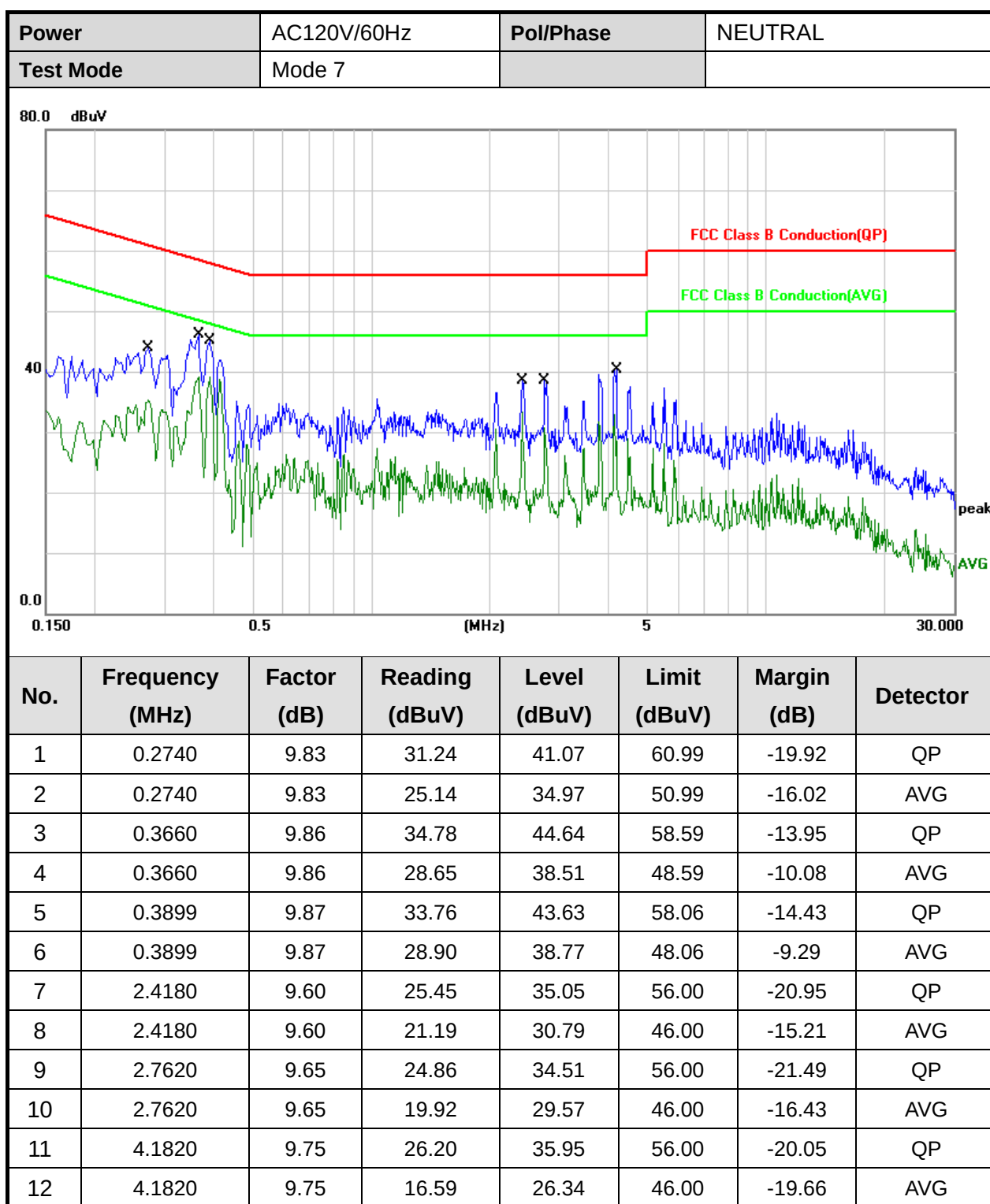




5.4. Test Result and Data



Note: Measurement Level = Reading Level + Correct Factor



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 15.407(b)(9)(10) 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.

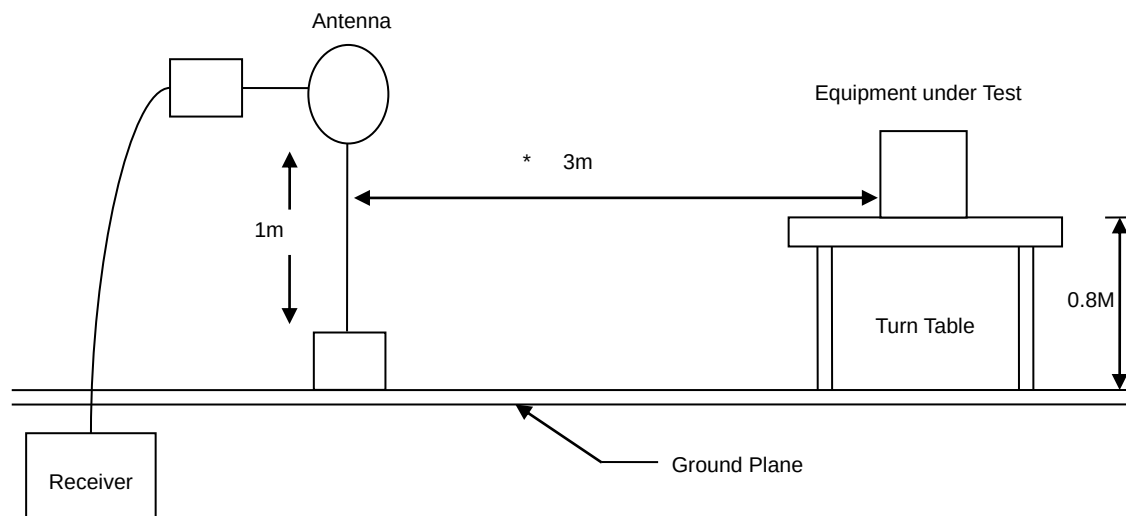
6.2. Test Procedures

- 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.
Note: The supporting fixture shall permit orientation of the EUT in each of three orthogonal axis positions sch that emissions from the EUT are maximized.(X-AXIS is the worst.)

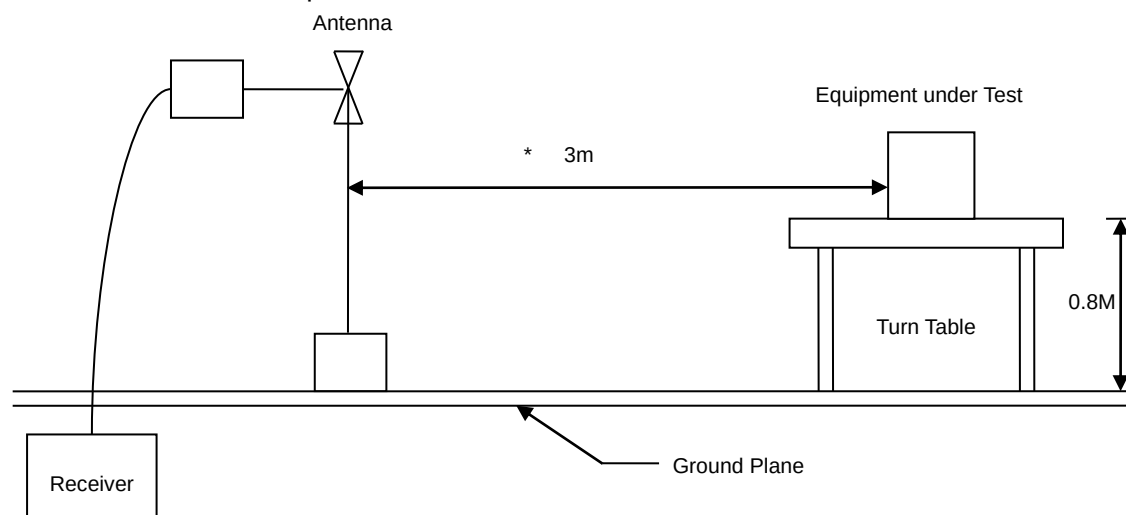


6.3. Typical Test Setup

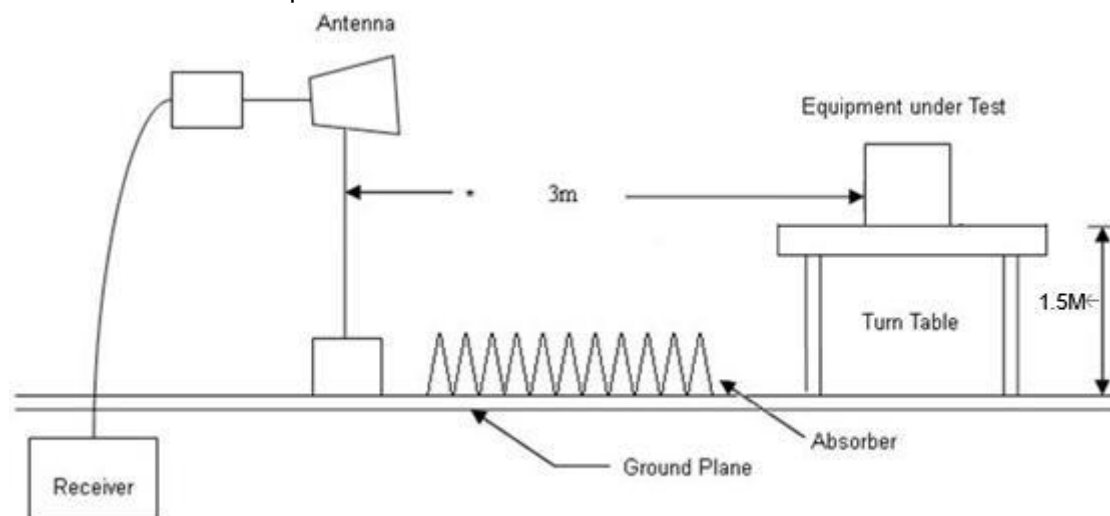
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup

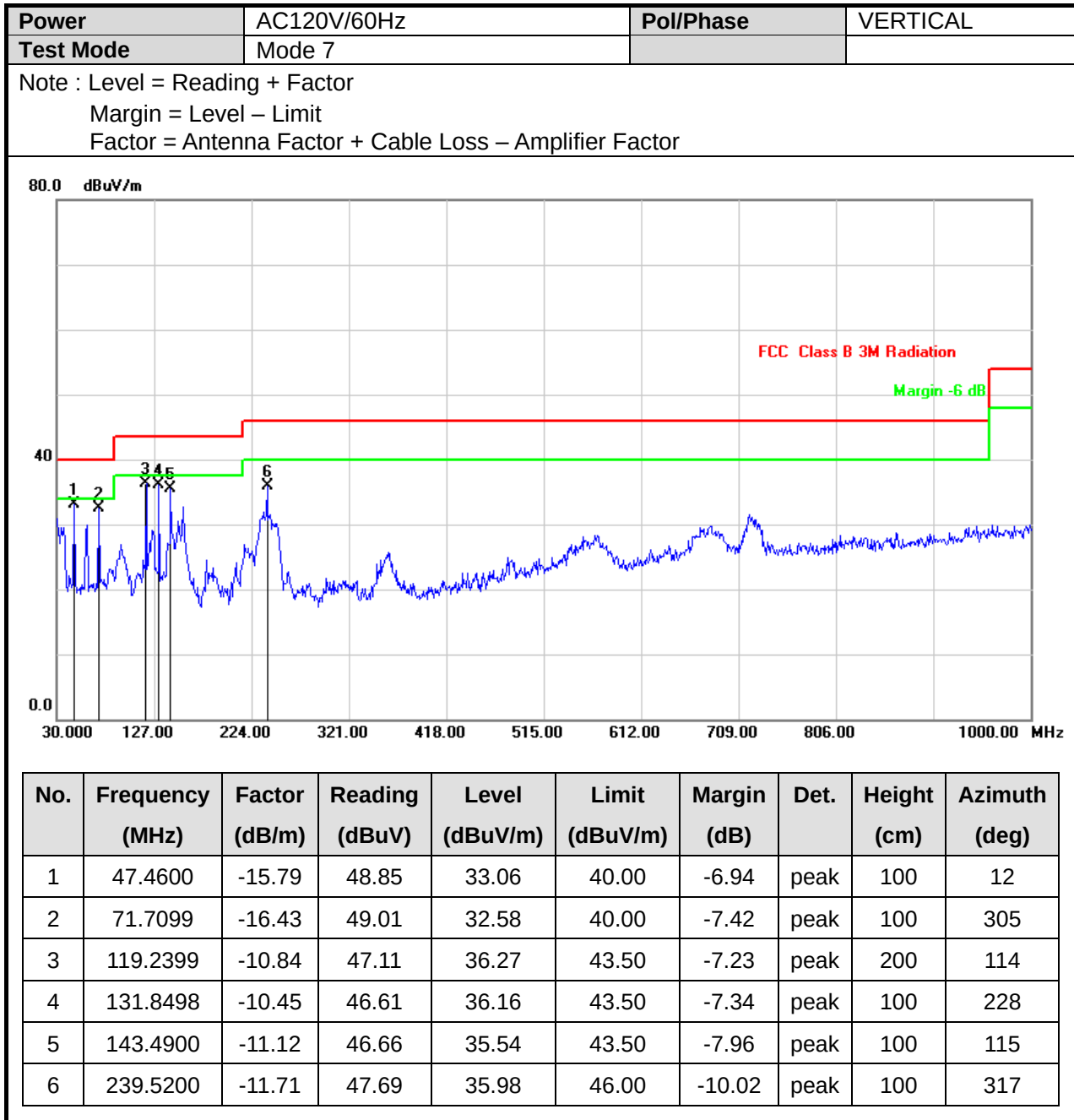


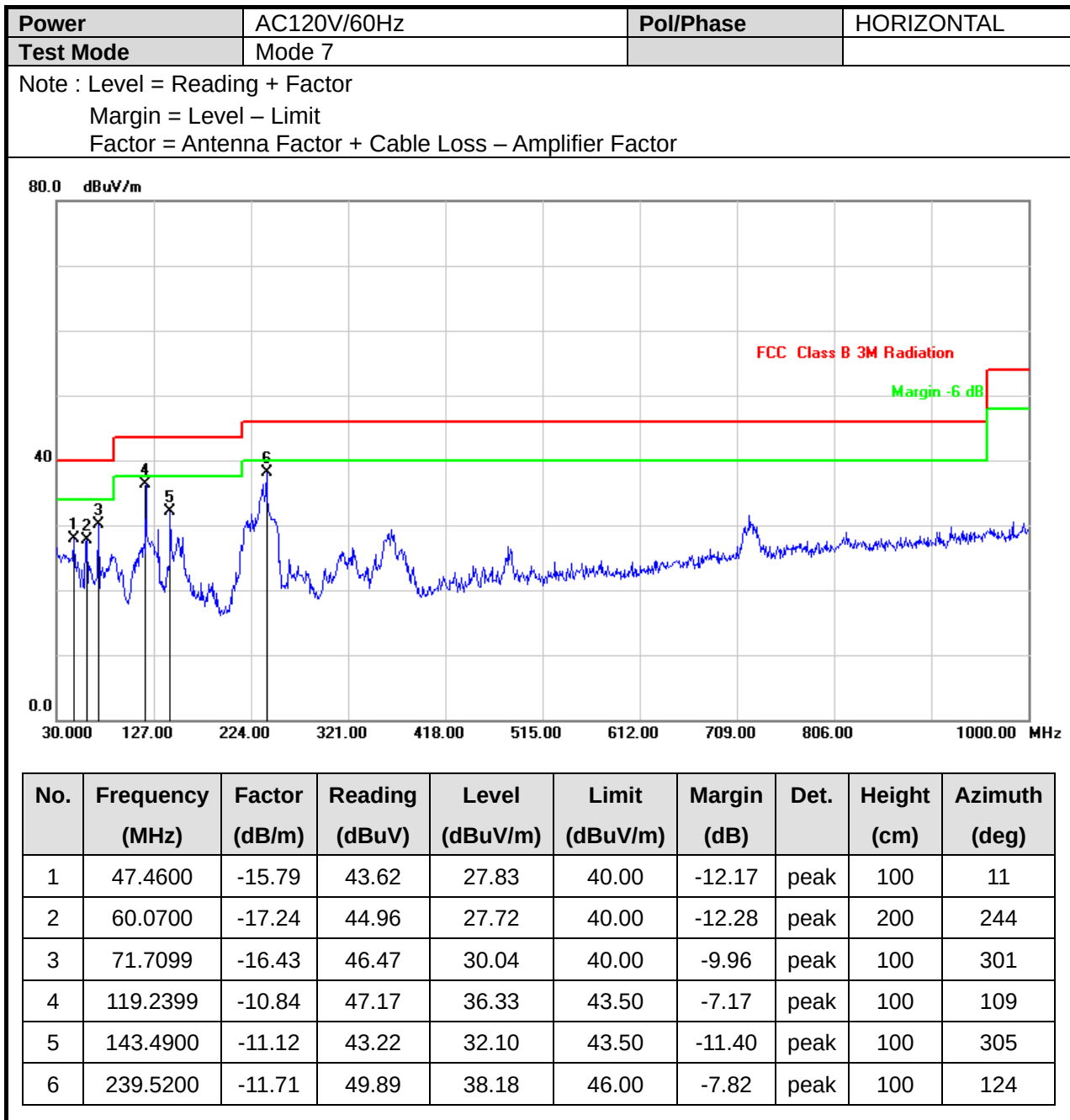


6.4. Test Result and Data (9kHz ~ 30MHz)

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	4.31	46.58	50.89	74.00	-23.11	peak	H
2	5150.000	4.31	36.37	40.68	54.00	-13.32	AVG	H
3	10360.000	13.24	38.09	51.33	68.20	-16.87	peak	H
4	15540.000	16.01	35.55	51.56	74.00	-22.44	peak	H
5	15540.000	16.01	24.13	40.14	54.00	-13.86	AVG	H
1	5150.000	4.31	47.63	51.94	74.00	-22.06	peak	V
2	5150.000	4.31	37.31	41.62	54.00	-12.38	AVG	V
3	10360.000	13.24	38.86	52.10	68.20	-16.10	peak	V
4	15540.000	16.01	36.01	52.02	74.00	-21.98	peak	V
5	15540.000	16.01	25.23	41.24	54.00	-12.76	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	4.31	46.04	50.35	74.00	-23.65	peak	H
2	5150.000	4.31	35.21	39.52	54.00	-14.48	AVG	H
3	5350.000	4.86	45.99	50.85	74.00	-23.15	peak	H
4	5350.000	4.86	35.53	40.39	54.00	-13.61	AVG	H
5	10440.000	13.45	38.07	51.52	68.20	-16.68	peak	H
6	15660.000	15.71	35.56	51.27	74.00	-22.73	peak	H
7	15660.000	15.71	24.34	40.05	54.00	-13.95	AVG	H
1	5150.000	4.31	46.92	51.23	74.00	-22.77	peak	V
2	5150.000	4.31	36.75	41.06	54.00	-12.94	AVG	V
3	5350.000	4.86	46.95	51.81	74.00	-22.19	peak	V
4	5350.000	4.86	36.86	41.72	54.00	-12.28	AVG	V
5	10440.000	13.45	38.76	52.21	68.20	-15.99	peak	V
6	15660.000	15.71	36.86	52.57	74.00	-21.43	peak	V
7	15660.000	15.71	25.54	41.25	54.00	-12.75	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	4.86	47.17	52.03	74.00	-21.97	peak	H
2	5350.000	4.86	37.52	42.38	54.00	-11.62	AVG	H
3	10480.000	13.54	37.91	51.45	68.20	-16.75	peak	H
4	15720.000	15.56	36.61	52.17	74.00	-21.83	peak	H
5	15720.000	15.56	25.02	40.58	54.00	-13.42	AVG	H
1	5350.000	4.86	46.30	51.16	74.00	-22.84	peak	V
2	5350.000	4.86	36.61	41.47	54.00	-12.53	AVG	V
3	10480.000	13.54	39.03	52.57	68.20	-15.63	peak	V
4	15720.000	15.56	37.27	52.83	74.00	-21.17	peak	V
5	15720.000	15.56	25.56	41.12	54.00	-12.88	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 4, 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	4.31	46.07	50.38	74.00	-23.62	peak	H
2	5150.000	4.31	34.93	39.24	54.00	-14.76	AVG	H
3	10360.000	13.24	38.29	51.53	68.20	-16.67	peak	H
4	15540.000	16.01	35.74	51.75	74.00	-22.25	peak	H
5	15540.000	16.01	24.66	40.67	54.00	-13.33	AVG	H
1	5150.000	4.31	46.89	51.20	74.00	-22.80	peak	V
2	5150.000	4.31	36.55	40.86	54.00	-13.14	AVG	V
3	10360.000	13.24	39.18	52.42	68.20	-15.78	peak	V
4	15540.000	16.01	36.04	52.05	74.00	-21.95	peak	V
5	15540.000	16.01	25.70	41.71	54.00	-12.29	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 4, 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	4.31	46.40	50.71	74.00	-23.29	peak	H
2	5150.000	4.31	36.11	40.42	54.00	-13.58	AVG	H
3	5350.000	4.86	45.77	50.63	74.00	-23.37	peak	H
4	5350.000	4.86	35.39	40.25	54.00	-13.75	AVG	H
5	10440.000	13.45	38.20	51.65	68.20	-16.55	peak	H
6	15660.000	15.71	36.39	52.10	74.00	-21.90	peak	H
7	15660.000	15.71	25.56	41.27	54.00	-12.73	AVG	H
1	5150.000	4.31	47.34	51.65	74.00	-22.35	peak	V
2	5150.000	4.31	36.01	40.32	54.00	-13.68	AVG	V
3	5350.000	4.86	46.86	51.72	74.00	-22.28	peak	V
4	5350.000	4.86	36.12	40.98	54.00	-13.02	AVG	V
5	10440.000	13.45	39.12	52.57	68.20	-15.63	peak	V
6	15660.000	15.71	36.67	52.38	74.00	-21.62	peak	V
7	15660.000	15.71	25.51	41.22	54.00	-12.78	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 4, 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	4.86	45.49	50.35	74.00	-23.65	peak	H
2	5350.000	4.86	35.64	40.50	54.00	-13.50	AVG	H
3	10480.000	13.54	38.72	52.26	68.20	-15.94	peak	H
4	15720.000	15.56	36.65	52.21	74.00	-21.79	peak	H
5	15720.000	15.56	26.11	41.67	54.00	-12.33	AVG	H
1	5350.000	4.86	46.61	51.47	74.00	-22.53	peak	V
2	5350.000	4.86	36.44	41.30	54.00	-12.70	AVG	V
3	10480.000	13.54	38.91	52.45	68.20	-15.75	peak	V
4	15720.000	15.56	37.11	52.67	74.00	-21.33	peak	V
5	15720.000	15.56	26.22	41.78	54.00	-12.22	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 5, 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	4.31	46.69	51.00	74.00	-23.00	peak	H
2	5150.000	4.31	35.93	40.24	54.00	-13.76	AVG	H
3	10380.000	13.30	37.95	51.25	68.20	-16.95	peak	H
4	15570.000	15.93	36.15	52.08	74.00	-21.92	peak	H
5	15570.000	15.93	24.94	40.87	54.00	-13.13	AVG	H
1	5150.000	4.31	48.55	52.86	74.00	-21.14	peak	V
2	5150.000	4.31	39.26	43.57	54.00	-10.43	AVG	V
3	10380.000	13.30	39.16	52.46	68.20	-15.74	peak	V
4	15570.000	15.93	36.60	52.53	74.00	-21.47	peak	V
5	15570.000	15.93	25.35	41.28	54.00	-12.72	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 5, 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	4.31	46.80	51.11	74.00	-22.89	peak	H
2	5150.000	4.31	35.67	39.98	54.00	-14.02	AVG	H
3	5350.000	4.86	45.92	50.78	74.00	-23.22	peak	H
4	5350.000	4.86	35.30	40.16	54.00	-13.84	AVG	H
5	10460.000	13.49	38.06	51.55	68.20	-16.65	peak	H
6	15690.000	15.63	35.86	51.49	74.00	-22.51	peak	H
7	15690.000	15.63	25.24	40.87	54.00	-13.13	AVG	H
1	5150.000	4.31	47.24	51.55	74.00	-22.45	peak	V
2	5150.000	4.31	36.00	40.31	54.00	-13.69	AVG	V
3	5350.000	4.86	46.82	51.68	74.00	-22.32	peak	V
4	5350.000	4.86	35.81	40.67	54.00	-13.33	AVG	V
5	10460.000	13.49	39.18	52.67	68.20	-15.53	peak	V
6	15690.000	15.63	37.19	52.82	74.00	-21.18	peak	V
7	15690.000	15.63	25.62	41.25	54.00	-12.75	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 6, 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	4.31	46.04	50.35	74.00	-23.65	peak	H
2	5150.000	4.31	34.93	39.24	54.00	-14.76	AVG	H
3	5350.000	4.86	45.92	50.78	74.00	-23.22	peak	H
4	5350.000	4.86	35.33	40.19	54.00	-13.81	AVG	H
5	10420.000	13.40	38.68	52.08	68.20	-16.12	peak	H
6	15630.000	15.78	36.13	51.91	74.00	-22.09	peak	H
7	15630.000	15.78	24.46	40.24	54.00	-13.76	AVG	H
1	5150.000	4.31	53.13	57.44	74.00	-16.56	peak	V
2	5150.000	4.31	43.17	47.48	54.00	-6.52	AVG	V
3	5350.000	4.86	47.03	51.89	74.00	-22.11	peak	V
4	5350.000	4.86	37.65	42.51	54.00	-11.49	AVG	V
5	10420.000	13.40	39.28	52.68	68.20	-15.52	peak	V
6	15630.000	15.78	36.96	52.74	74.00	-21.26	peak	V
7	15630.000	15.78	26.23	42.01	54.00	-11.99	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 7, 802.11ax HE20 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	4.31	46.67	50.98	74.00	-23.02	peak	H
2	5150.000	4.31	36.41	40.72	54.00	-13.28	AVG	H
3	10360.000	13.24	38.42	51.66	68.20	-16.54	peak	H
4	15540.000	16.01	36.53	52.54	74.00	-21.46	peak	H
5	15540.000	16.01	24.34	40.35	54.00	-13.65	AVG	H
1	5150.000	4.31	52.39	56.70	74.00	-17.30	peak	V
2	5150.000	4.31	38.66	42.97	54.00	-11.03	AVG	V
3	10360.000	13.24	38.88	52.12	68.20	-16.08	peak	V
4	15540.000	16.01	36.51	52.52	74.00	-21.48	peak	V
5	15540.000	16.01	24.27	40.28	54.00	-13.72	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 7, 802.11ax HE20 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	4.31	46.05	50.36	74.00	-23.64	peak	H
2	5150.000	4.31	35.98	40.29	54.00	-13.71	AVG	H
3	5350.000	4.86	45.95	50.81	74.00	-23.19	peak	H
4	5350.000	4.86	35.68	40.54	54.00	-13.46	AVG	H
5	10440.000	13.45	38.16	51.61	68.20	-16.59	peak	H
6	15660.000	15.71	36.33	52.04	74.00	-21.96	peak	H
7	15660.000	15.71	24.67	40.38	54.00	-13.62	AVG	H
1	5150.000	4.31	47.04	51.35	74.00	-22.65	peak	V
2	5150.000	4.31	36.44	40.75	54.00	-13.25	AVG	V
3	5350.000	4.86	46.82	51.68	74.00	-22.32	peak	V
4	5350.000	4.86	36.07	40.93	54.00	-13.07	AVG	V
5	10440.000	13.45	38.78	52.23	68.20	-15.97	peak	V
6	15660.000	15.71	36.71	52.42	74.00	-21.58	peak	V
7	15660.000	15.71	25.34	41.05	54.00	-12.95	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 7, 802.11ax HE20 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	4.86	46.43	51.29	74.00	-22.71	peak	H
2	5350.000	4.86	36.23	41.09	54.00	-12.91	AVG	H
3	10480.000	13.54	38.14	51.68	68.20	-16.52	peak	H
4	15720.000	15.56	36.18	51.74	74.00	-22.26	peak	H
5	15720.000	15.56	24.71	40.27	54.00	-13.73	AVG	H
1	5350.000	4.86	46.85	51.71	74.00	-22.29	peak	V
2	5350.000	4.86	34.60	39.46	54.00	-14.54	AVG	V
3	10480.000	13.54	38.61	52.15	68.20	-16.05	peak	V
4	15720.000	15.56	37.65	53.21	74.00	-20.79	peak	V
5	15720.000	15.56	26.28	41.84	54.00	-12.16	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 8, 802.11ax HE40 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	4.31	46.24	50.55	74.00	-23.45	peak	H
2	5150.000	4.31	36.38	40.69	54.00	-13.31	AVG	H
3	10380.000	13.30	38.14	51.44	68.20	-16.76	peak	H
4	15570.000	15.93	36.09	52.02	74.00	-21.98	peak	H
5	15570.000	15.93	24.63	40.56	54.00	-13.44	AVG	H
1	5150.000	4.31	49.98	54.29	74.00	-19.71	peak	V
2	5150.000	4.31	40.56	44.87	54.00	-9.13	AVG	V
3	10380.000	13.30	38.94	52.24	68.20	-15.96	peak	V
4	15570.000	15.93	35.12	51.05	74.00	-22.95	peak	V
5	15570.000	15.93	24.43	40.36	54.00	-13.64	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 8, 802.11ax HE40 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	4.31	46.55	50.86	74.00	-23.14	peak	H
2	5150.000	4.31	37.54	41.85	54.00	-12.15	AVG	H
3	5350.000	4.86	45.87	50.73	74.00	-23.27	peak	H
4	5350.000	4.86	36.00	40.86	54.00	-13.14	AVG	H
5	10460.000	13.49	38.23	51.72	68.20	-16.48	peak	H
6	15690.000	15.63	36.23	51.86	74.00	-22.14	peak	H
7	15690.000	15.63	24.90	40.53	54.00	-13.47	AVG	H
1	5150.000	4.31	50.93	55.24	74.00	-18.76	peak	V
2	5150.000	4.31	39.10	43.41	54.00	-10.59	AVG	V
3	5350.000	4.86	46.82	51.68	74.00	-22.32	peak	V
4	5350.000	4.86	35.39	40.25	54.00	-13.75	AVG	V
5	10460.000	13.49	38.87	52.36	68.20	-15.84	peak	V
6	15690.000	15.63	37.14	52.77	74.00	-21.23	peak	V
7	15690.000	15.63	25.88	41.51	54.00	-12.49	AVG	V



Power	AC120V/60Hz
Test Mode	Mode 9, 802.11ax HE80 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	4.31	53.04	57.35	74.00	-16.65	peak	H
2	5150.000	4.31	41.36	45.67	54.00	-8.33	AVG	H
3	5350.000	4.86	46.60	51.46	74.00	-22.54	peak	H
4	5350.000	4.86	35.20	40.06	54.00	-13.94	AVG	H
5	10420.000	13.40	38.13	51.53	68.20	-16.67	peak	H
6	15630.000	15.78	35.64	51.42	74.00	-22.58	peak	H
7	15630.000	15.78	24.57	40.35	54.00	-13.65	AVG	H
1	5150.000	4.31	46.50	50.81	74.00	-23.19	peak	V
2	5150.000	4.31	37.72	42.03	54.00	-11.97	AVG	V
3	5350.000	4.86	45.79	50.65	74.00	-23.35	peak	V
4	5350.000	4.86	34.66	39.52	54.00	-14.48	AVG	V
5	10420.000	13.40	38.84	52.24	68.20	-15.96	peak	V
6	15630.000	15.78	36.77	52.55	74.00	-21.45	peak	V
7	15630.000	15.78	25.85	41.63	54.00	-12.37	AVG	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	5.85	48.38	54.23	68.20	-13.97	peak	H
2	5700.000	6.04	46.50	52.54	105.20	-52.66	peak	H
3	5720.000	6.12	47.89	54.01	110.80	-56.79	peak	H
4	5725.000	6.14	46.82	52.96	122.20	-69.24	peak	H
5	11490.000	14.45	36.80	51.25	74.00	-22.75	peak	H
6	11490.000	14.45	25.00	39.45	54.00	-14.55	AVG	H
7	17235.000	20.08	37.85	57.93	68.20	-10.27	peak	H
1	5650.000	5.85	48.29	54.14	68.20	-14.06	peak	V
2	5700.000	6.04	48.13	54.17	105.20	-51.03	peak	V
3	5720.000	6.12	51.83	57.95	110.80	-52.85	peak	V
4	5725.000	6.14	49.00	55.14	122.20	-67.06	peak	V
5	11490.000	14.45	38.11	52.56	74.00	-21.44	peak	V
6	11490.000	14.45	26.57	41.02	54.00	-12.98	AVG	V
7	17235.000	20.08	38.58	58.66	68.20	-9.54	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	5.85	46.61	52.46	68.20	-15.74	peak	H
2	5700.000	6.04	47.51	53.55	105.20	-51.65	peak	H
3	5720.000	6.12	47.05	53.17	110.80	-57.63	peak	H
4	5725.000	6.14	47.87	54.01	122.20	-68.19	peak	H
5	5850.000	6.64	46.89	53.53	122.20	-68.67	peak	H
6	5855.000	6.65	46.97	53.62	110.80	-57.18	peak	H
7	5875.000	6.72	47.22	53.94	105.20	-51.26	peak	H
8	5925.000	6.92	47.19	54.11	68.20	-14.09	peak	H
9	11570.000	14.40	37.35	51.75	74.00	-22.25	peak	H
10	11570.000	14.40	26.22	40.62	54.00	-13.38	AVG	H
11	17355.000	20.59	37.43	58.02	68.20	-10.18	peak	H
1	5650.000	5.85	45.32	51.17	68.20	-17.03	peak	V
2	5700.000	6.04	46.82	52.86	105.20	-52.34	peak	V
3	5720.000	6.12	45.47	51.59	110.80	-59.21	peak	V
4	5725.000	6.14	46.22	52.36	122.20	-69.84	peak	V
5	5850.000	6.64	45.35	51.99	122.20	-70.21	peak	V
6	5855.000	6.65	45.70	52.35	110.80	-58.45	peak	V
7	5875.000	6.72	45.36	52.08	105.20	-53.12	peak	V
8	5925.000	6.92	45.48	52.40	68.20	-15.80	peak	V
9	11570.000	14.40	38.02	52.42	74.00	-21.58	peak	V
10	11570.000	14.40	26.17	40.57	54.00	-13.43	AVG	V
11	17355.000	20.59	38.10	58.69	68.20	-9.51	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	6.64	48.16	54.80	122.20	-67.40	peak	H
2	5855.000	6.65	46.86	53.51	110.80	-57.29	peak	H
3	5875.000	6.72	46.10	52.82	105.20	-52.38	peak	H
4	5925.000	6.92	46.24	53.16	68.20	-15.04	peak	H
5	11650.000	14.34	37.68	52.02	74.00	-21.98	peak	H
6	11650.000	14.34	26.23	40.57	54.00	-13.43	AVG	H
7	17475.000	21.10	38.18	59.28	68.20	-8.92	peak	H
1	5850.000	6.64	46.91	53.55	122.20	-68.65	peak	V
2	5855.000	6.65	47.08	53.73	110.80	-57.07	peak	V
3	5875.000	6.72	46.88	53.60	105.20	-51.60	peak	V
4	5925.000	6.92	47.33	54.25	68.20	-13.95	peak	V
5	11650.000	14.34	38.12	52.46	74.00	-21.54	peak	V
6	11650.000	14.34	26.26	40.60	54.00	-13.40	AVG	V
7	17475.000	21.10	38.12	59.22	68.20	-8.98	peak	V



Power	AC120V/60Hz
Test Mode	Mode 4, 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	5.85	47.69	53.54	68.20	-14.66	peak	H
2	5700.000	6.04	47.17	53.21	105.20	-51.99	peak	H
3	5720.000	6.12	46.89	53.01	110.80	-57.79	peak	H
4	5725.000	6.14	45.81	51.95	122.20	-70.25	peak	H
5	11490.000	14.45	37.80	52.25	74.00	-21.75	peak	H
6	11490.000	14.45	27.10	41.55	54.00	-12.45	AVG	H
7	17235.000	20.08	37.75	57.83	68.20	-10.37	peak	H
1	5650.000	5.85	47.43	53.28	68.20	-14.92	peak	V
2	5700.000	6.04	48.38	54.42	105.20	-50.78	peak	V
3	5720.000	6.12	47.85	53.97	110.80	-56.83	peak	V
4	5725.000	6.14	48.09	54.23	122.20	-67.97	peak	V
5	11490.000	14.45	37.86	52.31	74.00	-21.69	peak	V
6	11490.000	14.45	26.18	40.63	54.00	-13.37	AVG	V
7	17235.000	20.08	38.46	58.54	68.20	-9.66	peak	V



Power	AC120V/60Hz
Test Mode	Mode 4, 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	5.85	46.35	52.20	68.20	-16.00	peak	H
2	5700.000	6.04	47.60	53.64	105.20	-51.56	peak	H
3	5720.000	6.12	47.53	53.65	110.80	-57.15	peak	H
4	5725.000	6.14	46.81	52.95	122.20	-69.25	peak	H
5	5850.000	6.64	46.59	53.23	122.20	-68.97	peak	H
6	5855.000	6.65	46.67	53.32	110.80	-57.48	peak	H
7	5875.000	6.72	46.74	53.46	105.20	-51.74	peak	H
8	5925.000	6.92	46.47	53.39	68.20	-14.81	peak	H
9	11570.000	14.40	37.38	51.78	74.00	-22.22	peak	H
10	11570.000	14.40	25.76	40.16	54.00	-13.84	AVG	H
11	17355.000	20.59	37.52	58.11	68.20	-10.09	peak	H
1	5650.000	5.85	47.42	53.27	68.20	-14.93	peak	V
2	5700.000	6.04	46.90	52.94	105.20	-52.26	peak	V
3	5720.000	6.12	47.74	53.86	110.80	-56.94	peak	V
4	5725.000	6.14	47.44	53.58	122.20	-68.62	peak	V
5	5850.000	6.64	46.56	53.20	122.20	-69.00	peak	V
6	5855.000	6.65	48.12	54.77	110.80	-56.03	peak	V
7	5875.000	6.72	46.46	53.18	105.20	-52.02	peak	V
8	5925.000	6.92	48.34	55.26	68.20	-12.94	peak	V
9	11570.000	14.40	37.72	52.12	74.00	-21.88	peak	V
10	11570.000	14.40	26.11	40.51	54.00	-13.49	AVG	V
11	17355.000	20.59	38.17	58.76	68.20	-9.44	peak	V



Power	AC120V/60Hz
Test Mode	Mode 4, 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	6.64	46.72	53.36	122.20	-68.84	peak	H
2	5855.000	6.65	46.29	52.94	110.80	-57.86	peak	H
3	5875.000	6.72	47.10	53.82	105.20	-51.38	peak	H
4	5925.000	6.92	46.84	53.76	68.20	-14.44	peak	H
5	11650.000	14.34	37.22	51.56	74.00	-22.44	peak	H
6	11650.000	14.34	26.81	41.15	54.00	-12.85	peak	H
7	17475.000	21.10	37.65	58.75	68.20	-9.45	peak	H
1	5850.000	6.64	47.53	54.17	122.20	-68.03	peak	V
2	5855.000	6.65	46.81	53.46	110.80	-57.34	peak	V
3	5875.000	6.72	47.00	53.72	105.20	-51.48	peak	V
4	5925.000	6.92	46.99	53.91	68.20	-14.29	peak	V
5	11650.000	14.34	38.27	52.61	74.00	-21.39	peak	V
6	11650.000	14.34	27.32	41.66	54.00	-12.34	AVG	V
7	17475.000	21.10	38.47	59.57	68.20	-8.63	peak	V



Power	AC120V/60Hz
Test Mode	Mode 5, 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	5.85	47.50	53.35	68.20	-14.85	peak	H
2	5700.000	6.04	46.47	52.51	105.20	-52.69	peak	H
3	5720.000	6.12	46.85	52.97	110.80	-57.83	peak	H
4	5725.000	6.14	48.26	54.40	122.20	-67.80	peak	H
5	11510.000	14.45	37.30	51.75	74.00	-22.25	peak	H
6	11510.000	14.45	25.67	40.12	54.00	-13.88	AVG	H
7	17265.000	20.20	37.73	57.93	68.20	-10.27	peak	H
1	5650.000	5.85	46.51	52.36	68.20	-15.84	peak	V
2	5700.000	6.04	47.14	53.18	105.20	-52.02	peak	V
3	5720.000	6.12	48.83	54.95	110.80	-55.85	peak	V
4	5725.000	6.14	49.40	55.54	122.20	-66.66	peak	V
5	11510.000	14.45	37.93	52.38	74.00	-21.62	peak	V
6	11510.000	14.45	27.06	41.51	54.00	-12.49	AVG	V
7	17265.000	20.20	37.92	58.12	68.20	-10.08	peak	V



Power	AC120V/60Hz
Test Mode	Mode 5, 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	6.64	46.82	53.46	122.20	-68.74	peak	H
2	5855.000	6.65	47.58	54.23	110.80	-56.57	peak	H
3	5875.000	6.72	46.65	53.37	105.20	-51.83	peak	H
4	5925.000	6.92	45.65	52.57	68.20	-15.63	peak	H
5	11590.000	14.38	37.37	51.75	74.00	-22.25	peak	H
6	11590.000	14.38	26.30	40.68	54.00	-13.32	AVG	H
7	17385.000	20.72	37.96	58.68	68.20	-9.52	peak	H
1	5850.000	6.64	47.17	53.81	122.20	-68.39	peak	V
2	5855.000	6.65	47.63	54.28	110.80	-56.52	peak	V
3	5875.000	6.72	45.56	52.28	105.20	-52.92	peak	V
4	5925.000	6.92	46.84	53.76	68.20	-14.44	peak	V
5	11590.000	14.38	38.15	52.53	74.00	-21.47	peak	V
6	11590.000	14.38	26.23	40.61	54.00	-13.39	AVG	V
7	17385.000	20.72	38.53	59.25	68.20	-8.95	peak	V



Power	AC120V/60Hz
Test Mode	Mode 6, 802.11ac VHT80 CH155 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	5.85	46.88	52.73	68.20	-15.47	peak	H
2	5700.000	6.04	46.81	52.85	105.20	-52.35	peak	H
3	5720.000	6.12	46.72	52.84	110.80	-57.96	peak	H
4	5725.000	6.14	47.68	53.82	122.20	-68.38	peak	H
5	5850.000	6.64	48.12	54.76	122.20	-67.44	peak	H
6	5855.000	6.65	46.20	52.85	110.80	-57.95	peak	H
7	5875.000	6.72	46.80	53.52	105.20	-51.68	peak	H
8	5925.000	6.92	45.80	52.72	68.20	-15.48	peak	H
9	11550.000	14.41	38.16	52.57	74.00	-21.43	peak	H
10	11550.000	14.41	25.97	40.38	54.00	-13.62	AVG	H
11	17325.000	20.46	38.64	59.10	68.20	-9.10	peak	H
1	5650.000	5.85	47.23	53.08	68.20	-15.12	peak	V
2	5700.000	6.04	54.57	60.61	105.20	-44.59	peak	V
3	5720.000	6.12	52.87	58.99	110.80	-51.81	peak	V
4	5725.000	6.14	50.94	57.08	122.20	-65.12	peak	V
5	5850.000	6.64	49.69	56.33	122.20	-65.87	peak	V
6	5855.000	6.65	51.26	57.91	110.80	-52.89	peak	V
7	5875.000	6.72	47.53	54.25	105.20	-50.95	peak	V
8	5925.000	6.92	46.70	53.62	68.20	-14.58	peak	V
9	11550.000	14.41	38.13	52.54	74.00	-21.46	peak	V
10	11550.000	14.41	25.71	40.12	54.00	-13.88	AVG	V
11	17325.000	20.46	38.96	59.42	68.20	-8.78	peak	V



Power	AC120V/60Hz
Test Mode	Mode 7, 802.11ax HE20 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	5.85	47.85	53.70	68.20	-14.50	peak	H
2	5700.000	6.04	46.98	53.02	105.20	-52.18	peak	H
3	5720.000	6.12	46.23	52.35	110.80	-58.45	peak	H
4	5725.000	6.14	47.50	53.64	122.20	-68.56	peak	H
5	11490.000	14.45	36.90	51.35	74.00	-22.65	peak	H
6	11490.000	14.45	25.68	40.13	54.00	-13.87	AVG	H
7	17235.000	20.08	37.60	57.68	68.20	-10.52	peak	H
1	5650.000	5.85	46.87	52.72	68.20	-15.48	peak	V
2	5700.000	6.04	46.44	52.48	105.20	-52.72	peak	V
3	5720.000	6.12	46.16	52.28	110.80	-58.52	peak	V
4	5725.000	6.14	49.84	55.98	122.20	-66.22	peak	V
5	11490.000	14.45	37.89	52.34	74.00	-21.66	peak	V
6	11490.000	14.45	27.17	41.62	54.00	-12.38	AVG	V
7	17235.000	20.08	38.67	58.75	68.20	-9.45	peak	V



Power	AC120V/60Hz
Test Mode	Mode 7, 802.11ax HE20 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	5.85	46.74	52.59	68.20	-15.61	peak	H
2	5700.000	6.04	46.48	52.52	105.20	-52.68	peak	H
3	5720.000	6.12	47.25	53.37	110.80	-57.43	peak	H
4	5725.000	6.14	46.76	52.90	122.20	-69.30	peak	H
5	5850.000	6.64	48.01	54.65	122.20	-67.55	peak	H
6	5855.000	6.65	46.13	52.78	110.80	-58.02	peak	H
7	5875.000	6.72	47.93	54.65	105.20	-50.55	peak	H
8	5925.000	6.92	45.86	52.78	68.20	-15.42	peak	H
9	11570.000	14.40	36.89	51.29	74.00	-22.71	peak	H
10	11570.000	14.40	25.68	40.08	54.00	-13.92	AVG	H
11	17355.000	20.59	37.45	58.04	68.20	-10.16	peak	H
1	5650.000	5.85	47.10	52.95	68.20	-15.25	peak	V
2	5700.000	6.04	46.31	52.35	105.20	-52.85	peak	V
3	5720.000	6.12	46.15	52.27	110.80	-58.53	peak	V
4	5725.000	6.14	46.23	52.37	122.20	-69.83	peak	V
5	5850.000	6.64	46.23	52.87	122.20	-69.33	peak	V
6	5855.000	6.65	46.04	52.69	110.80	-58.11	peak	V
7	5875.000	6.72	45.74	52.46	105.20	-52.74	peak	V
8	5925.000	6.92	46.75	53.67	68.20	-14.53	peak	V
9	11570.000	14.40	37.97	52.37	74.00	-21.63	peak	V
10	11570.000	14.40	26.28	40.68	54.00	-13.32	AVG	V
11	17355.000	20.59	38.28	58.87	68.20	-9.33	peak	V



Power	AC120V/60Hz
Test Mode	Mode 7, 802.11ax HE20 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	6.64	46.56	53.20	122.20	-69.00	peak	H
2	5855.000	6.65	47.57	54.22	110.80	-56.58	peak	H
3	5875.000	6.72	47.46	54.18	105.20	-51.02	peak	H
4	5925.000	6.92	46.40	53.32	68.20	-14.88	peak	H
5	11650.000	14.34	37.30	51.64	74.00	-22.36	peak	H
6	11650.000	14.34	26.24	40.58	54.00	-13.42	AVG	H
7	17475.000	21.10	37.57	58.67	68.20	-9.53	peak	H
1	5850.000	6.64	48.99	55.63	122.20	-66.57	peak	V
2	5855.000	6.65	46.22	52.87	110.80	-57.93	peak	V
3	5875.000	6.72	46.60	53.32	105.20	-51.88	peak	V
4	5925.000	6.92	46.47	53.39	68.20	-14.81	peak	V
5	11650.000	14.34	38.08	52.42	74.00	-21.58	peak	V
6	11650.000	14.34	26.62	40.96	54.00	-13.04	AVG	V
7	17475.000	21.10	38.65	59.75	68.20	-8.45	peak	V



Power	AC120V/60Hz
Test Mode	Mode 8, 802.11ax HE40 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	5.85	45.88	51.73	68.20	-16.47	peak	H
2	5700.000	6.04	46.38	52.42	105.20	-52.78	peak	H
3	5720.000	6.12	47.57	53.69	110.80	-57.11	peak	H
4	5725.000	6.14	46.64	52.78	122.20	-69.42	peak	H
5	11510.000	14.45	37.12	51.57	74.00	-22.43	peak	H
6	11510.000	14.45	25.72	40.17	54.00	-13.83	AVG	H
7	17265.000	20.20	37.94	58.14	68.20	-10.06	peak	H
1	5650.000	5.85	46.71	52.56	68.20	-15.64	peak	V
2	5700.000	6.04	46.97	53.01	105.20	-52.19	peak	V
3	5720.000	6.12	52.17	58.29	110.80	-52.51	peak	V
4	5725.000	6.14	53.49	59.63	122.20	-62.57	peak	V
5	11510.000	14.45	37.70	52.15	74.00	-21.85	peak	V
6	11510.000	14.45	26.63	41.08	54.00	-12.92	AVG	V
7	17265.000	20.20	38.47	58.67	68.20	-9.53	peak	V



Power	AC120V/60Hz
Test Mode	Mode 8, 802.11ax HE40 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	6.64	46.52	53.16	122.20	-69.04	peak	H
2	5855.000	6.65	47.02	53.67	110.80	-57.13	peak	H
3	5875.000	6.72	45.95	52.67	105.20	-52.53	peak	H
4	5925.000	6.92	46.58	53.50	68.20	-14.70	peak	H
5	11590.000	14.38	38.20	52.58	74.00	-21.42	peak	H
6	11590.000	14.38	26.89	41.27	54.00	-12.73	AVG	H
7	17385.000	20.72	37.81	58.53	68.20	-9.67	peak	H
1	5850.000	6.64	47.43	54.07	122.20	-68.13	peak	V
2	5855.000	6.65	47.25	53.90	110.80	-56.90	peak	V
3	5875.000	6.72	47.00	53.72	105.20	-51.48	peak	V
4	5925.000	6.92	46.36	53.28	68.20	-14.92	peak	V
5	11590.000	14.38	38.37	52.75	74.00	-21.25	peak	V
6	11590.000	14.38	27.00	41.38	54.00	-12.62	AVG	V
7	17385.000	20.72	38.56	59.28	68.20	-8.92	peak	V



Power	AC120V/60Hz
Test Mode	Mode 9, 802.11ax HE80 CH155 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	5.85	46.64	52.49	68.20	-15.71	peak	H
2	5700.000	6.04	47.73	53.77	105.20	-51.43	peak	H
3	5720.000	6.12	46.13	52.25	110.80	-58.55	peak	H
4	5725.000	6.14	47.23	53.37	122.20	-68.83	peak	H
5	5850.000	6.64	47.32	53.96	122.20	-68.24	peak	H
6	5855.000	6.65	46.11	52.76	110.80	-58.04	peak	H
7	5875.000	6.72	46.49	53.21	105.20	-51.99	peak	H
8	5925.000	6.92	46.44	53.36	68.20	-14.84	peak	H
9	11550.000	14.41	37.16	51.57	74.00	-22.43	peak	H
10	11550.000	14.41	26.64	41.05	54.00	-12.95	AVG	H
11	17325.000	20.46	38.01	58.47	68.20	-9.73	peak	H
1	5650.000	5.85	46.75	52.60	68.20	-15.60	peak	V
2	5700.000	6.04	50.69	56.73	105.20	-48.47	peak	V
3	5720.000	6.12	53.06	59.18	110.80	-51.62	peak	V
4	5725.000	6.14	49.03	55.17	122.20	-67.03	peak	V
5	5850.000	6.64	50.03	56.67	122.20	-65.53	peak	V
6	5855.000	6.65	49.64	56.29	110.80	-54.51	peak	V
7	5875.000	6.72	51.53	58.25	105.20	-46.95	peak	V
8	5925.000	6.92	45.96	52.88	68.20	-15.32	peak	V
9	11550.000	14.41	38.26	52.67	74.00	-21.33	peak	V
10	11550.000	14.41	27.31	41.72	54.00	-12.28	AVG	V
11	17325.000	20.46	39.17	59.63	68.20	-8.57	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

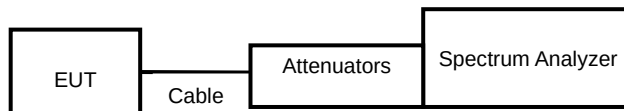
7.1. Test Limit

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

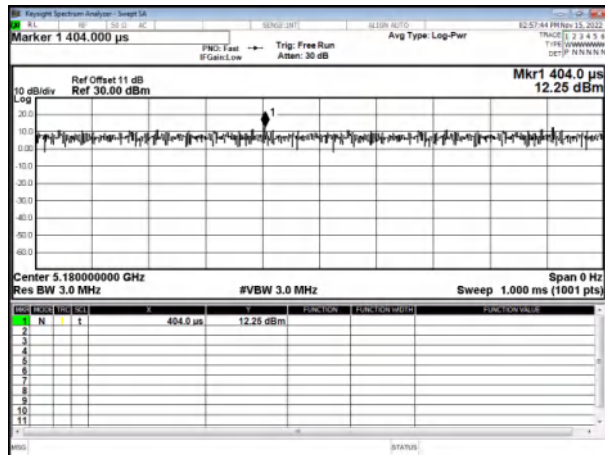
Modulation Mode	On Time (msec)	Period Time (msec)	Duty Cycle (%)
802.11a	100.00	100.00	100.00%
802.11ac VHT20	100.00	100.00	100.00%
802.11ac VHT40	100.00	100.00	100.00%
802.11ac VHT80	100.00	100.00	100.00%
802.11ax HE20	100.00	100.00	100.00%
802.11ax HE40	100.00	100.00	100.00%
802.11ax HE80	100.00	100.00	100.00%

**7.5. Measurement Methods**

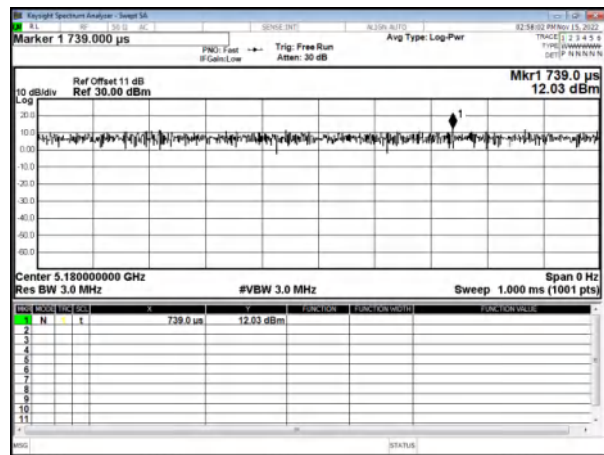
26 dB and 6dB Emission BW	KDB 789033 v02r01, Section C
99% Occupied BW	KDB 789033 v02r01, Section D
Conducted Output Power	KDB 789033 v02r01, Section E.2.d and E.3.b (Method PM-G)
Power Spectral Density	KDB 789033 v02r01, Section F
Unwanted emissions in restricted bands	KDB 789033 v02r01, Sections G and H
Unwanted emissions in non-restricted bands	KDB 789033 v02r01, Sections G and H



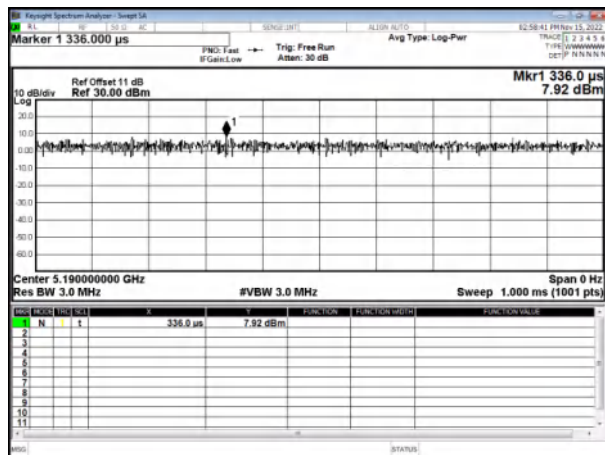
Modulation Type: 802.11a (6Mbps)



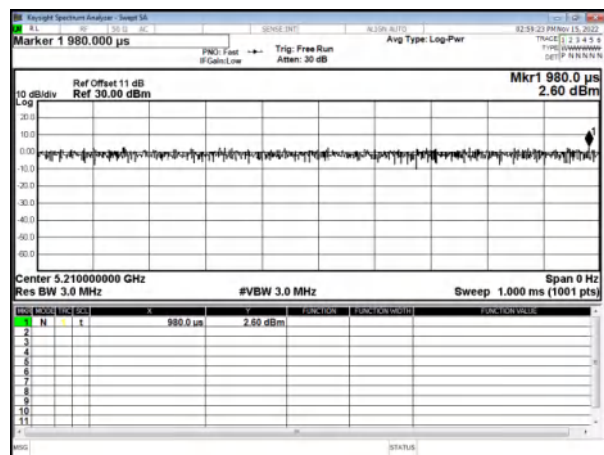
Modulation Type: 802.11ac VHT20 (6.5Mbps)



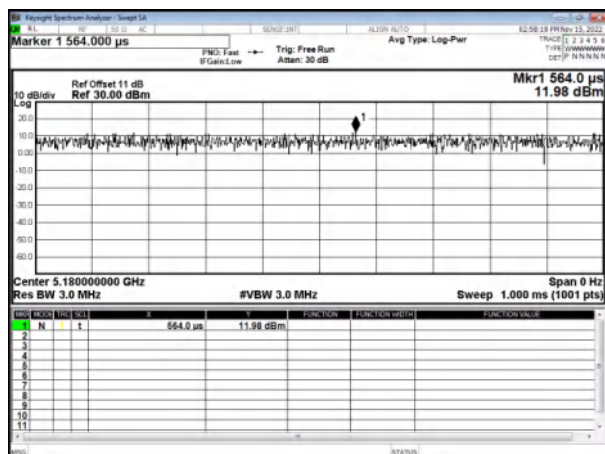
Modulation Type: 802.11ac VHT40 (13.5Mbps)



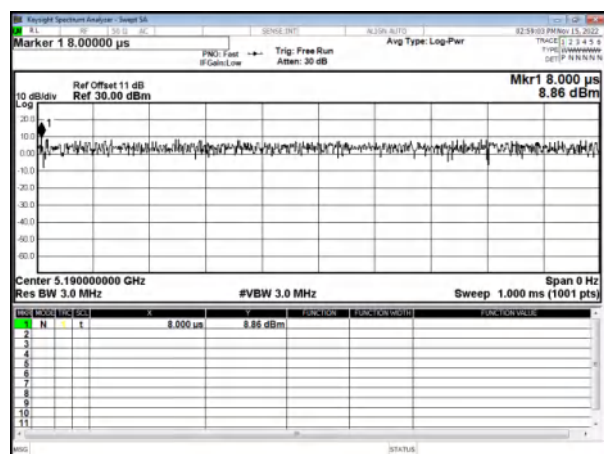
Modulation Type: 802.11ac VHT80 (29.3Mbps)



Modulation Type: 802.11ax HE20 (7.3Mbps)

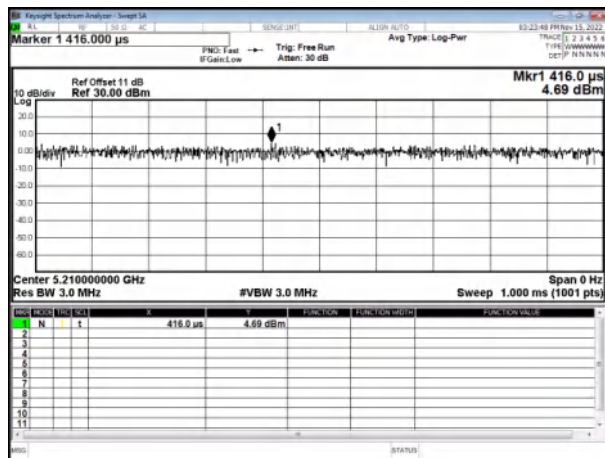


Modulation Type: 802.11ax HE40 (14.6Mbps)





Modulation Type: 802.11ax HE80 (30.6Mbps)





8. 6dB Bandwidth & 99% Occupied Bandwidth

8.1. Test Limit

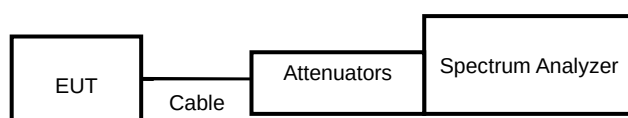
FCC §15.407

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

8.2. Test Procedure

Reference to 789033 v02r01 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

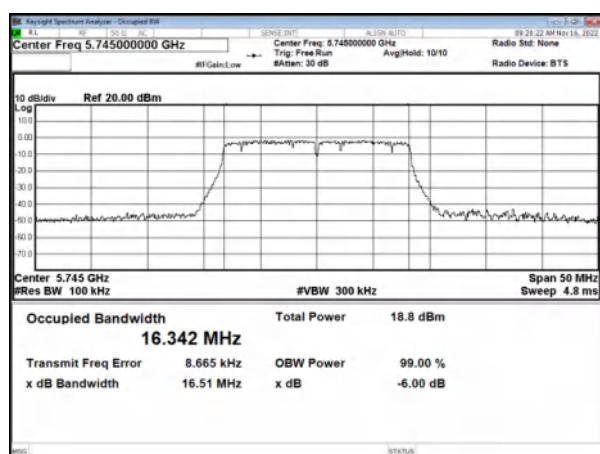
Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)
			ANT A	ANT B	
802.11a	149	5745	16.51	16.48	0.50
	157	5785	16.49	16.47	0.50
	165	5825	16.48	16.47	0.50
802.11ac VHT20	149	5745	17.68	17.71	0.50
	157	5785	17.68	17.73	0.50
	165	5825	17.68	17.71	0.50
802.11ac VHT40	155	5755	36.52	36.53	0.50
	159	5795	36.52	36.53	0.50
802.11ac VHT80	155	5775	74.77	73.74	0.50
802.11ax HE20	149	5745	19.03	19.04	0.50
	157	5785	19.03	19.00	0.50
	165	5825	19.05	19.04	0.50
802.11ax HE40	155	5755	38.00	38.08	0.50
	159	5795	37.37	37.84	0.50
802.11ax HE80	155	5775	78.07	78.08	0.50

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

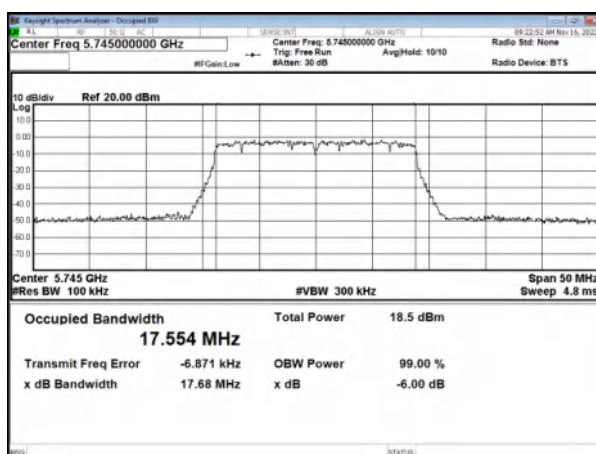
Mode	Channel	Frequency (MHz)	99% Bandwidth(MHz)	
			ANT A	ANT B
802.11a	149	5745	16.37	16.38
	157	5785	16.34	16.37
	165	5825	16.40	16.38
802.11ac VHT20	149	5745	18.88	17.56
	157	5785	17.57	17.55
	165	5825	17.56	17.55
802.11ac VHT40	155	5755	35.99	36.02
	159	5795	36.00	35.98
802.11ac VHT80	155	5775	74.51	74.30
802.11ax HE20	149	5745	18.88	18.88
	157	5785	18.91	18.90
	165	5825	18.92	18.92
802.11ax HE40	155	5755	37.74	37.73
	159	5795	37.74	37.70
802.11ax HE80	155	5775	77.32	77.30



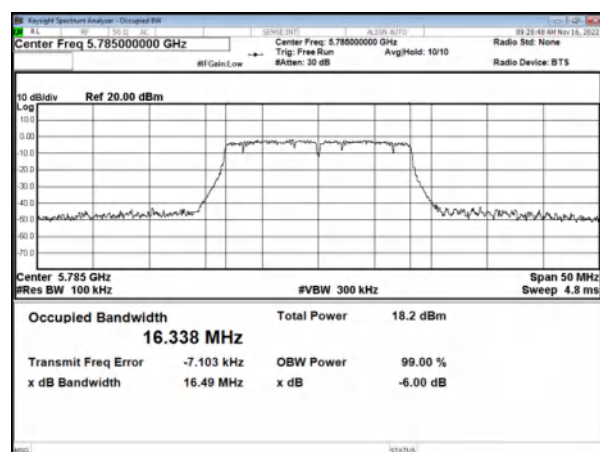
MIMO (ANT A)
6dB Bandwidth
Modulation Type: 802.11a (6Mbps)
CH149



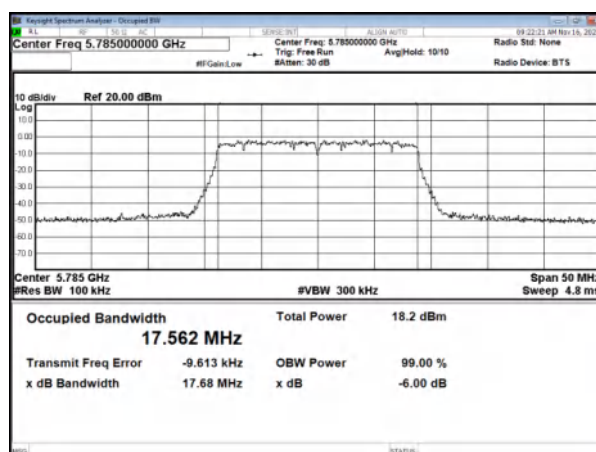
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



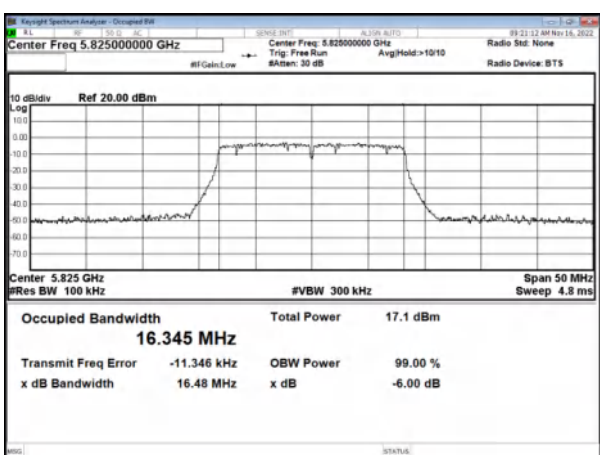
CH157



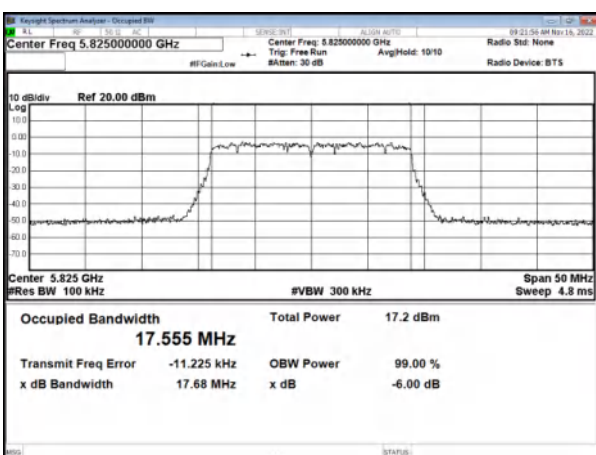
CH157



CH165



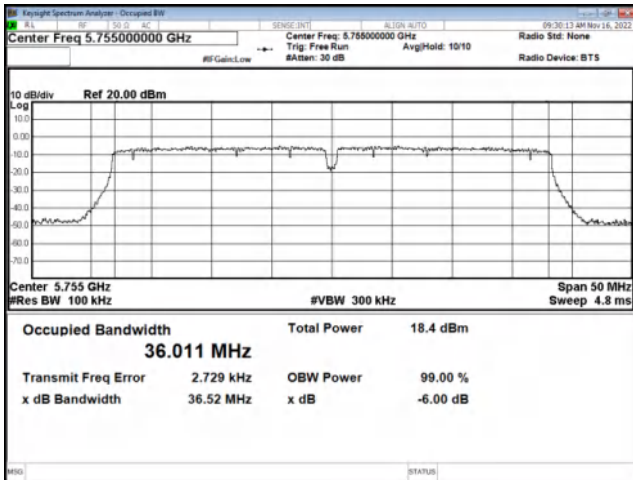
CH165



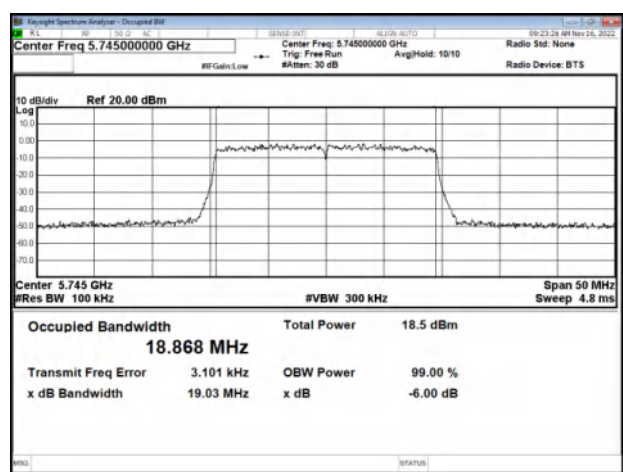


6dB Bandwidth

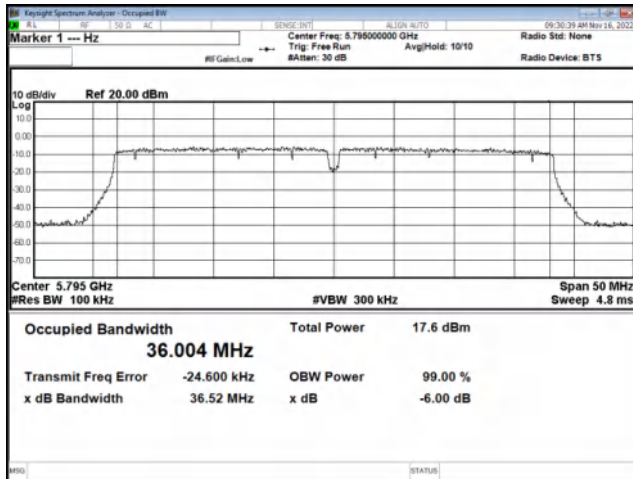
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



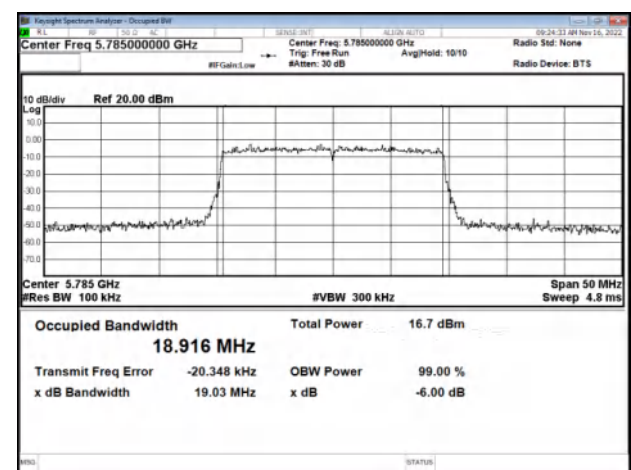
Modulation Type: 802.11n HE20 (7.3Mbps)
CH149



CH159

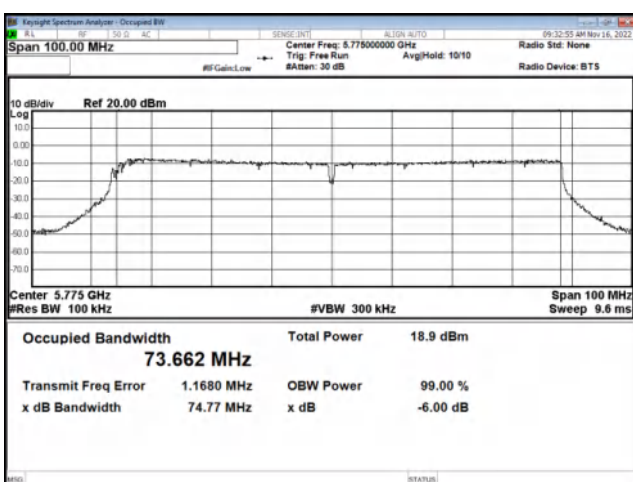


CH157

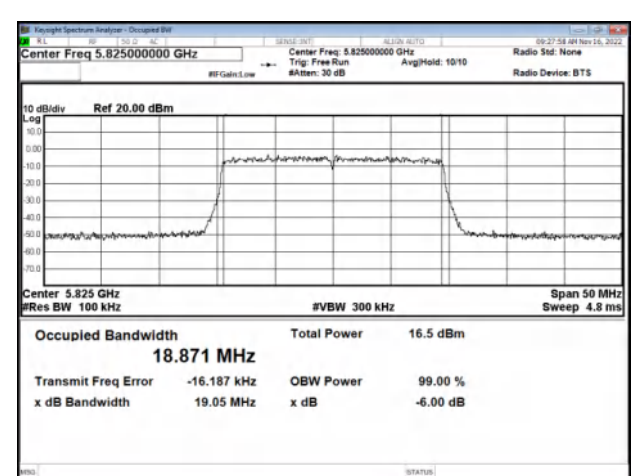


Modulation Type: 802.11ac, VHT80 (29.3Mbps)

CH155



CH165

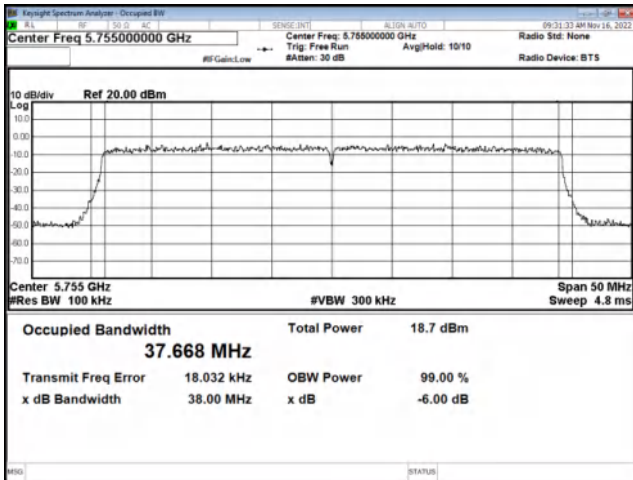




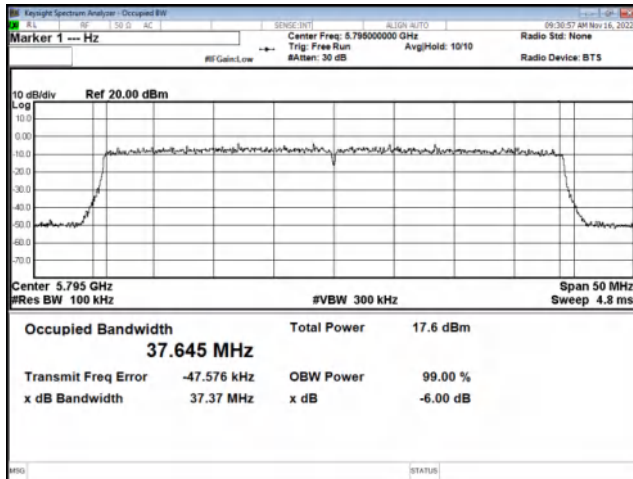
6dB Bandwidth

Modulation Type: 802.11 ax HE40 (14.6Mbps)

CH151

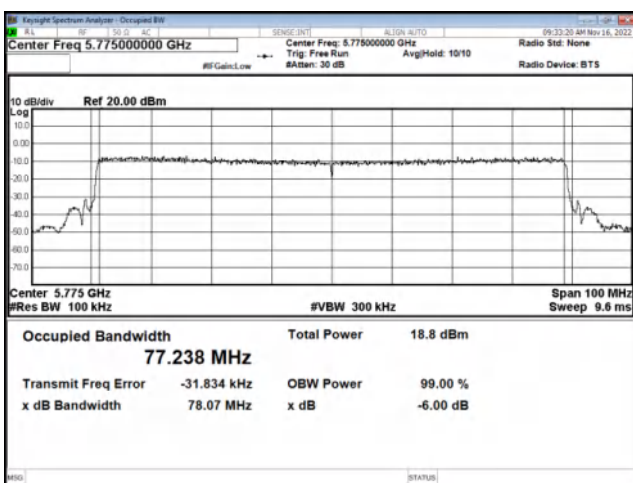


CH159



Modulation Type: 802.11ax HE80 (30.6Mbps)

CH155



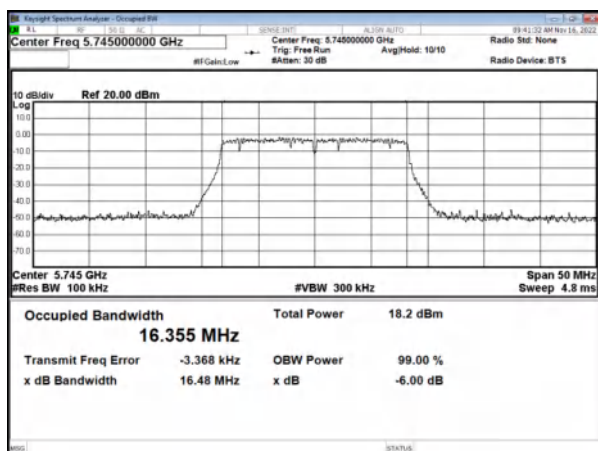


MIMO (ANT B)

6dB Bandwidth

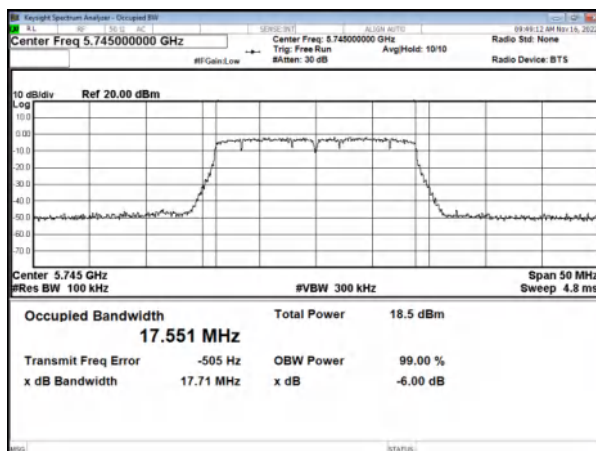
Modulation Type: 802.11a (6Mbps)

CH149

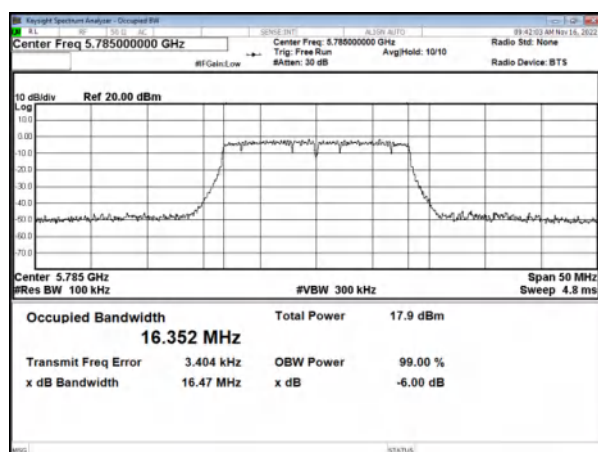


Modulation Type: 802.11ac, VHT20 (6.5Mbps)

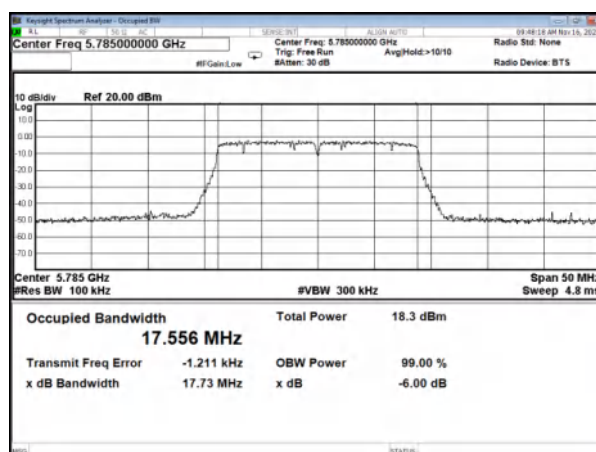
CH149



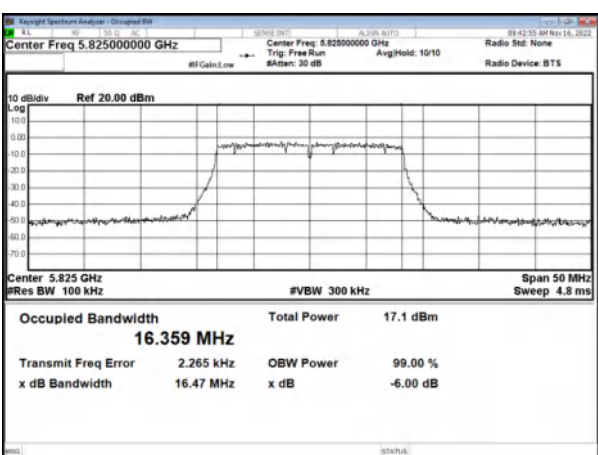
CH157



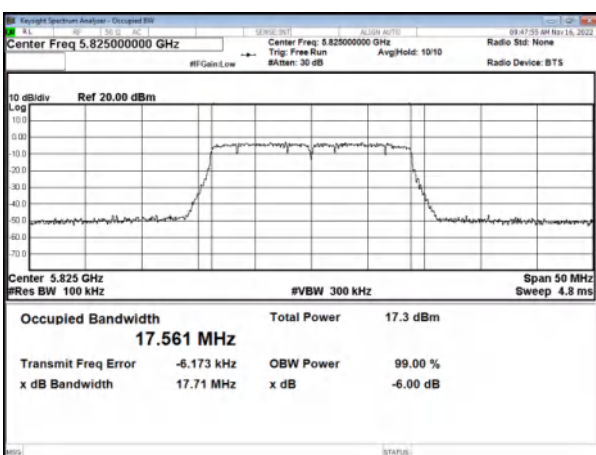
CH157



CH165



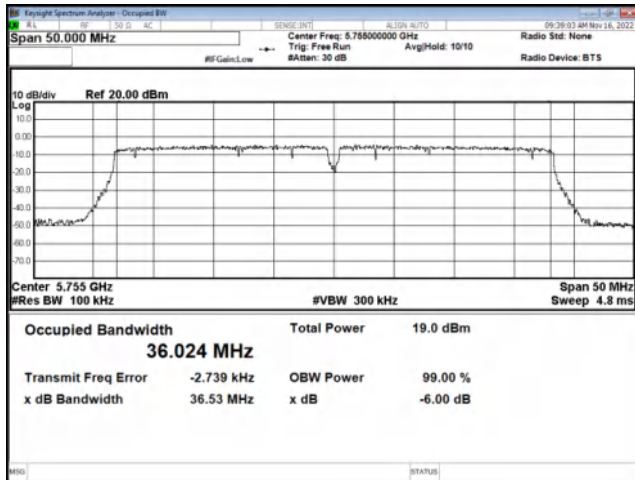
CH165



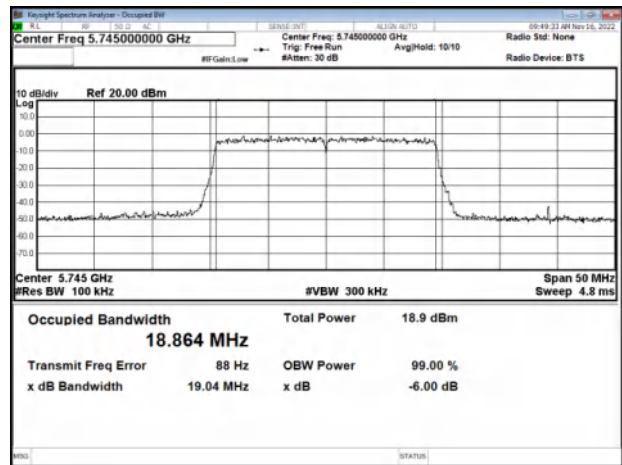


6dB Bandwidth

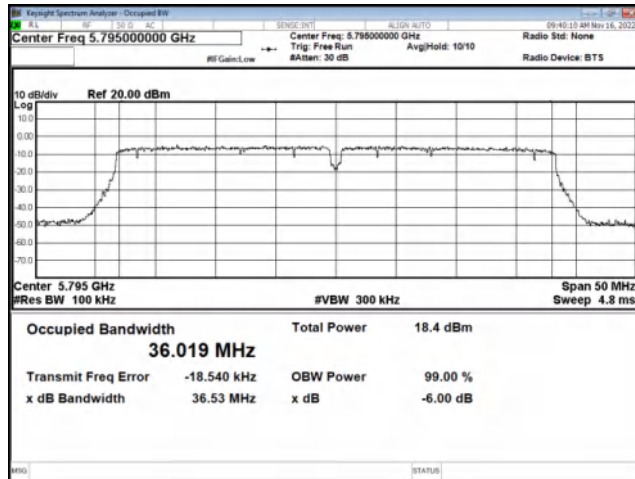
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



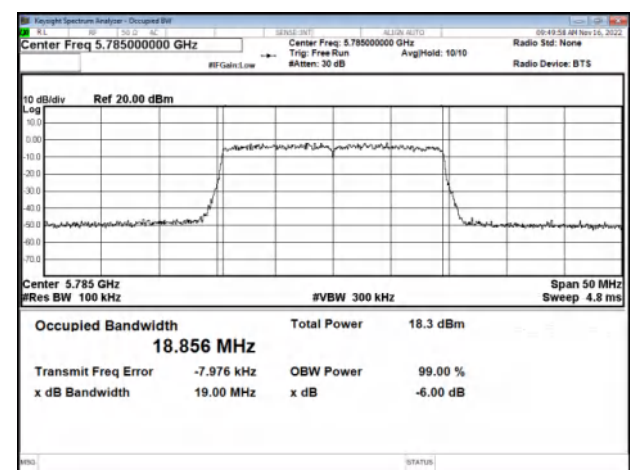
Modulation Type: 802.11n HE20 (7.3Mbps)
CH149



CH159

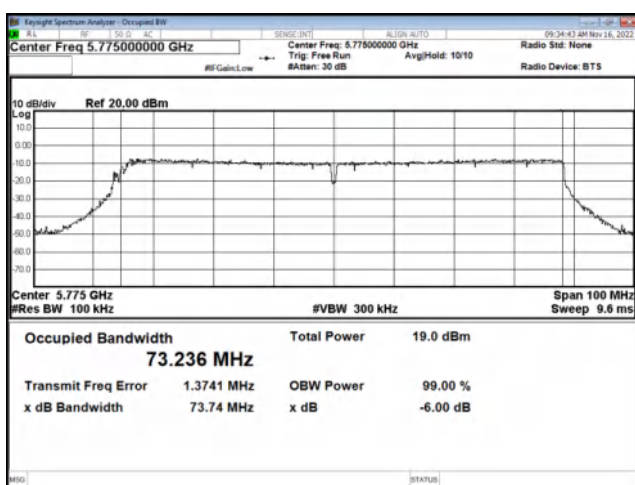


CH157

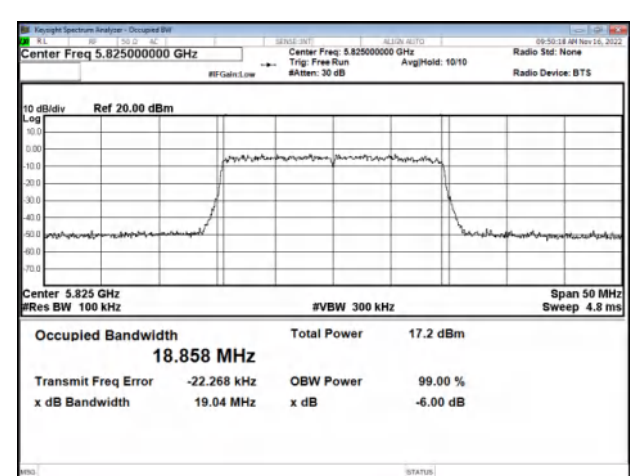


Modulation Type: 802.11ac, VHT80 (29.3Mbps)

CH155

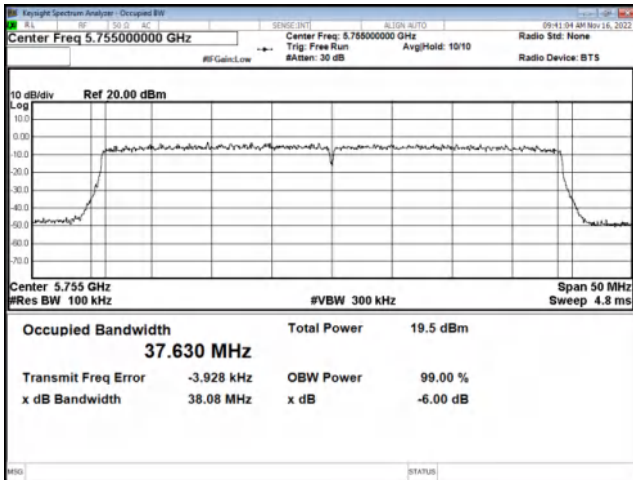


CH165

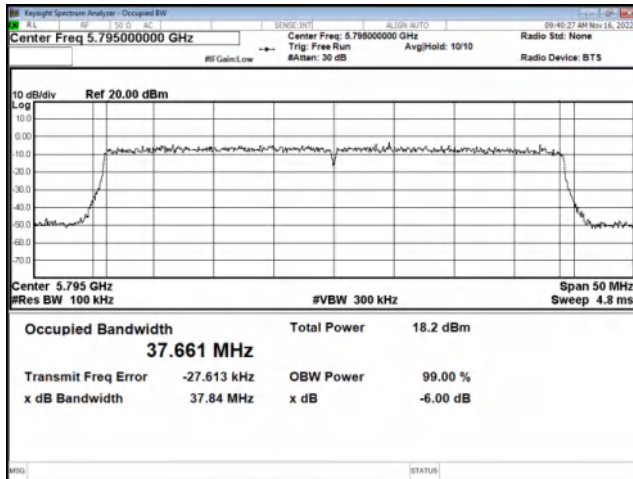




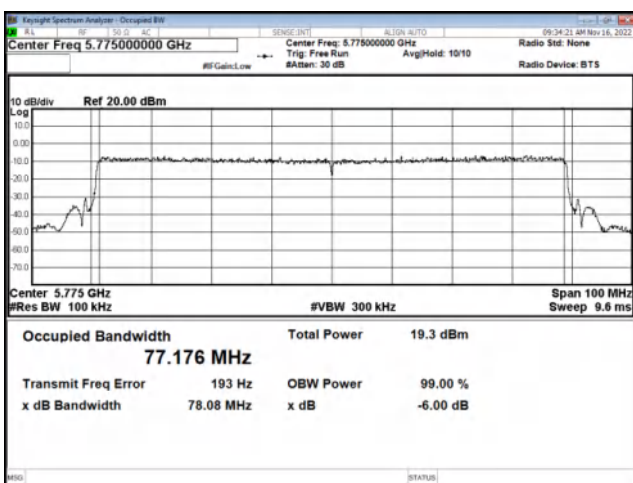
Modulation Type: 802.11 ax HE40 (14.6Mbps)
CH151



CH159

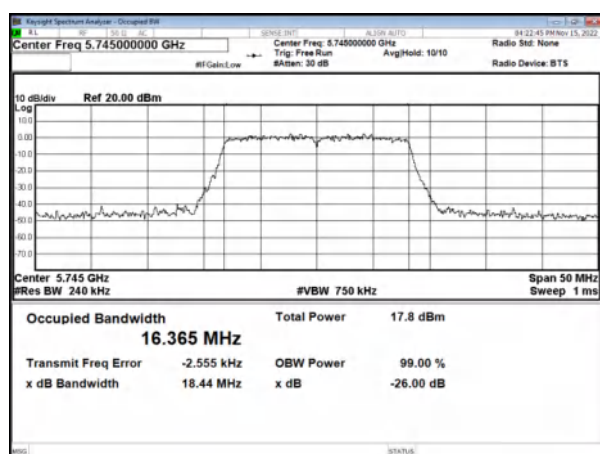


Modulation Type: 802.11ax HE80 (30.6Mbps)
CH155

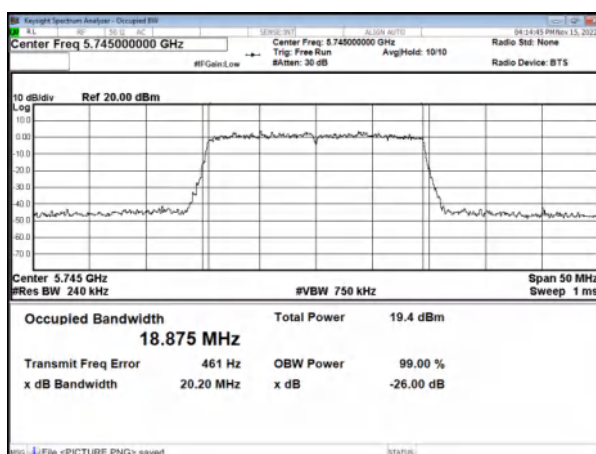




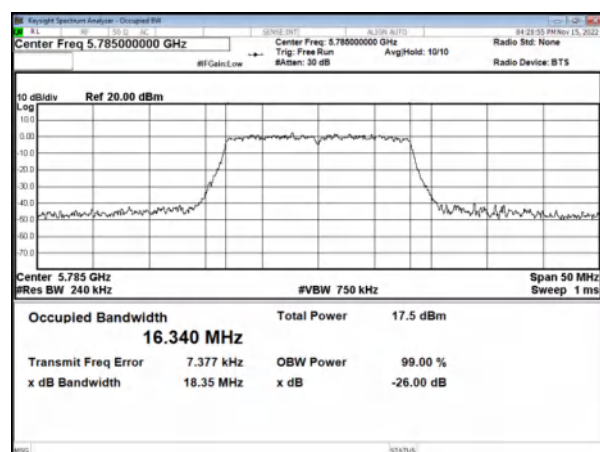
MIMO (ANT A)
99% Occupied Bandwidth
Modulation Type: 802.11a (6Mbps)
CH149



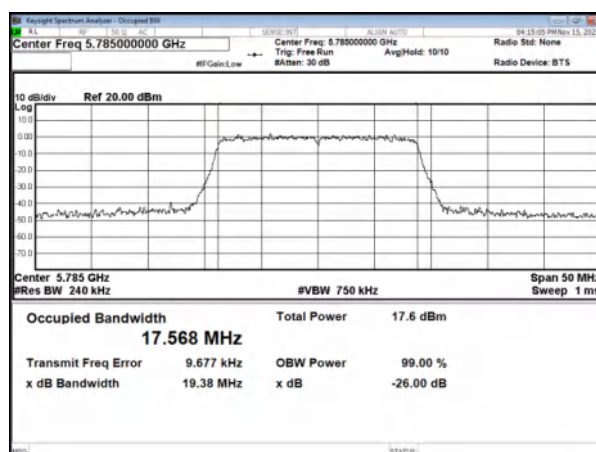
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



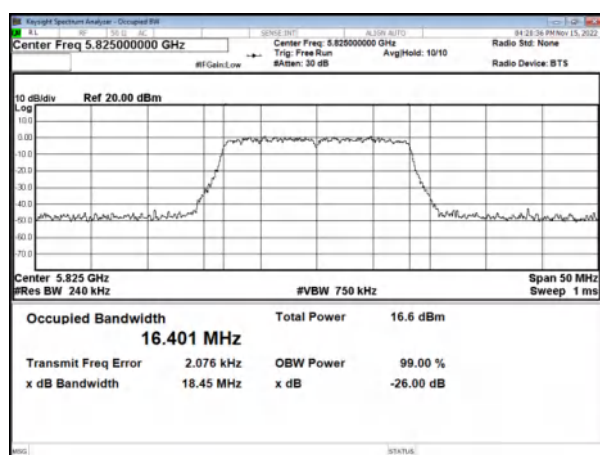
CH157



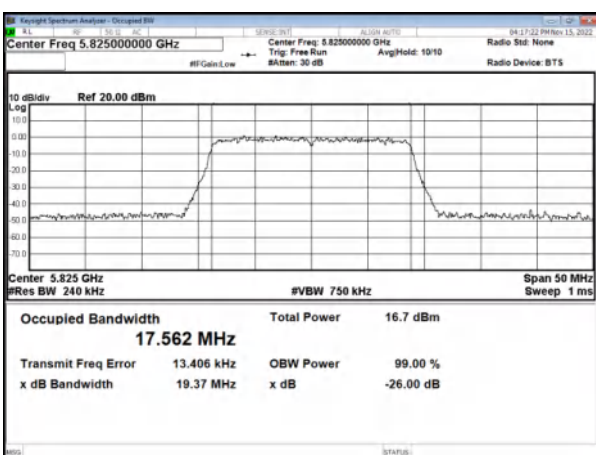
CH157



CH165

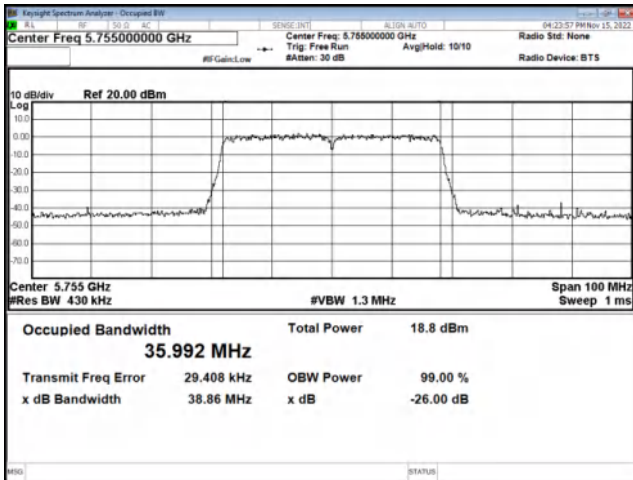


CH165

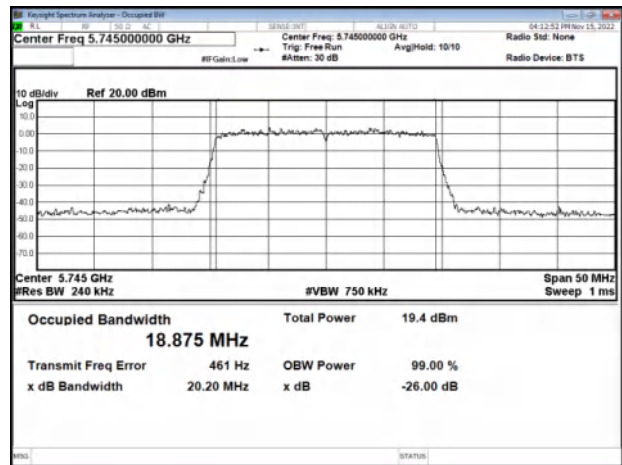




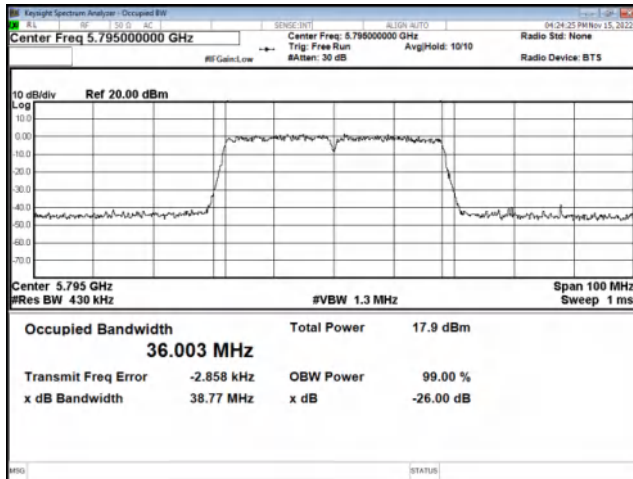
99% Occupied Bandwidth
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



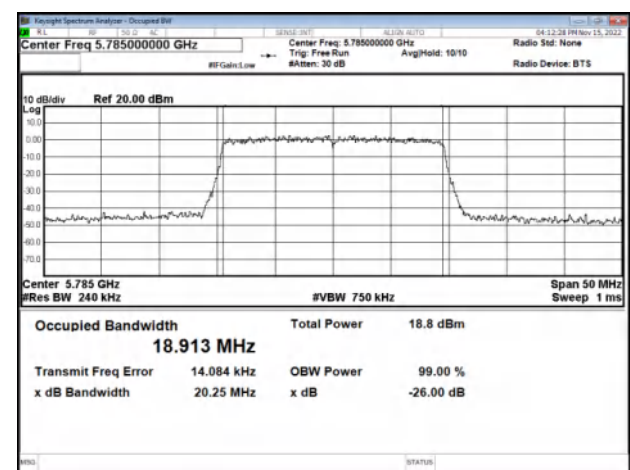
Modulation Type: 802.1111ax HE20 (7.3Mbps)
CH149



CH159

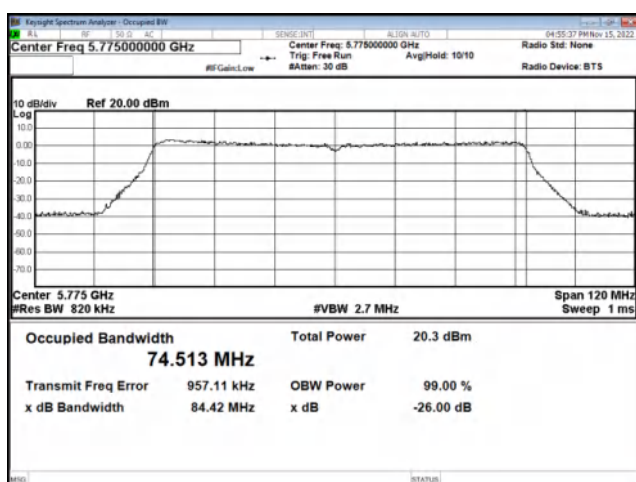


CH157

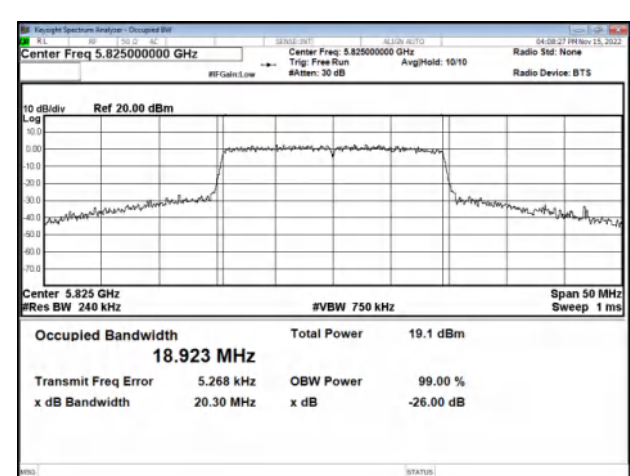


Modulation Type: 802.11ac, VHT80 (29.3Mbps)

CH155

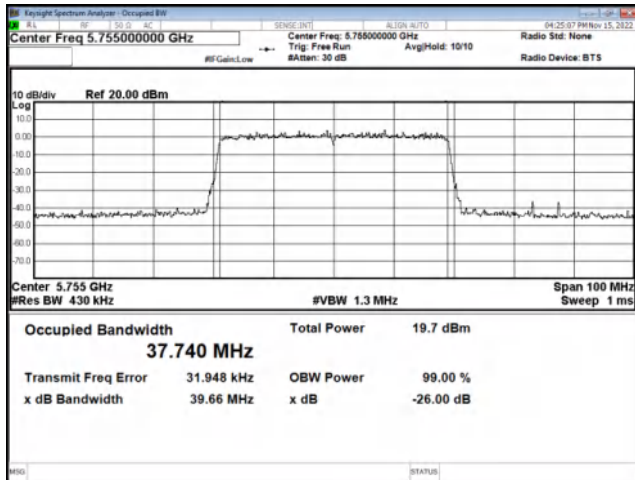


CH165

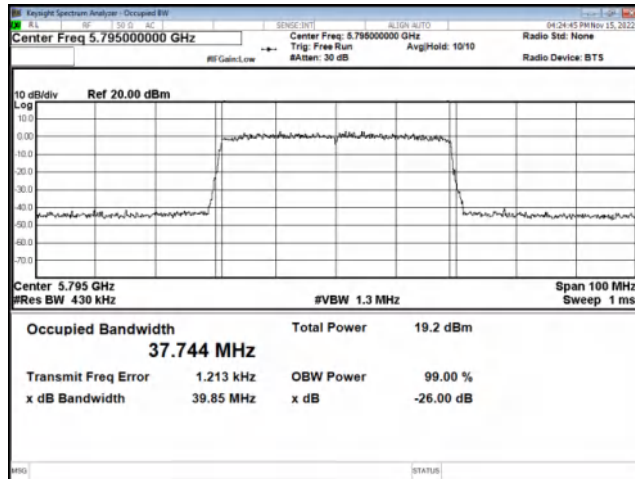




99% Occupied Bandwidth
Modulation Type: 802.11 ax HE40 (14.6Mbps)
CH151

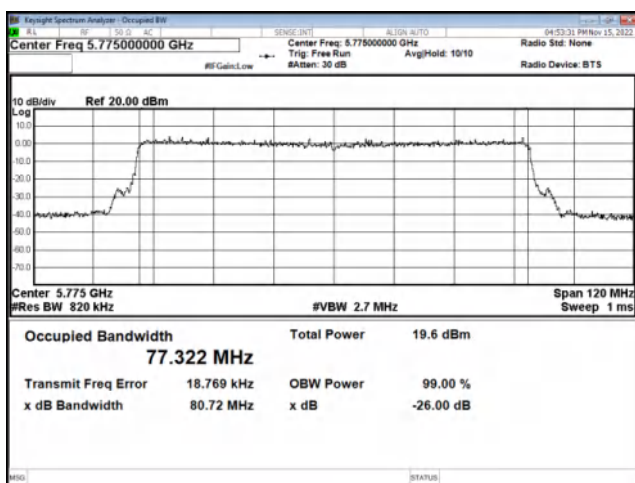


CH159



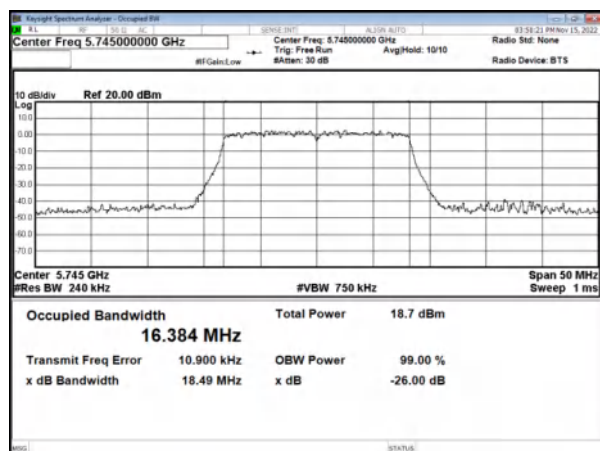
Modulation Type: 802.11ax HE80 (30.6Mbps)

CH155

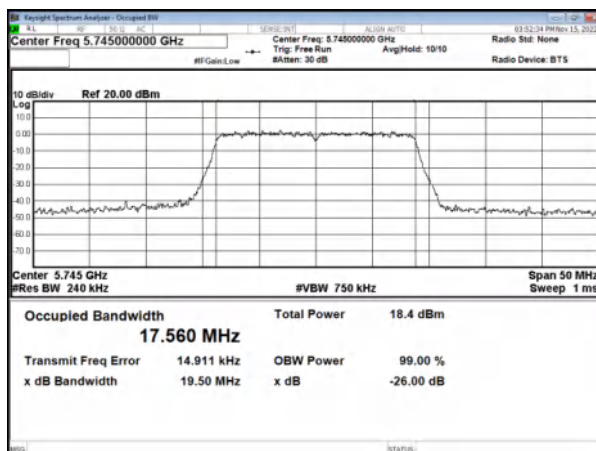




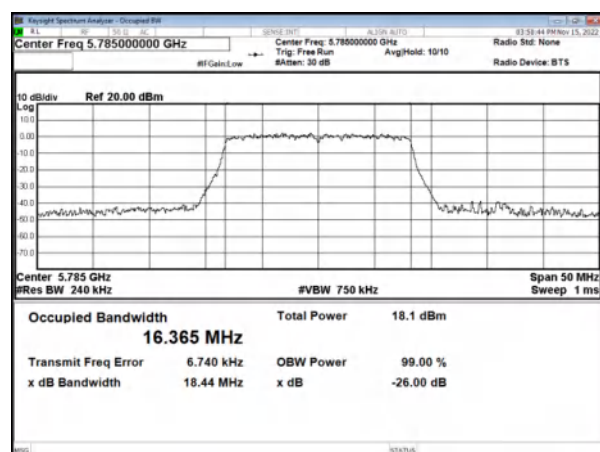
MIMO (ANT B)
99% Occupied Bandwidth
Modulation Type: 802.11a (6Mbps)
CH149



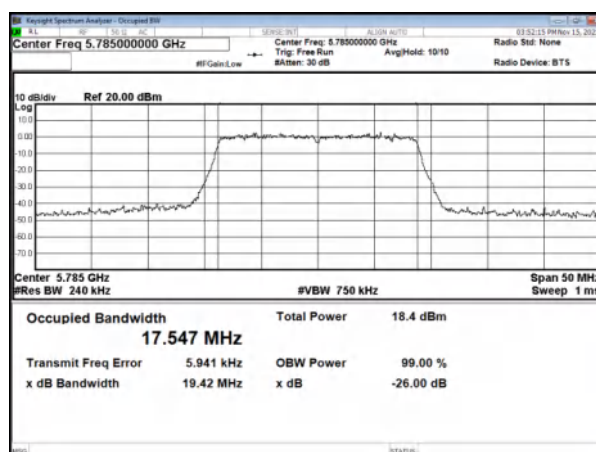
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



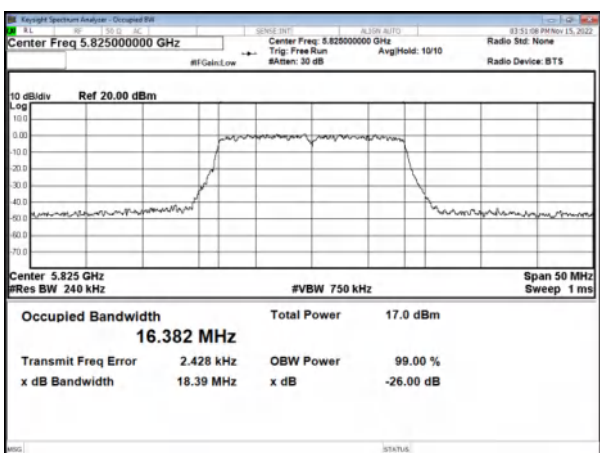
CH157



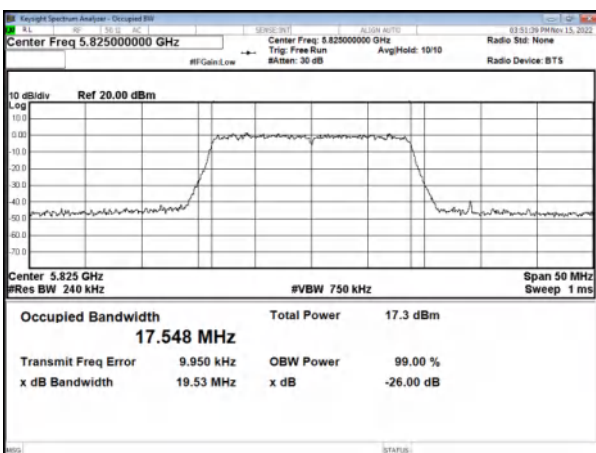
CH157



CH165

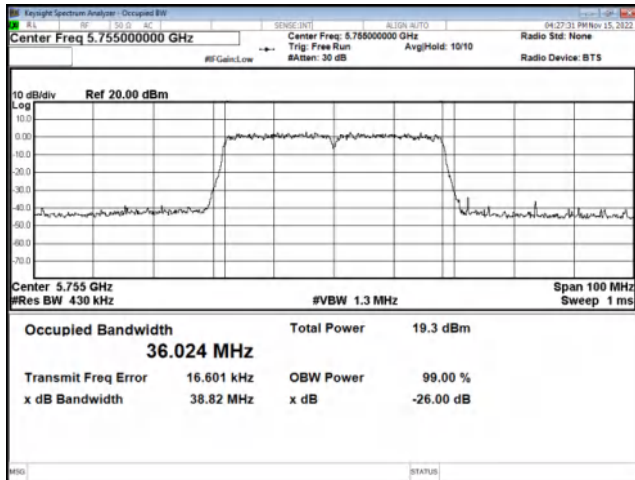


CH165

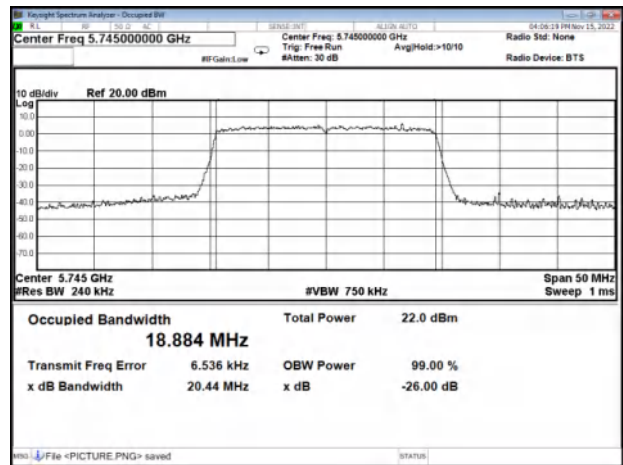




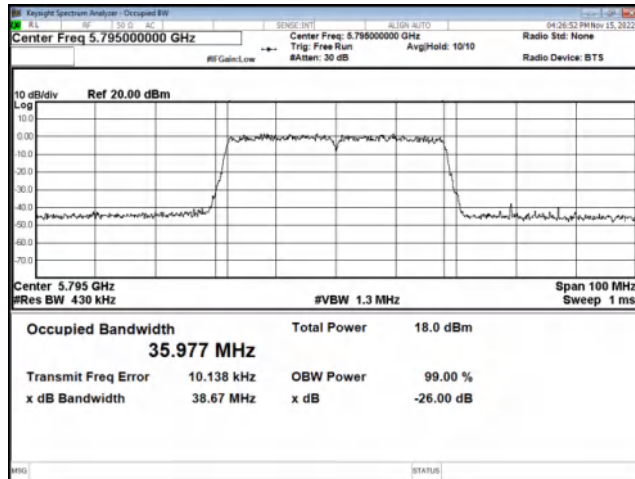
99% Occupied Bandwidth
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



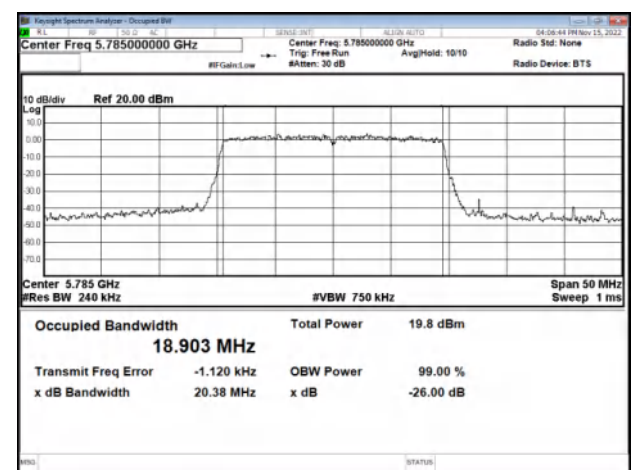
Modulation Type: 802.111ax HE20 (7.3Mbps)
CH149



CH159

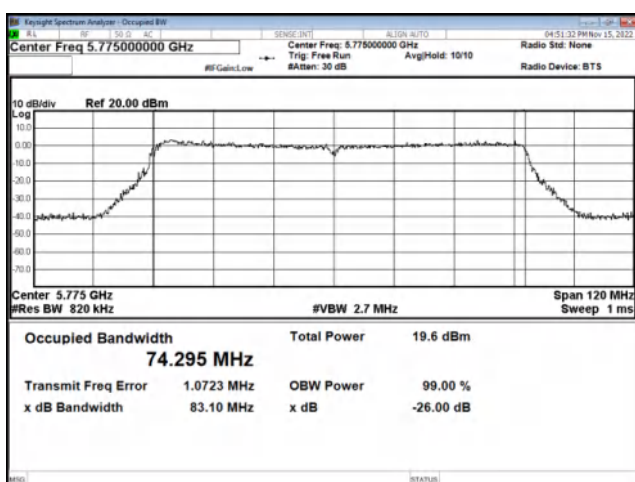


CH157

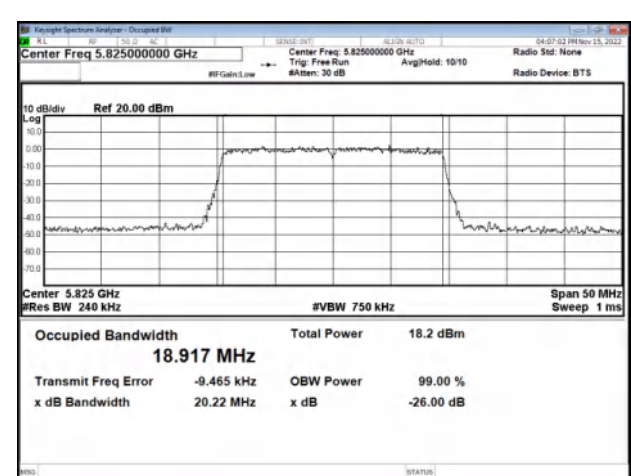


Modulation Type: 802.11ac, VHT80 (29.3Mbps)

CH155

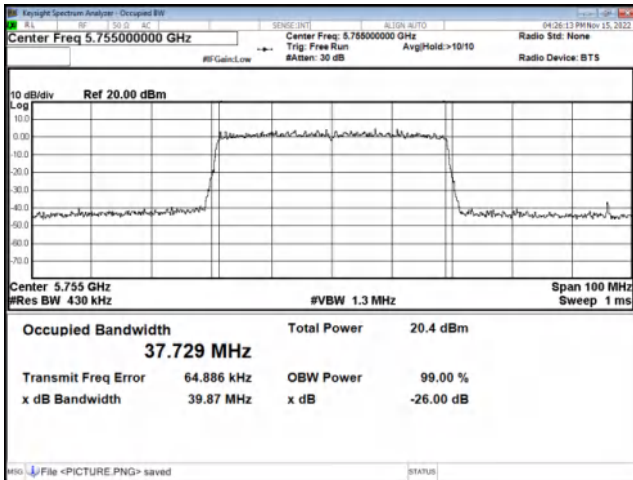


CH165

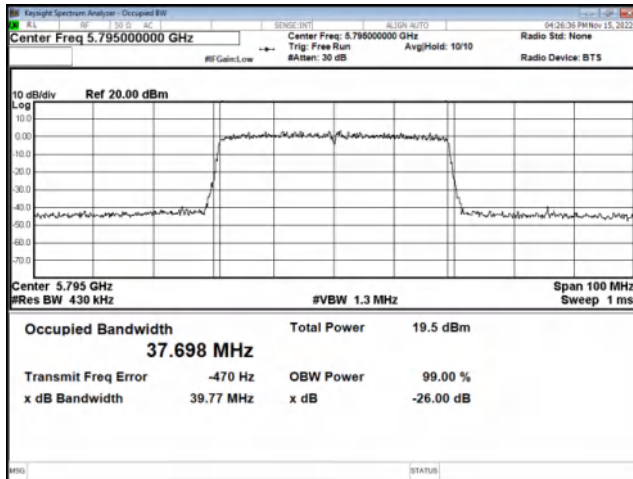




Modulation Type: 802.11 ax HE40 (14.6Mbps)
CH151

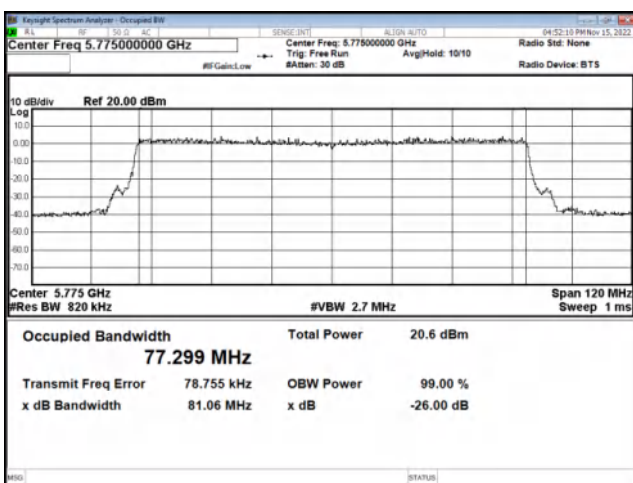


CH159



Modulation Type: 802.11ax HE80 (30.6Mbps)

CH155





9. 26dB Bandwidth & 99% Occupied Bandwidth

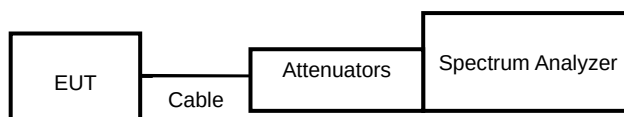
9.1. Test Limit

None; for reporting purposes only.

9.2. Test Procedure

Reference to 789033 v02r01 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
MIMO**

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
			ANT A	ANT B
802.11a	36	5180	18.40	18.47
	44	5220	18.36	18.4
	48	5240	18.55	18.39
802.11ac VHT20	36	5180	19.39	19.40
	44	5220	19.51	19.39
	48	5240	19.47	19.43
802.11ac VHT40	38	5190	38.61	38.81
	46	5230	38.57	38.65
802.11ac VHT80	42	5210	83.68	83.78
802.11ax HE20	36	5180	20.31	20.33
	44	5220	20.19	20.26
	48	5240	20.23	20.22
802.11ax HE40	38	5190	39.96	39.89
	46	5230	39.69	40.12
802.11ax HE80	42	5210	80.93	80.90



9.5. Test Result and Data (99% Occupied Bandwidth)
In the 5.2G Band
MIMO

Mode	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
			ANT A	ANT B
802.11a	36	5180	16.36	16.37
	44	5220	16.37	16.37
	48	5240	16.37	16.37
802.11ac VHT20	36	5180	17.56	17.57
	44	5220	17.56	17.56
	48	5240	17.56	17.57
802.11ac VHT40	38	5190	35.98	36.03
	46	5230	36.04	36.04
802.11ac VHT80	42	5210	74.15	74.42
802.11ax HE20	36	5180	18.93	18.88
	44	5220	18.88	18.92
	48	5240	18.88	18.87
802.11ax HE40	38	5190	37.73	37.82
	46	5230	37.72	37.68
802.11ax HE80	42	5210	77.31	77.37

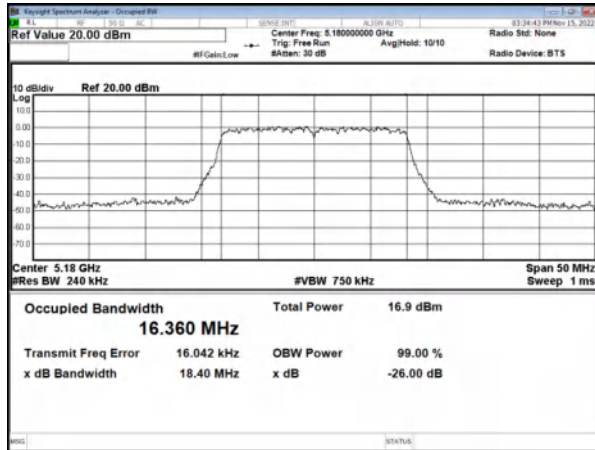


MIMO (ANT A)

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

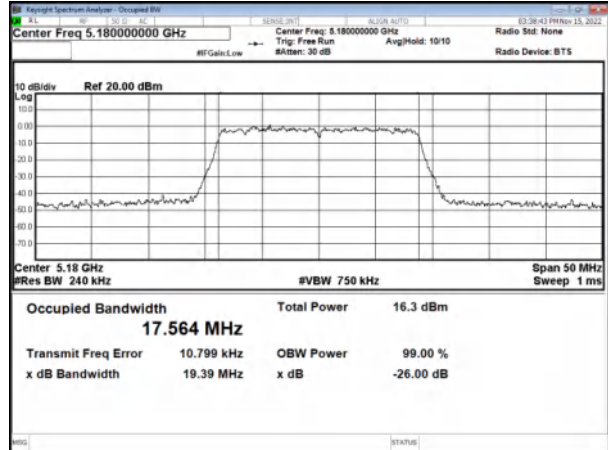
Modulation Standard: 802.11a (6Mbps)

CH36

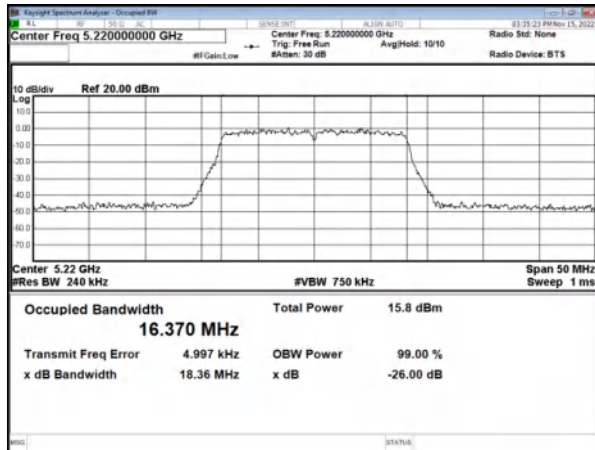


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

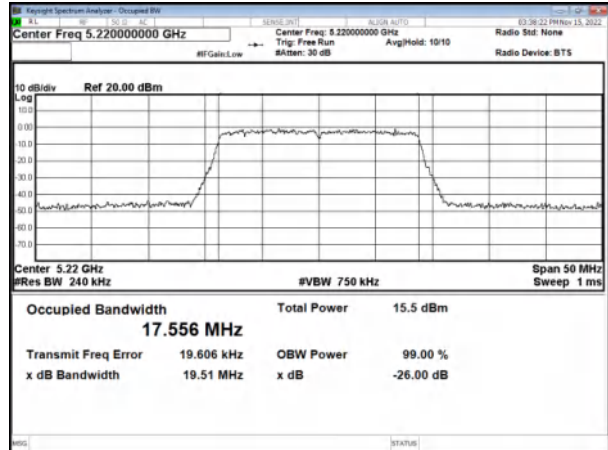
CH36



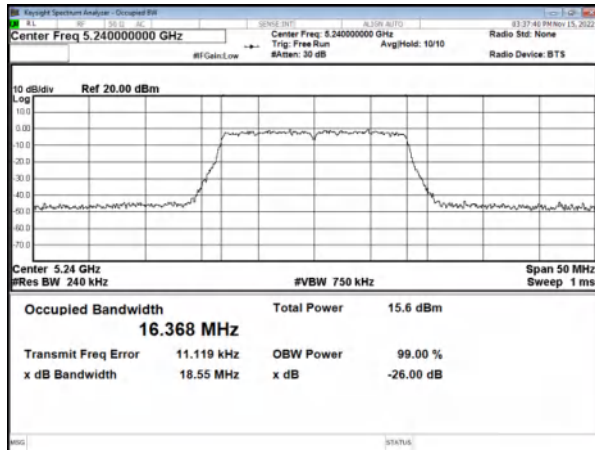
CH44



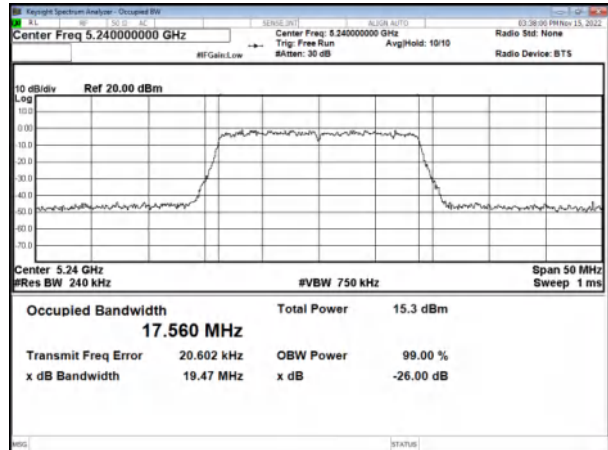
CH44



CH48



CH48

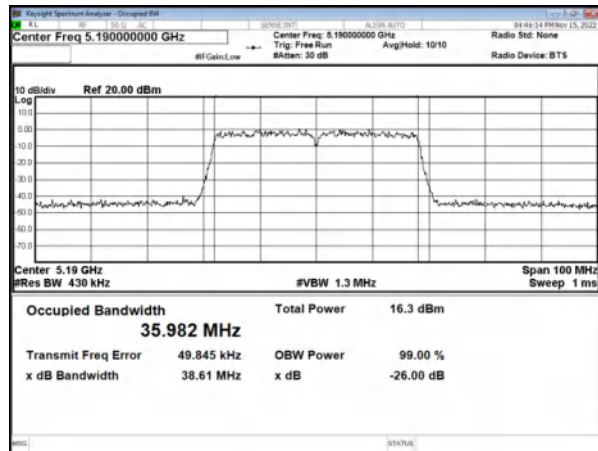




26dB Bandwidth &99% Occupied Bandwidth, UNII-1

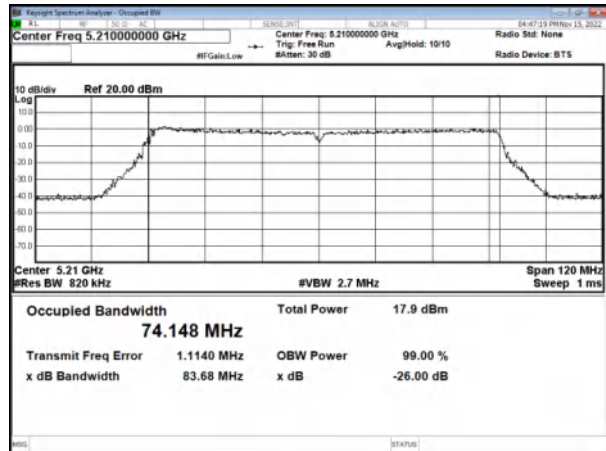
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

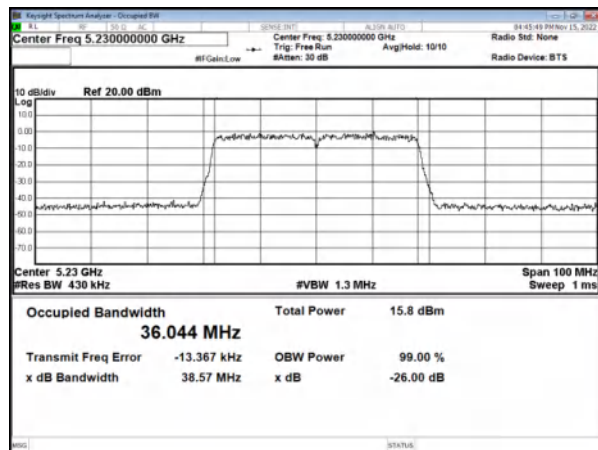


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46

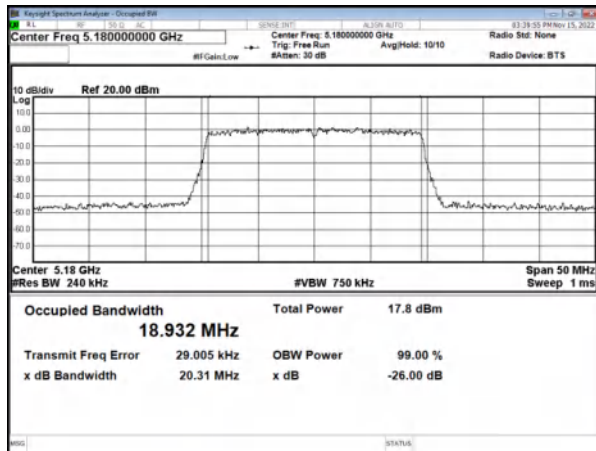




26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

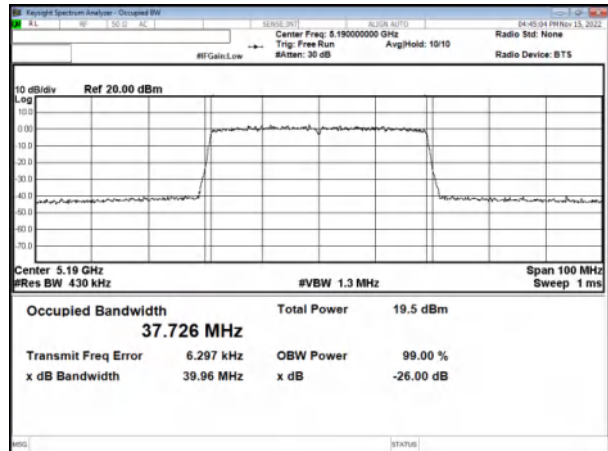
Modulation Standard: 802.11 ax HE20 (7.3Mbps)

CH36

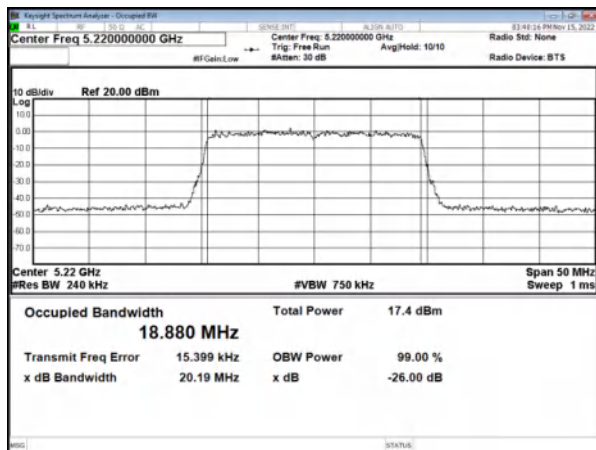


Modulation Standard: 802.11 ax HE40 (14.6Mbps)

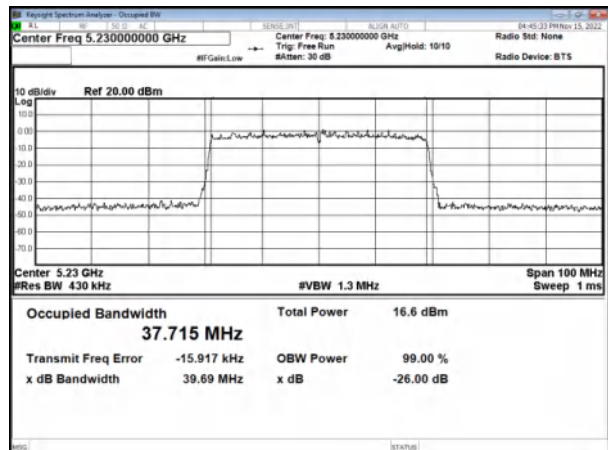
CH38



CH44

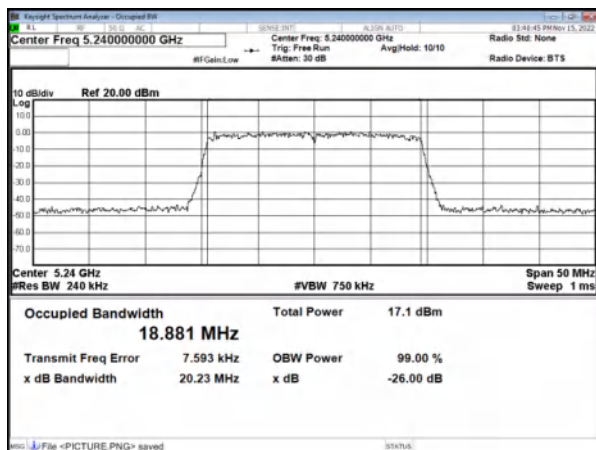


CH46

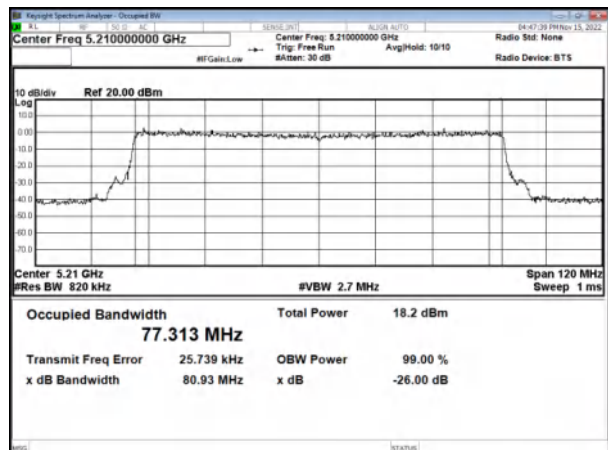


Modulation Standard: 802.11 ax HE80 (30.6Mbps)

CH48



CH42



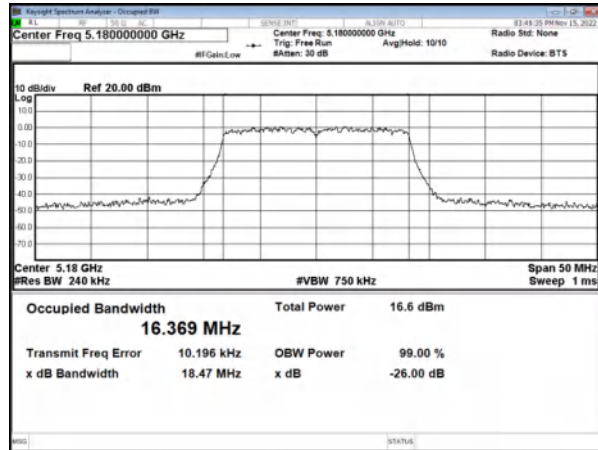


MIMO (ANT B)

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

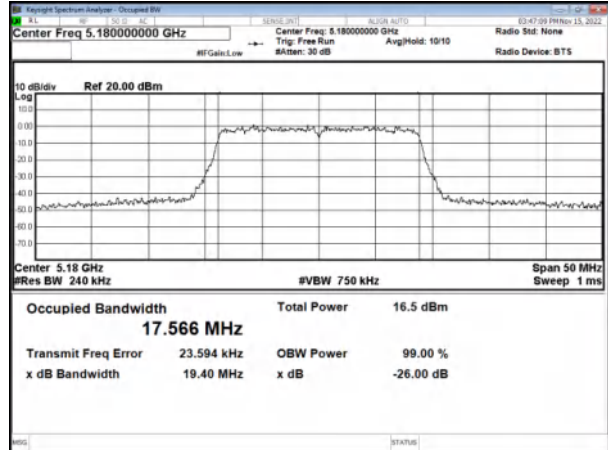
Modulation Standard: 802.11a (6Mbps)

CH36

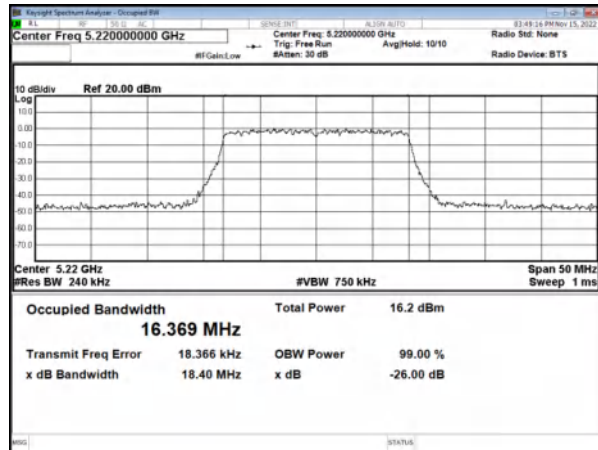


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

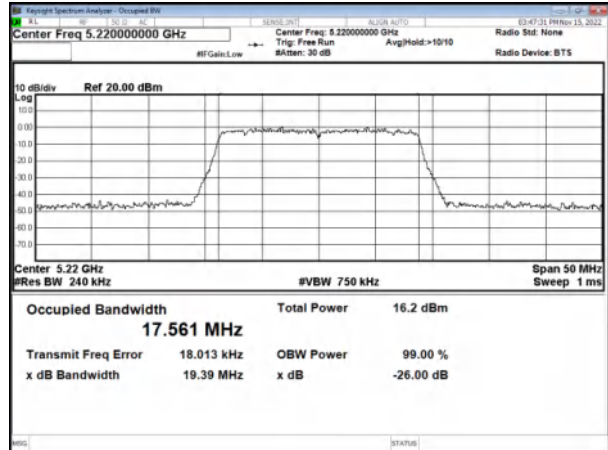
CH36



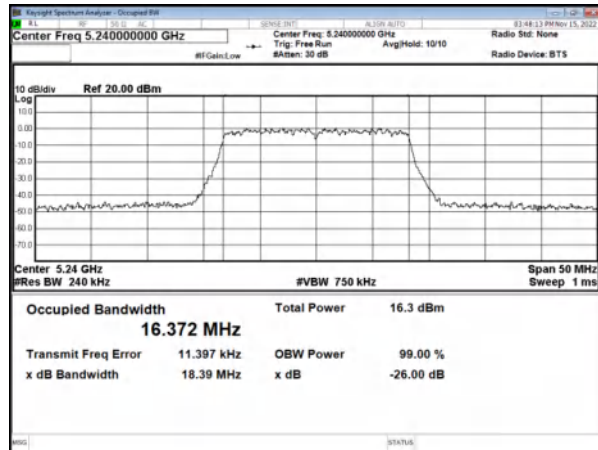
CH44



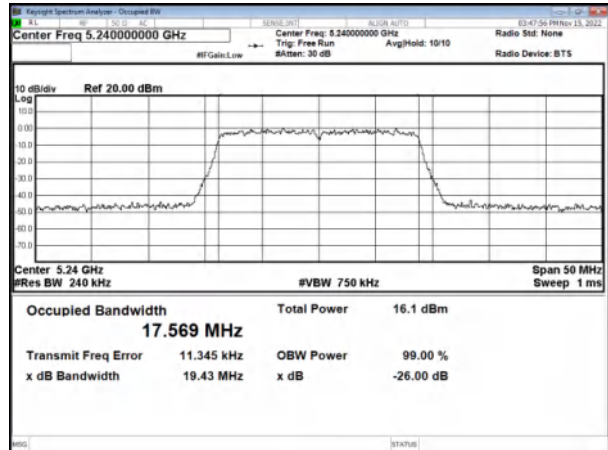
CH44



CH48



CH48

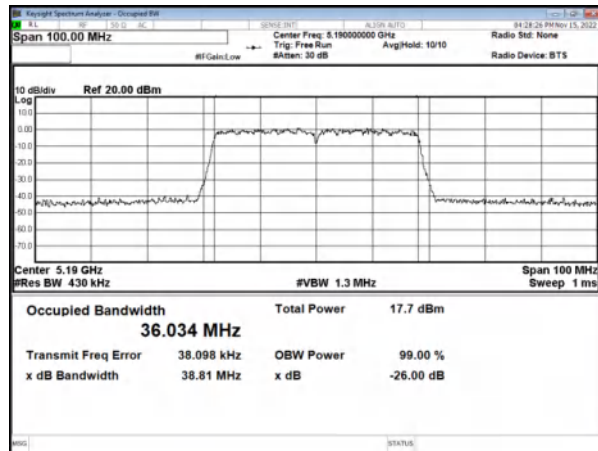




26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

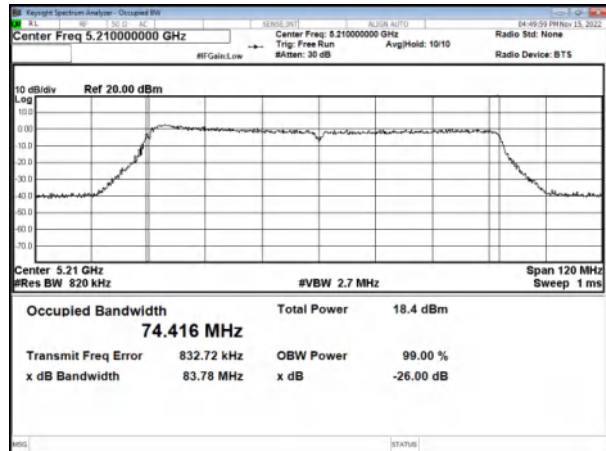
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

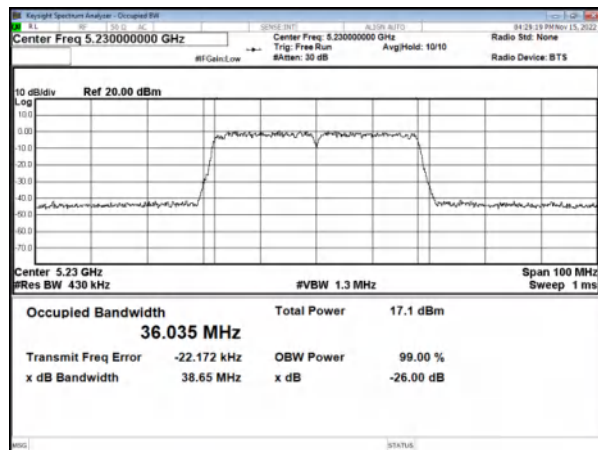


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46

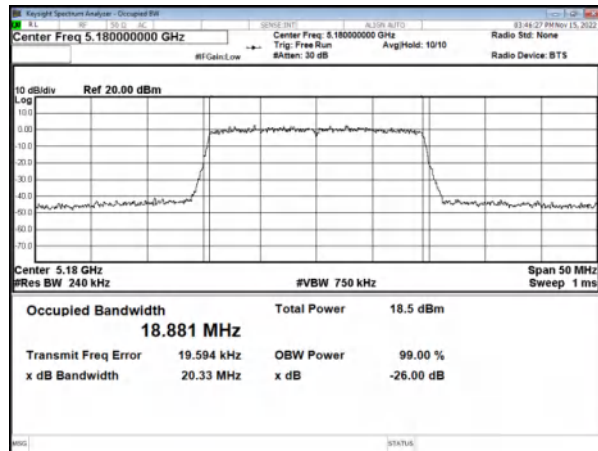




26dB Bandwidth & 99% Occupied Bandwidth, UNII-1

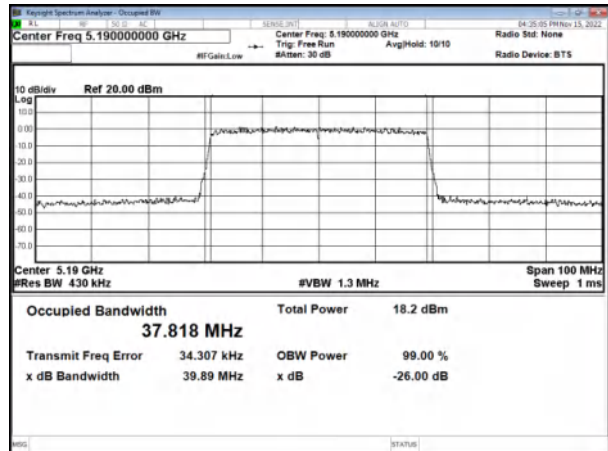
Modulation Standard: 802.11 ax HE20 (7.3Mbps)

CH36

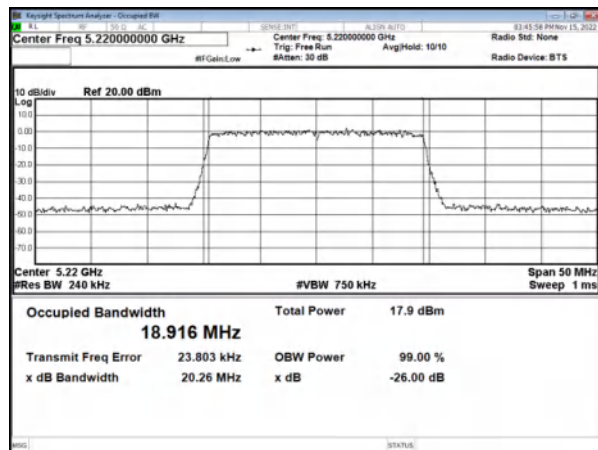


Modulation Standard: 802.11 ax HE40 (14.6Mbps)

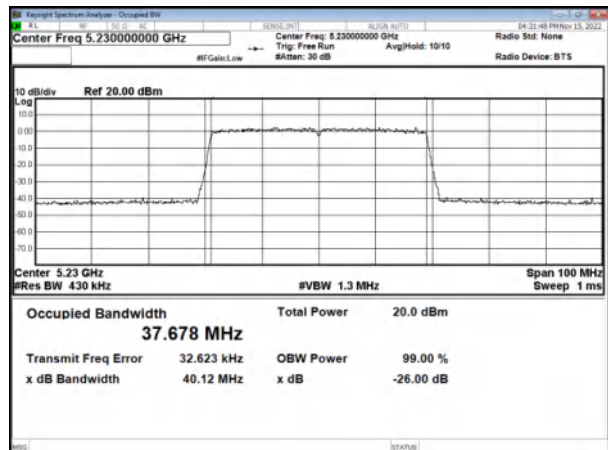
CH38



CH44

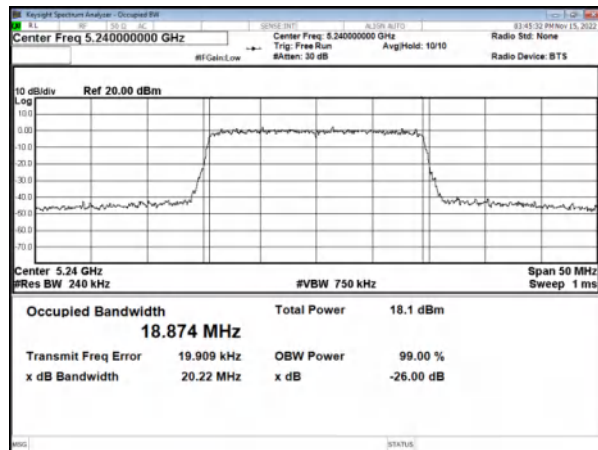


CH46

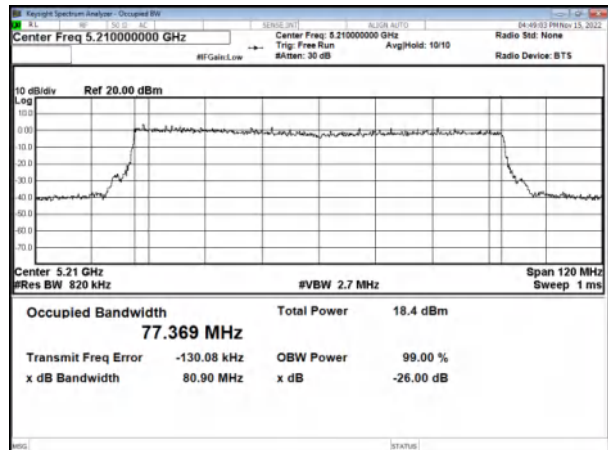


Modulation Standard: 802.11 ax HE80 (30.6Mbps)

CH48



CH42





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.



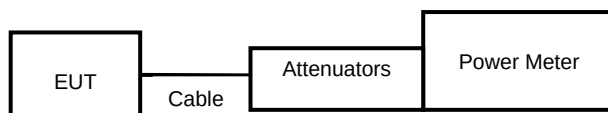
Frequency Band		Limit
☐	5.25-5.35 GHz	The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, 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	Default	36	5180	10.65	10.45	13.56	22.706	24.00
11a	6 Mbps	Default	44	5220	9.99	10.13	13.07	20.281	24.00
11a	6 Mbps	Default	48	5240	9.73	9.99	12.87	19.374	24.00
11n HT20	MCS 0	Default	36	5180	10.14	10.41	13.29	21.318	24.00
11n HT20	MCS 0	Default	44	5220	9.63	10.05	12.86	19.299	24.00
11n HT20	MCS 0	Default	48	5240	9.67	9.54	12.62	18.263	24.00
11n HT40	MCS 0	Default	38	5190	10.31	10.38	13.36	21.654	24.00
11n HT40	MCS 0	Default	46	5230	9.78	10.14	12.97	19.834	24.00
11ac VHT20	MCS 0	Default	36	5180	10.26	10.48	13.38	21.786	24.00
11ac VHT20	MCS 0	Default	44	5220	9.74	10.20	12.99	19.890	24.00
11ac VHT20	MCS 0	Default	48	5240	9.72	9.96	12.85	19.284	24.00
11ac VHT40	MCS 0	Default	38	5190	10.40	10.58	13.50	22.394	24.00
11ac VHT40	MCS 0	Default	46	5230	10.01	10.20	13.12	20.494	24.00
11ac VHT80	MCS 0	Default	42	5210	10.26	10.74	13.52	22.475	24.00
802.11ax HE20	MCS 0	Default	36	5180	10.22	10.16	13.20	20.895	24.00
802.11ax HE20	MCS 0	Default	44	5220	9.77	9.88	12.84	19.212	24.00
802.11ax HE20	MCS 0	Default	48	5240	9.64	9.77	12.72	18.689	24.00
802.11ax HE40	MCS 0	Default	38	5190	10.23	10.63	13.44	22.105	24.00
802.11ax HE40	MCS 0	Default	46	5230	9.83	10.24	13.05	20.184	24.00
802.11ax HE80	MCS 0	Default	42	5210	10.45	10.72	13.60	22.895	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	MCS8	Default	149	5745	12.00	12.23	15.13	32.560	30.00
11a	MCS8	Default	157	5785	12.00	11.82	14.92	31.054	30.00
11a	MCS8	Default	165	5825	11.06	10.77	13.93	24.704	30.00
11n HT20	MCS8	Default	149	5745	12.32	12.11	15.23	33.316	30.00
11n HT20	MCS8	Default	157	5785	11.41	11.45	14.44	27.799	30.00
11n HT20	MCS8	Default	165	5825	10.72	10.52	13.63	23.075	30.00
11n HT40	MCS8	Default	151	5755	12.14	12.25	15.21	33.156	30.00
11n HT40	MCS8	Default	159	5795	11.72	11.45	14.60	28.823	30.00
11ac VHT20	MCS8	Default	149	5745	12.44	12.16	15.31	33.983	30.00
11ac VHT20	MCS8	Default	157	5785	11.49	11.65	14.58	28.715	30.00
11ac VHT20	MCS8	Default	165	5825	10.78	10.76	13.78	23.880	30.00
11ac VHT40	MCS0	Default	151	5755	12.23	12.39	15.32	34.049	30.00
11ac VHT40	MCS0	Default	159	5795	11.76	11.60	14.69	29.451	30.00
11ac VHT80	MCS0	Default	155	5775	11.42	12.03	14.75	29.826	30.00
802.11ax HE20	MCS0	Default	149	5745	12.26	12.65	15.47	35.234	30.00
802.11ax HE20	MCS0	Default	157	5785	11.86	11.67	14.78	30.035	30.00
802.11ax HE20	MCS0	Default	165	5825	10.63	10.98	13.82	24.093	30.00
802.11ax HE40	MCS8	Default	151	5755	12.12	12.45	15.30	33.872	30.00
802.11ax HE40	MCS8	Default	159	5795	11.66	11.53	14.61	28.879	30.00
802.11ax HE80	MCS8	Default	155	5775	11.63	12.32	15.00	31.615	30.00



11. Maximum Power Spectral Density

11.1. Test Limit

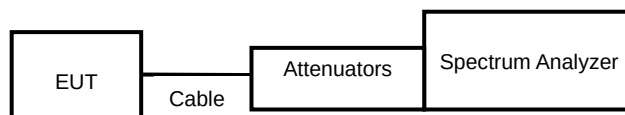
PSD:

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 v02r01 General UNII Test Procedures New Rules.

11.3. Test Setup Layout

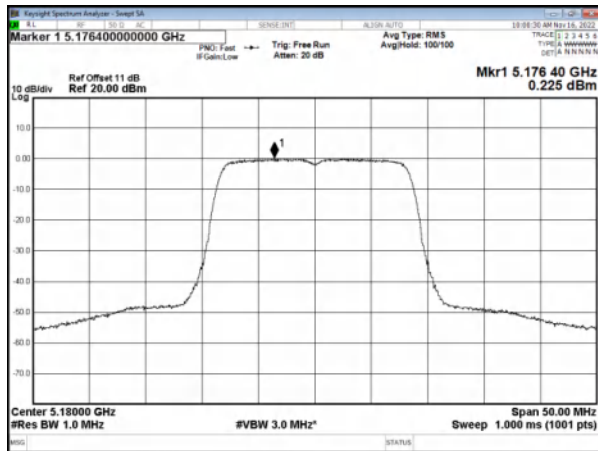


**11.4. Test Result and Data****In the 5.2G Band**

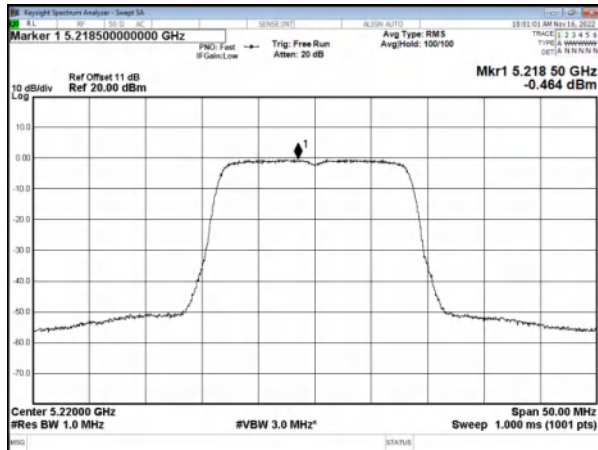
Modulation Type	CH	Freq. (MHz)	Meas PPSP (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PPSP (dBm/MHz)	PPSP Limit (dBm/MHz)
			ANT A	ANT B				
11a	36	5180	0.23	-0.36	2.95	0.00	2.95	10.34
11a	44	5220	-0.46	-0.72	2.42	0.00	2.42	10.34
11a	48	5240	-0.82	-1.17	2.02	0.00	2.02	10.34
11ac VHT20	36	5180	-0.82	-0.73	2.24	0.00	2.24	10.34
11ac VHT20	44	5220	-1.12	-1.08	1.91	0.00	1.91	10.34
11ac VHT20	48	5240	-1.30	-1.48	1.62	0.00	1.62	10.34
11ac VHT40	38	5190	-3.37	-3.51	-0.43	0.00	-0.43	10.34
11ac VHT40	46	5230	-4.02	-3.85	-0.92	0.00	-0.92	10.34
11ac VHT80	42	5210	-5.62	-5.27	-2.43	0.00	-2.43	10.34
802.11ax HE20	36	5180	-1.16	-1.31	1.77	0.00	1.77	10.34
802.11ax HE20	44	5220	-0.64	-2.73	1.45	0.00	1.45	10.34
802.11ax HE20	48	5240	-0.96	-1.58	1.75	0.00	1.75	10.34
802.11ax HE40	38	5190	-3.58	-5.53	-1.43	0.00	-1.43	10.34
802.11ax HE40	46	5230	-3.73	-4.10	-0.90	0.00	-0.90	10.34
802.11ax HE80	42	5210	-6.88	-7.05	-3.96	0.00	-3.96	10.34

In the 5.8G Band

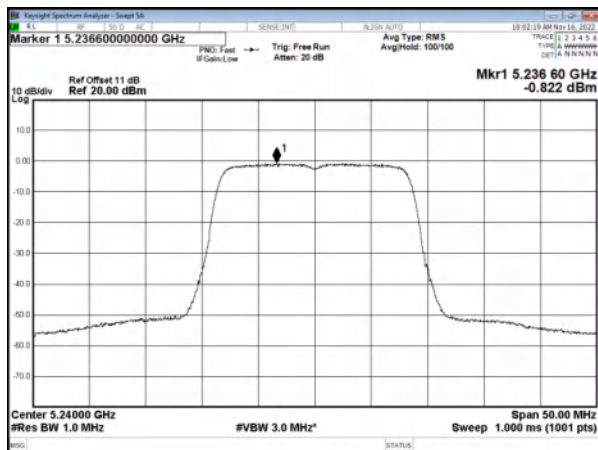
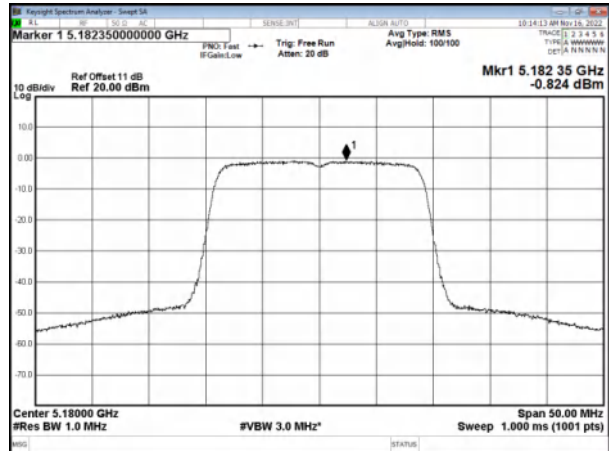
Modulation Type	CH	Freq. (MHz)	Meas PPSP (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	10log(500K Hz/RBW) CF (dB)	Total Corr'd PPSP (dBm/500kHz)	PPSP Limit (dBm/500kHz)
			ANT A	ANT B					
11a	149	5745	1.08	1.41	4.26	0.00	-3.01	1.25	29.20
11a	157	5785	0.73	0.79	3.77	0.00	-3.01	0.76	29.20
11a	165	5825	0.06	-0.02	3.03	0.00	-3.01	0.02	29.20
11ac VHT20	149	5745	0.59	0.99	3.81	0.00	-3.01	0.79	29.20
11ac VHT20	157	5785	0.41	0.72	3.58	0.00	-3.01	0.57	29.20
11ac VHT20	165	5825	-0.23	-0.21	2.79	0.00	-3.01	-0.22	29.20
11ac VHT40	151	5755	-2.04	-1.45	1.27	0.00	-3.01	-1.74	29.20
11ac VHT40	159	5795	-2.49	-2.45	0.54	0.00	-3.01	-2.47	29.20
11ac VHT80	155	5775	-5.16	-4.25	-1.67	0.00	-3.01	-4.68	29.20
802.11ax HE20	149	5745	0.78	0.37	3.59	0.00	-3.01	0.58	29.20
802.11ax HE20	157	5785	0.36	0.48	3.43	0.00	-3.01	0.42	29.20
802.11ax HE20	165	5825	-0.47	-0.54	2.50	0.00	-3.01	-0.51	29.20
802.11ax HE40	151	5755	-2.51	-2.09	0.71	0.00	-3.01	-2.30	29.20
802.11ax HE40	159	5795	-2.70	-2.36	0.49	0.00	-3.01	-2.53	29.20
802.11ax HE80	155	5775	-5.28	-5.39	-2.32	0.00	-3.01	-5.34	29.20

**5.2G, UNII-1
MIMO (ANT A)**Modulation Standard: 802.11a (6Mbps)
CH36

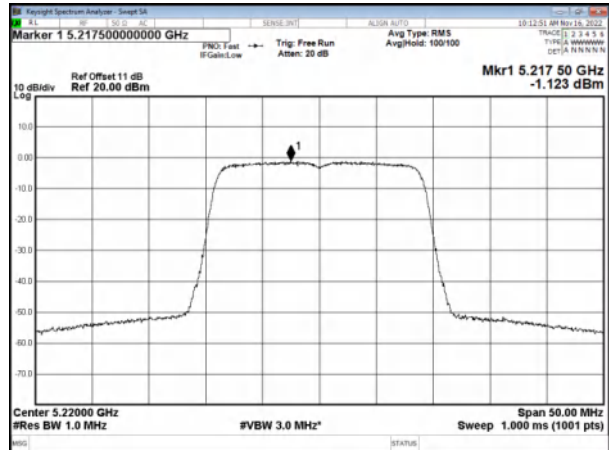
CH44



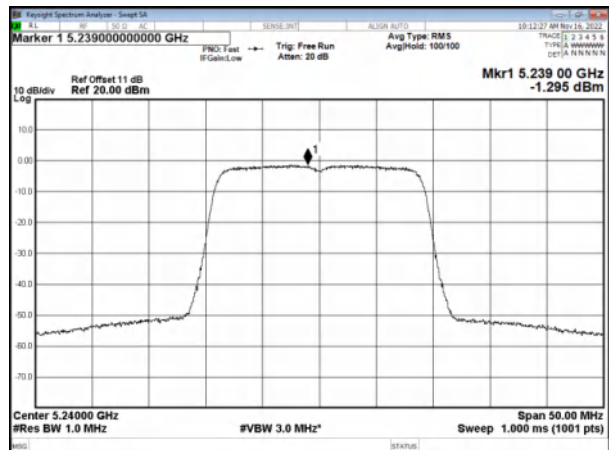
CH48

Modulation Standard: 802.11ac VHT20 (6.5Mbps)
CH36

CH44



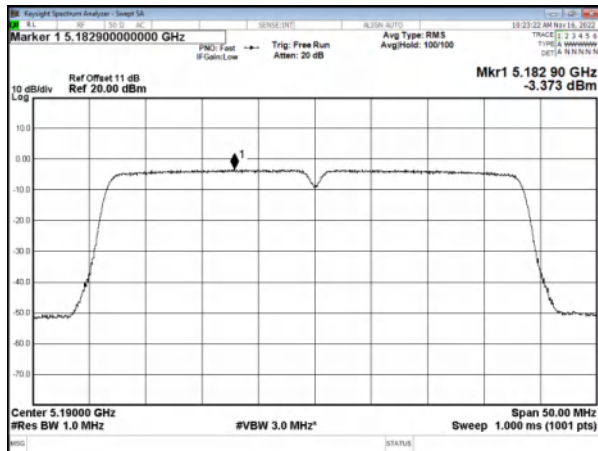
CH48





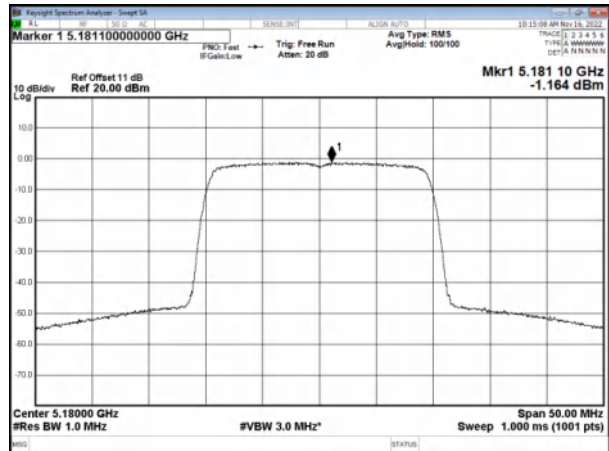
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

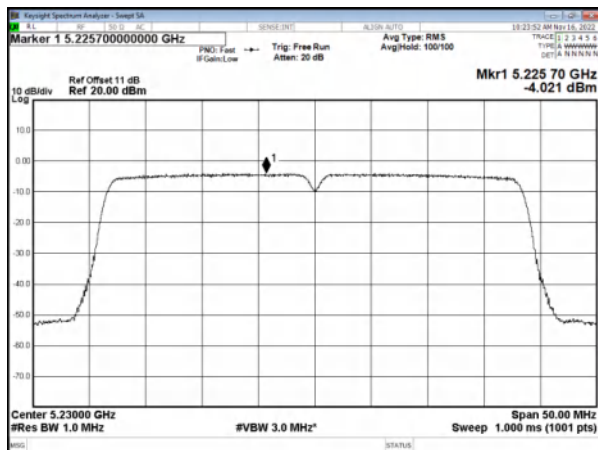


Modulation Standard: 802.11 ax HE20 (7.3Mbps)

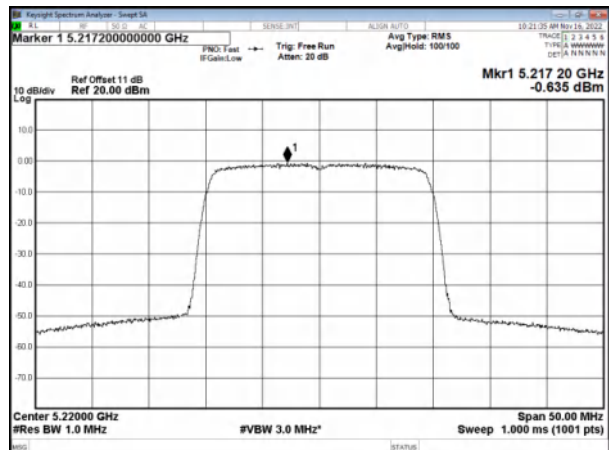
CH36



CH46

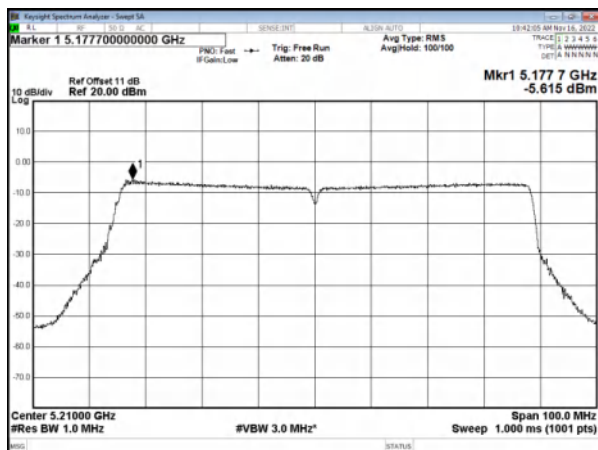


CH44

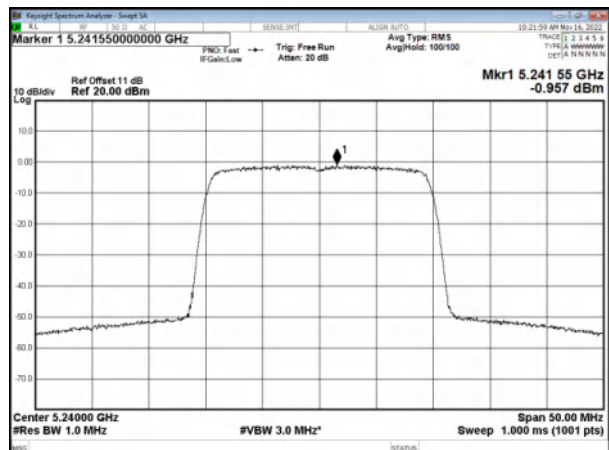


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



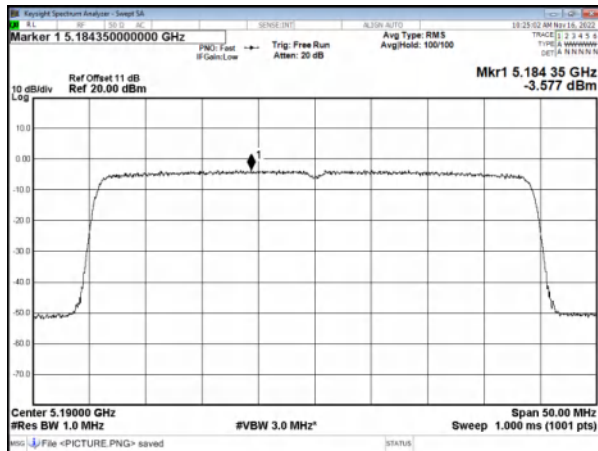
CH48



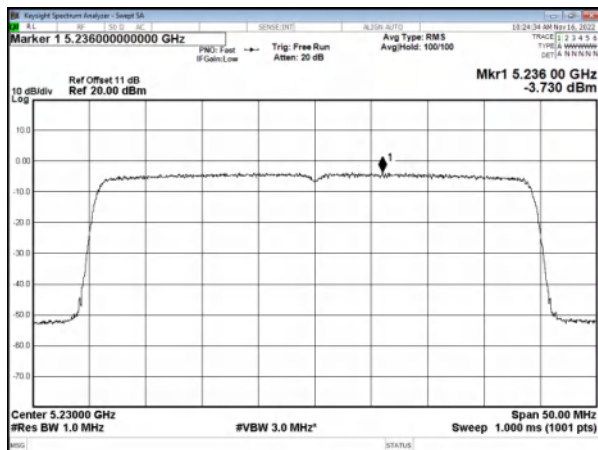


Modulation Standard: 802.11 ax HE40 (14.6Mbps)

CH38

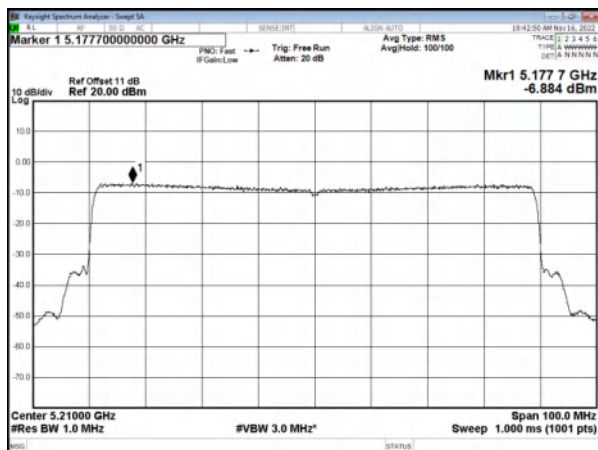


CH46



Modulation Standard: 802.11 ax HE80 (30.6Mbps)

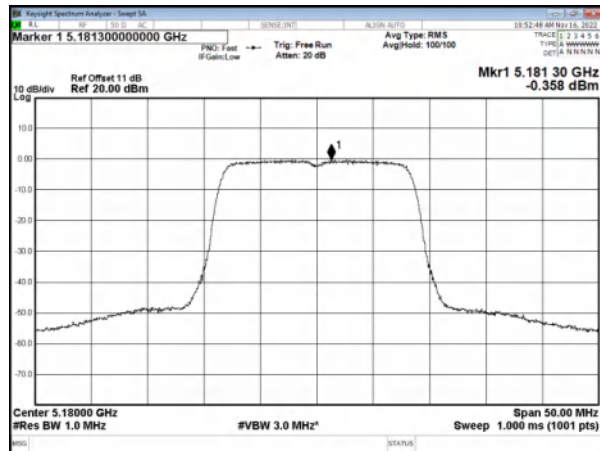
CH42



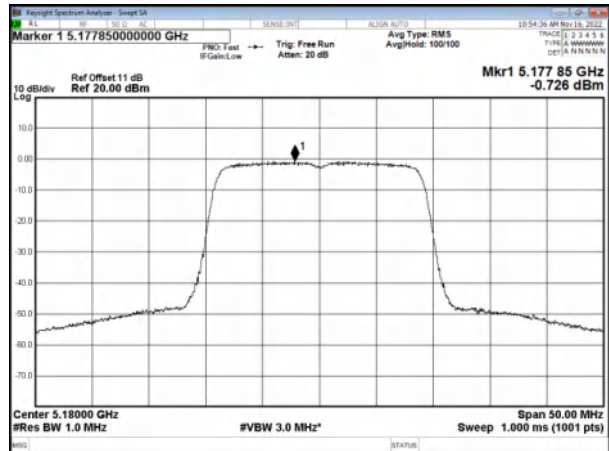


MIMO (ANT B)

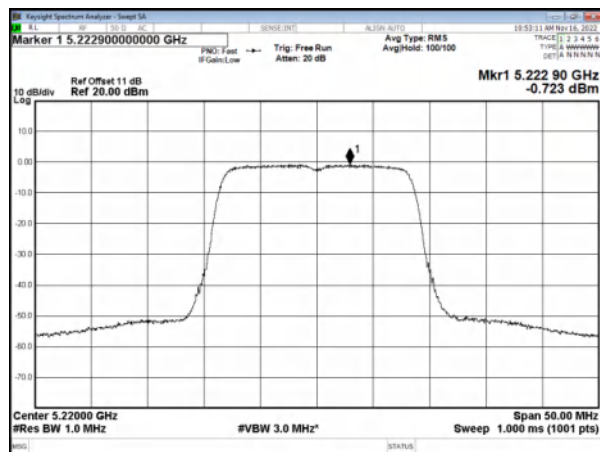
Modulation Standard: 802.11a (6Mbps)
CH36



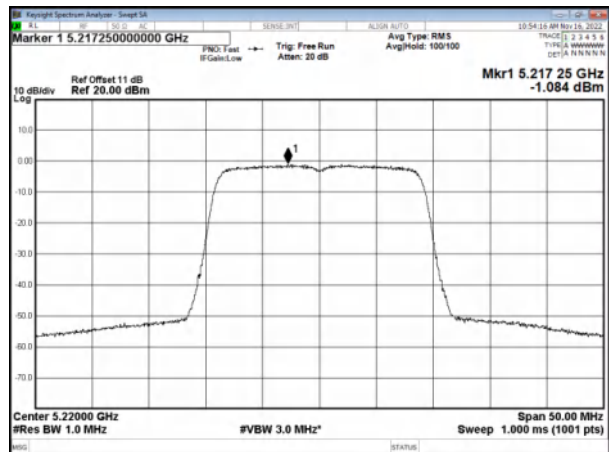
Modulation Standard: 802.11ac VHT20 (6.5Mbps)
CH36



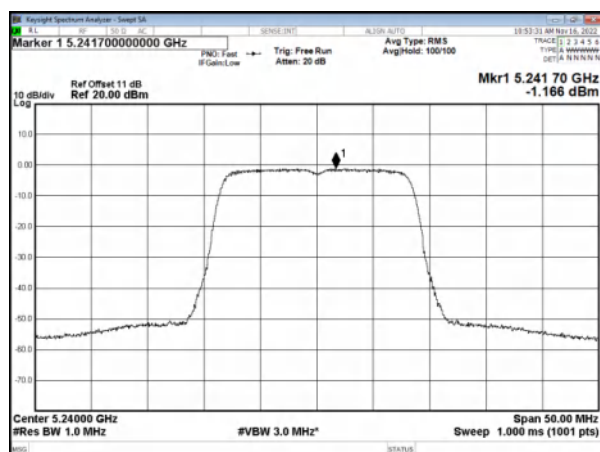
CH44



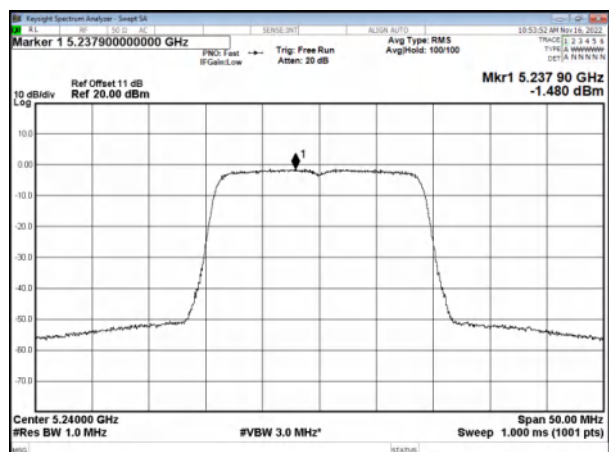
CH44



CH48



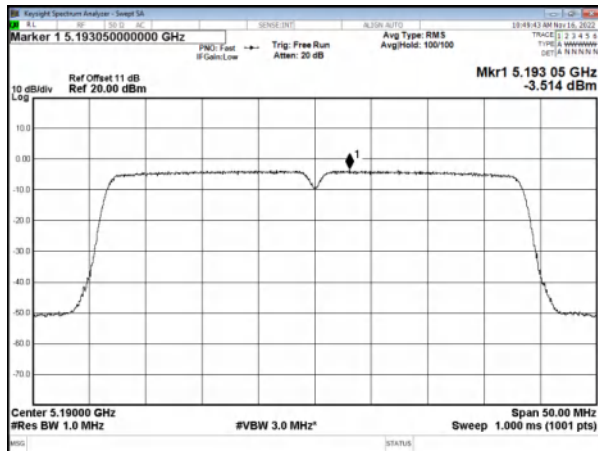
CH48





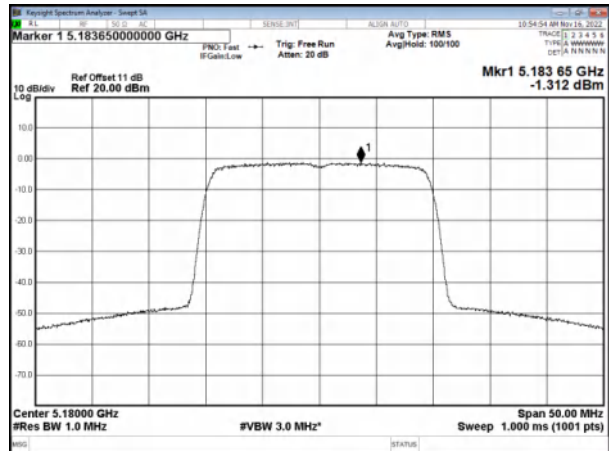
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

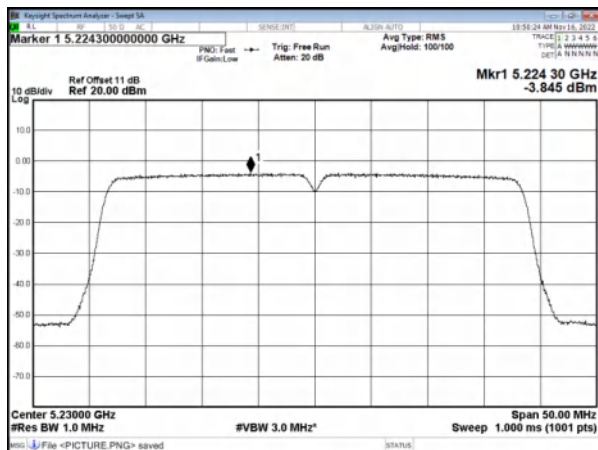


Modulation Standard: 802.11 ax HE20 (7.3Mbps)

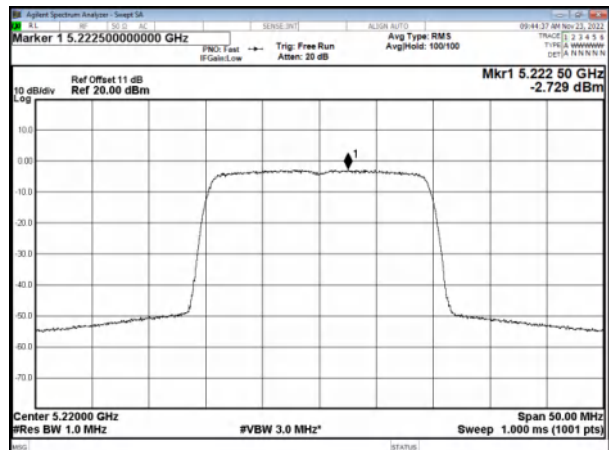
CH36



CH46

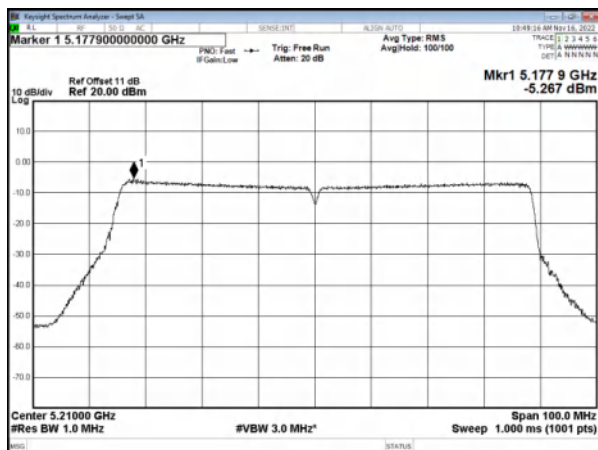


CH44

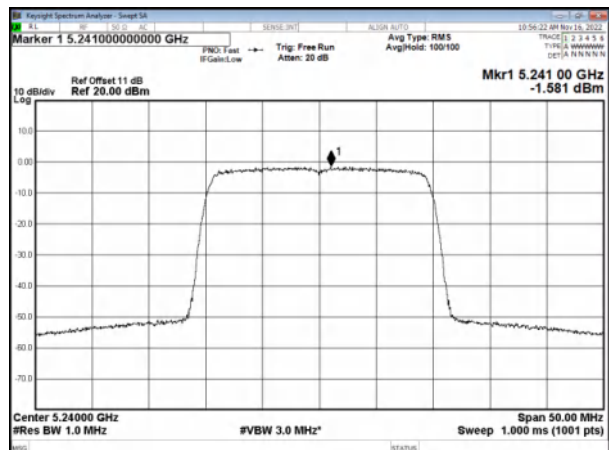


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



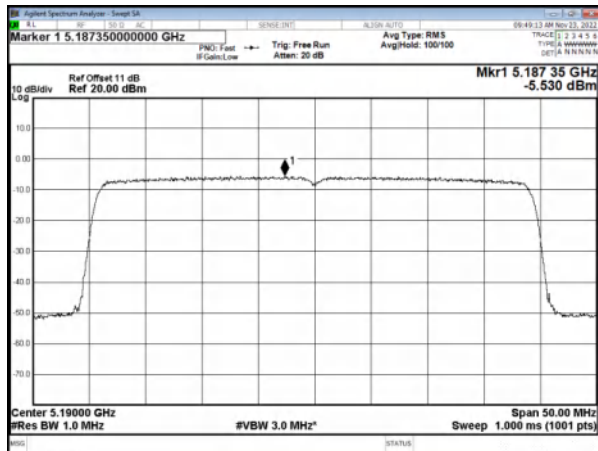
CH48



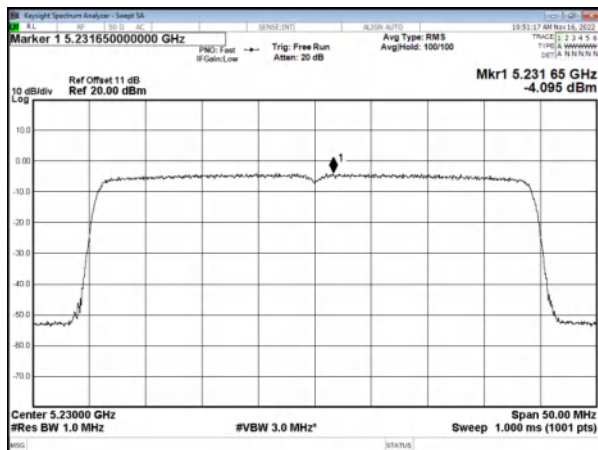


Modulation Standard: 802.11 ax HE40 (14.6Mbps)

CH38

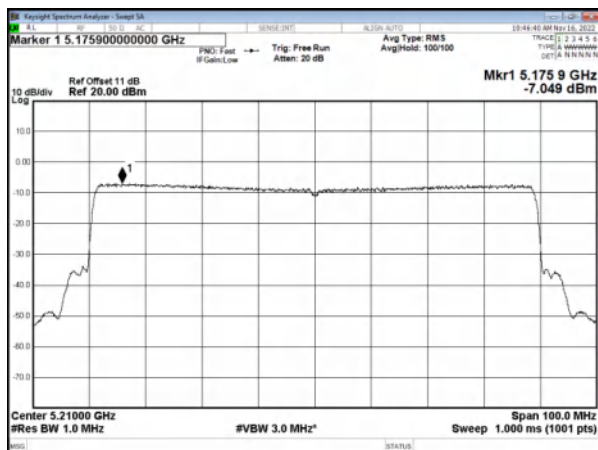


CH46



Modulation Standard: 802.11 ax HE80 (30.6Mbps)

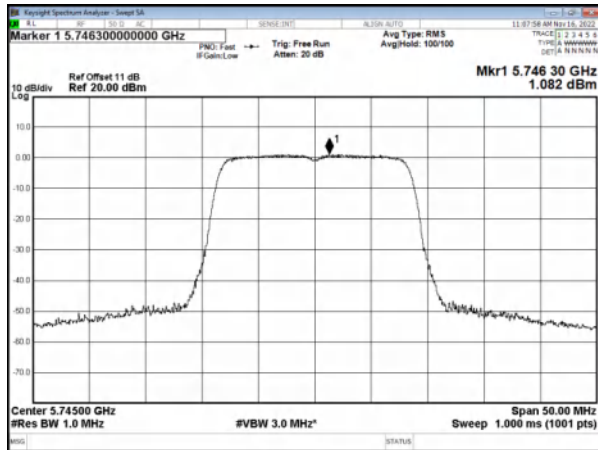
CH42



**5.8G, UNII-3
MIMO (ANT A)**

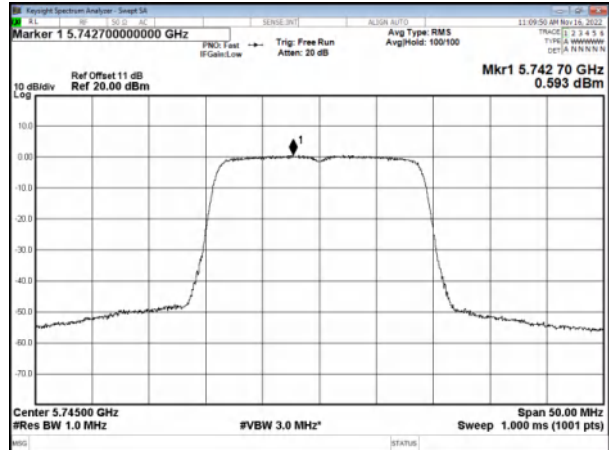
Modulation Standard: 802.11a (6Mbps)

CH149

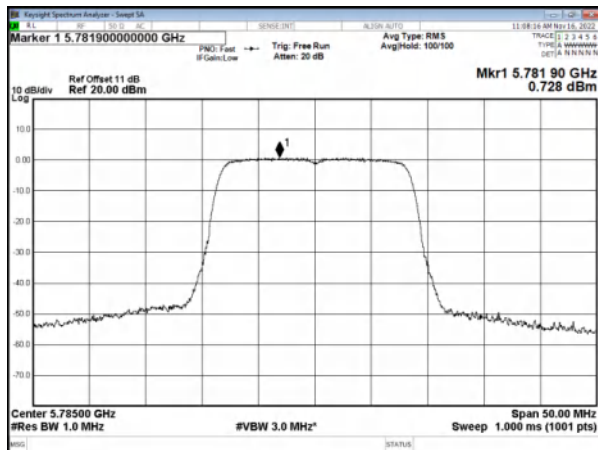


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

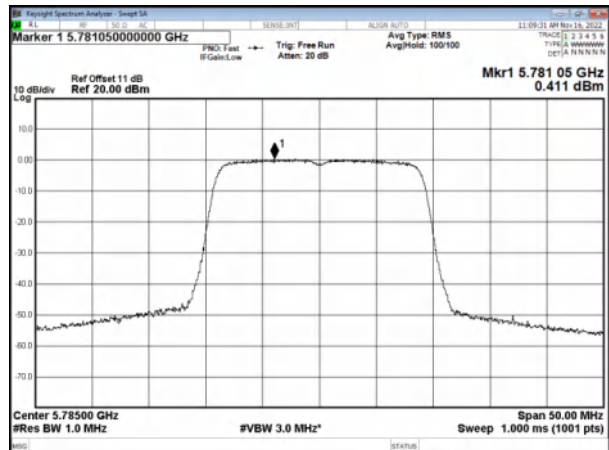
CH149



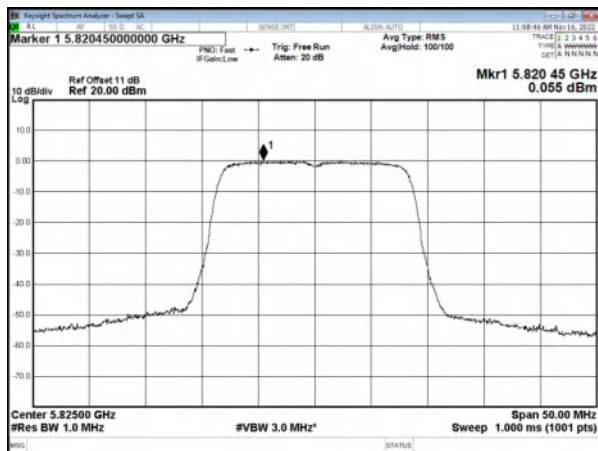
CH157



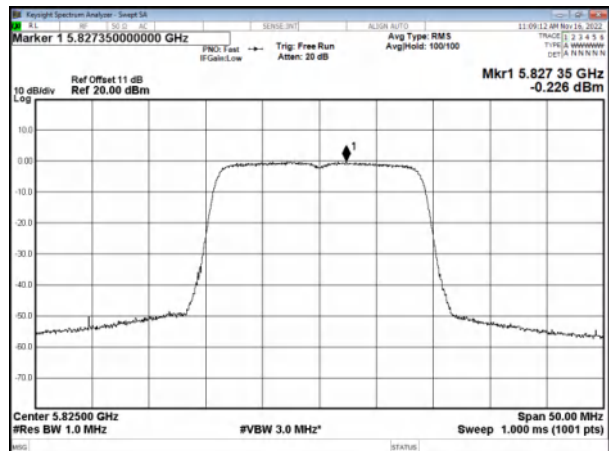
CH157



CH165



CH165



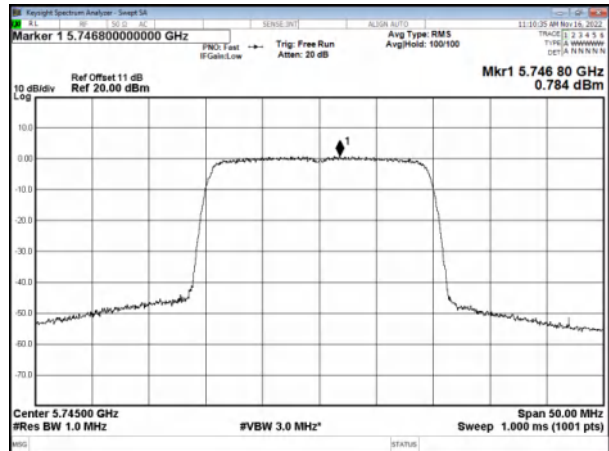
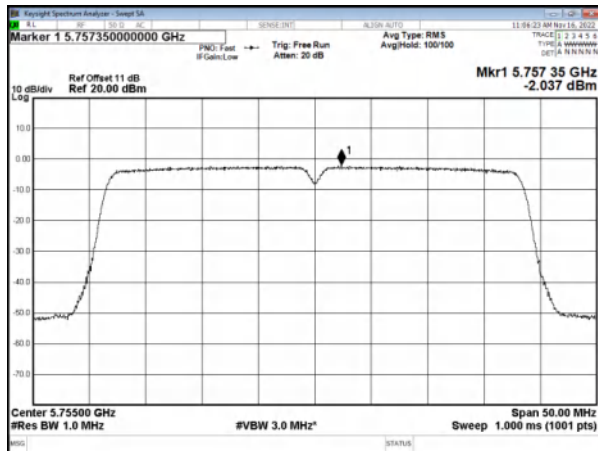


Modulation Standard: 802.11ac VHT40 (13.5Mbps)

Modulation Type: 802.1111ax HE20 (7.3Mbps)

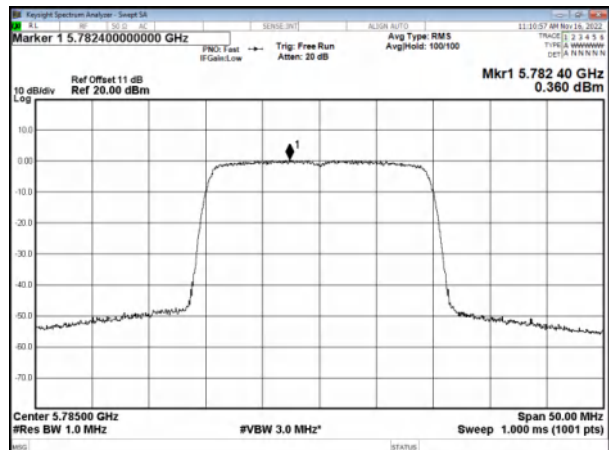
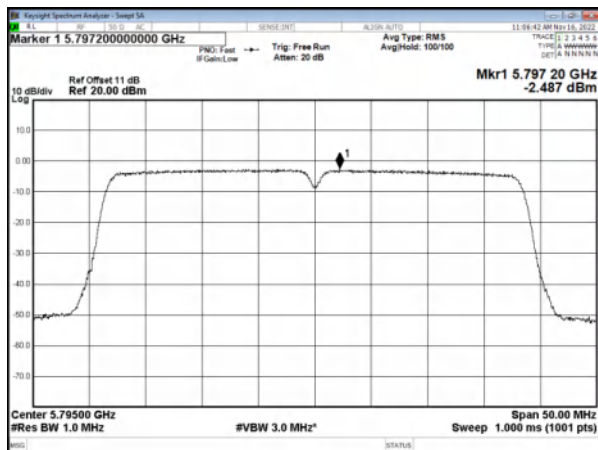
CH151

CH149



CH159

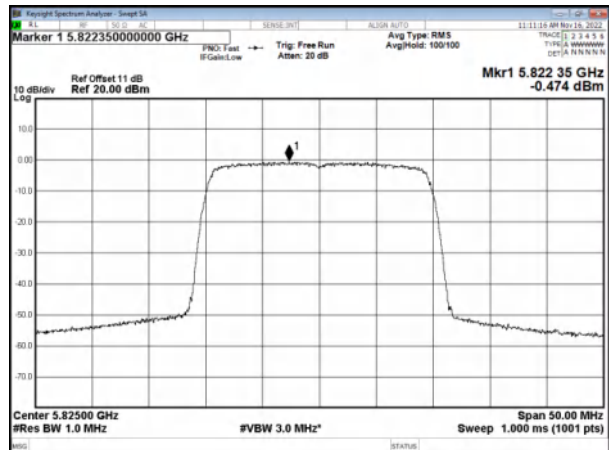
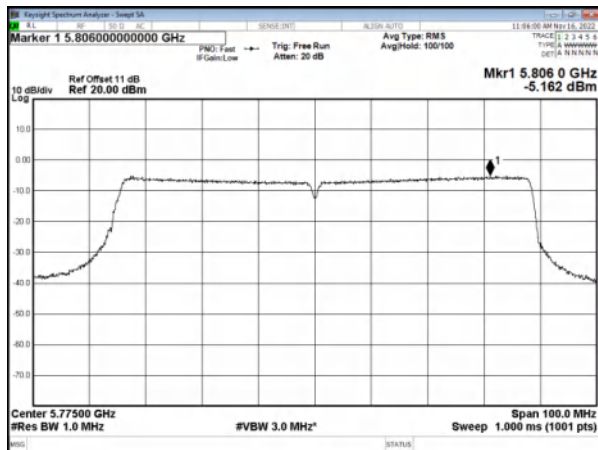
CH157



Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH155

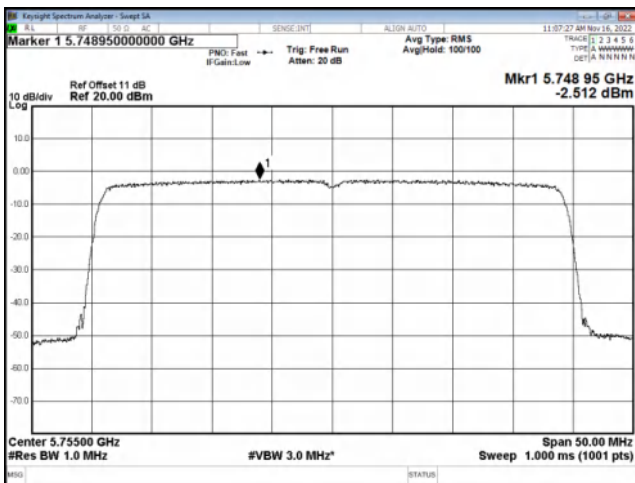
CH165



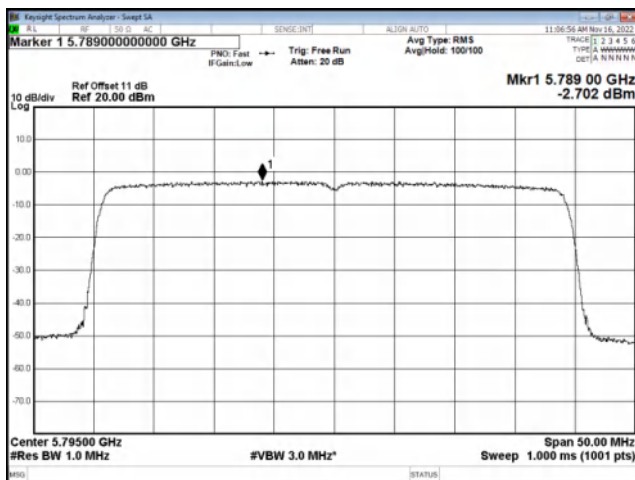


Modulation Type: 802.11 ax HE40 (14.6Mbps)

CH151

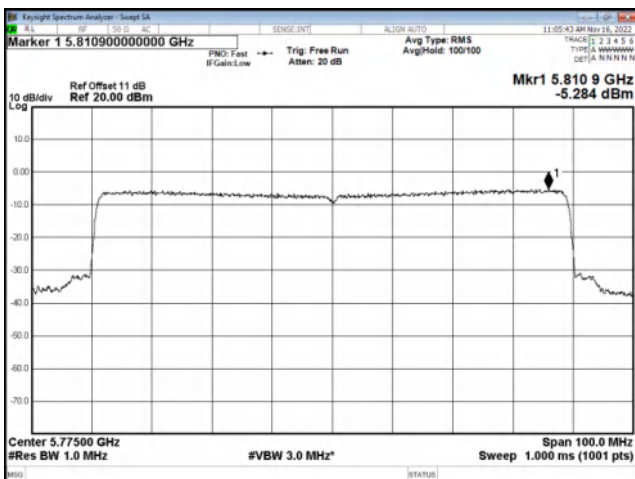


CH159



Modulation Type: 802.11ax HE80 (30.6Mbps)

CH155

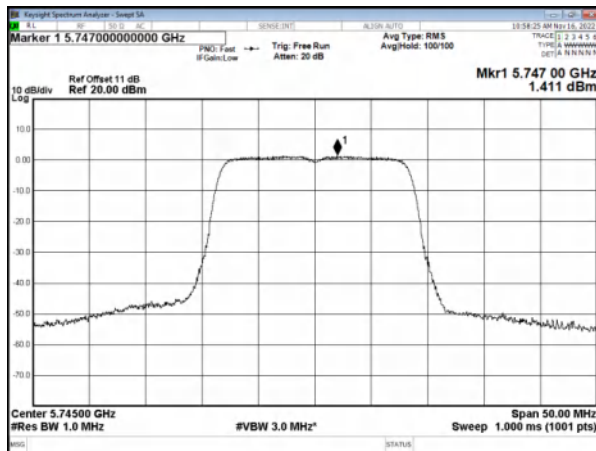




MIMO (ANT B)

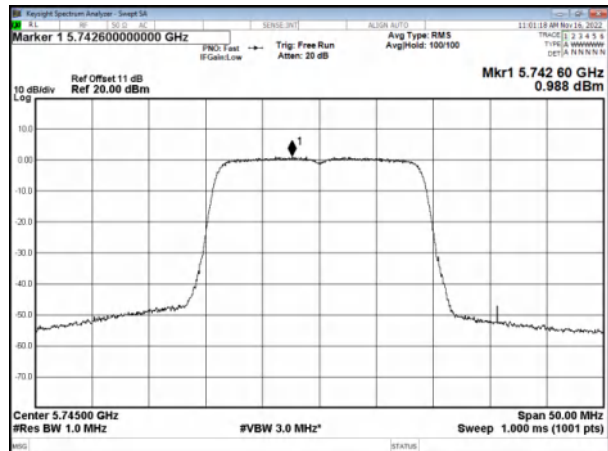
Modulation Standard: 802.11a (6Mbps)

CH149

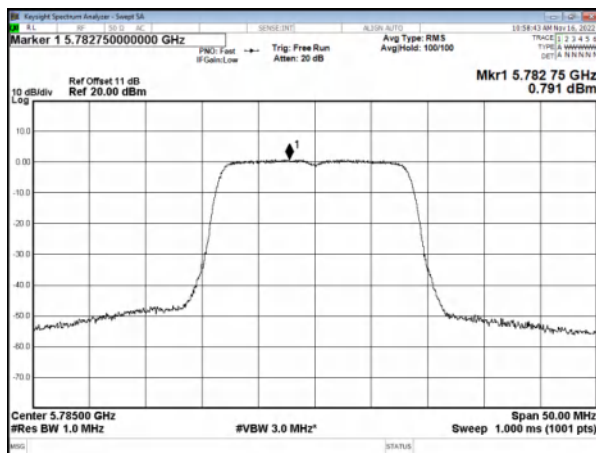


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

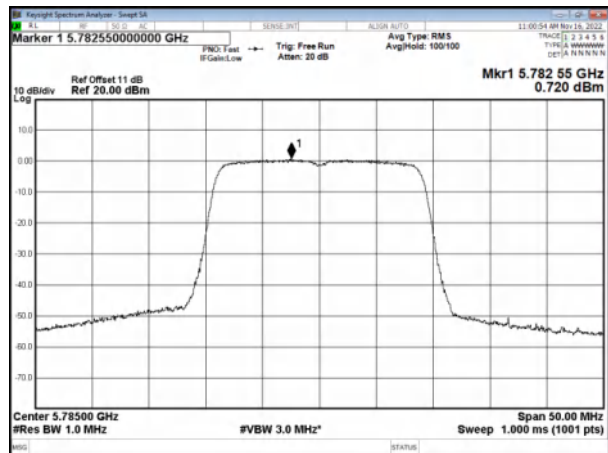
CH149



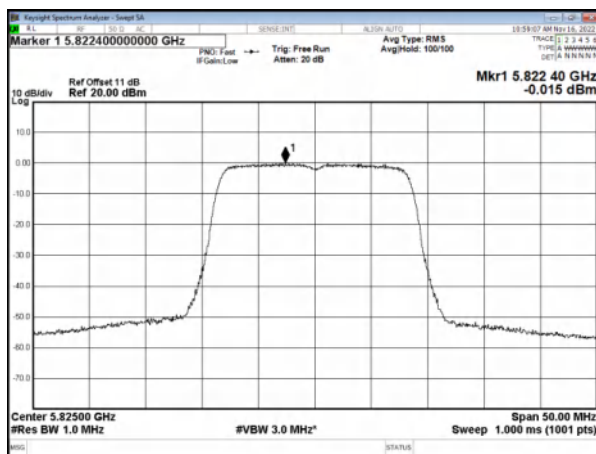
CH157



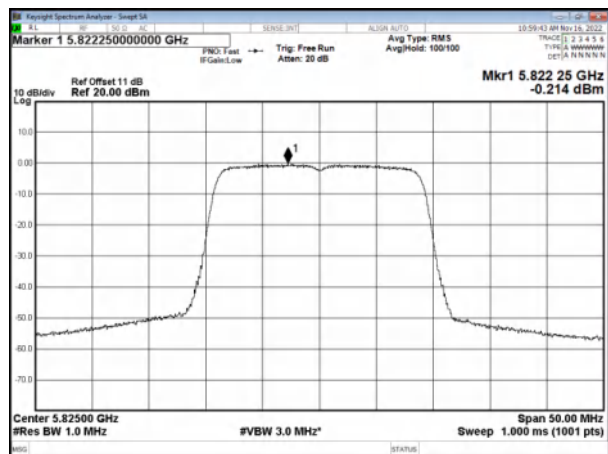
CH157



CH165



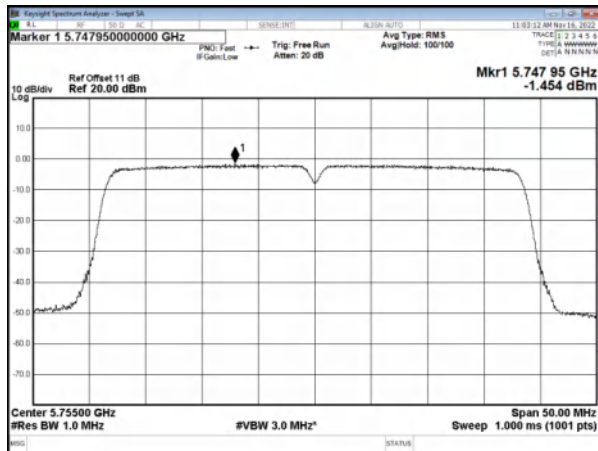
CH165





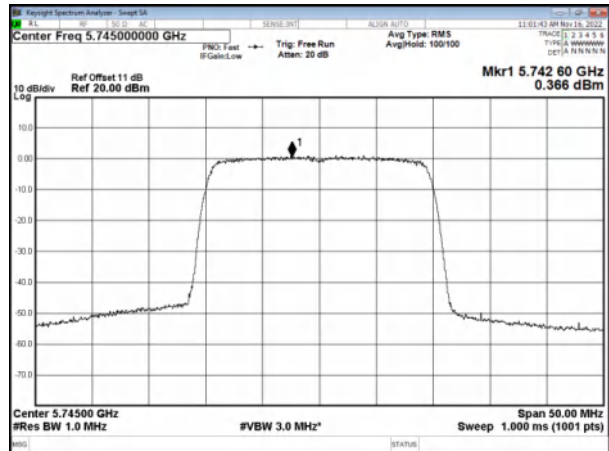
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH151

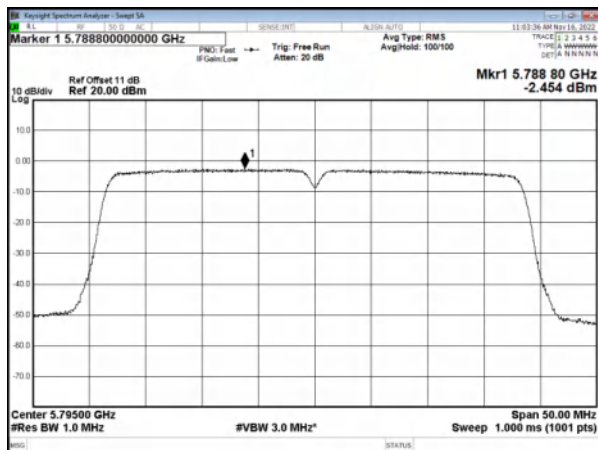


Modulation Type: 802.1111ax HE20 (7.3Mbps)

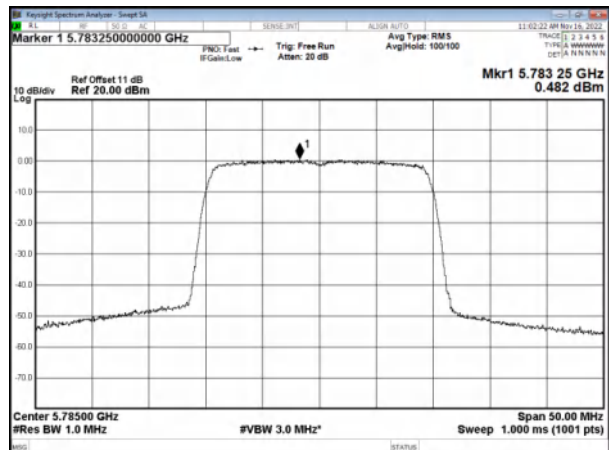
CH149



CH159

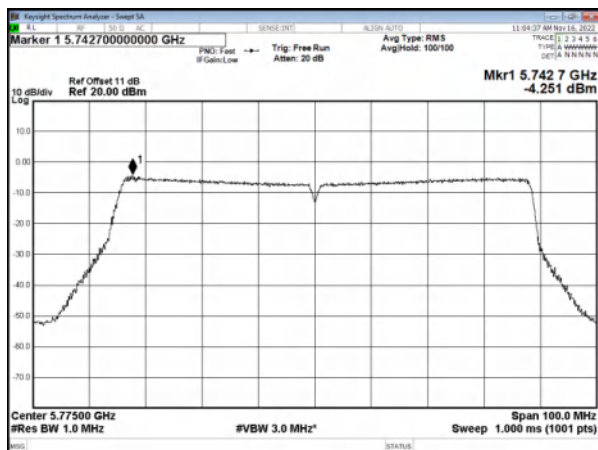


CH157

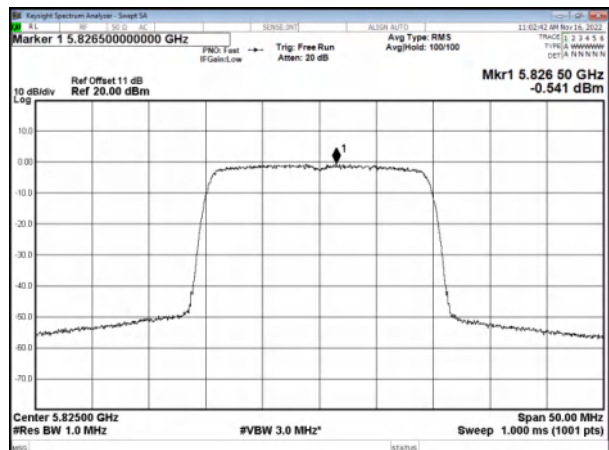


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH155



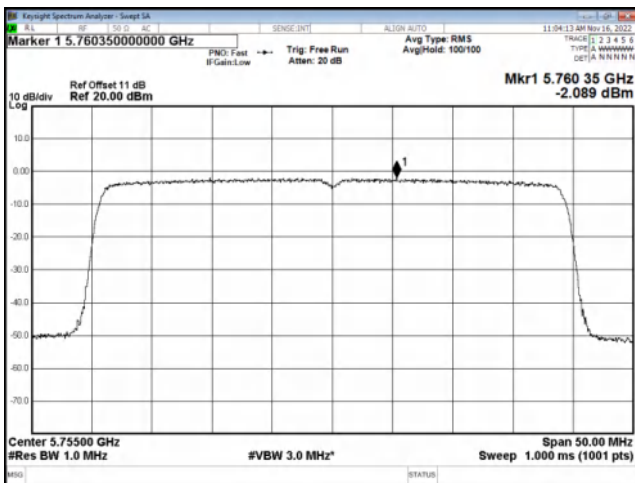
CH165



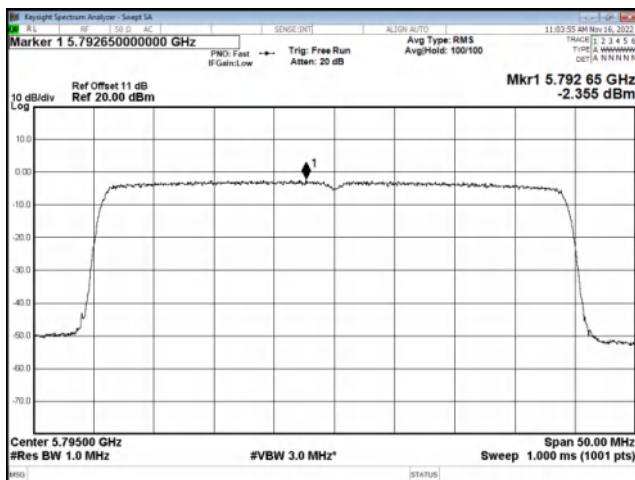


Modulation Type: 802.11 ax HE40 (14.6Mbps)

CH151

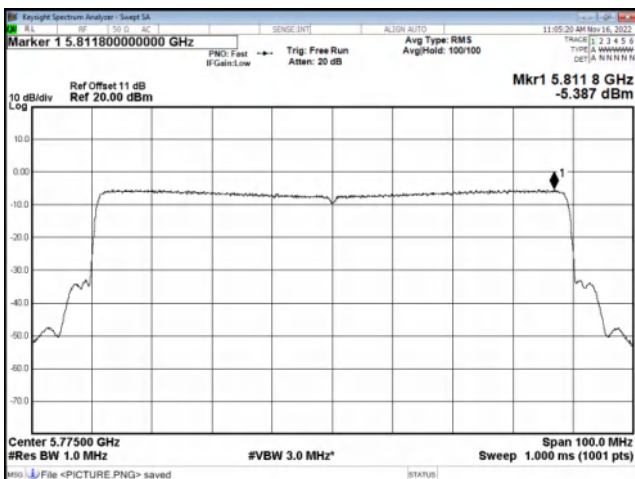


CH159



Modulation Type: 802.11ax HE80 (30.6Mbps)

CH155



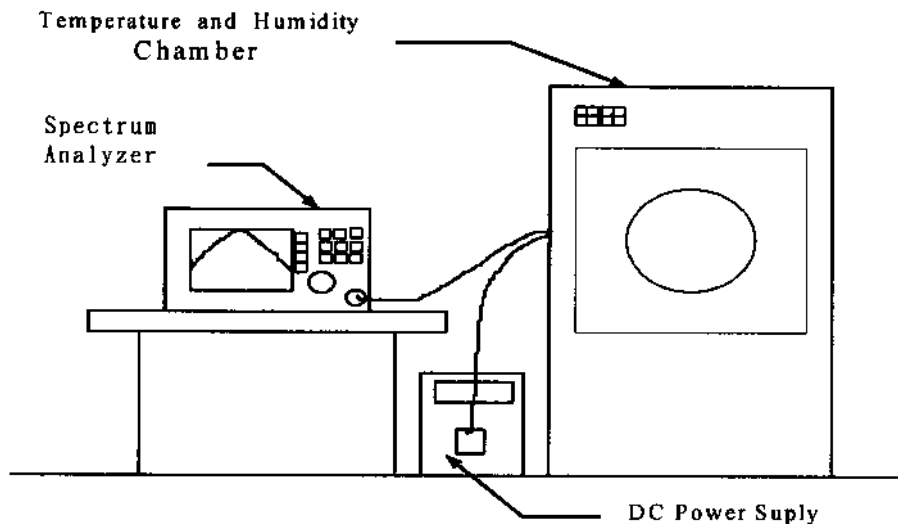


12. Frequency Stability

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)	(%)
45	13.2	5179.9825	-0.000338	5179.9864	-0.000263	5179.9854	-0.000282
	12	5179.9841	-0.000307	5179.9829	-0.000330	5179.9838	-0.000313
	10.8	5179.9862	-0.000266	5179.9857	-0.000276	5179.9886	-0.000220
30	13.2	5179.9853	-0.000284	5179.9845	-0.000299	5179.9853	-0.000284
	12	5179.9824	-0.000340	5179.9842	-0.000305	5179.9847	-0.000295
	10.8	5179.9888	-0.000216	5179.9831	-0.000326	5179.9855	-0.000280
20	13.2	5179.9875	-0.000241	5179.9868	-0.000255	5179.9824	-0.000340
	12	5179.9861	-0.000268	5179.9854	-0.000282	5179.9896	-0.000201
	10.8	5179.9857	-0.000276	5179.9844	-0.000301	5179.9876	-0.000239
10	13.2	5179.9838	-0.000313	5179.9884	-0.000224	5179.9851	-0.000288
	12	5179.9887	-0.000218	5179.9843	-0.000303	5179.9868	-0.000255
	10.8	5179.9839	-0.000311	5179.9885	-0.000222	5179.9856	-0.000278
0	13.2	5179.9845	-0.000299	5179.9857	-0.000276	5179.9865	-0.000261
	12	5179.9858	-0.000274	5179.9838	-0.000313	5179.9888	-0.000216
	10.8	5179.9891	-0.000210	5179.9876	-0.000239	5179.9857	-0.000276

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 -----