

TEST REPORT

CERTIFICATE OF CONFORMITY

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

Report No.: RFBERD-WTW-P22090179-3

FCC ID: TVE-391CBE0291

Product: Secured Wireless Access Point

Brand: FORTINET

Test Model: FAP-U231G

Series Model: FortiAP U231Gxxxxxx, FAP-U231Gxxxxxx, FORTIAP-U231Gxxxxxx (Where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes only)

Received Date: 2022/9/6

Test Date: 2022/9/23 ~ 2023/2/14

Issued Date: 2023/3/21

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration /

Designation Number(1): 788550 / TW0003

FCC Registration /

Designation Number(2): 427177 / TW0011

Approved by: _____

Jeremy Lin

Date: _____

2023/3/21

Jeremy Lin / Project Engineer

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Prepared by : Pettie Chen / Senior Specialist



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Release Control Record

Issue No.	Description	Date Issued
RFBERD-WTW-P22090179-3	Original release.	2023/3/21

1 Certificate

Product: Secured Wireless Access Point

Brand: FORTINET

Test Model: FAP-U231G

Series Model: FortiAP U231Gxxxxxx, FAP-U231Gxxxxxx, FORTIAP-U231Gxxxxxx (Where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes only)

Sample Status: Engineering sample

Applicant: Fortinet, Inc.

Test Date: 2022/9/23 ~ 2023/2/14

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

Measurement procedure: ANSI C63.10-2013
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)(1) 15.407(a)(2) 15.407(a)(3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1) 15.407(a)(2) 15.407(a)(3)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
---	Occupied Bandwidth	-	Reference only.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -9.60 dB at 0.35400 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -2.3 dB at 526.60 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 -1.0 dB at 5150.00, 5470.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is IPEX not a standard connector.

Note: 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:

Parameter	Specification	Expanded Uncertainty (k=2) (±)
Occupied Bandwidth	-	491.896 Hz
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.99 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	2.44 dB
	30 MHz ~ 1 GHz	2.02 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	1.01 dB
	18 GHz ~ 40 GHz	1.15 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	Secured Wireless Access Point
Brand	FORTINET
Test Model	FAP-U231G
Series Model	FortiAP U231Gxxxxxx, FAP-U231Gxxxxxx, FORTIAP-U231Gxxxxxx (Where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes only)
Status of EUT	Engineering sample
Power Supply Rating	12Vdc from adapter 56Vdc from POE
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: 54/48/36/24/18/12/9/6Mbps 802.11n (HT20/40): up to 300Mbps VHT20/40/80: up to 866.7Mbps 802.11ax: up to 1201.0Mbps
Operating Frequency	Radio 1: 5.745 GHz ~ 5.825 GHz Radio 2: 5.18 GHz ~ 5.24 GHz, 5.745 GHz ~ 5.825 GHz Radio 3: 5.18 GHz ~ 5.24 GHz, 5.745 GHz ~ 5.825 GHz
Number of Channel	5.18 GHz ~ 5.24 GHz 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 4 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2 802.11ac (VHT80), 802.11ax (HE80): 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	<u>Radio 1:</u> CDD: 5.745 GHz ~ 5.825 GHz: 436.1 mW (26.4 dBm) Beamforming: 5.745 GHz ~ 5.825 GHz: 436.1 mW (26.4 dBm) <u>Radio 2:</u> CDD: 5.18 GHz ~ 5.24 GHz: 357.604 mW (25.53 dBm) 5.745 GHz ~ 5.825 GHz: 289.334 mW (24.61 dBm) Beamforming: 5.18 GHz ~ 5.24 GHz: 357.604 mW (25.53 dBm) 5.745 GHz ~ 5.825 GHz: 282.699 mW (24.51 dBm) <u>Radio 3:</u> CDD: 5.18 GHz ~ 5.24 GHz: 423.454 mW (26.27 dBm) 5.745 GHz ~ 5.825 GHz: 456.609 mW (26.6 dBm) Beamforming: 5.18 GHz ~ 5.24 GHz: 423.454 mW (26.27 dBm) 5.745 GHz ~ 5.825 GHz: 456.609 mW (26.6 dBm)
EUT Category	Indoor Access Point

Note:

1. The following models are provided to this EUT. The model FAP-U231G was chosen for final test.

Brand	Model	Description
FORTINET	FAP-U231G	Series model for marketing purpose
	FortiAP U231Gxxxxxx, FAP-U231Gxxxxxx, FORTIAP-U231Gxxxxxx (Where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes only)	

2. The EUT consumes power from the following POE and adapter. (Support unit only)

POE (Support unit only)	
Brand	Engenius
Model	PNA90BGS-54
Input Power	100-240V ~1.5A, 50-60Hz
Output Power	56V, 1.7A

AC Adapter 1 (Support unit only)	
Brand	Asian Power Devices Inc.
Model	WA-30J12R
Input Power	100-240Vac ~50-60Hz, 0.9A Max
Output Power	12Vdc, 2.5A
DC Output Cable	1.48m non-shielded cable without core

AC Adapter 2 (Support unit only)	
Brand	Asian Power Devices Inc.
Model	WA-48A12R
Input Power	100-240Vac ~50-60Hz, 1.5A Max
Output Power	12Vdc, 4.0A
DC Output Cable	1.46m non-shielded cable without core

3. The simultaneous operation mode was determined by client.

No	Mode
1	2.4GHz radio (Radio 1) + 5GHz radio (Radio 2) + 2.4GHz radio (Radio 3) + BLE
2	2.4GHz radio (Radio 1) + 5GHz radio (Radio 2) + 2.4GHz radio (Radio 3) + Zigbee
3	2.4GHz radio (Radio 1) + 5GHz radio (Radio 2) + 5GHz radio (Radio 3) + BLE
4	2.4GHz radio (Radio 1) + 5GHz radio (Radio 2) + 5GHz radio (Radio 3) + Zigbee
5	2.4GHz radio (Radio 1) + 5GHz radio (Radio 2) + 6GHz radio (Radio 3) + BLE
6	2.4GHz radio (Radio 1) + 5GHz radio (Radio 2) + 6GHz radio (Radio 3) + Zigbee
7	5GHz radio (Radio 1) + 5GHz radio (Radio 2) + 2.4GHz radio (Radio 3) + BLE
8	5GHz radio (Radio 1) + 5GHz radio (Radio 2) + 2.4GHz radio (Radio 3) + Zigbee

* 5GHz radio (Radio 2) and 5GHz radio (Radio 3) cannot transmit in the same band at same time.

* Zigbee and BT technologies cannot transmit at same time.

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna Type		PIFA			
Connector Type		IPEX			
Antenna NO.	RF Chain NO.	Brand	Model	Antenna Net Gain (dBi)	Frequency range
ANT0(D1)	Radio 1 2G (Chain 0) Radio 1 5G (Chain 0)	INPAQ	46-500534-01	3.89	2.4~2.4835GHz
				4.76	5.15~5.25GHz
				4.96	5.25~5.35GHz
				5.75	5.47~5.725GHz
				5.78	5.725~5.85GHz
ANT1(D2)	Radio 1 2G (Chain 1) Radio 1 5G (Chain 1)	INPAQ	46-500534-01	3.83	2.4~2.4835GHz
				4.50	5.15~5.25GHz
				4.72	5.25~5.35GHz
				5.46	5.47~5.725GHz
				5.54	5.725~5.85GHz
ANT2(D3)	Radio 3 2G (Chain 0) Radio 3 5G (Chain 0)	INPAQ	46-500534-01	3.78	2.4~2.4835GHz
				5.47	5.15~5.25GHz
				5.28	5.25~5.35GHz
				5.78	5.47~5.725GHz
				5.42	5.725~5.85GHz
ANT3(D4)	Radio 3 2G (Chain 1) Radio 3 5G (Chain 1)	INPAQ	46-500534-01	3.75	2.4~2.4835GHz
				4.00	5.15~5.25GHz
				4.55	5.25~5.35GHz
				5.77	5.47~5.725GHz
				5.32	5.725~5.85GHz
ANT5(5G1)	Radio 2 5G (Chain 0)	INPAQ	46-500534-01	4.66	5.15~5.25GHz
				4.75	5.25~5.35GHz
				5.56	5.47~5.725GHz
				5.59	5.725~5.85GHz
ANT6(5G2)	Radio 2 5G (Chain 1)	INPAQ	46-500534-01	5.19	5.15~5.25GHz
				4.93	5.25~5.35GHz
				5.53	5.47~5.725GHz
				5.24	5.725~5.85GHz

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

2. The EUT incorporates a MIMO function:

5 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11a	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX
802.11ax (HE20)	2TX	2RX
802.11ax (HE40)	2TX	2RX
802.11ax (HE80)	2TX	2RX

Note:

1. All of modulation mode support beamforming function except 802.11a modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz), 802.11ac mode for 20 MHz (40 MHz, 80 MHz) and 802.11ax mode for 20 MHz (40 MHz, 80 MHz), 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.
4. The device didn't support Partial RU (Tone RU) with OFDMA Mode.

3.3 Channel List

FOR 5180 ~ 5240 MHz

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

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

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

Channel	Frequency
42	5210 MHz

FOR 5745 ~ 5825 MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 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), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

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

Channel	Frequency
155	5775 MHz

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	<ol style="list-style-type: none"> EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition. The EUT has 2 power modes: AC adapter/PoE. Pre-scan these modes and find the worst case as a representative test condition.
Worst Case:	<ol style="list-style-type: none"> X-axis/ Y-axis/ Z-axis Worst Condition: X-axis Worst Condition: Adapter 1 & PoE

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

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	A	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	155	BPSK	MCS0
	C	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	38, 46, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	42, 155	BPSK	MCS0
	E	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	38, 46, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	42, 155	BPSK	MCS0
Power Spectral Density	A	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	155	BPSK	MCS0
	C	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	38, 46, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	42, 155	BPSK	MCS0
	E	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	38, 46, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	42, 155	BPSK	MCS0

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
6 dB Bandwidth	A	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	155	BPSK	MCS0
	C	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	155	BPSK	MCS0
	E	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	155	BPSK	MCS0
Occupied Bandwidth	A	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	155	BPSK	MCS0
	C	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	38, 46, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	42, 155	BPSK	MCS0
	E	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	38, 46, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	42, 155	BPSK	MCS0
Frequency Stability	A	802.11a	CDD	149	un-modulation	-
	C	802.11a	CDD	36	un-modulation	-
	E	802.11a	CDD	36	un-modulation	-

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
AC Power Conducted Emissions	A, B	802.11ax (HE40)	CDD	151	BPSK	MCS0
	C, D	802.11ax (HE20)	CDD	48	BPSK	MCS0
	E, F	802.11ax (HE40)	CDD	151	BPSK	MCS0
Unwanted Emissions below 1 GHz	A, B	802.11ax (HE40)	CDD	151	BPSK	MCS0
	C, D	802.11ax (HE20)	CDD	48	BPSK	MCS0
	E, F	802.11ax (HE40)	CDD	151	BPSK	MCS0
Unwanted Emissions above 1 GHz	A	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	155	BPSK	MCS0
	C	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	38, 46, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	42, 155	BPSK	MCS0
	E	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	38, 46, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	42, 155	BPSK	MCS0
EUT Configure Mode	Mode	Radio	Power			
	A	1	Powered by adapter 1			
	B	1	Powered by POE			
	C	2	Powered by adapter 1			
	D	2	Powered by POE			
	E	3	Powered by adapter 1			
F	3	Powered by POE				

3.5 Duty Cycle of Test Signal

Test Mode A

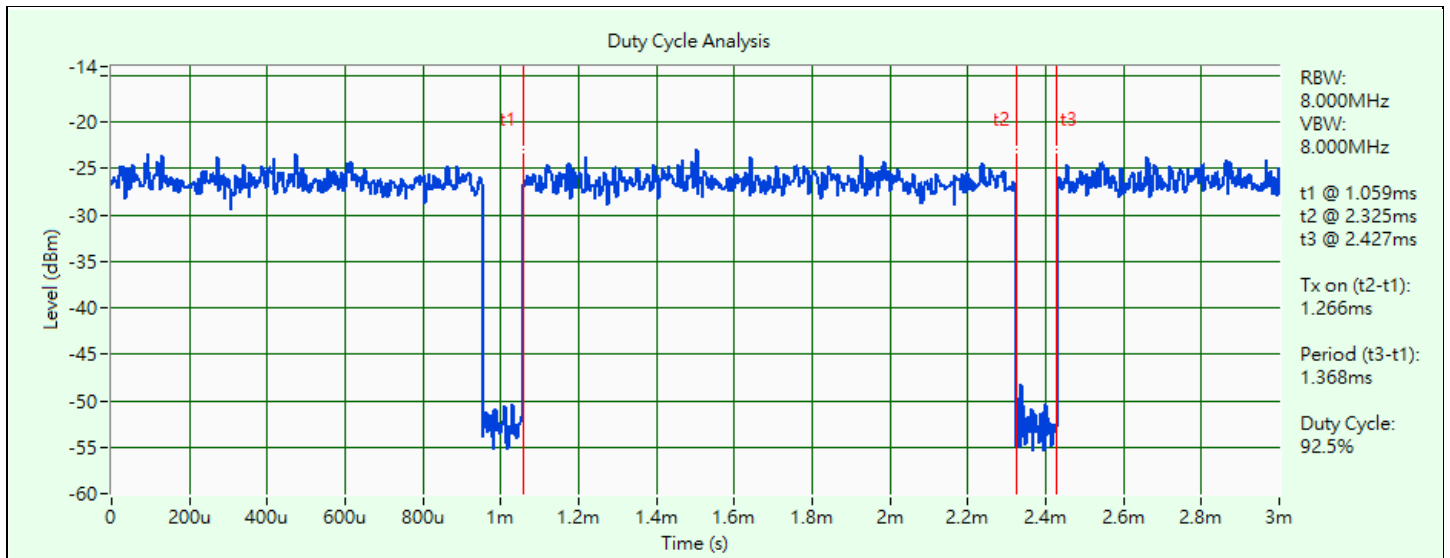
Radio 1

802.11a: Duty cycle = 1.266 ms / 1.368 ms x 100% = 92.5%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.34 \text{ dB}$

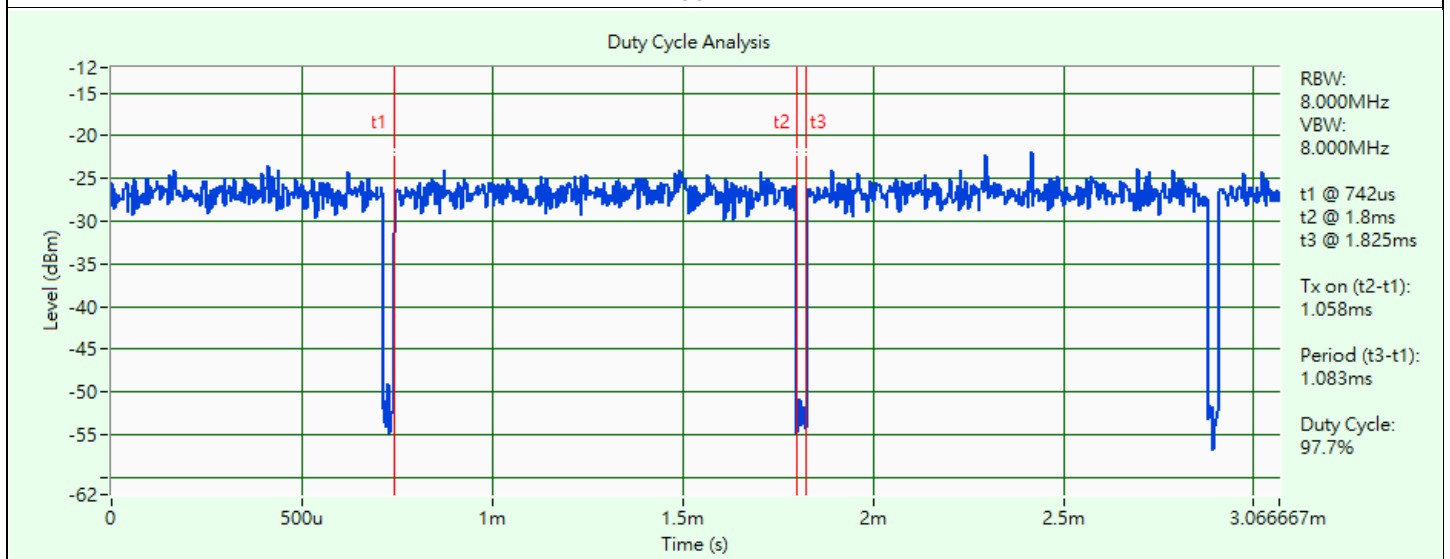
802.11ax (HE20): Duty cycle = 1.058 ms / 1.083 ms x 100% = 97.7%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.10 \text{ dB}$

802.11ax (HE40): Duty cycle = 1.058 ms / 1.083 ms x 100% = 97.7%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.10 \text{ dB}$

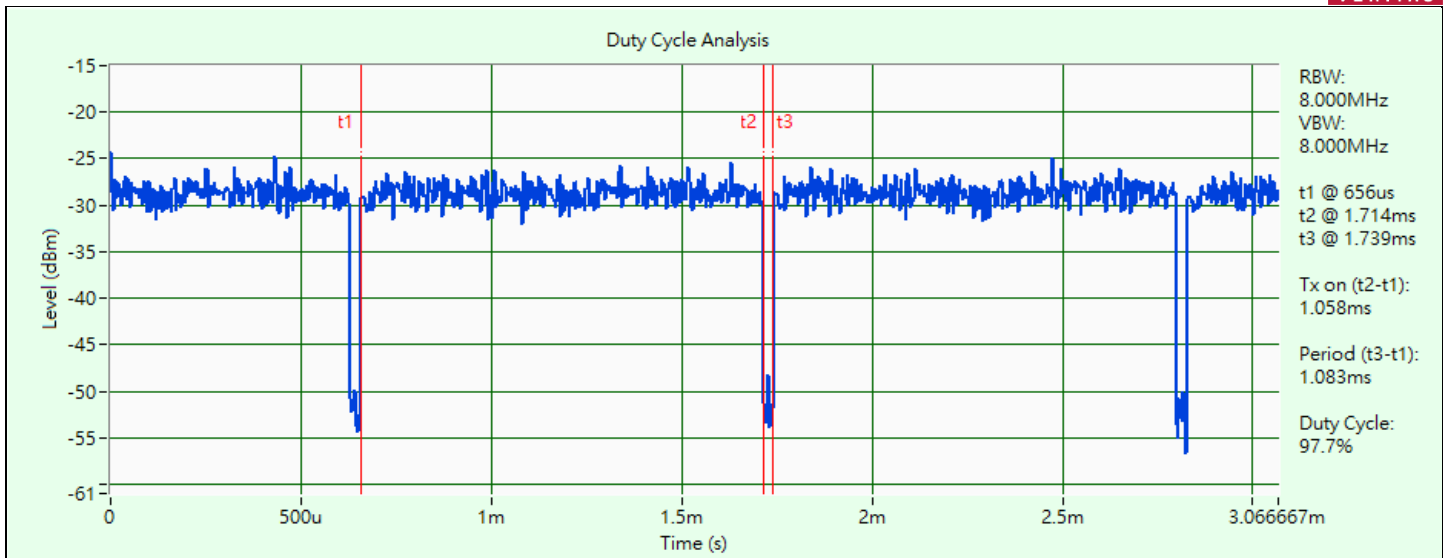
802.11ax (HE80): Duty cycle = 1.043 ms / 1.068 ms x 100% = 97.7%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.10 \text{ dB}$



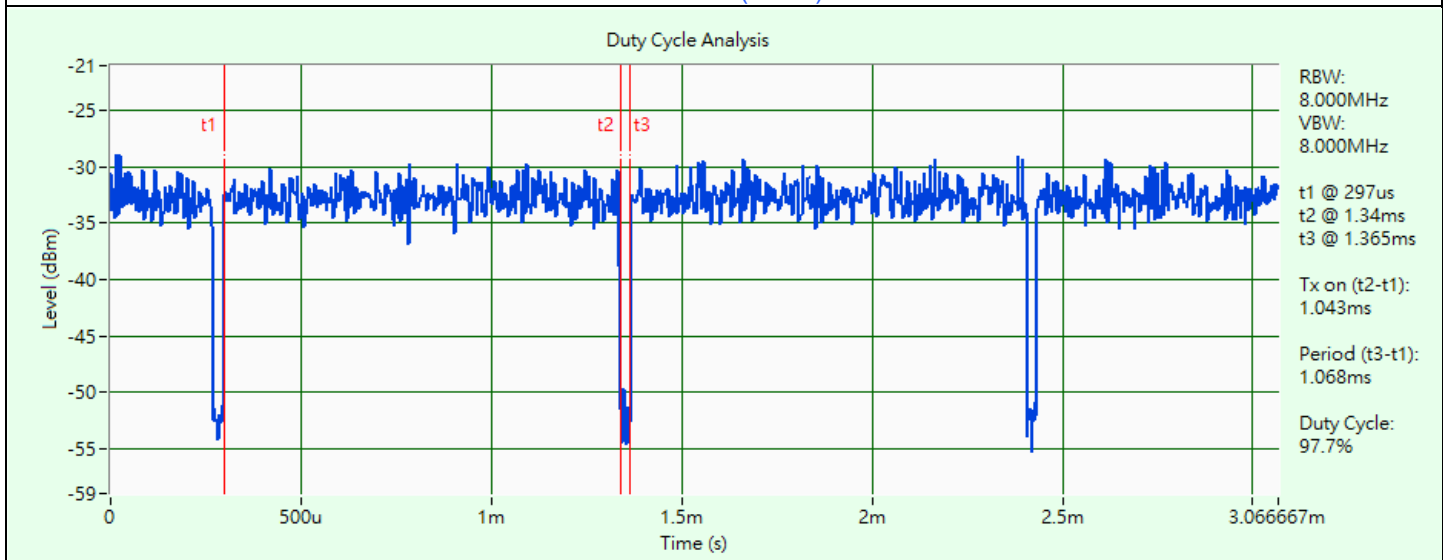
802.11a



802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)

Test Mode C

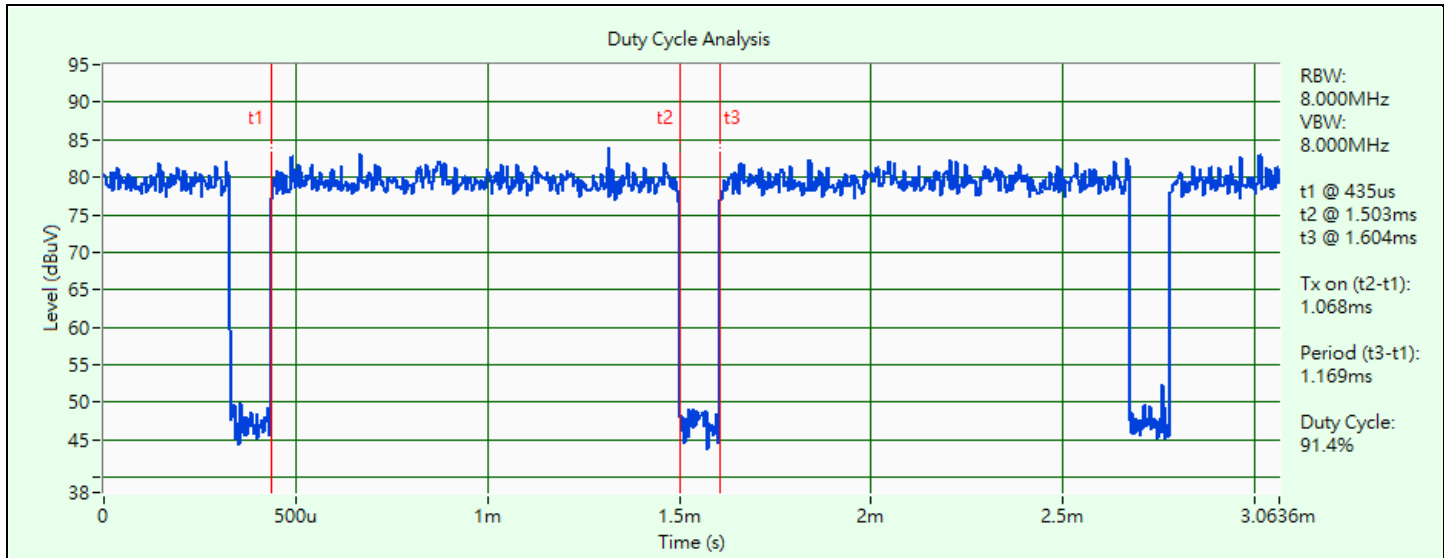
Radio 2

802.11a: Duty cycle = 1.068 ms / 1.169 ms x 100% = 91.4%, duty factor = 10 * log (1/Duty cycle) = 0.39 dB

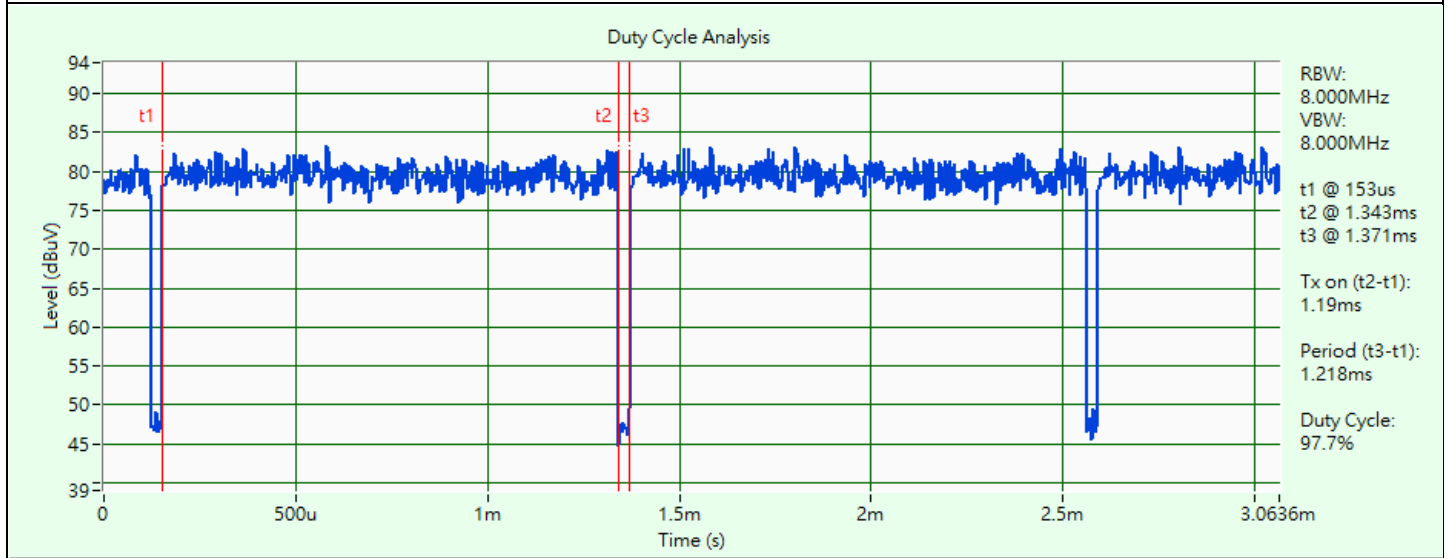
802.11ax (HE20): Duty cycle = 1.19 ms / 1.218 ms x 100% = 97.7%, duty factor = 10 * log (1/Duty cycle) = 0.10 dB

802.11ax (HE40): Duty cycle = 1.19 ms / 1.218 ms x 100% = 97.7%, duty factor = 10 * log (1/Duty cycle) = 0.10 dB

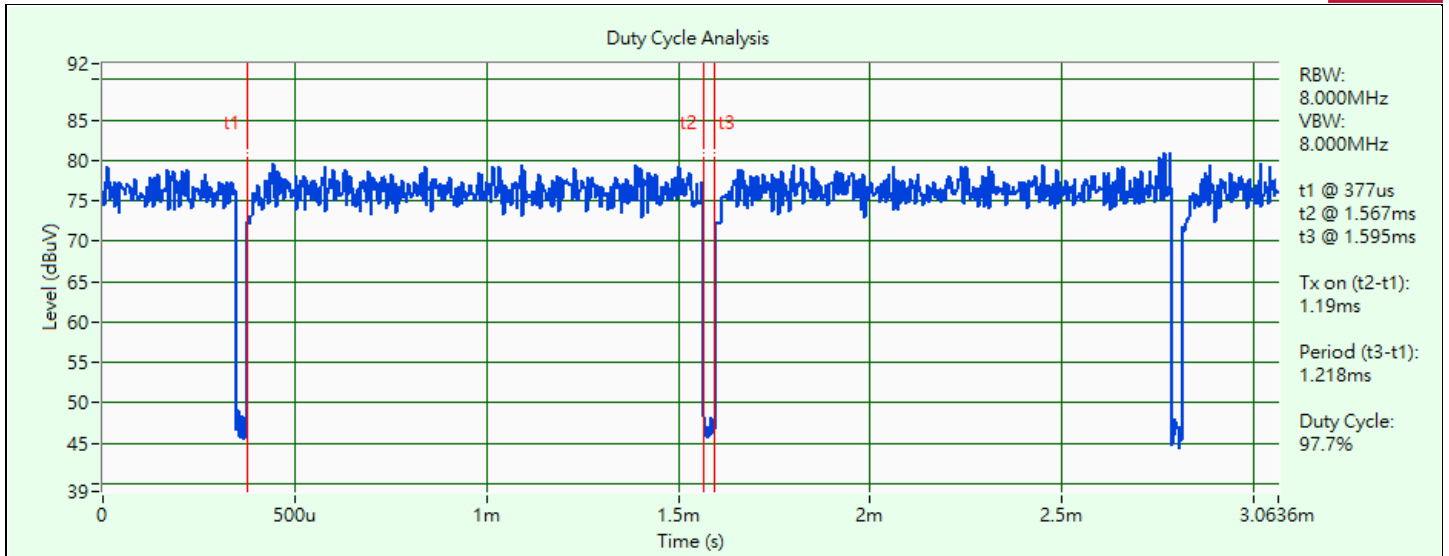
802.11ax (HE80): Duty cycle = 1.175 ms / 1.203 ms x 100% = 97.7%, duty factor = 10 * log (1/Duty cycle) = 0.10 dB



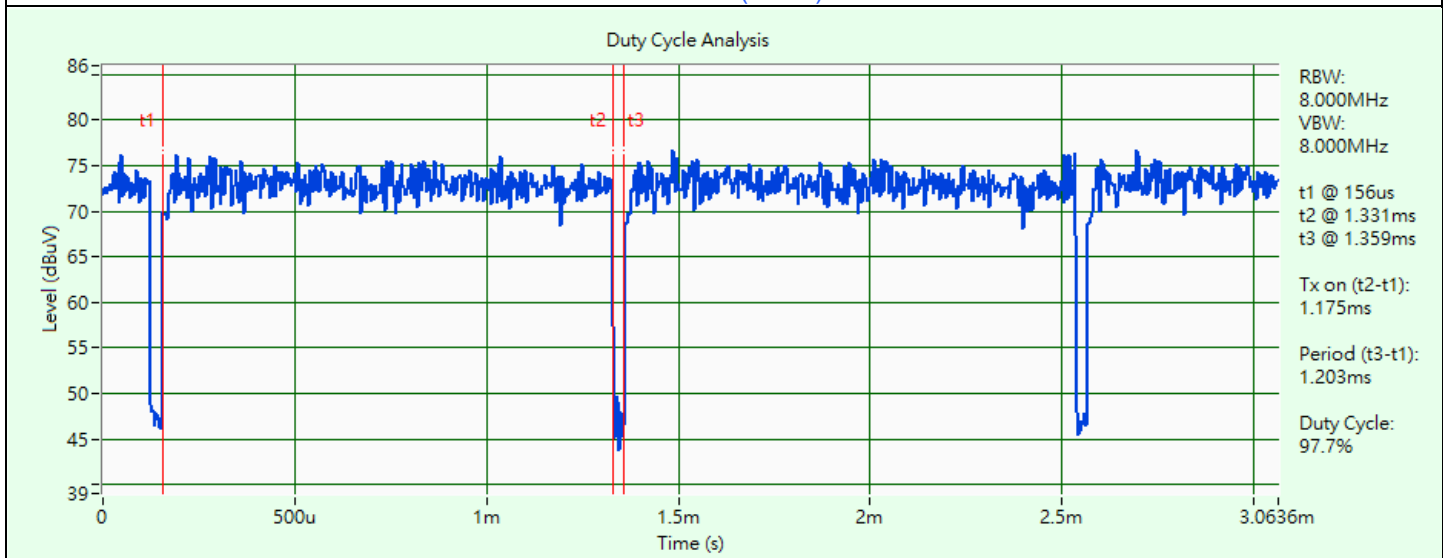
802.11a



802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)

Test Mode E

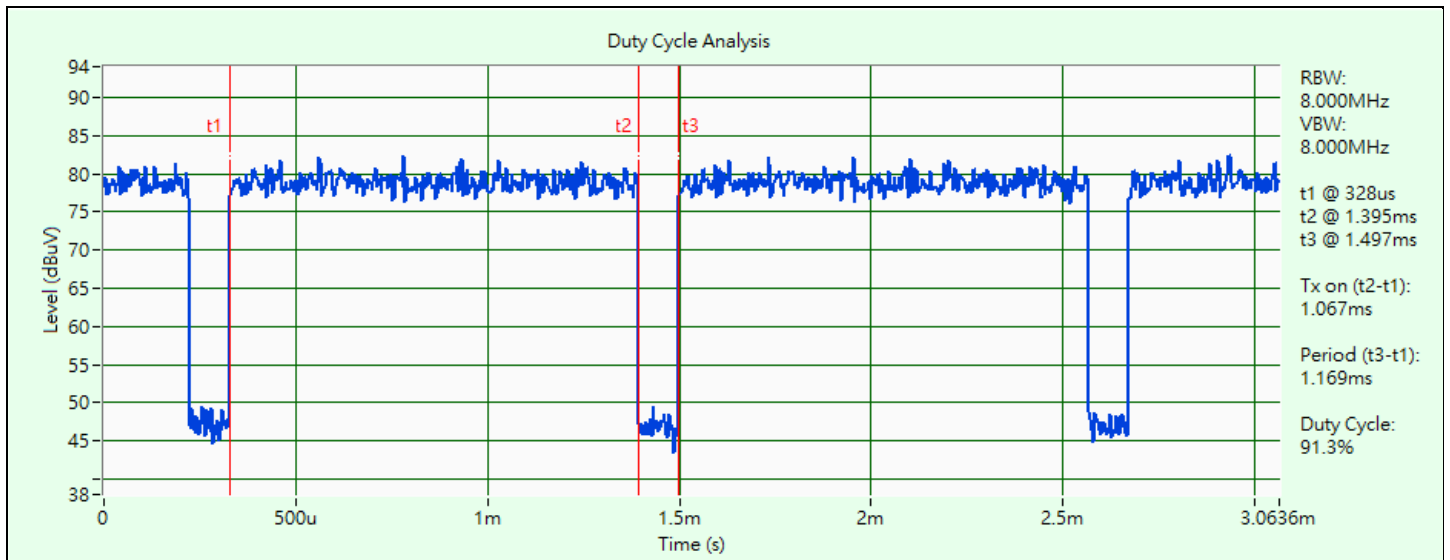
Radio 3

802.11a: Duty cycle = 1.067 ms / 1.169 ms x 100% = 91.3%, duty factor = 10 * log (1/Duty cycle) = 0.40 dB

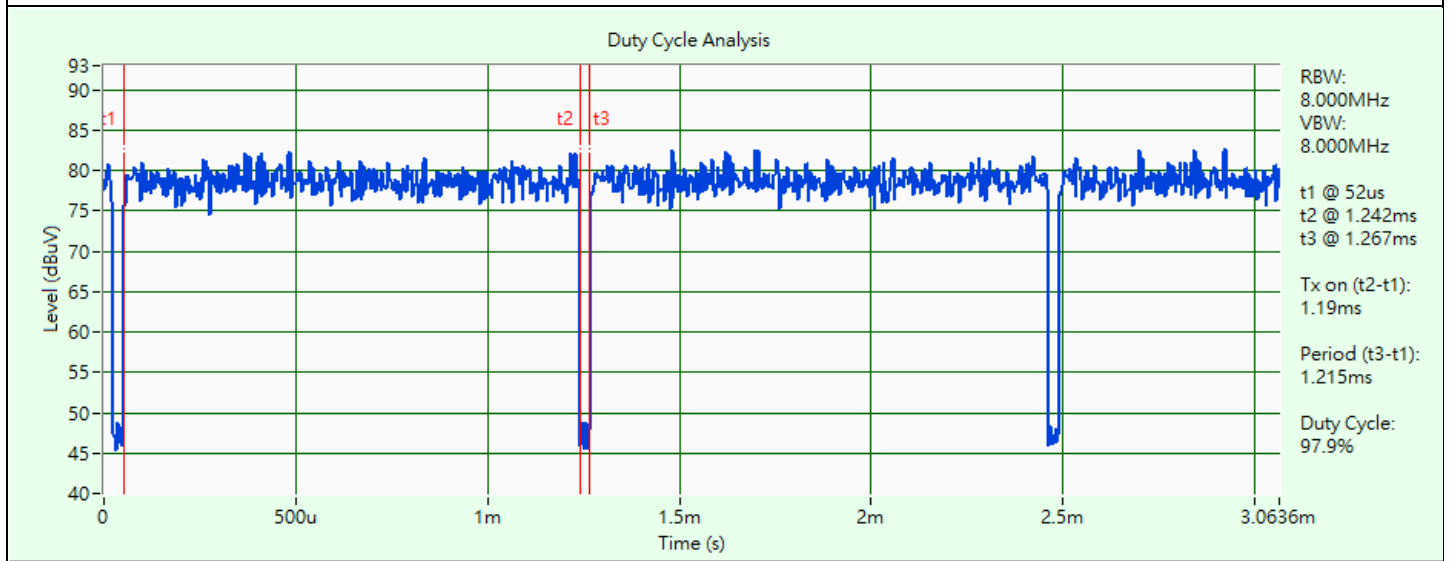
802.11ax (HE20): Duty cycle = 1.19 ms / 1.215 ms x 100% = 97.9%, duty factor = 10 * log (1/Duty cycle) = 0.09 dB

802.11ax (HE40): Duty cycle = 1.055 ms / 1.082 ms x 100% = 97.5%, duty factor = 10 * log (1/Duty cycle) = 0.11 dB

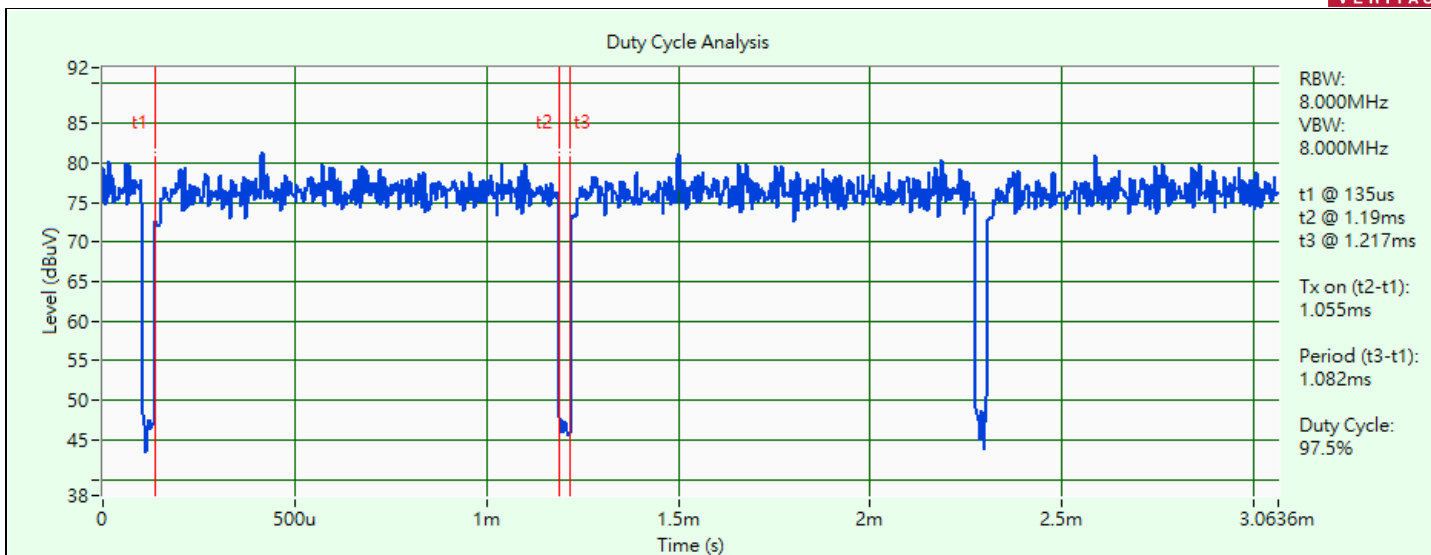
802.11ax (HE80): Duty cycle = 1.04 ms / 1.064 ms x 100% = 97.7%, duty factor = 10 * log (1/Duty cycle) = 0.10 dB



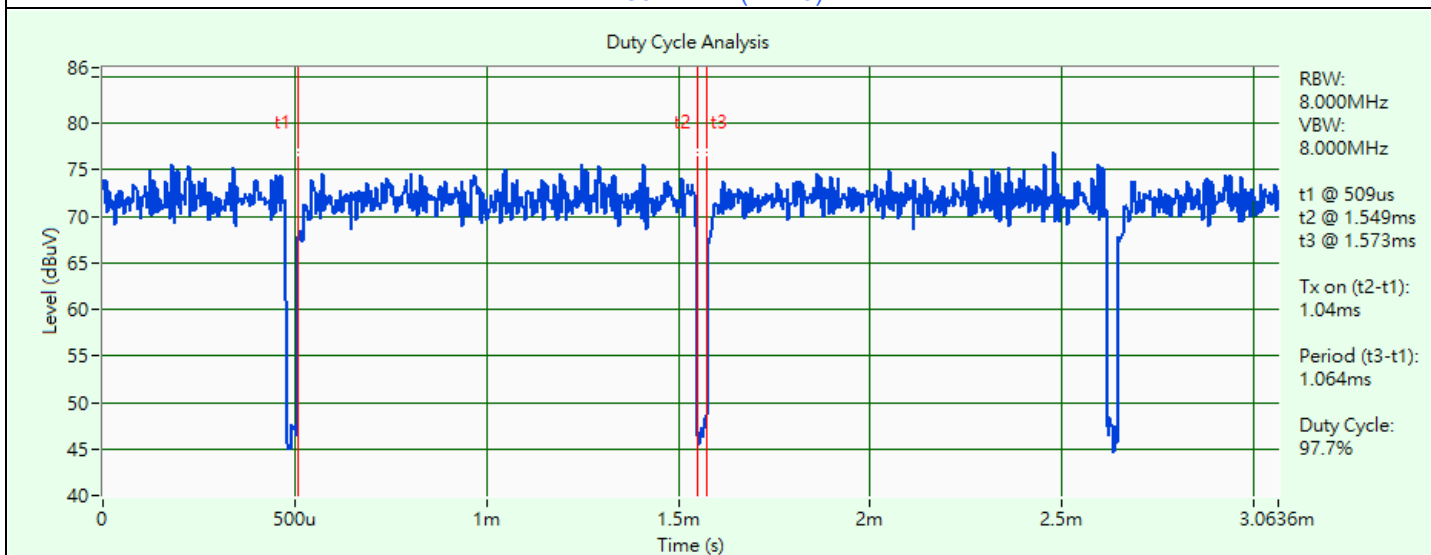
802.11a



802.11ax (HE20)



802.11ax (HE40)



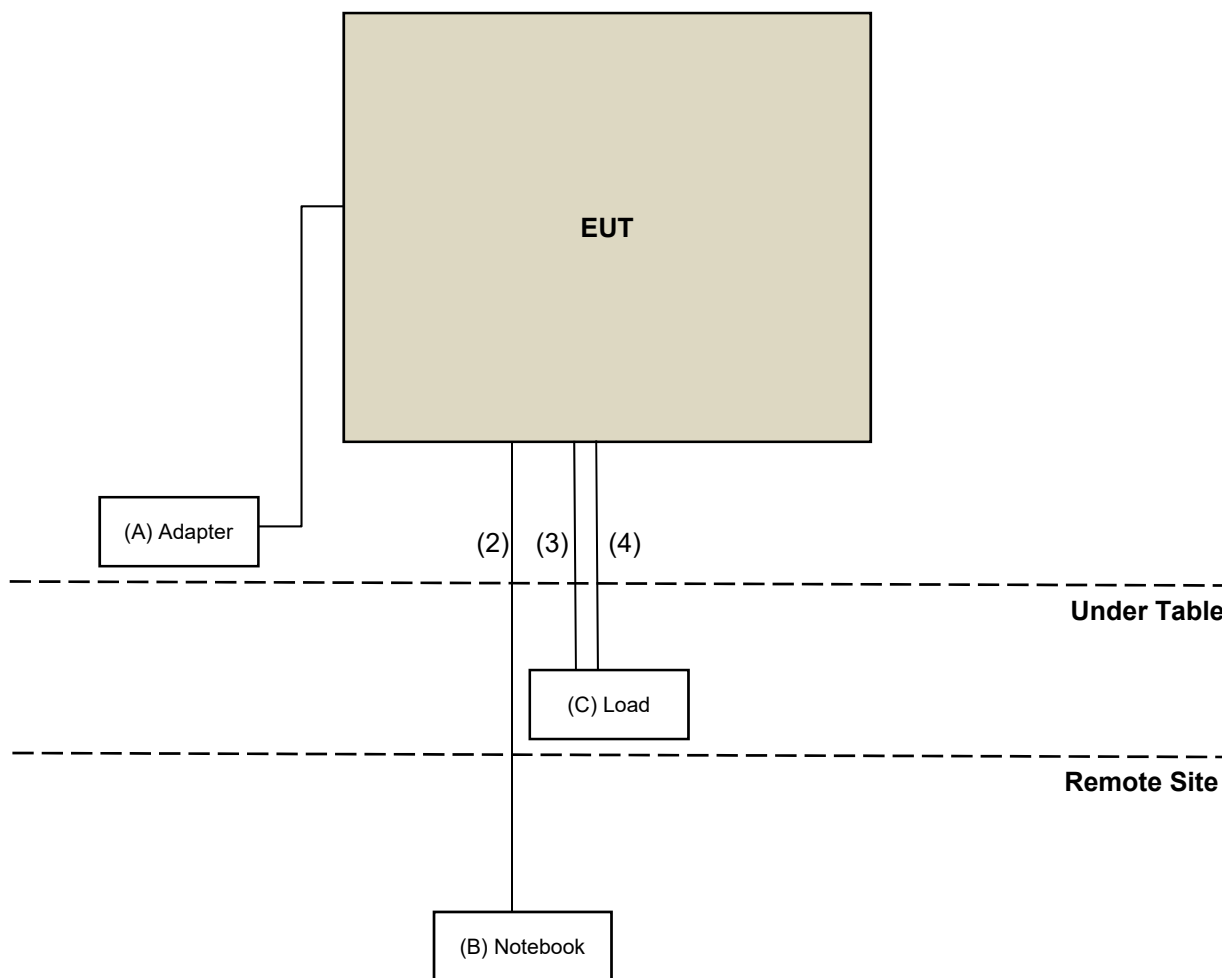
802.11ax (HE80)

3.6 Test Program Used and Operation Descriptions

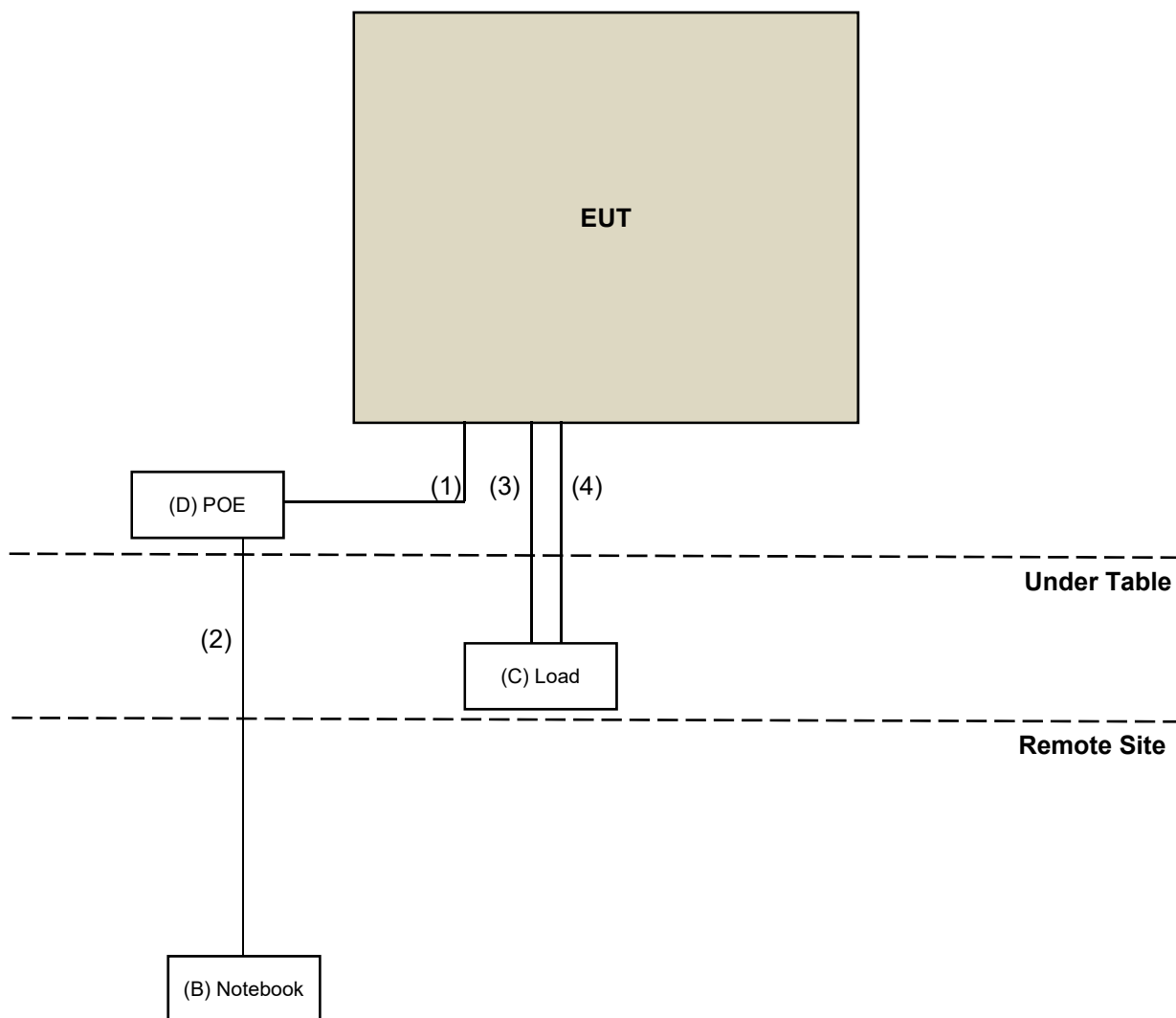
Controlling software (Access Manual Tool 3.2.1.5) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

Mode A, C, E



Mode B, D, F



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Adapter	Asian Power Devices Inc.	WA-30J12R	NA	NA	Provided by client
B.	Notebook	Dell	E5430	BPJVKV1	FCC DoC Approved	-
C.	Load	NA	NA	NA	NA	-
D.	PoE	Engenius	PNA90BGS-54	NA	NA	Provided by client

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	LAN cable	1	1.5	N	0	RJ45, Cat5e
2.	LAN cable	1	10	N	0	RJ45, Cat5e
3.	LAN cable	1	1.5	N	0	RJ45, Cat5e
4.	LAN cable	1	1.5	N	0	RJ45, Cat5e

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 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	100979	2022/3/25	2023/3/24
Wideband Power Sensor KEYSIGHT	N1923A	MY58190002	2022/5/6	2023/5/5
Peak Power Analyzer KEYSIGHT	8990B	MY51000485	2022/1/18	2023/1/17

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/11/2 ~ 2023/2/14

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	100979	2022/3/25	2023/3/24

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/11/2 ~ 2023/2/14

4.3 6 dB Bandwidth

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	100979	2022/3/25	2023/3/24

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/11/2 ~ 2023/2/13

4.4 Occupied Bandwidth

Refer to section 4.3 to get information of the instruments.

4.5 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
AC Power Source ExTech	CFW-105	E000603	N/A	N/A
AC power supply JIN YIH Technology	6905S	1720444	N/A	N/A
Digital Multimeter Fluke	87-III	70360742	2022/6/23	2023/6/22
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	100979	2022/3/25	2023/3/24
Temperature & Humidity Chamber TERCHY	HRM-120RF	931022	2022/1/3	2023/1/2

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/11/2 ~ 2022/11/18

4.6 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
LISN R&S	ESH3-Z5	100311	2022/09/12	2023/09/11
LISN ROHDE & SCHWARZ	ENV216	101826	2022/03/14	2023/03/13
RF Coaxial Cable WOKEN	5D-FB	Cable-cond1-01	2022/01/15	2023/01/14
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A
Test Receiver Rohde&Schwarz	ESCI	100613	2021/12/03	2022/12/02
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2022/08/31	2023/08/30

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2022/11/29

4.7 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	UNAT_5+	PAD-CH6-01	N/A	N/A
Antenna Tower Controller Max-Full	MF-7802	N/A	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB9168	9168-616	2021/10/27	2022/10/26
			2022/10/26	2023/10/25
Loop Antenna EMCI	EM-6879	269	2022/09/19	2023/09/18
Loop Antenna TESEQ	HLA 6121	45745	2022/07/27	2023/07/26
Pre-amplifier EMCI	EMC001340	980201	2022/09/23	2023/09/22
Preamplifier Agilent	310N	187226	2022/06/14	2023/06/13
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2022/01/15	2023/01/14
			2023/01/07	2024/01/06
RF Coaxial Cable ETS-Lindgren	EMC104-SM-SM-10000	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-4	2022/06/14	2023/06/13
	RFC-SMS-100-SMS-24-IN	Cable-CH1-02(RFC-SMS-100-SMS-24)	2022/06/14	2023/06/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Test Receiver Agilent	N9038A	MY52260177	2022/09/19	2023/09/18
Turn Table Max-Full	TT-1510	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802	N/A	N/A	N/A

Notes:

1. The test was performed in XD - 966 chamber 6.
2. Tested Date: 2022/10/20 ~ 2023/2/11

4.8 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	UNAT_5+	PAD-CH6-01	N/A	N/A
Antenna Tower Controller Max-Full	MF-7802	N/A	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	8	N/A	N/A
Horn Antenna ETS-Lindgren	3117	00143293	2021/11/14	2022/11/13
Horn Antenna Schwarzbeck	BBHA 9170	BBHA9170241	2021/10/26	2022/10/25
Pre-Amplifier EMCI	EMC 184045	980116	2021/10/05	2022/10/04
Preamplifier Agilent	83017A	MY39501373	2022/06/14	2023/06/13
RF Coaxial Cable ETS-Lindgren	EMC104-SM-SM-10000	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-4)	2022/06/14	2023/06/13
	RFC-SMS-100-SMS-24-IN	Cable-CH1-02(RFC-SMS-100-SMS-24)	2022/06/14	2023/06/13
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	2022/01/15	2023/01/14
RF Coaxial Cable HUBER+SUHNER&EMCI	SUCOFLEX 104& EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	2022/01/15	2023/01/14
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Test Receiver Agilent	N9038A	MY52260177	2022/09/19	2023/09/18
Turn Table Max-Full	TT-1510	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802	N/A	N/A	N/A

Notes:

1. The test was performed in XD - 966 chamber 6.
2. Tested Date: 2022/9/23 ~ 2022/10/3

5 Limits of Test Items

5.1 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.

5.2 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

5.3 6 dB Bandwidth

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

5.4 Occupied Bandwidth

The results are for reference only.

5.5 Frequency Stability

The frequency of the carrier signal shall be maintained within band of operation.

5.6 AC Power Conducted Emissions

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

Notes:

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

5.7 Unwanted Emissions below 1 GHz

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

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

Notes:

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

5.8 Unwanted Emissions above 1 GHz

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

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

Notes:

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

Limits of unwanted emission out of the restricted bands

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

For transmitters operating in the 5.15-5.25 GHz band:

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

For transmitters operating in the 5.25-5.35 GHz band:

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

For transmitters operating in the 5.47-5.725 GHz band:

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

For transmitters operating in the 5.725-5.850 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(4)(i)	PK: -27 (dBm/MHz) ^{*1}	PK: 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.

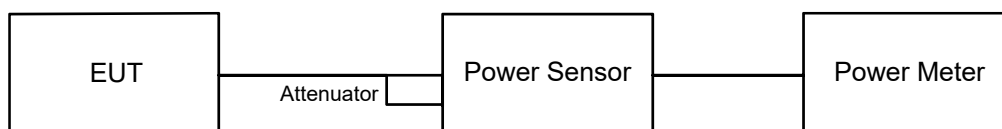
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

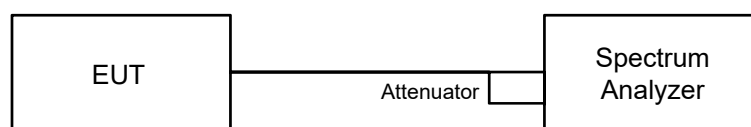
6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup



For channel straddling:



6.1.2 Test Procedure

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

For channel straddling:

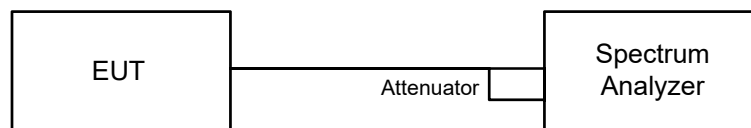
Method SA-2A

- 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.)
- Manually set sweep time \geq $10 \times (\text{number of points in sweep}) \times (\text{total on/off period of the transmitted signal})$.
- Perform a single sweep.
- 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.

6.2 Power Spectral Density

6.2.1 Test Setup



6.2.2 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).

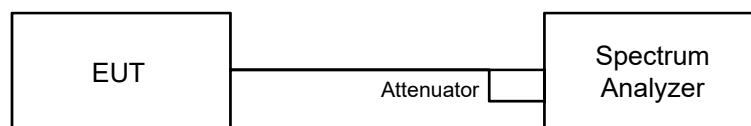
For specified measurement bandwidth 500 kHz:

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).

6.3 6 dB Bandwidth

6.3.1 Test Setup

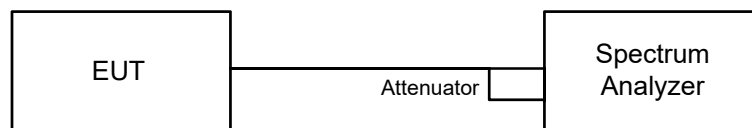


6.3.2 Test Procedure

- Set resolution bandwidth (RBW) = 100 kHz.
- Set the video bandwidth (VBW) \geq 3 x RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.4 Occupied Bandwidth

6.4.1 Test Setup

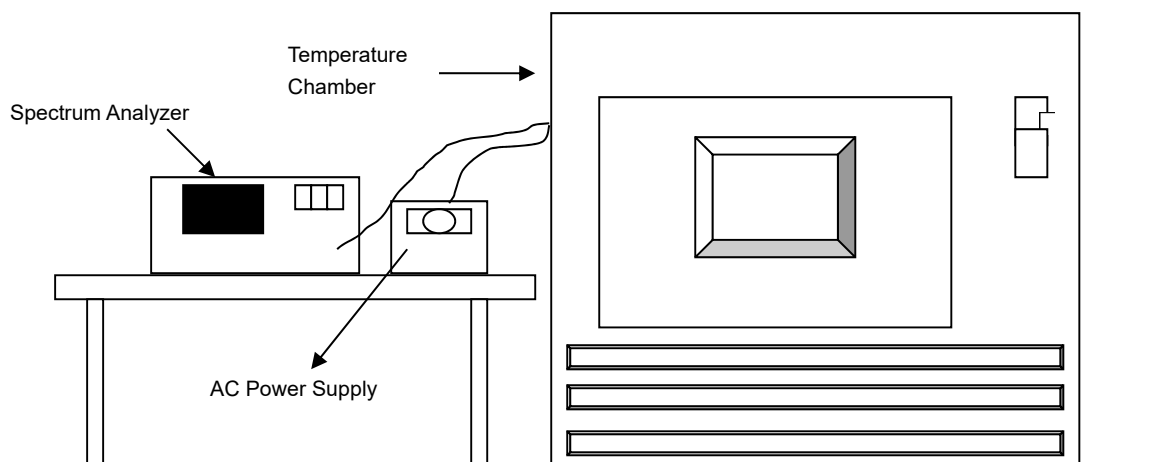


6.4.2 Test Procedure

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 Frequency Stability

6.5.1 Test Setup

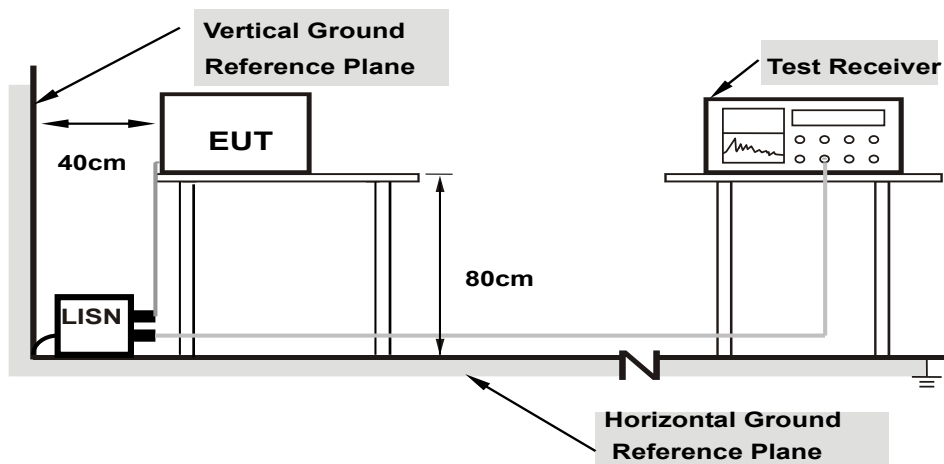


6.5.2 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
- Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

6.6 AC Power Conducted Emissions

6.6.1 Test Setup



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

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

6.6.2 Test Procedure

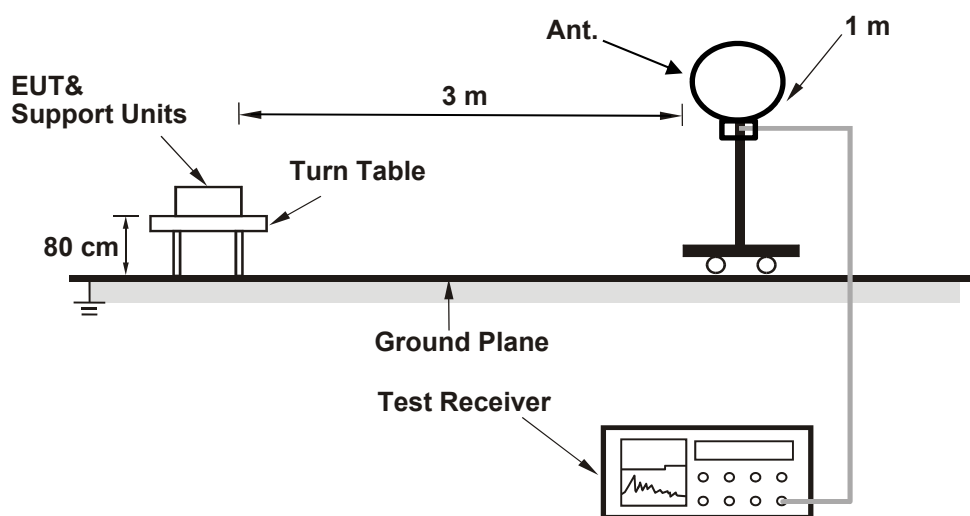
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The 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.

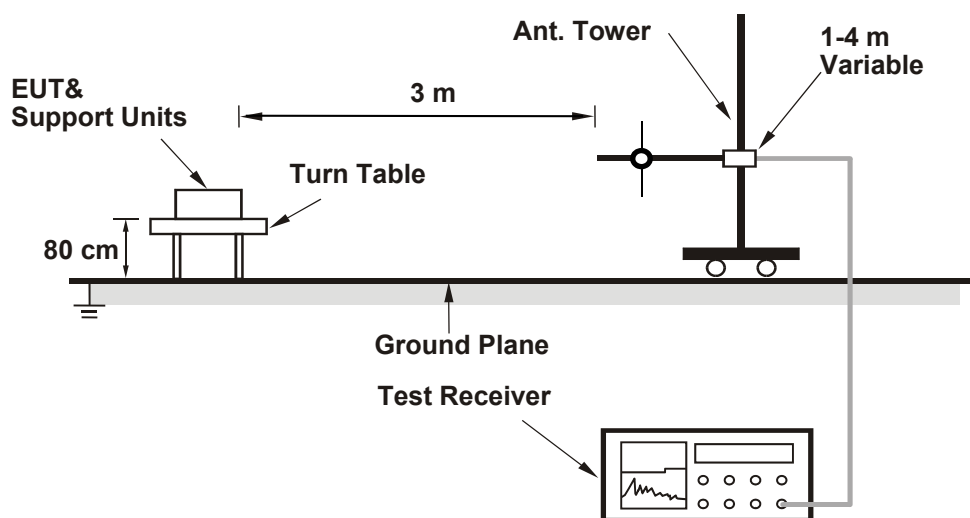
6.7 Unwanted Emissions below 1 GHz

6.7.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.7.2 Test Procedure

For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, 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

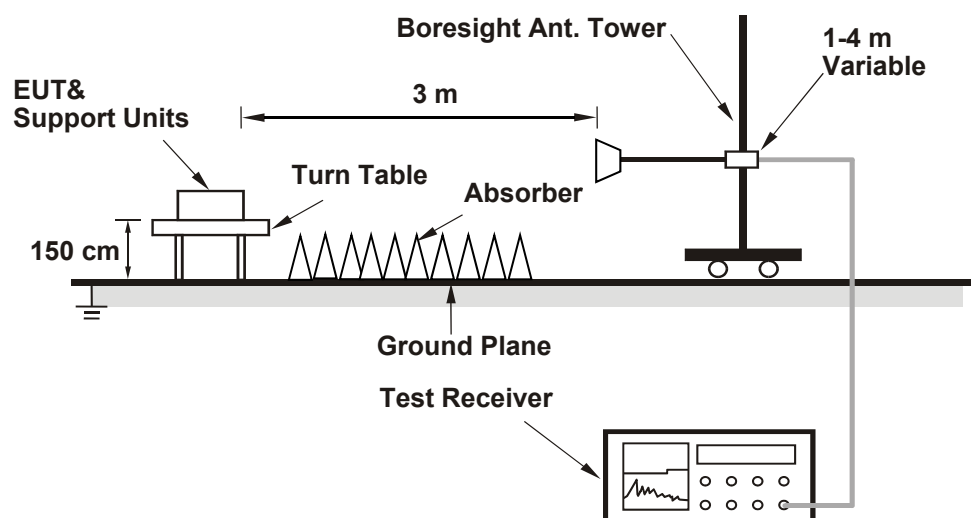
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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.

6.8 Unwanted Emissions above 1 GHz

6.8.1 Test Setup



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

6.8.2 Test Procedure

- 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 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
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Test Mode A

Radio 1

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
149	5745	21.73	24.24	414.397	26.17	30	Pass
157	5785	21.78	24.43	427.993	26.31	30	Pass
165	5825	21.44	23.20	348.245	25.42	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the maximum gain is 5.78 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				
149	5745	22.04	24.26	426.642	26.30	30	Pass
157	5785	21.83	24.49	433.595	26.37	30	Pass
165	5825	21.33	22.99	334.899	25.25	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the maximum gain is 5.78 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				
151	5755	22.53	24.10	436.1	26.40	30	Pass
159	5795	22.14	23.71	398.645	26.01	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the maximum gain is 5.78 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				
155	5775	19.45	19.83	184.266	22.65	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-3, the maximum gain is 5.78 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				
149	5745	22.04	24.26	426.642	26.30	27.33	Pass
157	5785	21.83	24.49	433.595	26.37	27.33	Pass
165	5825	21.33	22.99	334.899	25.25	27.33	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. For U-NII-3, the directional gain is 8.67 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.67 - 6) = 27.33$ 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				
151	5755	22.53	24.10	436.100	26.40	27.33	Pass
159	5795	22.14	23.71	398.645	26.01	27.33	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. For U-NII-3, the directional gain is 8.67 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.67 - 6) = 27.33$ 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				
155	5775	19.45	19.83	184.266	22.65	27.33	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. For U-NII-3, the directional gain is 8.67 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.67 - 6) = 27.33$ dBm.

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
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Test Mode C

Radio 2

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	17.48	17.79	116.093	20.65	30	Pass
40	5200	21.54	22.08	303.997	24.83	30	Pass
48	5240	22.20	22.49	343.378	25.36	30	Pass
149	5745	21.32	21.87	289.334	24.61	30	Pass
157	5785	20.84	21.03	248.104	23.95	30	Pass
165	5825	20.30	20.81	227.656	23.57	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.19 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.59 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	16.76	17.26	100.635	20.03	30	Pass
40	5200	20.57	20.79	233.975	23.69	30	Pass
48	5240	22.34	22.70	357.604	25.53	30	Pass
149	5745	21.34	21.66	282.699	24.51	30	Pass
157	5785	20.59	20.96	239.29	23.79	30	Pass
165	5825	19.96	20.73	217.387	23.37	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.19 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.59 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	13.09	12.57	38.442	15.85	30	Pass
46	5230	19.32	19.54	175.456	22.44	30	Pass
151	5755	20.51	20.70	229.95	23.62	30	Pass
159	5795	20.03	20.53	213.673	23.30	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.19 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.59 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	13.00	12.67	38.445	15.85	30	Pass
155	5775	17.69	17.29	112.329	20.50	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.19 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.59 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	16.76	17.26	100.635	20.03	28.06	Pass
40	5200	20.57	20.79	233.975	23.69	28.06	Pass
48	5240	22.34	22.70	357.604	25.53	28.06	Pass
149	5745	21.34	21.66	282.699	24.51	27.57	Pass
157	5785	20.59	20.96	239.29	23.79	27.57	Pass
165	5825	19.96	20.73	217.387	23.37	27.57	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. For U-NII-1, the directional gain is 7.94 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (7.94 - 6) = 28.06$ dBm.
3. For U-NII-3, the directional gain is 8.43 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.43 - 6) = 27.57$ 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	13.09	12.57	38.442	15.85	28.06	Pass
46	5230	19.32	19.54	175.456	22.44	28.06	Pass
151	5755	20.51	20.70	229.95	23.62	27.57	Pass
159	5795	20.03	20.53	213.673	23.30	27.57	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. For U-NII-1, the directional gain is 7.94 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (7.94 - 6) = 28.06$ dBm.
3. For U-NII-3, the directional gain is 8.43 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.43 - 6) = 27.57$ 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	13.00	12.67	38.445	15.85	28.06	Pass
155	5775	17.69	17.29	112.329	20.50	27.57	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. For U-NII-1, the directional gain is 7.94 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (7.94 - 6) = 28.06$ dBm.
3. For U-NII-3, the directional gain is 8.43 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.43 - 6) = 27.57$ dBm.

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Alan Wu/Wayne Lin
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Test Mode E

Radio 3

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	16.96	17.13	101.301	20.06	30	Pass
40	5200	22.01	22.11	321.41	25.07	30	Pass
48	5240	22.74	22.95	385.174	25.86	30	Pass
149	5745	22.56	23.14	386.365	25.87	30	Pass
157	5785	22.67	23.23	395.305	25.97	30	Pass
165	5825	22.55	23.10	384.061	25.84	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.47 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.42 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	16.34	16.69	89.719	19.53	30	Pass
40	5200	21.25	21.57	276.901	24.42	30	Pass
48	5240	23.10	23.41	423.454	26.27	30	Pass
149	5745	22.71	23.11	391.282	25.92	30	Pass
157	5785	22.85	23.23	403.13	26.05	30	Pass
165	5825	22.68	23.04	386.726	25.87	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.47 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.42 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	15.55	15.56	71.867	18.57	30	Pass
46	5230	20.90	20.99	248.63	23.96	30	Pass
151	5755	23.55	23.62	456.609	26.60	30	Pass
159	5795	23.32	23.48	437.627	26.41	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.47 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.42 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	15.91	16.00	78.805	18.97	30	Pass
155	5775	21.73	21.90	303.818	24.83	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 5.47 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-3, the maximum gain is 5.42 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	16.34	16.69	89.719	19.53	28.22	Pass
40	5200	21.25	21.57	276.901	24.42	28.22	Pass
48	5240	23.10	23.41	423.454	26.27	28.22	Pass
149	5745	22.71	23.11	391.282	25.92	27.62	Pass
157	5785	22.85	23.23	403.13	26.05	27.62	Pass
165	5825	22.68	23.04	386.726	25.87	27.62	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. For U-NII-1, the directional gain is 7.78 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (7.78 - 6) = 28.22$ dBm.
3. For U-NII-3, the directional gain is 8.38 dBi > 6 dBi, so the output power limit shall be reduced to $30 - (8.38 - 6) = 27.62$ 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	15.55	15.56	71.867	18.57	28.22	Pass
46	5230	20.90	20.99	248.63	23.96	28.22	Pass
151	5755	23.55	23.62	456.609	26.60	27.62	Pass
159	5795	23.32	23.48	437.627	26.41	27.62	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. For U-NII-1, the directional gain is 7.78 dBi > 6 dBi, so the output power limit shall be reduced to $30-(7.78-6) = 28.22$ dBm.
3. For U-NII-3, the directional gain is 8.38 dBi > 6 dBi, so the output power limit shall be reduced to $30-(8.38-6) = 27.62$ 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	15.91	16.00	78.805	18.97	28.22	Pass
155	5775	21.73	21.90	303.818	24.83	27.62	Pass

Notes:

1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
2. For U-NII-1, the directional gain is 7.78 dBi > 6 dBi, so the output power limit shall be reduced to $30-(7.78-6) = 28.22$ dBm.
3. For U-NII-3, the directional gain is 8.38 dBi > 6 dBi, so the output power limit shall be reduced to $30-(8.38-6) = 27.62$ dBm.

7.2 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
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Test Mode A

Radio 1

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
149	5745	2.15	4.47	6.47	0.34	9.03	27.33	Pass
157	5785	2.25	4.60	6.59	0.34	9.15	27.33	Pass
165	5825	1.92	3.41	5.74	0.34	8.30	27.33	Pass

Notes:

- Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
- Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-3, the directional gain is 8.67 dBi > 6 dBi, so the power density limit shall be reduced to $30 - (8.67 - 6) = 27.33$ dBm/500kHz.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
149	5745	0.24	2.45	4.49	0.1	6.81	27.33	Pass
157	5785	-0.01	2.71	4.57	0.1	6.89	27.33	Pass
165	5825	-0.49	1.16	3.42	0.1	5.74	27.33	Pass

Notes:

- Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
- Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-3, the directional gain is 8.67 dBi > 6 dBi, so the power density limit shall be reduced to $30 - (8.67 - 6) = 27.33$ dBm/500kHz.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
151	5755	-1.62	-0.03	2.26	0.1	4.58	27.33	Pass
159	5795	-2.08	-0.46	1.82	0.1	4.14	27.33	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-3, the directional gain is 8.67 dBi > 6 dBi, so the power density limit shall be reduced to $30 - (8.67 - 6) = 27.33$ dBm/500kHz.

802.11ax (HE80)

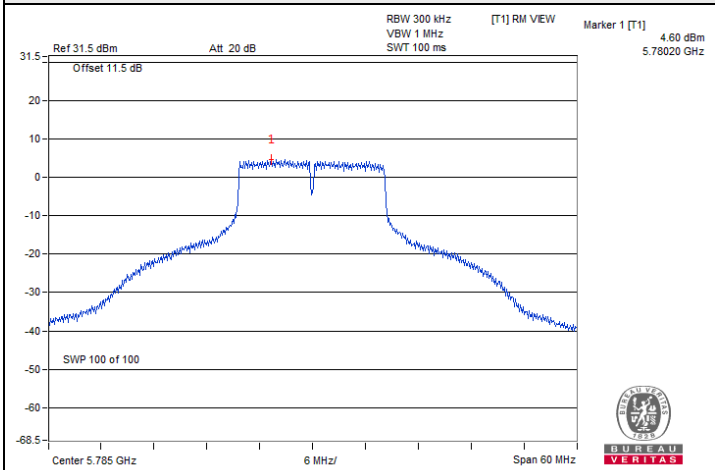
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
155	5775	-7.36	-7.00	-4.17	0.1	-1.85	27.33	Pass

Notes:

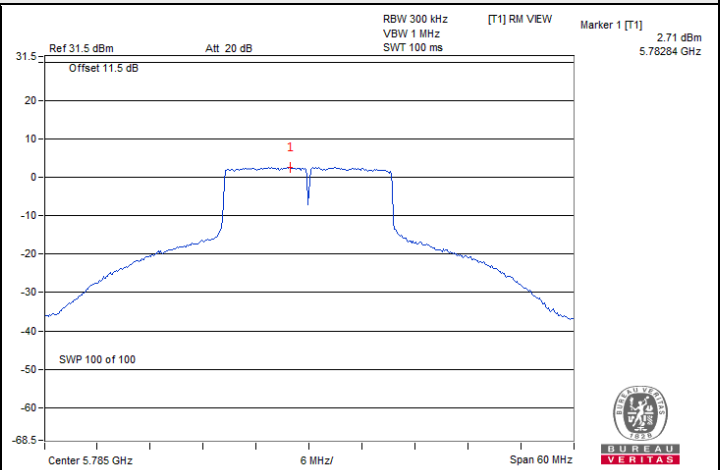
1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-3, the directional gain is 8.67 dBi > 6 dBi, so the power density limit shall be reduced to $30 - (8.67 - 6) = 27.33$ dBm/500kHz.



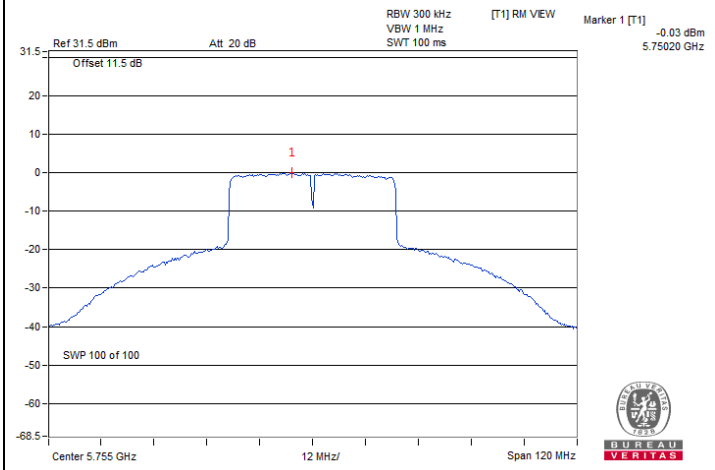
Spectrum Plot of Maximum Value



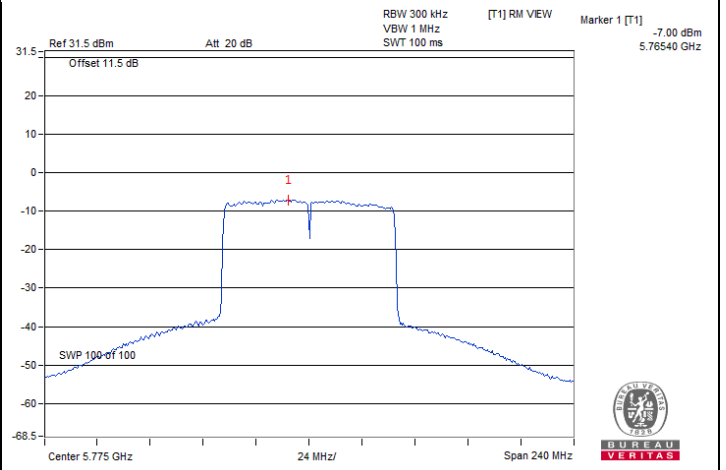
802.11a / Chain 1 : CH 157



802.11ax (HE20) / Chain 1 : CH 157



802.11ax (HE40) / Chain 1 : CH 151



802.11ax (HE80) / Chain 1 : CH 155

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
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Test Mode C

Radio 2

802.11a

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				
36	5180	4.32	4.65	0.39	7.89	15.06	Pass
40	5200	8.39	9.00	0.39	12.11	15.06	Pass
48	5240	9.12	9.28	0.39	12.60	15.06	Pass

Notes:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-1, the directional gain is 7.94 dBi > 6dBi, so the power density limit shall be reduced to $17-(7.94-6) = 15.06$ dBm/MHz.

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				
36	5180	3.56	4.15	0.10	6.98	15.06	Pass
40	5200	7.40	7.65	0.10	10.64	15.06	Pass
48	5240	9.16	9.58	0.10	12.49	15.06	Pass

Notes:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-1, the directional gain is 7.94 dBi > 6dBi, so the power density limit shall be reduced to $17-(7.94-6) = 15.06$ 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	-3.03	-3.56	0.10	-0.18	15.06	Pass
46	5230	3.20	3.38	0.10	6.40	15.06	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-1, the directional gain is 7.94 dBi > 6dBi, so the power density limit shall be reduced to $17-(7.94-6) = 15.06$ 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	-6.16	-6.50	0.10	-3.22	15.06	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-1, the directional gain is 7.94 dBi > 6dBi, so the power density limit shall be reduced to $17-(7.94-6) = 15.06$ dBm/MHz.

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
149	5745	0.47	1.03	3.77	0.39	6.38	27.57	Pass
157	5785	-0.09	0.20	3.07	0.39	5.68	27.57	Pass
165	5825	-0.64	-0.11	2.64	0.39	5.25	27.57	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-3, the directional gain is 8.43 dBi > 6 dBi, so the power density limit shall be reduced to $30-(8.43-6) = 27.57$ dBm/500kHz.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
149	5745	-2.49	-2.18	0.68	0.1	3.00	27.57	Pass
157	5785	-3.11	-2.85	0.03	0.1	2.35	27.57	Pass
165	5825	-3.70	-3.05	-0.35	0.1	1.97	27.57	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-3, the directional gain is 8.43 dBi > 6 dBi, so the power density limit shall be reduced to $30-(8.43-6) = 27.57$ dBm/500kHz.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
151	5755	-6.24	-6.01	-3.11	0.1	-0.79	27.57	Pass
159	5795	-6.72	-6.22	-3.45	0.1	-1.13	27.57	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-3, the directional gain is 8.43 dBi > 6 dBi, so the power density limit shall be reduced to $30-(8.43-6) = 27.57$ dBm/500kHz.

802.11ax (HE80)

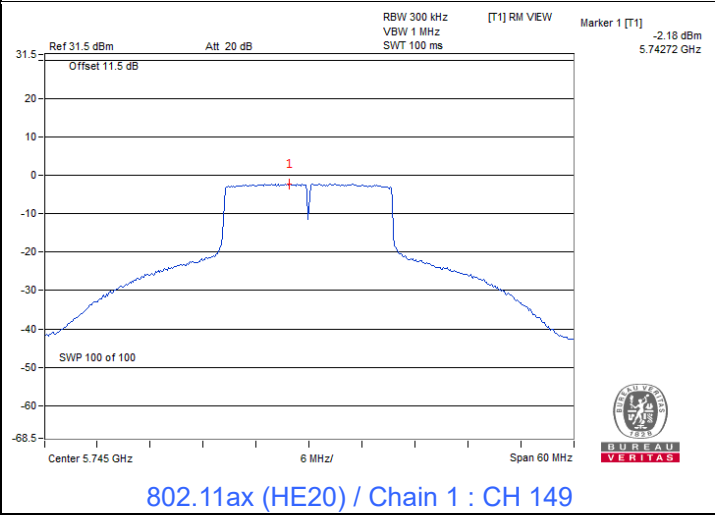
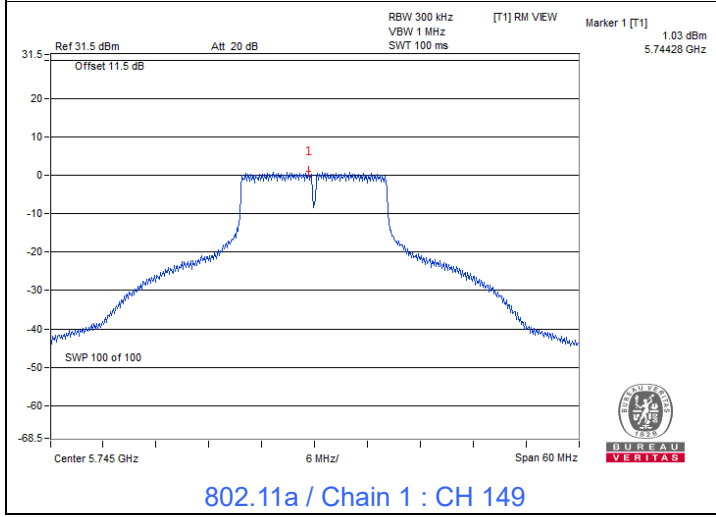
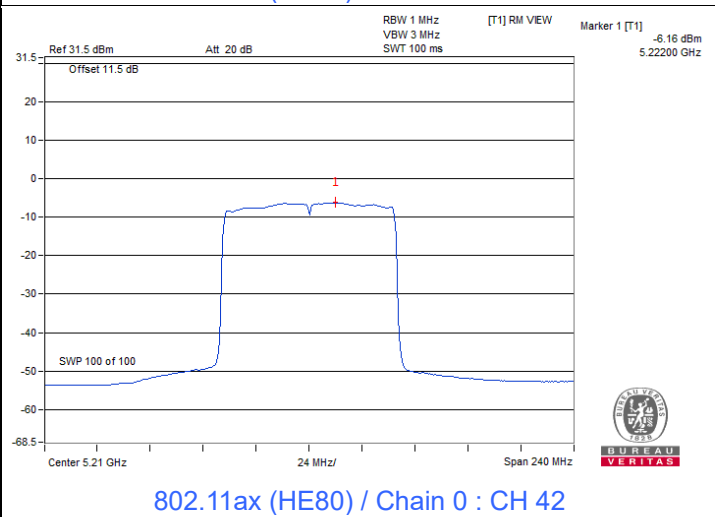
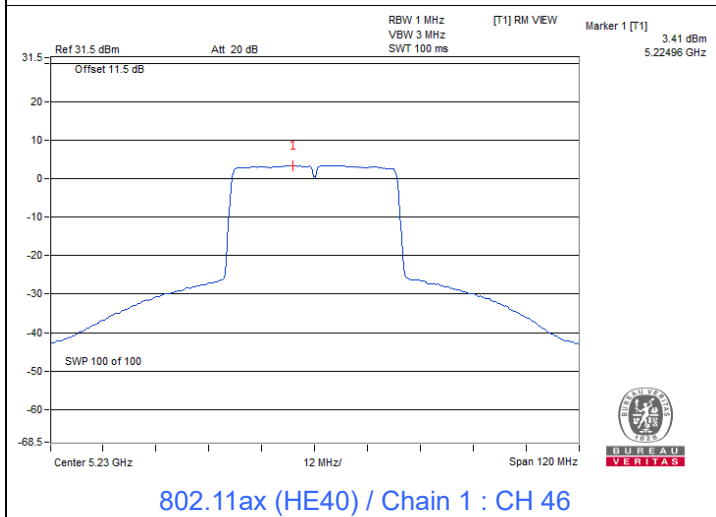
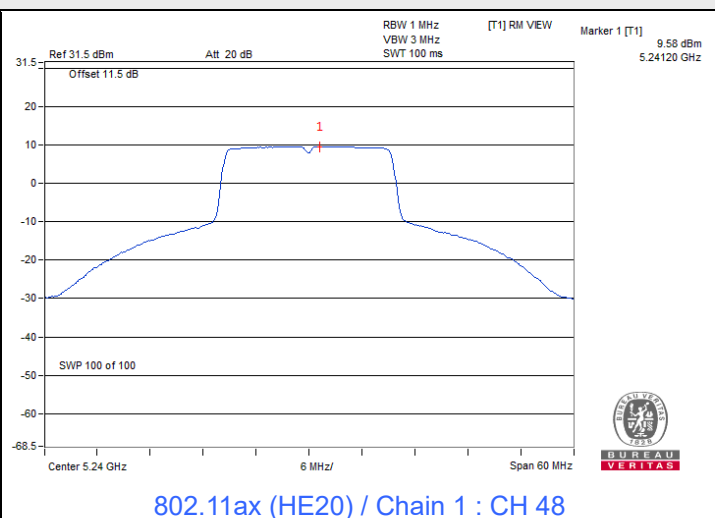
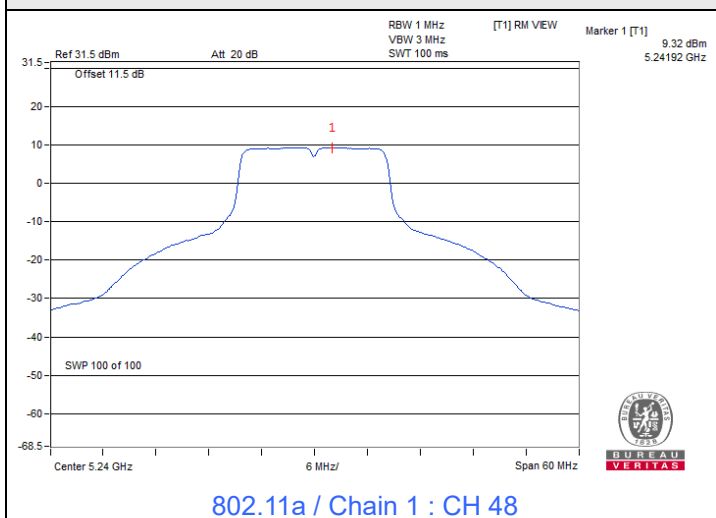
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
155	5775	-11.12	-11.54	-8.31	0.1	-5.99	27.57	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-3, the directional gain is 8.43 dBi > 6 dBi, so the power density limit shall be reduced to $30-(8.43-6) = 27.57$ dBm/500kHz.

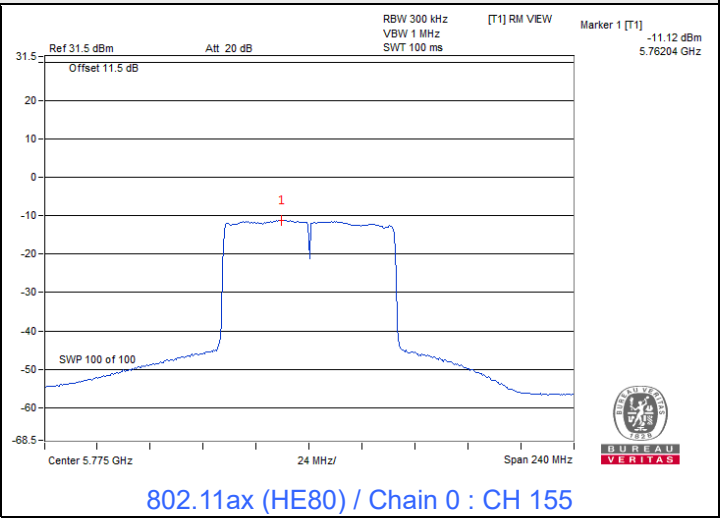
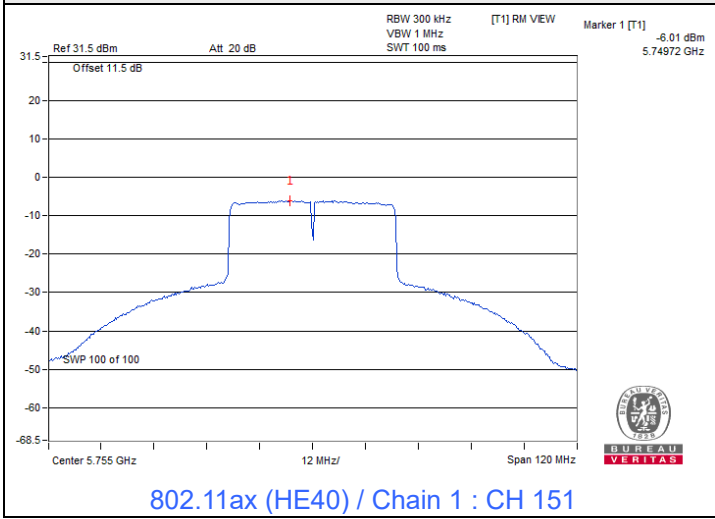


Spectrum Plot of Maximum Value





Spectrum Plot of Maximum Value



Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Alan Wu/Wayne Lin
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Test Mode E

Radio 3

802.11a

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				
36	5180	4.26	4.58	0.40	7.83	15.22	Pass
40	5200	9.11	9.46	0.40	12.70	15.22	Pass
48	5240	9.43	9.73	0.40	12.99	15.22	Pass

Notes:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-1, the directional gain is 7.78 dBi > 6dBi, so the power density limit shall be reduced to $17-(7.78-6) = 15.22$ dBm/MHz.

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				
36	5180	3.07	3.27	0.09	6.27	15.22	Pass
40	5200	7.71	8.02	0.09	10.97	15.22	Pass
48	5240	9.16	9.32	0.09	12.34	15.22	Pass

Notes:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-1, the directional gain is 7.78 dBi > 6dBi, so the power density limit shall be reduced to $17-(7.78-6) = 15.22$ 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	-0.83	-0.78	0.11	2.32	15.22	Pass
46	5230	4.20	4.22	0.11	7.33	15.22	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-1, the directional gain is 7.78 dBi > 6dBi, so the power density limit shall be reduced to $17-(7.78-6) = 15.22$ 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	-3.41	-3.11	0.10	-0.15	15.22	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-1, the directional gain is 7.78 dBi > 6dBi, so the power density limit shall be reduced to $17-(7.78-6) = 15.22$ dBm/MHz.

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
149	5745	1.73	2.28	5.02	0.4	7.64	27.62	Pass
157	5785	1.38	2.06	4.74	0.4	7.36	27.62	Pass
165	5825	1.33	1.95	4.66	0.4	7.28	27.62	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-3, the directional gain is 8.38 dBi > 6 dBi, so the power density limit shall be reduced to $30-(8.38-6) = 27.62$ dBm/500kHz.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
149	5745	-0.02	0.31	3.16	0.09	5.47	27.62	Pass
157	5785	-0.10	0.09	3.01	0.09	5.32	27.62	Pass
165	5825	-0.22	-0.11	2.85	0.09	5.16	27.62	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-3, the directional gain is 8.38 dBi > 6 dBi, so the power density limit shall be reduced to $30-(8.38-6) = 27.62$ dBm/500kHz.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
151	5755	-2.16	-1.94	0.96	0.11	3.29	27.62	Pass
159	5795	-2.35	-2.25	0.71	0.11	3.04	27.62	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-3, the directional gain is 8.38 dBi > 6 dBi, so the power density limit shall be reduced to $30-(8.38-6) = 27.62$ dBm/500kHz.

802.11ax (HE80)

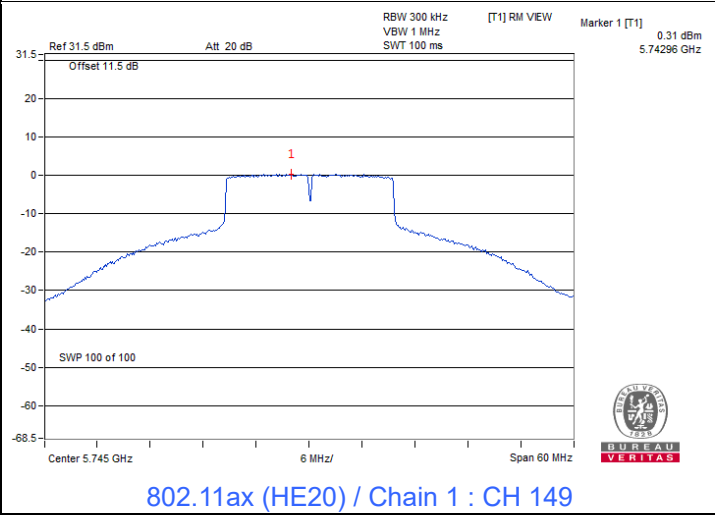
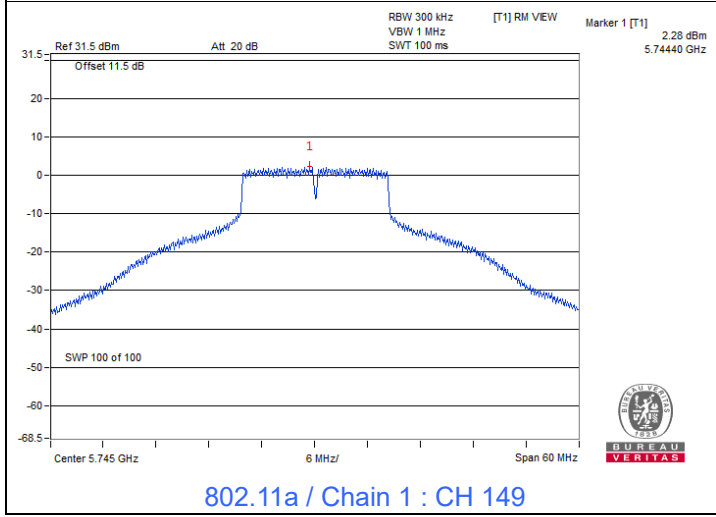
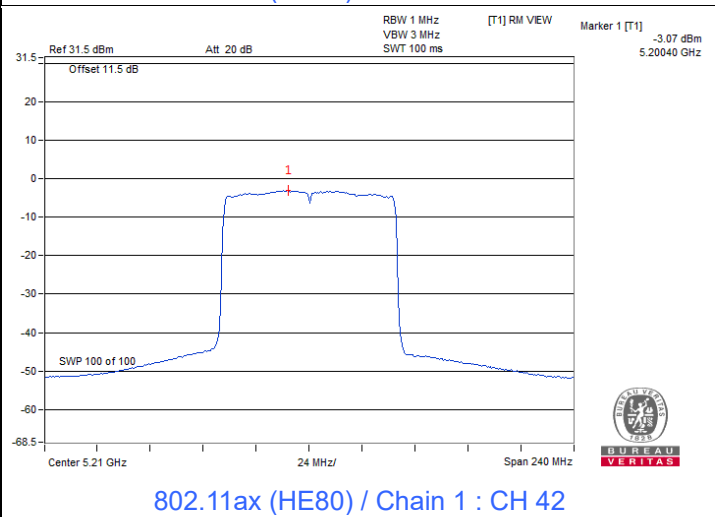
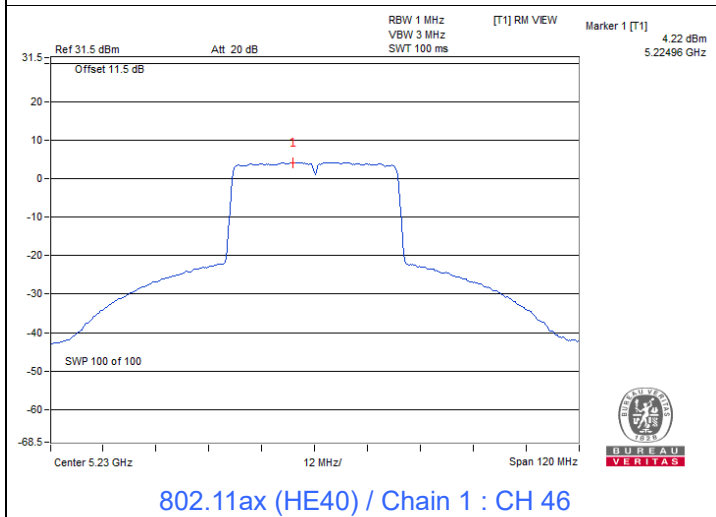
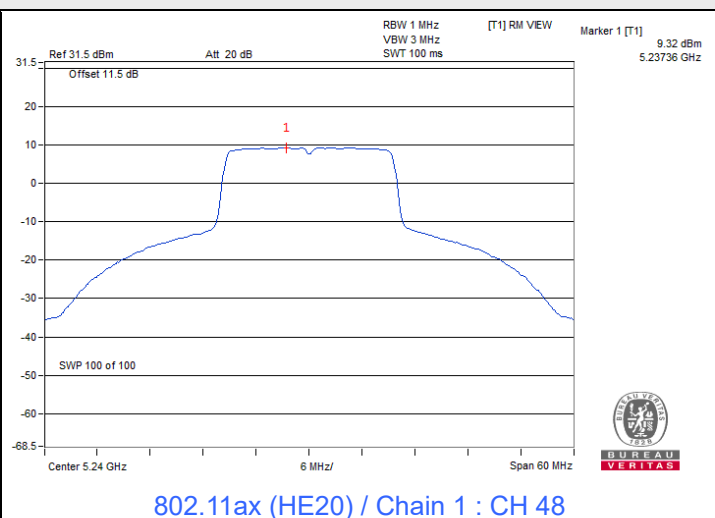
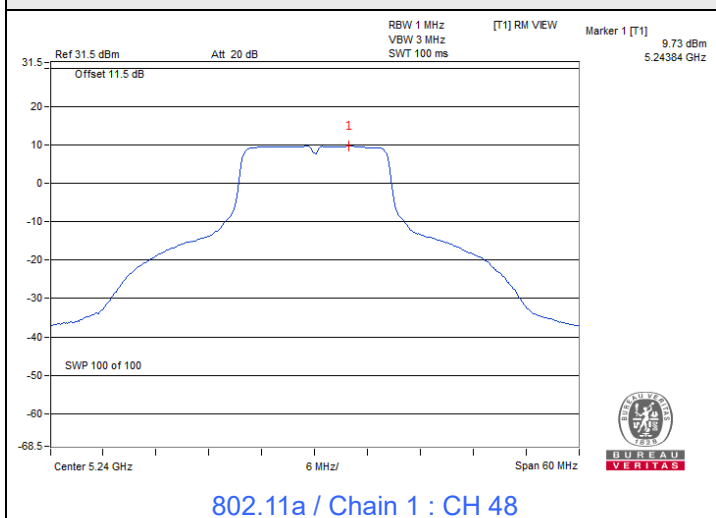
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
155	5775	-6.71	-6.31	-3.5	0.1	-1.18	27.62	Pass

Notes:

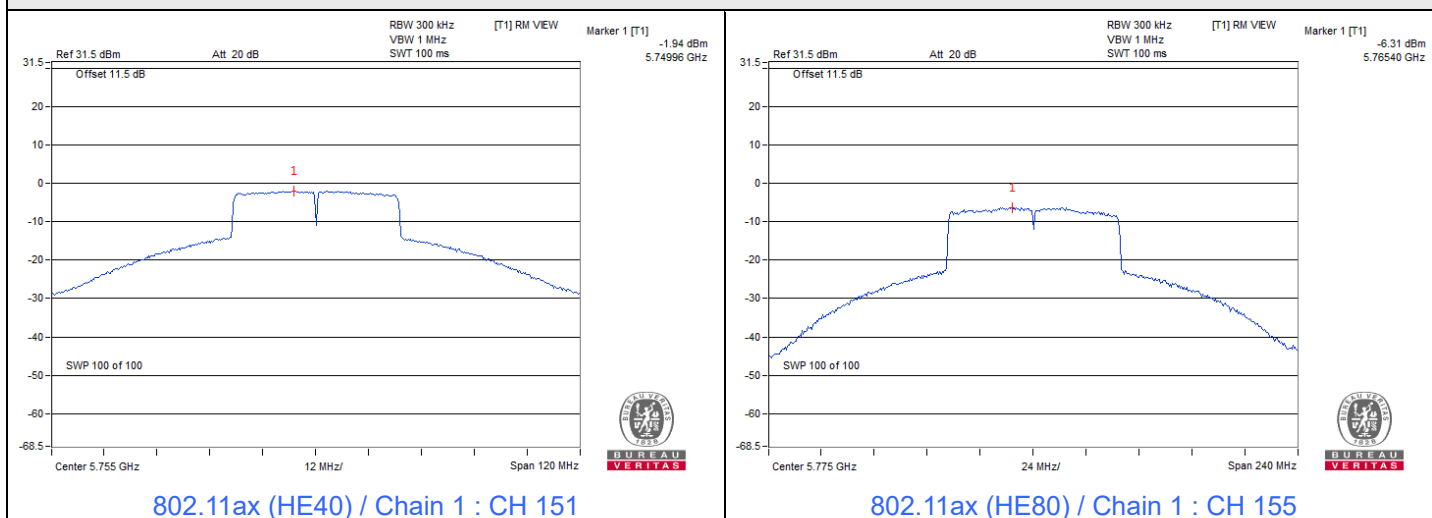
1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
3. For U-NII-3, the directional gain is 8.38 dBi > 6 dBi, so the power density limit shall be reduced to $30-(8.38-6) = 27.62$ dBm/500kHz.



Spectrum Plot of Maximum Value



Spectrum Plot of Maximum Value



7.3 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
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Test Mode A

Radio 1

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
149	5745	16.38	16.39	0.5	Pass
157	5785	16.40	16.38	0.5	Pass
165	5825	16.38	16.40	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
149	5745	19.03	18.83	0.5	Pass
157	5785	18.99	18.92	0.5	Pass
165	5825	19.01	18.90	0.5	Pass

802.11ax (HE40)

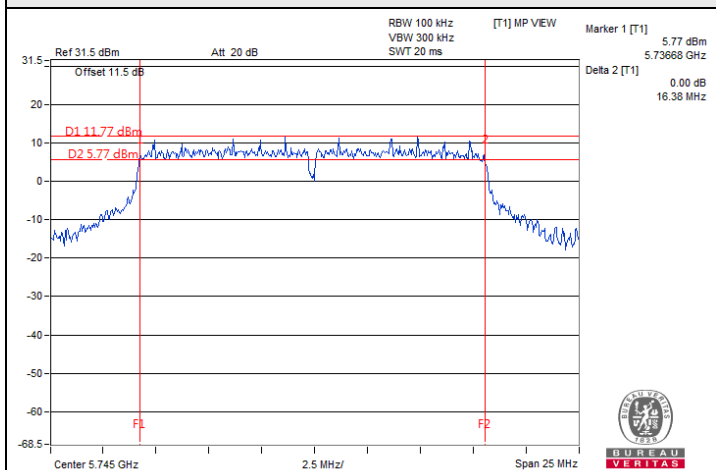
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
151	5755	37.38	37.21	0.5	Pass
159	5795	37.78	37.33	0.5	Pass

802.11ax (HE80)

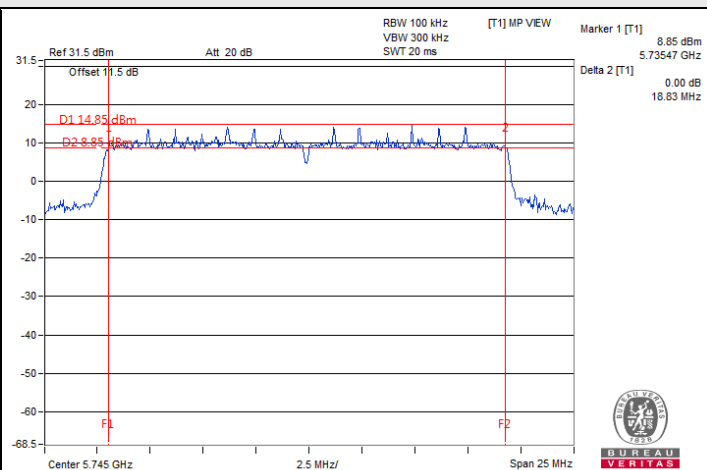
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
155	5775	77.32	77.31	0.5	Pass



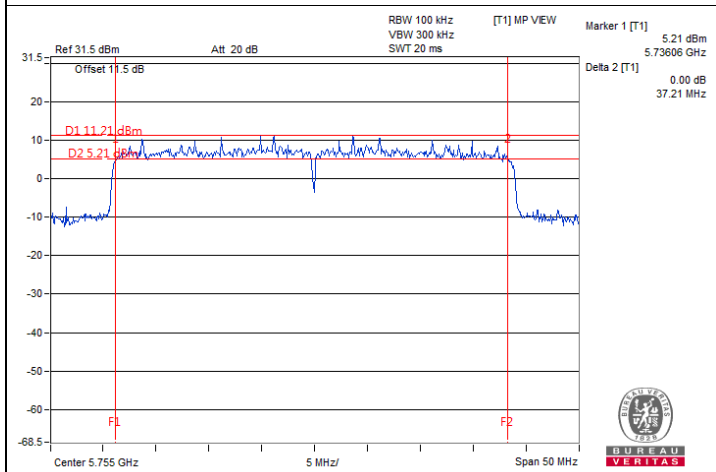
Spectrum Plot of Minimum Value



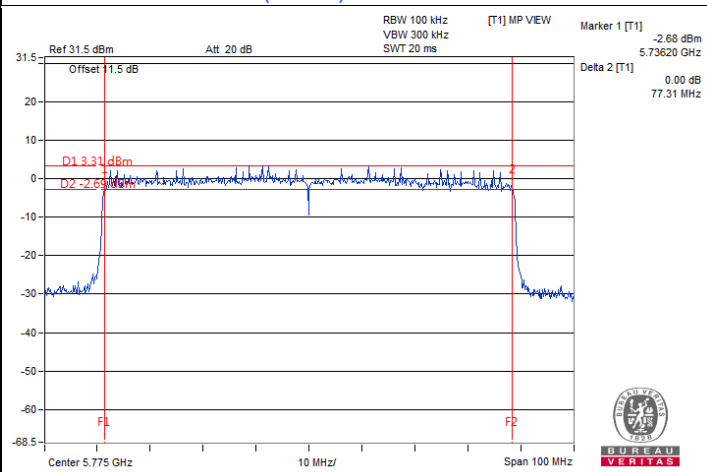
802.11a / Chain 0 : CH 149



802.11ax (HE20) / Chain 1 : CH 149



802.11ax (HE40) / Chain 1 : CH 151



802.11ax (HE80) / Chain 1 : CH 155



Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
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Test Mode C

Radio 2

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
149	5745	16.40	16.40	0.5	Pass
157	5785	16.40	16.39	0.5	Pass
165	5825	16.40	16.38	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
149	5745	19.03	18.90	0.5	Pass
157	5785	19.01	18.86	0.5	Pass
165	5825	19.04	18.93	0.5	Pass

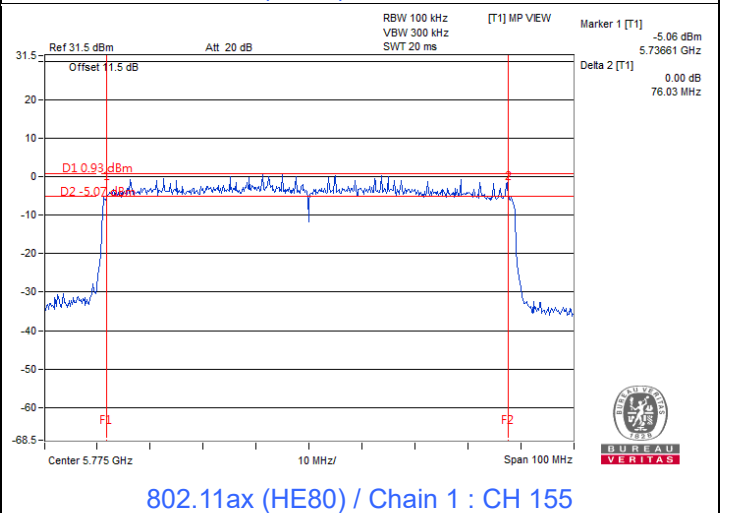
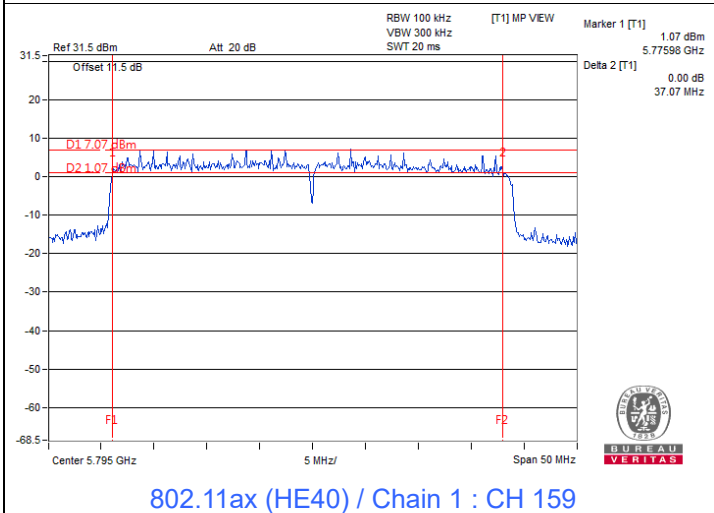
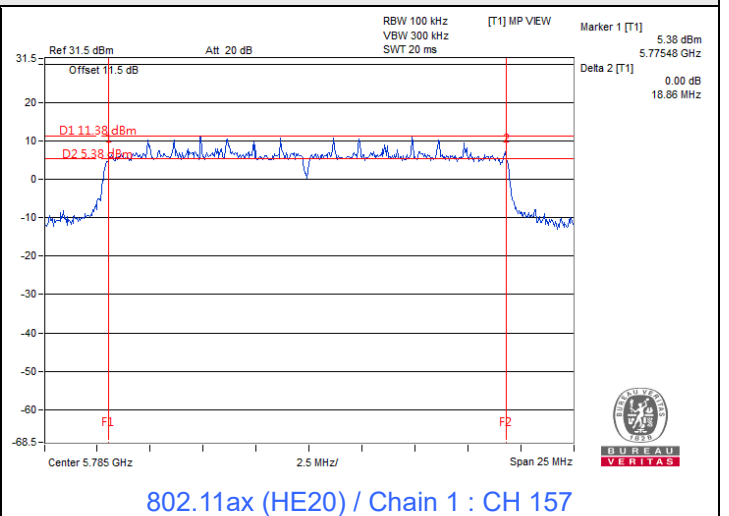
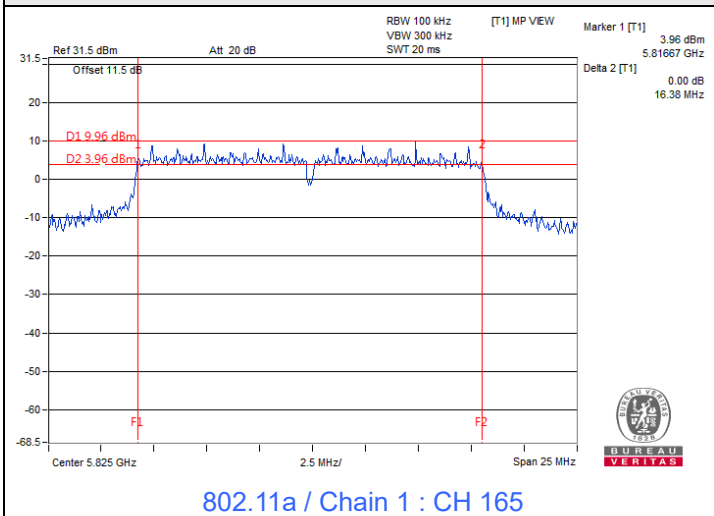
802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
151	5755	37.49	37.43	0.5	Pass
159	5795	37.78	37.07	0.5	Pass

802.11ax (HE80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
155	5775	77.37	76.03	0.5	Pass

Spectrum Plot of Minimum Value



Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Alan Wu/Wayne Lin
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Test Mode E

Radio 3

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
149	5745	16.40	16.40	0.5	Pass
157	5785	16.38	16.36	0.5	Pass
165	5825	16.37	16.39	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
149	5745	18.94	18.80	0.5	Pass
157	5785	18.93	18.85	0.5	Pass
165	5825	18.90	18.95	0.5	Pass

802.11ax (HE40)

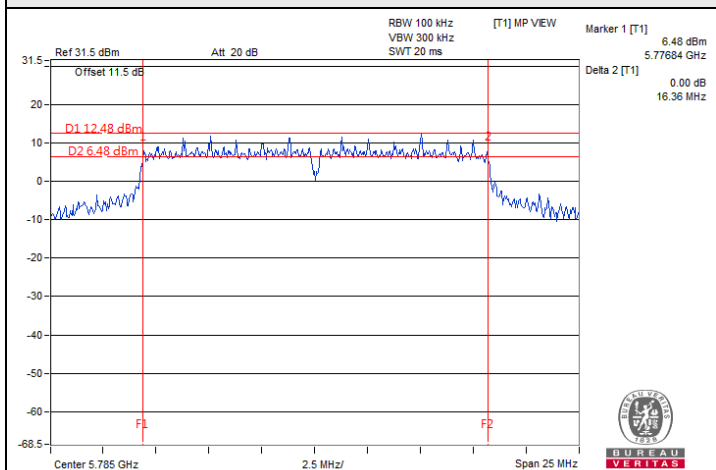
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
151	5755	37.68	37.64	0.5	Pass
159	5795	37.81	37.64	0.5	Pass

802.11ax (HE80)

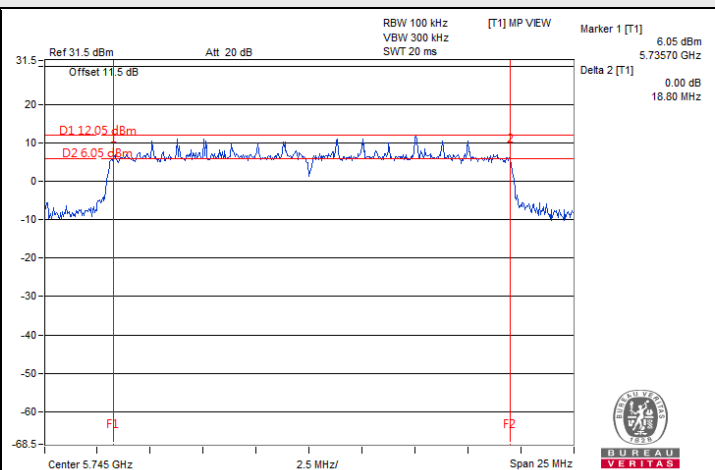
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
155	5775	77.43	76.07	0.5	Pass



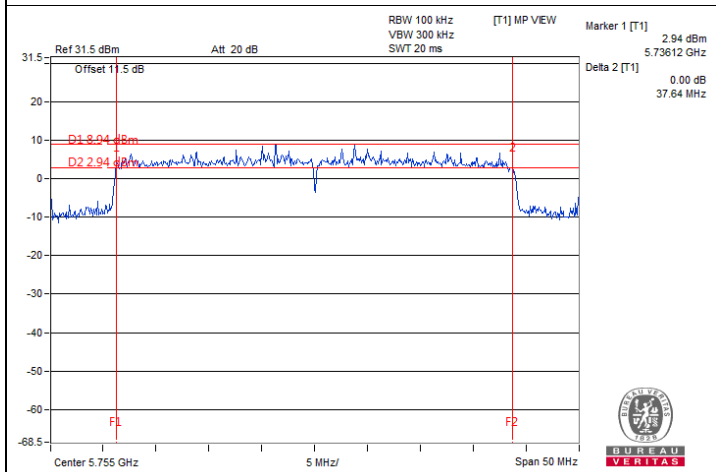
Spectrum Plot of Minimum Value



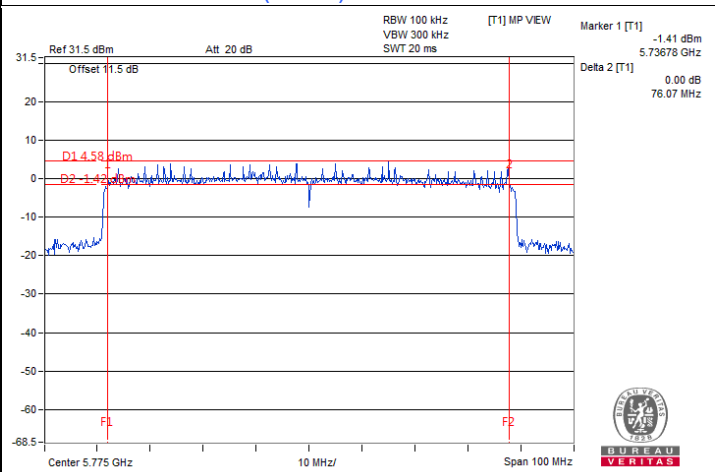
802.11a / Chain 1 : CH 157



802.11ax (HE20) / Chain 1 : CH 149



802.11ax (HE40) / Chain 1 : CH 151



802.11ax (HE80) / Chain 1 : CH 155

7.4 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
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Test Mode A

Radio 1

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
149	5745	17.59	22.60
157	5785	18.37	22.12
165	5825	19.14	23.75

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
149	5745	19.52	23.56
157	5785	19.52	23.66
165	5825	19.72	22.70

802.11ax (HE40)

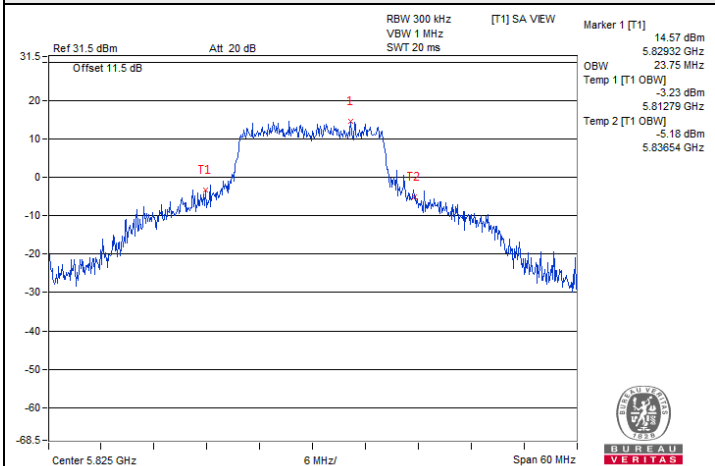
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
151	5755	39.23	43.27
159	5795	40.58	45.77

802.11ax (HE80)

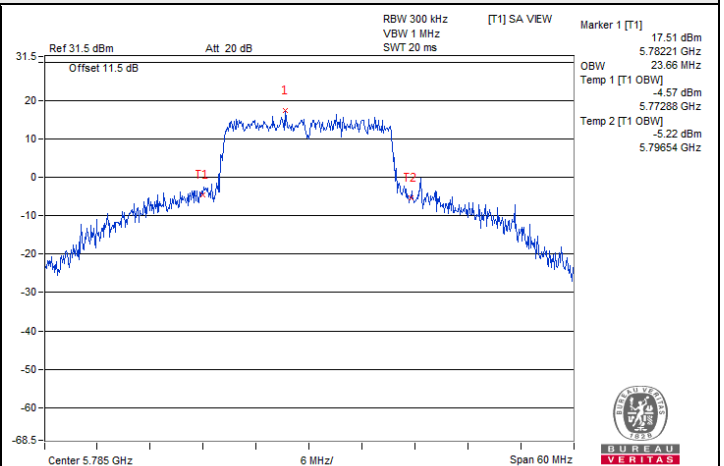
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
155	5775	77.31	76.93



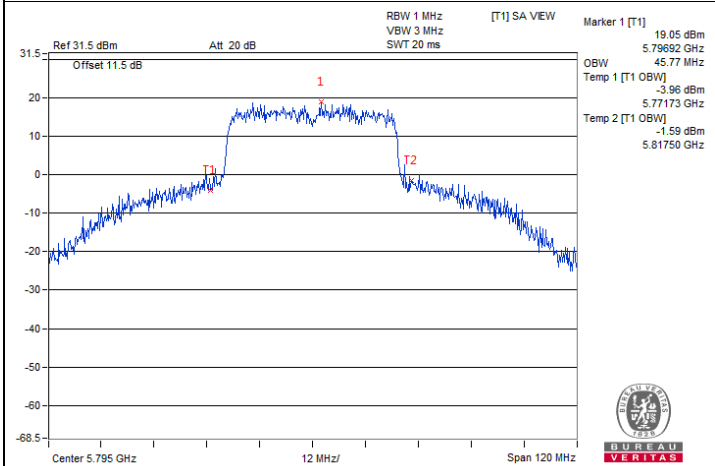
Spectrum Plot of Maximum Value



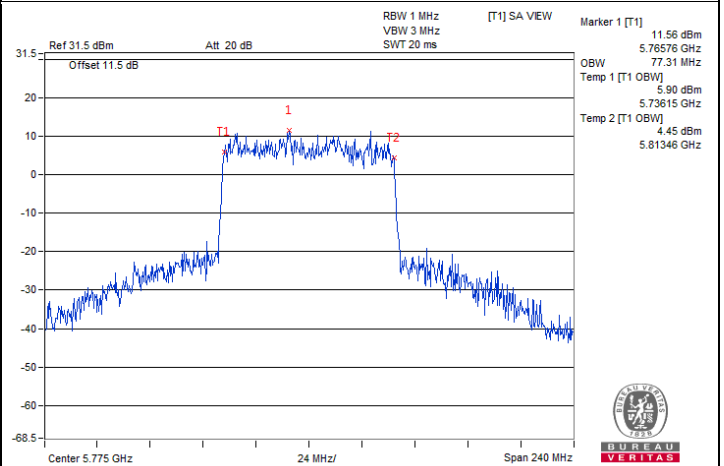
802.11a / Chain 1 : CH 165



802.11ax (HE20) / Chain 1 : CH 157



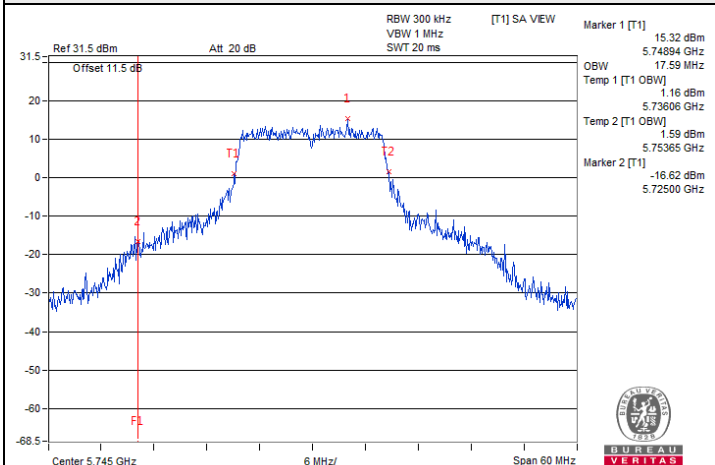
802.11ax (HE40) / Chain 1 : CH 159



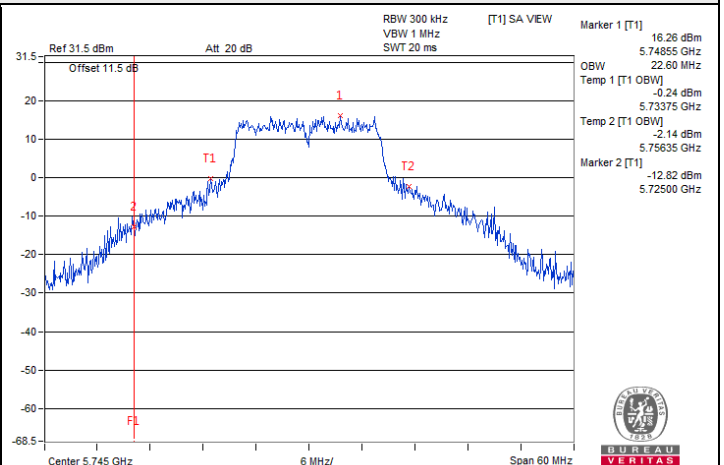
802.11ax (HE80) / Chain 0 : CH 155

Spectrum Plot for nearby DFS band

(DFS is required, if 99% OCP straddle into U-NII-2C)



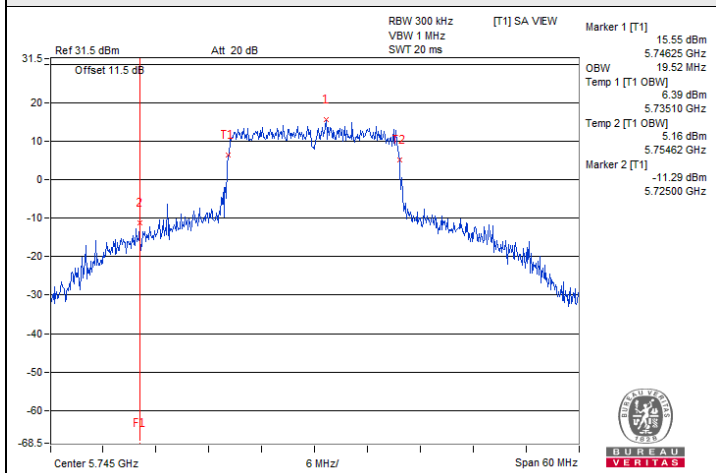
802.11a / Chain 0 : CH 149



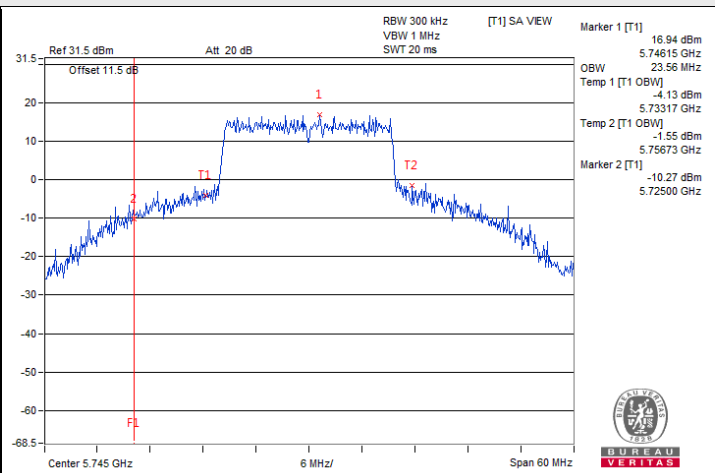
802.11a / Chain 1 : CH 149



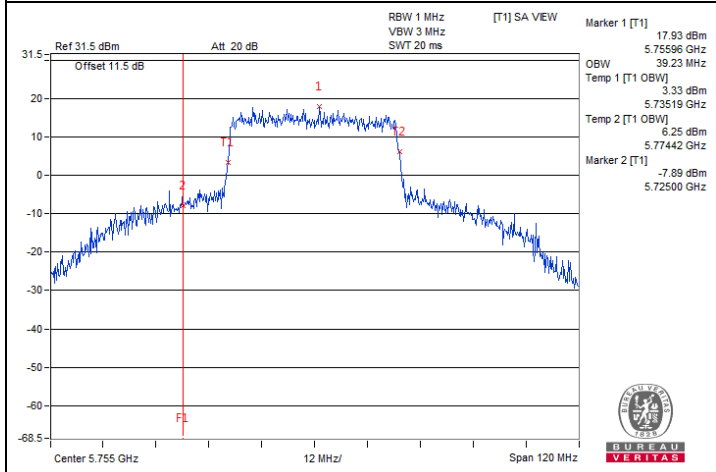
Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2C)



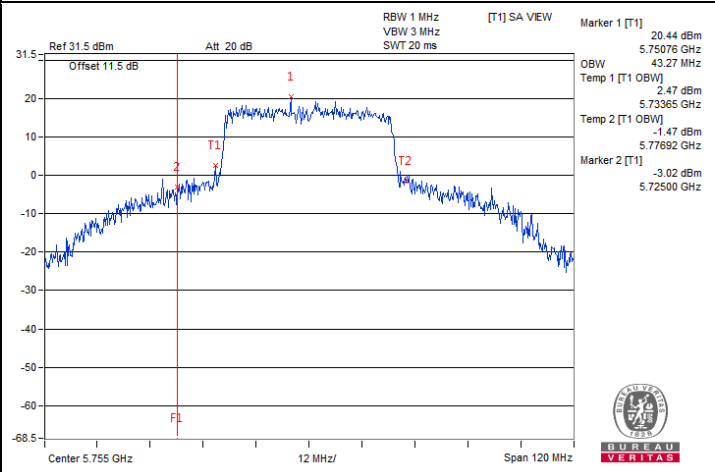
802.11ax (HE20) / Chain 0 : CH 149



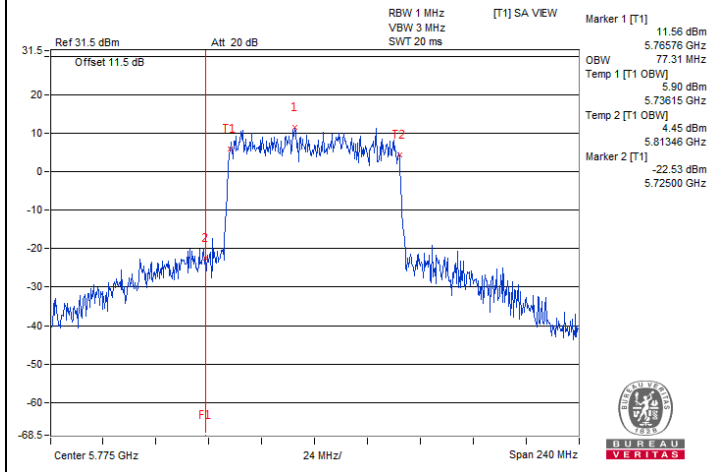
802.11ax (HE20) / Chain 1 : CH 149



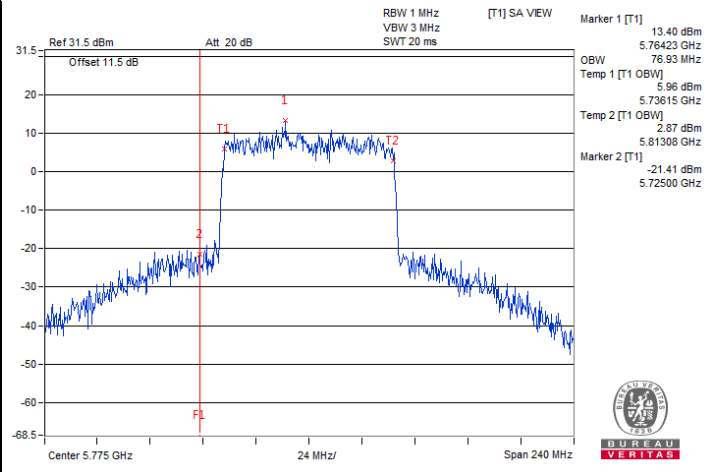
802.11ax (HE40) / Chain 0 : CH 151



802.11ax (HE40) / Chain 1 : CH 151



802.11ax (HE80) / Chain 0 : CH 155



802.11ax (HE80) / Chain 1 : CH 155

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
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Test Mode C

Radio 2

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.16	16.92
40	5200	17.28	17.76
48	5240	17.28	19.56
149	5745	17.60	21.83
157	5785	17.98	22.21
165	5825	17.88	24.13

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	19.08	18.96
40	5200	19.20	19.20
48	5240	19.32	20.16
149	5745	19.43	21.83
157	5785	19.42	21.92
165	5825	19.42	26.34

802.11ax (HE40)

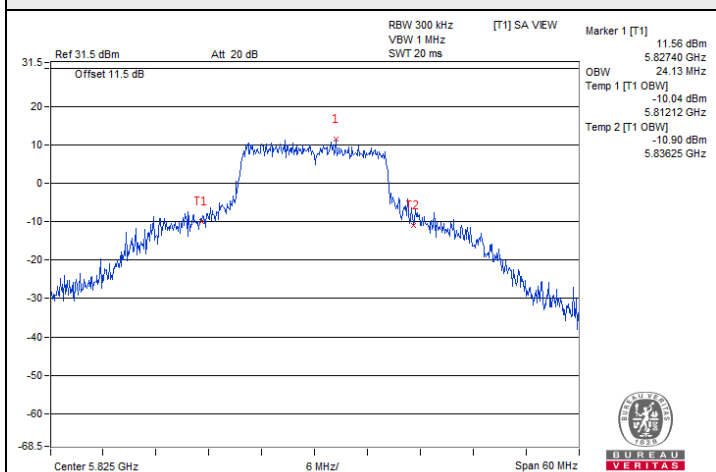
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	37.92	37.92
46	5230	37.92	37.92
151	5755	38.08	38.85
159	5795	38.46	40.00

802.11ax (HE80)

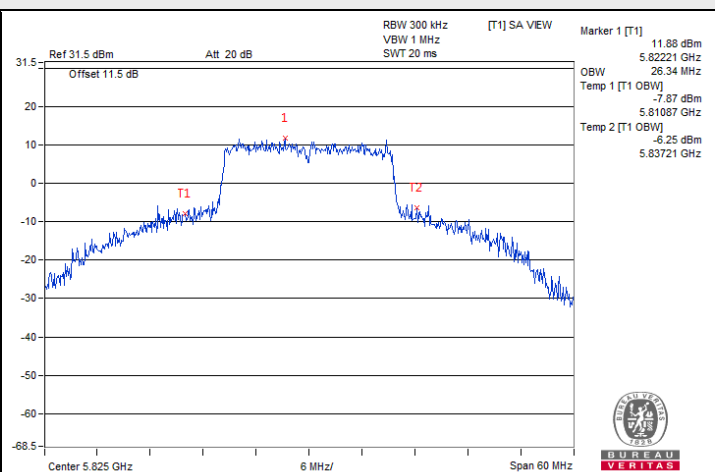
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	77.28	77.28
155	5775	77.31	76.93



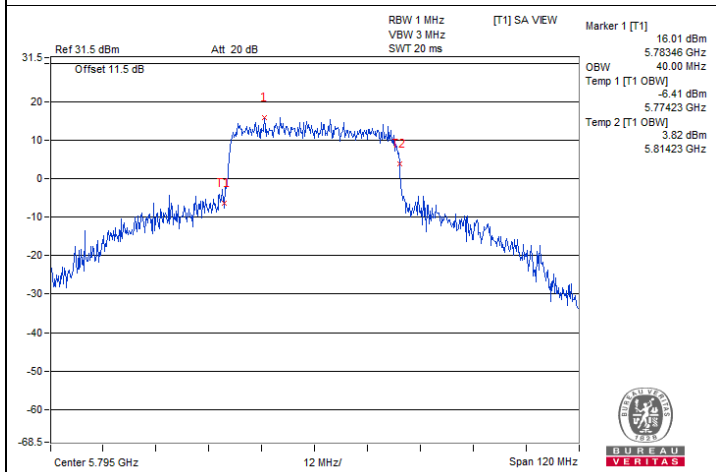
Spectrum Plot of Maximum Value



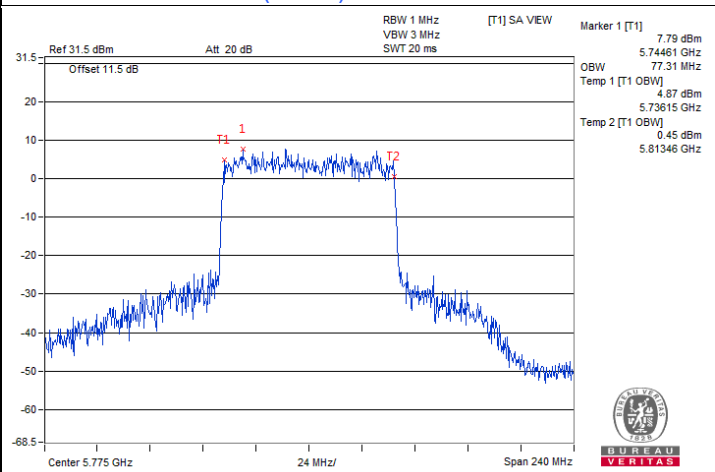
802.11a / Chain 1 : CH 165



802.11ax (HE20) / Chain 1 : CH 165

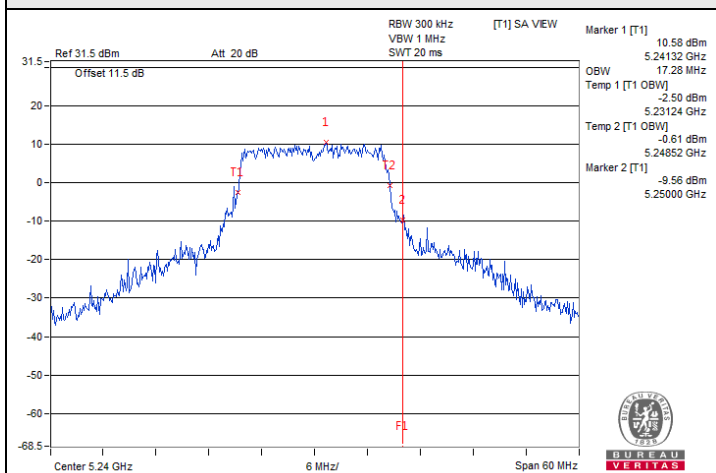


802.11ax (HE40) / Chain 1 : CH 159

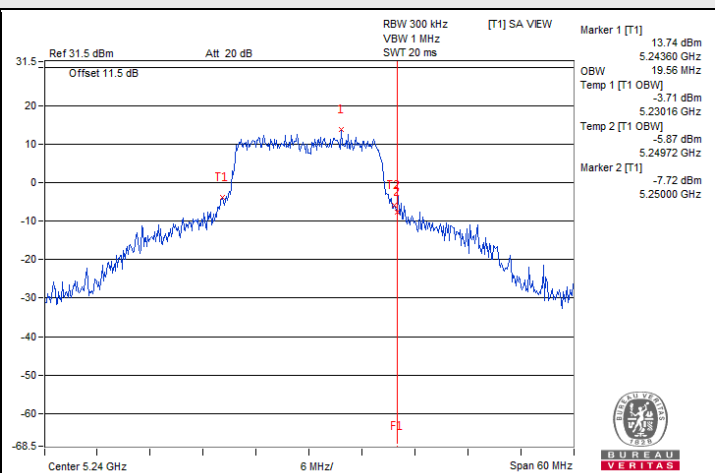


802.11ax (HE80) / Chain 0 : CH 155

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



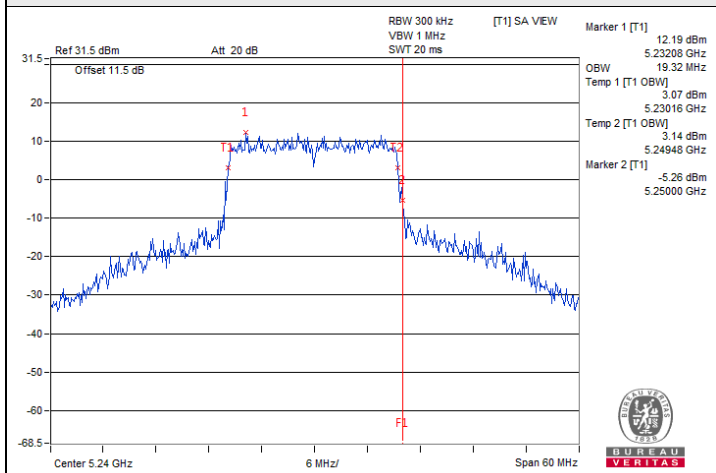
802.11a / Chain 0 : CH 48



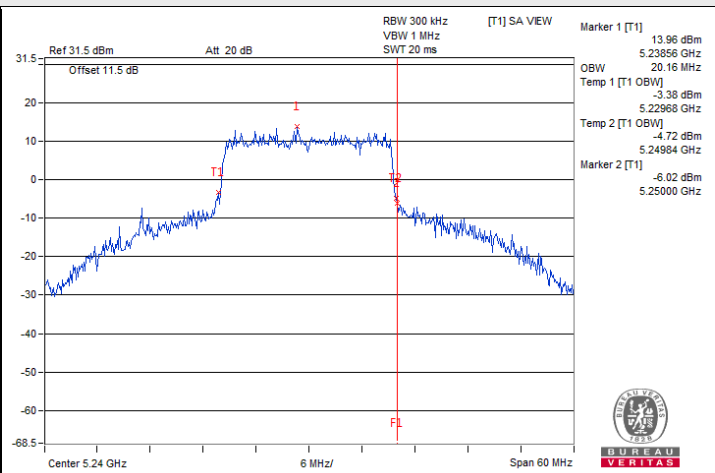
802.11a / Chain 1 : CH 48



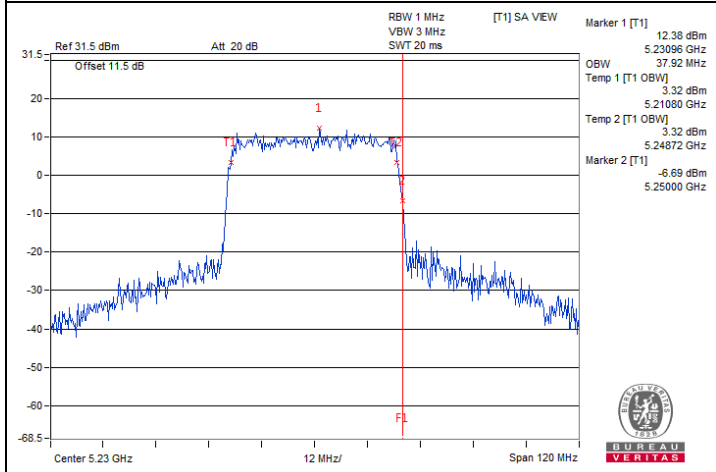
Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2A)



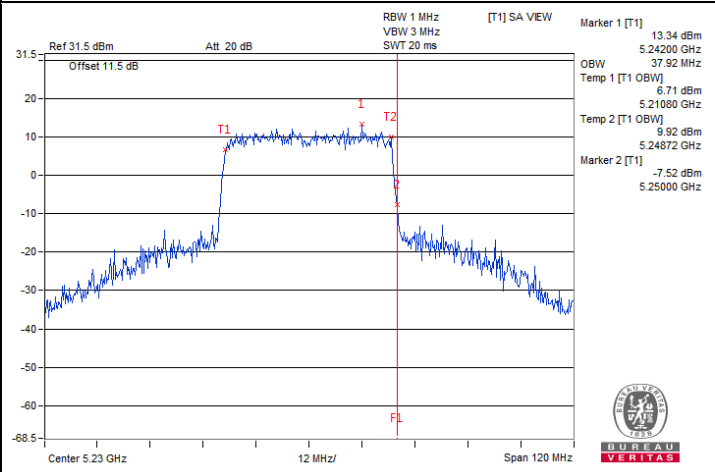
802.11ax (HE20) / Chain 0 : CH 48



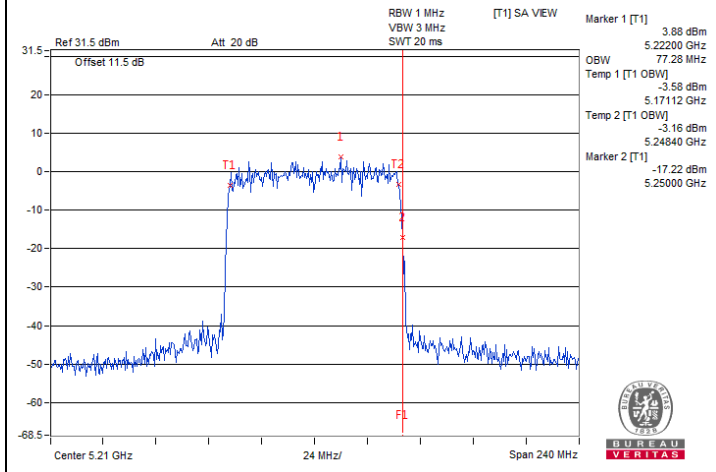
802.11ax (HE20) / Chain 1 : CH 48



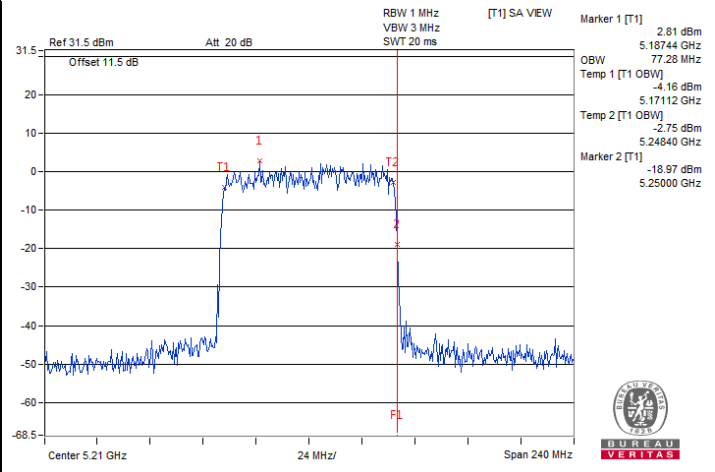
802.11ax (HE40) / Chain 0 : CH 46



802.11ax (HE40) / Chain 1 : CH 46



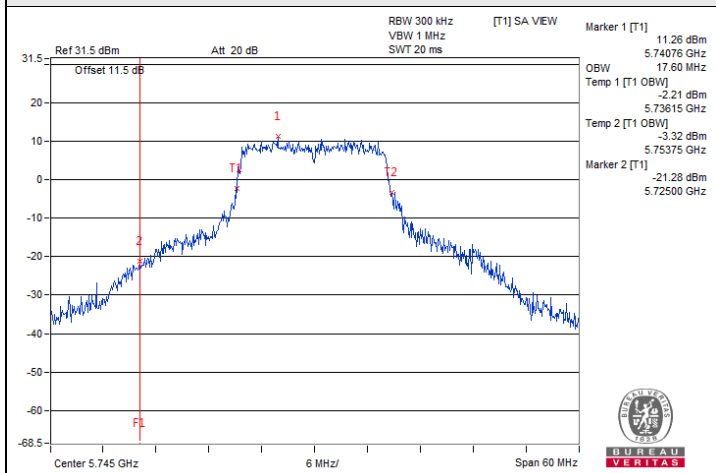
802.11ax (HE80) / Chain 0 : CH 42



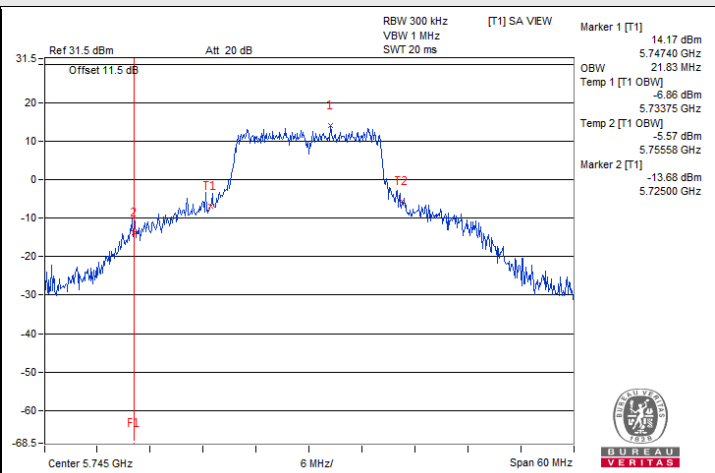
802.11ax (HE80) / Chain 1 : CH 42



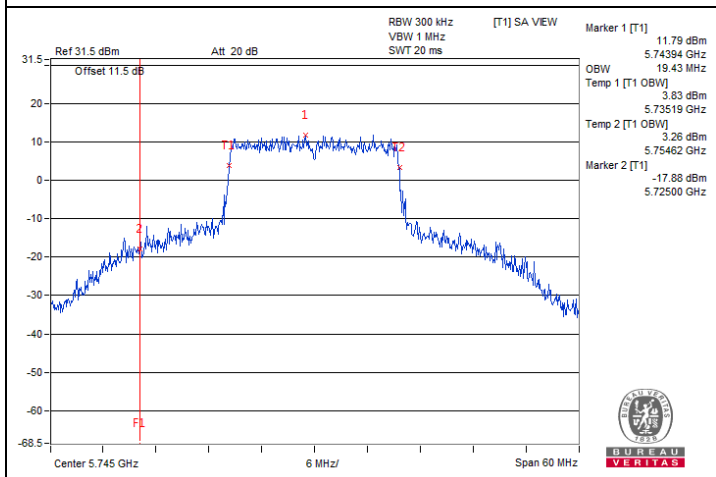
Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2C)



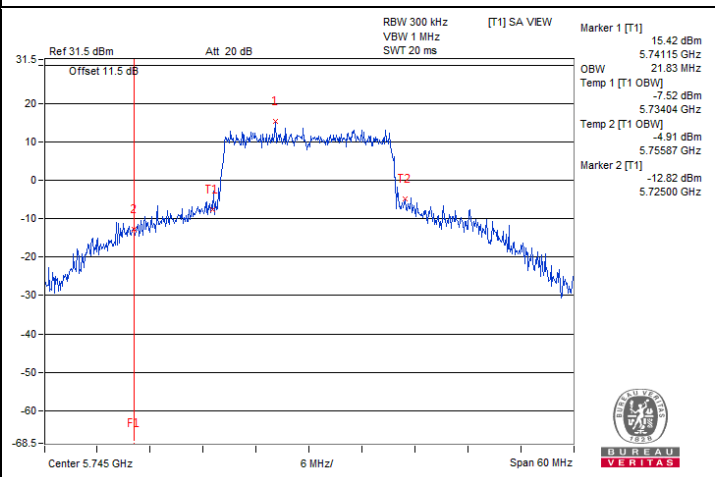
802.11a / Chain 0 : CH 149



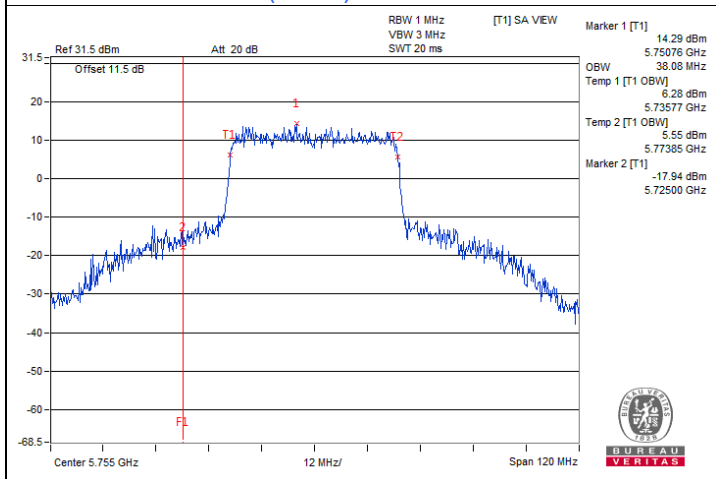
802.11a / Chain 1 : CH 149



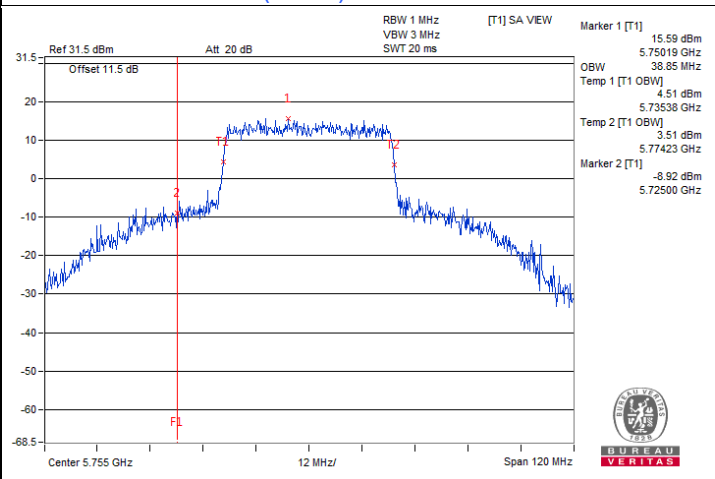
802.11ax (HE20) / Chain 0 : CH 149



802.11ax (HE20) / Chain 1 : CH 149



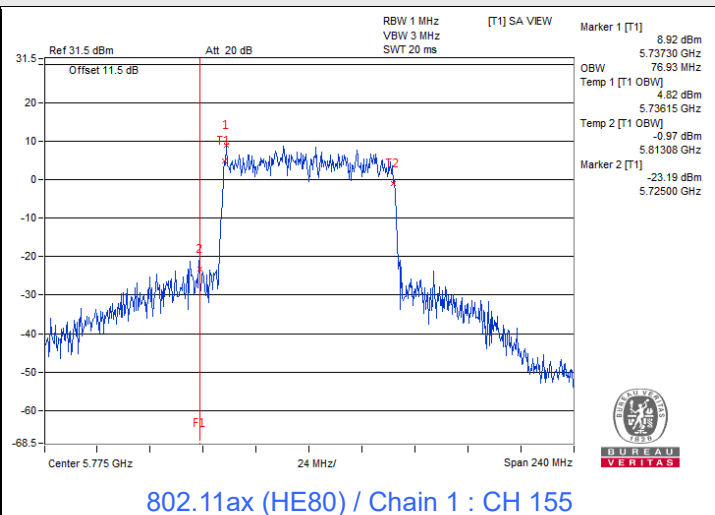
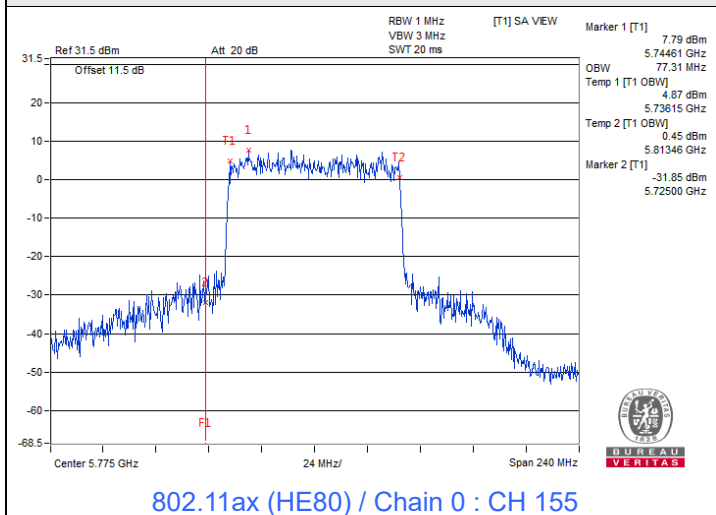
802.11ax (HE40) / Chain 0 : CH 151



802.11ax (HE40) / Chain 1 : CH 151



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



Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Alan Wu/Wayne Lin
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Test Mode E

Radio 3

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.80	17.04
40	5200	17.40	17.88
48	5240	17.52	18.00
149	5745	27.50	26.25
157	5785	29.62	27.50
165	5825	28.47	28.75

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	19.08	19.20
40	5200	19.08	19.20
48	5240	19.20	19.68
149	5745	29.52	27.50
157	5785	28.94	29.13
165	5825	29.42	26.63

802.11ax (HE40)

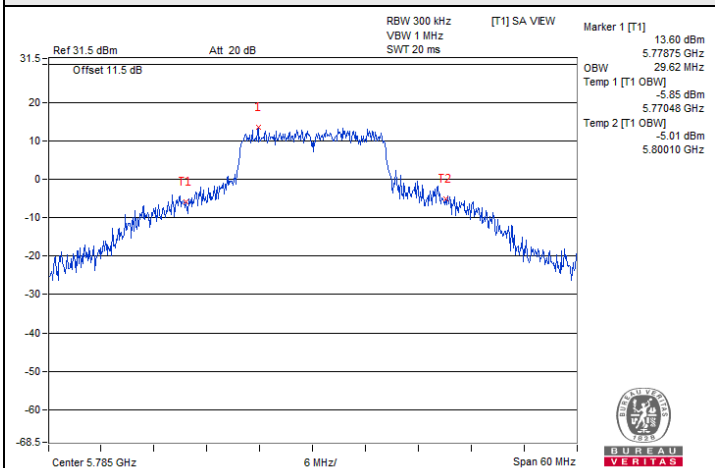
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	37.70	37.70
46	5230	37.92	38.16
151	5755	61.04	61.74
159	5795	70.38	71.93

802.11ax (HE80)

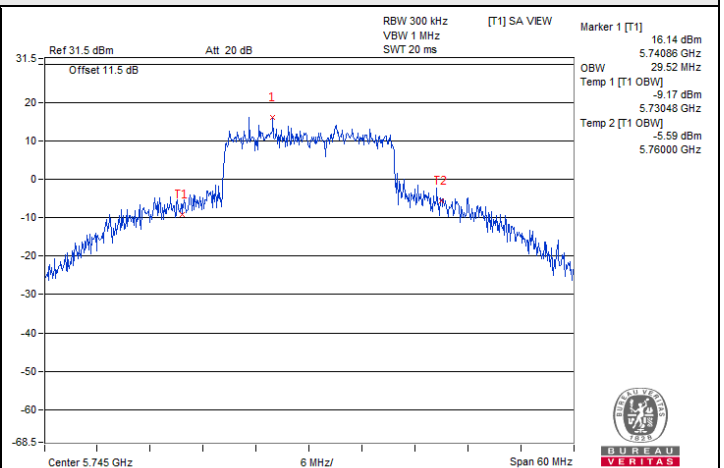
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	77.28	77.28
155	5775	92.31	79.62



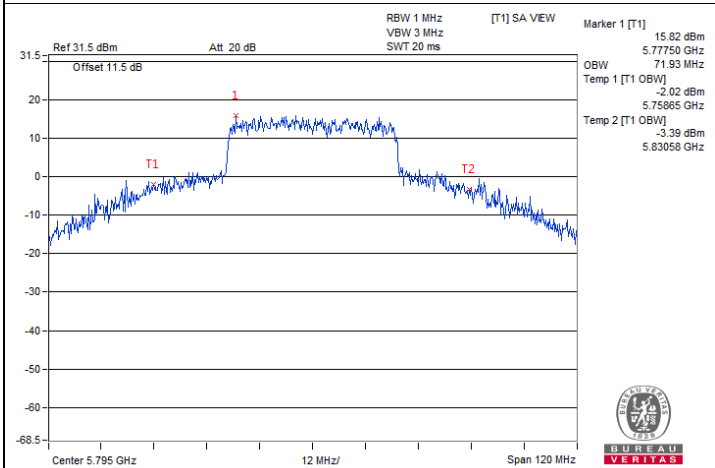
Spectrum Plot of Maximum Value



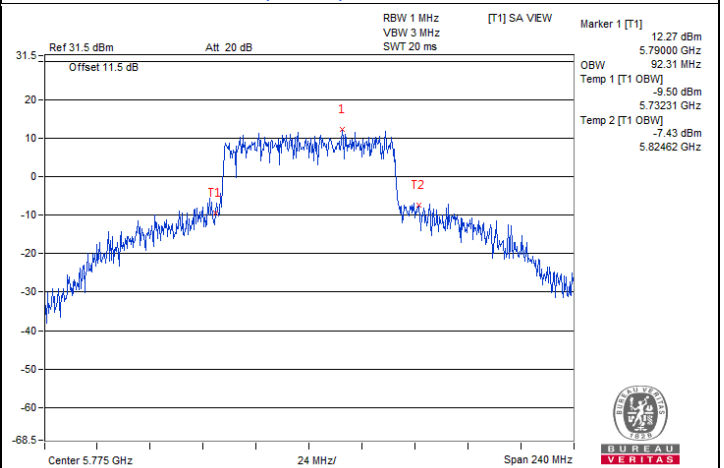
802.11a / Chain 0 : CH 157



802.11ax (HE20) / Chain 0 : CH 149

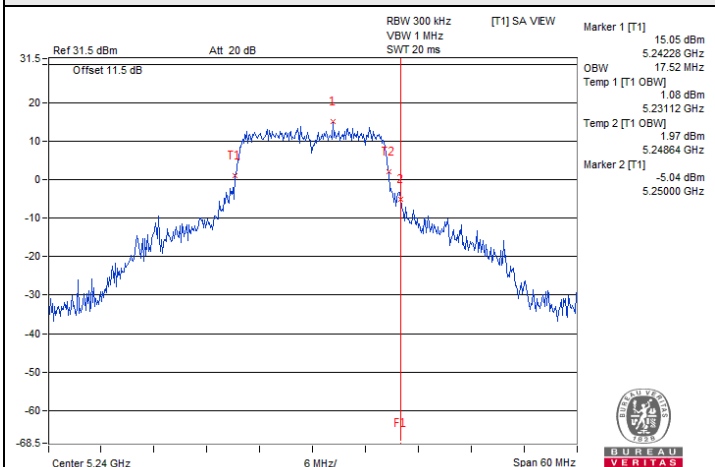


802.11ax (HE40) / Chain 1 : CH 159

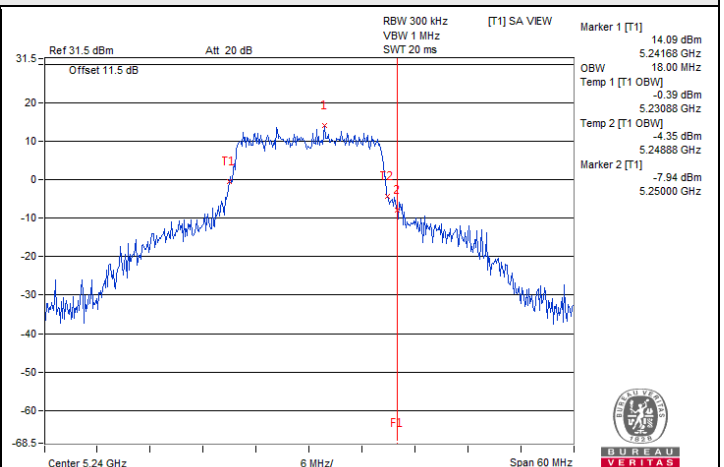


802.11ax (HE80) / Chain 0 : CH 155

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

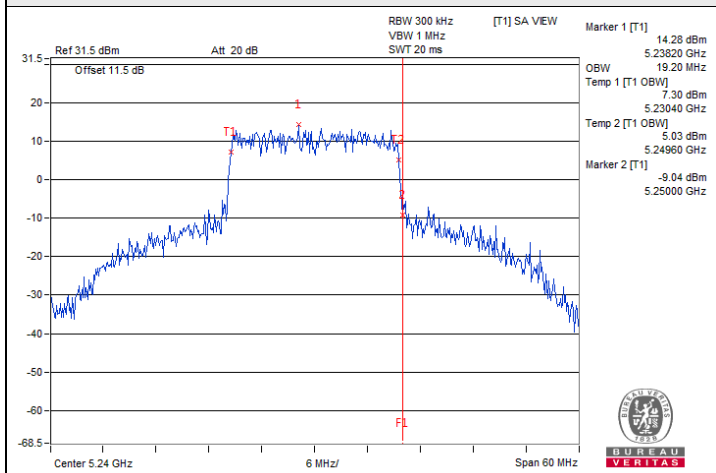


802.11a / Chain 0 : CH 48

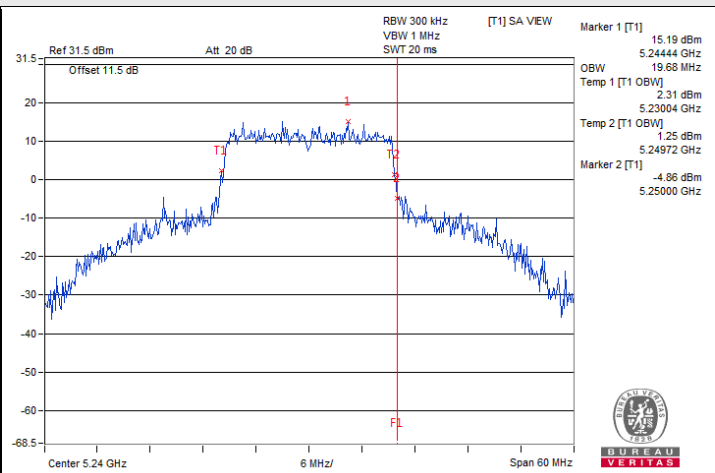


802.11a / Chain 1 : CH 48

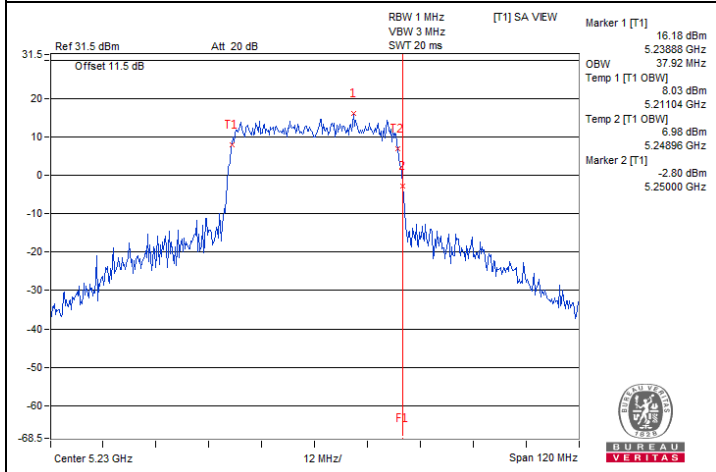
Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2A)



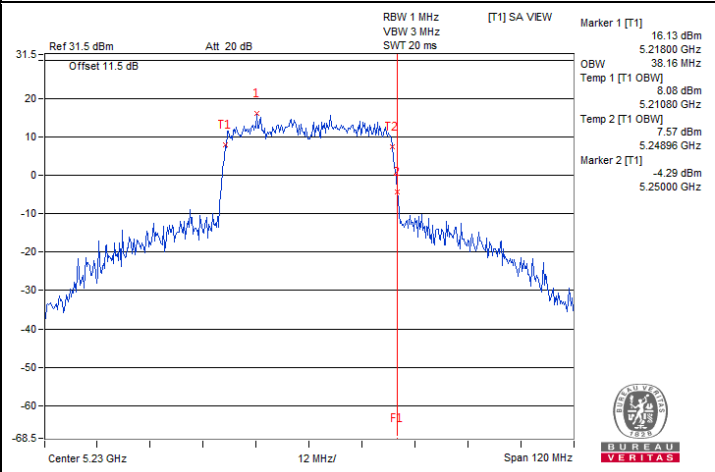
802.11ax (HE20) / Chain 0 : CH 48



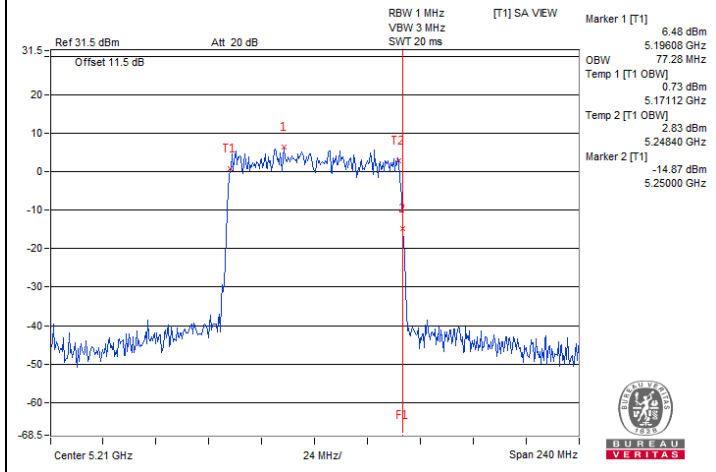
802.11ax (HE20) / Chain 1 : CH 48



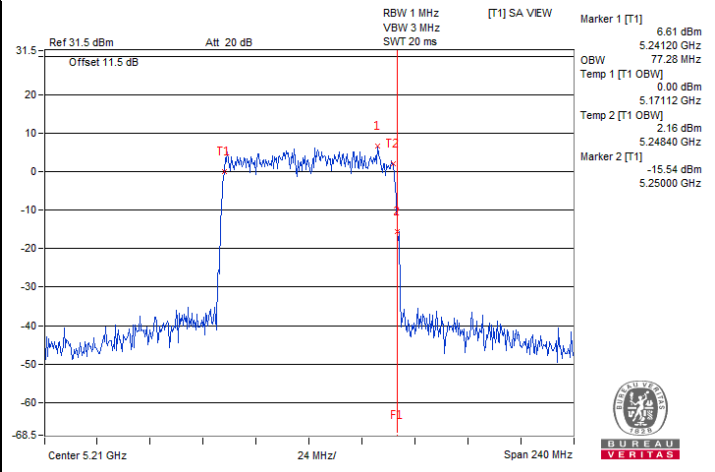
802.11ax (HE40) / Chain 0 : CH 46



802.11ax (HE40) / Chain 1 : CH 46

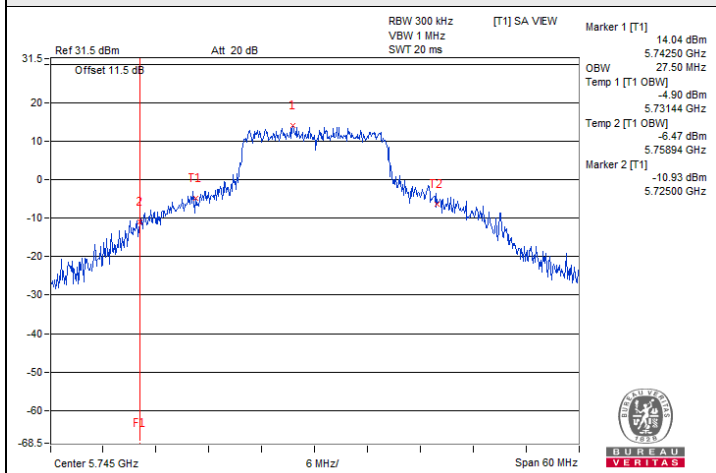


802.11ax (HE80) / Chain 0 : CH 42

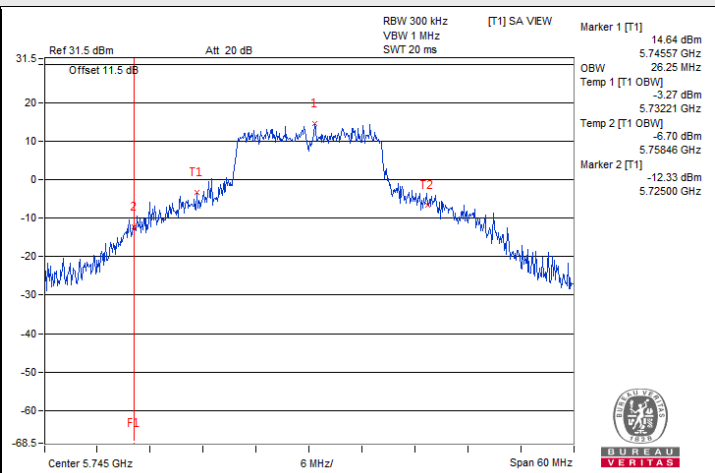


802.11ax (HE80) / Chain 1 : CH 42

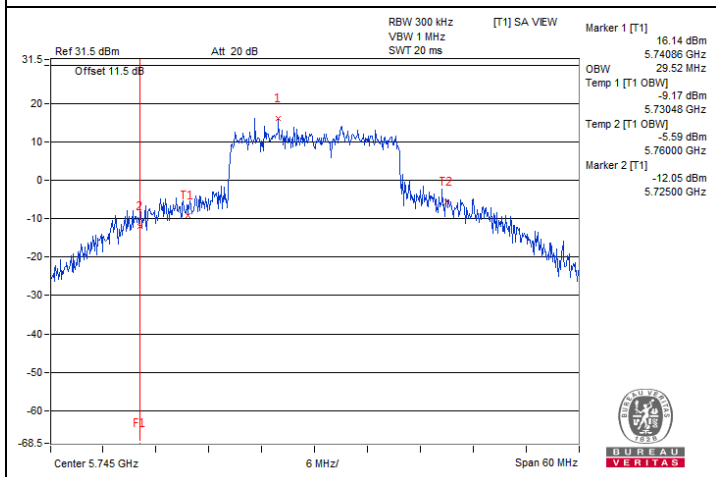
Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2C)



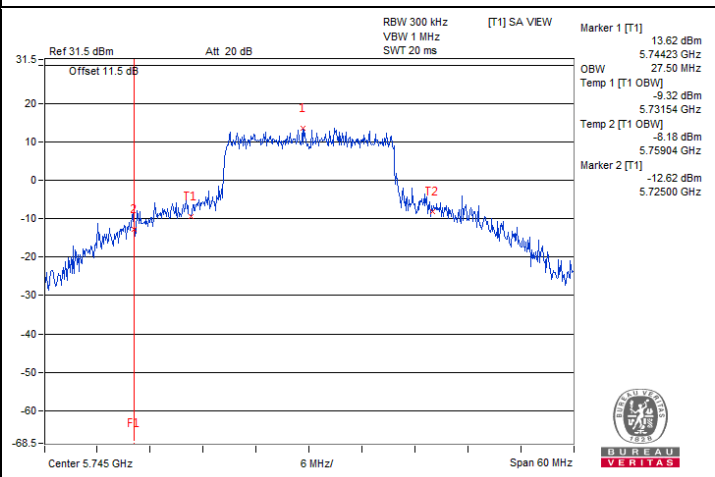
802.11a / Chain 0 : CH 149



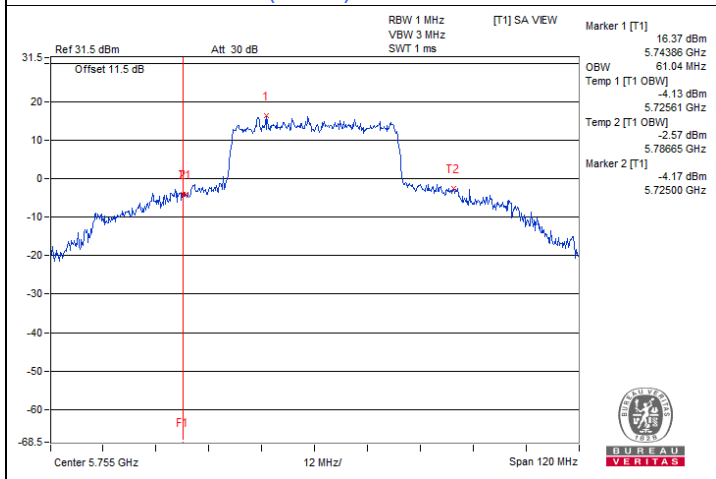
802.11a / Chain 1 : CH 149



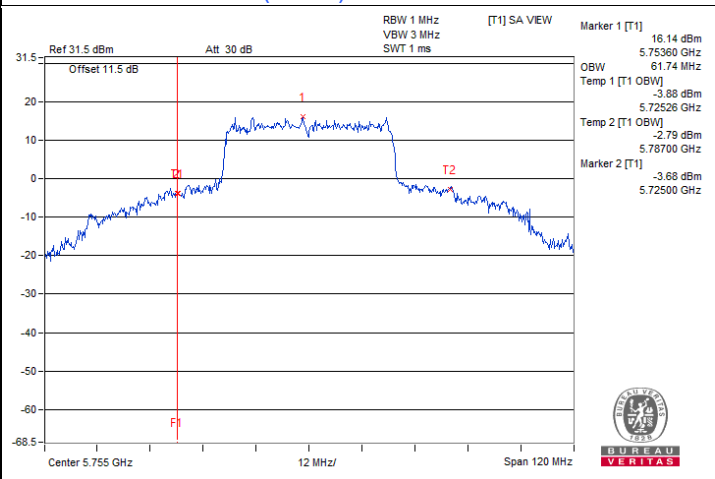
802.11ax (HE20) / Chain 0 : CH 149



802.11ax (HE20) / Chain 1 : CH 149



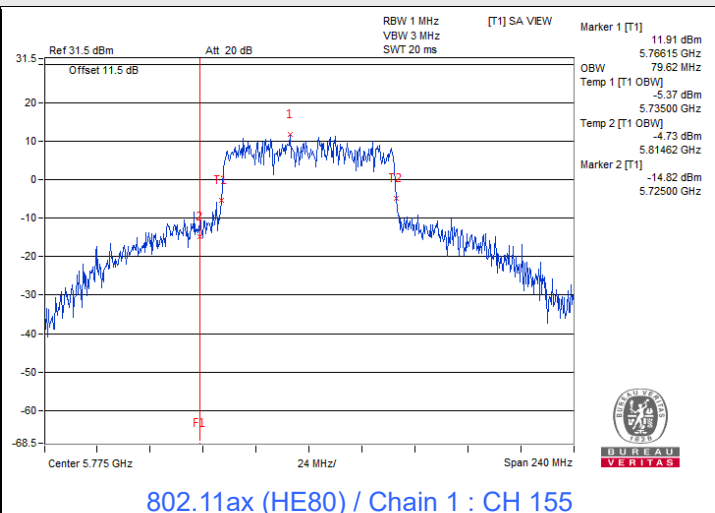
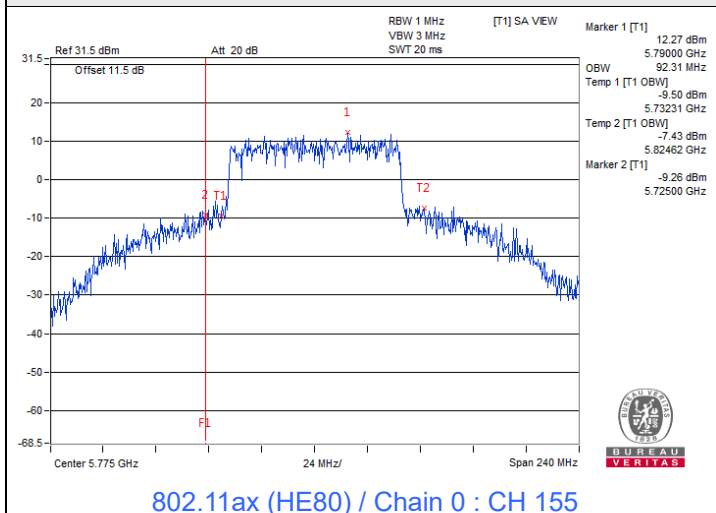
802.11ax (HE40) / Chain 0 : CH 151



802.11ax (HE40) / Chain 1 : CH 151



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



7.5 Frequency Stability

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
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Test Mode A

Radio 1

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5745 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
50	120	5744.9958	Pass	5744.9945	Pass	5744.9968	Pass	5744.9941	Pass
40	120	5745.0202	Pass	5745.0214	Pass	5745.0195	Pass	5745.0194	Pass
30	120	5745.0155	Pass	5745.0128	Pass	5745.0153	Pass	5745.0167	Pass
20	120	5745.0281	Pass	5745.027	Pass	5745.0254	Pass	5745.0259	Pass
10	120	5745.0132	Pass	5745.0129	Pass	5745.0122	Pass	5745.0143	Pass
0	120	5744.9771	Pass	5744.9795	Pass	5744.9765	Pass	5744.9771	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5745 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	5745.0285	Pass	5745.0289	Pass	5745.0247	Pass	5745.0271	Pass
	120	5745.0281	Pass	5745.027	Pass	5745.0254	Pass	5745.0259	Pass
	102	5745.0285	Pass	5745.0296	Pass	5745.0275	Pass	5745.025	Pass

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
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Test Mode C

Radio 2

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
50	120	5180.0254	Pass	5180.0243	Pass	5180.0211	Pass	5180.0254	Pass
40	120	5180.0118	Pass	5180.0077	Pass	5180.0111	Pass	5180.0111	Pass
30	120	5180.0024	Pass	5180.0051	Pass	5180.0046	Pass	5180.0058	Pass
20	120	5179.9886	Pass	5179.9851	Pass	5179.9889	Pass	5179.9842	Pass
10	120	5180.0002	Pass	5180	Pass	5180.0031	Pass	5179.9997	Pass
0	120	5179.9819	Pass	5179.9789	Pass	5179.9814	Pass	5179.982	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	5179.9901	Pass	5179.9904	Pass	5179.9867	Pass	5179.9889	Pass
	120	5179.9886	Pass	5179.9851	Pass	5179.9889	Pass	5179.9842	Pass
	102	5179.9902	Pass	5179.9884	Pass	5179.9879	Pass	5179.9908	Pass

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Alan Wu/Wayne Lin
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Test Mode E

Radio 3

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
50	120	5180.0067	Pass	5180.008	Pass	5180.0086	Pass	5180.0049	Pass
40	120	5179.9851	Pass	5179.9875	Pass	5179.9858	Pass	5179.9868	Pass
30	120	5180.0175	Pass	5180.0173	Pass	5180.0157	Pass	5180.017	Pass
20	120	5180.0243	Pass	5180.0223	Pass	5180.0219	Pass	5180.0237	Pass
10	120	5179.9858	Pass	5179.9818	Pass	5179.9837	Pass	5179.9818	Pass
0	120	5179.9916	Pass	5179.99	Pass	5179.9883	Pass	5179.9903	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	5180.0286	Pass	5180.0289	Pass	5180.0266	Pass	5180.0287	Pass
	120	5180.0243	Pass	5180.0223	Pass	5180.0219	Pass	5180.0237	Pass
	102	5180.0303	Pass	5180.0313	Pass	5180.0308	Pass	5180.0337	Pass

7.6 AC Power Conducted Emissions

Radio 1

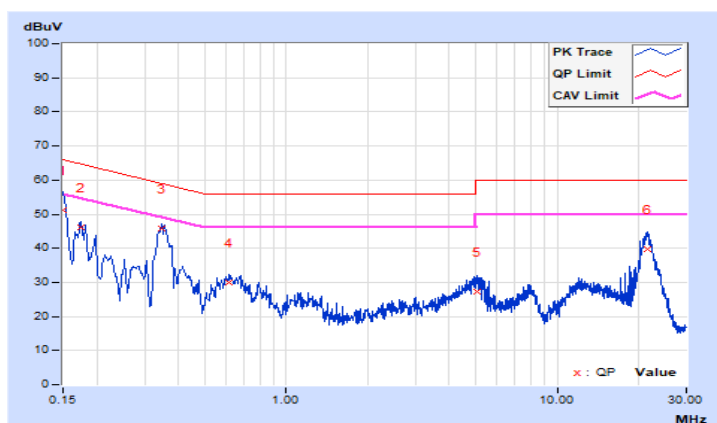
Test Mode A

RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	9 kHz ~ 150 kHz; 150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 200 Hz; 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	10.19	41.12	25.51	51.31	35.70	66.00	56.00	-14.69	-20.30
2	0.17384	10.20	35.76	23.30	45.96	33.50	64.77	54.77	-18.81	-21.27
3	0.34578	10.24	35.55	25.44	45.79	35.68	59.06	49.06	-13.27	-13.38
4	0.61734	10.26	19.72	13.26	29.98	23.52	56.00	46.00	-26.02	-22.48
5	5.05400	10.43	16.78	7.54	27.21	17.97	60.00	50.00	-32.79	-32.03
6	21.47800	10.60	29.26	20.47	39.86	31.07	60.00	50.00	-20.14	-18.93

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

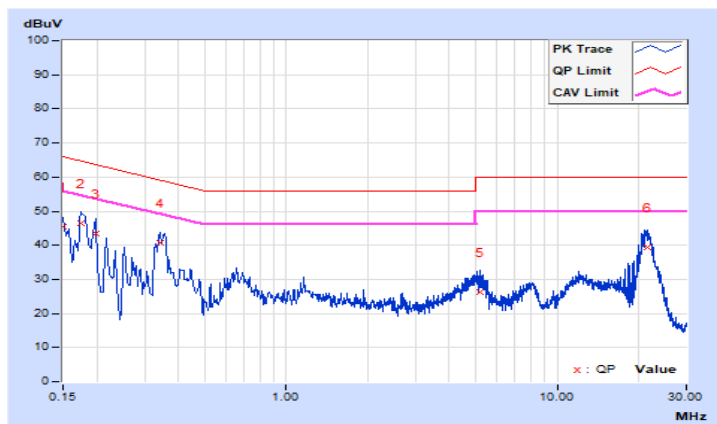


RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	9 kHz ~ 150 kHz; 150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 200 Hz; Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	0.15000	10.18	35.36	25.35	45.54	35.53	66.00	56.00	-20.46	-20.47
2	0.17400	10.19	36.34	23.32	46.53	33.51	64.77	54.77	-18.24	-21.26
3	0.19800	10.21	33.37	19.63	43.58	29.84	63.69	53.69	-20.11	-23.85
4	0.34200	10.24	30.45	20.14	40.69	30.38	59.15	49.15	-18.46	-18.77
5	5.17800	10.46	15.82	6.52	26.28	16.98	60.00	50.00	-33.72	-33.02
6	21.64600	10.75	28.55	19.98	39.30	30.73	60.00	50.00	-20.70	-19.27

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



Test Mode B

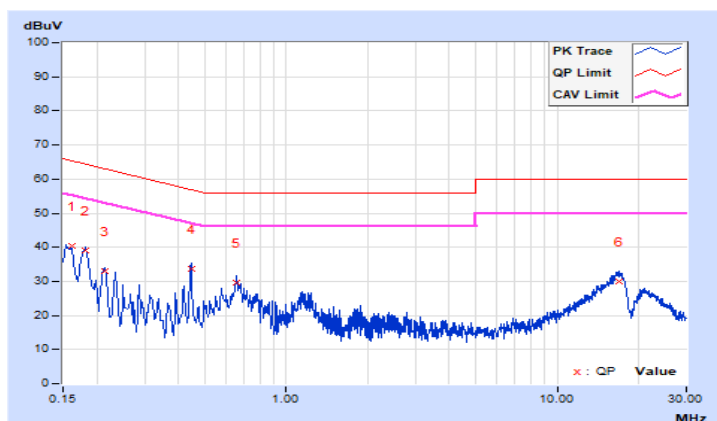
RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	9 kHz ~ 150 kHz; 150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 200 Hz; Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	0.16105	10.12	30.12	22.19	40.24	32.31	65.41	55.41	-25.17	-23.10
2	0.18180	10.13	28.85	22.02	38.98	32.15	64.40	54.40	-25.42	-22.25
3	0.21350	10.14	22.97	12.46	33.11	22.60	63.07	53.07	-29.96	-30.47
4	0.44600	10.16	23.53	22.00	33.69	32.16	56.95	46.95	-23.26	-14.79
5	0.65800	10.17	19.32	12.88	29.49	23.05	56.00	46.00	-26.51	-22.95
6	16.98600	10.38	19.65	15.38	30.03	25.76	60.00	50.00	-29.97	-24.24

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

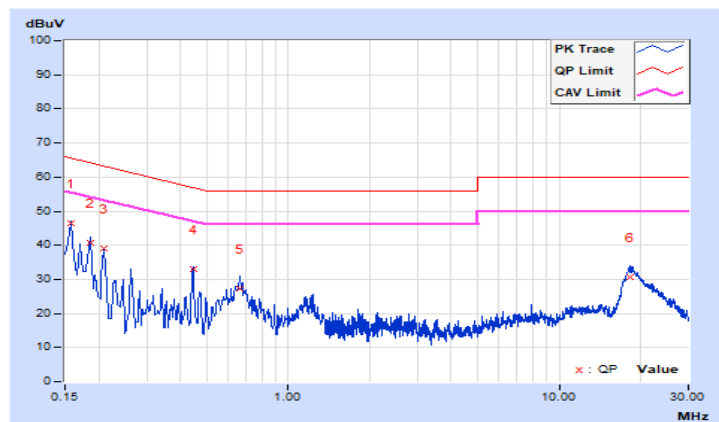


RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	9 kHz ~ 150 kHz; 150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 200 Hz; Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	0.15800	10.13	36.44	28.11	46.57	38.24	65.57	55.57	-19.00	-17.33
2	0.18600	10.14	30.56	21.81	40.70	31.95	64.21	54.21	-23.51	-22.26
3	0.20960	10.15	29.00	19.23	39.15	29.38	63.22	53.22	-24.07	-23.84
4	0.44529	10.17	22.95	21.61	33.12	31.78	56.96	46.96	-23.84	-15.18
5	0.66200	10.18	17.05	8.98	27.23	19.16	56.00	46.00	-28.77	-26.84
6	18.33000	10.53	20.23	15.48	30.76	26.01	60.00	50.00	-29.24	-23.99

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



Radio 2

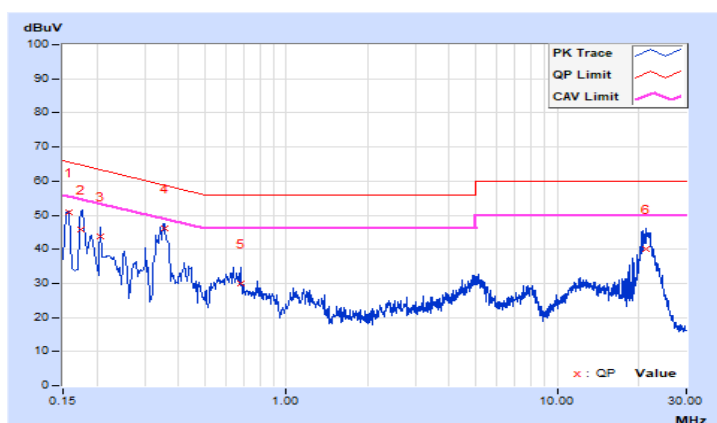
Test Mode C

RF Mode	802.11ax (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	9 kHz ~ 150 kHz; 150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 200 Hz; 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	0.15687	10.19	40.78	27.14	50.97	37.33	65.63	55.63	-14.66	-18.30
2	0.17384	10.20	35.65	23.15	45.85	33.35	64.77	54.77	-18.92	-21.42
3	0.20600	10.22	33.54	20.67	43.76	30.89	63.37	53.37	-19.61	-22.48
4	0.35400	10.24	35.99	29.03	46.23	39.27	58.87	48.87	-12.64	-9.60
5	0.67800	10.26	19.74	13.69	30.00	23.95	56.00	46.00	-26.00	-22.05
6	21.41800	10.60	29.32	20.41	39.92	31.01	60.00	50.00	-20.08	-18.99

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

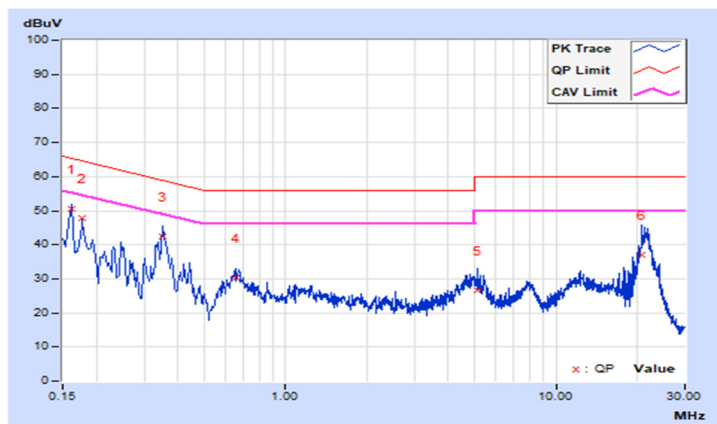


RF Mode	802.11ax (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	9 kHz ~ 150 kHz; 150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 200 Hz; Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hus		

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	0.16200	10.19	40.42	25.19	50.61	35.38	65.36	55.36	-14.75	-19.98
2	0.17800	10.20	37.62	23.87	47.82	34.07	64.58	54.58	-16.76	-20.51
3	0.35000	10.24	32.24	23.82	42.48	34.06	58.96	48.96	-16.48	-14.90
4	0.65800	10.27	19.87	14.25	30.14	24.52	56.00	46.00	-25.86	-21.48
5	5.13400	10.46	16.12	6.89	26.58	17.35	60.00	50.00	-33.42	-32.65
6	20.81000	10.76	26.42	16.71	37.18	27.47	60.00	50.00	-22.82	-22.53

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



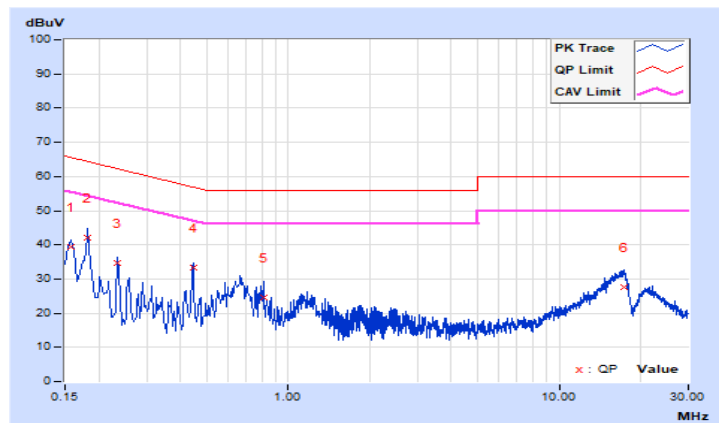
Test Mode D

RF Mode	802.11ax (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	9 kHz ~ 150 kHz; 150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 200 Hz; 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	0.15770	10.12	29.28	26.97	39.40	37.09	65.58	55.58	-26.18	-18.49
2	0.18200	10.13	32.01	22.26	42.14	32.39	64.39	54.39	-22.25	-22.00
3	0.23400	10.14	24.42	12.36	34.56	22.50	62.31	52.31	-27.75	-29.81
4	0.44600	10.16	23.30	21.76	33.46	31.92	56.95	46.95	-23.49	-15.03
5	0.81000	10.17	14.32	9.23	24.49	19.40	56.00	46.00	-31.51	-26.60
6	17.43400	10.38	17.30	11.25	27.68	21.63	60.00	50.00	-32.32	-28.37

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

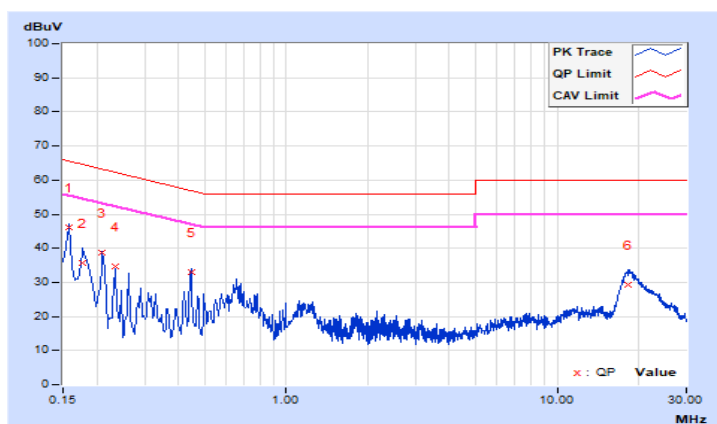


RF Mode	802.11ax (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	9 kHz ~ 150 kHz; 150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP), 200 Hz; Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	0.15800	10.13	36.12	28.01	46.25	38.14	65.57	55.57	-19.32	-17.43
2	0.17800	10.14	25.66	18.04	35.80	28.18	64.58	54.58	-28.78	-26.40
3	0.21000	10.15	28.63	18.97	38.78	29.12	63.21	53.21	-24.43	-24.09
4	0.23400	10.15	24.46	13.22	34.61	23.37	62.31	52.31	-27.70	-28.94
5	0.44600	10.17	22.91	21.03	33.08	31.20	56.95	46.95	-23.87	-15.75
6	18.31000	10.53	18.69	12.67	29.22	23.20	60.00	50.00	-30.78	-26.80

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



Radio 3

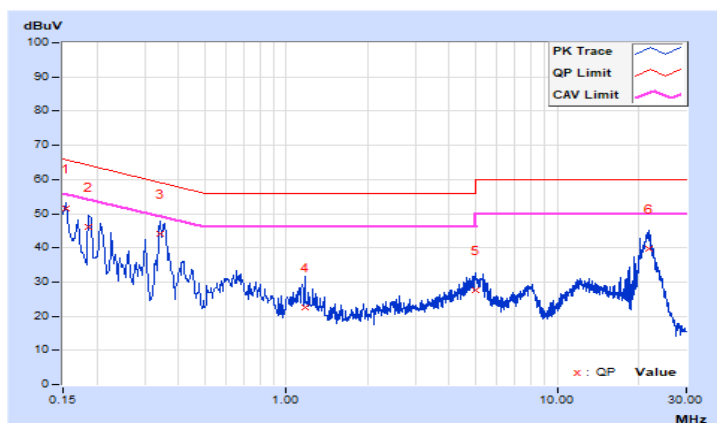
Test Mode E

RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	150kHz ~ 30MHz	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	0.15400	10.19	41.40	28.01	51.59	38.20	65.78	55.78	-14.19	-17.58
2	0.18600	10.21	36.05	23.36	46.26	33.57	64.21	54.21	-17.95	-20.64
3	0.34200	10.24	34.03	24.05	44.27	34.29	59.15	49.15	-14.88	-14.86
4	1.17000	10.29	12.14	5.04	22.43	15.33	56.00	46.00	-33.57	-30.67
5	5.01385	10.43	17.07	7.90	27.50	18.33	60.00	50.00	-32.50	-31.67
6	21.85000	10.60	28.97	20.85	39.57	31.45	60.00	50.00	-20.43	-18.55

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

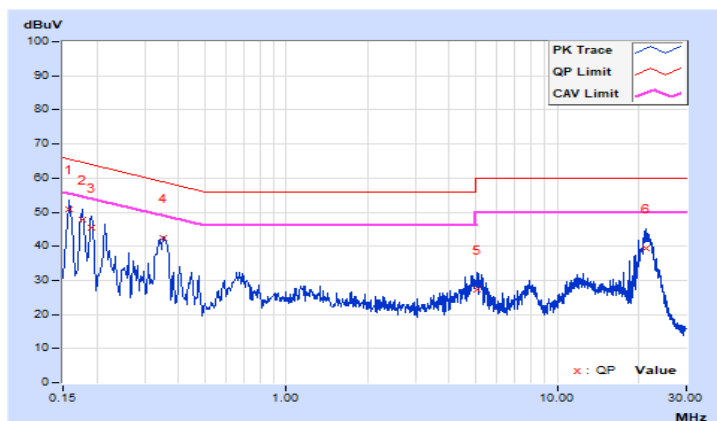


RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	0.15800	10.18	40.70	26.37	50.88	36.55	65.57	55.57	-14.69	-19.02
2	0.17800	10.20	37.47	23.87	47.67	34.07	64.58	54.58	-16.91	-20.51
3	0.19000	10.20	35.36	21.00	45.56	31.20	64.04	54.04	-18.48	-22.84
4	0.35129	10.24	32.31	24.25	42.55	34.49	58.93	48.93	-16.38	-14.44
5	5.04600	10.46	16.67	7.29	27.13	17.75	60.00	50.00	-32.87	-32.25
6	21.26600	10.76	28.59	19.32	39.35	30.08	60.00	50.00	-20.65	-19.92

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



Test Mode F

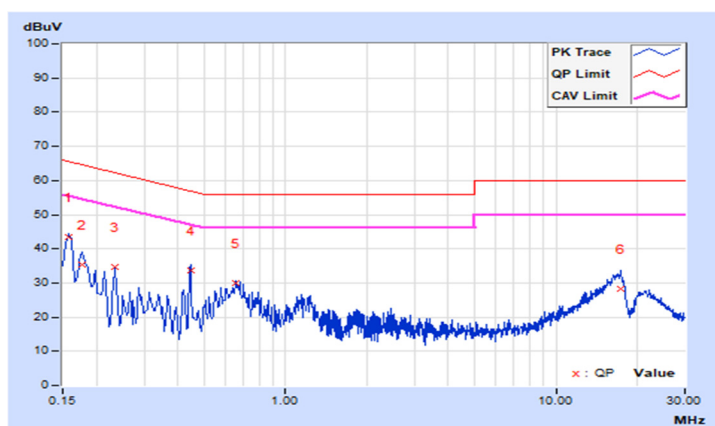
RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	0.15800	10.12	33.25	26.82	43.37	36.94	65.57	55.57	-22.20	-18.63
2	0.17755	10.13	25.23	17.66	35.36	27.79	64.60	54.60	-29.24	-26.81
3	0.23400	10.14	24.46	12.43	34.60	22.57	62.31	52.31	-27.71	-29.74
4	0.44600	10.16	23.39	21.84	33.55	32.00	56.95	46.95	-23.40	-14.95
5	0.65400	10.17	19.77	12.03	29.94	22.20	56.00	46.00	-26.06	-23.80
6	17.35800	10.38	17.80	11.46	28.18	21.84	60.00	50.00	-31.82	-28.16

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

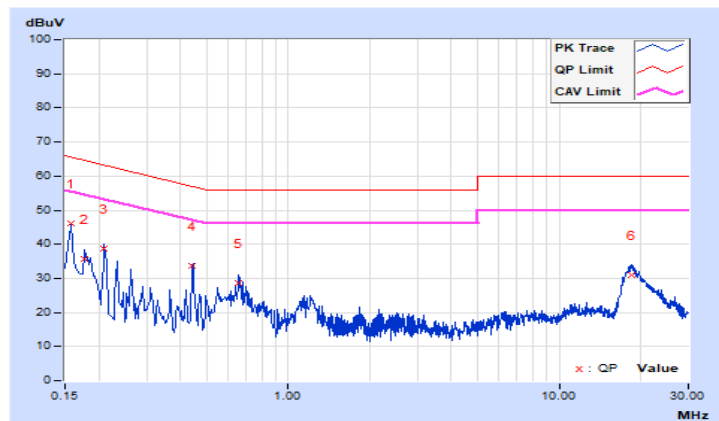


RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	0.15800	10.13	36.09	27.97	46.22	38.10	65.57	55.57	-19.35	-17.47
2	0.17800	10.14	25.48	17.98	35.62	28.12	64.58	54.58	-28.96	-26.46
3	0.21000	10.15	28.63	18.97	38.78	29.12	63.21	53.21	-24.43	-24.09
4	0.44411	10.17	23.42	21.60	33.59	31.77	56.98	46.98	-23.39	-15.21
5	0.65763	10.18	18.31	12.04	28.49	22.22	56.00	46.00	-27.51	-23.78
6	18.53000	10.53	20.42	16.16	30.95	26.69	60.00	50.00	-29.05	-23.31

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



7.7 Unwanted Emissions below 1 GHz

Radio 1

Test Mode A

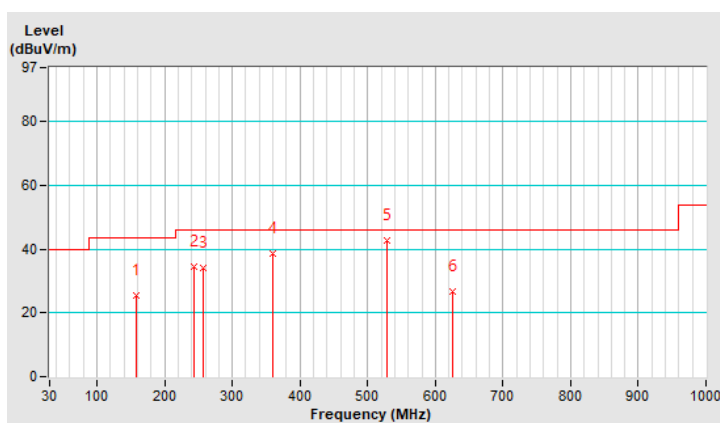
RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Karl Lee		

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	157.80	25.3 QP	43.5	-18.2	1.05 H	146	37.7	-12.4
2	242.70	34.5 QP	46.0	-11.5	1.64 H	25	48.5	-14.0
3	257.49	34.3 QP	46.0	-11.7	1.68 H	107	48.0	-13.7
4	359.60	38.7 QP	46.0	-7.3	1.05 H	208	49.5	-10.8
5	529.40	42.7 QP	46.0	-3.3	1.04 H	74	49.8	-7.1
6	626.30	26.8 QP	46.0	-19.2	1.93 H	241	31.8	-5.0

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

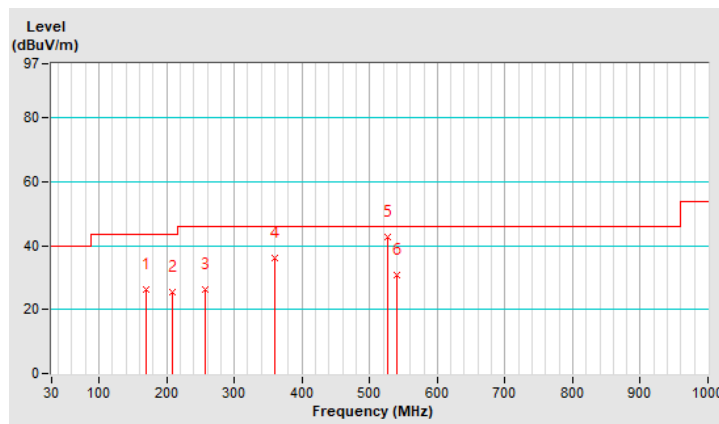


RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Karl Lee		

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	169.20	26.3 QP	43.5	-17.2	1.46 V	294	39.3	-13.0
2	208.60	25.4 QP	43.5	-18.1	1.71 V	154	41.3	-15.9
3	256.20	26.1 QP	46.0	-19.9	1.26 V	259	39.8	-13.7
4	359.80	36.3 QP	46.0	-9.7	1.62 V	179	47.1	-10.8
5	527.60	42.6 QP	46.0	-3.4	2.53 V	124	49.7	-7.1
6	540.60	30.8 QP	46.0	-15.2	1.62 V	198	37.6	-6.8

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



Test Mode B

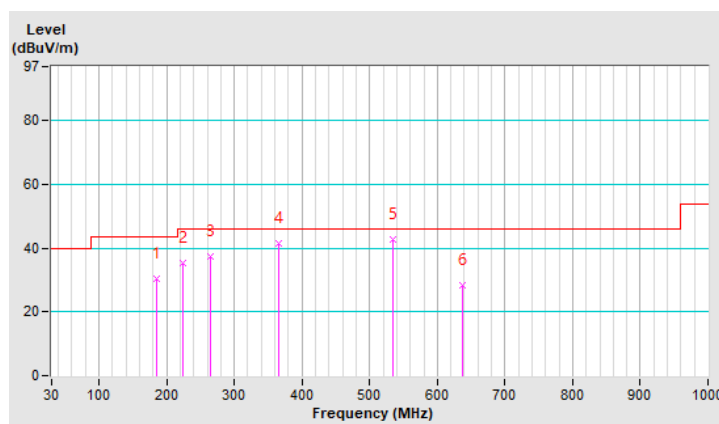
RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Karl Lee		

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	185.52	30.4 QP	43.5	-13.1	1.45 H	15	45.4	-15.0
2	224.64	35.3 QP	46.0	-10.7	1.63 H	160	51.1	-15.8
3	264.74	37.4 QP	46.0	-8.6	1.45 H	357	50.8	-13.4
4	365.12	41.6 QP	46.0	-4.4	1.32 H	222	52.1	-10.5
5	533.71	42.9 QP	46.0	-3.1	1.50 H	12	49.8	-6.9
6	637.91	28.4 QP	46.0	-17.6	1.46 H	280	33.2	-4.8

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

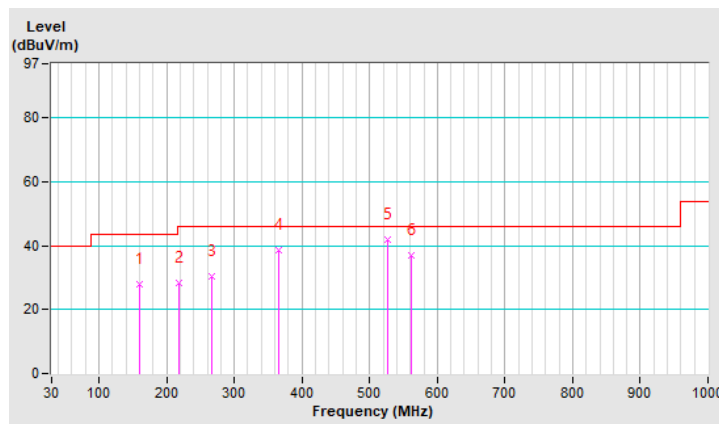


RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Karl Lee		

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	159.78	27.8 QP	43.5	-15.7	1.91 V	336	40.3	-12.5
2	218.64	28.2 QP	46.0	-17.8	1.67 V	330	43.9	-15.7
3	266.80	30.3 QP	46.0	-15.7	1.63 V	84	43.6	-13.3
4	365.81	38.8 QP	46.0	-7.2	1.64 V	105	49.3	-10.5
5	527.41	42.1 QP	46.0	-3.9	1.15 V	14	49.2	-7.1
6	560.81	36.8 QP	46.0	-9.2	1.92 V	266	43.4	-6.6

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



Radio 2

Test Mode C

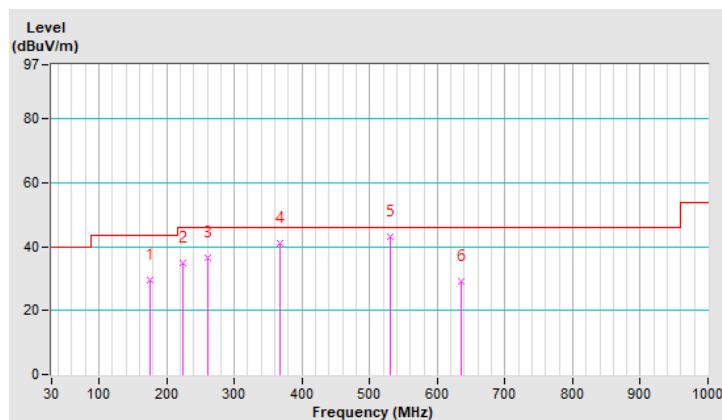
RF Mode	802.11ax (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Karl Lee		

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	175.66	29.7 QP	43.5	-13.8	1.36 H	180	43.3	-13.6
2	223.66	35.0 QP	46.0	-11.0	1.54 H	157	50.8	-15.8
3	260.80	36.6 QP	46.0	-9.4	1.36 H	263	50.2	-13.6
4	366.84	41.2 QP	46.0	-4.8	1.04 H	105	51.7	-10.5
5	530.82	43.2 QP	46.0	-2.8	1.57 H	29	50.2	-7.0
6	635.74	29.1 QP	46.0	-16.9	1.66 H	345	34.0	-4.9

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

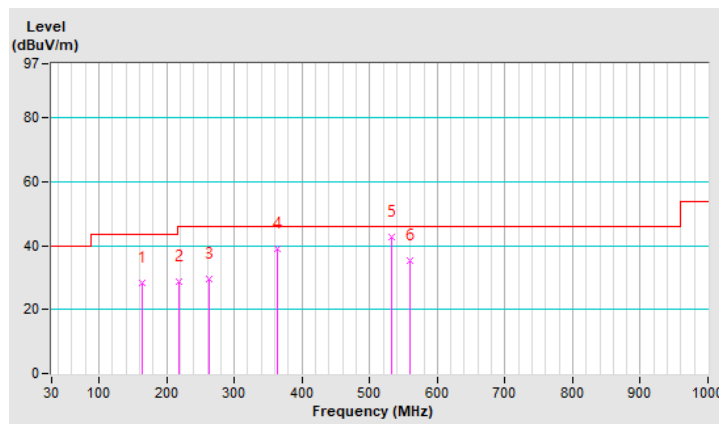


RF Mode	802.11ax (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Karl Lee		

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	163.00	28.2 QP	43.5	-15.3	1.01 V	111	40.8	-12.6
2	218.60	28.6 QP	46.0	-17.4	1.68 V	339	44.3	-15.7
3	262.50	29.5 QP	46.0	-16.5	1.04 V	180	43.0	-13.5
4	363.31	39.0 QP	46.0	-7.0	1.11 V	107	49.7	-10.7
5	533.12	42.9 QP	46.0	-3.1	1.15 V	24	49.8	-6.9
6	560.56	35.5 QP	46.0	-10.5	1.02 V	250	42.1	-6.6

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



Test Mode D

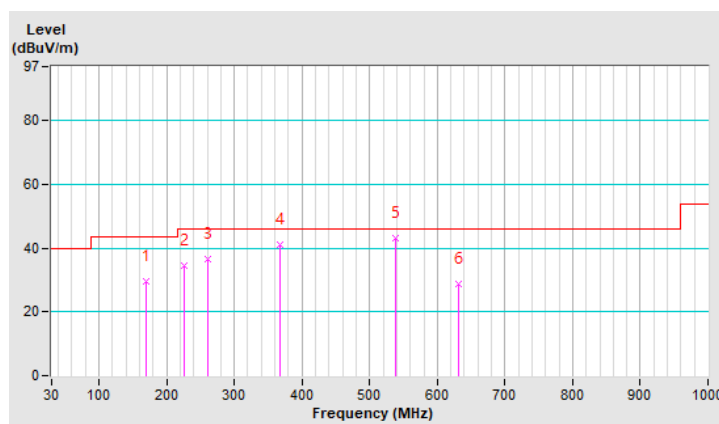
RF Mode	802.11ax (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Karl Lee		

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	168.74	29.6 QP	43.5	-13.9	1.35 H	130	42.6	-13.0
2	226.65	34.4 QP	46.0	-11.6	1.85 H	21	50.0	-15.6
3	259.94	36.5 QP	46.0	-9.5	1.36 H	179	50.1	-13.6
4	366.82	41.0 QP	46.0	-5.0	1.54 H	105	51.5	-10.5
5	537.87	43.1 QP	46.0	-2.9	1.15 H	169	50.0	-6.9
6	632.20	28.6 QP	46.0	-17.4	1.46 H	3	33.5	-4.9

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

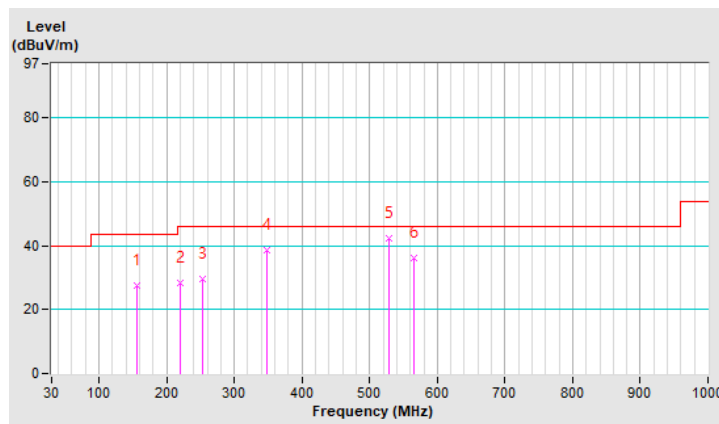


RF Mode	802.11ax (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Karl Lee		

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	155.82	27.7 QP	43.5	-15.8	1.78 V	125	40.2	-12.5
2	220.10	28.3 QP	46.0	-17.7	1.69 V	157	44.0	-15.7
3	252.28	29.6 QP	46.0	-16.4	1.34 V	104	43.5	-13.9
4	347.84	38.8 QP	46.0	-7.2	1.10 V	296	49.8	-11.0
5	528.80	42.2 QP	46.0	-3.8	1.15 V	19	49.3	-7.1
6	564.90	36.3 QP	46.0	-9.7	1.31 V	100	42.8	-6.5

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 emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



Radio 3

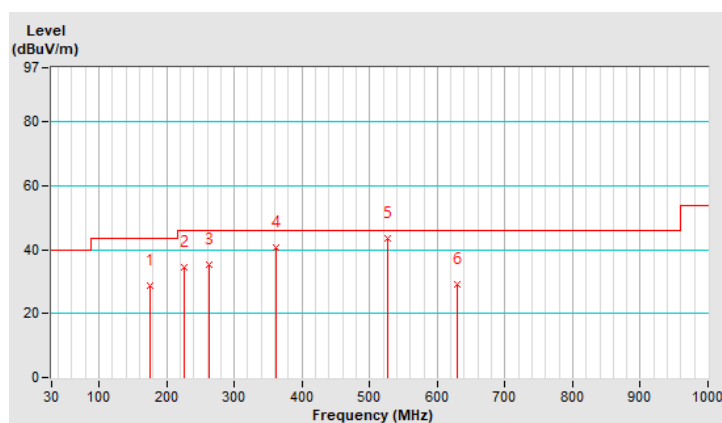
Test Mode E

RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Karl Lee		

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	175.42	28.6 QP	43.5	-14.9	1.31 H	149	42.2	-13.6
2	225.42	34.6 QP	46.0	-11.4	1.85 H	164	50.4	-15.8
3	262.80	35.3 QP	46.0	-10.7	1.53 H	206	48.8	-13.5
4	362.60	40.8 QP	46.0	-5.2	1.45 H	96	51.5	-10.7
5	526.60	43.7 QP	46.0	-2.3	2.62 H	353	50.8	-7.1
6	629.70	29.3 QP	46.0	-16.7	1.25 H	167	34.2	-4.9

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

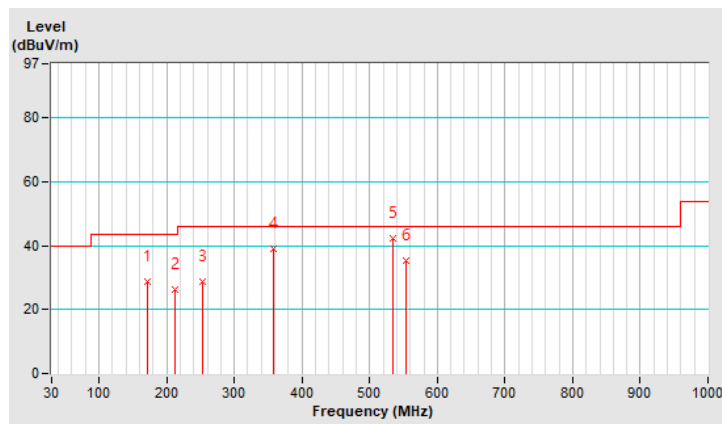


RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Karl Lee		

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	171.80	28.9 QP	43.5	-14.6	1.60 V	243	42.1	-13.2
2	212.80	26.4 QP	43.5	-17.1	1.98 V	121	42.2	-15.8
3	253.44	28.7 QP	46.0	-17.3	2.15 V	192	42.6	-13.9
4	357.35	38.9 QP	46.0	-7.1	1.95 V	14	49.7	-10.8
5	534.60	42.2 QP	46.0	-3.8	1.04 V	136	49.1	-6.9
6	554.30	35.2 QP	46.0	-10.8	1.81 V	114	41.8	-6.6

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



Test Mode F

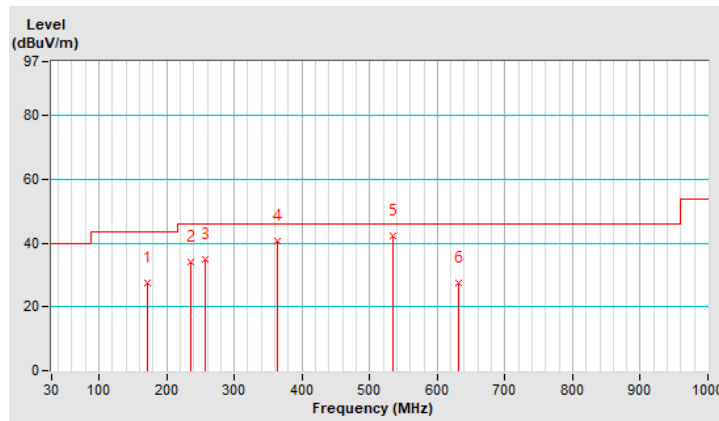
RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Karl Lee		

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	172.50	27.4 QP	43.5	-16.1	1.35 H	241	40.7	-13.3
2	234.70	34.3 QP	46.0	-11.7	1.81 H	129	48.9	-14.6
3	256.90	34.8 QP	46.0	-11.2	1.56 H	9	48.5	-13.7
4	362.80	40.8 QP	46.0	-5.2	1.07 H	183	51.5	-10.7
5	533.62	42.4 QP	46.0	-3.6	1.37 H	252	49.3	-6.9
6	631.80	27.4 QP	46.0	-18.6	1.08 H	56	32.3	-4.9

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

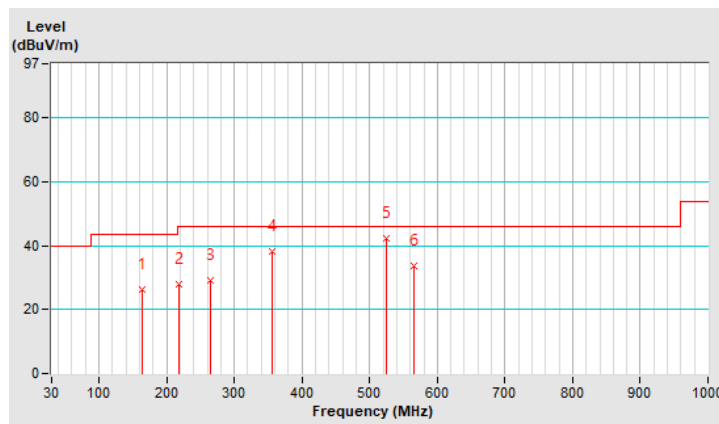


RF Mode	802.11ax (HE40)	Channel	CH 151 : 5755 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Karl Lee		

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	163.80	26.5 QP	43.5	-17.0	1.06 V	71	39.3	-12.8
2	218.59	27.9 QP	46.0	-18.1	1.36 V	149	43.6	-15.7
3	263.78	29.2 QP	46.0	-16.8	1.95 V	274	42.6	-13.4
4	355.92	38.4 QP	46.0	-7.6	1.26 V	209	49.2	-10.8
5	524.36	42.4 QP	46.0	-3.6	1.25 V	97	49.5	-7.1
6	564.80	33.9 QP	46.0	-12.1	2.82 V	164	40.4	-6.5

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 emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



7.8 Unwanted Emissions above 1 GHz

Test Mode A

Radio 1

RF Mode	802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5646.85	59.9 PK	68.2	-8.3	2.35 H	179	47.1	12.8
2	*5745.00	116.4 PK			2.35 H	179	72.7	43.7
3	*5745.00	109.7 AV			2.35 H	179	66.0	43.7
4	#5974.37	57.0 PK	68.2	-11.2	2.35 H	179	43.7	13.3
5	11490.00	60.2 PK	74.0	-13.8	1.16 H	252	41.4	18.8
6	11490.00	50.4 AV	54.0	-3.6	1.16 H	252	31.6	18.8

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	#5637.24	61.8 PK	68.2	-6.4	2.47 V	168	49.1	12.7
2	*5745.00	119.1 PK			2.47 V	168	75.4	43.7
3	*5745.00	112.6 AV			2.47 V	168	68.9	43.7
4	#5985.59	58.5 PK	68.2	-9.7	2.47 V	168	45.2	13.3
5	11490.00	62.0 PK	74.0	-12.0	2.00 V	75	43.2	18.8
6	11490.00	52.9 AV	54.0	-1.1	2.00 V	75	34.1	18.8

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.



RF Mode	802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5602.00	56.6 PK	68.2	-11.6	2.35 H	179	43.9	12.7
2	*5785.00	115.3 PK			2.35 H	179	71.5	43.8
3	*5785.00	108.6 AV			2.35 H	179	64.8	43.8
4	#5971.97	57.2 PK	68.2	-11.0	2.35 H	179	43.9	13.3
5	11570.00	59.8 PK	74.0	-14.2	2.32 H	222	41.2	18.6
6	11570.00	50.0 AV	54.0	-4.0	2.32 H	222	31.4	18.6

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	#5638.44	58.8 PK	68.2	-9.4	2.47 V	168	46.1	12.7
2	*5785.00	119.2 PK			2.47 V	168	75.4	43.8
3	*5785.00	112.4 AV			2.47 V	168	68.6	43.8
4	#5956.36	57.6 PK	68.2	-10.6	2.47 V	168	44.4	13.2
5	11570.00	61.9 PK	74.0	-12.1	2.06 V	117	43.3	18.6
6	11570.00	52.9 AV	54.0	-1.1	2.06 V	117	34.3	18.6

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	802.11a	Channel	CH 165 : 5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5647.65	57.3 PK	68.2	-10.9	2.35 H	179	44.5	12.8
2	*5825.00	115.4 PK			2.35 H	179	71.5	43.9
3	*5825.00	108.6 AV			2.35 H	179	64.7	43.9
4	#5986.79	58.1 PK	68.2	-10.1	2.35 H	179	44.8	13.3
5	11650.00	60.1 PK	74.0	-13.9	1.01 H	117	41.2	18.9
6	11650.00	50.3 AV	54.0	-3.7	1.01 H	117	31.4	18.9

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	#5624.02	59.4 PK	68.2	-8.8	2.47 V	168	46.7	12.7
2	*5825.00	119.3 PK			2.47 V	168	75.4	43.9
3	*5825.00	112.4 AV			2.47 V	168	68.5	43.9
4	#5932.73	59.9 PK	68.2	-8.3	2.47 V	168	46.7	13.2
5	11650.00	61.2 PK	74.0	-12.8	2.00 V	118	42.3	18.9
6	11650.00	52.9 AV	54.0	-1.1	2.00 V	118	34.0	18.9

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 (HE20)	Channel	CH 149 : 5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5638.04	60.4 PK	68.2	-7.8	2.35 H	179	47.7	12.7
2	*5745.00	115.2 PK			2.35 H	179	71.5	43.7
3	*5745.00	108.3 AV			2.35 H	179	64.6	43.7
4	#5942.34	56.9 PK	68.2	-11.3	2.35 H	179	43.7	13.2
5	11490.00	59.9 PK	74.0	-14.1	1.05 H	117	41.1	18.8
6	11490.00	50.2 AV	54.0	-3.8	1.05 H	117	31.4	18.8

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	#5638.84	60.5 PK	68.2	-7.7	2.47 V	168	47.8	12.7
2	*5745.00	119.4 PK			2.47 V	168	75.7	43.7
3	*5745.00	112.6 AV			2.47 V	168	68.9	43.7
4	#5971.17	58.2 PK	68.2	-10.0	2.47 V	168	44.9	13.3
5	11490.00	61.6 PK	74.0	-12.4	2.00 V	75	42.8	18.8
6	11490.00	52.9 AV	54.0	-1.1	2.00 V	75	34.1	18.8

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 (HE20)	Channel	CH 157 : 5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5646.05	58.4 PK	68.2	-9.8	2.35 H	179	45.6	12.8
2	*5785.00	114.7 PK			2.35 H	179	70.9	43.8
3	*5785.00	107.8 AV			2.35 H	179	64.0	43.8
4	#5951.15	57.1 PK	68.2	-11.1	2.35 H	179	43.9	13.2
5	11570.00	60.0 PK	74.0	-14.0	1.86 H	6	41.4	18.6
6	11570.00	50.4 AV	54.0	-3.6	1.86 H	6	31.8	18.6

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	#5648.45	59.0 PK	68.2	-9.2	2.47 V	168	46.2	12.8
2	*5785.00	118.1 PK			2.47 V	168	74.3	43.8
3	*5785.00	111.4 AV			2.47 V	168	67.6	43.8
4	#5957.96	58.3 PK	68.2	-9.9	2.47 V	168	45.1	13.2
5	11570.00	61.4 PK	74.0	-12.6	2.06 V	117	42.8	18.6
6	11570.00	52.5 AV	54.0	-1.5	2.06 V	117	33.9	18.6

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 (HE20)	Channel	CH 165 : 5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5601.60	57.9 PK	68.2	-10.3	2.35 H	179	45.2	12.7
2	*5825.00	114.5 PK			2.35 H	179	70.6	43.9
3	*5825.00	107.7 AV			2.35 H	179	63.8	43.9
4	#5968.37	56.9 PK	68.2	-11.3	2.35 H	179	43.6	13.3
5	11650.00	58.8 PK	74.0	-15.2	1.63 H	355	39.9	18.9
6	11650.00	49.9 AV	54.0	-4.1	1.63 H	355	31.0	18.9

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	#5631.63	58.6 PK	68.2	-9.6	2.47 V	168	45.9	12.7
2	*5825.00	118.8 PK			2.47 V	168	74.9	43.9
3	*5825.00	111.7 AV			2.47 V	168	67.8	43.9
4	#5926.33	59.2 PK	68.2	-9.0	2.47 V	168	46.0	13.2
5	11650.00	60.6 PK	74.0	-13.4	2.00 V	118	41.7	18.9
6	11650.00	52.8 AV	54.0	-1.2	2.00 V	118	33.9	18.9

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 151 : 5755 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5646.45	66.9 PK	68.2	-1.3	2.35 H	180	54.1	12.8
2	*5755.00	108.8 PK			2.35 H	180	65.1	43.7
3	*5755.00	100.4 AV			2.35 H	180	56.7	43.7
4	#5996.40	59.3 PK	68.2	-8.9	2.35 H	180	46.0	13.3
5	11510.00	60.2 PK	74.0	-13.8	1.07 H	74	41.5	18.7
6	11510.00	50.3 AV	54.0	-3.7	1.07 H	74	31.6	18.7

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	#5646.45	66.4 PK	68.2	-1.8	2.47 V	168	53.6	12.8
2	*5755.00	110.0 PK			2.47 V	168	66.3	43.7
3	*5755.00	102.2 AV			2.47 V	168	58.5	43.7
4	#5927.53	58.0 PK	68.2	-10.2	2.47 V	168	44.8	13.2
5	11510.00	62.7 PK	74.0	-11.3	2.01 V	74	44.0	18.7
6	11510.00	52.1 AV	54.0	-1.9	2.01 V	74	33.4	18.7

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 159 : 5795 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5643.24	62.4 PK	68.2	-5.8	2.35 H	179	49.7	12.7
2	*5795.00	107.9 PK			2.35 H	179	64.1	43.8
3	*5795.00	100.1 AV			2.35 H	179	56.3	43.8
4	#5971.57	59.3 PK	68.2	-8.9	2.35 H	179	46.0	13.3
5	11590.00	58.7 PK	74.0	-15.3	1.06 H	357	40.1	18.6
6	11590.00	50.3 AV	54.0	-3.7	1.06 H	357	31.7	18.6

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	#5644.84	57.8 PK	68.2	-10.4	2.47 V	168	45.0	12.8
2	*5795.00	110.1 PK			2.47 V	168	66.3	43.8
3	*5795.00	102.8 AV			2.47 V	168	59.0	43.8
4	#5995.60	56.9 PK	68.2	-11.3	2.47 V	168	43.6	13.3
5	11590.00	59.5 PK	74.0	-14.5	2.01 V	118	40.9	18.6
6	11590.00	51.5 AV	54.0	-2.5	2.01 V	118	32.9	18.6

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 (HE80)	Channel	CH 155 : 5775 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5642.44	62.0 PK	68.2	-6.2	2.35 H	179	49.3	12.7
2	*5775.00	107.7 PK			2.35 H	179	63.9	43.8
3	*5775.00	100.8 AV			2.35 H	179	57.0	43.8
4	#5987.19	57.6 PK	68.2	-10.6	2.35 H	179	44.3	13.3
5	11550.00	58.7 PK	74.0	-15.3	1.05 H	282	40.1	18.6
6	11550.00	50.0 AV	54.0	-4.0	1.05 H	282	31.4	18.6

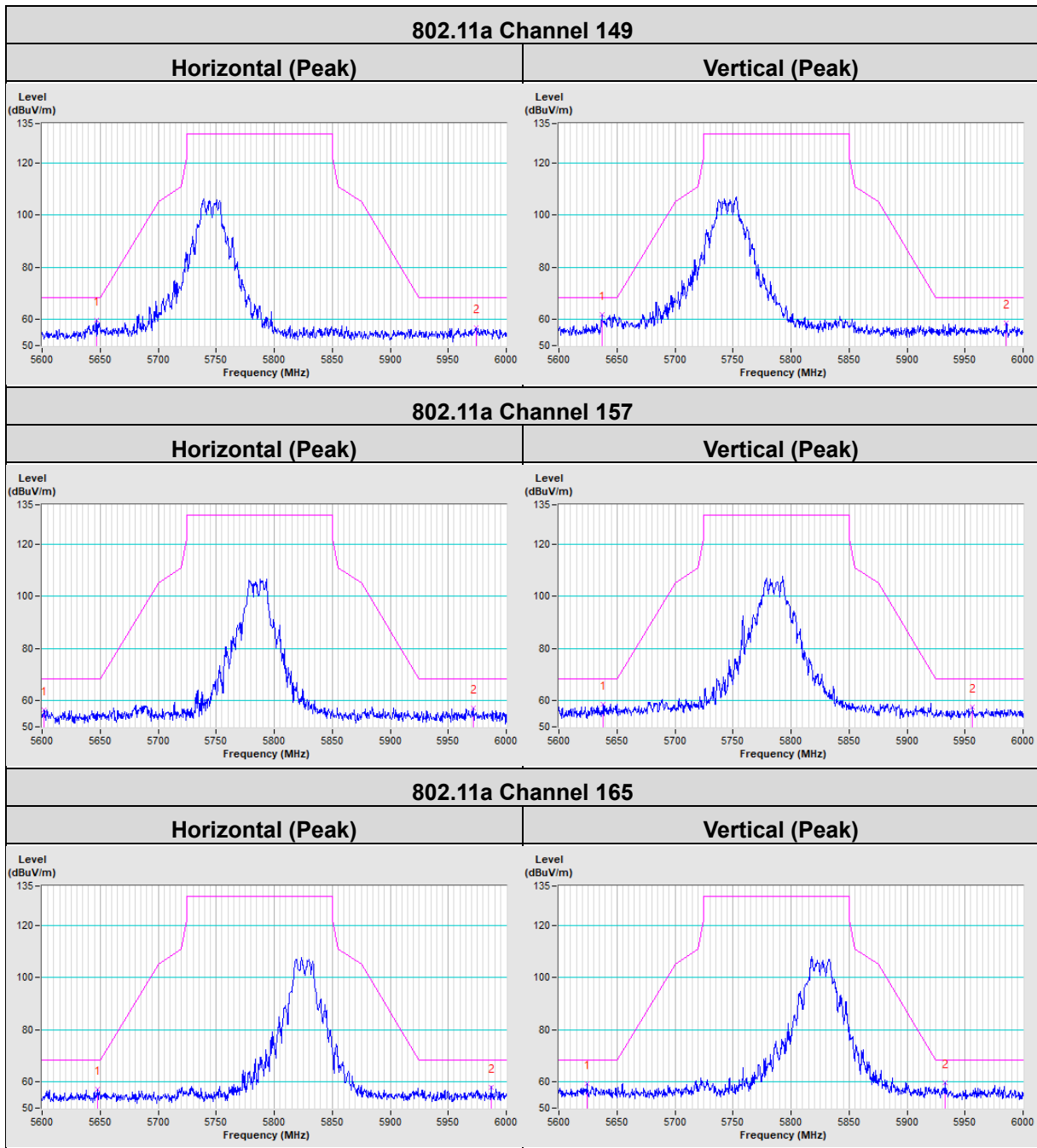
Antenna Polarity & Test Distance : Vertical at 3 m

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	#5648.45	66.3 PK	68.2	-1.9	2.45 V	171	53.5	12.8
2	*5775.00	111.6 PK			2.47 V	168	67.8	43.8
3	*5775.00	104.8 AV			2.47 V	168	61.0	43.8
4	#5925.93	59.5 PK	68.2	-8.7	2.47 V	168	46.3	13.2
5	11550.00	59.1 PK	74.0	-14.9	1.63 V	333	40.5	18.6
6	11550.00	50.4 AV	54.0	-3.6	1.63 V	333	31.8	18.6

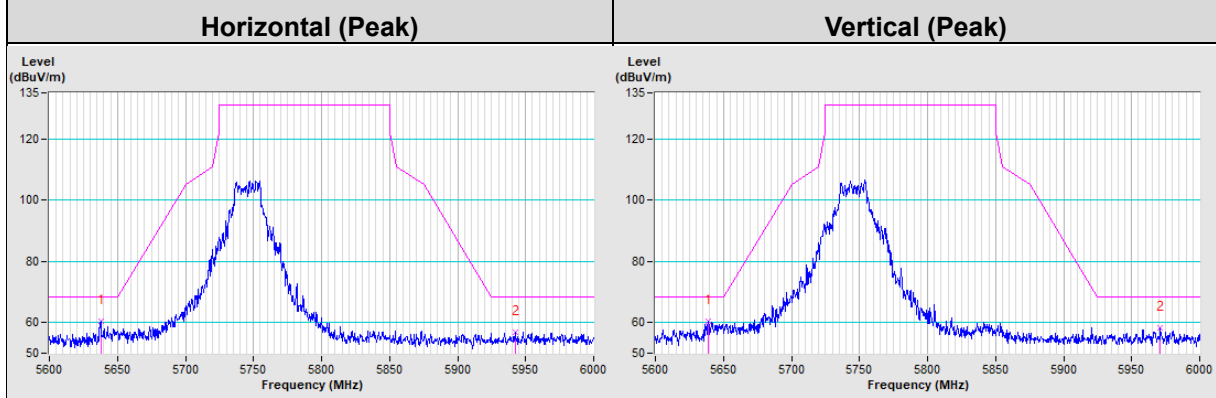
Remarks:

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.

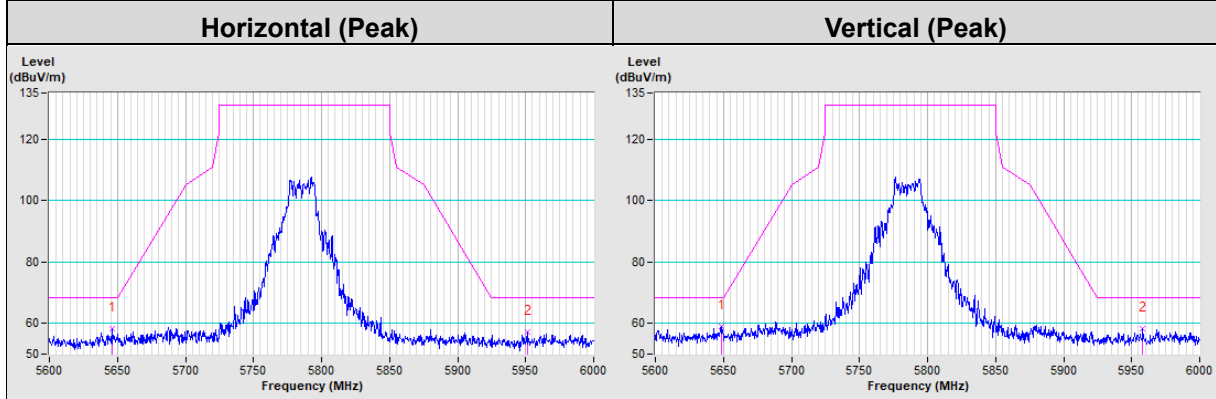
Radio 1_Plot of Band Edge



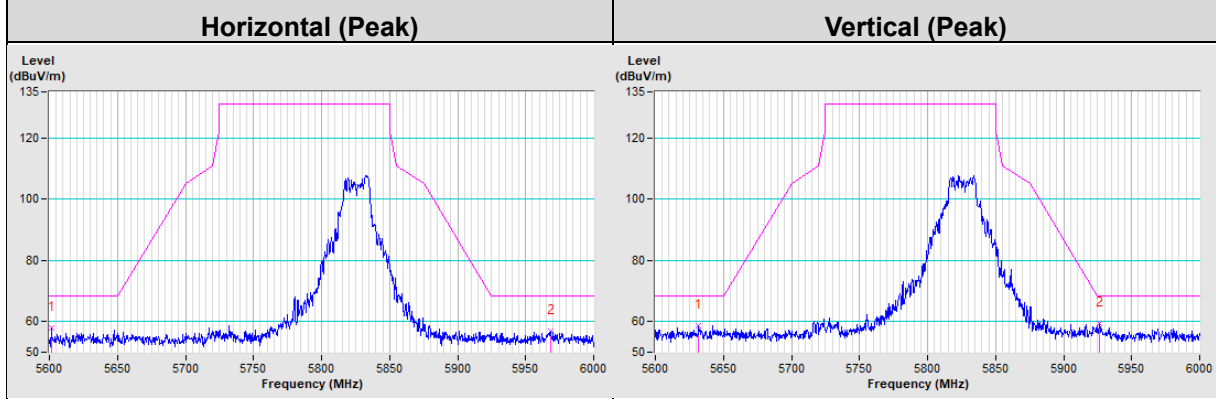
802.11ax (HE20) Channel 149



802.11ax (HE20) Channel 157

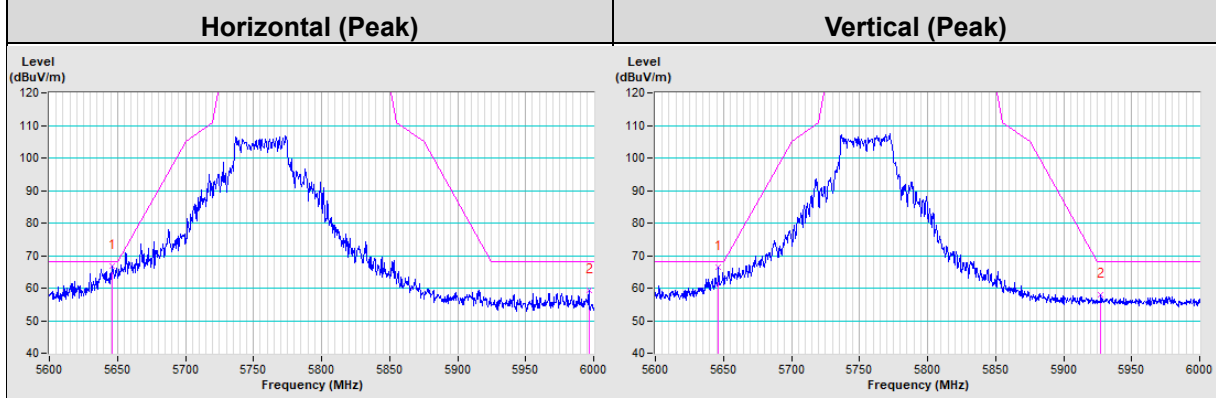


802.11ax (HE20) Channel 165

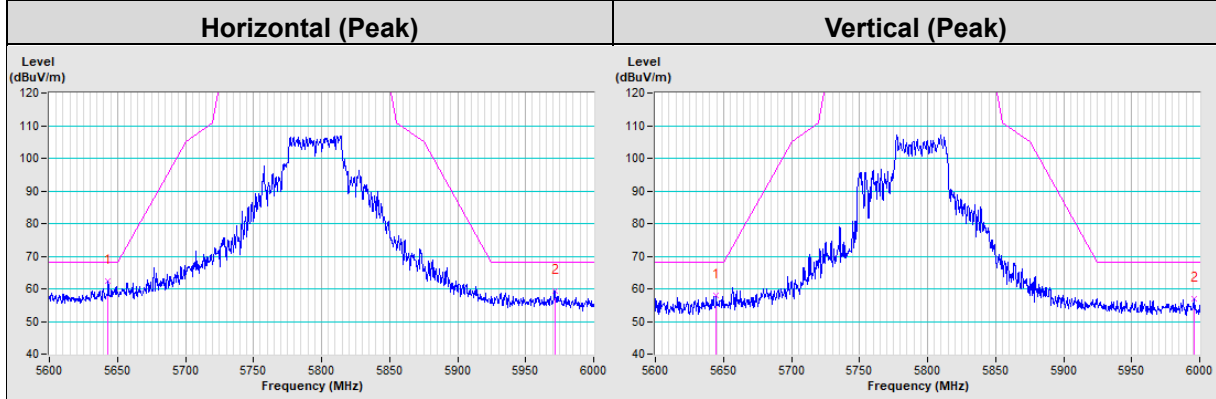




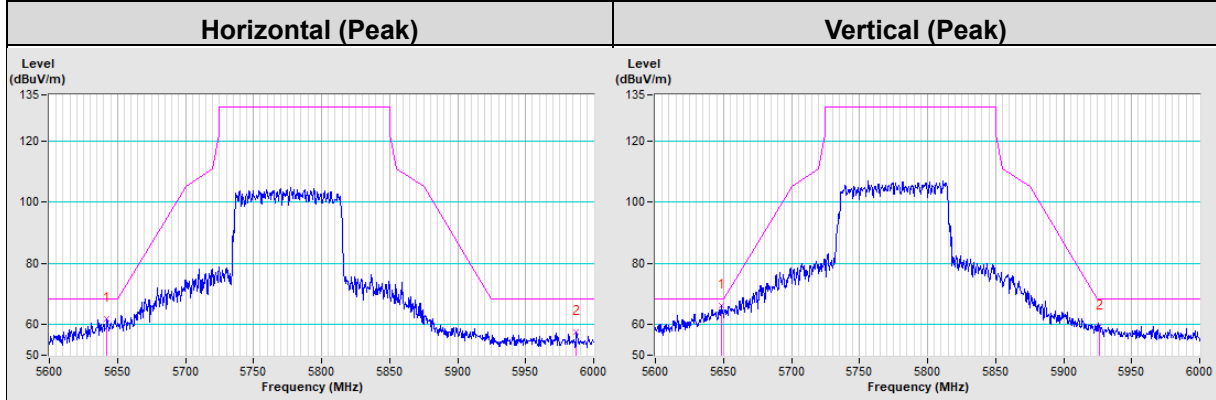
802.11ax (HE40) Channel 151



802.11ax (HE40) Channel 159



802.11ax (HE80) Channel 155



Test Mode C

Radio 2

RF Mode	802.11a	Channel	CH 36 : 5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	58.4 PK	74.0	-15.6	2.37 H	199	46.3	12.1
2	5150.00	48.0 AV	54.0	-6.0	2.37 H	199	35.9	12.1
3	*5180.00	107.1 PK			2.37 H	199	64.3	42.8
4	*5180.00	100.5 AV			2.37 H	199	57.7	42.8
5	#10360.00	58.2 PK	68.2	-10.0	1.62 H	229	40.5	17.7

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	68.0 PK	74.0	-6.0	2.45 V	253	55.9	12.1
2	5150.00	52.2 AV	54.0	-1.8	2.45 V	253	40.1	12.1
3	*5180.00	115.3 PK			2.72 V	244	72.5	42.8
4	*5180.00	108.9 AV			2.72 V	244	66.1	42.8
5	#10360.00	58.4 PK	68.2	-9.8	1.05 V	198	40.7	17.7

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	802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	58.4 PK	74.0	-15.6	2.37 H	199	46.3	12.1
2	5150.00	47.9 AV	54.0	-6.1	2.37 H	199	35.8	12.1
3	*5200.00	111.3 PK			2.37 H	199	68.5	42.8
4	*5200.00	104.5 AV			2.37 H	199	61.7	42.8
5	5350.00	58.6 PK	74.0	-15.4	2.37 H	199	46.3	12.3
6	5350.00	48.1 AV	54.0	-5.9	2.37 H	199	35.8	12.3
7	#10400.00	58.8 PK	68.2	-9.4	1.37 H	117	41.3	17.5
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	65.7 PK	74.0	-8.3	2.30 V	251	53.6	12.1
2	5150.00	52.9 AV	54.0	-1.1	2.30 V	251	40.8	12.1
3	*5200.00	119.2 PK			2.72 V	244	76.4	42.8
4	*5200.00	112.7 AV			2.72 V	244	69.9	42.8
5	5350.00	58.9 PK	74.0	-15.1	2.72 V	244	46.6	12.3
6	5350.00	48.2 AV	54.0	-5.8	2.72 V	244	35.9	12.3
7	#10400.00	59.7 PK	68.2	-8.5	1.52 V	175	42.2	17.5

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	802.11a	Channel	CH 48 : 5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	*5240.00	111.7 PK			2.37 H	199	68.7	43.0
2	*5240.00	104.4 AV			2.37 H	199	61.4	43.0
3	5350.00	58.1 PK	74.0	-15.9	2.37 H	199	45.8	12.3
4	5350.00	47.8 AV	54.0	-6.2	2.37 H	199	35.5	12.3
5	#10480.00	58.6 PK	68.2	-9.6	1.05 H	100	40.9	17.7

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	*5240.00	119.4 PK			2.72 V	244	76.4	43.0
2	*5240.00	112.3 AV			2.72 V	244	69.3	43.0
3	5350.00	58.7 PK	74.0	-15.3	2.72 V	244	46.4	12.3
4	5350.00	48.2 AV	54.0	-5.8	2.72 V	244	35.9	12.3
5	#10480.00	58.6 PK	68.2	-9.6	1.63 V	328	40.9	17.7

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	802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5637.64	63.9 PK	68.2	-4.3	2.50 H	238	51.2	12.7
2	*5745.00	107.7 PK			2.50 H	238	64.0	43.7
3	*5745.00	100.6 AV			2.50 H	238	56.9	43.7
4	#5977.18	58.2 PK	68.2	-10.0	2.50 H	238	44.9	13.3
5	11490.00	59.6 PK	74.0	-14.4	1.13 H	325	40.8	18.8
6	11490.00	49.6 AV	54.0	-4.4	1.13 H	325	30.8	18.8

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	#5649.65	62.2 PK	68.2	-6.0	2.46 V	245	49.4	12.8
2	*5745.00	110.2 PK			2.46 V	245	66.5	43.7
3	*5745.00	102.6 AV			2.46 V	245	58.9	43.7
4	#5993.59	58.8 PK	68.2	-9.4	2.46 V	245	45.5	13.3
5	11490.00	59.8 PK	74.0	-14.2	1.05 V	277	41.0	18.8
6	11490.00	49.7 AV	54.0	-4.3	1.05 V	277	30.9	18.8

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.



RF Mode	802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5647.25	63.1 PK	68.2	-5.1	2.50 H	238	50.3	12.8
2	*5785.00	108.7 PK			2.50 H	238	64.9	43.8
3	*5785.00	101.1 AV			2.50 H	238	57.3	43.8
4	#5951.15	57.8 PK	68.2	-10.4	2.50 H	238	44.6	13.2
5	11570.00	59.6 PK	74.0	-14.4	1.17 H	14	41.0	18.6
6	11570.00	49.5 AV	54.0	-4.5	1.17 H	14	30.9	18.6

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	#5646.85	57.7 PK	68.2	-10.5	2.48 V	246	44.9	12.8
2	*5785.00	110.1 PK			2.48 V	246	66.3	43.8
3	*5785.00	102.8 AV			2.48 V	246	59.0	43.8
4	#5982.78	57.1 PK	68.2	-11.1	2.48 V	246	43.8	13.3
5	11570.00	59.8 PK	74.0	-14.2	1.05 V	251	41.2	18.6
6	11570.00	49.9 AV	54.0	-4.1	1.05 V	251	31.3	18.6

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	802.11a	Channel	CH 165 : 5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5648.45	61.9 PK	68.2	-6.3	2.50 H	238	49.1	12.8
2	*5825.00	108.2 PK			2.50 H	238	64.3	43.9
3	*5825.00	101.4 AV			2.50 H	238	57.5	43.9
4	#5972.37	57.3 PK	68.2	-10.9	2.50 H	238	44.0	13.3
5	11650.00	58.6 PK	74.0	-15.4	1.32 H	255	39.7	18.9
6	11650.00	49.2 AV	54.0	-4.8	1.32 H	255	30.3	18.9

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	#5649.65	57.5 PK	68.2	-10.7	2.48 V	247	44.7	12.8
2	*5825.00	110.3 PK			2.48 V	247	66.4	43.9
3	*5825.00	102.5 AV			2.48 V	247	58.6	43.9
4	#5929.93	57.2 PK	68.2	-11.0	2.48 V	247	44.0	13.2
5	11650.00	59.6 PK	74.0	-14.4	1.07 V	177	40.7	18.9
6	11650.00	49.7 AV	54.0	-4.3	1.07 V	177	30.8	18.9

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 (HE20)	Channel	CH 36 : 5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	55.5 PK	74.0	-18.5	2.52 H	204	43.4	12.1
2	5150.00	47.8 AV	54.0	-6.2	2.52 H	204	35.7	12.1
3	*5180.00	109.3 PK			2.60 H	195	66.5	42.8
4	*5180.00	100.4 AV			2.60 H	195	57.6	42.8
5	#10360.00	58.5 PK	68.2	-9.7	1.61 H	183	40.8	17.7

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	60.4 PK	74.0	-13.6	2.82 V	245	48.3	12.1
2	5150.00	52.9 AV	54.0	-1.1	2.82 V	245	40.8	12.1
3	*5180.00	116.5 PK			2.74 V	245	73.7	42.8
4	*5180.00	108.2 AV			2.74 V	245	65.4	42.8
5	#10360.00	58.3 PK	68.2	-9.9	2.43 V	117	40.6	17.7

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 (HE20)	Channel	CH 40 : 5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	57.2 PK	74.0	-16.8	2.53 H	195	45.1	12.1
2	5150.00	47.7 AV	54.0	-6.3	2.53 H	195	35.6	12.1
3	*5200.00	113.1 PK			2.60 H	195	70.3	42.8
4	*5200.00	104.4 AV			2.60 H	195	61.6	42.8
5	5350.00	56.2 PK	74.0	-17.8	2.60 H	195	43.9	12.3
6	5350.00	47.1 AV	54.0	-6.9	2.60 H	195	34.8	12.3
7	#10400.00	58.6 PK	68.2	-9.6	2.14 H	16	41.1	17.5

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	62.2 PK	74.0	-11.8	2.76 V	241	50.1	12.1
2	5150.00	52.8 AV	54.0	-1.2	2.76 V	241	40.7	12.1
3	*5200.00	121.5 PK			2.93 V	245	78.7	42.8
4	*5200.00	112.1 AV			2.93 V	245	69.3	42.8
5	5350.00	57.0 PK	74.0	-17.0	2.93 V	245	44.7	12.3
6	5350.00	48.9 AV	54.0	-5.1	2.93 V	245	36.6	12.3
7	#10400.00	58.2 PK	68.2	-10.0	2.26 V	107	40.7	17.5

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 (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	55.4 PK	74.0	-18.6	2.55 H	192	43.3	12.1
2	5150.00	47.5 AV	54.0	-6.5	2.55 H	192	35.4	12.1
3	*5240.00	115.7 PK			2.61 H	195	72.7	43.0
4	*5240.00	106.9 AV			2.61 H	195	63.9	43.0
5	5350.00	55.7 PK	74.0	-18.3	2.61 H	192	43.4	12.3
6	5350.00	47.2 AV	54.0	-6.8	2.61 H	192	34.9	12.3
7	#10480.00	58.5 PK	68.2	-9.7	1.22 H	149	40.8	17.7

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	55.9 PK	74.0	-18.1	2.55 V	245	43.8	12.1
2	5150.00	48.4 AV	54.0	-5.6	2.55 V	245	36.3	12.1
3	*5240.00	124.7 PK			2.43 V	245	81.7	43.0
4	*5240.00	115.1 AV			2.43 V	245	72.1	43.0
5	5350.00	55.3 PK	74.0	-18.7	2.49 V	246	43.0	12.3
6	5350.00	47.1 AV	54.0	-6.9	2.49 V	246	34.8	12.3
7	#10480.00	58.9 PK	68.2	-9.3	1.08 V	161	41.2	17.7

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 (HE20)	Channel	CH 149 : 5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5644.44	60.3 PK	68.2	-7.9	2.50 H	238	47.6	12.7
2	*5745.00	108.5 PK			2.50 H	238	64.8	43.7
3	*5745.00	101.7 AV			2.50 H	238	58.0	43.7
4	#5924.72	57.3 PK	68.4	-11.1	2.50 H	238	44.1	13.2
5	11490.00	59.0 PK	74.0	-15.0	1.13 H	327	40.2	18.8
6	11490.00	48.9 AV	54.0	-5.1	1.13 H	327	30.1	18.8

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	#5643.64	65.2 PK	68.2	-3.0	2.48 V	247	52.5	12.7
2	*5745.00	116.1 PK			2.45 V	246	72.4	43.7
3	*5745.00	109.8 AV			2.45 V	246	66.1	43.7
4	#5977.18	57.3 PK	68.2	-10.9	2.45 V	246	44.0	13.3
5	11490.00	59.3 PK	74.0	-14.7	1.05 V	241	40.5	18.8
6	11490.00	49.2 AV	54.0	-4.8	1.05 V	241	30.4	18.8

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.



RF Mode	802.11ax (HE20)	Channel	CH 157 : 5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5649.25	65.0 PK	68.2	-3.2	2.50 H	238	52.2	12.8
2	*5785.00	106.6 PK			2.50 H	238	62.8	43.8
3	*5785.00	98.7 AV			2.50 H	238	54.9	43.8
4	#5975.18	57.2 PK	68.2	-11.0	2.50 H	238	43.9	13.3
5	11570.00	59.1 PK	74.0	-14.9	1.66 H	333	40.5	18.6
6	11570.00	49.1 AV	54.0	-4.9	1.66 H	333	30.5	18.6

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	#5644.44	58.5 PK	68.2	-9.7	2.45 V	246	45.8	12.7
2	*5785.00	109.3 PK			2.45 V	246	65.5	43.8
3	*5785.00	101.6 AV			2.45 V	246	57.8	43.8
4	#5963.56	57.3 PK	68.2	-10.9	2.45 V	246	44.1	13.2
5	11570.00	59.7 PK	74.0	-14.3	1.45 V	9	41.1	18.6
6	11570.00	49.3 AV	54.0	-4.7	1.45 V	9	30.7	18.6

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 (HE20)	Channel	CH 165 : 5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5648.85	62.3 PK	68.2	-5.9	2.50 H	238	49.5	12.8
2	*5825.00	106.7 PK			2.50 H	238	62.8	43.9
3	*5825.00	98.5 AV			2.50 H	238	54.6	43.9
4	#5952.75	57.4 PK	68.2	-10.8	2.50 H	238	44.2	13.2
5	11650.00	59.6 PK	74.0	-14.4	1.15 H	178	40.7	18.9
6	11650.00	49.4 AV	54.0	-4.6	1.15 H	178	30.5	18.9

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	#5643.64	58.2 PK	68.2	-10.0	2.45 V	246	45.5	12.7
2	*5825.00	109.3 PK			2.45 V	246	65.4	43.9
3	*5825.00	101.7 AV			2.45 V	246	57.8	43.9
4	#5996.00	57.2 PK	68.2	-11.0	2.45 V	246	43.9	13.3
5	11650.00	59.8 PK	74.0	-14.2	1.64 V	17	40.9	18.9
6	11650.00	49.6 AV	54.0	-4.4	1.64 V	17	30.7	18.9

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 38 : 5190 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	56.7 PK	74.0	-17.3	2.62 H	183	44.6	12.1
2	5150.00	48.1 AV	54.0	-5.9	2.62 H	183	36.0	12.1
3	*5190.00	101.3 PK			2.60 H	192	58.5	42.8
4	*5190.00	94.4 AV			2.60 H	192	51.6	42.8
5	5350.00	55.0 PK	74.0	-19.0	2.60 H	191	42.7	12.3
6	5350.00	47.6 AV	54.0	-6.4	2.60 H	191	35.3	12.3
7	#10380.00	59.9 PK	68.2	-8.3	1.31 H	280	42.3	17.6

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	5150.00	60.9 PK	74.0	-13.1	2.39 V	241	48.8	12.1
2	5150.00	53.0 AV	54.0	-1.0	2.39 V	241	40.9	12.1
3	*5190.00	110.8 PK			2.44 V	245	68.0	42.8
4	*5190.00	102.7 AV			2.44 V	245	59.9	42.8
5	5350.00	55.7 PK	74.0	-18.3	2.44 V	252	43.4	12.3
6	5350.00	48.3 AV	54.0	-5.7	2.44 V	252	36.0	12.3
7	#10380.00	57.8 PK	68.2	-10.4	2.36 V	271	40.2	17.6

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 (HE40)	Channel	CH 46 : 5230 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	55.7 PK	74.0	-18.3	2.61 H	195	43.6	12.1
2	5150.00	47.8 AV	54.0	-6.2	2.61 H	195	35.7	12.1
3	*5230.00	107.9 PK			2.61 H	195	65.0	42.9
4	*5230.00	101.1 AV			2.61 H	195	58.2	42.9
5	5350.00	55.6 PK	74.0	-18.4	2.62 H	174	43.3	12.3
6	5350.00	47.5 AV	54.0	-6.5	2.62 H	174	35.2	12.3
7	#10460.00	57.7 PK	68.2	-10.5	1.52 H	334	40.0	17.7

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	59.3 PK	74.0	-14.7	2.34 V	248	47.2	12.1
2	5150.00	52.8 AV	54.0	-1.2	2.34 V	248	40.7	12.1
3	*5230.00	116.5 PK			2.43 V	245	73.6	42.9
4	*5230.00	109.1 AV			2.43 V	245	66.2	42.9
5	5350.00	57.4 PK	74.0	-16.6	2.43 V	247	45.1	12.3
6	5350.00	50.0 AV	54.0	-4.0	2.43 V	247	37.7	12.3
7	#10460.00	57.5 PK	68.2	-10.7	1.09 V	161	39.8	17.7

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 151 : 5755 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5647.25	58.2 PK	68.2	-10.0	2.42 H	208	45.4	12.8
2	*5755.00	106.2 PK			2.42 H	208	62.5	43.7
3	*5755.00	98.9 AV			2.42 H	208	55.2	43.7
4	#5996.40	57.9 PK	68.2	-10.3	2.42 H	208	44.6	13.3
5	11510.00	58.9 PK	74.0	-15.1	1.07 H	357	40.2	18.7
6	11510.00	48.8 AV	54.0	-5.2	1.07 H	357	30.1	18.7

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	#5649.65	67.1 PK	68.2	-1.1	2.38 V	133	54.3	12.8
2	*5755.00	114.6 PK			2.41 V	246	70.9	43.7
3	*5755.00	107.8 AV			2.41 V	246	64.1	43.7
4	#5976.78	57.4 PK	68.2	-10.8	2.41 V	246	44.1	13.3
5	11510.00	58.7 PK	74.0	-15.3	1.15 V	265	40.0	18.7
6	11510.00	49.3 AV	54.0	-4.7	1.15 V	265	30.6	18.7

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 159 : 5795 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5626.43	58.6 PK	68.2	-9.6	2.42 H	208	45.9	12.7
2	*5795.00	105.3 PK			2.42 H	208	61.5	43.8
3	*5795.00	97.4 AV			2.42 H	208	53.6	43.8
4	#5947.55	57.4 PK	68.2	-10.8	2.42 H	208	44.2	13.2
5	11590.00	59.1 PK	74.0	-14.9	1.37 H	117	40.5	18.6
6	11590.00	49.1 AV	54.0	-4.9	1.37 H	117	30.5	18.6

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	#5644.44	62.0 PK	68.2	-6.2	2.31 V	216	49.3	12.7
2	*5795.00	113.3 PK			2.31 V	216	69.5	43.8
3	*5795.00	106.5 AV			2.31 V	216	62.7	43.8
4	#5967.57	57.1 PK	68.2	-11.1	2.31 V	216	43.8	13.3
5	11590.00	59.7 PK	74.0	-14.3	1.74 V	78	41.1	18.6
6	11590.00	49.4 AV	54.0	-4.6	1.74 V	78	30.8	18.6

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 (HE80)	Channel	CH 42 : 5210 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	56.0 PK	74.0	-18.0	2.09 H	194	43.9	12.1
2	5150.00	49.4 AV	54.0	-4.6	2.09 H	194	37.3	12.1
3	*5210.00	103.4 PK			2.23 H	195	60.5	42.9
4	*5210.00	96.3 AV			2.23 H	195	53.4	42.9
5	5350.00	55.9 PK	74.0	-18.1	2.24 H	195	43.6	12.3
6	5350.00	47.9 AV	54.0	-6.1	2.24 H	195	35.6	12.3
7	#10420.00	59.8 PK	68.2	-8.4	1.65 H	230	42.2	17.6

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	5150.00	60.8 PK	74.0	-13.2	2.73 V	229	48.7	12.1
2	5150.00	52.7 AV	54.0	-1.3	2.73 V	229	40.6	12.1
3	*5210.00	111.9 PK			2.70 V	245	69.0	42.9
4	*5210.00	104.3 AV			2.70 V	245	61.4	42.9
5	5350.00	56.4 PK	74.0	-17.6	2.69 V	226	44.1	12.3
6	5350.00	46.6 AV	54.0	-7.4	2.69 V	226	34.3	12.3
7	#10420.00	57.4 PK	68.2	-10.8	3.14 V	182	39.8	17.6

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 (HE80)	Channel	CH 155 : 5775 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5620.02	57.8 PK	68.2	-10.4	2.40 H	208	45.1	12.7
2	*5775.00	102.3 PK			2.40 H	208	58.5	43.8
3	*5775.00	93.8 AV			2.40 H	208	50.0	43.8
4	#5949.95	57.7 PK	68.2	-10.5	2.40 H	208	44.5	13.2
5	11550.00	59.1 PK	74.0	-14.9	1.38 H	185	40.5	18.6
6	11550.00	49.2 AV	54.0	-4.8	1.38 H	185	30.6	18.6

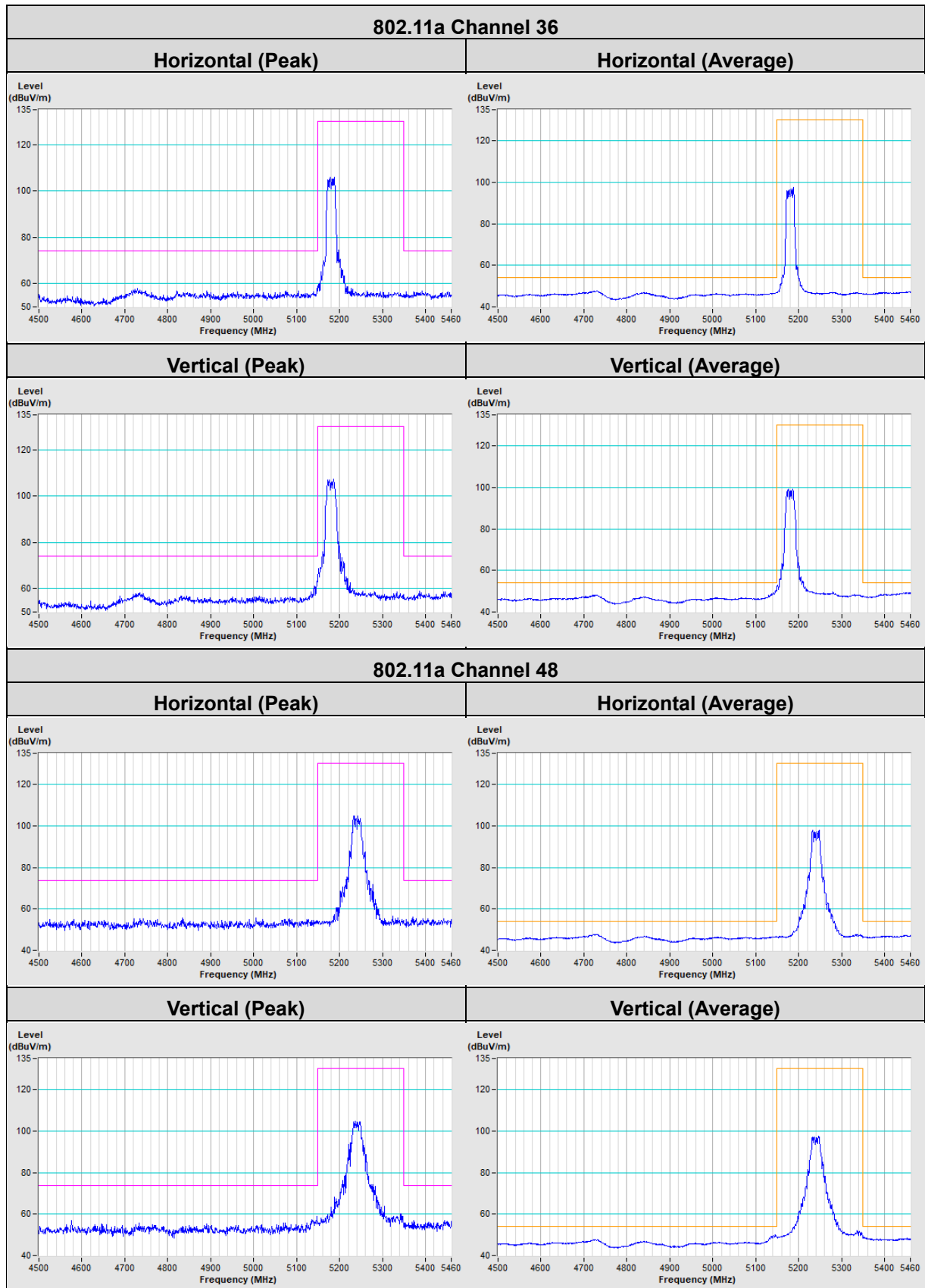
Antenna Polarity & Test Distance : Vertical at 3 m

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	#5646.05	67.0 PK	68.2	-1.2	2.42 V	242	54.2	12.8
2	*5775.00	111.1 PK			2.31 V	216	67.3	43.8
3	*5775.00	102.5 AV			2.31 V	216	58.7	43.8
4	#5933.53	56.7 PK	68.2	-11.5	2.31 V	216	43.5	13.2
5	11550.00	59.7 PK	74.0	-14.3	1.35 V	186	41.1	18.6
6	11550.00	49.6 AV	54.0	-4.4	1.35 V	186	31.0	18.6

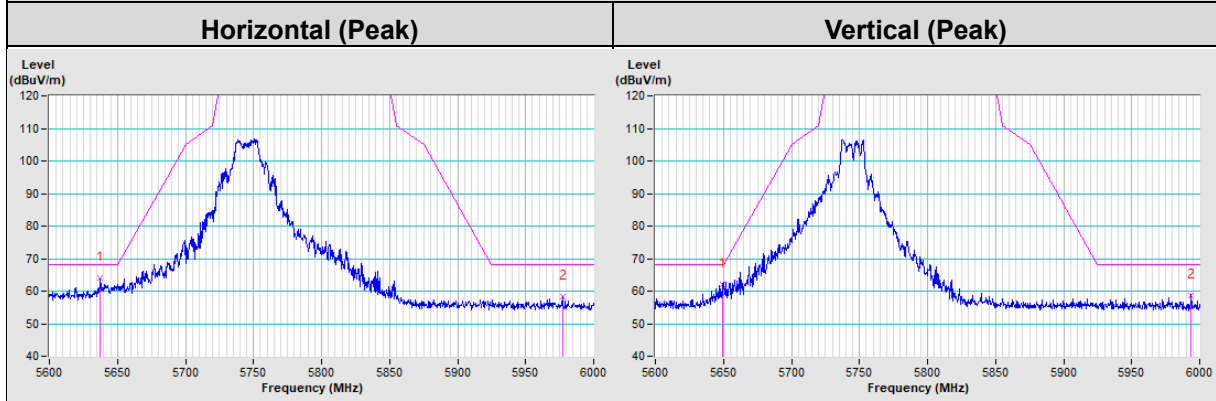
Remarks:

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.

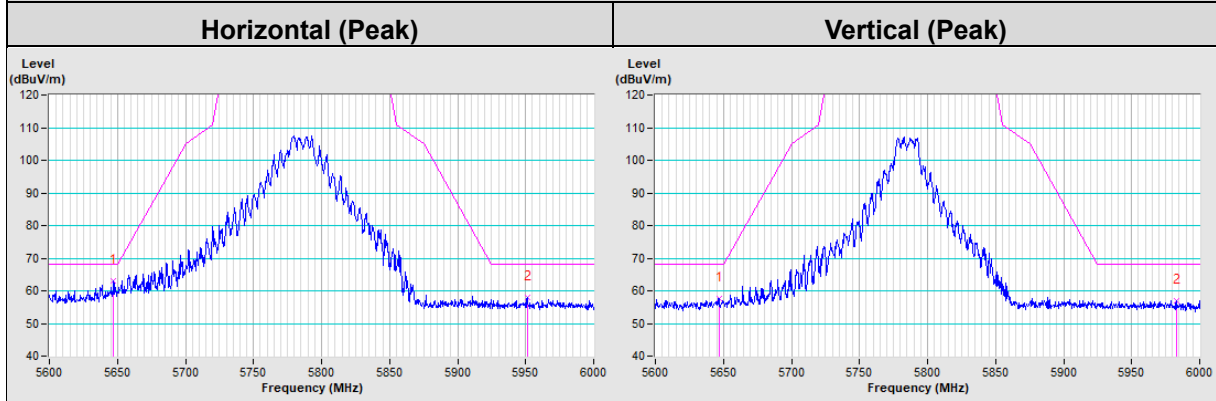
Radio 2_Plot of Band Edge



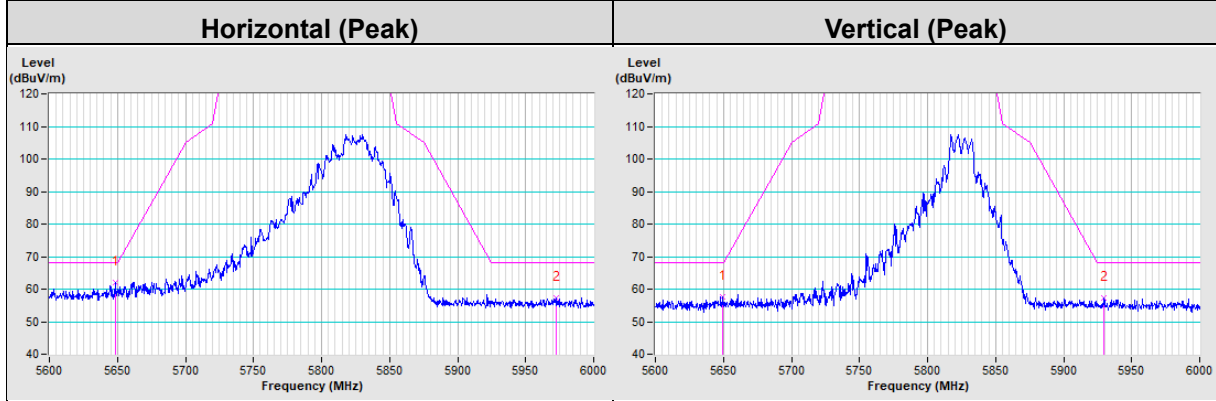
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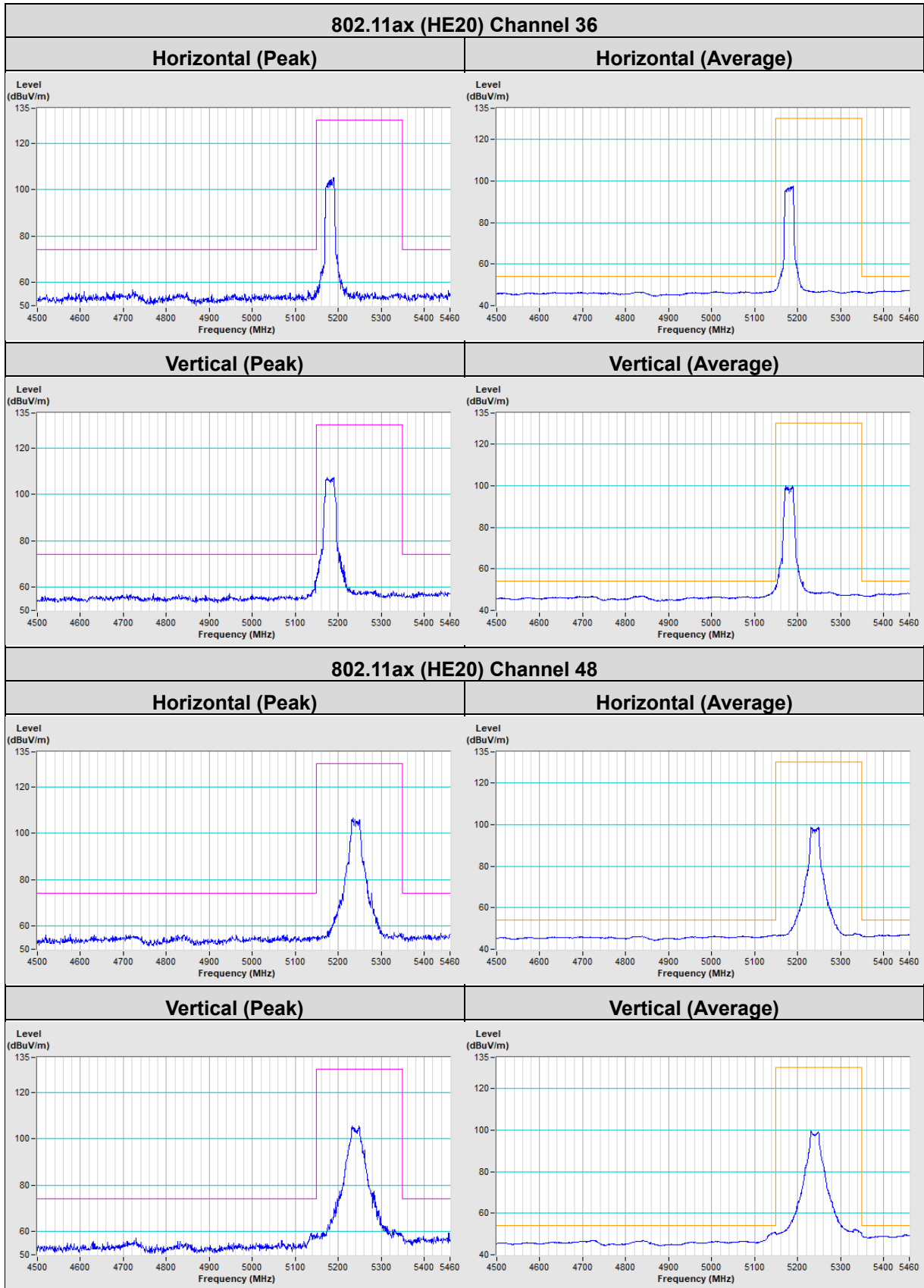


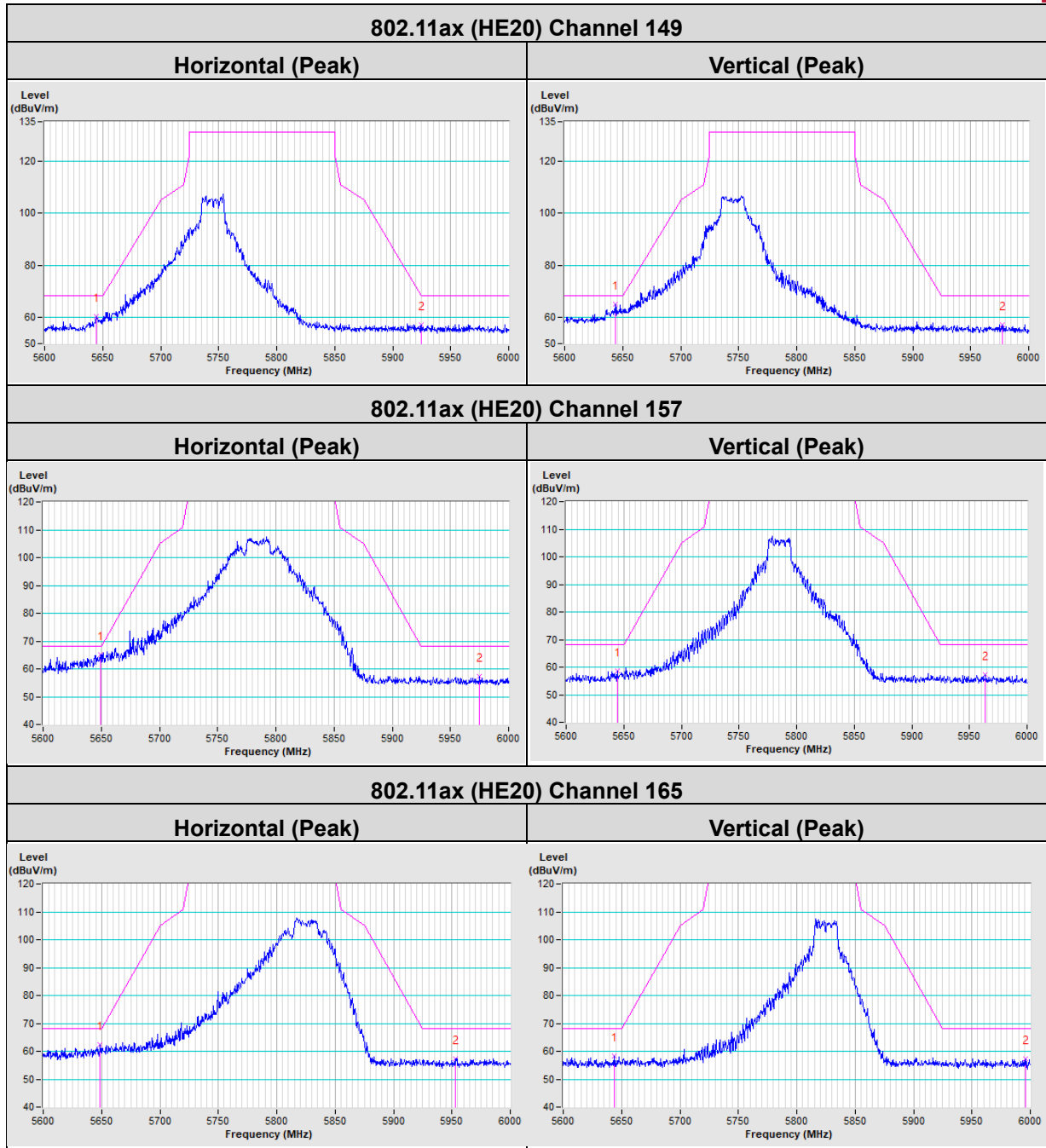
802.11a Channel 157



802.11a Channel 165

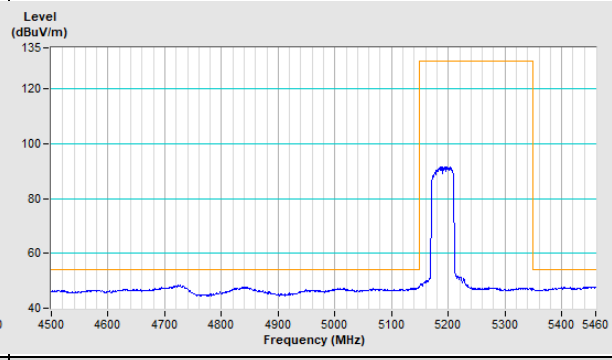
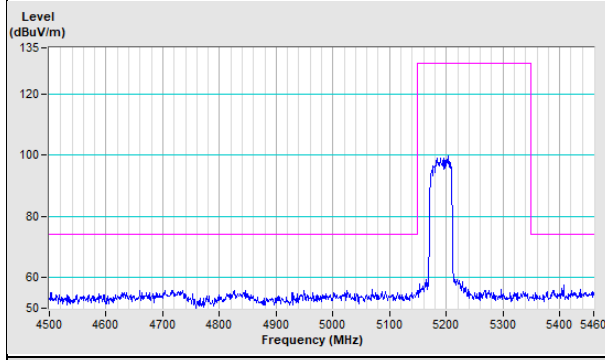




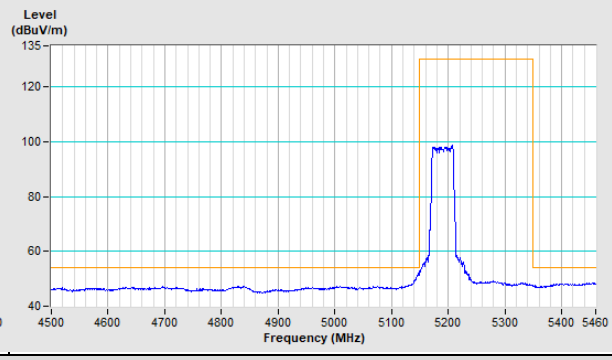
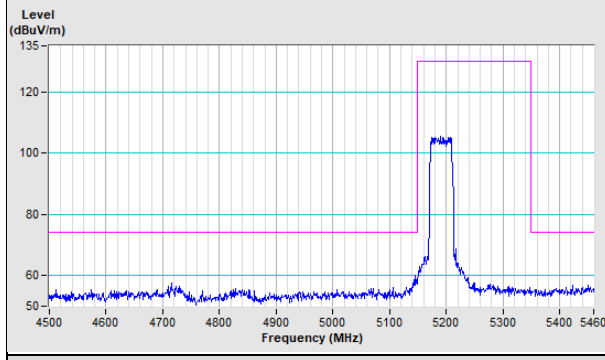


802.11ax (HE40) Channel 38

Horizontal (Peak) **Horizontal (Average)**

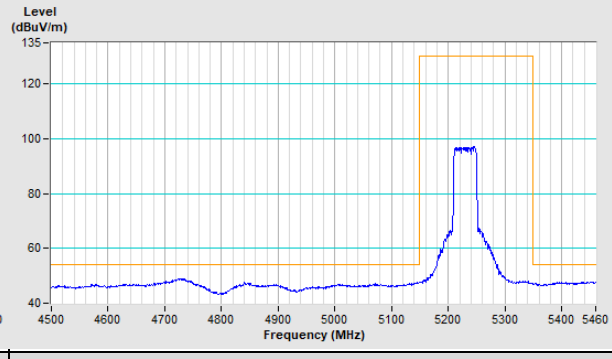
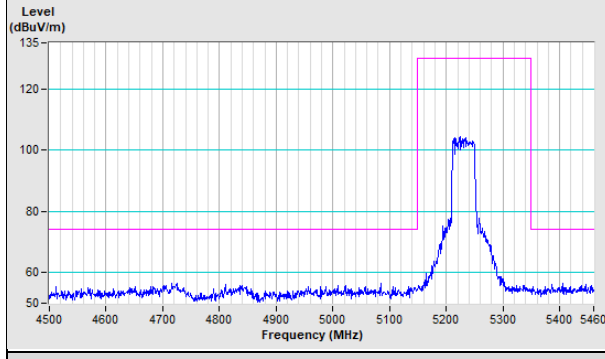


Vertical (Peak) **Vertical (Average)**

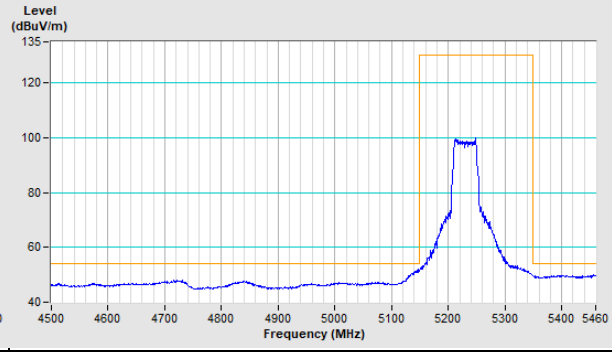
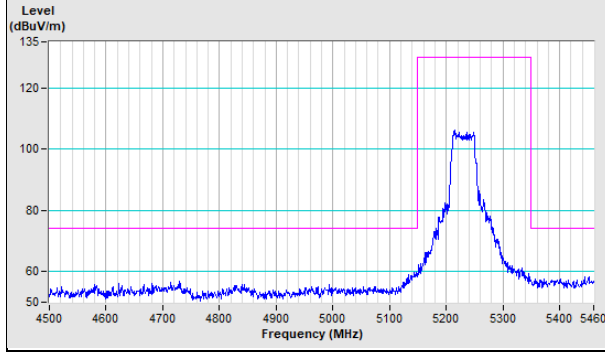


802.11ax (HE40) Channel 46

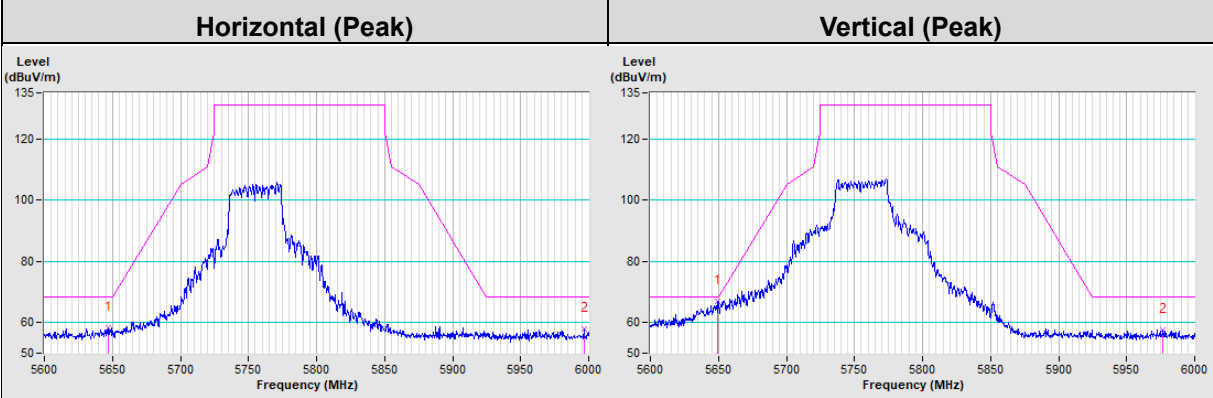
Horizontal (Peak) **Horizontal (Average)**



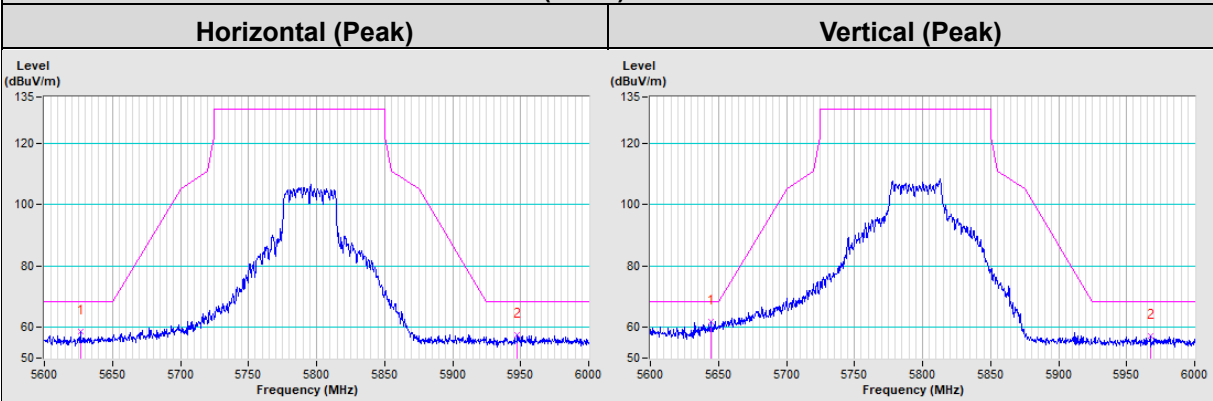
Vertical (Peak) **Vertical (Average)**



802.11ax (HE40) Channel 151



802.11ax (HE40) Channel 159



Test Mode E

Radio 3

RF Mode	802.11a	Channel	CH 36 : 5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	68.2 PK	74.0	-5.8	2.30 H	232	56.1	12.1
2	5150.00	50.2 AV	54.0	-3.8	2.30 H	232	38.1	12.1
3	*5180.00	109.5 PK			2.30 H	232	66.7	42.8
4	*5180.00	100.7 AV			2.30 H	232	57.9	42.8
5	#10360.00	58.7 PK	68.2	-9.5	1.15 H	244	41.0	17.7

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	68.3 PK	74.0	-5.7	2.41 V	237	56.2	12.1
2	5150.00	52.6 AV	54.0	-1.4	2.41 V	237	40.5	12.1
3	*5180.00	112.2 PK			2.40 V	239	69.4	42.8
4	*5180.00	103.8 AV			2.40 V	239	61.0	42.8
5	#10360.00	58.9 PK	68.2	-9.3	1.35 V	336	41.2	17.7

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	802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	65.5 PK	74.0	-8.5	2.30 H	232	53.4	12.1
2	5150.00	51.3 AV	54.0	-2.7	2.30 H	232	39.2	12.1
3	*5200.00	114.8 PK			2.30 H	232	72.0	42.8
4	*5200.00	105.5 AV			2.30 H	232	62.7	42.8
5	5350.00	57.5 PK	74.0	-16.5	2.30 H	232	45.2	12.3
6	5350.00	47.8 AV	54.0	-6.2	2.30 H	232	35.5	12.3
7	#10400.00	58.4 PK	68.2	-9.8	1.78 H	8	40.9	17.5

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	67.2 PK	74.0	-6.8	2.41 V	237	55.1	12.1
2	5150.00	52.8 AV	54.0	-1.2	2.41 V	237	40.7	12.1
3	*5200.00	117.5 PK			2.40 V	235	74.7	42.8
4	*5200.00	108.9 AV			2.40 V	235	66.1	42.8
5	5350.00	58.0 PK	74.0	-16.0	2.40 V	235	45.7	12.3
6	5350.00	48.1 AV	54.0	-5.9	2.40 V	235	35.8	12.3
7	#10400.00	58.6 PK	68.2	-9.6	1.96 V	66	41.1	17.5

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	802.11a	Channel	CH 48 : 5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	*5240.00	107.5 PK			2.30 H	232	64.5	43.0
2	*5240.00	100.6 AV			2.30 H	232	57.6	43.0
3	5350.00	58.1 PK	74.0	-15.9	2.30 H	232	45.8	12.3
4	5350.00	48.0 AV	54.0	-6.0	2.30 H	232	35.7	12.3
5	#10480.00	58.7 PK	68.2	-9.5	1.02 H	100	41.0	17.7

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	*5240.00	109.2 PK			2.40 V	238	66.2	43.0
2	*5240.00	101.1 AV			2.40 V	238	58.1	43.0
3	5350.00	58.3 PK	74.0	-15.7	2.40 V	238	46.0	12.3
4	5350.00	48.2 AV	54.0	-5.8	2.40 V	238	35.9	12.3
5	#10480.00	58.7 PK	68.2	-9.5	1.32 V	110	41.0	17.7

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	802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5639.24	59.2 PK	68.2	-9.0	2.54 H	194	46.5	12.7
2	*5745.00	107.0 PK			2.54 H	194	63.3	43.7
3	*5745.00	99.2 AV			2.54 H	194	55.5	43.7
4	#5968.37	58.2 PK	68.2	-10.0	2.54 H	194	44.9	13.3
5	11490.00	58.9 PK	74.0	-15.1	2.23 H	309	40.1	18.8
6	11490.00	49.3 AV	54.0	-4.7	2.23 H	309	30.5	18.8

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	#5638.84	54.2 PK	68.2	-14.0	2.34 V	93	41.5	12.7
2	*5745.00	108.5 PK			2.34 V	93	64.8	43.7
3	*5745.00	100.0 AV			2.34 V	93	56.3	43.7
4	#5979.18	54.1 PK	68.2	-14.1	2.34 V	93	40.8	13.3
5	11490.00	59.5 PK	74.0	-14.5	1.64 V	217	40.7	18.8
6	11490.00	50.0 AV	54.0	-4.0	1.64 V	217	31.2	18.8

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.



RF Mode	802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5638.84	57.4 PK	68.2	-10.8	2.41 H	190	44.7	12.7
2	*5785.00	117.6 PK			2.41 H	190	73.8	43.8
3	*5785.00	109.6 AV			2.41 H	190	65.8	43.8
4	#5975.18	58.8 PK	68.2	-9.4	2.41 H	190	45.5	13.3
5	11570.00	58.8 PK	74.0	-15.2	2.41 H	190	40.2	18.6
6	11570.00	49.5 AV	54.0	-4.5	2.41 H	190	30.9	18.6

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	#5622.02	56.4 PK	68.2	-11.8	2.23 V	92	43.7	12.7
2	*5785.00	121.1 PK			2.23 V	92	77.3	43.8
3	*5785.00	113.6 AV			2.23 V	92	69.8	43.8
4	#5987.99	56.4 PK	68.2	-11.8	2.23 V	92	43.1	13.3
5	11570.00	59.5 PK	74.0	-14.5	1.51 V	206	40.9	18.6
6	11570.00	50.2 AV	54.0	-3.8	1.51 V	206	31.6	18.6

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	802.11a	Channel	CH 165 : 5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5638.44	55.5 PK	68.2	-12.7	2.41 H	190	42.8	12.7
2	*5825.00	117.7 PK			2.41 H	190	73.8	43.9
3	*5825.00	109.5 AV			2.41 H	190	65.6	43.9
4	#5983.58	56.9 PK	68.2	-11.3	2.41 H	190	43.6	13.3
5	11650.00	58.7 PK	74.0	-15.3	2.16 H	154	39.8	18.9
6	11650.00	49.2 AV	54.0	-4.8	2.16 H	154	30.3	18.9

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	#5626.43	56.2 PK	68.2	-12.0	2.29 V	92	43.5	12.7
2	*5825.00	120.6 PK			2.29 V	92	76.7	43.9
3	*5825.00	112.9 AV			2.29 V	92	69.0	43.9
4	#5947.15	57.3 PK	68.2	-10.9	2.29 V	92	44.1	13.2
5	11650.00	59.2 PK	74.0	-14.8	1.39 V	76	40.3	18.9
6	11650.00	49.5 AV	54.0	-4.5	1.39 V	76	30.6	18.9

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 (HE20)	Channel	CH 36 : 5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	65.2 PK	74.0	-8.8	2.30 H	232	53.1	12.1
2	5150.00	51.1 AV	54.0	-2.9	2.30 H	232	39.0	12.1
3	*5180.00	108.4 PK			2.30 H	232	65.6	42.8
4	*5180.00	99.8 AV			2.30 H	232	57.0	42.8
5	#10360.00	58.2 PK	68.2	-10.0	1.76 H	6	40.5	17.7

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	64.8 PK	74.0	-9.2	2.41 V	237	52.7	12.1
2	5150.00	52.8 AV	54.0	-1.2	2.41 V	237	40.7	12.1
3	*5180.00	111.9 PK			2.38 V	240	69.1	42.8
4	*5180.00	102.8 AV			2.38 V	240	60.0	42.8
5	#10360.00	58.4 PK	68.2	-9.8	1.15 V	247	40.7	17.7

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 (HE20)	Channel	CH 40 : 5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	64.4 PK	74.0	-9.6	2.30 H	232	52.3	12.1
2	5150.00	51.2 AV	54.0	-2.8	2.30 H	232	39.1	12.1
3	*5200.00	113.6 PK			2.30 H	232	70.8	42.8
4	*5200.00	104.8 AV			2.30 H	232	62.0	42.8
5	5350.00	56.8 PK	74.0	-17.2	2.30 H	232	44.5	12.3
6	5350.00	48.0 AV	54.0	-6.0	2.30 H	232	35.7	12.3
7	#10400.00	58.0 PK	68.2	-10.2	1.17 H	288	40.5	17.5
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	64.0 PK	74.0	-10.0	2.41 V	237	51.9	12.1
2	5150.00	52.9 AV	54.0	-1.1	2.41 V	237	40.8	12.1
3	*5200.00	116.3 PK			2.39 V	235	73.5	42.8
4	*5200.00	107.7 AV			2.39 V	235	64.9	42.8
5	5350.00	57.7 PK	74.0	-16.3	2.39 V	235	45.4	12.3
6	5350.00	47.9 AV	54.0	-6.1	2.39 V	235	35.6	12.3
7	#10400.00	58.2 PK	68.2	-10.0	1.04 V	100	40.7	17.5

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 (HE20)	Channel	CH 48 : 5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	*5240.00	106.5 PK			2.30 H	232	63.5	43.0
2	*5240.00	98.7 AV			2.30 H	232	55.7	43.0
3	5350.00	57.1 PK	74.0	-16.9	2.30 H	232	44.8	12.3
4	5350.00	48.3 AV	54.0	-5.7	2.30 H	232	36.0	12.3
5	#10480.00	58.4 PK	68.2	-9.8	1.15 H	274	40.7	17.7

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	*5240.00	107.4 PK			2.38 V	242	64.4	43.0
2	*5240.00	99.7 AV			2.38 V	242	56.7	43.0
3	5350.00	57.7 PK	74.0	-16.3	2.38 V	242	45.4	12.3
4	5350.00	48.1 AV	54.0	-5.9	2.38 V	242	35.8	12.3
5	#10480.00	57.4 PK	68.2	-10.8	1.64 V	17	39.7	17.7

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 (HE20)	Channel	CH 149 : 5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5644.84	56.4 PK	68.2	-11.8	2.54 H	194	43.6	12.8
2	*5745.00	106.9 PK			2.54 H	194	63.2	43.7
3	*5745.00	98.1 AV			2.54 H	194	54.4	43.7
4	#5980.38	56.2 PK	68.2	-12.0	2.54 H	194	42.9	13.3
5	11490.00	59.1 PK	74.0	-14.9	2.21 H	164	40.3	18.8
6	11490.00	49.6 AV	54.0	-4.4	2.21 H	164	30.8	18.8

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	#5646.85	58.0 PK	68.2	-10.2	2.34 V	93	45.2	12.8
2	*5745.00	108.5 PK			2.34 V	93	64.8	43.7
3	*5745.00	100.0 AV			2.34 V	93	56.3	43.7
4	#5982.38	56.3 PK	68.2	-11.9	2.34 V	93	43.0	13.3
5	11490.00	59.5 PK	74.0	-14.5	1.28 V	264	40.7	18.8
6	11490.00	50.0 AV	54.0	-4.0	1.28 V	264	31.2	18.8

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.



RF Mode	802.11ax (HE20)	Channel	CH 157 : 5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5620.02	55.3 PK	68.2	-12.9	2.41 H	190	42.6	12.7
2	*5785.00	108.1 PK			2.41 H	190	64.3	43.8
3	*5785.00	98.5 AV			2.41 H	190	54.7	43.8
4	#5983.98	56.7 PK	68.2	-11.5	2.41 H	190	43.4	13.3
5	11570.00	58.2 PK	74.0	-15.8	2.02 H	341	39.6	18.6
6	11570.00	49.0 AV	54.0	-5.0	2.02 H	341	30.4	18.6

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	#5646.85	57.2 PK	68.2	-11.0	2.23 V	92	44.4	12.8
2	*5785.00	108.6 PK			2.23 V	92	64.8	43.8
3	*5785.00	100.5 AV			2.23 V	92	56.7	43.8
4	#5953.95	57.0 PK	68.2	-11.2	2.23 V	92	43.8	13.2
5	11570.00	58.3 PK	74.0	-15.7	1.62 V	307	39.7	18.6
6	11570.00	48.7 AV	54.0	-5.3	1.62 V	307	30.1	18.6

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 (HE20)	Channel	CH 165 : 5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5645.65	55.5 PK	68.2	-12.7	2.41 H	190	42.7	12.8
2	*5825.00	105.3 PK			2.41 H	190	61.4	43.9
3	*5825.00	97.3 AV			2.41 H	190	53.4	43.9
4	#5927.53	56.2 PK	68.2	-12.0	2.41 H	190	43.0	13.2
5	11650.00	59.1 PK	74.0	-14.9	2.82 H	104	40.2	18.9
6	11650.00	49.6 AV	54.0	-4.4	2.82 H	104	30.7	18.9

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	#5648.85	56.3 PK	68.2	-11.9	2.29 V	92	43.5	12.8
2	*5825.00	107.3 PK			2.29 V	92	63.4	43.9
3	*5825.00	99.6 AV			2.29 V	92	55.7	43.9
4	#5925.13	57.9 PK	68.2	-10.3	2.29 V	92	44.7	13.2
5	11650.00	59.2 PK	74.0	-14.8	2.06 V	227	40.3	18.9
6	11650.00	49.8 AV	54.0	-4.2	2.06 V	227	30.9	18.9

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 38 : 5190 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	61.0 PK	74.0	-13.0	2.30 H	232	48.9	12.1
2	5150.00	50.3 AV	54.0	-3.7	2.30 H	232	38.2	12.1
3	*5190.00	105.5 PK			2.30 H	232	62.7	42.8
4	*5190.00	96.7 AV			2.30 H	232	53.9	42.8
5	5350.00	56.6 PK	74.0	-17.4	2.30 H	232	44.3	12.3
6	5350.00	48.0 AV	54.0	-6.0	2.30 H	232	35.7	12.3
7	#10380.00	57.8 PK	68.2	-10.4	1.78 H	357	40.2	17.6

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	5150.00	63.6 PK	74.0	-10.4	2.36 V	230	51.5	12.1
2	5150.00	52.7 AV	54.0	-1.3	2.36 V	230	40.6	12.1
3	*5190.00	108.5 PK			2.41 V	237	65.7	42.8
4	*5190.00	99.6 AV			2.41 V	237	56.8	42.8
5	5350.00	56.6 PK	74.0	-17.4	2.41 V	237	44.3	12.3
6	5350.00	48.2 AV	54.0	-5.8	2.41 V	237	35.9	12.3
7	#10380.00	58.8 PK	68.2	-9.4	1.78 V	27	41.2	17.6

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 (HE40)	Channel	CH 46 : 5230 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	61.7 PK	74.0	-12.3	2.30 H	232	49.6	12.1
2	5150.00	50.3 AV	54.0	-3.7	2.30 H	232	38.2	12.1
3	*5230.00	110.7 PK			2.30 H	232	67.8	42.9
4	*5230.00	101.4 AV			2.30 H	232	58.5	42.9
5	5350.00	57.0 PK	74.0	-17.0	2.30 H	232	44.7	12.3
6	5350.00	48.2 AV	54.0	-5.8	2.30 H	232	35.9	12.3
7	#10460.00	58.3 PK	68.2	-9.9	1.42 H	222	40.6	17.7

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	63.6 PK	74.0	-10.4	2.42 V	238	51.5	12.1
2	5150.00	52.7 AV	54.0	-1.3	2.42 V	238	40.6	12.1
3	*5230.00	113.3 PK			2.41 V	237	70.4	42.9
4	*5230.00	104.8 AV			2.41 V	237	61.9	42.9
5	5350.00	56.8 PK	74.0	-17.2	2.41 V	237	44.5	12.3
6	5350.00	48.4 AV	54.0	-5.6	2.41 V	237	36.1	12.3
7	#10460.00	58.3 PK	68.2	-9.9	1.32 V	222	40.6	17.7

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 151 : 5755 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5649.25	62.4 PK	68.2	-5.8	2.54 H	194	49.6	12.8
2	*5755.00	113.6 PK			2.54 H	194	69.9	43.7
3	*5755.00	106.2 AV			2.54 H	194	62.5	43.7
4	#5996.80	56.9 PK	68.2	-11.3	2.54 H	194	43.6	13.3
5	11510.00	58.2 PK	74.0	-15.8	1.34 H	118	39.5	18.7
6	11510.00	49.5 AV	54.0	-4.5	1.34 H	118	30.8	18.7

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	#5648.05	67.1 PK	68.2	-1.1	2.34 V	93	54.3	12.8
2	*5755.00	117.6 PK			2.34 V	93	73.9	43.7
3	*5755.00	110.8 AV			2.34 V	93	67.1	43.7
4	#5944.34	57.0 PK	68.2	-11.2	2.34 V	93	43.8	13.2
5	11510.00	59.1 PK	74.0	-14.9	1.47 V	212	40.4	18.7
6	11510.00	49.5 AV	54.0	-4.5	1.47 V	212	30.8	18.7

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 159 : 5795 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5649.25	58.7 PK	68.2	-9.5	2.41 H	190	45.9	12.8
2	*5795.00	113.7 PK			2.41 H	190	69.9	43.8
3	*5795.00	106.4 AV			2.41 H	190	62.6	43.8
4	#5927.13	61.1 PK	68.2	-7.1	2.41 H	190	47.9	13.2
5	11590.00	58.2 PK	74.0	-15.8	1.80 H	137	39.6	18.6
6	11590.00	48.8 AV	54.0	-5.2	1.80 H	137	30.2	18.6

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	#5648.05	61.4 PK	68.2	-6.8	2.33 V	92	48.6	12.8
2	*5795.00	117.5 PK			2.33 V	92	73.7	43.8
3	*5795.00	110.3 AV			2.33 V	92	66.5	43.8
4	#5927.53	65.6 PK	68.2	-2.6	2.33 V	92	52.4	13.2
5	11590.00	58.7 PK	74.0	-15.3	2.93 V	104	40.1	18.6
6	11590.00	49.2 AV	54.0	-4.8	2.93 V	104	30.6	18.6

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 (HE80)	Channel	CH 42 : 5210 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	62.2 PK	74.0	-11.8	2.30 H	232	50.1	12.1
2	5150.00	51.3 AV	54.0	-2.7	2.30 H	232	39.2	12.1
3	*5210.00	103.8 PK			2.30 H	232	60.9	42.9
4	*5210.00	94.7 AV			2.30 H	232	51.8	42.9
5	5350.00	57.4 PK	74.0	-16.6	2.30 H	232	45.1	12.3
6	5350.00	48.1 AV	54.0	-5.9	2.30 H	232	35.8	12.3
7	#10420.00	57.6 PK	68.2	-10.6	1.08 H	280	40.0	17.6

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	5150.00	63.0 PK	74.0	-11.0	2.40 V	235	50.9	12.1
2	5150.00	53.0 AV	54.0	-1.0	2.40 V	235	40.9	12.1
3	*5210.00	106.7 PK			2.41 V	237	63.8	42.9
4	*5210.00	97.8 AV			2.41 V	237	54.9	42.9
5	5350.00	57.4 PK	74.0	-16.6	2.41 V	237	45.1	12.3
6	5350.00	48.3 AV	54.0	-5.7	2.41 V	237	36.0	12.3
7	#10420.00	58.0 PK	68.2	-10.2	1.05 V	207	40.4	17.6

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 (HE80)	Channel	CH 155 : 5775 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 59% RH
Tested By	Charles Hsiao		

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	#5646.05	62.2 PK	68.2	-6.0	2.41 H	190	49.4	12.8
2	*5775.00	108.0 PK			2.41 H	190	64.2	43.8
3	*5775.00	100.5 AV			2.41 H	190	56.7	43.8
4	#5937.54	59.7 PK	68.2	-8.5	2.41 H	190	46.5	13.2
5	11550.00	58.0 PK	74.0	-16.0	1.51 H	48	39.4	18.6
6	11550.00	48.6 AV	54.0	-5.4	1.51 H	48	30.0	18.6

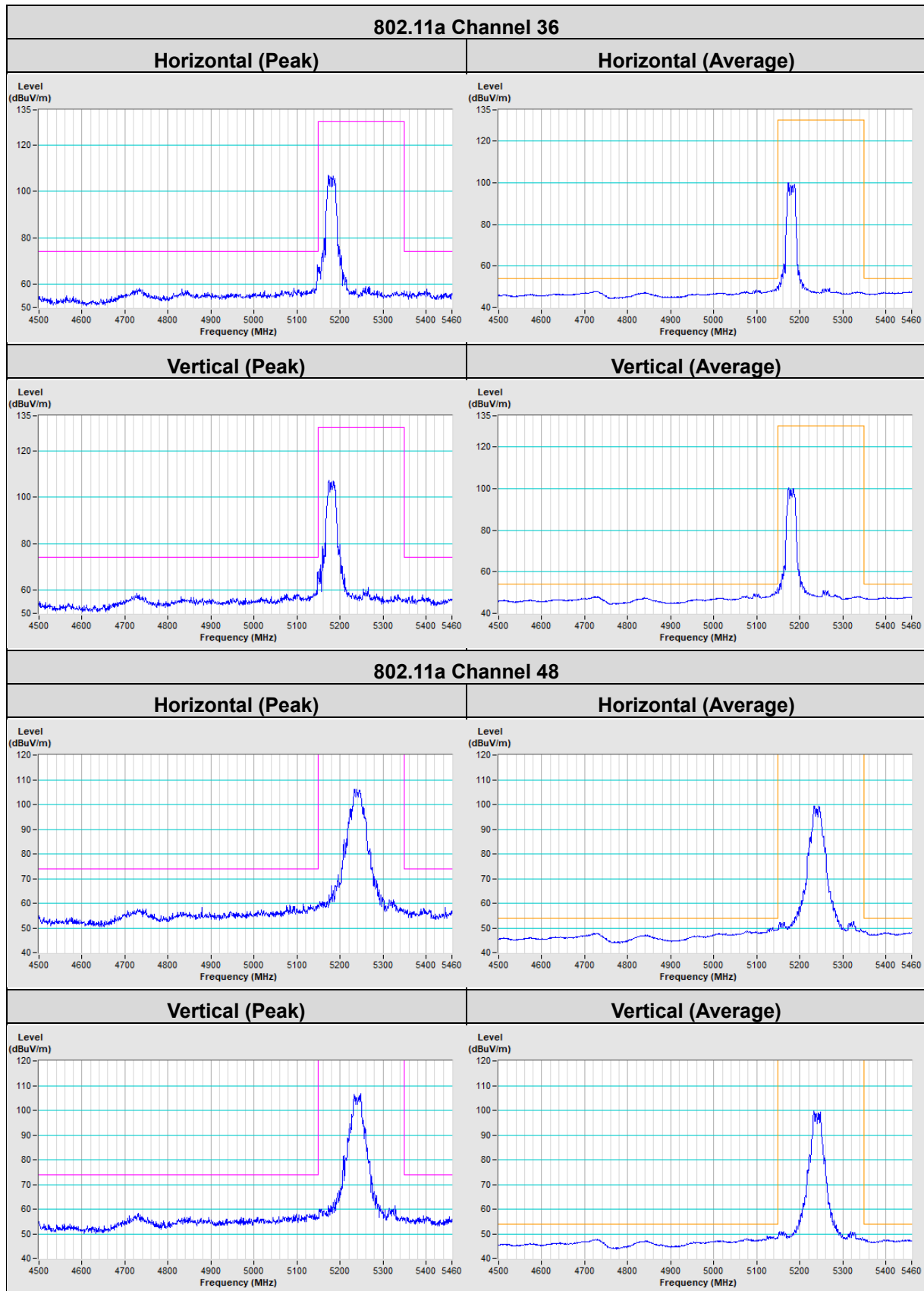
Antenna Polarity & Test Distance : Vertical at 3 m

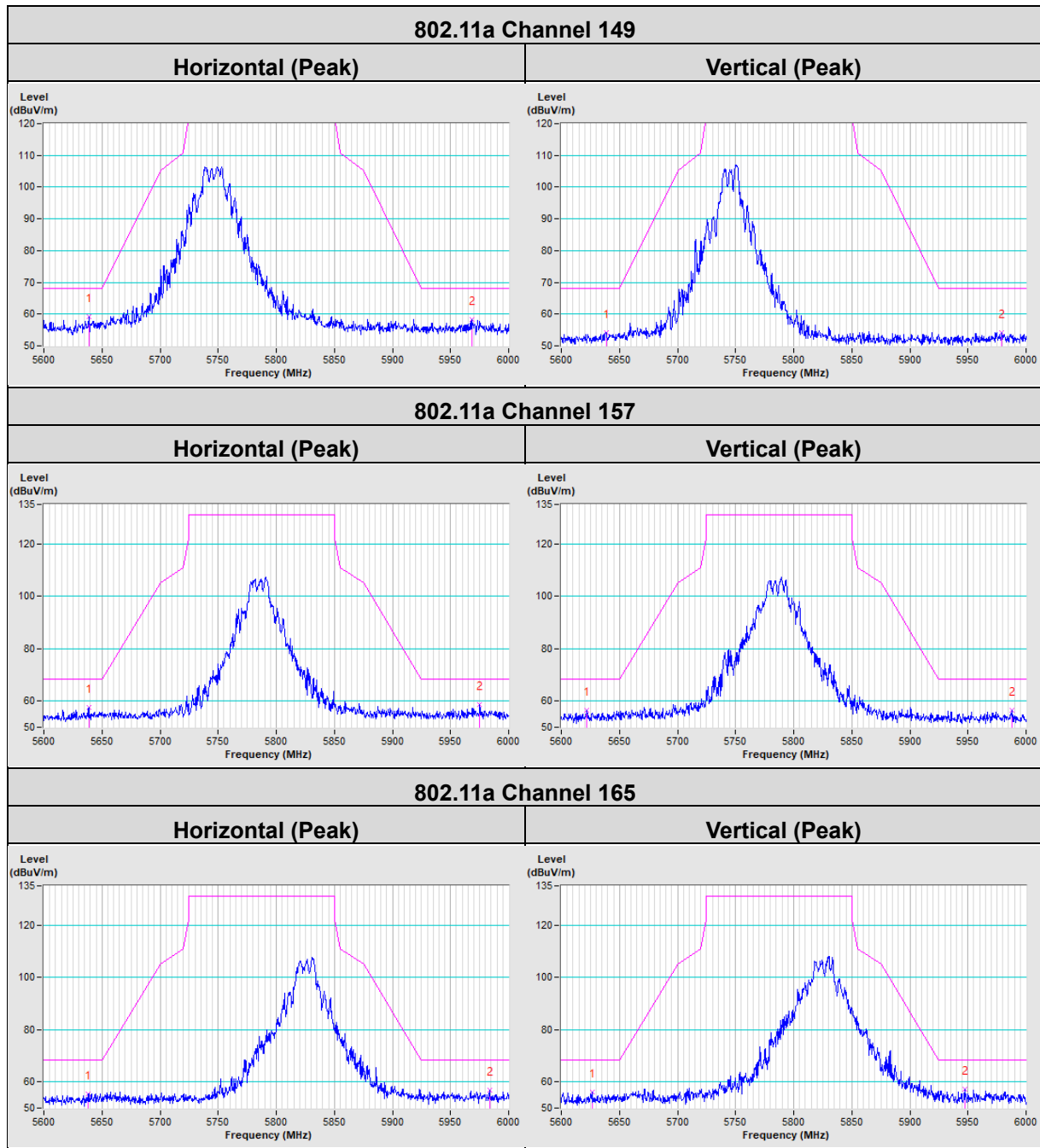
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1	#5647.65	67.0 PK	68.2	-1.2	2.33 V	92	54.2	12.8
2	*5775.00	112.3 PK			2.33 V	92	68.5	43.8
3	*5775.00	105.4 AV			2.33 V	92	61.6	43.8
4	#5927.93	63.4 PK	68.2	-4.8	2.33 V	92	50.2	13.2
5	11550.00	57.7 PK	74.0	-16.3	1.92 V	330	39.1	18.6
6	11550.00	48.1 AV	54.0	-5.9	1.92 V	330	29.5	18.6

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.

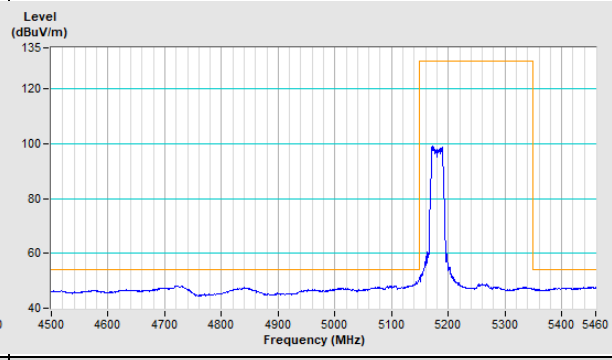
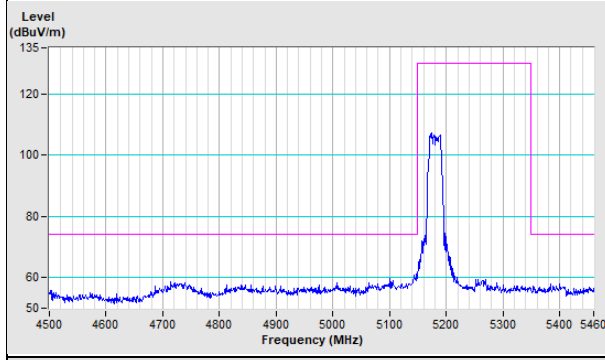
Radio 3_Plot of Band Edge





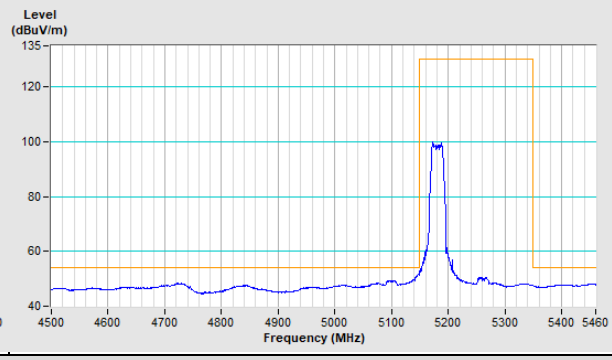
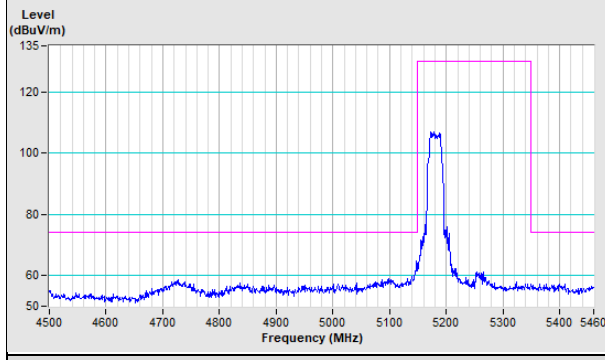
802.11ax (HE20) Channel 36

Horizontal (Peak) **Horizontal (Average)**



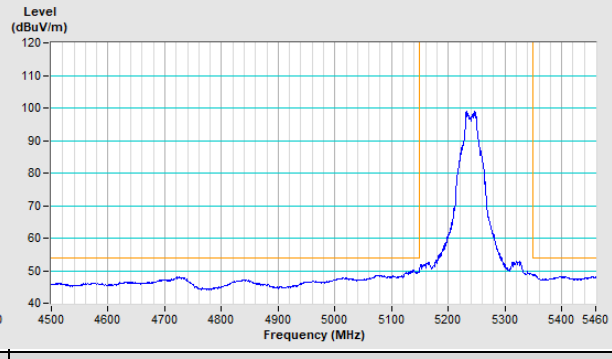
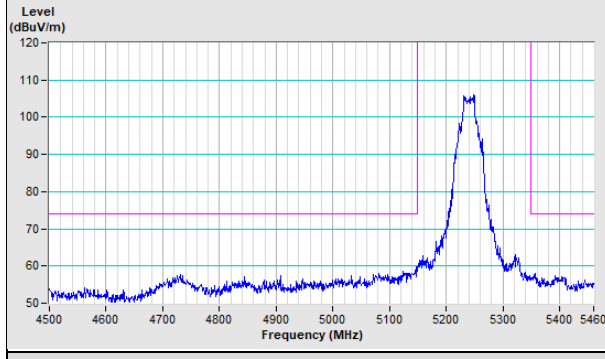
Vertical (Peak)

Vertical (Average)



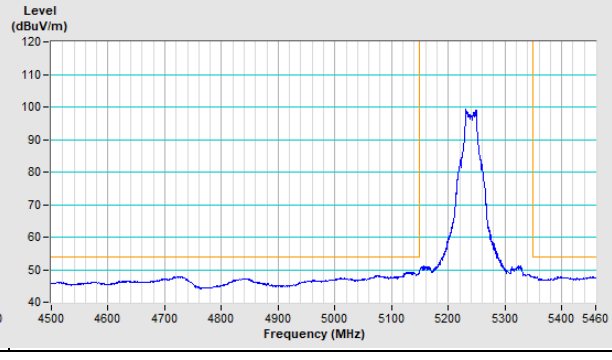
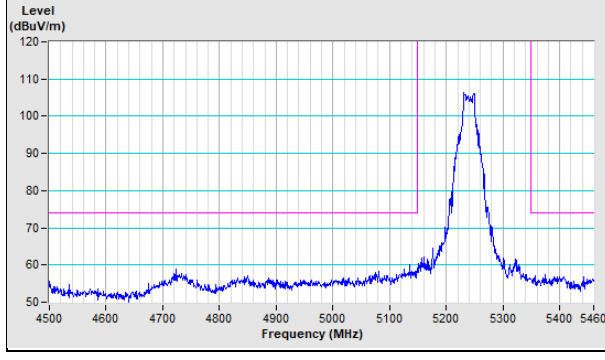
802.11ax (HE20) Channel 48

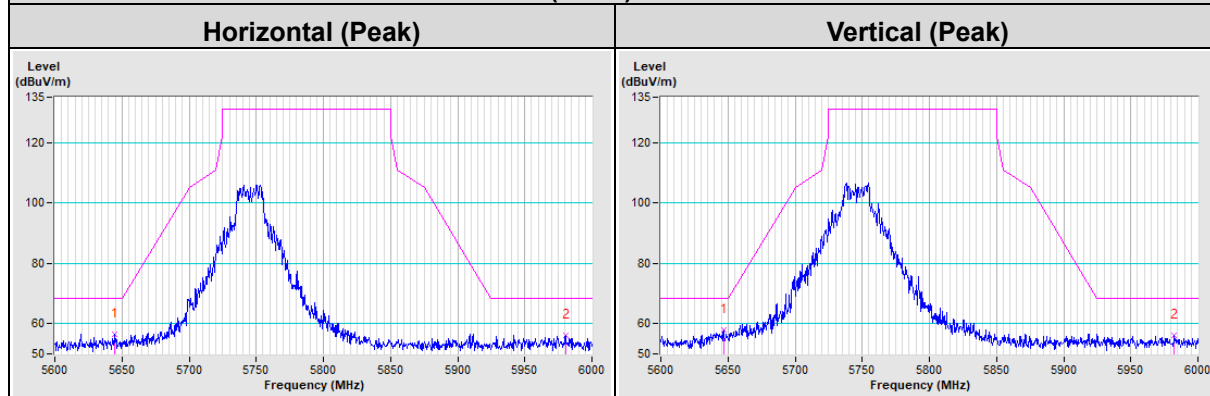
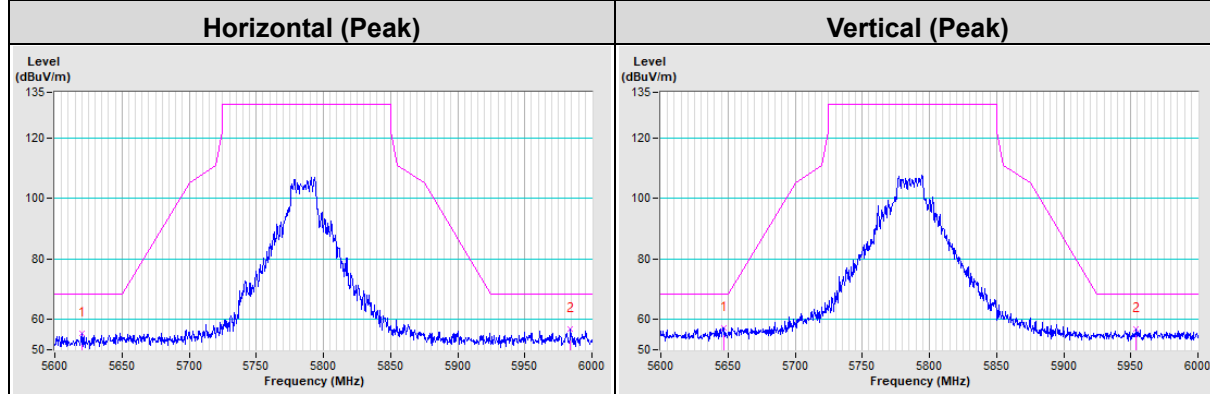
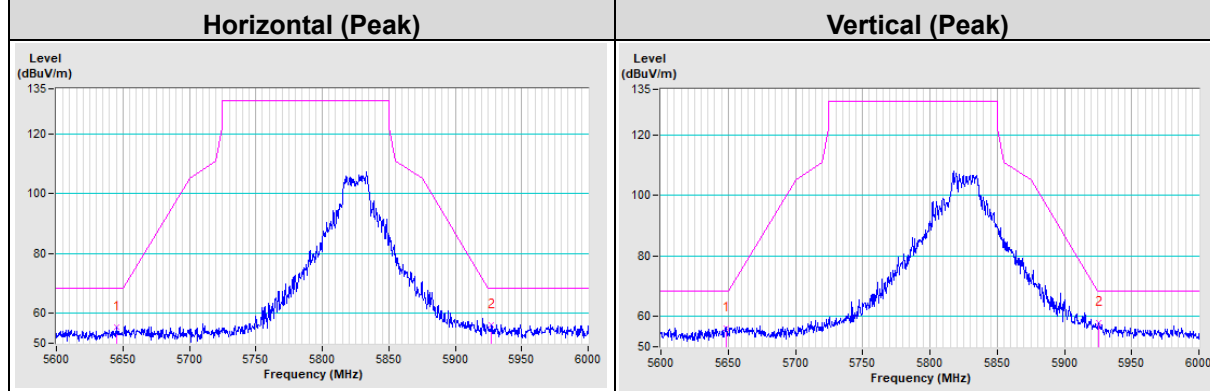
Horizontal (Peak) **Horizontal (Average)**



Vertical (Peak)

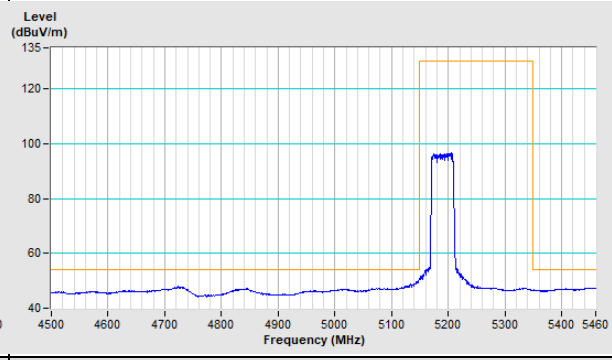
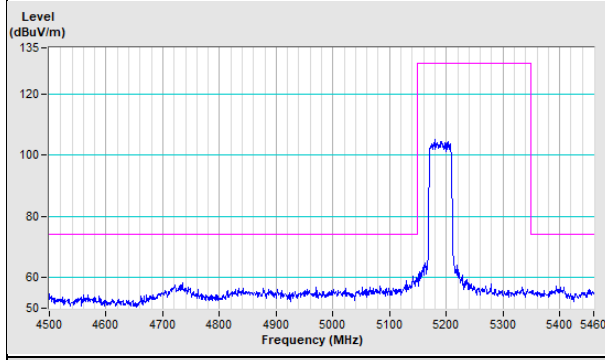
Vertical (Average)



802.11ax (HE20) Channel 149**802.11ax (HE20) Channel 157****802.11ax (HE20) Channel 165**

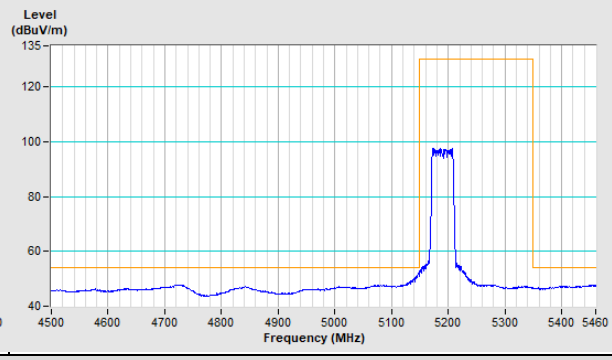
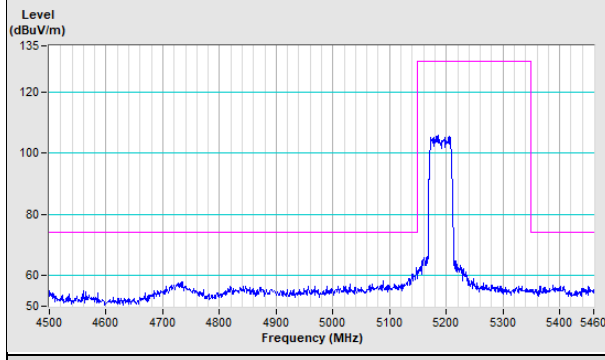
802.11ax (HE40) Channel 38

Horizontal (Peak) **Horizontal (Average)**



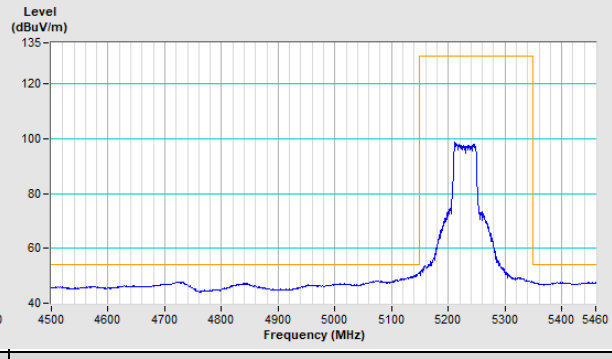
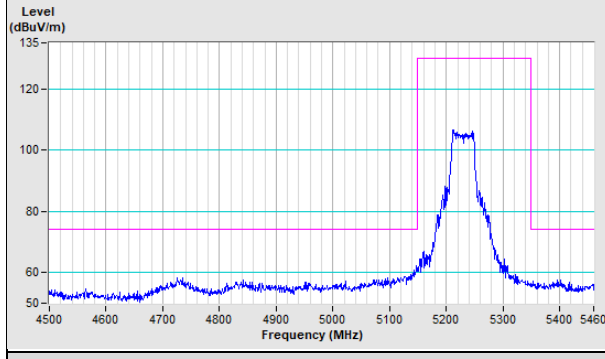
Vertical (Peak)

Vertical (Average)



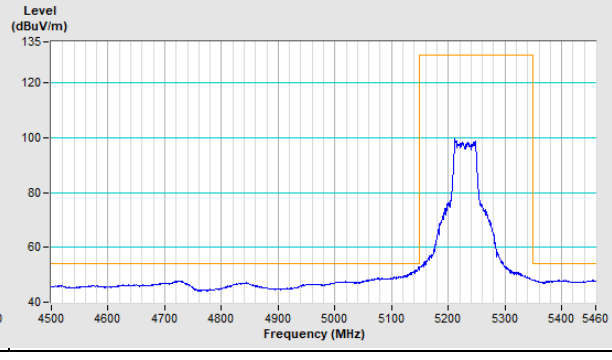
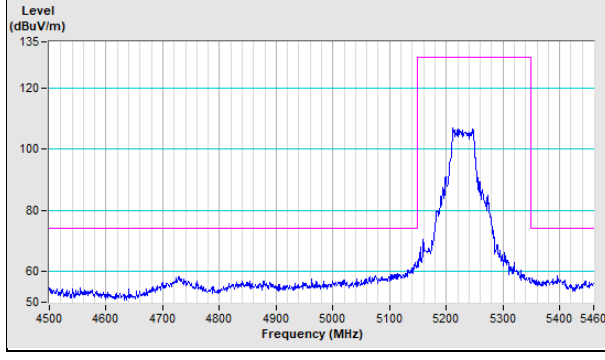
802.11ax (HE40) Channel 46

Horizontal (Peak) **Horizontal (Average)**

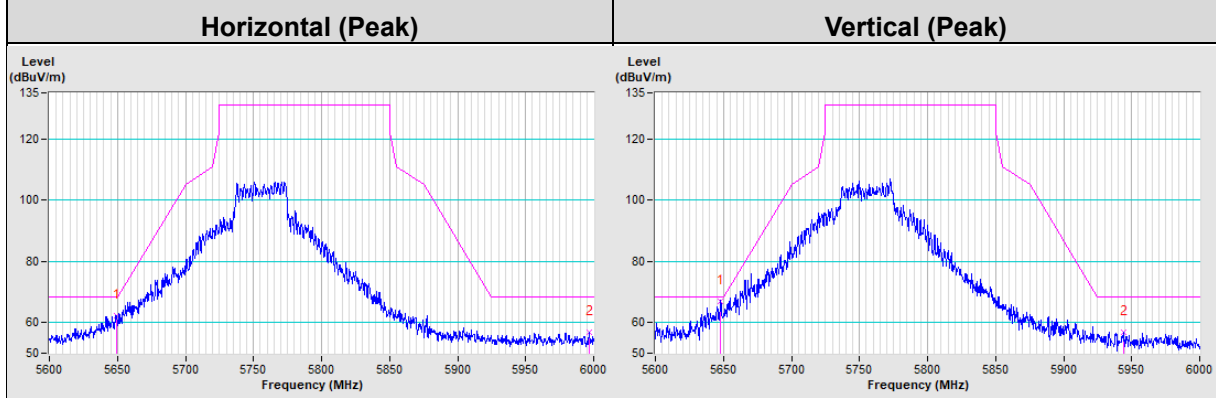


Vertical (Peak)

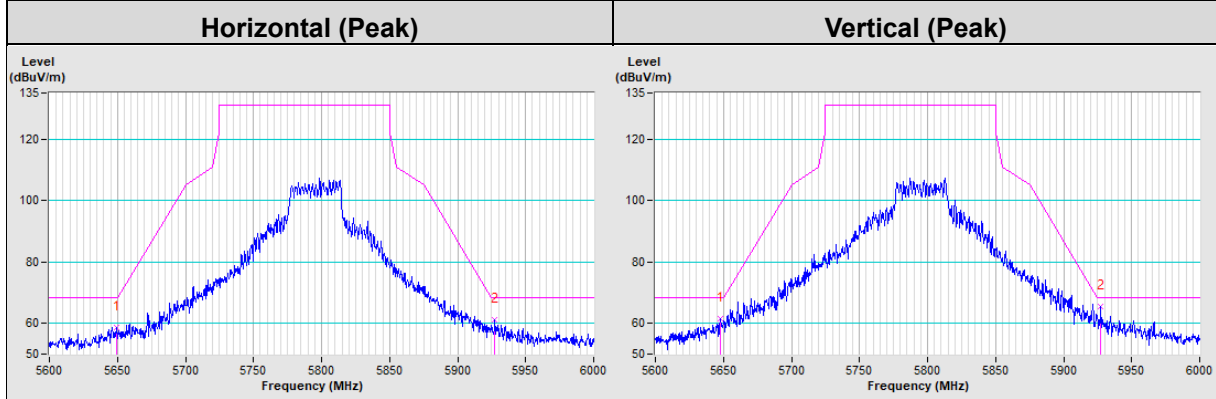
Vertical (Average)



802.11ax (HE40) Channel 151



802.11ax (HE40) Channel 159



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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