

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart E (Section 15.407)
Report No.: RFBGSN-WTW-P22060933A-1
FCC ID: I4L-GRAX66
Product: RadiX AX6600 WiFi 6 Tri-Band Gaming Router
Brand: msi
Model No.: GRAX66
Received Date: 2023/8/15
Test Date: 2023/8/16 ~ 2023/9/13
Issued Date: 2023/9/26

Applicant: Micro-Star International Co., Ltd.

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FCC Registration / 788550 / TW0003

Designation Number:

Approved by: _____

Jeremy Lin

Date: _____

2023/9/26

Jeremy Lin / Project Engineer

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Prepared by : Polly Chien / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBGSN-WTW-P22060933A-1	Original release.	2023/9/26

1 Certificate

Product: RadiX AX6600 WiFi 6 Tri-Band Gaming Router

Brand: msi

Test Model: GRAX66

Sample Status: Identical Prototype

Applicant: Micro-Star International Co., Ltd.

Test Date: 2023/8/16 ~ 2023/9/13

Standard: 47 CFR FCC Part 15, Subpart E (Section 15.407)

Measurement ANSI C63.10-2013

procedure: 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	Pass	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	Refer to note 1
---	Occupied Bandwidth	-	Reference only.
15.407(g)	Frequency Stability	Pass	Refer to note 1
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -8.86 dB at 0.47400 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -6.5 dB at 124.19 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 -0.4 dB at 5150.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is I-PEX not a standard connector.

Notes:

- The 26 dB Bandwidth, RF Output Power, Power Spectral Density, AC Power Conducted Emission and Radiated Emissions were verified and recorded in this report. Other testing data please refer to the original BV CPS report no.: RFBGSN-WTW-P22060933-1.
- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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) (±)
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.99 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.60 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 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	RadiX AX6600 WiFi 6 Tri-Band Gaming Router
Brand	msi
Test Model	GRAX66
Status of EUT	Identical Prototype
Power Supply Rating	12 Vdc (adapter)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDMA
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6 Mbps 802.11n: up to 600 Mbps 802.11ac: up to 3466.8Mbps 802.11ax: up to 4900Mbps
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	5.18 GHz ~ 5.32 GHz 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 8 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 4 802.11ac (VHT80), 802.11ax (HE80): 2 5.50 GHz ~ 5.72 GHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 12 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 6 802.11ac (VHT80), 802.11ax (HE80): 3 802.11ac (VHT160), 802.11ax (HE160): 1 5.745 GHz ~ 5.825 GHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 5 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2 802.11ac (VHT80), 802.11ax (HE80): 1
Output Power	CDD Mode 802.11a 5.18 GHz ~ 5.24 GHz : 654.886 mW (28.16 dBm) 5.26 GHz ~ 5.32 GHz : 235.811 mW (23.73 dBm) 5.50 GHz ~ 5.72 GHz : 152.612 mW (21.84 dBm) 5.745 GHz ~ 5.825 GHz : 943.377 mW (29.75 dBm) NSS 1: 5.18 GHz ~ 5.24 GHz : 735.268 mW (28.66 dBm) 5.26 GHz ~ 5.32 GHz : 239.371 mW (23.79 dBm) 5.50 GHz ~ 5.72 GHz : 230.539 mW (23.63 dBm) 5.745 GHz ~ 5.825 GHz : 947.169 mW (29.76 dBm) NSS 2: 5.18 GHz ~ 5.24 GHz : 681.278 mW (28.33 dBm) 5.26 GHz ~ 5.32 GHz : 239.651 mW (23.80 dBm) 5.50 GHz ~ 5.72 GHz : 242.228 mW (23.84 dBm) 5.745 GHz ~ 5.825 GHz : 926.398 mW (29.67 dBm) NSS 4: 5.50 GHz ~ 5.72 GHz : 241.008 mW (23.82 dBm) 5.745 GHz ~ 5.825 GHz : 962.109 mW (29.83 dBm)

Output Power	<p>Beamforming Mode</p> <p>NSS 1: 5.18 GHz ~ 5.24 GHz : 735.268 mW (28.66 dBm) 5.26 GHz ~ 5.32 GHz : 239.371 mW (23.79 dBm) 5.50 GHz ~ 5.72 GHz : 172.85 mW (22.38 dBm) 5.745 GHz ~ 5.825 GHz : 787.820 mW (28.96 dBm)</p> <p>NSS 2: 5.18 GHz ~ 5.24 GHz : 681.278 mW (28.33 dBm) 5.26 GHz ~ 5.32 GHz : 239.651 mW (23.80 dBm) 5.50 GHz ~ 5.72 GHz : 242.228 mW (23.84 dBm) 5.745 GHz ~ 5.825 GHz : 926.398 mW (29.67 dBm)</p> <p>NSS 4: 5.50 GHz ~ 5.72 GHz : 241.008 mW (23.82 dBm) 5.745 GHz ~ 5.825 GHz : 962.109 mW (29.83 dBm)</p>
EUT Category	Indoor Access Point

Note:

1. This is a supplementary report of BV CPS Report No.: RFBGSN-WTW-P22060933-1. The differences are changing antenna cable routing, channel output power and adding 2nd source PCBA manufacturer. Therefore, the 26 dB Bandwidth, RF Output Power, Power Spectral Density, AC Power Conducted Emission and Radiated Emissions were verified according to original worst case are performed for the addendum and presented in the test report (refer to test item 3.4). For other testing data, please refer to the original report.
2. The EUT uses following accessories.

AC Adapter 1		
Brand	Model	Specification
CWT	2AEJ042FC	AC Input : 100-240V, 50/60Hz, 1.3A DC Output : 12.0V, 3.5A, 42.0W
Ethernet cable		
Brand	Model	Specification
NA	NA	Signal Line : 0.96m non-shielded cable w/o core

3. There are WLAN (2.4 GHz & 5 GHz) technology used for the EUT.
4. Simultaneously transmission condition.

Condition	Technology	
1	WLAN (2.4 GHz)	WLAN (5 GHz)

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

RF Chain NO.	Type	Connector	Brand	Model	Frequency Range (MHz)	Gain (dBi)				Directional Gain (dBi)		
						Chain 0	Chain 1	Chain 2	Chain 3	NSS 1	NSS 2	NSS 4
2G	Dipole	I-PEX	Wieson	Chain 0: ARY121-0307-001-00 Chain 1: ARY121-0307-003-00	2400 ~ 2483.5	2.05	2.07	-	-	4.24	1.97	-
5G_L				Chain 0: ARY121-0307-001-00 Chain 1: ARY121-0307-003-00	5150 ~ 5250	4.54	4.59	-	-	5.68	3.21	-
				Chain 0: ARY121-0307-001-00 Chain 1: ARY121-0307-003-00	5250 ~ 5350	4.60	4.65	-	-	5.69	3.54	-
5G_H				Chain 0: ARY121-0307-002-00 Chain 1: ARY121-0307-004-00 Chain 2: ARY121-0307-005-00	5470 ~ 5725	3.02	3.69	2.89	3.02	7.59	5.56	2.47
				Chain 0: ARY121-0307-002-00 Chain 1: ARY121-0307-004-00 Chain 2: ARY121-0307-005-00 Chain 3: ARY121-0307-006-00	5725 ~ 5850	3.01	2.88	3.72	3.27	6.99	4.91	2.33

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

2. The EUT incorporates a MIMO function. Physically, the EUT (WLAN 5G Band 3, 4) provides 4 completed transmitters and 4 receivers. Physically, the EUT (WLAN 5G Band 1, 2) provides 2 completed transmitters and 2 receivers.

Modulation Mode	CDD Mode	Beamforming Mode	TX Function
Band 1, 2			
802.11a	Support	Not Support	2TX
802.11n (HT20)	Support	Not Support	2TX (NSS1 / NSS2)
802.11n (HT40)	Support	Not Support	2TX (NSS1 / NSS2)
802.11ac (VHT20)	Support	Support	2TX (NSS1 / NSS2)
802.11ac (VHT40)	Support	Support	2TX (NSS1 / NSS2)
802.11ac (VHT80)	Support	Support	2TX (NSS1 / NSS2)
802.11ax (HE20)	Support	Support	2TX (NSS1 / NSS2)
802.11ax (HE40)	Support	Support	2TX (NSS1 / NSS2)
802.11ax (HE80)	Support	Support	2TX (NSS1 / NSS2)
Band 3, 4			
802.11a	Support	Not Support	4TX
802.11n (HT20)	Support	Not Support	4TX (NSS1 / NSS2 / NSS4)
802.11n (HT40)	Support	Not Support	4TX (NSS1 / NSS2 / NSS4)
802.11ac (VHT20)	Support	Support	4TX (NSS1 / NSS2 / NSS4)
802.11ac (VHT40)	Support	Support	4TX (NSS1 / NSS2 / NSS4)
802.11ac (VHT80)	Support	Support	4TX (NSS1 / NSS2 / NSS4)
802.11ac (VHT160)	Support	Support	4TX (NSS1 / NSS2 / NSS4)
802.11ax (HE20)	Support	Support	4TX (NSS1 / NSS2 / NSS4)
802.11ax (HE40)	Support	Support	4TX (NSS1 / NSS2 / NSS4)
802.11ax (HE80)	Support	Support	4TX (NSS1 / NSS2 / NSS4)
802.11ax (HE160)	Support	Support	4TX (NSS1 / NSS2 / NSS4)

Note:

- 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.
- 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, 160MHz) and 802.11ax mode for 20 MHz (40 MHz, 80 MHz, 160MHz), therefore the manufacturer will control the power for 802.11n/ac mode is the same as the 802.11ax or more lower than it and investigated worst case to 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) and 802.11ax (HE20):

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) and 802.11ax (HE40):

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

2 channels are provided for 802.11ac (VHT80) and 802.11ax (HE80):

Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz

FOR 5500 ~ 5720 MHz

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

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) and 802.11ax (HE40):

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) and 802.11ax (HE80):

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

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

Channel	Frequency
114	5570MHz

FOR 5745 ~ 5825 MHz:

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

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) and 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80) and 802.11ax (HE80):

Channel	Frequency
155	5775 MHz

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan in these ways and find the worst case as a representative test condition.
Worst Case:	The worst case was found when positioned on X-axis.

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

Test Item	NSS	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	NA	802.11a	CDD	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	6Mb/s
	1, 2	802.11n (HT20)	CDD	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
		802.11n (HT40)	CDD	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	BPSK	MCS0
		802.11ac (VHT20)	CDD & Beamforming	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
		802.11ac (VHT40)	CDD & Beamforming	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	BPSK	MCS0
		802.11ac (VHT80)	CDD & Beamforming	42, 58, 106, 122, 138, 155	BPSK	MCS0
		802.11ac (VHT160)	CDD & Beamforming	114	BPSK	MCS0
		802.11ax (HE20)	CDD & Beamforming	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	42, 58, 106, 122, 138, 155	BPSK	MCS0
		802.11ax (HE160)	CDD & Beamforming	114	BPSK	MCS0

Test Item	NSS	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	4	802.11n (HT20)	CDD	100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
		802.11n (HT40)	CDD	102, 110, 134, 142, 151, 159	BPSK	MCS0
		802.11ac (VHT20)	CDD & Beamforming	100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
		802.11ac (VHT40)	CDD & Beamforming	102, 110, 134, 142, 151, 159	BPSK	MCS0
		802.11ac (VHT80)	CDD & Beamforming	106, 122, 138, 155	BPSK	MCS0
		802.11ac (VHT160)	CDD & Beamforming	114	BPSK	MCS0
		802.11ax (HE20)	CDD & Beamforming	100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	102, 110, 134, 142, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	106, 122, 138, 155	BPSK	MCS0
		802.11ax (HE160)	CDD & Beamforming	114	BPSK	MCS0
Occupied Bandwidth/ Power Spectral Density	1, 2	802.11ax (HE20)	CDD	140	BPSK	MCS0
		802.11ax (HE40)	CDD	38, 62, 102	BPSK	MCS0
		802.11ax (HE80)	CDD	42, 58, 106	BPSK	MCS0
		802.11ax (HE160)	CDD	114	BPSK	MCS0
	4	802.11ax (HE20)	CDD	140	BPSK	MCS0
		802.11ax (HE40)	CDD	102	BPSK	MCS0
		802.11ax (HE80)	CDD	106	BPSK	MCS0
		802.11ax (HE160)	CDD	114	BPSK	MCS0

Test Item	NSS	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
26 dB Bandwidth	1, 2	802.11ax (HE20)	CDD	140	BPSK	MCS0
		802.11ax (HE40)	CDD	62, 102	BPSK	MCS0
		802.11ax (HE80)	CDD	58, 106	BPSK	MCS0
		802.11ax (HE160)	CDD	114	BPSK	MCS0
	4	802.11ax (HE20)	CDD	140	BPSK	MCS0
		802.11ax (HE40)	CDD	102	BPSK	MCS0
		802.11ax (HE80)	CDD	106	BPSK	MCS0
		802.11ax (HE160)	CDD	114	BPSK	MCS0
AC Power Conducted Emissions	NA	802.11ax (HE20)	CDD	140	BPSK	MCS0
Unwanted Emissions below 1 GHz	NA	802.11ax (HE20)	CDD	140	BPSK	MCS0
Unwanted Emissions above 1 GHz	1, 2	802.11ax (HE20)	CDD	140	BPSK	MCS0
		802.11ax (HE40)	CDD	38, 62, 102	BPSK	MCS0
		802.11ax (HE80)	CDD	42, 58, 106	BPSK	MCS0
		802.11ax (HE160)	CDD	114	BPSK	MCS0
	4	802.11ax (HE20)	CDD	140	BPSK	MCS0
		802.11ax (HE40)	CDD	102	BPSK	MCS0
		802.11ax (HE80)	CDD	106	BPSK	MCS0
		802.11ax (HE160)	CDD	114	BPSK	MCS0

Note:

All the testing data are identical to the original report except the RF Output Power stated below.

Test Item	NSS	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	1, 2	802.11n (HT20)	CDD	140	BPSK	MCS0
		802.11n (HT40)	CDD	38, 62, 102	BPSK	MCS0
		802.11ac (VHT20)	CDD & Beamforming	140	BPSK	MCS0
		802.11ac (VHT40)	CDD & Beamforming	38, 62, 102	BPSK	MCS0
		802.11ac (VHT80)	CDD & Beamforming	42, 58, 106	BPSK	MCS0
		802.11ac (VHT160)	CDD & Beamforming	114	BPSK	MCS0

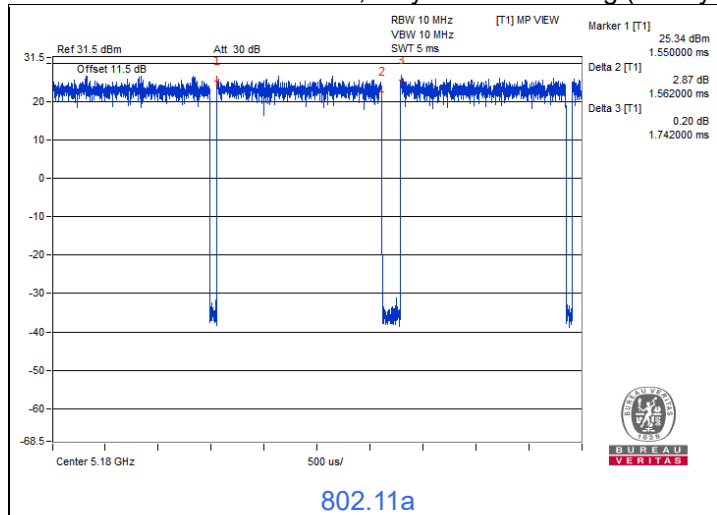
Test Item	NSS	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	1, 2	802.11ax (HE20)	CDD & Beamforming	140	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	38, 62, 102	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	42, 58, 106	BPSK	MCS0
		802.11ax (HE160)	CDD & Beamforming	114	BPSK	MCS0
	4	802.11n (HT20)	CDD	140	BPSK	MCS0
		802.11n (HT40)	CDD	102	BPSK	MCS0
		802.11ac (VHT20)	CDD & Beamforming	140	BPSK	MCS0
		802.11ac (VHT40)	CDD & Beamforming	102	BPSK	MCS0
		802.11ac (VHT80)	CDD & Beamforming	106	BPSK	MCS0
		802.11ac (VHT160)	CDD & Beamforming	114	BPSK	MCS0
		802.11ax (HE20)	CDD & Beamforming	140	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	102	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	106	BPSK	MCS0
		802.11ax (HE160)	CDD & Beamforming	114	BPSK	MCS0

3.5 Duty Cycle of Test Signal

Duty cycle of test signal is < 98 %, duty factor shall be considered.

FOR 5180 ~ 5320 MHz

802.11a: Duty cycle = 1.562 ms / 1.742 ms x 100% = 89.7%, duty factor = 10 * log (1/Duty cycle) = 0.47 dB



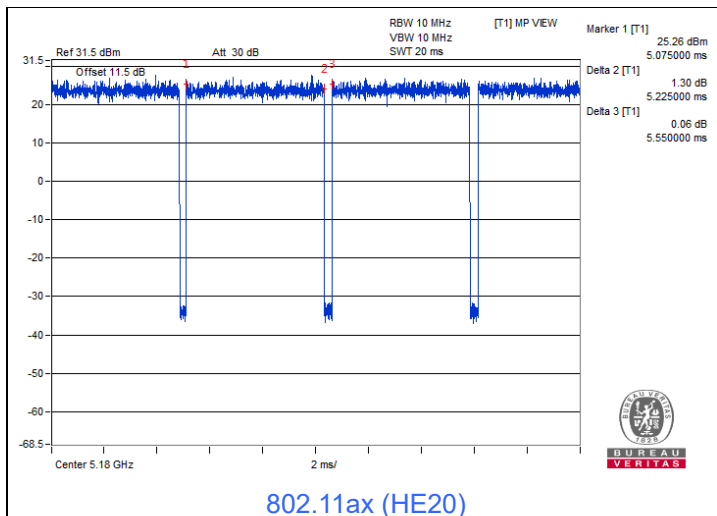
802.11a

NSS 1

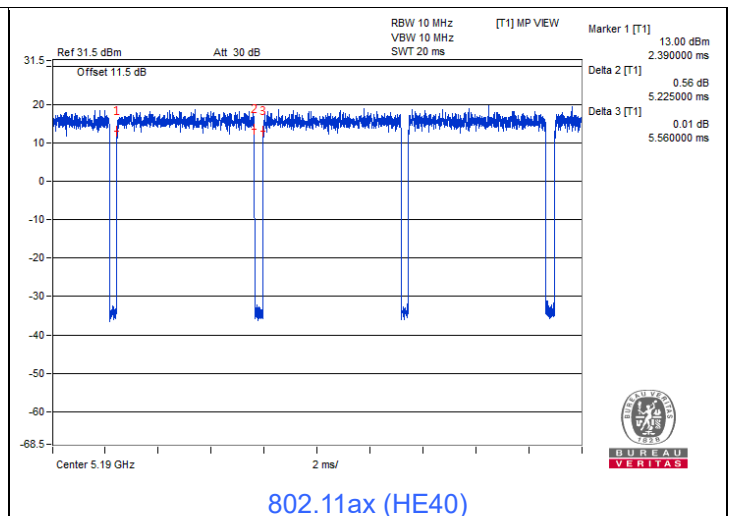
802.11ax (HE20): Duty cycle = 5.225 ms / 5.55 ms x 100% = 94.1%, duty factor = 10 * log (1/Duty cycle) = 0.26 dB

802.11ax (HE40): Duty cycle = 5.225 ms / 5.56 ms x 100% = 94.0%, duty factor = 10 * log (1/Duty cycle) = 0.27 dB

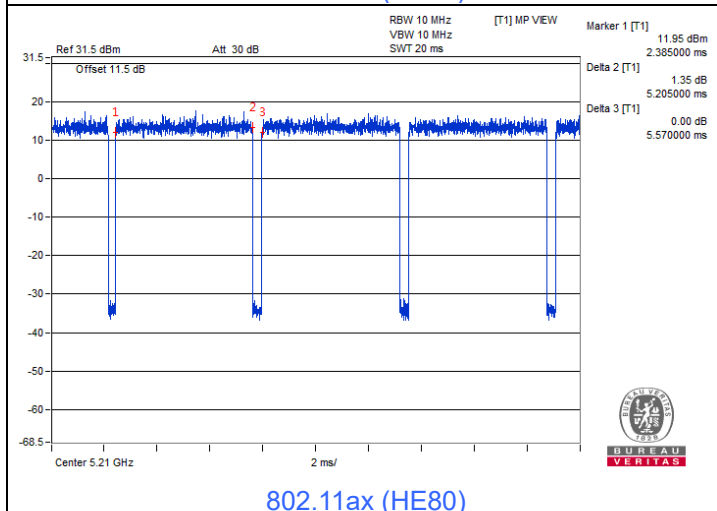
802.11ax (HE80): Duty cycle = 5.205 ms / 5.57 ms x 100% = 93.4%, duty factor = 10 * log (1/Duty cycle) = 0.29 dB



802.11ax (HE20)



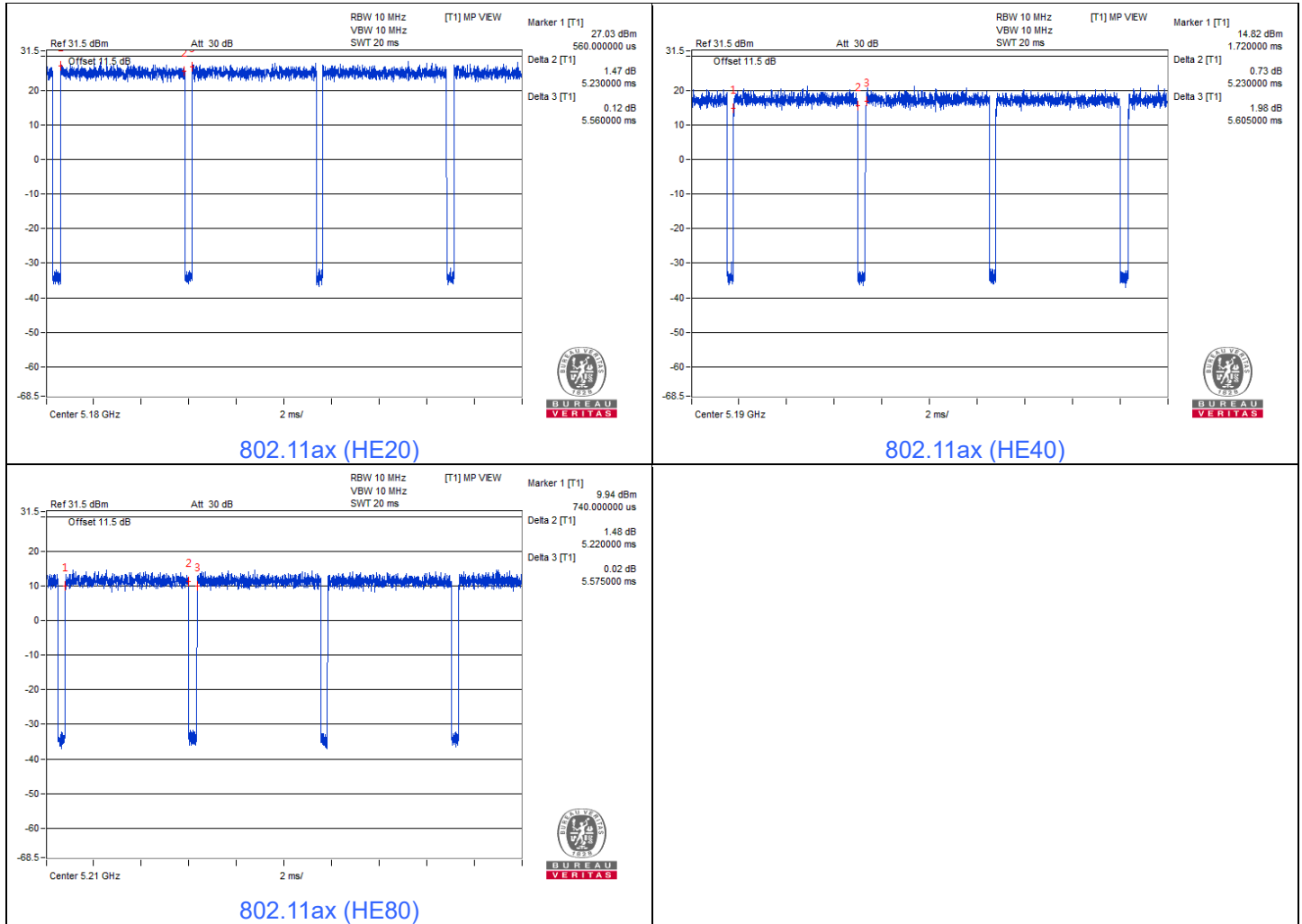
802.11ax (HE40)



802.11ax (HE80)

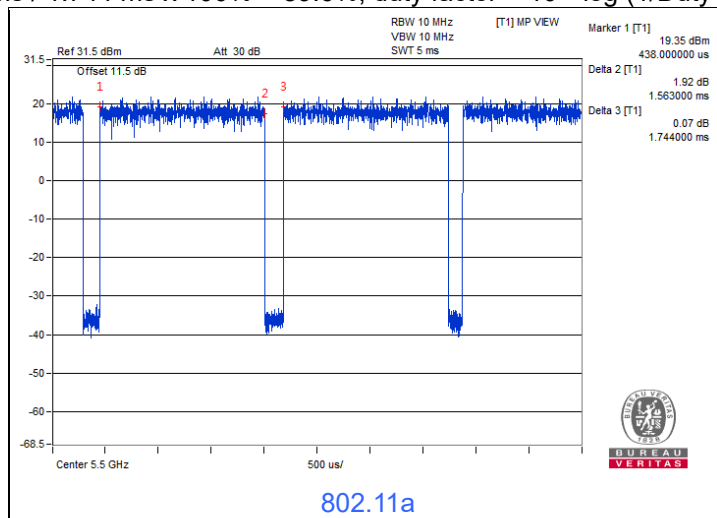
NSS 2

802.11ax (HE20): Duty cycle = 5.23 ms / 5.56 ms x 100% = 94.1%, duty factor = 10 * log (1/Duty cycle) = 0.27 dB
802.11ax (HE40): Duty cycle = 5.23 ms / 5.605 ms x 100% = 93.3%, duty factor = 10 * log (1/Duty cycle) = 0.30 dB
802.11ax (HE80): Duty cycle = 5.22 ms / 5.575 ms x 100% = 93.6%, duty factor = 10 * log (1/Duty cycle) = 0.29 dB



For 5.5 GHz ~ 5.825 GHz

802.11a: Duty cycle = 1.563 ms / 1.744 ms x 100% = 89.6%, duty factor = 10 * log (1/Duty cycle) = 0.48 dB



802.11a

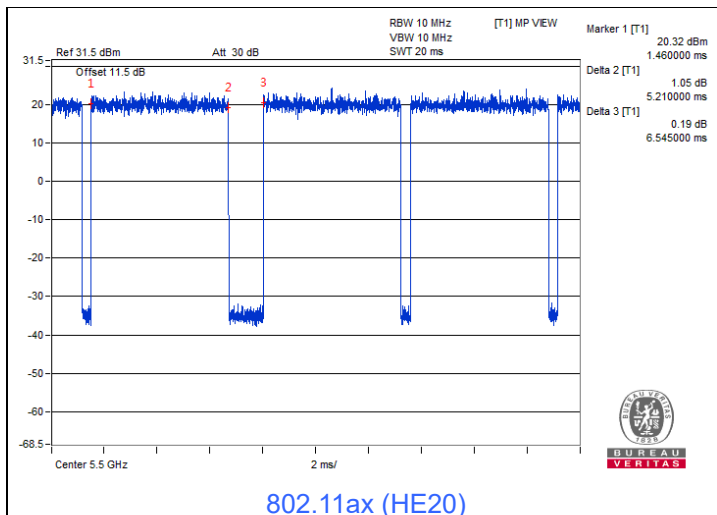
NSS 1

802.11ax (HE20): Duty cycle = 5.21 ms / 6.545 ms x 100% = 79.6%, duty factor = 10 * log (1/Duty cycle) = 0.99 dB

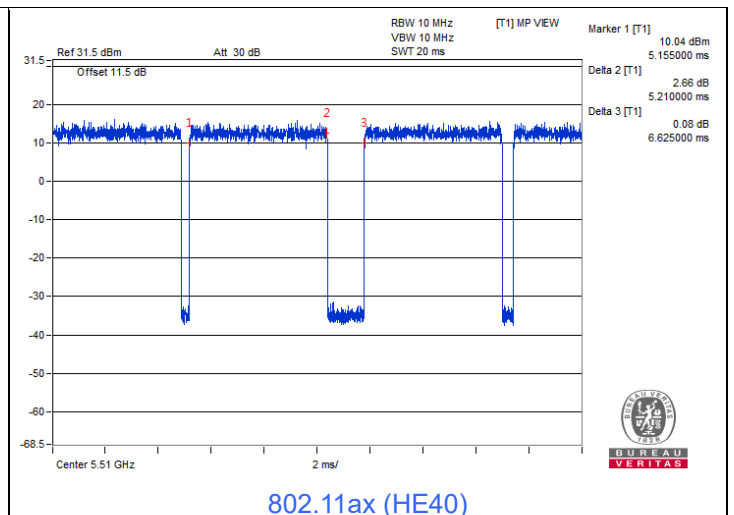
802.11ax (HE40): Duty cycle = 5.21 ms / 6.625 ms x 100% = 78.6%, duty factor = 10 * log (1/Duty cycle) = 1.04 dB

802.11ax (HE80): Duty cycle = 5.23 ms / 6.66 ms x 100% = 78.5%, duty factor = 10 * log (1/Duty cycle) = 1.05 dB

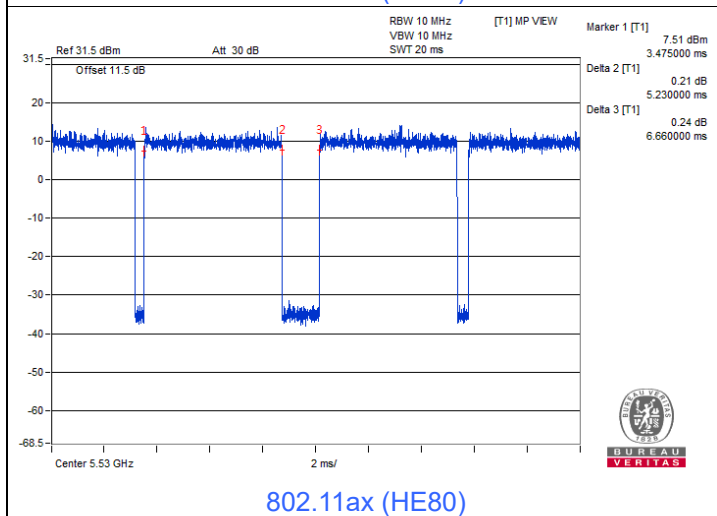
802.11ax (HE160): Duty cycle = 5.44 ms / 6.355 ms x 100% = 85.6%, duty factor = 10 * log (1/Duty cycle) = 0.68 dB



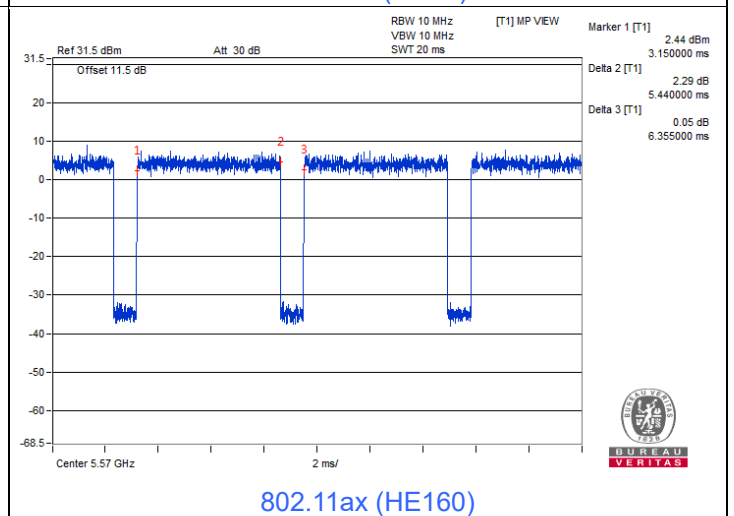
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



802.11ax (HE160)

NSS 2

802.11ax (HE20): Duty cycle = 5.225 ms / 6.63 ms x 100% = 78.8%, duty factor = 10 * log (1/Duty cycle) = 1.03 dB

802.11ax (HE40): Duty cycle = 5.23 ms / 6.595 ms x 100% = 79.3%, duty factor = 10 * log (1/Duty cycle) = 1.01 dB

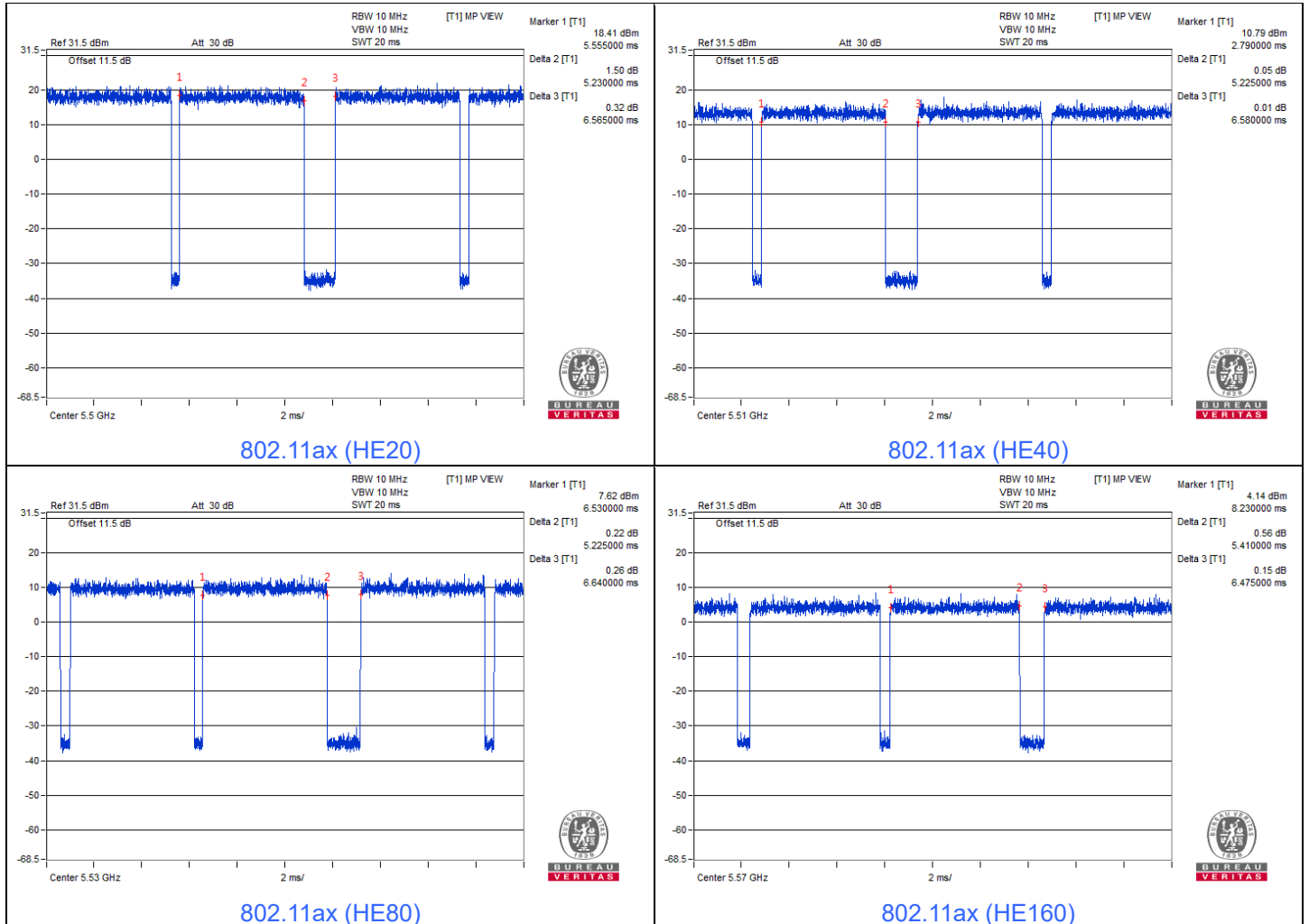
802.11ax (HE80): Duty cycle = 5.2 ms / 6.62 ms x 100% = 78.5%, duty factor = 10 * log (1/Duty cycle) = 1.05 dB

802.11ax (HE160): Duty cycle = 5.425 ms / 6.485 ms x 100% = 83.7%, duty factor = 10 * log (1/Duty cycle) = 0.78 dB



NSS 4

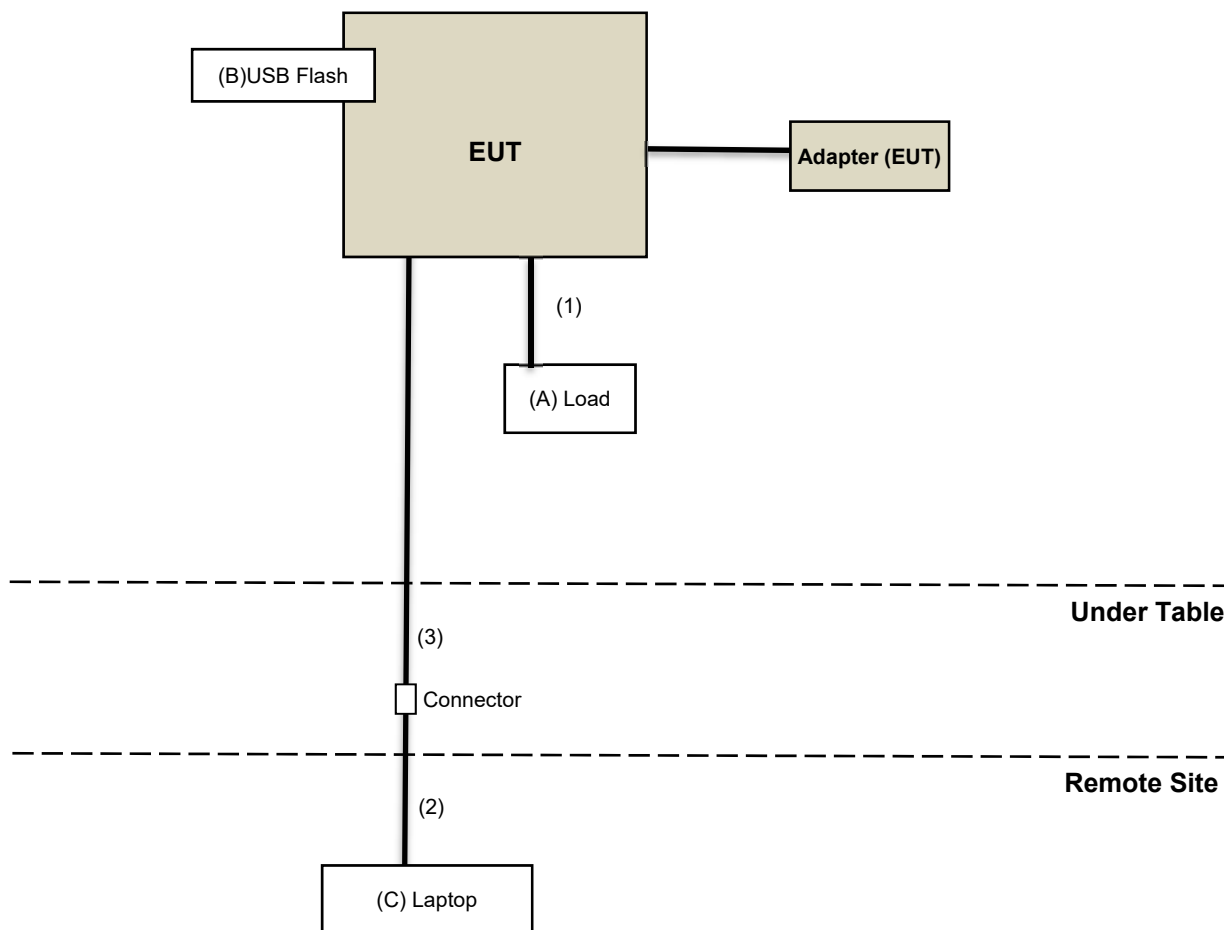
- 802.11ax (HE20): Duty cycle = 5.23 ms / 6.565 ms x 100% = 79.7%, duty factor = 10 * log (1/Duty cycle) = 0.99 dB
- 802.11ax (HE40): Duty cycle = 5.225 ms / 6.58 ms x 100% = 79.4%, duty factor = 10 * log (1/Duty cycle) = 1.00 dB
- 802.11ax (HE80): Duty cycle = 5.225 ms / 6.64 ms x 100% = 78.7%, duty factor = 10 * log (1/Duty cycle) = 1.04 dB
- 802.11ax (HE160): Duty cycle = 5.41 ms / 6.475 ms x 100% = 83.6%, duty factor = 10 * log (1/Duty cycle) = 0.78 dB



3.6 Test Program Used and Operation Descriptions

Controlling software Qualcomm Radio Control Tool Version 4.0.00192.0 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Load	BV	LP-4	N/A	N/A	Provided by Lab
B	USB Flash	sandisk	SDDDC3-032G	N/A	N/A	Provided by Lab
C	Laptop	Lenovo	L440	R90J29AA	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	LAN cable	4	1.5	No	0	Provided by Lab
2	LAN cable	1	7	No	0	Provided by Lab
3	Ethernet cable	1	0.96	No	0	Accessory of EUT

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
Signal & Spectrum Analyzer R&S	FSV3044	101105	2023/2/22	2024/2/21
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/9/13

4.2 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Peak Power Analyzer Keysight	8990B	MY51000485	2023/1/19	2024/1/18
Signal & Spectrum Analyzer R&S	FSV3044	101105	2023/2/22	2024/2/21
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Wideband Power Sensor Keysight	N1923A	MY58020002	2023/1/18	2024/1/17
		MY58140009	2023/1/18	2024/1/17

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/9/13

4.3 Power Spectral Density

Refer to section 4.1 to get information of the instruments.

4.4 Occupied Bandwidth

Refer to section 4.1 to get information of the instruments.

4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2022/11/9	2023/11/8
EMI Test Receiver R&S	ESR3	102783	2022/12/21	2023/12/20
LISN R&S	ESH2-Z5	100100	2023/3/7	2024/3/6
	ESH3-Z5	100116	2023/2/15	2024/2/14
RF Coaxial Cable Woken	5D-FB	Cable-cond2-01	2022/9/3	2023/9/2
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2022/8/31	2023/8/30

Notes:

1. The test was performed in HY - Conduction 2.
2. Tested Date: 2023/8/17

4.6 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-155	2022/10/21	2023/10/20
EMI Test Receiver R&S	ESR3	102782	2022/12/12	2023/12/11
Loop Antenna Electro-Metrics	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2023/8/8	2024/8/7
Preamplifier Agilent	8447D	2944A10631	2023/5/7	2024/5/6
Preamplifier EMCI	EMC001340	980201	2022/9/23	2023/9/22
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2023/1/7	2024/1/6
RF Coaxial Cable Woken	8D-FB	Cable-CH4-01	2023/7/8	2024/7/7
Signal & Spectrum Analyzer R&S	FSW43	101866	2023/1/10	2024/1/9
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2023/8/17

4.7 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
EMI Test Receiver R&S	ESR3	102782	2022/12/12	2023/12/11
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-408	2022/11/13	2023/11/12
	BBHA 9170	9170-480	2022/11/13	2023/11/12
		BBHA9170241	2022/10/20	2023/10/19
		BBHA9170243	2022/11/13	2023/11/12
Preamplifier EMCI	EMC 184045	980116	2022/10/1	2023/9/30
Preamplifier Keysight	83017A	MY53270295	2023/5/7	2024/5/6
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2023/7/8	2024/7/7
	EMC102-KM-KM-3000	150929	2023/7/8	2024/7/7
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2023/5/7	2024/5/6
	Sucoflex 104	MY 13380+295012/04	2023/5/7	2024/5/6
Signal & Spectrum Analyzer R&S	FSW43	101866	2023/1/10	2024/1/9
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2023/8/16 ~ 2023/8/17

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 \leq 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
	Fixed point-to-point Access Point	1 Watt (30 dBm)
	Indoor Access Point	1 Watt (30 dBm)
	Mobile and Portable client device	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 Point	
	Indoor Access Point	
	Mobile and Portable client device	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 Occupied Bandwidth

The results are for reference only.

5.5 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.

5.6 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).

5.7 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:

- The lower limit shall apply at the transition frequencies.
- Emission level (dBuV/m) = 20 log Emission level (uV/m).
- 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: 68.2 (dBμV/m) ^{*1}
	PK: 10 (dBm/MHz) ^{*2}	PK: 105.2 (dBμV/m) ^{*2}
	PK: 15.6 (dBm/MHz) ^{*3}	PK: 110.8 (dBμV/m) ^{*3}
	PK: 27 (dBm/MHz) ^{*4}	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.

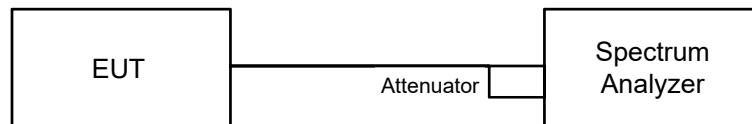
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup

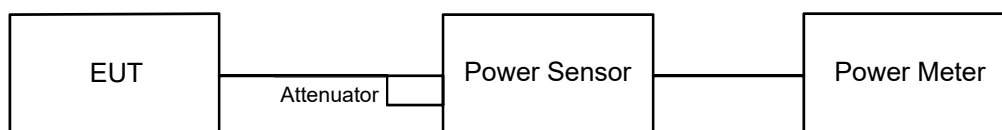


6.1.2 Test Procedure

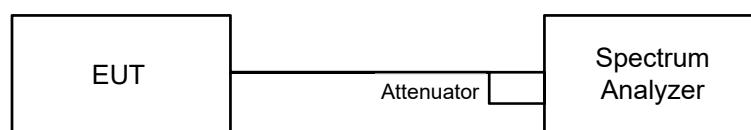
- a. Set RBW = approximately 1% of the emission bandwidth.
- b. Set the VBW > RBW.
- c. Detector = Peak.
- d. Trace mode = max hold.
- e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat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

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.

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:

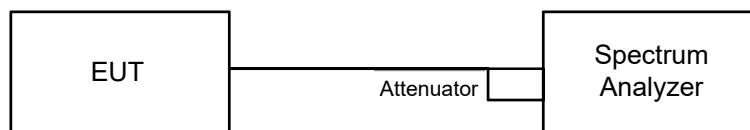
Method SA-2A

- a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- b. Set RBW = 1 MHz, Set VBW \geq 3 MHz, Detector = RMS
- c. Sweep points \geq $[2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing \leq RBW / 2, so that narrowband signals are not lost between frequency bins.)
- d. Manually set sweep time $\geq 10 \times$ (number of points in sweep) \times (total on/off period of the transmitted signal).
- e. Perform a single sweep.
- f. Record the max value and add $10 \log (1/\text{duty cycle})$.

Note: When measuring straddle channel power, use compute power by integrating the spectrum across the 26 dB EBW or 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 26 dB EBW or 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-2

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW \geq 3 MHz, Detector = RMS
- Sweep points \geq $[2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing \leq RBW / 2, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto, trigger set to “free run”.
- Trace average at least 100 traces in power averaging mode.
- Use the peak search function on the instrument to find the peak of the spectrum and record its value.
- Record the max value and add 10 log (1/duty cycle).

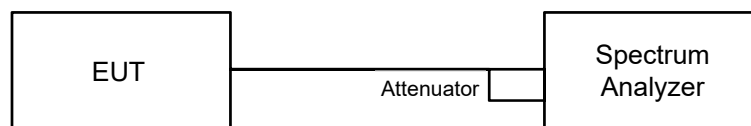
For specified measurement bandwidth 500 kHz:

Method SA-2

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz, Set VBW \geq 1 MHz, Detector = RMS
- 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 $\text{BWCF} = 10\log(500 \text{ kHz}/300 \text{ kHz})$
- Sweep points \geq $[2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing \leq RBW / 2, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto, trigger set to “free run”.
- Trace average at least 100 traces in power averaging mode.
- Use the peak search function on the instrument to find the peak of the spectrum and record its value.
- Record the max value and add 10 log (1/duty cycle).

6.4 Occupied Bandwidth

6.4.1 Test Setup

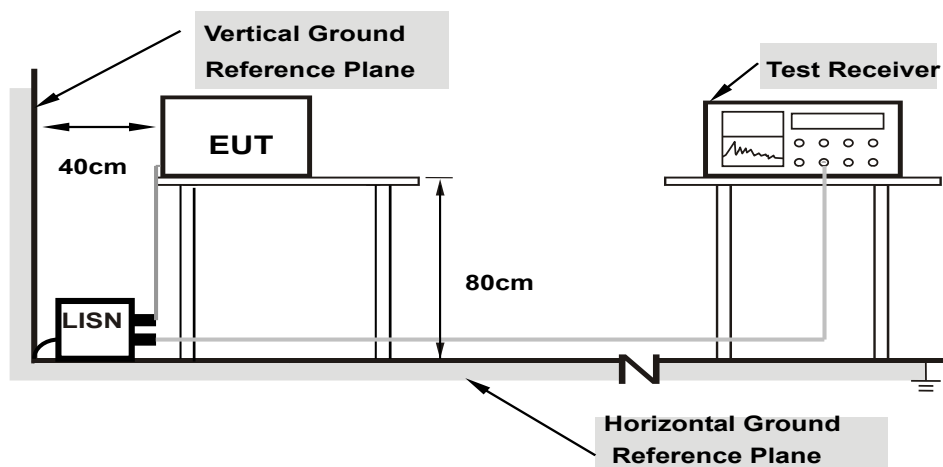


6.4.2 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to Sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean power of a given emission.

6.5 AC Power Conducted Emissions

6.5.1 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).

6.5.2 Test Procedure

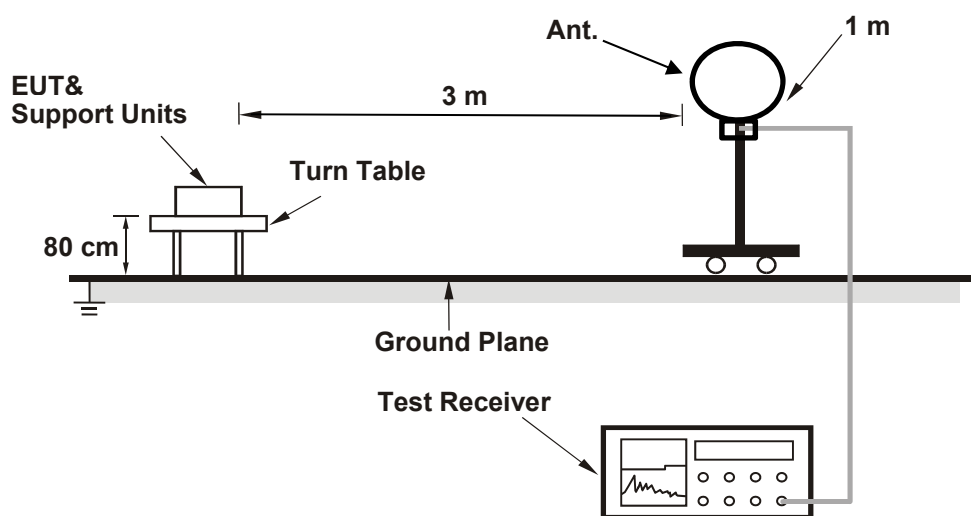
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The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

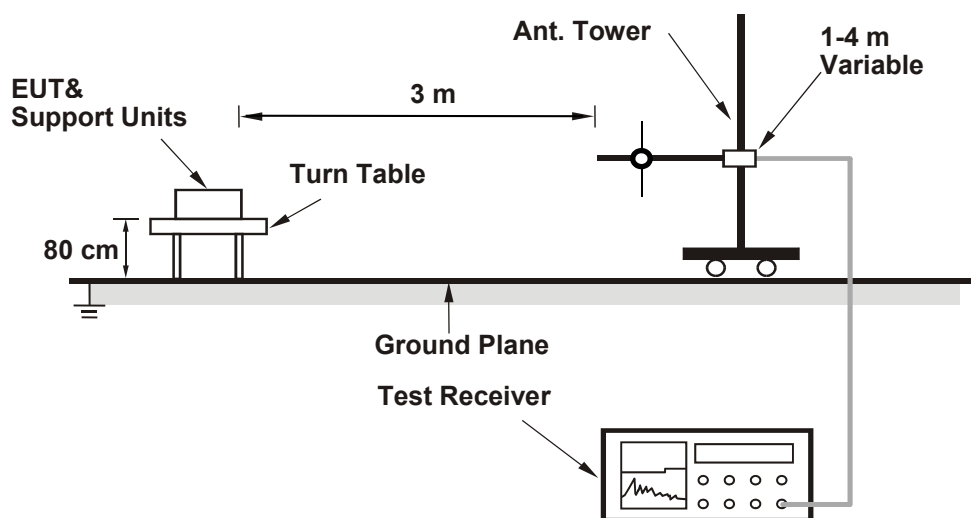
6.6 Unwanted Emissions below 1 GHz

6.6.1 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).

6.6.2 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, 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

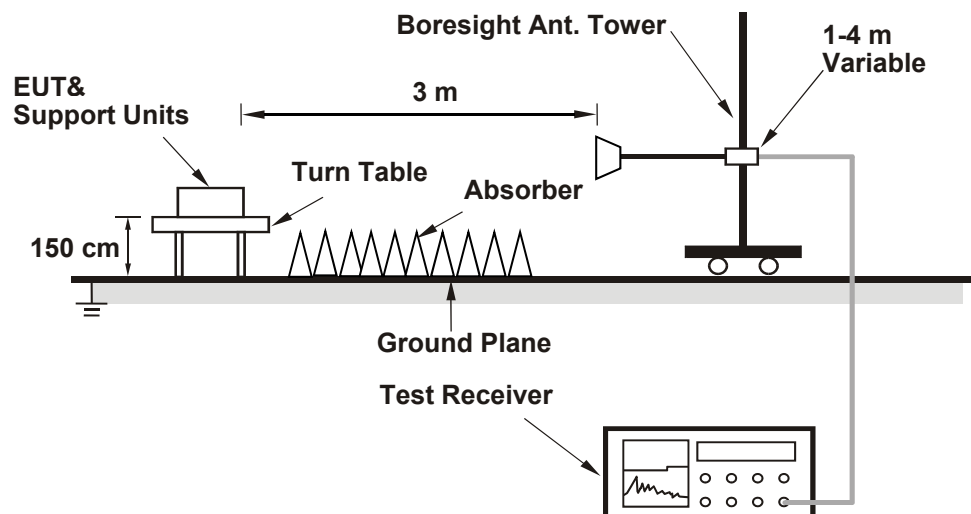
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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 detect function and specified bandwidth with maximum hold mode when the test frequency is below 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.
2. All modes of operation were investigated and the worst-case emissions are reported.

6.7 Unwanted Emissions above 1 GHz

6.7.1 Test Setup



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

6.7.2 Test Procedure

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

- 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.
- For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10 Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1 GHz.
- 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, 60% RH	Tested By:	Gary Lin
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NSS 1

802.11ax (HE20)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
140	5700	21.97	22.34	22.09	22.04

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
140	5700	21.97	24.41 > 24

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

802.11ax (HE40)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
62	5310	41.24	41.45

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
62	5310	41.24	27.15 > 24

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

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	41.00	40.76	40.88	40.80

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
102	5510	40.76	27.1 > 24

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

802.11ax (HE80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	83.13	83.25

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
58	5290	83.13	30.19 > 24

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

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	83.25	83.01	82.86	83.11

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
106	5530	82.86	30.18 > 24

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

802.11ax (HE160)

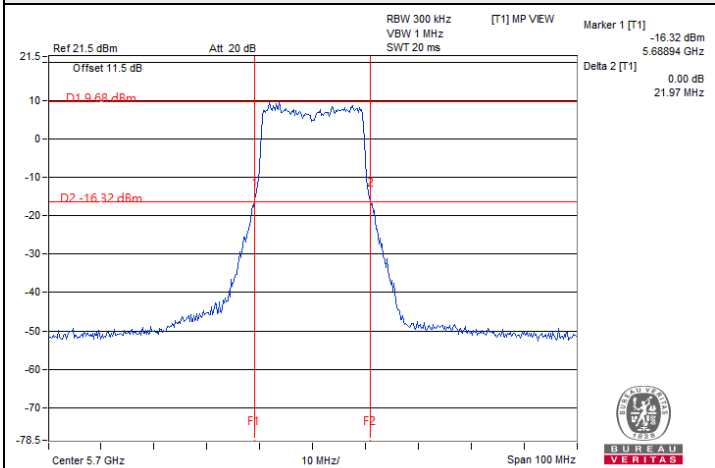
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
114	5570	166.32	165.84	166.77	166.88

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
114	5570	165.84	33.19 > 24

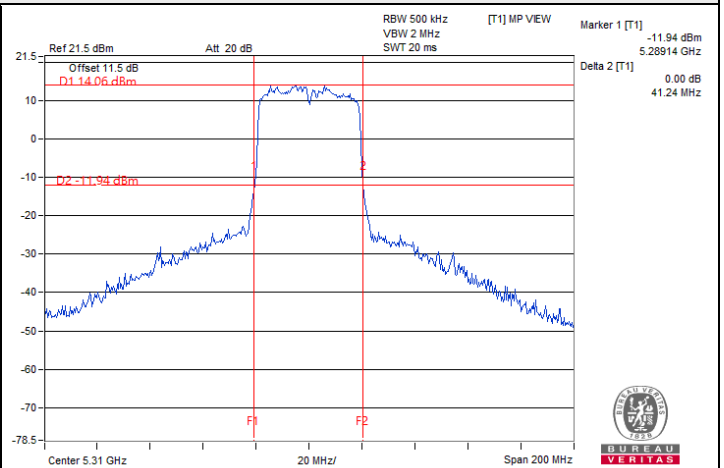
Note: For U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.



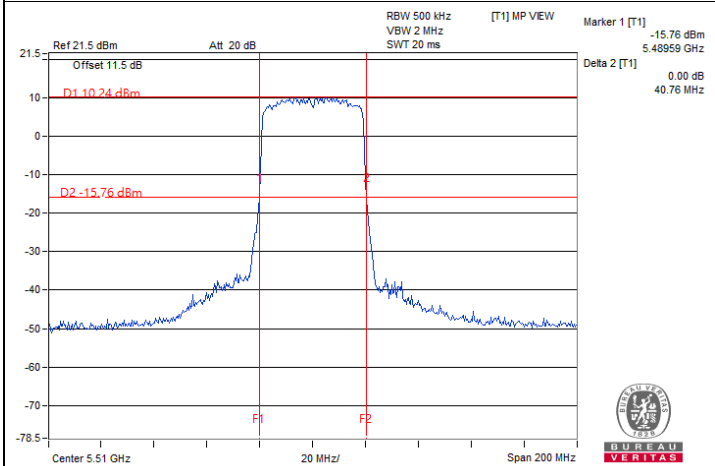
Spectrum Plot of Minimum Value



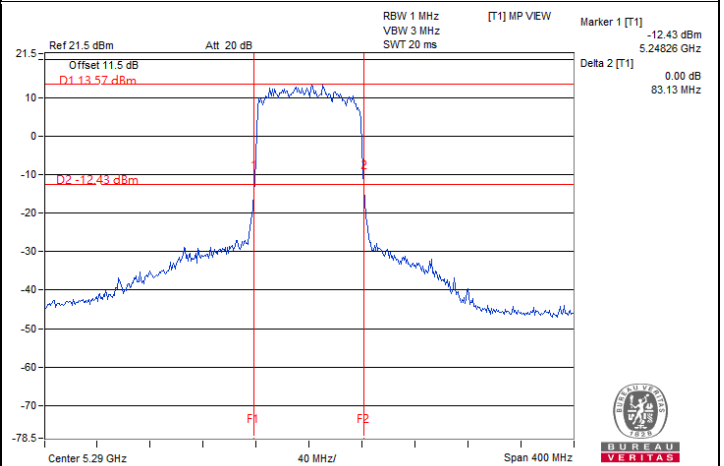
802.11ax (HE20) / Chain 0 : CH 140



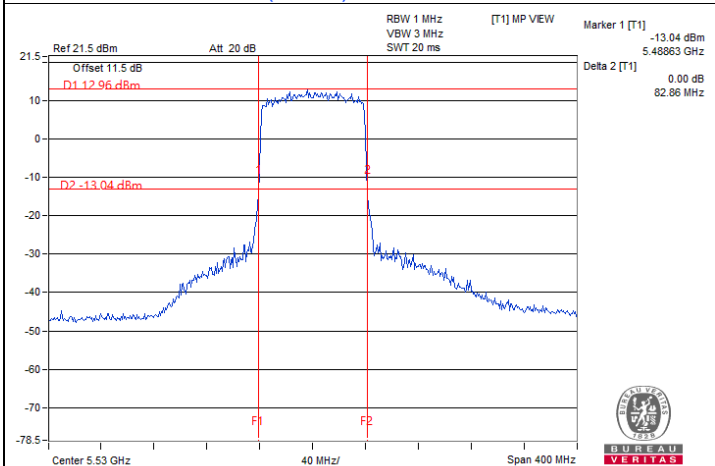
802.11ax (HE40) / Chain 0 : CH 62



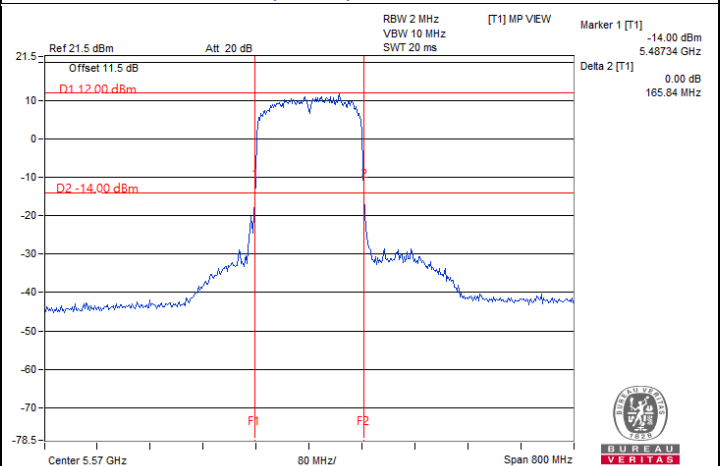
802.11ax (HE40) / Chain 1 : CH 102



802.11ax (HE80) / Chain 0 : CH 58



802.11ax (HE80) / Chain 2 : CH 106



802.11ax (HE160) / Chain 1 : CH 114

Note: For U-NII-2C straddle channel = 5725 MHz - Marker 1

NSS 2

802.11ax (HE20)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
140	5700	21.97	21.74	22.05	21.63

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
140	5700	21.63	24.35 > 24

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

802.11ax (HE40)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
62	5310	41.36	41.71

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
62	5310	41.36	27.16 > 24

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

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	41.01	40.77	40.73	41.04

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
102	5510	40.73	27.09 > 24

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

802.11ax (HE80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	82.73	82.86

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
58	5290	82.73	30.17 > 24

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

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	83.24	83.28	83.12	83.10

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
106	5530	83.10	30.19 > 24

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

802.11ax (HE160)

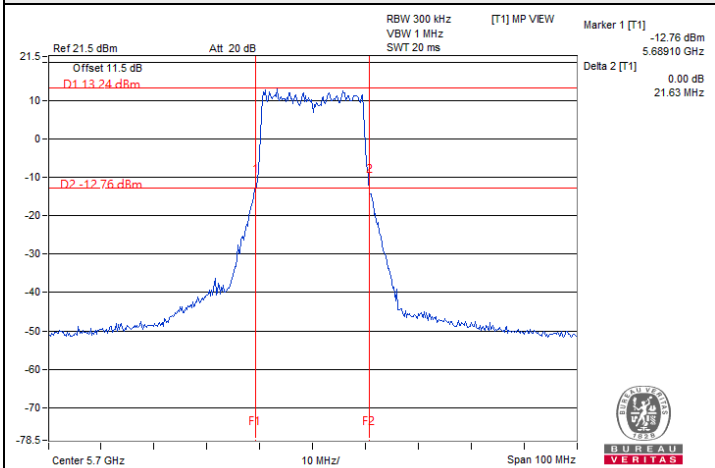
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
114	5570	165.91	166.28	166.31	166.33

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
114	5570	165.91	33.19 > 24

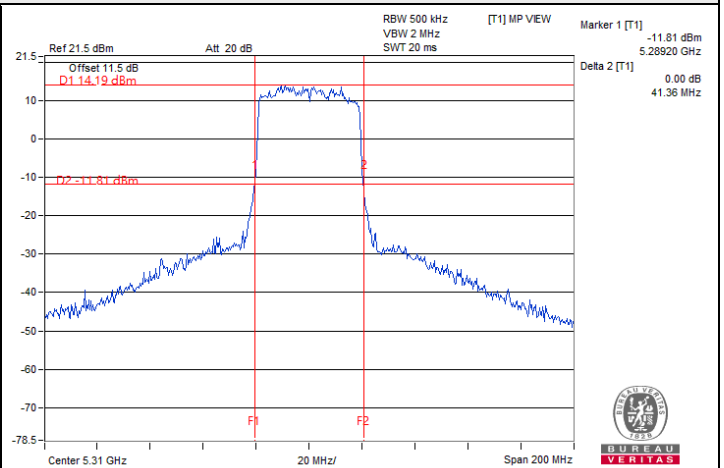
Note: For U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.



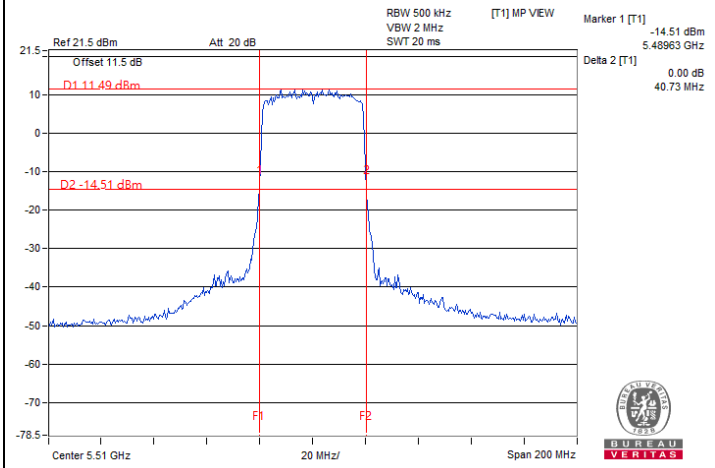
Spectrum Plot of Minimum Value



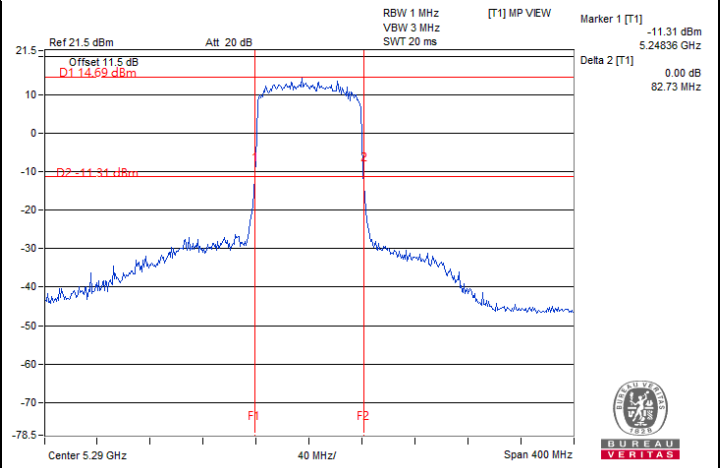
802.11ax (HE20) / Chain 3 : CH 140



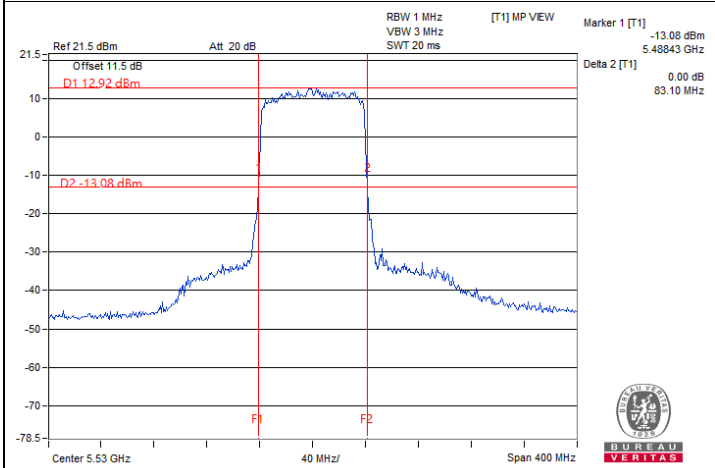
802.11ax (HE40) / Chain 0 : CH 62



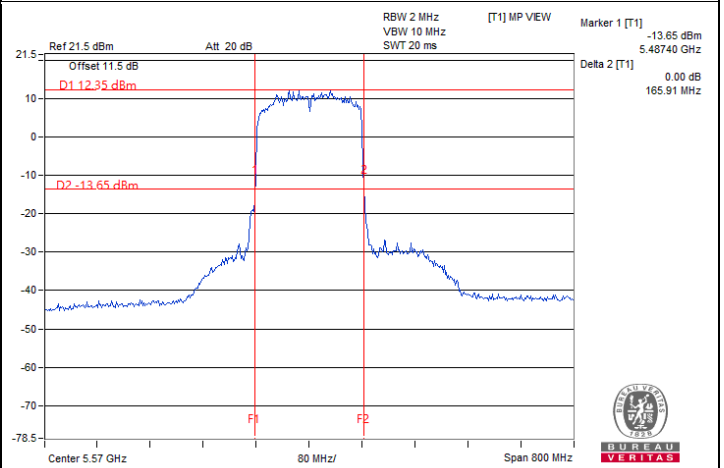
802.11ax (HE40) / Chain 2 : CH 102



802.11ax (HE80) / Chain 0 : CH 58



802.11ax (HE80) / Chain 3 : CH 106



802.11ax (HE160) / Chain 0 : CH 114

Note: For U-NII-2C straddle channel = 5725 MHz - Marker 1

NSS 4

802.11ax (HE20)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
140	5700	22.09	22.10	22.33	22.14

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
140	5700	22.09	24.44 > 24

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

802.11ax (HE40)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	41.20	40.81	40.99	40.79

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
102	5510	40.79	27.1 > 24

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

802.11ax (HE80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	83.27	83.66	83.39	82.90

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
106	5530	82.90	30.18 > 24

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

802.11ax (HE160)

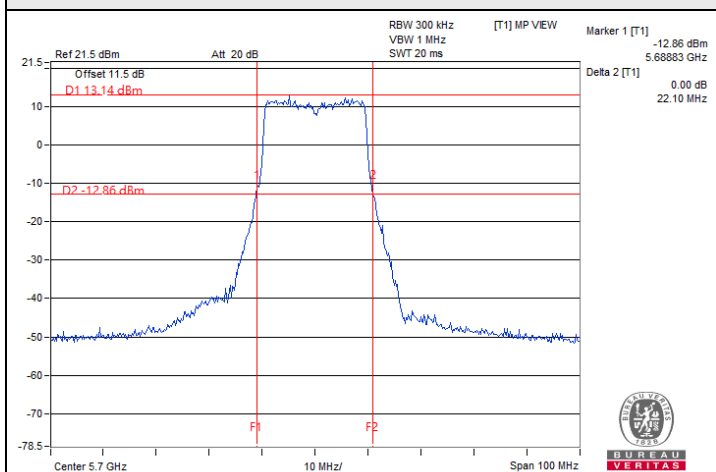
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
114	5570	166.14	166.54	166.64	166.04

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
114	5570	166.04	33.2 > 24

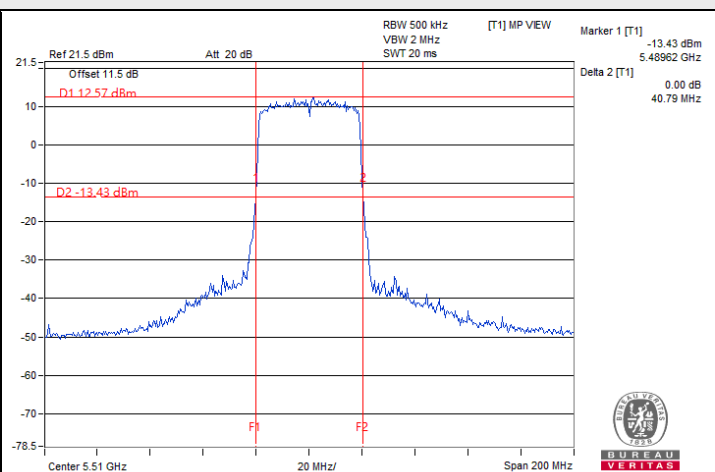
Note: For U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.



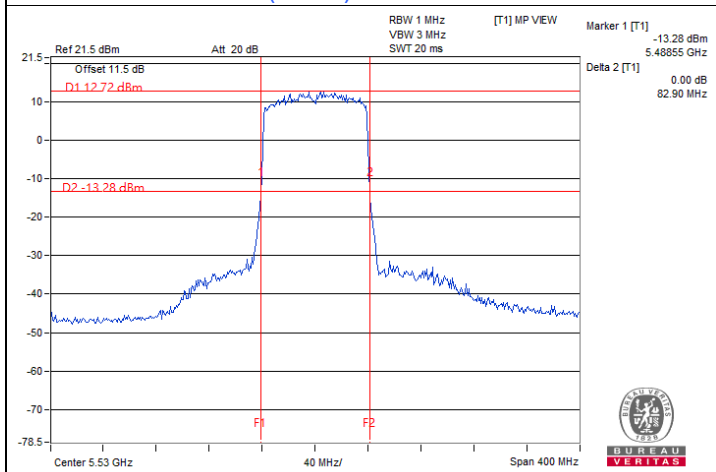
Spectrum Plot of Minimum Value



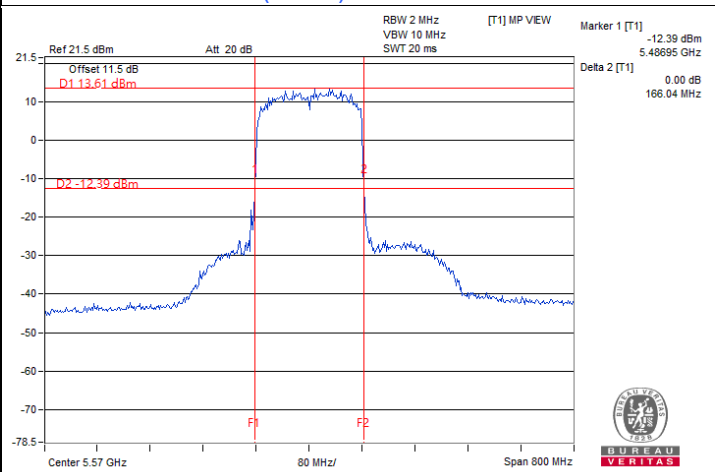
802.11ax (HE20) / Chain 1 : CH 140



802.11ax (HE40) / Chain 3 : CH 102



802.11ax (HE80) / Chain 3 : CH 106



802.11ax (HE160) / Chain 3 : CH 114

Note: For U-NII-2C straddle channel = 5725 MHz - Marker 1

7.2 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Gary Lin
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802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	21.18	20.53	244.200	23.88	30	Pass
40	5200	25.38	24.91	654.886	28.16	30	Pass
48	5240	25.19	24.84	635.159	28.03	30	Pass
52	5260	20.67	20.56	230.444	23.63	24	Pass
60	5300	20.71	20.54	231.001	23.64	23.98	Pass
64	5320	20.77	20.66	235.811	23.73	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
100	5500	15.73	15.99	15.58	15.97	152.808	21.84	24	Pass
116	5580	15.74	16.06	15.64	15.81	152.612	21.84	24	Pass
140	5700	15.70	15.89	15.51	15.73	148.943	21.73	24	Pass
*144 (U-NII-2C)	5720	14.07	14.30	14.28	14.44	119.426	20.77	22.84	Pass
*144 (U-NII-3)	5720	8.74	8.86	8.98	8.97	34.555	15.39	30	Pass
149	5745	23.77	23.46	23.52	23.27	897.281	29.53	30	Pass
157	5785	23.71	23.86	23.76	23.57	943.377	29.75	30	Pass
165	5825	23.01	23.74	23.85	23.47	901.57	29.55	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 directional gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

NSS 1
802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	23.51	23.14	430.451	26.34	30	Pass
40	5200	25.13	24.74	623.688	27.95	30	Pass
48	5240	24.95	24.56	598.367	27.77	30	Pass
52	5260	20.40	20.25	215.573	23.34	24	Pass
60	5300	20.49	20.37	220.837	23.44	24	Pass
64	5320	20.53	20.43	223.387	23.49	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
100	5500	15.31	15.54	15.43	15.53	140.413	21.47	24	Pass
116	5580	15.43	15.61	15.55	15.69	144.266	21.59	24	Pass
140	5700	15.42	15.69	15.64	15.73	145.957	21.64	24	Pass
*144 (U-NII-2C)	5720	13.52	13.92	13.79	13.85	119.783	20.78	23.01	Pass
*144 (U-NII-3)	5720	9.18	9.59	9.45	9.48	44.044	16.44	30	Pass
149	5745	23.50	23.18	23.26	23.01	843.664	29.26	30	Pass
157	5785	23.43	23.57	23.52	23.33	887.986	29.48	30	Pass
165	5825	23.54	23.34	23.37	23.03	859.897	29.34	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 directional gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	20.37	20.43	219.301	23.41	30	Pass
46	5230	25.53	25.19	687.642	28.37	30	Pass
54	5270	20.53	20.45	223.897	23.50	24	Pass
62	5310	19.85	19.94	195.233	22.91	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
102	5510	15.97	15.29	16.31	16.37	159.451	22.03	24	Pass
110	5550	15.84	16.08	16.04	16.15	160.31	22.05	24	Pass
134	5670	15.69	16.06	16.07	16.18	159.386	22.02	24	Pass
*142 (U-NII-2C)	5710	15.82	16.37	16.16	16.31	210.584	23.23	24	Pass
*142 (U-NII-3)	5710	5.45	5.82	5.65	5.65	18.658	12.71	30	Pass
151	5755	23.54	23.14	23.03	23.47	855.247	29.32	30	Pass
159	5795	23.54	23.10	23.01	23.49	853.461	29.31	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	23.62	23.26	441.98	26.45	30	Pass
40	5200	25.24	24.87	641.097	28.07	30	Pass
48	5240	25.07	24.68	615.131	27.89	30	Pass
52	5260	20.52	20.38	221.864	23.46	24	Pass
60	5300	20.60	20.48	226.502	23.55	24	Pass
64	5320	20.66	20.55	229.914	23.62	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
100	5500	15.43	15.68	15.56	15.65	144.6	21.60	24	Pass
116	5580	15.54	15.75	15.68	15.81	148.483	21.72	24	Pass
140	5700	15.47	15.73	15.69	15.82	147.911	21.70	24	Pass
*144 (U-NII-2C)	5720	13.63	14.04	13.91	13.98	123.144	20.90	23.01	Pass
*144 (U-NII-3)	5720	9.29	9.71	9.57	9.61	45.28	16.56	30	Pass
149	5745	23.63	23.30	23.39	23.12	867.86	29.38	30	Pass
157	5785	23.55	23.70	23.65	23.45	913.936	29.61	30	Pass
165	5825	23.66	23.46	23.50	23.14	884.028	29.46	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 directional gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	20.43	20.51	222.868	23.48	30	Pass
46	5230	25.67	25.31	708.603	28.50	30	Pass
54	5270	20.66	20.57	230.438	23.63	24	Pass
62	5310	19.90	20.03	198.417	22.98	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
102	5510	16.01	16.33	16.32	16.49	170.277	22.31	24	Pass
110	5550	15.98	16.21	16.15	16.27	164.985	22.17	24	Pass
134	5670	15.81	16.19	16.18	16.30	163.851	22.14	24	Pass
*142 (U-NII-2C)	5710	15.93	16.49	16.28	16.44	216.498	23.35	24	Pass
*142 (U-NII-3)	5710	5.56	5.94	5.77	5.78	19.181	12.83	30	Pass
151	5755	23.67	23.25	23.15	23.60	879.783	29.44	30	Pass
159	5795	23.70	23.22	23.12	23.62	879.577	29.44	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	19.07	19.64	172.768	22.37	30	Pass
58	5290	18.79	19.55	165.84	22.20	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
106	5530	15.97	16.27	16.33	16.49	169.42	22.29	24	Pass
122	5610	15.81	16.11	15.90	16.06	158.208	21.99	24	Pass
*138 (U-NII-2C)	5690	16.10	16.61	16.50	16.52	224.243	23.51	24	Pass
*138 (U-NII-3)	5690	2.11	2.28	2.37	2.15	8.51	9.30	30	Pass
155	5775	21.13	21.53	21.34	21.45	547.732	27.39	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT160)

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	5570	15.89	16.48	16.03	16.27	165.729	22.19	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-2C, the maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	23.78	23.41	458.062	26.61	30	Pass
40	5200	25.41	25.03	665.956	28.23	30	Pass
48	5240	25.23	24.82	636.816	28.04	30	Pass
52	5260	20.69	20.54	230.46	23.63	24	Pass
60	5300	20.77	20.62	234.744	23.71	24	Pass
64	5320	20.82	20.70	238.271	23.77	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
100	5500	15.58	15.85	15.72	15.80	149.944	21.76	24	Pass
116	5580	15.69	15.92	15.84	15.98	154.151	21.88	24	Pass
140	5700	15.53	15.86	15.79	15.94	151.471	21.80	24	Pass
*144 (U-NII-2C)	5720	13.74	14.16	14.03	14.11	126.6	21.02	23.01	Pass
*144 (U-NII-3)	5720	9.40	9.83	9.69	9.74	46.551	16.68	30	Pass
149	5745	23.79	23.47	23.54	23.28	900.42	29.54	30	Pass
157	5785	23.72	23.86	23.80	23.59	947.169	29.76	30	Pass
165	5825	23.83	23.61	23.66	23.28	916.249	29.62	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 directional gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	20.48	20.58	225.974	23.54	30	Pass
46	5230	25.84	25.46	735.268	28.66	30	Pass
54	5270	20.84	20.72	239.371	23.79	24	Pass
62	5310	19.98	20.15	203.055	23.08	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
102	5510	16.06	16.42	16.39	16.54	172.85	22.38	24	Pass
110	5550	16.13	16.38	16.31	16.43	171.182	22.33	24	Pass
134	5670	15.96	16.36	16.34	16.47	170.111	22.31	24	Pass
*142 (U-NII-2C)	5710	16.04	16.61	16.40	16.57	222.578	23.47	24	Pass
*142 (U-NII-3)	5710	5.67	6.06	5.89	5.91	19.719	12.95	30	Pass
151	5755	23.85	23.41	23.30	23.77	913.97	29.61	30	Pass
159	5795	23.86	23.34	23.23	23.69	903.256	29.56	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	19.15	19.74	176.413	22.47	30	Pass
58	5290	18.85	19.64	168.781	22.27	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
106	5530	16.03	16.34	16.44	16.52	172.069	22.36	24	Pass
122	5610	15.96	16.29	16.06	16.23	164.346	22.16	24	Pass
*138 (U-NII-2C)	5690	16.21	16.73	16.62	16.65	230.539	23.63	24	Pass
*138 (U-NII-3)	5690	2.22	2.40	2.49	2.28	8.748	9.42	30	Pass
155	5775	21.28	21.68	21.48	21.62	567.324	27.54	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE160)

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	5570	15.95	16.52	16.12	16.37	168.507	22.27	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-2C, the maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	23.62	23.26	441.98	26.45	30	Pass
40	5200	25.24	24.87	641.097	28.07	30	Pass
48	5240	25.07	24.68	615.131	27.89	30	Pass
52	5260	20.52	20.38	221.864	23.46	24	Pass
60	5300	20.60	20.48	226.502	23.55	24	Pass
64	5320	20.66	20.55	229.914	23.62	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the directional gain is 5.69 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
100	5500	15.43	15.68	15.56	15.65	144.6	21.60	22.41	Pass
116	5580	15.54	15.75	15.68	15.81	148.483	21.72	22.41	Pass
140	5700	15.47	15.73	15.69	15.82	147.911	21.70	22.41	Pass
*144 (U-NII-2C)	5720	13.63	14.04	13.91	13.98	123.144	20.90	21.42	Pass
*144 (U-NII-3)	5720	9.29	9.71	9.57	9.61	45.28	16.56	29.01	Pass
149	5745	22.73	22.40	22.49	22.22	705.423	28.48	29.01	Pass
157	5785	22.75	22.90	22.85	22.65	760.179	28.81	29.01	Pass
165	5825	22.86	22.66	22.70	22.34	735.303	28.66	29.01	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Please refer to 3.2 section for directional gain
3. For U-NII-2C, the directional gain is 7.59 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(7.59-6)].
4. For U-NII-3, the directional gain is 6.99 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.99-6) = 29.01 dBm.

802.11ac (VHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	20.43	20.51	222.868	23.48	30	Pass
46	5230	25.67	25.31	708.603	28.50	30	Pass
54	5270	20.66	20.57	230.438	23.63	24	Pass
62	5310	19.90	20.03	198.417	22.98	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the directional gain is 5.69 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
102	5510	16.01	16.33	16.32	16.49	170.277	22.31	22.41	Pass
110	5550	15.98	16.21	16.15	16.27	164.985	22.17	22.41	Pass
134	5670	15.81	16.19	16.18	16.30	163.851	22.14	22.41	Pass
*142 (U-NII-2C)	5710	14.38	14.94	14.73	14.89	151.514	21.80	22.41	Pass
*142 (U-NII-3)	5710	4.01	4.39	4.32	4.23	13.502	11.30	29.01	Pass
151	5755	22.77	22.35	22.25	22.70	715.114	28.54	29.01	Pass
159	5795	22.80	22.39	22.27	22.72	719.65	28.57	29.01	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Please refer to 3.2 section for directional gain
3. For U-NII-2C, the directional gain is 7.59 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(7.59-6)].
4. For U-NII-3, the directional gain is 6.99 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.99-6) = 29.01 dBm.

802.11ac (VHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	19.07	19.64	172.768	22.37	30	Pass
58	5290	18.79	19.55	165.84	22.20	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the directional gain is 5.69 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
106	5530	15.97	16.27	16.33	16.49	169.42	22.29	22.41	Pass
122	5610	15.81	16.11	15.90	16.06	158.208	21.99	22.41	Pass
*138 (U-NII-2C)	5690	14.45	14.96	14.85	14.87	153.363	21.86	22.41	Pass
*138 (U-NII-3)	5690	0.46	0.63	0.72	0.50	5.82	7.65	29.01	Pass
155	5775	21.13	21.53	21.34	21.45	547.732	27.39	29.01	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Please refer to 3.2 section for directional gain
3. For U-NII-2C, the directional gain is 7.59 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(7.59-6)].
4. For U-NII-3, the directional gain is 6.99 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.99-6) = 29.01 dBm.

802.11ac (VHT160) 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	5570	15.89	16.48	16.03	16.27	165.729	22.19	22.41	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 7.59 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(7.59-6)].

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	23.78	23.41	458.062	26.61	30	Pass
40	5200	25.41	25.03	665.956	28.23	30	Pass
48	5240	25.23	24.82	636.816	28.04	30	Pass
52	5260	20.69	20.54	230.46	23.63	24	Pass
60	5300	20.77	20.62	234.744	23.71	24	Pass
64	5320	20.82	20.70	238.271	23.77	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the directional gain is 5.69 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
100	5500	15.58	15.85	15.72	15.80	149.944	21.76	22.41	Pass
116	5580	15.69	15.92	15.84	15.98	154.151	21.88	22.41	Pass
140	5700	15.53	15.86	15.79	15.94	151.471	21.80	22.41	Pass
*144 (U-NII-2C)	5720	13.74	14.16	14.03	14.11	126.6	21.02	21.42	Pass
*144 (U-NII-3)	5720	9.40	9.83	9.69	9.74	46.551	16.68	29.01	Pass
149	5745	22.89	22.57	22.64	22.38	731.889	28.64	29.01	Pass
157	5785	22.92	23.06	23.00	22.79	787.82	28.96	29.01	Pass
165	5825	23.03	22.81	22.86	22.48	762.102	28.82	29.01	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Please refer to 3.2 section for directional gain
3. For U-NII-2C, the directional gain is 7.59 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(7.59-6)].
4. For U-NII-3, the directional gain is 6.99 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.99-6) = 29.01 dBm.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	20.48	20.58	225.974	23.54	30	Pass
46	5230	25.84	25.46	735.268	28.66	30	Pass
54	5270	20.84	20.72	239.371	23.79	24	Pass
62	5310	19.98	20.15	203.055	23.08	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the directional gain is 5.69 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
102	5510	16.06	16.42	16.39	16.54	172.85	22.38	22.41	Pass
110	5550	16.13	16.38	16.31	16.43	171.182	22.33	22.41	Pass
134	5670	15.96	16.36	16.34	16.47	170.111	22.31	22.41	Pass
*142 (U-NII-2C)	5710	14.49	15.06	14.85	15.02	155.77	21.92	22.41	Pass
*142 (U-NII-3)	5710	4.12	4.51	4.44	4.36	13.88	11.42	29.01	Pass
151	5755	22.95	22.51	22.40	22.87	742.902	28.71	29.01	Pass
159	5795	22.96	22.54	22.43	22.89	746.691	28.73	29.01	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Please refer to 3.2 section for directional gain
3. For U-NII-2C, the directional gain is 7.59 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(7.59-6)].
4. For U-NII-3, the directional gain is 6.99 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.99-6) = 29.01 dBm.

802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	19.15	19.74	176.413	22.47	30	Pass
58	5290	18.85	19.64	168.781	22.27	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 5.68 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the directional gain is 5.69 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
106	5530	16.03	16.34	16.44	16.52	172.069	22.36	22.41	Pass
122	5610	15.96	16.29	16.06	16.23	164.346	22.16	22.41	Pass
*138 (U-NII-2C)	5690	14.56	15.08	14.97	15.00	157.668	21.98	22.41	Pass
*138 (U-NII-3)	5690	0.57	0.75	0.84	0.63	5.983	7.77	29.01	Pass
155	5775	21.28	21.68	21.48	21.62	567.324	27.54	29.01	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Please refer to 3.2 section for directional gain
3. For U-NII-2C, the directional gain is 7.59 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(7.59-6)].
4. For U-NII-3, the directional gain is 6.99 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.99-6) = 29.01 dBm.

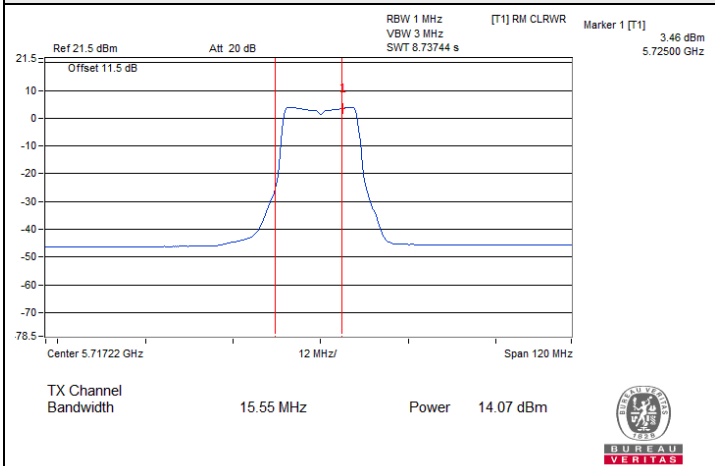
802.11ax (HE160) Beamforming

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	5570	15.95	16.52	16.12	16.37	168.507	22.27	22.41	Pass

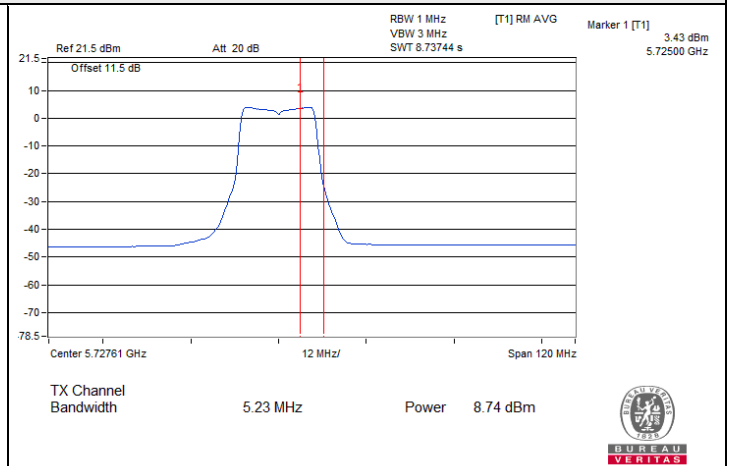
Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 7.59 dBi > 6 dBi, so the output power limit shall be reduced to [Determined Conducted Power Limit-(7.59-6)].

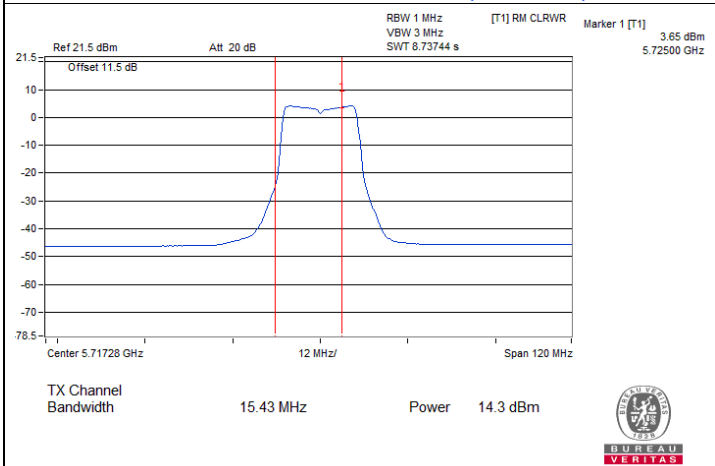
Spectrum Plot for channel straddling



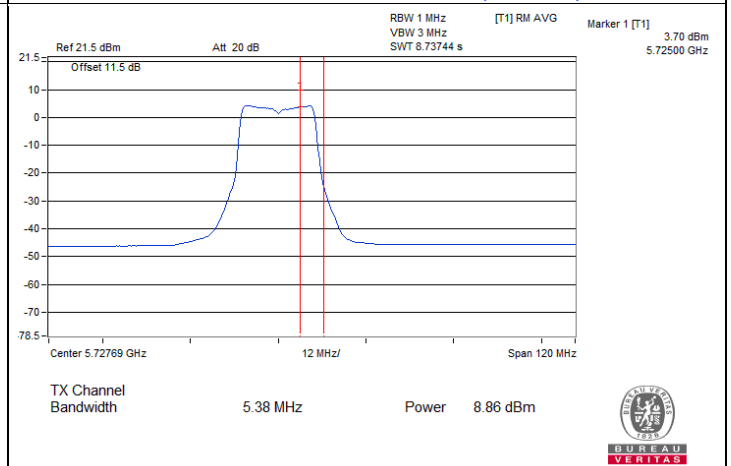
802.11a / Chain 0 : CH 144 (U-NII-2C)



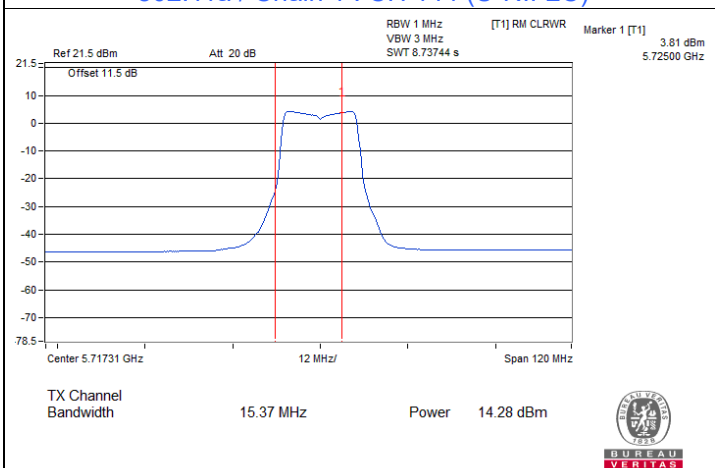
802.11a / Chain 0 : CH 144 (U-NII-3)



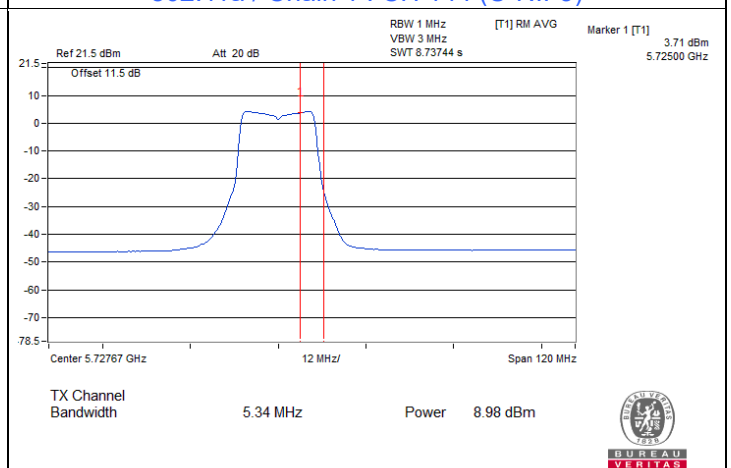
802.11a / Chain 1 : CH 144 (U-NII-2C)



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

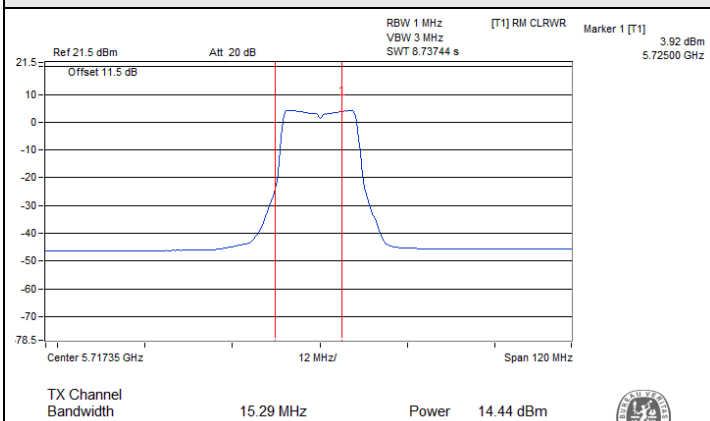


802.11a / Chain 2 : CH 144 (U-NII-2C)

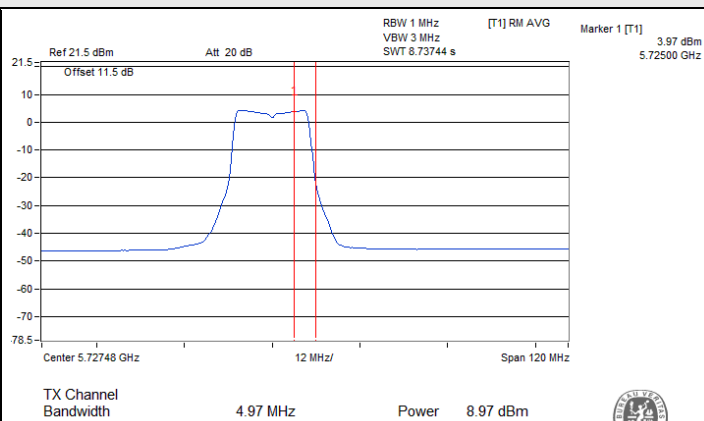


802.11a / Chain 2 : CH 144 (U-NII-3)

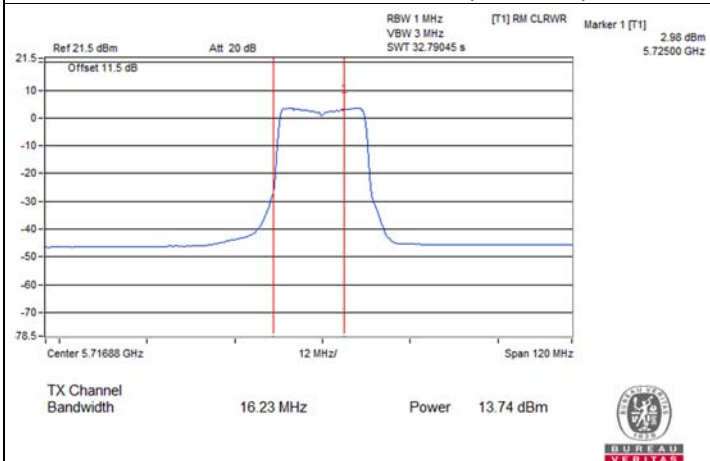
Spectrum Plot for channel straddling



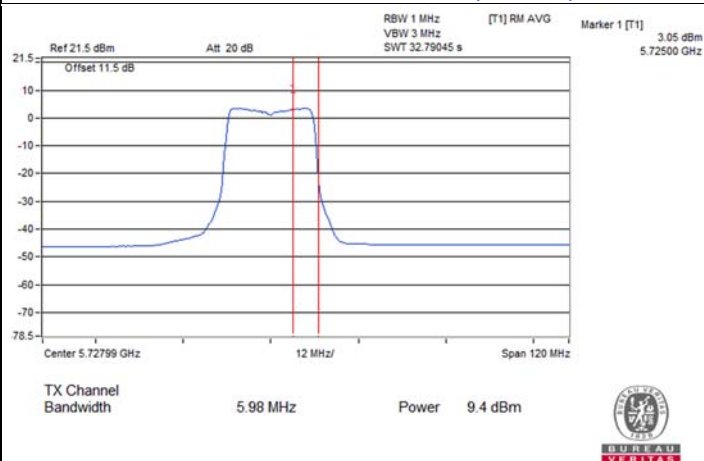
802.11a / Chain 3 : CH 144 (U-NII-2C)



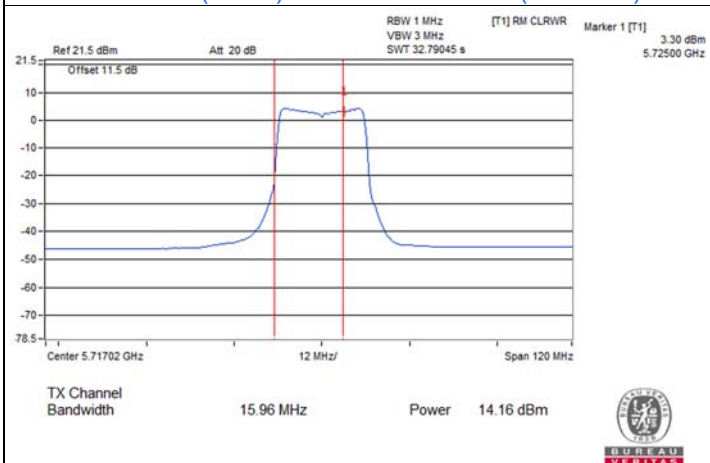
802.11a / Chain 3 : CH 144 (U-NII-3)



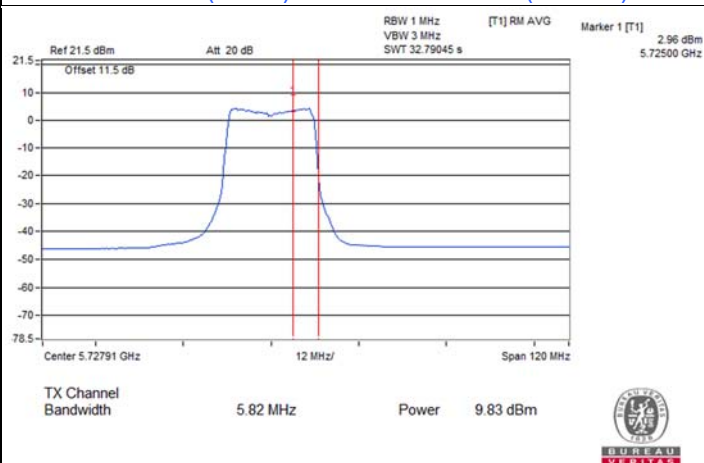
802.11ax (HE20) / Chain 0 : CH 144 (U-NII-2C)



802.11ax (HE20) / Chain 0 : CH 144 (U-NII-3)

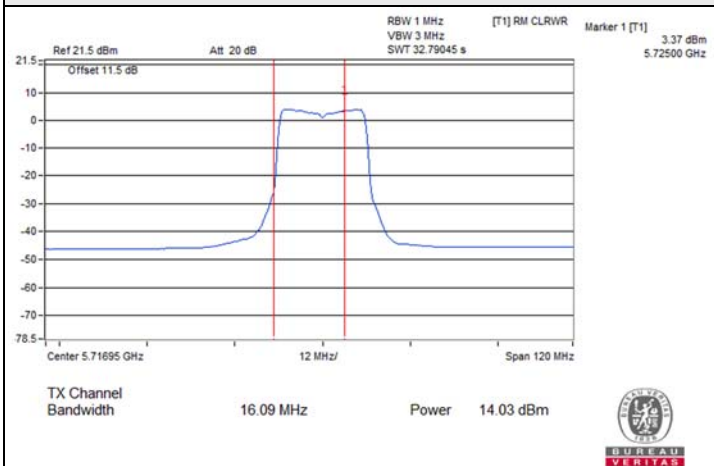


802.11ax (HE20) / Chain 1 : CH 144 (U-NII-2C)

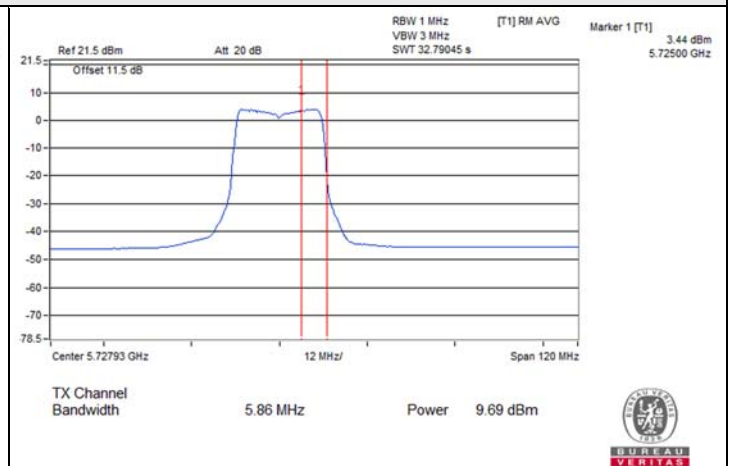


802.11ax (HE20) / Chain 1 : CH 144 (U-NII-3)

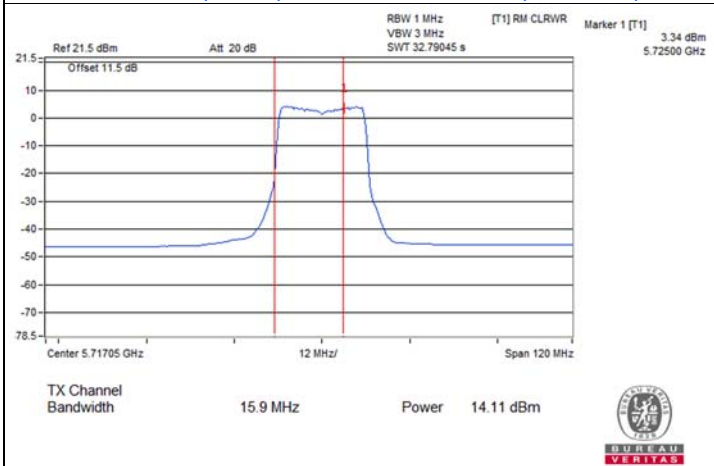
Spectrum Plot for channel straddling



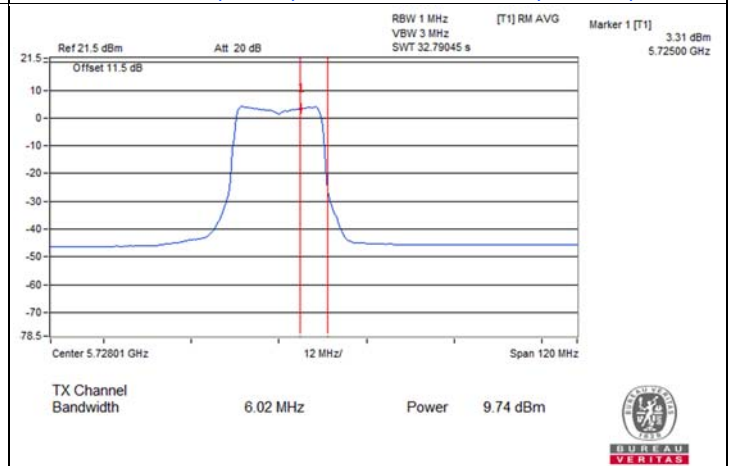
802.11ax (HE20) / Chain 2 : CH 144 (U-NII-2C)



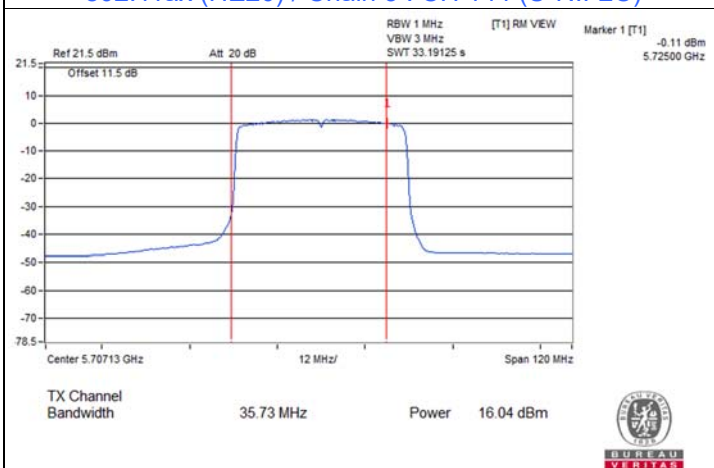
802.11ax (HE20) / Chain 2 : CH 144 (U-NII-3)



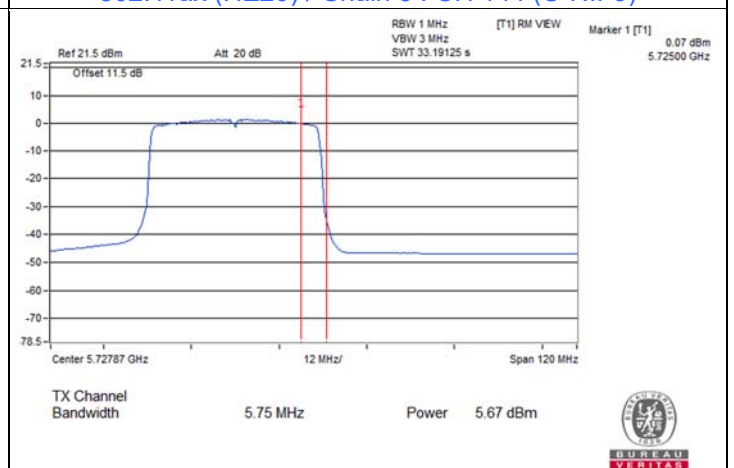
802.11ax (HE20) / Chain 3 : CH 144 (U-NII-2C)



802.11ax (HE20) / Chain 3 : CH 144 (U-NII-3)

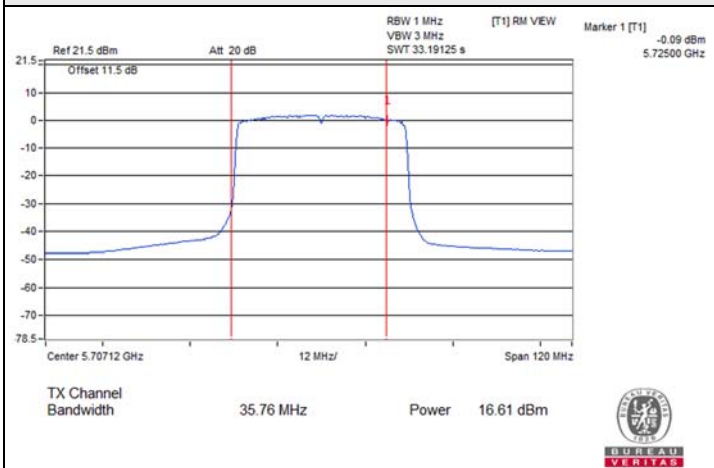


802.11ax (HE40) / Chain 0 : CH 142 (U-NII-2C)

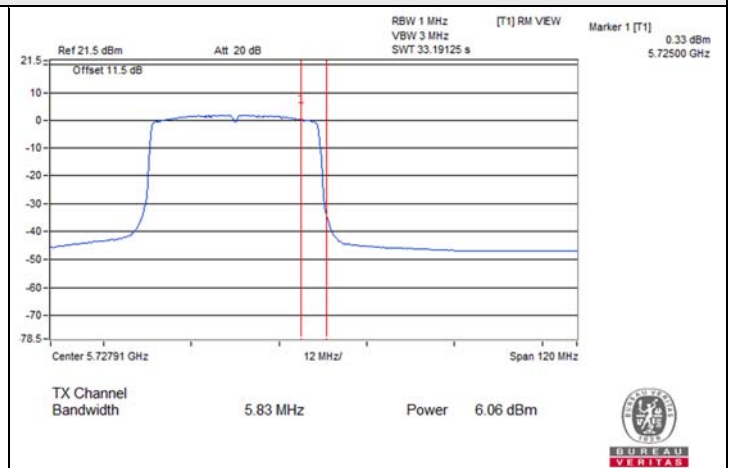


802.11ax (HE40) / Chain 0 : CH 142 (U-NII-3)

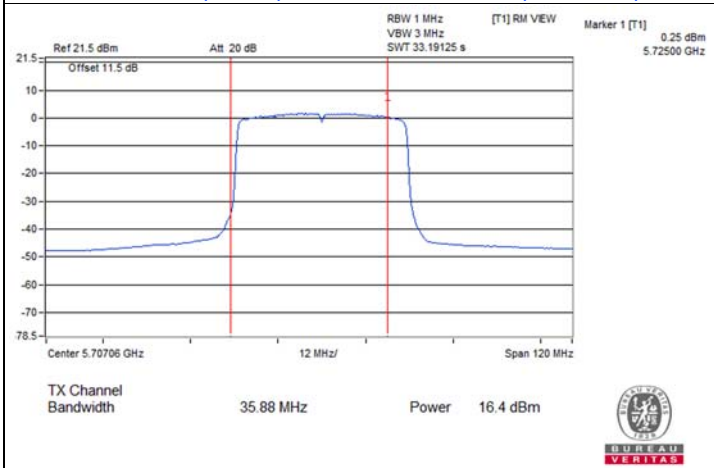
Spectrum Plot for channel straddling



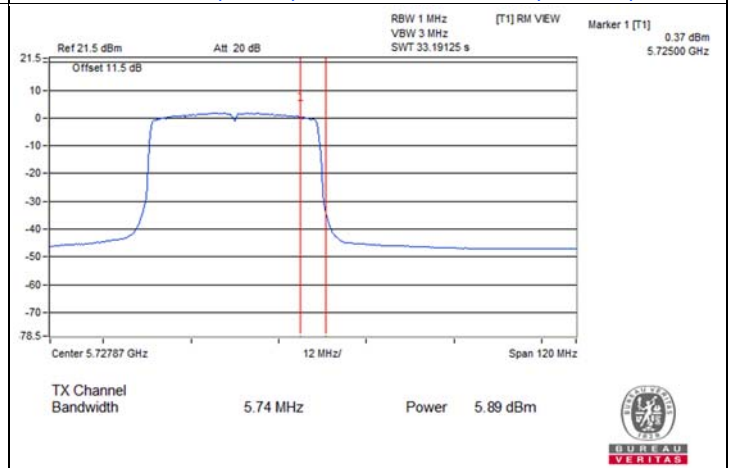
802.11ax (HE40) / Chain 1 : CH 142 (U-NII-2C)



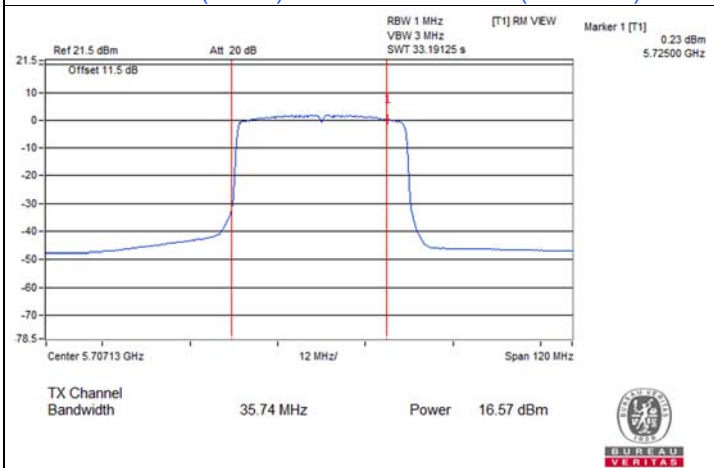
802.11ax (HE40) / Chain 1 : CH 142 (U-NII-3)



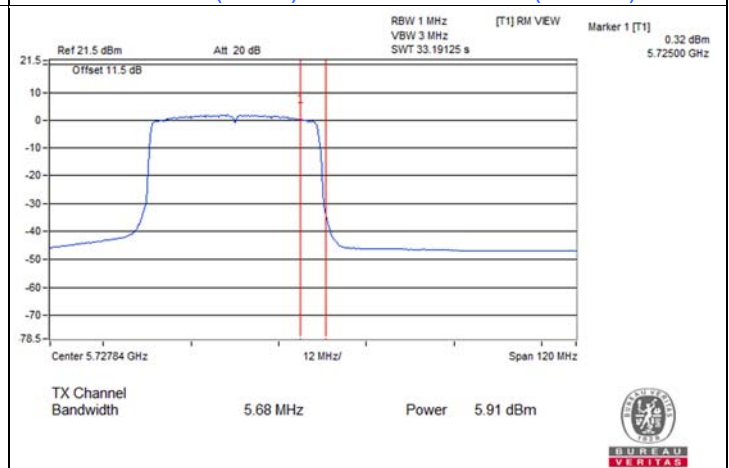
802.11ax (HE40) / Chain 2 : CH 142 (U-NII-2C)



802.11ax (HE40) / Chain 2 : CH 142 (U-NII-3)

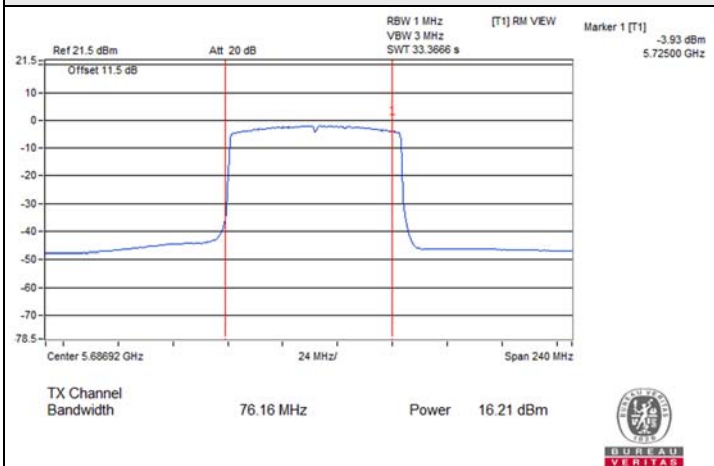


802.11ax (HE40) / Chain 3 : CH 142 (U-NII-2C)

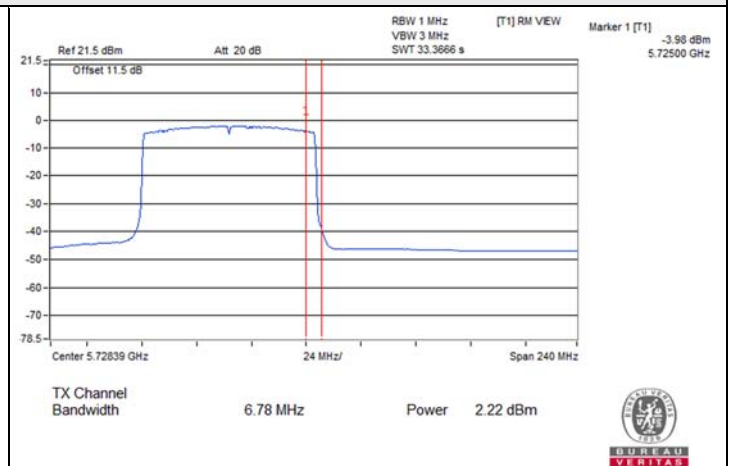


802.11ax (HE40) / Chain 3 : CH 142 (U-NII-3)

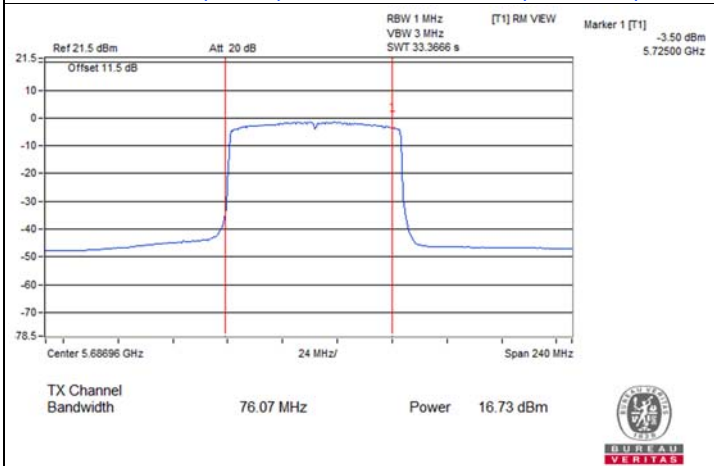
Spectrum Plot for channel straddling



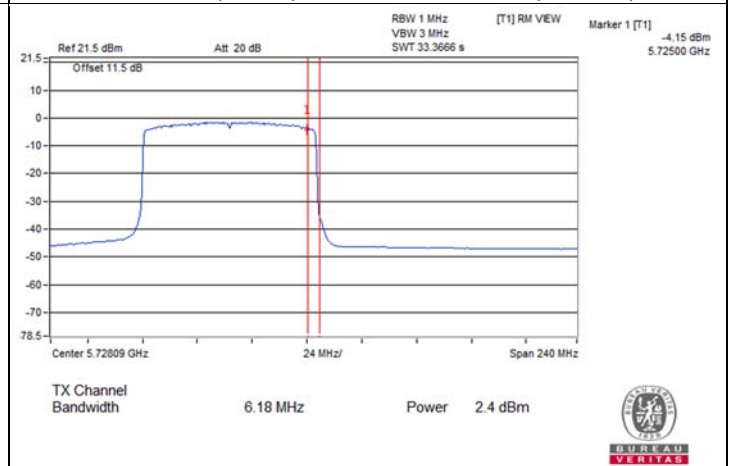
802.11ax (HE80) / Chain 0 : CH 138 (U-NII-2C)



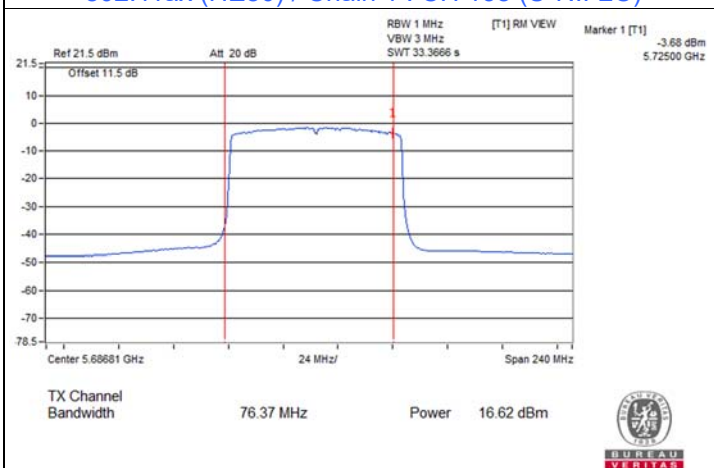
802.11ax (HE80) / Chain 0 : CH 138 (U-NII-3)



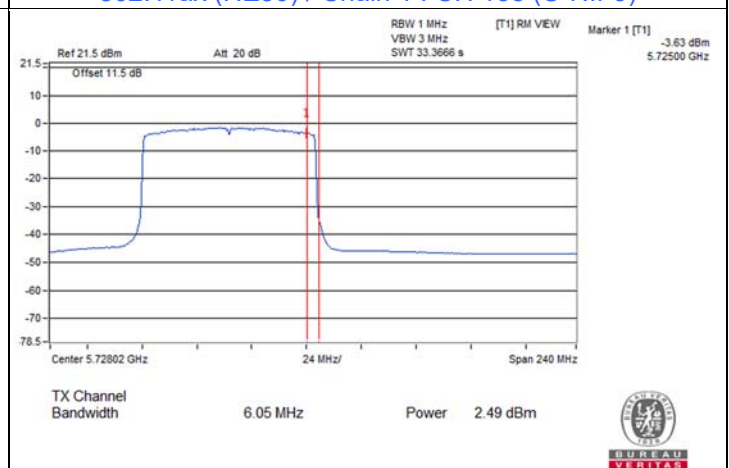
802.11ax (HE80) / Chain 1 : CH 138 (U-NII-2C)



802.11ax (HE80) / Chain 1 : CH 138 (U-NII-3)



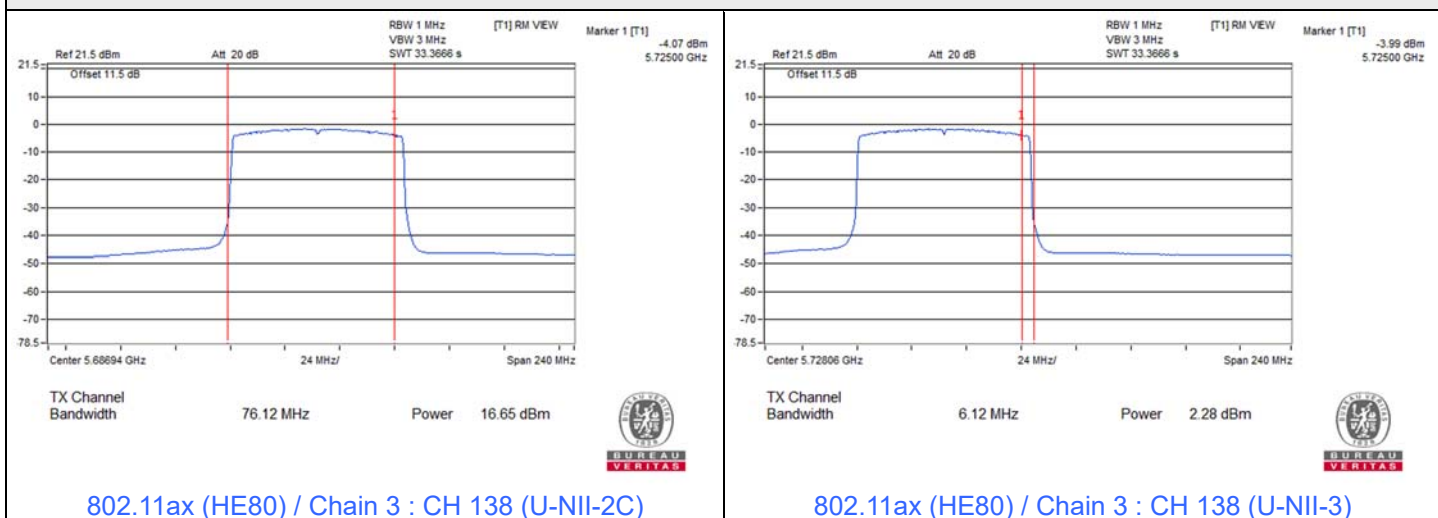
802.11ax (HE80) / Chain 2 : CH 138 (U-NII-2C)



802.11ax (HE80) / Chain 2 : CH 138 (U-NII-3)



Spectrum Plot for channel straddling



NSS 2
802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	21.92	21.63	301.142	24.79	30	Pass
40	5200	25.12	24.89	633.406	28.02	30	Pass
48	5240	25.23	24.91	643.168	28.08	30	Pass
52	5260	20.52	20.42	222.874	23.48	24	Pass
60	5300	20.53	20.36	221.622	23.46	24	Pass
64	5320	20.54	20.48	224.926	23.52	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
100	5500	16.68	16.98	16.86	16.91	194.067	22.88	24	Pass
116	5580	16.72	17.06	16.94	16.97	197.01	22.94	24	Pass
140	5700	17.19	17.68	17.49	18.03	230.612	23.63	24	Pass
*144 (U-NII-2C)	5720	14.81	15.13	15.21	15.32	165.062	22.18	23.01	Pass
*144 (U-NII-3)	5720	10.59	11.01	10.75	10.78	60.813	17.84	30	Pass
149	5745	23.93	23.13	22.98	23.14	857.434	29.33	30	Pass
157	5785	23.92	23.10	22.94	23.12	852.683	29.31	30	Pass
165	5825	23.88	23.06	22.95	23.14	849.95	29.29	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 directional gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	21.62	21.57	288.76	24.61	30	Pass
46	5230	25.10	24.80	625.589	27.96	30	Pass
54	5270	20.52	20.46	223.893	23.50	24	Pass
62	5310	19.89	19.95	196.354	22.93	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
102	5510	17.21	17.54	17.47	18.03	228.736	23.59	24	Pass
110	5550	17.21	17.69	17.61	17.64	227.104	23.56	24	Pass
134	5670	17.29	17.63	17.56	17.60	226.083	23.54	24	Pass
*142 (U-NII-2C)	5710	16.03	16.21	16.27	16.24	209.712	23.22	24	Pass
*142 (U-NII-3)	5710	5.58	5.63	5.80	5.60	18.54	12.68	30	Pass
151	5755	23.61	23.18	23.16	23.48	867.442	29.38	30	Pass
159	5795	23.59	23.16	23.14	23.45	862.946	29.36	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	22.04	21.74	309.235	24.90	30	Pass
40	5200	25.25	25.01	651.922	28.14	30	Pass
48	5240	25.34	25.03	660.399	28.20	30	Pass
52	5260	20.65	20.54	229.385	23.61	24	Pass
60	5300	20.66	20.47	227.842	23.58	24	Pass
64	5320	20.71	20.60	232.576	23.67	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
100	5500	16.79	17.11	16.98	17.05	199.745	23.00	24	Pass
116	5580	16.84	17.20	17.07	17.12	203.243	23.08	24	Pass
140	5700	17.21	17.73	17.54	18.11	233.363	23.68	24	Pass
*144 (U-NII-2C)	5720	14.92	15.25	15.33	15.45	169.698	22.30	23.01	Pass
*144 (U-NII-3)	5720	10.70	11.13	10.87	10.91	62.518	17.96	30	Pass
149	5745	24.06	23.26	23.10	23.27	883.017	29.46	30	Pass
157	5785	24.04	23.23	23.06	23.26	878.029	29.44	30	Pass
165	5825	24.02	23.20	23.08	23.26	876.35	29.43	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 directional gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	21.67	21.62	292.104	24.66	30	Pass
46	5230	25.23	24.92	643.882	28.09	30	Pass
54	5270	20.66	20.59	230.964	23.64	24	Pass
62	5310	19.98	20.01	199.771	23.01	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
102	5510	17.29	17.61	17.52	18.19	233.667	23.69	24	Pass
110	5550	17.35	17.82	17.73	17.77	233.993	23.69	24	Pass
134	5670	17.42	17.75	17.69	17.74	232.952	23.67	24	Pass
*142 (U-NII-2C)	5710	16.14	16.33	16.39	16.37	215.593	23.34	24	Pass
*142 (U-NII-3)	5710	5.69	5.75	5.92	5.73	19.06	12.80	30	Pass
151	5755	23.75	23.30	23.29	23.61	893.853	29.51	30	Pass
159	5795	23.72	23.28	23.25	23.58	887.702	29.48	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	20.27	20.59	220.966	23.44	30	Pass
58	5290	19.17	20.27	189.018	22.77	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
106	5530	17.24	17.75	17.55	18.03	232.951	23.67	24	Pass
122	5610	17.28	17.65	17.50	17.71	226.921	23.56	24	Pass
*138 (U-NII-2C)	5690	16.01	16.60	16.44	16.45	221.291	23.45	24	Pass
*138 (U-NII-3)	5690	1.93	2.57	2.33	2.40	8.675	9.38	30	Pass
155	5775	21.86	22.13	21.68	21.84	616.755	27.90	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT160)

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	5570	16.99	17.37	17.29	18.04	221.838	23.46	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-2C, the maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	22.18	21.87	319.012	25.04	30	Pass
40	5200	25.40	25.13	672.574	28.28	30	Pass
48	5240	25.48	25.16	681.278	28.33	30	Pass
52	5260	20.75	20.66	235.263	23.72	24	Pass
60	5300	20.79	20.61	235.03	23.71	24	Pass
64	5320	20.85	20.72	239.651	23.80	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
100	5500	16.93	17.26	17.14	17.20	206.77	23.15	24	Pass
116	5580	16.99	17.34	17.22	17.28	210.383	23.23	24	Pass
140	5700	17.29	17.82	17.66	18.29	239.911	23.80	24	Pass
*144 (U-NII-2C)	5720	15.03	15.37	15.45	15.58	174.465	22.42	23.01	Pass
*144 (U-NII-3)	5720	10.81	11.25	10.99	11.04	64.272	18.08	30	Pass
149	5745	24.23	23.42	23.23	23.42	914.8	29.61	30	Pass
157	5785	24.22	23.38	23.20	23.43	911.234	29.60	30	Pass
165	5825	24.19	23.35	23.22	23.42	908.374	29.58	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 directional gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	21.75	21.65	295.841	24.71	30	Pass
46	5230	25.40	25.08	668.844	28.25	30	Pass
54	5270	20.79	20.71	237.711	23.76	24	Pass
62	5310	20.02	20.18	204.693	23.11	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
102	5510	17.32	17.69	17.58	18.28	237.277	23.75	24	Pass
110	5550	17.49	17.97	17.89	17.92	242.228	23.84	24	Pass
134	5670	17.57	17.91	17.86	17.90	241.703	23.83	24	Pass
*142 (U-NII-2C)	5710	16.25	16.45	16.51	16.50	221.64	23.46	24	Pass
*142 (U-NII-3)	5710	5.80	5.87	6.04	5.86	19.594	12.92	30	Pass
151	5755	23.92	23.44	23.45	23.76	926.398	29.67	30	Pass
159	5795	23.89	23.42	23.40	23.74	920.06	29.64	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	20.32	20.65	223.791	23.50	30	Pass
58	5290	19.22	20.31	190.959	22.81	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.59 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.65 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
106	5530	17.36	17.83	17.69	18.23	240.4	23.81	24	Pass
122	5610	17.42	17.82	17.64	17.88	235.194	23.71	24	Pass
*138 (U-NII-2C)	5690	16.12	16.72	16.56	16.58	227.504	23.57	24	Pass
*138 (U-NII-3)	5690	2.04	2.69	2.45	2.53	8.919	9.50	30	Pass
155	5775	22.02	22.28	21.82	21.99	638.445	28.05	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A 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 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE160)

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	5570	17.05	17.44	17.31	18.08	224.257	23.51	24	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-2C, the maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	22.04	21.74	309.235	24.90	30	Pass
40	5200	25.25	25.01	651.922	28.14	30	Pass
48	5240	25.34	25.03	660.399	28.20	30	Pass
52	5260	20.65	20.54	229.385	23.61	24	Pass
60	5300	20.66	20.47	227.842	23.58	24	Pass
64	5320	20.71	20.60	232.576	23.67	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 3.21 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the directional gain is 3.54 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
100	5500	16.79	17.11	16.98	17.05	199.745	23.00	24	Pass
116	5580	16.84	17.20	17.07	17.12	203.243	23.08	24	Pass
140	5700	17.21	17.73	17.54	18.11	233.363	23.68	24	Pass
*144 (U-NII-2C)	5720	14.92	15.25	15.33	15.45	169.698	22.30	23.01	Pass
*144 (U-NII-3)	5720	10.70	11.13	10.87	10.91	62.518	17.96	30	Pass
149	5745	24.06	23.26	23.10	23.27	883.017	29.46	30	Pass
157	5785	24.04	23.23	23.06	23.26	878.029	29.44	30	Pass
165	5825	24.02	23.20	23.08	23.26	876.35	29.43	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Please refer to 3.2 section for directional gain
3. For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.91 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	21.67	21.62	292.104	24.66	30	Pass
46	5230	25.23	24.92	643.882	28.09	30	Pass
54	5270	20.66	20.59	230.964	23.64	24	Pass
62	5310	19.98	20.01	199.771	23.01	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 3.21 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the directional gain is 3.54 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
102	5510	17.29	17.61	17.52	18.19	233.667	23.69	24	Pass
110	5550	17.35	17.82	17.73	17.77	233.993	23.69	24	Pass
134	5670	17.42	17.75	17.69	17.74	232.952	23.67	24	Pass
*142 (U-NII-2C)	5710	16.14	16.33	16.39	16.37	215.593	23.34	24	Pass
*142 (U-NII-3)	5710	5.69	5.75	5.92	5.73	19.06	12.80	30	Pass
151	5755	23.75	23.30	23.29	23.61	893.853	29.51	30	Pass
159	5795	23.72	23.28	23.25	23.58	887.702	29.48	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Please refer to 3.2 section for directional gain
3. For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.91 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	20.27	20.59	220.966	23.44	30	Pass
58	5290	19.17	20.27	189.018	22.77	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 3.21 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the directional gain is 3.54 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
106	5530	17.24	17.75	17.55	18.03	232.951	23.67	24	Pass
122	5610	17.28	17.65	17.50	17.71	226.921	23.56	24	Pass
*138 (U-NII-2C)	5690	16.01	16.60	16.44	16.45	221.291	23.45	24	Pass
*138 (U-NII-3)	5690	1.93	2.57	2.33	2.40	8.675	9.38	30	Pass
155	5775	21.86	22.13	21.68	21.84	616.755	27.90	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Please refer to 3.2 section for directional gain
3. For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.91 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT160) 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	5570	16.99	17.37	17.29	18.04	221.838	23.46	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	22.18	21.87	319.012	25.04	30	Pass
40	5200	25.40	25.13	672.574	28.28	30	Pass
48	5240	25.48	25.16	681.278	28.33	30	Pass
52	5260	20.75	20.66	235.263	23.72	24	Pass
60	5300	20.79	20.61	235.03	23.71	24	Pass
64	5320	20.85	20.72	239.651	23.80	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 3.21 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the directional gain is 3.54 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
100	5500	16.93	17.26	17.14	17.20	206.77	23.15	24	Pass
116	5580	16.99	17.34	17.22	17.28	210.383	23.23	24	Pass
140	5700	17.29	17.82	17.66	18.29	239.911	23.80	24	Pass
*144 (U-NII-2C)	5720	15.03	15.37	15.45	15.58	174.465	22.42	23.01	Pass
*144 (U-NII-3)	5720	10.81	11.25	10.99	11.04	64.272	18.08	30	Pass
149	5745	24.23	23.42	23.23	23.42	914.8	29.61	30	Pass
157	5785	24.22	23.38	23.20	23.43	911.234	29.60	30	Pass
165	5825	24.19	23.35	23.22	23.42	908.374	29.58	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Please refer to 3.2 section for directional gain
3. For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.91 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	21.75	21.65	295.841	24.71	30	Pass
46	5230	25.40	25.08	668.844	28.25	30	Pass
54	5270	20.79	20.71	237.711	23.76	24	Pass
62	5310	20.02	20.18	204.693	23.11	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 3.21 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the directional gain is 3.54 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
102	5510	17.32	17.69	17.58	18.28	237.277	23.75	24	Pass
110	5550	17.49	17.97	17.89	17.92	242.228	23.84	24	Pass
134	5670	17.57	17.91	17.86	17.90	241.703	23.83	24	Pass
*142 (U-NII-2C)	5710	16.25	16.45	16.51	16.50	221.64	23.46	24	Pass
*142 (U-NII-3)	5710	5.80	5.87	6.04	5.86	19.594	12.92	30	Pass
151	5755	23.92	23.44	23.45	23.76	926.398	29.67	30	Pass
159	5795	23.89	23.42	23.40	23.74	920.06	29.64	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Please refer to 3.2 section for directional gain
3. For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.91 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80) Beamforming

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	20.32	20.65	223.791	23.50	30	Pass
58	5290	19.22	20.31	190.959	22.81	24	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 3.21 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the directional gain is 3.54 dBi < 6 dBi, so the output power limit shall not be reduced.

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				
106	5530	17.36	17.83	17.69	18.23	240.4	23.81	24	Pass
122	5610	17.42	17.82	17.64	17.88	235.194	23.71	24	Pass
*138 (U-NII-2C)	5690	16.12	16.72	16.56	16.58	227.504	23.57	24	Pass
*138 (U-NII-3)	5690	2.04	2.69	2.45	2.53	8.919	9.50	30	Pass
155	5775	22.02	22.28	21.82	21.99	638.445	28.05	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. Please refer to 3.2 section for directional gain
3. For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the directional gain is 4.91 dBi < 6 dBi, so the output power limit shall not be reduced.

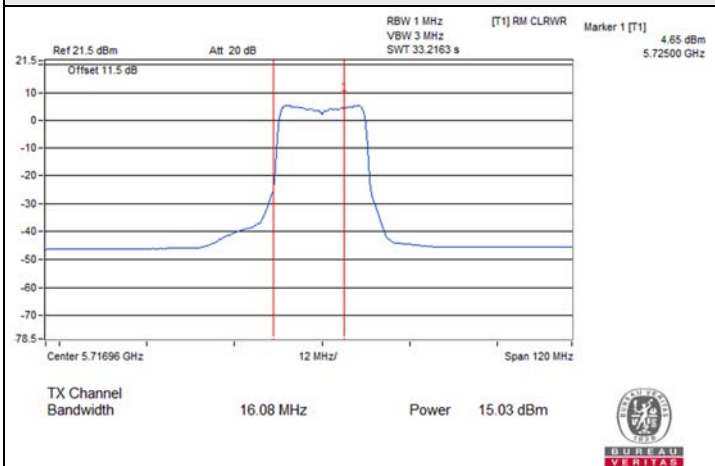
802.11ax (HE160) Beamforming

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	5570	17.05	17.44	17.31	18.08	224.257	23.51	24	Pass

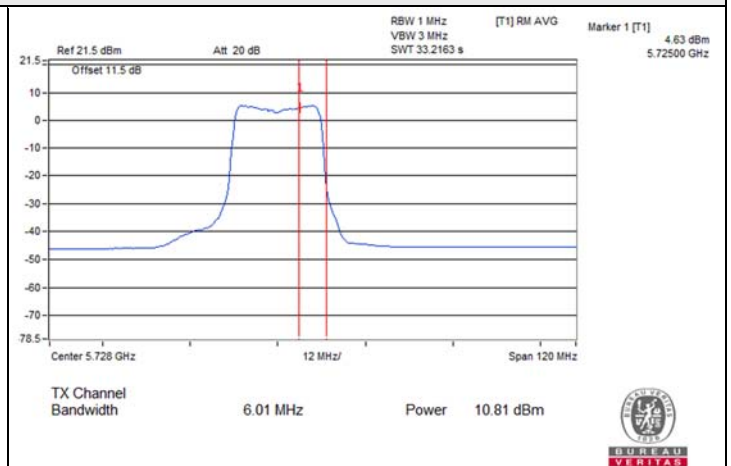
Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the output power limit shall not be reduced.

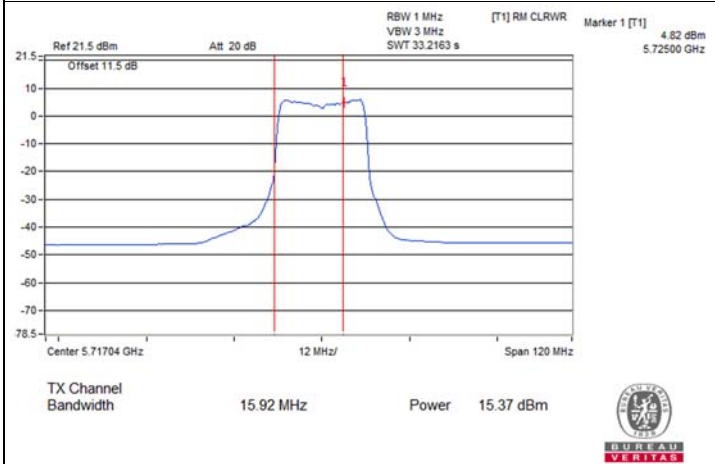
Spectrum Plot for channel straddling



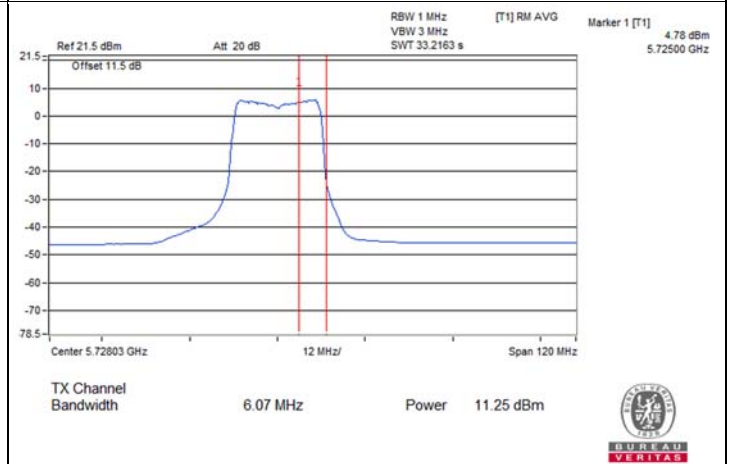
802.11ax (HE20) / Chain 0 : CH 144 (U-NII-2C)



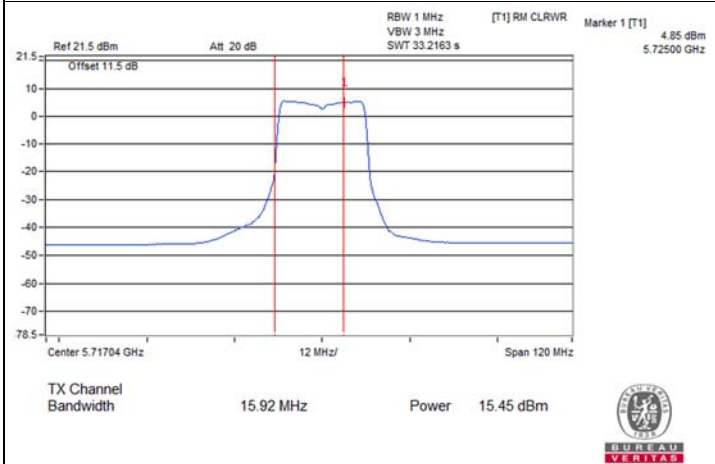
802.11ax (HE20) / Chain 0 : CH 144 (U-NII-3)



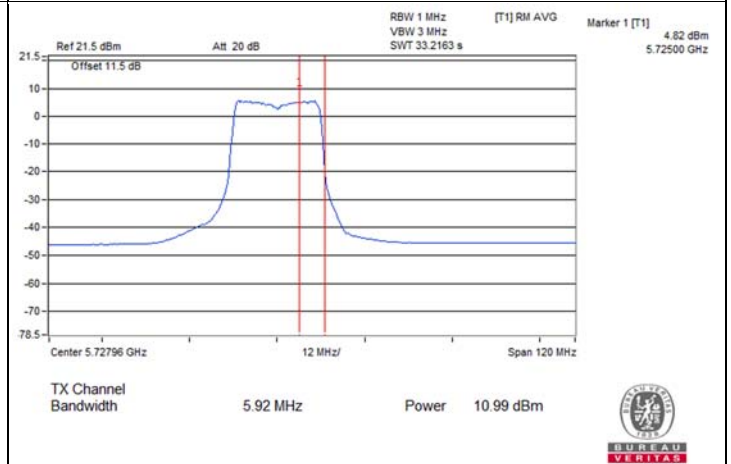
802.11ax (HE20) / Chain 1 : CH 144 (U-NII-2C)



802.11ax (HE20) / Chain 1 : CH 144 (U-NII-3)

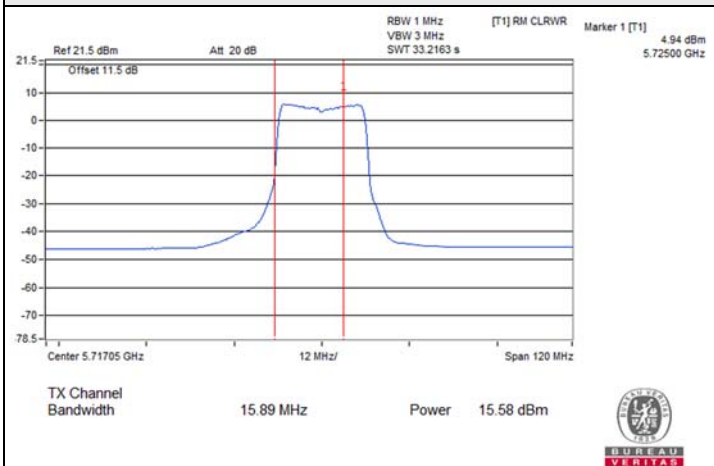


802.11ax (HE20) / Chain 2 : CH 144 (U-NII-2C)

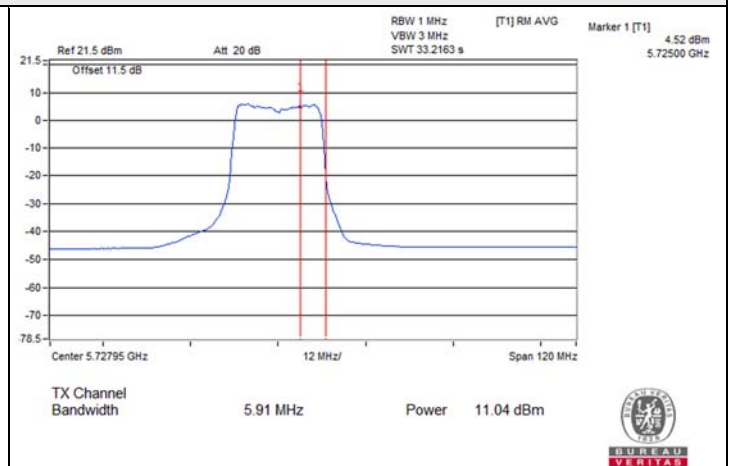


802.11ax (HE20) / Chain 2 : CH 144 (U-NII-3)

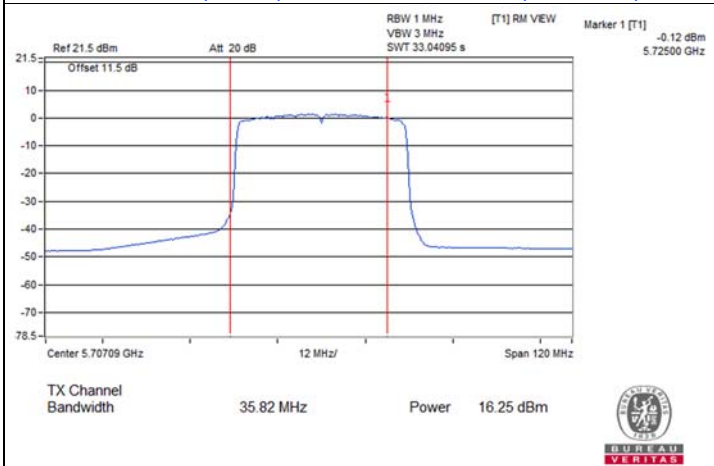
Spectrum Plot for channel straddling



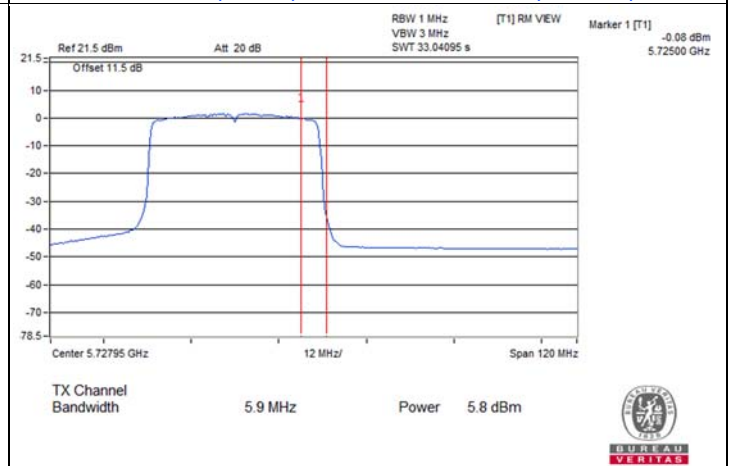
802.11ax (HE20) / Chain 3 : CH 144 (U-NII-2C)



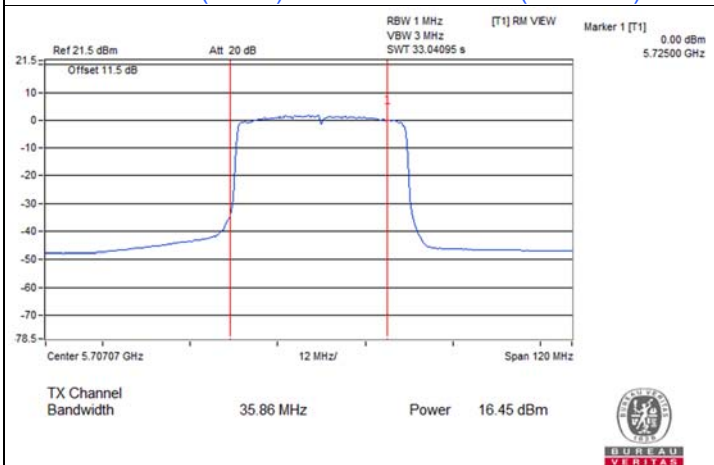
802.11ax (HE20) / Chain 3 : CH 144 (U-NII-3)



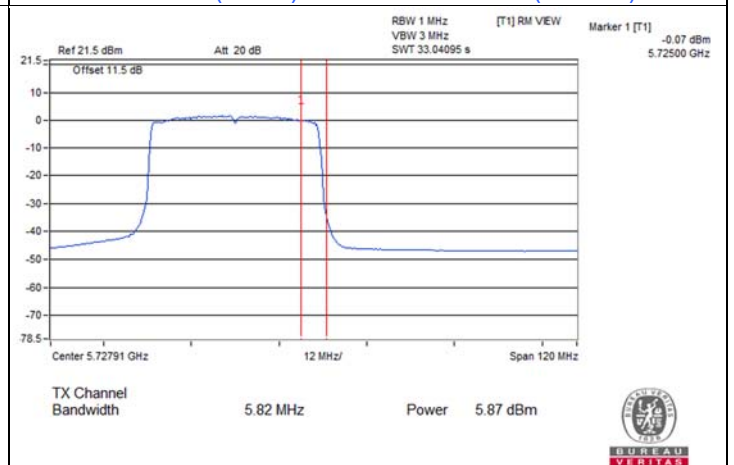
802.11ax (HE40) / Chain 0 : CH 142 (U-NII-2C)



802.11ax (HE40) / Chain 0 : CH 142 (U-NII-3)

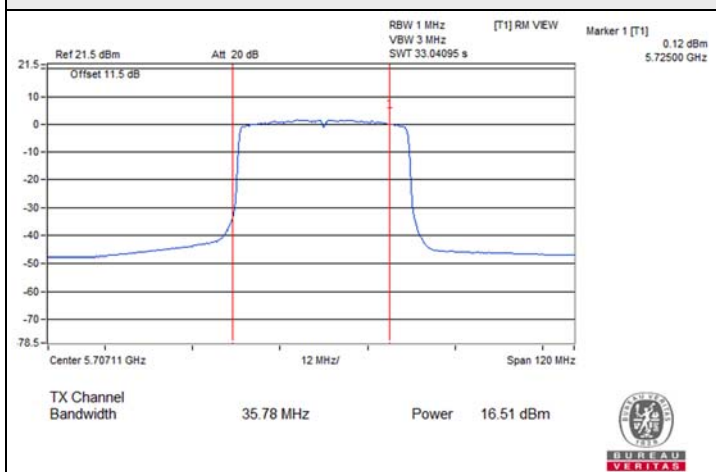


802.11ax (HE40) / Chain 1 : CH 142 (U-NII-2C)

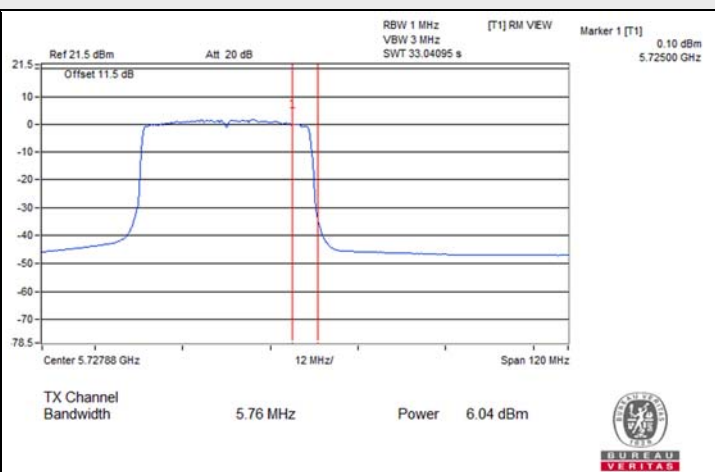


802.11ax (HE40) / Chain 1 : CH 142 (U-NII-3)

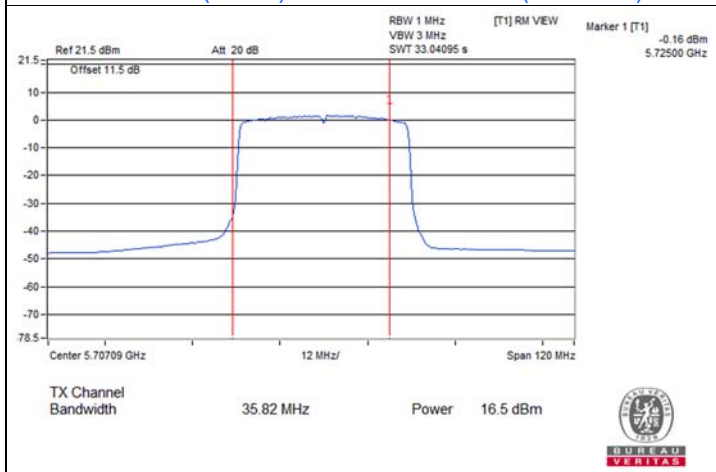
Spectrum Plot for channel straddling



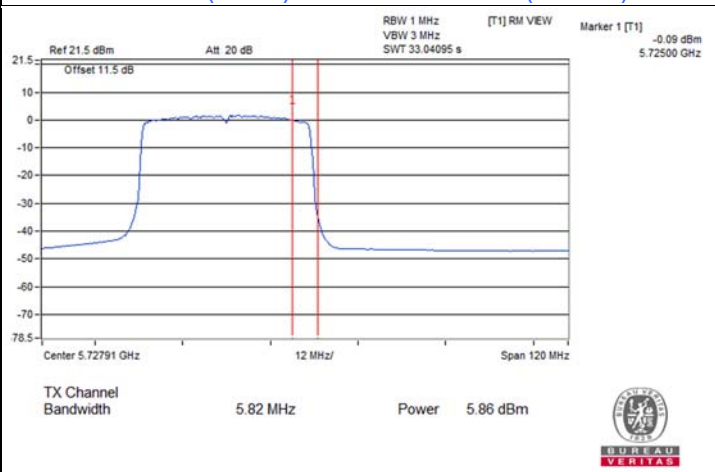
802.11ax (HE40) / Chain 2 : CH 142 (U-NII-2C)



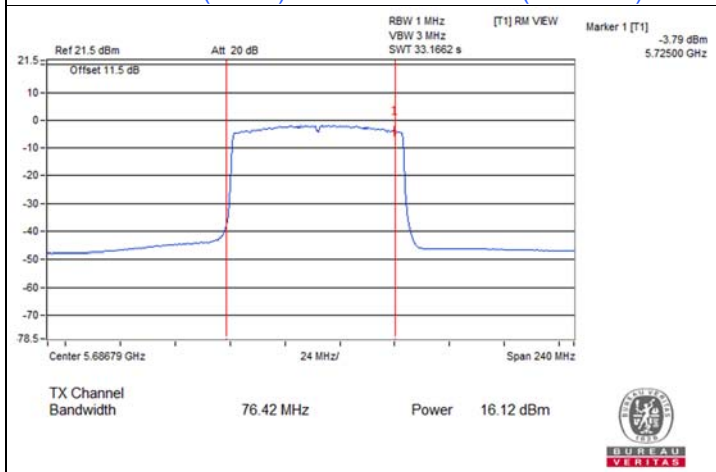
802.11ax (HE40) / Chain 2 : CH 142 (U-NII-3)



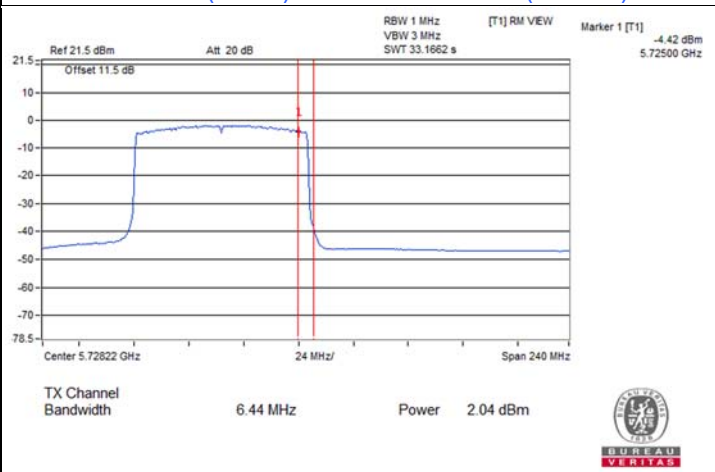
802.11ax (HE40) / Chain 3 : CH 142 (U-NII-2C)



802.11ax (HE40) / Chain 3 : CH 142 (U-NII-3)

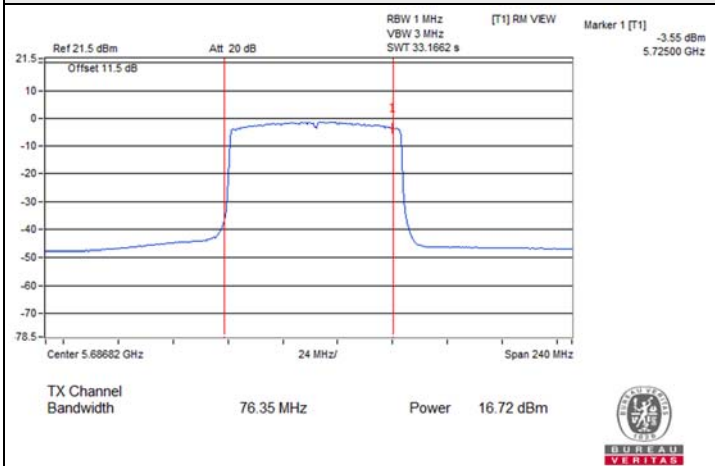


802.11ax (HE80) / Chain 0 : CH 138 (U-NII-2C)

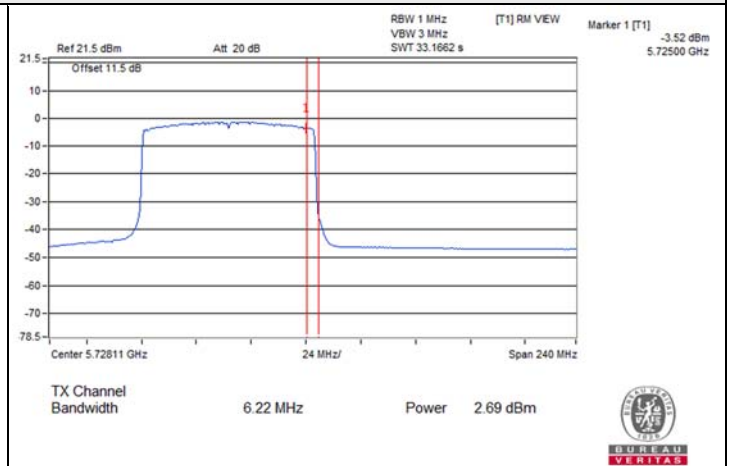


802.11ax (HE80) / Chain 0 : CH 138 (U-NII-3)

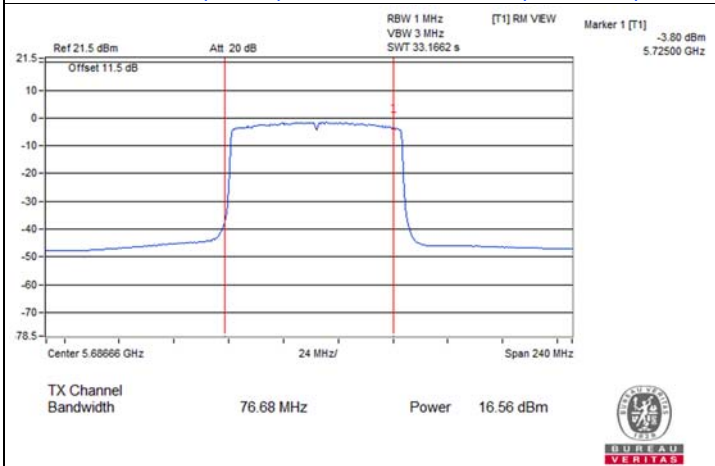
Spectrum Plot for channel straddling



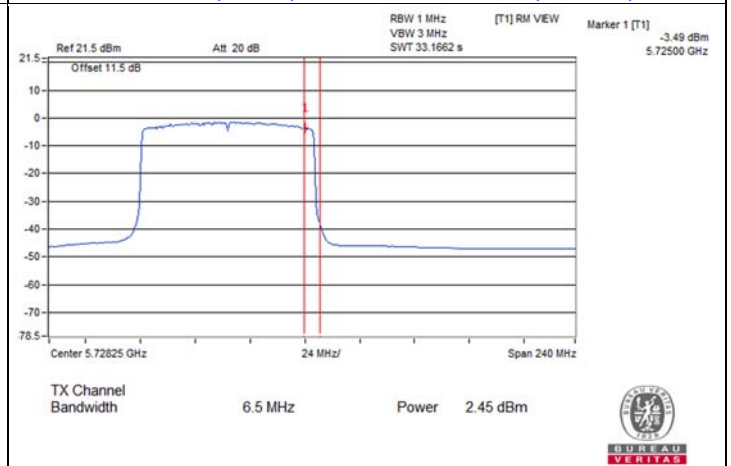
802.11ax (HE80) / Chain 1 : CH 138 (U-NII-2C)



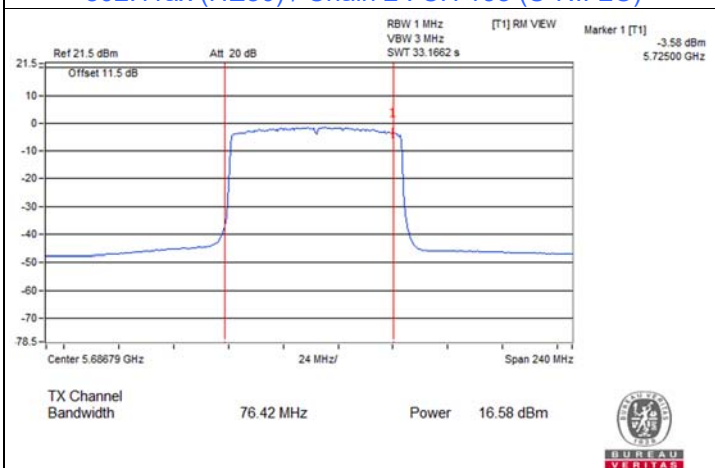
802.11ax (HE80) / Chain 1 : CH 138 (U-NII-3)



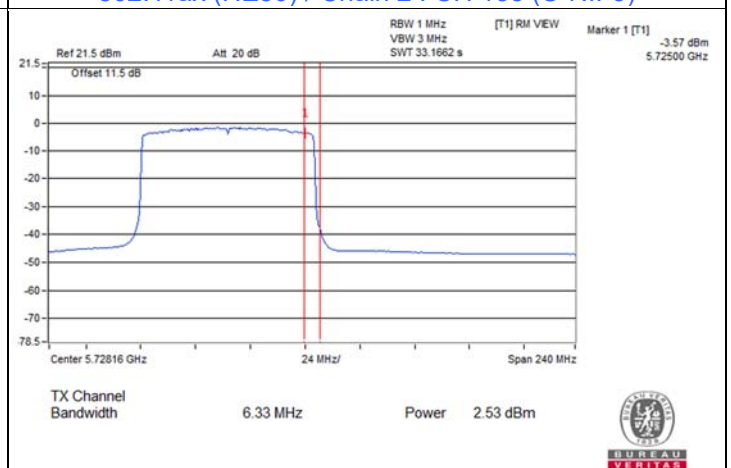
802.11ax (HE80) / Chain 2 : CH 138 (U-NII-2C)



802.11ax (HE80) / Chain 2 : CH 138 (U-NII-3)



802.11ax (HE80) / Chain 3 : CH 138 (U-NII-2C)



802.11ax (HE80) / Chain 3 : CH 138 (U-NII-3)

NSS 4

802.11n (HT20)

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				
100	5500	16.17	16.50	16.31	16.41	172.577	22.37	24	Pass
116	5580	17.05	17.35	17.30	17.39	213.555	23.30	24	Pass
140	5700	17.24	17.64	17.49	17.83	227.821	23.58	24	Pass
*144 (U-NII-2C)	5720	14.84	15.23	15.37	15.32	166.067	22.20	23.04	Pass
*144 (U-NII-3)	5720	10.49	10.86	10.92	10.89	60.275	17.80	30	Pass
149	5745	23.53	23.63	23.56	23.36	899.856	29.54	30	Pass
157	5785	23.47	23.54	23.50	23.31	886.436	29.48	30	Pass
165	5825	23.44	23.55	23.51	23.34	887.428	29.48	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Directional gain is the maximum gain of antennas.
- For U-NII-2C, the directional gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the directional gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40)

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				
102	5510	17.27	17.64	17.61	18.03	232.62	23.67	24	Pass
110	5550	17.24	17.60	17.40	17.52	221.958	23.46	24	Pass
134	5670	17.28	17.61	17.55	17.55	224.904	23.52	24	Pass
*142 (U-NII-2C)	5710	15.77	16.12	16.40	16.32	208.028	23.18	24	Pass
*142 (U-NII-3)	5710	5.31	5.61	5.84	5.72	18.392	12.65	30	Pass
151	5755	23.25	23.04	23.28	23.36	842.306	29.25	30	Pass
159	5795	23.22	23.01	23.31	23.39	842.442	29.26	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Directional gain is the maximum gain of antennas.
- For U-NII-2C, the maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20)

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				
100	5500	16.28	16.64	16.44	16.54	177.731	22.50	24	Pass
116	5580	17.16	17.48	17.42	17.53	219.807	23.42	24	Pass
140	5700	17.29	17.75	17.54	17.95	232.274	23.66	24	Pass
*144 (U-NII-2C)	5720	14.95	15.35	15.49	15.45	170.731	22.32	23.04	Pass
*144 (U-NII-3)	5720	10.60	10.98	11.04	11.02	61.967	17.92	30	Pass
149	5745	23.67	23.77	23.69	23.48	927.768	29.67	30	Pass
157	5785	23.60	23.69	23.63	23.42	913.431	29.61	30	Pass
165	5825	23.57	23.70	23.65	23.46	915.492	29.62	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Directional gain is the maximum gain of antennas.
- For U-NII-2C, the directional gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the directional gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40)

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				
102	5510	17.31	17.67	17.64	18.22	236.757	23.74	24	Pass
110	5550	17.37	17.75	17.52	17.65	228.846	23.60	24	Pass
134	5670	17.41	17.74	17.68	17.70	232.008	23.66	24	Pass
*142 (U-NII-2C)	5710	15.88	16.24	16.52	16.45	213.872	23.30	24	Pass
*142 (U-NII-3)	5710	5.42	5.73	5.96	5.85	18.909	12.77	30	Pass
151	5755	23.37	23.15	23.41	23.50	866.961	29.38	30	Pass
159	5795	23.35	23.13	23.45	23.54	869.114	29.39	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Directional gain is the maximum gain of antennas.
- For U-NII-2C, the maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80)

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				
106	5530	17.29	17.87	17.57	18.06	235.936	23.73	24	Pass
122	5610	17.32	17.76	17.58	17.79	231.052	23.64	24	Pass
*138 (U-NII-2C)	5690	16.08	16.51	16.53	16.55	223.01	23.48	24	Pass
*138 (U-NII-3)	5690	2.14	2.37	2.35	2.29	8.61	9.35	30	Pass
155	5775	21.10	21.76	21.75	21.45	568.054	27.54	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Directional gain is the maximum gain of antennas.
- For U-NII-2C, the maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT160)

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	5570	17.01	17.39	17.27	18.04	222.075	23.46	24	Pass

Notes:

- Directional gain is the maximum gain of antennas.
- For U-NII-2C, the maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20)

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				
100	5500	16.43	16.82	16.59	16.70	184.415	22.66	24	Pass
116	5580	17.31	17.63	17.58	17.69	227.798	23.58	24	Pass
140	5700	17.35	17.88	17.67	18.03	237.713	23.76	24	Pass
*144 (U-NII-2C)	5720	15.06	15.47	15.61	15.58	175.526	22.44	23.04	Pass
*144 (U-NII-3)	5720	10.71	11.10	11.16	11.15	63.707	18.04	30	Pass
149	5745	23.82	23.95	23.85	23.62	962.109	29.83	30	Pass
157	5785	23.76	23.86	23.79	23.58	948.27	29.77	30	Pass
165	5825	23.73	23.87	23.83	23.61	950.99	29.78	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Directional gain is the maximum gain of antennas.
- For U-NII-2C, the directional gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the directional gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40)

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				
102	5510	17.35	17.72	17.62	18.34	239.525	23.79	24	Pass
110	5550	17.52	17.93	17.67	17.81	237.454	23.76	24	Pass
134	5670	17.56	17.91	17.84	17.88	241.008	23.82	24	Pass
*142 (U-NII-2C)	5710	15.99	16.36	16.64	16.58	219.88	23.42	24	Pass
*142 (U-NII-3)	5710	5.53	5.85	6.08	5.98	19.44	12.89	30	Pass
151	5755	23.53	23.30	23.57	23.68	900.076	29.54	30	Pass
159	5795	23.51	23.28	23.62	23.70	901.769	29.55	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Directional gain is the maximum gain of antennas.
- For U-NII-2C, the maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80)

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				
106	5530	17.31	17.96	17.65	18.11	239.269	23.79	24	Pass
122	5610	17.47	17.94	17.73	17.96	239.887	23.80	24	Pass
*138 (U-NII-2C)	5690	16.19	16.63	16.65	16.67	229.136	23.60	24	Pass
*138 (U-NII-3)	5690	2.25	2.49	2.47	2.41	8.846	9.47	30	Pass
155	5775	21.25	21.93	21.81	21.60	585.556	27.68	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Directional gain is the maximum gain of antennas.
- For U-NII-2C, the maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the maximum gain is 3.72 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE160)

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	5570	17.07	17.45	17.35	18.12	225.712	23.54	24	Pass

Notes:

- Directional gain is the maximum gain of antennas.
- For U-NII-2C, the maximum gain is 3.69 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20) 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				
100	5500	16.28	16.64	16.44	16.54	177.731	22.50	24	Pass
116	5580	17.16	17.48	17.42	17.53	219.807	23.42	24	Pass
140	5700	17.29	17.75	17.54	17.95	232.274	23.66	24	Pass
*144 (U-NII-2C)	5720	14.95	15.35	15.49	15.45	172.586	22.37	23.01	Pass
*144 (U-NII-3)	5720	10.60	10.98	11.04	11.02	62.641	17.97	30	Pass
149	5745	23.67	23.77	23.69	23.48	927.768	29.67	30	Pass
157	5785	23.60	23.69	23.63	23.42	913.431	29.61	30	Pass
165	5825	23.57	23.70	23.65	23.46	915.492	29.62	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Please refer to 3.2 section for directional gain
- For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the directional gain is 4.91 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40) 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				
102	5510	17.31	17.67	17.64	18.22	236.757	23.74	24	Pass
110	5550	17.37	17.75	17.52	17.65	228.846	23.60	24	Pass
134	5670	17.41	17.74	17.68	17.70	232.008	23.66	24	Pass
*142 (U-NII-2C)	5710	15.88	16.24	16.52	16.45	213.872	23.30	24	Pass
*142 (U-NII-3)	5710	5.42	5.73	5.96	5.85	18.909	12.77	30	Pass
151	5755	23.37	23.15	23.41	23.50	866.961	29.38	30	Pass
159	5795	23.35	23.13	23.45	23.54	869.114	29.39	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Please refer to 3.2 section for directional gain
- For U-NII-2C, the directional gain is 2.47 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the directional gain is 2.33 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80) 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				
106	5530	17.29	17.87	17.57	18.06	235.936	23.73	24	Pass
122	5610	17.32	17.76	17.58	17.79	231.052	23.64	24	Pass
*138 (U-NII-2C)	5690	16.08	16.51	16.53	16.55	223.01	23.48	24	Pass
*138 (U-NII-3)	5690	2.14	2.37	2.35	2.29	8.61	9.35	30	Pass
155	5775	21.10	21.76	21.75	21.45	568.054	27.54	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Please refer to 3.2 section for directional gain
- For U-NII-2C, the directional gain is 2.47 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the directional gain is 2.33 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT160) 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	5570	17.01	17.39	17.27	18.04	222.075	23.46	24	Pass

Notes:

- Please refer to 3.2 section for directional gain
- For U-NII-2C, the directional gain is 2.47 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE20) 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				
100	5500	16.43	16.82	16.59	16.70	184.415	22.66	24	Pass
116	5580	17.31	17.63	17.58	17.69	227.798	23.58	24	Pass
140	5700	17.35	17.88	17.67	18.03	237.713	23.76	24	Pass
*144 (U-NII-2C)	5720	15.06	15.47	15.61	15.58	175.526	22.44	23.04	Pass
*144 (U-NII-3)	5720	10.71	11.10	11.16	11.15	63.707	18.04	30	Pass
149	5745	23.82	23.95	23.85	23.62	962.109	29.83	30	Pass
157	5785	23.76	23.86	23.79	23.58	948.27	29.77	30	Pass
165	5825	23.73	23.87	23.83	23.61	950.99	29.78	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Please refer to 3.2 section for directional gain
- For U-NII-2C, the directional gain is 2.47 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the directional gain is 2.33 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE40) 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				
102	5510	17.35	17.72	17.62	18.34	239.525	23.79	24	Pass
110	5550	17.52	17.93	17.67	17.81	237.454	23.76	24	Pass
134	5670	17.56	17.91	17.84	17.88	241.008	23.82	24	Pass
*142 (U-NII-2C)	5710	15.99	16.36	16.64	16.58	219.88	23.42	24	Pass
*142 (U-NII-3)	5710	5.53	5.85	6.08	5.98	19.44	12.89	30	Pass
151	5755	23.53	23.30	23.57	23.68	900.076	29.54	30	Pass
159	5795	23.51	23.28	23.62	23.70	901.769	29.55	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Please refer to 3.2 section for directional gain
- For U-NII-2C, the directional gain is 2.47 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the directional gain is 2.33 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ax (HE80) 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				
106	5530	17.31	17.96	17.65	18.11	239.269	23.79	24	Pass
122	5610	17.47	17.94	17.73	17.96	239.887	23.80	24	Pass
*138 (U-NII-2C)	5690	16.19	16.63	16.65	16.67	229.136	23.60	24	Pass
*138 (U-NII-3)	5690	2.25	2.49	2.47	2.41	8.846	9.47	30	Pass
155	5775	21.25	21.93	21.81	21.60	585.556	27.68	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- Please refer to 3.2 section for directional gain
- For U-NII-2C, the directional gain is 2.47 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the directional gain is 2.33 dBi < 6 dBi, so the output power limit shall not be reduced.

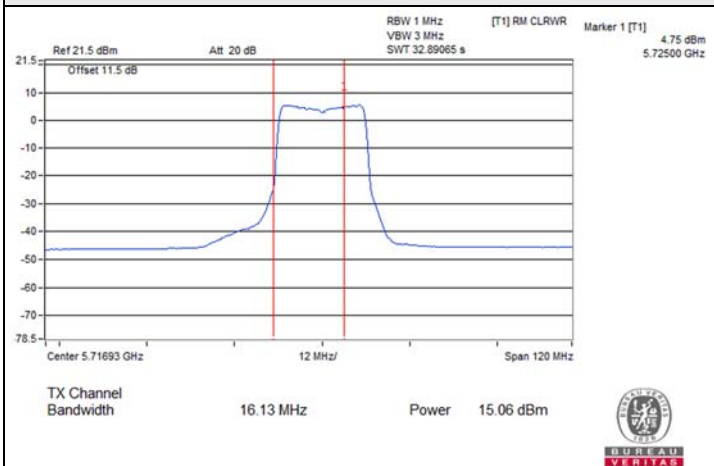
802.11ax (HE160) Beamforming

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	5570	17.07	17.45	17.35	18.12	225.712	23.54	24	Pass

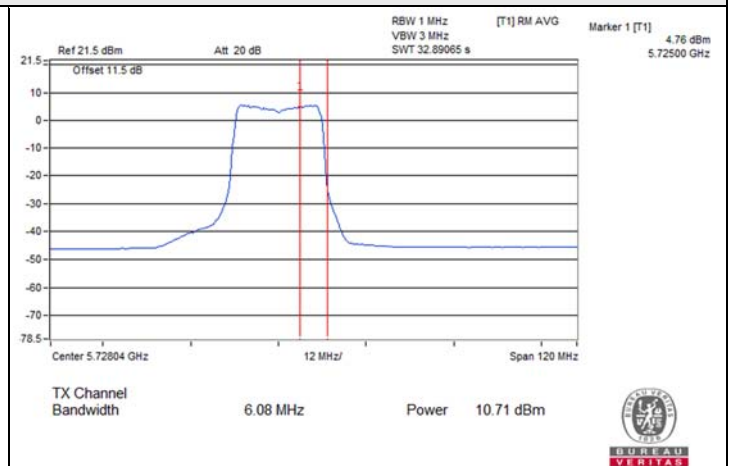
Notes:

- Directional gain is the maximum gain of antennas.
- For U-NII-2C, the directional gain is 2.47 dBi < 6 dBi, so the output power limit shall not be reduced.

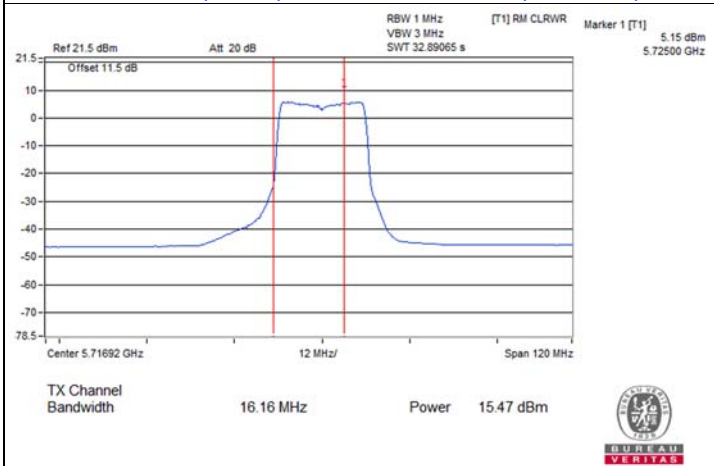
Spectrum Plot for channel straddling



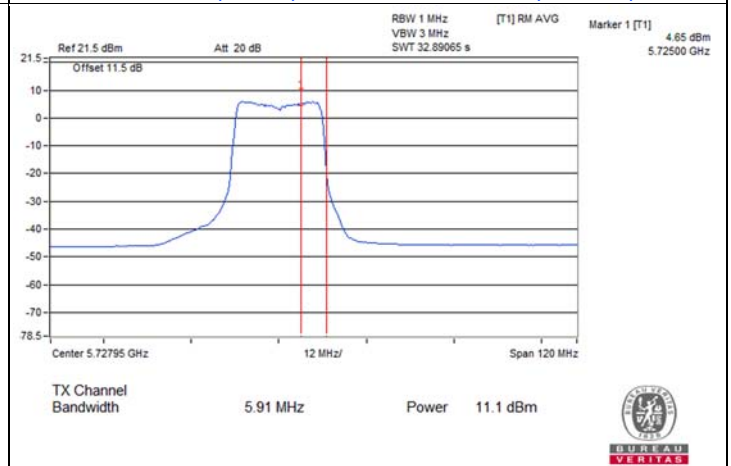
802.11ax (HE20) / Chain 0 : CH 144 (U-NII-2C)



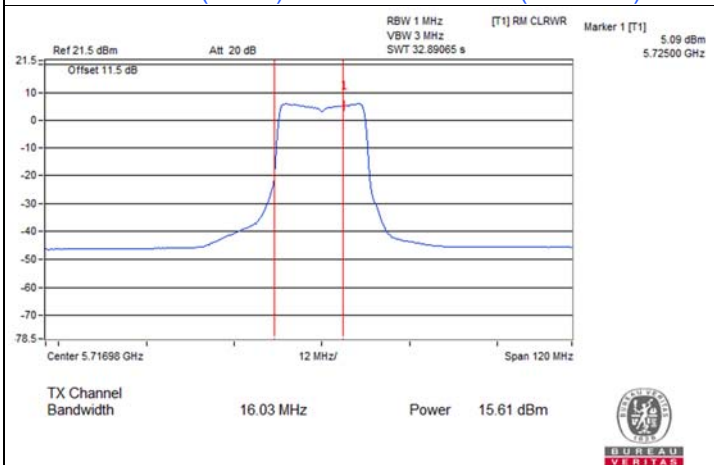
802.11ax (HE20) / Chain 0 : CH 144 (U-NII-3)



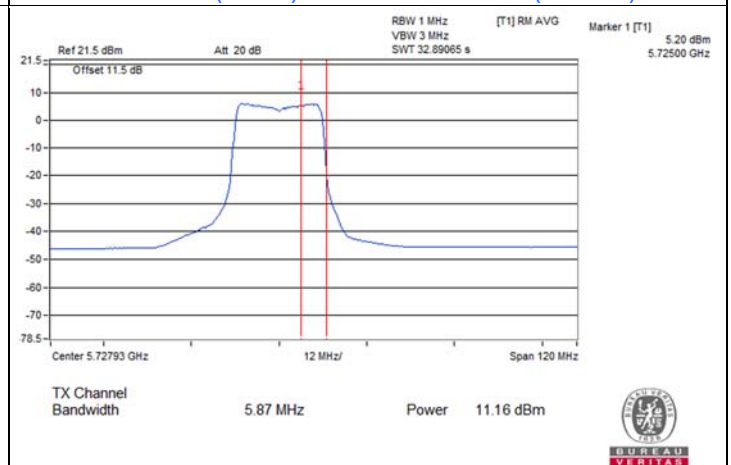
802.11ax (HE20) / Chain 1 : CH 144 (U-NII-2C)



802.11ax (HE20) / Chain 1 : CH 144 (U-NII-3)

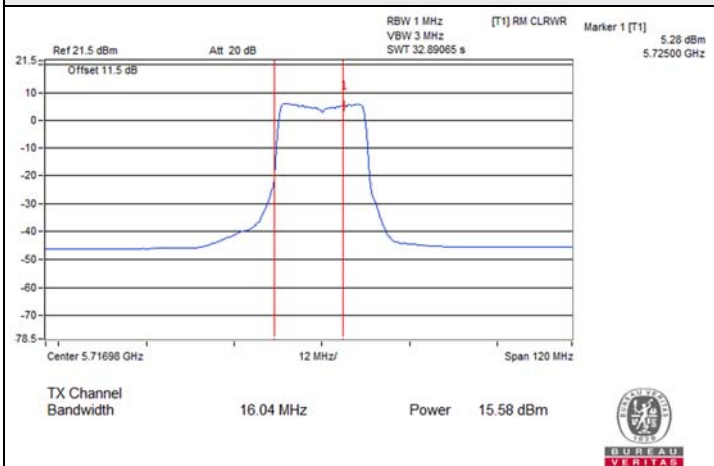


802.11ax (HE20) / Chain 2 : CH 144 (U-NII-2C)

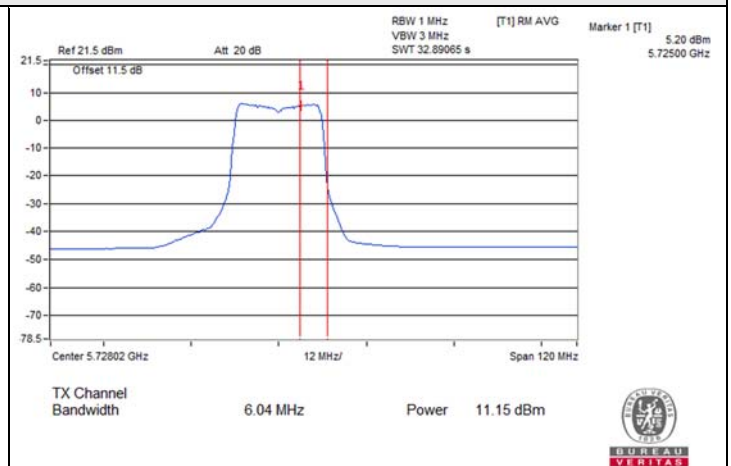


802.11ax (HE20) / Chain 2 : CH 144 (U-NII-3)

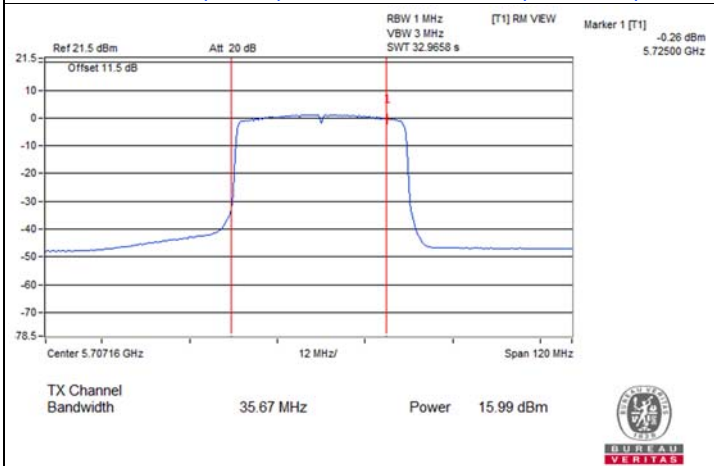
Spectrum Plot for channel straddling



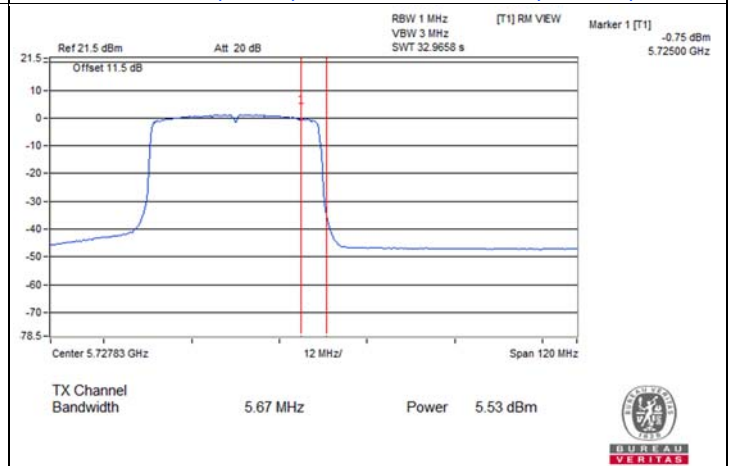
802.11ax (HE20) / Chain 3 : CH 144 (U-NII-2C)



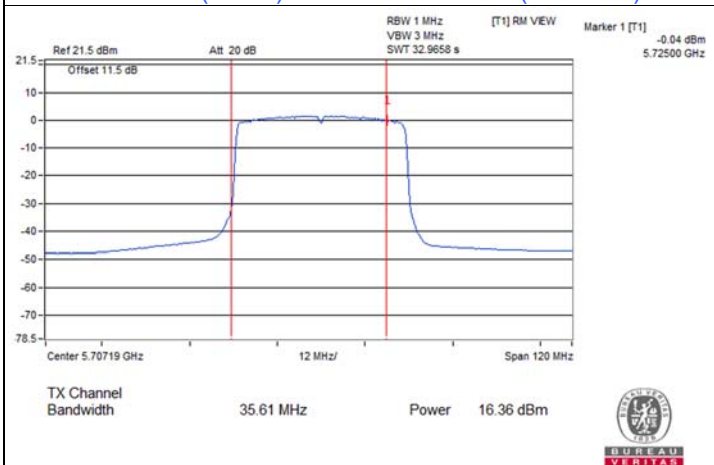
802.11ax (HE20) / Chain 3 : CH 144 (U-NII-3)



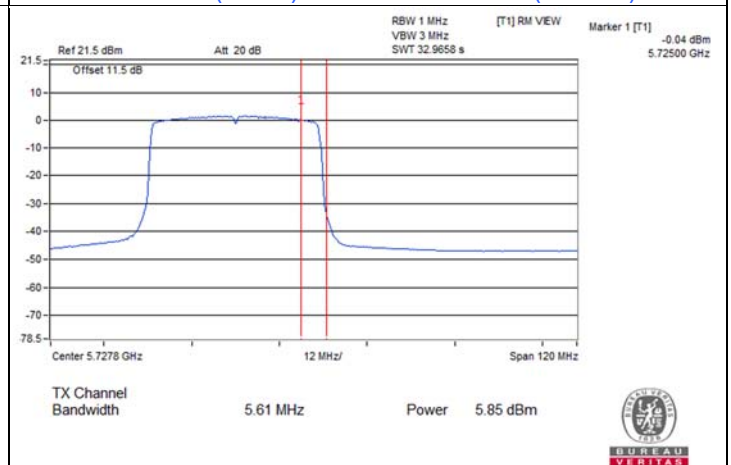
802.11ax (HE40) / Chain 0 : CH 142 (U-NII-2C)



802.11ax (HE40) / Chain 0 : CH 142 (U-NII-3)

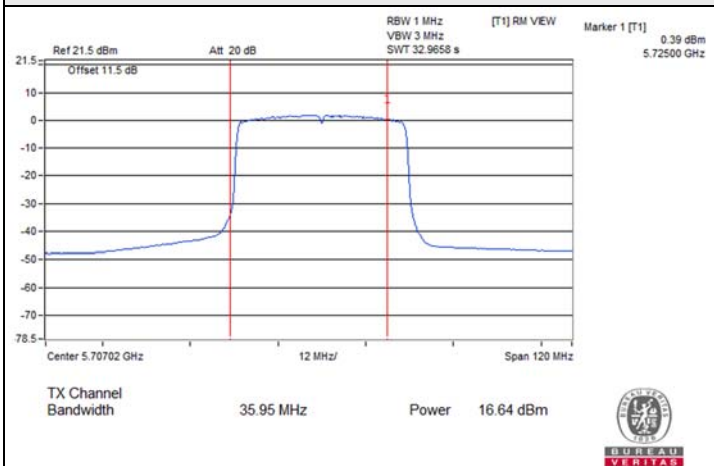


802.11ax (HE40) / Chain 1 : CH 142 (U-NII-2C)

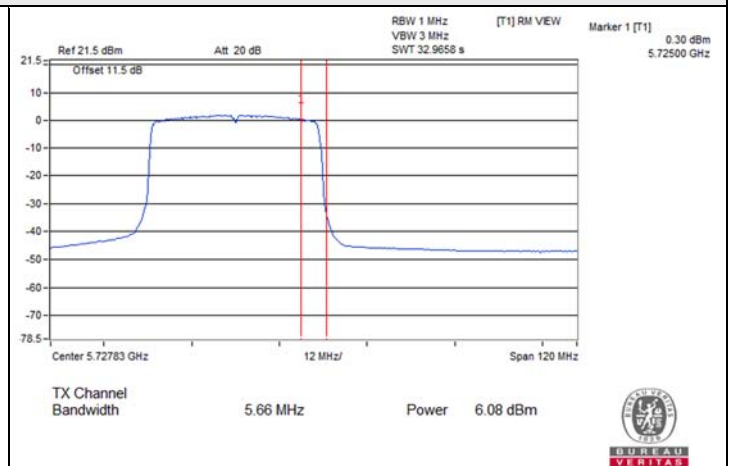


802.11ax (HE40) / Chain 1 : CH 142 (U-NII-3)

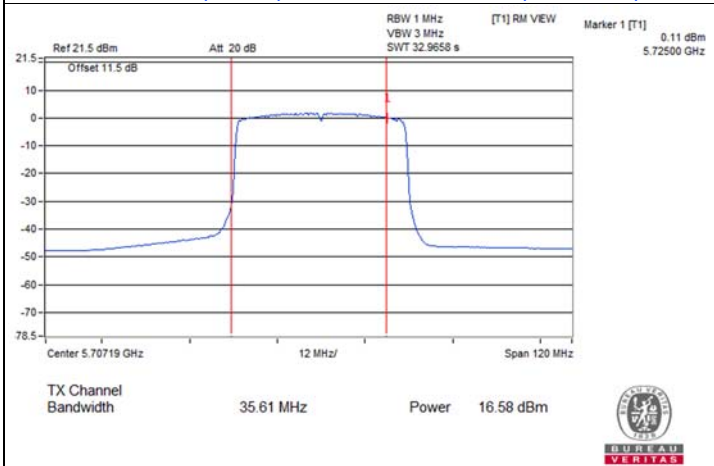
Spectrum Plot for channel straddling



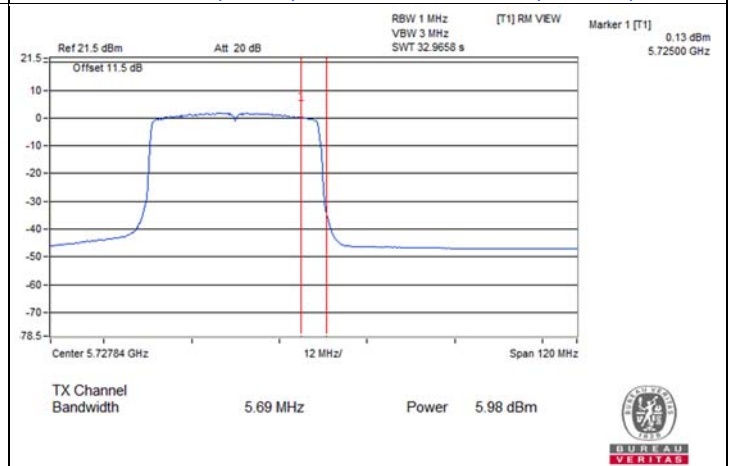
802.11ax (HE40) / Chain 2 : CH 142 (U-NII-2C)



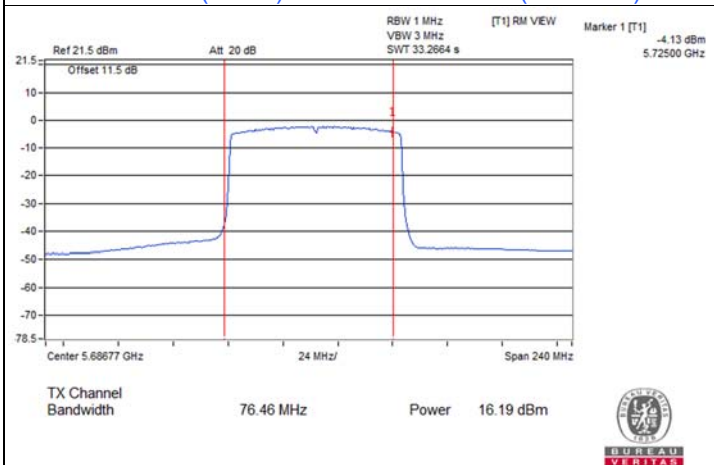
802.11ax (HE40) / Chain 2 : CH 142 (U-NII-3)



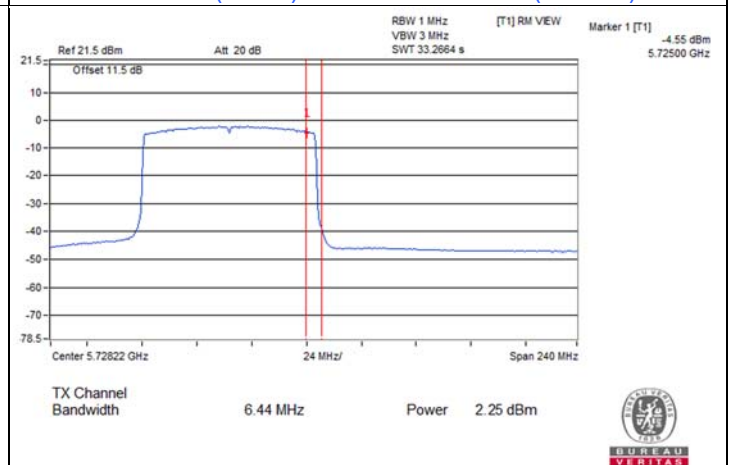
802.11ax (HE40) / Chain 3 : CH 142 (U-NII-2C)



802.11ax (HE40) / Chain 3 : CH 142 (U-NII-3)

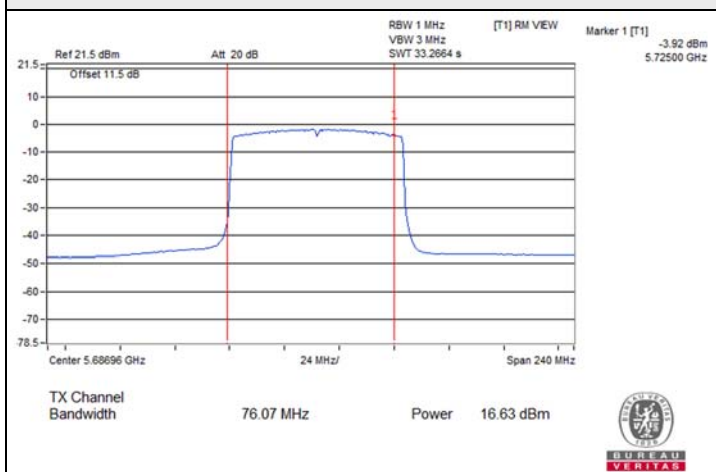


802.11ax (HE80) / Chain 0 : CH 138 (U-NII-2C)

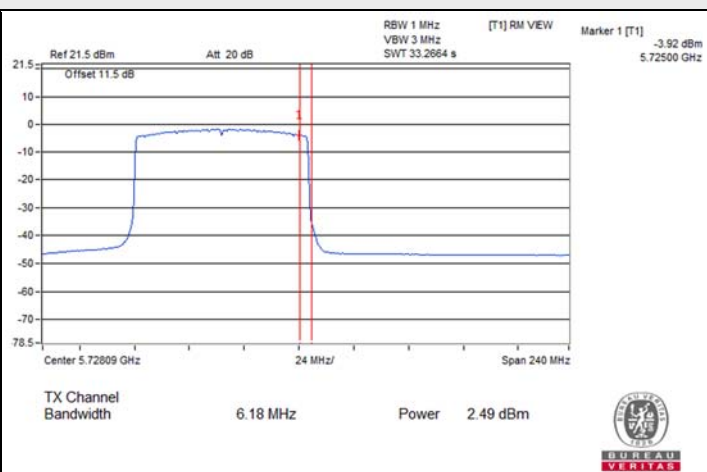


802.11ax (HE80) / Chain 0 : CH 138 (U-NII-3)

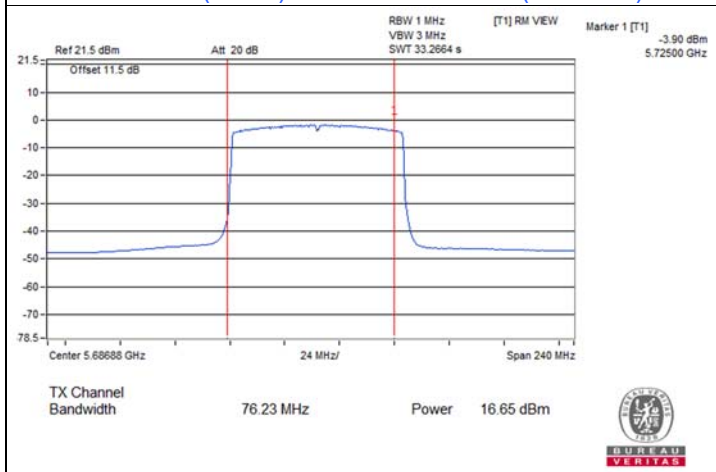
Spectrum Plot for channel straddling



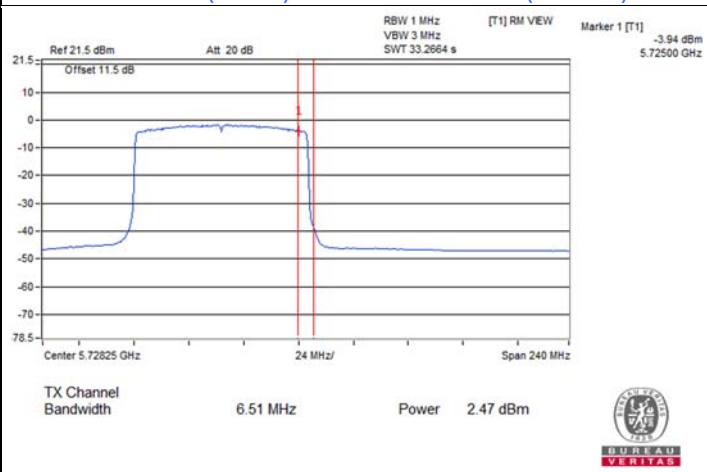
802.11ax (HE80) / Chain 1 : CH 138 (U-NII-2C)



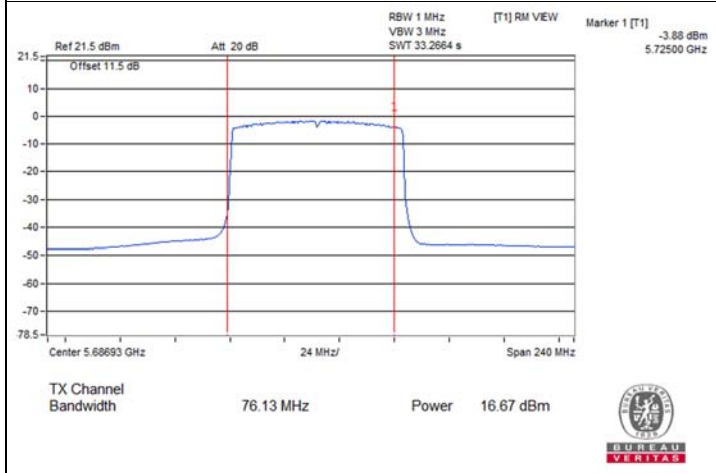
802.11ax (HE80) / Chain 1 : CH 138 (U-NII-3)



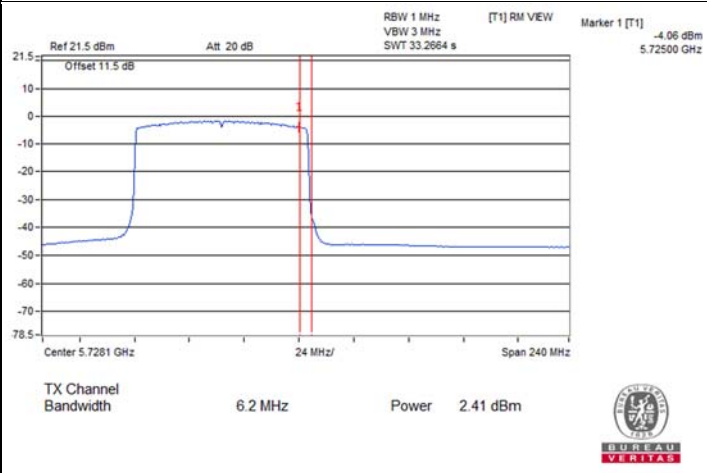
802.11ax (HE80) / Chain 2 : CH 138 (U-NII-2C)



802.11ax (HE80) / Chain 2 : CH 138 (U-NII-3)



802.11ax (HE80) / Chain 3 : CH 138 (U-NII-2C)



802.11ax (HE80) / Chain 3 : CH 138 (U-NII-3)

7.3 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Gary Lin
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NSS 1

802.11ax (HE20)

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				
140	5700	0.49	0.81	2.10	1.08	0.99	8.17	9.41	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 7.59 dBi > 6 dBi, so the power density limit shall be reduced to $11-(7.59-6) = 9.41$ dBm/MHz.

802.11ax (HE40)

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				
38	5190	4.14	4.35	0.27	7.53	17.00	Pass
62	5310	3.87	3.78	0.27	7.11	11.00	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 5.68 dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A, the directional gain is 5.69 dBi < 6 dBi, so the power density limit shall not be reduced.

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				
102	5510	0.25	0.70	0.62	0.62	1.04	7.61	9.41	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 7.59 dBi > 6 dBi, so the power density limit shall be reduced to $11-(7.59-6) = 9.41$ dBm/MHz.

802.11ax (HE80)

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				
42	5210	-0.72	0.15	0.29	3.04	17.00	Pass
58	5290	0.10	-0.15	0.29	3.28	11.00	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 5.68 dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A, the directional gain is 5.69 dBi < 6 dBi, so the power density limit shall not be reduced.

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				
106	5530	-3.25	-3.29	-3.30	-0.08	1.05	4.84	9.41	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 7.59 dBi > 6 dBi, so the power density limit shall be reduced to $11-(7.59-6) = 9.41$ dBm/MHz.

802.11ax (HE160)

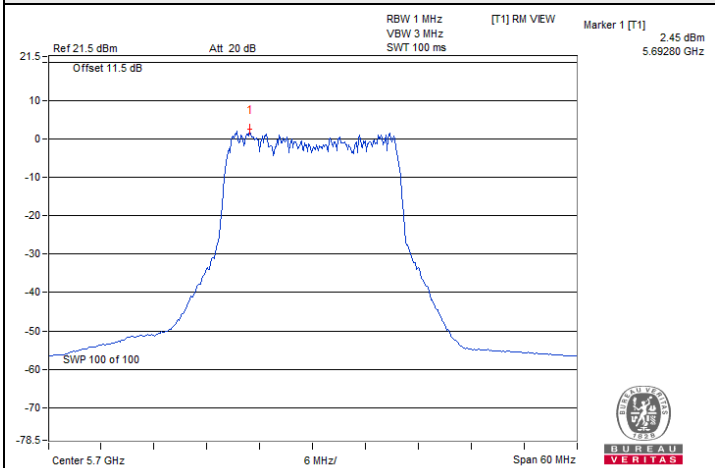
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
114	5570	-9.40	-5.53	-7.70	-7.30	0.68	-0.57	9.41	Pass

Notes:

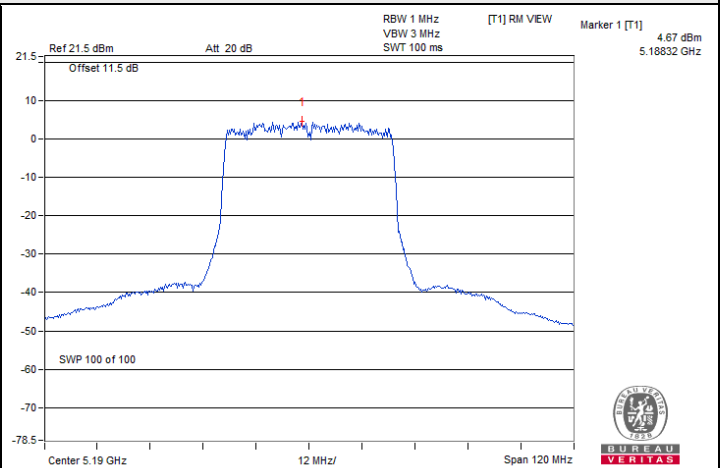
1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 7.59 dBi > 6 dBi, so the power density limit shall be reduced to $11-(7.59-6) = 9.41$ dBm/MHz.



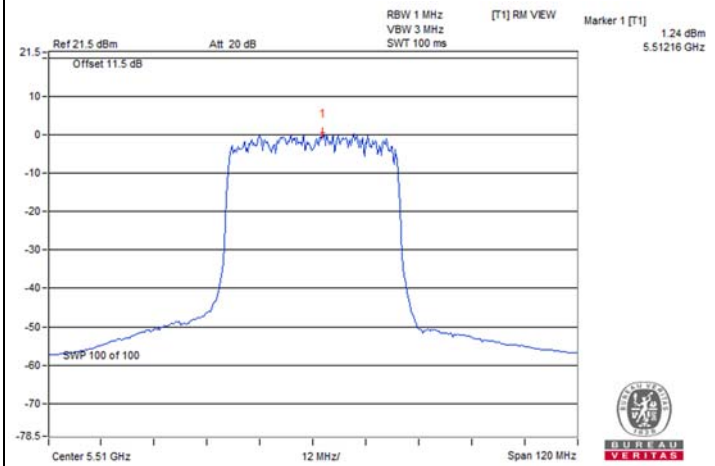
Spectrum Plot of Maximum Value



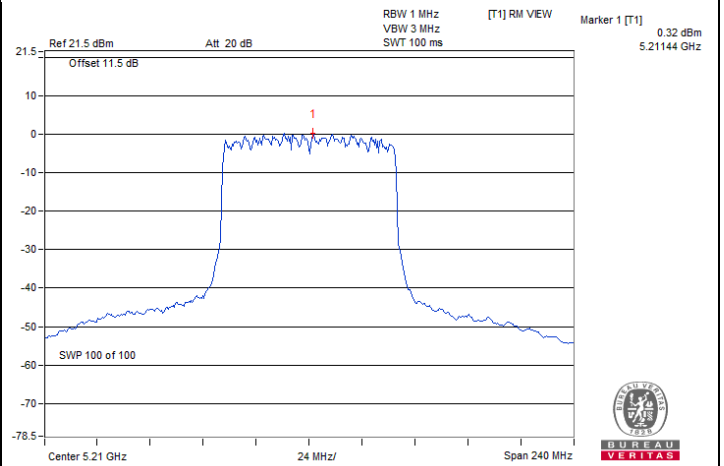
802.11ax (HE20) / Chain 2 : CH 140



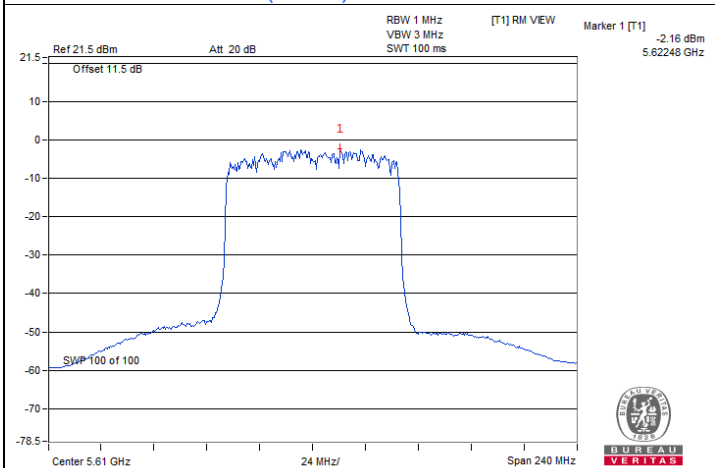
802.11ax (HE40) / Chain 1 : CH 38



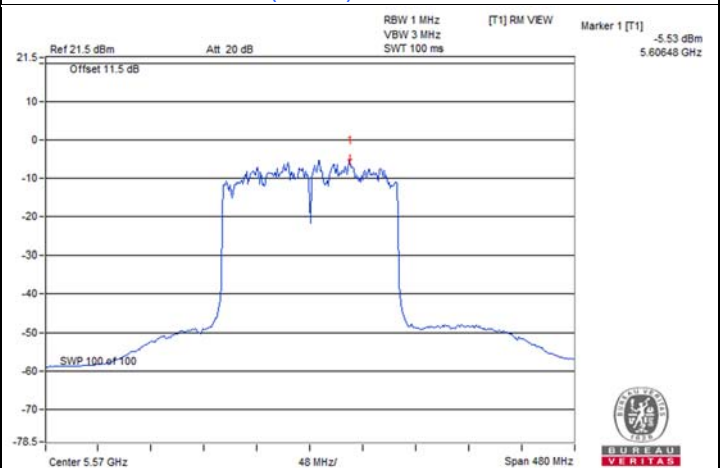
802.11ax (HE40) / Chain 1 : CH 102



802.11ax (HE80) / Chain 1 : CH 42



802.11ax (HE80) / Chain 0 : CH 122



802.11ax (HE160) / Chain 1 : CH 114

NSS 2

802.11ax (HE20)

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				
140	5700	3.42	2.70	0.49	4.29	1.03	9.99	11.00	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE40)

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				
38	5190	5.08	4.60	0.30	8.16	17.00	Pass
62	5310	3.51	3.92	0.30	7.03	11.00	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 3.21 dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A, the directional gain is 3.54 dBi < 6 dBi, so the power density limit shall not be reduced.

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				
102	5510	0.01	-0.02	-0.86	1.22	1.01	7.18	11.00	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE80)

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				
42	5210	1.10	0.82	0.29	4.26	17.00	Pass
58	5290	-0.01	0.49	0.29	3.55	11.00	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-1, the directional gain is 3.21 dBi < 6dBi, so the power density limit shall not be reduced.
3. For U-NII-2A, the directional gain is 3.54 dBi < 6 dBi, so the power density limit shall not be reduced.

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				
106	5530	-3.64	-2.44	-2.52	-2.01	1.05	4.46	11.00	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the power density limit shall not be reduced.

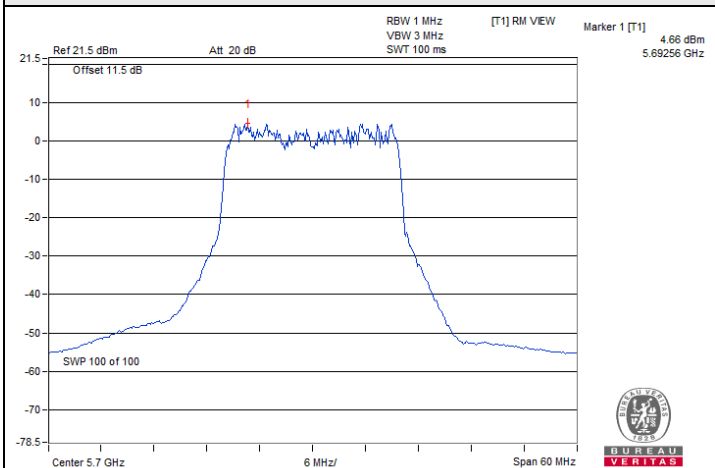
802.11ax (HE160)

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	5570	-6.39	-6.03	-6.10	-4.82	0.78	1.01	11.00	Pass

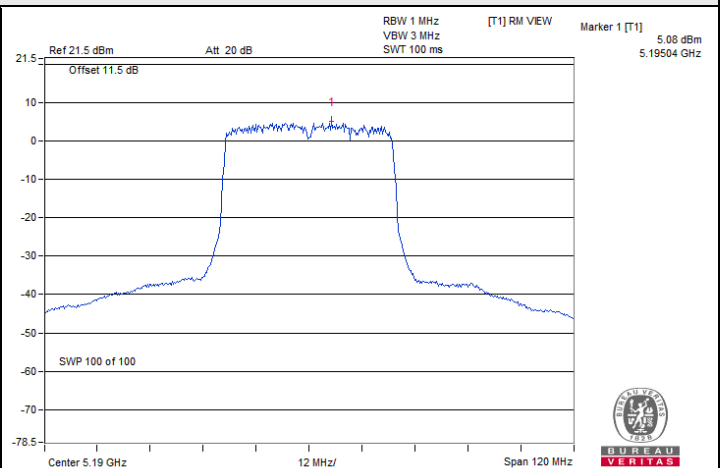
Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 5.56 dBi < 6 dBi, so the power density limit shall not be reduced.

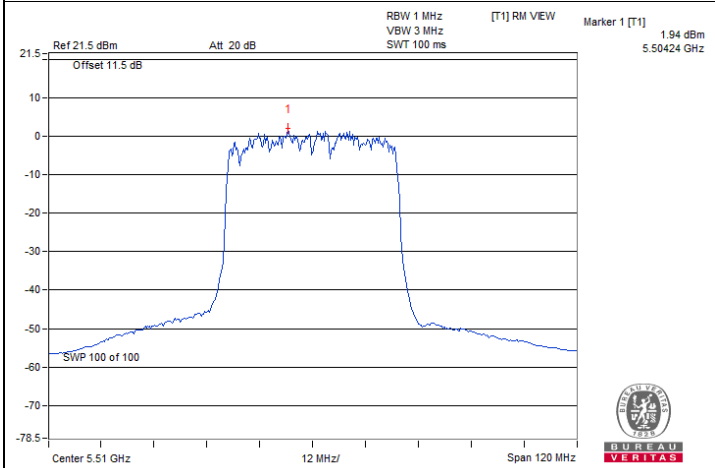
Spectrum Plot of Maximum Value



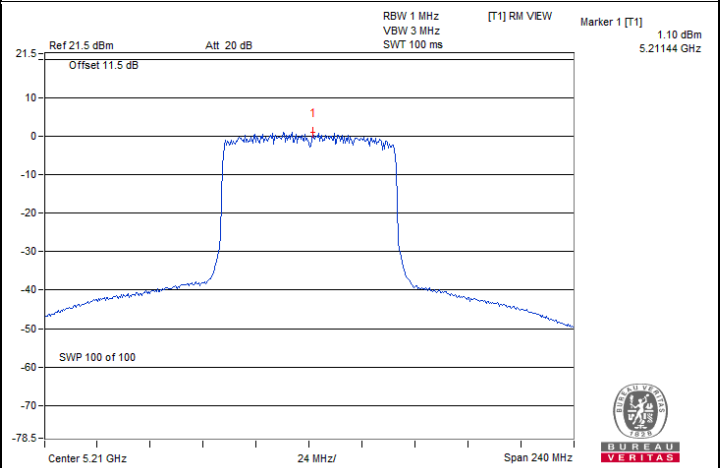
802.11ax (HE20) / Chain 3 : CH 140



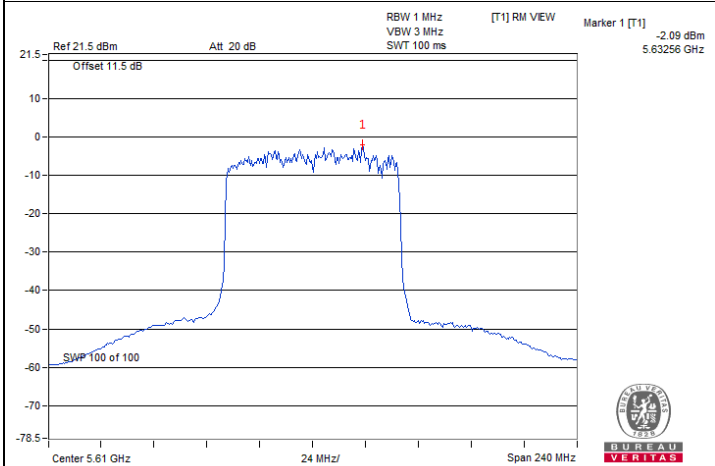
802.11ax (HE40) / Chain 0 : CH 38



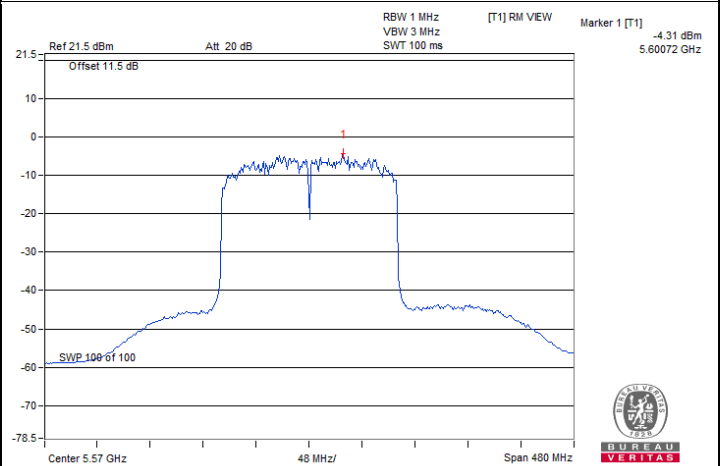
802.11ax (HE40) / Chain 3 : CH 102



802.11ax (HE80) / Chain 0 : CH 42



802.11ax (HE80) / Chain 0 : CH 122



802.11ax (HE160) / Chain 3 : CH 114

NSS 4

802.11ax (HE20)

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				
140	5700	3.11	3.00	4.37	1.96	0.99	10.21	11.00	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 2.47 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE40)

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				
102	5510	-1.32	0.11	0.98	-0.42	1.00	6.94	11.00	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 2.47 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE80)

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				
106	5530	-2.95	-2.59	-2.81	-3.22	1.04	4.17	11.00	Pass

Notes:

1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 2.47 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ax (HE160)

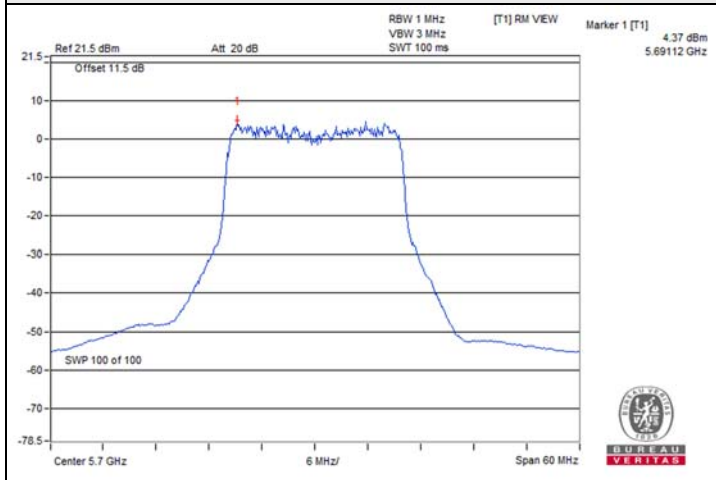
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
114	5570	-6.78	-6.41	-6.70	-5.36	0.78	0.53	11.00	Pass

Notes:

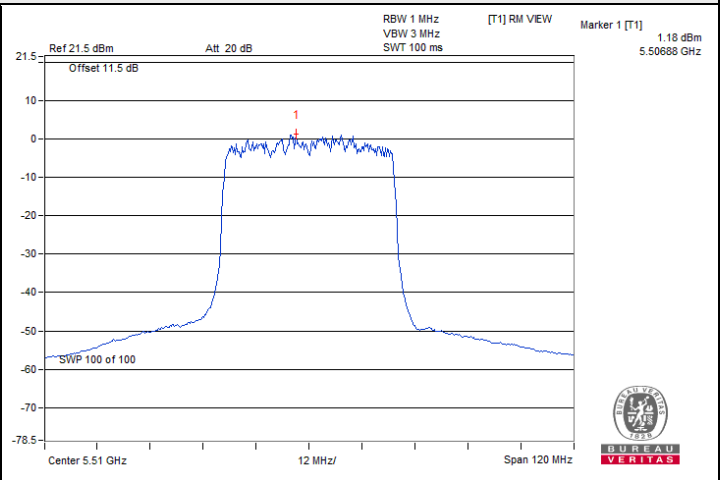
1. Please refer to 3.2 section for directional gain
2. For U-NII-2C, the directional gain is 2.47 dBi < 6 dBi, so the power density limit shall not be reduced.



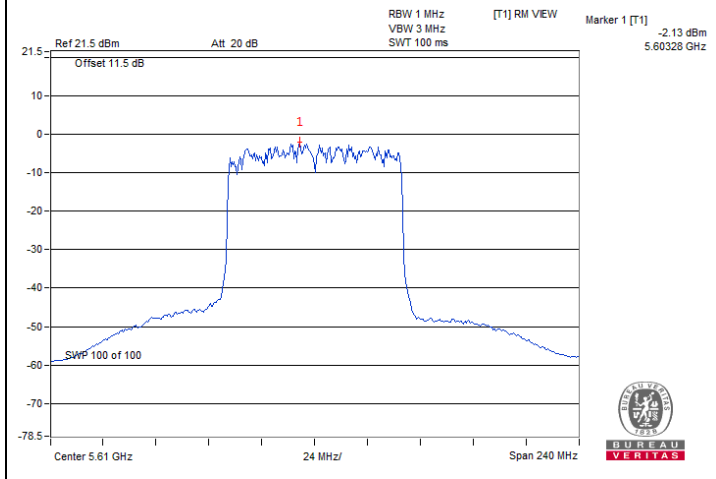
Spectrum Plot of Maximum Value



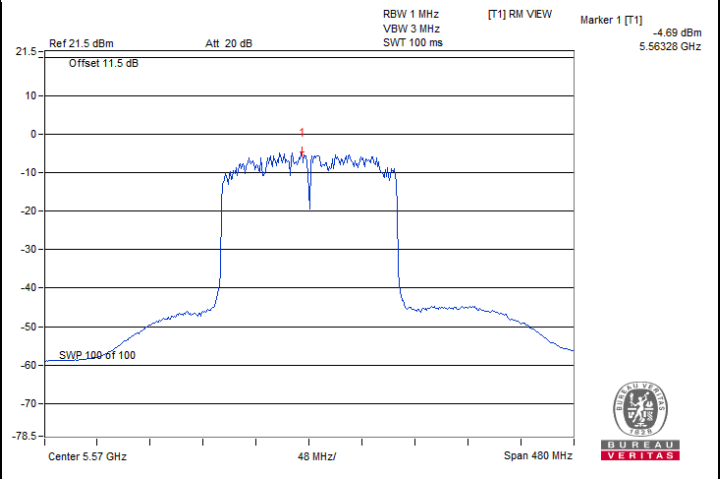
802.11ax (HE20) / Chain 2 : CH 140



802.11ax (HE40) / Chain 2 : CH 102



802.11ax (HE80) / Chain 0 : CH 122



802.11ax (HE160) / Chain 3 : CH 114

7.4 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Gary Lin
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NSS 1

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
140	5700	19.20	19.20	19.20	19.20

802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	38.16	38.16
62	5310	37.92	37.92

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	38.16	37.68	37.68	38.16

802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	77.28	77.28
58	5290	76.80	77.28

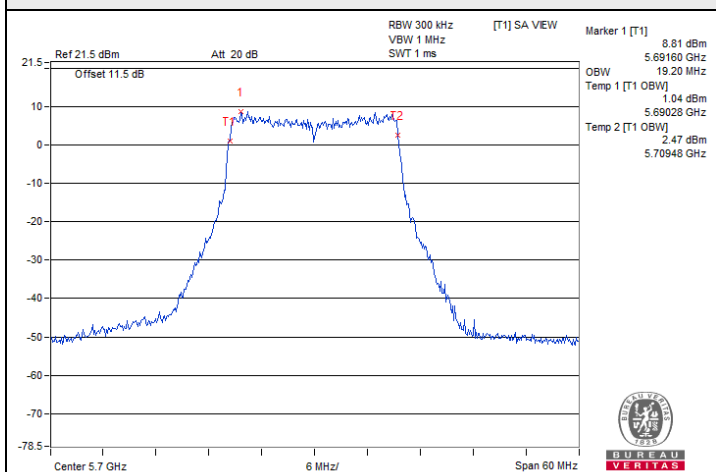
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	77.28	77.28	77.28	77.28

802.11ax (HE160)

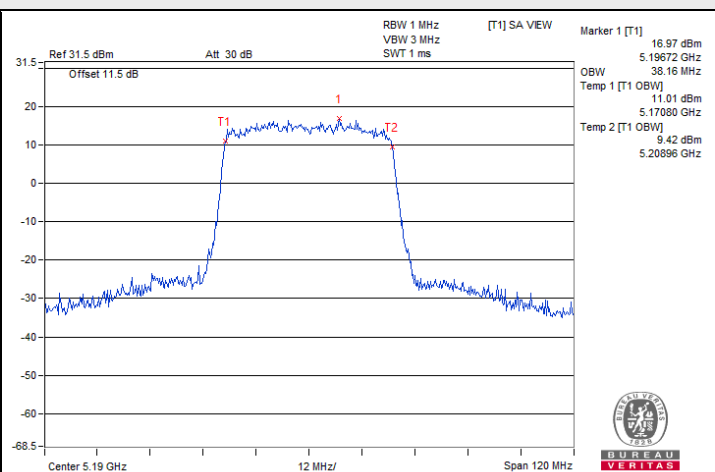
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
114	5570	154.56	155.52	154.56	155.52



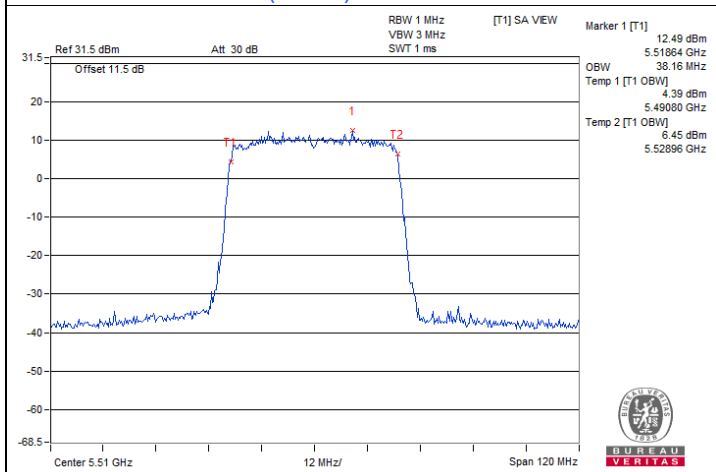
Spectrum Plot of Maximum Value



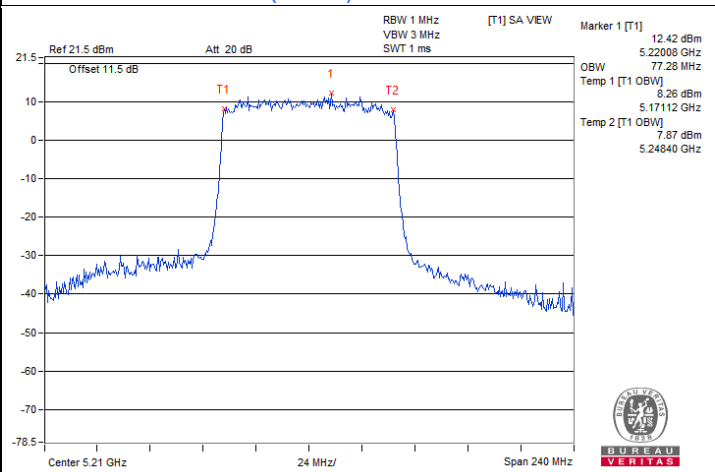
802.11ax (HE20) / Chain 0 : CH 140



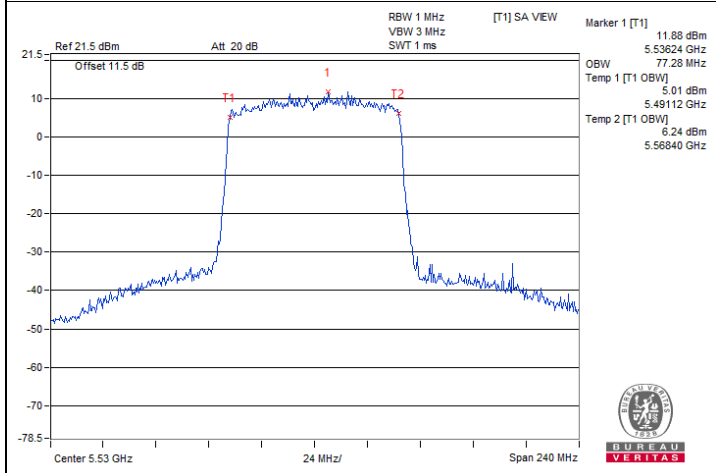
802.11ax (HE40) / Chain 0 : CH 38



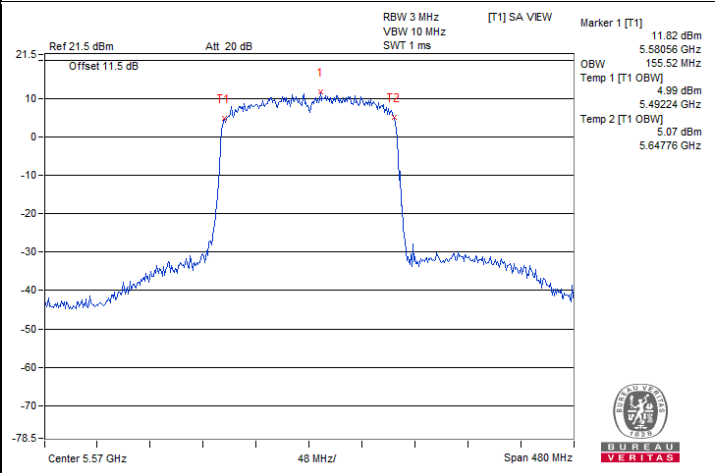
802.11ax (HE40) / Chain 0 : CH 102



802.11ax (HE80) / Chain 0 : CH 42



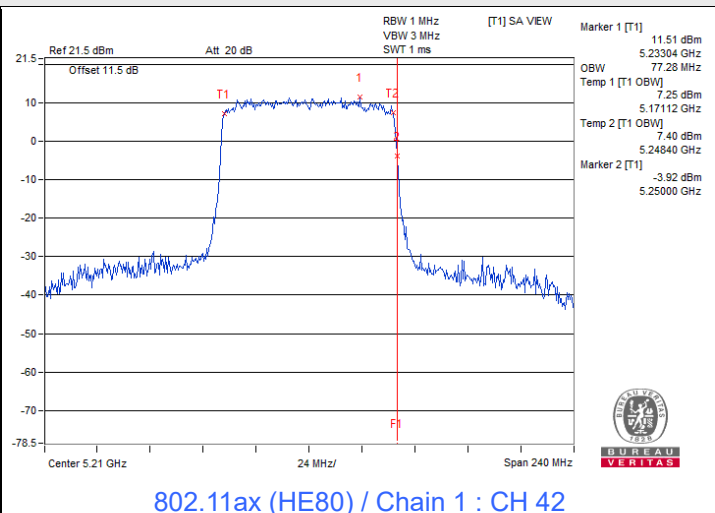
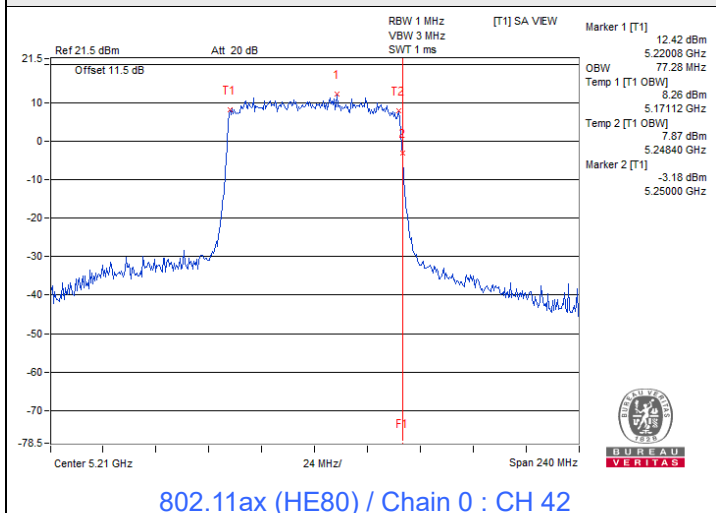
802.11ax (HE80) / Chain 0 : CH 106



802.11ax (HE160) / Chain 1 : CH 114



Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2A)



NSS 2

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
140	5700	19.20	19.20	19.20	19.20

802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	37.92	37.92
62	5310	37.92	37.92

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	37.68	37.68	37.68	38.16

802.11ax (HE80)

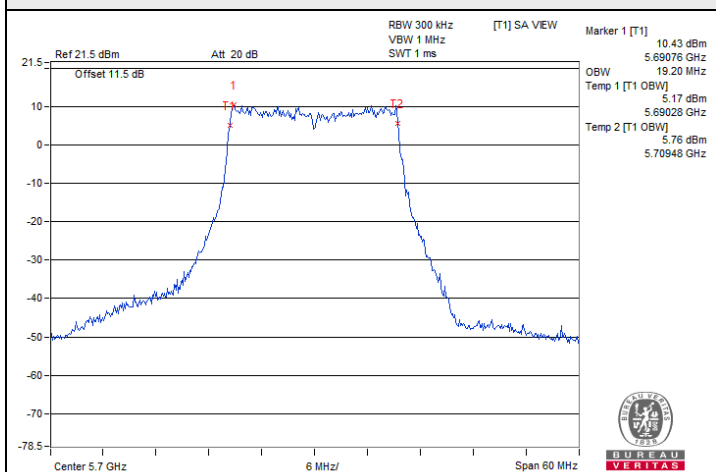
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	77.28	77.28
58	5290	76.80	76.80

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	77.28	77.28	77.28	77.28

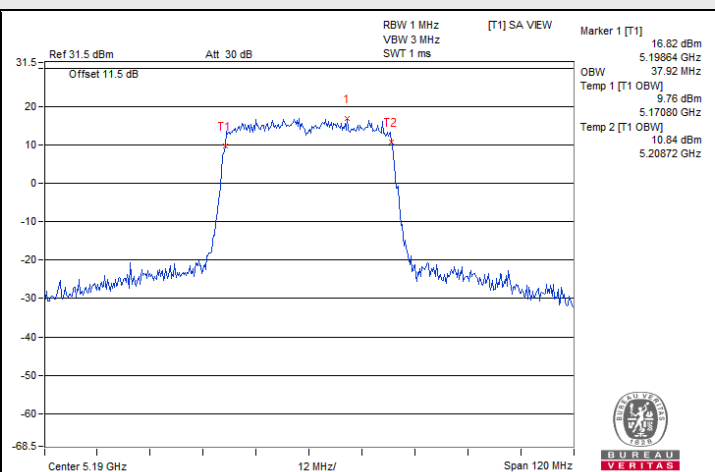
802.11ax (HE160)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
114	5570	154.56	155.52	155.52	155.52

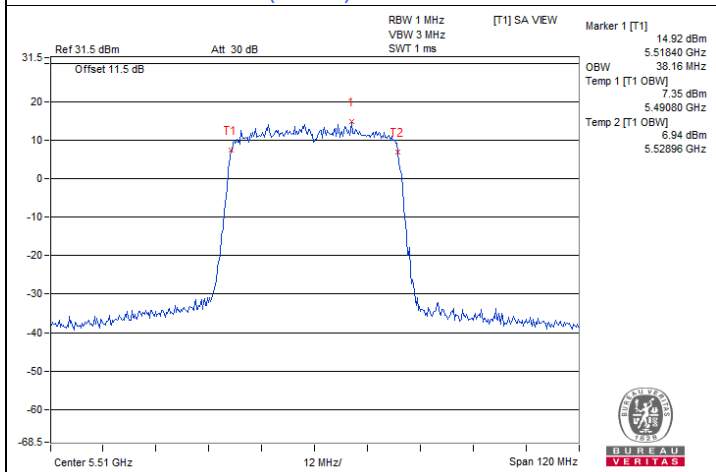
Spectrum Plot of Maximum Value



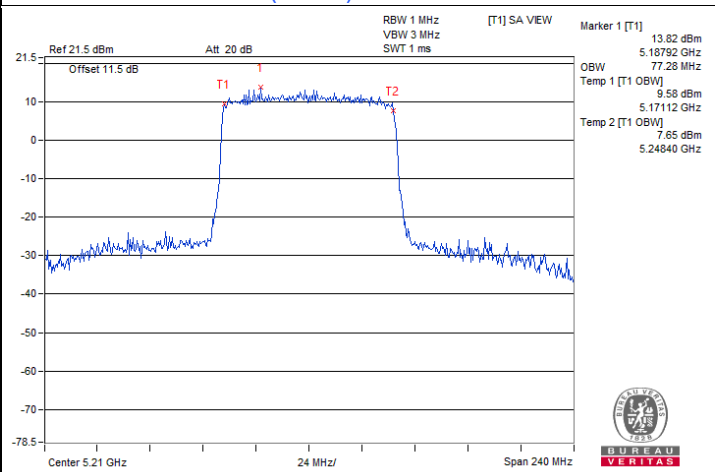
802.11ax (HE20) / Chain 0 : CH 140



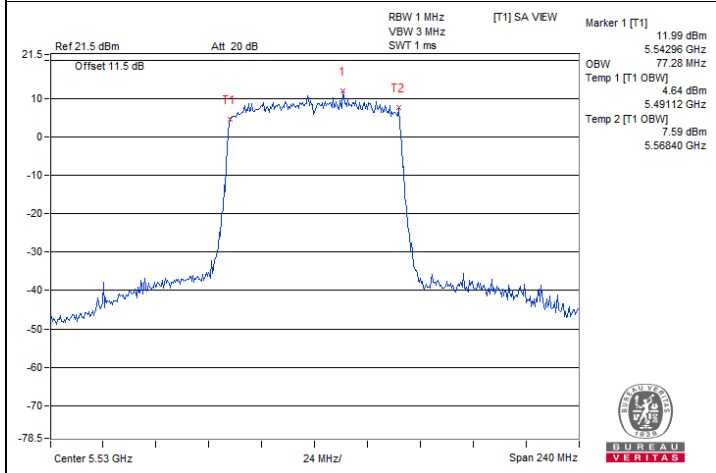
802.11ax (HE40) / Chain 0 : CH 38



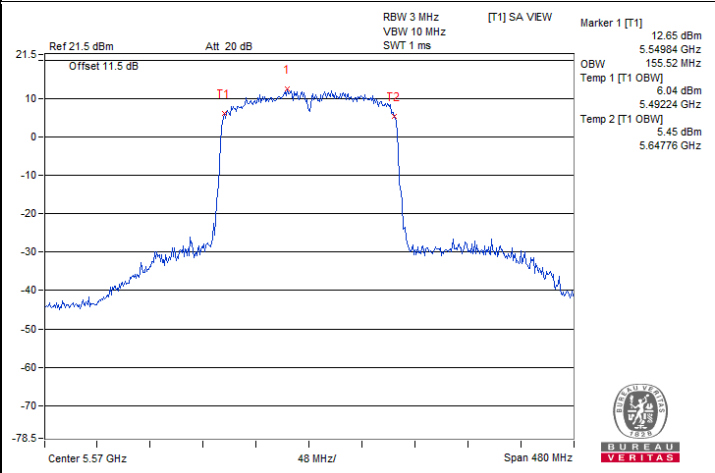
802.11ax (HE40) / Chain 3 : CH 102



802.11ax (HE80) / Chain 0 : CH 42



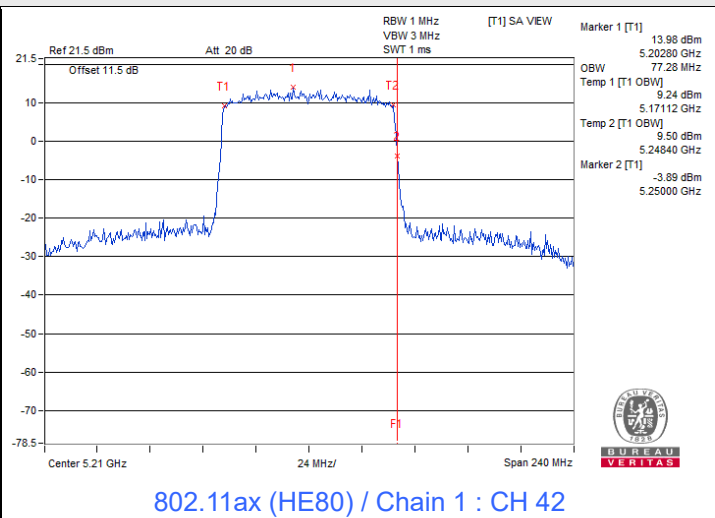
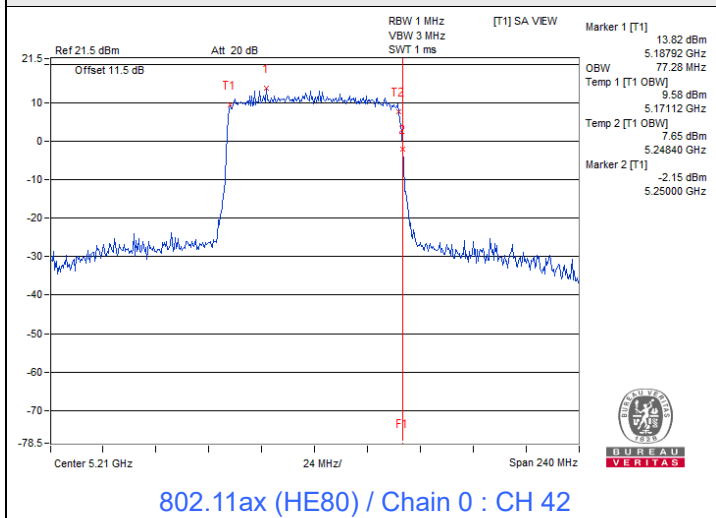
802.11ax (HE80) / Chain 0 : CH 106



802.11ax (HE160) / Chain 1 : CH 114



Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2A)



NSS 4
802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
140	5700	19.20	19.20	19.20	19.20

802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
102	5510	37.68	37.68	37.68	37.92

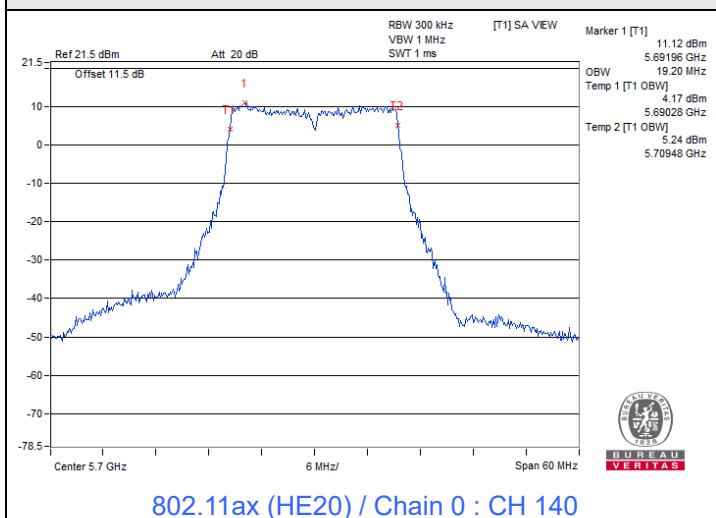
802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	77.28	77.52	77.28	77.04

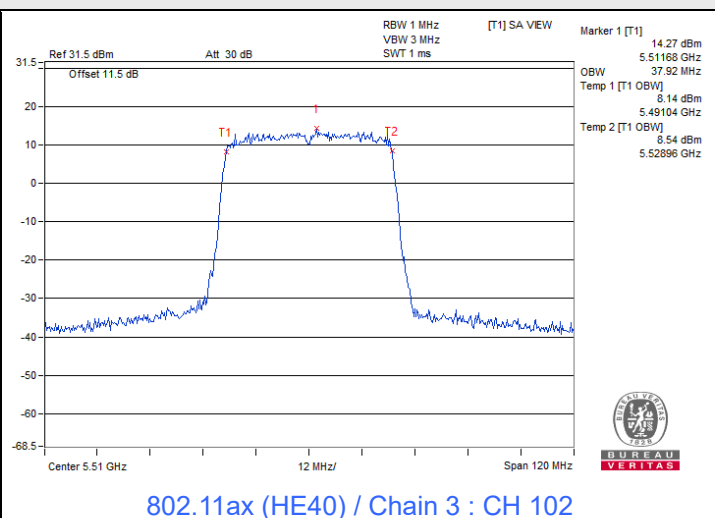
802.11ax (HE160)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
114	5570	155.52	155.52	155.52	155.52

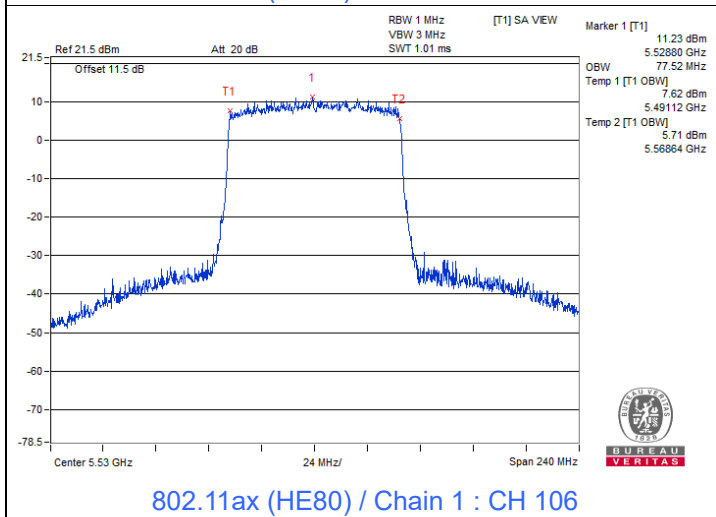
Spectrum Plot of Maximum Value



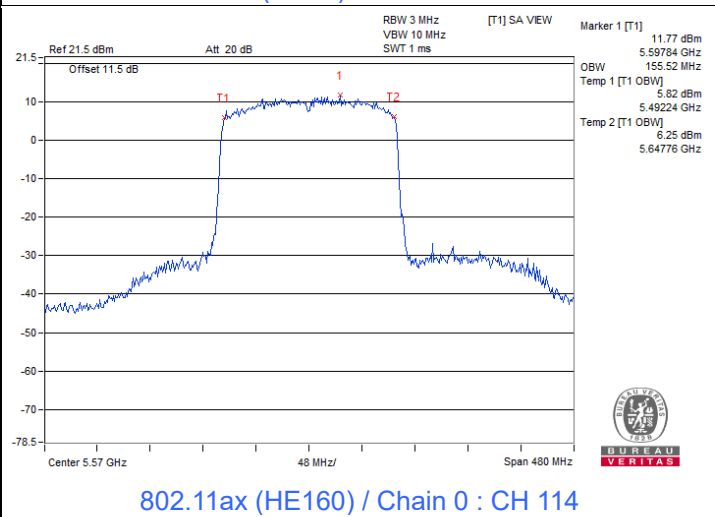
802.11ax (HE20) / Chain 0 : CH 140



802.11ax (HE40) / Chain 3 : CH 102



802.11ax (HE80) / Chain 1 : CH 106



802.11ax (HE160) / Chain 0 : CH 114

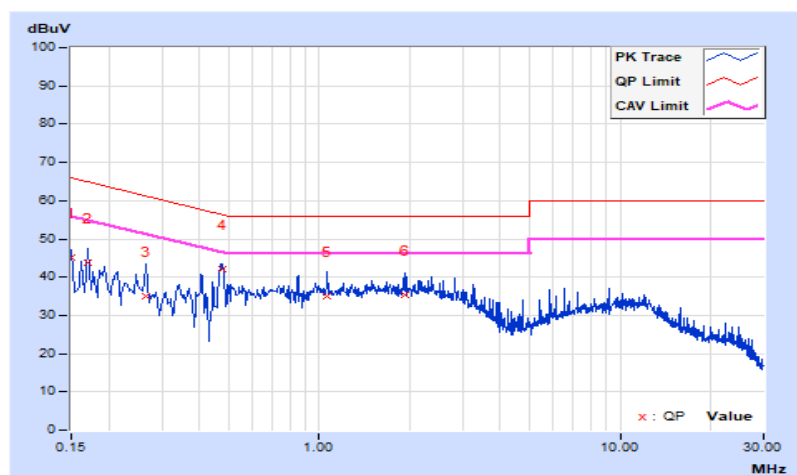
7.5 AC Power Conducted Emissions

RF Mode	802.11ax (HE20)	Channel	CH 140 : 5700 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.18	35.06	21.71	45.24	31.89	66.00	56.00	-20.76	-24.11
2	0.17000	10.19	33.66	21.78	43.85	31.97	64.96	54.96	-21.11	-22.99
3	0.26600	10.22	24.82	17.09	35.04	27.31	61.24	51.24	-26.20	-23.93
4	0.47400	10.23	31.82	27.35	42.05	37.58	56.44	46.44	-14.39	-8.86
5	1.06200	10.26	24.76	17.41	35.02	27.67	56.00	46.00	-20.98	-18.33
6	1.93800	10.32	25.07	18.47	35.39	28.79	56.00	46.00	-20.61	-17.21

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

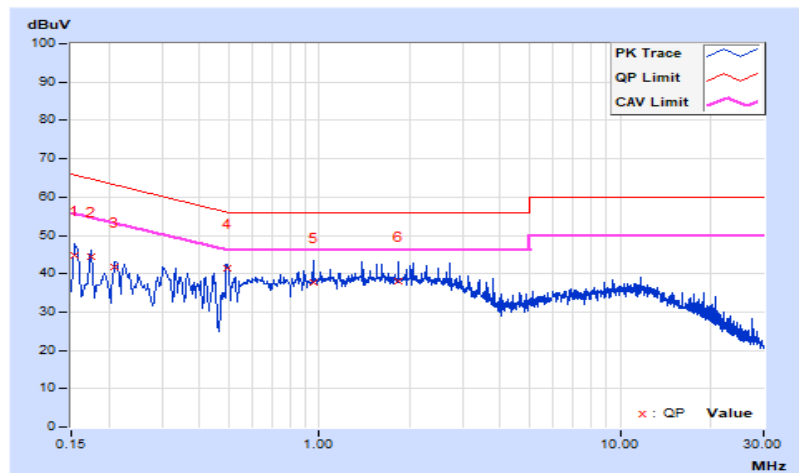


RF Mode	802.11ax (HE20)	Channel	CH 140 : 5700 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	10.17	34.53	20.55	44.70	30.72	65.78	55.78	-21.08	-25.06
2	0.17400	10.19	34.38	22.33	44.57	32.52	64.77	54.77	-20.20	-22.25
3	0.21000	10.21	31.39	20.93	41.60	31.14	63.21	53.21	-21.61	-22.07
4	0.49800	10.25	31.24	25.56	41.49	35.81	56.03	46.03	-14.54	-10.22
5	0.95400	10.29	27.28	19.29	37.57	29.58	56.00	46.00	-18.43	-16.42
6	1.83000	10.34	27.67	20.63	38.01	30.97	56.00	46.00	-17.99	-15.03

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



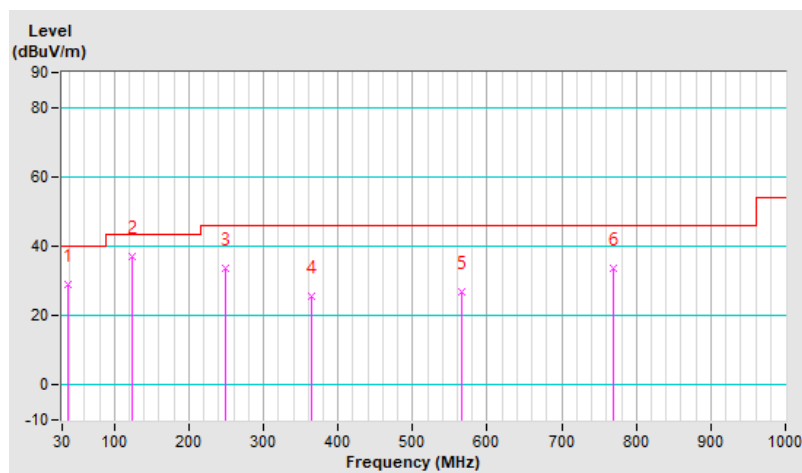
7.6 Unwanted Emissions below 1 GHz

RF Mode	802.11ax (HE20)	Channel	CH 140 : 5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.03	28.9 QP	40.0	-11.1	1.50 H	104	38.5	-9.6
2	124.19	37.0 QP	43.5	-6.5	1.50 H	104	47.6	-10.6
3	249.30	33.8 QP	46.0	-12.2	1.01 H	138	43.0	-9.2
4	364.58	25.7 QP	46.0	-20.3	1.01 H	161	32.0	-6.3
5	565.61	26.7 QP	46.0	-19.3	1.01 H	6	29.4	-2.7
6	769.45	33.8 QP	46.0	-12.2	1.01 H	42	31.4	2.4

Remarks:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- Margin value = Emission Level – Limit value
- The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
- The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

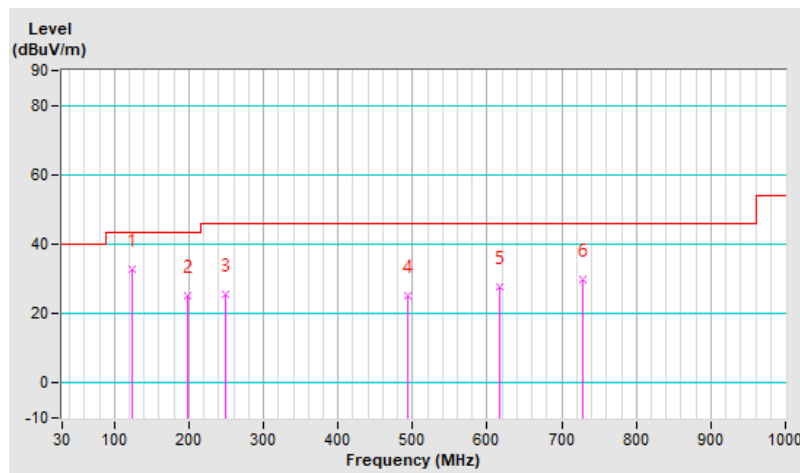


RF Mode	802.11ax (HE20)	Channel	CH 140 : 5700 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	124.19	32.7 QP	43.5	-10.8	1.50 V	282	43.3	-10.6
2	197.29	25.2 QP	43.5	-18.3	1.00 V	106	36.7	-11.5
3	249.30	25.8 QP	46.0	-20.2	1.00 V	297	35.0	-9.2
4	493.91	25.0 QP	46.0	-21.0	1.50 V	278	29.0	-4.0
5	617.62	27.6 QP	46.0	-18.4	1.50 V	189	28.5	-0.9
6	728.68	29.7 QP	46.0	-16.3	1.50 V	269	28.6	1.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.7 Unwanted Emissions above 1 GHz

NSS 1

RF Mode	802.11ax (HE20)	Channel	CH 140 : 5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	111.9 PK			1.44 H	294	67.9	44.0
2	*5700.00	99.3 AV			1.44 H	294	55.3	44.0
3	#5725.00	61.9 PK	68.2	-6.3	1.44 H	294	48.4	13.5
4	11400.00	62.6 PK	74.0	-11.4	1.85 H	285	39.2	23.4
5	11400.00	48.4 AV	54.0	-5.6	1.85 H	285	25.0	23.4

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	123.6 PK			2.59 V	175	79.6	44.0
2	*5700.00	110.8 AV			2.59 V	175	66.8	44.0
3	#5725.00	62.3 PK	68.2	-5.9	2.59 V	175	48.8	13.5
4	11400.00	62.9 PK	74.0	-11.1	2.26 V	195	39.5	23.4
5	11400.00	48.6 AV	54.0	-5.4	2.26 V	195	25.2	23.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.



RF Mode	802.11ax (HE40)	Channel	CH 38 : 5190 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.4 PK	74.0	-12.6	1.78 H	1	48.8	12.6
2	5150.00	48.0 AV	54.0	-6.0	1.78 H	1	35.4	12.6
3	*5190.00	109.0 PK			1.78 H	1	65.9	43.1
4	*5190.00	95.8 AV			1.78 H	1	52.7	43.1
5	#10380.00	61.4 PK	68.2	-6.8	1.85 H	289	39.5	21.9

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.4 PK	74.0	-7.6	1.57 V	292	53.8	12.6
2	5150.00	53.2 AV	54.0	-0.8	1.57 V	292	40.6	12.6
3	*5190.00	115.4 PK			1.57 V	292	72.3	43.1
4	*5190.00	102.5 AV			1.57 V	292	59.4	43.1
5	#10380.00	61.6 PK	68.2	-6.6	2.28 V	198	39.7	21.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE40)	Channel	CH 62 : 5310 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	110.3 PK			2.31 H	91	67.2	43.1
2	*5310.00	97.5 AV			2.31 H	91	54.4	43.1
3	5350.00	62.4 PK	74.0	-11.6	2.31 H	91	49.6	12.8
4	5350.00	49.9 AV	54.0	-4.1	2.31 H	91	37.1	12.8
5	10620.00	61.7 PK	74.0	-12.3	1.95 H	287	39.5	22.2
6	10620.00	47.0 AV	54.0	-7.0	1.95 H	287	24.8	22.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	115.2 PK			1.40 V	294	72.1	43.1
2	*5310.00	102.5 AV			1.40 V	294	59.4	43.1
3	5350.00	66.9 PK	74.0	-7.1	1.40 V	294	54.1	12.8
4	5350.00	53.2 AV	54.0	-0.8	1.40 V	294	40.4	12.8
5	10620.00	62.0 PK	74.0	-12.0	2.28 V	187	39.8	22.2
6	10620.00	47.4 AV	54.0	-6.6	2.28 V	187	25.2	22.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11ax (HE40)	Channel	CH 102 : 5510 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.3 PK	74.0	-12.7	2.14 H	158	48.2	13.1
2	5460.00	48.6 AV	54.0	-5.4	2.14 H	158	35.5	13.1
3	#5470.00	63.5 PK	68.2	-4.7	2.14 H	158	50.5	13.0
4	*5510.00	104.9 PK			2.14 H	158	61.3	43.6
5	*5510.00	92.7 AV			2.14 H	158	49.1	43.6
6	11020.00	62.0 PK	74.0	-12.0	1.95 H	287	39.2	22.8
7	11020.00	47.5 AV	54.0	-6.5	1.95 H	287	24.7	22.8

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.8 PK	74.0	-12.2	2.56 V	126	48.7	13.1
2	5460.00	48.8 AV	54.0	-5.2	2.56 V	126	35.7	13.1
3	#5470.00	65.1 PK	68.2	-3.1	2.56 V	126	52.1	13.0
4	*5510.00	119.6 PK			2.56 V	126	76.0	43.6
5	*5510.00	106.9 AV			2.56 V	126	63.3	43.6
6	11020.00	62.2 PK	74.0	-11.8	2.32 V	185	39.4	22.8
7	11020.00	47.8 AV	54.0	-6.2	2.32 V	185	25.0	22.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.



RF Mode	802.11ax (HE80)	Channel	CH 42 : 5210 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.6 PK	74.0	-12.4	2.38 H	298	49.0	12.6
2	5150.00	47.5 AV	54.0	-6.5	2.38 H	298	34.9	12.6
3	*5210.00	106.2 PK			2.38 H	298	63.2	43.0
4	*5210.00	93.9 AV			2.38 H	298	50.9	43.0
5	5350.00	59.8 PK	74.0	-14.2	2.38 H	298	47.0	12.8
6	5350.00	47.0 AV	54.0	-7.0	2.38 H	298	34.2	12.8
7	#10420.00	61.2 PK	68.2	-7.0	1.95 H	293	39.2	22.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	68.1 PK	74.0	-5.9	1.51 V	295	55.5	12.6
2	5150.00	53.2 AV	54.0	-0.8	1.51 V	295	40.6	12.6
3	*5210.00	113.5 PK			1.51 V	295	70.5	43.0
4	*5210.00	99.2 AV			1.51 V	295	56.2	43.0
5	5350.00	60.0 PK	74.0	-14.0	1.51 V	295	47.2	12.8
6	5350.00	47.6 AV	54.0	-6.4	1.51 V	295	34.8	12.8
7	#10420.00	61.5 PK	68.2	-6.7	2.25 V	188	39.5	22.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.



RF Mode	802.11ax (HE80)	Channel	CH 58 : 5290 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.6 PK	74.0	-13.4	2.43 H	89	48.0	12.6
2	5150.00	47.0 AV	54.0	-7.0	2.43 H	89	34.4	12.6
3	*5290.00	106.8 PK			2.43 H	89	63.7	43.1
4	*5290.00	94.5 AV			2.43 H	89	51.4	43.1
5	5350.00	61.5 PK	74.0	-12.5	2.43 H	89	48.7	12.8
6	5350.00	49.4 AV	54.0	-4.6	2.43 H	89	36.6	12.8
7	#10580.00	61.3 PK	68.2	-6.9	1.92 H	287	39.1	22.2

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.1 PK	74.0	-12.9	1.36 V	288	48.5	12.6
2	5150.00	47.6 AV	54.0	-6.4	1.36 V	288	35.0	12.6
3	*5290.00	112.5 PK			1.36 V	288	69.4	43.1
4	*5290.00	100.1 AV			1.36 V	288	57.0	43.1
5	5350.00	64.1 PK	74.0	-9.9	1.36 V	288	51.3	12.8
6	5350.00	53.2 AV	54.0	-0.8	1.36 V	288	40.4	12.8
7	#10580.00	61.6 PK	68.2	-6.6	2.27 V	195	39.4	22.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.



RF Mode	802.11ax (HE80)	Channel	CH 106 : 5530 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.9 PK	74.0	-13.1	2.21 H	345	47.8	13.1
2	5460.00	47.7 AV	54.0	-6.3	2.21 H	345	34.6	13.1
3	#5470.00	61.1 PK	68.2	-7.1	2.21 H	345	48.1	13.0
4	*5530.00	103.3 PK			2.21 H	345	59.7	43.6
5	*5530.00	91.0 AV			2.21 H	345	47.4	43.6
6	#5725.00	61.3 PK	68.2	-6.9	2.21 H	345	47.8	13.5
7	11060.00	61.6 PK	74.0	-12.4	1.95 H	287	39.0	22.6
8	11060.00	47.3 AV	54.0	-6.7	1.95 H	287	24.7	22.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	66.1 PK	74.0	-7.9	2.57 V	127	53.0	13.1
2	5460.00	53.3 AV	54.0	-0.7	2.57 V	127	40.2	13.1
3	#5470.00	65.8 PK	68.2	-2.4	2.57 V	127	52.8	13.0
4	*5530.00	116.0 PK			2.57 V	127	72.4	43.6
5	*5530.00	103.2 AV			2.57 V	127	59.6	43.6
6	#5725.00	61.5 PK	68.2	-6.7	2.57 V	127	48.0	13.5
7	11060.00	61.9 PK	74.0	-12.1	2.35 V	189	39.3	22.6
8	11060.00	47.6 AV	54.0	-6.4	2.35 V	189	25.0	22.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE160)	Channel	CH 114 : 5570 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.7 PK	74.0	-13.3	2.42 H	234	47.6	13.1
2	5460.00	47.4 AV	54.0	-6.6	2.42 H	234	34.3	13.1
3	#5470.00	60.8 PK	68.2	-7.4	2.42 H	234	47.8	13.0
4	*5570.00	99.8 PK			2.42 H	234	56.2	43.6
5	*5570.00	88.5 AV			2.42 H	234	44.9	43.6
6	#5725.00	61.1 PK	68.2	-7.1	2.42 H	234	47.6	13.5
7	11140.00	61.6 PK	74.0	-12.4	1.85 H	292	39.0	22.6
8	11140.00	47.2 AV	54.0	-6.8	1.85 H	292	24.6	22.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	67.5 PK	74.0	-6.5	2.53 V	92	54.4	13.1
2	5460.00	53.3 AV	54.0	-0.7	2.53 V	92	40.2	13.1
3	#5470.00	65.4 PK	68.2	-2.8	2.53 V	92	52.4	13.0
4	*5570.00	111.4 PK			2.53 V	92	67.8	43.6
5	*5570.00	99.0 AV			2.53 V	92	55.4	43.6
6	#5725.00	67.4 PK	68.2	-0.8	2.53 V	92	53.9	13.5
7	11140.00	61.8 PK	74.0	-12.2	2.29 V	185	39.2	22.6
8	11140.00	47.3 AV	54.0	-6.7	2.29 V	185	24.7	22.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

NSS 2

RF Mode	802.11ax (HE20)	Channel	CH 140 : 5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	107.6 PK			1.52 H	289	63.6	44.0
2	*5700.00	96.3 AV			1.52 H	289	52.3	44.0
3	#5725.00	61.2 PK	68.2	-7.0	1.52 H	289	47.7	13.5
4	11400.00	62.6 PK	74.0	-11.4	1.86 H	289	39.2	23.4
5	11400.00	48.4 AV	54.0	-5.6	1.86 H	289	25.0	23.4

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	120.5 PK			2.56 V	174	76.5	44.0
2	*5700.00	107.3 AV			2.56 V	174	63.3	44.0
3	#5725.00	61.5 PK	68.2	-6.7	2.56 V	174	48.0	13.5
4	11400.00	63.0 PK	74.0	-11.0	2.22 V	192	39.6	23.4
5	11400.00	48.6 AV	54.0	-5.4	2.22 V	192	25.2	23.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.



RF Mode	802.11ax (HE40)	Channel	CH 38 : 5190 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.1 PK	74.0	-12.9	1.77 H	1	48.5	12.6
2	5150.00	48.4 AV	54.0	-5.6	1.77 H	1	35.8	12.6
3	*5190.00	107.7 PK			1.77 H	1	64.6	43.1
4	*5190.00	94.5 AV			1.77 H	1	51.4	43.1
5	#10380.00	61.3 PK	68.2	-6.9	1.92 H	287	39.4	21.9

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	68.4 PK	74.0	-5.6	1.32 V	285	55.8	12.6
2	5150.00	53.6 AV	54.0	-0.4	1.32 V	285	41.0	12.6
3	*5190.00	115.9 PK			1.32 V	285	72.8	43.1
4	*5190.00	102.6 AV			1.32 V	285	59.5	43.1
5	#10380.00	61.5 PK	68.2	-6.7	2.25 V	195	39.6	21.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE40)	Channel	CH 62 : 5310 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	108.3 PK			2.29 H	90	65.2	43.1
2	*5310.00	94.9 AV			2.29 H	90	51.8	43.1
3	5350.00	61.9 PK	74.0	-12.1	2.29 H	90	49.1	12.8
4	5350.00	49.2 AV	54.0	-4.8	2.29 H	90	36.4	12.8
5	10620.00	61.7 PK	74.0	-12.3	1.95 H	285	39.5	22.2
6	10620.00	47.0 AV	54.0	-7.0	1.95 H	285	24.8	22.2

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	113.7 PK			1.33 V	292	70.6	43.1
2	*5310.00	100.5 AV			1.33 V	292	57.4	43.1
3	5350.00	65.4 PK	74.0	-8.6	1.33 V	292	52.6	12.8
4	5350.00	53.3 AV	54.0	-0.7	1.33 V	292	40.5	12.8
5	10620.00	61.9 PK	74.0	-12.1	2.25 V	185	39.7	22.2
6	10620.00	47.3 AV	54.0	-6.7	2.25 V	185	25.1	22.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.



RF Mode	802.11ax (HE40)	Channel	CH 102 : 5510 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.9 PK	74.0	-13.1	2.26 H	160	47.8	13.1
2	5460.00	47.8 AV	54.0	-6.2	2.26 H	160	34.7	13.1
3	#5470.00	63.0 PK	68.2	-5.2	2.26 H	160	50.0	13.0
4	*5510.00	104.4 PK			2.26 H	160	60.8	43.6
5	*5510.00	91.5 AV			2.26 H	160	47.9	43.6
6	11020.00	62.1 PK	74.0	-11.9	1.88 H	282	39.3	22.8
7	11020.00	47.6 AV	54.0	-6.4	1.88 H	282	24.8	22.8

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.3 PK	74.0	-12.7	2.50 V	127	48.2	13.1
2	5460.00	48.0 AV	54.0	-6.0	2.50 V	127	34.9	13.1
3	#5470.00	63.8 PK	68.2	-4.4	2.50 V	127	50.8	13.0
4	*5510.00	116.7 PK			2.50 V	127	73.1	43.6
5	*5510.00	103.8 AV			2.50 V	127	60.2	43.6
6	11020.00	62.3 PK	74.0	-11.7	2.29 V	191	39.5	22.8
7	11020.00	47.9 AV	54.0	-6.1	2.29 V	191	25.1	22.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	802.11ax (HE80)	Channel	CH 42 : 5210 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	63.4 PK	74.0	-10.6	2.42 H	281	50.8	12.6
2	5150.00	49.2 AV	54.0	-4.8	2.42 H	281	36.6	12.6
3	*5210.00	105.6 PK			2.42 H	281	62.6	43.0
4	*5210.00	92.4 AV			2.42 H	281	49.4	43.0
5	5350.00	60.1 PK	74.0	-13.9	2.42 H	281	47.3	12.8
6	5350.00	47.0 AV	54.0	-7.0	2.42 H	281	34.2	12.8
7	#10420.00	61.4 PK	68.2	-6.8	1.95 H	287	39.4	22.0

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	68.9 PK	74.0	-5.1	1.41 V	287	56.3	12.6
2	5150.00	53.1 AV	54.0	-0.9	1.41 V	287	40.5	12.6
3	*5210.00	111.2 PK			1.41 V	287	68.2	43.0
4	*5210.00	98.6 AV			1.41 V	287	55.6	43.0
5	5350.00	60.7 PK	74.0	-13.3	1.41 V	287	47.9	12.8
6	5350.00	48.4 AV	54.0	-5.6	1.41 V	287	35.6	12.8
7	#10420.00	61.6 PK	68.2	-6.6	2.28 V	192	39.6	22.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.



RF Mode	802.11ax (HE80)	Channel	CH 58 : 5290 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.4 PK	74.0	-14.6	2.43 H	91	46.8	12.6
2	5150.00	46.5 AV	54.0	-7.5	2.43 H	91	33.9	12.6
3	*5290.00	105.8 PK			2.43 H	91	62.7	43.1
4	*5290.00	92.2 AV			2.43 H	91	49.1	43.1
5	5350.00	60.5 PK	74.0	-13.5	2.43 H	91	47.7	12.8
6	5350.00	47.4 AV	54.0	-6.6	2.43 H	91	34.6	12.8
7	#10580.00	61.4 PK	68.2	-6.8	2.30 H	192	39.2	22.2

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.1 PK	74.0	-12.9	1.29 V	290	48.5	12.6
2	5150.00	47.7 AV	54.0	-6.3	1.29 V	290	35.1	12.6
3	*5290.00	111.7 PK			1.29 V	290	68.6	43.1
4	*5290.00	98.4 AV			1.29 V	290	55.3	43.1
5	5350.00	64.5 PK	74.0	-9.5	1.29 V	290	51.7	12.8
6	5350.00	53.3 AV	54.0	-0.7	1.29 V	290	40.5	12.8
7	#10580.00	61.7 PK	68.2	-6.5	2.28 V	189	39.5	22.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.



RF Mode	802.11ax (HE80)	Channel	CH 106 : 5530 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.8 PK	74.0	-13.2	2.20 H	348	47.7	13.1
2	5460.00	47.6 AV	54.0	-6.4	2.20 H	348	34.5	13.1
3	#5470.00	61.0 PK	68.2	-7.2	2.20 H	348	48.0	13.0
4	*5530.00	100.9 PK			2.20 H	348	57.3	43.6
5	*5530.00	89.7 AV			2.20 H	348	46.1	43.6
6	#5725.00	61.7 PK	68.2	-6.5	2.20 H	348	48.2	13.5
7	11060.00	61.6 PK	74.0	-12.4	1.95 H	287	39.0	22.6
8	11060.00	47.4 AV	54.0	-6.6	1.95 H	287	24.8	22.6

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	65.1 PK	74.0	-8.9	2.54 V	125	52.0	13.1
2	5460.00	51.6 AV	54.0	-2.4	2.54 V	125	38.5	13.1
3	#5470.00	67.3 PK	68.2	-0.9	2.54 V	125	54.3	13.0
4	*5530.00	112.9 PK			2.54 V	125	69.3	43.6
5	*5530.00	100.1 AV			2.54 V	125	56.5	43.6
6	#5725.00	62.5 PK	68.2	-5.7	2.54 V	125	49.0	13.5
7	11060.00	61.8 PK	74.0	-12.2	2.28 V	192	39.2	22.6
8	11060.00	47.7 AV	54.0	-6.3	2.28 V	192	25.1	22.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.



RF Mode	802.11ax (HE160)	Channel	CH 114 : 5570 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.8 PK	74.0	-13.2	2.45 H	231	47.7	13.1
2	5460.00	47.8 AV	54.0	-6.2	2.45 H	231	34.7	13.1
3	#5470.00	61.5 PK	68.2	-6.7	2.45 H	231	48.5	13.0
4	*5570.00	99.4 PK			2.45 H	231	55.8	43.6
5	*5570.00	87.2 AV			2.45 H	231	43.6	43.6
6	#5725.00	61.7 PK	68.2	-6.5	2.45 H	231	48.2	13.5
7	11140.00	61.6 PK	74.0	-12.4	1.99 H	289	39.0	22.6
8	11140.00	47.3 AV	54.0	-6.7	1.99 H	289	24.7	22.6

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	69.8 PK	74.0	-4.2	2.55 V	91	56.7	13.1
2	5460.00	53.1 AV	54.0	-0.9	2.55 V	91	40.0	13.1
3	#5470.00	67.6 PK	68.2	-0.6	2.55 V	91	54.6	13.0
4	*5570.00	110.5 PK			2.55 V	91	66.9	43.6
5	*5570.00	97.9 AV			2.55 V	91	54.3	43.6
6	#5725.00	65.9 PK	68.2	-2.3	2.55 V	91	52.4	13.5
7	11140.00	61.8 PK	74.0	-12.2	2.30 V	192	39.2	22.6
8	11140.00	47.4 AV	54.0	-6.6	2.30 V	192	24.8	22.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

NSS 4

RF Mode	802.11ax (HE20)	Channel	CH 140 : 5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	106.5 PK			1.53 H	290	62.5	44.0
2	*5700.00	94.1 AV			1.53 H	290	50.1	44.0
3	#5725.00	61.2 PK	68.2	-7.0	1.53 H	290	47.7	13.5
4	11400.00	62.7 PK	74.0	-11.3	1.92 H	292	39.3	23.4
5	11400.00	48.3 AV	54.0	-5.7	1.92 H	292	24.9	23.4

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	119.2 PK			2.63 V	175	75.2	44.0
2	*5700.00	105.7 AV			2.63 V	175	61.7	44.0
3	#5725.00	61.8 PK	68.2	-6.4	2.63 V	175	48.3	13.5
4	11400.00	62.9 PK	74.0	-11.1	2.21 V	199	39.5	23.4
5	11400.00	48.5 AV	54.0	-5.5	2.21 V	199	25.1	23.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.



RF Mode	802.11ax (HE40)	Channel	CH 102 : 5510 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.9 PK	74.0	-13.1	2.42 H	231	47.8	13.1
2	5460.00	47.6 AV	54.0	-6.4	2.42 H	231	34.5	13.1
3	#5470.00	63.2 PK	68.2	-5.0	2.42 H	231	50.2	13.0
4	*5510.00	103.1 PK			2.42 H	231	59.5	43.6
5	*5510.00	90.7 AV			2.42 H	231	47.1	43.6
6	11020.00	61.8 PK	74.0	-12.2	1.92 H	286	39.0	22.8
7	11020.00	47.5 AV	54.0	-6.5	1.92 H	286	24.7	22.8

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.1 PK	74.0	-12.9	2.53 V	126	48.0	13.1
2	5460.00	47.8 AV	54.0	-6.2	2.53 V	126	34.7	13.1
3	#5470.00	64.8 PK	68.2	-3.4	2.53 V	126	51.8	13.0
4	*5510.00	115.1 PK			2.53 V	126	71.5	43.6
5	*5510.00	101.6 AV			2.53 V	126	58.0	43.6
6	11020.00	62.1 PK	74.0	-11.9	2.31 V	188	39.3	22.8
7	11020.00	47.8 AV	54.0	-6.2	2.31 V	188	25.0	22.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.



RF Mode	802.11ax (HE80)	Channel	CH 106 : 5530 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.9 PK	74.0	-13.1	2.25 H	231	47.8	13.1
2	5460.00	47.7 AV	54.0	-6.3	2.25 H	231	34.6	13.1
3	#5470.00	63.2 PK	68.2	-5.0	2.25 H	231	50.2	13.0
4	*5530.00	100.6 PK			2.25 H	231	57.0	43.6
5	*5530.00	87.8 AV			2.25 H	231	44.2	43.6
6	#5725.00	61.2 PK	68.2	-7.0	2.25 H	231	47.7	13.5
7	11060.00	61.6 PK	74.0	-12.4	1.93 H	289	39.0	22.6
8	11060.00	47.3 AV	54.0	-6.7	1.93 H	289	24.7	22.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	65.9 PK	74.0	-8.1	2.53 V	127	52.8	13.1
2	5460.00	51.0 AV	54.0	-3.0	2.53 V	127	37.9	13.1
3	#5470.00	66.6 PK	68.2	-1.6	2.53 V	127	53.6	13.0
4	*5530.00	111.9 PK			2.53 V	127	68.3	43.6
5	*5530.00	98.7 AV			2.53 V	127	55.1	43.6
6	#5725.00	61.5 PK	68.2	-6.7	2.53 V	127	48.0	13.5
7	11060.00	61.8 PK	74.0	-12.2	2.31 V	188	39.2	22.6
8	11060.00	47.6 AV	54.0	-6.4	2.31 V	188	25.0	22.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.



RF Mode	802.11ax (HE160)	Channel	CH 114 : 5570 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan HSU		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.7 PK	74.0	-13.3	2.30 H	232	47.6	13.1
2	5460.00	47.4 AV	54.0	-6.6	2.30 H	232	34.3	13.1
3	#5470.00	61.2 PK	68.2	-7.0	2.30 H	232	48.2	13.0
4	*5570.00	98.1 PK			2.30 H	232	54.5	43.6
5	*5570.00	85.4 AV			2.30 H	232	41.8	43.6
6	#5725.00	62.0 PK	68.2	-6.2	2.30 H	232	48.5	13.5
7	11140.00	61.6 PK	74.0	-12.4	1.90 H	288	39.0	22.6
8	11140.00	47.2 AV	54.0	-6.8	1.90 H	288	24.6	22.6

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	71.6 PK	74.0	-2.4	2.43 V	94	58.5	13.1
2	5460.00	52.5 AV	54.0	-1.5	2.43 V	94	39.4	13.1
3	#5470.00	67.4 PK	68.2	-0.8	2.43 V	94	54.4	13.0
4	*5570.00	108.9 PK			2.43 V	94	65.3	43.6
5	*5570.00	95.8 AV			2.43 V	94	52.2	43.6
6	#5725.00	66.3 PK	68.2	-1.9	2.43 V	94	52.8	13.5
7	11140.00	61.9 PK	74.0	-12.1	2.32 V	187	39.3	22.6
8	11140.00	47.4 AV	54.0	-6.6	2.32 V	187	24.8	22.6

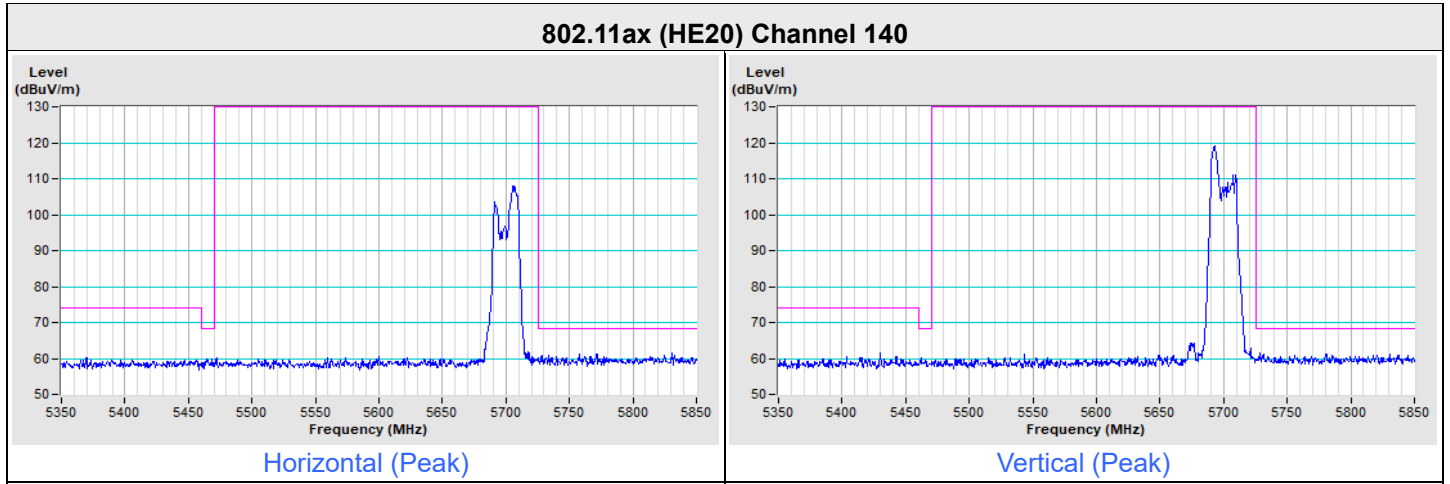
Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

Plot of Band Edge

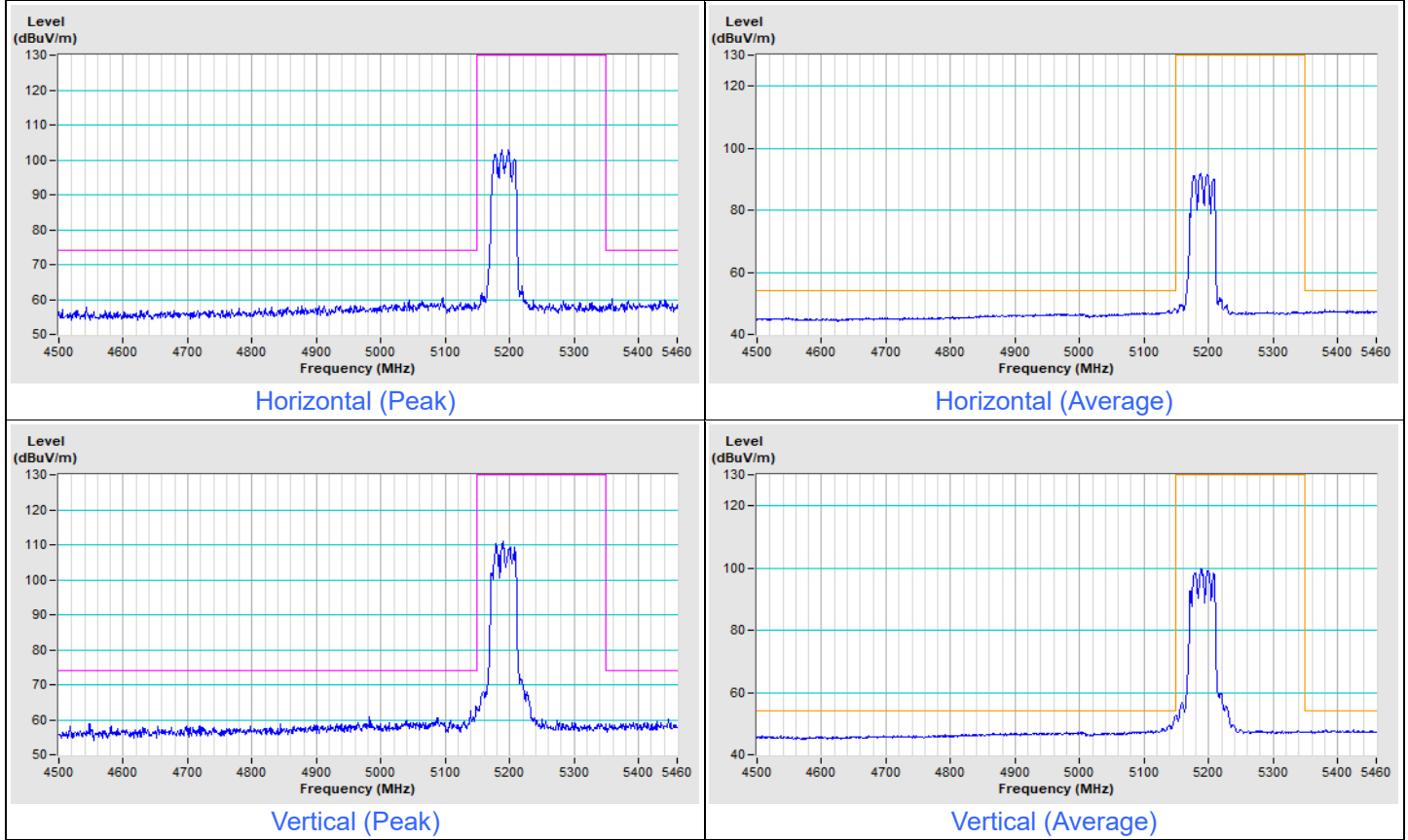
NSS 1

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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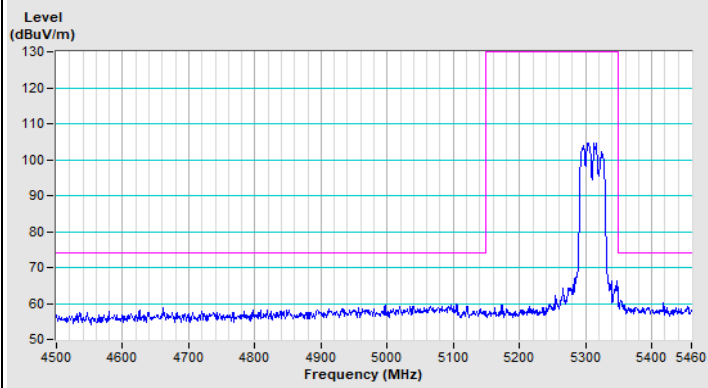


Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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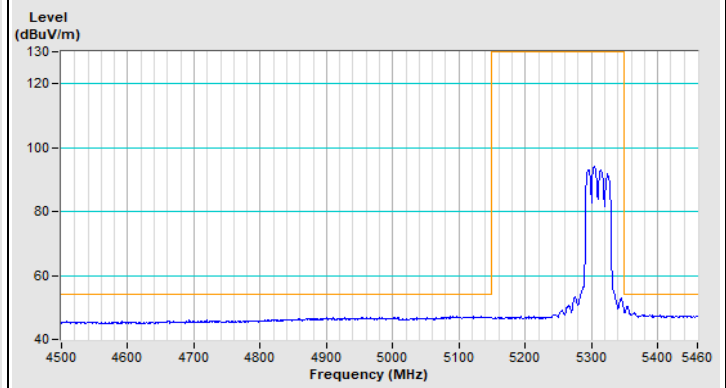
802.11ax (HE40) Channel 38



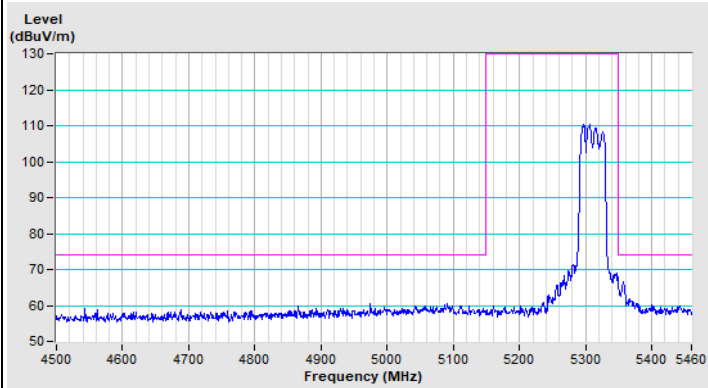
802.11ax (HE40) Channel 62



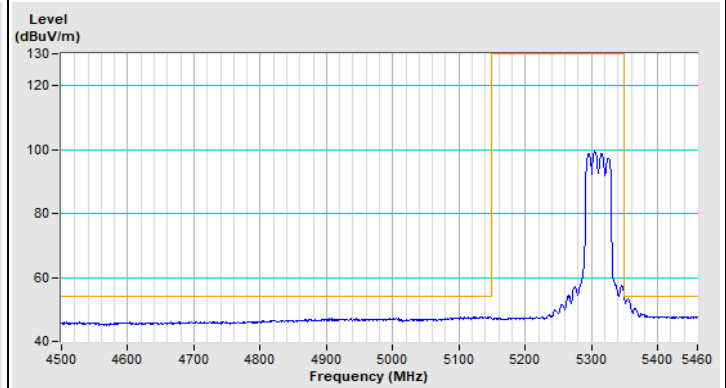
Horizontal (Peak)



Horizontal (Average)



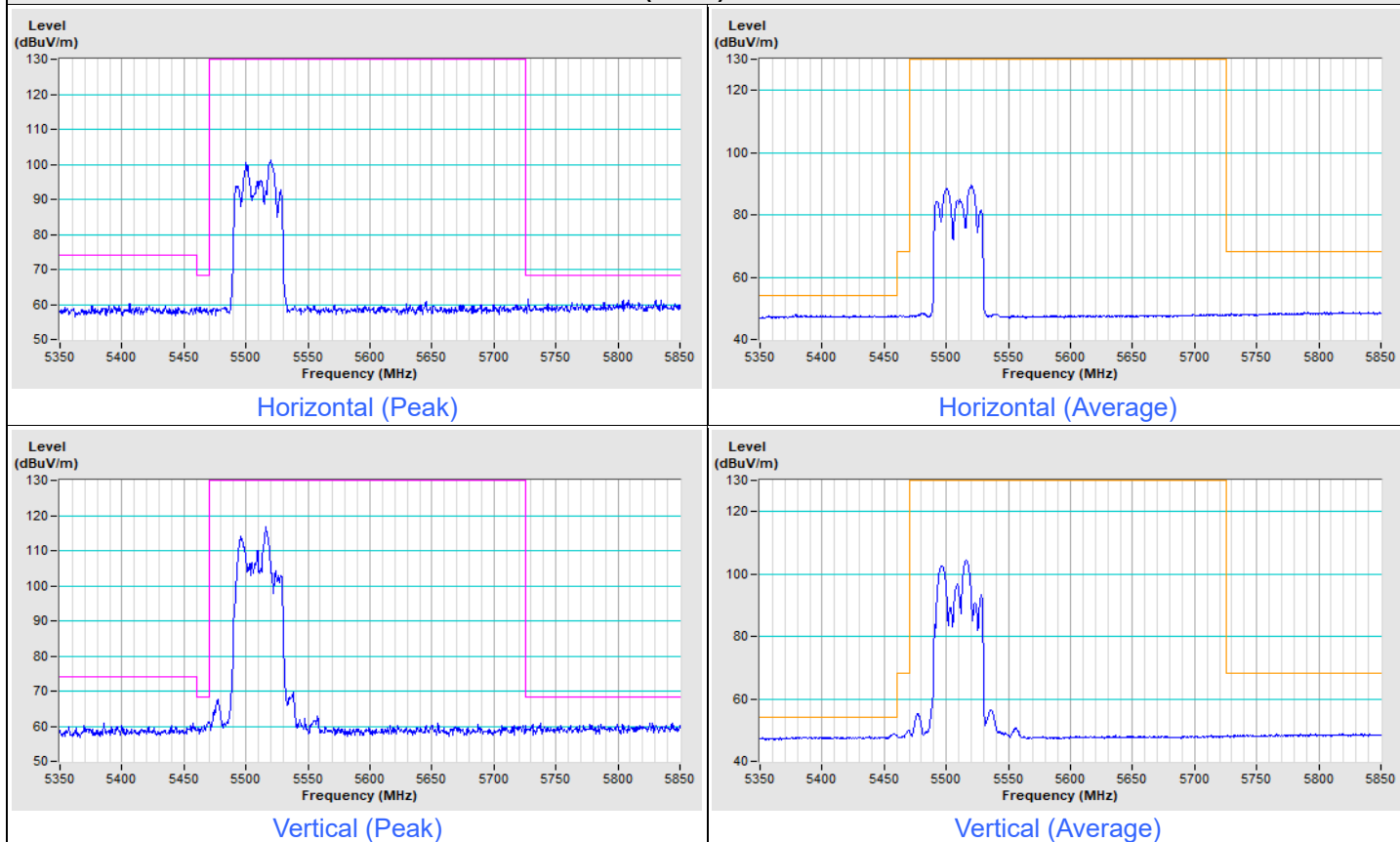
Vertical (Peak)



Vertical (Average)

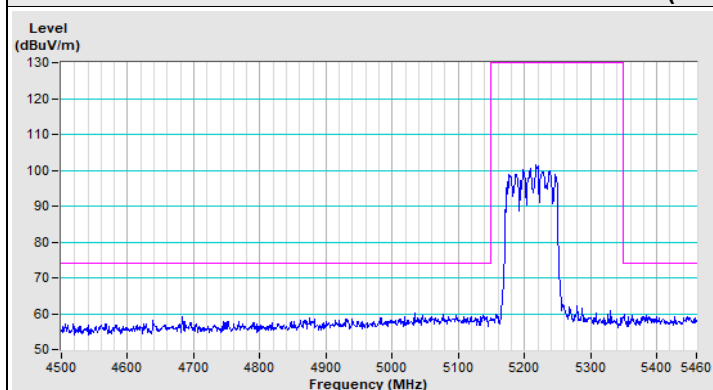
Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11ax (HE40) Channel 102

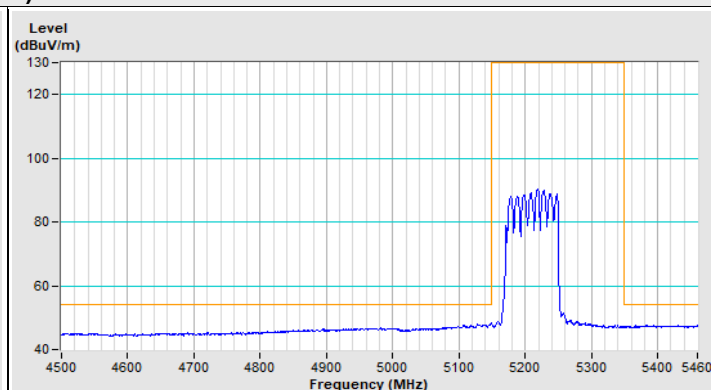


Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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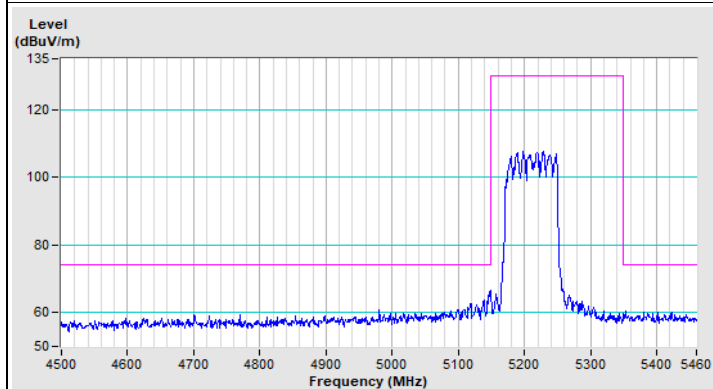
802.11ax (HE80) Channel 42



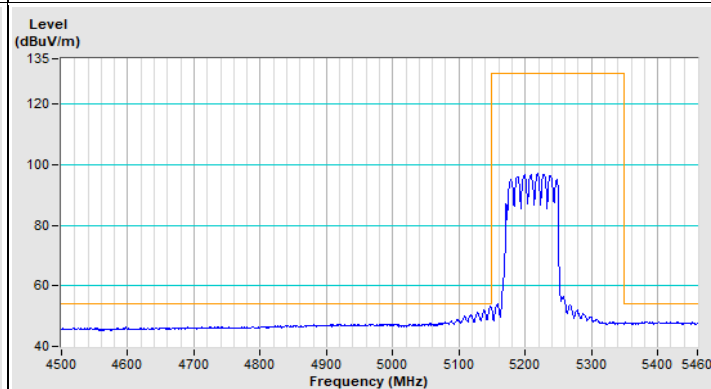
Horizontal (Peak)



Horizontal (Average)

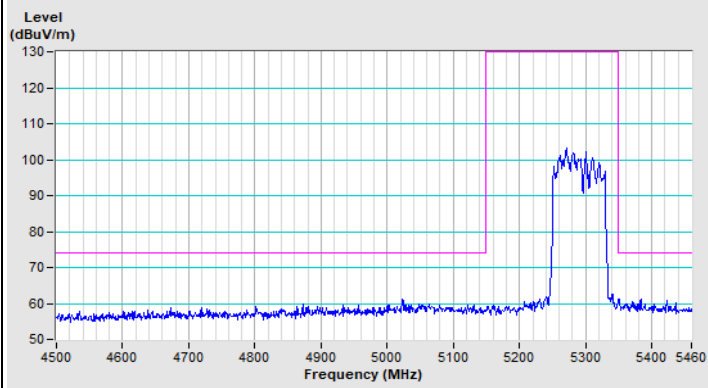


Vertical (Peak)

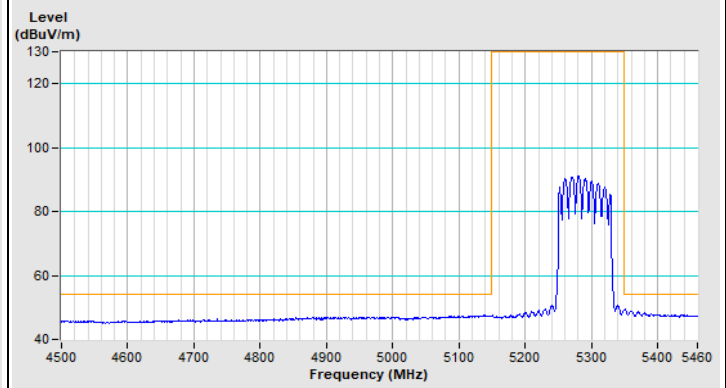


Vertical (Average)

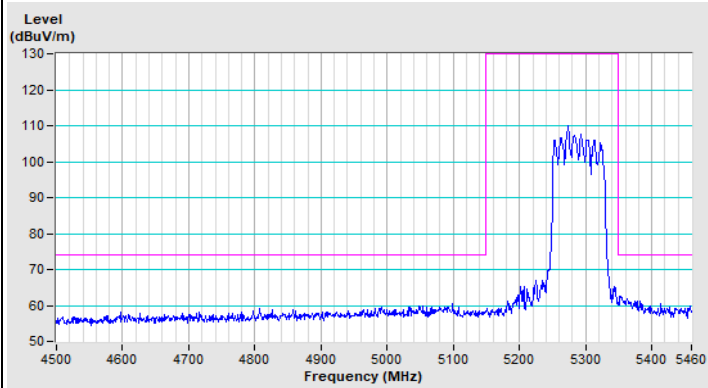
802.11ax (HE80) Channel 58



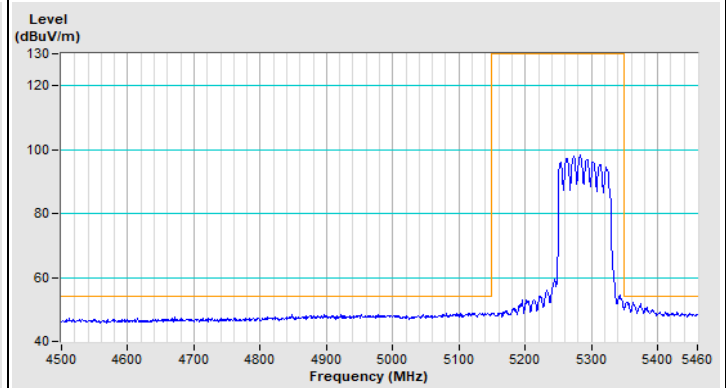
Horizontal (Peak)



Horizontal (Average)



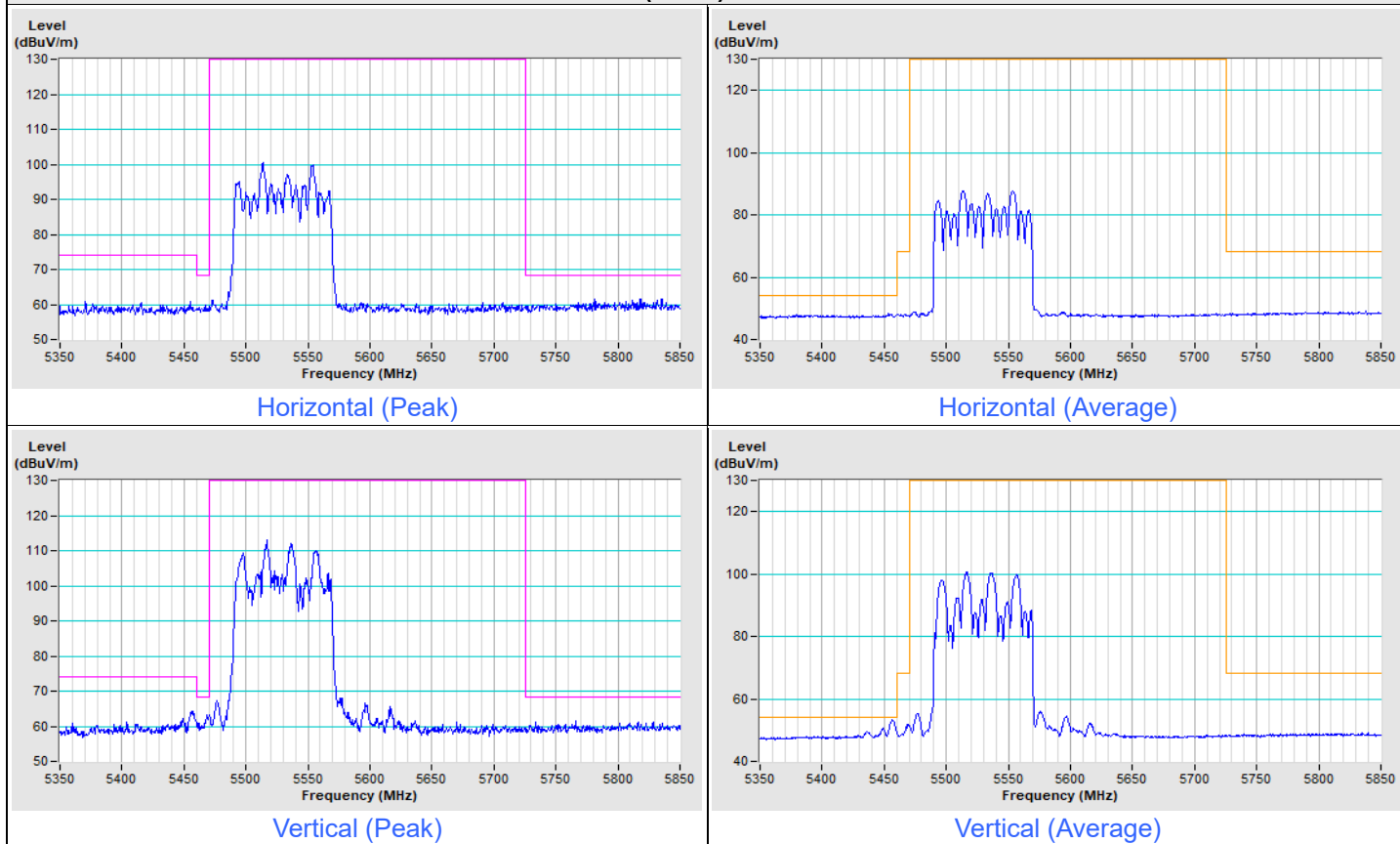
Vertical (Peak)



Vertical (Average)

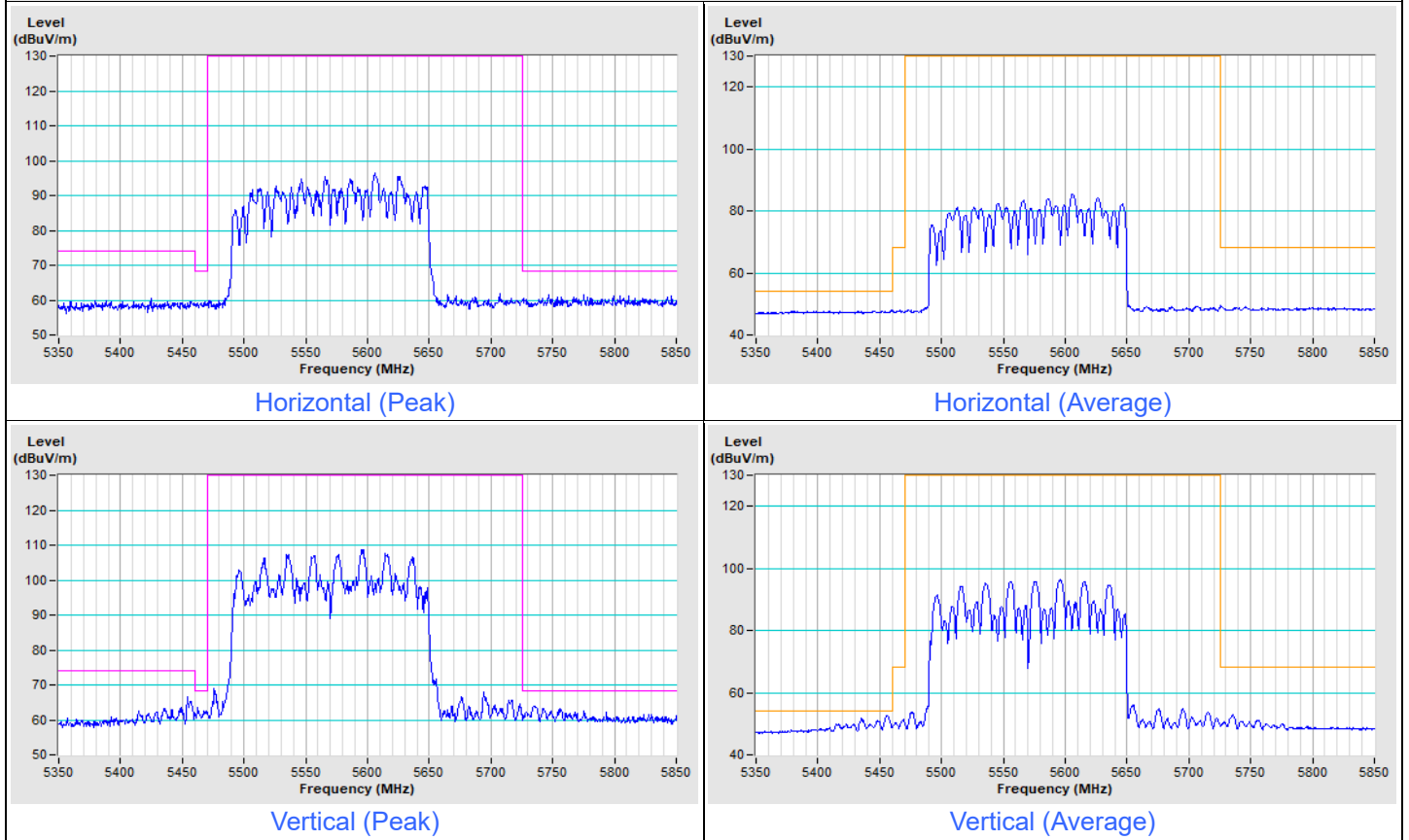
Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11ax (HE80) Channel 106



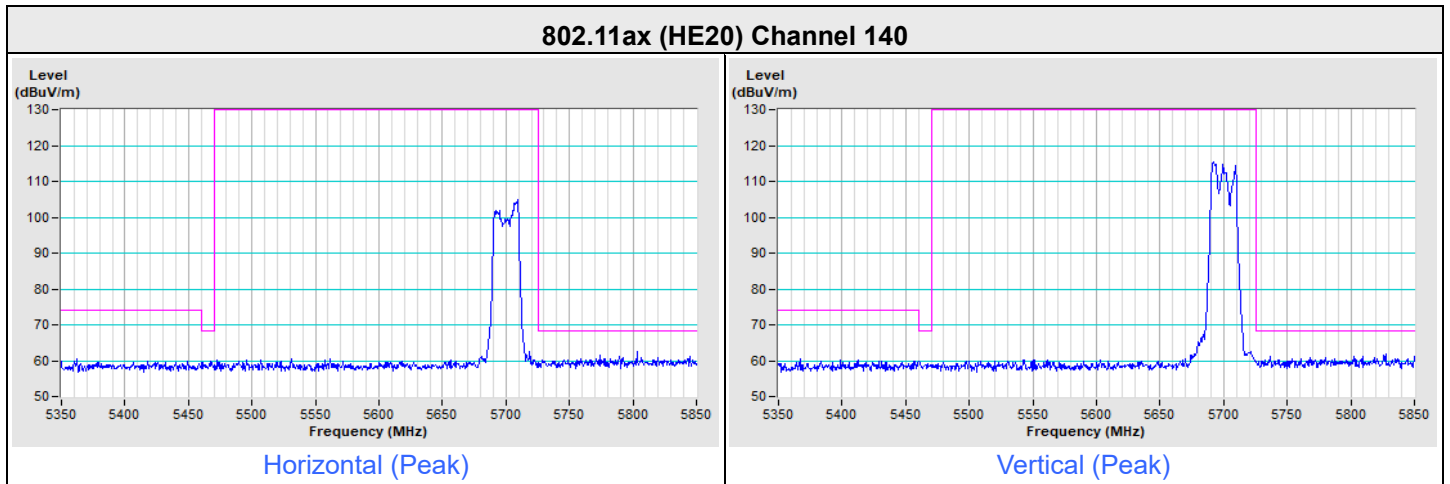
Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11ax (HE160) Channel 114



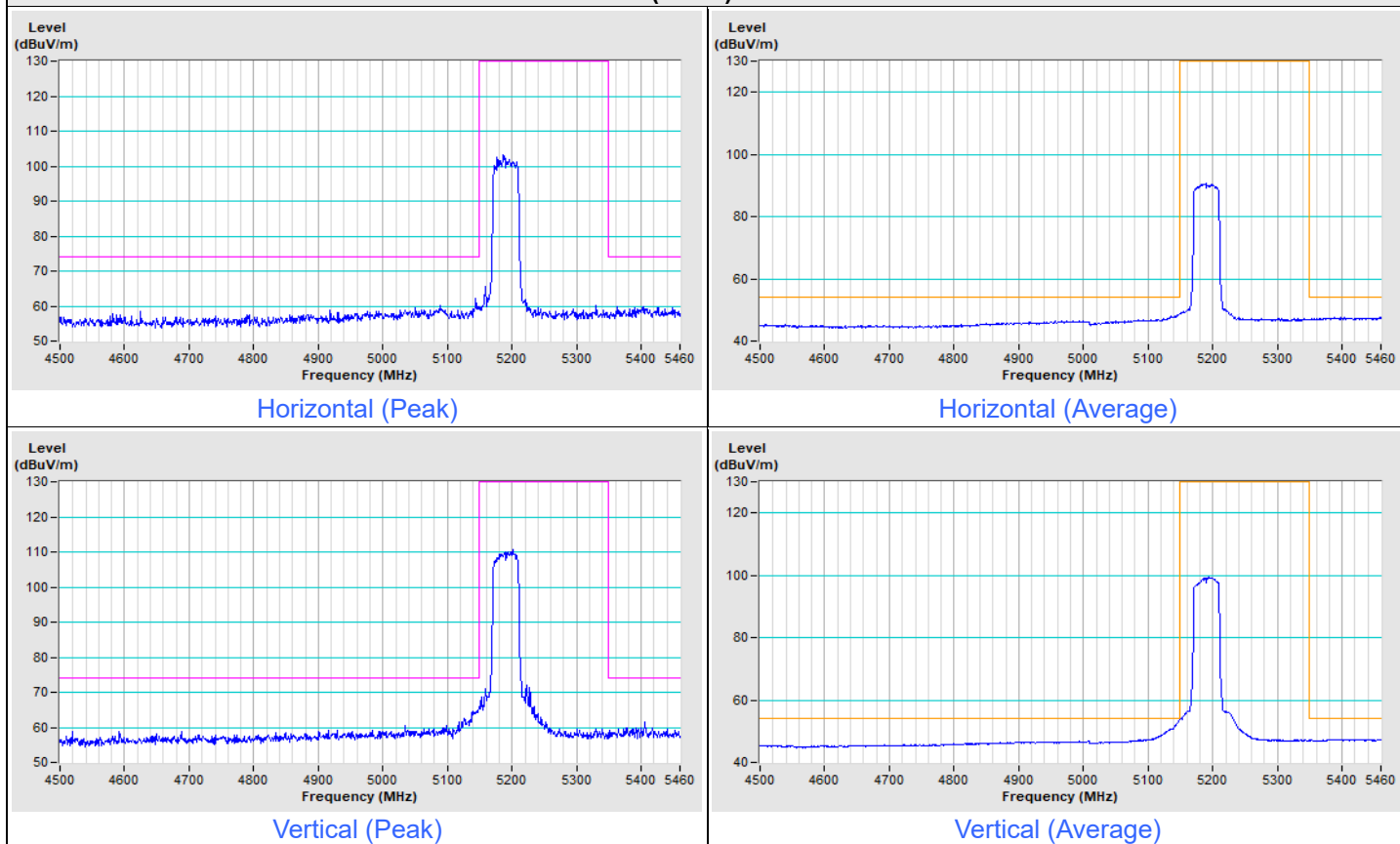
NSS 2

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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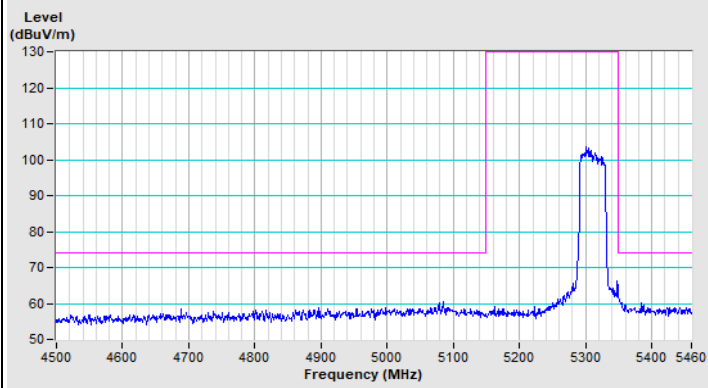


Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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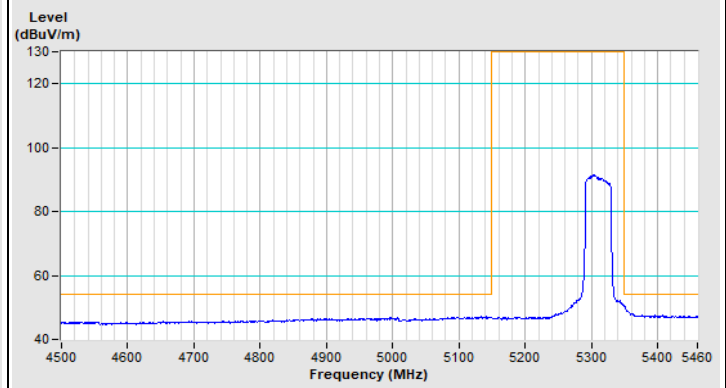
802.11ax (HE40) Channel 38



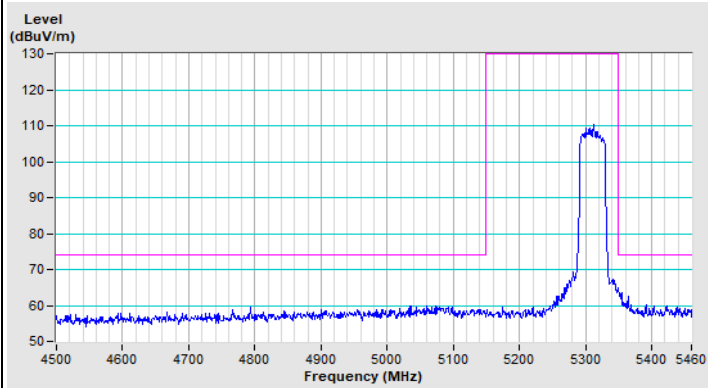
802.11ax (HE40) Channel 62



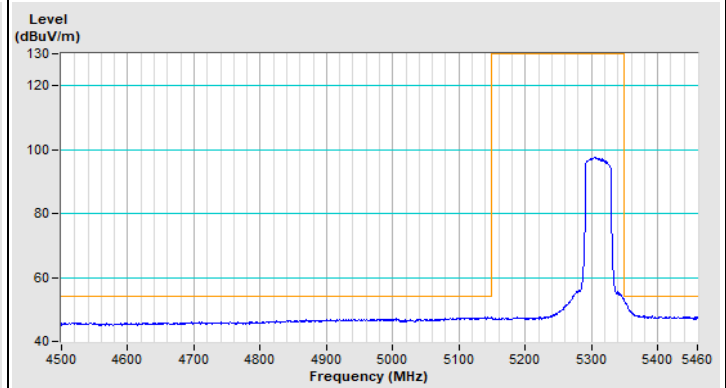
Horizontal (Peak)



Horizontal (Average)



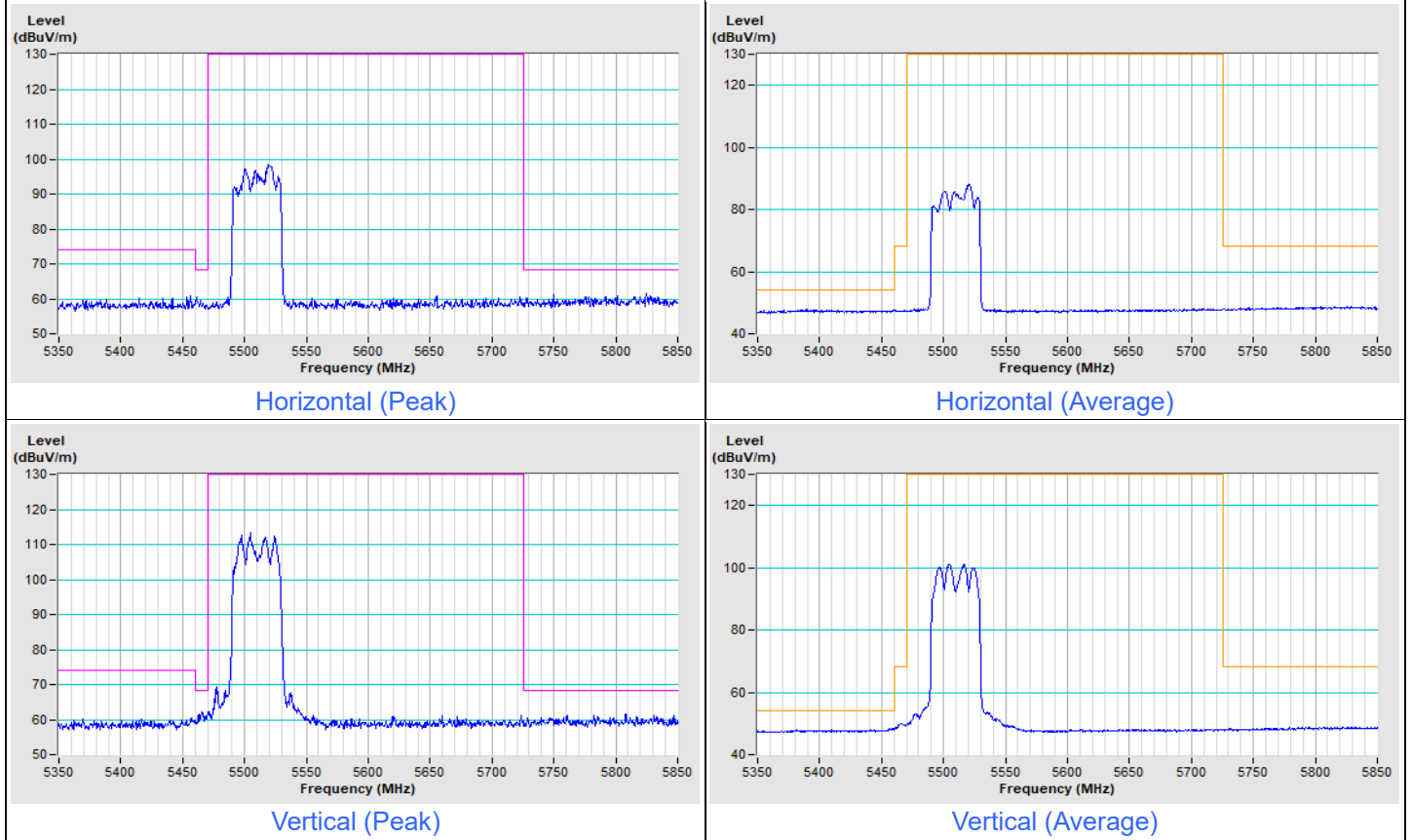
Vertical (Peak)



Vertical (Average)

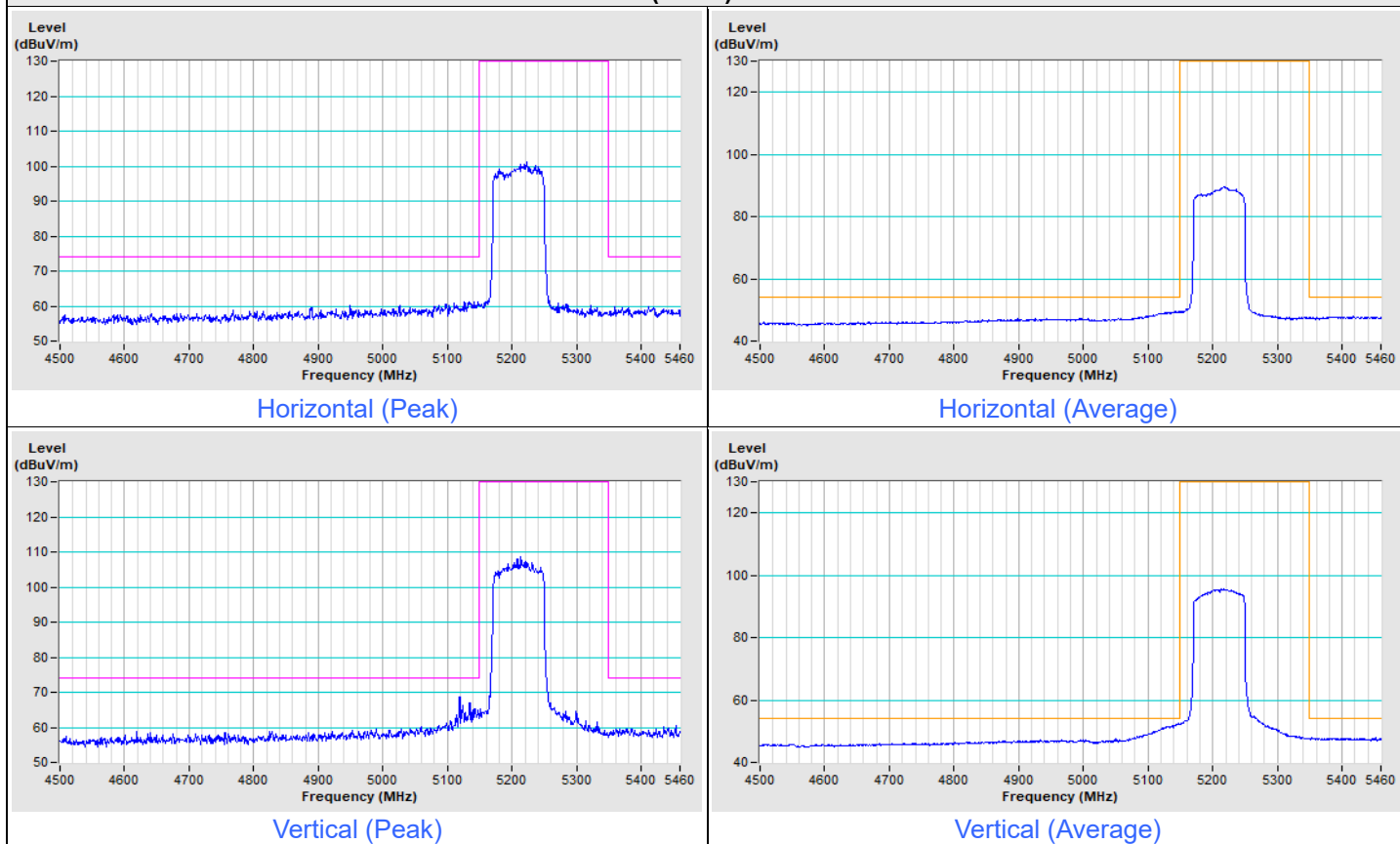
Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11ax (HE40) Channel 102

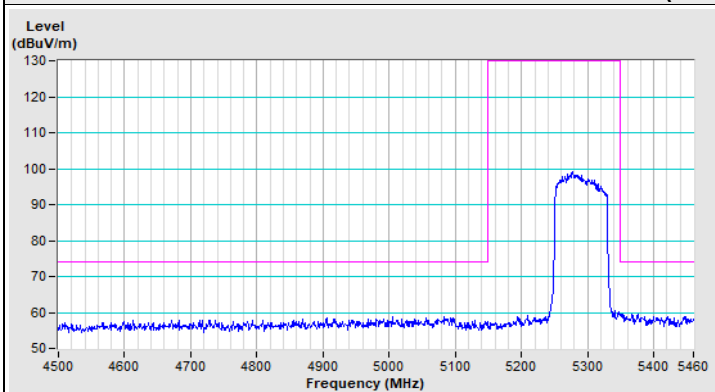


Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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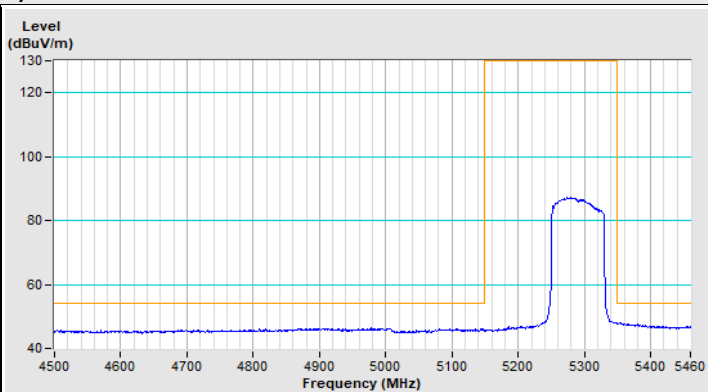
802.11ax (HE80) Channel 42



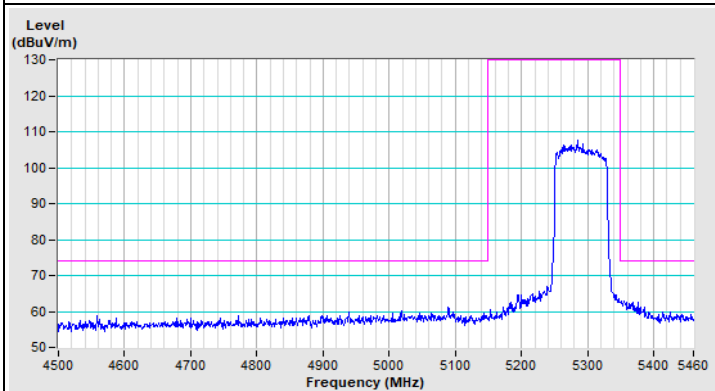
802.11ax (HE80) Channel 58



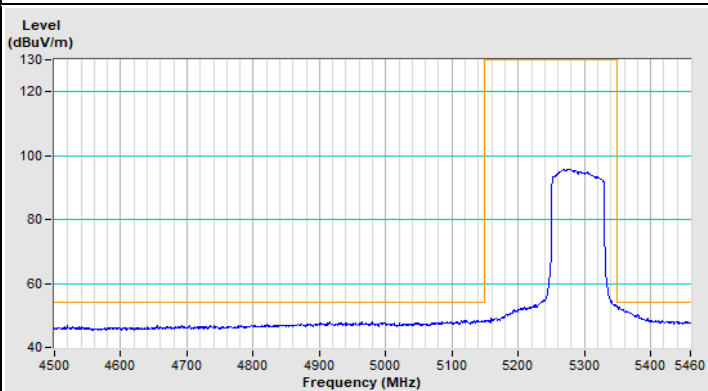
Horizontal (Peak)



Horizontal (Average)



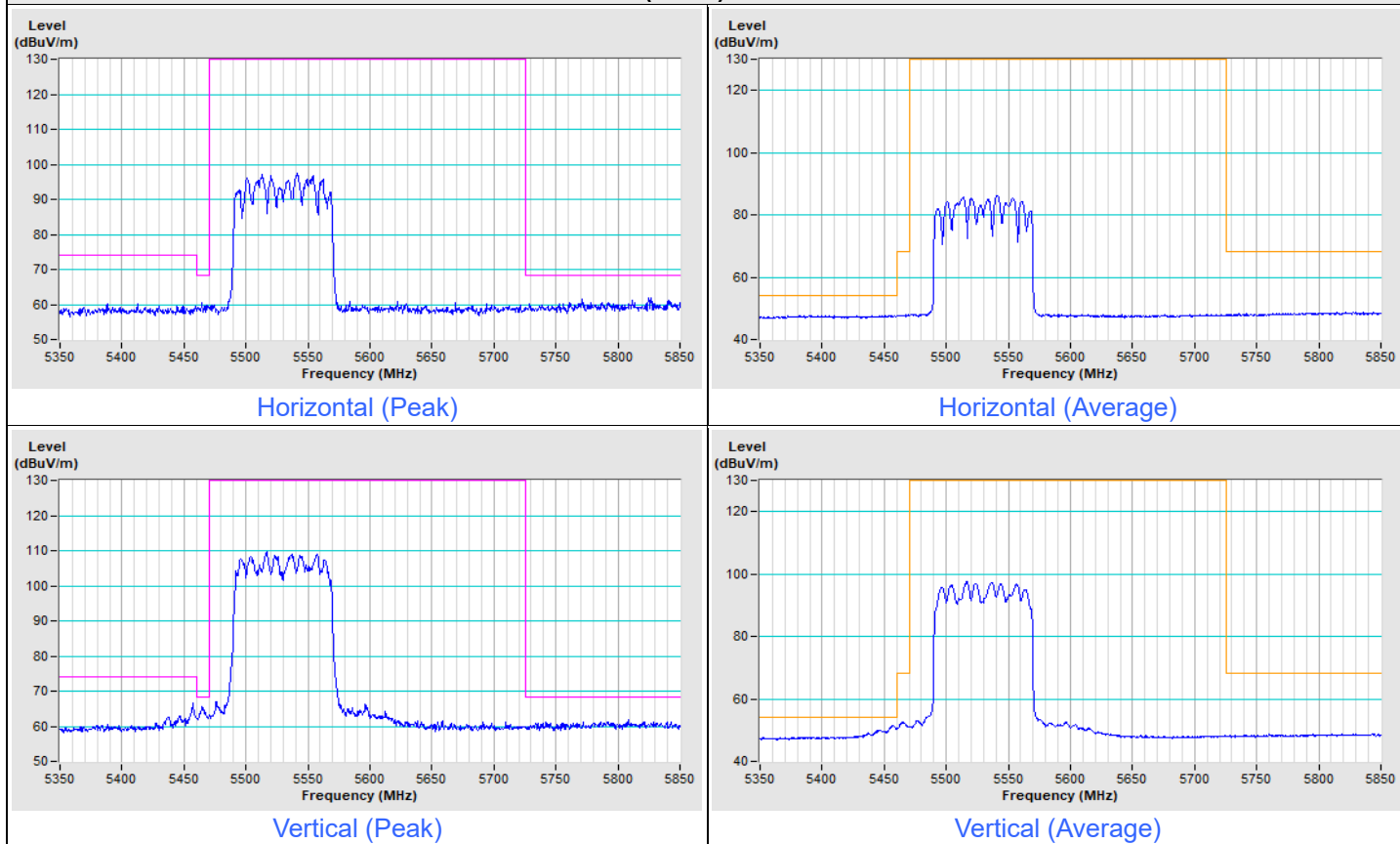
Vertical (Peak)



Vertical (Average)

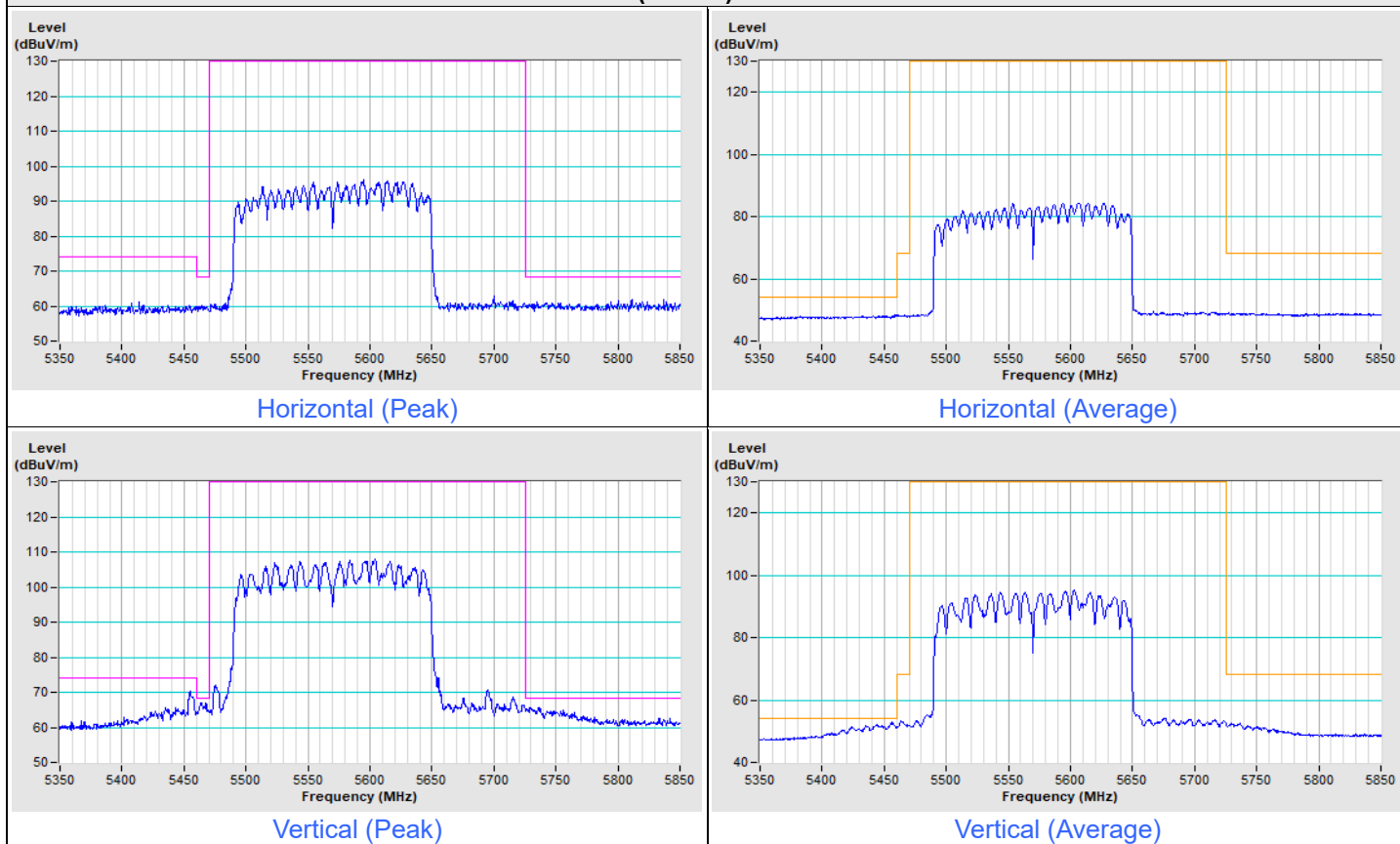
Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11ax (HE80) Channel 106



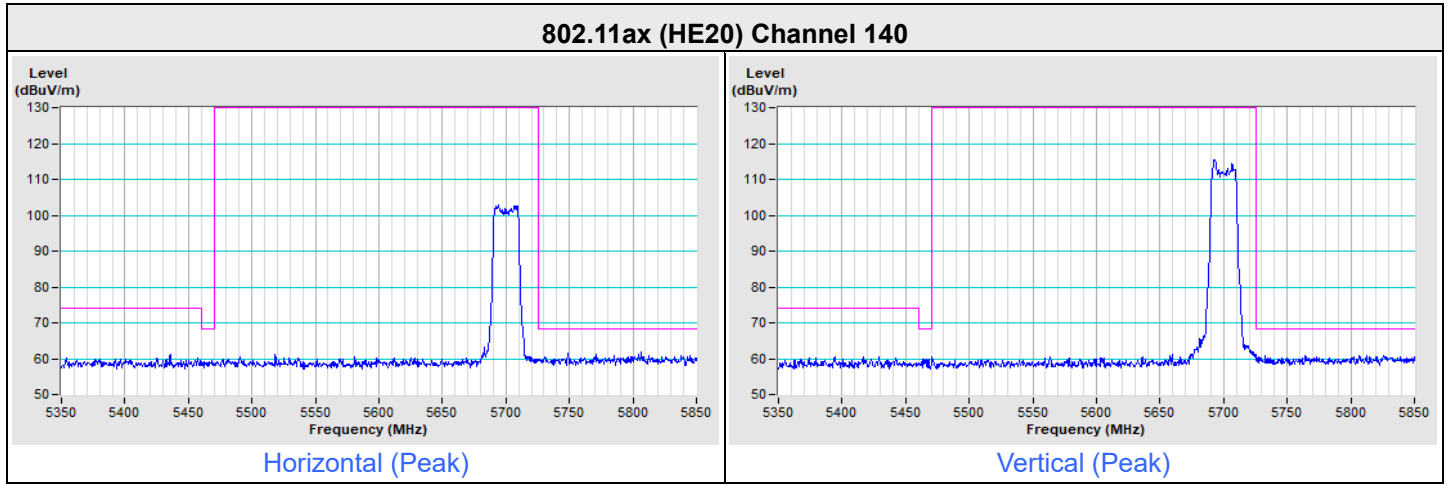
Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11ax (HE160) Channel 114



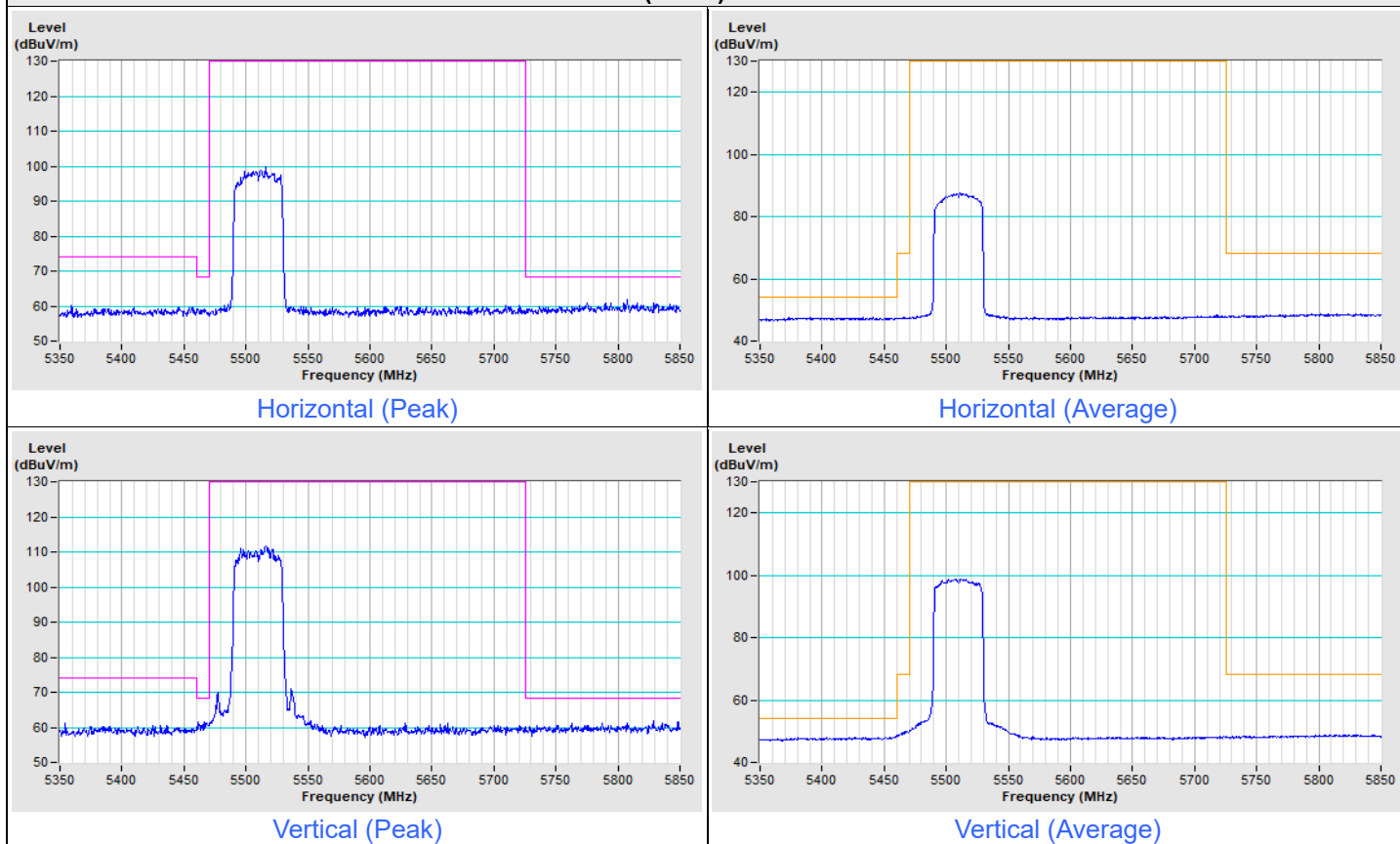
NSS 4

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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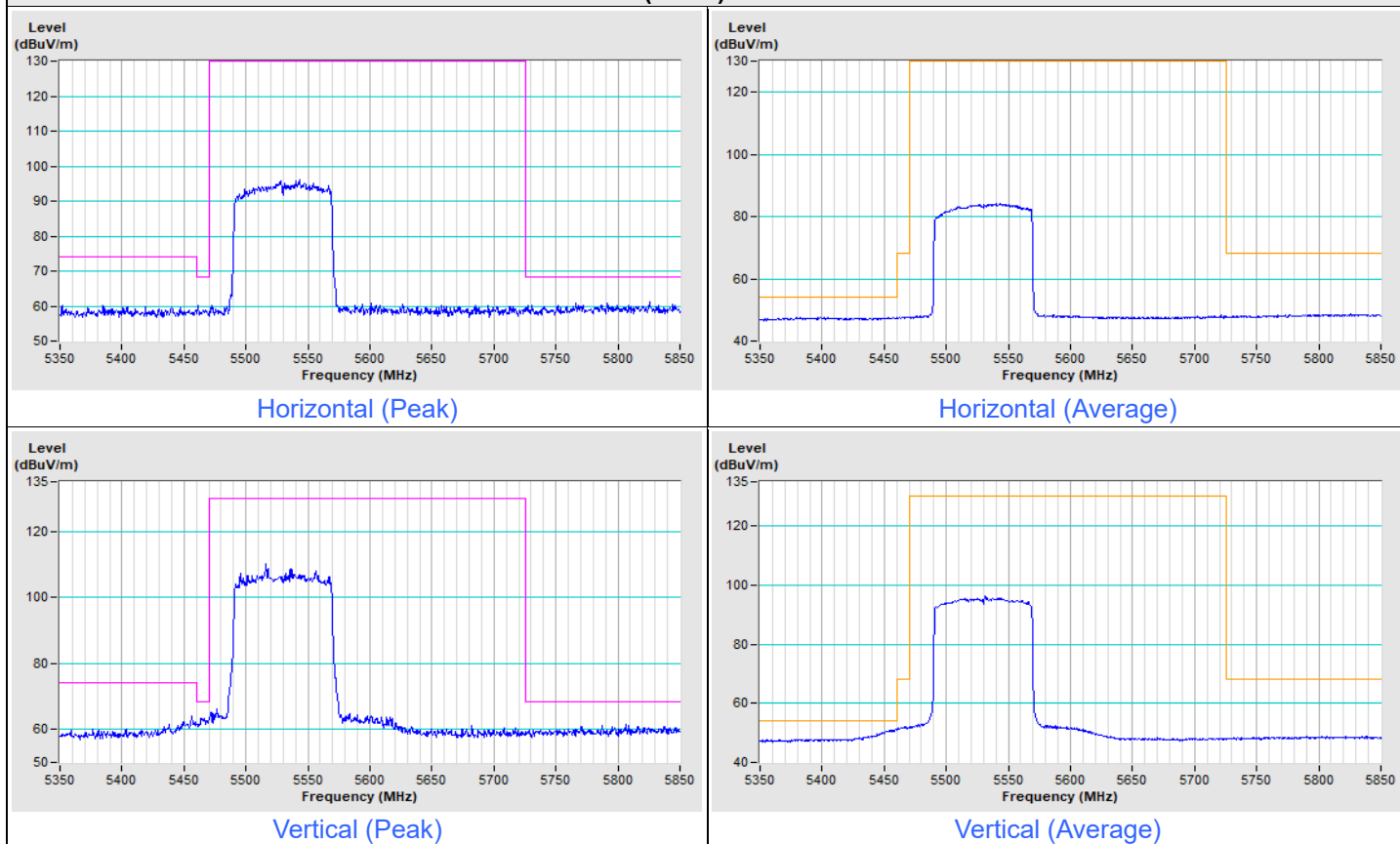
Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11ax (HE40) Channel 102



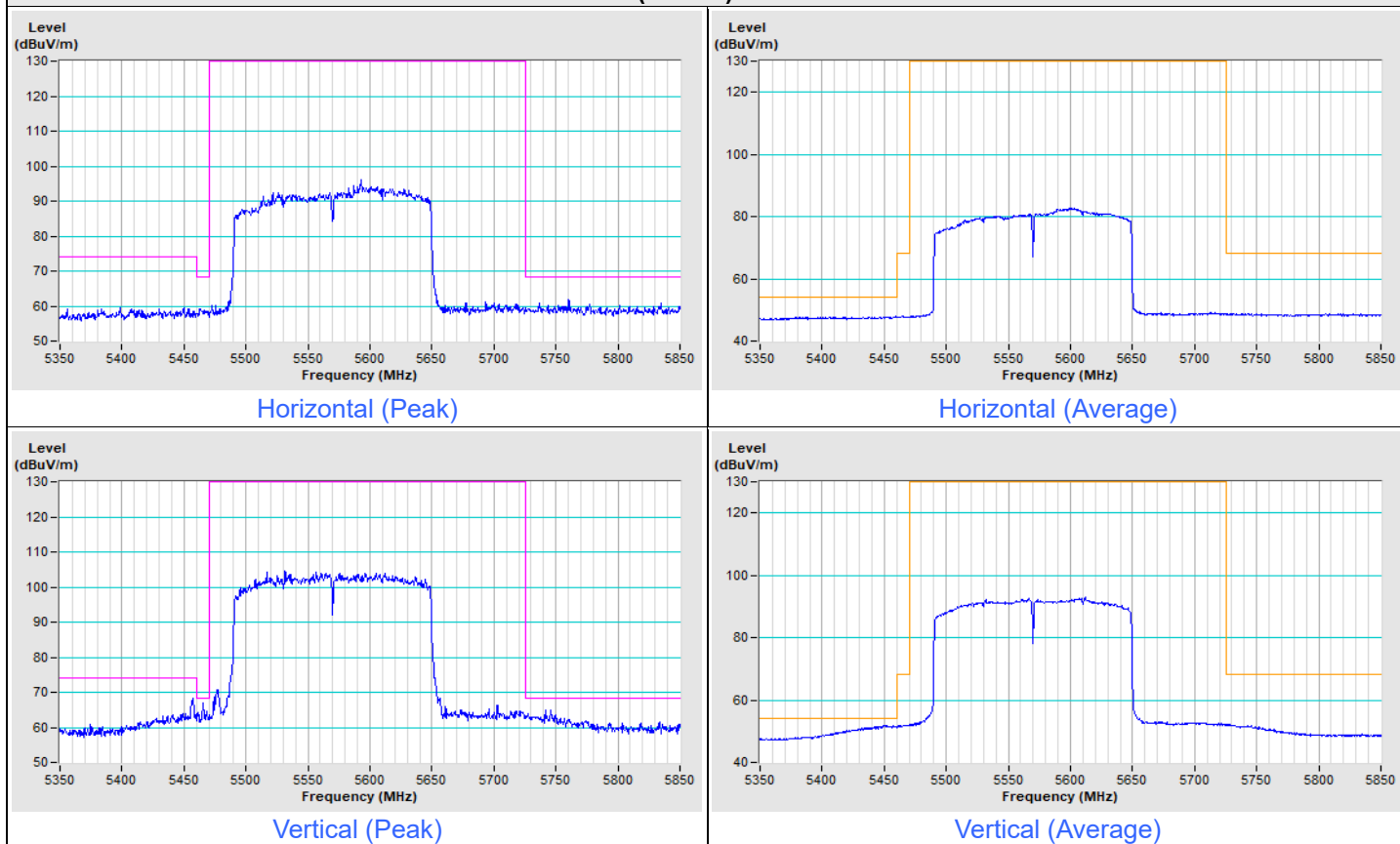
Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11ax (HE80) Channel 106



Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
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802.11ax (HE160) Channel 114



8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.

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