

RF MEASUREMENT REPORT

FCC ID: UIDM6
Applicant: ARRIS
Product: Wireless Router
Model No.: M6
Brand Name: ARRIS
FCC Classification: 15E 6 GHz Low Power Indoor Access Point (6ID)
15E 6 GHz Subordinate Indoor Device (6PP)
FCC Rule Part(s): Part 15 Subpart E (Section 15.407)
Result: Complies
Test Date: 2022-08-03 ~ 2022-08-21

Reviewed By:

Vincent Yu

Approved By:

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 789033. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2207RSU062-U1	Rev. 01	Initial Report	2022-11-16	Valid

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1.4. Product Information

Product Name	Wireless Router
Model No.	M6
Serial No.	26V431111190039 (CBP) 26V431111190006 (RF Conducted) 26V431111190029 (RF Radiated)
Wi-Fi Specification	802.11a/ax
Antenna Information	Refer to section 1.7
Power Supply	AC/DC Adapter
Operating Temperature	0 ~ 40 °C
Operating Environment	Indoor Use
Accessories	
AC/DC Adapter 1#	Model: F24L15-120200SPAU Input: 100-120V~60Hz, 0.7A Max Output: 12.0V, 2.0A
AC/DC Adapter 2#	Model: WB-24M12FU Input: 100-120V~60Hz, 0.7A Max Output: 12.0V, 2.0A
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Frequency Range	For 802.11a/ax-HE20: 5955~7095MHz For 802.11ax-HE40: 5965~7085MHz For 802.11ax-HE80: 5985~7025MHz For 802.11ax-HE160: 6025~6985MHz
Type of Modulation	802.11a: OFDM 802.11ax: OFDMA
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11ax: up to 4804Mbps

1.6. Working Frequencies

802.11a/ax-HE20

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	5955 MHz	05	5975 MHz	09	5995 MHz
13	6015 MHz	17	6035 MHz	21	6055 MHz
25	6075 MHz	29	6095 MHz	33	6115 MHz
37	6135 MHz	41	6155 MHz	45	6175 MHz
49	6195 MHz	53	6215 MHz	57	6235 MHz
61	6255 MHz	65	6275 MHz	69	6295 MHz
73	6315 MHz	77	6335 MHz	81	6355 MHz
85	6375 MHz	89	6395 MHz	93	6415 MHz
97	6435 MHz	101	6455 MHz	105	6475 MHz
109	5495 MHz	113	6515 MHz	117	6535 MHz
121	6555 MHz	125	6575 MHz	129	6595 MHz
133	6615 MHz	137	6635 MHz	141	6655 MHz
145	6675 MHz	149	6695 MHz	153	6715 MHz
157	6735 MHz	161	6755 MHz	165	6775 MHz
169	6795 MHz	173	6815 MHz	177	6835 MHz
181	6855 MHz	185	6875 MHz	189	6895 MHz
193	6915 MHz	197	6935 MHz	201	6955 MHz
205	6975 MHz	209	6995 MHz	213	7015 MHz
217	7035 MHz	221	7055 MHz	225	7075 MHz
229	7095 MHz	--	--	--	--

802.11ax-HE40

Channel	Frequency	Channel	Frequency	Channel	Frequency
03	5965 MHz	11	6005 MHz	19	6045 MHz
27	6085 MHz	35	6125 MHz	43	6165 MHz
51	6205 MHz	59	6245 MHz	67	6285 MHz
75	6325 MHz	83	6365 MHz	91	6405 MHz
99	6445 MHz	107	6485 MHz	115	6525 MHz
123	6565 MHz	131	6605 MHz	139	6645 MHz
147	6685 MHz	155	6725 MHz	163	6765 MHz
171	6805 MHz	179	6845 MHz	187	6885 MHz
195	6925 MHz	203	6965 MHz	211	7005 MHz
219	7045 MHz	227	7085 MHz	--	--

802.11ax-HE80

Channel	Frequency	Channel	Frequency	Channel	Frequency
07	5985 MHz	23	6065 MHz	39	6145 MHz
55	6225 MHz	71	6305 MHz	87	6385 MHz
103	6465 MHz	119	6545 MHz	135	6625 MHz
151	6705 MHz	167	6785 MHz	183	6865 MHz
199	6945 MHz	215	7025 MHz	--	--

802.11ax-HE160

Channel	Frequency	Channel	Frequency	Channel	Frequency
15	6025 MHz	47	6185 MHz	79	6345 MHz
111	6505 MHz	143	6665 MHz	175	6825 MHz
207	6985 MHz	--	--	--	--

1.7. Antenna Details

Antenna Type	Frequency Range (MHz)	N _{ANT}	Antenna Gain (dBi)				Max. G _{ANT} (dBi)	CDD DG (dBi)	
			Ant 0	Ant 1	Ant 2	Ant 3		Power	PSD
PCB Antenna	5955 ~ 7095	4	4.6	4.5	4.5	4.6	4.6	4.6	10.62

Remark:

- The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated. For CDD transmissions, directional gain is calculated as follows, $N_{ANT} = 4$, $N_{SS} = 1$. If all antennas have the same gain, G_{ANT} , Directional gain = $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows.
 - For power spectral density (PSD) measurements on all devices, Array Gain = $10 \cdot \log(N_{ANT} / N_{SS})$ dB = 6.01;
 - For power measurements on IEEE 802.11 devices, Array Gain = 0 dB for $N_{ANT} \leq 4$;
- The EUT also supports Beam Forming mode, and the Beam Forming support 802.11ax, not include 802.11a. BF Directional Gain = $\text{Max. } G_{ANT} + 10 \log(N_{ANT} / N_{SS}) = 10.62$ dBi. For beamforming operation, manufacturer automatically backs power down based on a $10 \log(N_{ANT})$ factor based on CDD power. Therefore, only the CDD mode was evaluated in this report.

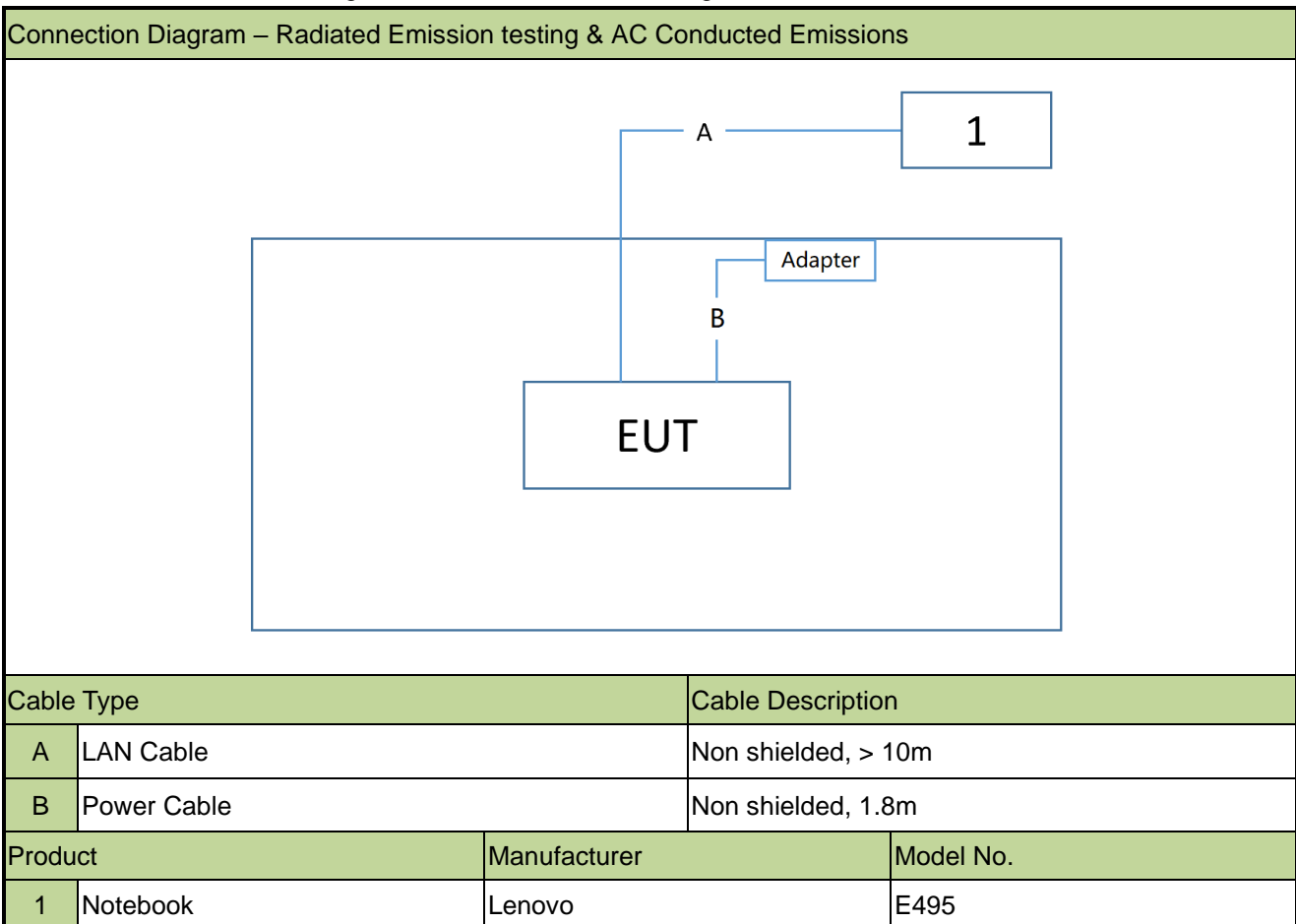
2. Test Configuration

2.1. Test Mode

Mode 1: Transmit by 802.11a (6Mbps) (CDD mode) _ N _{SS} = 1
Mode 2: Transmit by 802.11ax-HE20 (MCS0) (CDD mode) _ N _{SS} = 1
Mode 3: Transmit by 802.11ax-HE40 (MCS0) (CDD mode) _ N _{SS} = 1
Mode 4: Transmit by 802.11ax-HE80 (MCS0) (CDD mode) _ N _{SS} = 1
Mode 5: Transmit by 802.11ax-HE160 (MCS0) (CDD mode) _ N _{SS} = 1

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing.



Note: Only Adapter #1 was selected for all RF test.

2.3. Test Software

The test utility software used during testing was “QSPR”, and the version was V5.0-00199.

Power Setting was shown as below:

Test Mode	Channel No.	Frequency (MHz)	Power Setting	Test Mode	Channel No.	Frequency (MHz)	Power Setting	
11a	1	5955	10.5	11ax-HE40	3	5965	13.5	
	49	6195	10.5		51	6205	13.5	
	93	6415	10.0		91	6405	12.5	
	97	6435	10.0		99	6445	13.0	
	105	6475	11.5		107	6485	13.0	
	113	6515	11.0		115	6525	13.5	
	117	6535	11.0		123	6565	13.5	
	153	6715	10.5		147	6685	13.5	
	181	6855	12.0		179	6845	15.0	
	185	6875	12.0		187	6885	14.5	
	189	6895	11.0		195	6925	14.5	
	213	7015	10.5		211	7005	13.0	
229	7095	10.5	227	7085	13.0			
11ax-HE20	1	5955	12.0	11ax-HE80	7	5985	16.0	
	49	6195	11.5		55	6225	15.5	
	93	6415	10.5		87	6385	16.0	
	97	6435	11.5		103	6465	16.5	
	105	6475	10.5		119	6545	16.5	
	113	6515	10.5		135	6625	16.5	
	117	6535	11.0		151	6705	17.0	
	153	6715	10.0		183	6865	18.5	
	181	6855	12.0		199	6945	18.0	
	185	6875	12.5		215	7025	16.5	
	189	6895	12.5		11ax-HE160	15	6025	19.0
	213	7015	11.5			47	6185	20.5
229	7095	11.5	79	6345		19.5		
--	--	--	111	6505		19.5		
--	--	--	--	143	6665	19.5		
--	--	--	--	175	6825	20.0		
--	--	--	--	207	6985	19.5		

2.4. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ANSI C63.10-2013
- FCC KDB 789033 D02v02r01
- FCC KDB 987594 D02v01r01
- FCC KDB 987594 D04v01
- FCC KDB 662911 D01v02r01
- FCC KDB 414788 D01v01r01
- FCC KDB 412172 D01v01r01

2.5. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

3. Antenna Requirements

Excerpt from §15.407(a)(9) of the FCC Rules/Regulations:

Access points operating under the provisions of paragraphs (a)(5) and (a)(6) of this section must employ a permanently attached integrated antenna.

- The antenna of the device is built in and locked inside the enclosure.

Conclusion:

The device complies with the requirement of §15.407(a)(9).

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2023-06-01	SIP-AC3
Preamplifier	EMCI	EMC001330	MRTSUE06643	1 year	2023-01-13	SIP-AC3
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2023-03-14	SIP-AC3
Signal Analyzer	Keysight	N9020B	MRTSUE06604	1 year	2022-09-07	SIP-AC3
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2023-06-08	SIP-AC3
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06598	1 year	2022-11-09	SIP-AC3
Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2022-09-12	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06619	1 year	2022-11-02	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06622	1 year	2022-11-28	SIP-AC3
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2023-01-13	SIP-AC3
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06646	1 year	2022-08-26	SIP-AC3
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2022-12-23	SIP-AC3
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2023-06-01	SIP-SR2
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2023-06-01	SIP-SR2
Four-Line V-Network	R&S	ENV432	MRTSUE06614	1 year	2022-10-10	SIP-SR2
Thermohygrometer	testo	608-H1	MRTSUE06621	1 year	2022-11-28	SIP-SR2
Shielding Room	MIX-BEP	SIP-SR2	MRTSUE06949	5 years	2024-10-23	SIP-SR2
Attenuator	MVE	MVE2213	MRTSUE11091	1 year	2023-06-09	WZ-SR5
Attenuator	MVE	MVE2213	MRTSUE11084	1 year	2023-06-09	WZ-SR5
Attenuator	MVE	MVE2213	MRTSUE11085	1 year	2023-06-09	WZ-SR5
Power Divider	MVE	MVE8576	MRTSUE06267	1 year	2022-10-28	WZ-SR5
Directional Coupler	PULSAR	CS10-23-436/20	MRTSUE06565	1 year	2022-10-28	WZ-SR5
Thermohygrometer	testo	608-H1	MRTSUE06402	1 year	2023-06-06	WZ-SR5
Shielding Room	HUAMING	WZ-SR5	MRTSUE06442	N/A	N/A	WZ-SR5
Signal Analyzer	Keysight	N9010B	MRTSUE06457	1 year	2023-06-04	WZ-SR5
Signal Generator	Keysight	N5182B	MRTSUE06451	1 year	2023-07-08	WZ-SR5
Frequency extender for EXG or MXG	Keysight	N5182BX07	MRTSUE06984	1 year	2023-03-03	WZ-SR5
Temperature Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2022-10-10	WZ-TR3
Thermohygrometer	testo	608-H1	MRTSUE06401	1 year	2023-06-06	WZ-TR3
Signal Analyzer	Keysight	N9010B	MRTSUE07027	1 year	2022-12-05	WZ-TR3

Software	Version	Function
EMI V3	V 3.0.0	EMI Test Software
Controller_MF 7802BS	1.02	RE Antenna & Turntable

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. Measurement Uncertainty

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

AC Conducted Emission Measurement
Measurement Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 9kHz~150kHz: 3.74dB 150kHz~30MHz: 3.44dB
Radiated Disturbance
Measurement Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): Horizontal: 30MHz~300MHz: 5.04dB 300MHz~1GHz: 4.95dB 1GHz~40GHz: 6.40dB Vertical: 30MHz~300MHz: 5.24dB 300MHz~1GHz: 6.03dB 1GHz~40GHz: 6.40dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.13dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.15dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 0.28%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.407(a)	26dB Bandwidth	Conducted	Pass
15.407(a)(5), (a)(6)	Maximum Equivalent Isotropically Radiated Power (EIRP)		Pass
15.407(a)(5), (a)(6)	Peak Power Spectral Density (EIRP)		Pass
15.407(b)(6)	In-Band Emission		Pass
15.407(g)	Frequency Stability		Pass
15.407(d)(6)	Contention-Based Protocol		Pass
15.407(b)(5)	Unwanted Emissions		Pass
15.407(b)(7), (8), (9)	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	Pass

Remark:

- The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- EUT supports one configuration only in 802.11ax full RU mode.
- The test results shown in the following sections represent the worst-case emissions.

6.2. 26dB Bandwidth Measurement

6.2.1. Test Limit

N/A

6.2.2. Test Procedure

KDB 789033 D02v02r01 - Section II)C)1) (26dB Bandwidth)

KDB 789033 D02v02r01 - Section II)D) (99% Bandwidth)

6.2.3. Test Setting

26dB Bandwidth

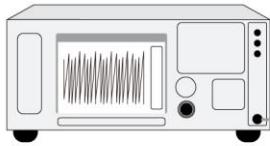
1. The analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth
2. RBW = approximately 1% of the emission bandwidth.
3. VBW > RBW
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission.
Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

99% Bandwidth

1. Set center frequency to the nominal EUT channel center frequency.
2. RBW = 1% to 5% of the OBW
3. VBW $\geq 3 \times$ RBW
4. Span = 1.5 times to 5 times the OBW
5. Detector = peak
6. Trace mode = max hold
7. Allow the trace to stabilize
8. Use the 99% power bandwidth function of the instrument.

6.2.4. Test Setup

Spectrum Analyzer



DC Block
&
Attenuator



6.2.5. Test Result

Refer to Appendix A.2.

6.3. Output Power Measurement

6.3.1. Test Limit

For an indoor access point operating in the 5.925-7.125 GHz band, the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm.

For a subordinate device operating under the control of an indoor access point in the 5.925-7.125 GHz band, the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm.

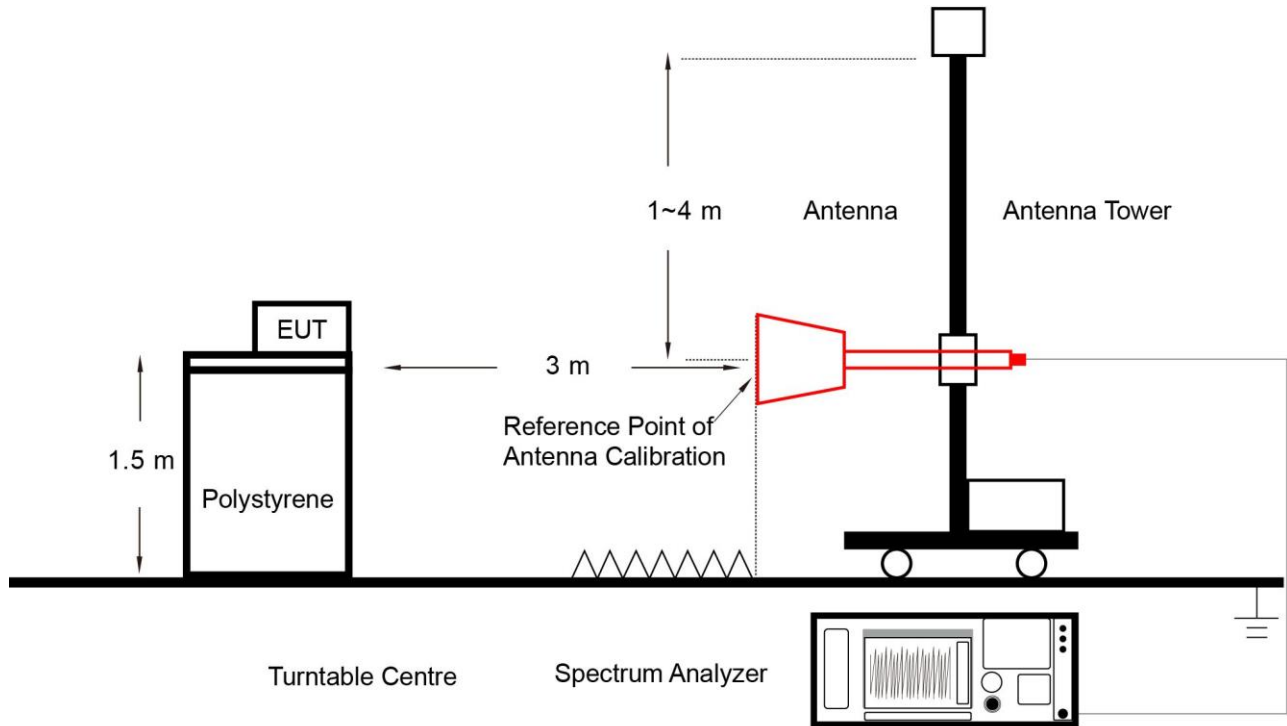
6.3.2. Test Procedure

KDB 789033 D02v02r01 - Section II)E)2)d) Method SA-2

6.3.3. Test Setting

1. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal
2. Set RBW = 1 MHz
3. Set VBW \geq 3 MHz
4. Number of points in sweep $\geq 2 \times$ span / RBW
5. Sweep time = auto
6. Detector = power averaging (rms)
7. Allow the sweep to "free run"
8. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.
9. Use the Channel Power function of the instrument.
10. Add $10 \log (1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Power Spectral Density Measurement

6.4.1. Test Limit

For an indoor access point operating in the 5.925-7.125 GHz band, the maximum power spectral density must not exceed 5 dBm e.i.r.p. in any 1-megahertz band.

For a subordinate device operating under the control of an indoor access point in the 5.925-7.125 GHz band, the maximum power spectral density must not exceed 5 dBm e.i.r.p in any 1-megahertz band.

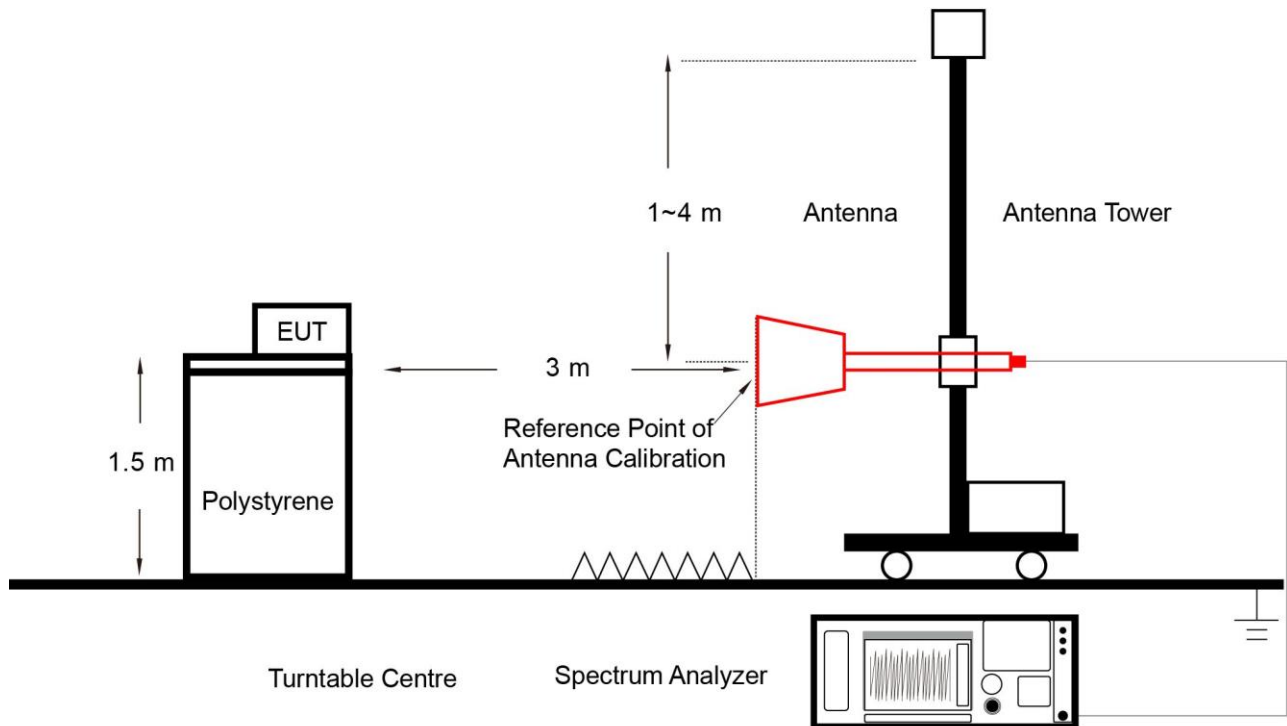
6.4.2. Test Procedure

KDB 789033 D02v02r01 - Section II)F)

6.4.3. Test Setting

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire 26dB EBW of the signal.
3. RBW = 1MHz
4. VBW = 3MHz
5. Number of sweep points $\geq 2 \times (\text{span} / \text{RBW})$
6. Detector = power averaging (Average)
7. Sweep time = auto
8. Trigger = free run
9. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.
10. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
11. Add $10 \cdot \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add $10 \cdot \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

6.5. In-Band Emission Measurement

6.5.1. Test Limit

Suppressed by 20 dB at 1 MHz outside of the channel edge. (The channel edge is defined as the 26-dB point on either side of the carrier center frequency.)

Suppressed by 28 dB at one channel bandwidth from the channel center.

Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.

6.5.2. Test Procedure

KDB 987594 D02v01r01 - Section J

6.5.3. Test Setting

Emissions Mask Reference Level Measurement

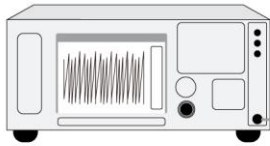
11. Set the span to encompass the entire 26 dB EBW of the signal.
12. Set RBW = same RBW used for 26 dB EBW measurement.
13. Set VBW $\geq 3 \times$ RBW.
14. Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$.
15. Sweep time = auto.
16. Detector = RMS.
17. Trace average at least 100 traces in power averaging (rms) mode.
18. Use the peak search function on the instrument to find the peak of the spectrum.

In-Band Emission

1. Using the measuring equipment limit line function, develop the emissions mask based on rule.
2. Adjust the span to encompass the entire mask as necessary.
3. Clear trace.
4. Trace average at least 100 traces in power averaging (rms) mode.
5. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask.

6.5.4. Test Setup

Spectrum Analyzer



DC Block
&
Attenuator



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Frequency Stability Measurement

6.6.1. Test Limit

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

6.6.2. Test Procedure

Frequency Stability Under Temperature Variations:

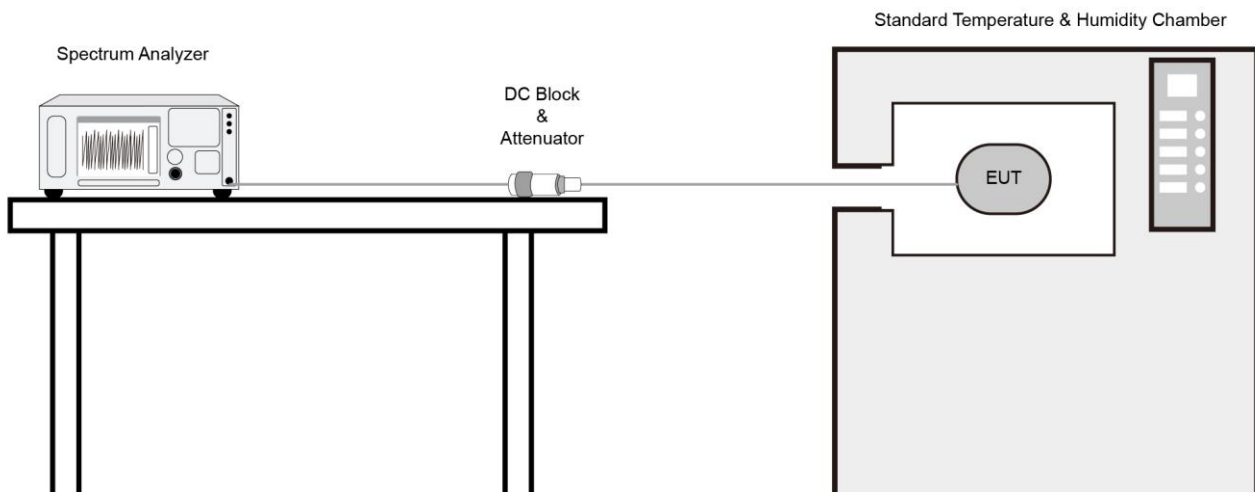
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

6.6.3. Test Setup



6.6.4. Test Result

Refer to Appendix A.6.

6.7. Contention Based Protocol Measurement

6.7.1. Test Limit

Unlicensed indoor low power device must detect co-channel radio frequency power that is at least -62dBm (The threshold is referenced to a 0dBi antenna gain.) or low.

Indoor low power device must detect an AWGN signal with 90% (or better) level of certainty.

6.7.2. Test Procedure

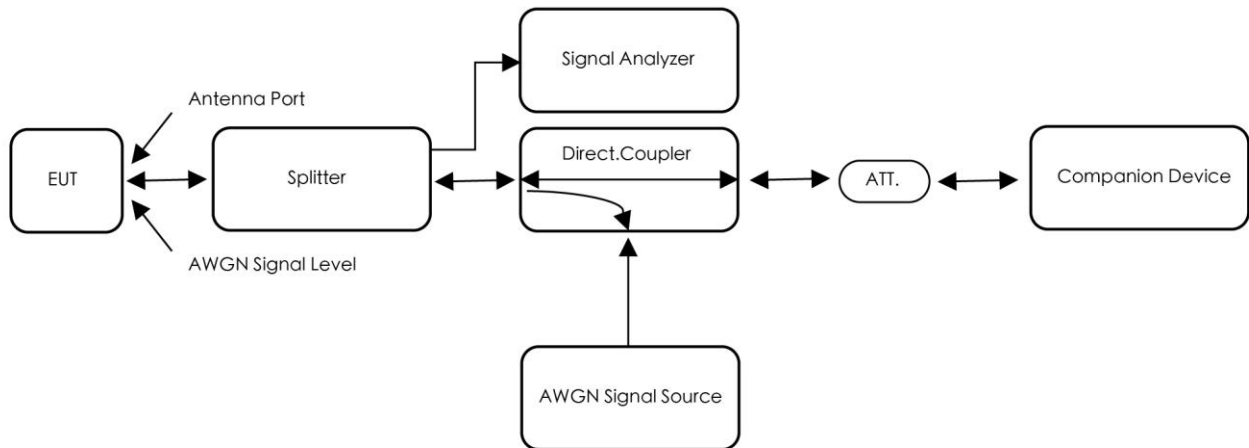
KDB 987594 D02v01r01 - Section I

6.7.3. Test Setting

1. Configure the EUT to transmit with a constant duty cycle.
2. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3. Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
4. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
5. Using an AWGN signal source, generate a 10 MHz-wide AWGN signal. Use Table 1 of KDB 987594 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
6. Set the AWGN signal power to an extremely low level. Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in below figure.
7. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
8. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
9. Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
10. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If

testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.

6.7.4. Test Setup



6.7.5. Test Result

Refer to Appendix A.7.

6.8. Radiated Spurious Emission Measurement

6.8.1. Test Limit

For 15.407(b)(5) requirement

For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

Refer to 987594 D02 U-NII 6GHz EMC Measurement v01 clause G

Use guidance in KDB 789033 for measurements below 1000 MHz and above 1000 MHz. Unwanted emissions outside of restricted bands are measured with a RMS detector. In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [μ V/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.8.2. Test Procedure

KDB 789033 D02v02r01 - Section II)G)

6.8.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000MHz	1MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

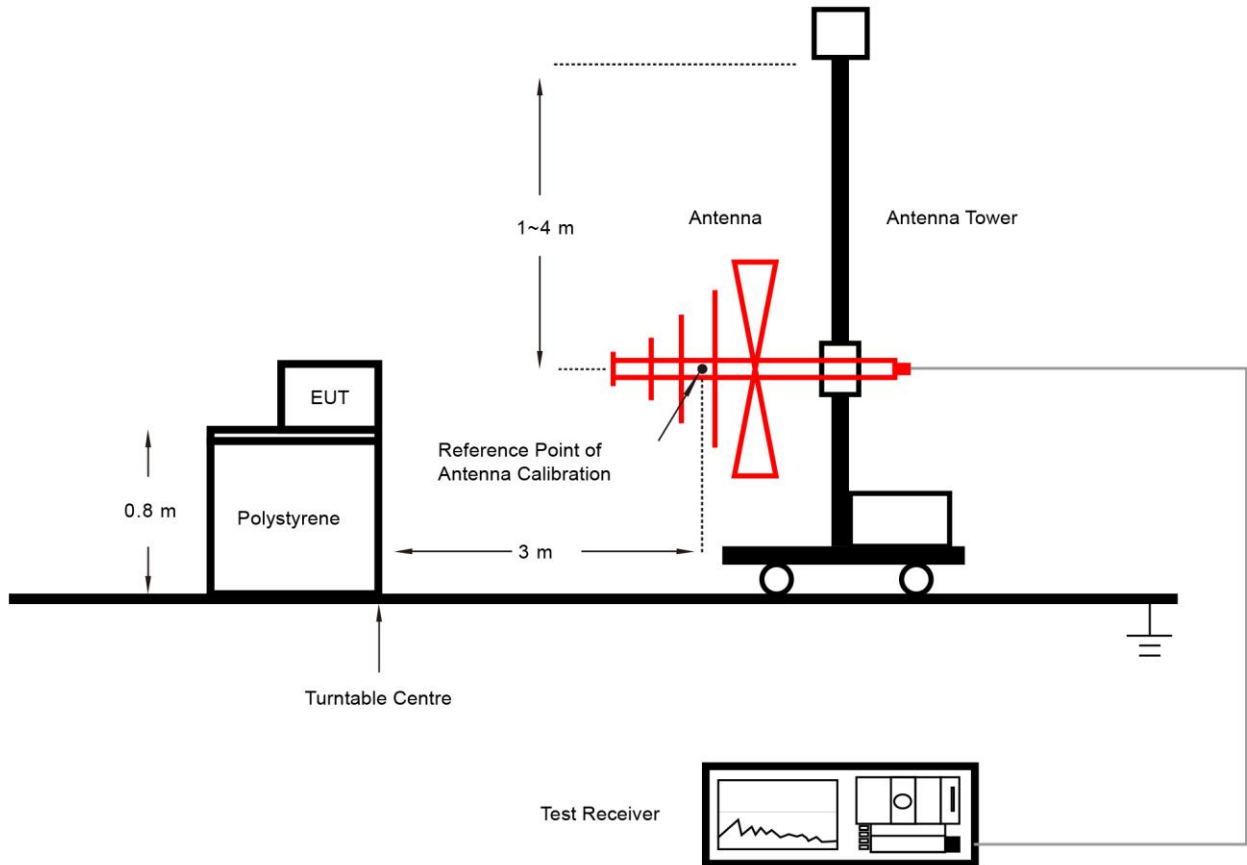
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

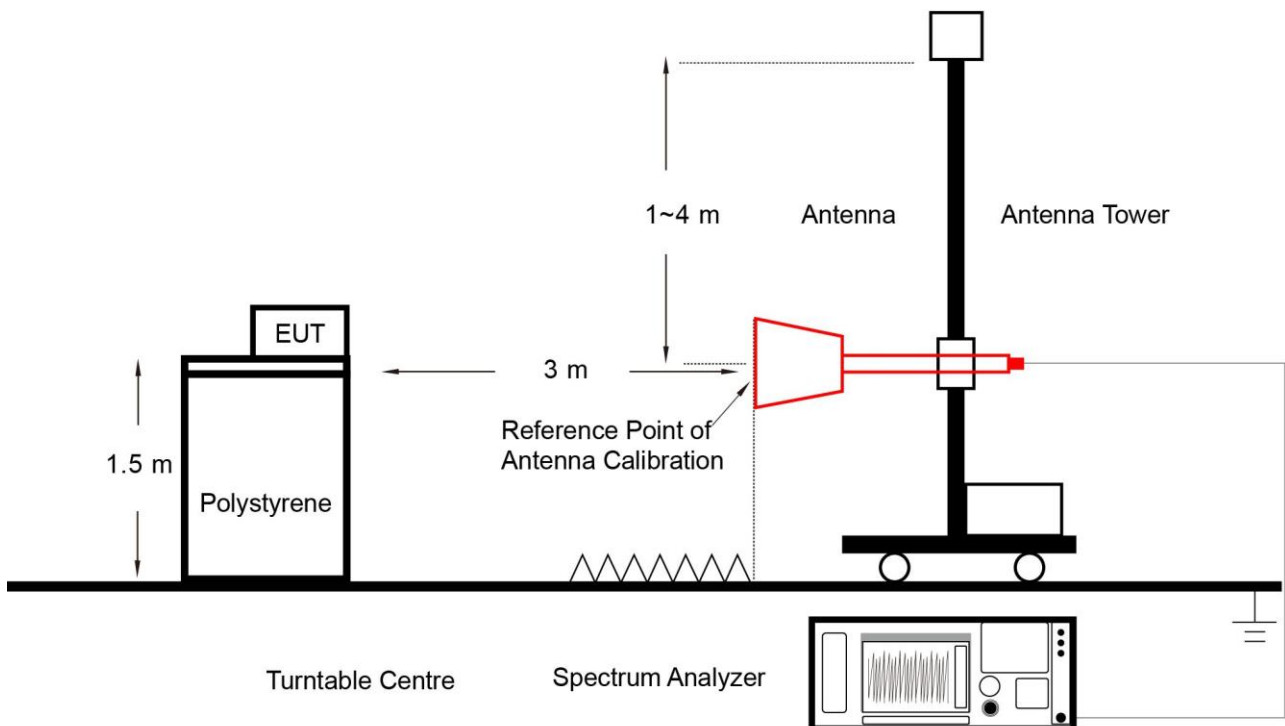
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

6.8.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.8.5. Test Result

Refer to Appendix A.8.

6.9. Radiated Restricted Band Edge Measurement

6.9.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41	--	--	--

For 15.407(b)(5) requirement:

For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

Refer to 987594 D02 U-NII 6GHz EMC Measurement v01 clause G - Unwanted Emission Measurement

Use guidance in KDB 789033 for measurements below 1000 MHz and above 1000 MHz. Unwanted emissions outside of restricted bands are measured with a RMS detector. In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.9.2. Test Procedure

KDB 789033 D02v02r01-Section II)G)

6.9.3. Test Setting

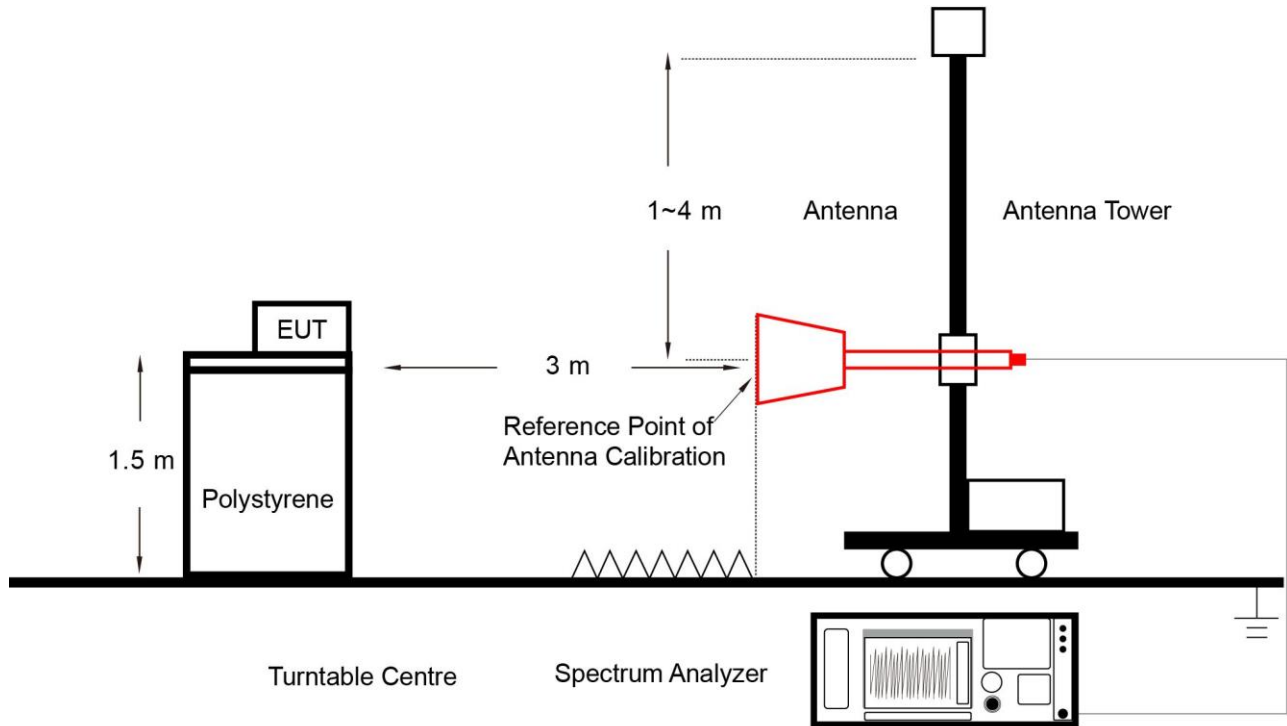
Peak Measurements above 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; if the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10Hz
4. If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration
5. Detector = Peak
6. Sweep time = Auto
7. Trace mode = Max hold
8. Trace was allowed to stabilize

6.9.4. Test Setup



6.9.5. Test Result

Refer to Appendix A.9.

6.10. AC Conducted Emissions Measurement

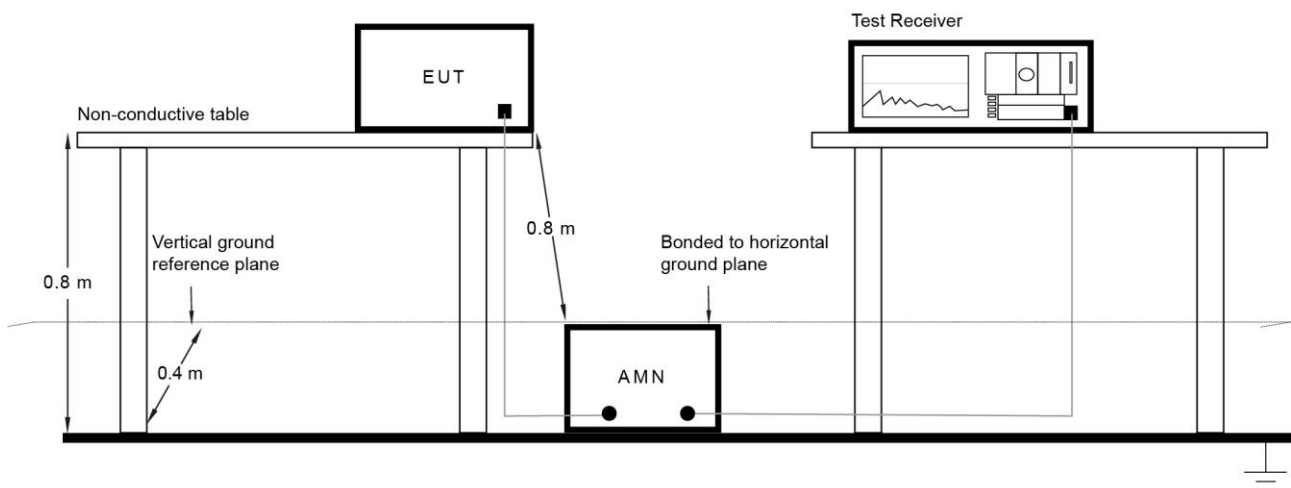
6.10.1. Test Limit

FCC Part 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

6.10.2. Test Setup



6.10.3. Test Result

Refer to Appendix A.10.

Appendix A – Test Result

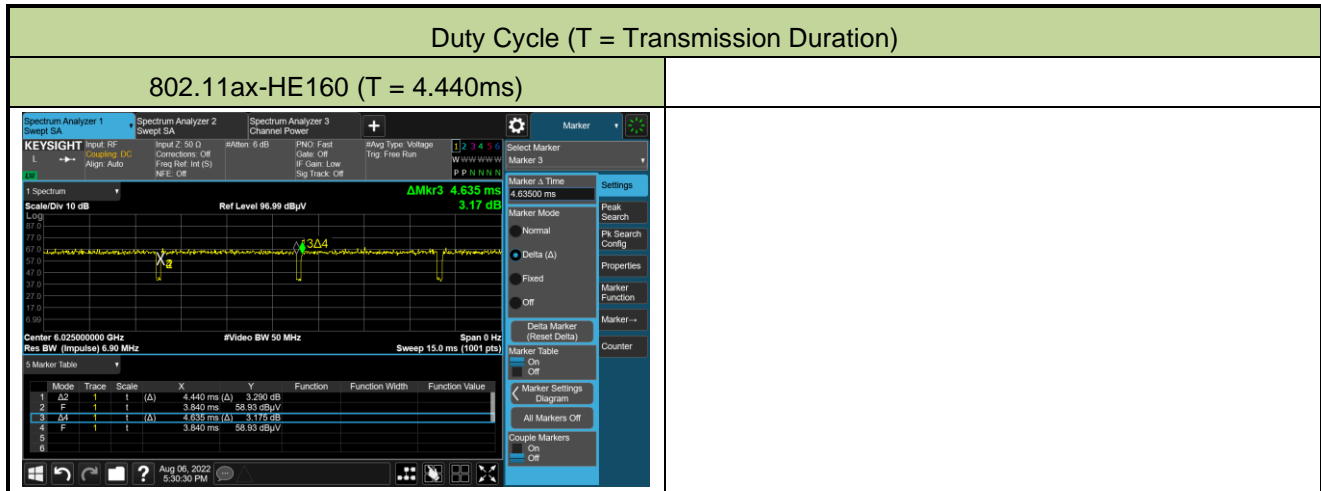
A.1 Duty Cycle Test Result

Test Site	SIP-AC3	Test Engineer	Arvin Ding
Test Date	2022-08-06		

Test Mode	Duty Cycle
802.11a	92.29%
802.11ax-HE20	96.67%
802.11ax-HE40	97.28%
802.11ax-HE80	97.11%
802.11ax-HE160	95.79%

Duty Cycle (T = Transmission Duration)

802.11a (T = 1.974ms)	802.11ax-HE20 (T = 5.220ms)																																																																																
<table border="1"> <thead> <tr> <th>Mode</th> <th>Trace</th> <th>Scale</th> <th>X</th> <th>Y</th> <th>Function</th> <th>Function Width</th> <th>Function Value</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Δ2</td> <td>1</td> <td>1.974 ms (Δ)</td> <td>0.5189 dB</td> <td>Function</td> <td>Function Width</td> <td>Function Value</td> </tr> <tr> <td>2</td> <td>F</td> <td>1</td> <td>1.424 ms (Δ)</td> <td>73.94 dBμV</td> <td>Function</td> <td>Function Width</td> <td>Function Value</td> </tr> <tr> <td>3</td> <td>Δ4</td> <td>1</td> <td>2.139 ms (Δ)</td> <td>0.50 dB</td> <td>Function</td> <td>Function Width</td> <td>Function Value</td> </tr> <tr> <td>4</td> <td>F</td> <td>1</td> <td>1.424 ms (Δ)</td> <td>73.94 dBμV</td> <td>Function</td> <td>Function Width</td> <td>Function Value</td> </tr> </tbody> </table>	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value	1	Δ2	1	1.974 ms (Δ)	0.5189 dB	Function	Function Width	Function Value	2	F	1	1.424 ms (Δ)	73.94 dBμV	Function	Function Width	Function Value	3	Δ4	1	2.139 ms (Δ)	0.50 dB	Function	Function Width	Function Value	4	F	1	1.424 ms (Δ)	73.94 dBμV	Function	Function Width	Function Value	<table border="1"> <thead> <tr> <th>Mode</th> <th>Trace</th> <th>Scale</th> <th>X</th> <th>Y</th> <th>Function</th> <th>Function Width</th> <th>Function Value</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Δ2</td> <td>1</td> <td>5.220 ms (Δ)</td> <td>-3.522 dB</td> <td>Function</td> <td>Function Width</td> <td>Function Value</td> </tr> <tr> <td>2</td> <td>F</td> <td>1</td> <td>3.036 ms (Δ)</td> <td>71.88 dBμV</td> <td>Function</td> <td>Function Width</td> <td>Function Value</td> </tr> <tr> <td>3</td> <td>Δ4</td> <td>1</td> <td>4.500 ms (Δ)</td> <td>0.46 dB</td> <td>Function</td> <td>Function Width</td> <td>Function Value</td> </tr> <tr> <td>4</td> <td>F</td> <td>1</td> <td>3.036 ms (Δ)</td> <td>71.88 dBμV</td> <td>Function</td> <td>Function Width</td> <td>Function Value</td> </tr> </tbody> </table>	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value	1	Δ2	1	5.220 ms (Δ)	-3.522 dB	Function	Function Width	Function Value	2	F	1	3.036 ms (Δ)	71.88 dBμV	Function	Function Width	Function Value	3	Δ4	1	4.500 ms (Δ)	0.46 dB	Function	Function Width	Function Value	4	F	1	3.036 ms (Δ)	71.88 dBμV	Function	Function Width	Function Value
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A.2 26dB Bandwidth Test Result

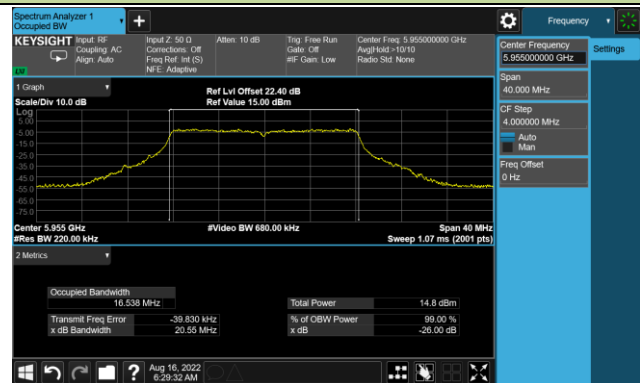
Test Site	WZ-SR5	Test Engineer	Liz Yuan
Test Date	2022-08-16		

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11a	6Mbps	1	5955	20.55	16.538
802.11a	6Mbps	49	6195	20.38	16.552
802.11a	6Mbps	93	6415	20.23	16.575
802.11a	6Mbps	97	6435	20.18	16.541
802.11a	6Mbps	105	6475	20.48	16.541
802.11a	6Mbps	113	6515	20.45	16.544
802.11a	6Mbps	117	6535	20.42	16.542
802.11a	6Mbps	153	6715	20.13	16.541
802.11a	6Mbps	181	6855	20.59	16.555
802.11a	6Mbps	185	6875	20.53	16.554
802.11a	6Mbps	189	6895	20.59	16.557
802.11a	6Mbps	213	7015	20.52	16.560
802.11a	6Mbps	229	7095	20.61	16.533
802.11ax-HE20	MCS0	1	5955	21.81	19.054
802.11ax-HE20	MCS0	49	6195	21.79	19.037
802.11ax-HE20	MCS0	93	6415	21.32	19.064
802.11ax-HE20	MCS0	97	6435	21.43	19.041
802.11ax-HE20	MCS0	105	6475	21.58	19.040
802.11ax-HE20	MCS0	113	6515	21.56	19.069
802.11ax-HE20	MCS0	117	6535	21.68	19.043
802.11ax-HE20	MCS0	153	6715	21.45	19.054
802.11ax-HE20	MCS0	181	6855	21.50	19.070
802.11ax-HE20	MCS0	185	6875	21.52	19.046
802.11ax-HE20	MCS0	189	6895	21.58	19.037
802.11ax-HE20	MCS0	213	7015	21.36	19.048
802.11ax-HE20	MCS0	229	7095	21.59	19.040

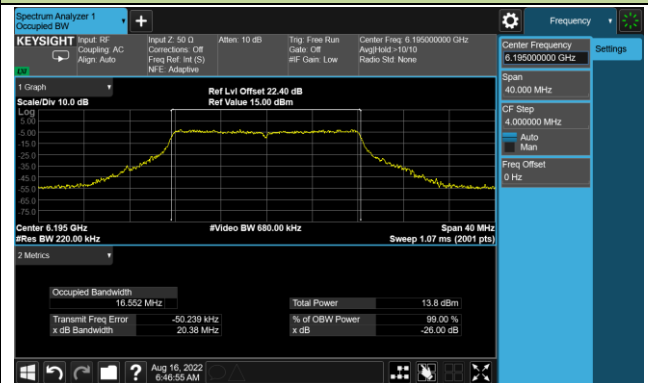
Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11ax-HE40	MCS0	3	5965	40.19	37.608
802.11ax-HE40	MCS0	51	6205	40.43	37.664
802.11ax-HE40	MCS0	91	6405	40.25	37.612
802.11ax-HE40	MCS0	99	6445	40.22	37.570
802.11ax-HE40	MCS0	107	6485	40.18	37.690
802.11ax-HE40	MCS0	115	6525	40.46	37.676
802.11ax-HE40	MCS0	123	6565	40.26	37.625
802.11ax-HE40	MCS0	147	6685	40.03	37.529
802.11ax-HE40	MCS0	179	6845	40.24	37.609
802.11ax-HE40	MCS0	187	6885	40.24	37.645
802.11ax-HE40	MCS0	195	6925	40.06	37.657
802.11ax-HE40	MCS0	211	7005	40.02	37.612
802.11ax-HE40	MCS0	227	7085	40.02	37.639
802.11ax-HE80	MCS0	7	5985	81.12	77.126
802.11ax-HE80	MCS0	55	6225	81.11	76.971
802.11ax-HE80	MCS0	87	6385	82.26	77.064
802.11ax-HE80	MCS0	103	6465	81.91	77.161
802.11ax-HE80	MCS0	119	6545	81.63	77.002
802.11ax-HE80	MCS0	135	6625	81.41	76.915
802.11ax-HE80	MCS0	151	6705	81.69	77.175
802.11ax-HE80	MCS0	183	6865	81.44	77.032
802.11ax-HE80	MCS0	199	6945	81.44	77.173
802.11ax-HE80	MCS0	215	7025	81.79	77.071
802.11ax-HE160	MCS0	15	6025	162.7	154.47
802.11ax-HE160	MCS0	47	6185	163.3	155.03
802.11ax-HE160	MCS0	79	6345	162.8	154.66
802.11ax-HE160	MCS0	111	6505	163.5	154.79
802.11ax-HE160	MCS0	143	6665	162.5	154.19
802.11ax-HE160	MCS0	175	6825	162.8	154.96
802.11ax-HE160	MCS0	207	6985	163.4	154.84

802.11a 26dB Bandwidth & 99% Bandwidth

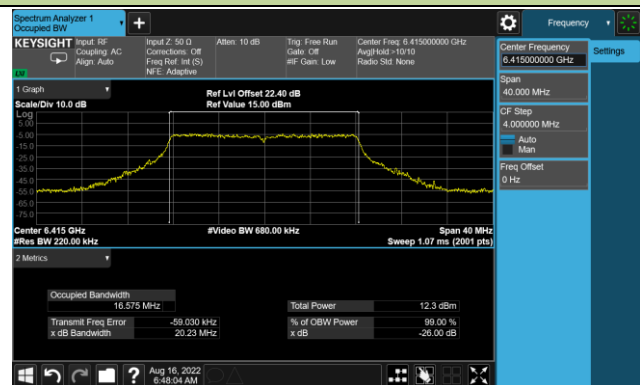
Channel 1 (5955MHz)



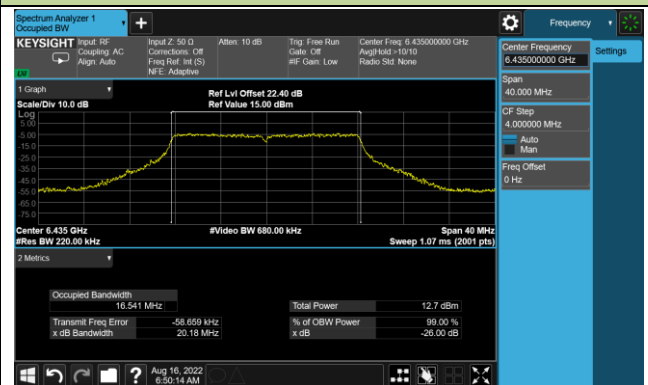
Channel 49 (6195MHz)



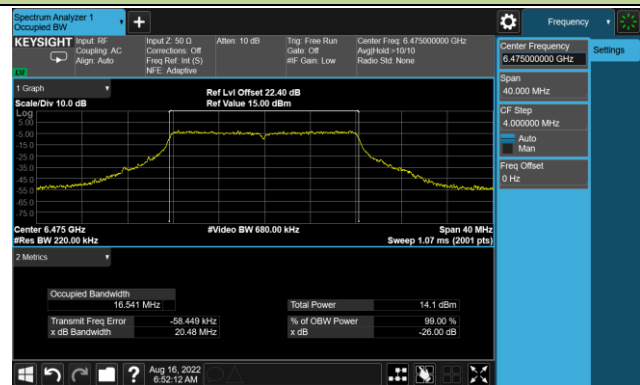
Channel 93 (6415MHz)



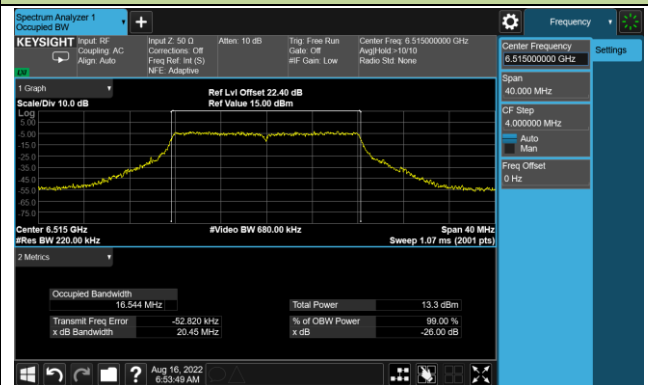
Channel 97 (6435MHz)



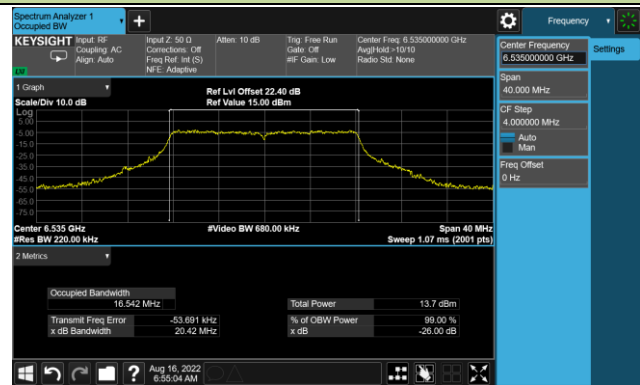
Channel 105 (6475MHz)



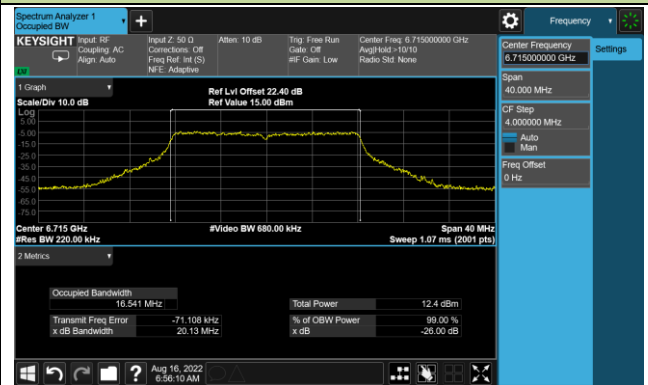
Channel 113 (6515MHz)



Channel 117 (6535MHz)

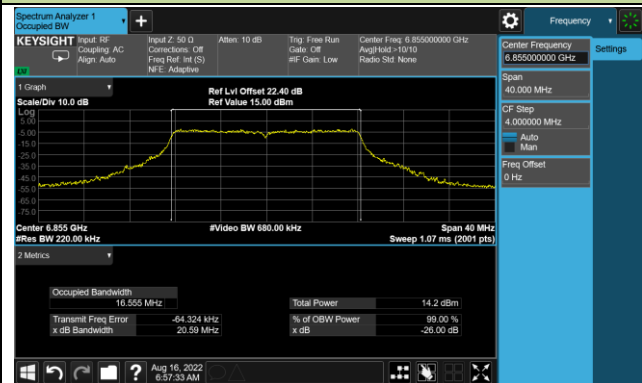


Channel 153 (6715MHz)

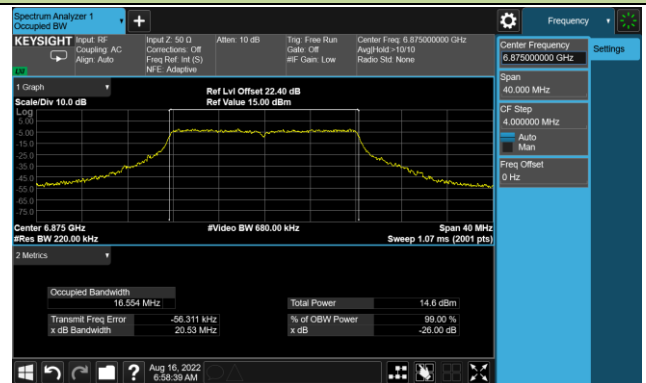


802.11a 26dB Bandwidth & 99% Bandwidth

Channel 181 (6855MHz)



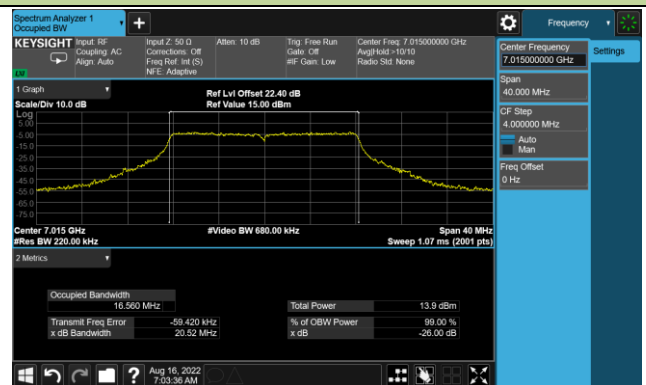
Channel 185 (6875MHz)



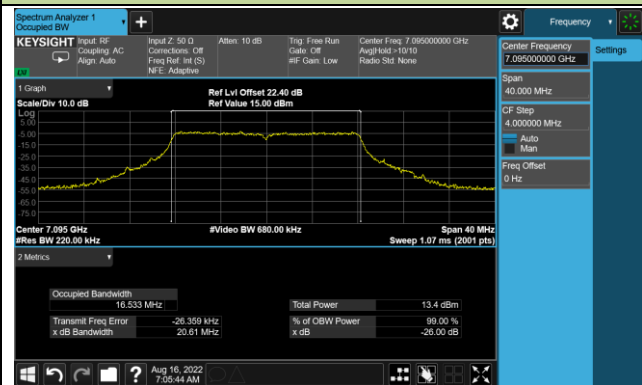
Channel 189 (6895MHz)



Channel 213 (7015MHz)

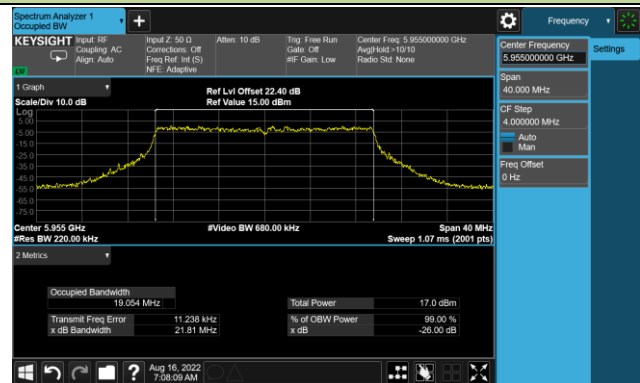


Channel 229 (7095MHz)



802.11ax-HE20 26dB Bandwidth & 99% Bandwidth

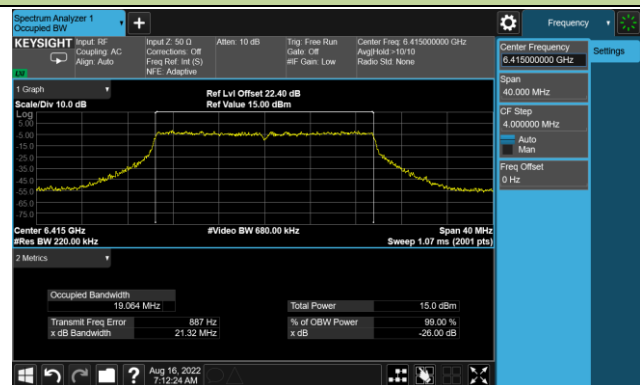
Channel 1 (5955MHz)



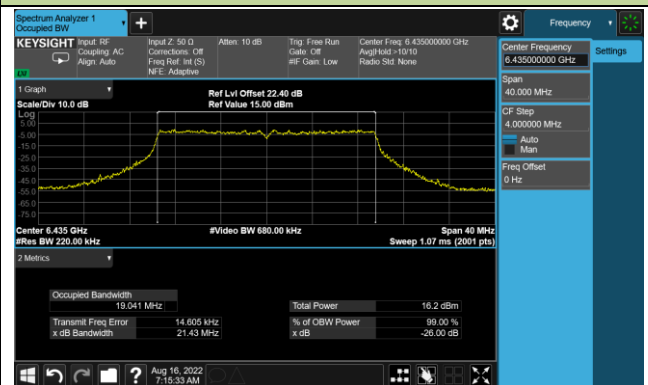
Channel 49 (6195MHz)



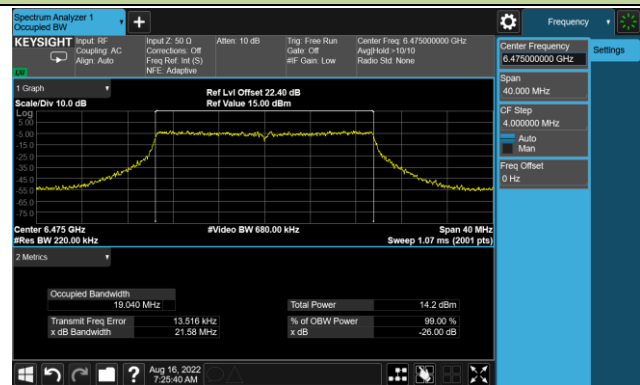
Channel 93 (6415MHz)



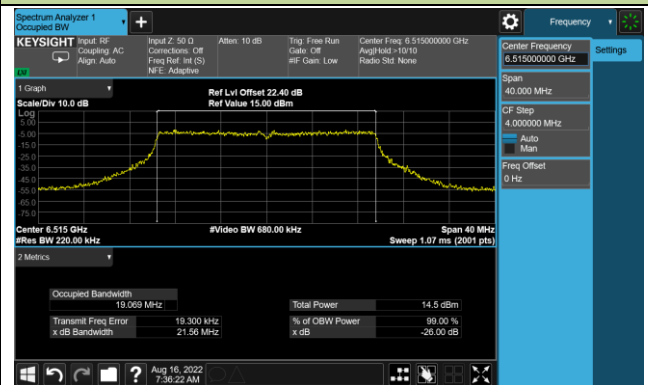
Channel 97 (6435MHz)



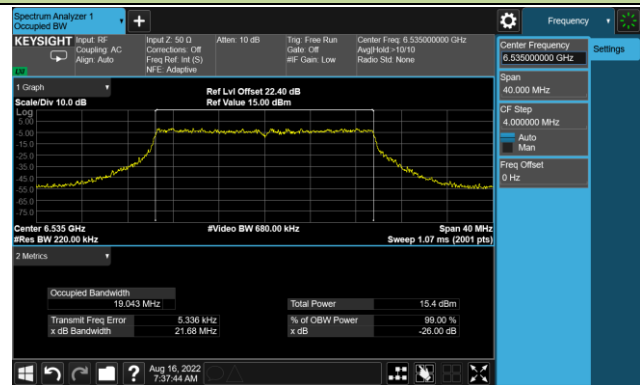
Channel 105 (6475MHz)



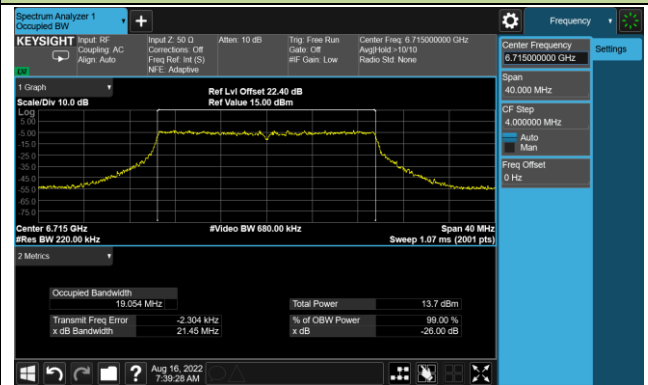
Channel 113 (6515MHz)



Channel 117 (6535MHz)

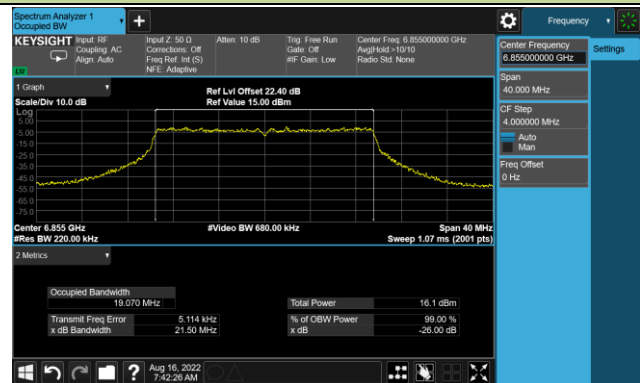


Channel 153 (6715MHz)

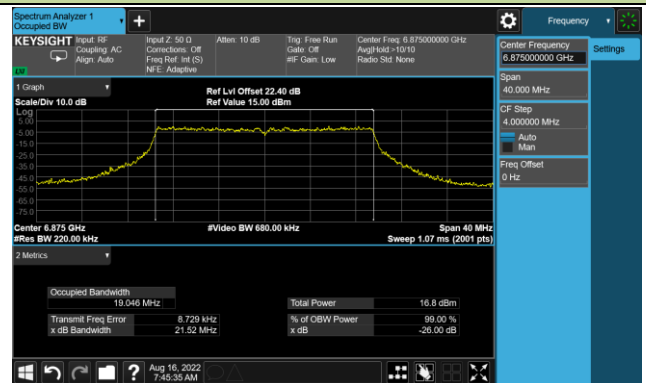


802.11ax-HE20 26dB Bandwidth & 99% Bandwidth

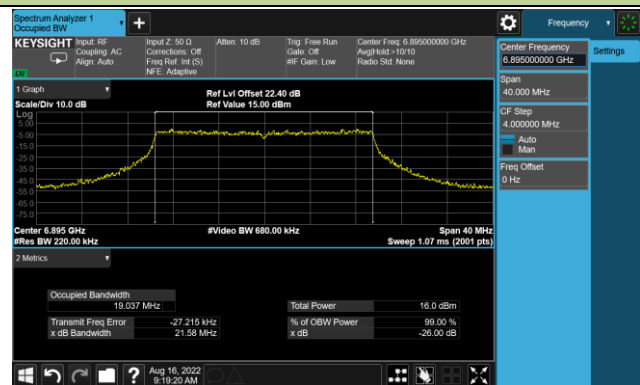
Channel 181 (6855MHz)



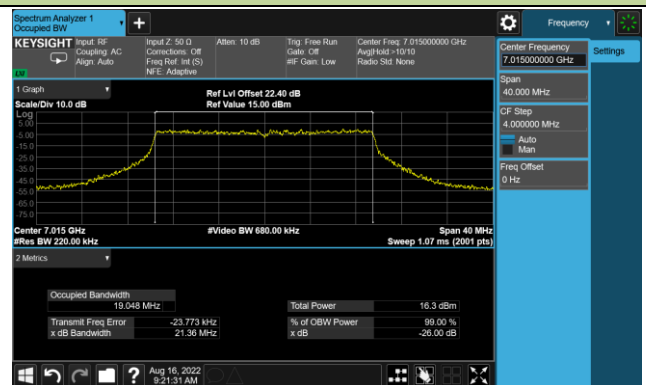
Channel 185 (6875MHz)



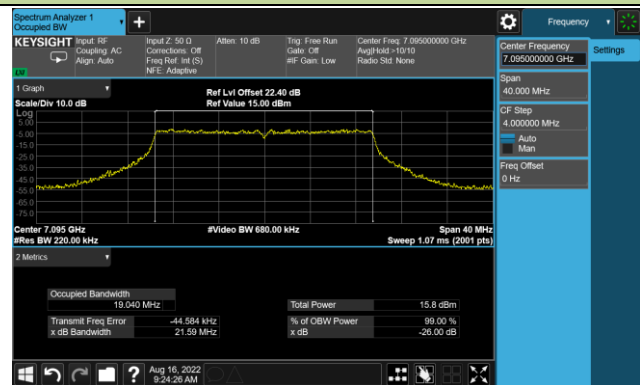
Channel 189 (6895MHz)



Channel 213 (7015MHz)

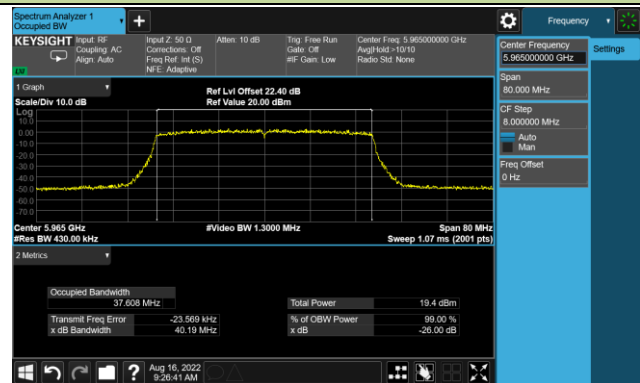


Channel 229 (7095MHz)

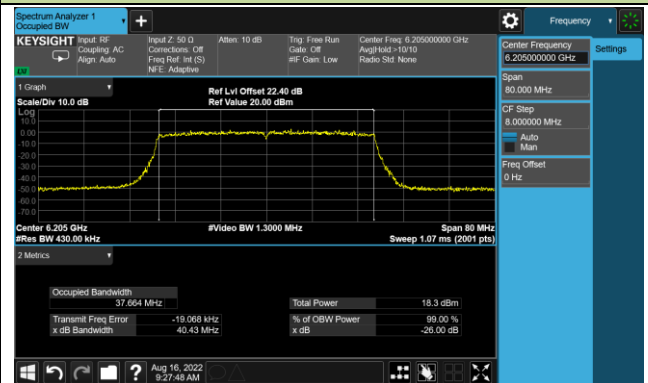


802.11ax-HE40 26dB Bandwidth & 99% Bandwidth

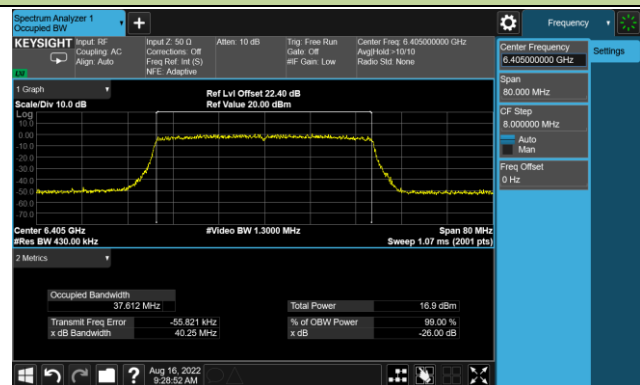
Channel 3 (5965MHz)



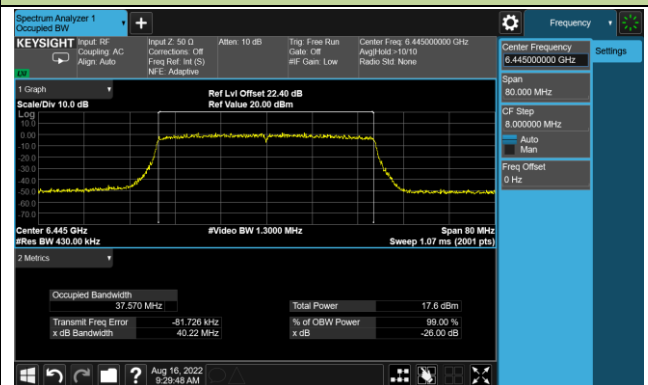
Channel 51 (6205MHz)



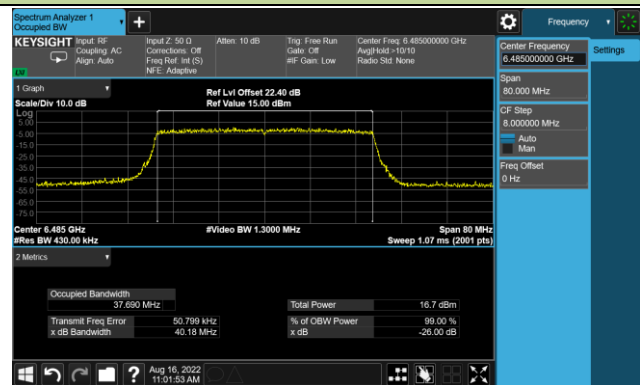
Channel 91 (6405MHz)



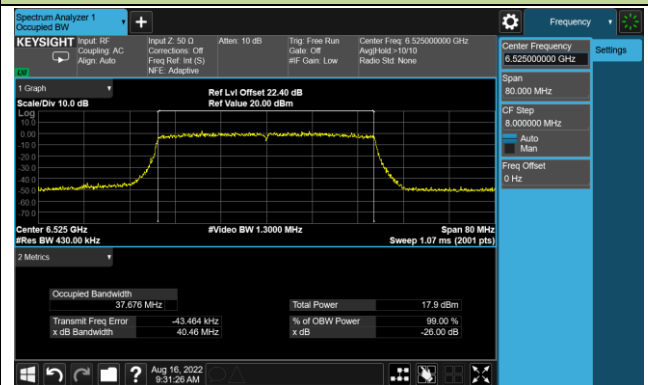
Channel 99 (6445MHz)



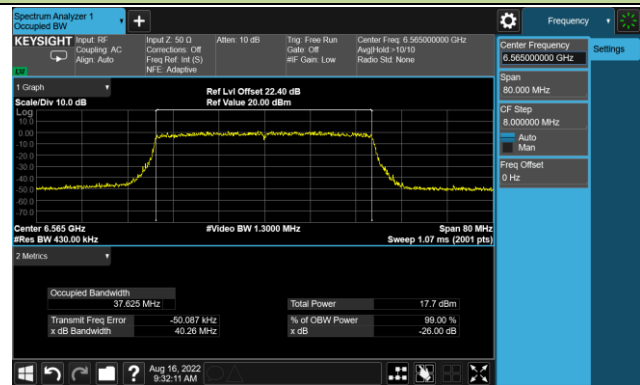
Channel 107 (6485MHz)



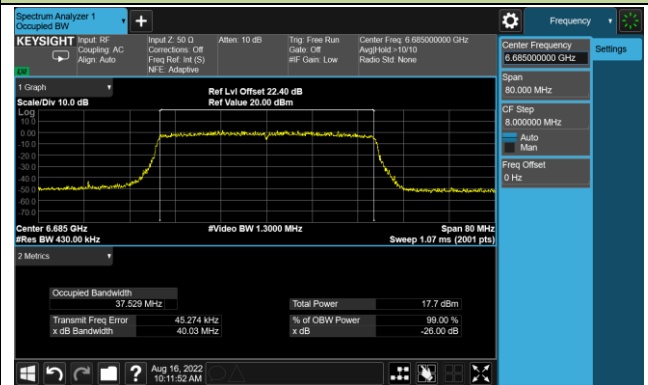
Channel 115 (6525MHz)



Channel 123 (6565MHz)

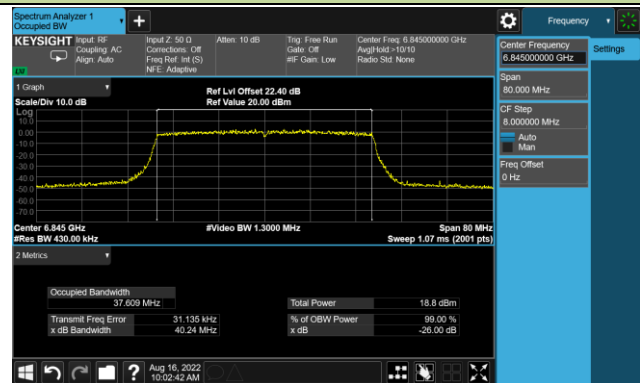


Channel 147 (6685MHz)

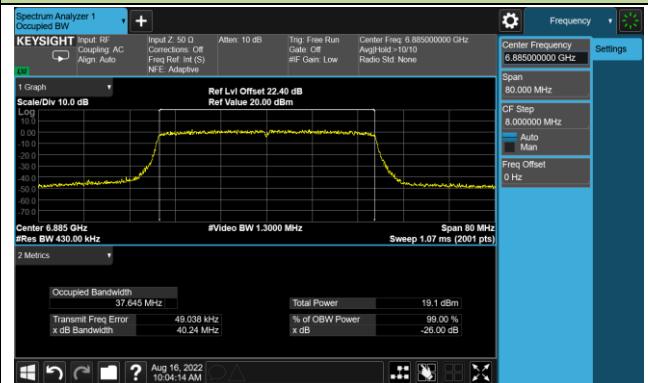


802.11ax-HE40 26dB Bandwidth & 99% Bandwidth

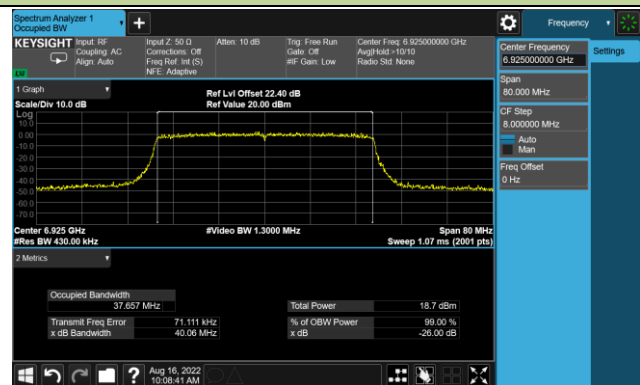
Channel 179 (6845MHz)



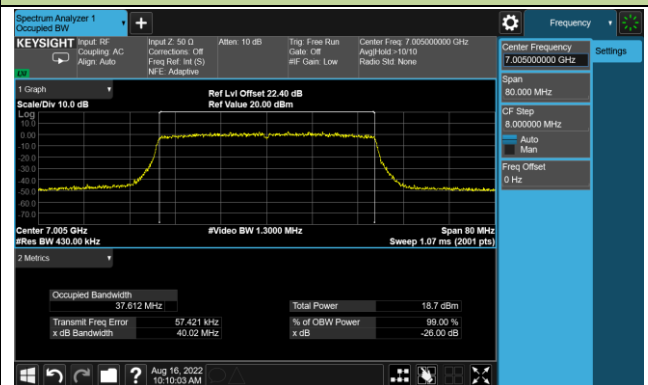
Channel 187 (6885MHz)



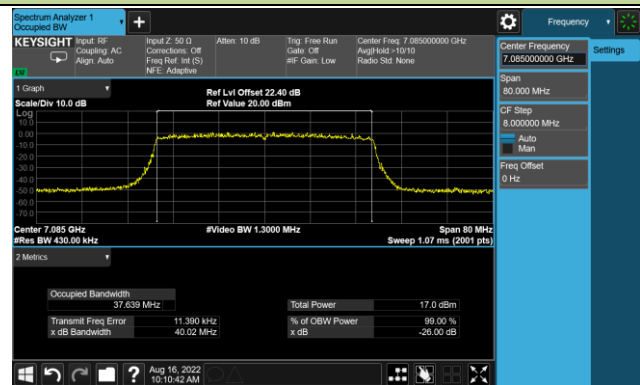
Channel 195 (6925MHz)



Channel 211 (7005MHz)

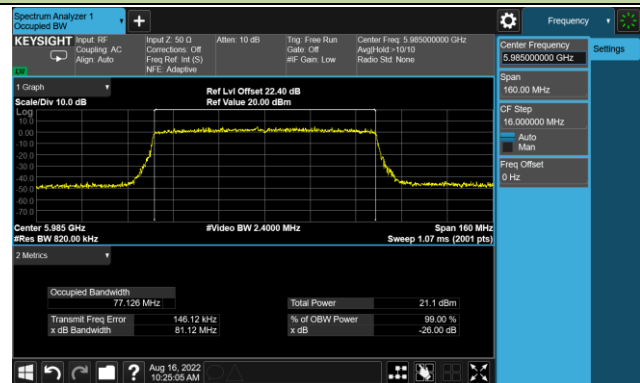


Channel 227 (7085MHz)

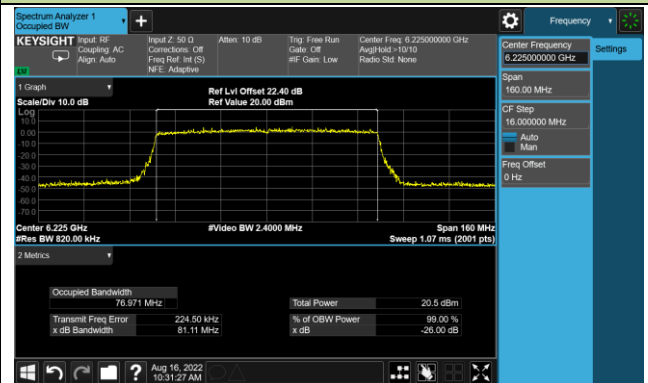


802.11ax-HE80 26dB Bandwidth & 99% Bandwidth

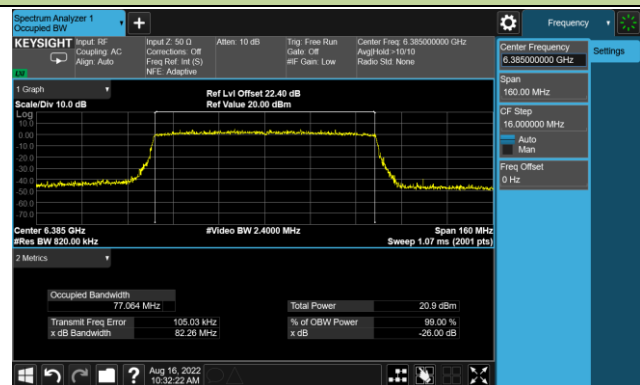
Channel 7 (5985MHz)



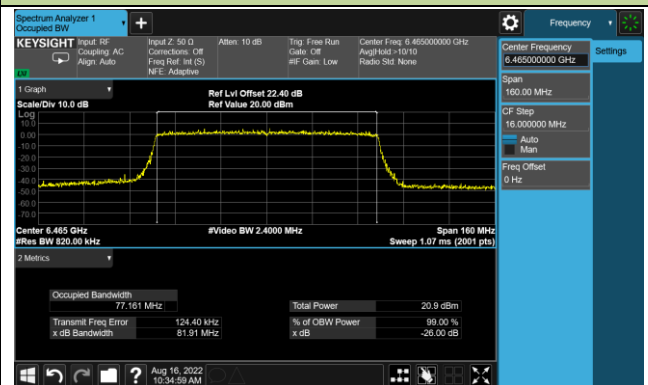
Channel 55 (6225MHz)



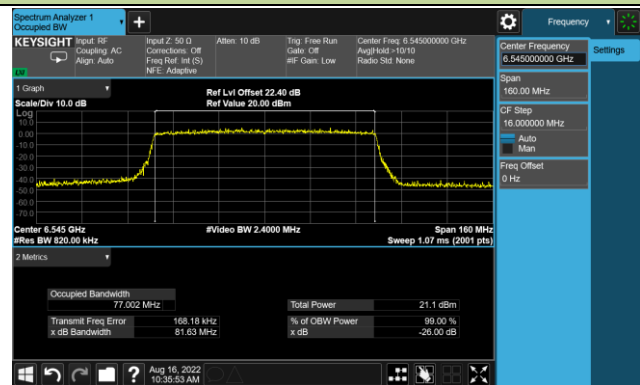
Channel 87 (6385MHz)



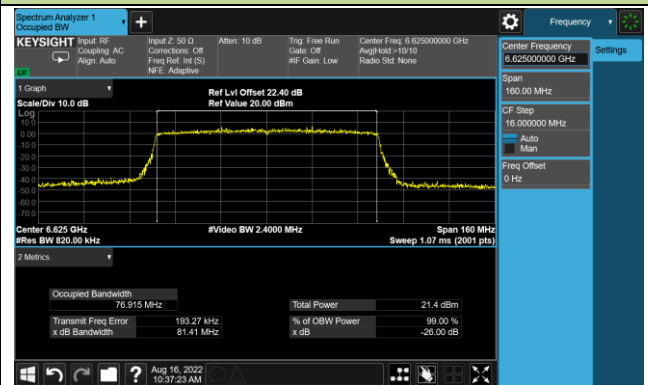
Channel 103 (6465MHz)



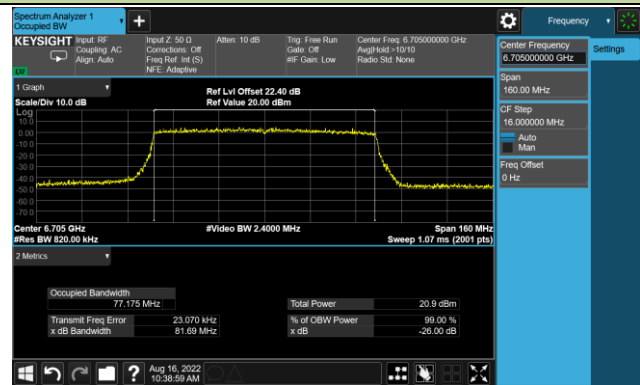
Channel 119 (6545MHz)



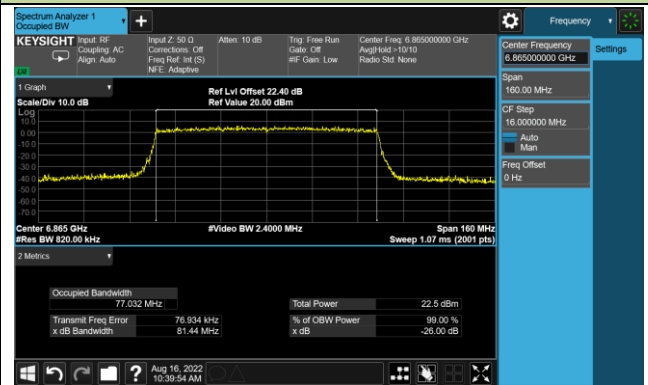
Channel 135 (6625MHz)

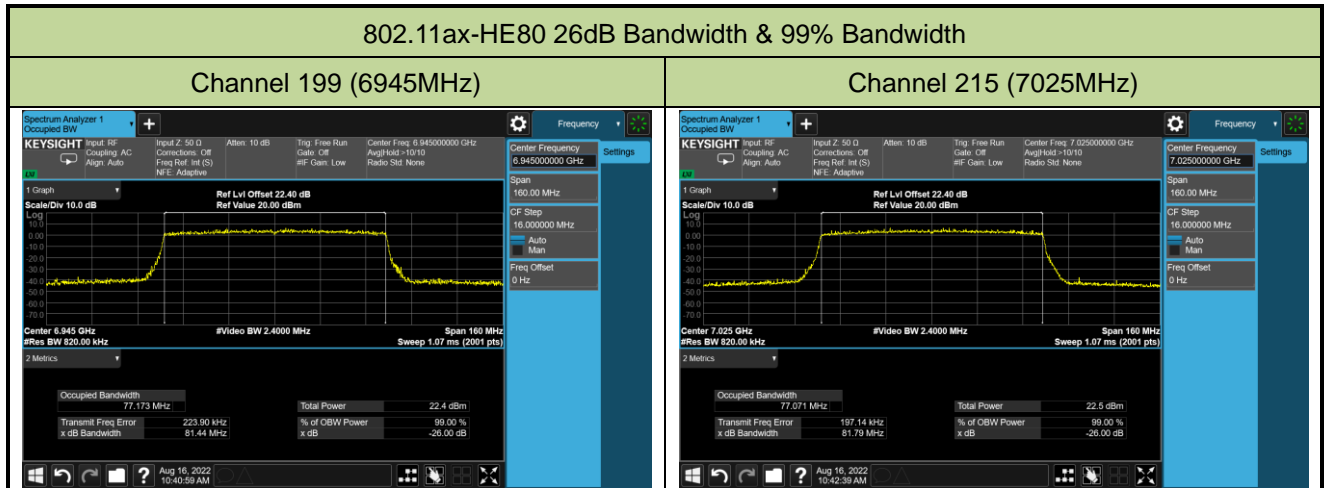


Channel 151 (6705MHz)



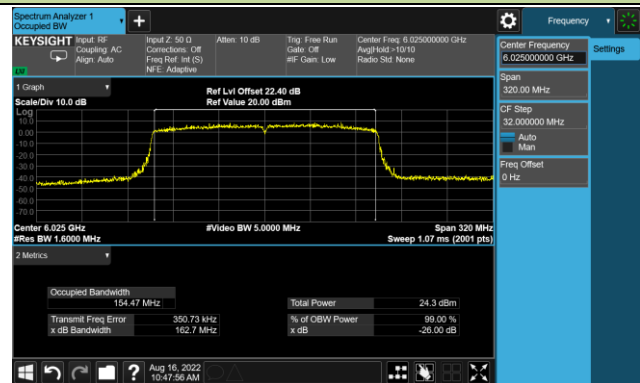
Channel 183 (6865MHz)



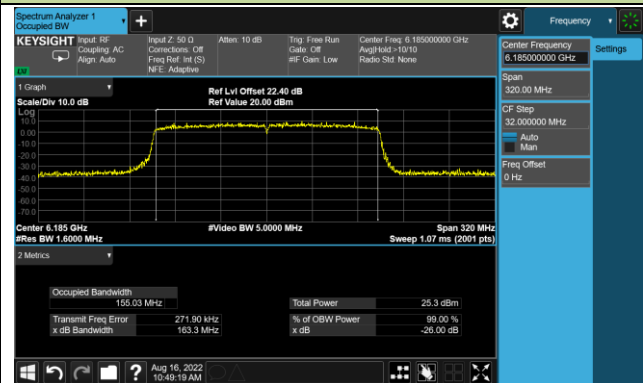


802.11ax-HE160 26dB Bandwidth & 99% Bandwidth

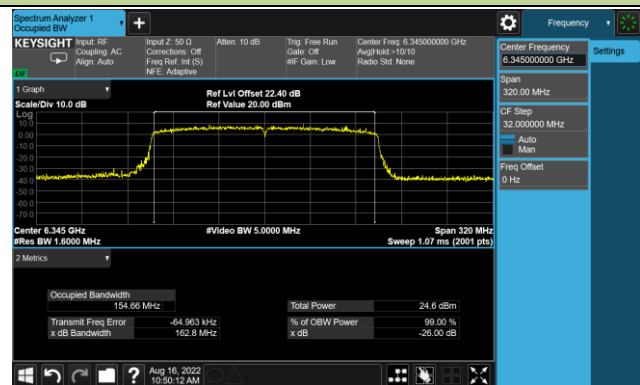
Channel 15 (6025MHz)



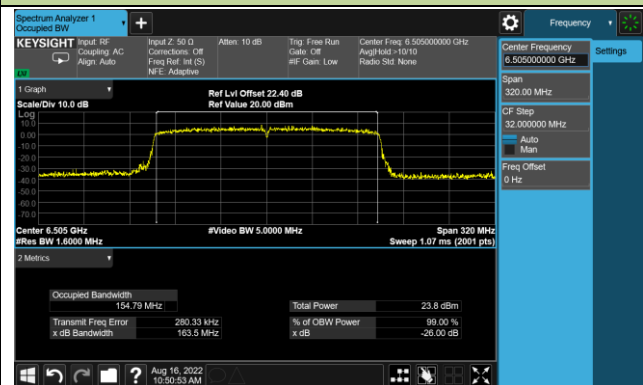
Channel 47 (6185MHz)



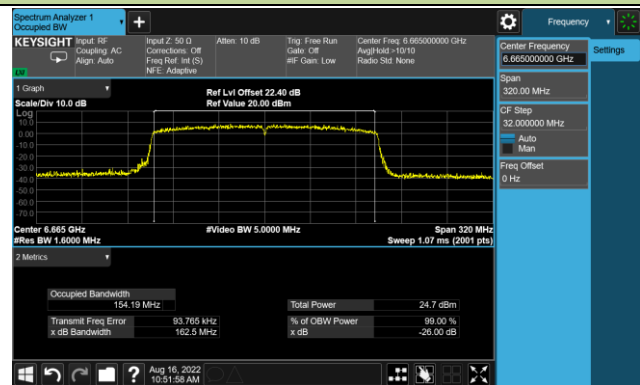
Channel 79 (6345MHz)



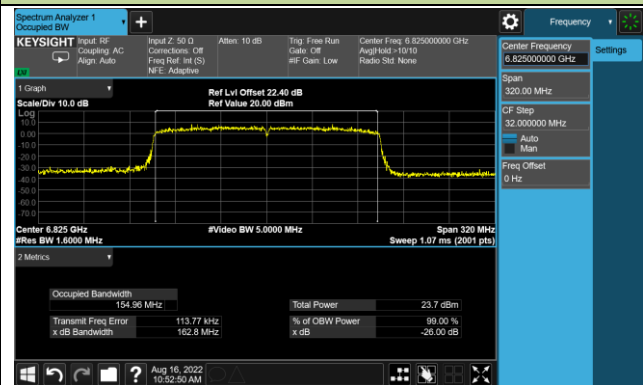
Channel 111 (6505MHz)



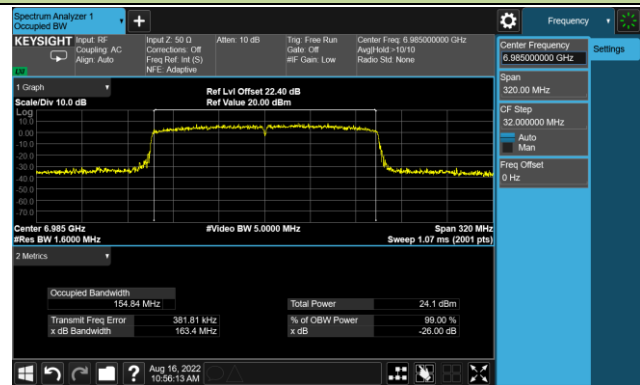
Channel 143 (6665MHz)



Channel 175 (6825MHz)



Channel 207 (6985MHz)



A.3 Output Power Test Result

Test Site	SIP-AC3	Test Engineer	Arvin Ding
Test Date	2022-08-06 ~ 2022-08-09		

Test Mode	Data Rate/MCS	Channel No.	Frequency (MHz)	EIRP (dB μ V/m)	EIRP (dBm)	Total EIRP (dBm)	EIRP Limit (dBm)
11a	6Mbps	1	5955	108.2	13.0	13.348	≤ 30.00
11a	6Mbps	49	6195	108.8	13.6	13.948	≤ 30.00
11a	6Mbps	93	6415	108.1	12.9	13.248	≤ 30.00
11a	6Mbps	97	6435	108.5	13.3	13.648	≤ 30.00
11a	6Mbps	105	6475	108.5	13.3	13.648	≤ 30.00
11a	6Mbps	113	6515	108.9	13.7	14.048	≤ 30.00
11a	6Mbps	117	6535	107.3	12.1	12.448	≤ 30.00
11a	6Mbps	153	6715	107.6	12.4	12.748	≤ 30.00
11a	6Mbps	181	6855	108.5	13.3	13.648	≤ 30.00
11a	6Mbps	185	6875	108.2	13.0	13.348	≤ 30.00
11a	6Mbps	189	6895	108.2	13.0	13.348	≤ 30.00
11a	6Mbps	213	7015	107.8	12.6	12.948	≤ 30.00
11a	6Mbps	229	7095	108.1	12.9	13.248	≤ 30.00
11ax-HE20	MCS0	1	5955	109.2	14.0	14.147	≤ 30.00
11ax-HE20	MCS0	49	6195	106.7	11.5	11.647	≤ 30.00
11ax-HE20	MCS0	93	6415	108.4	13.2	13.347	≤ 30.00
11ax-HE20	MCS0	97	6435	108.3	13.1	13.247	≤ 30.00
11ax-HE20	MCS0	105	6475	108.0	12.8	12.947	≤ 30.00
11ax-HE20	MCS0	113	6515	108.1	12.9	13.047	≤ 30.00
11ax-HE20	MCS0	117	6535	108.6	13.4	13.547	≤ 30.00
11ax-HE20	MCS0	153	6715	107.7	12.5	12.647	≤ 30.00
11ax-HE20	MCS0	181	6855	107.9	12.7	12.847	≤ 30.00
11ax-HE20	MCS0	185	6875	108.6	13.4	13.547	≤ 30.00
11ax-HE20	MCS0	189	6895	109.9	14.7	14.847	≤ 30.00
11ax-HE20	MCS0	213	7015	109.1	13.9	14.047	≤ 30.00
11ax-HE20	MCS0	229	7095	108.7	13.5	13.647	≤ 30.00

Test Mode	Data Rate/MCS	Channel No.	Frequency (MHz)	EIRP (dBμV/m)	EIRP (dBm)	Total EIRP (dBm)	EIRP Limit (dBm)
11ax-HE40	MCS0	3	5965	110.1	14.9	15.020	≤ 30.00
11ax-HE40	MCS0	51	6205	110.9	15.7	15.820	≤ 30.00
11ax-HE40	MCS0	91	6405	110.5	15.3	15.420	≤ 30.00
11ax-HE40	MCS0	99	6445	111.0	15.8	15.920	≤ 30.00
11ax-HE40	MCS0	107	6485	110.7	15.5	15.620	≤ 30.00
11ax-HE40	MCS0	115	6525	110.8	15.6	15.720	≤ 30.00
11ax-HE40	MCS0	123	6565	110.7	15.5	15.620	≤ 30.00
11ax-HE40	MCS0	147	6685	110.7	15.5	15.620	≤ 30.00
11ax-HE40	MCS0	179	6845	111.0	15.8	15.920	≤ 30.00
11ax-HE40	MCS0	187	6885	110.5	15.3	15.420	≤ 30.00
11ax-HE40	MCS0	195	6925	110.9	15.7	15.820	≤ 30.00
11ax-HE40	MCS0	211	7005	110.3	15.1	15.220	≤ 30.00
11ax-HE40	MCS0	227	7085	110.3	15.1	15.220	≤ 30.00
11ax-HE80	MCS0	7	5985	113.2	18.0	18.127	≤ 30.00
11ax-HE80	MCS0	55	6225	113.3	18.1	18.227	≤ 30.00
11ax-HE80	MCS0	87	6385	114.1	18.9	19.027	≤ 30.00
11ax-HE80	MCS0	103	6465	114.3	19.1	19.227	≤ 30.00
11ax-HE80	MCS0	119	6545	113.1	17.9	18.027	≤ 30.00
11ax-HE80	MCS0	135	6625	114.2	19.0	19.127	≤ 30.00
11ax-HE80	MCS0	151	6705	114.7	19.5	19.627	≤ 30.00
11ax-HE80	MCS0	183	6865	114.8	19.6	19.727	≤ 30.00
11ax-HE80	MCS0	199	6945	114.3	19.1	19.227	≤ 30.00
11ax-HE80	MCS0	215	7025	114.3	19.1	19.227	≤ 30.00
11ax-HE160	MCS0	15	6025	116.1	20.9	21.087	≤ 30.00
11ax-HE160	MCS0	47	6185	118.0	22.8	22.987	≤ 30.00
11ax-HE160	MCS0	79	6345	117.6	22.4	22.587	≤ 30.00
11ax-HE160	MCS0	111	6505	117.5	22.3	22.487	≤ 30.00
11ax-HE160	MCS0	143	6665	117.0	21.8	21.987	≤ 30.00
11ax-HE160	MCS0	175	6825	116.6	21.4	21.587	≤ 30.00
11ax-HE160	MCS0	207	6985	116.7	21.5	21.687	≤ 30.00

Remark:

1. $EIRP (dBm) = EIRP (dB\mu V/m) + \text{Correction Factor @ } 3m$, $\text{Correction Factor @ } 3m = 20\log(D) - 104.7$;
where D is the measurement distance @3m = -95.2dB
2. If Duty cycle < 98%, $\text{Total EIRP (dBm)} = EIRP (dBm) + 10*\text{Log}(1/\text{Duty cycle})$.

A.4 Power Spectral Density Test Result

Test Site	SIP-AC3	Test Engineer	Arvin Ding
Test Date	2022-08-06 ~ 2022-08-09		

Test Mode	Data Rate/MCS	Channel No.	Frequency (MHz)	EIRP PSD (dBμV/m/MHz)	Duty Cycle (%)	EIRP PSD (dBm/MHz)	Limit (dBm/MHz)
802.11a	6Mbps	1	5955	99.429	92.29	4.577	≤ 5.00
802.11a	6Mbps	49	6195	99.694	92.29	4.842	≤ 5.00
802.11a	6Mbps	93	6415	99.414	92.29	4.562	≤ 5.00
802.11a	6Mbps	97	6435	99.651	92.29	4.799	≤ 5.00
802.11a	6Mbps	105	6475	99.589	92.29	4.737	≤ 5.00
802.11a	6Mbps	113	6515	99.702	92.29	4.850	≤ 5.00
802.11a	6Mbps	117	6535	99.618	92.29	4.766	≤ 5.00
802.11a	6Mbps	153	6715	99.367	92.29	4.515	≤ 5.00
802.11a	6Mbps	181	6855	99.523	92.29	4.671	≤ 5.00
802.11a	6Mbps	185	6875	99.611	92.29	4.759	≤ 5.00
802.11a	6Mbps	189	6895	99.671	92.29	4.819	≤ 5.00
802.11a	6Mbps	213	7015	99.474	92.29	4.622	≤ 5.00
802.11a	6Mbps	229	7095	99.491	92.29	4.639	≤ 5.00
802.11ax-HE20	MCS0	1	5955	99.636	96.67	4.583	≤ 5.00
802.11ax-HE20	MCS0	49	6195	99.511	96.67	4.458	≤ 5.00
802.11ax-HE20	MCS0	93	6415	99.671	96.67	4.618	≤ 5.00
802.11ax-HE20	MCS0	97	6435	99.734	96.67	4.681	≤ 5.00
802.11ax-HE20	MCS0	105	6475	99.723	96.67	4.670	≤ 5.00
802.11ax-HE20	MCS0	113	6515	99.539	96.67	4.486	≤ 5.00
802.11ax-HE20	MCS0	117	6535	99.764	96.67	4.711	≤ 5.00
802.11ax-HE20	MCS0	153	6715	99.467	96.67	4.414	≤ 5.00
802.11ax-HE20	MCS0	181	6855	99.763	96.67	4.710	≤ 5.00
802.11ax-HE20	MCS0	185	6875	99.606	96.67	4.553	≤ 5.00
802.11ax-HE20	MCS0	189	6895	99.599	96.67	4.546	≤ 5.00
802.11ax-HE20	MCS0	213	7015	99.697	96.67	4.644	≤ 5.00
802.11ax-HE20	MCS0	229	7095	99.701	96.67	4.648	≤ 5.00

Test Mode	Data Rate/MCS	Channel No.	Frequency (MHz)	EIRP PSD (dB μ V/m/MHz)	Duty Cycle (%)	EIRP PSD (dBm/MHz)	Limit (dBm/MHz)
802.11ax-HE40	MCS0	3	5965	99.621	97.28	4.541	≤ 5.00
802.11ax-HE40	MCS0	51	6205	99.754	97.28	4.674	≤ 5.00
802.11ax-HE40	MCS0	91	6405	99.711	97.28	4.631	≤ 5.00
802.11ax-HE40	MCS0	99	6445	99.779	97.28	4.699	≤ 5.00
802.11ax-HE40	MCS0	107	6485	99.679	97.28	4.599	≤ 5.00
802.11ax-HE40	MCS0	115	6525	99.758	97.28	4.678	≤ 5.00
802.11ax-HE40	MCS0	123	6565	99.769	97.28	4.689	≤ 5.00
802.11ax-HE40	MCS0	147	6685	99.588	97.28	4.508	≤ 5.00
802.11ax-HE40	MCS0	179	6845	99.563	97.28	4.483	≤ 5.00
802.11ax-HE40	MCS0	187	6885	99.634	97.28	4.554	≤ 5.00
802.11ax-HE40	MCS0	195	6925	99.770	97.28	4.690	≤ 5.00
802.11ax-HE40	MCS0	211	7005	99.657	97.28	4.577	≤ 5.00
802.11ax-HE40	MCS0	227	7085	99.703	97.28	4.623	≤ 5.00
802.11ax-HE80	MCS0	7	5985	99.762	97.11	4.689	≤ 5.00
802.11ax-HE80	MCS0	55	6225	99.622	97.11	4.549	≤ 5.00
802.11ax-HE80	MCS0	87	6385	99.757	97.11	4.684	≤ 5.00
802.11ax-HE80	MCS0	103	6465	99.814	97.11	4.741	≤ 5.00
802.11ax-HE80	MCS0	119	6545	99.746	97.11	4.673	≤ 5.00
802.11ax-HE80	MCS0	135	6625	99.769	97.11	4.696	≤ 5.00
802.11ax-HE80	MCS0	151	6705	99.967	97.11	4.894	≤ 5.00
802.11ax-HE80	MCS0	183	6865	99.864	97.11	4.791	≤ 5.00
802.11ax-HE80	MCS0	199	6945	99.954	97.11	4.881	≤ 5.00
802.11ax-HE80	MCS0	215	7025	99.956	97.11	4.883	≤ 5.00
802.11ax-HE160	MCS0	15	6025	99.546	95.79	4.533	≤ 5.00
802.11ax-HE160	MCS0	47	6185	99.887	95.79	4.874	≤ 5.00
802.11ax-HE160	MCS0	79	6345	99.884	95.79	4.871	≤ 5.00
802.11ax-HE160	MCS0	111	6505	99.898	95.79	4.885	≤ 5.00
802.11ax-HE160	MCS0	143	6665	99.881	95.79	4.868	≤ 5.00
802.11ax-HE160	MCS0	175	6825	99.639	95.79	4.626	≤ 5.00
802.11ax-HE160	MCS0	207	6985	99.893	95.79	4.880	≤ 5.00

Remark: EIRP PSD (dBm/MHz) = EIRP PSD (dB μ V/m/MHz) + Correction Factor @ 3m + 10*Log(1/Duty cycle),
 Correction Factor @ 3m = 20log(D) - 104.7; where D is the measurement distance @3m = -95.2dB