



RF MEASUREMENT REPORT

FCC ID: I88EE3300-00
Applicant: Zyxel Communications Corporation
Product: Dual-Band Wireless BE7200 2.5G Ethernet Gateway
Model No.: EE3300-00
Brand Name: ZYXEL
FCC Classification: Unlicensed National Information Infrastructure (NII)
FCC Rule Part(s): Part 15 Subpart E (Section 15.407)
Result: Complies
Received Date: 2025-08-04
Test Date: 2025-08-07 ~ 2025-09-06

Reviewed By:

Kevin Guo

Kevin Guo

Approved By:

Robin Wu

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. Testing was performed in accordance with the applicable measurement procedures. The test results reported herein apply only to the specific 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
R25S1006089-U201	V01	Initial Report	2025-09-30	Valid

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1. General Information

1.1. Applicant

Zykel Communications Corporation

No. 2 Industry East RD. IX, Hsinchu Science Park, Hsinchu 30075, Taiwan, R.O.C.

1.2. Manufacturer

Zyxel Communications Corporation

No. 2 Industry East RD. IX, Hsinchu Science Park, Hsinchu 30075, Taiwan, R.O.C.

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 FCC: CN1166
	CNAS: L10551 ISED: CN0001
☐	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 FCC: CN1284
	CNAS: L10551 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	Dual-Band Wireless BE7200 2.5G Ethernet Gateway
Model No.	EE3300-00
Brand Name	ZYXEL
EUT Identification No.	20250804Sample#03 (Conducted) 20250804Sample#01 (Radiated)
Wi-Fi Specification	802.11a/b/g/n/ac/ax/be
Antenna Information	Refer to section 1.7
Power Type	AC/DC Adapter
Accessory(ies)	
AC/DC Adapter #1	Model: MAUS-1202003605 Input: 100-240 V ~ 50-60 Hz 1.0 A Output: 12.0 VDC 2.0 A
AC/DC Adapter #2	Model: FC030A05-120025U Input: 100-240 V ~ 50-60 Hz 1.2 A Output: 12.0 VDC 2.5 A 30.0 W
Note 1: The information of the EUT (Equipment Under Test) was provided by the manufacturer. The accuracy, completeness, and validity of the information are solely the responsibility of the manufacturer. Note 2: For this report, we select AC/DC Adapter #2 for testing.	

1.5. Radio Specification under Test

Frequency Range	UNII-1: 5150 ~ 5250 MHz UNII-2A: 5250 ~ 5350 MHz UNII-2C: 5470 ~ 5725 MHz UNII-3: 5725 ~ 5850 MHz	
Type of Modulation	802.11a/n/ac: OFDM 802.11ax/be: OFDMA	
Data Rate	802.11a: 6/9/12/18/24/36/48/54 Mbps 802.11n: up to 750 Mbps 802.11ac: up to 4333.5 Mbps 802.11ax: up to 6005 Mbps 802.11be: up to 7205 Mbps	
Channel Puncturing Function	☐ Supported	☒ Unsupported
Support RU	☒ Full RU	☐ Partial RU

1.6. Working Frequencies

802.11a/n-HT20/ac-VHT20/ax-HE20/be-EHT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz
48	5240 MHz	52	5260 MHz	56	5280 MHz
60	5300 MHz	64	5320 MHz	100	5500 MHz
104	5520 MHz	108	5540 MHz	112	5560 MHz
116	5580 MHz	120	5600 MHz	124	5620 MHz
128	5640 MHz	132	5660 MHz	136	5680 MHz
140	5700 MHz	144	5720 MHz	149	5745 MHz
153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz	--	--	--	--

802.11n-HT40/ac-VHT40/ax-HE40/be-EHT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	54	5270 MHz
62	5310 MHz	102	5510 MHz	110	5550 MHz
118	5590 MHz	126	5630 MHz	134	5670 MHz
142	5710 MHz	151	5755 MHz	159	5795 MHz

802.11ac-VHT80/ax-HE80/be-EHT80

Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz	106	5530 MHz
122	5610 MHz	138	5690 MHz	155	5775 MHz

802.11ac-VHT160/ax-HE160/be-EHT160

Channel	Frequency	Channel	Frequency	Channel	Frequency
50	5250 MHz	114	5570 MHz	--	--

1.7. Antenna Details

Antenna Type	Frequency Band (MHz)	Tx Paths	CDD Directional Gain (dBi)		Beamforming Directional Gain (dBi)
			For Power	For PSD	
PCB Antenna	2400 ~ 2483.5	4	0.68	6.29	6.29
	5150 ~ 5250	5	1.76	8.43	8.43
	5250 ~ 5350	5	1.76	8.43	8.43
	5470 ~ 5725	5	1.83	8.71	8.71
	5725 ~ 5850	5	1.84	8.66	8.66

Notes:

1. The EUT supports Cyclic Delay Diversity (CDD) mode for 802.11a/b/g/n/ac/ax/be.
2. The EUT also supports Beamforming mode for 802.11n/ac/ax/be, not include 802.11a/b/g.
3. All antenna information is provided by the manufacturer.

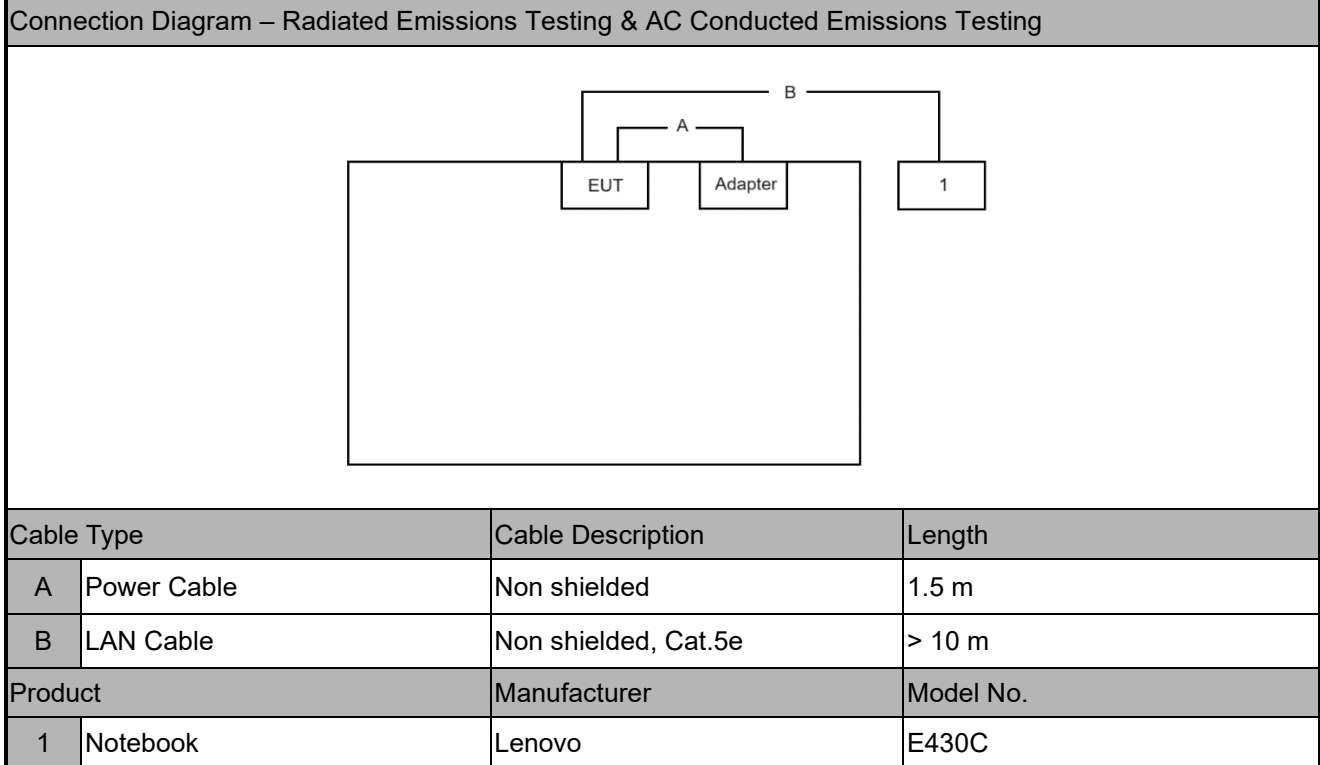
2. Test Configuration

2.1. Test Mode

Mode 1: Transmit by 802.11a_Nss = 1(6 Mbps)
Mode 2: Transmit by 802.11ac-VHT20_Nss = 1(MCS0)
Mode 3: Transmit by 802.11ac-VHT40_Nss = 1(MCS0)
Mode 4: Transmit by 802.11ac-VHT80_Nss = 1(MCS0)
Mode 5: Transmit by 802.11ac-VHT160_Nss = 1(MCS0)
Mode 6: Transmit by 802.11be-EHT20_Nss = 1(MCS0)
Mode 7: Transmit by 802.11be-EHT40_Nss = 1(MCS0)
Mode 8: Transmit by 802.11be-EHT80_Nss = 1(MCS0)
Mode 9: Transmit by 802.11be-EHT160_Nss = 1(MCS0)
Note 1: 802.11n and 802.11ac have same modulation type and same power parameter declared by the manufacturer, and the data rate of 802.11n is covered by 802.11ac, so all tests were performed based on 802.11ac in this report. Note 2: For CDD mode, this device supports 5 Nss and power level is the same of spatial multiplexing. The worst case is Nss=1. Note 3: 802.11ax and 802.11be have same modulation type and same power parameter declared by the manufacturer, and we have verified that the same power parameter, the power of 802.11ax is slightly less than the power of 802.11be, so all tests were performed based on 802.11be in this report. Note 4: For Beamforming operation, the manufacturer automatically reduces power based on a factor calculated as the difference between the Beamforming directional gain and the CDD directional power gain. Thus, only the CDD mode was evaluated in this report. Note 5: All modes of operation and data rates were investigated, so all RF test requirements shall be executed at the worst data rate.

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10-2020 was used to reference the appropriate EUT setup for radiated emissions testing and AC conducted emissions testing.



2.3. Test Software

The test utility software used during testing was “QATool” and the version was “0.0.2.103”.

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:

- FCC Part 15.407
- KDB 789033 D02 v02r01
- KDB 662911 D01 v02r01
- ANSI C63.10-2020
- ANSI C63.10-2020/Cor1-2023
- ANSI C63.10a-2024

2.5. Test Environment Condition

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

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

- The antenna of the device is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
EMI Test Receiver	R&S	ESR3	MRTSUE07110	1 year	2026-04-19	WJ-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE07285	1 year	2026-02-18	WJ-AC1
TRILOG Broad Band Antenna	Schwarzbeck	VULB 9163	MRTSUE07099	1 year	2026-04-22	WJ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11333	1 year	2026-06-16	WJ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11402	1 year	2025-12-01	WJ-AC1
Anechoic Chamber	TDK	WJ-AC1	MRTSUE07115	1 year	2026-05-16	WJ-AC1
EMI Test Receiver	R&S	ESR3	MRTSUE07111	1 year	2026-03-24	WJ-AC2
EXA Signal Analyzer	Keysight	N9010B	MRTSUE07148	1 year	2026-04-26	WJ-AC2
Active Loop Antenna	Schwarzbeck	FMZB 1519-60 D	MRTSUE07076	1 year	2025-11-19	WJ-AC2
Horn Antenna	RFSPIN	DRH18-E	MRTSUE07105	1 year	2026-05-12	WJ-AC2
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06599	1 year	2025-09-08 2026-08-18	WJ-AC2
Preamplifier	EMCI	EMC118A45SE	MRTSUE07102	1 year	2026-04-09	WJ-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE07103	1 year	2026-04-09	WJ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11315	1 year	2026-06-16	WJ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11332	1 year	2026-06-05	WJ-AC2
Anechoic Chamber	TDK	WJ-AC2	MRTSUE07117	1 year	2026-05-12	WJ-AC2
EMI Test Receiver	R&S	ESR3	MRTSUE07112	1 year	2026-04-19	WJ-SR5
Two-Line V-Network	R&S	ENV216	MRTSUE07202	1 year	2026-05-26	WJ-SR5
Thermohygrometer	testo	608-H1	MRTSUE11317	1 year	2026-06-05	WJ-SR5
Shielding Room	TDK	WJ-SR5	MRTSUE07127	N/A	N/A	WJ-SR5
EXA Signal Analyzer	Keysight	N9010B	MRTSUE07147	1 year	2025-11-06	WJ-SR2
USB Power Sensor	Keysight	U2021XA	MRTSUE07143	1 year	2026-03-15	WJ-SR2
Fixed Attenuator	MVE	MVE2213	MRTSUE07311	Note	Note	WJ-SR2
RF Cable	UCwave	UCE500	MRTSUE07337	Note	Note	WJ-SR2
Thermohygrometer	testo	608-H1	MRTSUE11330	1 year	2026-06-05	WJ-SR2
Shielding Room	TDK	WJ-SR2	MRTSUE07124	N/A	N/A	WJ-SR2
EXA Signal Analyzer	Keysight	N9010B	MRTSUE07147	1 year	2025-11-06	WJ-TR1
Fixed Attenuator	MVE	MVE2213	MRTSUE07311	Note	Note	WJ-TR1
RF Cable	UCwave	UCE500	MRTSUE07337	Note	Note	WJ-TR1
High and low temperature-humidity test chamber	GWS	EL-01JA	MRTSUE07114	1 year	2026-05-17	WJ-TR1
Thermohygrometer	testo	608-H1	MRTSUE11403	1 year	2025-12-01	WJ-TR1

Note: The loss of the Attenuator & Cable will be measured before testing.



Software	Version	Function
e3	230711	RE & CE
CONTROLLER CO3000	V 1.03.02	RE Antenna & Turntable
Agilent Power Panel	V 3.9	Power

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:	
9 kHz ~ 150 kHz:	3.58 dB
150 kHz ~ 30 MHz:	3.20 dB
Radiated Emission Measurement	
The maximum measurement uncertainty is evaluated as:	
Coaxial:	9 kHz ~ 30 MHz: 2.35 dB
Coplanar:	9 kHz ~ 30 MHz: 2.37 dB
Horizontal:	30 MHz ~ 200 MHz: 3.47 dB
	200 MHz ~ 1 GHz: 4.17 dB
	1 GHz ~ 40 GHz: 4.97 dB
Vertical:	30 MHz ~ 200 MHz: 4.07 dB
	200 MHz ~ 1 GHz: 5.28 dB
	1 GHz ~ 40 GHz: 4.84 dB
Spurious Emissions, Conducted	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2 U_c(y)$): 2.5 dB	
Output Power	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2 U_c(y)$): 1.5 dB	
Power Spectrum Density	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2 U_c(y)$): 2.5 dB	
Occupied Bandwidth	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2 U_c(y)$): 3.2%	

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.407(a)	26 dB Bandwidth	Conducted	Pass
15.407(e)	6 dB Bandwidth		Pass
15.407(a)(1)(ii), (2), (3)(i)	Maximum Conducted Output Power		Pass
15.407(h)(1)	Transmit Power Control		Pass
15.407(g)	Frequency Stability		Pass
15.407(a)(1)(ii), (2), (3)(i), (13)	Peak Power Spectral Density		Pass
15.407(h)(2)	Dynamic Frequency Selection (DFS)		Pass ^{Note 3}
15.407(b)(1), (2), (3), (4)(i)	Undesirable Emissions	Radiated	Pass
15.205, 15.209 15.407(b)(8), (9), (10)	General Field Strength (Restricted Bands and Radiated Emissions)		Pass
15.207	AC Conducted Emissions 150 kHz - 30 MHz	Line Conducted	Pass

Notes:

1. The analyzer plots shown in this section were captured using a correction table to account for cable and attenuator losses in the system connecting the EUT to the analyzer across relevant frequencies.
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. DFS report refer to R25S1006089-U203.

6.2. 26 dB & 99% Bandwidth Measurement

6.2.1. Test Limit

N/A

6.2.2. Test Procedure

KDB 789033 D02 v02r01 - Section II - C.1 (26 dB Bandwidth)

KDB 789033 D02 v02r01 - Section II - D (99% Bandwidth)

6.2.3. Test Setting

26 dB Bandwidth

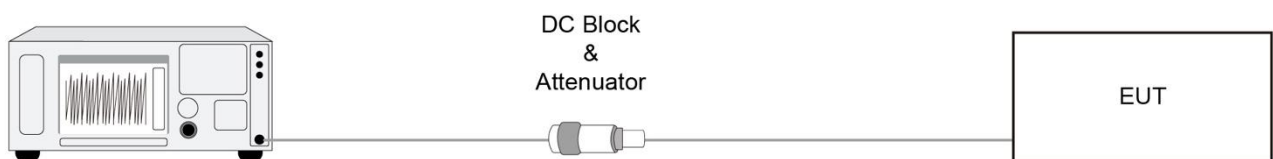
1. The analyzers' automatic bandwidth measurement capability was used to perform the 26 dB bandwidth
2. RBW = Approximately 1% of the emission bandwidth
3. VBW $\geq 3 \times$ RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Measure the maximum width of the emission that is 26 dB down from the maximum 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. Span = 1.5 times to 5.0 times the OBW
3. RBW = 1% to 5% of the OBW
4. VBW $\geq 3 \times$ RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99% power bandwidth function of the instrument

6.2.4. Test Setup

Spectrum Analyzer



6.2.5. Test Result

Refer to Appendix A.2.

6.3. 6 dB Bandwidth Measurement

6.3.1. Test Limit

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

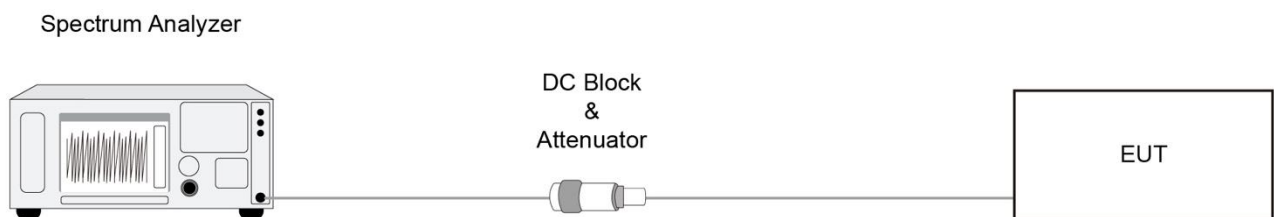
6.3.2. Test Procedure

KDB 789033 D02 v02r01 - Section II - C.2

6.3.3. Test Setting

1. Set center frequency to the nominal EUT channel center frequency
2. RBW = 100 kHz
3. VBW $\geq 3 \times$ RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Output Power Measurement

6.4.1. Test Limit

For the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30 dBm).

If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.4.2. Test Procedure

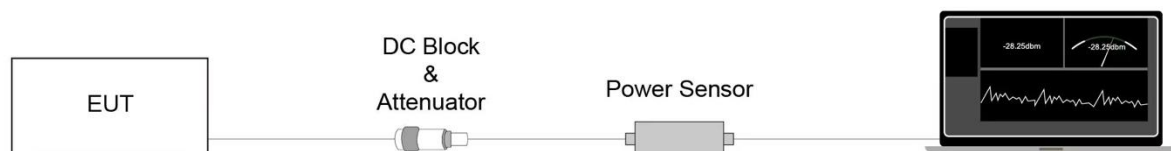
KDB 789033 D02 v02r01 - Section II - E.3.b (Method PM-G)

6.4.3. 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.

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

6.5. Transmit Power Control Measurement

6.5.1. Test Limit

The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm.

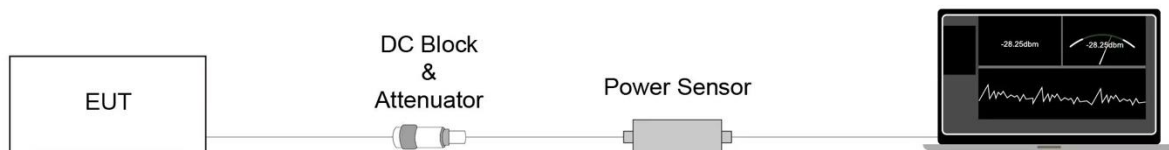
6.5.2. Test Procedure

KDB 789033 D02 v02r01 - Section II - E.3.b (Method PM-G)

6.5.3. Test Setting

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. The trace was averaged over 100 traces to obtain the final measured average power.

6.5.4. Test Setup



6.5.5. Test Result

Device supports TPC mechanism, details refer to the operational description.

6.6. Power Spectral Density Measurement

6.6.1. Test Limit

For the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.6.2. Test Procedure

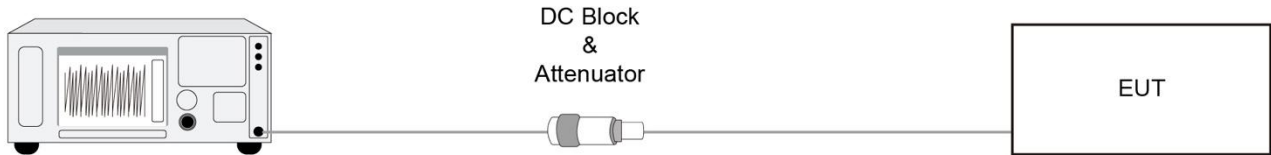
KDB 789033 D02 v02r01 - Section II - F

6.6.3. Test Setting

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire 26 dB EBW of the signal.
3. RBW = 1 MHz (510 kHz, if measurement bandwidth of Maximum PSD is specified in 500 kHz)
4. VBW $\geq 3 \times$ RBW
5. Number of sweep points $\geq 2 \times$ (Span / RBW)
6. Detector = Power averaging (RMS)
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. If duty cycle < 98%, add $10 \times \log(1/x)$, 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 $10 \times \log(1/0.25) = 6$ dB if the duty cycle is 25 percent; If duty cycle $\geq 98\%$, no need to add $10 \times \log(1/x)$.

6.6.4. Test Setup

Spectrum Analyzer



6.6.5. Test Result

Refer to Appendix A.5.

6.7. Frequency Stability Measurement

6.7.1. 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.

6.7.2. Test Procedure

Frequency Stability Under Temperature Variations:

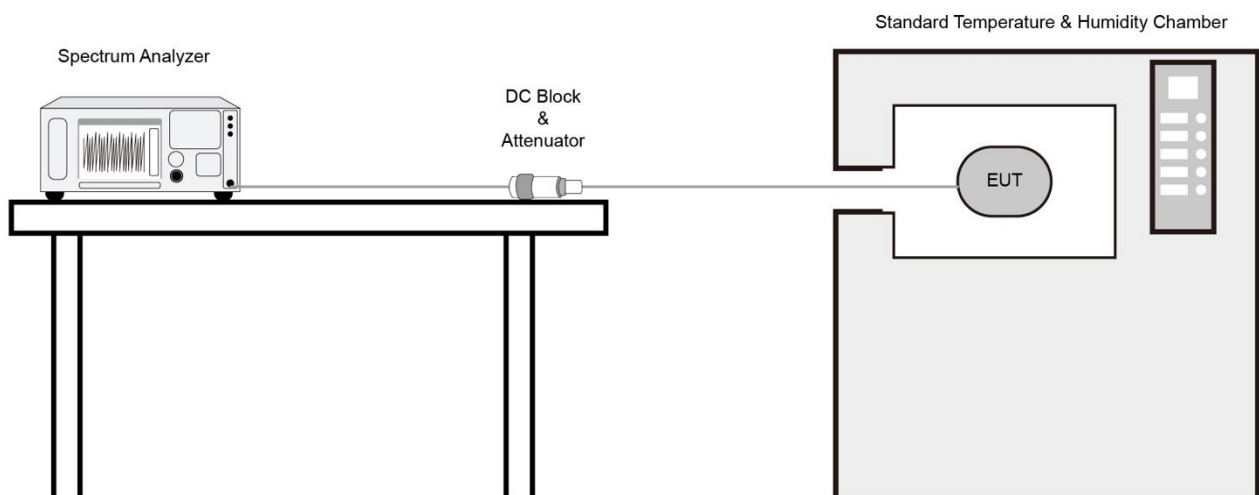
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain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

6.7.3. Test Setup



6.7.4. Test Result

Refer to Appendix A.6.

6.8. Radiated Spurious Emissions Measurement

6.8.1. Test Limit

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

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [$\mu\text{V/m}$]	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

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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
> 1000 MHz	1 MHz

Quasi-Peak Measurements below 1 GHz

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

Peak Measurements above 1 GHz

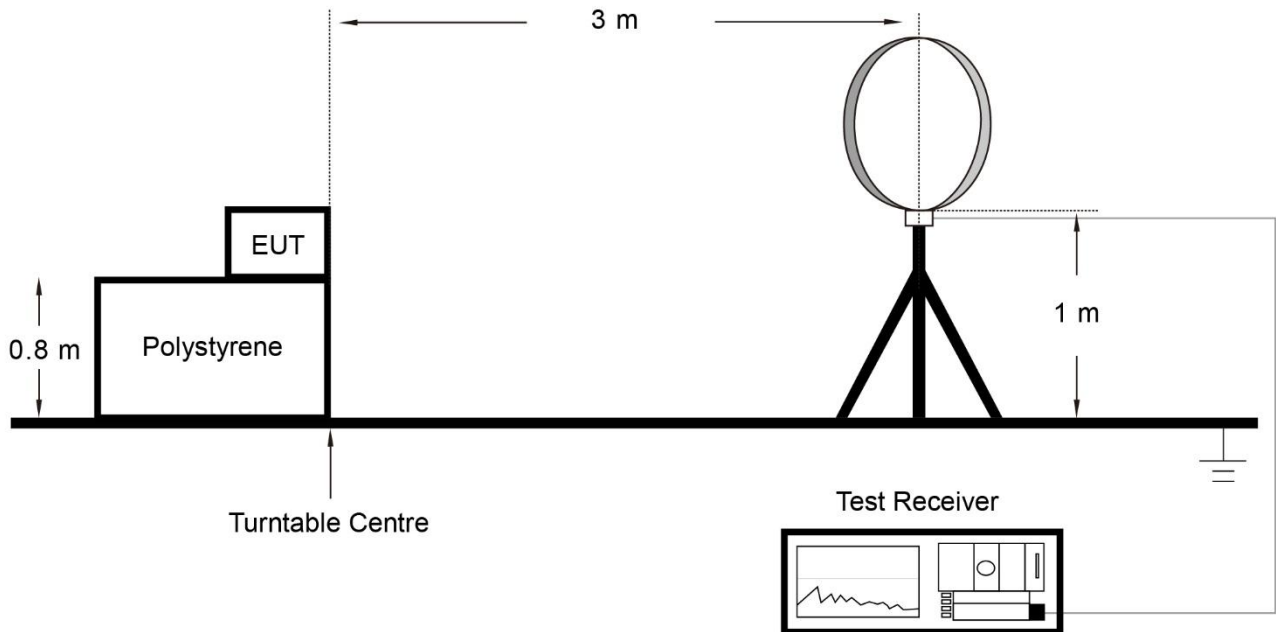
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 MHz
3. $VBW \geq 3 \times RBW$
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max hold
7. Trace was allowed to stabilize

Average Measurements above 1 GHz (Method VB)

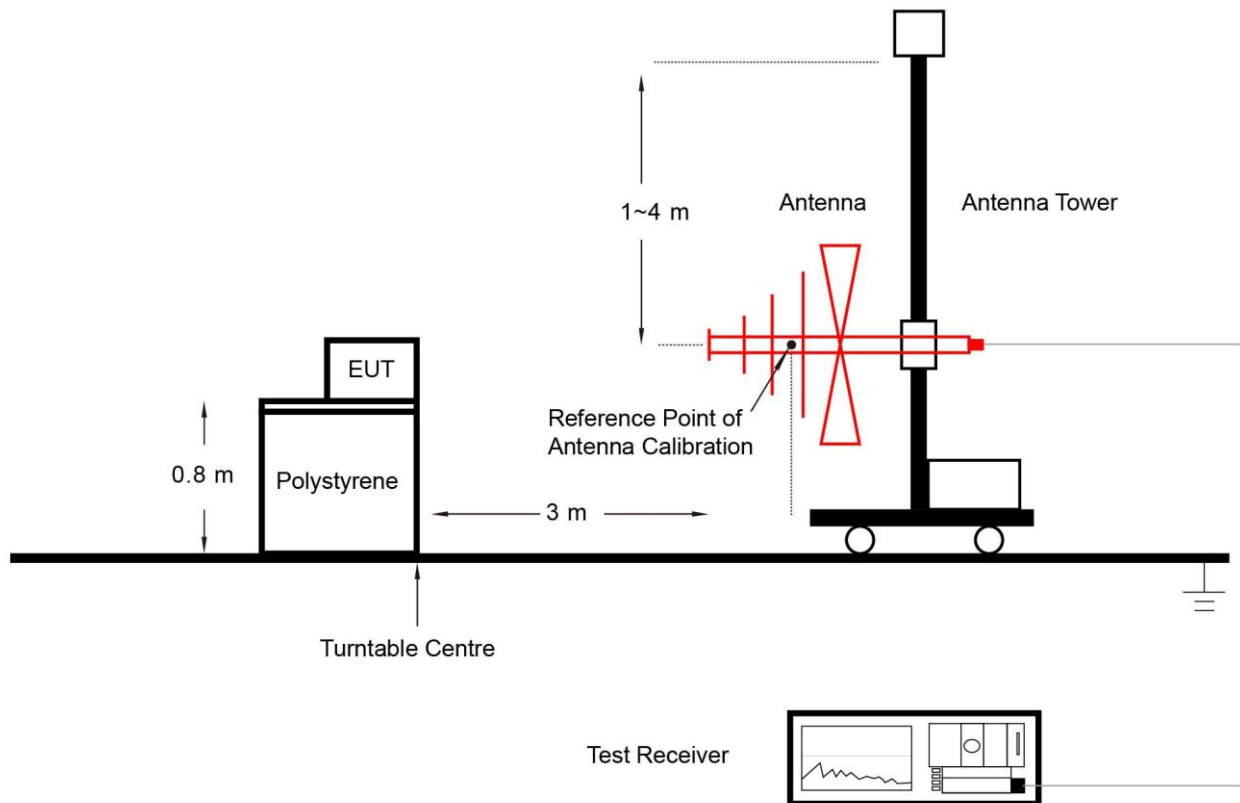
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 MHz
3. VBW; if the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz
If the EUT duty cycle is $< 98\%$, set $VBW \geq 1/T$. T is the minimum transmission duration.
4. 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

6.8.4. Test Setup

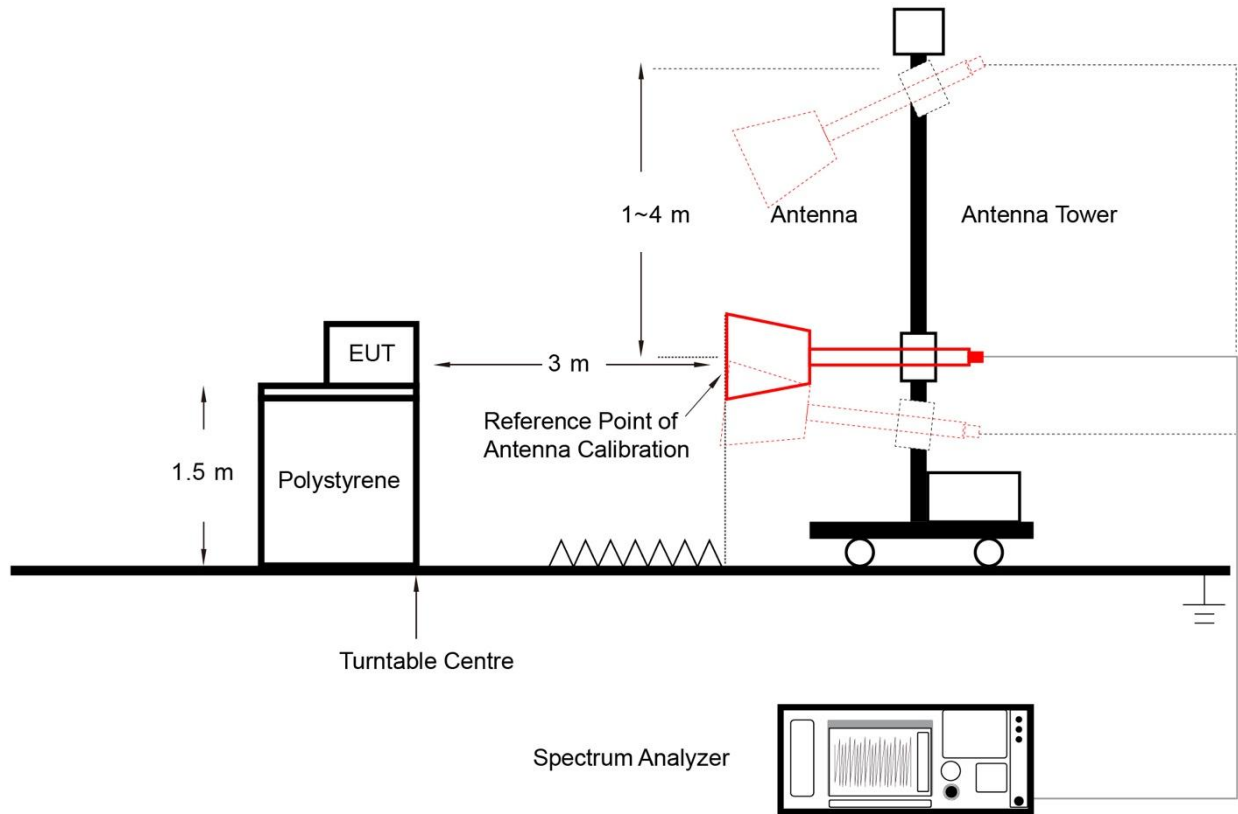
Below 30 MHz Test Setup:



Below 1 GHz Test Setup:



Above 1 GHz 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) requirement:

For transmitters operating in the band 5150-5250 MHz:

All emissions outside of the band 5150-5350 MHz shall not exceed an EIRP of -27 dBm/MHz.

For transmitters operating in the band 5250-5350 MHz:

All emissions outside of the band 5150-5350 MHz shall not exceed an EIRP of -27 dBm/MHz.

For transmitters operating in the band 5470-5725 MHz:

All emissions outside of the band 5470-5725 MHz shall not exceed an EIRP of -27 dBm/MHz.

For transmitters operating in the band 5725-5850 MHz:

All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Refer to KDB 789033 D02 v02r01 - Section II - G.2.c, as specified in § 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a maximum emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in § 15.407(b)(4)). However, an out-of-band emission that complies with both the peak and average limits of § 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit.

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

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [μV/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

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6.9.3. Test Setting

Peak Field Strength Measurements

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

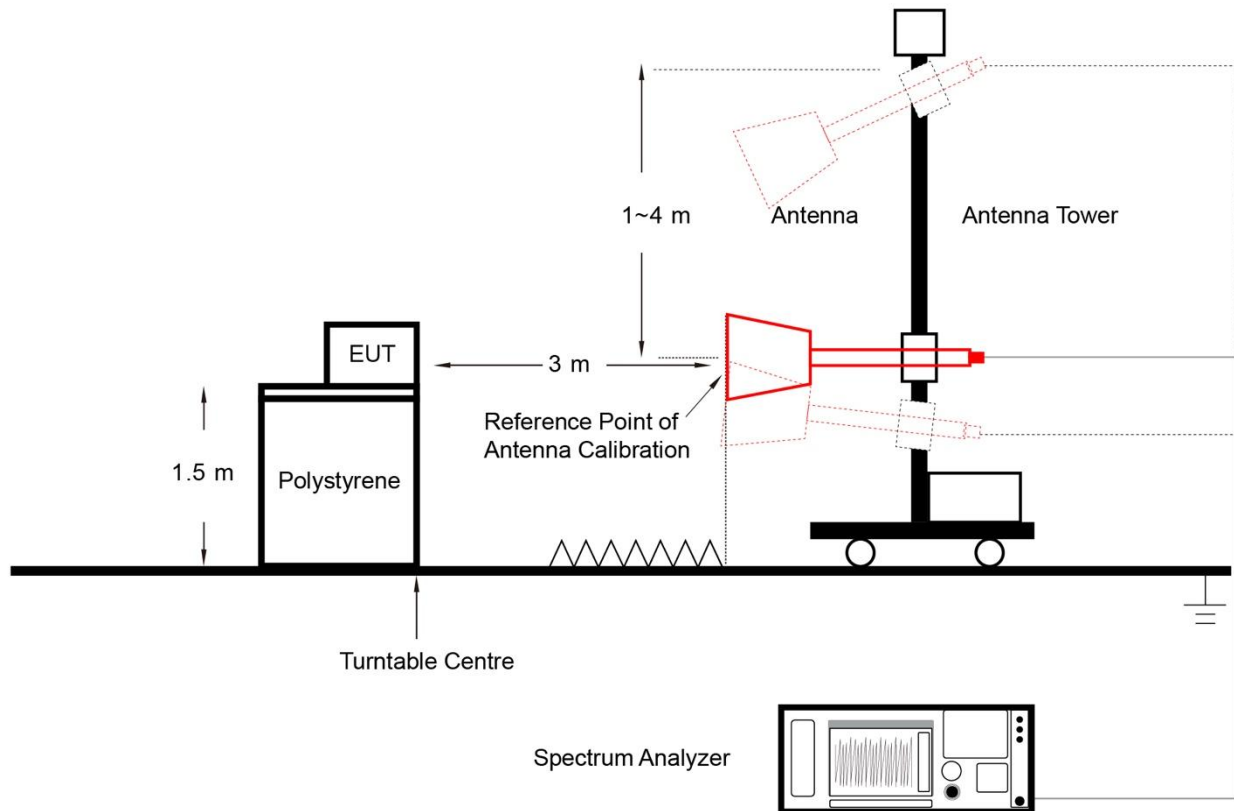
Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1 MHz
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. 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

6.9.4. Test Setup



6.9.5. Test Result

Refer to Appendix A.8.

6.10. AC Conducted Emissions Measurement

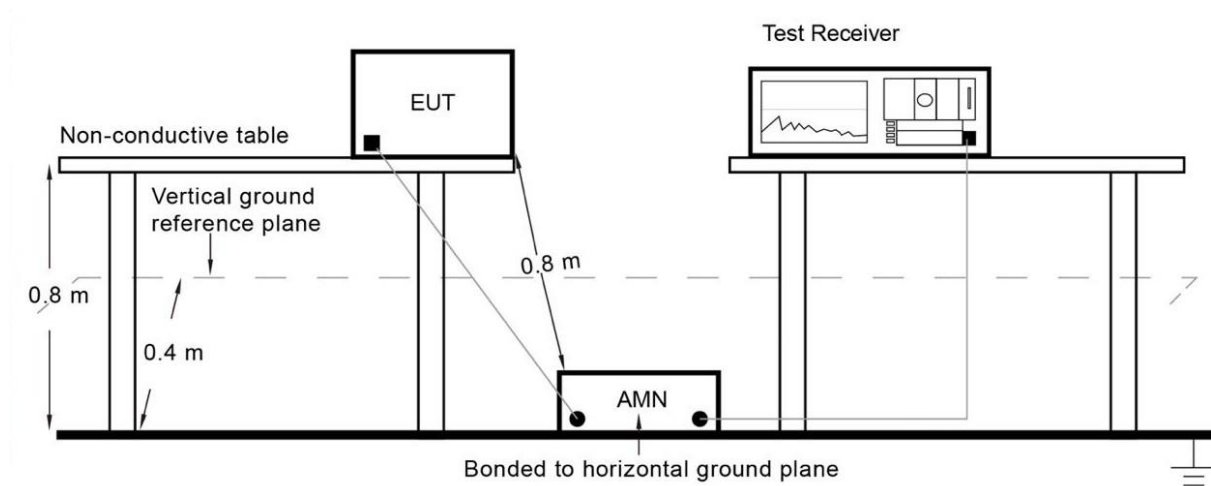
6.10.1. Test Limit

FCC Part 15.207 Limits		
Frequency (MHz)	QP (dB μ V)	AV (dB μ V)
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 0.15 MHz to 0.5 MHz.

6.10.2. Test Setup



6.10.3. Test Result

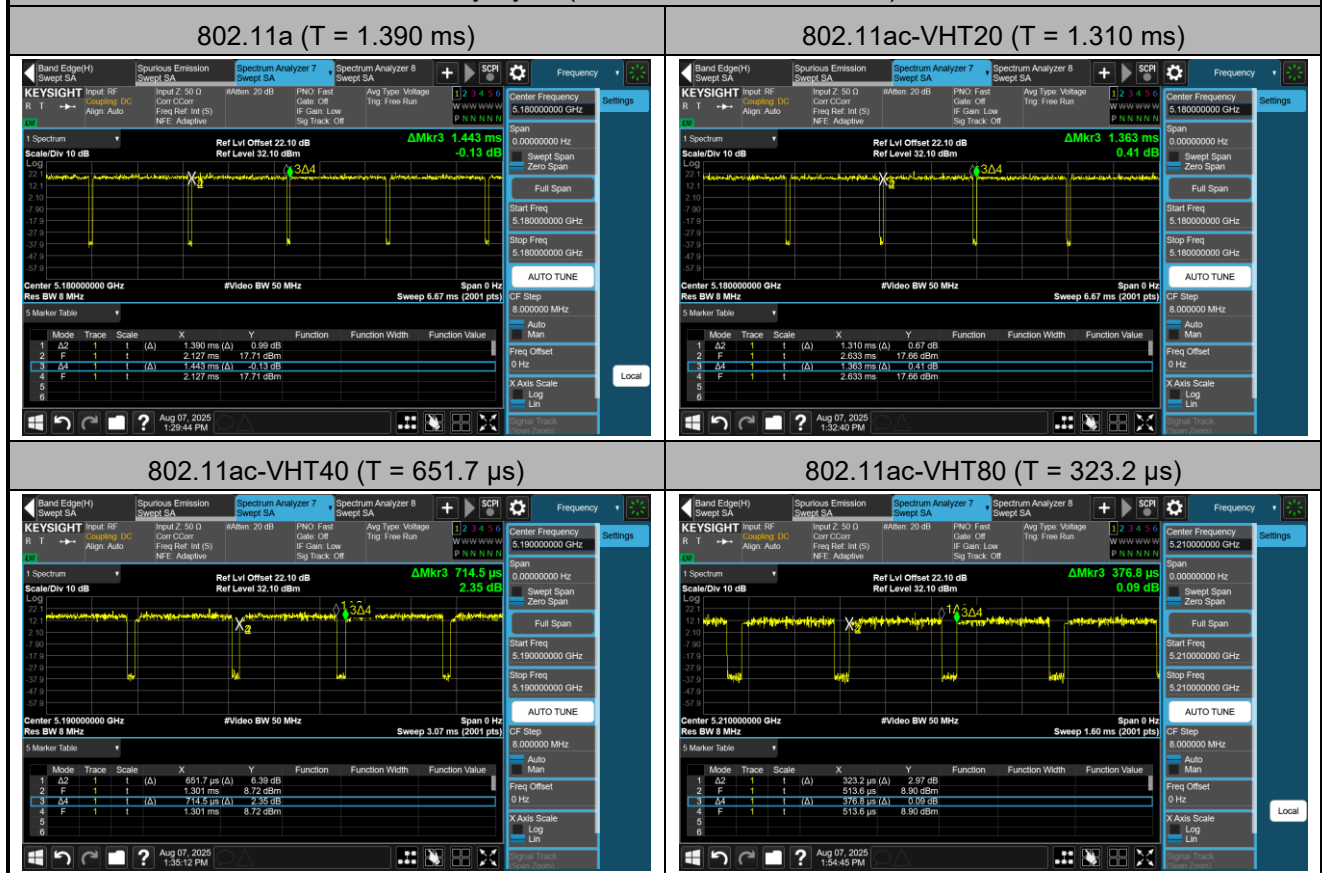
Refer to Appendix A.9.

Appendix A - Test Result

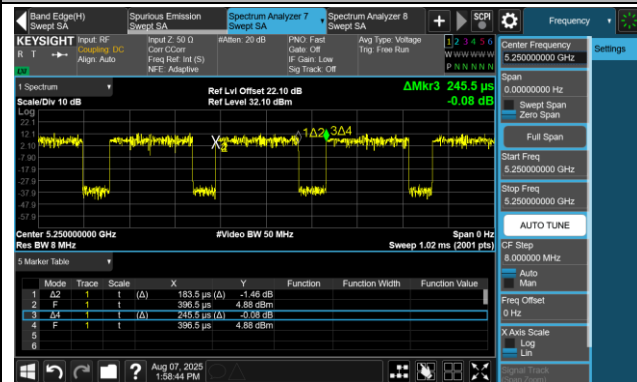
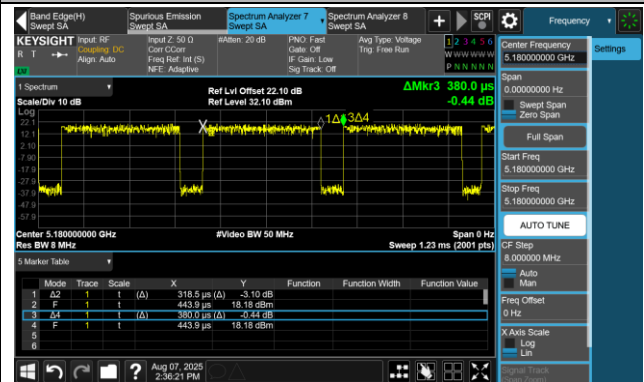
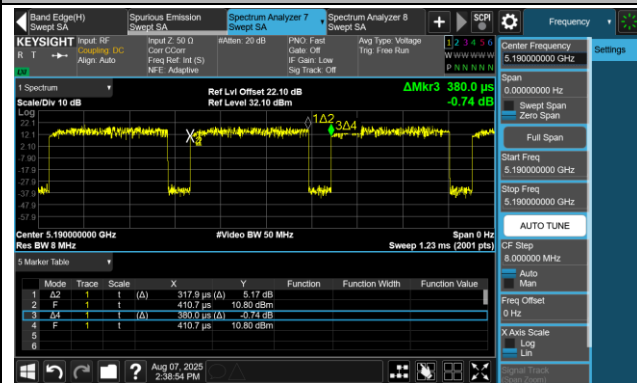
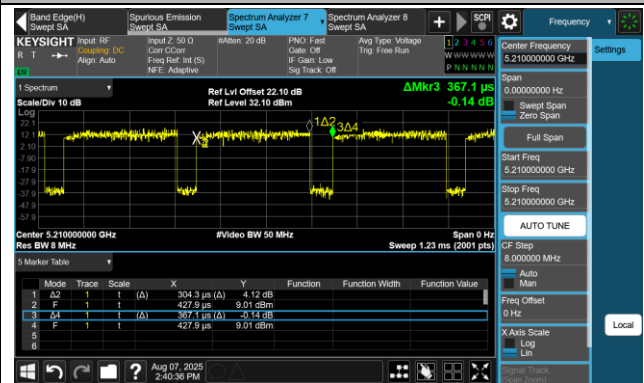
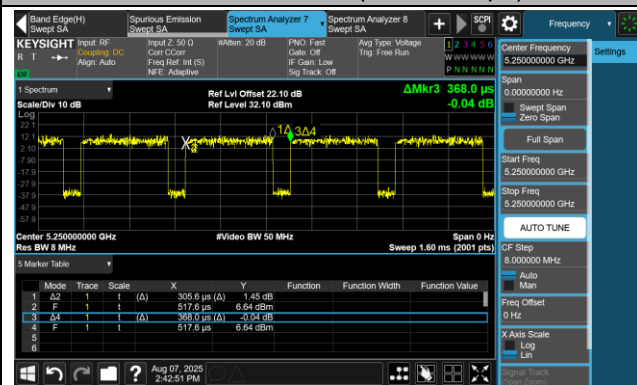
A.1 Duty Cycle Test Result

Test Mode	Duty Cycle	Test Mode	Duty Cycle
11a	96.33%	11be-EHT20	83.82%
11ac-VHT20	96.11%	11be-EHT40	83.66%
11ac-VHT40	91.21%	11be-EHT80	82.89%
11ac-VHT80	85.77%	11be-EHT160	83.04%
11ac-VHT160	74.75%	--	--

Duty Cycle (T = Transmission Duration)



Duty Cycle (T = Transmission Duration)

802.11ac-VHT160 (T = 183.5 μ s)

802.11be-EHT20 (T = 318.5 μ s)

802.11be-EHT40 (T = 317.9 μ s)

802.11be-EHT80 (T = 304.3 μ s)

802.11be-EHT160 (T = 305.6 μ s)


A.2 26 dB Bandwidth Test Result

Test Site	WJ-SR2	Test Engineer	Layla Gui
Test Date	2025-09-01 ~ 2025-09-02		

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	6 Mbps	36	5180	18.71	16.383
11a	6 Mbps	44	5220	18.15	16.375
11a	6 Mbps	48	5240	18.15	16.353
11a	6 Mbps	52	5260	18.23	16.329
11a	6 Mbps	60	5300	18.55	16.389
11a	6 Mbps	64	5320	18.49	16.373
11a	6 Mbps	100	5500	18.35	16.400
11a	6 Mbps	116	5580	18.15	16.371
11a	6 Mbps	140	5700	18.13	16.343
11a	6 Mbps	144	5720	18.21	16.343
11a	6 Mbps	149	5745	18.29	16.356
11a	6 Mbps	157	5785	19.21	16.402
11a	6 Mbps	165	5825	18.24	16.370
11ac-VHT20	MCS0	36	5180	18.91	17.526
11ac-VHT20	MCS0	44	5220	19.00	17.521
11ac-VHT20	MCS0	48	5240	18.89	17.517
11ac-VHT20	MCS0	52	5260	18.76	17.527
11ac-VHT20	MCS0	60	5300	18.74	17.523
11ac-VHT20	MCS0	64	5320	18.74	17.541
11ac-VHT20	MCS0	100	5500	18.88	17.517
11ac-VHT20	MCS0	116	5580	18.96	17.438
11ac-VHT20	MCS0	140	5700	19.97	17.496
11ac-VHT20	MCS0	144	5720	18.77	17.512
11ac-VHT20	MCS0	149	5745	35.96	19.520
11ac-VHT20	MCS0	157	5785	31.45	17.489
11ac-VHT20	MCS0	165	5825	28.71	17.769

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11ac-VHT40	MCS0	38	5190	38.30	35.809
11ac-VHT40	MCS0	46	5230	39.23	35.892
11ac-VHT40	MCS0	54	5270	38.18	35.754
11ac-VHT40	MCS0	62	5310	38.15	35.851
11ac-VHT40	MCS0	102	5510	38.33	35.834
11ac-VHT40	MCS0	110	5550	37.84	35.826
11ac-VHT40	MCS0	134	5670	38.47	35.838
11ac-VHT40	MCS0	142	5710	38.27	38.810
11ac-VHT40	MCS0	151	5755	65.23	36.672
11ac-VHT40	MCS0	159	5795	74.97	36.930
11ac-VHT80	MCS0	42	5210	78.80	75.189
11ac-VHT80	MCS0	58	5290	78.72	75.197
11ac-VHT80	MCS0	106	5530	78.43	75.089
11ac-VHT80	MCS0	122	5610	78.86	75.082
11ac-VHT80	MCS0	138	5690	78.44	75.096
11ac-VHT80	MCS0	155	5775	121.5	75.781
11ac-VHT160	MCS0	50	5250	161.6	153.79
11ac-VHT160	MCS0	114	5570	160.1	153.93
11be-EHT20	MCS0	36	5180	19.80	18.842
11be-EHT20	MCS0	44	5220	19.74	18.853
11be-EHT20	MCS0	48	5240	19.81	18.860
11be-EHT20	MCS0	52	5260	19.86	18.814
11be-EHT20	MCS0	60	5300	19.73	18.833
11be-EHT20	MCS0	64	5320	19.72	18.890
11be-EHT20	MCS0	100	5500	19.83	18.854
11be-EHT20	MCS0	116	5580	19.72	18.854
11be-EHT20	MCS0	140	5700	19.74	18.850
11be-EHT20	MCS0	144	5720	19.87	18.818
11be-EHT20	MCS0	149	5745	19.73	18.957
11be-EHT20	MCS0	157	5785	31.73	19.027
11be-EHT20	MCS0	165	5825	31.21	19.068

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11be-EHT40	MCS0	38	5190	39.85	37.431
11be-EHT40	MCS0	46	5230	40.02	37.524
11be-EHT40	MCS0	54	5270	39.11	37.490
11be-EHT40	MCS0	62	5310	39.05	37.526
11be-EHT40	MCS0	102	5510	39.14	37.470
11be-EHT40	MCS0	110	5550	39.10	37.513
11be-EHT40	MCS0	134	5670	39.06	37.504
11be-EHT40	MCS0	142	5710	39.24	37.498
11be-EHT40	MCS0	151	5755	54.73	38.297
11be-EHT40	MCS0	159	5795	68.90	38.652
11be-EHT80	MCS0	42	5210	79.74	76.690
11be-EHT80	MCS0	58	5290	79.78	76.816
11be-EHT80	MCS0	106	5530	79.75	76.782
11be-EHT80	MCS0	122	5610	79.58	76.859
11be-EHT80	MCS0	138	5690	79.75	76.758
11be-EHT80	MCS0	155	5775	84.49	77.125
11be-EHT160	MCS0	50	5250	162.0	155.80
11be-EHT160	MCS0	114	5570	161.8	155.40

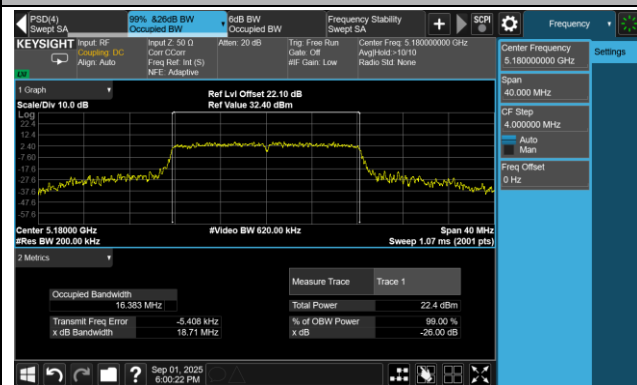
Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	F _H (MHz)	Limit (MHz)
802.11a	6 Mbps	48	5240	5248.18	< 5250
802.11ac-VHT20	MCS0	48	5240	5248.76	< 5250
802.11ac-VHT40	MCS0	46	5230	5247.95	< 5250
802.11ac-VHT80	MCS0	42	5210	5247.59	< 5250
802.11be-EHT20	MCS0	48	5240	5249.43	< 5250
802.11be-EHT40	MCS0	46	5230	5248.76	< 5250
802.11be-EHT80	MCS0	42	5210	5248.35	< 5250

Note: F_H = Centre frequency + 99% OBW / 2.

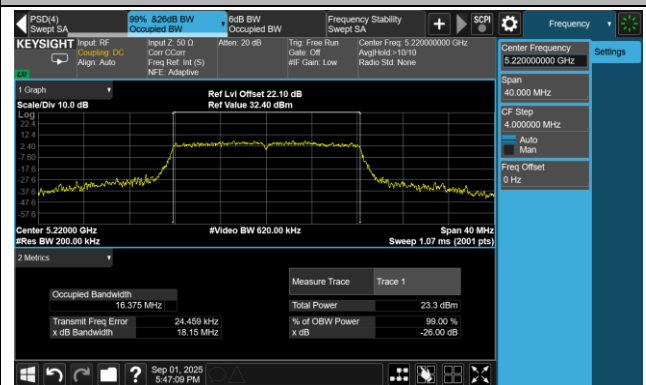
For example, 802.11a 5240 MHz, F_H = 5240 MHz + 16.353 MHz / 2 = 5248.18 MHz.

802.11a 26 dB Bandwidth & 99% Bandwidth

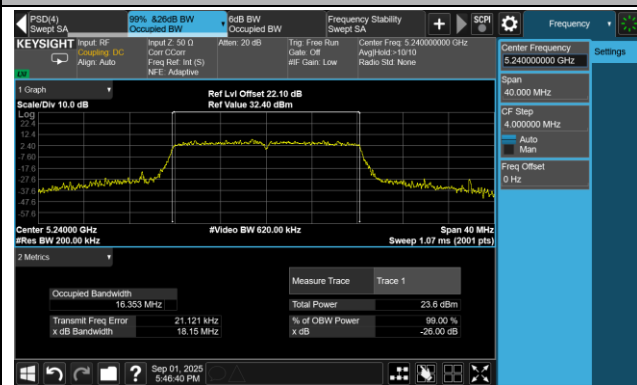
Channel 36 (5180 MHz)



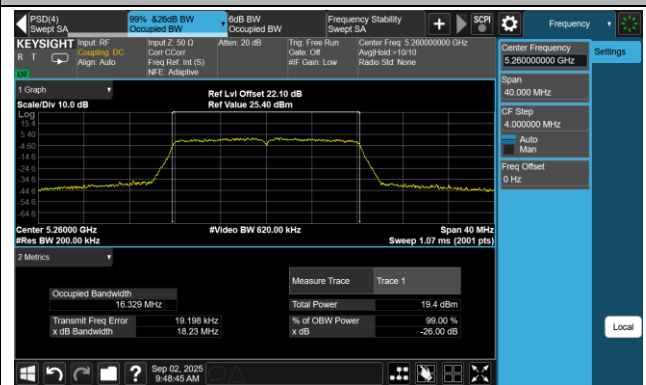
Channel 44 (5220 MHz)



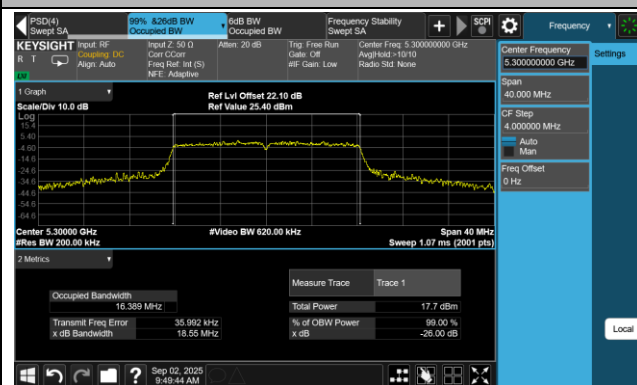
Channel 48 (5240 MHz)



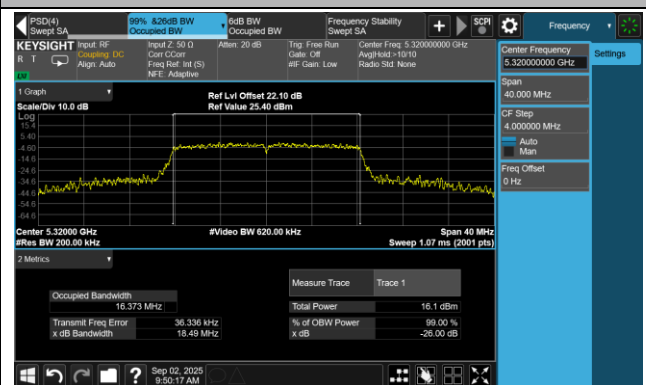
Channel 52 (5260 MHz)



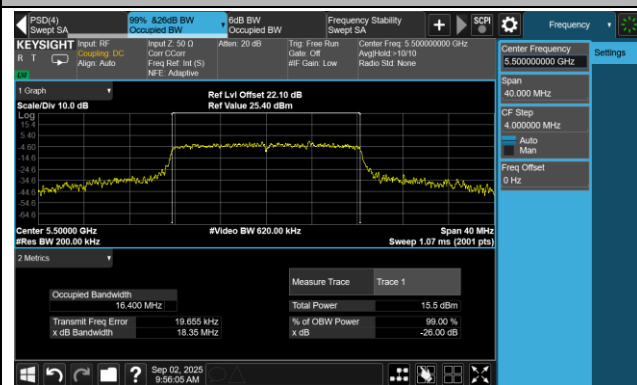
Channel 60 (5300 MHz)



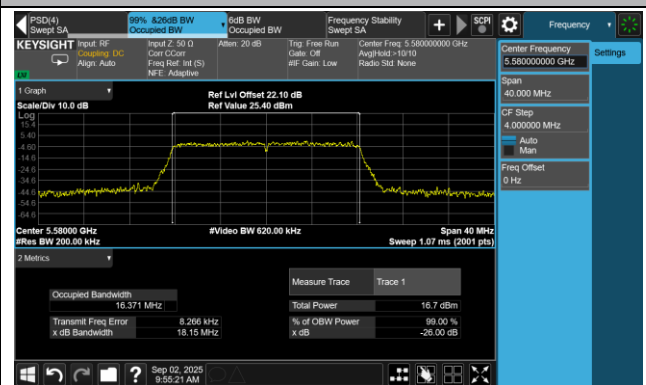
Channel 64 (5320 MHz)



Channel 100 (5500 MHz)

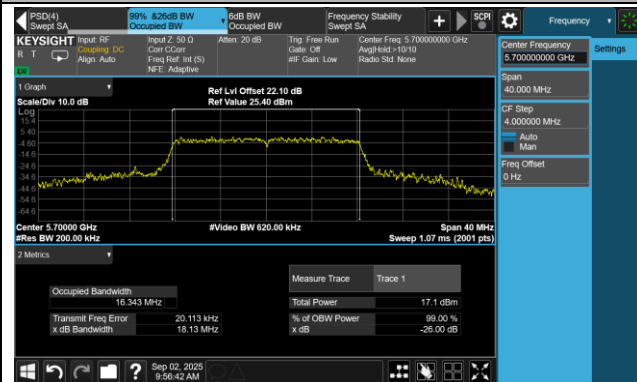


Channel 116 (5580 MHz)

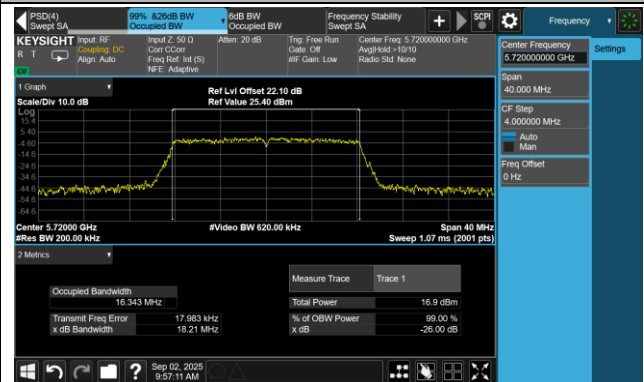


802.11a 26 dB Bandwidth & 99% Bandwidth

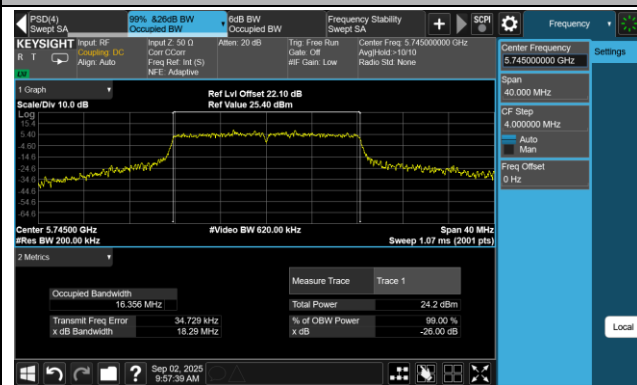
Channel 140 (5700 MHz)



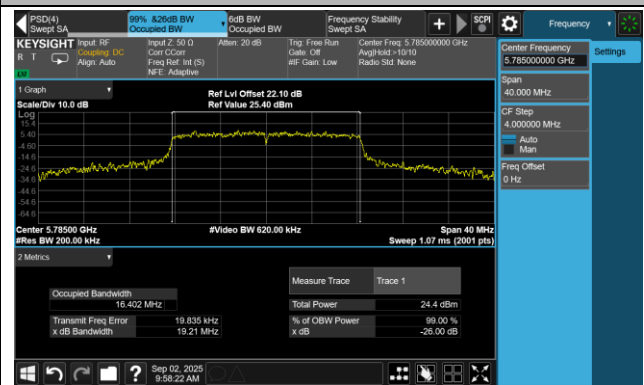
Channel 144 (5720 MHz)



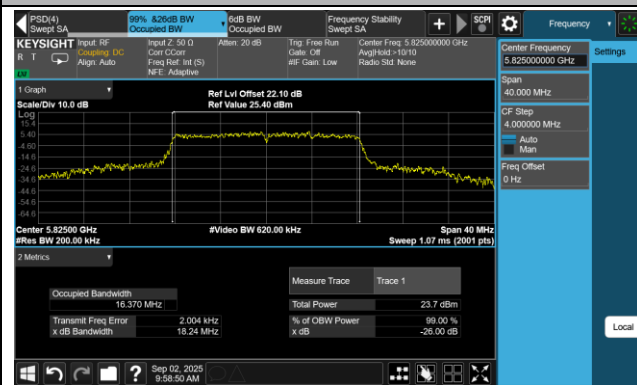
Channel 149 (5745 MHz)



Channel 157 (5785 MHz)

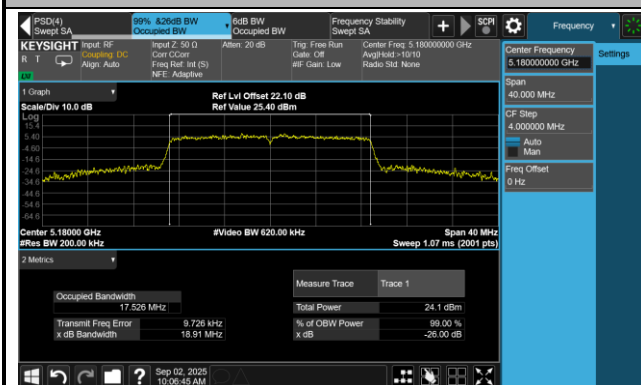


Channel 165 (5825 MHz)

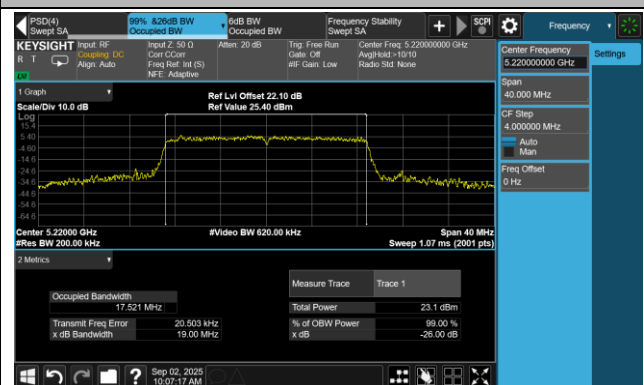


802.11ac-VHT20 26 dB Bandwidth & 99% Bandwidth

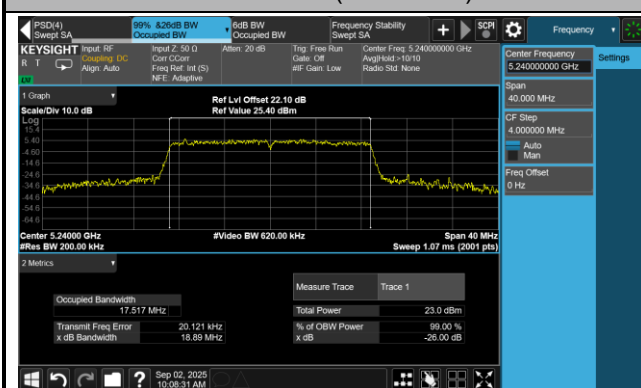
Channel 36 (5180 MHz)



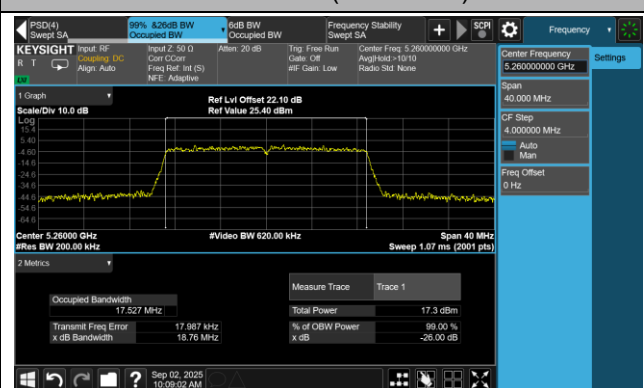
Channel 44 (5220 MHz)



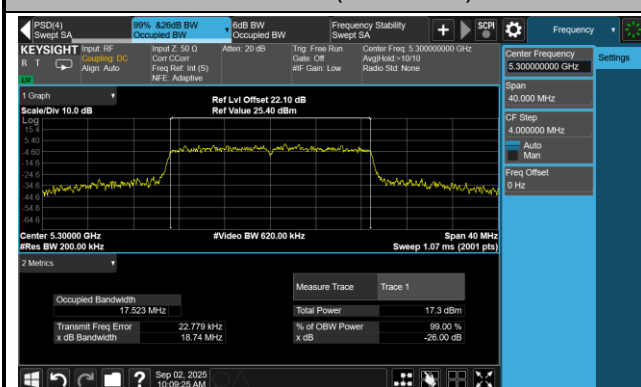
Channel 48 (5240 MHz)



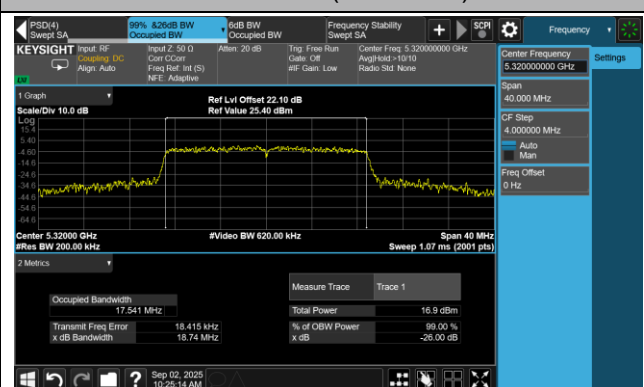
Channel 52 (5260 MHz)



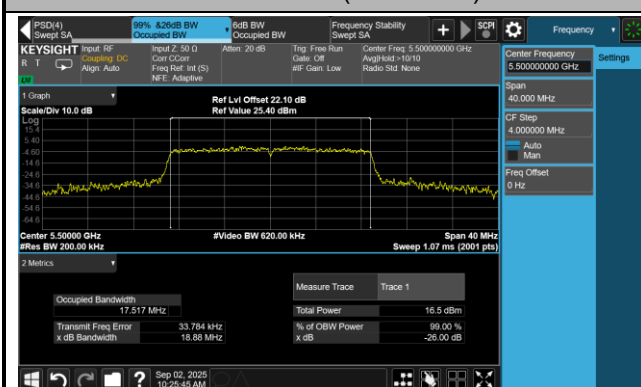
Channel 60 (5300 MHz)



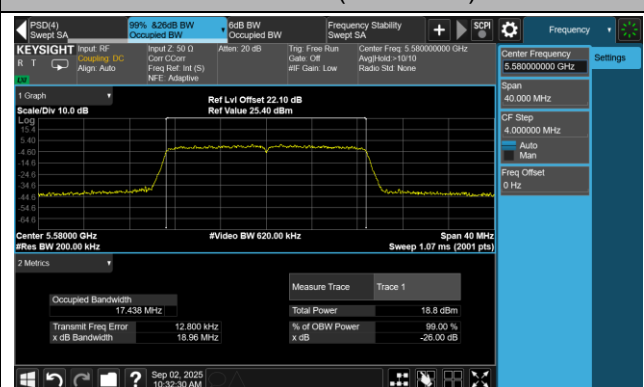
Channel 64 (5320 MHz)



Channel 100 (5500 MHz)

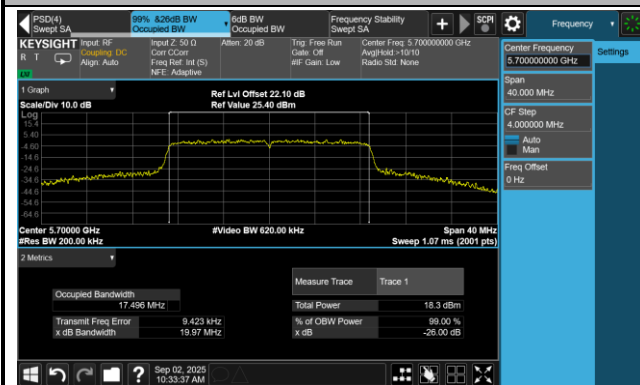


Channel 116 (5580 MHz)

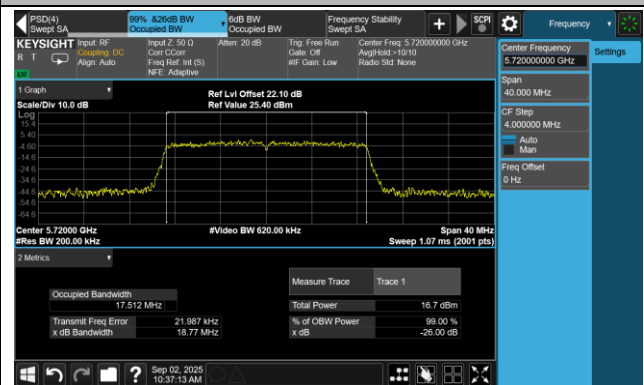


802.11ac-VHT20 26 dB Bandwidth & 99% Bandwidth

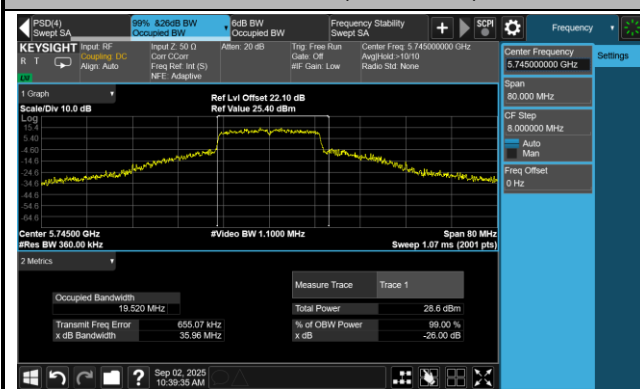
Channel 140 (5700 MHz)



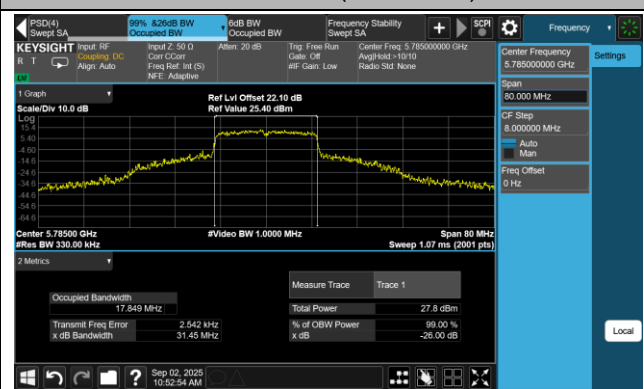
Channel 144 (5720 MHz)



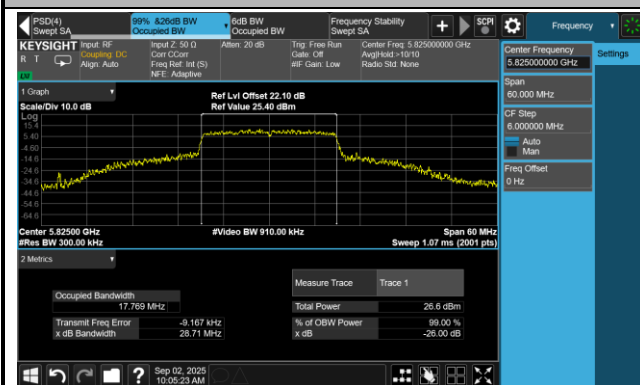
Channel 149 (5745 MHz)



Channel 157 (5785 MHz)

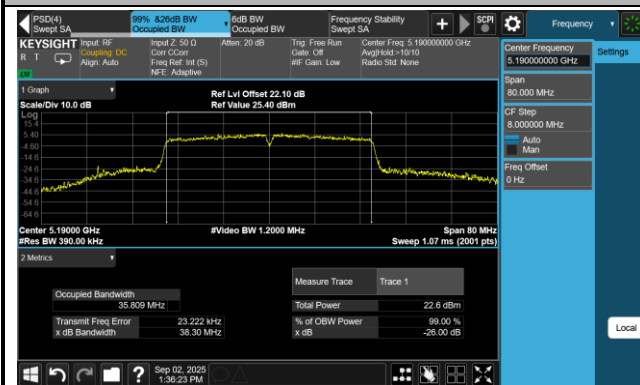


Channel 165 (5825 MHz)

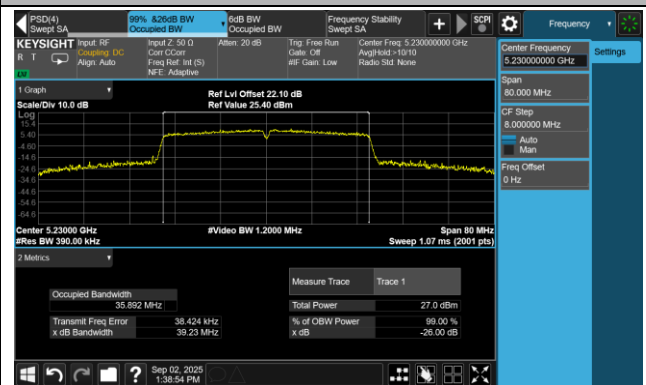


802.11ac-VHT40 26 dB Bandwidth & 99% Bandwidth

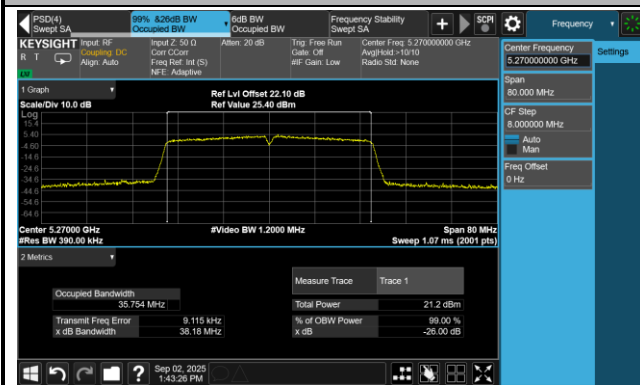
Channel 38 (5190 MHz)



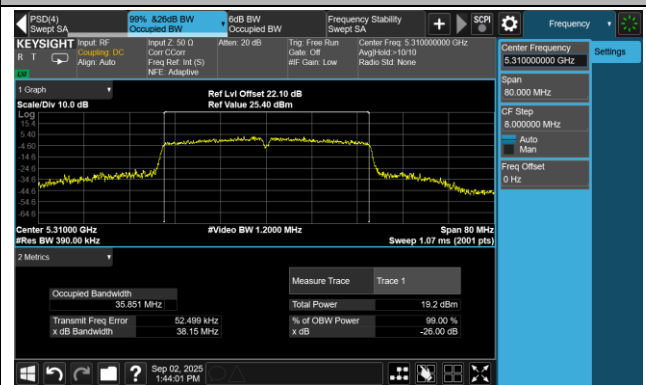
Channel 46 (5230 MHz)



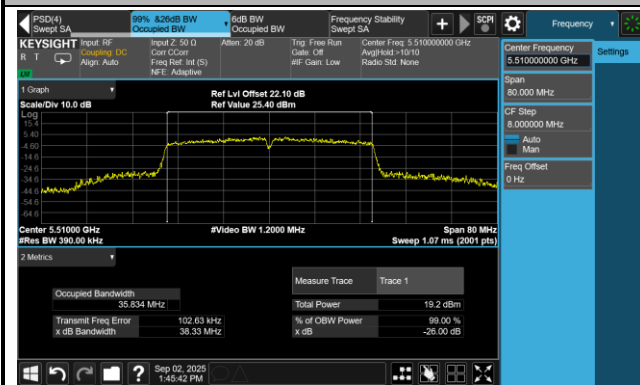
Channel 54 (5270 MHz)



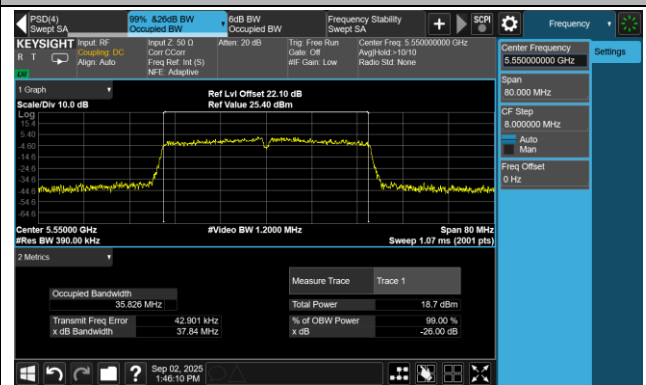
Channel 62 (5310 MHz)



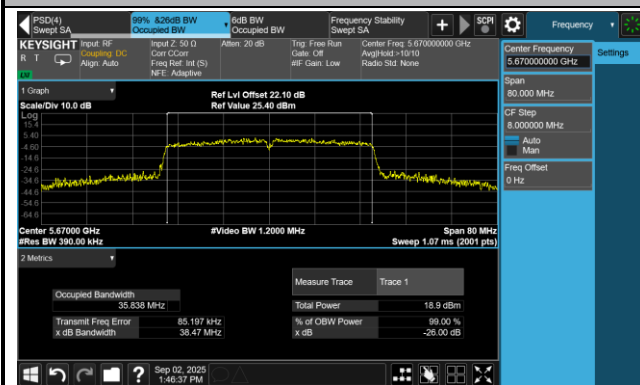
Channel 102 (5510 MHz)



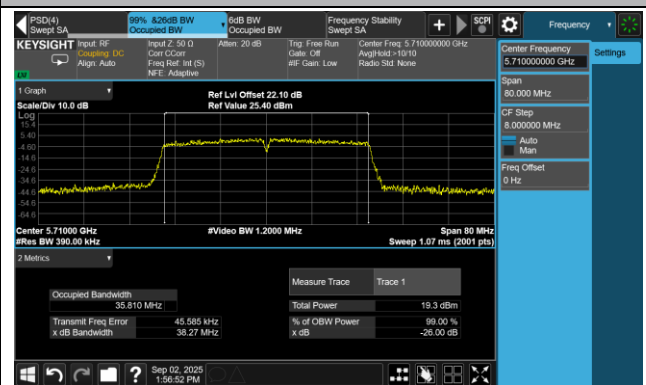
Channel 110 (5550 MHz)

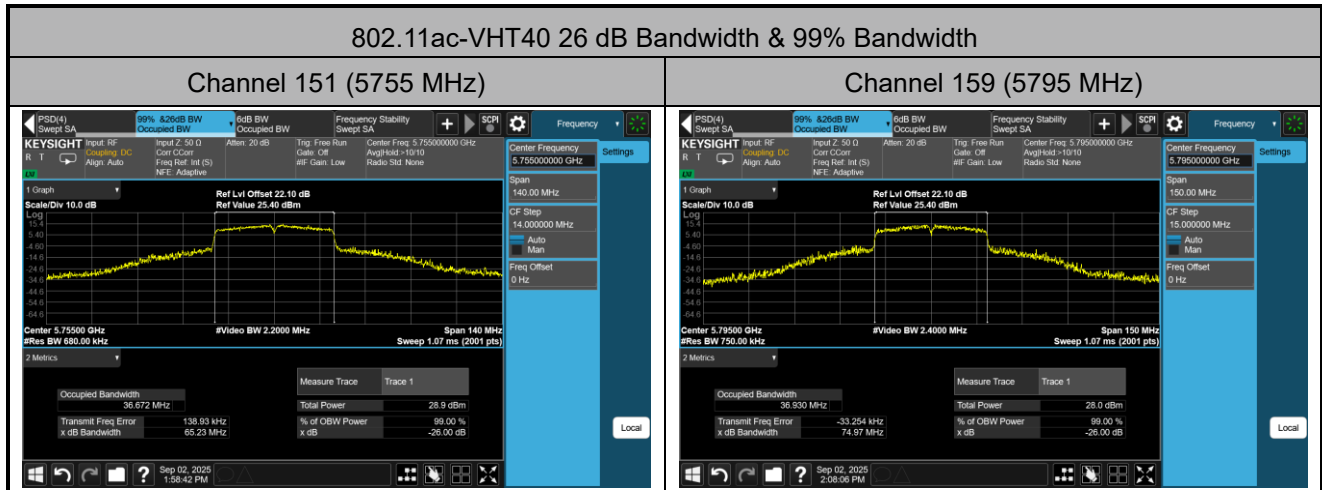


Channel 134 (5670 MHz)



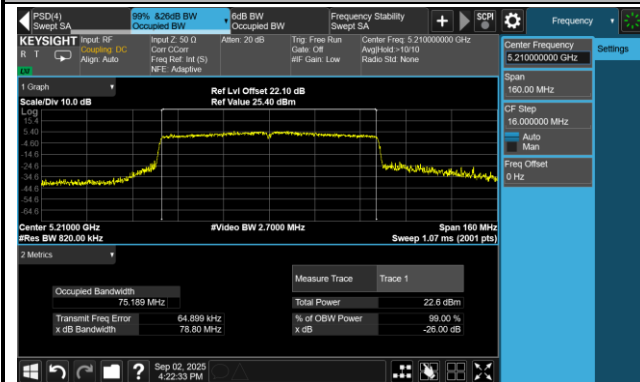
Channel 142(5710 MHz)



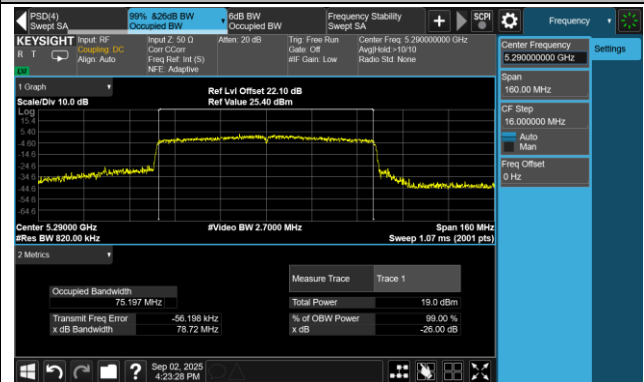


802.11ac-VHT80 26 dB Bandwidth & 99% Bandwidth

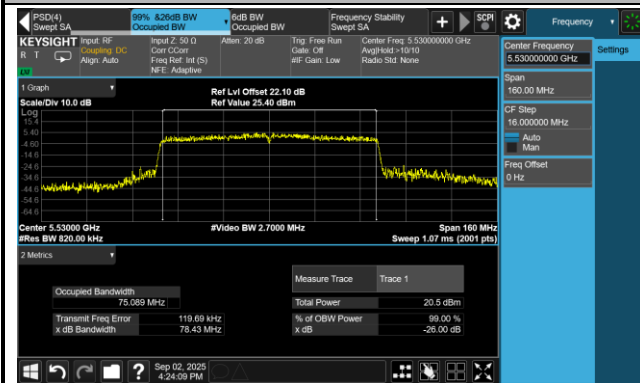
Channel 42 (5210 MHz)



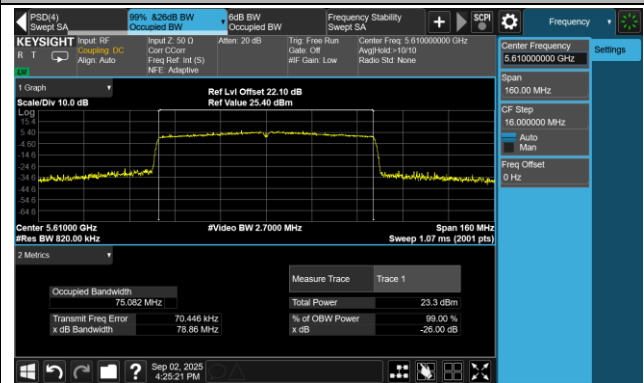
Channel 58 (5290 MHz)



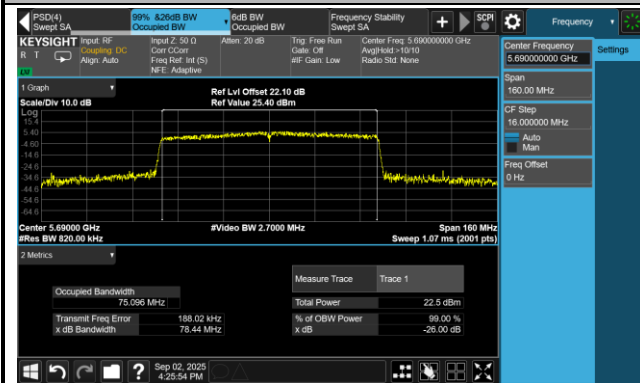
Channel 106 (5530 MHz)



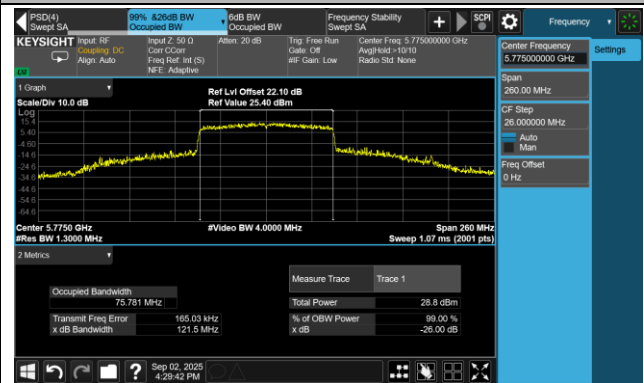
Channel 122 (5610 MHz)

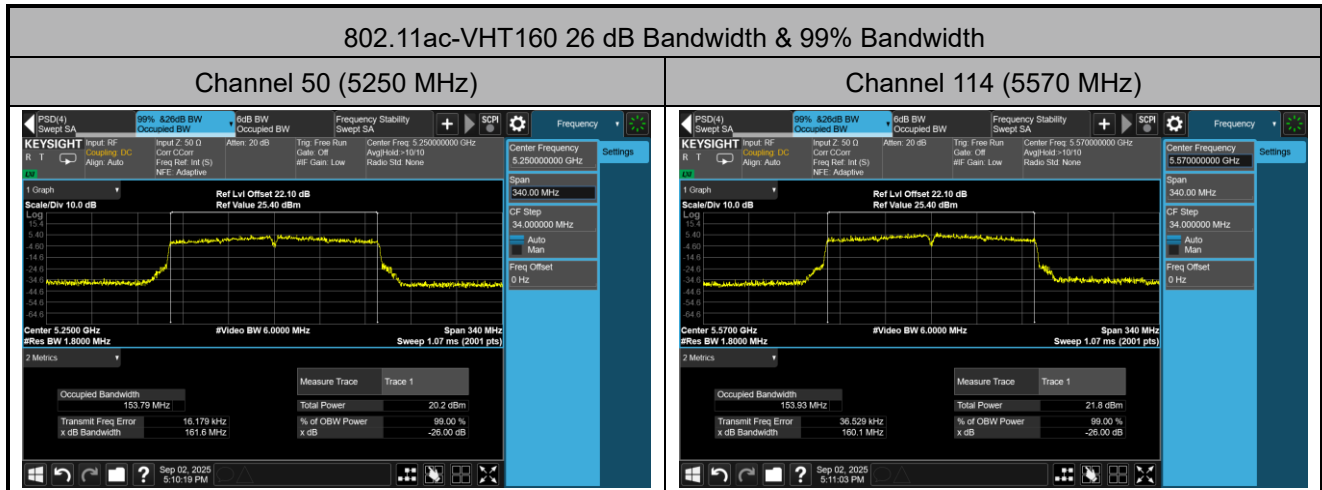


Channel 138 (5690 MHz)



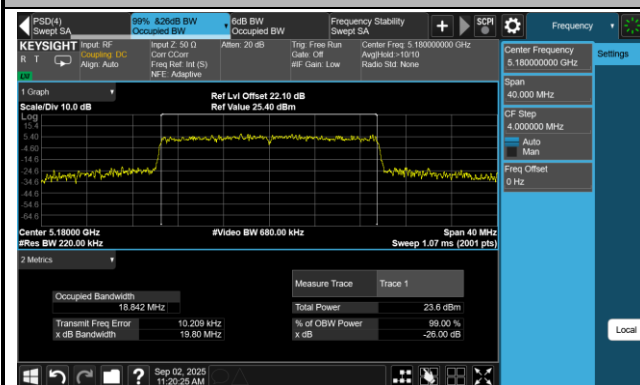
Channel 155 (5775 MHz)



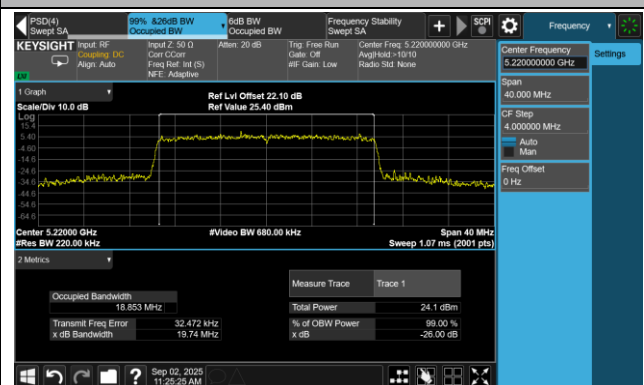


802.11be-EHT20 26 dB Bandwidth & 99% Bandwidth

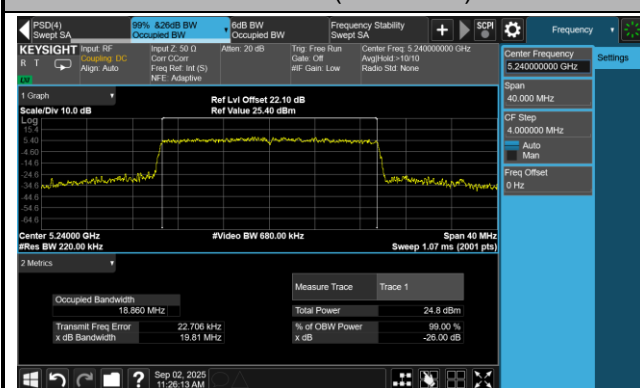
Channel 36 (5180 MHz)



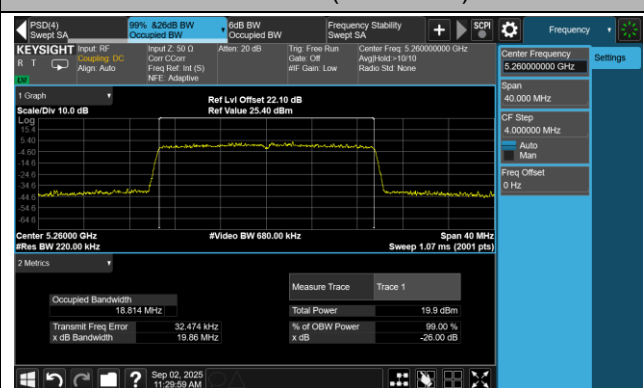
Channel 44 (5220 MHz)



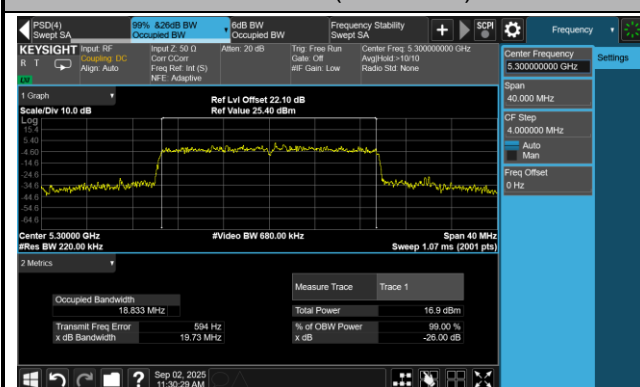
Channel 48 (5240 MHz)



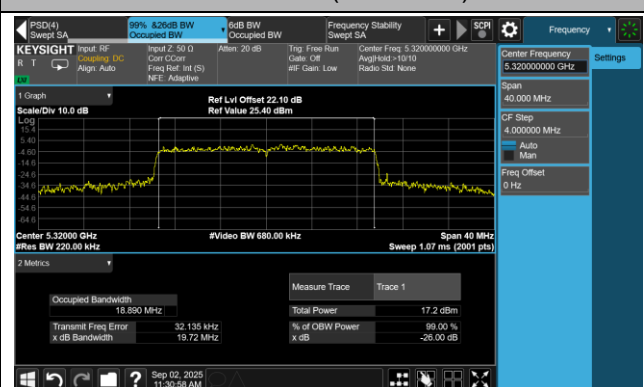
Channel 52 (5260 MHz)



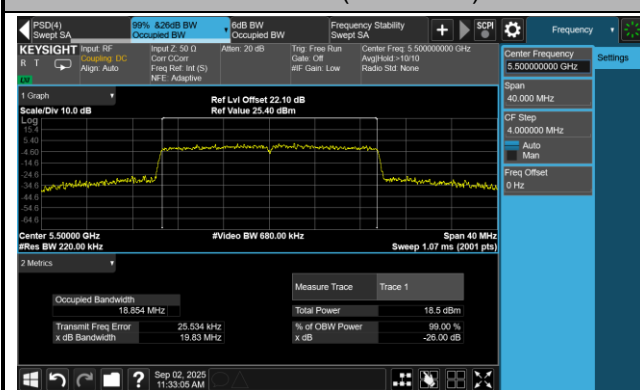
Channel 60 (5300 MHz)



Channel 64 (5320 MHz)



Channel 100 (5500 MHz)



Channel 116 (5580 MHz)

