RF MEASUREMENT REPORT

FCC ID:	2BF3W-7161
Applicant:	Wireless (US) Inc
Product:	SkyNet IAB Node
Model No.:	SkyNet SC7161, SkyNet SR7161
Brand Name:	SkyNet
FCC Classification:	15E 6GHz Standard Power Access Point (6SD)
FCC Rule Part(s):	Part 15 Subpart E (Section 15.407)
Result:	Complies
Received Date:	2024-07-01
Test Date:	2024-08-07 ~ 2024-09-20

Reviewed By: Vincent Yu

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

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 KDB789033. 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
2407RSU001-U4	V01	Initial Report	2024-08-28	Invalid
2407RSU001-U4	V02	Update Test Channel	2024-09-21	Valid

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1. General Information

1.1. Applicant

Wireless (US) Inc

10 CORPORATE PARK STE 330 IRVINE, CA 92606, USA

1.2. Manufacturer

Wireless (US) Inc

10 CORPORATE PARK STE 330 IRVINE, CA 92606, USA

1.3. Testing Facility

☒	**Test Site – MRT Suzhou Laboratory**
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China **Laboratory Location (Suzhou - SIP)** 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China **Laboratory Location (Suzhou - Wujiang)** Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China
	Laboratory Accreditations
	A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: ☐R-20025 ☐G-20034 ☐C-20020 ☐T-20020 ☐R-20141 ☐G-20134 ☐C-20103 ☐T-20104
☒	**Test Site – MRT Shenzhen Laboratory**
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
☐	**Test Site – MRT Taiwan Laboratory**
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: 3261 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	SkyNet IAB Node	
Model No.	SkyNet SC7161, SkyNet SR7161	
EUT Identification No.	20240806Sample#01	
Wi-Fi Specification	802.11a/b/g/n/ac/ax/be	
Antenna Information	Refer to section 1.7	
Power Type	PoE input	
Operating Temp.	-40 ~ 55°C	
Operating Environment	☐ Indoor Use	☒ Outdoor Use
Accessory		
PoE Injector	Model: UPI3301-PSC Input: AC 100-240V, 50/60Hz Output: 54V, DC	

Remark:

1. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.
2. SkyNet SR7161 with built-in omnidirectional antenna, SkyNet SC7161 with built-in directional antenna and 2.4G Wi-Fi is disabled by SW based on SkyNet SR7161 hardware. The circuit parts of SkyNet SR7161 and SkyNet SC7161 are the same.
3. This report was assessed the SkyNet SR7161 model.

1.5. Radio Specification under Test

Frequency Range	For 802.11ax-HE20/be-EHT20: 5955 ~ 6415MHz, 6595 ~ 6855MHz For 802.11ax-HE40/be-EHT40: 5965 ~ 6405MHz, 6605 ~ 6845MHz For 802.11ax-HE80/be-EHT80: 5985 ~ 6385MHz, 6625 ~ 6785MHz For 802.11ax-HE160/be-EHT160: 6025 ~ 6345MHz, 6665MHz For 802.11be-EHT320: 6105MHz, 6265MHz	
Type of Modulation	802.11ax/be: OFDMA	
Data Rate	802.11ax: up to 4804Mbps 802.11be: up to 11530Mbps	
Channel Puncturing Function	☐ Supported	☒ Unsupported
Support RU	☒ Full RU	☐ Partial RU

1.6. Working Frequencies

802.11ax-HE20/be-EHT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
1	5955 MHz	5	5975 MHz	9	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
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	--	--

802.11ax-HE40/be-EHT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
3	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
131	6605 MHz	139	6645 MHz	147	6685 MHz
155	6725 MHz	163	6765 MHz	171	6805 MHz
179	6845 MHz	--	--	--	--

802.11ax-HE80/be-EHT80

Channel	Frequency	Channel	Frequency	Channel	Frequency
7	5985 MHz	23	6065 MHz	39	6145 MHz
55	6225 MHz	71	6305 MHz	87	6385 MHz
135	6625 MHz	151	6705 MHz	167	6785 MHz

802.11ax-HE160/be-EHT160

Channel	Frequency	Channel	Frequency	Channel	Frequency
15	6025 MHz	47	6185 MHz	79	6345 MHz
143	6665 MHz	--	--	--	--

802.11be-EHT320

Channel	Frequency	Channel	Frequency	Channel	Frequency
31	6105 MHz	63	6265 MHz	--	--

1.7. Antenna Details

Antenna Type	Frequency Range (MHz)	Antenna Gain (dBi)				Directional Gain (dBi)		30°elevation Gain (dBi)
		Ant 0	Ant 1	Ant 2	Ant 3	For Power	For PSD	
Model No.: SkyNet SR7161								
Built-in omni antenna	2412 ~ 2462	7.53	6.85	7.26	6.50	7.53	13.55	--
	5150 ~ 5850	6.97	7.65	7.80	8.12	8.12	14.14	7.65
	5925 ~ 6425	8.01	9.30	7.79	9.86	9.86	15.88	9.62
	6525 ~ 6875	6.51	8.81	6.78	8.71	8.81	14.83	8.70
Model No.: SkyNet SC7161								
Built-in directional antenna	5150 ~ 5850	8.58	10.19	10.12	10.32	10.32	16.34	3.92
	5925 ~ 6425	12.53	11.50	11.91	11.55	12.53	18.55	1.23
	6525 ~ 6875	12.24	11.25	12.72	11.29	12.72	18.74	-0.63

Note 1: The antenna gain and directional gain refer to manufacturer's antenna specification.

Note 2: The EUT supports Cyclic Delay Diversity (CDD) mode for 802.11a/b/g/n/ac/ax/be.

Note 3: Software automatically backs power down based on CDD power for beamforming operation.

Note 4: The transmit power of SkyNet SC7161 will be adjusted according to the difference in antenna gain between the two models.

Therefore, only Radiated Spurious Emission and Radiated Restricted Band Edge were fully tested for SkyNet SC7161 in this report.

2. Test Configuration

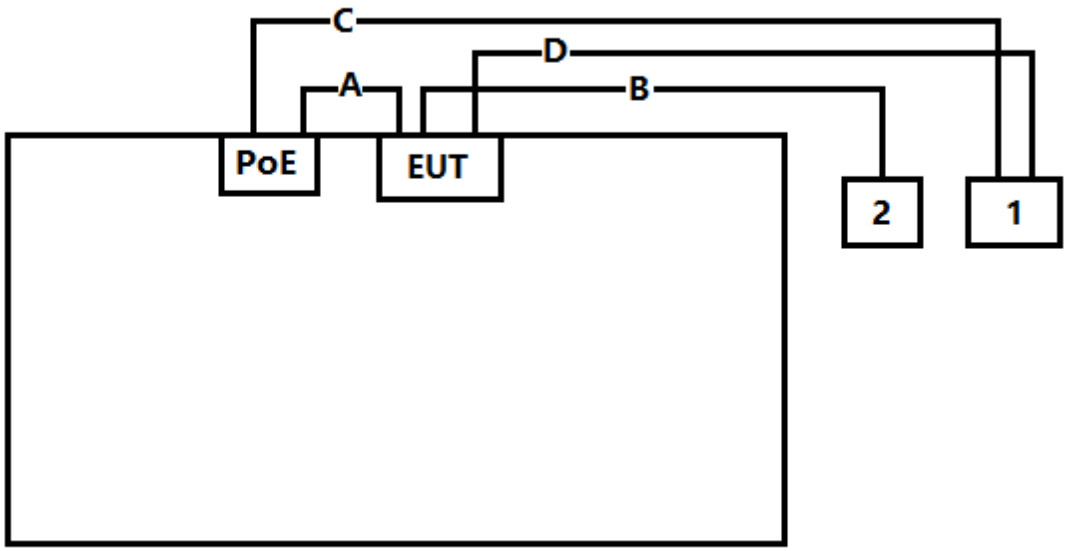
2.1. Test Mode

Mode 1: Transmit by 802.11ax-HE20_N_{SS}=1 (MCS0)
Mode 2: Transmit by 802.11ax-HE40_N_{SS}=1 (MCS0)
Mode 3: Transmit by 802.11ax-HE80_N_{SS}=1 (MCS0)
Mode 4: Transmit by 802.11 ax-HE160_N_{SS}=1 (MCS0)
Mode 5: Transmit by 802.11be-EHT20_N_{SS}=1 (MCS0)
Mode 6: Transmit by 802.11be-EHT40_N_{SS}=1 (MCS0)
Mode 7: Transmit by 802.11be-EHT80_N_{SS}=1 (MCS0)
Mode 8: Transmit by 802.11be-EHT160_N_{SS}=1 (MCS0)
Mode 9: Transmit by 802.11be-EHT320_N_{SS}=1 (MCS0)
Notes: 1. All modes of operation and data rates were investigated, so all RF test requirements shall be executed at the worst data rate. 2. For beamforming operation, manufacturer automatically backs power down based on a 10log(N_{ANT}) factor based on CDD power. Therefore, only the CDD mode was evaluated in this report

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.

Connection Diagram



Cable Type		Cable Description	Length
A	LAN Cable	Non shielded	1.5m
B	LAN Cable	Non shielded	> 10m
C	LAN Cable	Non shielded	> 10m
D	USB Cable	Shielded	> 10m
Product		Manufacturer	Model No.
1	Notebook	HP	ZHAN99 G1
2	Notebook	HP	735G5

2.3. Test Software

The test utility software used during testing was “QSPR”, and the version was 6.00.00130.1.

Note: Final power setting please refer to operational description.

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 D02v02r01
- FCC KDB 987594 D04v02
- 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
Signal Generator	Agilent	E4438C	MRTSUE06081	1 year	2025-02-03	WZ-SR5
Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2025-02-03	WZ-SR5
Bluetooth Test Set	Anritsu	MT8852B	MRTSUE06389	1 year	2025-05-08	WZ-SR5
Thermohygrometer	testo	608-H1	MRTSUE06402	1 year	2025-05-12	WZ-SR5
Shielding Room	HUAMING	WZ-SR5	MRTSUE06442	N/A	N/A	WZ-SR5
Signal Analyzer	Keysight	N9010B	MRTSUE06457	1 year	2025-05-08	WZ-SR5
Signal Analyzer	Keysight	N9010B	MRTSUE06558	1 year	2025-05-20	WZ-SR5
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2025-07-26	WZ-AC1
Preamplifier	Agilent	83017A	MRTSUE06076	1 year	2024-11-09	WZ-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2025-05-15	WZ-AC1
Anechoic Chamber	TDK	WZ-AC1	MRTSUE06212	1 year	2025-04-19	WZ-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2024-10-23	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11039	1 year	2024-10-25	WZ-AC1
Temperature Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2024-09-27	WZ-TR3
Vibration Test System	DongLing	ES-1-150	MRTSUE06206	1 year	2025-06-18	WZ-TR3
Thermohygrometer	testo	608-H1	MRTSUE11268	1 year	2024-12-14	WZ-TR3
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2024-09-17	NS-AC1
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06573	1 year	2025-05-12	NS-AC1
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06572	1 year	2025-03-15	NS-AC1
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06292	1 year	2024-10-21	NS-AC1
Anechoic Chamber	BOOMWAVE	NS-AC1	MRTSUE06496	1 year	2025-07-05	NS-AC1
Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06574	1 year	2025-07-06	NS-AC1
Preamplifier	EMCI	EMC184045SE	MRTSUE06641	1 year	2025-01-07	NS-AC1
EMI Test Receiver	R&S	ESR3	MRTSUE06575	1 year	2025-06-10	NS-AC1/NS-SR2
Signal Analyzer	Agilent	N9010A	MRTSUE06195	1 year	2024-12-10	NS-AC1/NS-TR2
Thermohygrometer	testo	608-H1	MRTSUE11294	1 year	2025-05-14	NS-AC1
Two-Line V-Network	R&S	ENV216	MRTSUE06578	1 year	2025-04-06	NS-SR2
Thermohygrometer	testo	608-H1	MRTSUE11106	1 year	2025-04-08	NS-SR2
Shielding Room	BOOMWAVE	NS-SR2	MRTSUE06551	5 years	2029-06-10	NS-SR2
Thermohygrometer	DELI	NO.8813	MRTSUE06783	1 year	2024-12-05	NS-TR2
Temperature Chamber	OUKE	OK-TH-100C	MRTSUE06899	1 year	2025-04-06	NS-TR2

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software
e3	230711	EMI Test Software
EMI V3	V 3.0.0	EMI Test Software
Controller_T-E-TAC-2	1.02	RE Antenna & Turntable
BenchVue Power Meter	2018.1	Power
Controller_MF 7802	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
The maximum measurement uncertainty is evaluated as: 9kHz~150kHz: 3.58dB 150kHz~30MHz: 3.20dB
Radiated Emission Measurement
The maximum measurement uncertainty is evaluated as: Coaxial: 9kHz~30MHz: 2.61dB Coplanar: 9kHz~30MHz: 2.62dB Horizontal: 30MHz~200MHz: 3.79dB 200MHz~1GHz: 3.91dB 1GHz~40GHz: 4.99dB Vertical: 30MHz~200MHz: 4.06dB 200MHz~1GHz: 5.21dB 1GHz~40GHz: 4.90dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.2dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.4dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.2dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.7%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.407(a)(10)	26dB Bandwidth	Conducted	Pass
15.407(a)(4)	Maximum Equivalent Isotopically Radiated Power (EIRP)		Pass
15.407(a)(4)	Maximum Power Spectral Density (EIRP)		Pass
15.407(b)(7)	In-Band Emission		Pass
15.407(d)(6)	Contention-Based Protocol		N/A[Note3]
15.407(b)(6)	Unwanted Emissions	Radiated	Pass
15.407(b)(9), (10)	General Field Strength (Restricted Bands and Radiated Emission)		Pass
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	Pass

Notes:

1. 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.
2. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.
3. Standard power access points does not need to employ contention-based protocol.

6.2. 26dB Bandwidth Measurement

6.2.1. Test Limit

The maximum transmitter channel bandwidth for U–NII devices in the 5.925–7.125 GHz band is 320 megahertz.

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

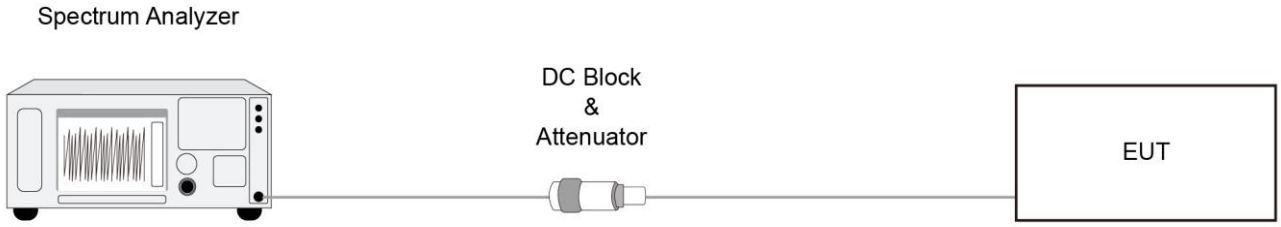
26dB Bandwidth

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 ≥ 3 × 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



6.2.5. Test Result

Refer to Appendix A.1.

6.3. Output Power Measurement

6.3.1. Test Limit

For a standard power access point and fixed client device operating in the 5.925-6.425 GHz and 6.525-6.875 GHz bands, the maximum e.i.r.p. over the frequency band of operation must not exceed 36 dBm. For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

6.3.2. Test Procedure

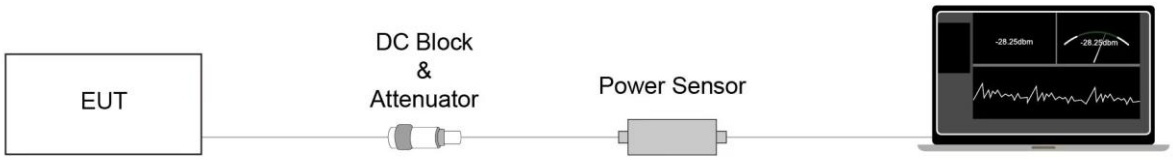
KDB 789033D02v02r01- Section II)E)3)b) Method PM-G

6.3.3. Test Setting

Average Power Measurement

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.2.

6.4. Power Spectral Density Measurement

6.4.1. Test Limit

For a standard power access point and fixed client device operating in the 5.925-6.425 GHz and 6.525-6.875 GHz bands, the maximum power spectral density must not exceed 23 dBm e.i.r.p in any 1-megahertz band.

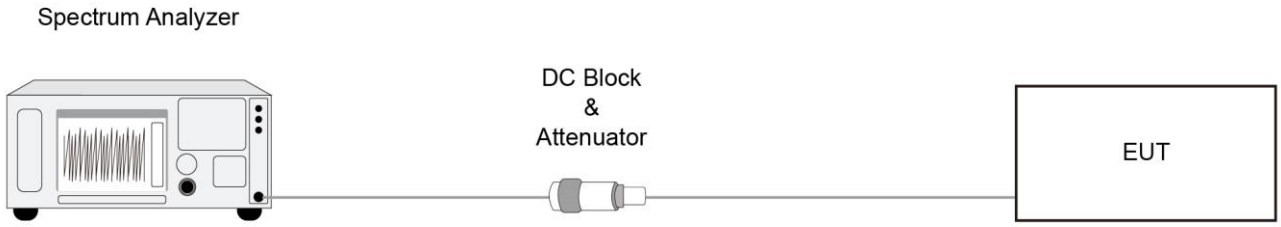
6.4.2. Test Procedure

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 ≥ 2 × (span / 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*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*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.3.

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 D02v02r01- Section J

6.5.3. Test Setting

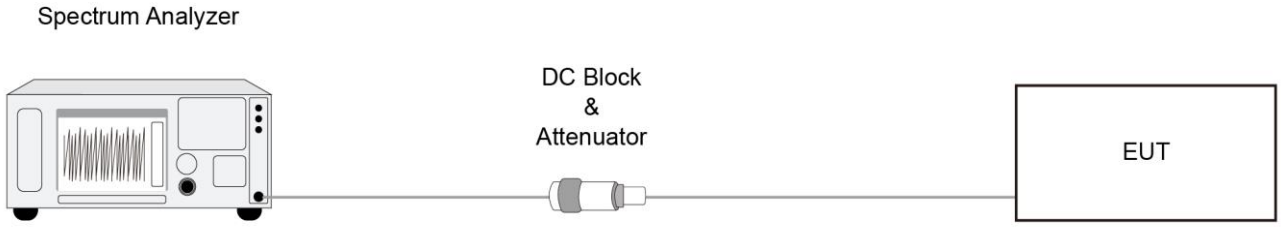
Emissions Mask Reference Level Measurement

1. Set the span to encompass the entire 26 dB EBW of the signal.
2. Set RBW = same RBW used for 26 dB EBW measurement.
3. Set VBW ≥ 3 X RBW.
4. Number of points in sweep ≥ [2 x span / RBW].
5. Sweep time = auto.
6. Detector = RMS.
7. Trace average at least 100 traces in power averaging (rms) mode.
8. 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



6.5.5. Test Result

Refer to Appendix A.4.

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:

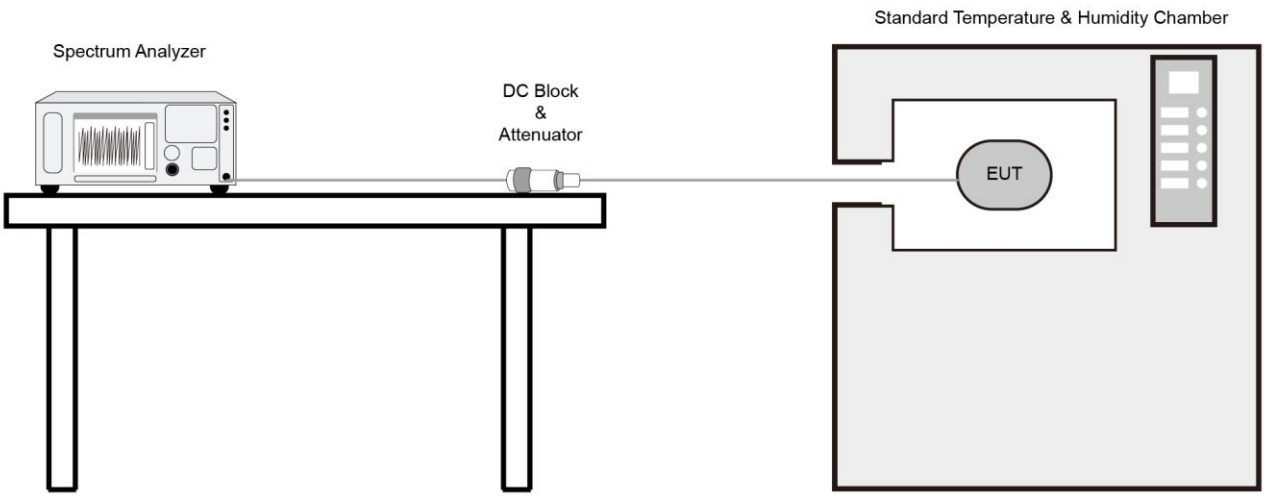
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain 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 (±15%) and endpoint, recordthe maximum frequency change.

6.6.3. Test Setup



6.6.4. Test Result

Refer to Appendix A.5.

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

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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.

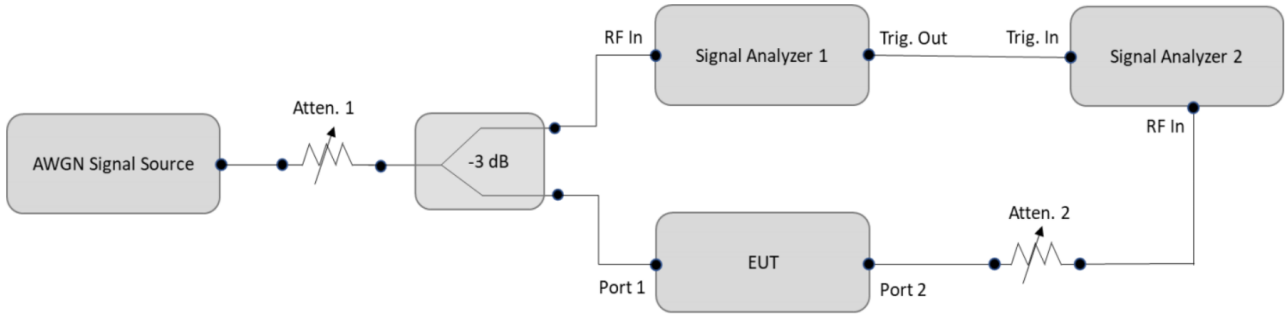
8. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.

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

Standard power access points does not need to employ contention-based protocol.

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 EIRP. of −27 dBm/MHz.

Refer to 987594 D02 U-NII 6GHz EMC Measurement v02r01 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 [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

6.8.2. 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 ≥ 98%, set VBW = 10 Hz.

   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.

4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to “Voltage” regardless of the display mode

5. Detector = Peak

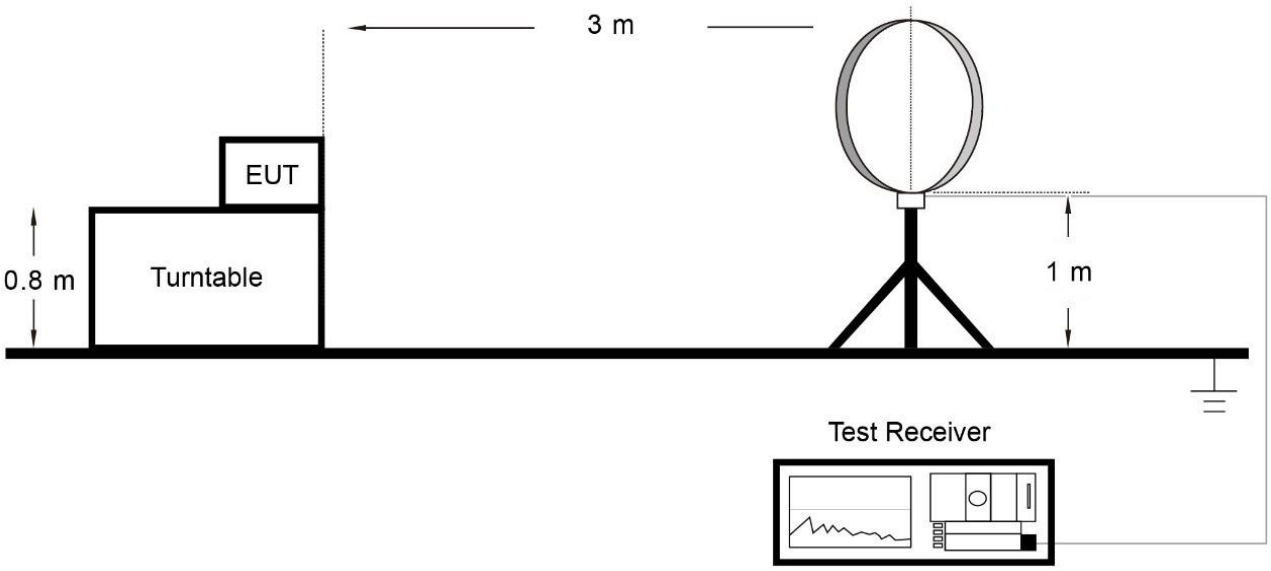
6. Sweep time = auto

7. Trace mode = max hold

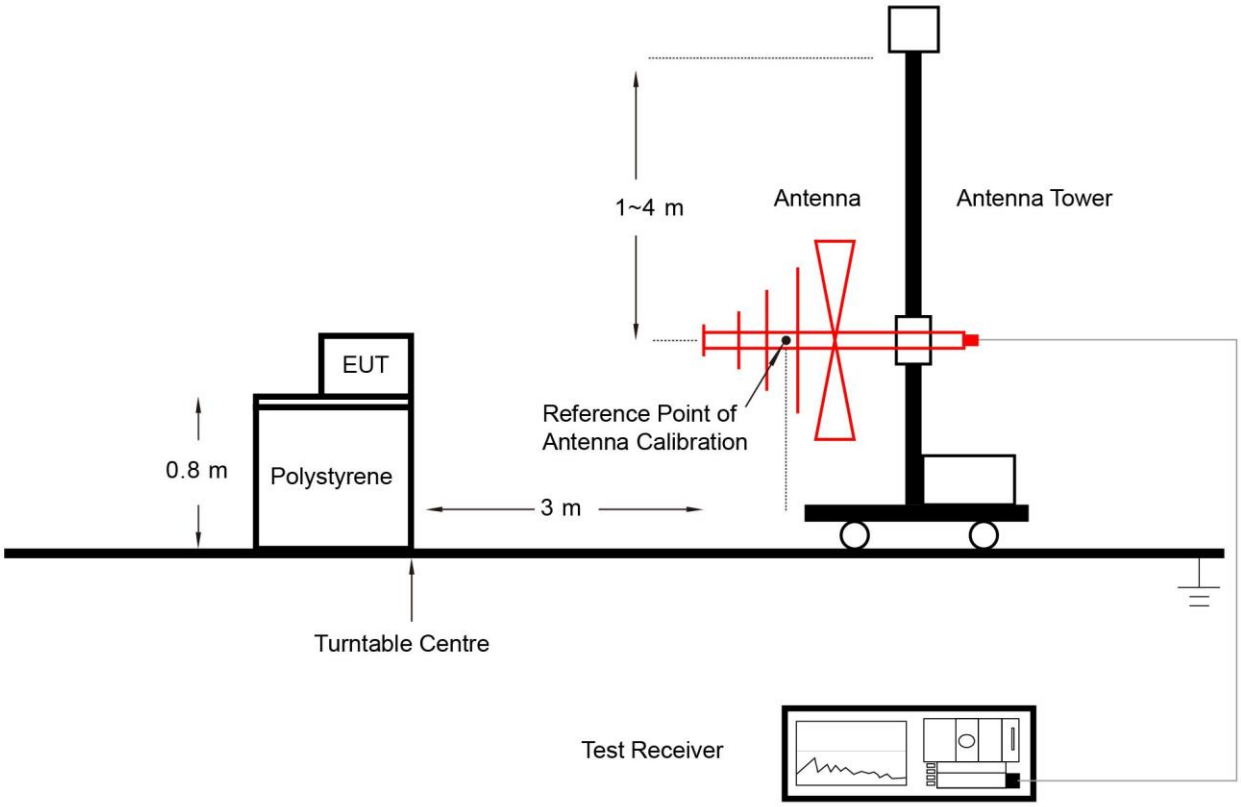
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

6.8.4. Test Setup

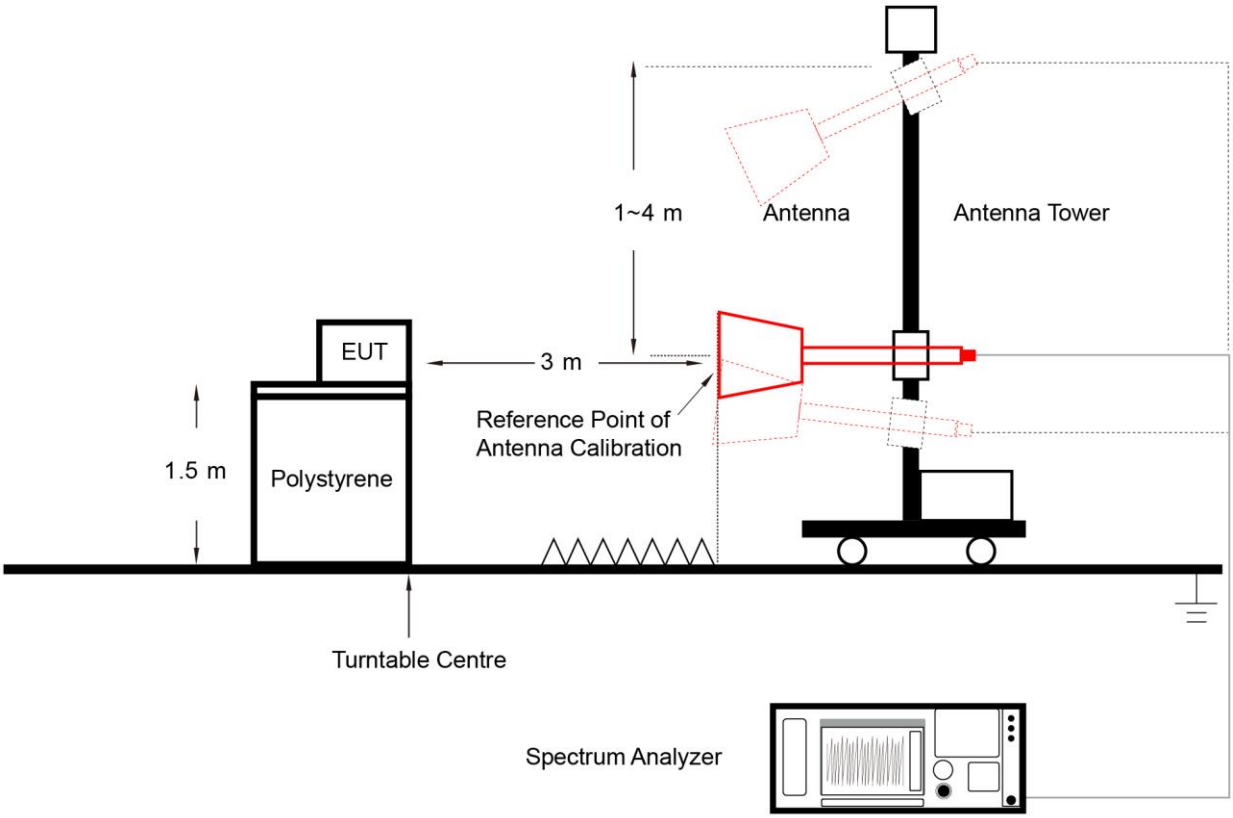
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.8.5. Test Result

Refer to Appendix A.7.

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 EIRP. of −27 dBm/MHz.

Refer to 987594 D02 U-NII 6GHz EMC Measurement v02r01 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

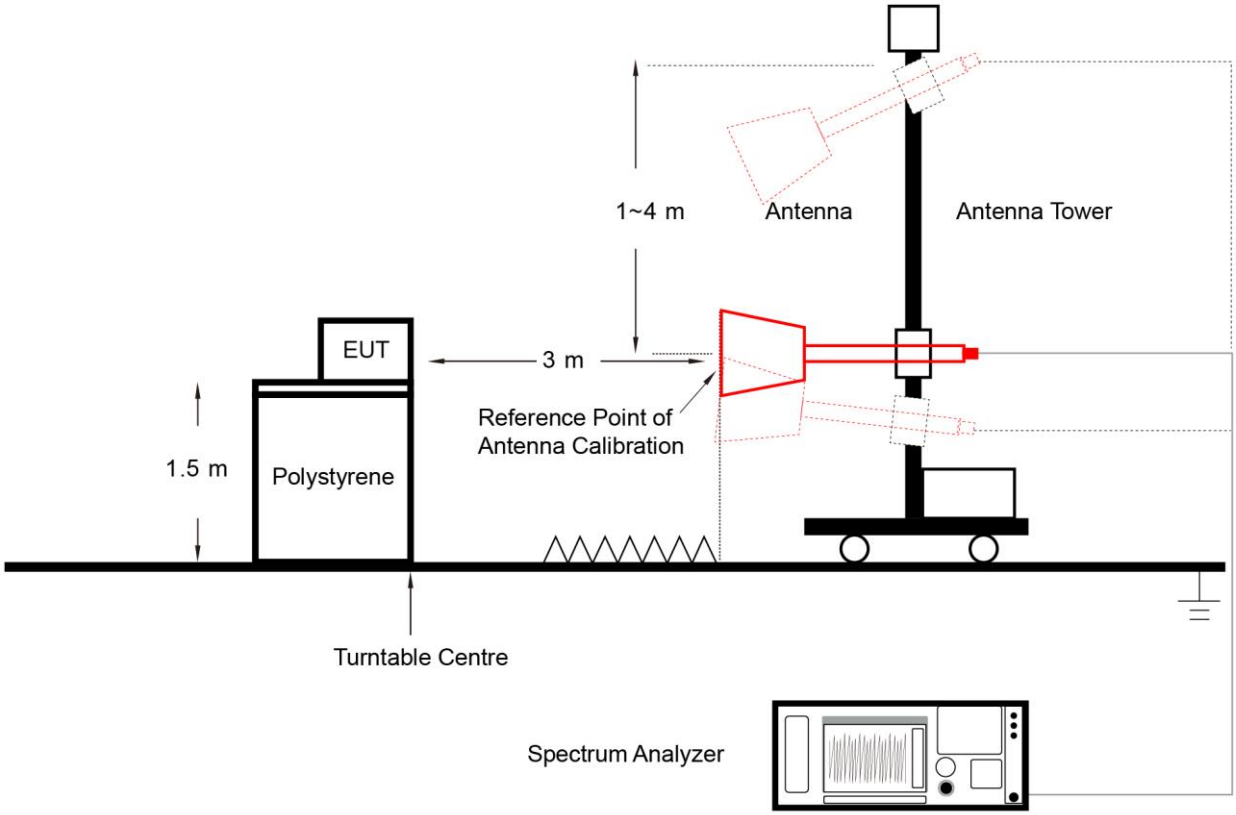
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max hold
7. Trace was allowed to stabilize

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 ≥ 98%, set VBW = 10 Hz.

   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to “Voltage” regardless of the display mode
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

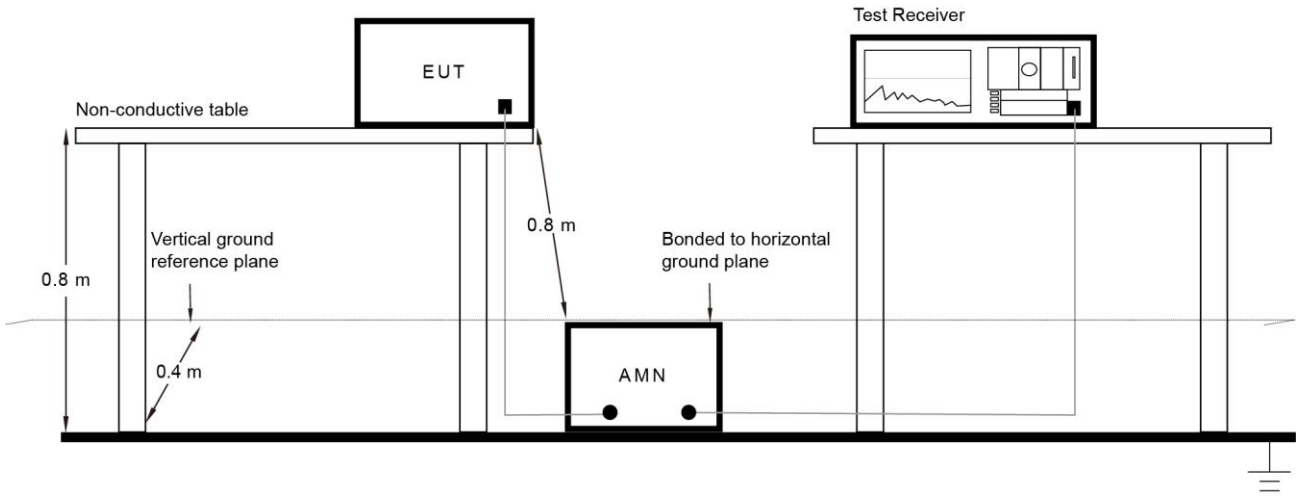
Refer to Appendix A.8.

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.9.

Appendix A – Test Result

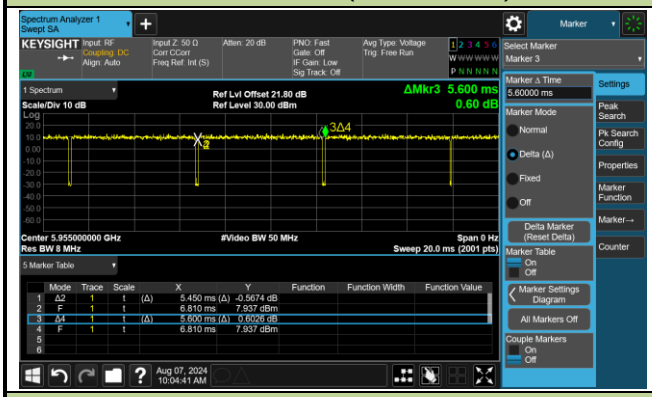
A.1 Duty Cycle Test Result

Test Site	WZ-SR5	Test Engineer	Luis Yang
Test Date	2024-08-07		

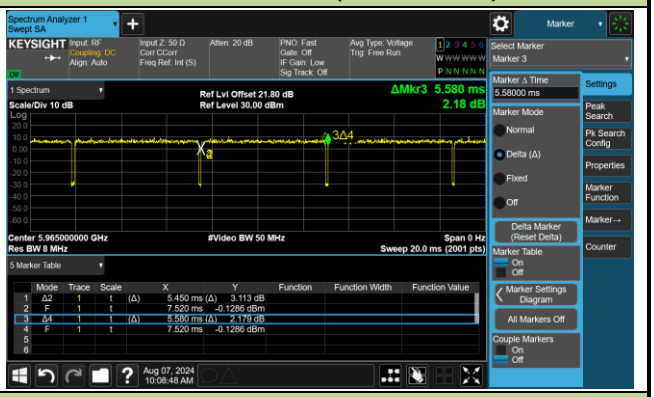
Test Mode	Duty Cycle
802.11ax-HE20	97.32%
802.11ax-HE40	97.67%
802.11ax-HE80	97.14%
802.11ax-HE160	97.49%
802.11be-EHT20	97.85%
802.11be-EHT40	96.80%
802.11be-EHT80	97.15%
802.11be-EHT160	97.85%
802.11be-EHT320	97.67%

Duty Cycle (T = Transmission Duration)

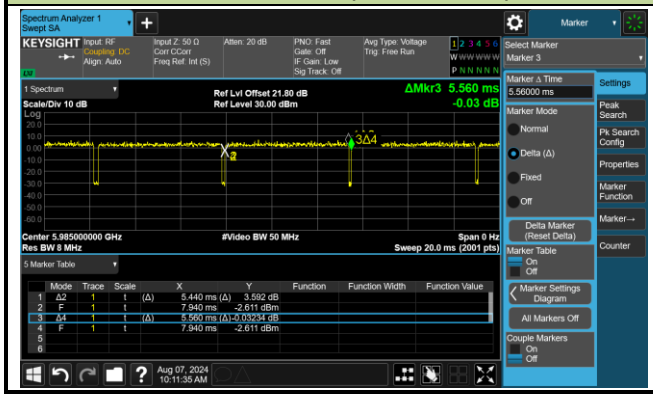
802.11ax-HE20 (T = 5.450ms)



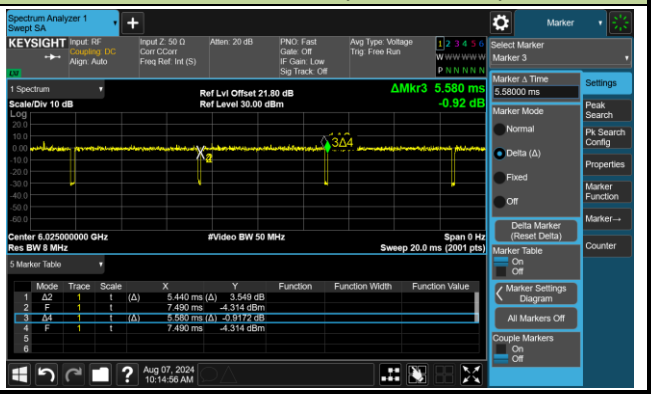
802.11ax-HE40 (T = 5.450ms)

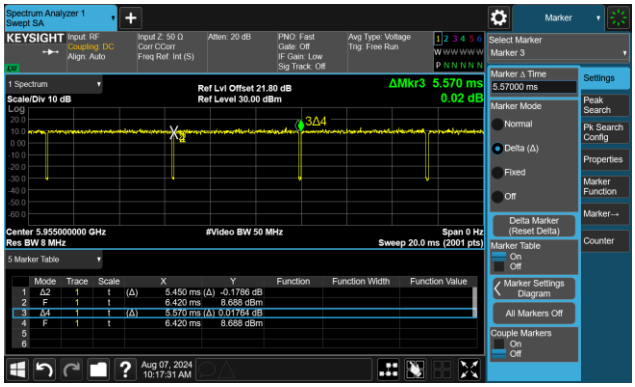
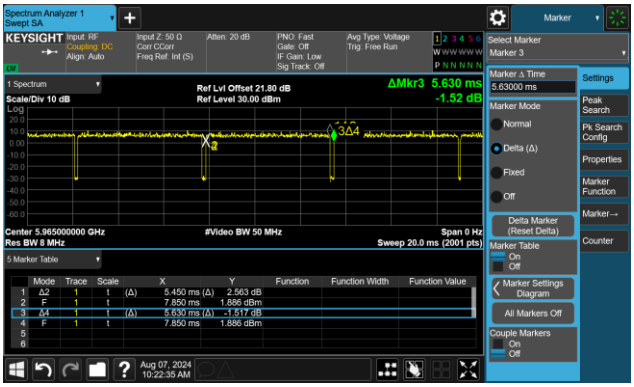
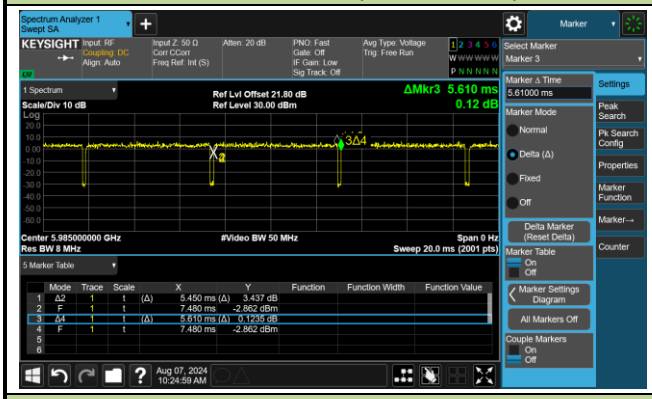
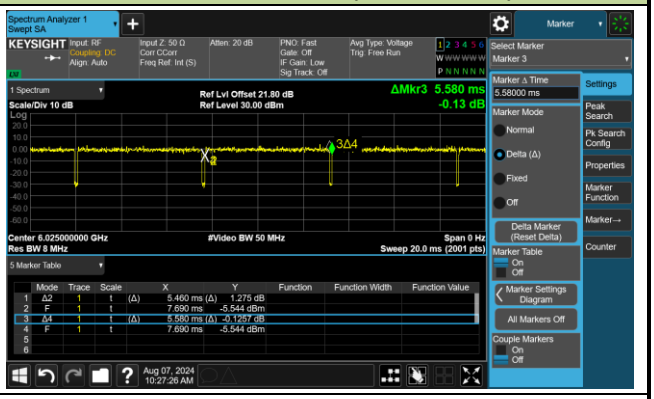
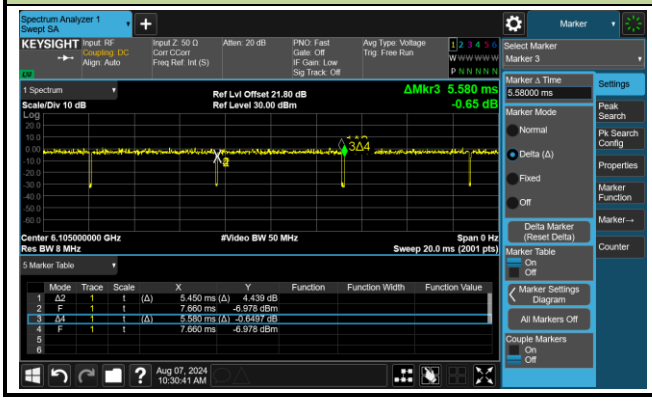


802.11ax-HE80 (T = 5.440ms)



802.11ax-HE160 (T = 5.440ms)



Duty Cycle (T = Transmission Duration)	
802.11be-EHT20 (T = 5.450ms)	802.11be-EHT40 (T = 5.450ms)
	
802.11be-EHT80 (T = 5.450ms)	802.11be-EHT160 (T = 5.460ms)
	
802.11be-EHT320 (T = 5.450ms)	
	

A.2 26dB Bandwidth Test Result

Test Site	WZ-SR5	Test Engineer	Luis Yang
Test Date	2024-08-07 ~ 2024-08-12, 2024-09-19		

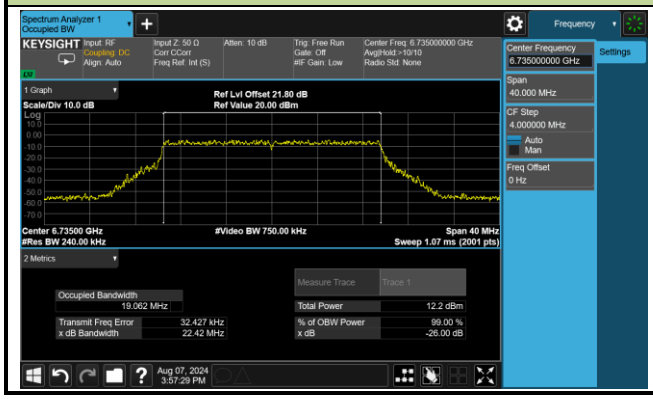
Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Test Limit (MHz)
802.11ax-HE20	MCS0	1	5955	23.09	19.040	≤ 320
802.11ax-HE20	MCS0	49	6195	23.24	19.140	≤ 320
802.11ax-HE20	MCS0	93	6415	22.61	19.030	≤ 320
802.11ax-HE20	MCS0	129	6595	22.88	19.062	≤ 320
802.11ax-HE20	MCS0	157	6735	22.42	19.062	≤ 320
802.11ax-HE20	MCS0	181	6855	23.21	19.086	≤ 320
802.11ax-HE40	MCS0	3	5965	42.80	37.925	≤ 320
802.11ax-HE40	MCS0	51	6205	42.34	37.841	≤ 320
802.11ax-HE40	MCS0	91	6405	42.46	37.924	≤ 320
802.11ax-HE40	MCS0	131	6605	42.71	38.009	≤ 320
802.11ax-HE40	MCS0	155	6725	44.00	38.021	≤ 320
802.11ax-HE40	MCS0	179	6845	43.74	37.952	≤ 320
802.11ax-HE80	MCS0	7	5985	87.86	77.479	≤ 320
802.11ax-HE80	MCS0	55	6225	88.39	77.650	≤ 320
802.11ax-HE80	MCS0	87	6385	86.85	77.746	≤ 320
802.11ax-HE80	MCS0	135	6625	86.65	77.610	≤ 320
802.11ax-HE80	MCS0	151	6705	86.36	77.606	≤ 320
802.11ax-HE80	MCS0	167	6785	88.09	77.678	≤ 320
802.11ax-HE160	MCS0	15	6025	170.40	156.820	≤ 320
802.11ax-HE160	MCS0	47	6185	169.40	156.850	≤ 320
802.11ax-HE160	MCS0	79	6345	169.70	156.780	≤ 320
802.11ax-HE160	MCS0	143	6665	171.90	156.620	≤ 320

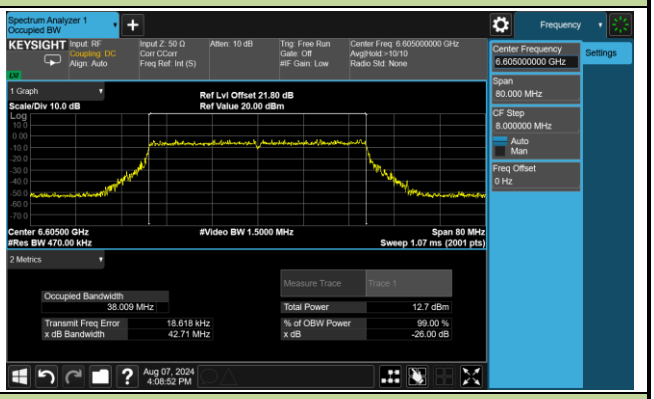
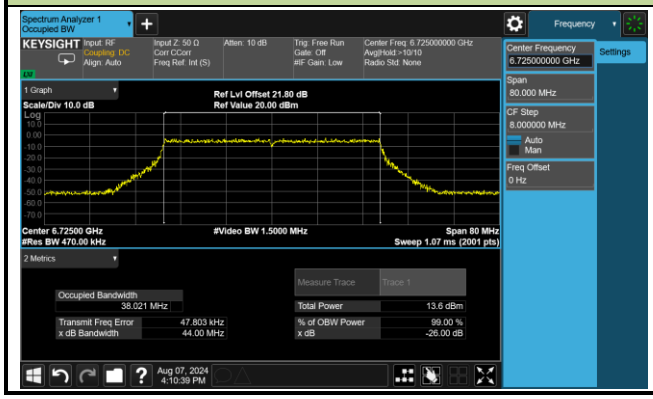
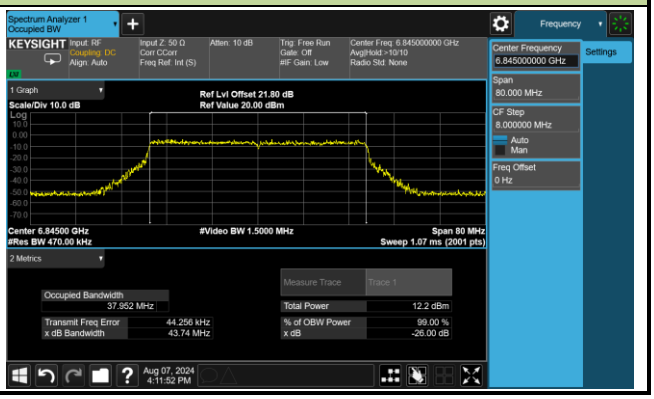
Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Test Limit (MHz)
802.11be-EHT20	MCS0	1	5955	22.38	19.079	≤ 320
802.11be-EHT20	MCS0	49	6195	22.46	19.009	≤ 320
802.11be-EHT20	MCS0	93	6415	22.14	19.018	≤ 320
802.11be-EHT20	MCS0	129	6595	23.09	19.098	≤ 320
802.11be-EHT20	MCS0	157	6735	23.28	19.036	≤ 320
802.11be-EHT20	MCS0	181	6855	23.24	19.061	≤ 320
802.11be-EHT40	MCS0	3	5965	42.66	37.984	≤ 320
802.11be-EHT40	MCS0	51	6205	42.61	37.899	≤ 320
802.11be-EHT40	MCS0	91	6405	42.85	37.937	≤ 320
802.11be-EHT40	MCS0	131	6605	42.95	37.999	≤ 320
802.11be-EHT40	MCS0	155	6725	42.68	38.051	≤ 320
802.11be-EHT40	MCS0	179	6845	43.29	37.991	≤ 320
802.11be-EHT80	MCS0	7	5985	87.97	77.541	≤ 320
802.11be-EHT80	MCS0	55	6225	88.28	77.524	≤ 320
802.11be-EHT80	MCS0	87	6385	88.05	77.627	≤ 320
802.11be-EHT80	MCS0	135	6625	85.30	77.496	≤ 320
802.11be-EHT80	MCS0	151	6705	88.34	77.782	≤ 320
802.11be-EHT80	MCS0	167	6785	86.28	77.633	≤ 320
802.11be-EHT160	MCS0	15	6025	166.30	156.730	≤ 320
802.11be-EHT160	MCS0	47	6185	169.60	156.720	≤ 320
802.11be-EHT160	MCS0	79	6345	168.50	156.900	≤ 320
802.11be-EHT160	MCS0	143	6665	170.60	156.700	≤ 320
802.11be-EHT320	MCS0	31	6105	335.60	314.420	≤ 320
802.11be-EHT320	MCS0	63	6265	335.60	314.710	≤ 320

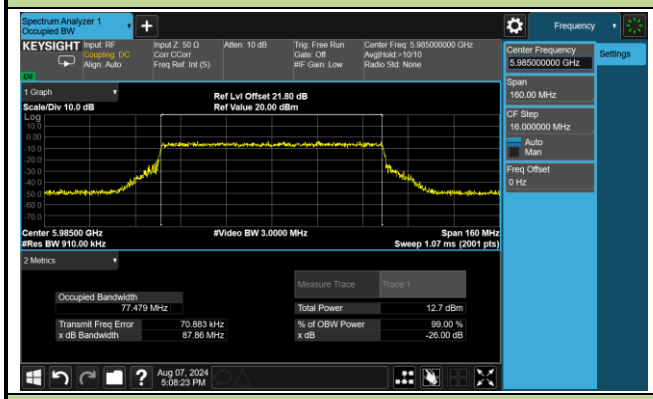
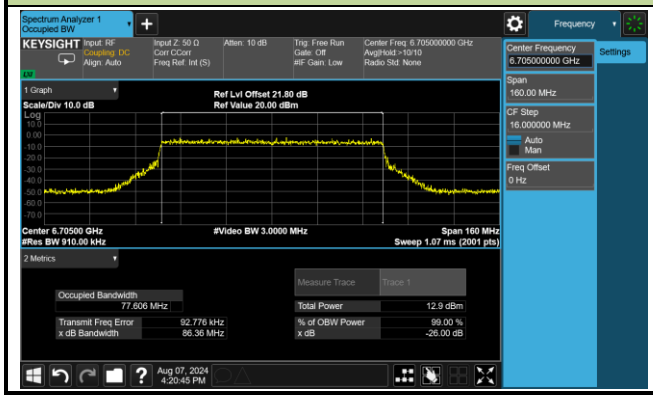
Note:

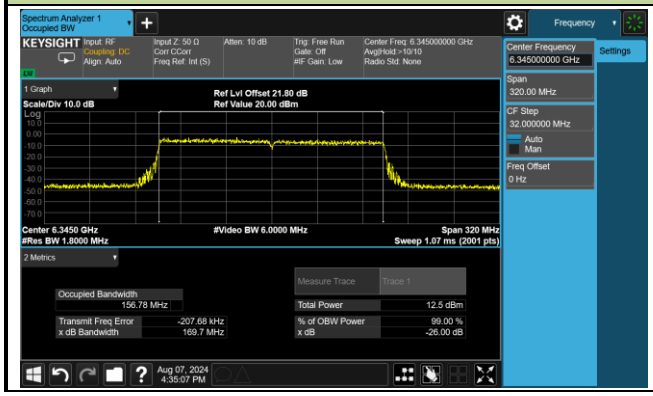
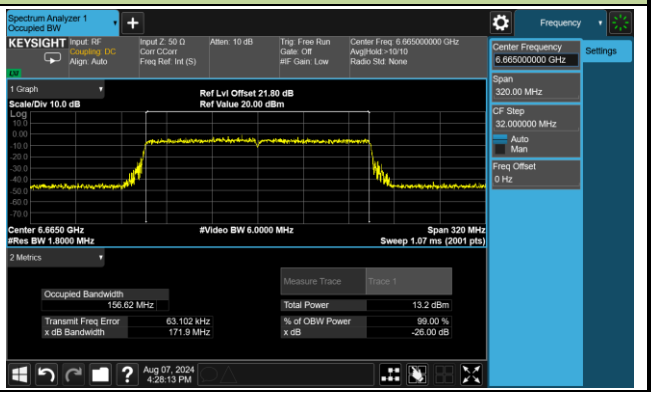
For channels with a nominal bandwidth less than 320 MHz compliance is demonstrated by way of the 26 dB EBW.

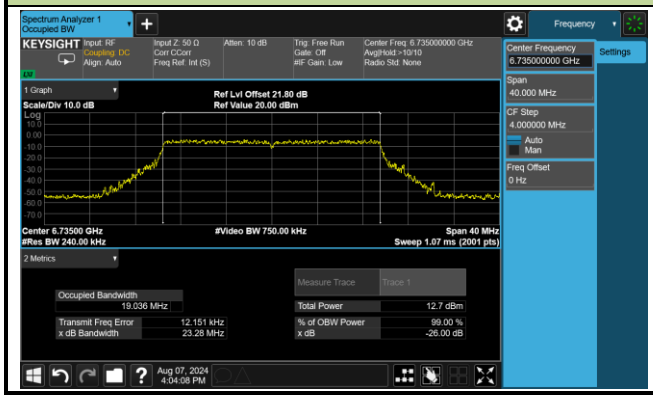
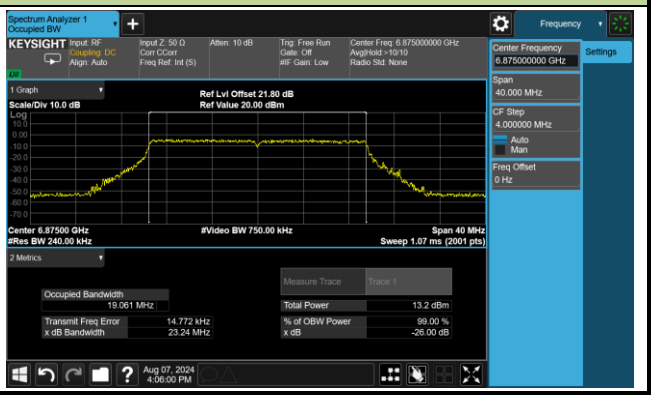
For channels with a nominal bandwidth of 320 MHz compliance is demonstrated by way of the 99% BW.

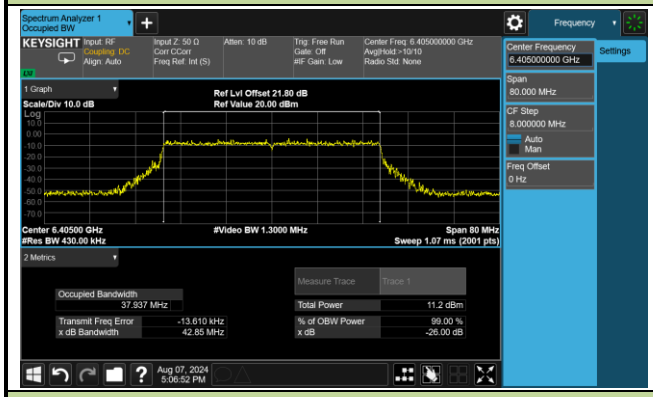
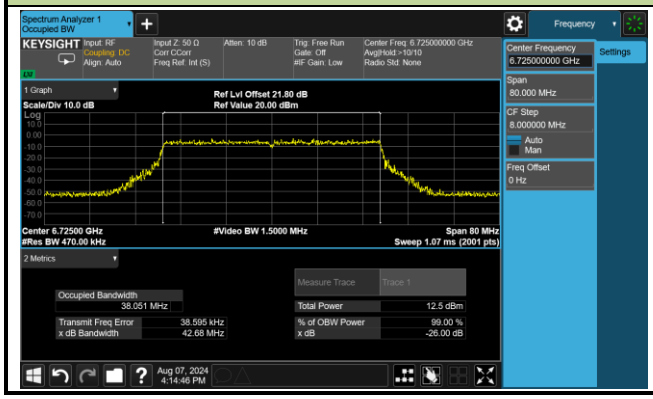
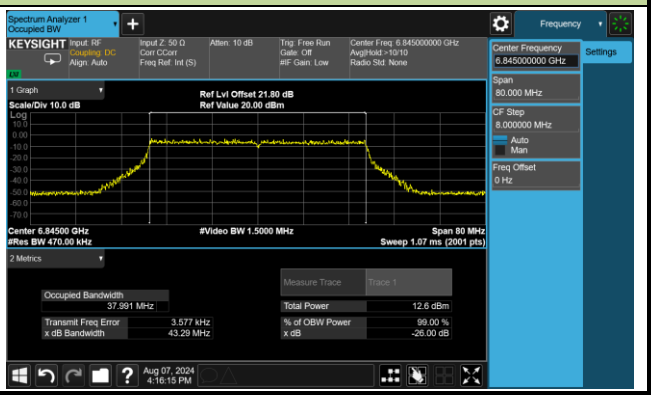
802.11ax-HE20 26dB Bandwidth	
Channel 1 (5955MHz)	Channel 49 (6195MHz)
Channel 93 (6415MHz)	Channel 129 (6595MHz)
Channel 157 (6735MHz)	Channel 182 (6855MHz)
	

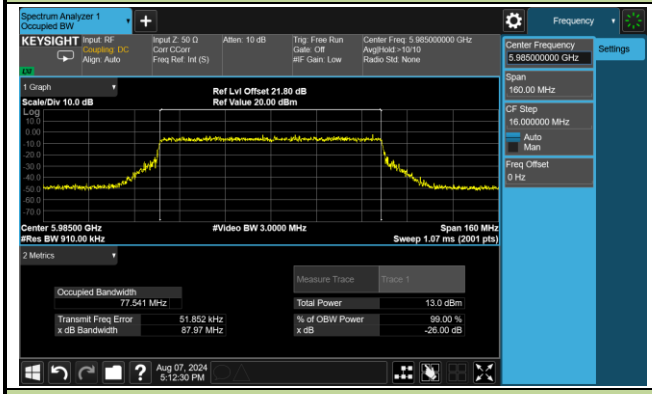
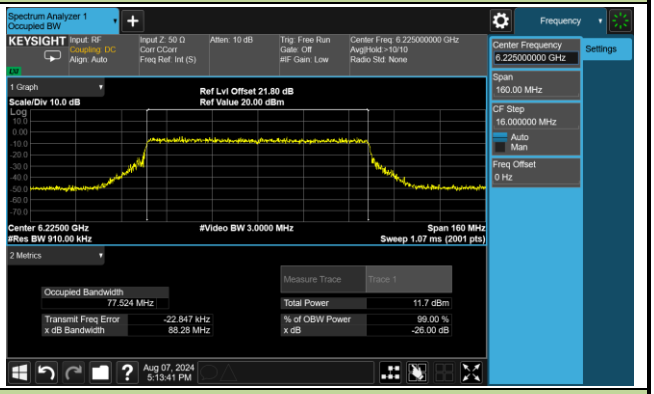
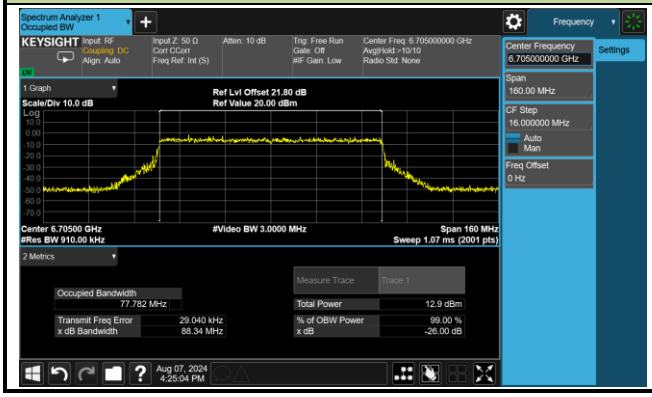
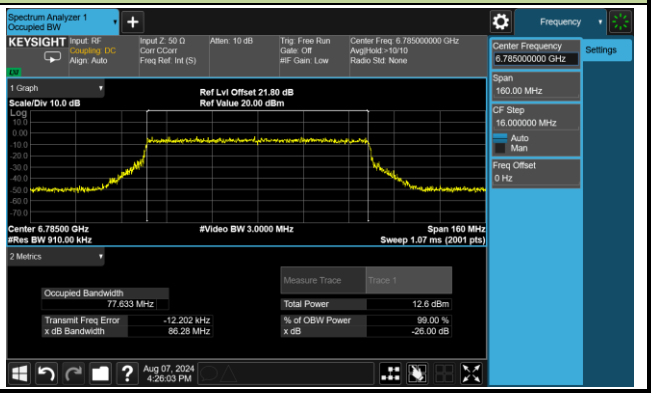
802.11ax-HE40 26dB Bandwidth	
Channel 3 (5965MHz)	Channel 51 (6205MHz)
Channel 91 (6405MHz)	Channel 131 (6605MHz)
	
Channel 155 (6725MHz)	Channel 179 (6845MHz)
	

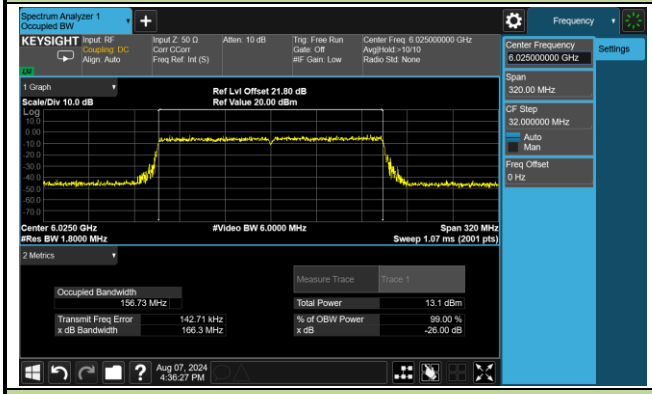
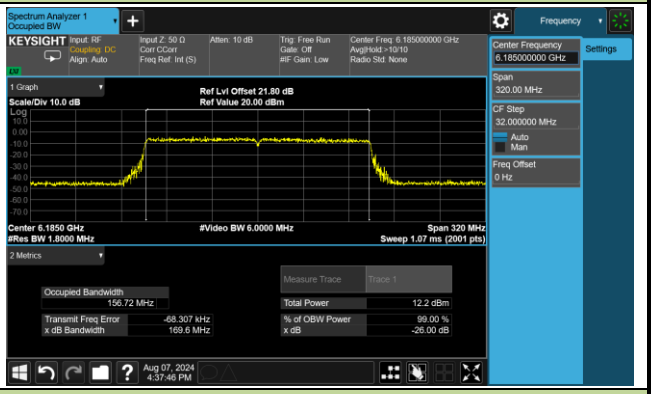
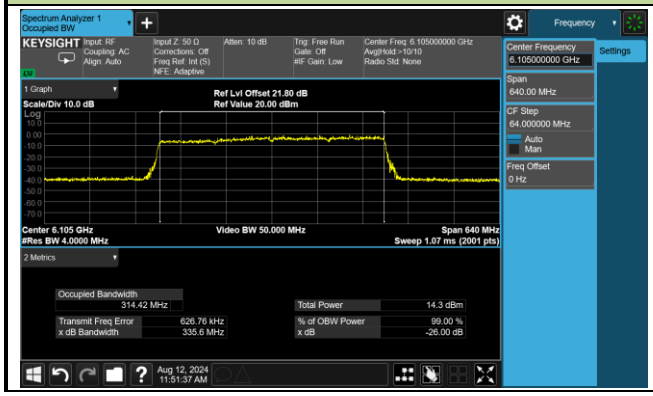
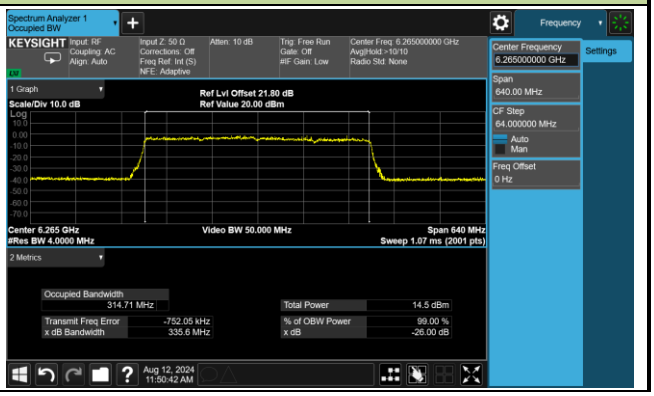
802.11ax-HE80 26dB Bandwidth	
Channel 7 (5985MHz)	Channel 55 (6225MHz)
	
Channel 87 (6385MHz)	Channel 135 (6625MHz)
Channel 151 (6705MHz)	Channel 167 (6785MHz)
	

802.11ax-HE160 26dB Bandwidth	
Channel 15 (6025MHz)	Channel 47 (6185MHz)
Channel 79 (6345MHz)	Channel 143 (6665MHz)
	

802.11be-EHT20 26dB Bandwidth	
Channel 1 (5955MHz)	Channel 49 (6195MHz)
Channel 93 (6415MHz)	Channel 129 (6595MHz)
Channel 157 (6735MHz)	Channel 181 (6855MHz)
	

802.11be-EHT40 26dB Bandwidth	
Channel 3 (5965MHz)	Channel 51 (6205MHz)
Channel 91 (6405MHz)	Channel 131 (6605MHz)
	
Channel 155 (6725MHz)	Channel 179 (6845MHz)
	

802.11be-EHT80 26dB Bandwidth	
Channel 7 (5985MHz)	Channel 55 (6225MHz)
	
Channel 87 (6385MHz)	Channel 135 (6625MHz)
Channel 151 (6705MHz)	Channel 167 (6785MHz)
	

802.11be-EHT160 26dB Bandwidth	
Channel 15 (6025MHz)	Channel 47 (6185MHz)
	
Channel 79 (6345MHz)	Channel 143 (6665MHz)
802.11be-EHT320 26dB Bandwidth	
Channel 31 (6105MHz)	Channel 63 (6265MHz)
	

A.3 Output Power Test Result

Test Site	WZ-SR5	Test Engineer	Luis Yang
Test Date	2024-08-12, 2024-09-19		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Average Power (dBm)				Total Average Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)
				Ant 0	Ant 1	Ant 2	Ant 3				
802.11ax-HE20	MCS0	1	5955	4.98	4.97	4.46	5.16	10.92	9.62	20.54	≤ 21.00
802.11ax-HE20	MCS0	49	6195	4.69	4.82	4.82	4.78	10.80	9.62	20.42	≤ 21.00
802.11ax-HE20	MCS0	93	6415	5.01	4.82	4.51	5.02	10.87	9.62	20.49	≤ 21.00
802.11ax-HE20	MCS0	129	6595	6.08	5.98	6.28	5.71	12.04	8.70	20.74	≤ 21.00
802.11ax-HE20	MCS0	157	6735	6.21	6.05	5.72	6.18	12.06	8.70	20.76	≤ 21.00
802.11ax-HE20	MCS0	181	6855	5.88	5.39	6.02	6.09	11.87	8.70	20.57	≤ 21.00
802.11ax-HE40	MCS0	3	5965	5.21	4.86	4.29	5.02	10.88	9.62	20.50	≤ 21.00
802.11ax-HE40	MCS0	51	6205	4.69	4.81	5.14	4.84	10.89	9.62	20.51	≤ 21.00
802.11ax-HE40	MCS0	91	6405	5.02	5.07	4.91	5.29	11.10	9.62	20.72	≤ 21.00
802.11ax-HE40	MCS0	131	6605	6.17	5.95	6.24	5.83	12.07	8.70	20.77	≤ 21.00
802.11ax-HE40	MCS0	155	6725	6.22	6.26	5.87	6.34	12.20	8.70	20.90	≤ 21.00
802.11ax-HE40	MCS0	179	6845	6.09	5.64	6.21	5.82	11.97	8.70	20.67	≤ 21.00
802.11ax-HE80	MCS0	7	5985	5.15	5.10	4.72	5.02	11.02	9.62	20.64	≤ 21.00
802.11ax-HE80	MCS0	55	6225	4.66	4.64	5.15	5.01	10.89	9.62	20.51	≤ 21.00
802.11ax-HE80	MCS0	87	6385	4.92	4.89	4.73	4.96	10.90	9.62	20.52	≤ 21.00
802.11ax-HE80	MCS0	135	6625	6.16	5.75	6.41	6.13	12.14	8.70	20.84	≤ 21.00
802.11ax-HE80	MCS0	151	6705	6.13	6.05	5.83	5.95	12.01	8.70	20.71	≤ 21.00
802.11ax-HE80	MCS0	167	6785	5.41	5.54	5.92	6.02	11.75	8.70	20.45	≤ 21.00
802.11ax-HE160	MCS0	15	6025	5.44	4.71	5.36	5.24	11.22	9.62	20.84	≤ 21.00
802.11ax-HE160	MCS0	47	6185	4.93	5.19	5.43	5.47	11.28	9.62	20.90	≤ 21.00
802.11ax-HE160	MCS0	79	6345	5.09	5.13	4.78	5.11	11.05	9.62	20.67	≤ 21.00
802.11ax-HE160	MCS0	143	6665	5.62	5.75	5.95	5.71	11.78	8.70	20.48	≤ 21.00

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Average Power (dBm)				Total Average Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)
				Ant 0	Ant 1	Ant 2	Ant 3				
802.11be-EHT20	MCS0	1	5955	4.95	5.06	4.28	5.15	10.89	9.62	20.51	≤ 21.00
802.11be-EHT20	MCS0	49	6195	4.74	4.89	5.02	4.82	10.89	9.62	20.51	≤ 21.00
802.11be-EHT20	MCS0	93	6415	4.98	4.80	4.48	5.04	10.85	9.62	20.47	≤ 21.00
802.11be-EHT20	MCS0	129	6595	6.05	5.94	6.18	5.61	11.97	8.70	20.67	≤ 21.00
802.11be-EHT20	MCS0	157	6735	6.25	5.96	5.73	6.19	12.06	8.70	20.76	≤ 21.00
802.11be-EHT20	MCS0	181	6855	6.06	5.28	5.76	5.92	11.79	8.70	20.49	≤ 21.00
802.11be-EHT40	MCS0	3	5965	5.69	5.30	4.75	5.26	11.28	9.62	20.90	≤ 21.00
802.11be-EHT40	MCS0	51	6205	4.71	4.61	5.13	4.87	10.86	9.62	20.48	≤ 21.00
802.11be-EHT40	MCS0	91	6405	5.06	5.01	4.89	5.14	11.05	9.62	20.67	≤ 21.00
802.11be-EHT40	MCS0	131	6605	5.95	5.79	6.14	5.67	11.91	8.70	20.61	≤ 21.00
802.11be-EHT40	MCS0	155	6725	6.05	6.08	5.71	6.28	12.06	8.70	20.76	≤ 21.00
802.11be-EHT40	MCS0	179	6845	5.95	5.47	6.14	5.78	11.86	8.70	20.56	≤ 21.00
802.11be-EHT80	MCS0	7	5985	5.73	4.98	4.84	5.08	11.19	9.62	20.81	≤ 21.00
802.11be-EHT80	MCS0	55	6225	4.82	4.74	5.13	5.04	10.96	9.62	20.58	≤ 21.00
802.11be-EHT80	MCS0	87	6385	5.05	4.87	4.78	5.16	10.99	9.62	20.61	≤ 21.00
802.11be-EHT80	MCS0	135	6625	6.18	5.83	6.52	6.13	12.19	8.70	20.89	≤ 21.00
802.11be-EHT80	MCS0	151	6705	6.13	6.11	5.83	6.08	12.06	8.70	20.76	≤ 21.00
802.11be-EHT80	MCS0	167	6785	5.41	5.72	5.96	6.11	11.83	8.70	20.53	≤ 21.00
802.11be-EHT160	MCS0	15	6025	5.55	4.72	5.31	5.42	11.28	9.62	20.90	≤ 21.00
802.11be-EHT160	MCS0	47	6185	4.61	4.73	5.19	5.04	10.92	9.62	20.54	≤ 21.00
802.11be-EHT160	MCS0	79	6345	5.17	5.17	4.85	5.32	11.15	9.62	20.77	≤ 21.00
802.11be-EHT160	MCS0	143	6665	5.71	5.65	5.94	5.76	11.79	8.70	20.49	≤ 21.00
802.11be-EHT320	MCS0	31	6105	5.38	4.83	5.26	4.92	11.12	9.62	20.74	≤ 21.00
802.11be-EHT320	MCS0	63	6265	5.32	4.98	5.46	5.05	11.23	9.62	20.85	≤ 21.00

Note 1: Total Average Power (dBm) = 10*log {$10^{(\text{Ant 0 Average Power /10})}$ + $10^{(\text{Ant 1 Average Power /10})}$ + $10^{(\text{Ant 2 Average Power /10})}$ + $10^{(\text{Ant 3 Average Power /10})}$}.

Note 2: EIRP (dBm) = Total Average Power (dBm) + Antenna Gain (dBi).

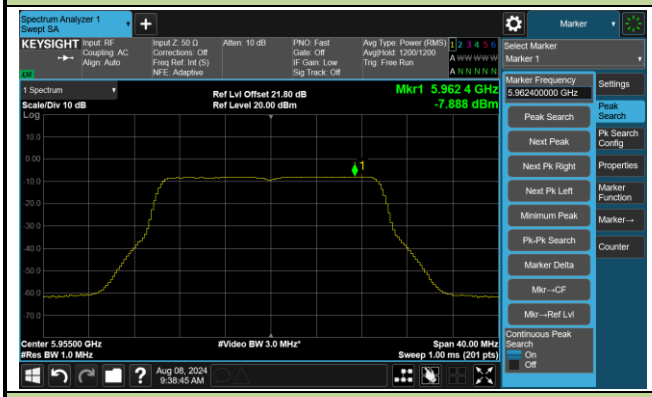
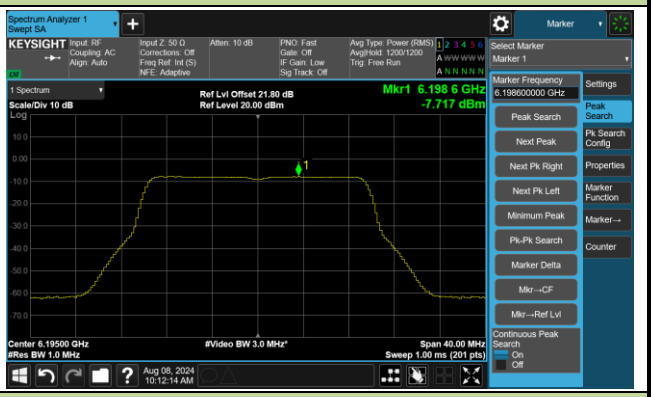
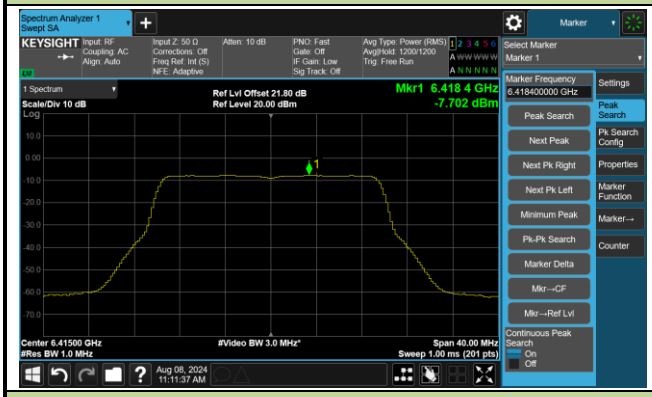
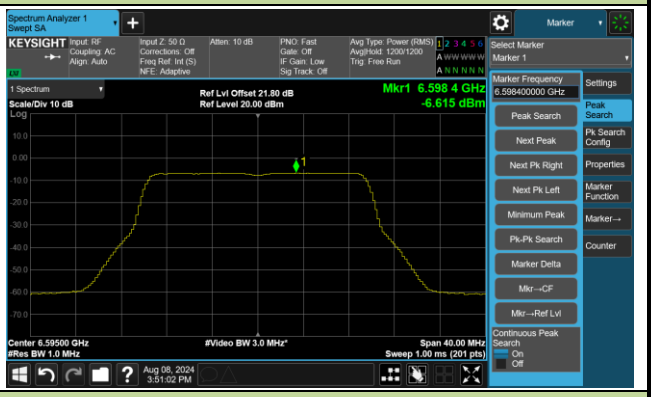
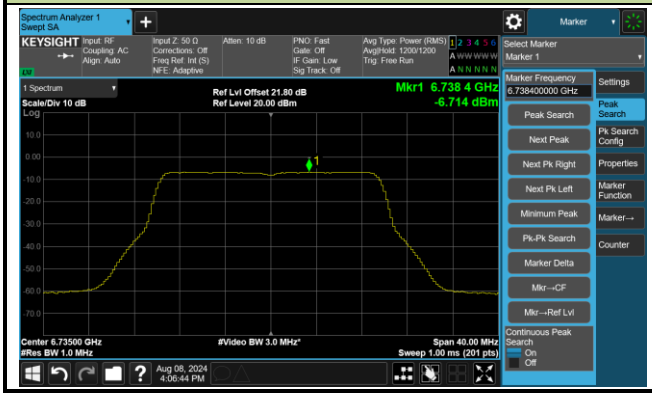
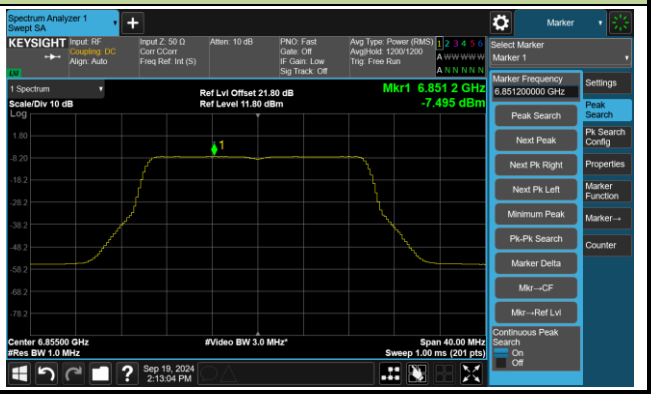
A.4 Power Spectral Density Test Result

Test Site	WZ-SR5	Test Engineer	Luis Yang
Test Date	2024-08-08 ~ 2024-08-09, 2024-09-19		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	PSD (dBm/MHz)				Duty Cycle (%)	Antenna Gain (dBi)	EIRP PSD (dBm/MHz)	Limit (dBm/ MHz)
				Ant 0	Ant 1	Ant 2	Ant 3				
802.11ax-HE20	MCS0	1	5955	-7.888	-7.653	-8.216	-7.525	97.32	15.88	14.21	≤ 23.00
802.11ax-HE20	MCS0	49	6195	-7.717	-7.522	-7.461	-7.380	97.32	15.88	14.50	≤ 23.00
802.11ax-HE20	MCS0	93	6415	-7.702	-7.606	-7.732	-7.301	97.32	15.88	14.44	≤ 23.00
802.11ax-HE20	MCS0	129	6595	-6.615	-6.932	-6.510	-7.272	97.32	14.83	14.15	≤ 23.00
802.11ax-HE20	MCS0	157	6735	-6.714	-6.705	-7.181	-6.664	97.32	14.83	14.16	≤ 23.00
802.11ax-HE20	MCS0	181	6855	-7.495	-8.275	-7.729	-7.617	97.32	14.83	13.20	≤ 23.00
802.11ax-HE40	MCS0	3	5965	-10.162	-10.676	-11.080	-10.524	97.67	15.88	11.40	≤ 23.00
802.11ax-HE40	MCS0	51	6205	-10.372	-10.602	-10.232	-10.404	97.67	15.88	11.60	≤ 23.00
802.11ax-HE40	MCS0	91	6405	-10.513	-10.449	-10.437	-10.256	97.67	15.88	11.59	≤ 23.00
802.11ax-HE40	MCS0	131	6605	-9.438	-9.797	-9.468	-9.755	97.67	14.83	11.34	≤ 23.00
802.11ax-HE40	MCS0	155	6725	-9.147	-9.458	-9.819	-9.340	97.67	14.83	11.52	≤ 23.00
802.11ax-HE40	MCS0	179	6845	-9.628	-9.842	-9.431	-9.639	97.67	14.83	11.32	≤ 23.00
802.11ax-HE80	MCS0	7	5985	-12.684	-13.403	-13.369	-13.322	97.14	15.88	8.84	≤ 23.00
802.11ax-HE80	MCS0	55	6225	-13.524	-13.960	-13.472	-13.601	97.14	15.88	8.39	≤ 23.00
802.11ax-HE80	MCS0	87	6385	-13.477	-13.792	-13.834	-13.526	97.14	15.88	8.37	≤ 23.00
802.11ax-HE80	MCS0	135	6625	-12.419	-13.004	-12.447	-12.730	97.14	14.83	8.33	≤ 23.00
802.11ax-HE80	MCS0	151	6705	-12.520	-12.684	-12.508	-12.731	97.14	14.83	8.37	≤ 23.00
802.11ax-HE80	MCS0	167	6785	-13.420	-12.905	-12.874	-12.699	97.14	14.83	8.01	≤ 23.00
802.11ax-HE160	MCS0	15	6025	-15.763	-15.942	-15.300	-14.987	97.49	15.88	6.53	≤ 23.00
802.11ax-HE160	MCS0	47	6185	-16.065	-15.851	-15.746	-15.761	97.49	15.88	6.16	≤ 23.00
802.11ax-HE160	MCS0	79	6345	-15.586	-15.745	-16.048	-15.539	97.49	15.88	6.29	≤ 23.00
802.11ax-HE160	MCS0	143	6665	-15.832	-15.898	-15.409	-15.954	97.49	14.83	5.19	≤ 23.00

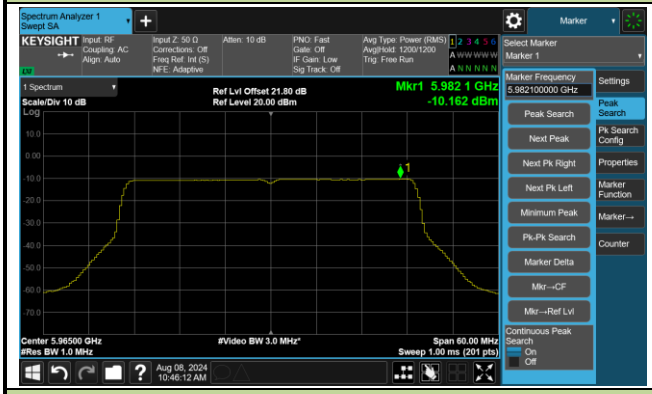
Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	PSD (dBm/MHz)				Duty Cycle (%)	Antenna Gain (dBi)	EIRP PSD (dBm/MHz)	Limit (dBm/ MHz)
				Ant 0	Ant 1	Ant 2	Ant 3				
802.11be-EHT20	MCS0	1	5955	-7.422	-7.444	-8.225	-7.312	97.85	15.88	14.41	≤ 23.00
802.11be-EHT20	MCS0	49	6195	-7.785	-7.586	-7.443	-7.462	97.85	15.88	14.43	≤ 23.00
802.11be-EHT20	MCS0	93	6415	-7.758	-7.522	-7.568	-7.050	97.85	15.88	14.53	≤ 23.00
802.11be-EHT20	MCS0	129	6595	-6.723	-6.767	-6.374	-7.011	97.85	14.83	14.23	≤ 23.00
802.11be-EHT20	MCS0	157	6735	-6.651	-6.576	-6.935	-6.717	97.85	14.83	14.23	≤ 23.00
802.11be-EHT20	MCS0	181	6855	-7.370	-8.077	-7.689	-7.603	97.85	13.27	14.47	≤ 23.00
802.11be-EHT40	MCS0	3	5965	-9.935	-10.474	-10.820	-10.315	96.80	15.88	11.67	≤ 23.00
802.11be-EHT40	MCS0	51	6205	-10.493	-10.834	-10.397	-10.520	96.80	15.88	11.48	≤ 23.00
802.11be-EHT40	MCS0	91	6405	-10.724	-10.650	-10.531	-10.218	96.80	15.88	11.52	≤ 23.00
802.11be-EHT40	MCS0	131	6605	-9.517	-9.945	-9.580	-9.907	96.80	14.83	11.26	≤ 23.00
802.11be-EHT40	MCS0	155	6725	-9.409	-9.549	-9.843	-9.468	96.80	14.83	11.43	≤ 23.00
802.11be-EHT40	MCS0	179	6845	-9.654	-10.098	-9.740	-9.841	96.80	14.83	11.16	≤ 23.00
802.11be-EHT80	MCS0	7	5985	-12.570	-13.423	-13.199	-13.285	97.15	15.88	8.92	≤ 23.00
802.11be-EHT80	MCS0	55	6225	-13.413	-13.884	-13.370	-13.609	97.15	15.88	8.46	≤ 23.00
802.11be-EHT80	MCS0	87	6385	-13.365	-13.685	-13.733	-13.305	97.15	15.88	8.51	≤ 23.00
802.11be-EHT80	MCS0	135	6625	-12.433	-12.867	-12.298	-12.680	97.15	14.83	8.41	≤ 23.00
802.11be-EHT80	MCS0	151	6705	-12.469	-12.623	-12.578	-12.541	97.15	14.83	8.42	≤ 23.00
802.11be-EHT80	MCS0	167	6785	-13.131	-12.818	-12.618	-12.435	97.15	14.83	8.23	≤ 23.00
802.11be-EHT160	MCS0	15	6025	-15.669	-15.793	-15.119	-14.809	97.85	15.88	6.67	≤ 23.00
802.11be-EHT160	MCS0	47	6185	-16.625	-16.487	-16.240	-16.193	97.85	15.88	5.61	≤ 23.00
802.11be-EHT160	MCS0	79	6345	-15.415	-15.537	-16.021	-15.477	97.85	15.88	6.39	≤ 23.00
802.11be-EHT160	MCS0	143	6665	-15.691	-15.713	-15.177	-15.644	97.85	14.83	5.39	≤ 23.00
802.11be-EHT320	MCS0	31	6105	-18.623	-18.861	-18.430	-18.387	97.67	15.88	3.43	≤ 23.00
802.11be-EHT320	MCS0	63	6265	-18.151	-18.564	-18.493	-18.558	97.67	15.88	3.56	≤ 23.00

Note: When EUT duty cycle < 98%, EIRP PSD (dBm/MHz) = 10*log {$10^{(\text{Ant 0 PSD/10})}$ + $10^{(\text{Ant 1 PSD/10})}$ + $10^{(\text{Ant 2 PSD/10})}$ + $10^{(\text{Ant 3 PSD/10})}$} (dBm/MHz) + 10*log (1/Duty Cycle) + Antenna Gain (dBi).

802.11ax-HE20 Power Spectral Density- Ant 0	
Channel 1 (5955MHz)	Channel 49 (6195MHz)
	
Channel 93 (6415MHz)	Channel 129 (6595MHz)
	
Channel 157 (6735MHz)	Channel 181 (6855MHz)
	

802.11ax-HE40 Power Spectral Density- Ant 0

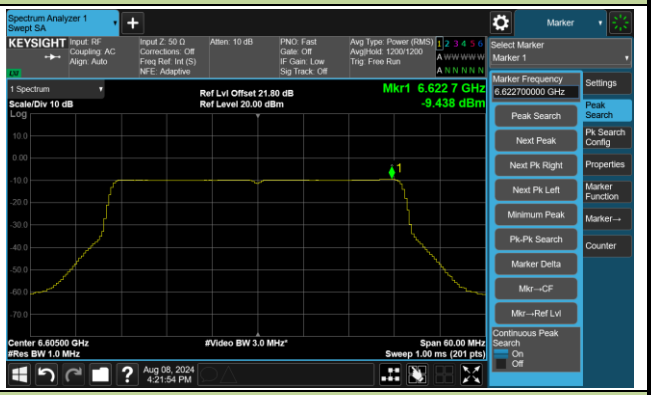
Channel 3 (5965MHz)



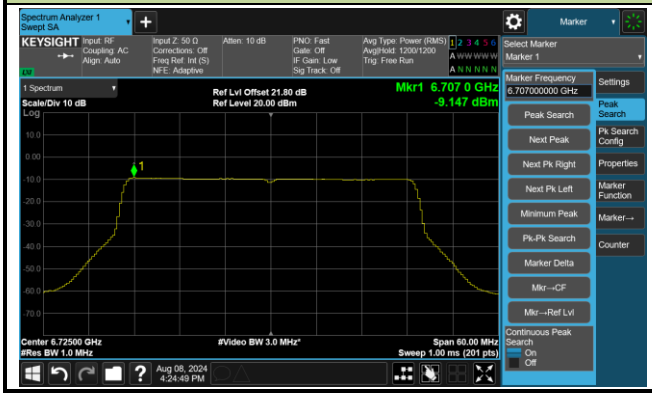
Channel 51 (6205MHz)

Channel 91 (6405MHz)

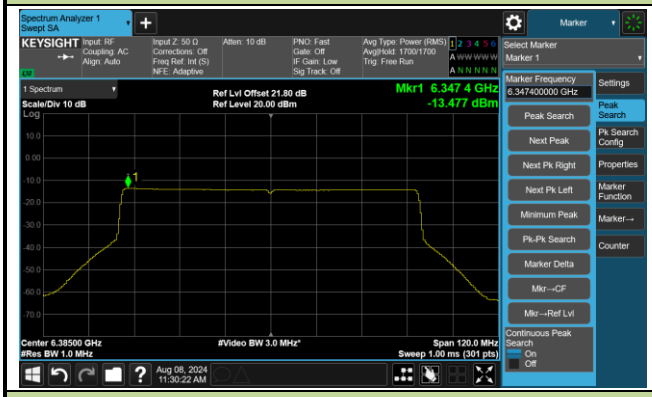
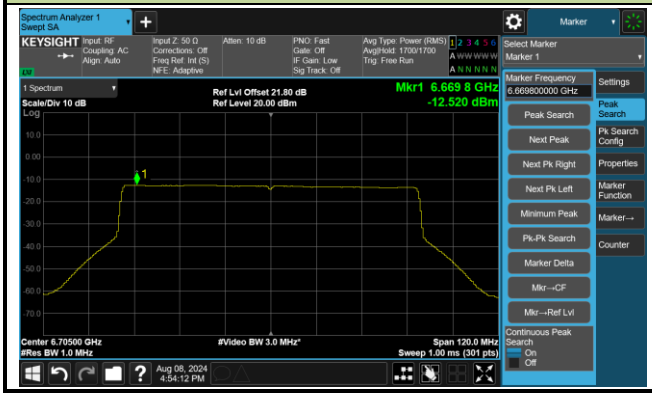
Channel 131 (6605MHz)



Channel 155 (6725MHz)



Channel 179 (6845MHz)

802.11ax-HE80 Power Spectral Density- Ant 0	
Channel 7 (5985MHz)	Channel 55 (6225MHz)
Channel 87 (6385MHz)	Channel 135 (6625MHz)
	
Channel 151 (6705MHz)	Channel 167 (6785MHz)