



RF MEASUREMENT REPORT

FCC ID: HD5-CT32X0
Applicant: Honeywell International Inc
Product: Mobile Computer
Model No.: CT32X0
Brand Name: Honeywell
FCC Classification: 15E 6GHz Dual Client (6CD)
FCC Rule Part(s): Part 15 Subpart E (Section 15.407)
Result: Complies
Received Date: 2024-12-26
Test Date: 2025-01-07 ~ 2025-03-20

Reviewed By:

Jame Yuan

Jame Yuan

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 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
2412RSU045-U9	V01	Initial Report	2025-03-10	Invalid
2412RSU045-U9	V02	1. Add test data of duty cycle for partial RU; 2. Add one description for CBP.	2025-03-21	Valid

CONTENTS

Description	Page
1. General Information	6
1.1. Applicant	6
1.2. Manufacturer	6
1.3. Testing Facility	6
1.4. Product Information	7
1.5. Radio Specification under Test	7
1.6. Working Frequencies	8
1.7. Antenna Details	10
2. Test Configuration	11
2.1. Test Mode	11
2.2. Test System Connection Diagram	12
2.3. Test Software	13
2.4. Applied Standards	14
2.5. Test Environment Condition	14
3. Antenna Requirements	15
4. Measuring Instrument	16
5. Decision Rules and Measurement Uncertainty	17
5.1. Decision Rules	17
5.2. Measurement Uncertainty	17
6. Test Result	18
6.1. Summary	18
6.2. 26dB Bandwidth Measurement	19
6.2.1. Test Limit	19
6.2.2. Test Procedure	19
6.2.3. Test Setting	19
6.2.4. Test Setup	20
6.2.5. Test Result	20
6.3. Output Power Measurement	21
6.3.1. Test Limit	21
6.3.2. Test Procedure	21
6.3.3. Test Setting	21
6.3.4. Test Setup	21
6.3.5. Test Result	21
6.4. Power Spectral Density Measurement	22
6.4.1. Test Limit	22

6.4.2.	Test Procedure	22
6.4.3.	Test Setting	22
6.4.4.	Test Setup	23
6.4.5.	Test Result	23
6.5.	In-Band Emission Measurement.....	24
6.5.1.	Test Limit.....	24
6.5.2.	Test Procedure	24
6.5.3.	Test Setting	24
6.5.4.	Test Setup	25
6.5.5.	Test Result	25
6.6.	Frequency Stability Measurement	26
6.6.1.	Test Limit.....	26
6.6.2.	Test Procedure	26
6.6.3.	Test Setup	26
6.6.4.	Test Result	27
6.7.	Contention Based Protocol Measurement	28
6.7.1.	Test Limit.....	28
6.7.2.	Test Procedure	28
6.7.3.	Test Setting	28
6.7.4.	Test Setup	29
6.7.5.	Test Result	29
6.8.	Proper Power Adjustment, Client Devices Connected to a Standard Power Access Point (APC).....	30
6.8.1.	Test Limit.....	30
6.8.2.	Test Procedure	30
6.8.3.	Test Setting	30
6.8.4.	Test Setup	30
6.8.5.	Test Result	31
6.9.	Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP	32
6.9.1.	Test Limit.....	32
6.9.2.	Test Procedure	32
6.9.3.	Test Setting	32
6.9.4.	Test Setup	33
6.9.5.	Test Result	33
6.10.	Radiated Spurious Emission Measurement	34
6.10.1.	Test Limit.....	34
6.10.2.	Test Procedure	34
6.10.3.	Test Setting	35
6.10.4.	Test Setup	37
6.10.5.	Test Result	38

6.11.	Radiated Restricted Band Edge Measurement	39
6.11.1.	Test Limit	39
6.11.2.	Test Procedure	41
6.11.3.	Test Setting	41
6.11.4.	Test Setup	42
6.11.5.	Test Result	42
6.12.	AC Conducted Emissions Measurement	43
6.12.1.	Test Limit	43
6.12.2.	Test Setup	43
6.12.3.	Test Result	43
Appendix A	- Test Result.....	44
A.1	Duty Cycle Test Result	44
A.2	26dB Bandwidth Test Result	47
A.3	Output Power Test Result	61
A.4	Power Spectral Density Test Result	69
A.5	In-Band Emission Measurement.....	133
A.6	Frequency Stability Test Result	155
A.7	Contention Based Protocol Test Result.....	156
A.8	Proper Power Adjustment, Client Devices Connected to a Standard Power Access Point (APC) Test Result.....	176
A.9	Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP Test Result.....	178
A.10	Radiated Spurious Emission Test Result	180
A.11	Radiated Restricted Band Edge Test Result	249
A.12	AC Conducted Emissions Test Result.....	297
Appendix B	- Test Setup Photograph.....	301
Appendix C	- EUT Photograph	302

1. General Information

1.1. Applicant

Honeywell International Inc

9680 Old Bailes Rd. Fort Mill, SC 29707 United States

1.2. Manufacturer

Honeywell International Inc

9680 Old Bailes Rd. Fort Mill, SC 29707 United States

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
		☐ R-20141	☐ G-20134	☐ C-20103
☐	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	
☐	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		ISED: TW3261	

1.4. Product Information

Product Name	Mobile Computer
Model No.	CT32X0
Brand Name	Honeywell
EUT Identification No.	20241226Sample#12 (For conducted testing) 20241226Sample#13 (For radiated testing with S0803FR scan engine) 20241226Sample#11 (For radiated testing with S0703 scan engine)
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Bluetooth Specification	V5.2 dual mode
NFC	13.56 MHz
Antenna Information	Refer to Section 1.7
Power Type	By Li-ion Battery
Accessories	
Rechargeable Li-ion Battery	Model No.: EDA52-BAT-US Nominal Voltage: 3.8V Rated Capacity: 17.1 Wh, 4500 mAh
Adapter	Model No.: ADS-12B-06 05010E Input: 100-240 V ~ 50/60 Hz, Max 0.3 A Output: 5 V = 2 A 10.0 W
Remarks:	
1. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	
2. The Mobile Computer has two types of Scan engines (S0703 and S0803FR). The Full Radiated Spurious emission test is performed on Mobile Computer with S0803FR Scan engine, and spot check (Radiated Spurious emission) with Model S0703.	

1.5. Radio Specification under Test

Frequency Range	For 802.11ax-HE20: 5955 ~ 7115MHz For 802.11ax-HE40: 5965 ~ 7085MHz For 802.11ax-HE80: 5985 ~ 7025MHz For 802.11ax-HE160: 6025 ~ 6985MHz	
Type of Modulation	802.11ax: OFDMA	
Data Rate	802.11ax: up to 2402Mbps	
Channel Puncturing Function	☐ Supported	☒ Unsupported
Support RU	☒ Full RU	☒ Partial RU

1.6. Working Frequencies

802.11ax-HE20

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
97	6435 MHz	101	6455 MHz	105	6475 MHz
109	6495 MHz	113	6515 MHz	117	6535 MHz
121	6555 MHz	125	6575 MHz	129	6595 MHz
133	6615 MHz	137	6635 MHz	141	6655 MHz
145	6675 MHz	149	6695 MHz	153	6715 MHz
157	6735 MHz	161	6755 MHz	165	6775 MHz
169	6795 MHz	173	6815 MHz	177	6835 MHz
181	6855 MHz	185	6875 MHz	189	6895 MHz
193	6915 MHz	197	6935 MHz	201	6955 MHz
205	6975 MHz	209	6995 MHz	213	7015 MHz
217	7035 MHz	221	7055 MHz	225	7075 MHz
229	7095 MHz	233	7115 MHz	--	--

802.11ax-HE40

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
99	6445 MHz	107	6485 MHz	115	6525 MHz
123	6565 MHz	131	6605 MHz	139	6645 MHz
147	6685 MHz	155	6725 MHz	163	6765 MHz
171	6805 MHz	179	6845 MHz	187	6885 MHz
195	6925 MHz	203	6965 MHz	211	7005 MHz
219	7045 MHz	227	7085 MHz		--

802.11ax-HE80

Channel	Frequency	Channel	Frequency	Channel	Frequency
7	5985 MHz	23	6065 MHz	39	6145 MHz
55	6225 MHz	71	6305 MHz	87	6385 MHz
103	6465 MHz	119	6545 MHz	135	6625 MHz
151	6705 MHz	167	6785 MHz	183	6865 MHz
199	6945 MHz	215	7025 MHz		--

802.11ax-HE160

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

1.7. Antenna Details

Antenna Type	Frequency Band (MHz)	Antenna Gain (dBi)		Directional Gain (dBi)	
		Ant 0	Ant 1	Uncorrelated (For Power)	Correlated (For PSD)
Wi-Fi Antennas					
LDS	2400 ~ 2500	2.71	2.42	2.71	5.72
	5150 ~ 5250	3.42	3.05	3.42	6.43
	5250 ~ 5350	3.38	3.09	3.38	6.39
	5470 ~ 5725	3.41	3.13	3.41	6.42
	5725 ~ 5850	3.54	3.09	3.54	6.55
	5925 ~ 6425	3.82	2.94	3.82	6.83
	6425 ~ 6525	3.74	2.96	3.74	6.75
	6525 ~ 6875	3.68	3.14	3.68	6.69
	6875 ~ 7125	3.72	3.22	3.72	6.73
Note: The EUT supports Cyclic Delay Diversity (CDD) mode, For CDD transmissions, directional gain is calculated as follows. Directional gain = $G_{ANT\ Max} + \text{Array Gain}$, where Array Gain is as follows. - For power spectral density (PSD) measurements on all devices, Array Gain = $10 \log (N_{ANT}/ N_{SS})$ dB; - For power measurements on IEEE 802.11 devices, Array Gain = 0 dB for $N_{ANT} \leq 4$;					

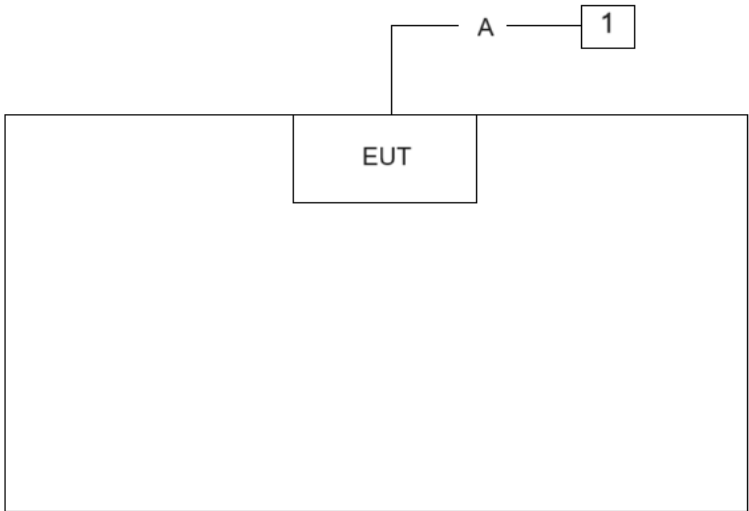
2. Test Configuration

2.1. Test Mode

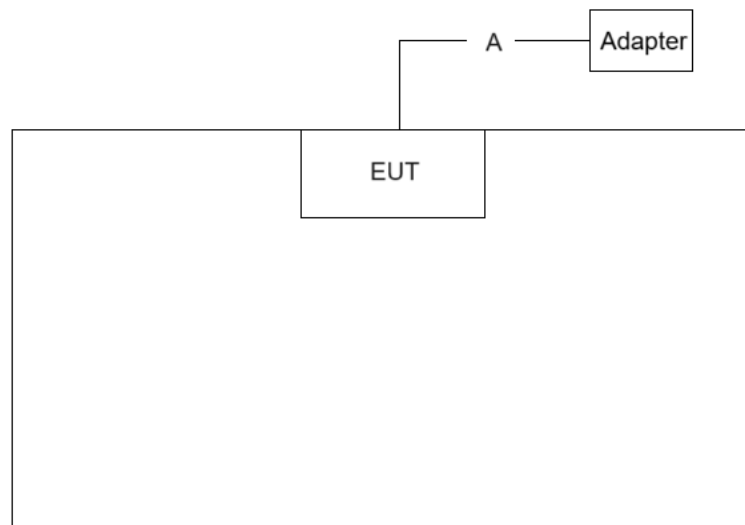
Mode 1: Transmit by 802.11ax-HE20_Nss=1 (MCS0)
Mode 2: Transmit by 802.11ax-HE40_Nss=1 (MCS0)
Mode 3: Transmit by 802.11ax-HE80_Nss=1 (MCS0)
Mode 4: Transmit by 802.11 ax-HE160_Nss=1 (MCS0)
Notes: 1. All modes of operation and data rates were investigated, so all RF test requirements shall be executed at the worst data rate. 2. For CDD mode, this device supports 2NSS and power level is the same of spatial multiplexing. The worst case is Nss=1. 3. the EUT supports 26/52/106/242/484/996/2*996-tone RU, the PSD of the partial RU has been minimized to be less than full RU. 4. The 242-tone RU is covered by 20MHz channel, 484-tone RU is covered by 40MHz channel, 996-tone RU is covered by 80MHz channel and 2*996-tone RU is covered by 160MHz channel.

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			
Connection Diagram – Radiated Emission testing			
			
Cable Type		Cable Description	Length
A	USB Cable	Shielded	1.2m
Product		Manufacturer	Model No.
1	Notebook	HP	445R G6

Connection Diagram – AC Conducted Emissions



Cable Type		Cable Description	Length
A	USB Cable	Shielded	1.2m

2.3. Test Software

The test utility software used during testing was “QRCT”, and the version was 4.0.209.0.

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 D02v03
- FCC KDB 987594 D04v03
- 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 §15.203 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	MRTSUE06185	1 year	2025-12-05	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06619	1 year	2025-10-16	SIP-AC3
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06646	1 year	2025-07-29	SIP-AC3
Signal Analyzer	Keysight	N9010B	MRTSUE06603	1 year	2025-09-05	SIP-AC3
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2026-01-05	SIP-AC3
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06599	1 year	2025-09-08	SIP-AC3
Preamplifier	EMCI	EMC184045SE	MRTSUE06602	1 year	2025-10-08	SIP-AC3
Active Loop Antenna	Schwarzbeck	FMZB 1519-60 D	MRTSUE07075	1 year	2025-11-19	SIP-AC3
Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2025-07-07	SIP-AC3
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2025-12-19	SIP-AC3
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2025-05-08	SIP-SR2
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2025-05-08	SIP-SR2
Thermohygrometer	testo	608-H1	MRTSUE06621	1 year	2025-10-29	SIP-SR2
Shielding Room	MIX-BEP	SIP-SR2	MRTSUE06949	5 years	2029-10-13	SIP-SR2
USB Power Sensor	Keysight	U2021XA	MRTSUE06596	1 year	2025-07-23	SIP-TR1
Pxle Microwave Vector Signal Source test set	Keysight	M9384B	MRTSUE06994	1 year	2025-12-23	SIP-TR1
Temperature Chamber	BAOYT	BYG-408CS	MRTSUE06847	1 year	2025-02-03	SIP-TR1
				1 year	2026-01-21	SIP-TR1
Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2025-06-21	SIP-TR1
Thermohygrometer	testo	608-H1	MRTSUE11022	1 year	2025-10-16	SIP-TR1
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 Generator	Keysight	N5182B	MRTSUE06993	1 year	2025-07-18	WZ-SR5
Frequency extender for EXG or MXG	Keysight	N5182BX07	MRTSUE06984	1 year	2025-02-03	WZ-SR5
				1 year	2026-01-21	WZ-SR5

Software	Version	Function
e3	230711	EMI Test Software
Agilent Power Analyzer/Agilent Power Panel	V R03.09.00	Power
Controller_MF 7802BS	1.02	RE Antenna & Turntable

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

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

5.2. Measurement Uncertainty

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

AC Conducted Emission Measurement	
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% ($U=2U_c(y)$):	
2.2dB	
Output Power	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$):	
1.4dB	
Power Spectrum Density	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$):	
2.2dB	
Occupied Bandwidth	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$):	
2.7%	

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.407(a)	26dB Bandwidth	Conducted	Pass
15.407(a)(7), (a)(8)	Maximum Equivalent Isotropically Radiated Power (EIRP)		Pass
15.407(a)(7), (a)(8)	Maximum Power Spectral Density (EIRP)		Pass
15.407(g)	Frequency Stability		Pass
15.407(b)(7)	In-Band Emission		Pass
15.407(d)(6)	Contention-Based Protocol		Pass
15.407(a)(7)	Proper Power Adjustment, Client Devices Connected to a Standard Power Access Point (APC)		Pass
15.407(a)(7)	Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP		Pass
15.407(b)(6)	Unwanted Emissions	Radiated	Pass
15.205, 15.209 15.407(b)(8), (9), (10)	General Field Strength (Restricted Bands and Radiated Emission)		Pass
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	Pass

Notes:

- 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.
- 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.
- The full RU has higher power levels than partial RU, therefore full test was performed for full RU. For partial RU, we do some spot check testing on partial items "Maximum Equivalent Isotropically Radiated Power (EIRP)" and "Maximum Power Spectral Density (EIRP)".
- The Mobile Computer has two types of scan engines (S0703 and S0803FR), these differences don't involve PCB board. So we do the full test with engine S0803FR and spot check "Radiated Spurious Emission" with engine S0703.

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

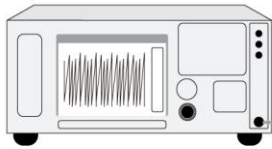
1. The analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth
2. RBW = approximately 1% of the emission bandwidth.
3. VBW > RBW
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission.
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. $VBW \geq 3 \times RBW$
4. Span = 1.5 times to 5 times the OBW
5. Detector = peak
6. Trace mode = max hold
7. Allow the trace to stabilize
8. Use the 99% power bandwidth function of the instrument.

6.2.4. Test Setup

Spectrum Analyzer



DC Block
&
Attenuator



EUT



6.2.5. Test Result

Refer to Appendix A.2.

6.3. Output Power Measurement

6.3.1. Test Limit

For client devices, except for fixed client devices as defined in this subpart, operating under the control of a standard power access point in 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 30 dBm and the device must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power.

For client devices operating under the control of an indoor access point in the 5.925–7.125 GHz bands, the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.

6.3.2. Test Procedure

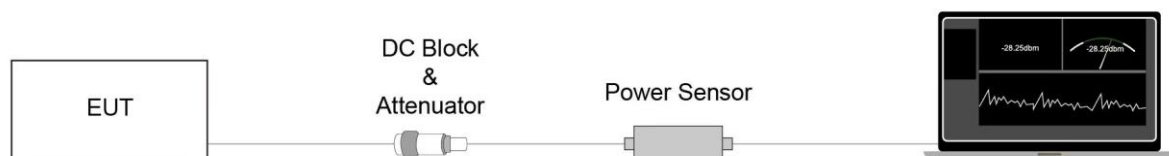
KDB 789033D02v02r01- Section II(E)3)b) Method PM-G

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.3.

6.4. Power Spectral Density Measurement

6.4.1. Test Limit

For client devices, except for fixed client devices as defined in this subpart, operating under the control of a standard power access point in 5.925–6.425 GHz and 6.525–6.875 GHz bands, the maximum power spectral density must not exceed 17 dBm e.i.r.p. in any 1-megahertz band.

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

6.4.2. Test Procedure

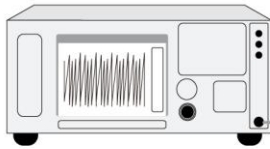
KDB 789033 D02v02r01-Section II)F)

6.4.3. Test Setting

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

6.4.4. Test Setup

Spectrum Analyzer



DC Block
&
Attenuator



EUT



6.4.5. Test Result

Refer to Appendix A.4.

6.5. In-Band Emission Measurement

6.5.1. Test Limit

Suppressed by 20 dB at 1 MHz outside of the channel edge.

(The channel edge is defined as the 26-dB point on either side of the carrier center frequency.)

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

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

6.5.2. Test Procedure

KDB 987594 D02v03- Section II)J

6.5.3. Test Setting

Emissions Mask Reference Level Measurement

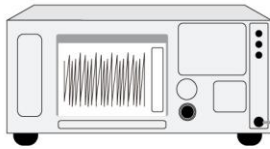
1. Set the span to encompass the entire 26 dB EBW of the signal.
2. Set RBW = same RBW used for 26 dB EBW measurement.
3. Set VBW $\geq 3 \times$ RBW.
4. Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$.
5. Sweep time = auto.
6. Detector = RMS.
7. Trace average at least 100 traces 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

Spectrum Analyzer



DC Block
&
Attenuator



EUT



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Frequency Stability Measurement

6.6.1. Test Limit

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

6.6.2. Test Procedure

Frequency Stability Under Temperature Variations:

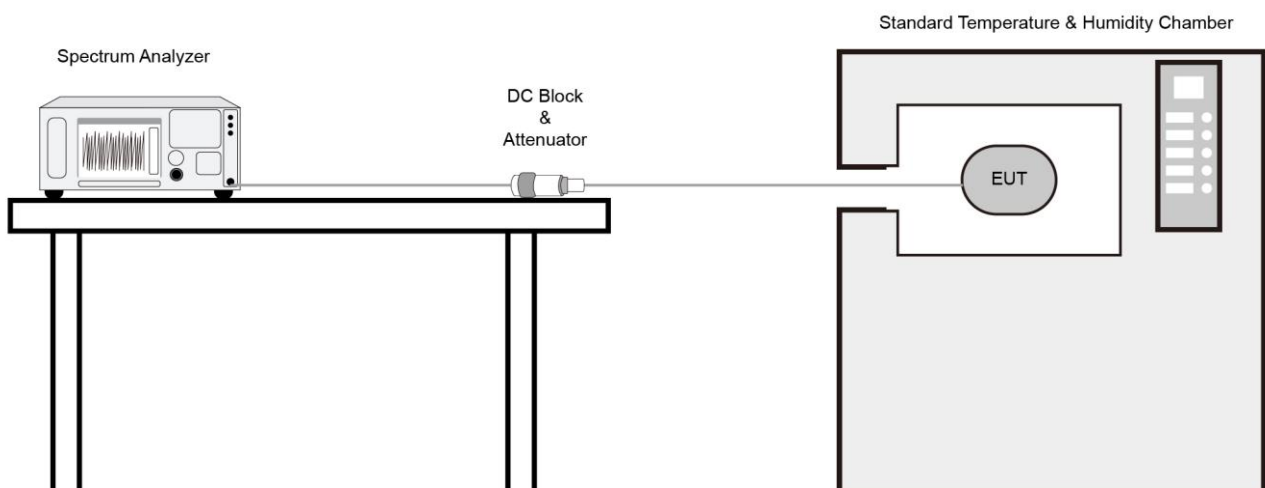
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain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

Frequency Stability Under Voltage Variations:

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

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

6.6.3. Test Setup



6.6.4. Test Result

Refer to Appendix A.6.

6.7. Contention Based Protocol Measurement

6.7.1. Test Limit

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

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

6.7.2. Test Procedure

KDB 987594 D02v03- Section II)

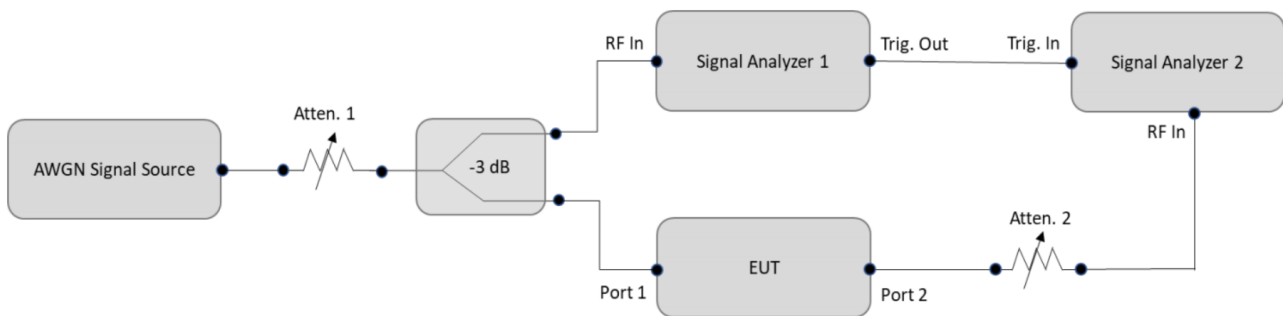
6.7.3. Test Setting

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.

Note: The EUT does not support channel puncturing or bandwidth reduction for the purposes of incumbent avoidance, with the whole channel shutting down when an incumbent signal is present.

6.7.4. Test Setup



6.7.5. Test Result

Refer to Appendix A.7.

6.8. Proper Power Adjustment, Client Devices Connected to a Standard Power Access Point (APC)

6.8.1. Test Limit

The device must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power.

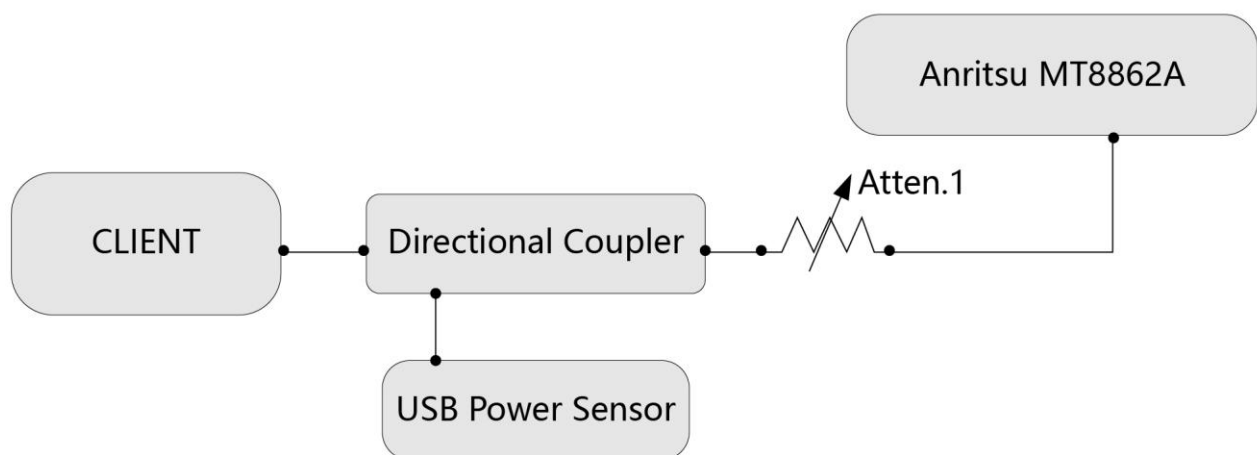
6.8.2. Test Procedure

KDB 987594 D02v03- Section II)L

6.8.3. Test Setting

1. Connect equipment as shown in test setup below.
2. Adjust Atten 1 to Std Power AP (Anritsu MT8862A) so as to facilitate error free communication with the Client but protect the Client receiver from overload or damage.
3. Configure the Client in SISO Mode.
4. Configure the Client and AP (Anritsu MT8862A) to associate and send data (stream data). The AP (Anritsu MT8862A) should be configured so its registered power is 36 dBm EIRP.
5. Verify transmission between the Client and Std Power AP (Anritsu MT8862A). Additional attenuators may be required to protect measurement equipment. Measure the Client RF power using any of the methods in C63.10 for NII devices. Use this power, along with its antenna gain, to calculate the Client EIRP.
6. The Client EIRP should be minimally 6 dB lower than the instrument.
7. Repeat Steps 2 through 5 at two other selected measurement points—the first at the midpoint and the second at the lowest rated power of the client as declared by the manufacturer.

6.8.4. Test Setup



6.8.5. Test Result

Refer to Appendix A.8.

6.9. Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP

6.9.1. Test Limit

A client device may connect to a Standard Power AP with a maximum power level of 30 dBm EIRP. A client may also connect to a Low Power indoor AP, but the power level is limited to a maximum of 24 dBm EIRP.

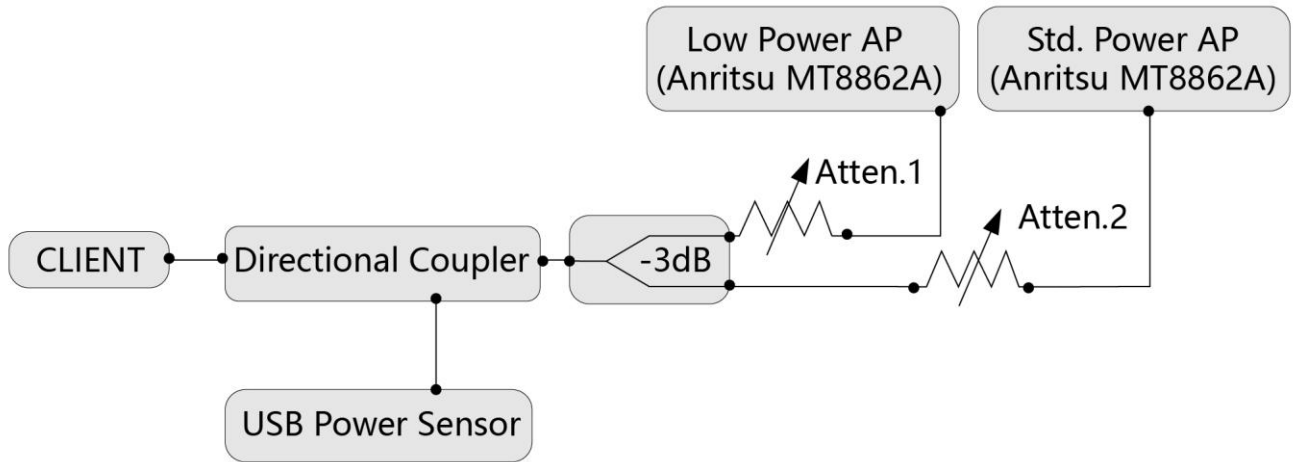
6.9.2. Test Procedure

KDB 987594 D02v03- Section II)K

6.9.3. Test Setting

1. Connect equipment as shown in test setup below.
2. Adjust Atten 2 to Std Power AP (Anritsu MT8862A) so as to facilitate error free communication with the Client (Atten 1 should be set to High on the RF path to the Low Power AP)
3. Configure the Client in SISO Mode.
4. Configure the Client and APs (Anritsu MT8862A) so that they associate and start sending data (stream data). It is important that the client is configured to transmit at its highest power level. Initially, because the attenuation on Atten 1 is set high, the Client will only associate with the Std Power AP (Anritsu MT8862A).
5. Verify transmission between Client and Std Power AP (Anritsu MT8862A). Additional attenuators may be required to protect measurement equipment. Measure the Client RF power using any of the methods in C63.10 for NII devices.
6. Gradually increase Atten 2 while at the same time decreasing Atten 1. This simulates the Client moving from outdoors to indoors. At some level of attenuation the Client should associate with the Low Power indoor AP (Anritsu MT8862A).
7. Verify transmission between Client and Low Power AP (Anritsu MT8862A).
8. Measure the RF power of the Client device using the same method as in step 4. Verify the power is no more than 24 dBm EIRP

6.9.4. Test Setup



6.9.5. Test Result

Refer to Appendix A.9.

6.10. Radiated Spurious Emission Measurement

6.10.1. 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 v03 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

6.10.2. Test Procedure

KDB 789033 D02v02r01-Section II)G)

6.10.3. Test Setting

Table 1 - RBW as a function of frequency

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

Quasi-Peak Measurements below 1GHz

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

Peak Measurements above 1GHz

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

Average Measurements above 1GHz (Method VB)

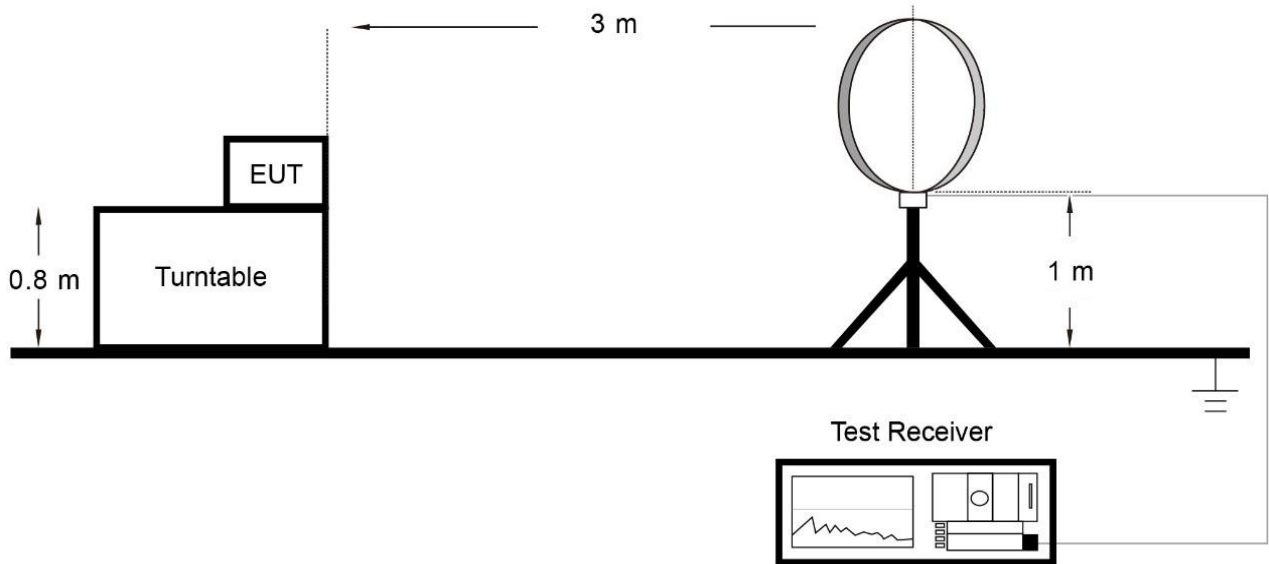
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.

If the EUT duty cycle is $< 98\%$, set $\text{VBW} \geq 1/T$. T is the minimum transmission duration.

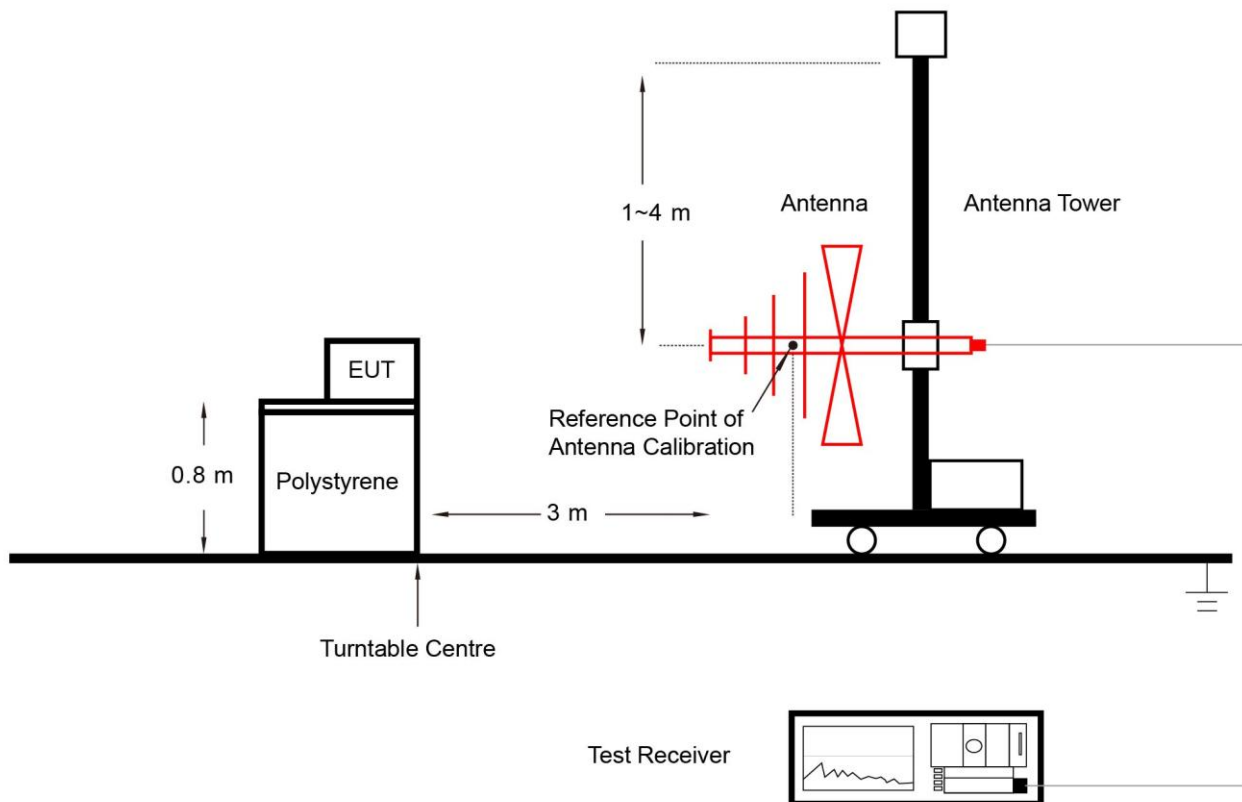
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can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

6.10.4. Test Setup

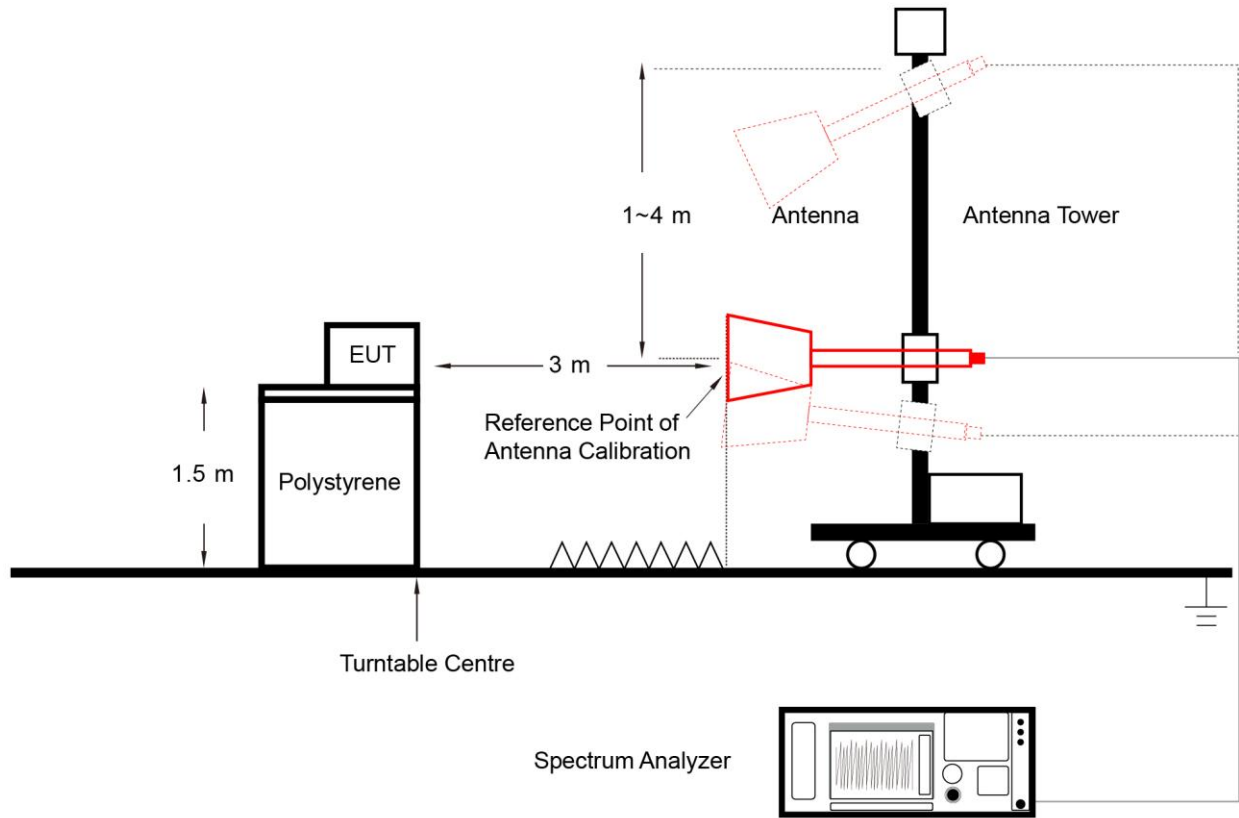
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.10.5. Test Result

Refer to Appendix A.10.

6.11. Radiated Restricted Band Edge Measurement

6.11.1. 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 v03 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

6.11.2. Test Procedure

KDB 789033 D02v02r01-Section II)G)

6.11.3. Test Setting

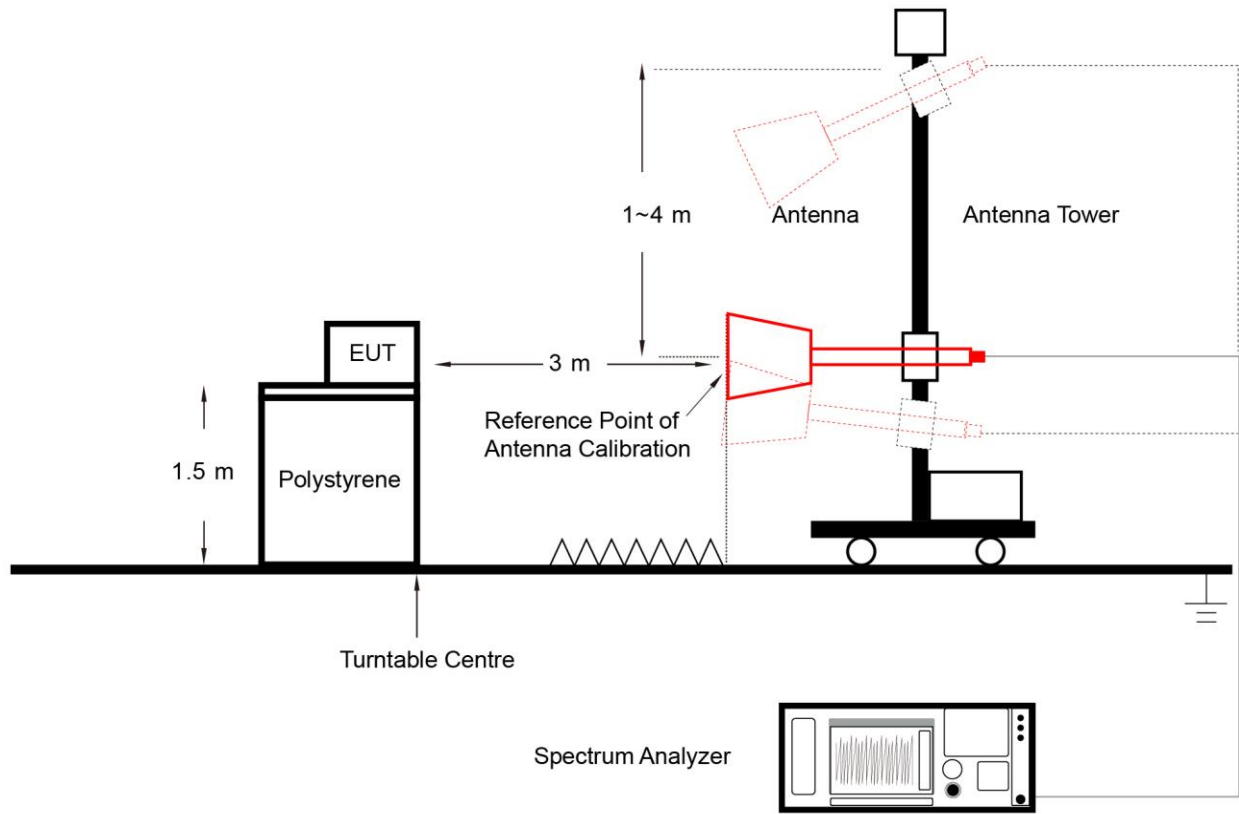
Peak Measurements above 1GHz

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

Average Measurements above 1GHz (Method VB)

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

6.11.4. Test Setup



6.11.5. Test Result

Refer to Appendix A.11.

6.12. AC Conducted Emissions Measurement

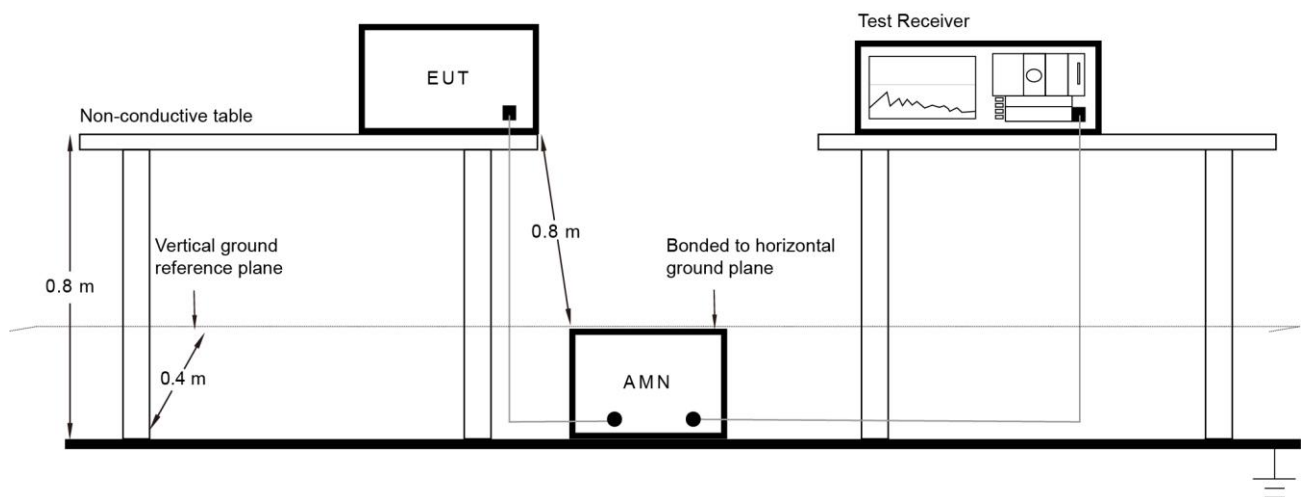
6.12.1. Test Limit

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.

6.12.2. Test Setup



6.12.3. Test Result

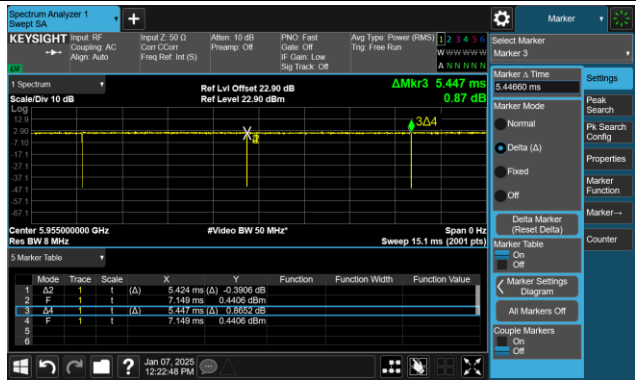
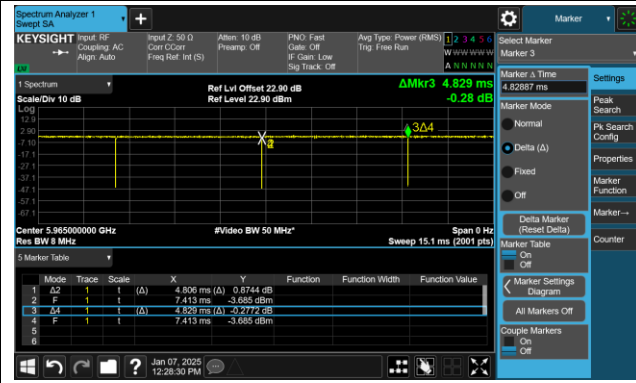
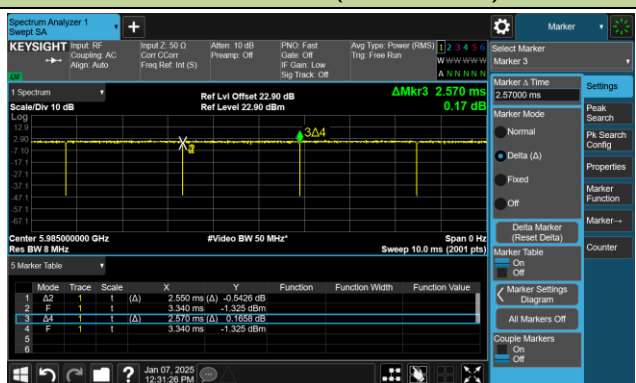
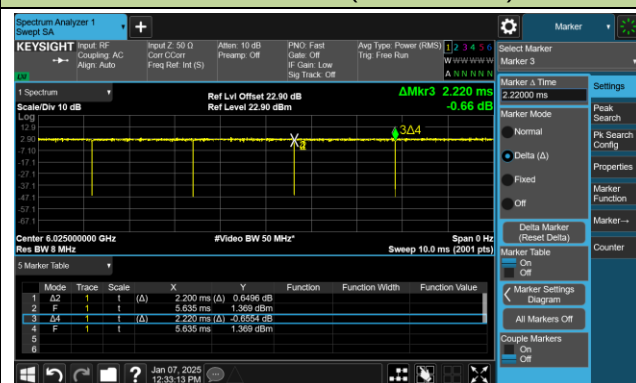
Refer to Appendix A.12.

Appendix A – Test Result

A.1 Duty Cycle Test Result

Full RU:

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2025-01-07		

Test Mode	Duty Cycle
802.11ax-HE20	99.58%
802.11ax-HE40	99.52%
802.11ax-HE80	99.22%
802.11ax-HE160	99.10%
Duty Cycle (T = Transmission Duration)	
802.11ax-HE20 (T = 5.424ms)	802.11ax-HE40 (T = 4.806ms)
	
802.11ax-HE80 (T = 2.550ms)	802.11ax-HE160 (T = 2.200ms)
	

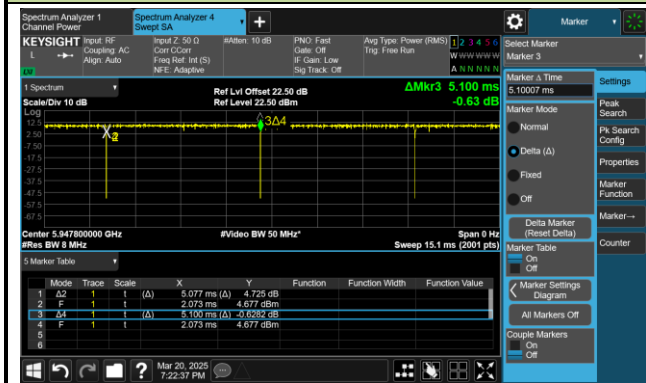
Partial RU:

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2025-03-20		

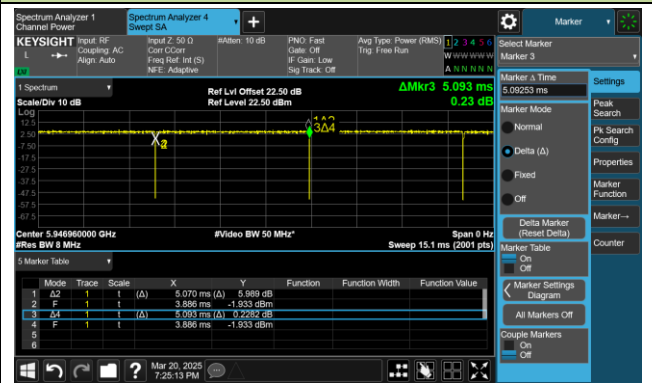
Test Mode	Duty Cycle
802.11ax-HE20 – 26Tone	99.55%
802.11ax-HE20 – 52Tone	99.55%
802.11ax-HE20 – 106Tone	99.52%
802.11ax-HE40 – 242Tone	99.55%
802.11ax-HE80 – 484Tone	99.16%
802.11ax-HE160 – 996Tone	98.40%

Duty Cycle (T = Transmission Duration)

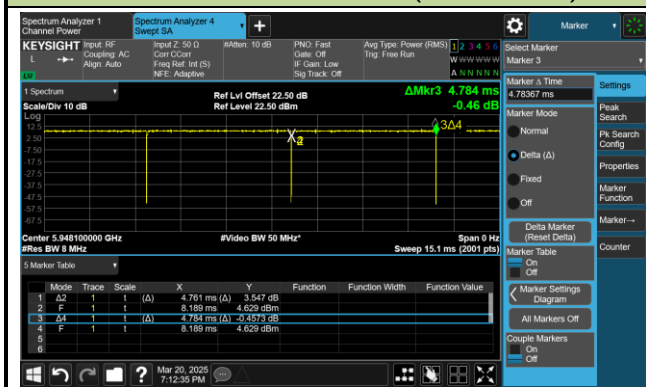
802.11ax-HE20 – 26Tone (T = 5.077ms)



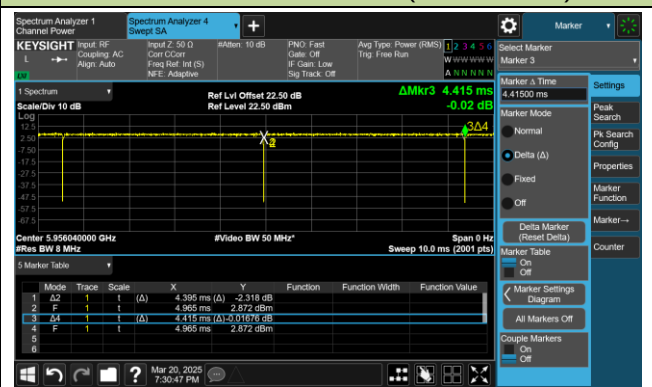
802.11ax-HE20 – 52Tone (T = 5.070ms)

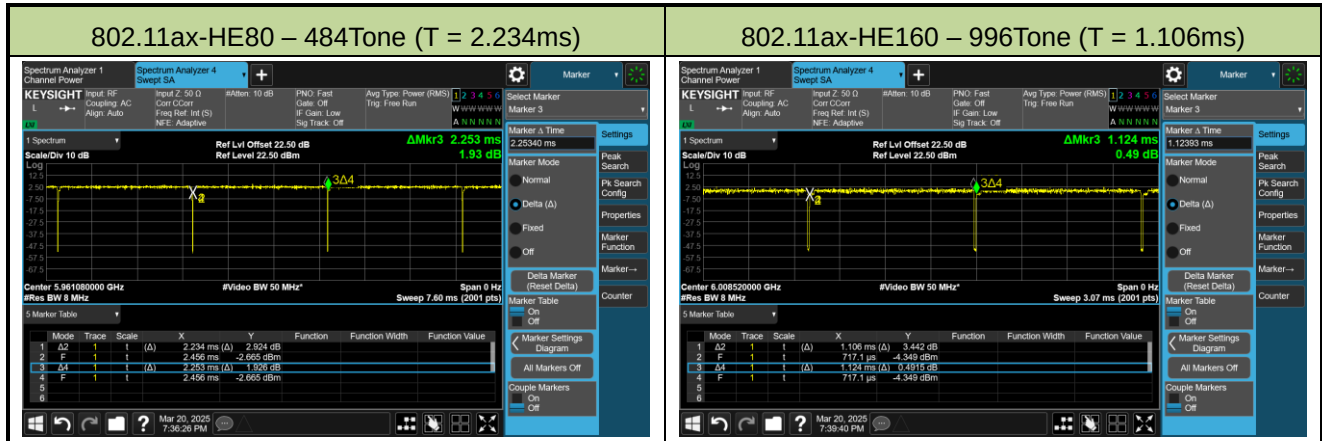


802.11ax-HE20 – 106Tone (T = 4.761ms)



802.11ax-HE40 – 242Tone (T = 4.395ms)





A.2 26dB Bandwidth Test Result

Client operating under the control of an indoor access point

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2025-02-13		

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Test Limit (MHz)
802.11ax-HE20	MCS0	1	5955	20.51	18.941	≤ 320
802.11ax-HE20	MCS0	49	6195	20.75	18.932	≤ 320
802.11ax-HE20	MCS0	93	6415	20.81	18.916	≤ 320
802.11ax-HE20	MCS0	97	6435	20.81	18.930	≤ 320
802.11ax-HE20	MCS0	105	6475	20.85	18.986	≤ 320
802.11ax-HE20	MCS0	113	6515	20.63	18.963	≤ 320
802.11ax-HE20	MCS0	117	6535	20.61	18.944	≤ 320
802.11ax-HE20	MCS0	149	6695	20.83	18.907	≤ 320
802.11ax-HE20	MCS0	181	6855	20.66	18.947	≤ 320
802.11ax-HE20	MCS0	185	6875	20.86	18.918	≤ 320
802.11ax-HE20	MCS0	189	6895	20.79	18.985	≤ 320
802.11ax-HE20	MCS0	209	6995	20.75	18.906	≤ 320
802.11ax-HE20	MCS0	229	7095	20.91	18.929	≤ 320
802.11ax-HE20	MCS0	233	7115	21.13	18.946	≤ 320
802.11ax-HE40	MCS0	3	5965	40.21	37.723	≤ 320
802.11ax-HE40	MCS0	51	6205	40.20	37.786	≤ 320
802.11ax-HE40	MCS0	91	6405	40.28	37.778	≤ 320
802.11ax-HE40	MCS0	99	6445	40.36	37.754	≤ 320
802.11ax-HE40	MCS0	107	6485	40.10	37.836	≤ 320
802.11ax-HE40	MCS0	115	6525	39.85	37.754	≤ 320
802.11ax-HE40	MCS0	123	6565	40.08	37.735	≤ 320
802.11ax-HE40	MCS0	147	6685	40.90	37.825	≤ 320
802.11ax-HE40	MCS0	179	6845	40.31	37.775	≤ 320
802.11ax-HE40	MCS0	187	6885	40.21	37.722	≤ 320
802.11ax-HE40	MCS0	195	6925	40.25	37.721	≤ 320
802.11ax-HE40	MCS0	211	7005	39.79	37.734	≤ 320
802.11ax-HE40	MCS0	227	7085	40.57	37.781	≤ 320

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Test Limit (MHz)
802.11ax-HE80	MCS0	7	5985	81.40	77.204	≤ 320
802.11ax-HE80	MCS0	55	6225	81.63	77.081	≤ 320
802.11ax-HE80	MCS0	87	6385	81.20	77.305	≤ 320
802.11ax-HE80	MCS0	103	6465	81.67	77.111	≤ 320
802.11ax-HE80	MCS0	119	6545	81.51	77.170	≤ 320
802.11ax-HE80	MCS0	135	6625	82.17	77.275	≤ 320
802.11ax-HE80	MCS0	151	6705	81.96	77.147	≤ 320
802.11ax-HE80	MCS0	167	6785	82.08	77.221	≤ 320
802.11ax-HE80	MCS0	183	6865	82.00	77.086	≤ 320
802.11ax-HE80	MCS0	199	6945	81.52	77.109	≤ 320
802.11ax-HE80	MCS0	215	7025	81.49	77.055	≤ 320
802.11ax-HE160	MCS0	15	6025	165.4	155.77	≤ 320
802.11ax-HE160	MCS0	47	6185	166.2	156.22	≤ 320
802.11ax-HE160	MCS0	79	6345	164.6	156.04	≤ 320
802.11ax-HE160	MCS0	111	6505	164.7	155.73	≤ 320
802.11ax-HE160	MCS0	143	6665	165.8	155.98	≤ 320
802.11ax-HE160	MCS0	175	6825	164.6	156.07	≤ 320
802.11ax-HE160	MCS0	207	6985	163.8	156.02	≤ 320

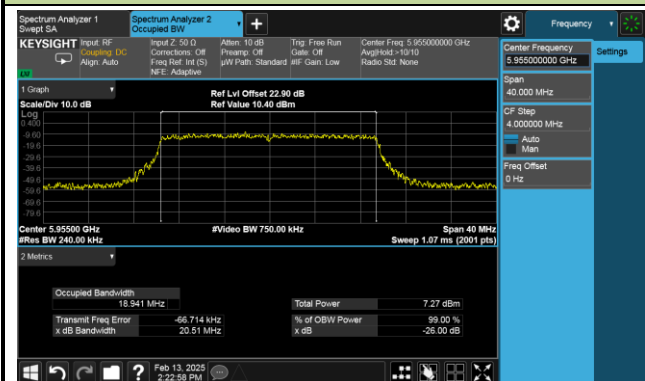
Note:

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

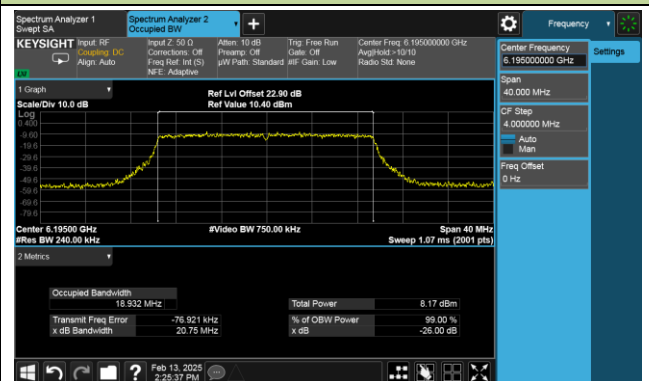
For channels with a nominal bandwidth of 320 MHz compliance is demonstrated by way of the 99% BW.

802.11ax-HE20 26dB Bandwidth

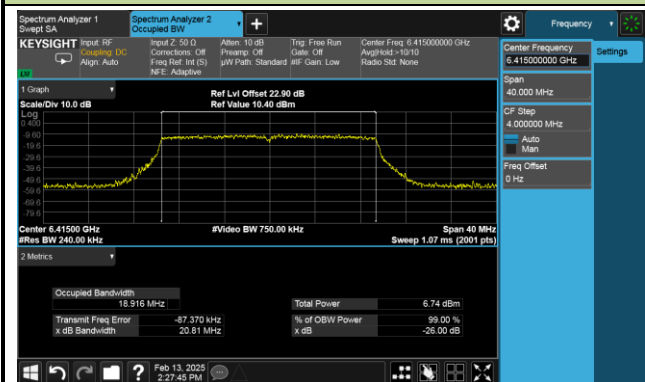
Channel 1 (5955MHz)



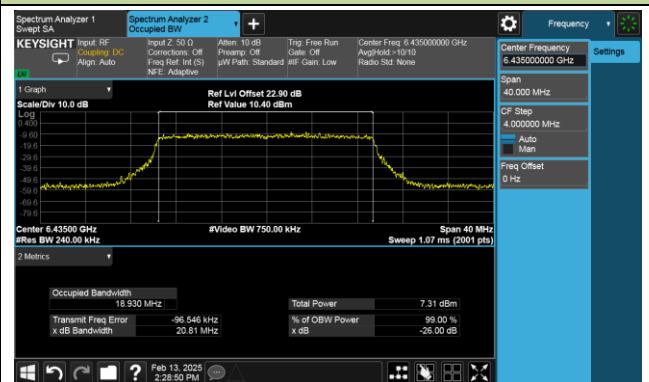
Channel 49 (6195MHz)



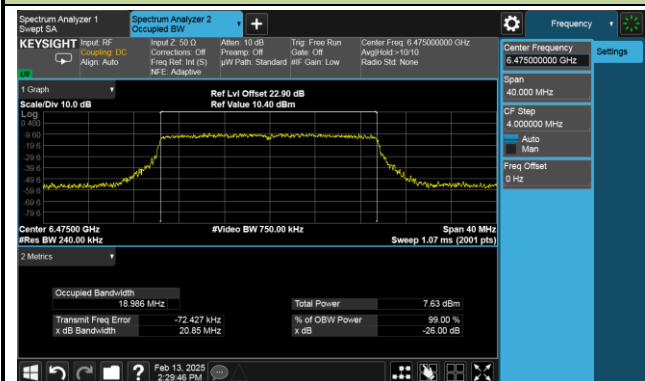
Channel 93 (6415MHz)



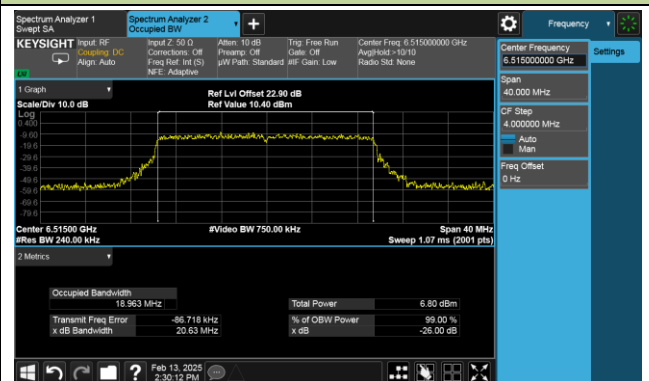
Channel 97 (6435MHz)



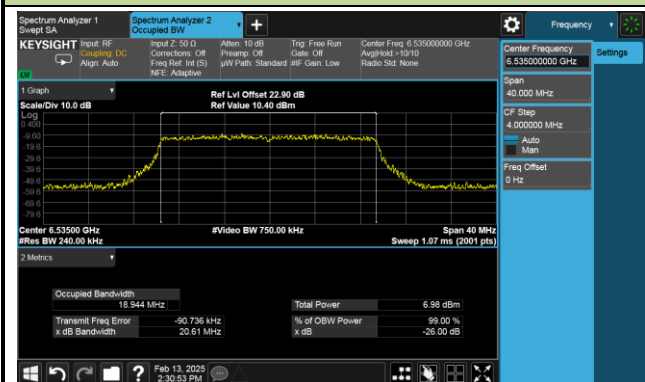
Channel 105 (6475MHz)



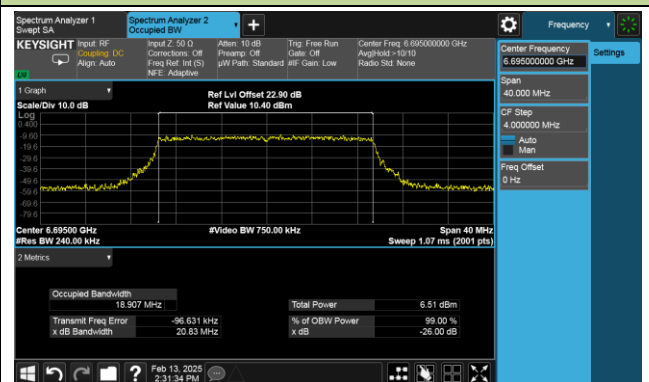
Channel 113 (6515MHz)



Channel 117 (6535MHz)

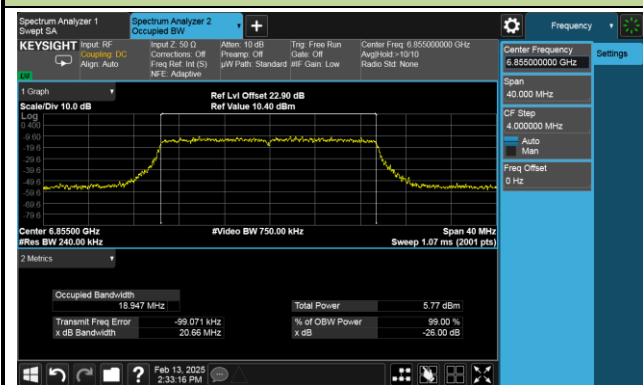


Channel 149 (6695MHz)

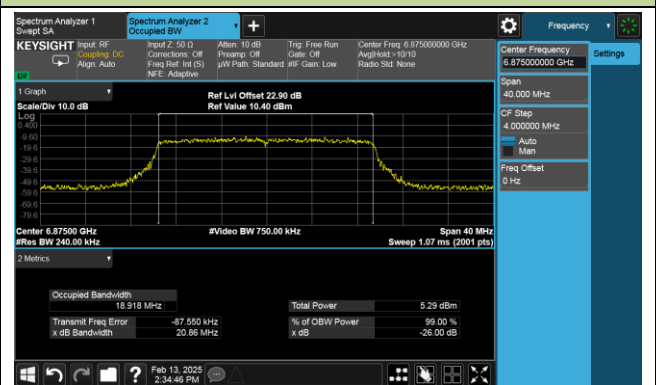


802.11ax-HE20 26dB Bandwidth

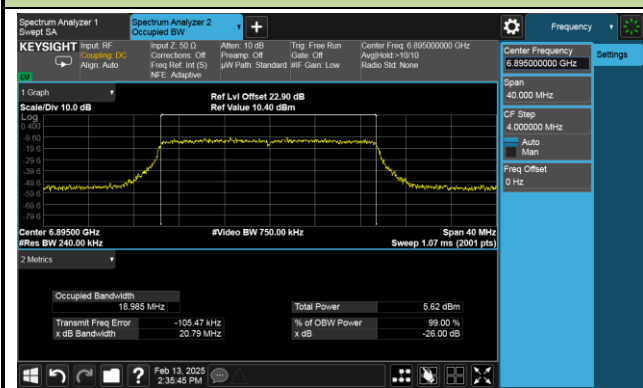
Channel 181 (6855MHz)



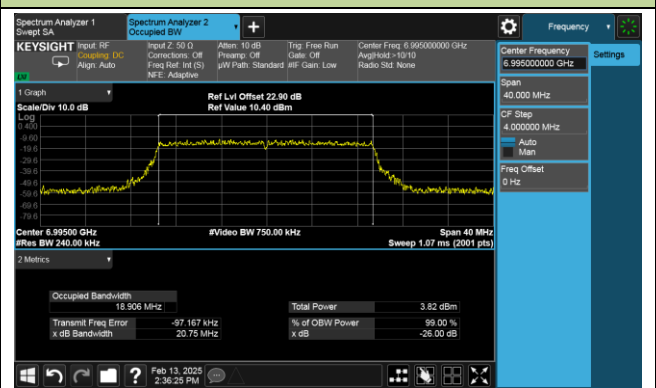
Channel 185 (6875MHz)



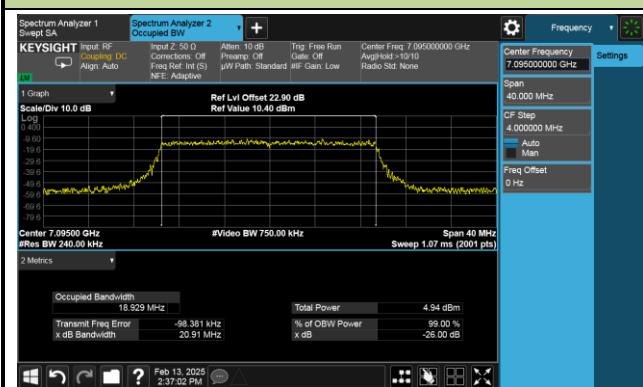
Channel 189 (6895MHz)



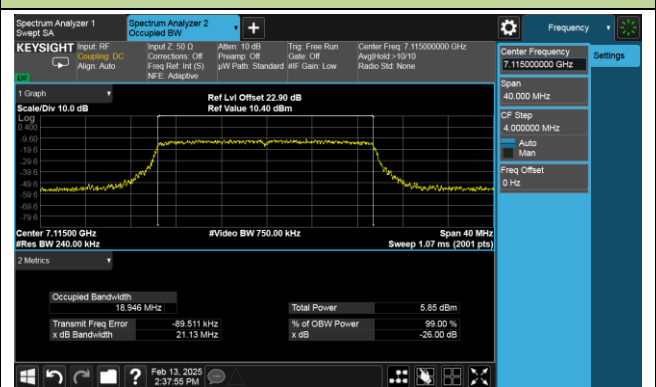
Channel 209 (6995MHz)



Channel 229 (7095MHz)

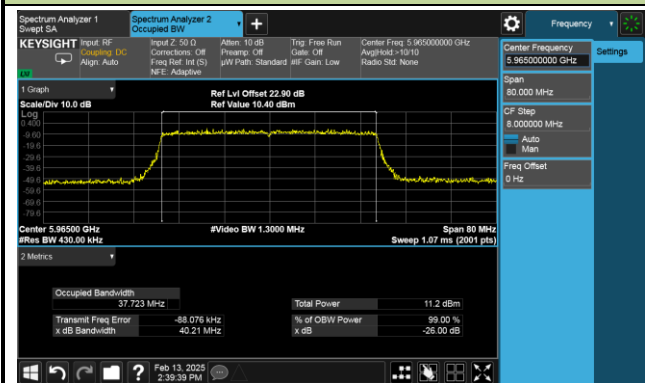


Channel 223 (7115MHz)

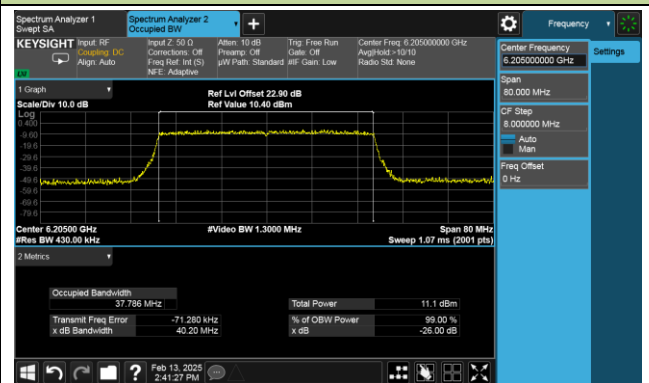


802.11ax-HE40 26dB Bandwidth

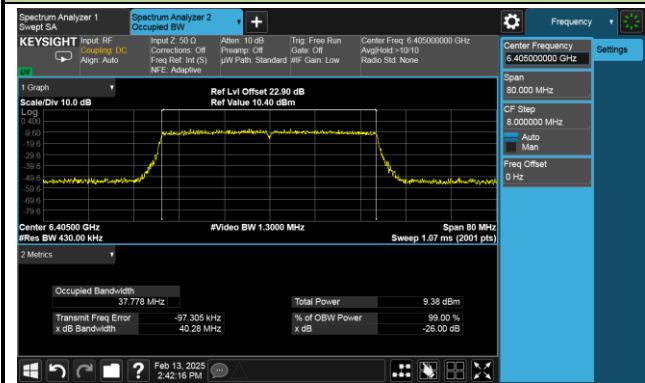
Channel 3 (5965MHz)



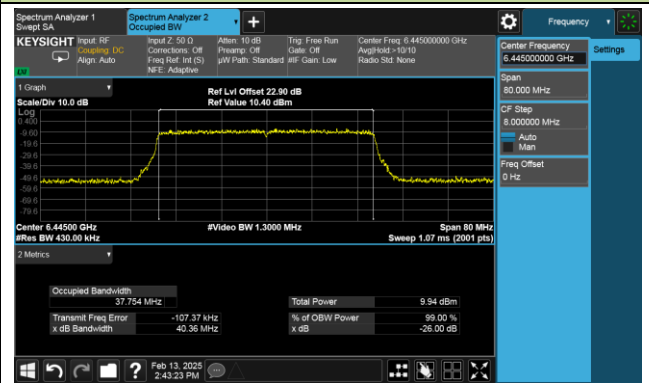
Channel 51 (6205MHz)



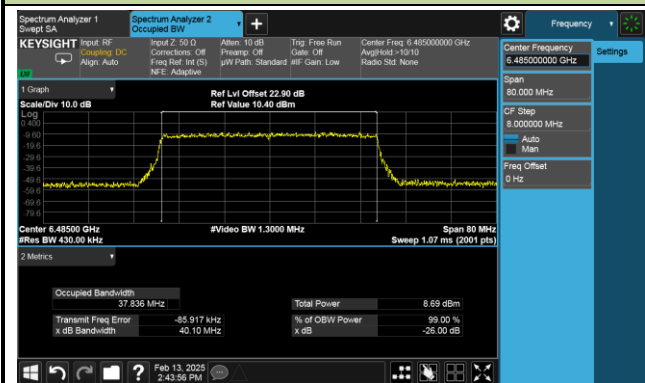
Channel 91 (6405MHz)



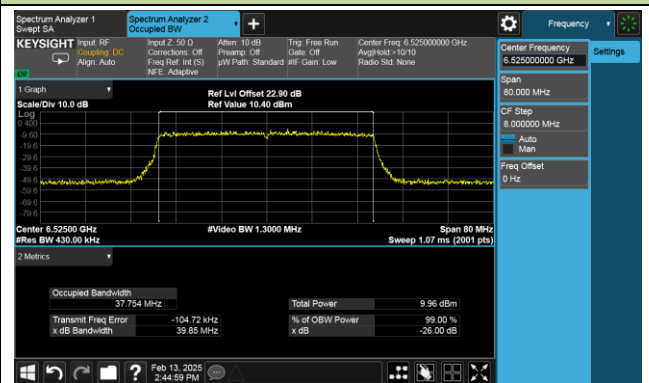
Channel 99 (6445MHz)



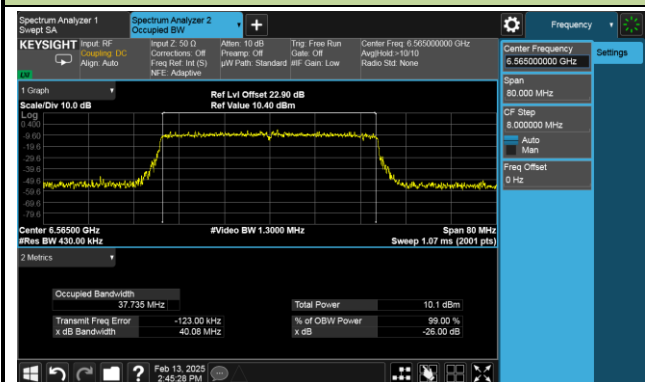
Channel 107 (6485MHz)



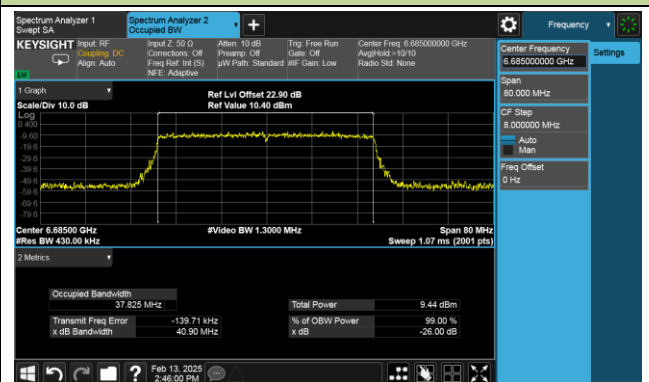
Channel 115 (6525MHz)



Channel 123 (6565MHz)

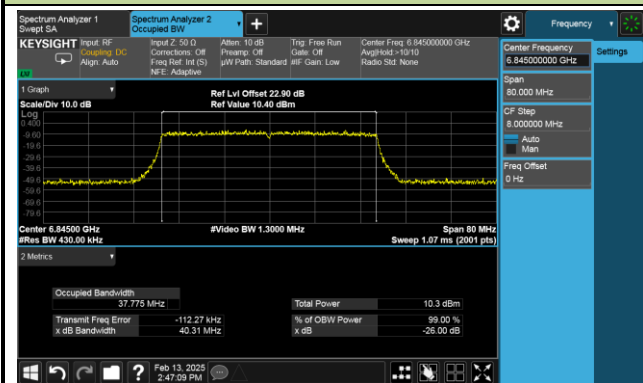


Channel 147 (6685MHz)

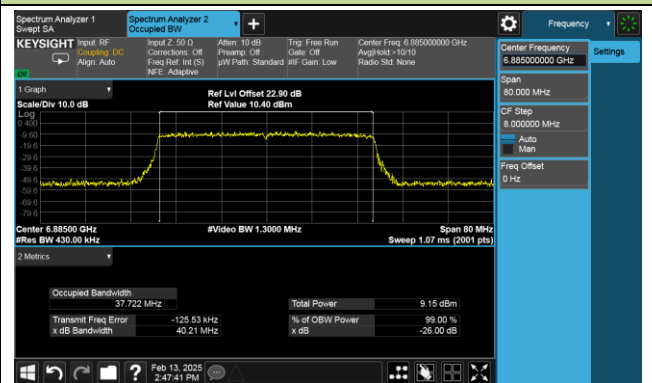


802.11ax-HE40 26dB Bandwidth

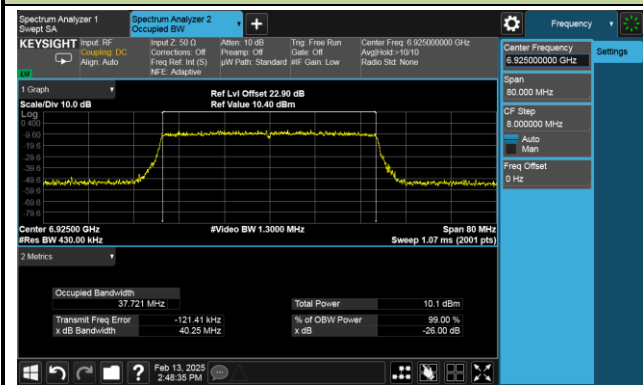
Channel 179 (6845MHz)



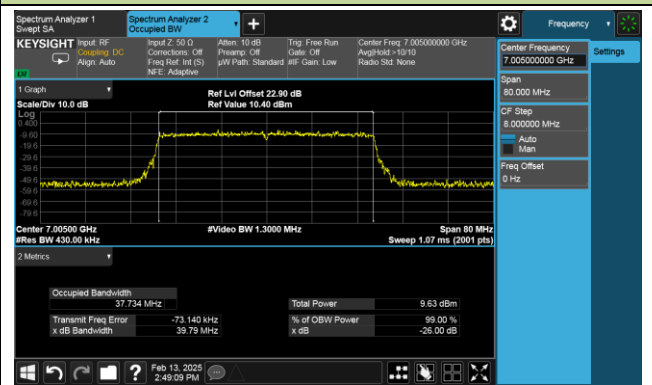
Channel 187 (6885MHz)



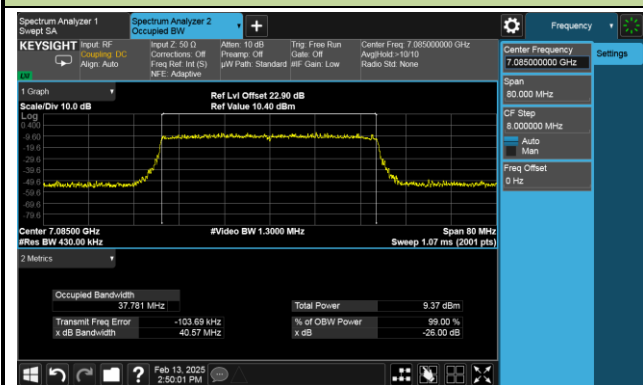
Channel 195 (6925MHz)



Channel 211 (7005MHz)

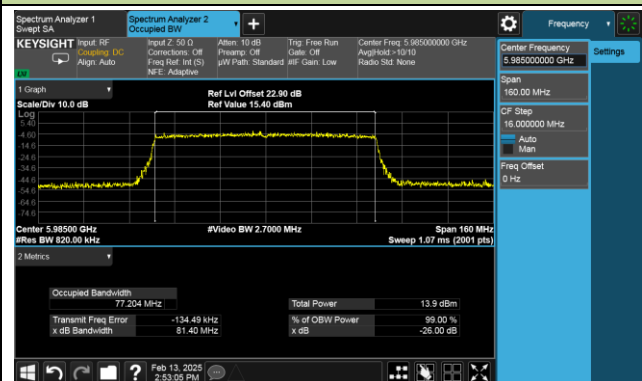


Channel 227 (7085MHz)

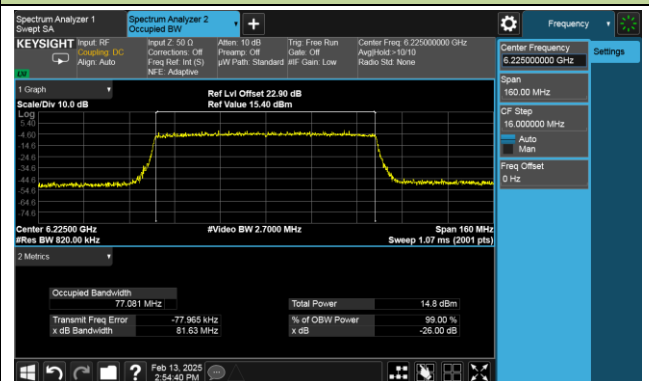


802.11ax-HE80 26dB Bandwidth

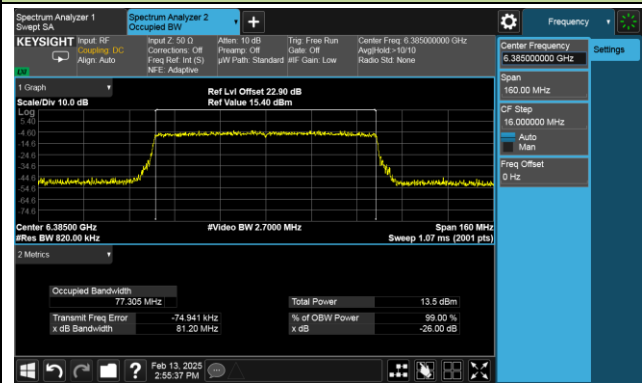
Channel 7 (5985MHz)



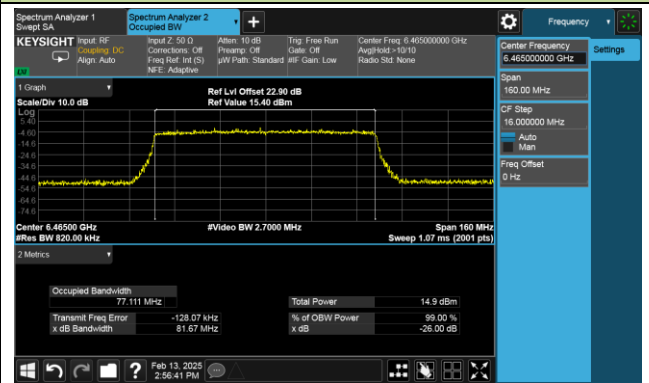
Channel 55 (6225MHz)



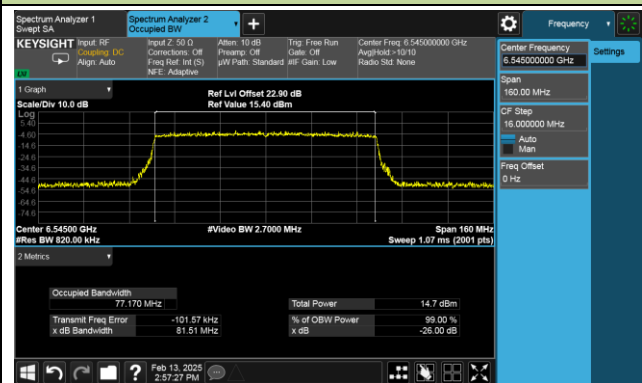
Channel 87 (6385MHz)



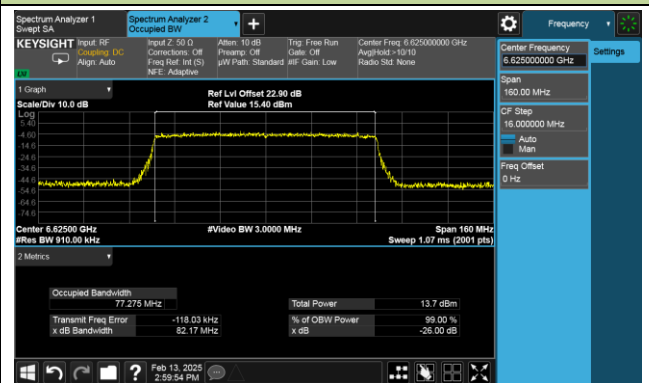
Channel 103 (6465MHz)



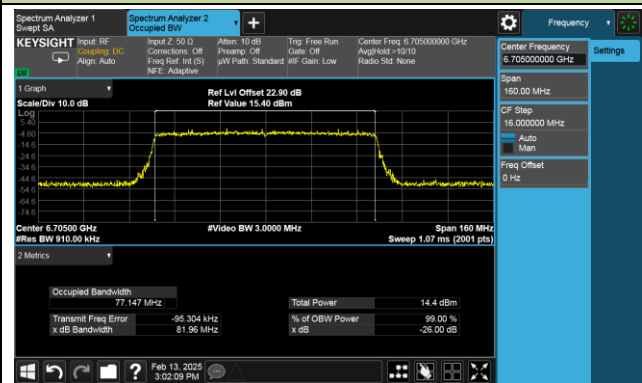
Channel 119 (6545MHz)



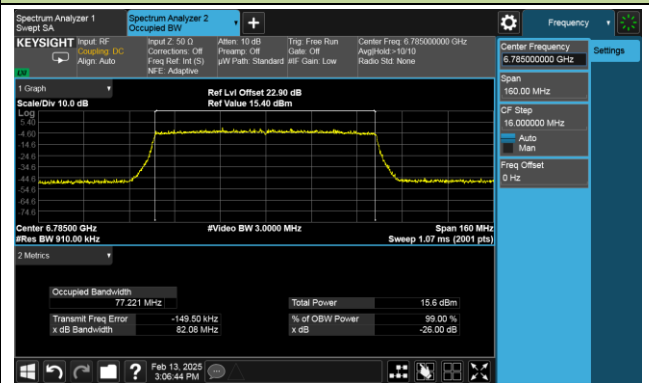
Channel 135 (6625MHz)



Channel 151 (6705MHz)

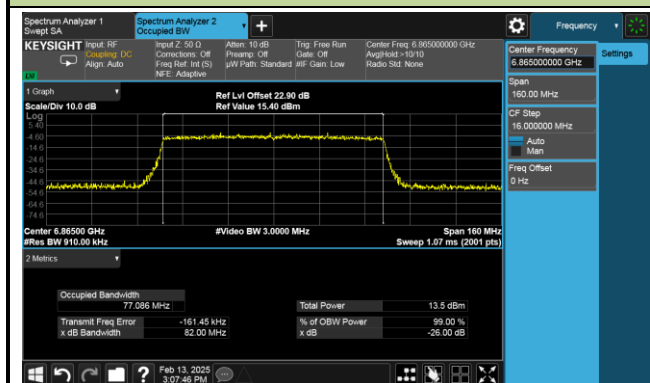


Channel 167 (6785MHz)

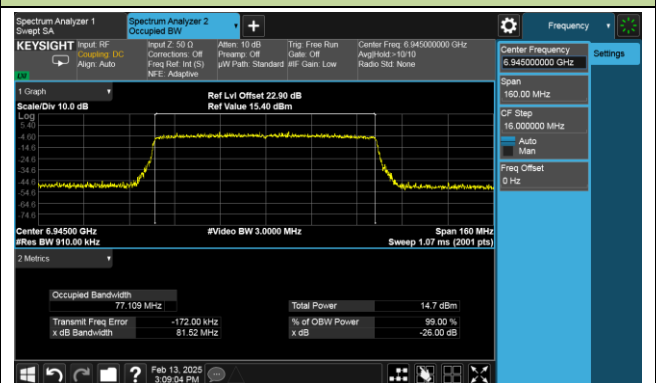


802.11ax-HE80 26dB Bandwidth

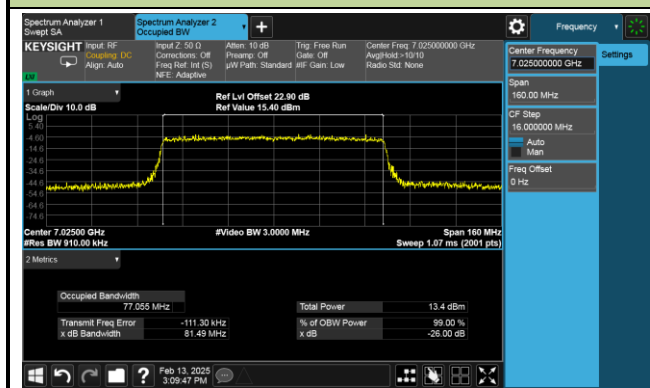
Channel 183 (6865MHz)



Channel 199 (6945MHz)

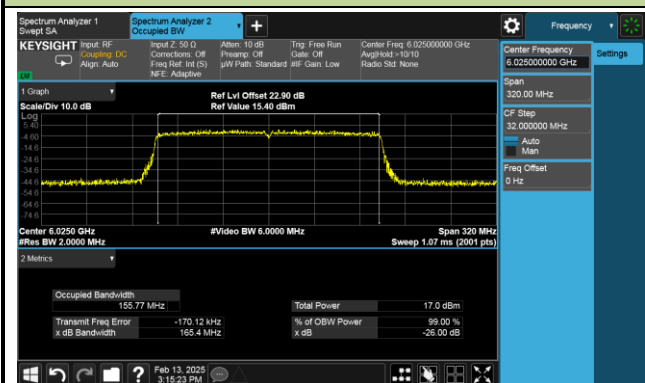


Channel 215 (7025MHz)

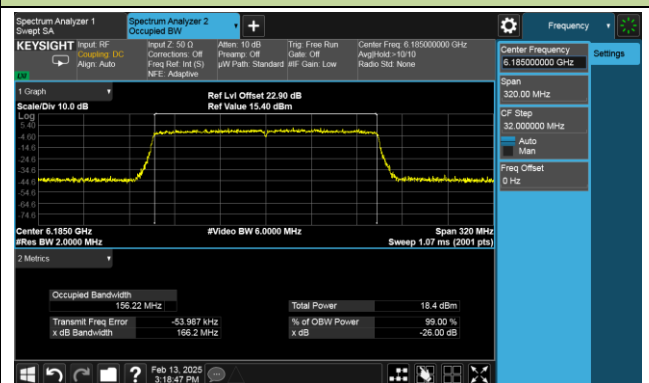


802.11ax-HE160 26dB Bandwidth

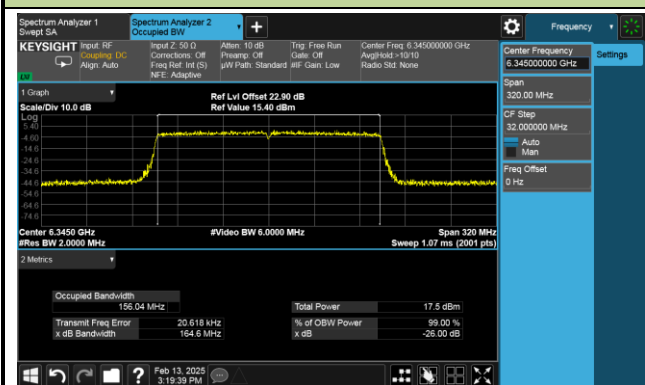
Channel 15 (6025MHz)



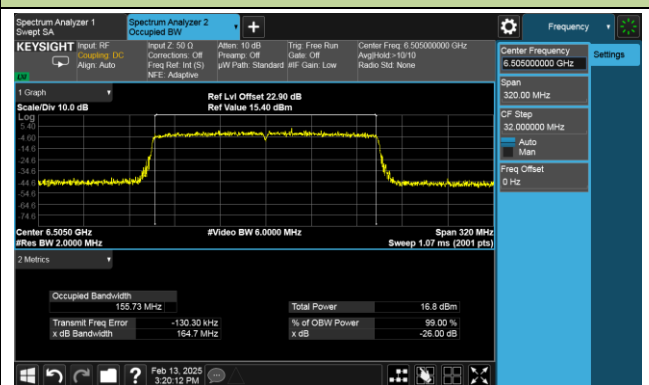
Channel 47 (6185MHz)



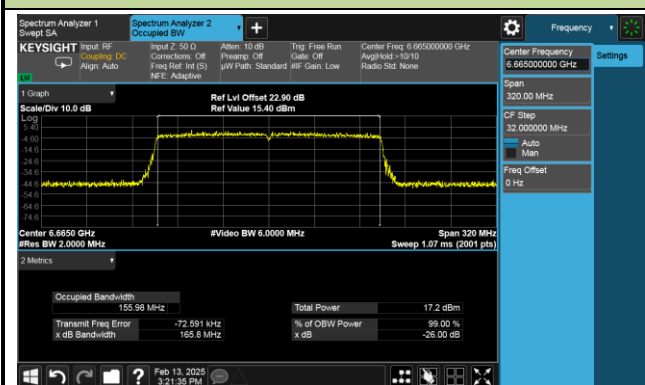
Channel 79 (6345MHz)



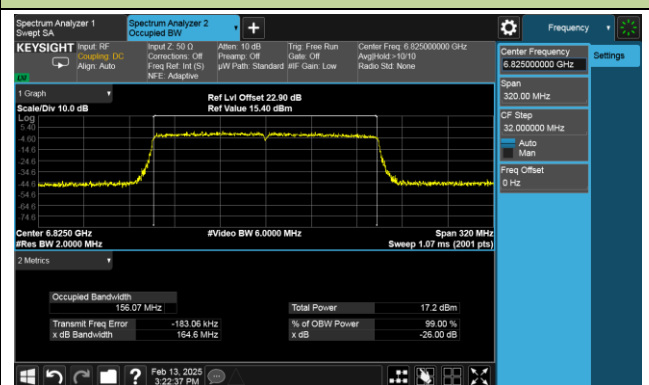
Channel 111 (6505MHz)



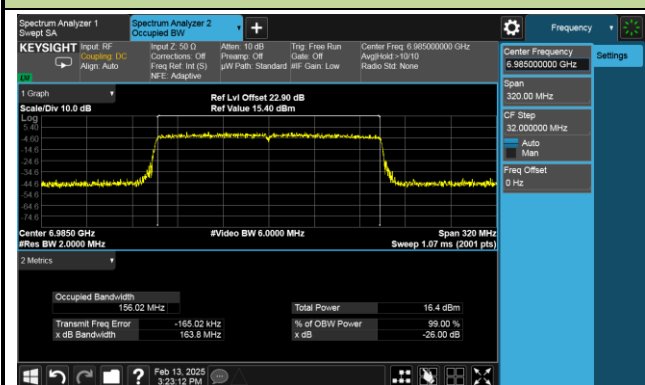
Channel 143 (6665MHz)



Channel 175 (6825MHz)



Channel 207 (6985MHz)



Client operating under the control of a standard power access point

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2025-03-06		

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Test Limit (MHz)
802.11ax-HE20	MCS0	1	5955	21.36	18.911	≤ 320
802.11ax-HE20	MCS0	49	6195	20.92	18.927	≤ 320
802.11ax-HE20	MCS0	93	6415	20.94	18.946	≤ 320
802.11ax-HE20	MCS0	117	6535	20.94	18.929	≤ 320
802.11ax-HE20	MCS0	149	6695	21.11	18.935	≤ 320
802.11ax-HE20	MCS0	181	6855	20.98	18.963	≤ 320
802.11ax-HE40	MCS0	3	5965	40.53	37.676	≤ 320
802.11ax-HE40	MCS0	51	6205	40.66	37.723	≤ 320
802.11ax-HE40	MCS0	91	6405	40.29	37.754	≤ 320
802.11ax-HE40	MCS0	123	6565	40.55	37.746	≤ 320
802.11ax-HE40	MCS0	147	6685	40.55	37.776	≤ 320
802.11ax-HE40	MCS0	179	6845	40.36	37.727	≤ 320
802.11ax-HE80	MCS0	7	5985	81.65	77.028	≤ 320
802.11ax-HE80	MCS0	55	6225	81.53	77.208	≤ 320
802.11ax-HE80	MCS0	87	6385	81.20	77.185	≤ 320
802.11ax-HE80	MCS0	135	6625	81.59	77.222	≤ 320
802.11ax-HE80	MCS0	151	6705	81.05	77.103	≤ 320
802.11ax-HE80	MCS0	167	6785	81.08	77.054	≤ 320
802.11ax-HE160	MCS0	15	6025	165.1	155.96	≤ 320
802.11ax-HE160	MCS0	47	6185	166.6	156.06	≤ 320
802.11ax-HE160	MCS0	79	6345	165.0	156.03	≤ 320
802.11ax-HE160	MCS0	111	6505	164.5	155.93	≤ 320
802.11ax-HE160	MCS0	143	6665	164.7	156.12	≤ 320

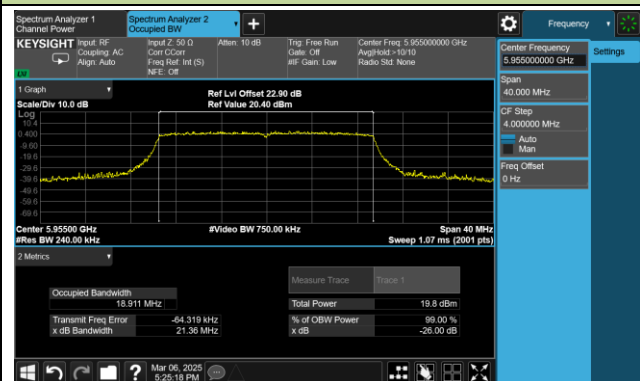
Note:

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

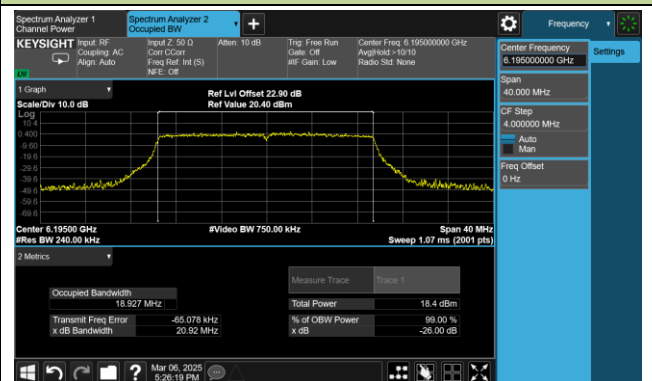
For channels with a nominal bandwidth of 320 MHz compliance is demonstrated by way of the 99% BW.

802.11ax-HE20 26dB Bandwidth

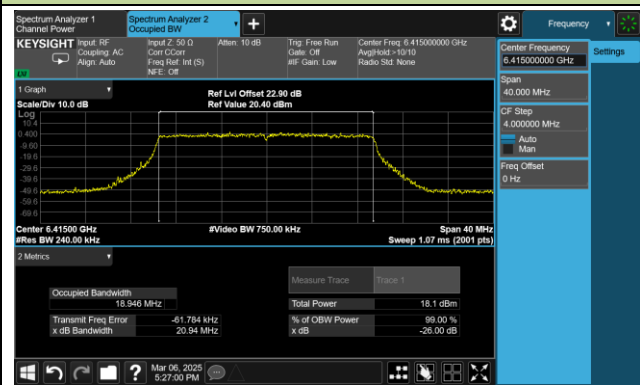
Channel 1 (5955MHz)



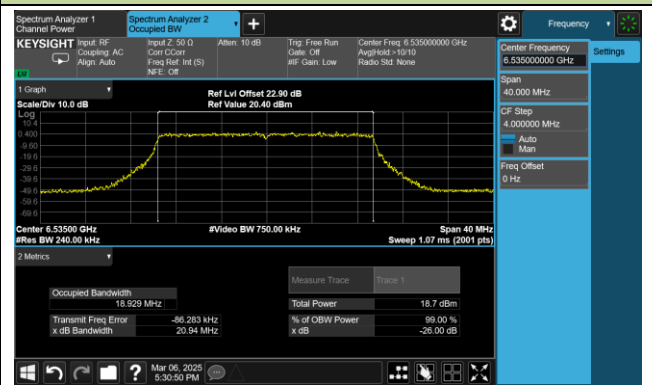
Channel 49 (6195MHz)



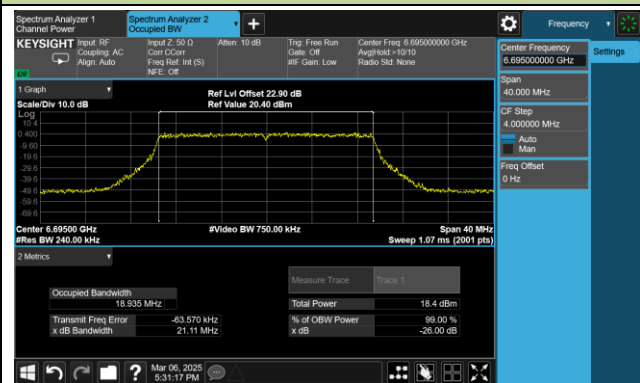
Channel 93 (6415MHz)



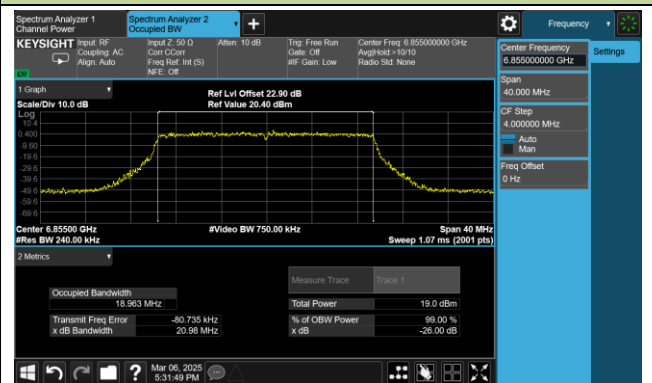
Channel 117 (6535MHz)



Channel 149 (6695MHz)

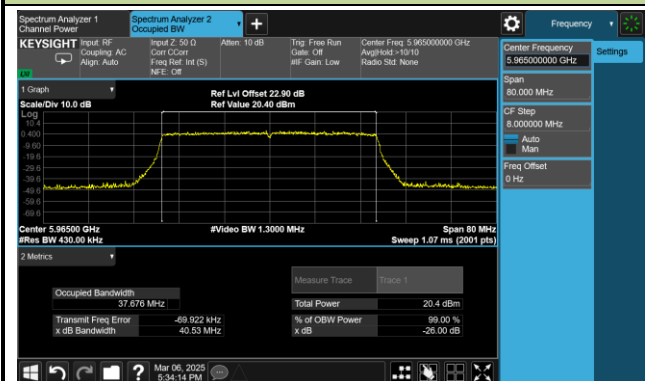


Channel 181 (6855MHz)

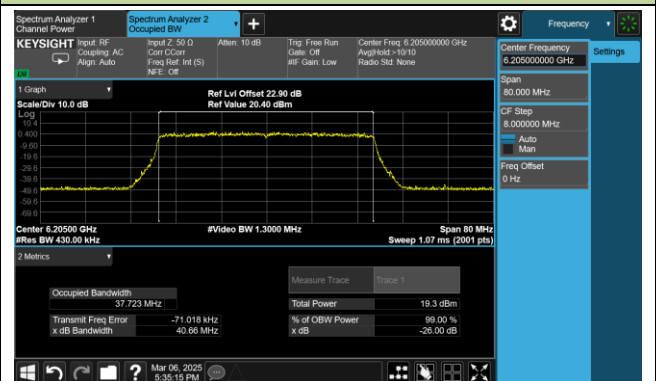


802.11ax-HE40 26dB Bandwidth

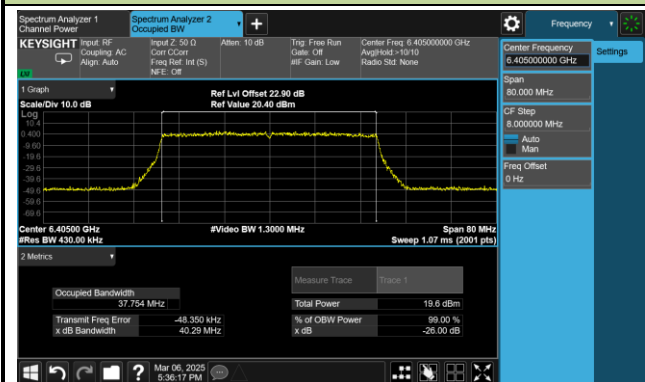
Channel 3 (5965MHz)



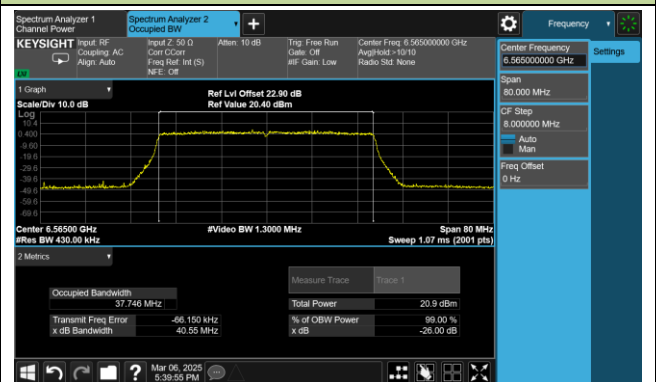
Channel 51 (6205MHz)



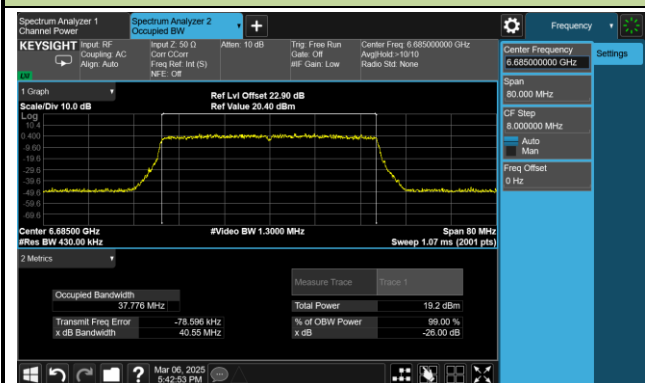
Channel 91 (6405MHz)



Channel 123 (6565MHz)



Channel 147 (6685MHz)



Channel 179 (6845MHz)

