

RF MEASUREMENT REPORT

FCC ID : 2BCGWBE65V2
Applicant : TP-LINK CORPORATION PTE. LTD.
Application Type : Certification
Product : BE11000 Whole Home Mesh Wi-Fi 7 System
Model No. : Deco BE65, Deco BE63, Deco BE11000, HB610, Hexagon PB60, Deco BE65 Pro
Brand Name : tp-link
FCC Classification : 15E 6GHz Low Power Indoor Access Point (6ID)
15E 6GHz Subordinate Indoor Device (6PP)
FCC Rule Part(s) : Part 15 Subpart E (Section 15.407)
Received Date : November 13, 2023
Test Date : November 17, 2023 ~ January 4, 2024

Tested By : Owen Tsai
(Owen Tsai)
Reviewed By : Paddy Chen
(Paddy Chen)
Approved By : Chenz Ker
(Chenz Ker)



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 (Taiwan) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2311TW0113-U5	1.0	Original Report	2024-01-18	Invalid
2311TW0113-U5	2.0	Add a new model name	2024-01-26	Valid

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General Information

Applicant	TP-LINK CORPORATION PTE. LTD.
Applicant Address	7 Temasek Boulevard #29-03 Suntec Tower One, Singapore 038987
Manufacturer	TP-LINK CORPORATION PTE. LTD.
Manufacturer Address	7 Temasek Boulevard #29-03 Suntec Tower One, Singapore 038987
Test Site	MRT Technology (Taiwan) Co., Ltd
Test Site Address	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
MRT FCC Registration No.	291082
FCC Rule Part(s)	Part 15.407

Test Facility / Accreditations

1. MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Firm.
2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC (Designation Number: TW3261), Industry Canada, EU and TELEC Rules.

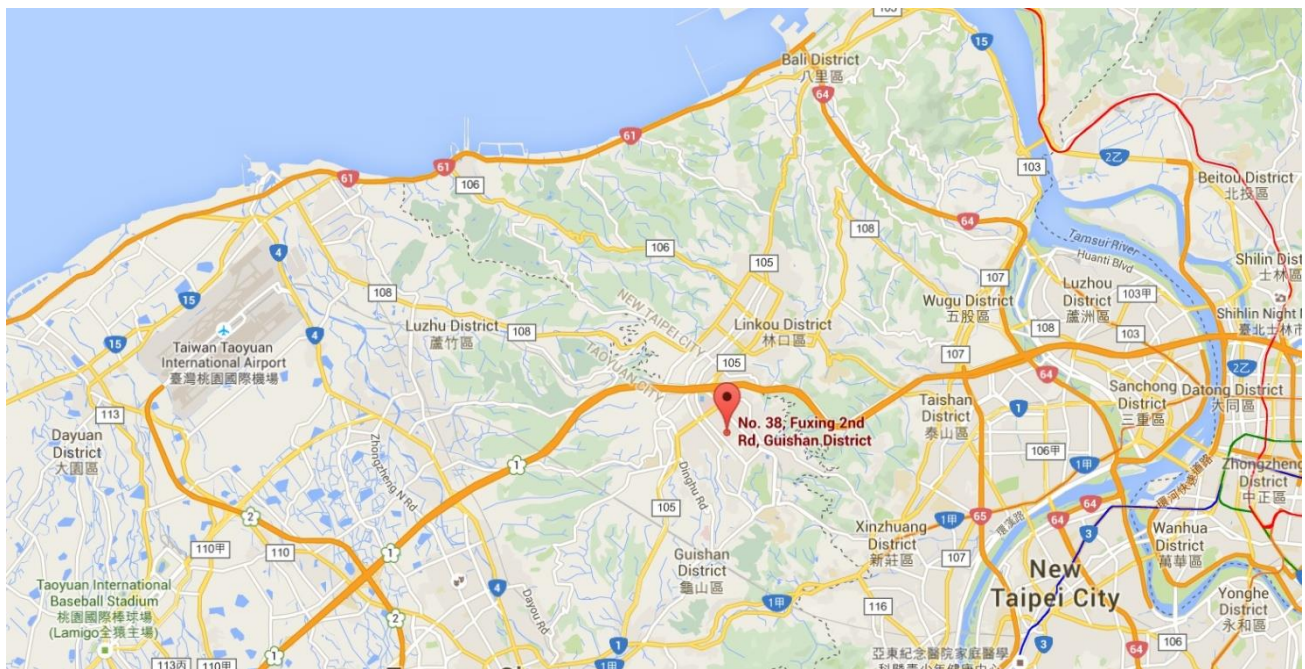
1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada and Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taoyuan City. These measurement tests were conducted at the MRT Technology (Taiwan) Co., Ltd. Facility located at No.38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 33377, Taiwan (R.O.C).



2. Product Information

2.1. Equipment Description

Product Name	BE11000 Whole Home Mesh Wi-Fi 7 System
Model No.	Deco BE65, Deco BE63, Deco BE11000, HB610, Hexagon PB60, Deco BE65 Pro
Brand Name	tp-link
Wi-Fi Specification	802.11a/b/g/n/ac/ax/be
EUT Identification No.:	#1-1 (Conducted) #1-2 (Radiated)
Accessories	
Power Adapter	BRAND: tp-link MODEL: T120250-2B4 INPUT: 100 - 240V ~ 50/60Hz 0.8A. OUTPUT: DC 12.0V 2.5A Cable Out: Non-shielding, 1.5m

Note 1: Models Difference:

- The Deco BE63 and Deco BE11000 are exactly the same as the Deco BE65 except for the model.
- The HB610 is exactly the same as the Deco BE65 except for the model, the silkscreen on enclosure.
- Hexagon PB60 remove the USB port and related circuits based on HB610. Other software and hardware designs are consistent with HB610.
- The Deco BE65 Pro has the different USB port, PHY/Switch solutions and the power for FEM from the Deco BE65, but the RF circuit (including the schematic, layout, antenna, antenna position and RF parameters) is exactly the same as the Deco BE65.

Note 2: Some validation tests are evaluated in the EMC report as per the differences as above, only Deco BE65 was evaluated in this report.

2.2. Radio Specification

Frequency Range	For 802.11ax-HE20/be-EHT20: 6115 ~ 7095MHz For 802.11ax-HE40/be-EHT40: 6125 ~ 7085MHz For 802.11ax-HE80/be-EHT80: 6145 ~ 7025MHz For 802.11ax-HE160/be-EHT160: 6185 ~ 6985MHz For 802.11be-EHT320: 6265 ~ 6905MHz
Type of Modulation	802.11ax/be: OFDMA
Data Rate	802.11ax: up to 2402Mbps 802.11be: up to 5764Mbps

Note: For other features of this EUT, test report will be issued separately.

2.3. Working Frequencies

802.11ax-HE20/be-EHT20

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

802.11ax-HE40/be-EHT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
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/be-EHT80

Channel	Frequency	Channel	Frequency	Channel	Frequency
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/be-EHT160

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

802.11be-EHT320

Channel	Frequency	Channel	Frequency	Channel	Frequency
63	6265 MHz	95	6425 MHz	127	6585 MHz
159	6745 MHz	191	6905 MHz	--	--

2.4. Antenna Details

Antenna Type	Frequency Band (MHz)	T _x Paths	Number of spatial streams	Antenna Gain (dBi)		Beamforming Directional Gain (dBi)	CDD Directional Gain (dBi)	
				Ant 0	Ant 1		For Power	For PSD
Dipole	2400 ~ 2483.5	2	1	1.98	1.85	4.37	1.98	4.37
Dipole	5150 ~ 5350	2	1	3.00	3.00	5.51	3.00	5.51
	5470 ~ 5850	2	1	3.00	3.00	5.78	3.00	5.78
Franklin	5925 ~ 6425	2	1	3.00	3.00	5.45	3.00	5.45
			2	3.00	3.00	--	3.00	3.00
	6425 ~ 7125	2	1	3.00	3.00	5.51	3.00	5.51
			2	3.00	3.00	--	3.00	3.00

- The device supports CDD Mode and Beamforming mode, details refer to the table as below.
- CDD signals are correlated, the directional gain as follows,
When $N_{SS}=1$, for power measurements: Array Gain = 0 dB for $N_{ANT} \leq 4$, the directional gain = max antenna gain + array gain
For power spectral density (PSD) measurements: the max directional gain (each angle) = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$
When $N_{SS}=4$, the Directional Gain = $G_{ANT \text{ MAX}} + 10 \log(N_{ANT}/N_{SS})$ dBi
- Beamforming signals are correlated, the directional gain as follows,
the max directional gain (each angle) = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$
- The information as above is from the antenna report.

Test Mode	T _x Paths	CDD Mode	Beamforming Mode
802.11b/g (DTS)	2	√	X
802.11nax/be (DTS)	2	√	√
802.11a (NII)	2	√	X
802.11n/ac/ax/be (NII)	2	√	√
802.11ax/be (6ID & 6PP)	2	√	√

2.5. Test Mode

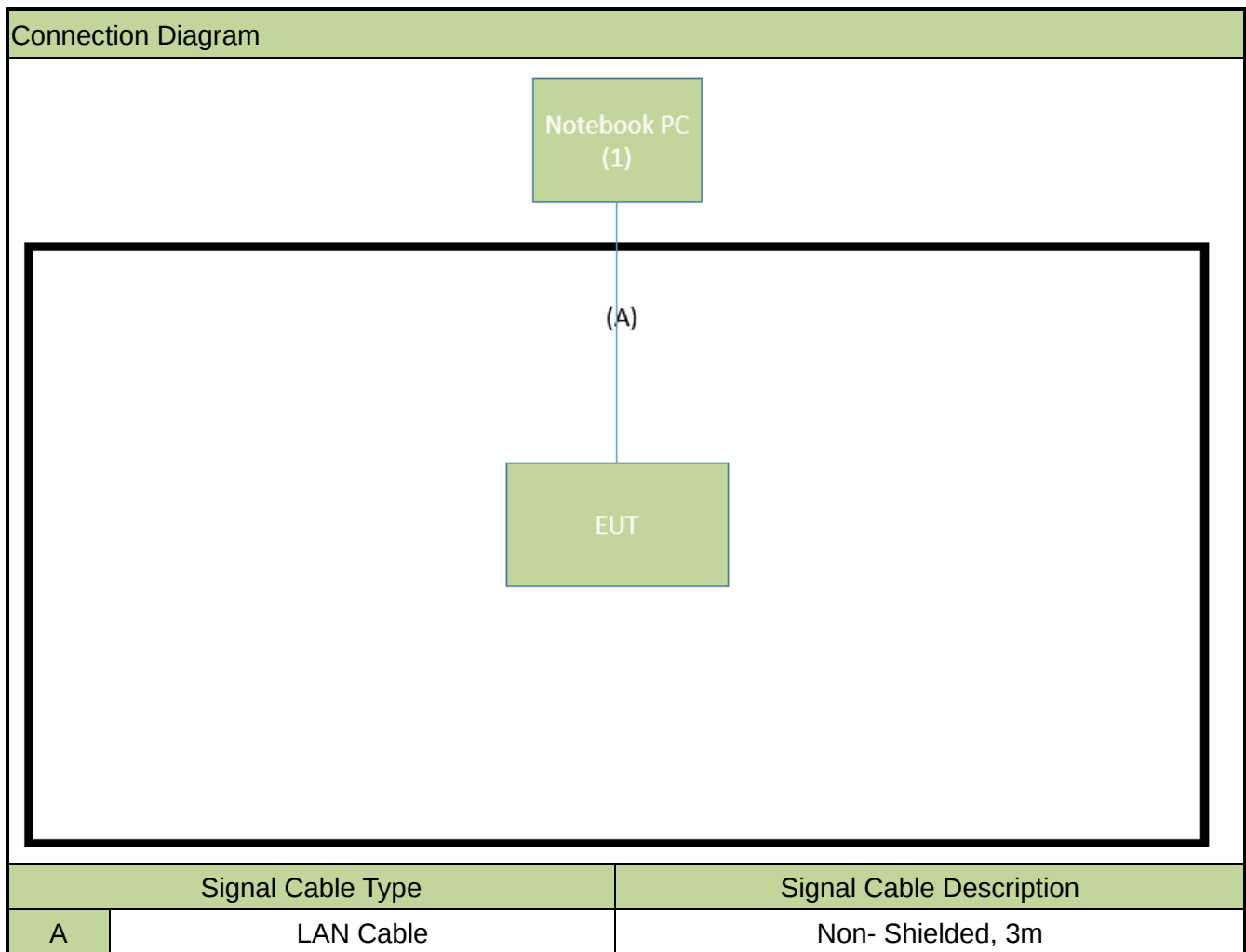
CDD Mode
Mode 1: Transmit by 802.11ax-HE20_Nss=1 (MCS0) (CDD mode)
Mode 2: Transmit by 802.11ax-HE40_Nss=1 (MCS0) (CDD mode)
Mode 3: Transmit by 802.11ax-HE80_Nss=1 (MCS0) (CDD mode)
Mode 4: Transmit by 802.11ax-HE160_Nss=1 (MCS0) (CDD mode)
Mode 5: Transmit by 802.11be-EHT20_Nss=1 (MCS0) (CDD mode)
Mode 6: Transmit by 802.11be-EHT40_Nss=1 (MCS0) (CDD mode)
Mode 7: Transmit by 802.11be-EHT80_Nss=1 (MCS0) (CDD mode)
Mode 8: Transmit by 802.11be-EHT160_Nss=1 (MCS0) (CDD mode)
Mode 9: Transmit by 802.11be-EHT320_Nss=1 (MCS0) (CDD mode)
Mode 10: Transmit by 802.11ax-HE20_Nss=2 (MCS0) (CDD mode)
Mode 11: Transmit by 802.11ax-HE40_Nss=2 (MCS0) (CDD mode)
Mode 12: Transmit by 802.11ax-HE80_Nss=2 (MCS0) (CDD mode)
Mode 13: Transmit by 802.11ax-HE160_Nss=2 (MCS0) (CDD mode)
Mode 14: Transmit by 802.11be-EHT20_Nss=2 (MCS0) (CDD mode)
Mode 15: Transmit by 802.11be-EHT40_Nss=2 (MCS0) (CDD mode)
Mode 16: Transmit by 802.11be-EHT80_Nss=2 (MCS0) (CDD mode)
Mode 17: Transmit by 802.11be-EHT160_Nss=2 (MCS0) (CDD mode)
Mode 18: Transmit by 802.11be-EHT320_Nss=2 (MCS0) (CDD mode)
Beamforming Mode
Mode 19: Transmit by 802.11ax-HE20_Nss=1 (MCS0) (Beam-Forming mode)
Mode 20: Transmit by 802.11ax-HE40_Nss=1 (MCS0) (Beam-Forming mode)
Mode 21: Transmit by 802.11ax-HE80_Nss=1 (MCS0) (Beam-Forming mode)
Mode 22: Transmit by 802.11ax-HE160_Nss=1 (MCS0) (Beam-Forming mode)
Mode 23: Transmit by 802.11be-EHT20_Nss=1 (MCS0) (Beam-Forming mode)
Mode 24: Transmit by 802.11be-EHT40_Nss=1 (MCS0) (Beam-Forming mode)
Mode 25: Transmit by 802.11be-EHT80_Nss=1 (MCS0) (Beam-Forming mode)
Mode 26: Transmit by 802.11be-EHT160_Nss=1 (MCS0) (Beam-Forming mode)
Mode 27: Transmit by 802.11be-EHT320_Nss=1 (MCS0) (Beam-Forming mode)
Remark:
1. For Radiated emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.
2. For CDD mode, this device supports 2 N _{SS} and the worst case is N _{SS} =1. Meanwhile, N _{SS} =2 at 802.11ax-HE20/be-EHT20/be-ETH320 was tested in this report. The power level of N _{SS} =2 at other modes is the same as the N _{SS} =1.
3. Due to CDD mode was the worst mode, so all test items were evaluated in this report. The

beamforming mode only evaluated the RF output power.

4. EUT supports one configuration only in 802.11ax/be full RU mode.

2.6. 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.



2.7. Test System Details

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	Lenovo	20Y7-006KTW	N/A	Non-shielded, 0.8m

2.8. Test Software

The test utility software used during testing was “accessMTool”, and the version was 3.2.1.2.

Note: Final power setting please refer to operational description.

2.9. Applied Standards

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

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

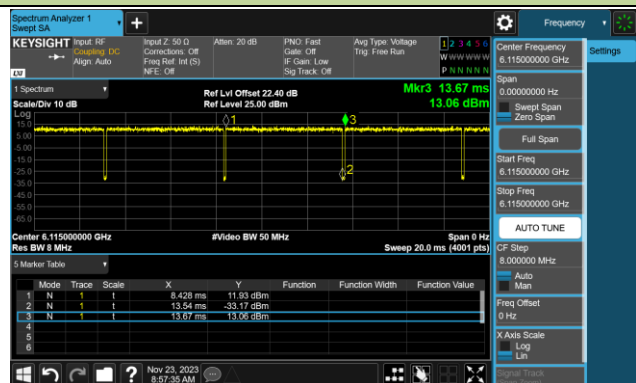
2.10. Duty Cycle

The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz. The RBW and VBW were both greater than $50/T$, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

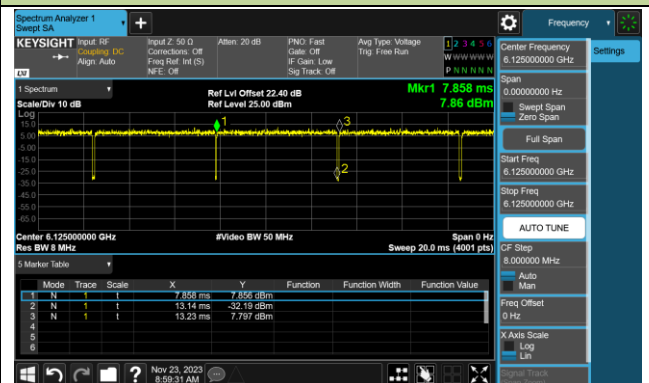
Test Mode	Duty Cycle
802.11ax-HE20	97.52%
802.11ax-HE40	98.32%
802.11ax-HE80	98.16%
802.11ax-HE160	97.55%
802.11be-EHT20	98.47%
802.11be-EHT40	97.79%
802.11be-EHT80	96.90%
802.11be-EHT160	97.73%
802.11be-EHT320	96.53%

Duty Cycle (T = Transmission Duration)

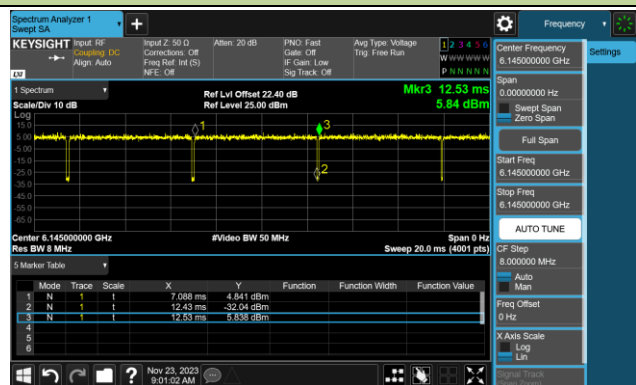
802.11ax-HE20



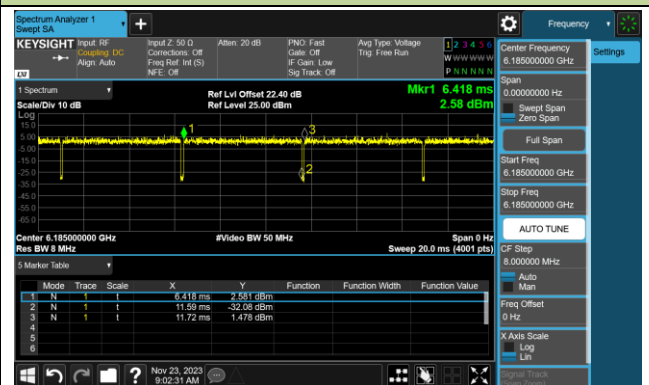
802.11ax-HE40



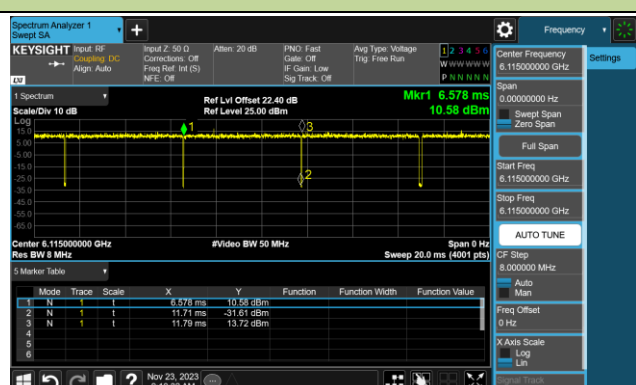
802.11ax-HE80



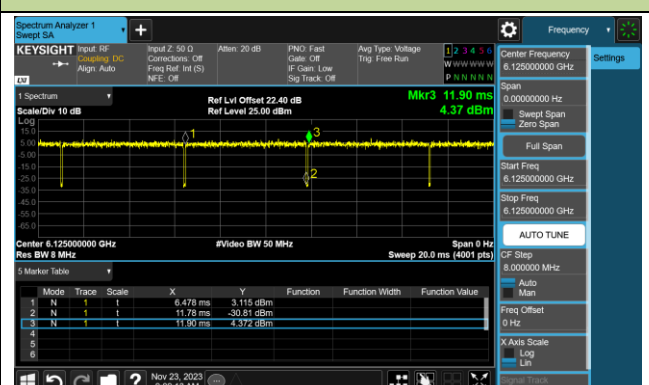
802.11ax-HE160



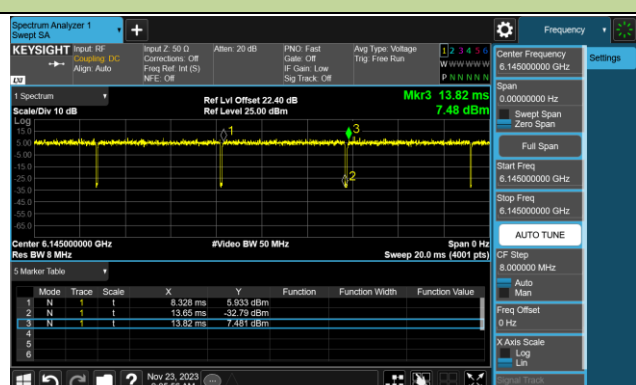
802.11be-EHT20



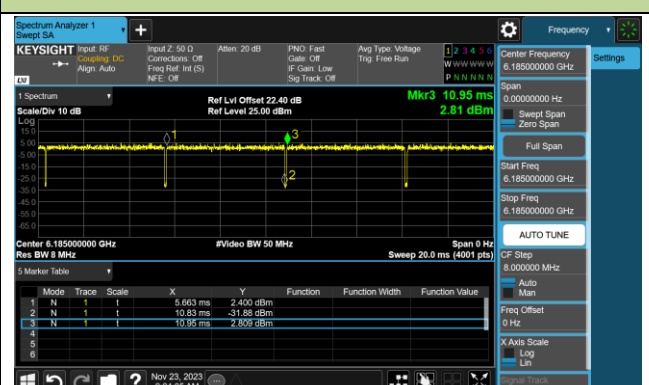
802.11be-EHT40

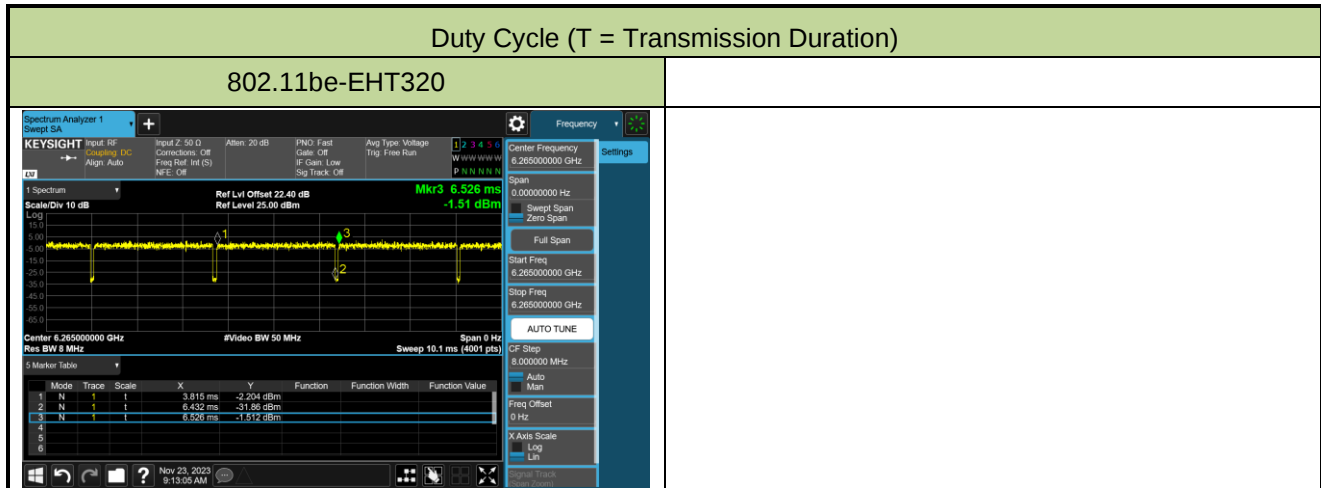


802.11be-EHT80



802.11be-EHT160





2.11. Test Environment Condition

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

3. Antenna Requirements

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

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

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

Conclusion:

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

4. Measuring Instrument

Conducted Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Two-Line V-Network	R&S	ENV216	MRTTWA00019	1 year	2024/3/7
Two-Line V-Network	R&S	ENV216	MRTTWA00020	1 year	2024/4/17
EMI Test Receiver	R&S	ESR3	MRTTWA00045	1 year	2024/5/10
DIVA PLUS Funk-Wetterstation	TFA	35.1083	MRTTWA00050	1 year	2024/6/15

Radiated Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Active Loop Antenna	SCHWARZBECK	FMZB 1519B	MRTTWA00002	1 year	2024/5/22
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2024/10/31
Broadband Hornantenna	RFSPIN	DRH18-E	MRTTWA00087	1 year	2024/5/17
Broadband Preamplifier	EMC Instruments corporation	EMC118A45SE	MRTTWA00088	1 year	2024/5/17
Breitband Hornantenna	SCHWARZBECK	BBHA 9170	MRTTWA00004	1 year	2024/3/20
Broadband Amplifier	SCHWARZBECK	BBV 9721	MRTTWA00006	1 year	2024/3/27
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2024/3/8
Signal Analyzer	R&S	FSVA3044	MRTTWA00092	1 year	2024/6/29
Antenna Cable	HUBERSUHNER	SF106	MRTTWE00034	1 year	2024/6/26
Cable	HUBERSUHNER	EMC105-NM-N M-3000	MRTTWE00035	1 year	2024/6/26
Temperature/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00032	1 year	2024/6/4

Conducted Test Equipment

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
X-Series USB Peak and Average Power Sensor	KEYSIGHT	U2021XA	MRTTWA00014	1 year	2024/4/19
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2024/10/17
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2024/7/19
Attenuator	WTI	218FS-20	MRTTWE00026	1 year	2024/11/1
Attenuator	WTI	218FS-10	MRTTWE00027	1 year	2024/6/14
Temperature & Humidity Chamber	TEN BILLION	TTH-B3UP	MRTTWA00036	1 year	2024/6/11
DIVA PLUS Funk-Wetterstation	TFA	35.1083	MRTTWA00050	1 year	2024/6/15

Software	Version	Function
e3	9.160520a	EMI Test Software

5. 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
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 150kHz~30MHz: $\pm 2.53\text{dB}$
Radiated Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 9kHz ~ 1GHz: $\pm 4.25\text{dB}$ 1GHz ~ 40GHz: $\pm 4.45\text{dB}$
Conducted Power (Carrier Power / Power Density)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.84\text{dB}$
Conducted Spurious Emission
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 2.65\text{ dB}$
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 3.3\%$
Temp. / Humidity
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.82^\circ\text{C} / \pm 3\%$
Frequency Error
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 78.4\text{Hz}$

6. Test Result

6.1. Summary

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

Notes:

- Determining compliance is based on the test results met the regulation limits or requirements declared by clients, and the test results don't take into account the value of measurement uncertainty.
- 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, the test results shown in the following sections represent the worst-case emissions.

6.2. 26dB Bandwidth

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 used

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

KDB 789033 D02v02r01- Section D (99% Bandwidth)

6.2.3. Test Setting

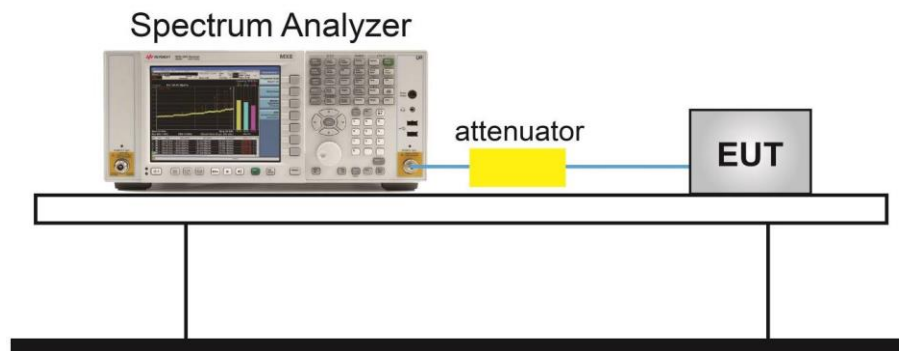
26dB Bandwidth

1. The analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 26$. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediated power nulls in the fundamental emission.
2. RBW = approximately 1% of the emission bandwidth.
3. VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold.

99% Bandwidth

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1% to 5% of the OBW
4. Set VBW $\geq 3 \times$ RBW
5. Detector = Peak.
6. Use the 99% power bandwidth function of the instrument.

6.2.4. Test Setup



6.2.5. Test Result

Test Site	SR6	Test Engineer	Xuan
Test Date	2023/12/8		

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
802.11ax-HE20	MCS0	33	6115	23.37	19.073	≤ 320
802.11ax-HE20	MCS0	61	6255	22.50	19.104	≤ 320
802.11ax-HE20	MCS0	93	6415	22.77	19.120	≤ 320
802.11ax-HE20	MCS0	97	6435	22.42	19.106	≤ 320
802.11ax-HE20	MCS0	105	6475	22.06	19.066	≤ 320
802.11ax-HE20	MCS0	113	6515	22.19	19.074	≤ 320
802.11ax-HE20	MCS0	117	6535	21.70	19.111	≤ 320
802.11ax-HE20	MCS0	149	6695	22.45	19.089	≤ 320
802.11ax-HE20	MCS0	181	6855	22.06	19.077	≤ 320
802.11ax-HE20	MCS0	185	6875	22.01	19.040	≤ 320
802.11ax-HE20	MCS0	189	6895	22.05	19.124	≤ 320
802.11ax-HE20	MCS0	213	7015	22.18	19.031	≤ 320
802.11ax-HE20	MCS0	229	7095	22.90	19.036	≤ 320
802.11ax-HE40	MCS0	35	6125	43.15	38.012	≤ 320
802.11ax-HE40	MCS0	59	6245	44.71	37.973	≤ 320
802.11ax-HE40	MCS0	91	6405	42.87	37.953	≤ 320
802.11ax-HE40	MCS0	99	6445	43.12	37.998	≤ 320
802.11ax-HE40	MCS0	107	6485	42.95	37.983	≤ 320
802.11ax-HE40	MCS0	115	6525	43.57	38.007	≤ 320
802.11ax-HE40	MCS0	123	6565	42.36	37.969	≤ 320
802.11ax-HE40	MCS0	147	6685	43.13	37.910	≤ 320
802.11ax-HE40	MCS0	179	6845	42.81	38.006	≤ 320
802.11ax-HE40	MCS0	187	6885	43.17	37.987	≤ 320
802.11ax-HE40	MCS0	195	6925	43.59	38.031	≤ 320
802.11ax-HE40	MCS0	211	7005	43.17	37.979	≤ 320
802.11ax-HE40	MCS0	227	7085	42.79	37.971	≤ 320

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
802.11ax-HE80	MCS0	39	6145	89.17	77.866	≤ 320
802.11ax-HE80	MCS0	55	6225	85.56	77.736	≤ 320
802.11ax-HE80	MCS0	87	6385	85.63	77.673	≤ 320
802.11ax-HE80	MCS0	103	6465	86.21	77.824	≤ 320
802.11ax-HE80	MCS0	119	6545	88.11	77.879	≤ 320
802.11ax-HE80	MCS0	135	6625	87.30	77.703	≤ 320
802.11ax-HE80	MCS0	151	6705	86.21	77.635	≤ 320
802.11ax-HE80	MCS0	167	6785	88.49	77.938	≤ 320
802.11ax-HE80	MCS0	183	6865	86.52	77.723	≤ 320
802.11ax-HE80	MCS0	199	6945	88.23	77.667	≤ 320
802.11ax-HE80	MCS0	215	7025	84.59	77.680	≤ 320
802.11ax-HE160	MCS0	47	6185	169.1	157.27	≤ 320
802.11ax-HE160	MCS0	79	6345	166.3	157.13	≤ 320
802.11ax-HE160	MCS0	111	6505	165.2	157.39	≤ 320
802.11ax-HE160	MCS0	143	6665	166.8	157.34	≤ 320
802.11ax-HE160	MCS0	175	6825	167.1	157.19	≤ 320
802.11ax-HE160	MCS0	207	6985	167.2	157.20	≤ 320
802.11be-EHT20	MCS0	33	6115	23.02	19.070	≤ 320
802.11be-EHT20	MCS0	61	6255	22.58	19.075	≤ 320
802.11be-EHT20	MCS0	93	6415	22.18	19.131	≤ 320
802.11be-EHT20	MCS0	97	6435	22.46	19.078	≤ 320
802.11be-EHT20	MCS0	105	6475	23.25	19.065	≤ 320
802.11be-EHT20	MCS0	113	6515	22.56	19.068	≤ 320
802.11be-EHT20	MCS0	117	6535	22.75	19.133	≤ 320
802.11be-EHT20	MCS0	149	6695	21.65	19.080	≤ 320
802.11be-EHT20	MCS0	181	6855	22.38	19.089	≤ 320
802.11be-EHT20	MCS0	185	6875	22.62	19.078	≤ 320
802.11be-EHT20	MCS0	189	6895	22.58	19.070	≤ 320
802.11be-EHT20	MCS0	213	7015	23.30	19.085	≤ 320
802.11be-EHT20	MCS0	229	7095	22.19	19.066	≤ 320

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
802.11be-EHT40	MCS0	35	6125	43.62	37.973	≤ 320
802.11be-EHT40	MCS0	59	6245	42.73	37.971	≤ 320
802.11be-EHT40	MCS0	91	6405	42.91	38.050	≤ 320
802.11be-EHT40	MCS0	99	6445	43.90	38.050	≤ 320
802.11be-EHT40	MCS0	107	6485	43.54	37.988	≤ 320
802.11be-EHT40	MCS0	115	6525	43.24	38.037	≤ 320
802.11be-EHT40	MCS0	123	6565	42.21	37.983	≤ 320
802.11be-EHT40	MCS0	147	6685	43.43	37.996	≤ 320
802.11be-EHT40	MCS0	179	6845	43.02	38.024	≤ 320
802.11be-EHT40	MCS0	187	6885	42.07	38.128	≤ 320
802.11be-EHT40	MCS0	195	6925	43.59	38.000	≤ 320
802.11be-EHT40	MCS0	211	7005	43.16	37.943	≤ 320
802.11be-EHT40	MCS0	227	7085	42.41	38.036	≤ 320
802.11be-EHT80	MCS0	39	6145	85.73	77.799	≤ 320
802.11be-EHT80	MCS0	55	6225	85.95	77.736	≤ 320
802.11be-EHT80	MCS0	87	6385	87.17	77.686	≤ 320
802.11be-EHT80	MCS0	103	6465	86.83	77.765	≤ 320
802.11be-EHT80	MCS0	119	6545	85.79	77.700	≤ 320
802.11be-EHT80	MCS0	135	6625	87.22	77.845	≤ 320
802.11be-EHT80	MCS0	151	6705	87.08	77.812	≤ 320
802.11be-EHT80	MCS0	167	6785	86.42	77.682	≤ 320
802.11be-EHT80	MCS0	183	6865	88.36	77.613	≤ 320
802.11be-EHT80	MCS0	199	6945	85.28	77.731	≤ 320
802.11be-EHT80	MCS0	215	7025	85.20	77.722	≤ 320
802.11be-EHT160	MCS0	47	6185	169.3	157.23	≤ 320
802.11be-EHT160	MCS0	79	6345	164.9	157.02	≤ 320
802.11be-EHT160	MCS0	111	6505	168.3	157.40	≤ 320
802.11be-EHT160	MCS0	143	6665	170.1	157.22	≤ 320
802.11be-EHT160	MCS0	175	6825	167.6	157.16	≤ 320
802.11be-EHT160	MCS0	207	6985	167.6	157.15	≤ 320
802.11be-EHT320	MCS0	63	6265	329.7	315.75	≤ 320
802.11be-EHT320	MCS0	95	6425	329.6	316.42	≤ 320
802.11be-EHT320	MCS0	127	6585	331.5	316.05	≤ 320
802.11be-EHT320	MCS0	159	6745	329.3	316.59	≤ 320
802.11be-EHT320	MCS0	191	6905	329.5	316.11	≤ 320

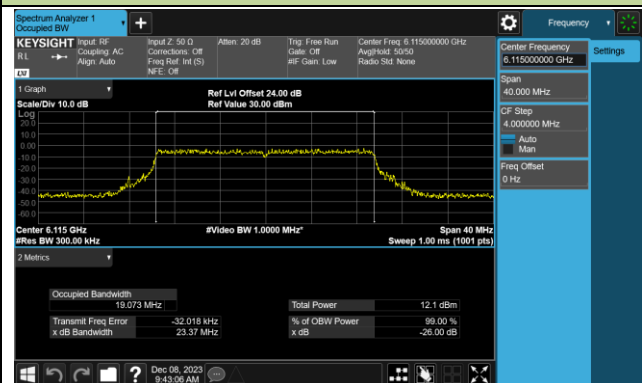
Note:

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

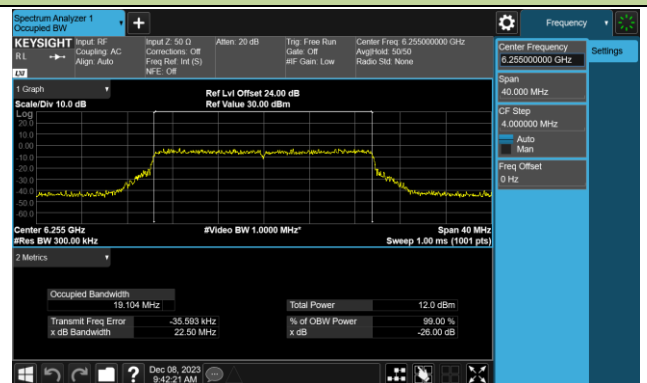
For channels with a nominal bandwidth of 320 MHz compliance is demonstrated by way of the 99% BW.

802.11ax-HE20 26dB Bandwidth & 99% Bandwidth

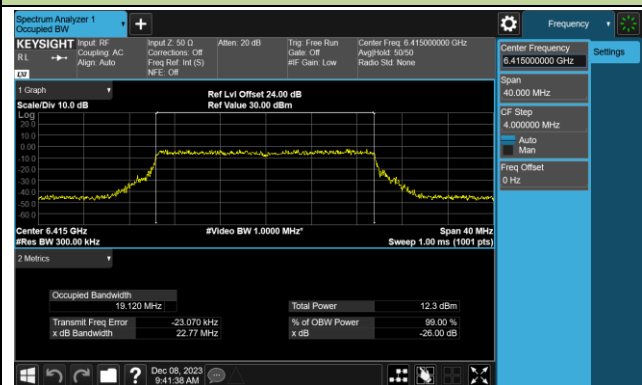
Channel 33 (6115MHz)



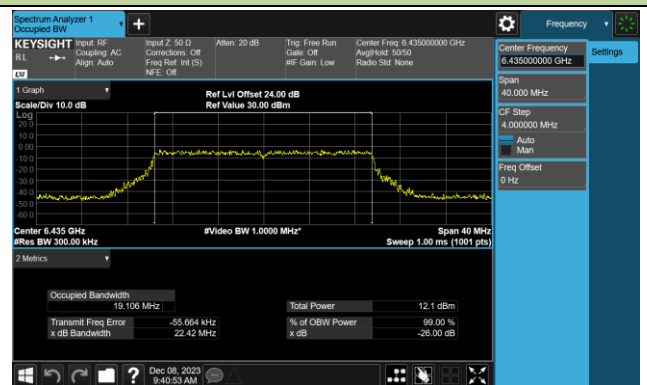
Channel 61 (6255MHz)



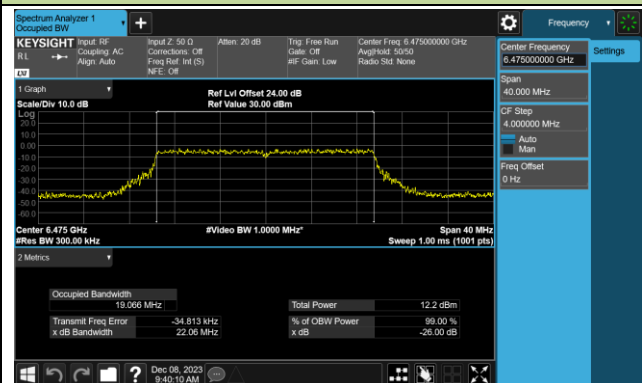
Channel 93 (6415MHz)



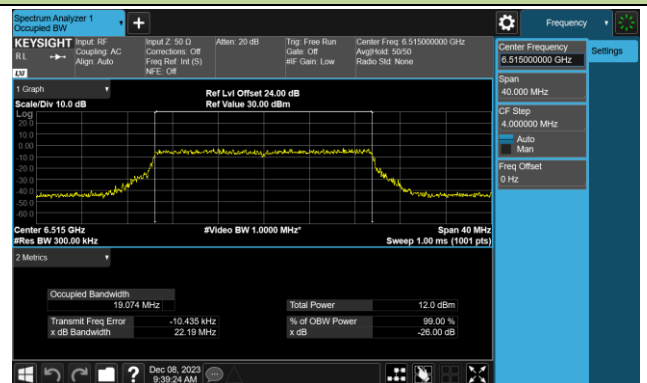
Channel 97 (6435MHz)



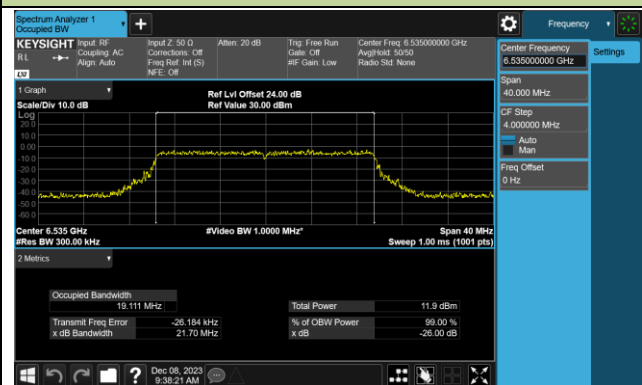
Channel 105 (6475MHz)



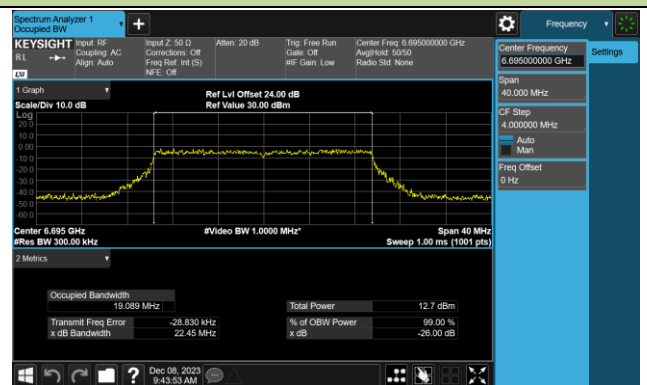
Channel 113 (6515MHz)



Channel 117 (6535MHz)

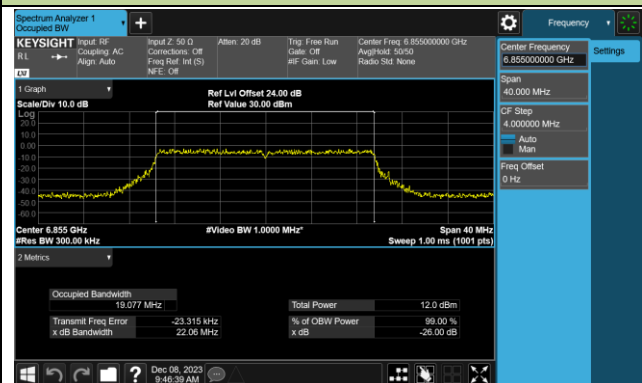


Channel 149 (6695MHz)

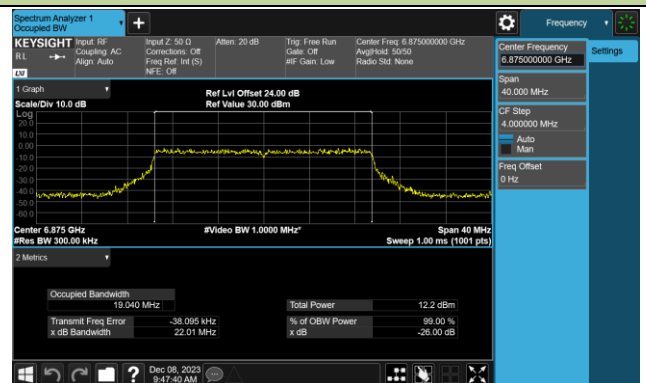


802.11ax-HE20 26dB Bandwidth & 99% Bandwidth

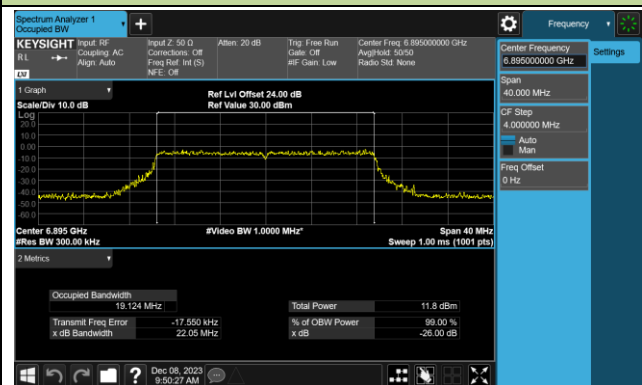
Channel 181 (6855MHz)



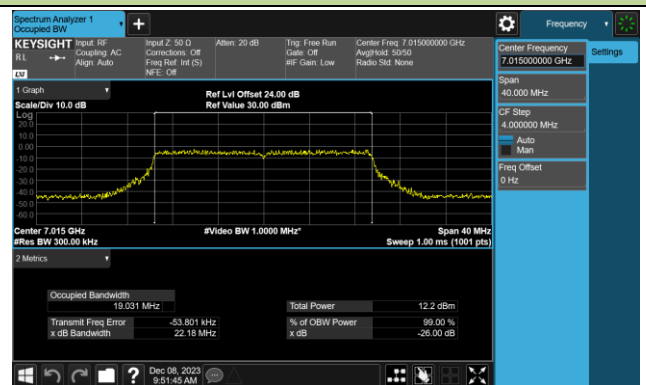
Channel 185 (6875MHz)



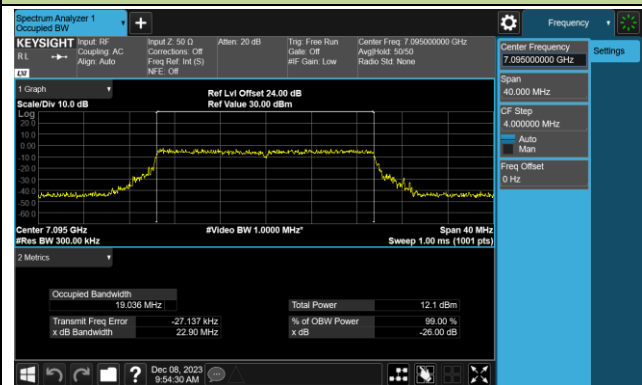
Channel 189 (6895MHz)



Channel 213 (7015MHz)

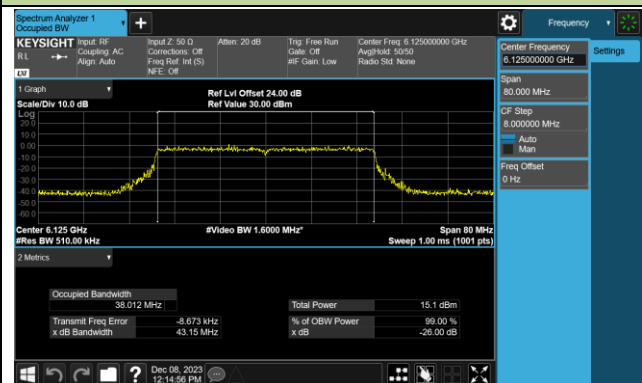


Channel 229 (7095MHz)

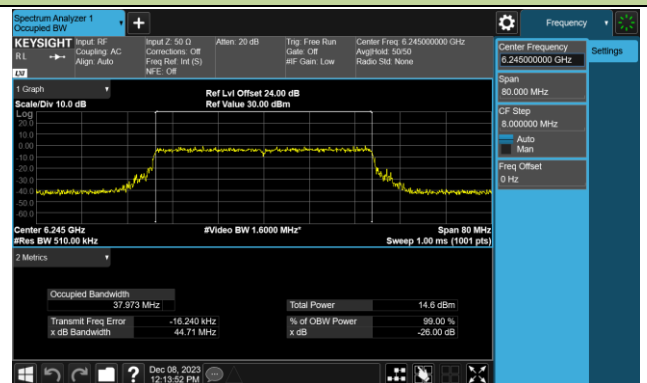


802.11ax-HE40 26dB Bandwidth & 99% Bandwidth

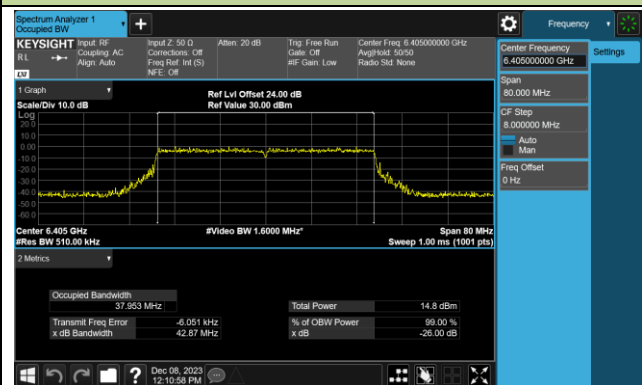
Channel 35 (6125MHz)



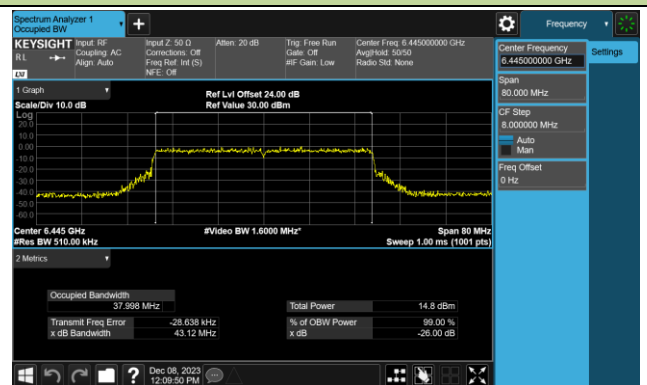
Channel 59 (6245MHz)



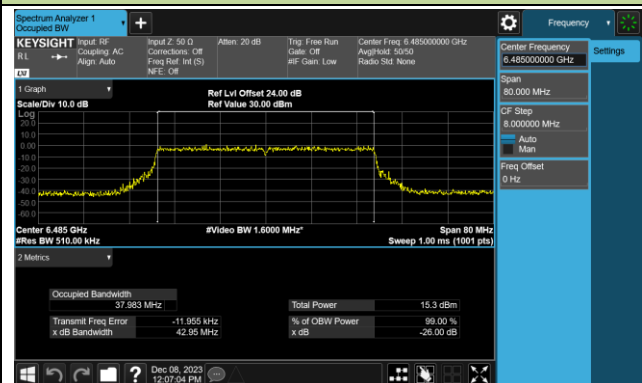
Channel 91 (6405MHz)



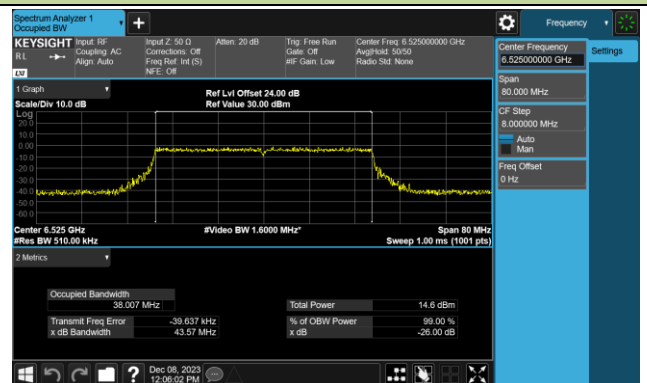
Channel 99 (6445MHz)



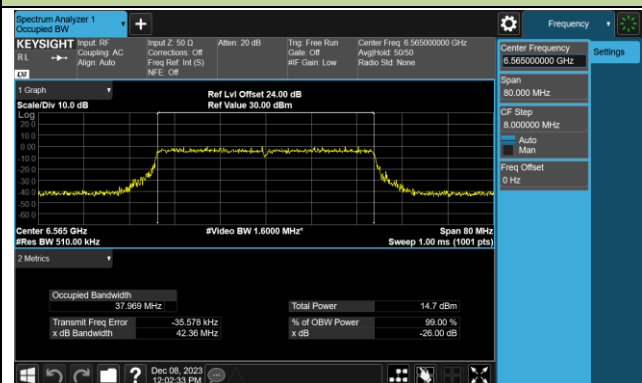
Channel 107 (6485MHz)



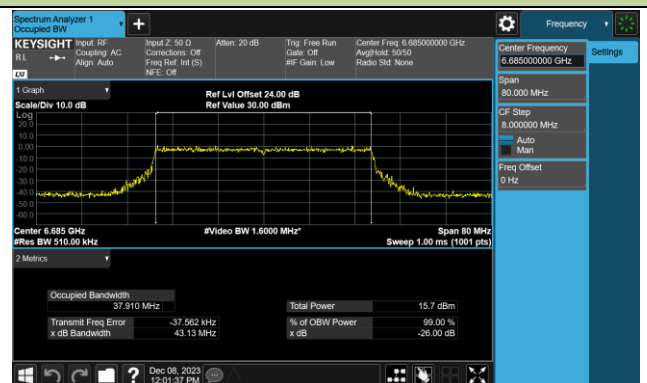
Channel 115 (6525MHz)



Channel 123 (6565MHz)

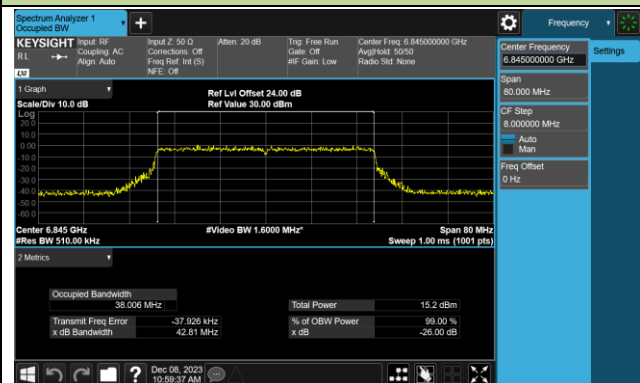


Channel 147 (6685MHz)

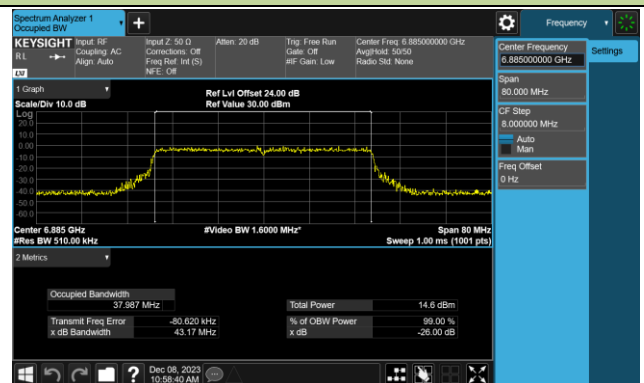


802.11ax-HE40 26dB Bandwidth & 99% Bandwidth

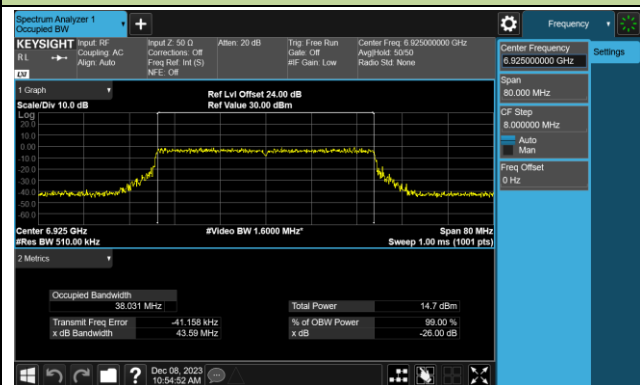
Channel 179 (6845MHz)



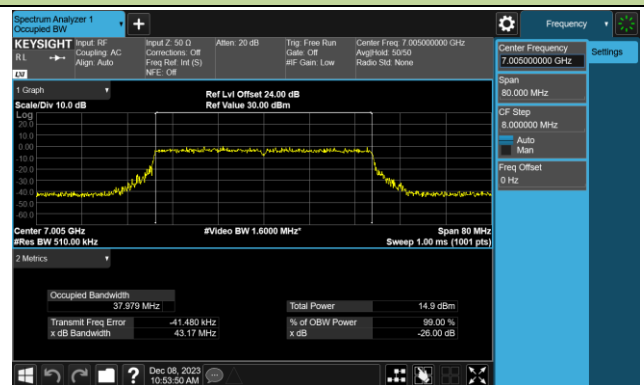
Channel 187 (6885MHz)



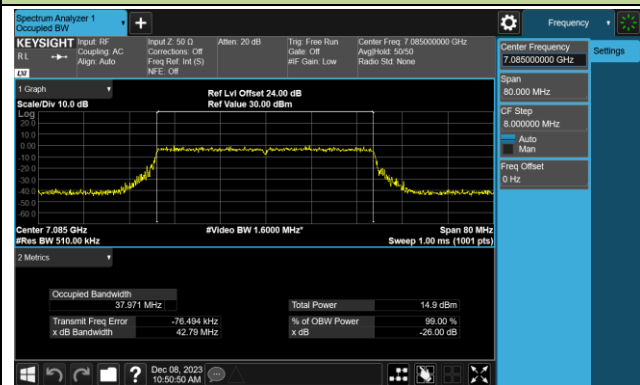
Channel 195 (6925MHz)



Channel 211 (7005MHz)

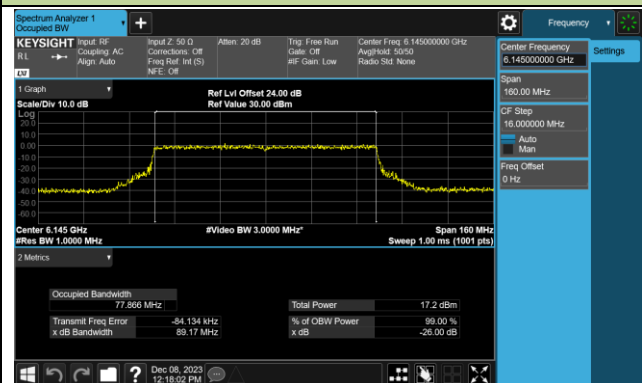


Channel 227 (7085MHz)

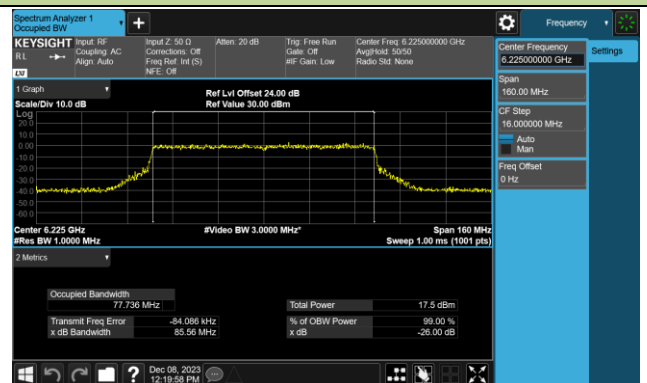


802.11ax-HE80 26dB Bandwidth & 99% Bandwidth

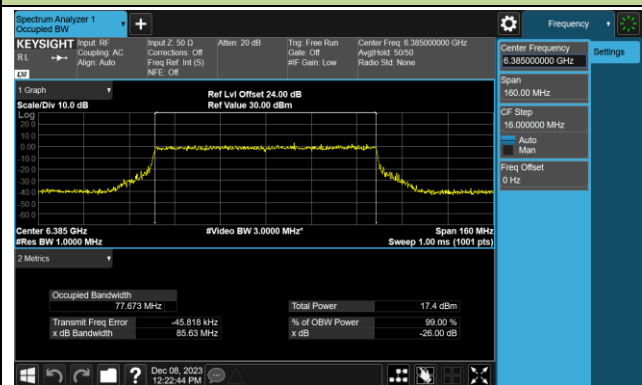
Channel 39 (6145MHz)



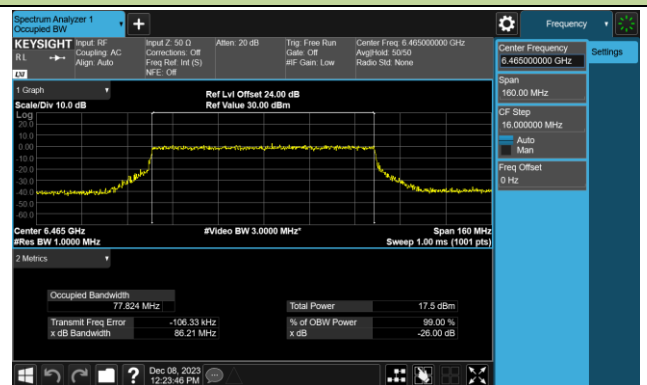
Channel 55 (6225MHz)



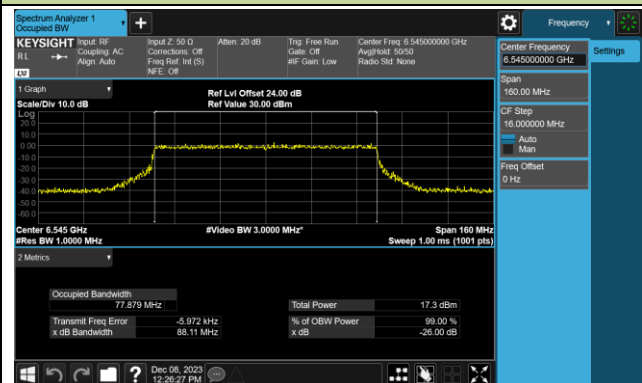
Channel 87 (6385MHz)



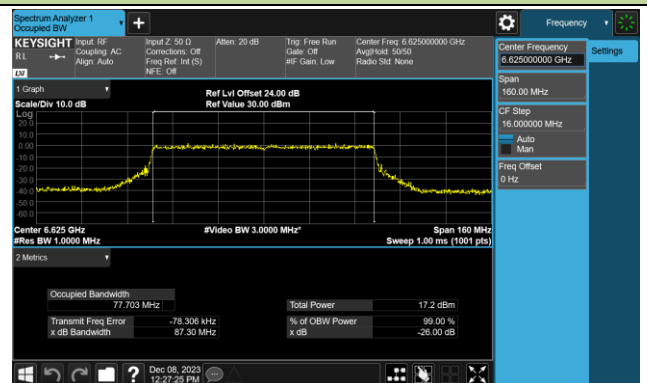
Channel 103 (6465MHz)



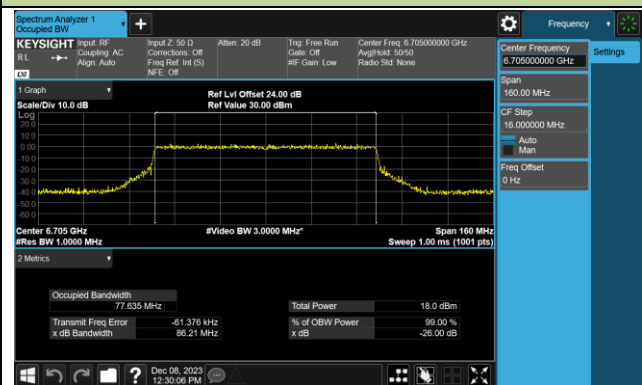
Channel 119 (6545MHz)



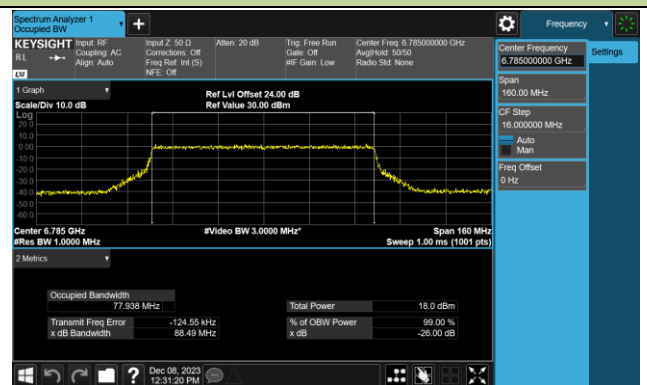
Channel 135 (6625MHz)



Channel 151 (6705MHz)

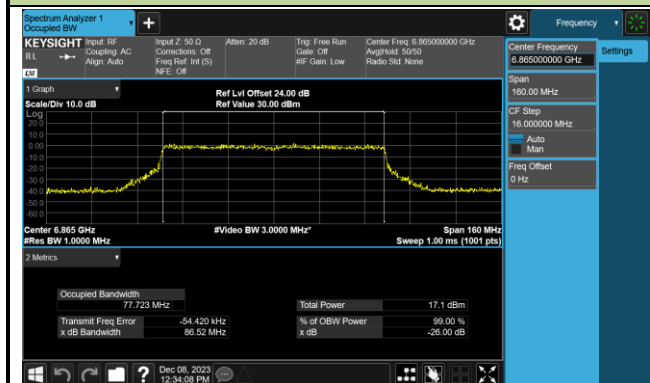


Channel 167 (6785MHz)

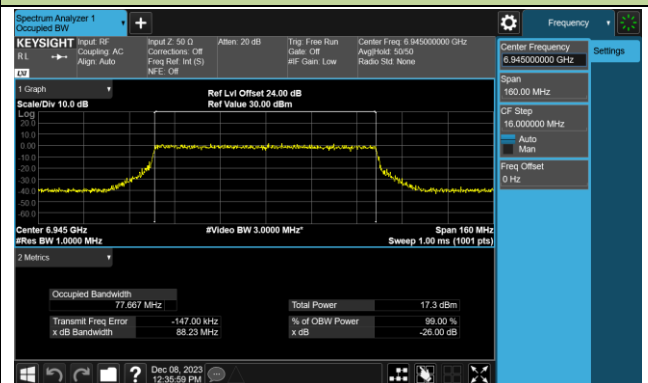


802.11ax-HE80 26dB Bandwidth & 99% Bandwidth

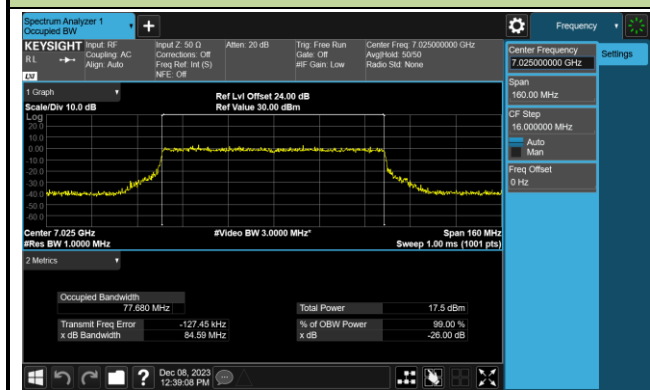
Channel 183 (6865MHz)



Channel 199 (6945MHz)

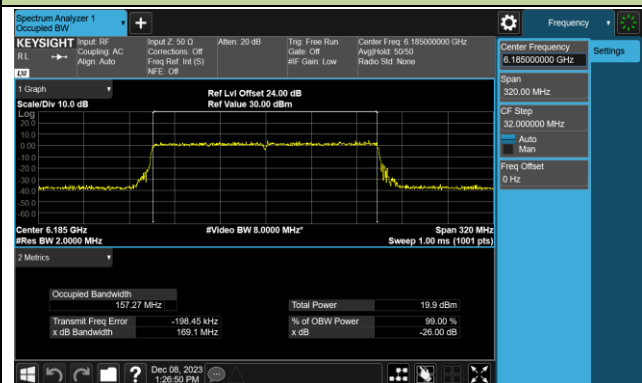


Channel 215 (7025MHz)

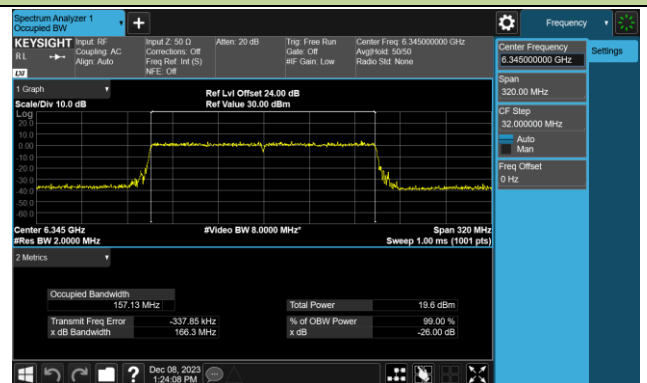


802.11ax-HE160 26dB Bandwidth & 99% Bandwidth

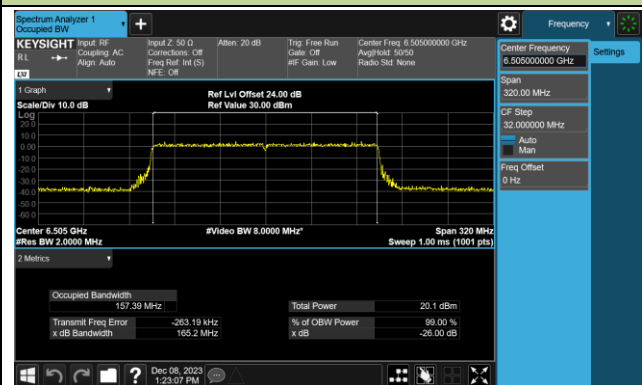
Channel 47 (6185MHz)



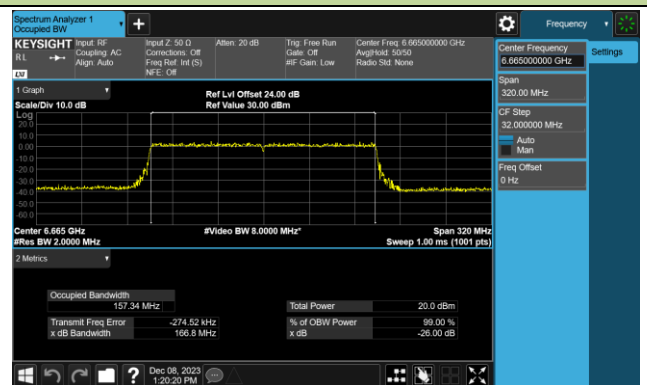
Channel 79 (6345MHz)



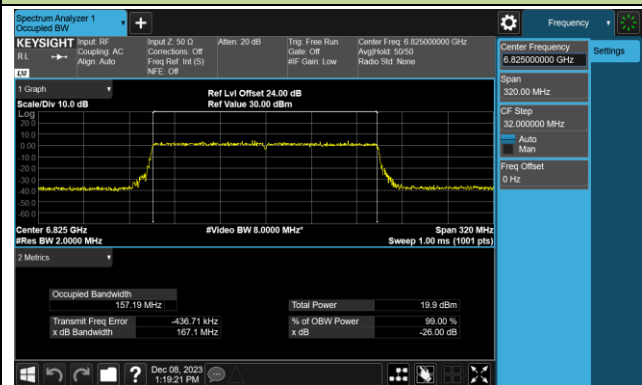
Channel 111 (6505MHz)



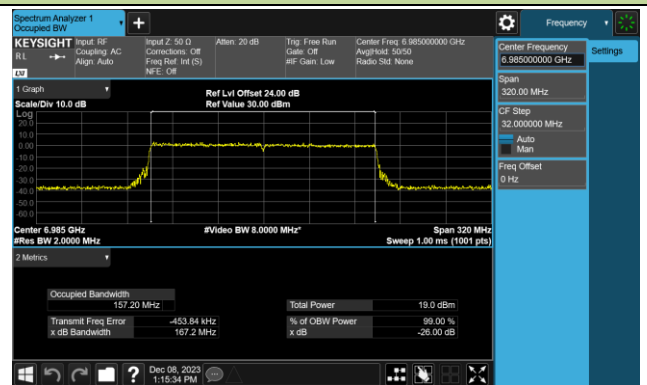
Channel 143 (6665MHz)



Channel 175 (6825MHz)

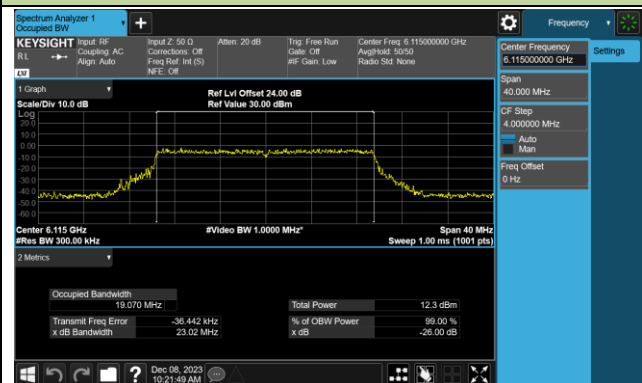


Channel 207 (6985MHz)

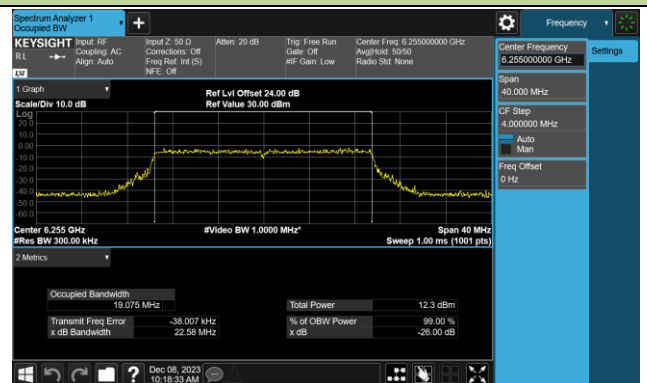


802.11be-EHT20 26dB Bandwidth & 99% Bandwidth

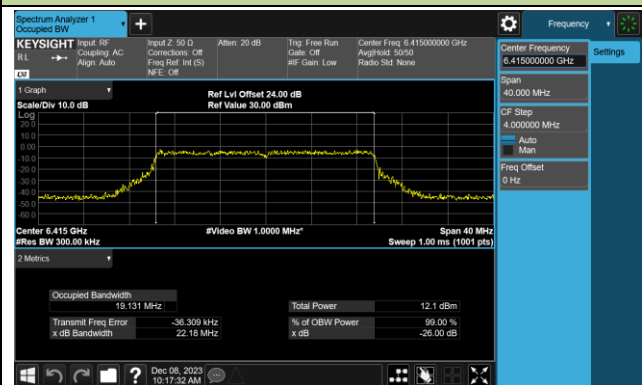
Channel 33 (6115MHz)



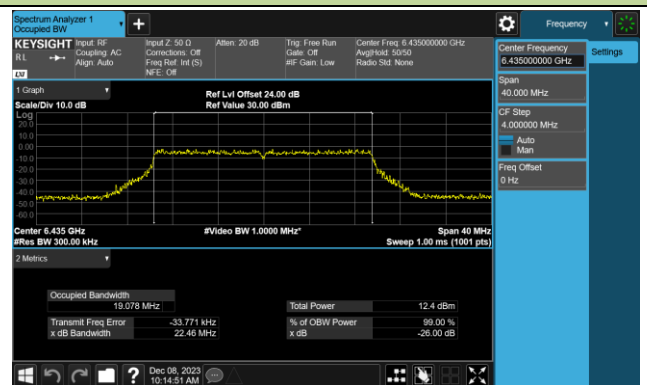
Channel 61 (6255MHz)



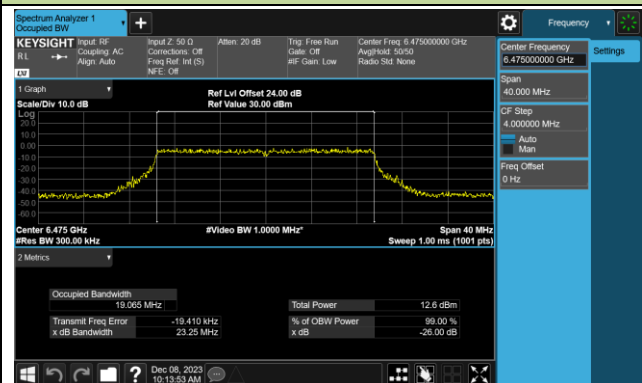
Channel 93 (6415MHz)



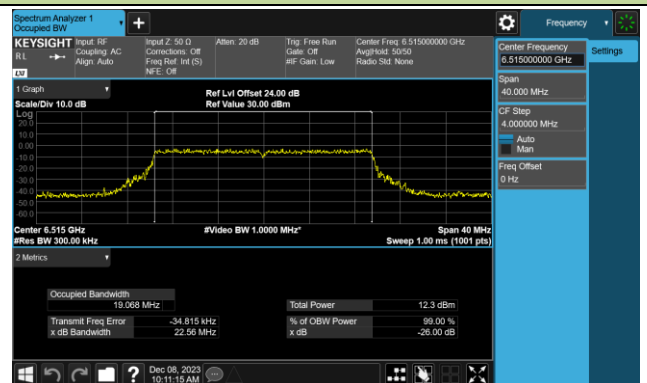
Channel 97 (6435MHz)



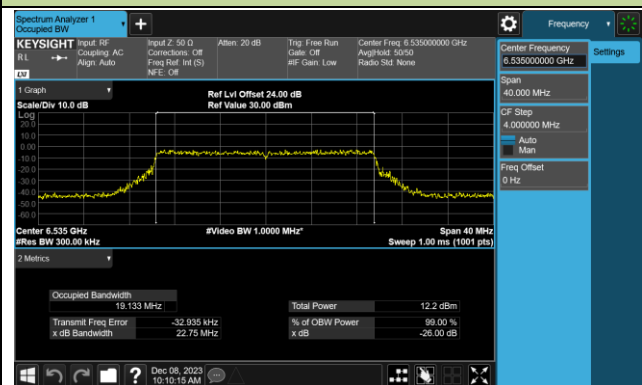
Channel 105 (6475MHz)



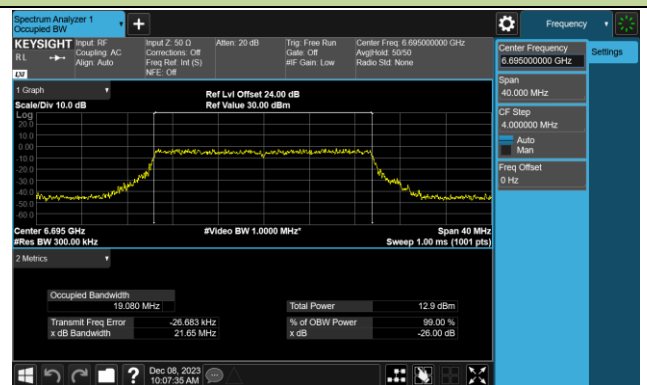
Channel 113 (6515MHz)



Channel 117 (6535MHz)

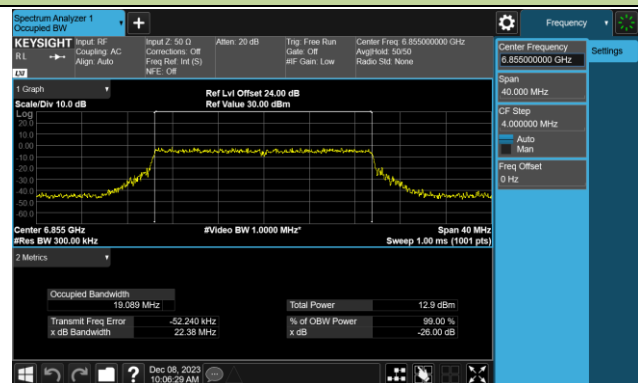


Channel 149 (6695MHz)

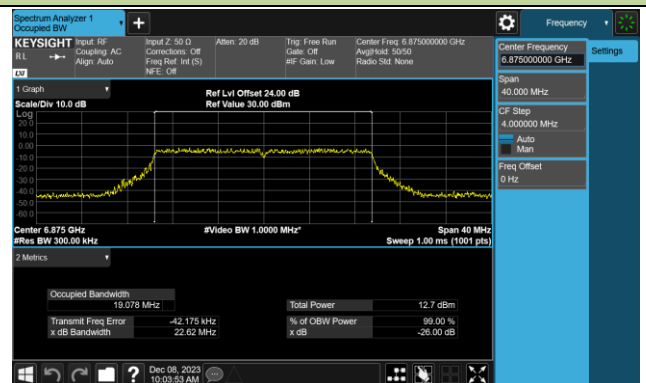


802.11be-EHT20 26dB Bandwidth & 99% Bandwidth

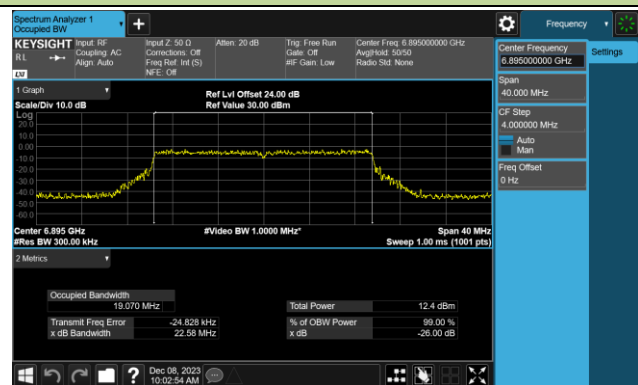
Channel 181 (6855MHz)



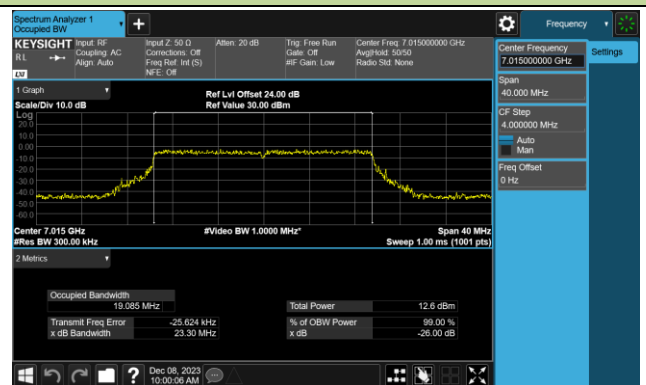
Channel 185 (6875MHz)



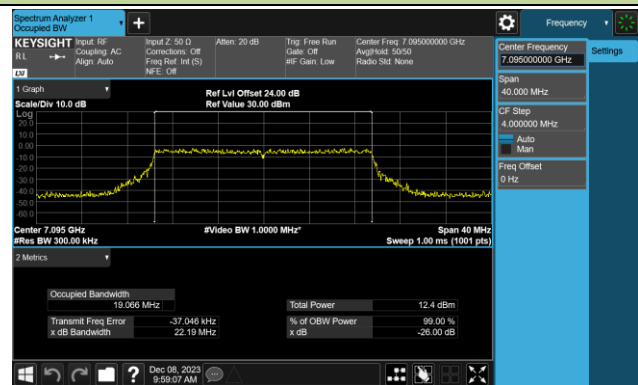
Channel 189 (6895MHz)



Channel 213 (7015MHz)

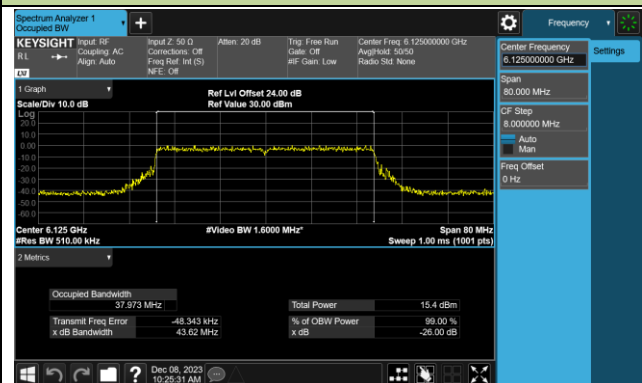


Channel 229 (7095MHz)

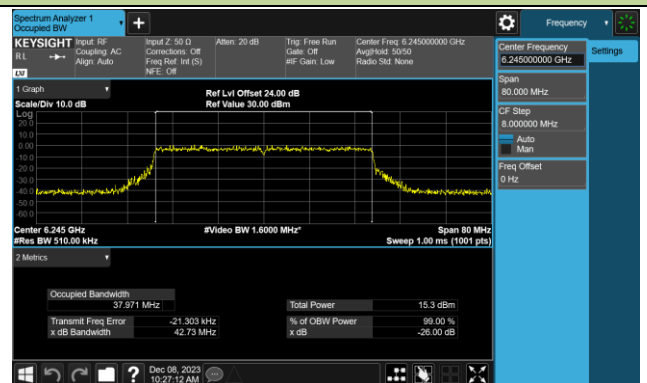


802.11be-EHT40 26dB Bandwidth & 99% Bandwidth

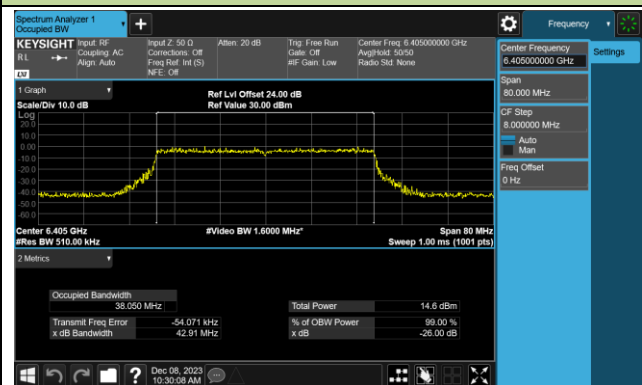
Channel 35 (6125MHz)



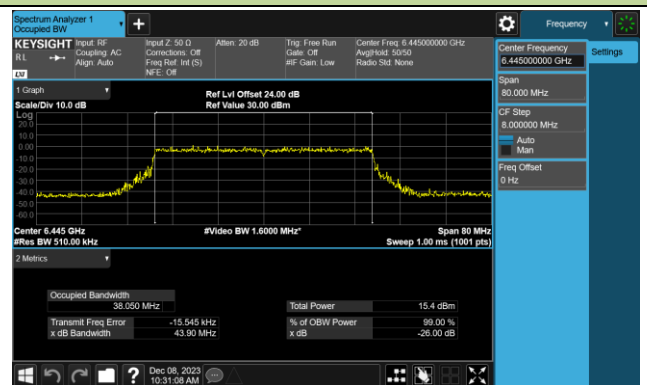
Channel 59 (6245MHz)



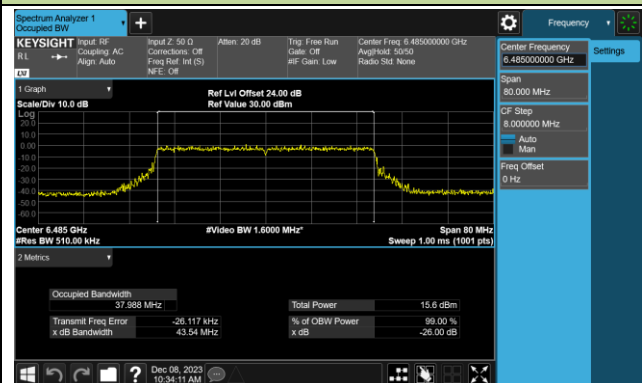
Channel 91 (6405MHz)



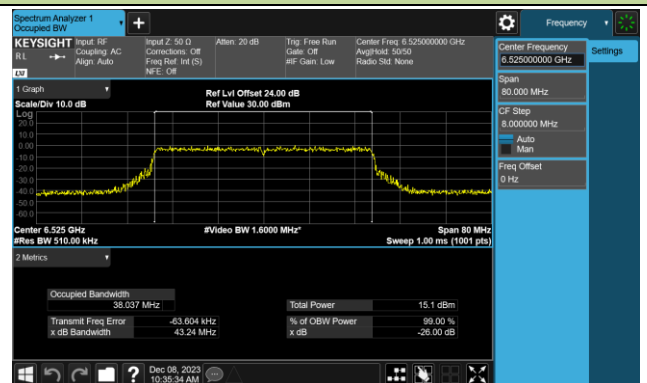
Channel 99 (6445MHz)



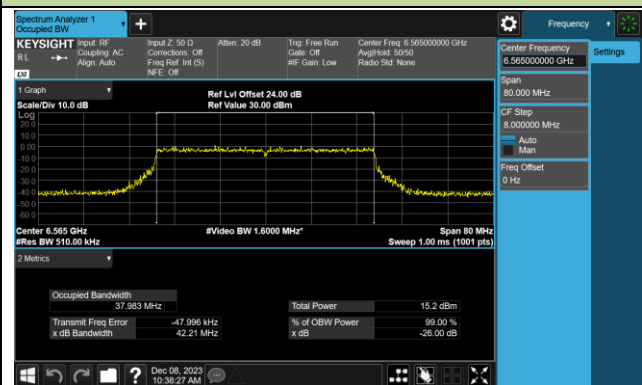
Channel 107 (6485MHz)



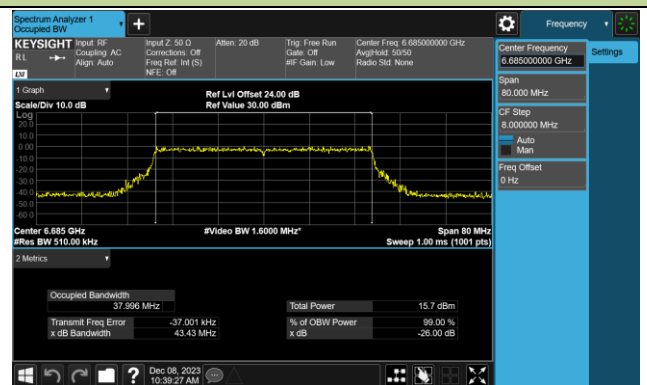
Channel 115 (6525MHz)



Channel 123 (6565MHz)

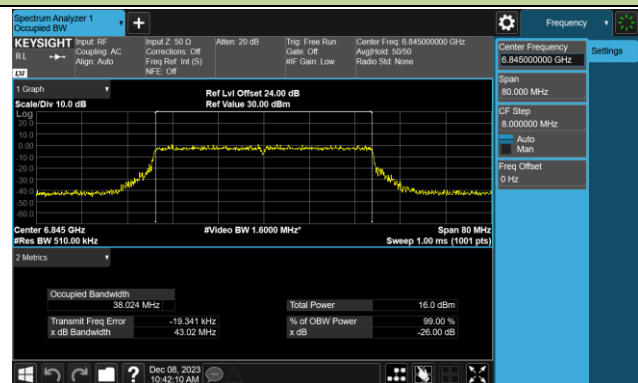


Channel 147 (6685MHz)

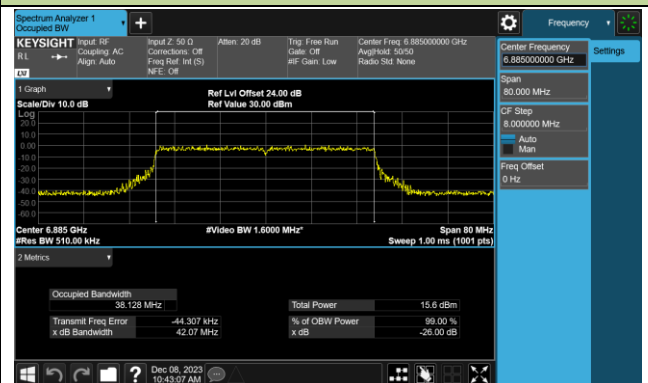


802.11be-EHT40 26dB Bandwidth & 99% Bandwidth

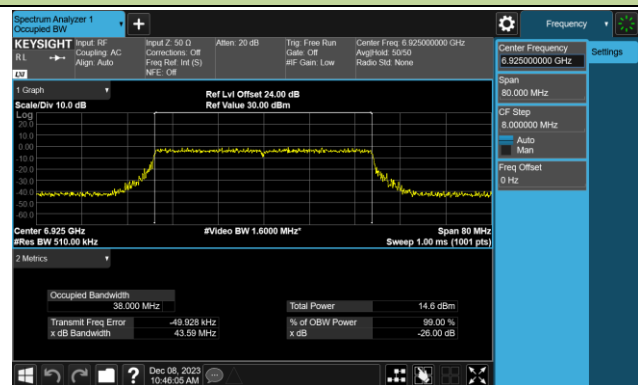
Channel 179 (6845MHz)



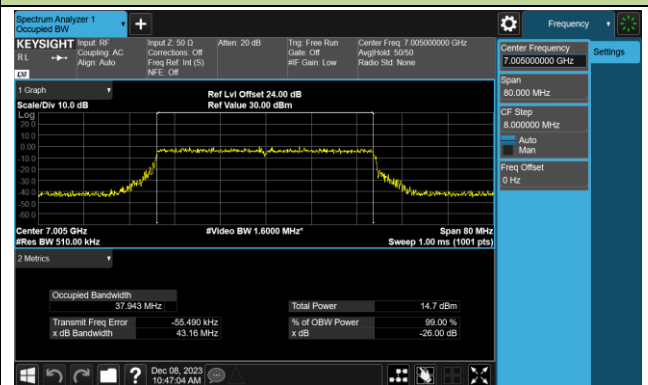
Channel 187 (6885MHz)



Channel 195 (6925MHz)



Channel 211 (7005MHz)



Channel 227 (7085MHz)

