TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBCKS-WTW-P25080470A-1 R2
FCC ID:	2ABLK-GS4139E
Product:	WiFi7 AP
Brand:	GigaSpire
Model No.:	7u10t.2 GS4139E, 7u10txg.2 GS4139XG
Received Date:	2025/9/4
Test Date:	2025/9/4 ~ 2026/3/23
Issued Date:	2026/4/14
Applicant:	Calix Inc.
Address:	1 Santana West 3155 Olsen Drive, Suite 450, San Jose, California 95117, United States
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

Approved by: _____ , **Date:** **2026/4/14**

Wen Yu / Assistant Manager

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Prepared by: Vito Lung / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBCKS-WTW-P25080470A-1	Original release.	2026/3/16
RFBCKS-WTW-P25080470A-1 R1	Update the AC Power Conducted Emissions test results.	2026/3/24
RFBCKS-WTW-P25080470A-1 R2	Modify Note 1 in Section 3.1.	2026/4/14

1 Certificate

Product:	WiFi7 AP
Brand:	GigaSpire
Test Model:	7u10t.2 GS4139E, 7u10txg.2 GS4139XG
Sample Status:	Engineering sample
Applicant:	Calix Inc.
Test Date:	2025/9/4 ~ 2026/3/23
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407)
Measurement procedure:	ANSI C63.10-2020 KDB 789033 D02 General UNII Test Procedure New Rules v02r01 KDB 662911 D01 Multiple Transmitter Output v02r01

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(2)	26 dB Bandwidth	-	For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.
15.407(a)(1) 15.407(a)(2) 15.407(a)(3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1) 15.407(a)(2) 15.407(a)(3)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
---	Occupied Bandwidth	-	Reference only.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -3.04 dB at 0.47422 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -3.2 dB at 43.02 MHz
15.407(b) (1/10) 15.407(b) (2/10) 15.407(b) (3/10) 15.407(b) (4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.2 dB at 5350.00 MHz and 5624.47 MHz
15.203	Antenna Requirement	Pass	No antenna connector is used.

Notes:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. The “Dynamic Frequency Selection measurement” was recorded in DFS test report.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Specification	Expanded Uncertainty (k=2) (±)
26 dB Bandwidth	-	1050.00 Hz
RF Output Power	-	1.1 dB
Power Spectral Density	-	1.3 dB
6 dB Bandwidth	-	1050.00 Hz
Occupied Bandwidth	-	1050.00 Hz
AC Power Conducted Emissions	150 kHz ~ 30 MHz	1.9 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.5 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	5.1 dB
	18 GHz ~ 40 GHz	5.3 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	WiFi7 AP
Brand	GigaSpire
Test Model	7u10t.2 GS4139E, 7u10txg.2 GS4139XG
Status of EUT	Engineering sample
Power Supply Rating	12 Vdc from power adapter or 12 Vdc from UPS
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode 1024QAM for OFDMA in 11ax mode 4096QAM for OFDMA in 11be mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: up to 54 Mbps 802.11n: up to 600 Mbps 802.11ac: up to 3466.7 Mbps 802.11ax: up to 4803.9 Mbps 802.11be: up to 8647.1 Mbps
Operating Frequency	5.18 GHz ~ 5.24 GHz 5.26 GHz ~ 5.32 GHz 5.5 GHz ~ 5.72 GHz 5.745 GHz ~ 5.825 GHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20), 802.11be (EHT20): 25 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40), 802.11be (EHT40): 12 802.11ac (VHT80), 802.11ax (HE80), 802.11be (EHT80): 6 802.11ac (VHT160), 802.11ax (HE160), 802.11be (EHT160): 2 802.11be (EHT240): 1
Channel Puncturing (Large RU)	80 MHz punctured by 20 MHz, 80 MHz punctured by 40 MHz 160 MHz punctured by 40 MHz, 160 MHz punctured by 60 MHz 160 MHz punctured by 80 MHz
Output Power	5.18 GHz ~ 5.24 GHz: 215.277 mW (23.33 dBm) 5.26 GHz ~ 5.32 GHz: 236.682 mW (23.74 dBm) 5.5 GHz ~ 5.72 GHz: 248.684 mW (23.96 dBm) 5.745 GHz ~ 5.825 GHz: 406.565 mW (26.09 dBm)
EUT Category	Indoor Access Point

Note:

1. This report is prepared for FCC class II permissive change. The difference compared with the Report No.: RFBCKS-WTW-P25080470-1 as the following:
   - ◆ Enable U-NII-2A and U-NII-2C bands and Channel Puncturing function through software change.
   - ◆ Change the 5G antenna cable color.
   - ◆ Sample print modification.
   - ◆ Enclosure bottom ventilation opening quantity adjustment.
2. According to above conditions, for all of test items need to be performed and all data was verified to meet the requirements.
3. All models are listed as below.

Brand	Model	Difference
GigaSpire	7u10t.2 GS4139E	GigaSpire 7u10t.2, GS4139E, Triband 2+4+4 Wi-Fi 7 RG/Mesh, 10GE WAN, 10GE + 2.5GE + 2 GE LAN, 1 POTS, USB, AM PA
	7u10txg.2 GS4139XG	GigaSpire 7u10txg.2, GS4139XG, Triband 2+4+4 Wi-Fi 7 RG/Mesh, XGS WAN, 10GE + 2.5GE + 2 GE LAN, 1 POTS, USB, AM PA

4. The EUT uses following accessories.

Item	Brand	Model	Specification
AC Adapter 1	AMIGO	AMS340-1204000FU	AC Input: 100-240V 50/60Hz 2.0A DC Output: 12V⎓4.0A DC Output Cable: 1.5m
AC Adapter 2	MOSO	MS-V4000R120-050A0-US	AC Input: 100-240V~50/60Hz 1.3A max DC Output: 12.0V⎓4.0A 48W DC Output Cable: 1.5m

5. There are WLAN (2.4 GHz), WLAN (5 GHz) and WLAN (6 GHz) technology used for the EUT.

6. Simultaneously transmission combination.

Combination	Technology		
1	WLAN (2.4 GHz)	WLAN (5 GHz)	WLAN (6 GHz)
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.			

7. The EUT support OFDMA and Partial RU mode, therefore partial RU combination were investigated and the worst case scenario was identified.

8. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna NO.	RF Chain NO.	Brand	Model	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
2G_1	0	WNC	48XPAB0R	2.66	2.4~2.4835	Dipole	ipex(MHF)
2G_2	1	WNC	48XPAB0S	1.54	2.4~2.4835	Dipole	ipex(MHF)
5G_3	0	WNC	48XPAB09	4.03	5.15~5.25	Dipole	ipex(MHF)
				2.36	5.25~5.35		
				2.72	5.47~5.725		
				2.28	5.725~5.85		
5G_4	1	WNC	48XPAB09	3.33	5.15~5.25	Dipole	ipex(MHF)
				3.5	5.25~5.35		
				4.09	5.47~5.725		
				4.09	5.725~5.85		
5G_5	2	WNC	48XPAB09	4.27	5.15~5.25	Dipole	ipex(MHF)
				4.18	5.25~5.35		
				4.03	5.47~5.725		
				3.35	5.725~5.85		
5G_6	3	WNC	48XPAB09	3.18	5.15~5.25	Dipole	ipex(MHF)
				2.69	5.25~5.35		
				4.46	5.47~5.725		
				4.1	5.725~5.85		
6G_7	0	WNC	48XPAB0T	3.56	5.925~6.425	Dipole	ipex(MHF)
				2.74	6.425~6.525		
				3.47	6.525~6.875		
				3.47	6.875~7.125		
6G_8	1	WNC	48XPAB0U	2.99	5.925~6.425	Dipole	ipex(MHF)
				3.44	6.425~6.525		
				3.76	6.525~6.875		
				4.9	6.875~7.125		
6G_9	2	WNC	48XPAB0V	4.68	5.925~6.425	Dipole	ipex(MHF)
				4.71	6.425~6.525		
				4.86	6.525~6.875		
				4.66	6.875~7.125		
6G_10	3	WNC	48XPAB0W	3.77	5.925~6.425	Dipole	ipex(MHF)
				4.33	6.425~6.525		
				4.33	6.525~6.875		
				4.79	6.875~7.125		

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

2. The directional antenna gain, please refer to the following table:

Frequency Range (GHz)	Directional Antenna Gain (dBi)
2.4 ~ 2.4835	3.69
5.15 ~ 5.25	7
5.25 ~ 5.35	6.17
5.47 ~ 5.725	6.52
5.725 ~ 5.85	6.52

3. The EUT incorporates a MIMO function:

5 GHz Band		
Modulation Mode	**TX & RX Configuration**	
802.11a	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
802.11ac (VHT20)	4TX	4RX
802.11ac (VHT40)	4TX	4RX
802.11ac (VHT80)	4TX	4RX
802.11ac (VHT160)	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
802.11ax (HE80)	4TX	4RX
802.11ax (HE160)	4TX	4RX
802.11be (EHT20)	4TX	4RX
802.11be (EHT40)	4TX	4RX
802.11be (EHT80)	4TX	4RX
802.11be (EHT160)	4TX	4RX
802.11be (EHT240)	4TX	4RX

Note:
1. All of modulation mode support beamforming function except 802.11a modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz), 802.11ac mode for 20 MHz (40 MHz, 80 MHz, 160 MHz), 802.11ax mode for 20 MHz (40 MHz, 80 MHz, 160 MHz) and 802.11be mode for 20 MHz (40 MHz, 80 MHz, 160 MHz, 240 MHz). Therefore the investigated worst case is the representative mode in test report.

3.3 Channel List

FOR 5180 ~ 5320 MHz

8 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20), 802.11be (EHT20):

Channel	Frequency	Channel	Frequency
36	5180 MHz	52	5260 MHz
40	5200 MHz	56	5280 MHz
44	5220 MHz	60	5300 MHz
48	5240 MHz	64	5320 MHz

4 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40), 802.11be (EHT40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	54	5270 MHz
46	5230 MHz	62	5310 MHz

2 channels are provided for 802.11ac (VHT80), 802.11ax (HE80), 802.11be (EHT80):

Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz

1 straddle channel is provided for 802.11ac (VHT160), 802.11ax (HE160), 802.11be (EHT160):

Channel	Frequency
50	5250 MHz

FOR 5500 ~ 5720 MHz

12 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20), 802.11be (EHT20):

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40), 802.11be (EHT40):

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channels are provided for 802.11ac (VHT80), 802.11ax (HE80), 802.11be (EHT80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	138	5690 MHz
122	5610 MHz		

1 channel is provided for 802.11ac (VHT160), 802.11ax (HE160), 802.11be (EHT160):

Channel	Frequency
114	5570 MHz

1 channel is provided for 802.11be (EHT240):

Channel	Frequency
114+138	5610 MHz

FOR 5745 ~ 5825 MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20), 802.11be (EHT20):

Channel	Frequency	Channel	Frequency
149	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz		

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40), 802.11be (EHT40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80), 802.11be (EHT80):

Channel	Frequency
155	5775 MHz

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. The AC Adapter has the following models: AMS340-1204000FU / MS-V4000R120-050A0-US / modular 8Pin DC input. Pre-scan these models of AC Adapters and find the worst case as a representative test condition. 2. EUT can be used in the following ways: Lying/ Standing. Pre-scan these ways and find the worst case as a representative test condition. 3. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Worst Case:	1. AC Adapter Worst Condition: MS-V4000R120-050A0-US 2. Lying / Standing Worst Condition: Standing

Following channel(s) was (were) selected for the final test as listed below:

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
26 dB Bandwidth	A	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
		802.11be (EHT20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
		802.11be (EHT40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
		802.11be (EHT80)	CDD	58, 106, 122, 138	BPSK	MCS0
		802.11be (EHT160)	CDD	50, 114	BPSK	MCS0
		802.11be (EHT240)	CDD	114+138	BPSK	MCS0
		11be80_Punct20 Mid	Non -Beamforming	58, 106, 122, 138	BPSK	MCS0
		11be80_Punct40 Mid	Non -Beamforming	58, 106, 122, 138	BPSK	MCS0
		11be160_Punct40 Mid	Non -Beamforming	50, 114	BPSK	MCS0
		11be160_Punct60 Mid	Non -Beamforming	50, 114	BPSK	MCS0
		11be160_Punct80 Mid	Non -Beamforming	50, 114	BPSK	MCS0

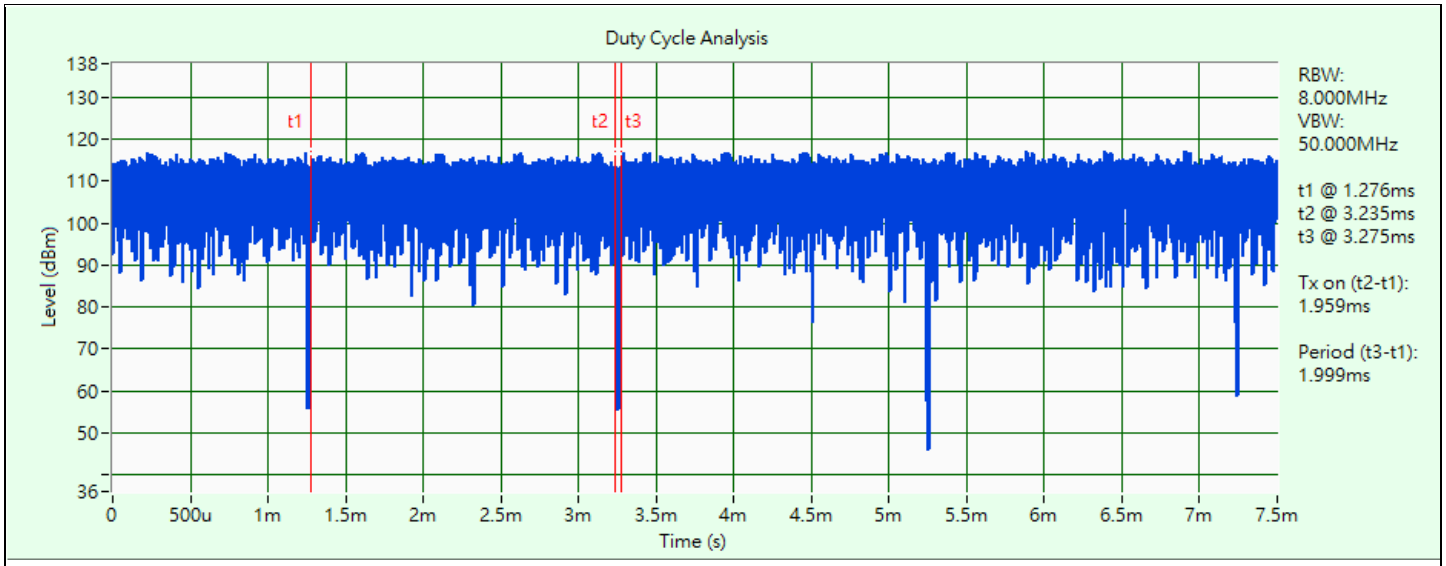
Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	A	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
		802.11be (EHT20)	CDD & Beamforming	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
		802.11be (EHT40)	CDD & Beamforming	54, 62, 102, 110, 134, 142	BPSK	MCS0
		802.11be (EHT80)	CDD & Beamforming	58, 106, 122, 138	BPSK	MCS0
		802.11be (EHT160)	CDD & Beamforming	50, 114	BPSK	MCS0
		802.11be (EHT240)	CDD & Beamforming	114+138	BPSK	MCS0
		11be80_Punct20 Mid	Non-Beamforming & Beamforming	42, 58, 106, 122, 138, 155	BPSK	MCS0
		11be80_Punct40 Mid	Non -Beamforming & Beamforming	42, 58, 106, 122, 138, 155	BPSK	MCS0
		11be160_Punct40 Mid	Non-Beamforming & Beamforming	50, 114	BPSK	MCS0
		11be160_Punct60 Mid	Non -Beamforming & Beamforming	50, 114	BPSK	MCS0
		11be160_Punct80 Mid	Non-Beamforming & Beamforming	50, 114	BPSK	MCS0
Power Spectral Density	A	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
		802.11be (EHT20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
		802.11be (EHT40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
		802.11be (EHT80)	CDD	58, 106, 122, 138	BPSK	MCS0
		802.11be (EHT160)	CDD	50, 114	BPSK	MCS0
		802.11be (EHT240)	CDD	114+138	BPSK	MCS0
		11be80_Punct20 Mid	Non -Beamforming	42, 58, 106, 122, 138, 155	BPSK	MCS0

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Power Spectral Density	A	11be80_Punct40 Mid	Non -Beamforming	42, 58, 106, 122, 138, 155	BPSK	MCS0
		11be160_Punct40 Mid	Non -Beamforming	50, 114	BPSK	MCS0
		11be160_Punct60 Mid	Non -Beamforming	50, 114	BPSK	MCS0
		11be160_Punct80 Mid	Non -Beamforming	50, 114	BPSK	MCS0
6 dB Bandwidth	A	802.11a	CDD	144	BPSK	6Mb/s
		802.11be (EHT20)	CDD	144	BPSK	MCS0
		802.11be (EHT40)	CDD	142	BPSK	MCS0
		802.11be (EHT80)	CDD	138	BPSK	MCS0
		802.11be (EHT240)	CDD	114+138	BPSK	MCS0
		11be80_Punct20 Mid	Non -Beamforming	138, 155	BPSK	MCS0
		11be80_Punct40 Mid	Non -Beamforming	138, 155	BPSK	MCS0
Occupied Bandwidth	A	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
		802.11be (EHT20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
		802.11be (EHT40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
		802.11be (EHT80)	CDD	58, 106, 122, 138	BPSK	MCS0
		802.11be (EHT160)	CDD	50, 114	BPSK	MCS0
		802.11be (EHT240)	CDD	114+138	BPSK	MCS0
		11be80_Punct20 Mid	Non -Beamforming	42, 58, 106, 122, 138, 155	BPSK	MCS0
		11be80_Punct40 Mid	Non -Beamforming	42, 58, 106, 122, 138, 155	BPSK	MCS0
		11be160_Punct40 Mid	Non -Beamforming	50, 114	BPSK	MCS0
		11be160_Punct60 Mid	Non -Beamforming	50, 114	BPSK	MCS0
		11be160_Punct80 Mid	Non -Beamforming	50, 114	BPSK	MCS0

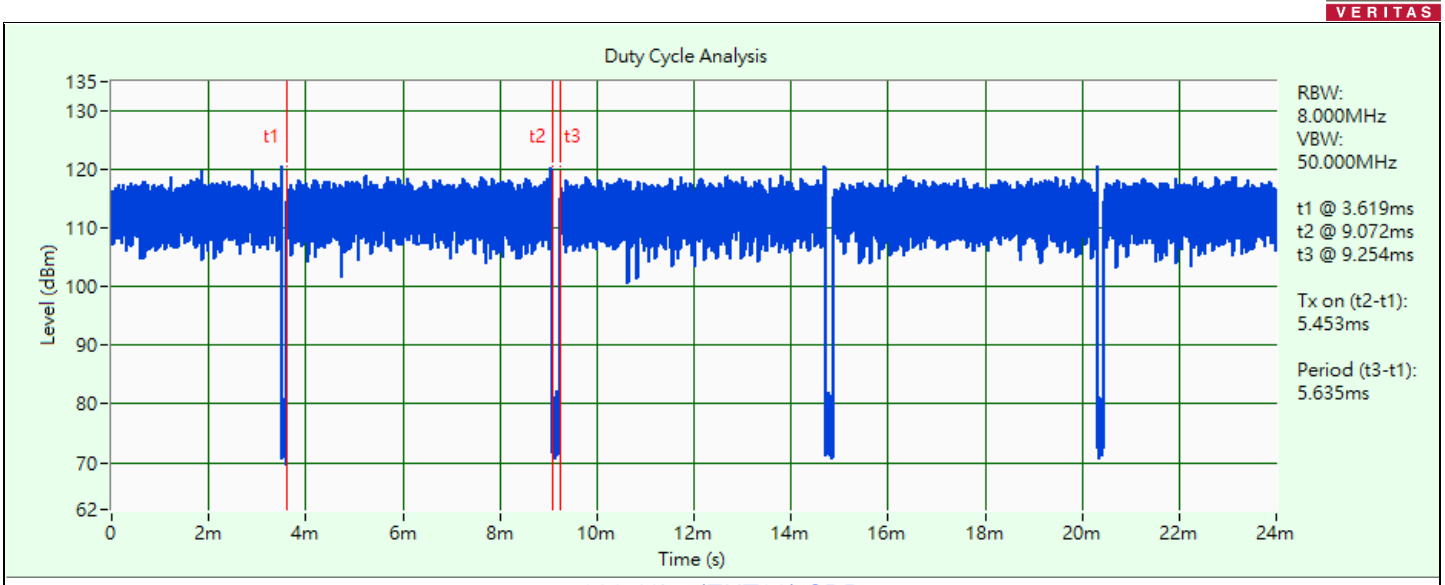
Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
AC Power Conducted Emissions	A, B	802.11be (EHT40)	CDD	134	BPSK	MCS0
Unwanted Emissions below 1 GHz	A, B	802.11be (EHT40)	CDD	134	BPSK	MCS0
Unwanted Emissions above 1 GHz	A	802.11a	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
		802.11be (EHT20)	CDD	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
		802.11be (EHT40)	CDD	54, 62, 102, 110, 134, 142	BPSK	MCS0
		802.11be (EHT80)	CDD	58, 106, 122, 138	BPSK	MCS0
		802.11be (EHT160)	CDD	50, 114	BPSK	MCS0
		802.11be (EHT240)	CDD	114+138	BPSK	MCS0
		11be80_Punct20 Mid	Non -Beamforming	42, 58, 106, 122, 138, 155	BPSK	MCS0
		11be80_Punct40 Mid	Non -Beamforming	42, 58, 106, 122, 138, 155	BPSK	MCS0
		11be160_Punct40 Mid	Non -Beamforming	50, 114	BPSK	MCS0
		11be160_Punct60 Mid	Non -Beamforming	50, 114	BPSK	MCS0
		11be160_Punct80 Mid	Non -Beamforming	50, 114	BPSK	MCS0
EUT Configure Mode:	A	7u10t.2 GS4139E				
	B	7u10txg.2 GS4139XG				

3.5 Duty Cycle of Test Signal

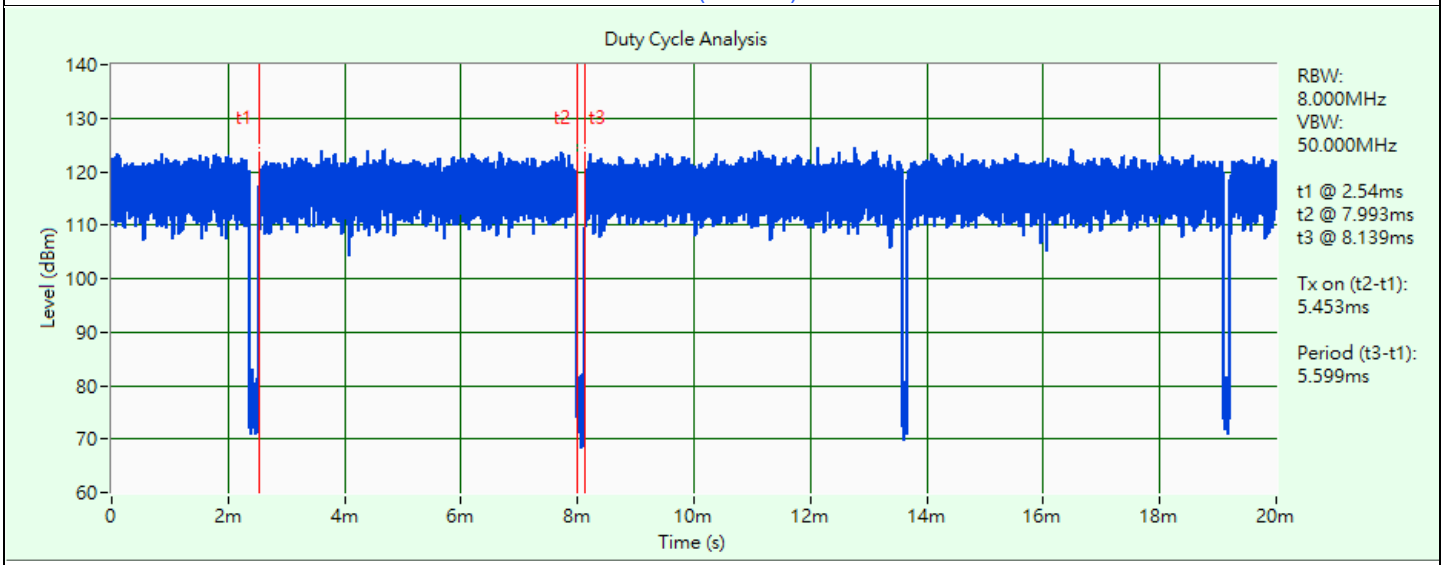
802.11a CDD:
Duty cycle = 1.959 ms / 1.999 ms x 100% = 98.0%
802.11be (EHT20) CDD:
Duty cycle = 5.453 ms / 5.635 ms x 100% = 96.8%, duty factor = 10 * log (1/Duty cycle) = 0.14 dB
802.11be (EHT40) CDD:
Duty cycle = 5.453 ms / 5.599 ms x 100% = 97.4%, duty factor = 10 * log (1/Duty cycle) = 0.11 dB
802.11be (EHT80) CDD:
Duty cycle = 5.452 ms / 5.608 ms x 100% = 97.2%, duty factor = 10 * log (1/Duty cycle) = 0.12 dB
802.11be (EHT160) CDD:
Duty cycle = 5.453 ms / 5.572 ms x 100% = 97.9%, duty factor = 10 * log (1/Duty cycle) = 0.09 dB
802.11be (EHT240) CDD:
Duty cycle = 5.457 ms / 5.639 ms x 100% = 96.8%, duty factor = 10 * log (1/Duty cycle) = 0.14 dB
802.11be (EHT80) Punctured by 20 MHz NSS4:
Duty cycle = 1.428 ms / 1.894 ms x 100% = 75.4%, duty factor = 10 * log (1/Duty cycle) = 1.23 dB
802.11be (EHT80) Punctured by 40 MHz NSS4:
Duty cycle = 2 ms / 2.52 ms x 100% = 79.4%, duty factor = 10 * log (1/Duty cycle) = 1.00 dB
802.11be (EHT160) Punctured by 40 MHz NSS4:
Duty cycle = 1.892 ms / 2.223 ms x 100% = 85.1%, duty factor = 10 * log (1/Duty cycle) = 0.70 dB
802.11be (EHT160) Punctured by 60 MHz NSS4:
Duty cycle = 2.016 ms / 2.418 ms x 100% = 83.4%, duty factor = 10 * log (1/Duty cycle) = 0.79 dB
802.11be (EHT160) Punctured by 80 MHz NSS4:
Duty cycle = 2.2 ms / 2.837 ms x 100% = 77.5%, duty factor = 10 * log (1/Duty cycle) = 1.10 dB



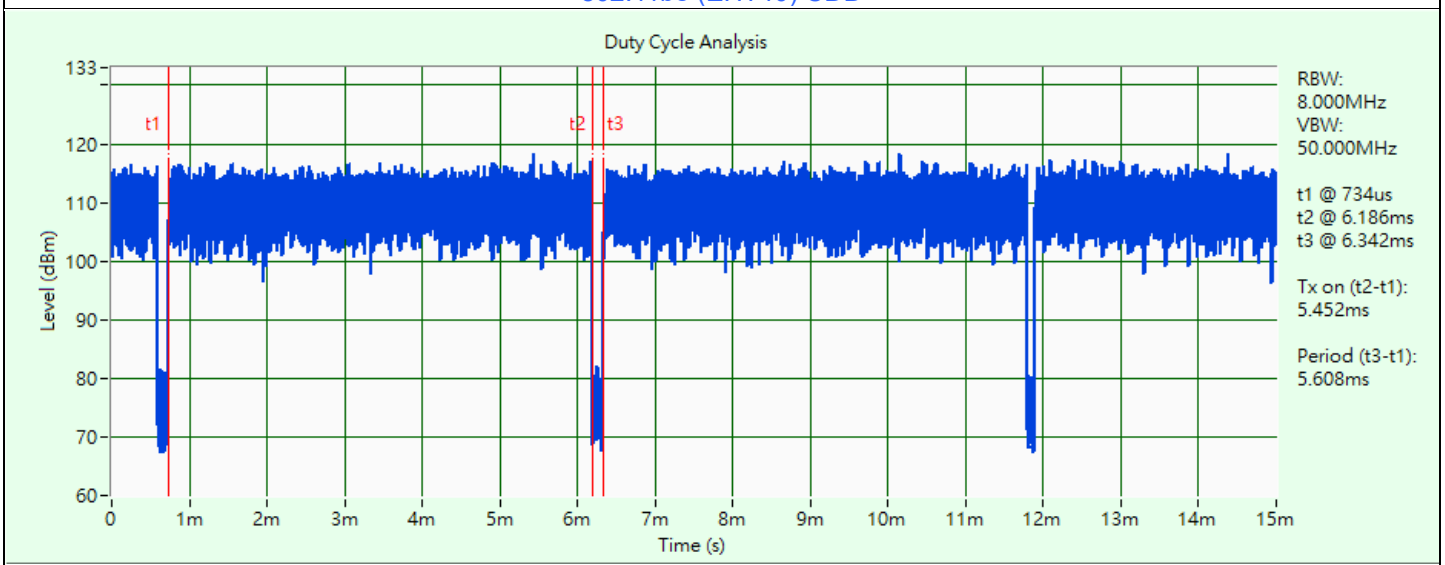
802.11a CDD



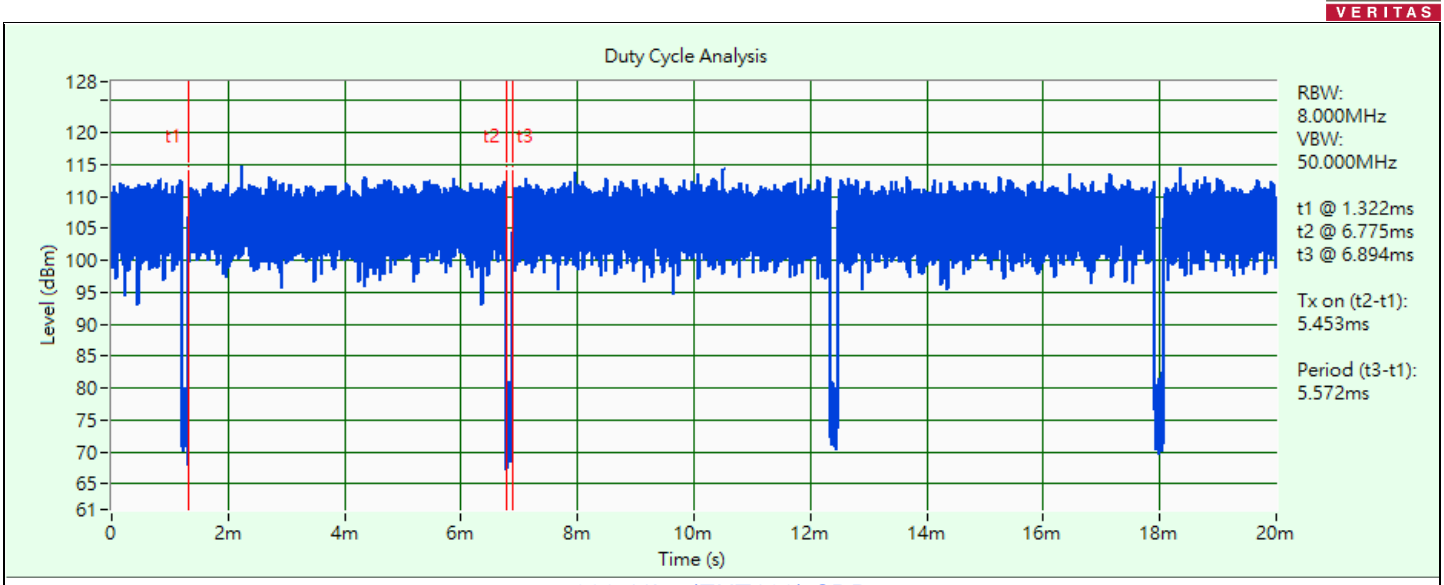
802.11be (EHT20) CDD



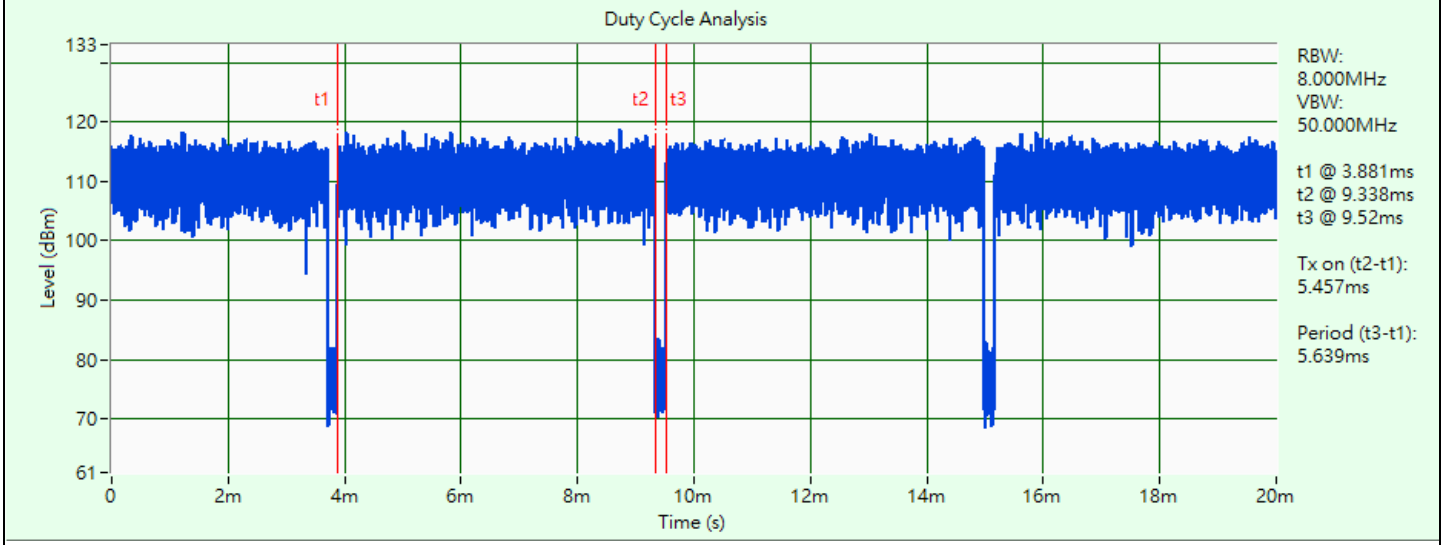
802.11be (EHT40) CDD



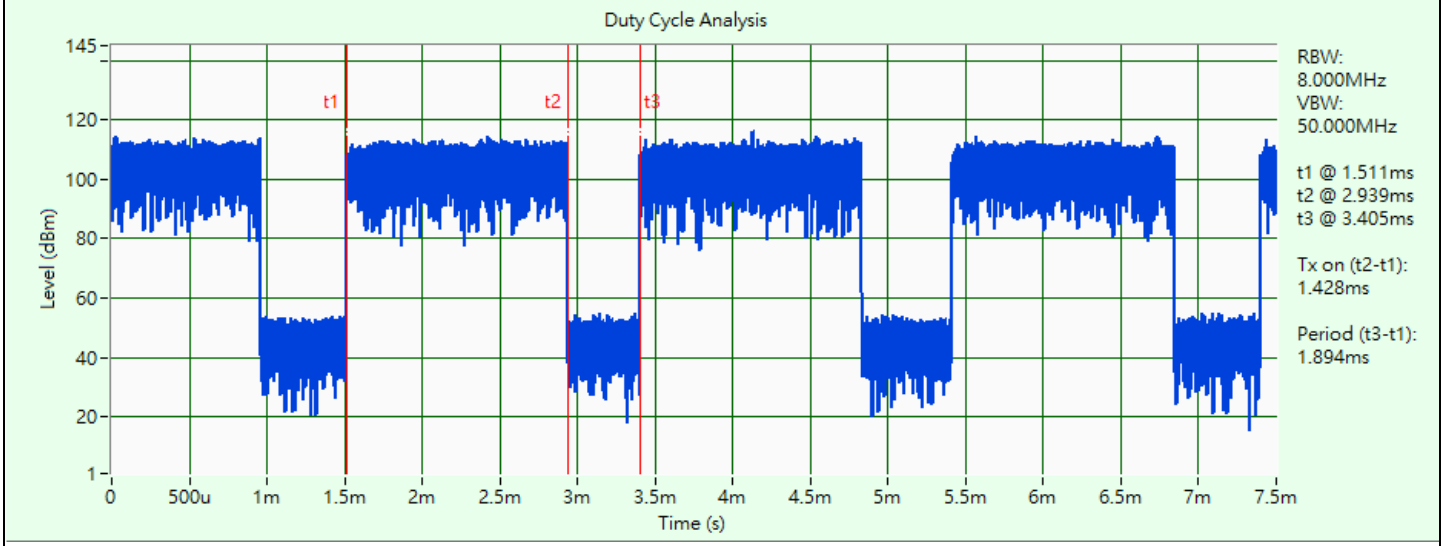
802.11be (EHT80) CDD



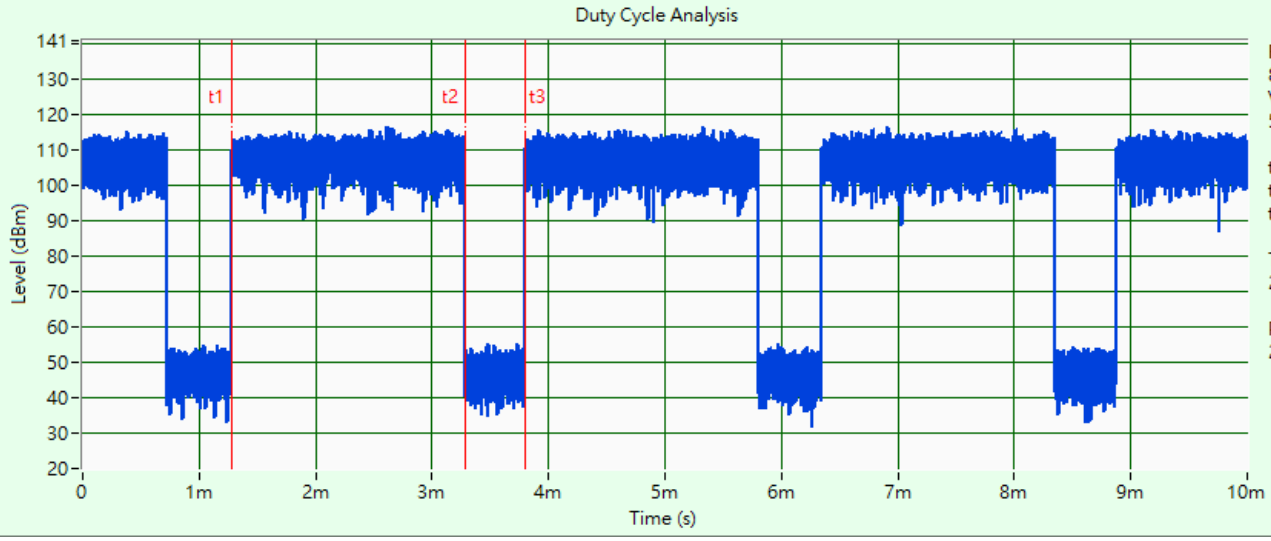
802.11be (EHT160) CDD



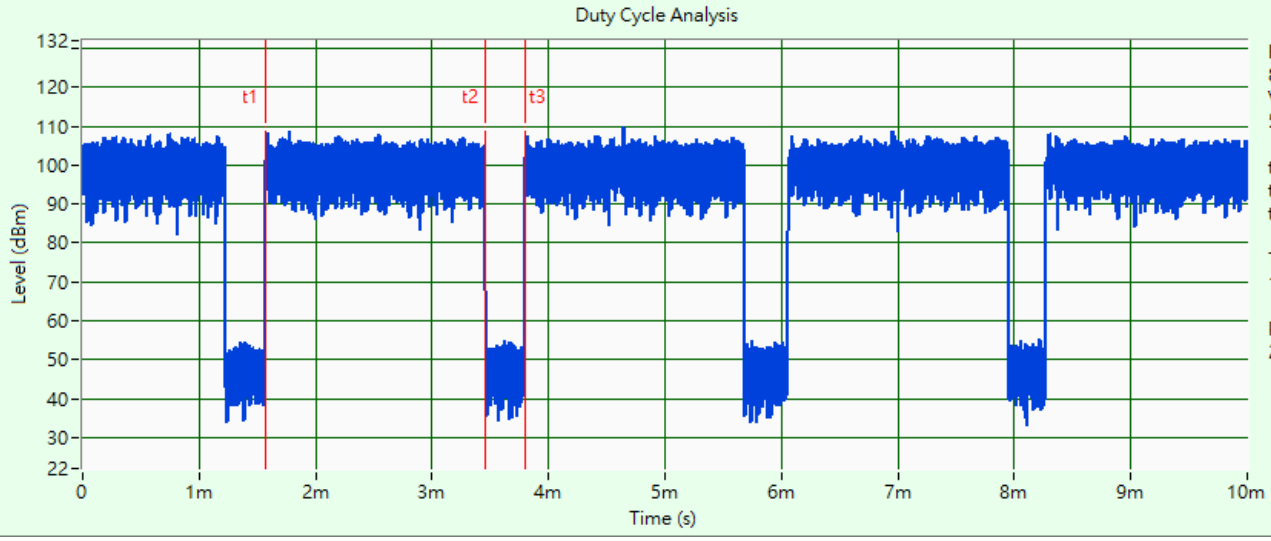
802.11be (EHT240) CDD



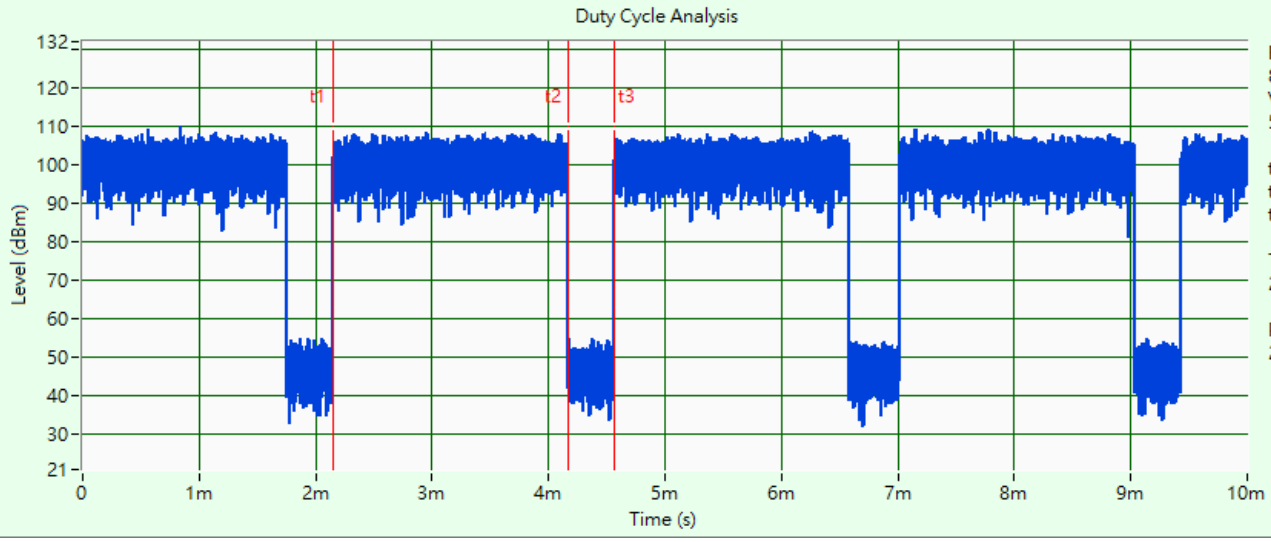
802.11be (EHT80) Punctured by 20 MHz NSS4



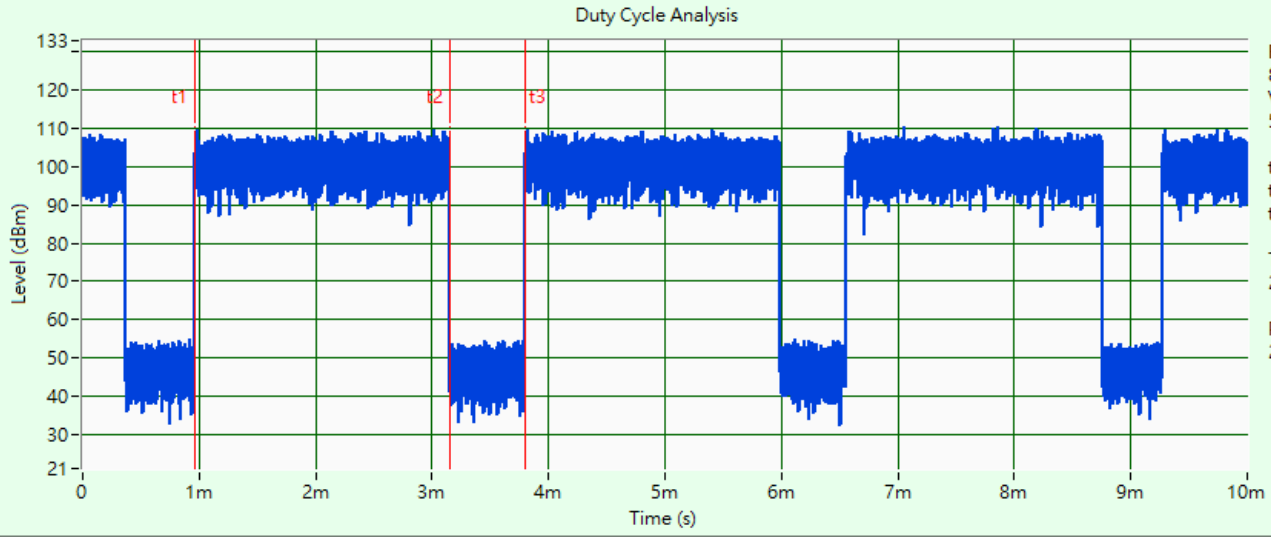
802.11be (EHT80) Punctured by 40 MHz NSS4



802.11be (EHT160) Punctured by 40 MHz NSS4



802.11be (EHT160) Punctured by 60 MHz NSS4



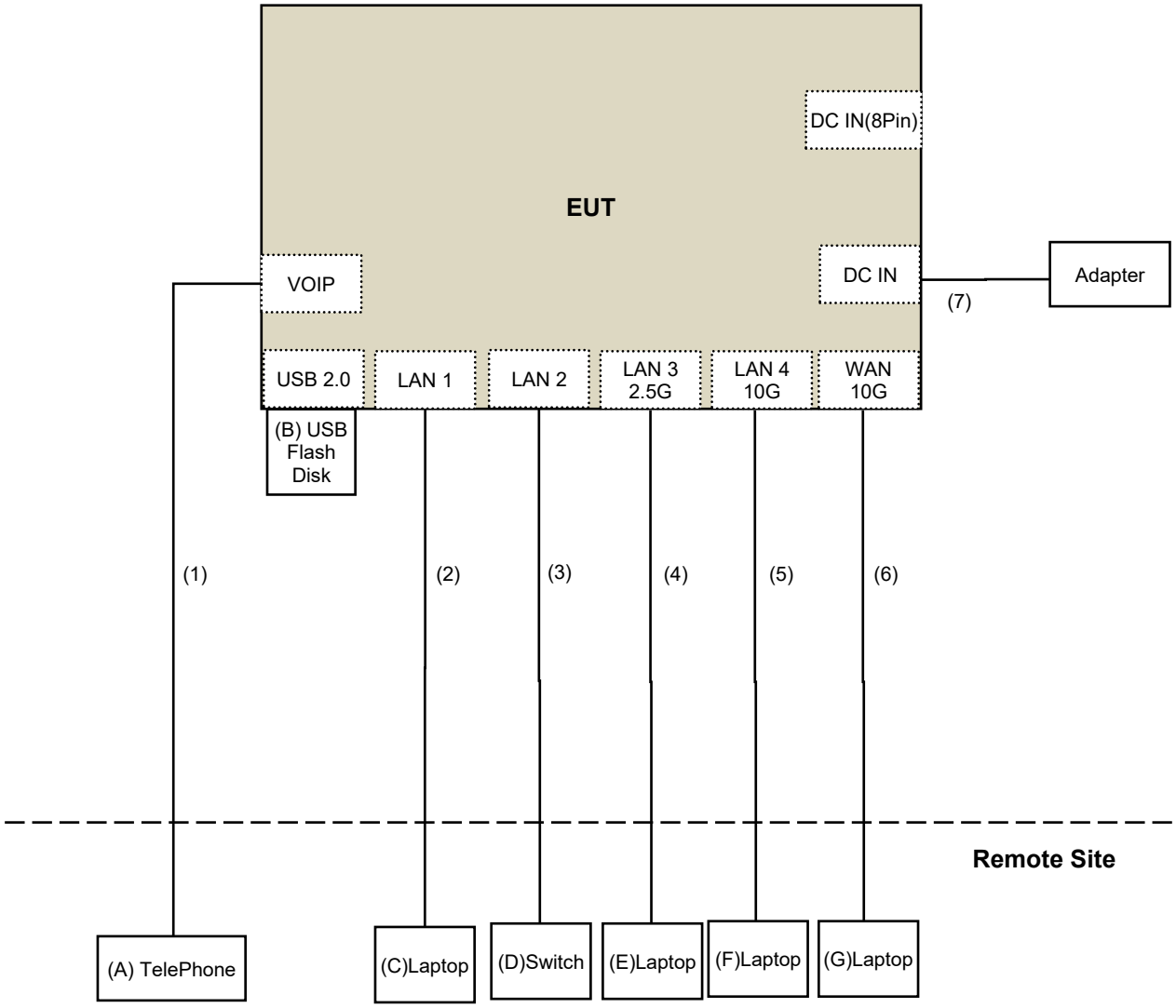
802.11be (EHT160) Punctured by 80 MHz NSS4

3.6 Test Program Used and Operation Descriptions

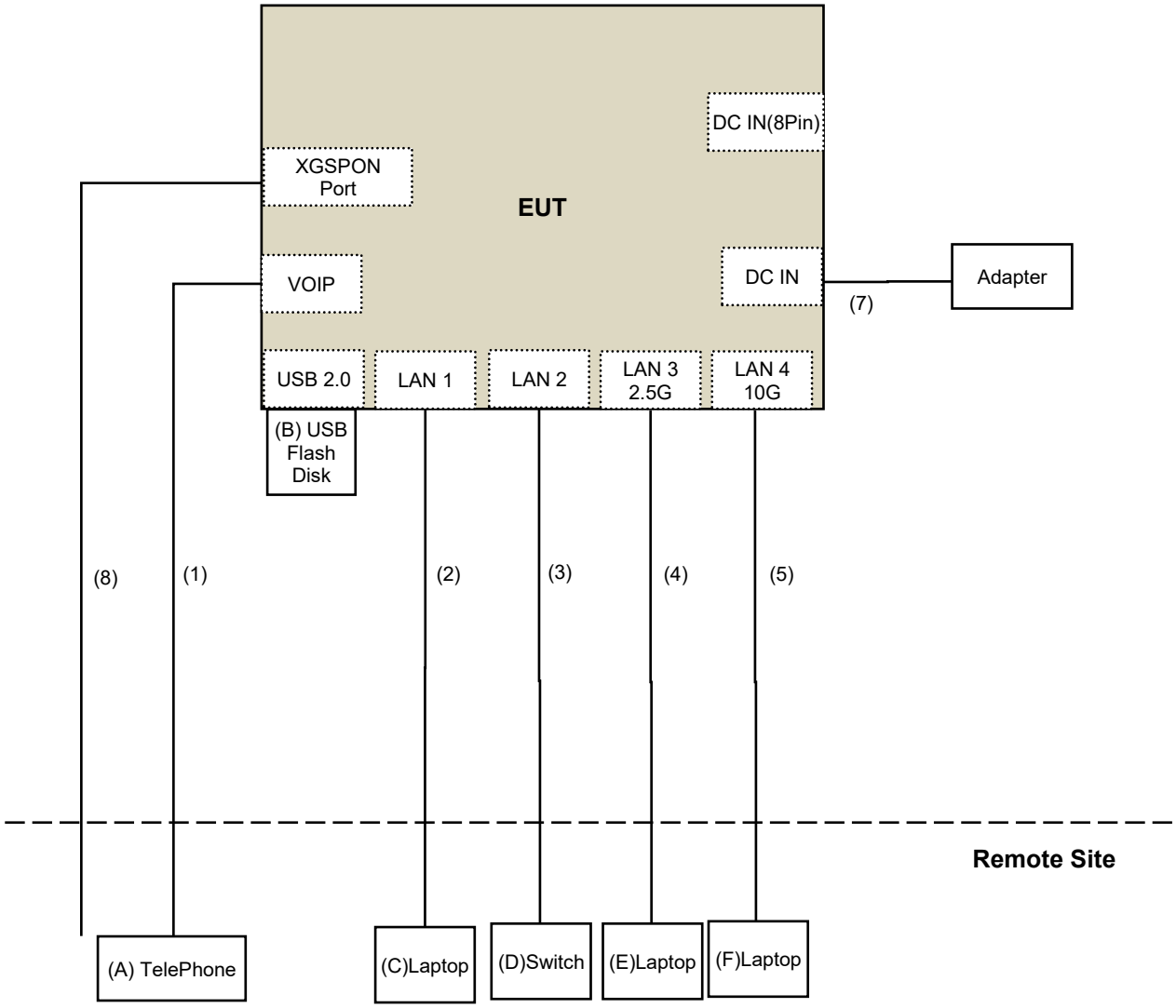
Controlling software (QSPR v6.00.00114.1) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

Mode A



Mode B


DC IN(8Pin)
XGSPON Port
EUT
VOIP
DC IN
Adapter
(7)
USB 2.0
LAN 1
LAN 2
LAN 3 2.5G
LAN 4 10G
(B) USB Flash Disk
(8)
(1)
(2)
(3)
(4)
(5)
Remote Site
(A) TelePhone
(C)Laptop
(D)Switch
(E)Laptop
(F)Laptop

3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Telephone	Wonder	WD-303	N/A	N/A	Provided by Lab
B	USB Flash Disk	SanDisk	SDDDC3-032G-I35NB	BM22065835SW	N/A	Provided by Lab
C	Laptop	Acer	TMP214	N/A	N/A	Supplied by applicant
D	Switch	D-Link	DGS-1005D	DR8WC92000523	N/A	Provided by Lab
E	Laptop	Lenovo	L480	RF1PRC03	N/A	Provided by Lab
F	Laptop	DELL	E6230	H86M3X1	N/A	Provided by Lab
G	Laptop	DELL	E6230	1BCMLX1	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-11 Cable	1	10	No	0	Provided by Lab
2	RJ-45 Cable	1	10	No	0	Provided by Lab
3	RJ-45 Cable	1	10	No	0	Provided by Lab
4	RJ-45 Cable	1	10	No	0	Provided by Lab
5	RJ-45 Cable	1	10	No	0	Provided by Lab
6	RJ-45 Cable	1	10	No	0	Provided by Lab
7	DC Cable	1	1.5	No	0	Supplied by applicant
8	Fiber Cable	1	10	No	0	Provided by Lab

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 26 dB Bandwidth

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
MXA Signal Analyzer Keysight	N9020B	MY60112408	2025/3/12	2026/3/11
Software	ADT_RF Test Software V8	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2025/11/19 ~ 2026/1/5

4.2 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
	00800A1K01A-20	00800A1K01A-20-02	2025/5/23	2026/5/22
MXA Signal Analyzer Keysight	N9020B	MY60112408	2025/3/12	2026/3/11
Pulse Power Sensor Anritsu	MA2411B	1726434	2025/6/3	2026/6/2
RF Power Meter Anritsu	ML2495A	1529002	2025/6/3	2026/6/2
Software	ADT_RF Test Software V8	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2025/11/19 ~ 2026/1/5

4.3 Power Spectral Density

Refer to section 4.1 to get the tested date and information of the instruments.

4.4 6 dB Bandwidth

Refer to section 4.1 to get the tested date and information of the instruments.

4.5 Occupied Bandwidth

Refer to section 4.1 to get the tested date and information of the instruments.

4.6 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance Telegartner	50 ohm	3	2025/10/29	2026/10/28
EMI Test Receiver R&S	ESCS 30	100375	2025/5/21	2026/5/20
Fixed Attenuator STI	STI02-2200-10	005	2025/2/17 2026/2/9	2026/2/16 2027/2/8
LISN R&S	ESH3-Z5	835239/001	2025/3/27	2026/3/26
		848773/004	2025/10/3	2026/10/2
RF Coaxial Cable JYEBAO	5D-FB	COCCAB-001	2025/2/17 2026/2/9	2026/2/16 2027/2/8
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	N/A	N/A

Notes:

1. The test was performed in Conduction 1
2. Tested Date: 2025/11/21 ~ 2026/3/23

4.7 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-406	2025/9/17	2026/9/16
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-03	2025/2/15	2026/2/14
Loop Antenna TESEQ	HLA 6121	63620	2025/10/20	2026/10/19
MXE EMI Receiver Agilent	N9038A	MY51210202	2025/7/30	2026/7/29
Preamplifier EMCI	EMC330N	980701	2025/2/15	2026/2/14
RF Coaxial Cable mTJ	100100-CFD400LW-200	CFD400-200	2025/2/15	2026/2/14
	100100-CFD400LW-400	CFD400-400	2025/2/15	2026/2/14
	100100-CFD400LW-800	CFD400-800	2025/2/15	2026/2/14
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 4.
2. Tested Date: 2025/11/21

4.8 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-783	2024/11/10 2025/11/9	2025/11/9 2026/11/8
	BBHA 9170	9170-739	2025/11/9	2026/11/8
MXA Signal Analyzer Keysight	N9020B	MY60112410	2025/3/17	2026/3/16
Preamplifier EMCI	EMC12630SE	980688	2025/8/7	2026/8/6
	EMC184045SE	980387	2025/8/7	2026/8/6
RF Coaxial Cable EMCI	EMC102-KM-KM-1200	160924	2025/1/24	2026/1/23
	EMC102-KM-KM-4000	200214	2025/1/24	2026/1/23
	EMC104-SM-SM-1200	160922	2025/1/14	2026/1/13
	EMC104-SM-SM-2000	180502	2025/1/14	2026/1/13
	EMC104-SM-SM-6000	210704	2024/10/30 2025/10/22	2025/10/29 2026/10/21
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 4.
2. Tested Date: 2025/9/4 ~ 2025/12/25

5 Limits of Test Items

5.1 26 dB Bandwidth

The results are for reference only.

5.2 RF Output Power

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
	Fixed point-to-point Access Points	1 Watt (30 dBm)
	Indoor Access Point	1 Watt (30 dBm)
	Client devices	250mW (24 dBm)

Operation Band	Limit
U-NII-2A	250 mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	250 mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{ANT} \geq 5$.

For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

5.3 Power Spectral Density

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	17 dBm/MHz
	Fixed point-to-point Access Points	
	Indoor Access Point	
	Client devices	11 dBm/MHz

Operation Band	Limit
U-NII-2A	11 dBm/MHz
U-NII-2C	11 dBm/MHz
U-NII-3	30 dBm/500 kHz

5.4 6 dB Bandwidth

Within the 5.725-5.850 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

5.5 Occupied Bandwidth

The results are for reference only.

5.6 AC Power Conducted Emissions

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Notes:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

5.7 Unwanted Emissions below 1 GHz

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

5.8 Unwanted Emissions above 1 GHz

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applicable To	Limit	
789033 D02 General UNII Test Procedure New Rules v02r01	Field Strength at 3 m	
	PK: 74 (dBµV/m)	AV: 54 (dBµV/m)

For transmitters operating in the 5.15-5.25 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)

For transmitters operating in the 5.25-5.35 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(2)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)

For transmitters operating in the 5.47-5.725 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(3)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)

For transmitters operating in the 5.725-5.850 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(4)(i)	PK: -27 (dBm/MHz) [*1] PK: 10 (dBm/MHz) [*2] PK: 15.6 (dBm/MHz) [*3] PK: 27 (dBm/MHz) [*4]	PK: 68.2 (dBμV/m) [*1] PK: 105.2 (dBμV/m) [*2] PK: 110.8 (dBμV/m) [*3] PK: 122.2 (dBμV/m) [*4]
[*1] beyond 75 MHz or more above of the band edge. [*2] below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. [*3] below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. [*4] from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.		

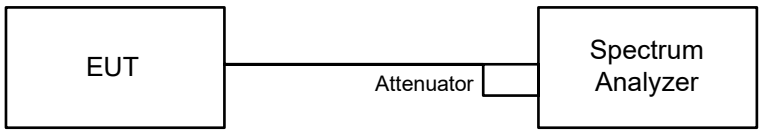
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts).

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup



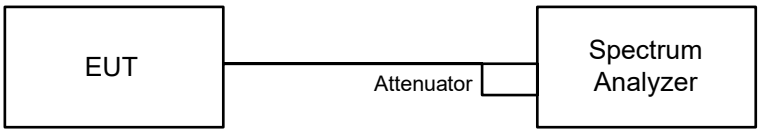
6.1.2 Test Procedure

a. Set RBW = shall be in the range of 1% to 5% of the emission bandwidth.
b. Set the VBW > RBW.
c. Detector = peak.
d. Trace mode = max-hold.
e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the instrument. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is in the range of 1% to 5%.

6.2 RF Output Power

6.2.1 Test Setup

For channel straddling:



6.2.2 Test Procedure

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst and set the detector to average. Duty factor is not added to measured value.

For channel straddling:

Method SA-1

a. Set span to encompass the entire 99% OBW of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS.
c. Number of points in sweep ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Sweep time = auto, trigger set to “free run”.
e. Trace average at least 100 traces in power averaging (rms) mode.
f. Compute power by integrating the spectrum across the 99% OBW of the signal using the instrument’s band-power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band-power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 99% OBW of the spectrum.
g. Record the max value.

Note: When measuring straddle channel power, use compute power by integrating the spectrum across the 99% OBW of

the signal using the instrument's band power measurement function, with band limits set equal to the 99% OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 99% OBW of the spectrum.

For channel straddling:

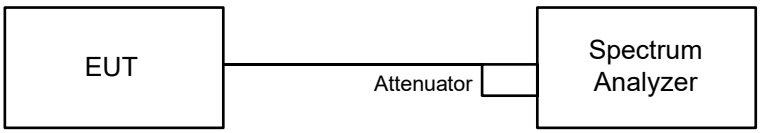
Method SA-2

a. Measure the duty cycle of the transmitter output signal.
b. Set span to encompass the entire 99% OBW of the signal.
c. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
d. Number of points in sweep ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
e. Sweep time = auto, trigger set to "free run".
f. Detector = Power averaging (rms), if available. Otherwise, use sample detector mode.
g. Do not use sweep triggering. Allow the sweep to "free run."
h. Trace average at least 100 traces in power averaging mode.
i. Compute power by integrating the spectrum across the 99% OBW of the signal using the instrument's band-power measurement function with band limits set equal to the EBW or OBW band-edges. If the instrument does not have a band-power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 99% OBW of the spectrum.
j. Record the max value and add 10 log (1/duty cycle).

Note: When measuring straddle channel power, use compute power by integrating the spectrum across the 99% OBW of the signal using the instrument's band power measurement function, with band limits set equal to the 99% OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 99% OBW of the spectrum.

6.3 Power Spectral Density

6.3.1 Test Setup



6.3.2 Test Procedure

For specified measurement bandwidth 1 MHz:

Method SA-1

a. Set span to encompass the entire 99% OBW of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS.
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Sweep time = auto, trigger set to "free run".
e. Trace average at least 100 traces in power averaging mode.
f. Record the max value

For specified measurement bandwidth 1 MHz:

Method SA-2

a. Measure the duty cycle of the transmitter output signal.
b. Set span to encompass the entire 99% OBW of the signal.
c. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS.
d. Number of points in sweep ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)

e. Sweep time = auto, trigger set to “free run”.
f. Trace average at least 100 traces in power averaging mode.
g. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
h. Record the max value and add 10 log (1/duty cycle).

For specified measurement bandwidth 500 kHz:
Method SA-1

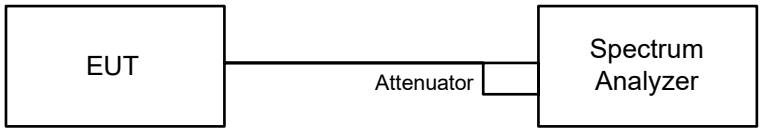
a. Set span to encompass the entire 99% OBW of the signal
b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS.
c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300 kHz).
d. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
e. Sweep time = auto, trigger set to “free run”.
f. Trace average at least 100 traces in power averaging mode.
g. Record the max value.

For specified measurement bandwidth 500 kHz:
Method SA-2

a. Measure the duty cycle of the transmitter output signal.
b. Set span to encompass the entire 99% OBW of the signal.
c. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS.
d. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300 kHz).
e. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
f. Sweep time = auto, trigger set to “free run”.
g. Trace average at least 100 traces in power averaging mode.
h. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
i. Record the max value and add 10 log (1/duty cycle).

6.4 6 dB Bandwidth

6.4.1 Test Setup

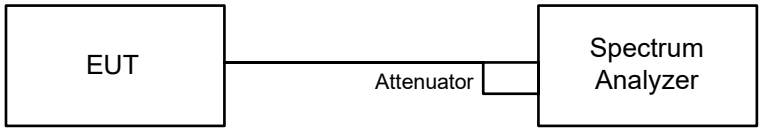


6.4.2 Test Procedure

a. Set RBW = 100 kHz.
b. Set the VBW ≥ [3 × RBW].
c. Detector = peak.
d. Trace mode = max-hold.
e. Sweep = No faster than coupled (auto) time.
f. Allow the trace to stabilize.
g. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.5 Occupied Bandwidth

6.5.1 Test Setup



6.5.2 Test Procedure

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

a. The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.

b. The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be at least three times the RBW, unless otherwise specified by the applicable requirement.

c. Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level.

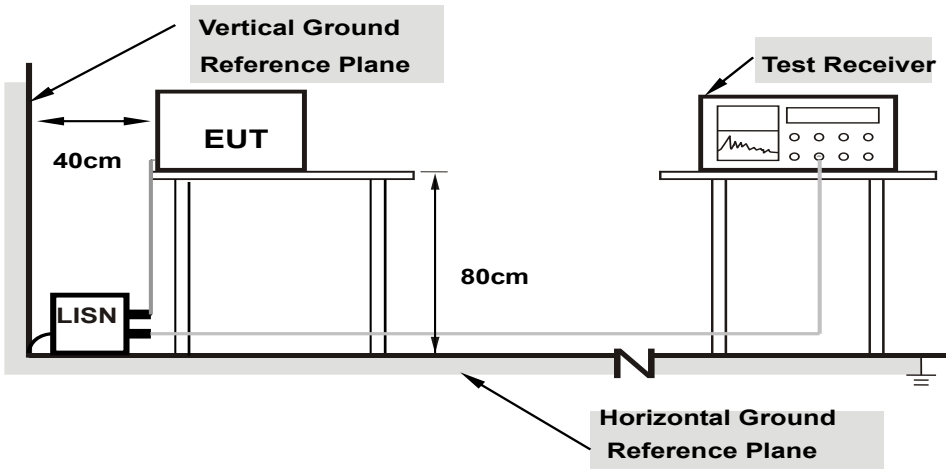
d. Step a) through step c) might require iteration to adjust within the specified range.

e. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max-hold mode (until the trace stabilizes) shall be used.

f. Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

6.6 AC Power Conducted Emissions

6.6.1 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.6.2 Test Procedure

a. Exploratory ac power-line conducted emission measurements: The EUT shall be operated on the mid channel and in the mode with highest output power unless the fundamental operates in the AC power-line emission test range then the EUT shall be operated in the range of typical modes of operation.

b. The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.

c. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

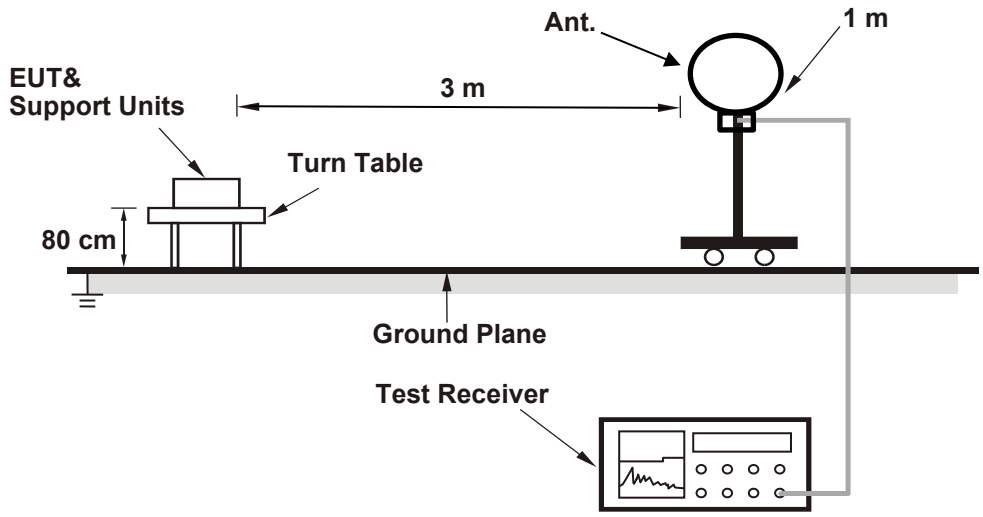
d. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz-30 MHz.

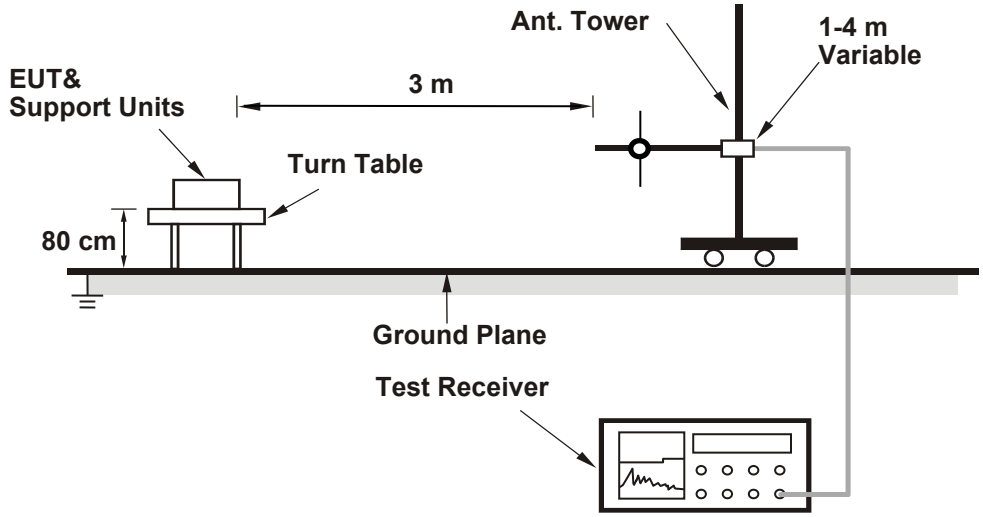
6.7 Unwanted Emissions below 1 GHz

6.7.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.7.2 Test Procedure

For Radiated emission below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode (however, peak detector measurements may be used to determine compliance with QP requirements), except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

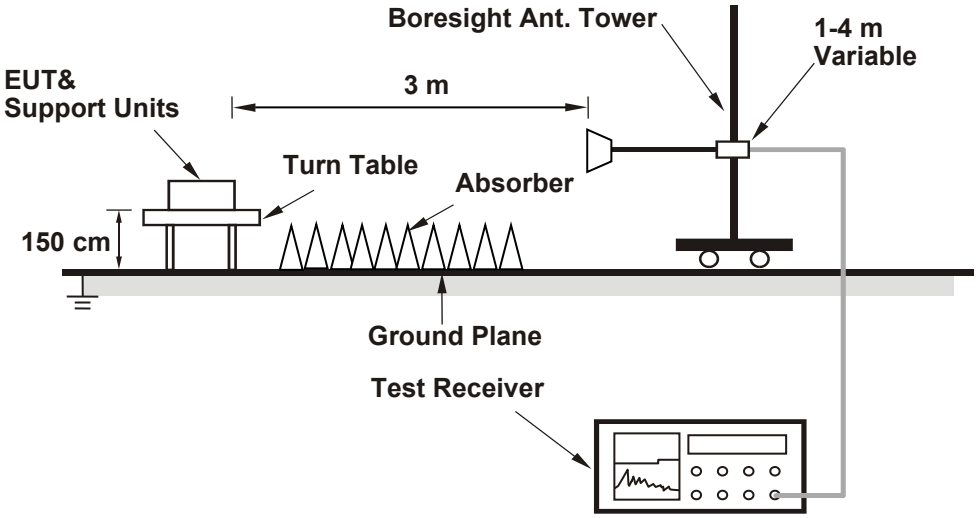
e. The test-receiver system was set to Quasi-peak(QP) detect function, Average(AV) detect function, Peak(PK) detect function and specified bandwidth with maximum hold mode when the test frequencies less than or equal to 1 GHz.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz (however, peak detector measurements may be used to determine compliance with QP requirements).
2. All modes of operation were investigated and the worst-case emissions are reported.

6.8 Unwanted Emissions above 1 GHz

6.8.1 Test Setup



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.8.2 Test Procedure

a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Notes:

1. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
2. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10 Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1 GHz.
3. All modes of operation were investigated and the worst-case emissions are reported.

7 Test Results of Test Item

7.1 26 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 61% RH	Tested By:	Henry HSU

802.11a CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	22.46	22.41	22.40	22.63
60	5300	22.35	22.37	22.79	22.50
64	5320	22.33	22.84	22.83	22.11
100	5500	22.30	22.78	22.93	22.57
116	5580	22.44	22.53	22.90	22.59
140	5700	22.43	22.42	22.98	22.40
144 (U-NII-2C)	5720	16.35	16.23	16.14	16.32
144 (U-NII-3)	5720	6.18	6.52	6.64	6.26

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	22.40	24.5	>	24
60	5300	22.35	24.49	>	24
64	5320	22.11	24.44	>	24
100	5500	22.30	24.48	>	24
116	5580	22.44	24.51	>	24
140	5700	22.40	24.5	>	24
144 (U-NII-2C)	5720	16.14	23.07	<	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11be (EHT20) CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	23.00	22.80	22.36	23.24
60	5300	22.80	23.12	22.99	23.68
64	5320	22.84	22.73	22.92	23.43
100	5500	22.55	22.90	23.31	22.56
116	5580	23.08	22.93	23.59	24.11
140	5700	22.60	22.99	22.92	24.85
144 (U-NII-2C)	5720	16.58	16.64	16.26	16.65
144 (U-NII-3)	5720	6.36	6.19	6.85	6.50

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	22.36	24.49	>	24
60	5300	22.80	24.57	>	24
64	5320	22.73	24.56	>	24
100	5500	22.55	24.53	>	24
116	5580	22.93	24.6	>	24
140	5700	22.60	24.54	>	24
144 (U-NII-2C)	5720	16.26	23.11	<	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11be (EHT40) CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	44.08	44.00	44.45	44.41
62	5310	43.93	44.48	43.04	43.85
102	5510	44.40	44.72	42.95	44.32
110	5550	43.55	44.08	43.87	43.51
134	5670	43.51	44.43	44.07	43.44
142 (U-NII-2C)	5710	37.05	36.67	37.47	37.06
142 (U-NII-3)	5710	6.98	7.56	6.63	6.72

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
54	5270	44.00	27.43	>	24
62	5310	43.04	27.33	>	24
102	5510	42.95	27.32	>	24
110	5550	43.51	27.38	>	24
134	5670	43.44	27.37	>	24
142 (U-NII-2C)	5710	36.67	26.64	>	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11be (EHT80) CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	87.35	88.97	88.86	89.07
106	5530	87.55	88.24	90.36	87.25
122	5610	88.98	88.36	89.08	88.78
138 (U-NII-2C)	5690	80.13	80.66	79.79	81.11
138 (U-NII-3)	5690	8.21	9.46	8.75	9.24

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	87.35	30.41	>	24
106	5530	87.25	30.4	>	24
122	5610	88.36	30.46	>	24
138 (U-NII-2C)	5690	79.79	30.01	>	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11be (EHT160) CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
50 (U-NII-1)	5250	85.30	86.40	84.72	85.12
50 (U-NII-2A)	5250	84.28	85.20	84.66	85.18
114	5570	173.39	172.78	173.50	172.68

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
50 (U-NII-2A)	5250	84.28	30.25	>	24
114	5570	172.68	33.37	>	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11be (EHT240) CDD

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
114+138 (U-NII-2C)	5610	247.21	243.90	244.92	244.22
114+138 (U-NII-3)	5610	25.55	30.50	29.81	25.79

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
114+138 (U-NII-2C)	5610	243.90	34.87	>	24

Note: For U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11be (EHT80) Punctured by 20 MHz NSS4

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	90.33	88.47	87.17	86.31
106	5530	88.77	88.12	87.98	86.94
122	5610	86.74	87.52	86.56	86.73
138 (U-NII-2C)	5690	78.31	78.12	78.32	79.95
138 (U-NII-3)	5690	7.62	7.61	7.81	8.61

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	86.31	30.36	>	24
106	5530	86.94	30.39	>	24
122	5610	86.56	30.37	>	24
138 (U-NII-2C)	5690	78.12	29.92	>	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11be (EHT80) Punctured by 40 MHz NSS4

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	86.14	86.85	88.29	88.36
106	5530	87.50	87.96	85.87	87.09
122	5610	87.33	87.02	85.43	87.48
138 (U-NII-2C)	5690	79.47	77.46	78.05	78.49
138 (U-NII-3)	5690	7.87	7.80	7.65	7.11

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	86.14	30.35	>	24
106	5530	85.87	30.33	>	24
122	5610	85.43	30.31	>	24
138 (U-NII-2C)	5690	77.46	29.89	>	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11be (EHT160) Punctured by 40 MHz NSS4

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
50 (U-NII-1)	5250	86.54	86.60	87.17	85.88
50 (U-NII-2A)	5250	85.68	85.22	85.14	85.79
114	5570	173.05	170.90	172.03	171.97

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
50 (U-NII-2A)	5250	85.14	30.3	>	24
114	5570	170.90	33.32	>	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

802.11be (EHT160) Punctured by 60 MHz NSS4

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
50 (U-NII-1)	5250	86.49	86.21	86.35	85.17
50 (U-NII-2A)	5250	85.12	84.73	86.60	83.83
114	5570	171.51	172.17	173.49	173.85

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
50 (U-NII-2A)	5250	83.83	30.23	>	24
114	5570	171.51	33.34	>	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

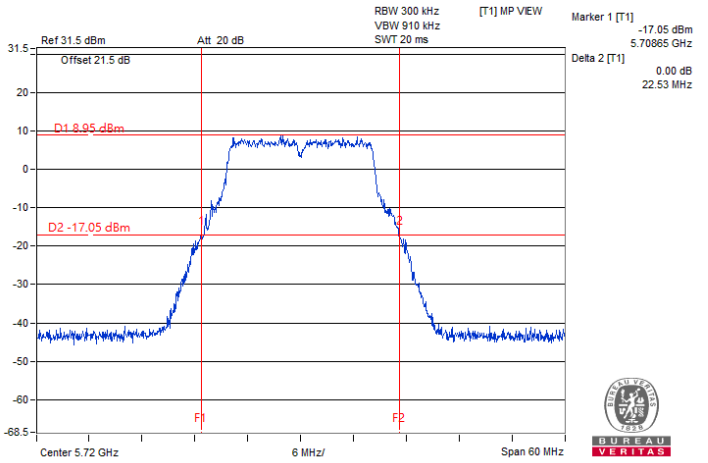
802.11be (EHT160) Punctured by 80 MHz NSS4

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
50 (U-NII-1)	5250	86.45	85.80	85.98	85.14
50 (U-NII-2A)	5250	85.93	85.56	85.11	85.54
114	5570	174.68	173.45	171.76	170.62

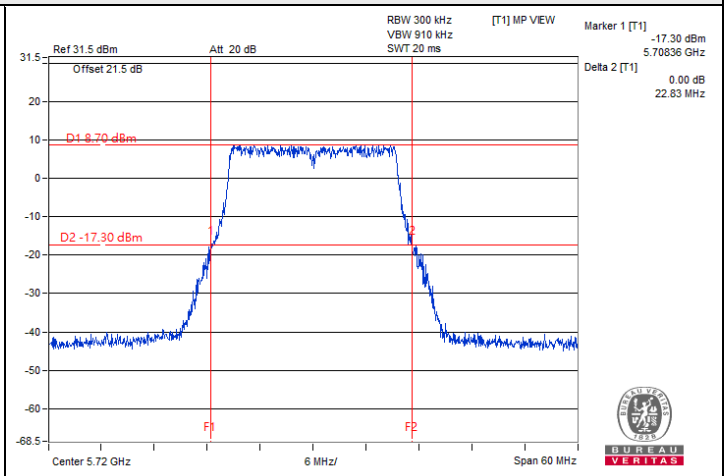
Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
50 (U-NII-2A)	5250	85.11	30.29	>	24
114	5570	170.62	33.32	>	24

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.

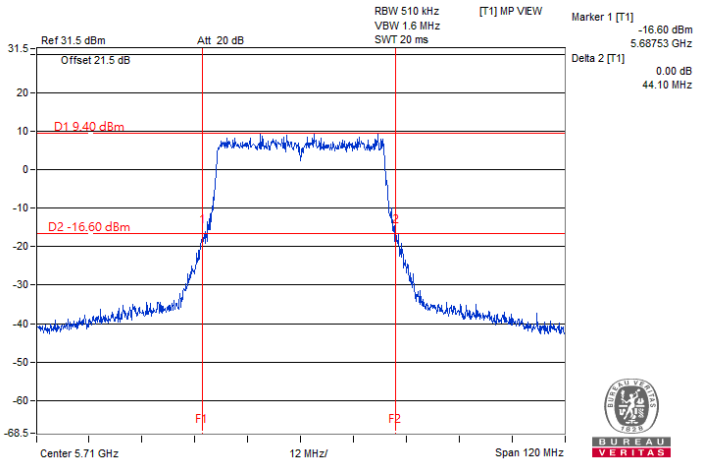
Spectrum Plot of Minimum Value



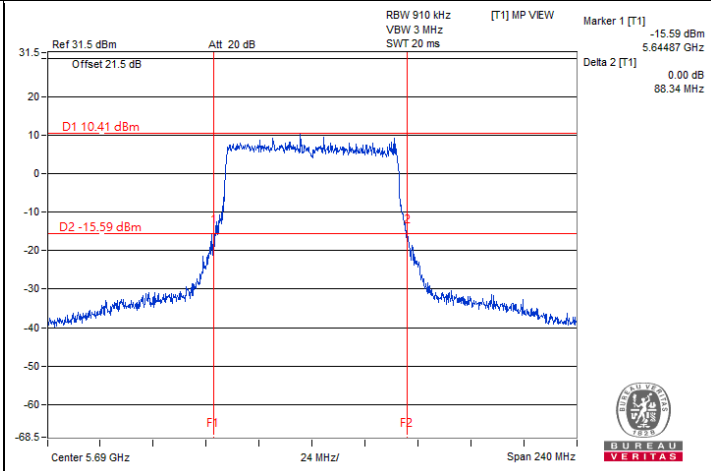
802.11a CDD / Chain 0 : CH 144 (U-NII-3)



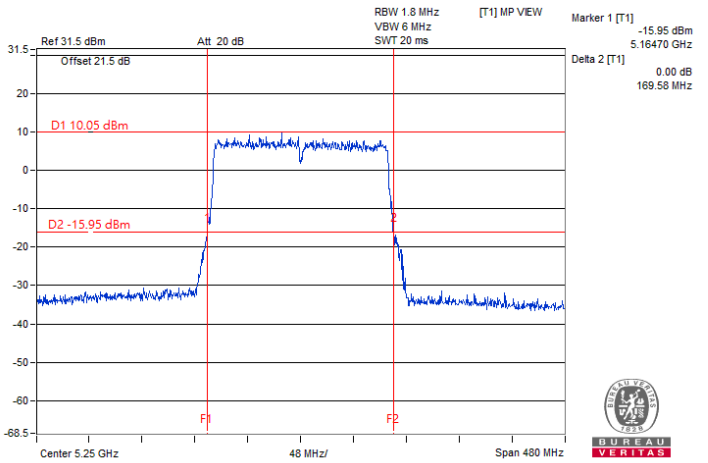
802.11be (EHT20) CDD / Chain 1 : CH 144 (U-NII-3)



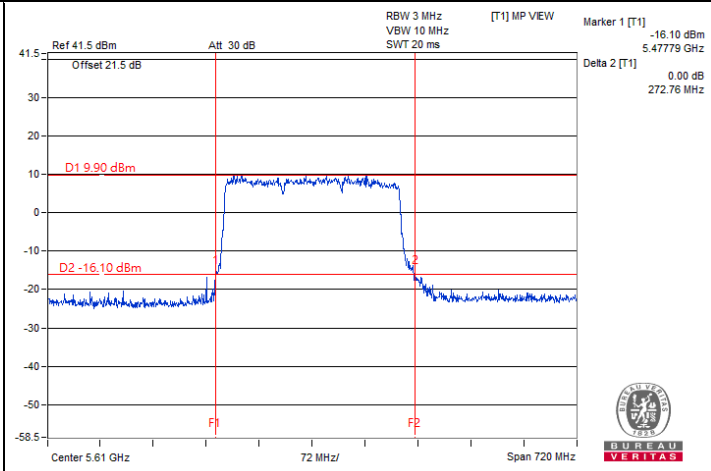
802.11be (EHT40) CDD / Chain 2 : CH 142 (U-NII-3)



802.11be (EHT80) CDD / Chain 0 : CH 138 (U-NII-3)

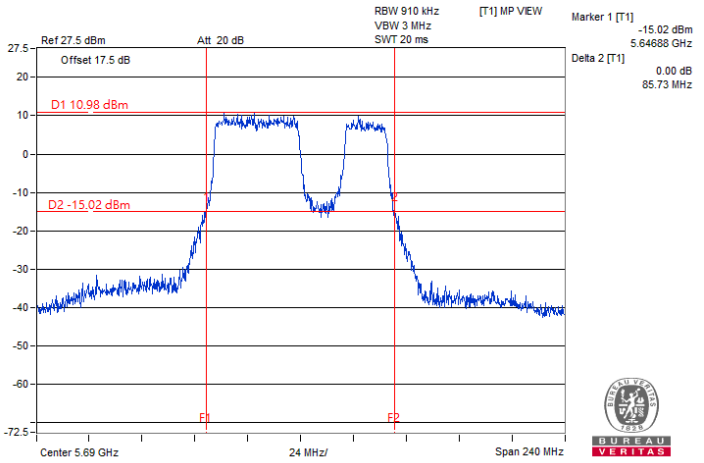


802.11be (EHT160) CDD / Chain 0 : CH 50 (U-NII-2A)

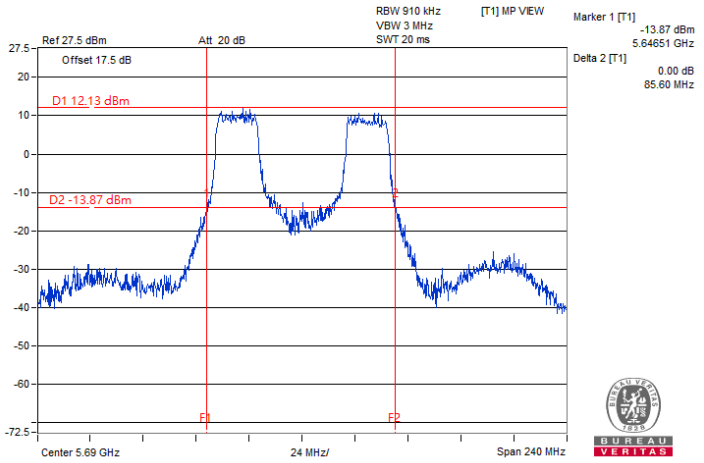


802.11be (EHT240) CDD / Chain 0 : CH 114+138 (U-NII-3)

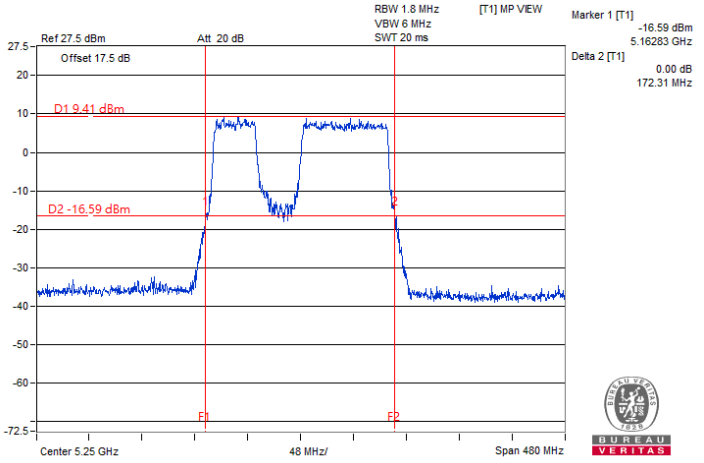
Spectrum Plot of Minimum Value



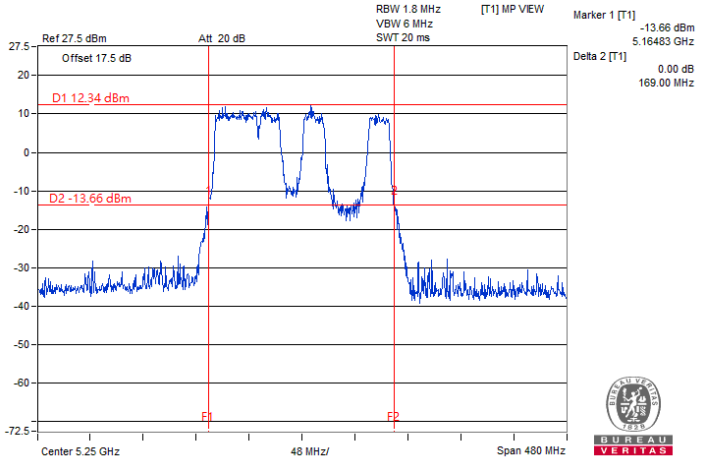
802.11be (EHT80) Punctured by 20 MHz NSS4 / Chain 1 : CH 138 (U-NII-3)



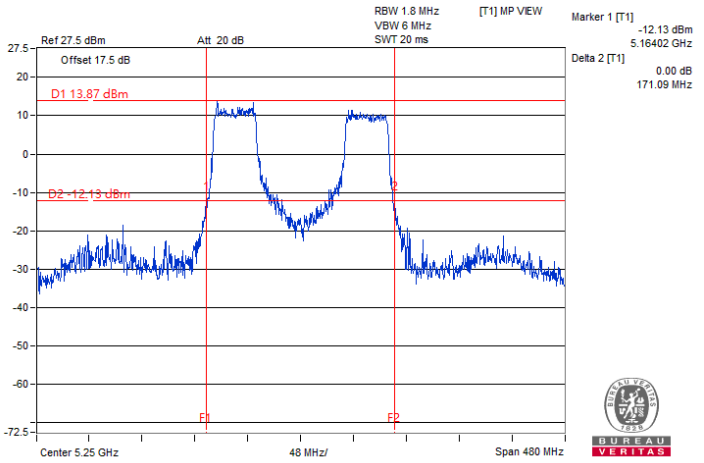
802.11be (EHT80) Punctured by 40 MHz NSS4 / Chain 3 : CH 138 (U-NII-3)



802.11be (EHT160) Punctured by 40 MHz NSS4 / Chain 2 : CH 50 (U-NII-2A)



802.11be (EHT160) Punctured by 60 MHz NSS4 / Chain 3 : CH 50 (U-NII-2A)



802.11be (EHT160) Punctured by 80 MHz NSS4 / Chain 2 : CH 50 (U-NII-2A)

Notes:

1. For U-NII-2C straddle channel = 5725 MHz - Marker 1
2. For U-NII-3 straddle channel = Marker 1 + Delta 2 - 5725 MHz
3. For U-NII-1 straddle channel = 5250 MHz - Marker 1
4. For U-NII-2A straddle channel = Marker 1 + Delta 2 - 5250 MHz

7.2 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 61% RH	Tested By:	Henry HSU

802.11a CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	17.58	17.75	17.34	17.72	230.202	23.62	24	Pass
60	5300	17.25	17.76	17.45	17.54	225.137	23.52	24	Pass
64	5320	17.48	17.56	17.49	17.73	228.39	23.59	24	Pass
100	5500	17.14	17.76	17.53	17.69	226.837	23.56	24	Pass
116	5580	17.29	18.13	17.64	18.10	241.234	23.82	24	Pass
140	5700	17.71	17.96	17.64	17.81	240.009	23.80	24	Pass
*144 (U-NII-2C)	5720	16.38	16.67	16.38	16.29	175.913	22.45	23.07	Pass
*144 (U-NII-3)	5720	10.41	10.92	10.20	10.76	45.733	16.60	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 4.18 dBi <= 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 4.46 dBi <= 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 4.1 dBi <= 6 dBi, so the output power limit shall not be reduced.

802.11be (EHT20) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	17.76	17.93	17.44	17.74	236.682	23.74	24	Pass
60	5300	17.40	17.82	17.43	17.69	229.572	23.61	24	Pass
64	5320	17.50	17.64	17.73	17.72	232.759	23.67	24	Pass
100	5500	17.21	17.92	17.65	17.87	233.991	23.69	24	Pass
116	5580	17.06	17.89	17.33	17.61	224.086	23.50	24	Pass
140	5700	17.47	17.82	17.45	17.81	232.366	23.66	24	Pass
*144 (U-NII-2C)	5720	16.20	16.55	16.20	16.05	174.466	22.42	23.11	Pass
*144 (U-NII-3)	5720	11.20	11.50	10.98	12.28	58.638	17.68	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 4.18 dBi <= 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 4.46 dBi <= 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 4.1 dBi <= 6 dBi, so the output power limit shall not be reduced.

802.11be (EHT40) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	17.57	17.67	17.36	17.77	229.918	23.62	24	Pass
62	5310	17.36	17.77	17.52	17.61	228.462	23.59	24	Pass
102	5510	17.49	18.05	17.70	18.01	242.057	23.84	24	Pass
110	5550	17.32	18.11	17.77	17.76	238.21	23.77	24	Pass
134	5670	17.93	18.09	17.76	17.75	245.774	23.91	24	Pass
*142 (U-NII-2C)	5710	16.66	16.88	16.67	16.88	195.397	22.91	24	Pass
*142 (U-NII-3)	5710	7.24	7.70	6.91	7.12	21.815	13.39	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 4.18 dBi <= 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 4.46 dBi <= 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 4.1 dBi <= 6 dBi, so the output power limit shall not be reduced.

802.11be (EHT80) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	17.35	17.85	17.45	17.52	227.363	23.57	24	Pass
106	5530	17.16	17.90	17.64	17.71	230.756	23.63	24	Pass
122	5610	17.54	18.09	17.71	17.64	238.268	23.77	24	Pass
*138 (U-NII-2C)	5690	17.20	17.39	17.28	17.31	220.732	23.44	24	Pass
*138 (U-NII-3)	5690	3.22	2.82	2.90	2.58	7.997	9.03	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2A, the maximum gain is 4.18 dBi <= 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 4.46 dBi <= 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 4.1 dBi <= 6 dBi, so the output power limit shall not be reduced.

802.11be (EHT160) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
*50 (U-NII-1)	5250	14.69	14.66	14.59	14.67	119.317	20.77	30	Pass
*50 (U-NII-2A)	5250	13.20	12.12	12.69	13.11	77.892	18.91	24	Pass
114	5570	17.27	17.98	17.67	17.72	233.774	23.69	24	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-1, the maximum gain is 4.27 dBi <= 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2A, the maximum gain is 4.18 dBi <= 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-2C, the maximum gain is 4.46 dBi <= 6 dBi, so the output power limit shall not be reduced.

802.11be (EHT240) CDD

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
*114+138(U-NII-2C)	5610	16.93	16.40	16.72	14.39	173.022	22.38	24	Pass
*114+138(U-NII-3)	5610	-4.05	-3.97	-1.94	-7.53	1.6645	2.21	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the maximum gain of antennas.
3. For U-NII-2C, the maximum gain is 4.46 dBi <= 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 4.1 dBi <= 6 dBi, so the output power limit shall not be reduced.

802.11be (EHT80) Punctured by 20 MHz NSS4

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	17.12	17.48	17.60	17.01	215.277	23.33	30	Pass
58	5290	17.01	17.40	17.53	16.66	208.157	23.18	24	Pass
106	5530	16.89	16.95	17.35	16.69	199.401	23.00	24	Pass
122	5610	16.55	17.44	17.50	16.84	205.188	23.12	24	Pass
*138 (U-NII-2C)	5690	16.38	16.95	17.08	16.38	248.684	23.96	24	Pass
*138 (U-NII-3)	5690	4.20	3.68	4.61	4.84	14.46	11.60	30	Pass
155	5775	18.94	19.06	19.82	18.70	328.952	25.17	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[($10^{Chain0/10}$ + $10^{Chain1/10}$ + $10^{Chain2/10}$ + $10^{Chain3/10}$) / 4]
3. For U-NII-1, the directional gain is 3.73 dBi <= 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2A, the directional gain is 3.24 dBi <= 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-2C, the directional gain is 3.87 dBi <= 6 dBi, so the output power limit shall not be reduced.
6. For U-NII-3, the directional gain is 3.52 dBi <= 6 dBi, so the output power limit shall not be reduced.

802.11be (EHT80) Punctured by 40 MHz NSS4

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	15.06	15.34	15.44	14.97	132.66	21.23	30	Pass
58	5290	16.23	16.39	16.69	15.72	169.518	22.29	24	Pass
106	5530	16.69	16.84	17.25	16.61	193.874	22.88	24	Pass
122	5610	16.54	17.11	17.25	16.97	199.348	23.00	24	Pass
*138 (U-NII-2C)	5690	16.46	16.74	16.99	16.25	231.384	23.64	24	Pass
*138 (U-NII-3)	5690	6.34	6.74	6.44	6.29	22.286	13.48	30	Pass
155	5775	19.84	20.03	20.76	19.56	406.565	26.09	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[($10^{Chain0/10}$ + $10^{Chain1/10}$ + $10^{Chain2/10}$ + $10^{Chain3/10}$) / 4]
3. For U-NII-1, the directional gain is 3.73 dBi <= 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2A, the directional gain is 3.24 dBi <= 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-2C, the directional gain is 3.87 dBi <= 6 dBi, so the output power limit shall not be reduced.
6. For U-NII-3, the directional gain is 3.52 dBi <= 6 dBi, so the output power limit shall not be reduced.

802.11be (EHT160) Punctured by 40 MHz NSS4

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
*50 (U-NII-1)	5250	10.22	9.20	9.57	9.56	43.392	16.37	30	Pass
*50 (U-NII-2A)	5250	12.28	11.85	12.58	12.11	78.233	18.93	24	Pass
114	5570	16.42	16.94	16.99	16.64	189.419	22.77	24	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[(10Chain0/10 + 10Chain1/10 + 10Chain2/10 + 10Chain3/10) / 4]
3. For U-NII-1, the directional gain is 3.73 dBi <= 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2A, the directional gain is 3.24 dBi <= 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-2C, the directional gain is 3.87 dBi <= 6 dBi, so the output power limit shall not be reduced.

802.11be (EHT160) Punctured by 60 MHz NSS4

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
*50 (U-NII-1)	5250	14.20	14.84	15.12	14.67	142.249	21.53	30	Pass
*50 (U-NII-2A)	5250	11.27	11.66	12.11	11.24	69.1	18.39	24	Pass
114	5570	16.43	16.89	17.18	16.81	193.032	22.86	24	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[($10^{Chain0/10}$ + $10^{Chain1/10}$ + $10^{Chain2/10}$ + $10^{Chain3/10}$) / 4]
3. For U-NII-1, the directional gain is 3.73 dBi <= 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2A, the directional gain is 3.24 dBi <= 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-2C, the directional gain is 3.87 dBi <= 6 dBi, so the output power limit shall not be reduced.

802.11be (EHT160) Punctured by 80 MHz NSS4

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
*50 (U-NII-1)	5250	13.91	13.98	14.25	14.10	131.428	21.19	30	Pass
*50 (U-NII-2A)	5250	13.99	13.94	13.95	13.08	122.494	20.88	24	Pass
114	5570	16.55	17.01	17.24	16.75	195.701	22.92	24	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain = 10 log[($10^{Chain0/10}$ + $10^{Chain1/10}$ + $10^{Chain2/10}$ + $10^{Chain3/10}$) / 4]
3. For U-NII-1, the directional gain is 3.73 dBi <= 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2A, the directional gain is 3.24 dBi <= 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-2C, the directional gain is 3.87 dBi <= 6 dBi, so the output power limit shall not be reduced.

802.11be (EHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	17.71	17.83	17.41	17.70	233.659	23.69	23.83	Pass
60	5300	17.35	17.78	17.39	1.62	170.584	22.32	23.83	Pass
64	5320	17.45	17.61	17.68	17.66	230.225	23.62	23.83	Pass
100	5500	17.11	17.72	17.28	17.53	220.641	23.44	23.48	Pass
116	5580	17.02	17.82	17.31	17.51	221.075	23.45	23.48	Pass
140	5700	17.22	17.61	17.38	17.45	220.692	23.44	23.48	Pass
*144 (U-NII-2C)	5720	16.05	16.40	16.04	15.92	168.633	22.27	22.59	Pass
*144 (U-NII-3)	5720	11.05	11.35	10.82	12.13	56.618	17.53	29.48	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.17-6)].
4. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.52-6)].
5. For U-NII-3, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.52-6) = 29.48 dBm.

802.11be (EHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	17.51	17.62	17.32	17.68	226.738	23.56	23.83	Pass
62	5310	17.32	17.69	17.48	17.58	225.955	23.54	23.83	Pass
102	5510	17.16	17.54	17.31	17.49	218.686	23.40	23.48	Pass
110	5550	17.03	17.51	17.28	17.58	217.566	23.38	23.48	Pass
134	5670	17.38	17.51	17.30	17.51	221.132	23.45	23.48	Pass
*142 (U-NII-2C)	5710	16.62	16.80	16.58	16.81	192.269	22.84	23.48	Pass
*142 (U-NII-3)	5710	7.20	7.61	6.85	7.03	21.464	13.32	29.48	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.17-6)].
4. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.52-6)].
5. For U-NII-3, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.52-6) = 29.48 dBm.

802.11be (EHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	16.46	16.81	16.49	16.41	180.55	22.57	23.83	Pass
106	5530	17.16	17.48	17.45	17.48	219.542	23.42	23.48	Pass
122	5610	17.54	17.32	17.41	17.38	220.488	23.43	23.48	Pass
*138 (U-NII-2C)	5690	17.02	17.12	17.08	17.15	210.664	23.24	23.48	Pass
*138 (U-NII-3)	5690	3.03	2.64	2.74	2.34	7.652	8.84	29.48	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.17-6)].
4. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.52-6)].
5. For U-NII-3, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.52-6) = 29.48 dBm.

802.11be (EHT160) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
*50 (U-NII-1)	5250	14.58	14.56	14.51	14.60	116.869	20.68	29	Pass
*50 (U-NII-2A)	5250	13.12	12.04	12.60	13.02	76.38	18.83	23.83	Pass
114	5570	16.34	16.90	16.78	16.97	189.447	22.77	23.48	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 7 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7-6) = 29 dBm.
4. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.17-6)].
5. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.52-6)].

802.11be (EHT240) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
*114+138 (U-NII-2C)	5610	16.82	16.30	16.62	14.30	169.033	22.28	23.48	Pass
*114+138 (U-NII-3)	5610	-4.05	-3.97	-1.94	-7.53	1.6645	2.21	29.48	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.52-6)].
4. For U-NII-3, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.52-6) = 29.48 dBm.

802.11be (EHT80) Punctured by 20 MHz NSS1-Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	17.12	17.48	17.60	17.01	215.277	23.33	29	Pass
58	5290	17.01	17.40	17.53	16.66	208.157	23.18	23.83	Pass
106	5530	16.89	16.95	17.35	16.69	199.401	23.00	23.48	Pass
122	5610	16.55	17.44	17.50	16.84	205.188	23.12	23.48	Pass
*138 (U-NII-2C)	5690	15.80	15.35	15.58	15.77	146.194	21.65	23.48	Pass
*138 (U-NII-3)	5690	3.84	3.18	4.12	4.24	9.738	9.88	29.48	Pass
155	5775	18.94	19.06	19.82	18.70	328.952	25.17	29.48	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 7 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7-6) = 29 dBm.
4. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.17-6)].
5. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.52-6)].
6. For U-NII-3, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.52-6) = 29.48 dBm.

802.11be (EHT80) Punctured by 40 MHz NSS1-Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	15.06	15.34	15.44	14.97	132.66	21.23	29	Pass
58	5290	16.23	16.39	16.69	15.72	169.518	22.29	23.83	Pass
106	5530	16.69	16.84	17.25	16.61	193.874	22.88	23.48	Pass
122	5610	16.54	17.11	17.25	16.97	199.348	23.00	23.48	Pass
*138 (U-NII-2C)	5690	16.20	16.38	16.55	16.01	170.226	22.31	23.48	Pass
*138 (U-NII-3)	5690	6.34	6.74	6.44	6.29	17.687	12.48	29.48	Pass
155	5775	19.84	20.03	20.76	19.56	406.565	26.09	29.48	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 7 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7-6) = 29 dBm.
4. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.17-6)].
5. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.52-6)].
6. For U-NII-3, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.52-6) = 29.48 dBm.

802.11be (EHT160) Punctured by 40 MHz NSS1-Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
*50 (U-NII-1)	5250	10.22	9.20	9.57	9.56	43.392	16.37	29	Pass
*50 (U-NII-2A)	5250	12.28	11.85	12.58	12.11	78.233	18.93	23.83	Pass
114	5570	16.42	16.94	16.99	16.64	189.419	22.77	23.48	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 7 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7-6) = 29 dBm.
4. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.17-6)].
5. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.52-6)].

802.11be (EHT160) Punctured by 60 MHz NSS1-Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
*50 (U-NII-1)	5250	14.20	14.84	15.12	14.67	142.249	21.53	29	Pass
*50 (U-NII-2A)	5250	11.27	11.66	12.11	11.24	69.1	18.39	23.83	Pass
114	5570	16.43	16.89	17.18	16.81	193.032	22.86	23.48	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 7 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7-6) = 29 dBm.
4. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.17-6)].
5. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.52-6)].

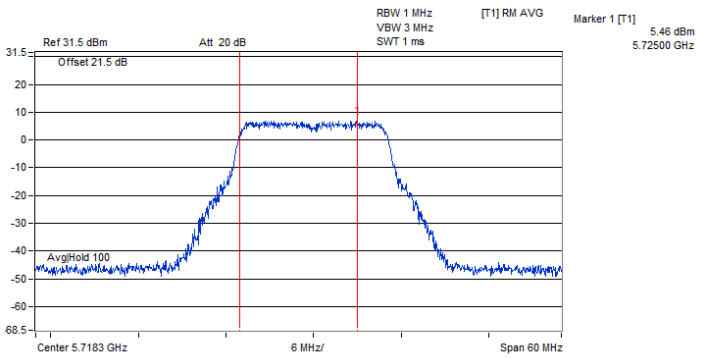
802.11be (EHT160) Punctured by 80 MHz NSS1-Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
*50 (U-NII-1)	5250	13.91	13.98	14.25	14.10	131.428	21.19	29	Pass
*50 (U-NII-2A)	5250	13.99	13.94	13.95	13.08	122.494	20.88	23.83	Pass
114	5570	16.55	17.01	17.24	16.75	195.701	22.92	23.48	Pass

Notes:

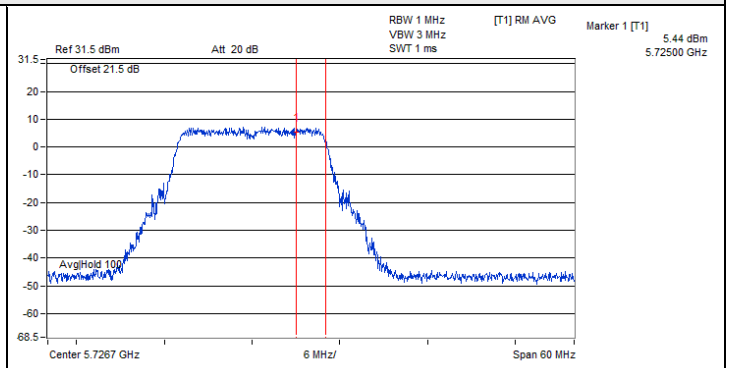
1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test , the duty factor was included in the total power.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 7 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7-6) = 29 dBm.
4. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.17-6)].
5. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(6.52-6)].

Spectrum Plot for channel straddling



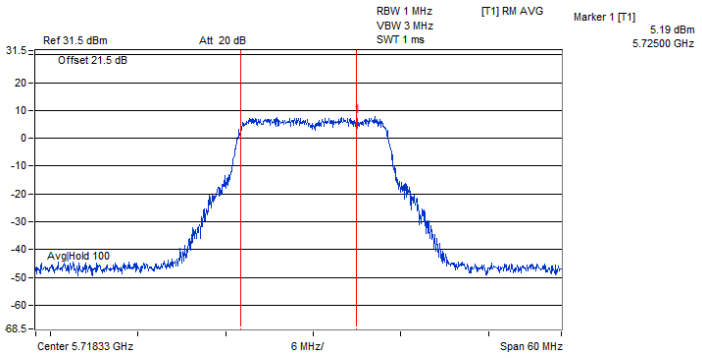
TX Channel Bandwidth 13.4 MHz Power 16.38 dBm

802.11a CDD / Chain 0 : CH 144 (U-NII-2C)



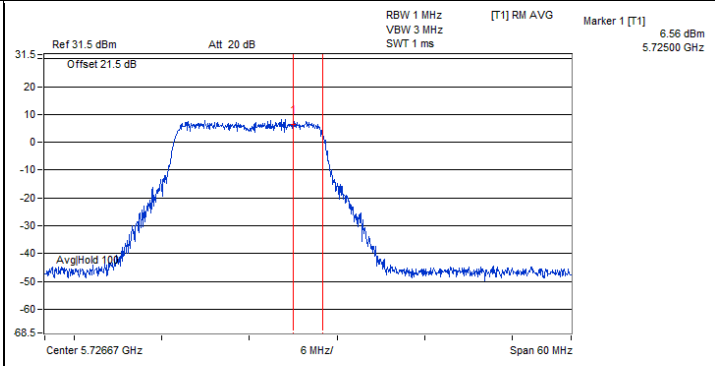
TX Channel Bandwidth 3.4 MHz Power 10.41 dBm

802.11a CDD / Chain 0 : CH 144 (U-NII-3)



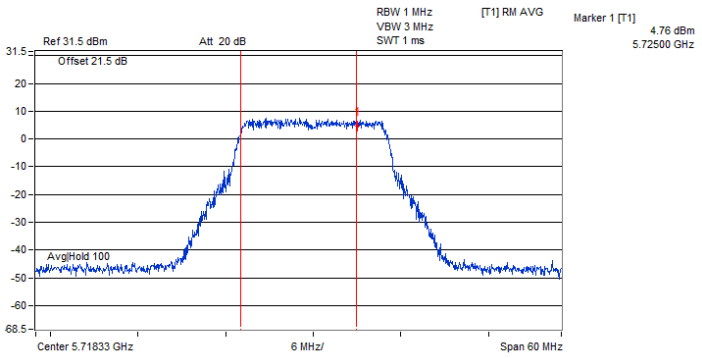
TX Channel Bandwidth 13.34 MHz Power 16.67 dBm

802.11a CDD / Chain 1 : CH 144 (U-NII-2C)



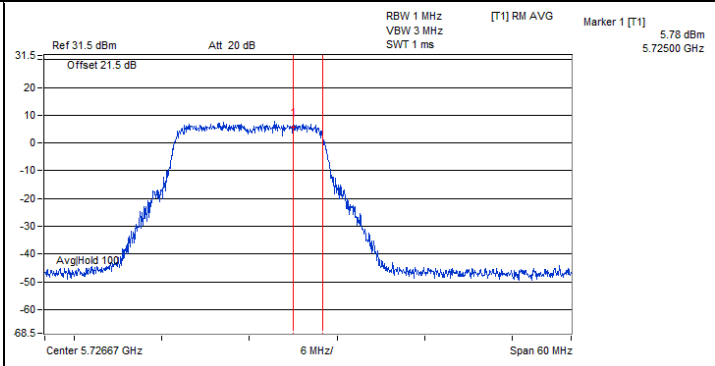
TX Channel Bandwidth 3.34 MHz Power 10.92 dBm

802.11a CDD / Chain 1 : CH 144 (U-NII-3)



TX Channel Bandwidth 13.34 MHz Power 16.38 dBm

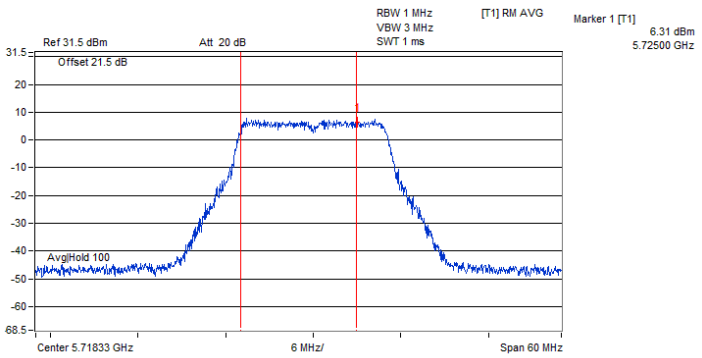
802.11a CDD / Chain 2 : CH 144 (U-NII-2C)



TX Channel Bandwidth 3.34 MHz Power 10.2 dBm

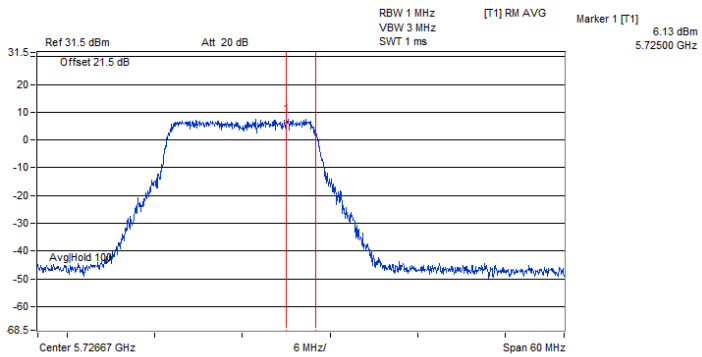
802.11a CDD / Chain 2 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



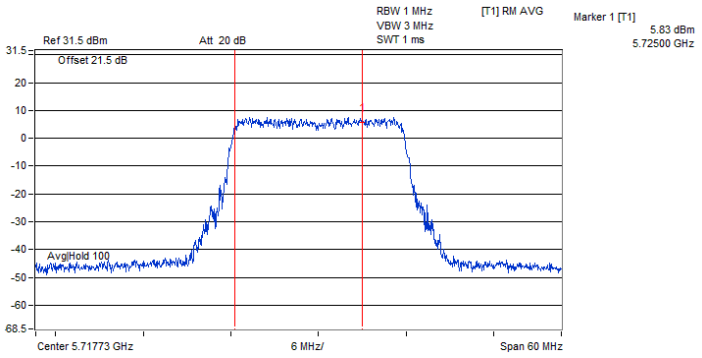
TX Channel Bandwidth 13.34 MHz Power 16.29 dBm

802.11a CDD / Chain 3 : CH 144 (U-NII-2C)



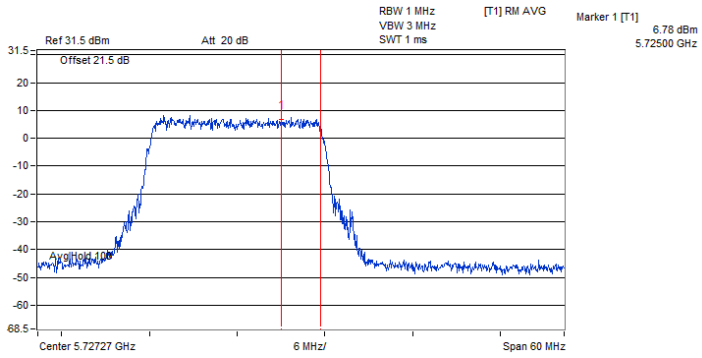
TX Channel Bandwidth 3.34 MHz Power 10.76 dBm

802.11a CDD / Chain 3 : CH 144 (U-NII-3)



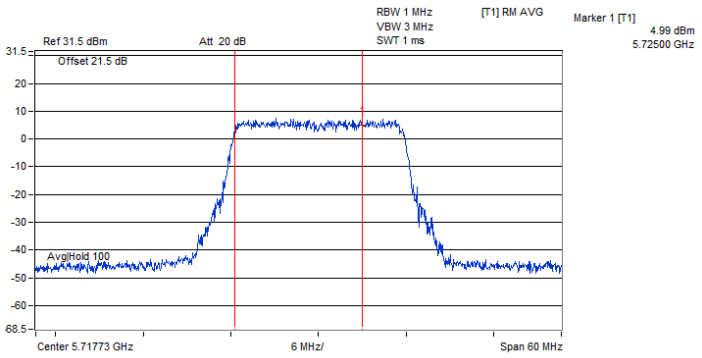
TX Channel Bandwidth 14.54 MHz Power 16.2 dBm

802.11be (EHT20) CDD / Chain 0 : CH 144 (U-NII-2C)



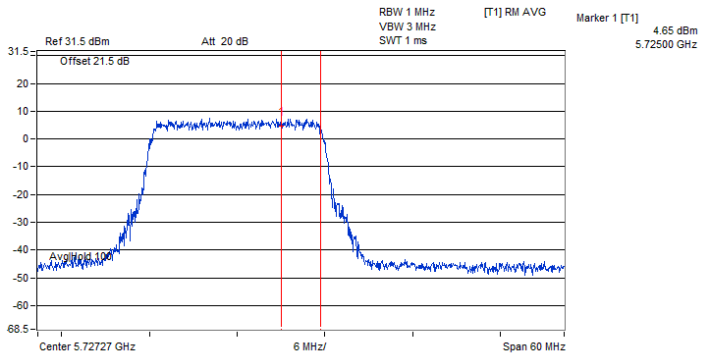
TX Channel Bandwidth 4.54 MHz Power 11.2 dBm

802.11be (EHT20) CDD / Chain 0 : CH 144 (U-NII-3)



TX Channel Bandwidth 14.54 MHz Power 16.55 dBm

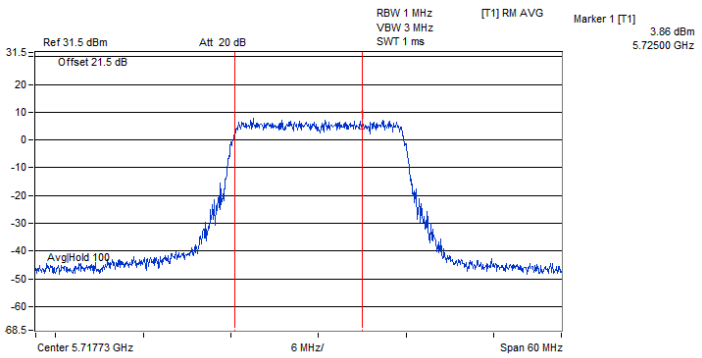
802.11be (EHT20) CDD / Chain 1 : CH 144 (U-NII-2C)



TX Channel Bandwidth 4.54 MHz Power 11.5 dBm

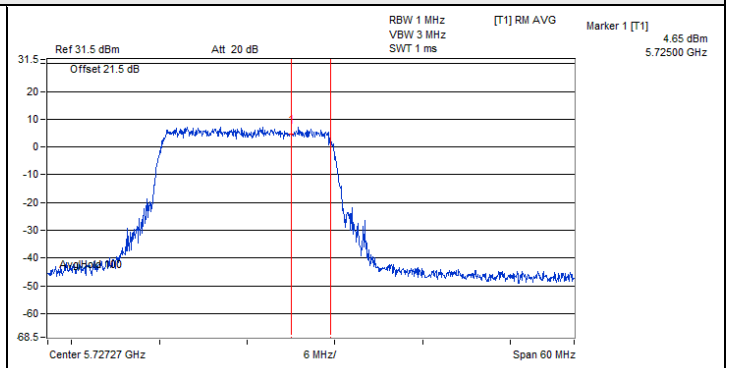
802.11be (EHT20) CDD / Chain 1 : CH 144 (U-NII-3)

Spectrum Plot for channel straddling



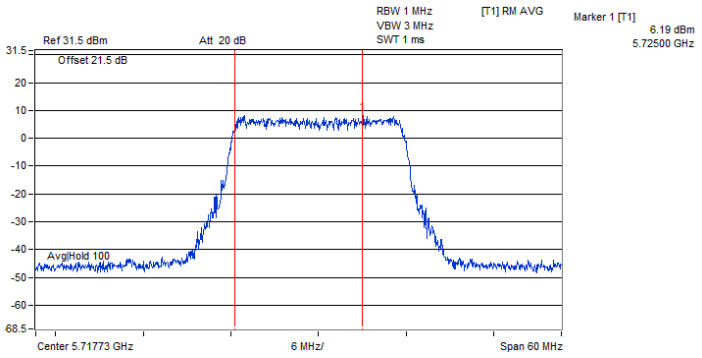
TX Channel Bandwidth 14.54 MHz Power 16.2 dBm

802.11be (EHT20) CDD / Chain 2 : CH 144 (U-NII-2C)



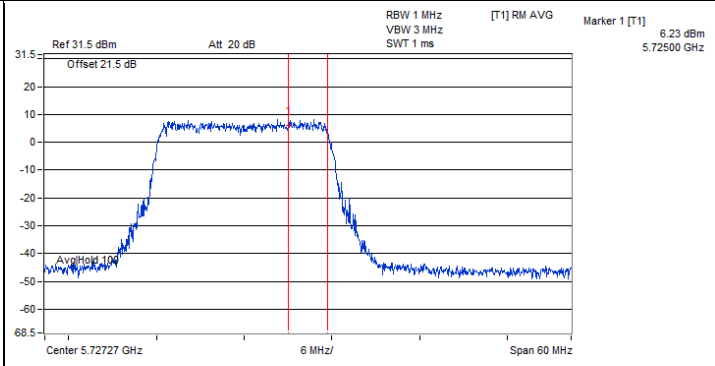
TX Channel Bandwidth 4.54 MHz Power 10.98 dBm

802.11be (EHT20) CDD / Chain 2 : CH 144 (U-NII-3)



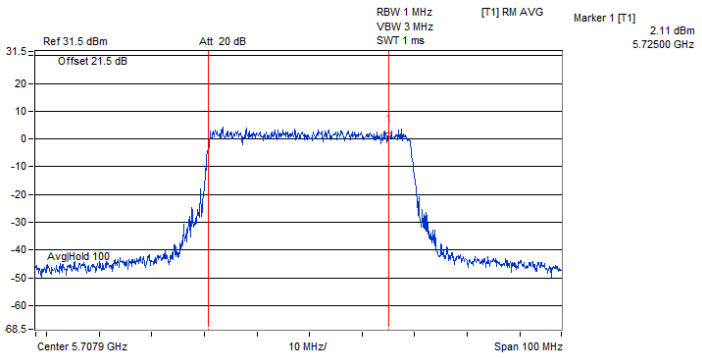
TX Channel Bandwidth 14.54 MHz Power 16.05 dBm

802.11be (EHT20) CDD / Chain 3 : CH 144 (U-NII-2C)



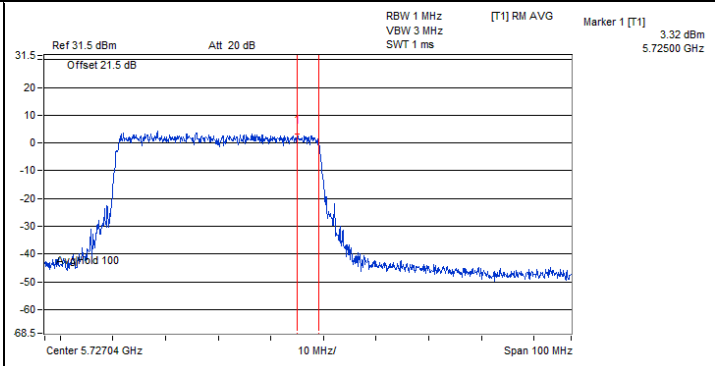
TX Channel Bandwidth 4.54 MHz Power 12.28 dBm

802.11be (EHT20) CDD / Chain 3 : CH 144 (U-NII-3)



TX Channel Bandwidth 34.2 MHz Power 16.66 dBm

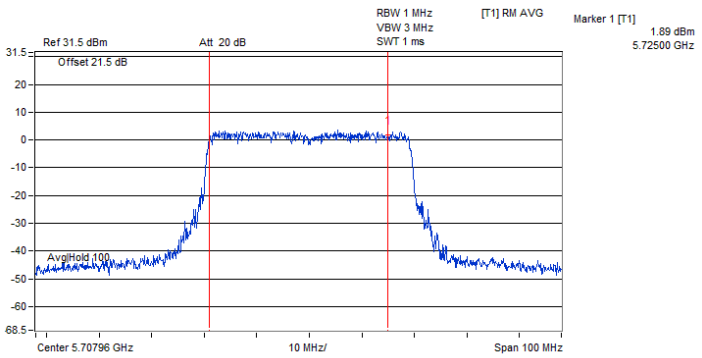
802.11be (EHT40) CDD / Chain 0 : CH 142 (U-NII-2C)



TX Channel Bandwidth 4.08 MHz Power 7.24 dBm

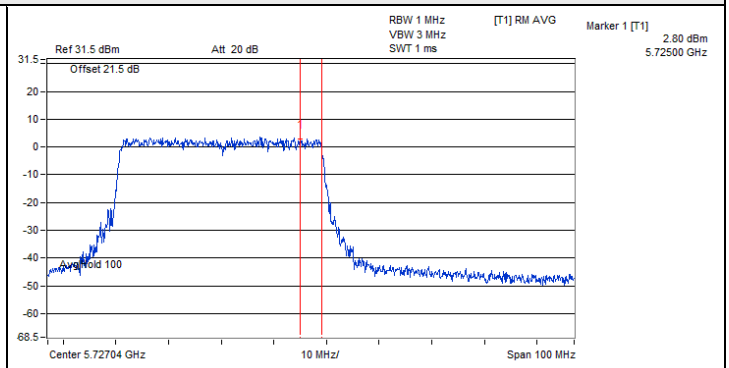
802.11be (EHT40) CDD / Chain 0 : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



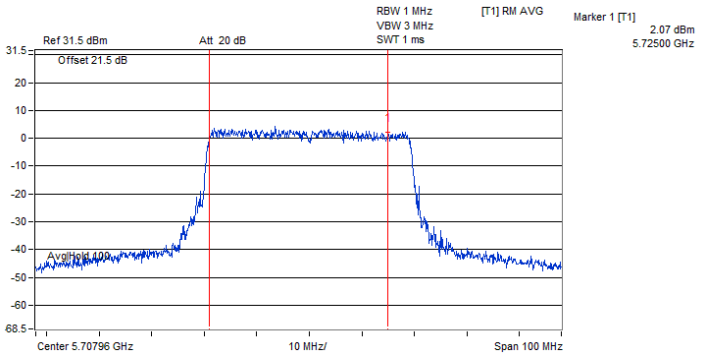
TX Channel Bandwidth 34.08 MHz Power 16.88 dBm

802.11be (EHT40) CDD / Chain 1 : CH 142 (U-NII-2C)



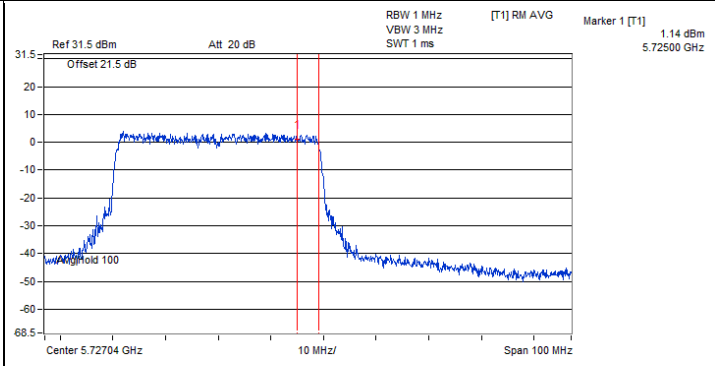
TX Channel Bandwidth 4.08 MHz Power 7.7 dBm

802.11be (EHT40) CDD / Chain 1 : CH 142 (U-NII-3)



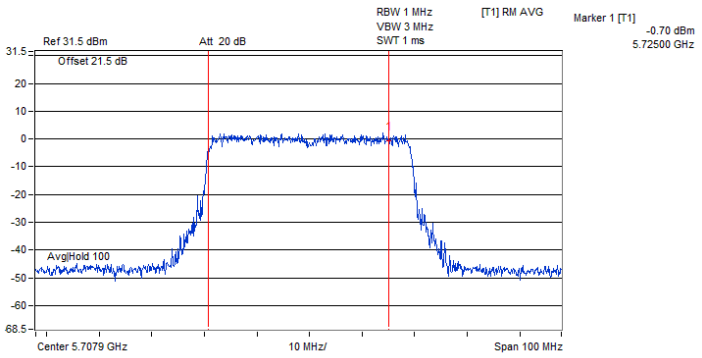
TX Channel Bandwidth 34.08 MHz Power 16.67 dBm

802.11be (EHT40) CDD / Chain 2 : CH 142 (U-NII-2C)



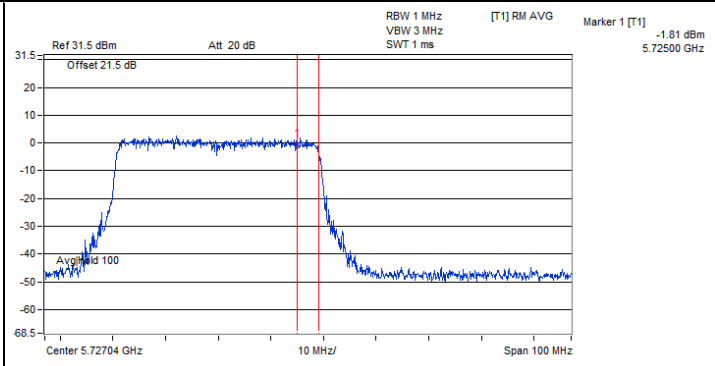
TX Channel Bandwidth 4.08 MHz Power 6.91 dBm

802.11be (EHT40) CDD / Chain 2 : CH 142 (U-NII-3)



TX Channel Bandwidth 34.2 MHz Power 16.88 dBm

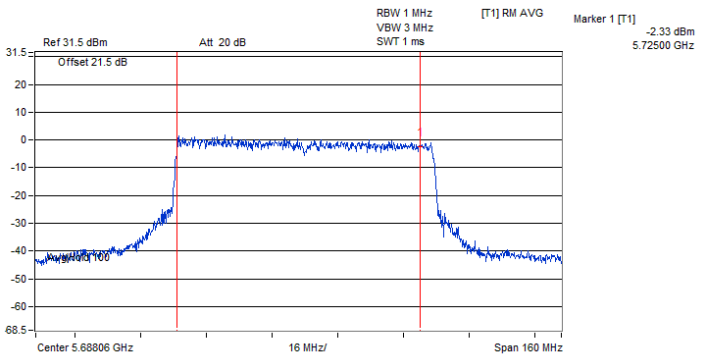
802.11be (EHT40) CDD / Chain 3 : CH 142 (U-NII-2C)



TX Channel Bandwidth 4.08 MHz Power 7.12 dBm

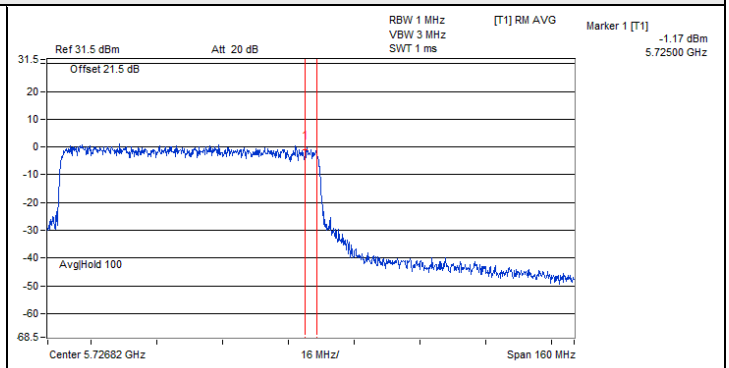
802.11be (EHT40) CDD / Chain 3 : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



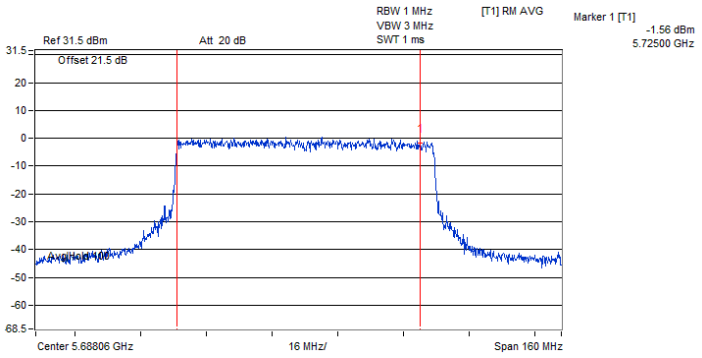
TX Channel Bandwidth 73.88 MHz Power 17.2 dBm

802.11be (EHT80) CDD / Chain 0 : CH 138 (U-NII-2C)



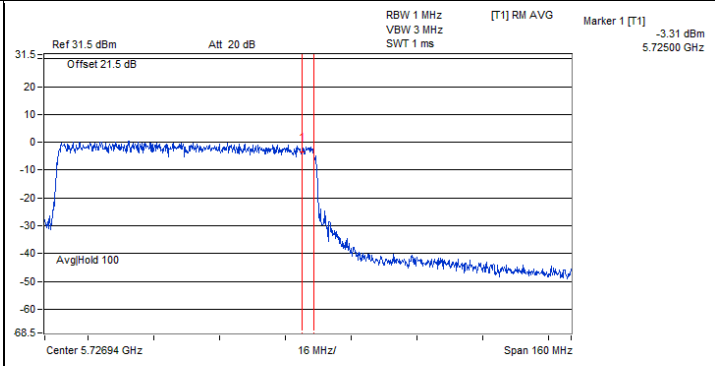
TX Channel Bandwidth 3.64 MHz Power 3.22 dBm

802.11be (EHT80) CDD / Chain 0 : CH 138 (U-NII-3)



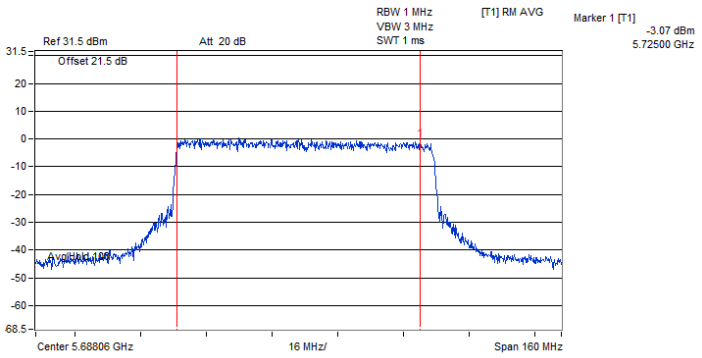
TX Channel Bandwidth 73.88 MHz Power 17.39 dBm

802.11be (EHT80) CDD / Chain 1 : CH 138 (U-NII-2C)



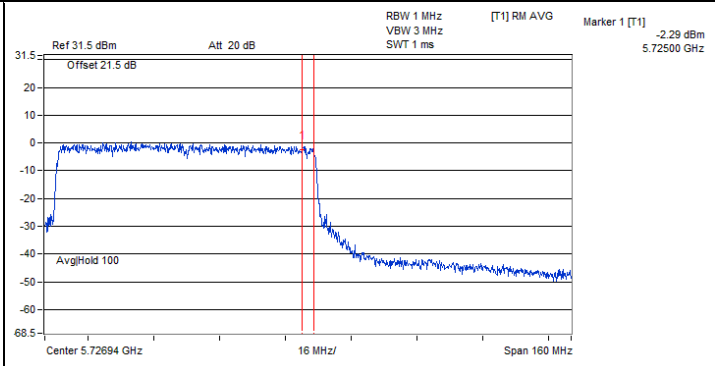
TX Channel Bandwidth 3.88 MHz Power 2.82 dBm

802.11be (EHT80) CDD / Chain 1 : CH 138 (U-NII-3)



TX Channel Bandwidth 73.88 MHz Power 17.28 dBm

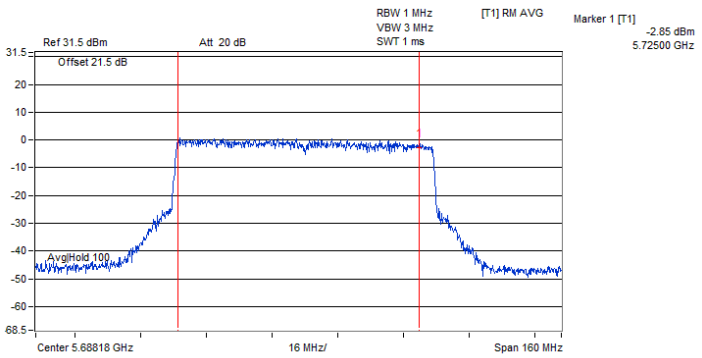
802.11be (EHT80) CDD / Chain 2 : CH 138 (U-NII-2C)



TX Channel Bandwidth 3.88 MHz Power 2.9 dBm

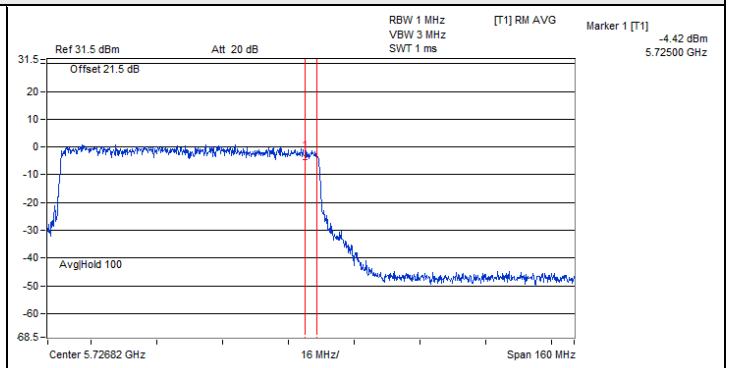
802.11be (EHT80) CDD / Chain 2 : CH 138 (U-NII-3)

Spectrum Plot for channel straddling



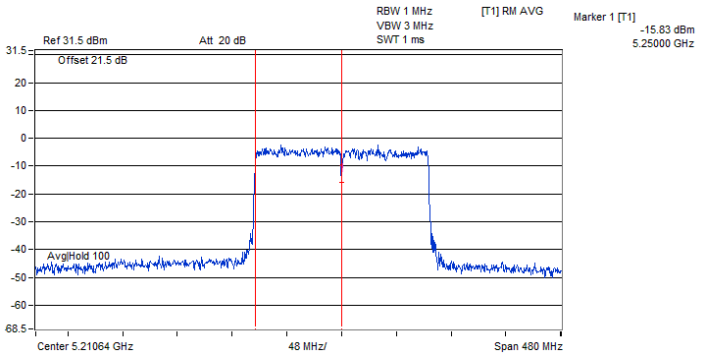
TX Channel Bandwidth 73.64 MHz Power 17.31 dBm

802.11be (EHT80) CDD / Chain 3 : CH 138 (U-NII-2C)



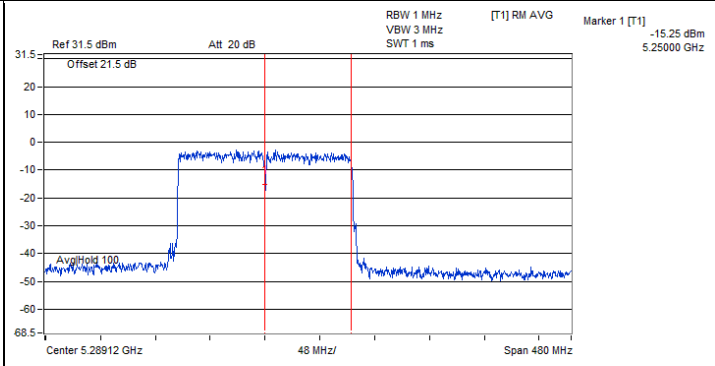
TX Channel Bandwidth 3.64 MHz Power 2.58 dBm

802.11be (EHT80) CDD / Chain 3 : CH 138 (U-NII-3)



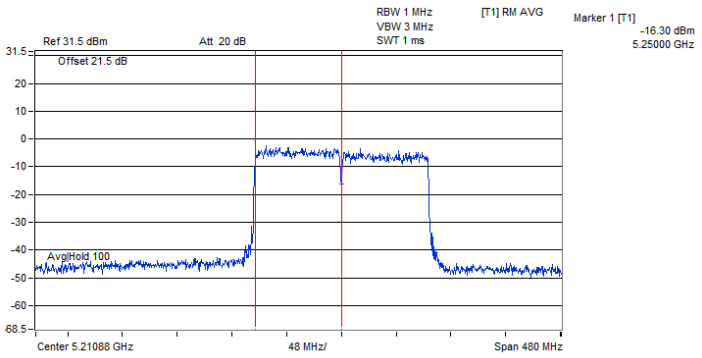
TX Channel Bandwidth 78.72 MHz Power 14.69 dBm

802.11be (EHT160) CDD / Chain 0 : CH 50 (U-NII-1)



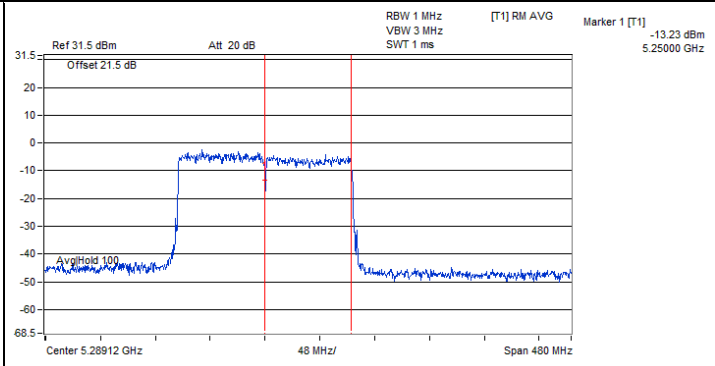
TX Channel Bandwidth 78.24 MHz Power 13.2 dBm

802.11be (EHT160) CDD / Chain 0 : CH 50 (U-NII-2A)



TX Channel Bandwidth 78.24 MHz Power 14.66 dBm

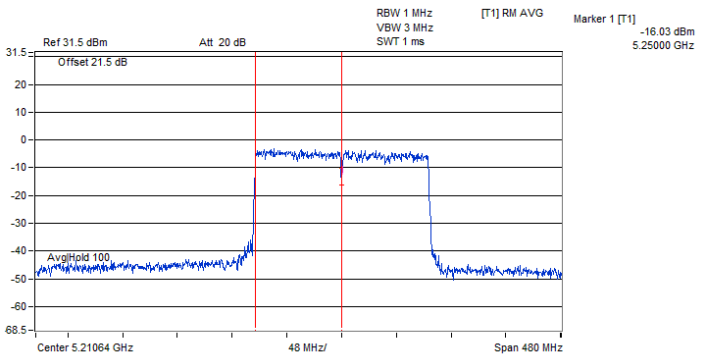
802.11be (EHT160) CDD / Chain 1 : CH 50 (U-NII-1)



TX Channel Bandwidth 78.24 MHz Power 12.12 dBm

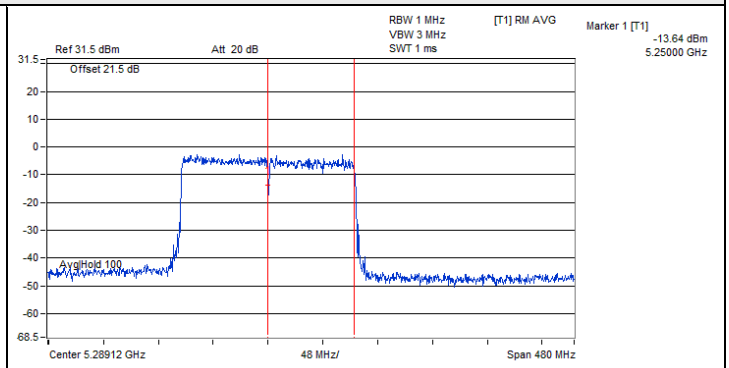
802.11be (EHT160) CDD / Chain 1 : CH 50 (U-NII-2A)

Spectrum Plot for channel straddling



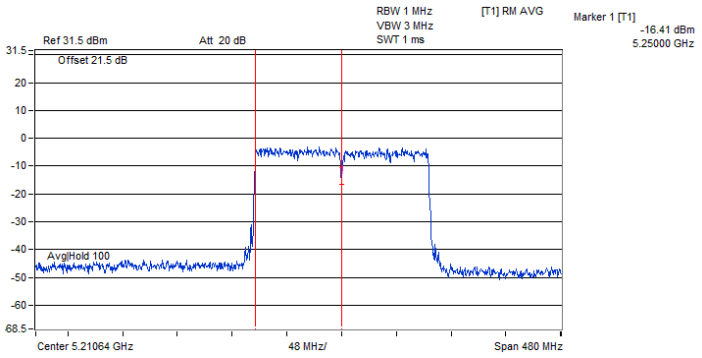
TX Channel Bandwidth 78.72 MHz Power 14.59 dBm

802.11be (EHT160) CDD / Chain 2 : CH 50 (U-NII-1)



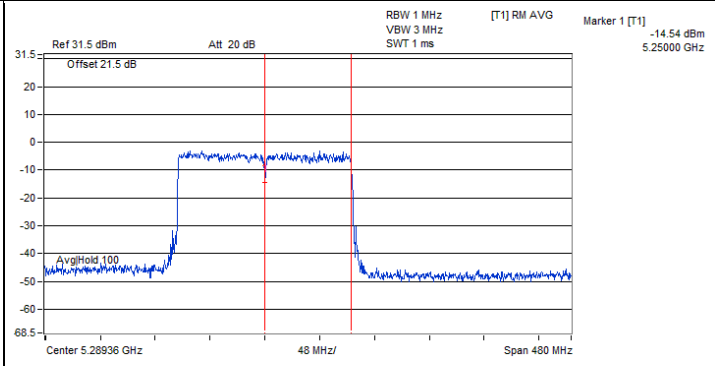
TX Channel Bandwidth 78.24 MHz Power 12.69 dBm

802.11be (EHT160) CDD / Chain 2 : CH 50 (U-NII-2A)



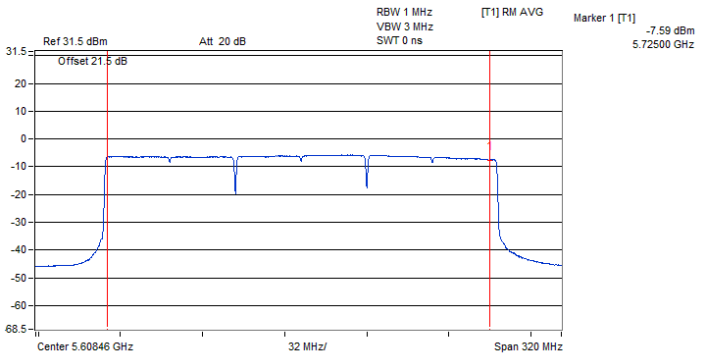
TX Channel Bandwidth 78.72 MHz Power 14.67 dBm

802.11be (EHT160) CDD / Chain 3 : CH 50 (U-NII-1)



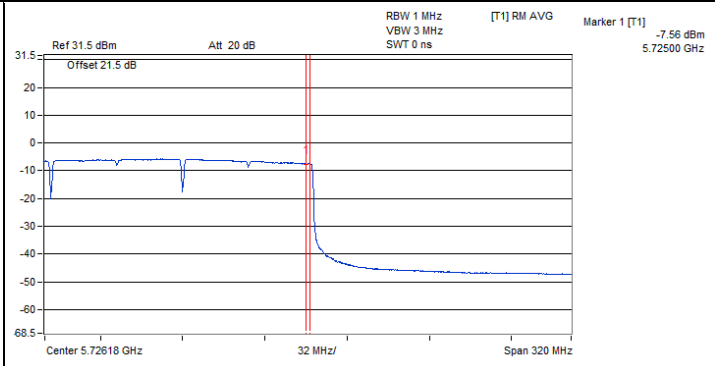
TX Channel Bandwidth 78.72 MHz Power 13.11 dBm

802.11be (EHT160) CDD / Chain 3 : CH 50 (U-NII-2A)



TX Channel Bandwidth 233.08 MHz Power 16.93 dBm

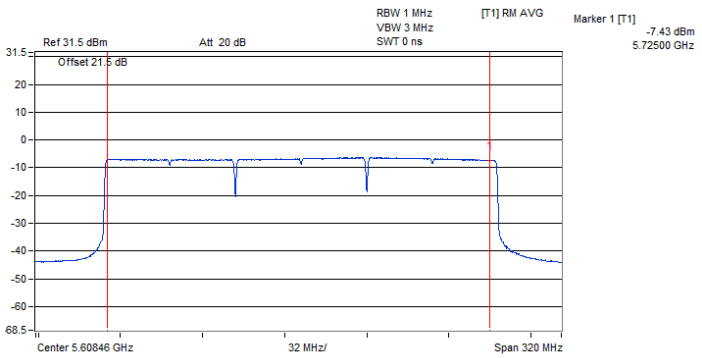
802.11be (EHT240) CDD / Chain 0 : CH 122 (U-NII-2C)



TX Channel Bandwidth 2.36 MHz Power -4.05 dBm

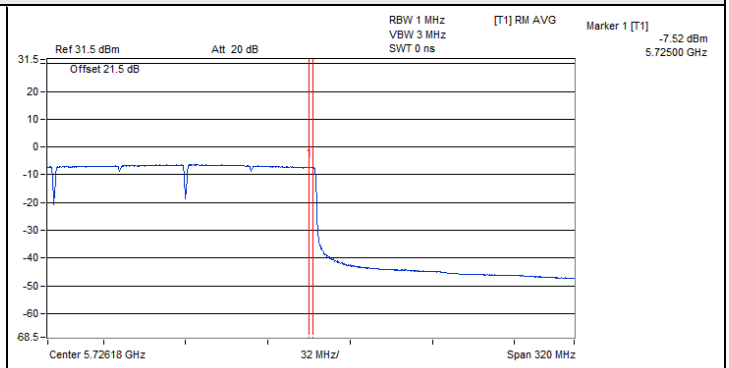
802.11be (EHT240) CDD / Chain 0 : CH 122 (U-NII-3)

Spectrum Plot for channel straddling



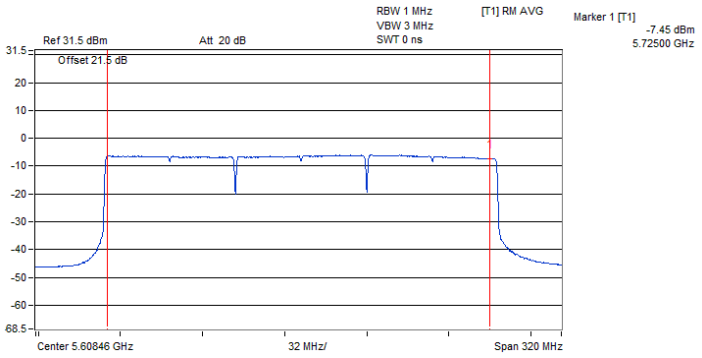
TX Channel Bandwidth 233.08 MHz Power 16.4 dBm

802.11be (EHT240) CDD / Chain 1 : CH 122 (U-NII-2C)



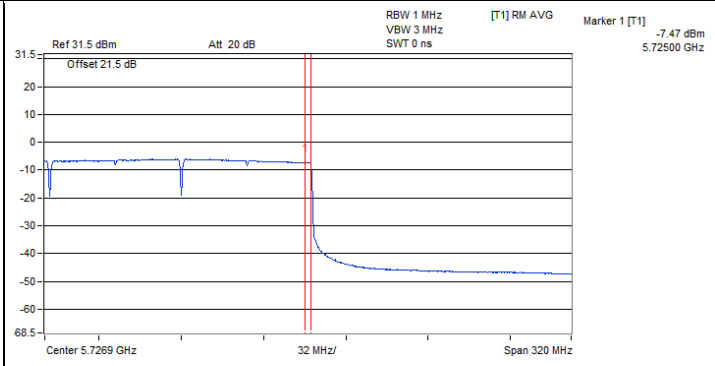
TX Channel Bandwidth 2.36 MHz Power -3.97 dBm

802.11be (EHT240) CDD / Chain 1 : CH 122 (U-NII-3)



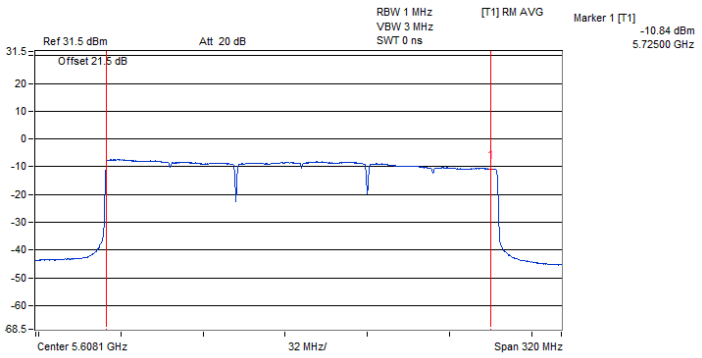
TX Channel Bandwidth 233.08 MHz Power 16.72 dBm

802.11be (EHT240) CDD / Chain 2 : CH 122 (U-NII-2C)



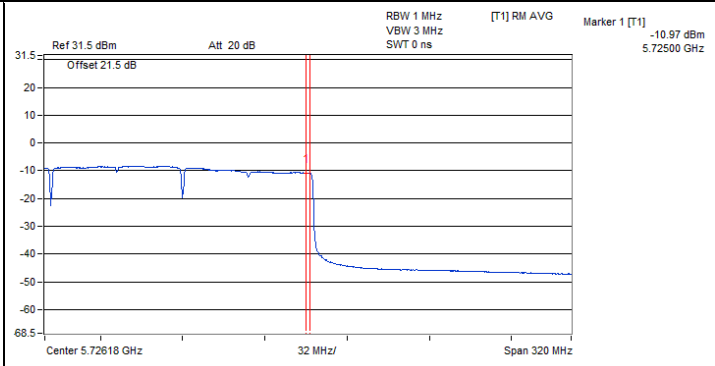
TX Channel Bandwidth 3.8 MHz Power -1.94 dBm

802.11be (EHT240) CDD / Chain 2 : CH 122 (U-NII-3)



TX Channel Bandwidth 233.8 MHz Power 14.39 dBm

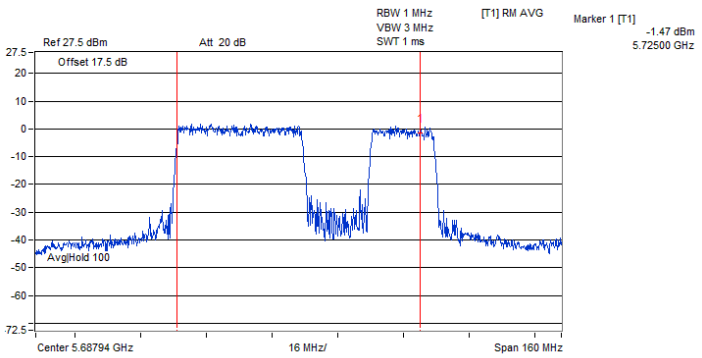
802.11be (EHT240) CDD / Chain 3 : CH 122 (U-NII-2C)



TX Channel Bandwidth 2.36 MHz Power -7.53 dBm

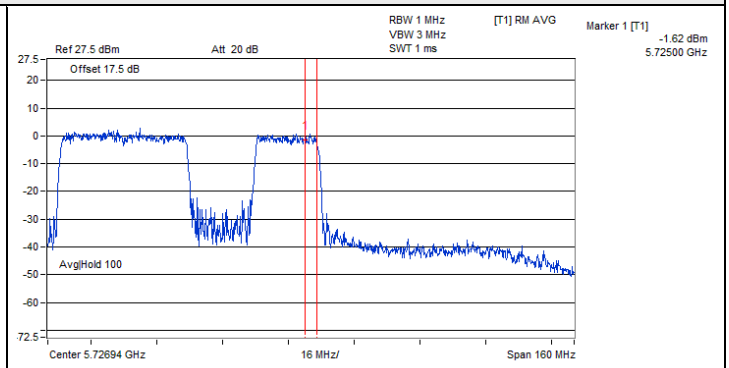
802.11be (EHT240) CDD / Chain 3 : CH 122 (U-NII-3)

Spectrum Plot for channel straddling



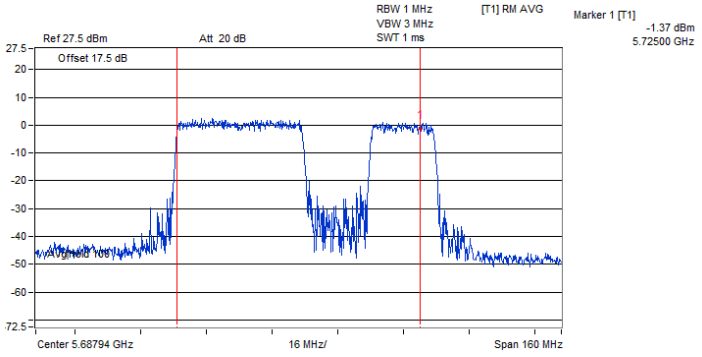
TX Channel Bandwidth 74.12 MHz Power 16.38 dBm

802.11be (EHT80) Punctured by 20 MHz NSS4 / Chain 0 : CH 138 (U-NII-2C)



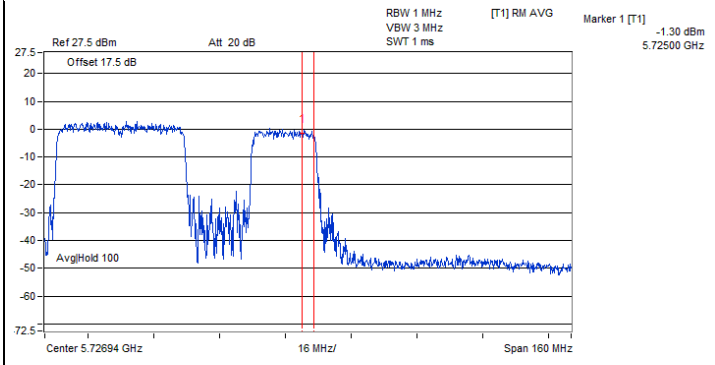
TX Channel Bandwidth 3.88 MHz Power 4.2 dBm

802.11be (EHT80) Punctured by 20 MHz NSS4 / Chain 0 : CH 138 (U-NII-3)



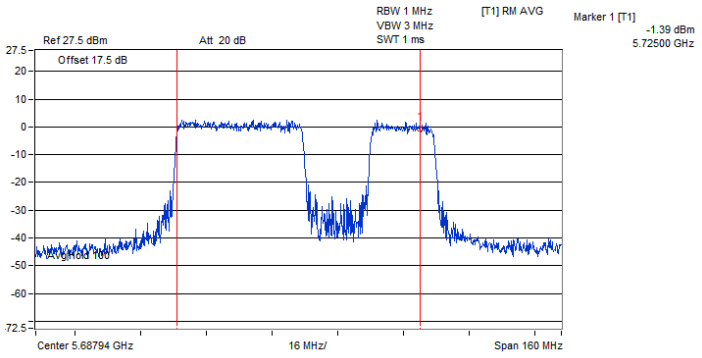
TX Channel Bandwidth 74.12 MHz Power 16.95 dBm

802.11be (EHT80) Punctured by 20 MHz NSS4 / Chain 1 : CH 138 (U-NII-2C)



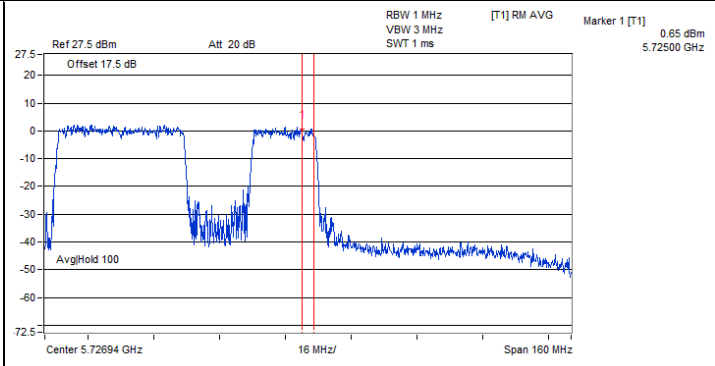
TX Channel Bandwidth 3.88 MHz Power 3.68 dBm

802.11be (EHT80) Punctured by 20 MHz NSS4 / Chain 1 : CH 138 (U-NII-3)



TX Channel Bandwidth 74.12 MHz Power 17.08 dBm

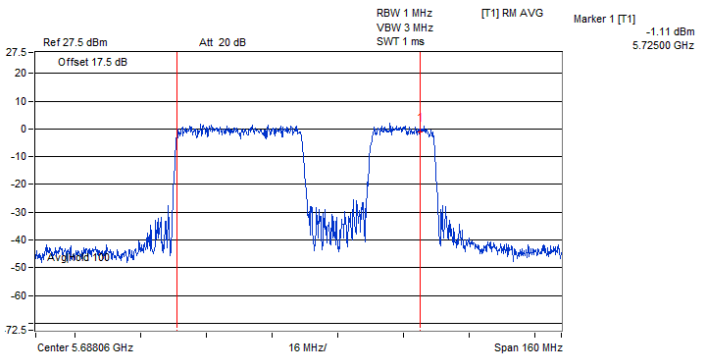
802.11be (EHT80) Punctured by 20 MHz NSS4 / Chain 2 : CH 138 (U-NII-2C)



TX Channel Bandwidth 3.88 MHz Power 4.61 dBm

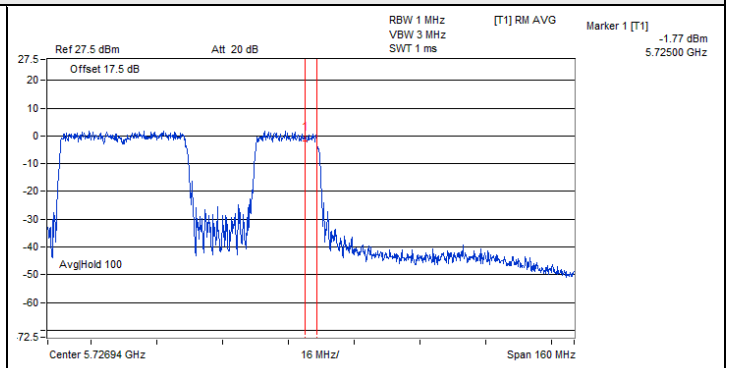
802.11be (EHT80) Punctured by 20 MHz NSS4 / Chain 2 : CH 138 (U-NII-3)

Spectrum Plot for channel straddling



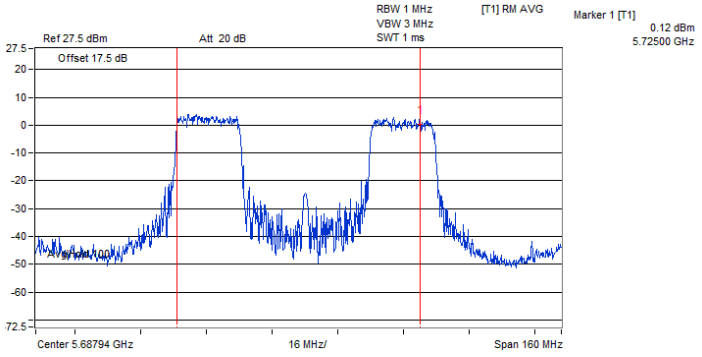
TX Channel Bandwidth 73.88 MHz Power 16.38 dBm

802.11be (EHT80) Punctured by 20 MHz NSS4 / Chain 3 : CH 138 (U-NII-2C)



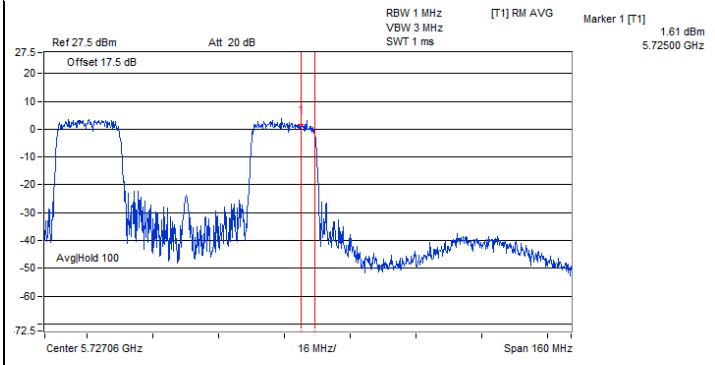
TX Channel Bandwidth 3.88 MHz Power 4.84 dBm

802.11be (EHT80) Punctured by 20 MHz NSS4 / Chain 3 : CH 138 (U-NII-3)



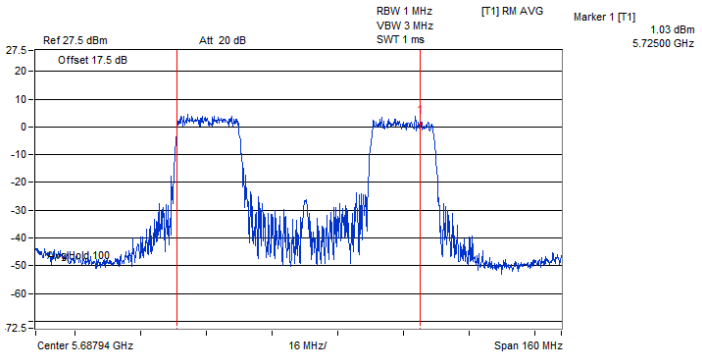
TX Channel Bandwidth 74.12 MHz Power 16.46 dBm

802.11be (EHT80) Punctured by 40 MHz NSS4 / Chain 0 : CH 138 (U-NII-2C)



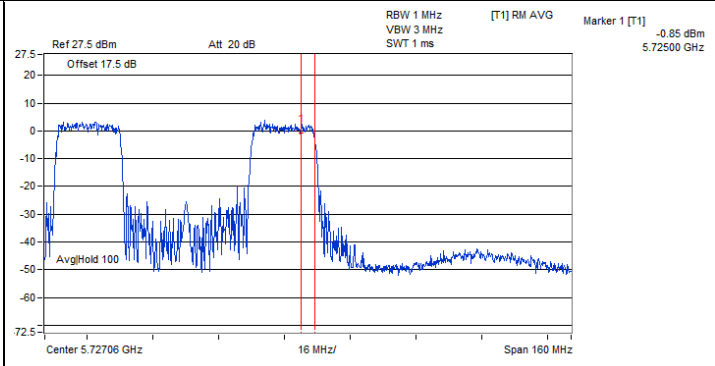
TX Channel Bandwidth 4.12 MHz Power 6.34 dBm

802.11be (EHT80) Punctured by 40 MHz NSS4 / Chain 0 : CH 138 (U-NII-3)



TX Channel Bandwidth 74.12 MHz Power 16.74 dBm

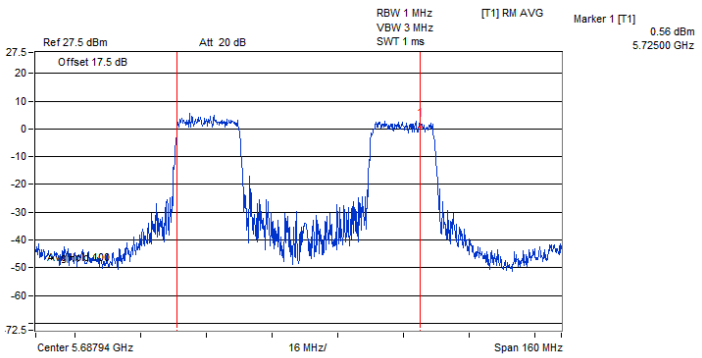
802.11be (EHT80) Punctured by 40 MHz NSS4 / Chain 1 : CH 138 (U-NII-2C)



TX Channel Bandwidth 4.12 MHz Power 6.74 dBm

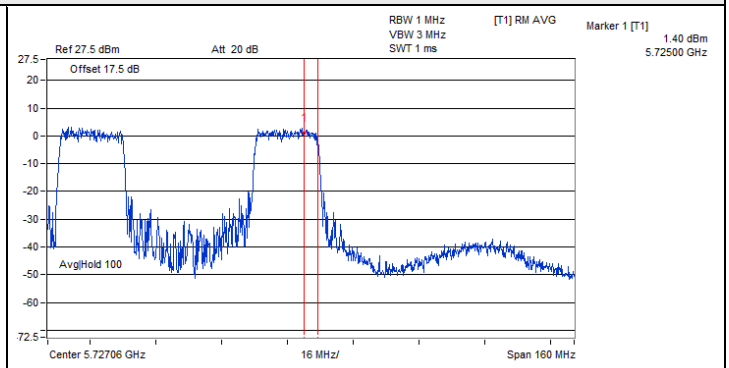
802.11be (EHT80) Punctured by 40 MHz NSS4 / Chain 1 : CH 138 (U-NII-3)

Spectrum Plot for channel straddling



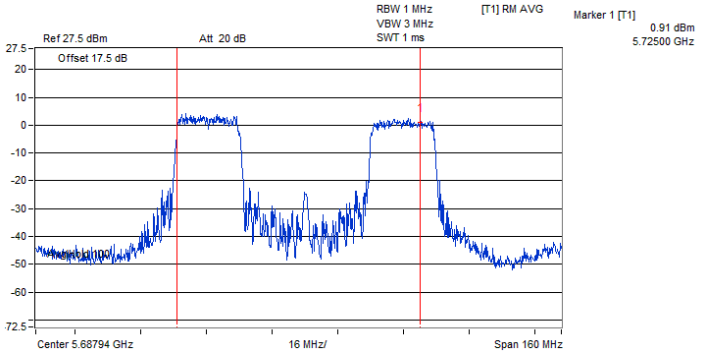
TX Channel Bandwidth 74.12 MHz Power 16.99 dBm

802.11be (EHT80) Punctured by 40 MHz NSS4 / Chain 2 : CH 138 (U-NII-2C)



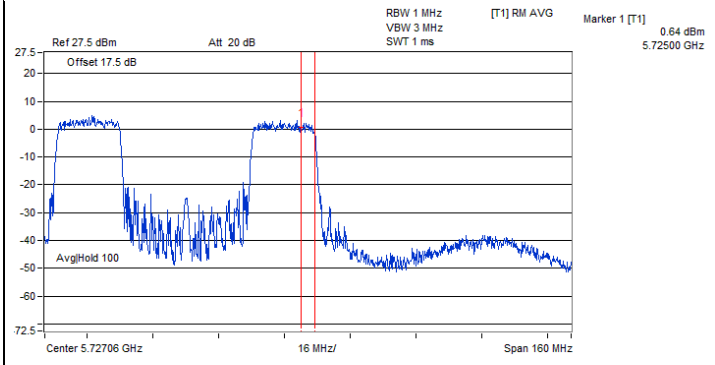
TX Channel Bandwidth 4.12 MHz Power 6.44 dBm

802.11be (EHT80) Punctured by 40 MHz NSS4 / Chain 2 : CH 138 (U-NII-3)



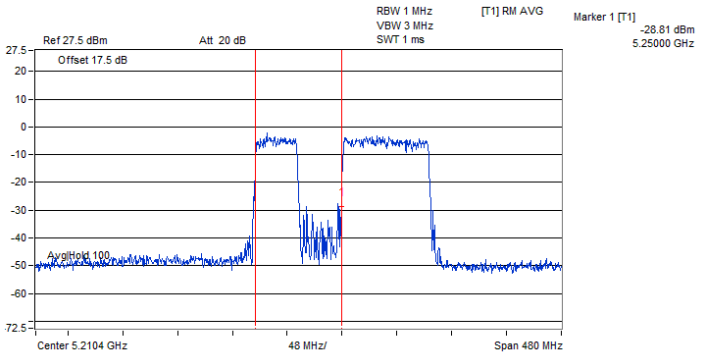
TX Channel Bandwidth 74.12 MHz Power 16.25 dBm

802.11be (EHT80) Punctured by 40 MHz NSS4 / Chain 3 : CH 138 (U-NII-2C)



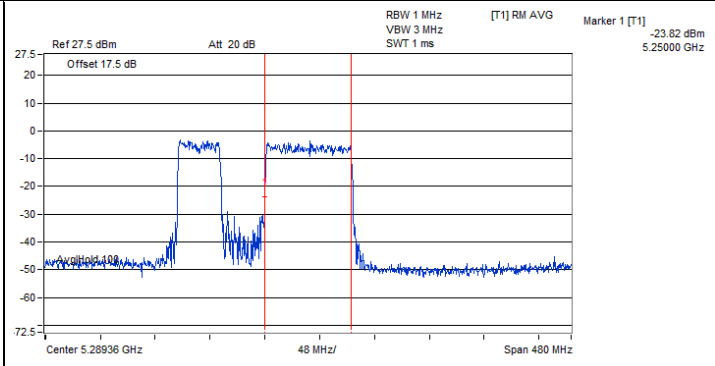
TX Channel Bandwidth 4.12 MHz Power 6.29 dBm

802.11be (EHT80) Punctured by 40 MHz NSS4 / Chain 3 : CH 138 (U-NII-3)



TX Channel Bandwidth 79.2 MHz Power 10.22 dBm

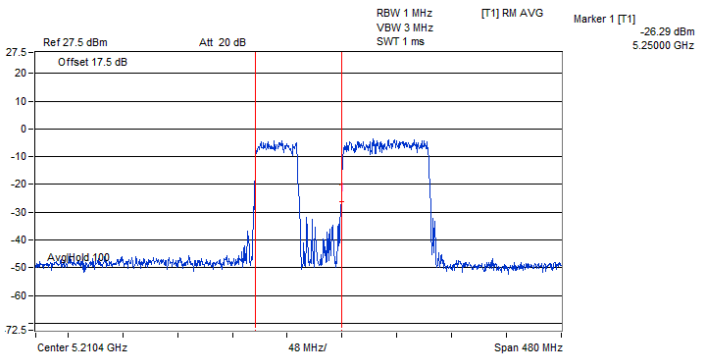
802.11be (EHT160) Punctured by 40 MHz NSS4 / Chain 0 : CH 50 (U-NII-1)



TX Channel Bandwidth 78.72 MHz Power 12.28 dBm

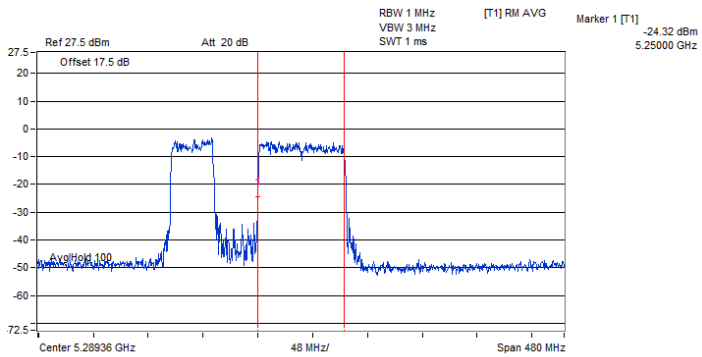
802.11be (EHT160) Punctured by 40 MHz NSS4 / Chain 0 : CH 50 (U-NII-2A)

Spectrum Plot for channel straddling



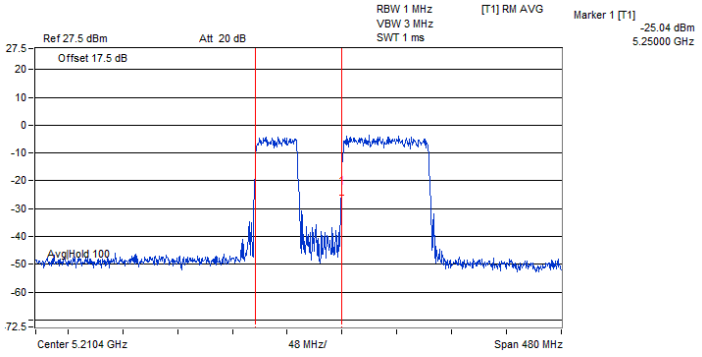
TX Channel Bandwidth 79.2 MHz Power 9.2 dBm

802.11be (EHT160) Punctured by 40 MHz NSS4 / Chain 1 : CH 50 (U-NII-1)



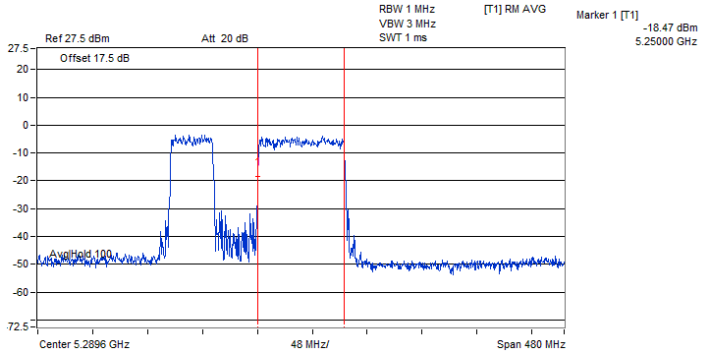
TX Channel Bandwidth 78.72 MHz Power 11.85 dBm

802.11be (EHT160) Punctured by 40 MHz NSS4 / Chain 1 : CH 50 (U-NII-2A)



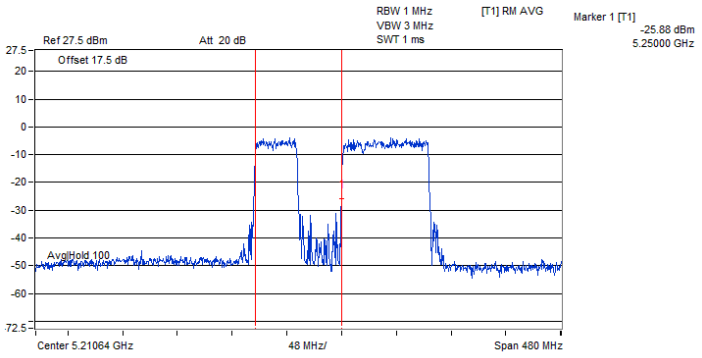
TX Channel Bandwidth 79.2 MHz Power 9.57 dBm

802.11be (EHT160) Punctured by 40 MHz NSS4 / Chain 2 : CH 50 (U-NII-1)



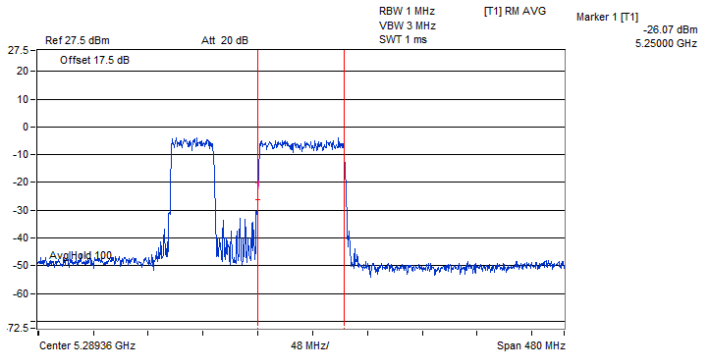
TX Channel Bandwidth 79.2 MHz Power 12.58 dBm

802.11be (EHT160) Punctured by 40 MHz NSS4 / Chain 2 : CH 50 (U-NII-2A)



TX Channel Bandwidth 78.72 MHz Power 9.56 dBm

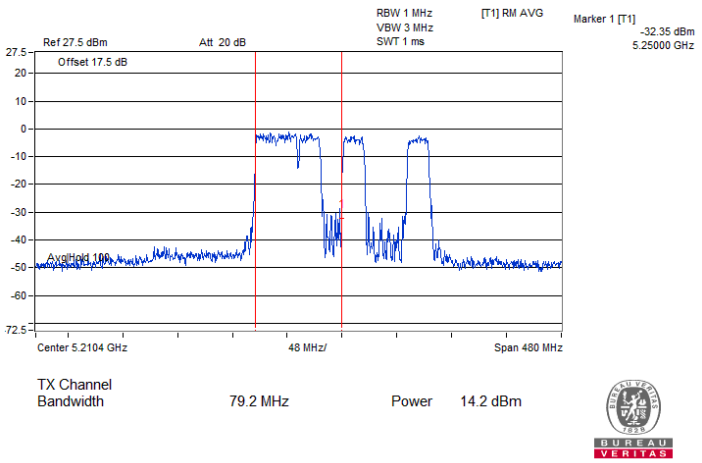
802.11be (EHT160) Punctured by 40 MHz NSS4 / Chain 3 : CH 50 (U-NII-1)



TX Channel Bandwidth 78.72 MHz Power 12.11 dBm

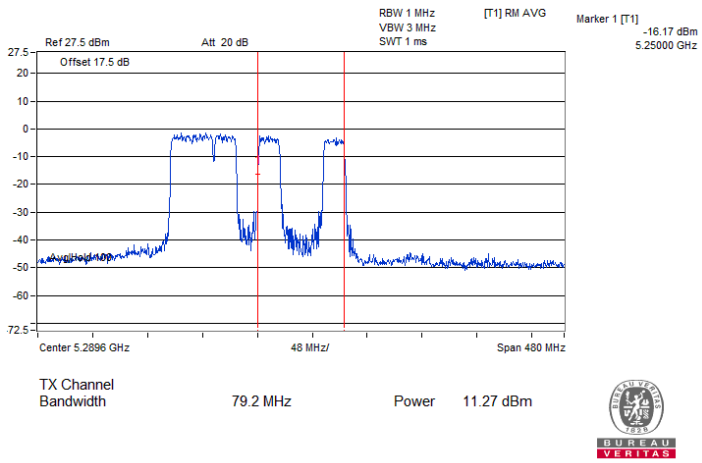
802.11be (EHT160) Punctured by 40 MHz NSS4 / Chain 3 : CH 50 (U-NII-2A)

Spectrum Plot for channel straddling



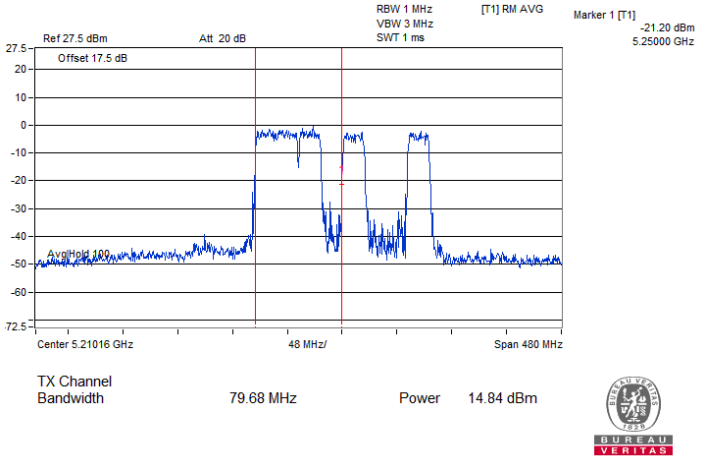
TX Channel Bandwidth 79.2 MHz Power 14.2 dBm

802.11be (EHT160) Punctured by 60 MHz NSS4 / Chain 0 : CH 50 (U-NII-1)



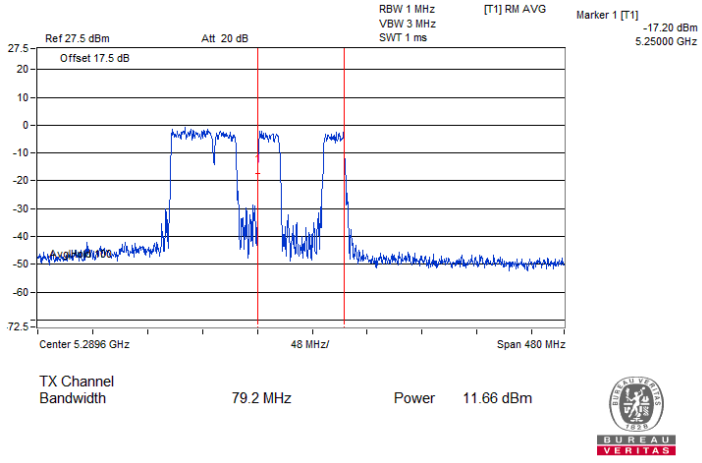
TX Channel Bandwidth 79.2 MHz Power 11.27 dBm

802.11be (EHT160) Punctured by 60 MHz NSS4 / Chain 0 : CH 50 (U-NII-2A)



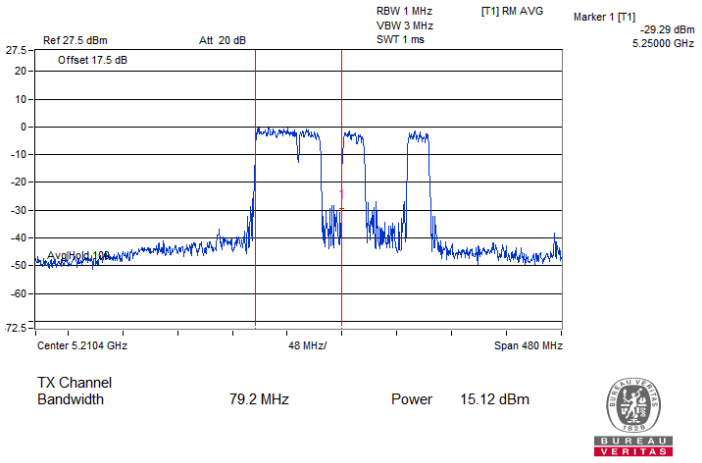
TX Channel Bandwidth 79.68 MHz Power 14.84 dBm

802.11be (EHT160) Punctured by 60 MHz NSS4 / Chain 1 : CH 50 (U-NII-1)



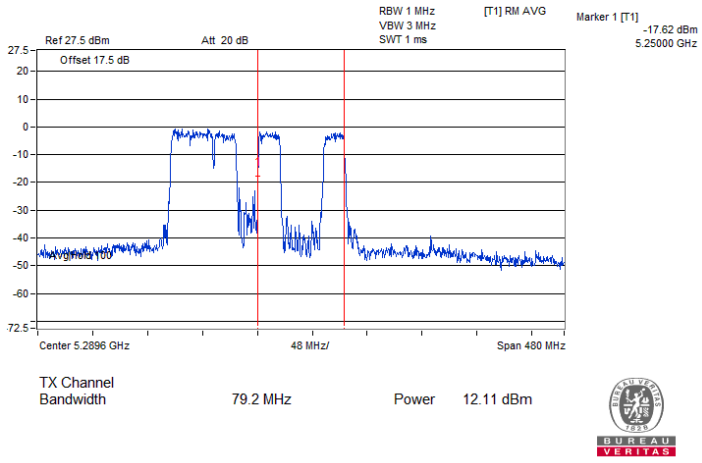
TX Channel Bandwidth 79.2 MHz Power 11.66 dBm

802.11be (EHT160) Punctured by 60 MHz NSS4 / Chain 1 : CH 50 (U-NII-2A)



TX Channel Bandwidth 79.2 MHz Power 15.12 dBm

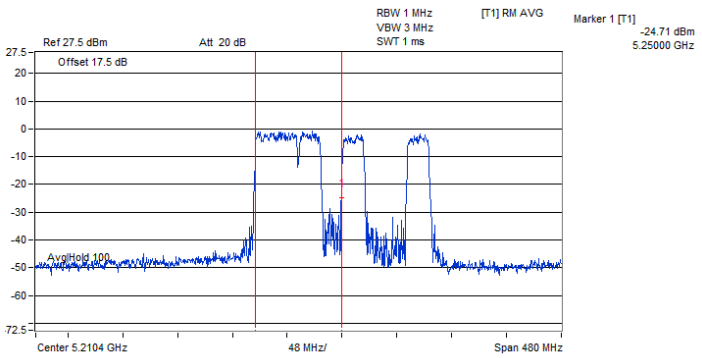
802.11be (EHT160) Punctured by 60 MHz NSS4 / Chain 2 : CH 50 (U-NII-1)



TX Channel Bandwidth 79.2 MHz Power 12.11 dBm

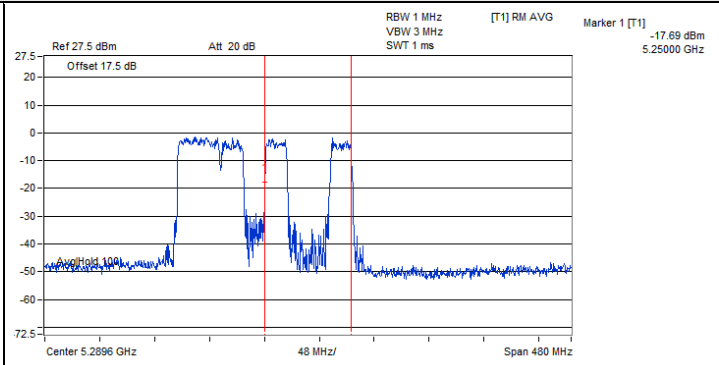
802.11be (EHT160) Punctured by 60 MHz NSS4 / Chain 2 : CH 50 (U-NII-2A)

Spectrum Plot for channel straddling



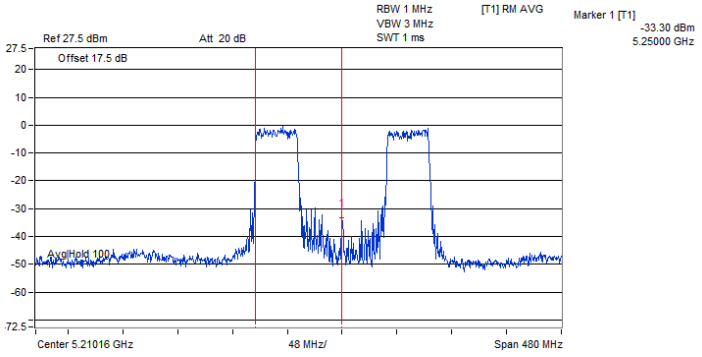
TX Channel Bandwidth 79.2 MHz Power 14.67 dBm

802.11be (EHT160) Punctured by 60 MHz NSS4 / Chain 3 : CH 50 (U-NII-1)



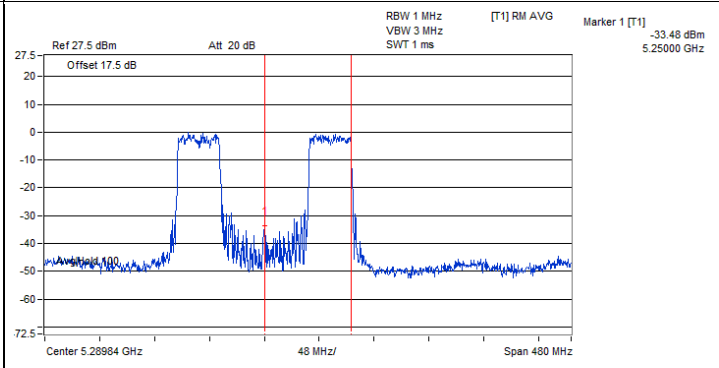
TX Channel Bandwidth 79.2 MHz Power 11.24 dBm

802.11be (EHT160) Punctured by 60 MHz NSS4 / Chain 3 : CH 50 (U-NII-2A)



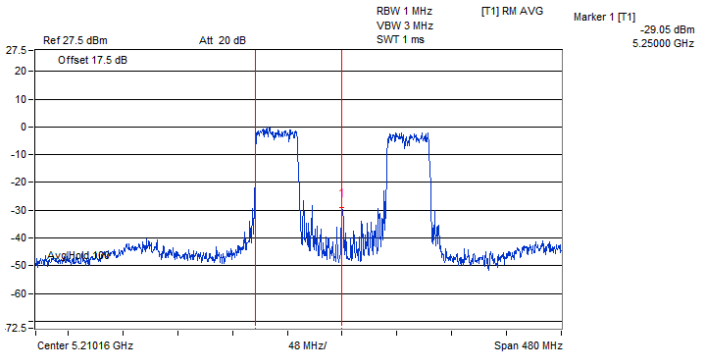
TX Channel Bandwidth 79.68 MHz Power 13.91 dBm

802.11be (EHT160) Punctured by 80 MHz NSS4 / Chain 0 : CH 50 (U-NII-1)



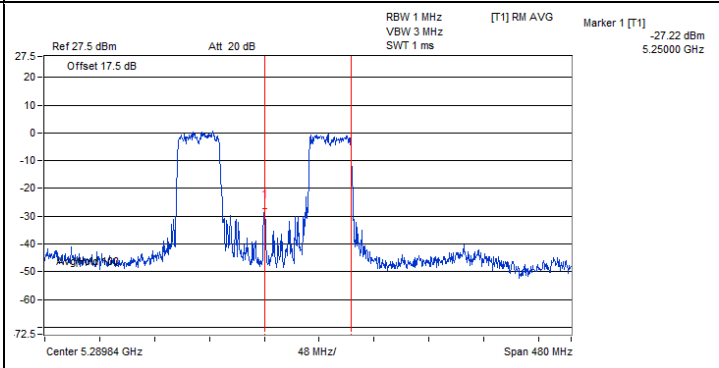
TX Channel Bandwidth 79.68 MHz Power 13.99 dBm

802.11be (EHT160) Punctured by 80 MHz NSS4 / Chain 0 : CH 50 (U-NII-2A)



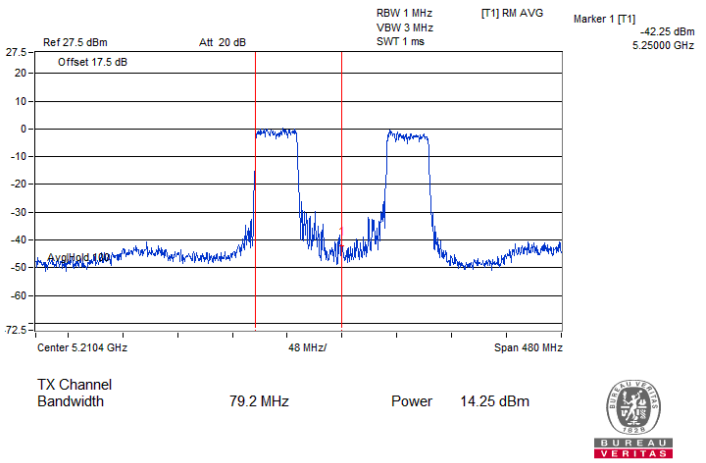
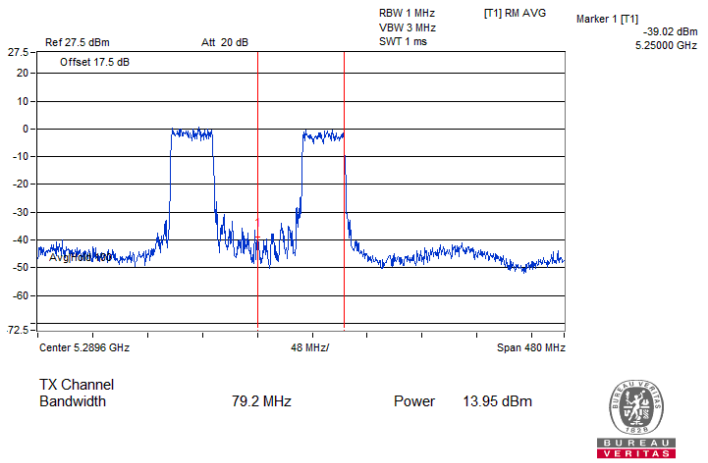
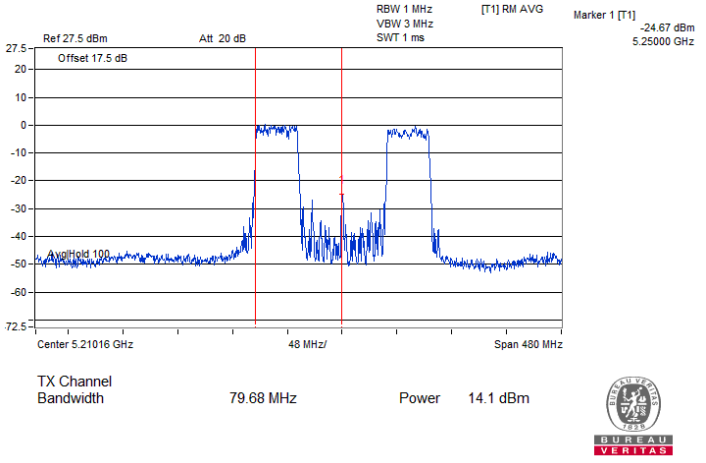
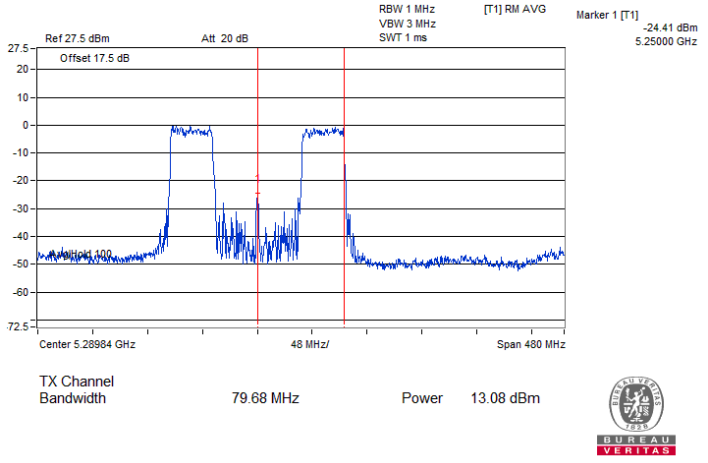
TX Channel Bandwidth 79.68 MHz Power 13.98 dBm

802.11be (EHT160) Punctured by 80 MHz NSS4 / Chain 1 : CH 50 (U-NII-1)



TX Channel Bandwidth 79.68 MHz Power 13.94 dBm

802.11be (EHT160) Punctured by 80 MHz NSS4 / Chain 1 : CH 50 (U-NII-2A)

Spectrum Plot for channel straddling	
	
802.11be (EHT160) Punctured by 80 MHz NSS4 / Chain 2 : CH 50 (U-NII-1)	802.11be (EHT160) Punctured by 80 MHz NSS4 / Chain 2 : CH 50 (U-NII-2A)
	
802.11be (EHT160) Punctured by 80 MHz NSS4 / Chain 3 : CH 50 (U-NII-1)	802.11be (EHT160) Punctured by 80 MHz NSS4 / Chain 3 : CH 50 (U-NII-2A)

7.3 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 61% RH	Tested By:	Henry HSU

802.11a CDD

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3			
52	5260	3.39	3.47	3.05	3.39	9.35	10.83	Pass
60	5300	3.00	3.38	2.98	3.32	9.19	10.83	Pass
64	5320	3.12	3.35	3.13	3.42	9.28	10.83	Pass
100	5500	2.83	3.49	3.08	3.51	9.26	10.48	Pass
116	5580	2.82	3.60	2.89	3.42	9.22	10.48	Pass
140	5700	3.61	3.68	3.40	3.79	9.64	10.48	Pass
144 (U-NII-2C)	5720	3.44	3.60	3.20	3.61	9.49	10.48	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.17-6) = 10.83 dBm/MHz.
4. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.52-6) = 10.48 dBm/MHz.

802.11be (EHT20) CDD

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	2.73	2.94	2.39	2.93	0.14	8.91	10.83	Pass
60	5300	2.39	2.76	2.28	2.59	0.14	8.67	10.83	Pass
64	5320	2.56	2.66	2.50	2.73	0.14	8.77	10.83	Pass
100	5500	2.32	2.89	2.63	2.97	0.14	8.87	10.48	Pass
116	5580	1.86	2.55	1.95	2.43	0.14	8.37	10.48	Pass
140	5700	2.51	2.69	2.43	2.76	0.14	8.76	10.48	Pass
144 (U-NII-2C)	5720	2.43	2.40	2.12	2.55	0.14	8.54	10.48	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.17-6) = 10.83 dBm/MHz.
4. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.52-6) = 10.48 dBm/MHz.

802.11be (EHT40) CDD

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	0.16	0.43	0.40	0.37	0.11	6.47	10.83	Pass
62	5310	0.44	0.37	0.17	0.32	0.11	6.46	10.83	Pass
102	5510	0.82	0.66	0.62	0.71	0.11	6.83	10.48	Pass
110	5550	0.68	0.34	0.56	0.53	0.11	6.66	10.48	Pass
134	5670	1.50	1.28	1.64	0.36	0.11	7.35	10.48	Pass
142 (U-NII-2C)	5710	0.21	0.20	0.34	-1.45	0.11	6.01	10.48	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.17-6) = 10.83 dBm/MHz.
4. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.52-6) = 10.48 dBm/MHz.

802.11be (EHT80) CDD

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	-2.35	-2.53	-2.40	-2.93	0.12	3.59	10.83	Pass
106	5530	-3.82	-3.02	-2.72	-4.01	0.12	2.78	10.48	Pass
122	5610	-2.34	-2.55	-2.42	-2.28	0.12	3.74	10.48	Pass
138 (U-NII-2C)	5690	-2.40	-3.17	-3.18	-2.35	0.12	3.38	10.48	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.17-6) = 10.83 dBm/MHz.
4. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.52-6) = 10.48 dBm/MHz.

802.11be (EHT160) CDD

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
50 (U-NII-1)	5250	-6.00	-6.14	-5.75	-5.78	0.09	0.20	16	Pass
50 (U-NII-2A)	5250	-6.18	-6.82	-6.57	-6.35	0.09	-0.36	10.83	Pass
114	5570	-6.12	-6.54	-6.10	-6.66	0.09	-0.24	10.48	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-1, the directional gain is 7 dBi > 6 dBi, so the power density limit shall be reduced to 17-(7-6) = 16 dBm/MHz.
4. For U-NII-2A, the directional gain is 6.17 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.17-6) = 10.83 dBm/MHz.
5. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.52-6) = 10.48 dBm/MHz.

802.11be (EHT240) CDD

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
114+138 (U-NII-2C)	5610	-6.75	-7.53	-7.33	-9.47	0.14	-1.50	10.48	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-2C, the directional gain is 6.52 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.52-6) = 10.48 dBm/MHz.

802.11be (EHT80) Punctured by 20 MHz NSS4

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-1.54	-1.66	-0.73	-1.17	1.23	5.99	17	Pass
58	5290	-2.40	-2.81	-2.60	-3.06	1.23	4.54	11	Pass
106	5530	-1.90	-2.29	-2.05	-1.87	1.23	5.23	11	Pass
122	5610	-1.81	-1.31	-1.84	-2.26	1.23	5.46	11	Pass
138 (U-NII-2C)	5690	-1.54	-1.64	-1.34	-1.42	1.23	5.77	11	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[($10^{Chain0/10}$ + $10^{Chain1/10}$ + $10^{Chain2/10}$ + $10^{Chain3/10}$) / 4]
3. For U-NII-1, the directional gain is 3.73 dBi <= 6 dBi, so the power density limit shall not be reduced.
4. For U-NII-2A, the directional gain is 3.24 dBi <= 6 dBi, so the power density limit shall not be reduced.
5. For U-NII-2C, the directional gain is 3.87 dBi <= 6 dBi, so the power density limit shall not be reduced.

802.11be (EHT80) Punctured by 40 MHz NSS4

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-1.67	-1.41	-1.14	-1.68	1.00	5.55	17	Pass
58	5290	-0.41	-0.55	0.04	-1.26	1.00	6.50	11	Pass
106	5530	-0.68	-0.87	-0.07	-0.72	1.00	6.45	11	Pass
122	5610	-0.13	0.42	0.72	-0.30	1.00	7.22	11	Pass
138 (U-NII-2C)	5690	-0.21	0.03	0.47	-0.49	1.00	6.98	11	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[($10^{Chain0/10}$ + $10^{Chain1/10}$ + $10^{Chain2/10}$ + $10^{Chain3/10}$) / 4]
3. For U-NII-1, the directional gain is 3.73 dBi <= 6 dBi, so the power density limit shall not be reduced.
4. For U-NII-2A, the directional gain is 3.24 dBi <= 6 dBi, so the power density limit shall not be reduced.
5. For U-NII-2C, the directional gain is 3.87 dBi <= 6 dBi, so the power density limit shall not be reduced.

802.11be (EHT160) Punctured by 40 MHz NSS4

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
50 (U-NII-1)	5250	-4.94	-5.27	-5.86	-5.85	0.70	1.26	17	Pass
50 (U-NII-2A)	5250	-5.79	-5.49	-6.22	-6.29	0.70	0.79	11	Pass
114	5570	-5.50	-5.22	-5.04	-4.90	0.70	1.56	11	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[($10^{Chain0/10}$ + $10^{Chain1/10}$ + $10^{Chain2/10}$ + $10^{Chain3/10}$) / 4]
3. For U-NII-1, the directional gain is 3.73 dBi <= 6 dBi, so the power density limit shall not be reduced.
4. For U-NII-2A, the directional gain is 3.24 dBi <= 6 dBi, so the power density limit shall not be reduced.
5. For U-NII-2C, the directional gain is 3.87 dBi <= 6 dBi, so the power density limit shall not be reduced.

802.11be (EHT160) Punctured by 60 MHz NSS4

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
50 (U-NII-1)	5250	-4.39	-4.32	-3.57	-3.31	0.79	2.94	17	Pass
50 (U-NII-2A)	5250	-4.99	-4.80	-4.10	-4.49	0.79	2.23	11	Pass
114	5570	-4.21	-4.19	-3.48	-4.69	0.79	2.69	11	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[($10^{Chain0/10}$ + $10^{Chain1/10}$ + $10^{Chain2/10}$ + $10^{Chain3/10}$) / 4]
3. For U-NII-1, the directional gain is 3.73 dBi <= 6 dBi, so the power density limit shall not be reduced.
4. For U-NII-2A, the directional gain is 3.24 dBi <= 6 dBi, so the power density limit shall not be reduced.
5. For U-NII-2C, the directional gain is 3.87 dBi <= 6 dBi, so the power density limit shall not be reduced.

802.11be (EHT160) Punctured by 80 MHz NSS4

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
50 (U-NII-1)	5250	-3.13	-2.77	-2.41	-2.60	1.10	4.40	17	Pass
50 (U-NII-2A)	5250	-4.08	-3.68	-3.58	-3.81	1.10	3.34	11	Pass
114	5570	-3.88	-2.96	-3.14	-2.43	1.10	4.05	11	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[($10^{Chain0/10}$ + $10^{Chain1/10}$ + $10^{Chain2/10}$ + $10^{Chain3/10}$) / 4]
3. For U-NII-1, the directional gain is 3.73 dBi <= 6 dBi, so the power density limit shall not be reduced.
4. For U-NII-2A, the directional gain is 3.24 dBi <= 6 dBi, so the power density limit shall not be reduced.
5. For U-NII-2C, the directional gain is 3.87 dBi <= 6 dBi, so the power density limit shall not be reduced.

802.11a CDD

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)				Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
144 (U-NII-3)	5720	-1.81	-1.50	-1.72	-1.38	4.42	6.64	29.48	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-3, the directional gain is 6.52 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.52-6) = 29.48 dBm/500kHz.

802.11be (EHT20) CDD

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
144 (U-NII-3)	5720	-3.06	-2.97	-3.18	-2.72	3.04	0.14	5.40	29.48	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-3, the directional gain is 6.52 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.52-6) = 29.48 dBm/500kHz.

802.11be (EHT40) CDD

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
142 (U-NII-3)	5710	-5.43	-5.37	-5.43	-7.34	0.2	0.11	2.53	29.48	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-3, the directional gain is 6.52 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.52-6) = 29.48 dBm/500kHz.

802.11be (EHT80) CDD

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
138 (U-NII-3)	5690	-9.13	-9.24	-9.44	-9.22	-3.24	0.12	-0.90	29.48	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-3, the directional gain is 6.52 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.52-6) = 29.48 dBm/500kHz.

802.11be (EHT240) CDD

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
114+138 (U-NII-3)	5610	-13.85	-13.67	-13.60	-17.23	-8.33	0.14	-5.97	29.48	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain is the measured value according to KDB 662911 D03 Method of MIMO Antenna Gain Measurement.
3. For U-NII-3, the directional gain is 6.52 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.52-6) = 29.48 dBm/500kHz.

802.11be (EHT80) Punctured by 20 MHz NSS4

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
138 (U-NII-3)	5690	-8.25	-8.18	-7.81	-8.01	-2.04	1.23	1.41	30	Pass
155	5775	-4.91	-4.62	-3.93	-4.88	1.45	1.23	4.90	30	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[($10^{Chain0/10}$ + $10^{Chain1/10}$ + $10^{Chain2/10}$ + $10^{Chain3/10}$) / 4]
3. For U-NII-3, the directional gain is 3.52 dBi <= 6 dBi, so the power density limit shall not be reduced.

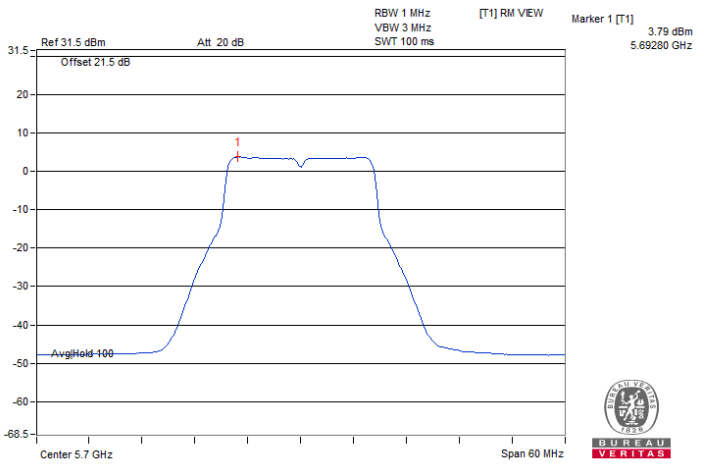
802.11be (EHT80) Punctured by 40 MHz NSS4

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
138 (U-NII-3)	5690	-6.68	-6.62	-6.04	-7.05	-0.56	1	2.66	30	Pass
155	5775	-1.87	-0.94	-0.84	-1.72	4.7	1	7.92	30	Pass

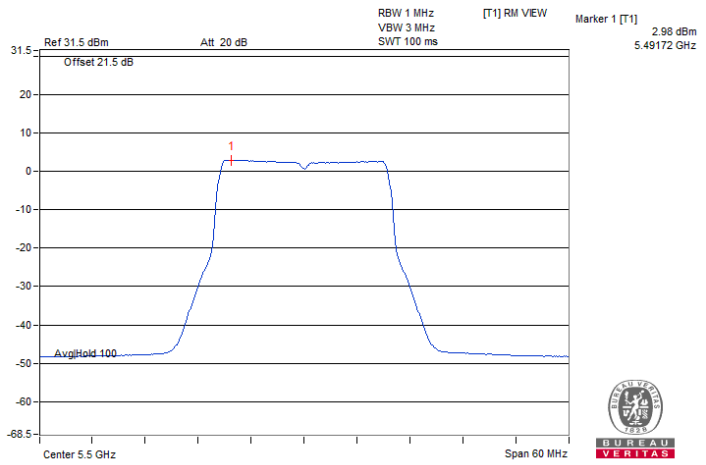
Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[($10^{Chain0/10}$ + $10^{Chain1/10}$ + $10^{Chain2/10}$ + $10^{Chain3/10}$) / 4]
3. For U-NII-3, the directional gain is 3.52 dBi <= 6 dBi, so the power density limit shall not be reduced.

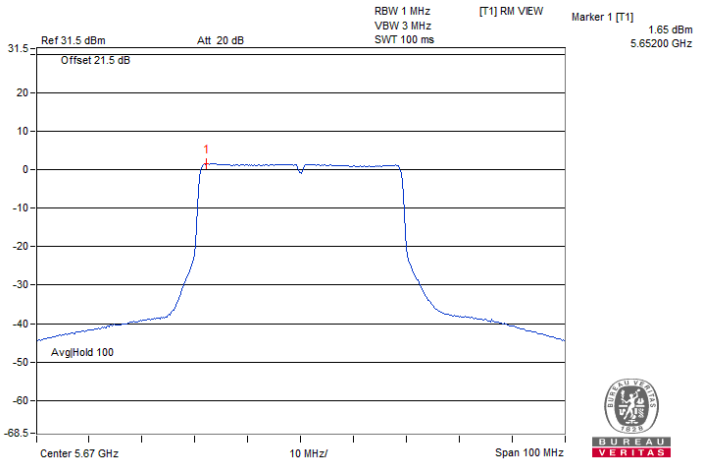
Spectrum Plot of Maximum Value



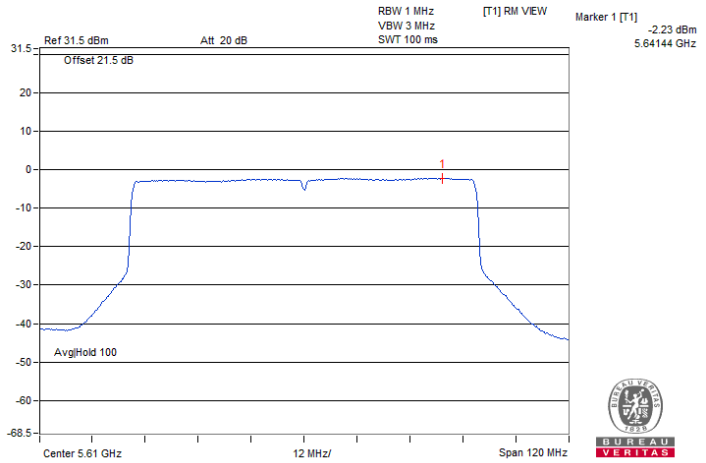
802.11a CDD / Chain 3 : CH 140



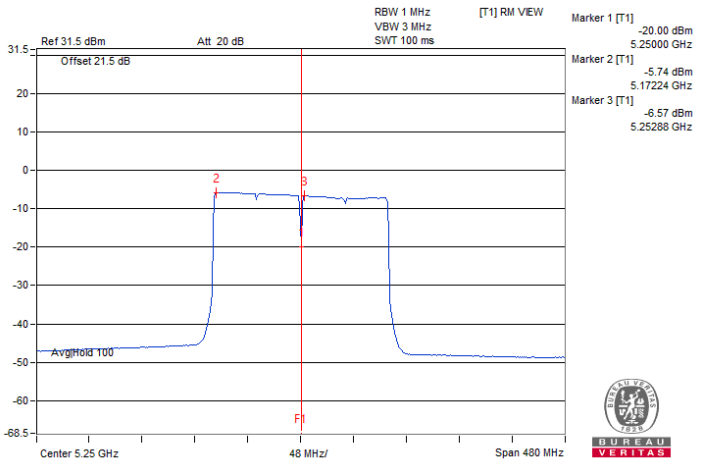
802.11be (EHT20) CDD / Chain 3 : CH 100



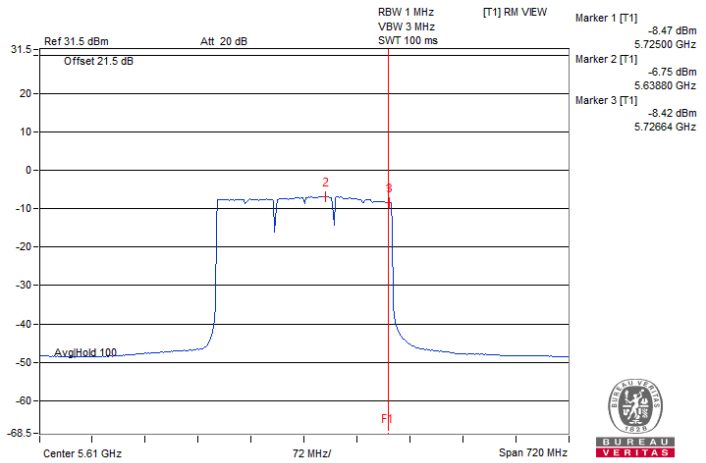
802.11be (EHT40) CDD / Chain 2 : CH 134



802.11be (EHT80) CDD / Chain 3 : CH 122

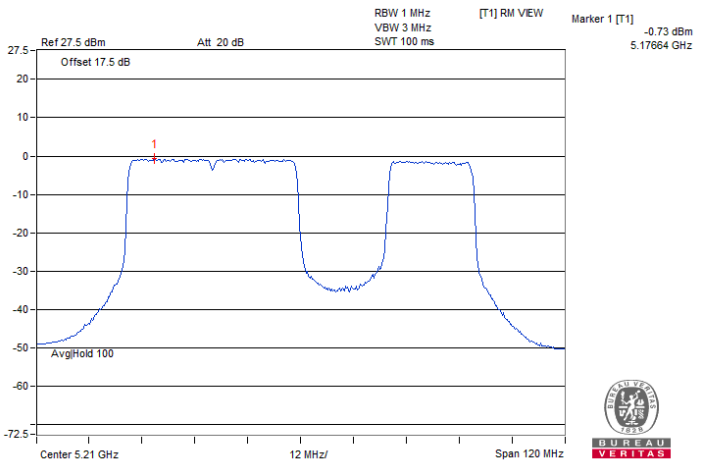


802.11be (EHT160) CDD / Chain 2 : CH 50 (U-NII-1)

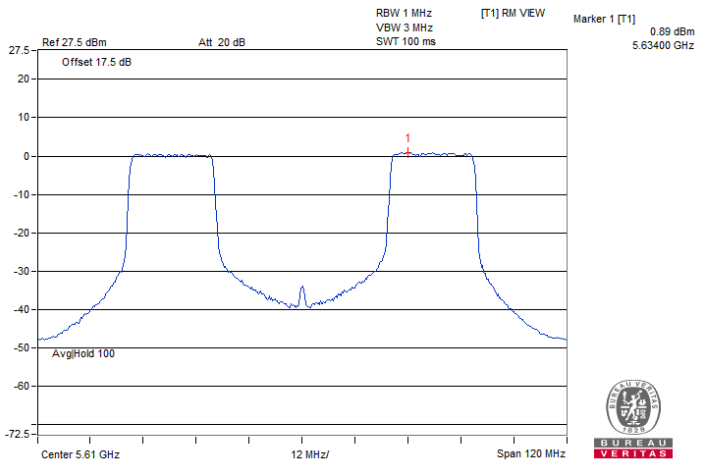


802.11be (EHT240) CDD / Chain 0 : CH 114+138 (U-NII-2C)

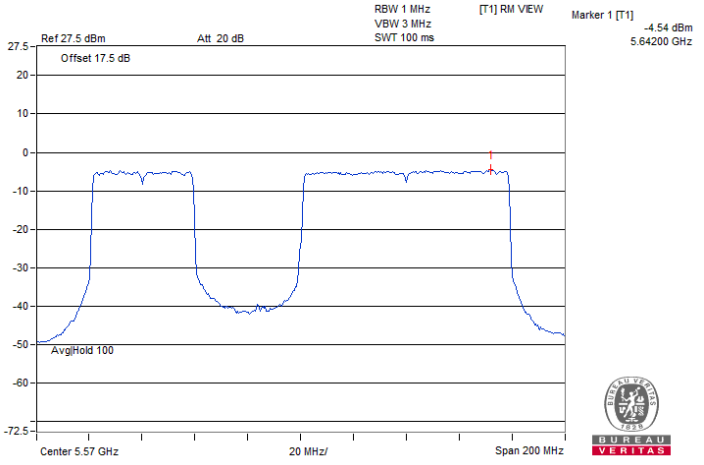
Spectrum Plot of Maximum Value



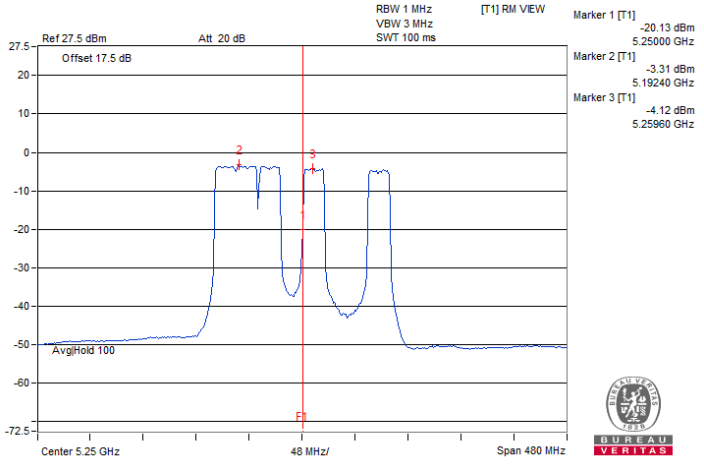
802.11be (EHT80) Punctured by 20 MHz NSS4 / Chain 2 : CH 42



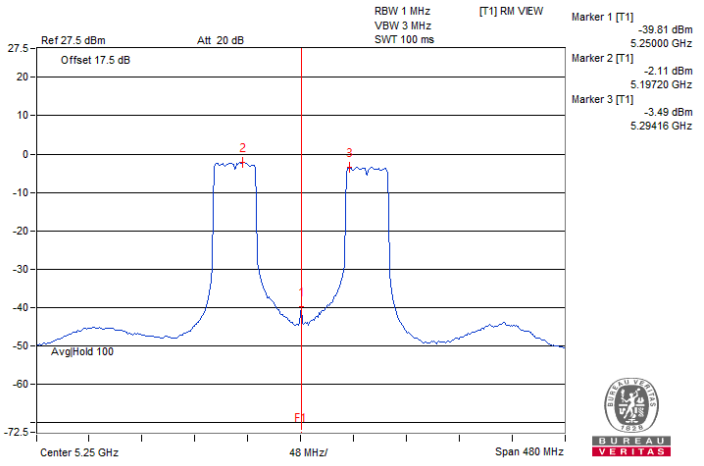
802.11be (EHT80) Punctured by 40 MHz NSS4 / Chain 2 : CH 122



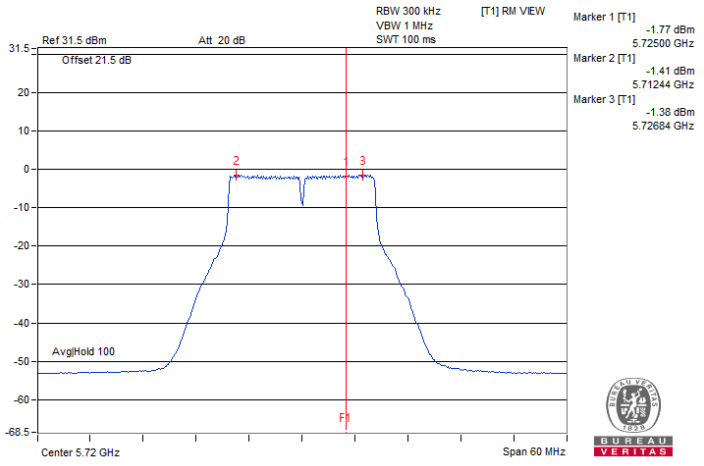
802.11be (EHT160) Punctured by 40 MHz NSS4 / Chain 3 : CH 114



802.11be (EHT160) Punctured by 60 MHz NSS4 / Chain 3 : CH 50 (U-NII-1)

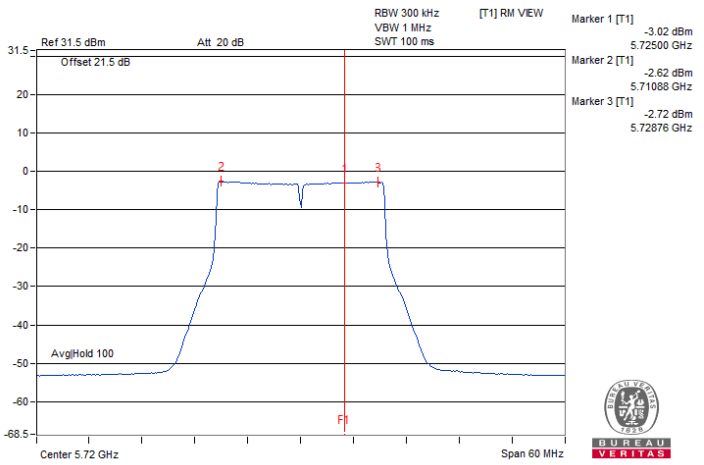


802.11be (EHT160) Punctured by 80 MHz NSS4 / Chain 2 : CH 50 (U-NII-1)

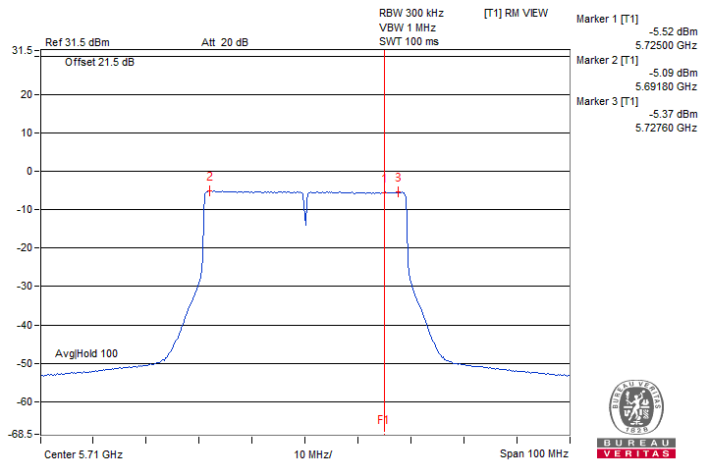


802.11a CDD / Chain 3 : CH 144 (U-NII-3)

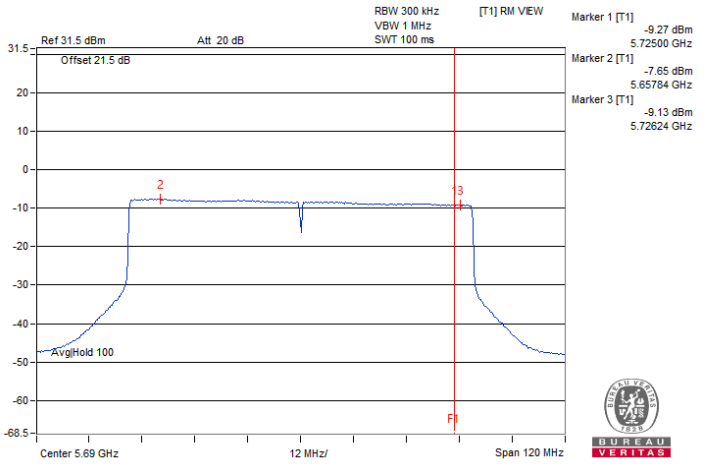
Spectrum Plot of Maximum Value



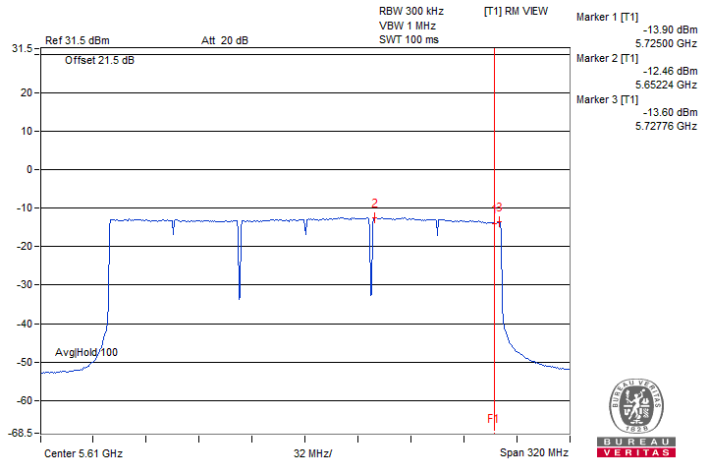
802.11be (EHT20) CDD / Chain 3 : CH 144 (U-NII-3)



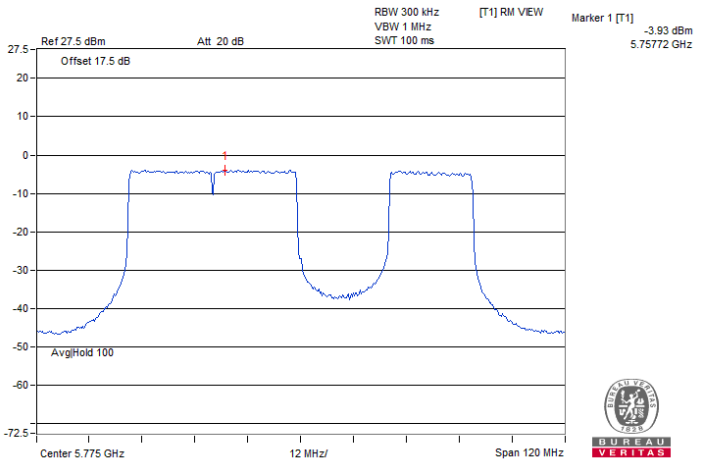
802.11be (EHT40) CDD / Chain 1 : CH 142 (U-NII-3)



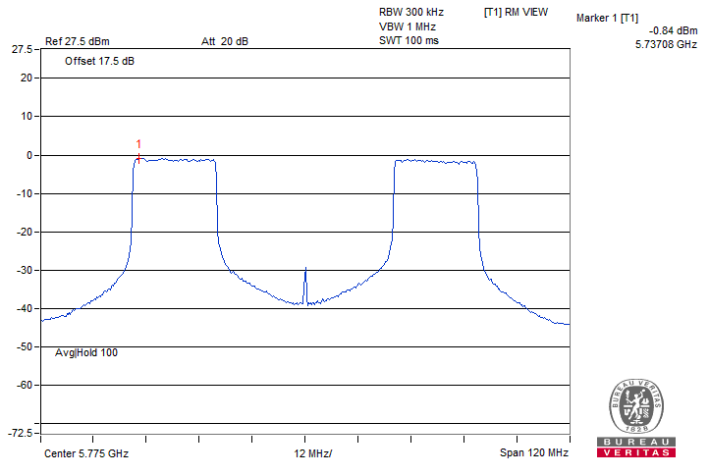
802.11be (EHT80) CDD / Chain 0 : CH 138 (U-NII-3)



802.11be (EHT240) CDD / Chain 2 : CH 114+138 (U-NII-3)



802.11be (EHT80) Punctured by 20 MHz NSS4 / Chain 2 : CH 155



802.11be (EHT80) Punctured by 40 MHz NSS4 / Chain 2 : CH 155

7.4 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 61% RH	Tested By:	Henry HSU

802.11a CDD

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
144 (U-NII-3)	5720	3.17	3.17	3.18	3.18	0.5	Pass

802.11be (EHT20) CDD

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
144 (U-NII-3)	5720	4.45	4.51	4.52	4.57	0.5	Pass

802.11be (EHT40) CDD

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
142 (U-NII-3)	5710	4.08	3.98	4.12	3.80	0.5	Pass

802.11be (EHT80) CDD

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
138 (U-NII-3)	5690	3.92	3.72	4.16	4.08	0.5	Pass

802.11be (EHT240) CDD

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
114+138 (U-NII-3)	5610	3.90	3.98	3.94	3.90	0.5	Pass

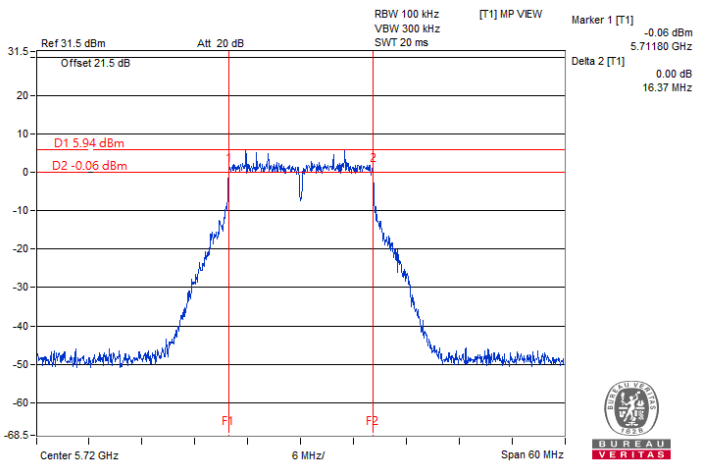
802.11be (EHT80) Punctured by 20 MHz NSS4

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
138 (U-NII-3)	5690	4.00	3.97	4.14	3.76	0.5	Pass
155	5775	78.32	77.73	78.28	77.09	0.5	Pass

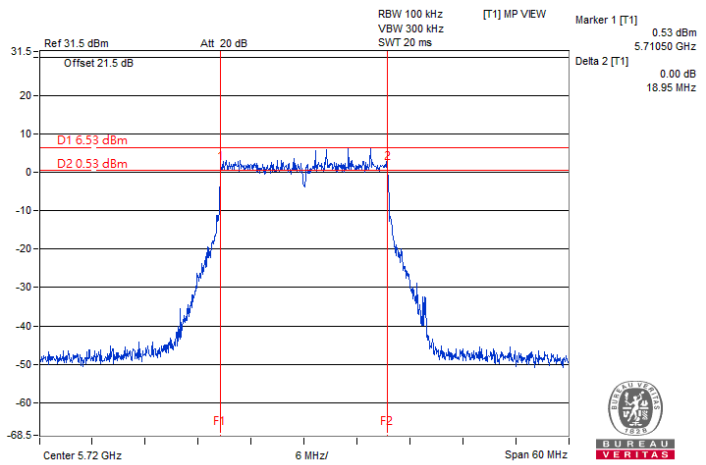
802.11be (EHT80) Punctured by 40 MHz NSS4

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
138 (U-NII-3)	5690	4.12	4.05	3.55	4.09	0.5	Pass
155	5775	78.09	78.14	77.82	77.76	0.5	Pass

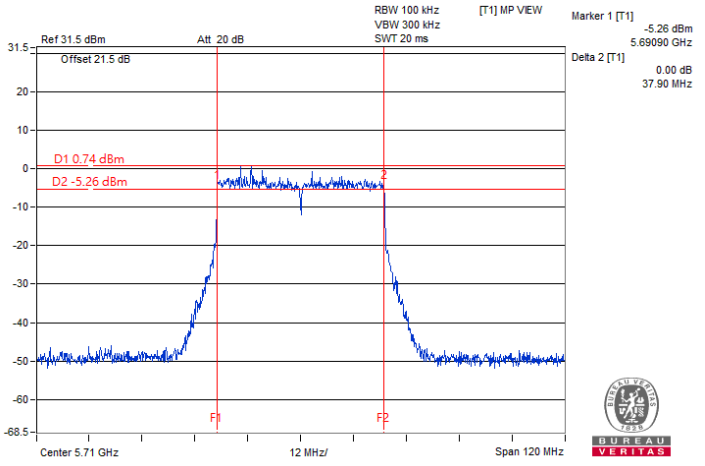
Spectrum Plot of Minimum Value



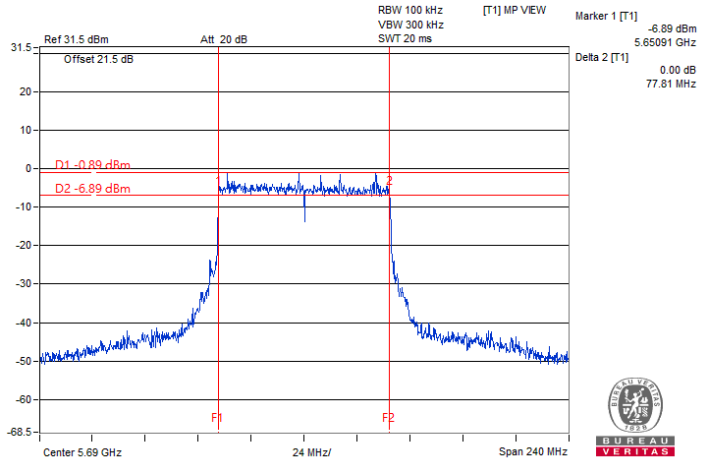
802.11a CDD / Chain 0 : CH 144 (U-NII-3)



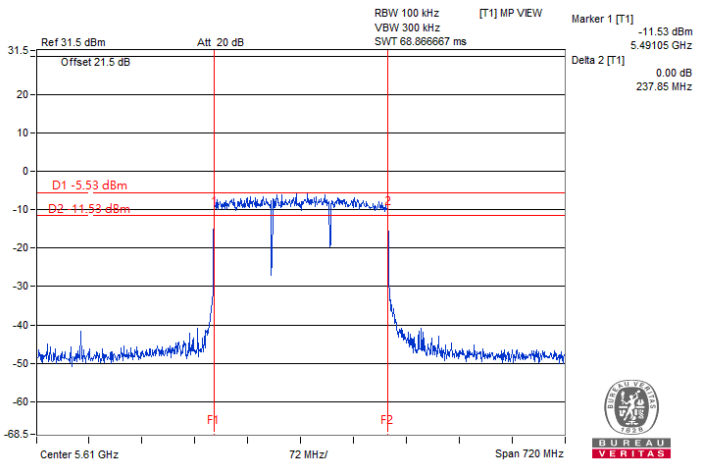
802.11be (EHT20) CDD / Chain 0 : CH 144 (U-NII-3)



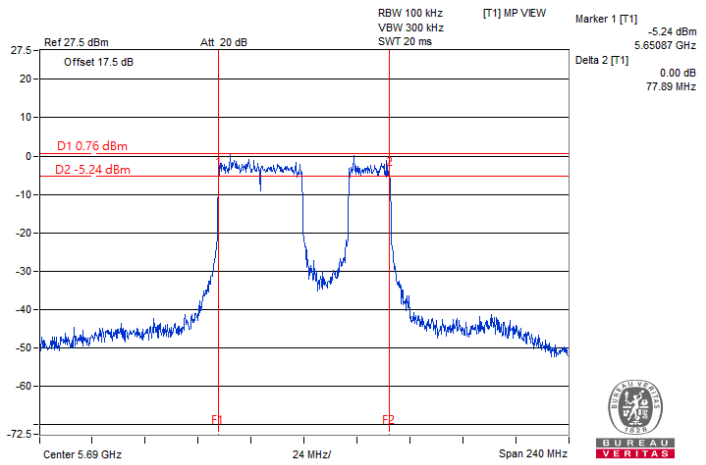
802.11be (EHT40) CDD / Chain 3 : CH 142 (U-NII-3)



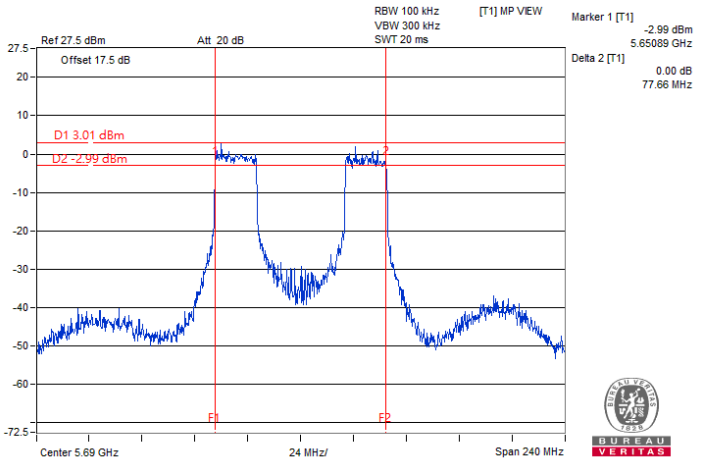
802.11be (EHT80) CDD / Chain 1 : CH 138 (U-NII-3)



802.11be (EHT240) CDD / Chain 0 : CH 114+138 (U-NII-3)



802.11be (EHT80) Punctured by 20 MHz NSS4 / Chain 3 : CH 138 (U-NII-3)

Spectrum Plot of Minimum Value	
 802.11be (EHT80) Punctured by 40 MHz NSS4 / Chain 2 : CH 138 (U-NII-3)	

Note: For U-NII-3 straddle channel = Marker 1 + Delta 2 - 5725 MHz

7.5 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 61% RH	Tested By:	Henry HSU

802.11a CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	16.80	16.86	16.80	16.74
60	5300	16.74	16.80	16.86	16.74
64	5320	16.80	16.74	16.80	16.86
100	5500	16.80	16.80	16.80	16.74
116	5580	16.80	16.74	16.80	16.80
140	5700	16.86	16.74	16.80	16.86
144 (U-NII-2C)	5720	13.40	13.34	13.34	13.34
144 (U-NII-3)	5720	3.40	3.34	3.34	3.34

802.11be (EHT20) CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	19.08	19.02	19.02	19.08
60	5300	19.08	19.08	19.02	19.02
64	5320	19.08	19.02	19.08	19.08
100	5500	19.08	19.08	19.08	19.08
116	5580	19.08	19.08	19.08	19.02
140	5700	19.08	19.02	19.08	19.08
144 (U-NII-2C)	5720	14.54	14.54	14.54	14.54
144 (U-NII-3)	5720	4.54	4.54	4.54	4.54

802.11be (EHT40) CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	38.16	38.28	38.28	38.16
62	5310	38.28	38.16	38.16	38.16
102	5510	38.40	38.16	38.40	38.28
110	5550	38.28	38.28	38.16	38.16
134	5670	38.16	38.16	38.16	38.40
142 (U-NII-2C)	5710	34.20	34.08	34.08	34.20
142 (U-NII-3)	5710	4.08	4.08	4.08	4.08

802.11be (EHT80) CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	77.76	77.52	77.76	77.76
106	5530	77.76	77.52	77.52	77.52
122	5610	77.76	77.76	77.76	77.28
138 (U-NII-2C)	5690	73.88	73.88	73.88	73.64
138 (U-NII-3)	5690	3.64	3.88	3.88	3.64

802.11be (EHT160) CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
50 (U-NII-1)	5250	78.72	78.24	78.72	78.72
50 (U-NII-2A)	5250	78.24	78.24	78.24	78.72
114	5570	157.44	157.44	157.92	157.44

802.11be (EHT240) CDD

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
114+138 (U-NII-2C)	5610	233.08	233.08	233.08	233.80
114+138 (U-NII-3)	5610	2.36	2.36	3.80	2.36

802.11be (EHT80) Punctured by 20 MHz NSS4

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	78.00	78.00	77.76	77.76
58	5290	77.76	78.00	78.00	78.24
106	5530	78.00	77.76	77.76	78.24
122	5610	78.00	78.00	77.76	77.76
138 (U-NII-2C)	5690	74.12	74.12	74.12	73.88
138 (U-NII-3)	5690	3.88	3.88	3.88	3.88
155	5775	77.76	78.00	77.76	78.00