

FCC Test Report (WLAN 5GHz Band)

Report No.: RFBGQZ-WTW-P21031057-3

FCC ID: M72-EDGE450

Test Model: POLY EDGE E450

Received Date: Mar. 30, 2021

Test Date: Apr. 01 ~ Apr. 19, 2022

Issued Date: May 17, 2022

Applicant: Polycom Inc.

Address: 6001 America Center Drive, San Jose, California 95002, United States

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location: No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City
33383, Taiwan

FCC Registration /
Designation Number: 788550 / TW0003



This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification.

Table of Contents

Release Control Record	4
1 Certificate of Conformity	5
2 Summary of Test Results.....	6
2.1 Measurement Uncertainty.....	6
2.2 Modification Record	6
3 General Information	7
3.1 General Description of EUT	7
3.2 Description of Test Modes.....	10
3.2.1 Test Mode Applicability and Tested Channel Detail.....	12
3.3 Duty Cycle of Test Signal	14
3.4 Description of Support Units	15
3.4.1 Configuration of System under Test	15
3.5 General Description of Applied Standards and References	15
4 Test Types and Results.....	17
4.1 Radiated Emission and Bandedge Measurement	17
4.1.1 Limits of Radiated Emission and Bandedge Measurement	17
4.1.2 Test Instruments	19
4.1.3 Test Procedures.....	20
4.1.4 Deviation from Test Standard	20
4.1.5 Test Setup.....	21
4.1.6 EUT Operating Conditions.....	22
4.1.7 Test Results	23
4.2 Conducted Emission Measurement.....	69
4.2.1 Limits of Conducted Emission Measurement	69
4.2.2 Test Instruments	69
4.2.3 Test Procedures.....	70
4.2.4 Deviation from Test Standard	70
4.2.5 Test Setup.....	70
4.2.6 EUT Operating Conditions.....	70
4.2.7 Test Results	71
4.3 Transmit Power Measurement.....	75
4.3.1 Limits of Transmit Power Measurement	75
4.3.2 Test Setup.....	75
4.3.3 Test Instruments	76
4.3.4 Test Procedure	76
4.3.5 Deviation from Test Standard	76
4.3.6 EUT Operating Conditions.....	76
4.3.7 Test Results	77
4.4 Occupied Bandwidth Measurement.....	84
4.4.1 Test Setup.....	84
4.4.2 Test Instruments	84
4.4.3 Test Procedure	84
4.4.4 Test Results	85
4.5 Peak Power Spectral Density Measurement	89
4.5.1 Limits of Peak Power Spectral Density Measurement	89
4.5.2 Test Setup.....	89
4.5.3 Test Instruments	89
4.5.4 Test Procedures.....	89
4.5.5 Deviation from Test Standard	90
4.5.6 EUT Operating Conditions.....	90
4.5.7 Test Results	91
4.6 Frequency Stability	96
4.6.1 Limit of Frequency Stability Measurement	96

4.6.2	Test Setup.....	96
4.6.3	Test Instruments	96
4.6.4	Test Procedure	96
4.6.5	Deviation from Test Standard	96
4.6.6	EUT Operating Condition	96
4.6.7	Test Results	97
4.7	6 dB Bandwidth Measurement.....	98
4.7.1	Limits of 6 dB Bandwidth Measurement.....	98
4.7.2	Test Setup.....	98
4.7.3	Test Instruments	98
4.7.4	Test Procedure	98
4.7.5	Deviation from Test Standard	98
4.7.6	EUT Operating Condition	98
4.7.7	Test Results	99
5	Pictures of Test Arrangements	101
	Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)	102
	Appendix – Information of the Testing Laboratories	122

Release Control Record

Issue No.	Description	Date Issued
RFBGQZ-WTW-P21031057-3	Original Release	May 17, 2022

1 Certificate of Conformity

Product: IP Phone

Brand: POLY

Test Model: POLY EDGE E450

Sample Status: Engineering Sample

Applicant: Polycom Inc.

Test Date: Apr. 01 ~ Apr. 19, 2022

Standards: 47 CFR FCC Part 15, Subpart E (Section 15.407)
ANSI C63.10:2013

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.

Prepared by : Gina Liu, **Date:** May 17, 2022
Gina Liu / Specialist

Approved by : Jeremy Lin, **Date:** May 17, 2022
Jeremy Lin / Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(9)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -14.19 dB at 0.47684 MHz.
15.407(b) (1/2/3/4(i/ii)/ 9)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -0.8 dB at 5470.00 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only
15.407(a)(1/2/3)	Peak 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)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	No antenna connector is used.

Note:

- For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.
- For U-NII-1, U-NII-2A, U-NII-2C band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex B. Test Procedures refer to report 4.1.3.
- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.79 dB
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.00 dB
	30 MHz ~ 200 MHz	3.59 dB
	200 MHz ~ 1000 MHz	3.60 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	IP Phone
Brand	POLY
Test Model	POLY EDGE E450
FW Version (FVIN)	MFG 1.0.16
Status of EUT	Engineering Sample
Power Supply Rating	5Vdc from adapter 48Vdc for PoE
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3Mbps
Operating Frequency	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5720 MHz, 5745 ~ 5825 MHz
Number of Channel	5180 ~ 5240 MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5260 ~ 5320 MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5500 ~ 5720 MHz: 12 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 6 for 802.11n (HT40), 802.11ac (VHT40) 3 for 802.11ac (VHT80) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)
Output Power	19.634 mW for 5180 ~ 5240 MHz 19.588 mW for 5260 ~ 5320 MHz 19.77 mW for 5500 ~ 5720 MHz 18.967 mW for 5745 ~ 5825 MHz
Antenna Type	Refer to Note
Antenna Connector	NA
Accessory Device	Refer to Note
Data Cable Supplied	Refer to Note

Note:

1. The EUT provides 1 completed transmitter and 1 receiver.

Modulation Mode	TX Function
802.11a	1TX
802.11n (HT20)	1TX
802.11n (HT40)	1TX
802.11ac (VHT20)	1TX
802.11ac (VHT40)	1TX
802.11ac (VHT80)	1TX

* The bandwidth and modulation are similar for HT20/HT40 on 802.11n mode and VHT20/VHT40 on 802.11ac mode. Therefore the investigated worst case is the representative mode in test report. (Final test mode refer section 3.2.1)

2. The EUT contains following accessory devices.

Adapter	
Brand	Mass Power
Model	S018-1A050300VU
Input Power	100-240Vac 50/60Hz, 0.6A
Output Power	5Vdc, 3A
DC Output Cable	1.5m non-shielded cable without core

PoE (Support unit)	
Brand	CERIO
Model	POE-S48G2

Adapter for PoE (Support unit)	
Brand	L.T.E
Model	LTE36ES-S5-1
Input Power	100-240Vac, 50/60Hz, 0.75A
Output Power	48Vdc, 0.75A
DC Output Cable	1.8m non-shielded cable without core

Coil Cable	
Brand	EXCELTEK
Model	PE00003
Signal Line	570mm

LAN Cable	
Brand	EXCELTEK
Model	PO02008
Signal Line	1.524m

3. The antenna information is listed as below.

Antenna Type	PCB				
Antenna Connector	NA				
Frequency (MHz)	5150	5350	5470	5725	5850
Gain (dBi)	2.57	2.69	2.48	2.75	2.67

*The above antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.
 5. The EUT is not capable of simultaneous transmission.

6. Power setting is as below:

802.11a		802.11ac (VHT20)		802.11ac (VHT40)		802.11ac (VHT80)	
Channel	Power Setting	Channel	Power Setting	Channel	Power Setting	Channel	Power Setting
36	12	36	13	38	12	42	10
40	12	40	13	46	12	58	10
48	12	48	13	54	12	106	10
52	12	52	12	62	12	138	10
60	12	60	12	102	12	155	10
64	12	64	12	110	12		
100	12	100	12	134	12		
116	12	116	12	142	12		
140	12	140	12	151	12		
144	12	144	12	159	12		
149	12	149	12				
157	12	157	12				
165	12	165	12				

3.2 Description of Test Modes

For 5180 ~ 5240 MHz

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

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

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
42	5210

For 5260 ~ 5320 MHz

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	60	5300
56	5280	64	5320

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
54	5270	62	5310

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
58	5290

For 5500 ~ 5720 MHz

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

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

6 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

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

3 channels are provided for 802.11ac (VHT80):

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

For 5745 ~ 5825 MHz:

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

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

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
155	5775

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE $\geq$ 1G	RE<1G	PLC	APCM	
A	√	√	√	√	Powered by adapter
B	-	√	√	-	Powered by POE

Where **RE $\geq$ 1G**: Radiated Emission above 1 GHz **RE<1G**: Radiated Emission below 1 GHz
PLC: Power Line Conducted Emission **APCM**: Antenna Port Conducted Measurement

Note:

- The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.
- Radiated emission test (below 1GHz) and power line conducted emission test items chosen the worst maximum power.

Radiated Emission Test (Above 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
		802.11ac (VHT20)	36 to 48	36, 40, 48	OFDM	BPSK	MCS0
		802.11ac (VHT40)	38 to 46	38, 46	OFDM	BPSK	MCS0
		802.11ac (VHT80)	42	42	OFDM	BPSK	MCS0
	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
		802.11ac (VHT20)	52 to 64	52, 60, 64	OFDM	BPSK	MCS0
		802.11ac (VHT40)	54 to 62	54, 62	OFDM	BPSK	MCS0
		802.11ac (VHT80)	58	58	OFDM	BPSK	MCS0
	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
		802.11ac (VHT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	MCS0
		802.11ac (VHT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	MCS0
		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	BPSK	MCS0
	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
		802.11ac (VHT20)	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
		802.11ac (VHT40)	151 to 159	151, 159	OFDM	BPSK	MCS0
		802.11ac (VHT80)	155	155	OFDM	BPSK	MCS0

Radiated Emission Test (Below 1 GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A, B	5745-5825	802.11a	149 to 165	149	OFDM	BPSK	6.0

Power Line Conducted Emission Test:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A, B	5745-5825	802.11a	149 to 165	149	OFDM	BPSK	6.0

Antenna Port Conducted Measurement:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
		802.11ac (VHT20)	36 to 48	36, 40, 48	OFDM	BPSK	MCS0
		802.11ac (VHT40)	38 to 46	38, 46	OFDM	BPSK	MCS0
		802.11ac (VHT80)	42	42	OFDM	BPSK	MCS0
	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
		802.11ac (VHT20)	52 to 64	52, 60, 64	OFDM	BPSK	MCS0
		802.11ac (VHT40)	54 to 62	54, 62	OFDM	BPSK	MCS0
		802.11ac (VHT80)	58	58	OFDM	BPSK	MCS0
	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
		802.11ac (VHT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	MCS0
		802.11ac (VHT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	MCS0
		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	BPSK	MCS0
	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
		802.11ac (VHT20)	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
		802.11ac (VHT40)	151 to 159	151, 159	OFDM	BPSK	MCS0
		802.11ac (VHT80)	155	155	OFDM	BPSK	MCS0

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE $\geq$ 1G	21 deg. C, 70 % RH	120Vac, 60Hz	Greg Lin, Rex Wang
RE<1G	20 deg. C, 66 % RH	120Vac, 60Hz 48Vdc	Rex Wang
PLC	22 deg. C, 73 % RH	120Vac, 60Hz 48Vdc	Greg Lin
APCM	25 deg. C, 65 % RH	120Vac, 60Hz	Chun Wu

3.3 Duty Cycle of Test Signal

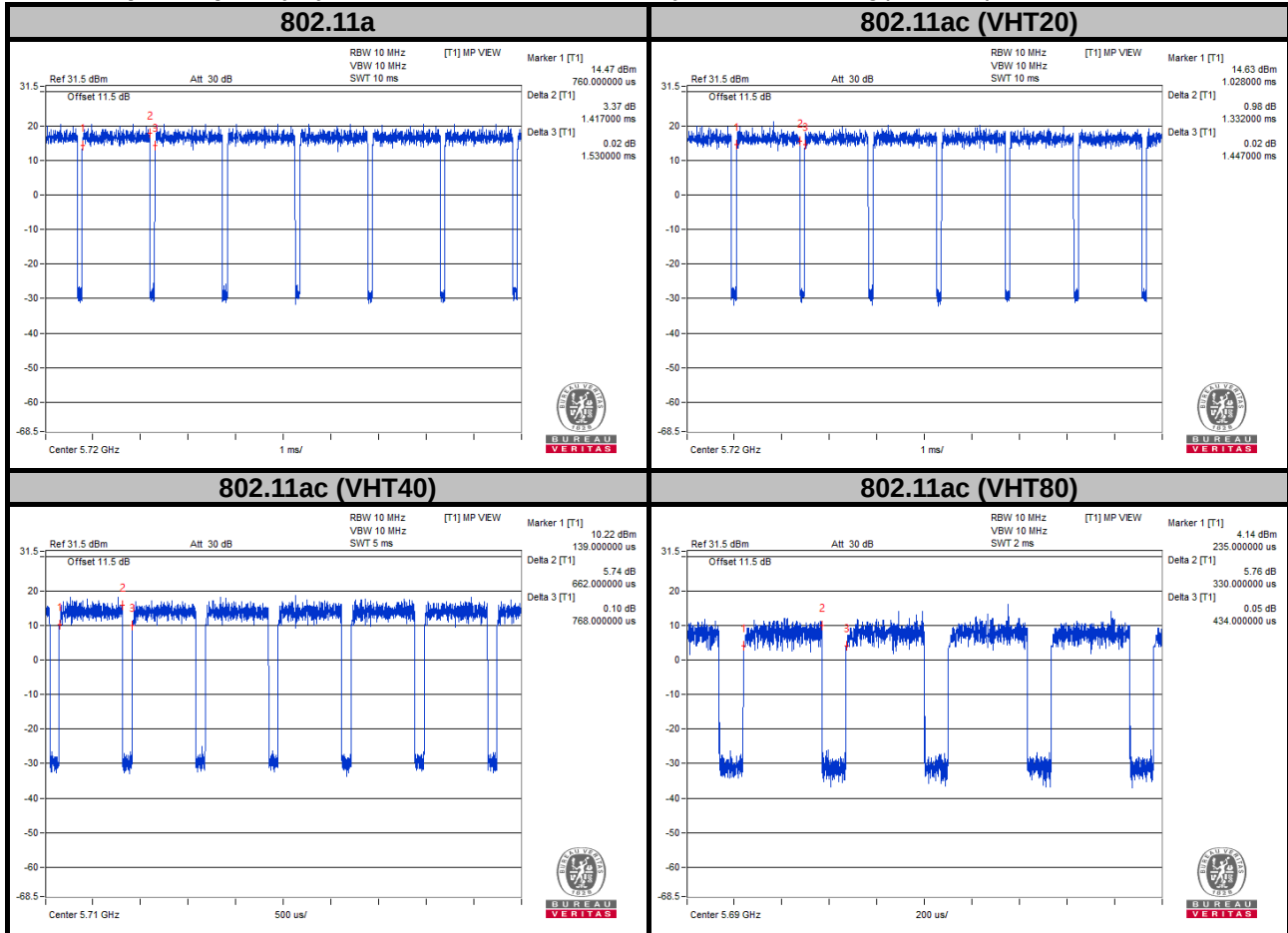
Duty cycle of test signal is < 98 %, duty factor is required.

802.11a: Duty cycle = $1.417/1.53 = 0.926$, Duty factor = $10 * \log(1/0.926) = 0.33$

802.11ac (VHT20): Duty cycle = $1.332/1.447 = 0.921$, Duty factor = $10 * \log(1/0.921) = 0.36$

802.11ac (VHT40): Duty cycle = $0.662/0.768 = 0.862$, Duty factor = $10 * \log(1/0.862) = 0.65$

802.11ac (VHT80): Duty cycle = $0.33/0.434 = 0.760$, Duty factor = $10 * \log(1/0.760) = 1.19$



3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Load	NA	NA	NA	NA	-
B.	USB Flash	SanDisk	SDDDC3-032G	NA	NA	-
C.	POE	CERIO	POE-S48G2	NA	NA	Provided by client
D.	Adapter	L.T.E	LTE36ES-S5-1	NA	NA	Provided by client
E.	Notebook	HP	11-u018TU	8CG70505V9	NA	-

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item E acted as communication partner to transfer data.

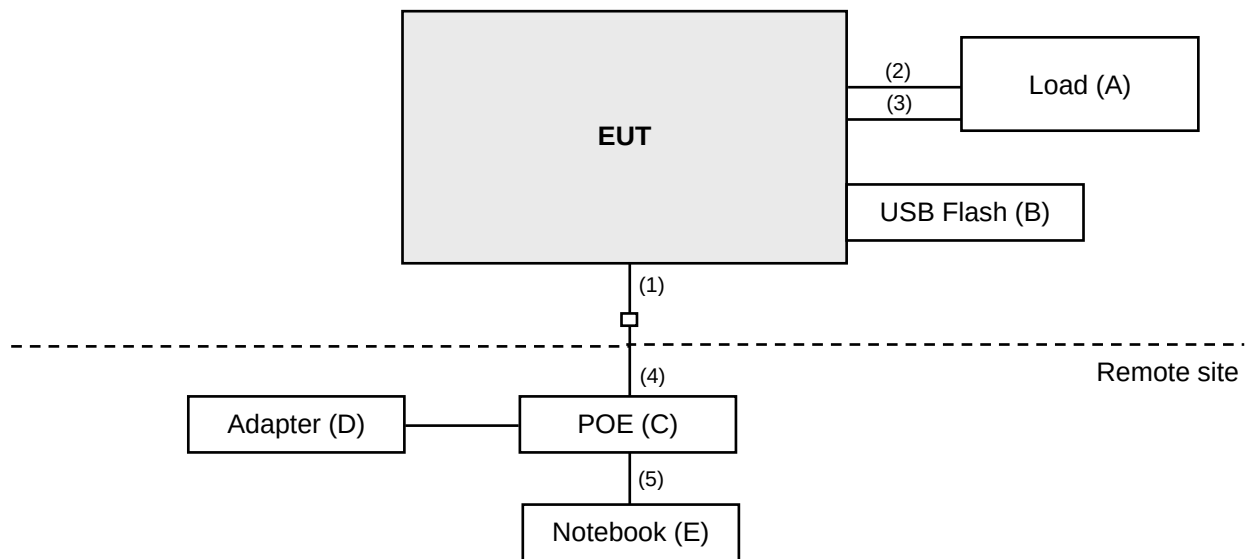
ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	LAN	1	1.524	N	0	RJ45, Cat5e Accessory of EUT
2.	LAN	1	1.5	N	0	RJ45, Cat5e
3.	RJ9	1	1	N	0	-
4.	LAN	1	1.5	N	0	RJ45, Cat5e
5.	LAN	1	10	N	0	RJ45, Cat5e

3.4.1 Configuration of System under Test

Test Mode A



Test Mode B



3.5 General Description of Applied Standards and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test Standard:

FCC Part 15, Subpart E (15.407)

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

Note:

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 Procedures New Rules v02r01		Field Strength at 3 m	
		PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
5150~5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	☒ 15.407(b)(4)(i)	PK:-27 (dBm/MHz) ^{*1} PK:10 (dBm/MHz) ^{*2} PK:15.6 (dBm/MHz) ^{*3} PK:27 (dBm/MHz) ^{*4}	PK: 68.2 (dBμV/m) ^{*1} PK:105.2 (dBμV/m) ^{*2} PK: 110.8 (dBμV/m) ^{*3} PK:122.2 (dBμV/m) ^{*4}
	☐ 15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

^{*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:

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Preamplifier Agilent	8447D	2944A10638	2021/6/5	2022/6/4
Bi_Log Antenna Schwarzbeck	VULB9168	9168-160	2021/10/28	2022/10/27
RF Coaxial Cable WOKEN	8D-FB	Cable-CH9-01	2021/6/5	2022/6/4
Horn Antenna Schwarzbeck	9120D	9120D-1169	2021/11/14	2022/11/13
Preamplifier Agilent	8449B	3008A02367	2022/2/16	2023/2/15
RF Coaxial Cable HUBER+SUHNER&EMCI	SUCOFLEX 104& EMC104-SM-SM80 00	CABLE-CH9-02 (248780+171006)	2022/1/15	2023/1/14
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(2507 95/4)	2022/1/15	2023/1/14
RF FLITER MICRO-TRONICS	BRM50716	060	2022/1/10	2023/1/9
RF FLITER MICRO-TRONICS	BRM17690	004	2022/1/10	2023/1/9
Boresight antenna tower fixture BV	BAF-02	5	NA	NA
Pre-Amplifier EMCI	EMC 184045	980116	2021/10/5	2022/10/4
Horn Antenna Schwarzbeck	BBHA 9170	BBHA9170241	2021/10/26	2022/10/25
RF Coaxial Cable HUBER+SUHNER&EMCI	SUCOFLEX 104& EMC104-SM-SM80 00	CABLE-CH9-02 (248780+171006)	2022/1/15	2023/1/14
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(2507 95/4)	2022/1/15	2023/1/14
Boresight antenna tower fixture BV	BAF-02	5	NA	NA
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Test Receiver Agilent	N9038A	MY51210203	2021/9/22	2022/9/21
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	2021/6/10	2022/6/9

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 9.

4.1.3 Test Procedures

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 a 3 meter chamber room. 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.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz at frequency below 30 MHz.

For Radiated Emission above 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 1 GHz) / 1.5 meters (for above 1 GHz) 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.
- f. The test-receiver system was set to peak and average detected 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.

Note:

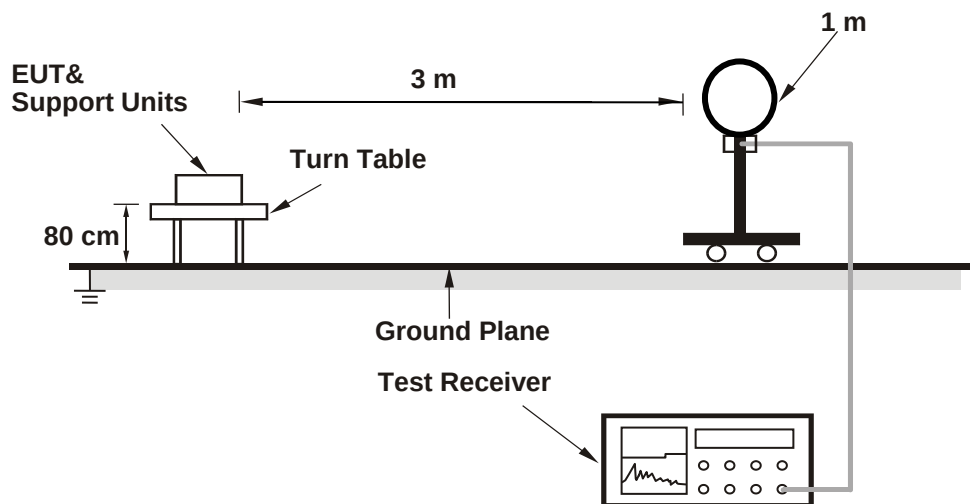
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. 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.
(11a: RBW = 1 MHz, VBW = 1 kHz ; 11n (HT20): RBW = 1 MHz, VBW = 1 kHz ;
11n (HT40): RBW = 1 MHz, VBW = 2 kHz ; 11ac (VHT80): RBW = 1 MHz, VBW = 3 kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

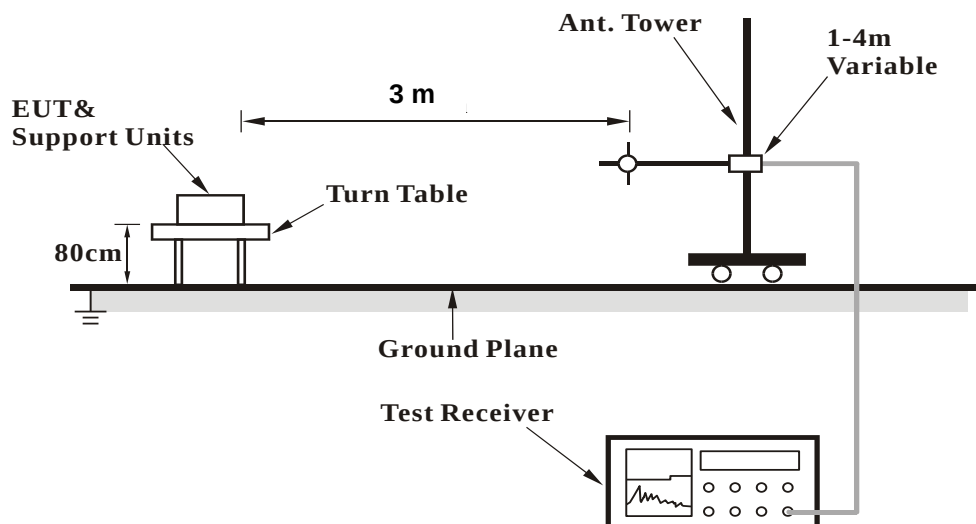
No deviation.

4.1.5 Test Setup

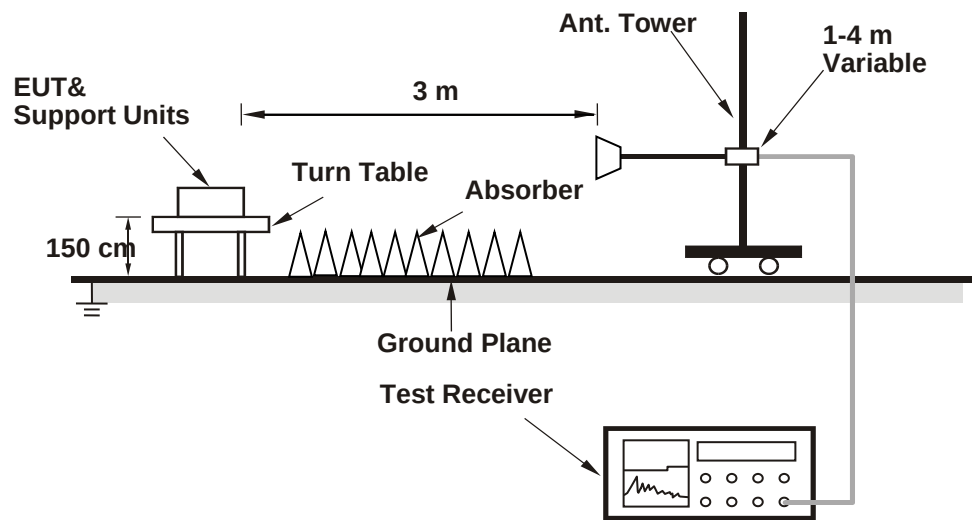
<Radiated Emission below 30 MHz>



<Radiated Emission 30 MHz to 1 GHz>



<Radiated Emission above 1 GHz>



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

4.1.6 EUT Operating Conditions

- Placed the EUT on a testing table.
- Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1 GHz Data :

RF Mode	TX 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/1

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	58.5 PK	74.0	-15.5	3.06 H	346	52.9	5.6
2	5150.00	45.3 AV	54.0	-8.7	3.06 H	346	39.7	5.6
3	*5180.00	107.2 PK			3.06 H	346	67.2	40.0
4	*5180.00	97.5 AV			3.06 H	346	57.5	40.0
5	#10360.00	59.8 PK	68.2	-8.4	2.57 H	302	42.3	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	58.2 PK	74.0	-15.8	1.03 V	124	52.6	5.6
2	5150.00	44.9 AV	54.0	-9.1	1.03 V	124	39.3	5.6
3	*5180.00	105.5 PK			1.03 V	124	65.5	40.0
4	*5180.00	96.1 AV			1.03 V	124	56.1	40.0
5	#10360.00	59.1 PK	68.2	-9.1	1.76 V	145	41.6	17.5

Remarks:

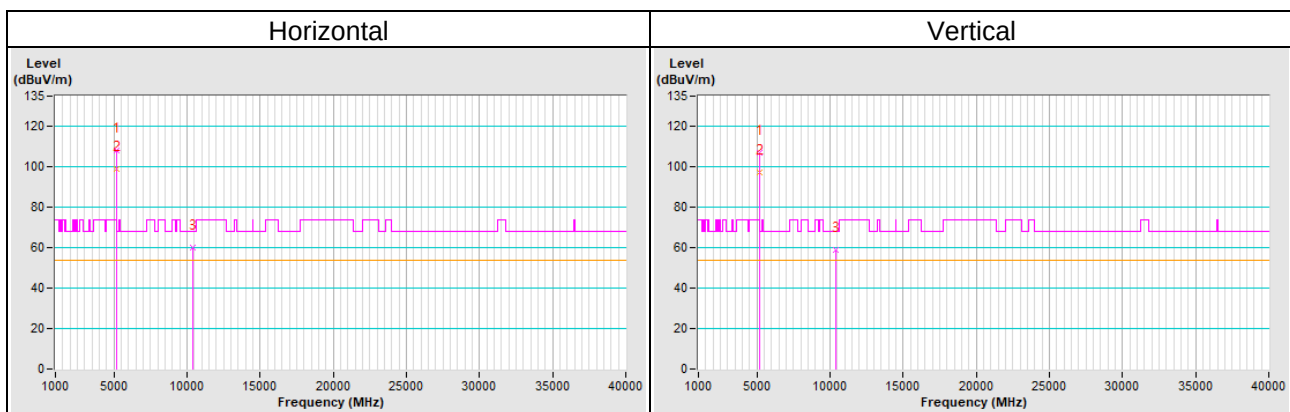
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.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

RF Mode	TX 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/1

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	*5200.00	108.4 PK			3.03 H	357	68.4	40.0
2	*5200.00	98.7 AV			3.03 H	357	58.7	40.0
3	#10400.00	60.0 PK	68.2	-8.2	2.56 H	294	42.5	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	*5200.00	106.8 PK			1.07 V	132	66.8	40.0
2	*5200.00	97.1 AV			1.07 V	132	57.1	40.0
3	#10400.00	59.2 PK	68.2	-9.0	1.74 V	149	41.7	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.
6. " # ": The radiated frequency is out of the restricted band.



RF Mode	TX 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/1

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	108.2 PK			3.11 H	15	68.3	39.9
2	*5240.00	98.4 AV			3.11 H	15	58.5	39.9
3	5350.00	57.2 PK	74.0	-16.8	3.11 H	15	51.9	5.3
4	5350.00	44.6 AV	54.0	-9.4	3.11 H	15	39.3	5.3
5	#10480.00	59.7 PK	68.2	-8.5	2.43 H	306	42.1	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	*5240.00	106.8 PK			1.01 V	128	66.9	39.9
2	*5240.00	97.1 AV			1.01 V	128	57.2	39.9
3	5350.00	56.7 PK	74.0	-17.3	1.01 V	128	51.4	5.3
4	5350.00	44.0 AV	54.0	-10.0	1.01 V	128	38.7	5.3
5	#10480.00	59.1 PK	68.2	-9.1	1.73 V	142	41.5	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 52 : 5260 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	*5260.00	108.4 PK			2.70 H	17	68.5	39.9
2	*5260.00	98.7 AV			2.70 H	17	58.8	39.9
3	5350.00	56.9 PK	74.0	-17.1	2.70 H	17	51.6	5.3
4	5350.00	45.0 AV	54.0	-9.0	2.70 H	17	39.7	5.3
5	#10520.00	59.8 PK	68.2	-8.4	2.54 H	311	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	*5260.00	107.0 PK			1.09 V	121	67.1	39.9
2	*5260.00	97.3 AV			1.09 V	121	57.4	39.9
3	5350.00	56.1 PK	74.0	-17.9	1.09 V	121	50.8	5.3
4	5350.00	44.0 AV	54.0	-10.0	1.09 V	121	38.7	5.3
5	#10520.00	59.3 PK	68.2	-8.9	1.66 V	137	41.7	17.6

Remarks:

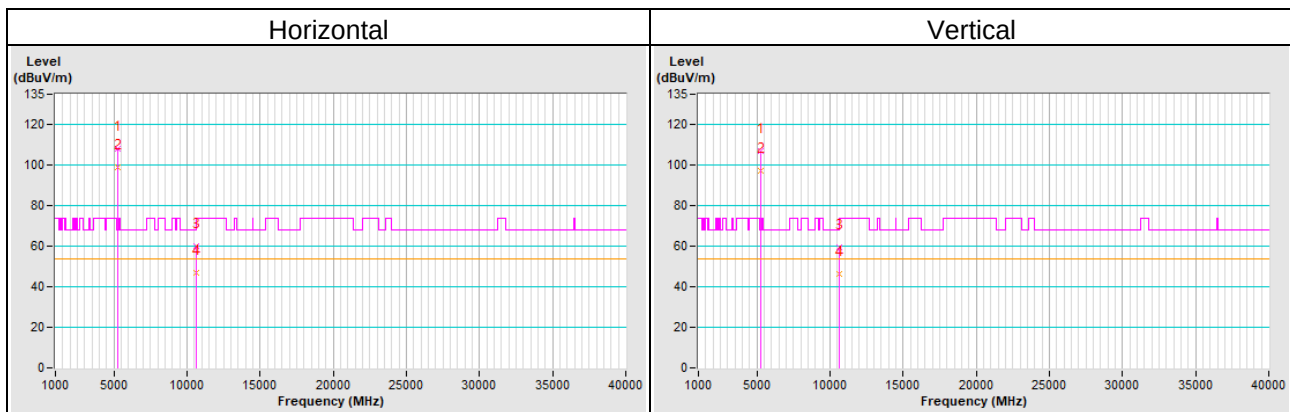
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

RF Mode	TX 802.11a	Channel	CH 60 : 5300 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	*5300.00	108.4 PK			2.75 H	11	68.8	39.6
2	*5300.00	98.7 AV			2.75 H	11	59.1	39.6
3	10600.00	60.3 PK	74.0	-13.7	2.56 H	304	42.3	18.0
4	10600.00	46.9 AV	54.0	-7.1	2.56 H	304	28.9	18.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	106.9 PK			1.07 V	124	67.3	39.6
2	*5300.00	97.2 AV			1.07 V	124	57.6	39.6
3	10600.00	59.7 PK	74.0	-14.3	1.67 V	138	41.7	18.0
4	10600.00	46.4 AV	54.0	-7.6	1.67 V	138	28.4	18.0

Remarks:

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



RF Mode	TX 802.11a	Channel	CH 64 : 5320 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	*5320.00	107.9 PK			2.77 H	14	68.3	39.6
2	*5320.00	98.1 AV			2.77 H	14	58.5	39.6
3	5350.00	59.4 PK	74.0	-14.6	2.77 H	14	54.1	5.3
4	5350.00	45.5 AV	54.0	-8.5	2.77 H	14	40.2	5.3
5	10640.00	60.0 PK	74.0	-14.0	2.43 H	309	42.1	17.9
6	10640.00	46.5 AV	54.0	-7.5	2.43 H	309	28.6	17.9
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	*5320.00	106.5 PK			1.05 V	126	66.9	39.6
2	*5320.00	96.7 AV			1.05 V	126	57.1	39.6
3	5350.00	58.1 PK	74.0	-15.9	1.05 V	126	52.8	5.3
4	5350.00	45.0 AV	54.0	-9.0	1.05 V	126	39.7	5.3
5	10640.00	59.5 PK	74.0	-14.5	1.78 V	146	41.6	17.9
6	10640.00	46.0 AV	54.0	-8.0	1.78 V	146	28.1	17.9

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.

RF Mode	TX 802.11a	Channel	CH 100 : 5500 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.9 PK	74.0	-14.1	3.44 H	347	53.7	6.2
2	5460.00	45.4 AV	54.0	-8.6	3.44 H	347	39.2	6.2
3	#5470.00	67.4 PK	68.2	-0.8	3.44 H	347	61.2	6.2
4	*5500.00	107.0 PK			3.44 H	347	66.5	40.5
5	*5500.00	87.7 AV			3.44 H	347	47.2	40.5
6	11000.00	59.3 PK	74.0	-14.7	2.44 H	299	40.5	18.8
7	11000.00	45.3 AV	54.0	-8.7	2.44 H	299	26.5	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	5460.00	59.7 PK	74.0	-14.3	4.00 V	321	53.5	6.2
2	5460.00	44.8 AV	54.0	-9.2	4.00 V	321	38.6	6.2
3	#5470.00	66.6 PK	68.2	-1.6	4.00 V	321	60.4	6.2
4	*5500.00	107.0 PK			4.00 V	321	66.5	40.5
5	*5500.00	97.5 AV			4.00 V	321	57.0	40.5
6	11000.00	60.3 PK	74.0	-13.7	1.85 V	160	41.5	18.8
7	11000.00	45.4 AV	54.0	-8.6	1.85 V	160	26.6	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 116 : 5580 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	*5580.00	105.7 PK			3.28 H	14	65.4	40.3
2	*5580.00	96.5 AV			3.28 H	14	56.2	40.3
3	11160.00	59.6 PK	74.0	-14.4	2.53 H	301	41.5	18.1
4	11160.00	44.9 AV	54.0	-9.1	2.53 H	301	26.8	18.1
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	*5580.00	105.1 PK			3.99 V	306	64.8	40.3
2	*5580.00	96.1 AV			3.99 V	306	55.8	40.3
3	11160.00	59.0 PK	74.0	-15.0	1.85 V	147	40.9	18.1
4	11160.00	44.5 AV	54.0	-9.5	1.85 V	147	26.4	18.1

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 140 : 5700 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	105.8 PK			2.91 H	15	65.1	40.7
2	*5700.00	96.3 AV			2.91 H	15	55.6	40.7
3	#5725.00	67.0 PK	68.2	-1.2	2.91 H	15	60.5	6.5
4	11400.00	60.3 PK	74.0	-13.7	2.54 H	306	41.5	18.8
5	11400.00	46.2 AV	54.0	-7.8	2.54 H	306	27.4	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	*5700.00	105.1 PK			3.85 V	311	64.4	40.7
2	*5700.00	95.9 AV			3.85 V	311	55.2	40.7
3	#5725.00	66.9 PK	68.2	-1.3	3.85 V	311	60.4	6.5
4	11400.00	60.1 PK	74.0	-13.9	2.54 V	300	41.3	18.8
5	11400.00	45.8 AV	54.0	-8.2	2.54 V	300	27.0	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 144 : 5720 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	#5470.00	56.7 PK	68.2	-11.5	3.28 H	15	50.5	6.2
2	*5720.00	105.8 PK			3.28 H	15	65.0	40.8
3	*5720.00	96.4 AV			3.28 H	15	55.6	40.8
4	#5850.00	57.6 PK	68.2	-10.6	3.28 H	15	50.6	7.0
5	11440.00	60.2 PK	74.0	-13.8	2.55 H	307	41.5	18.7
6	11440.00	46.2 AV	54.0	-7.8	2.55 H	307	27.5	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	#5470.00	56.6 PK	68.2	-11.6	4.00 V	309	50.4	6.2
2	*5720.00	104.8 PK			4.00 V	309	64.0	40.8
3	*5720.00	95.5 AV			4.00 V	309	54.7	40.8
4	#5850.00	57.2 PK	68.2	-11.0	4.00 V	309	50.2	7.0
5	11440.00	59.6 PK	74.0	-14.4	1.78 V	154	40.9	18.7
6	11440.00	45.9 AV	54.0	-8.1	1.78 V	154	27.2	18.7

Remarks:

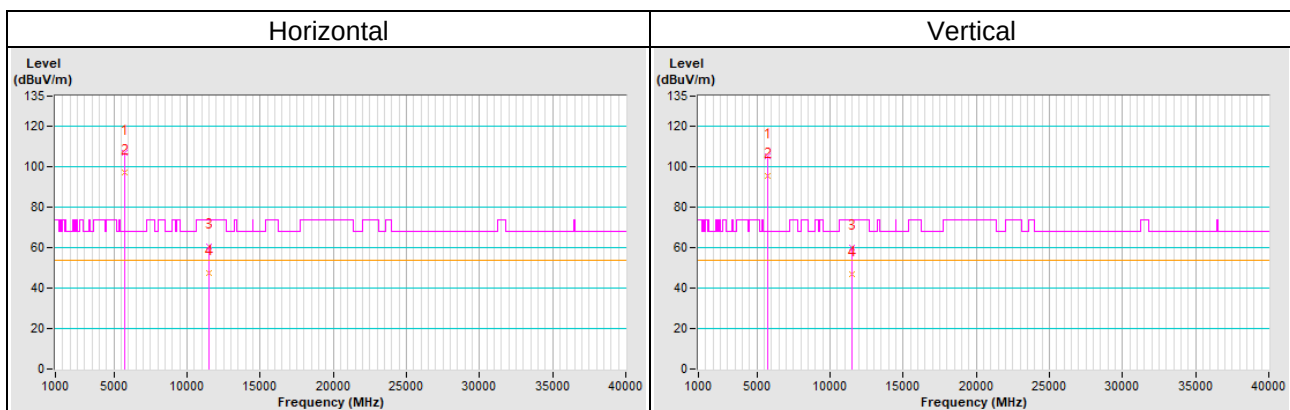
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.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

RF Mode	TX 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	#5608.80	55.3 PK	68.2	-12.9	3.00 H	9	49.3	6.0
2	*5745.00	106.9 PK			3.00 H	9	66.0	40.9
3	*5745.00	97.1 AV			3.00 H	9	56.2	40.9
4	#5925.60	57.8 PK	68.2	-10.4	3.00 H	9	50.7	7.1
5	11490.00	60.4 PK	74.0	-13.6	2.51 H	304	41.8	18.6
6	11490.00	47.5 AV	54.0	-6.5	2.51 H	304	28.9	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	#5620.00	55.6 PK	68.2	-12.6	1.02 V	129	49.6	6.0
2	*5745.00	105.5 PK			1.02 V	129	64.6	40.9
3	*5745.00	95.7 AV			1.02 V	129	54.8	40.9
4	#5953.20	56.6 PK	68.2	-11.6	1.02 V	129	49.7	6.9
5	11490.00	60.1 PK	74.0	-13.9	1.76 V	142	41.5	18.6
6	11490.00	46.7 AV	54.0	-7.3	1.76 V	142	28.1	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.



RF Mode	TX 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	#5632.80	56.3 PK	68.2	-11.9	3.10 H	11	50.3	6.0
2	*5785.00	108.1 PK			3.10 H	11	67.1	41.0
3	*5785.00	98.3 AV			3.10 H	11	57.3	41.0
4	#5934.40	58.2 PK	68.2	-10.0	3.10 H	11	51.2	7.0
5	11570.00	60.3 PK	74.0	-13.7	2.57 H	296	41.9	18.4
6	11570.00	47.2 AV	54.0	-6.8	2.57 H	296	28.8	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5627.60	56.0 PK	68.2	-12.2	1.09 V	123	50.0	6.0
2	*5785.00	106.6 PK			1.09 V	123	65.6	41.0
3	*5785.00	96.9 AV			1.09 V	123	55.9	41.0
4	#5940.40	57.6 PK	68.2	-10.6	1.09 V	123	50.6	7.0
5	11570.00	59.9 PK	74.0	-14.1	1.82 V	153	41.5	18.4
6	11570.00	46.6 AV	54.0	-7.4	1.82 V	153	28.2	18.4

Remarks:

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

RF Mode	TX 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	#5613.60	56.8 PK	68.2	-11.4	3.06 H	12	50.8	6.0
2	*5825.00	107.8 PK			3.06 H	12	66.6	41.2
3	*5825.00	98.0 AV			3.06 H	12	56.8	41.2
4	#5979.20	57.9 PK	68.2	-10.3	3.06 H	12	51.0	6.9
5	11650.00	59.8 PK	74.0	-14.2	2.46 H	291	41.6	18.2
6	11650.00	46.7 AV	54.0	-7.3	2.46 H	291	28.5	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5643.20	57.4 PK	68.2	-10.8	1.10 V	134	51.4	6.0
2	*5825.00	106.3 PK			1.10 V	134	65.1	41.2
3	*5825.00	96.6 AV			1.10 V	134	55.4	41.2
4	#5951.60	58.6 PK	68.2	-9.6	1.10 V	134	51.7	6.9
5	11650.00	59.5 PK	74.0	-14.5	1.64 V	139	41.3	18.2
6	11650.00	46.2 AV	54.0	-7.8	1.64 V	139	28.0	18.2

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	57.8 PK	74.0	-16.2	3.31 H	16	52.2	5.6
2	5150.00	45.4 AV	54.0	-8.6	3.31 H	16	39.8	5.6
3	*5180.00	107.7 PK			3.31 H	16	67.7	40.0
4	*5180.00	97.9 AV			3.31 H	16	57.9	40.0
5	#10360.00	59.4 PK	68.2	-8.8	2.46 H	297	41.9	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	57.0 PK	74.0	-17.0	1.02 V	120	51.4	5.6
2	5150.00	44.7 AV	54.0	-9.3	1.02 V	120	39.1	5.6
3	*5180.00	106.1 PK			1.02 V	120	66.1	40.0
4	*5180.00	96.3 AV			1.02 V	120	56.3	40.0
5	#10360.00	59.1 PK	68.2	-9.1	1.79 V	143	41.6	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT20)	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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	*5200.00	108.3 PK			3.10 H	9	68.3	40.0
2	*5200.00	98.4 AV			3.10 H	9	58.4	40.0
3	#10400.00	59.6 PK	68.2	-8.6	2.52 H	306	42.1	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	*5200.00	106.8 PK			1.07 V	129	66.8	40.0
2	*5200.00	97.0 AV			1.07 V	129	57.0	40.0
3	#10400.00	59.2 PK	68.2	-9.0	1.77 V	142	41.7	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT20)	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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	107.8 PK			3.12 H	14	67.9	39.9
2	*5240.00	98.0 AV			3.12 H	14	58.1	39.9
3	5350.00	57.1 PK	74.0	-16.9	3.12 H	14	51.8	5.3
4	5350.00	44.9 AV	54.0	-9.1	3.12 H	14	39.6	5.3
5	#10480.00	59.5 PK	68.2	-8.7	2.67 H	311	41.9	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	*5240.00	106.3 PK			1.04 V	121	66.4	39.9
2	*5240.00	96.5 AV			1.04 V	121	56.6	39.9
3	5350.00	56.5 PK	74.0	-17.5	1.04 V	121	51.2	5.3
4	5350.00	44.4 AV	54.0	-9.6	1.04 V	121	39.1	5.3
5	#10480.00	59.0 PK	68.2	-9.2	1.67 V	135	41.4	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT20)	Channel	CH 52 : 5260 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	57.8 PK	74.0	-16.2	2.70 H	18	52.2	5.6
2	5150.00	44.9 AV	54.0	-9.1	2.70 H	18	39.3	5.6
3	*5260.00	108.2 PK			2.70 H	18	68.3	39.9
4	*5260.00	98.0 AV			2.70 H	18	58.1	39.9
5	#10520.00	59.7 PK	68.2	-8.5	2.53 H	306	42.1	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	57.4 PK	74.0	-16.6	1.10 V	131	51.8	5.6
2	5150.00	44.3 AV	54.0	-9.7	1.10 V	131	38.7	5.6
3	*5260.00	106.6 PK			1.10 V	131	66.7	39.9
4	*5260.00	96.4 AV			1.10 V	131	56.5	39.9
5	#10520.00	59.3 PK	68.2	-8.9	1.74 V	134	41.7	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT20)	Channel	CH 60 : 5300 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	*5300.00	108.2 PK			2.79 H	14	68.6	39.6
2	*5300.00	98.0 AV			2.79 H	14	58.4	39.6
3	10600.00	60.1 PK	74.0	-13.9	2.61 H	300	42.1	18.0
4	10600.00	46.8 AV	54.0	-7.2	2.61 H	300	28.8	18.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	106.5 PK			1.06 V	126	66.9	39.6
2	*5300.00	96.4 AV			1.06 V	126	56.8	39.6
3	10600.00	59.6 PK	74.0	-14.4	1.64 V	141	41.6	18.0
4	10600.00	46.3 AV	54.0	-7.7	1.64 V	141	28.3	18.0

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 64 : 5320 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	*5320.00	107.5 PK			2.76 H	16	67.9	39.6
2	*5320.00	97.3 AV			2.76 H	16	57.7	39.6
3	5350.00	58.8 PK	74.0	-15.2	2.76 H	16	53.5	5.3
4	5350.00	45.6 AV	54.0	-8.4	2.76 H	16	40.3	5.3
5	10640.00	59.8 PK	74.0	-14.2	2.68 H	294	41.9	17.9
6	10640.00	46.6 AV	54.0	-7.4	2.68 H	294	28.7	17.9
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	*5320.00	105.9 PK			1.03 V	114	66.3	39.6
2	*5320.00	95.8 AV			1.03 V	114	56.2	39.6
3	5350.00	57.7 PK	74.0	-16.3	1.03 V	114	52.4	5.3
4	5350.00	44.9 AV	54.0	-9.1	1.03 V	114	39.6	5.3
5	10640.00	59.3 PK	74.0	-14.7	1.68 V	142	41.4	17.9
6	10640.00	45.9 AV	54.0	-8.1	1.68 V	142	28.0	17.9

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.

RF Mode	TX 802.11ac (VHT20)	Channel	CH 100 : 5500 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	58.1 PK	74.0	-15.9	2.99 H	12	51.9	6.2
2	5460.00	43.7 AV	54.0	-10.3	2.99 H	12	37.5	6.2
3	#5470.00	64.7 PK	68.2	-3.5	2.99 H	12	58.5	6.2
4	*5500.00	105.4 PK			2.99 H	12	64.9	40.5
5	*5500.00	96.0 AV			2.99 H	12	55.5	40.5
6	11000.00	60.3 PK	74.0	-13.7	2.44 H	299	41.5	18.8
7	11000.00	46.2 AV	54.0	-7.8	2.44 H	299	27.4	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	5460.00	58.0 PK	74.0	-16.0	3.90 V	304	51.8	6.2
2	5460.00	43.5 AV	54.0	-10.5	3.90 V	304	37.3	6.2
3	#5470.00	62.6 PK	68.2	-5.6	3.90 V	304	56.4	6.2
4	*5500.00	104.1 PK			3.90 V	304	63.6	40.5
5	*5500.00	94.4 AV			3.90 V	304	53.9	40.5
6	11000.00	60.2 PK	74.0	-13.8	1.80 V	166	41.4	18.8
7	11000.00	46.0 AV	54.0	-8.0	1.80 V	166	27.2	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.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT20)	Channel	CH 116 : 5580 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	*5580.00	104.6 PK			3.44 H	13	64.3	40.3
2	*5580.00	94.5 AV			3.44 H	13	54.2	40.3
3	11160.00	58.9 PK	74.0	-15.1	2.53 H	304	40.8	18.1
4	11160.00	45.3 AV	54.0	-8.7	2.53 H	304	27.2	18.1
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	*5580.00	103.7 PK			3.96 V	306	63.4	40.3
2	*5580.00	93.9 AV			3.96 V	306	53.6	40.3
3	11160.00	58.6 PK	74.0	-15.4	1.87 V	152	40.5	18.1
4	11160.00	44.9 AV	54.0	-9.1	1.87 V	152	26.8	18.1

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 140 : 5700 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	105.6 PK			2.91 H	14	64.9	40.7
2	*5700.00	95.7 AV			2.91 H	14	55.0	40.7
3	#5725.00	61.7 PK	68.2	-6.5	2.91 H	14	55.2	6.5
4	11400.00	60.2 PK	74.0	-13.8	2.48 H	297	41.4	18.8
5	11400.00	45.6 AV	54.0	-8.4	2.48 H	297	26.8	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	*5700.00	104.5 PK			4.00 V	303	63.8	40.7
2	*5700.00	95.5 AV			4.00 V	303	54.8	40.7
3	#5725.00	56.1 PK	68.2	-12.1	4.00 V	303	49.6	6.5
4	11400.00	60.0 PK	74.0	-14.0	1.83 V	156	41.2	18.8
5	11400.00	45.4 AV	54.0	-8.6	1.83 V	156	26.6	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT20)	Channel	CH 144 : 5720 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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	#5470.00	55.8 PK	68.2	-12.4	3.27 H	15	49.6	6.2
2	*5720.00	104.8 PK			3.27 H	15	64.0	40.8
3	*5720.00	95.3 AV			3.27 H	15	54.5	40.8
4	#5850.00	56.5 PK	68.2	-11.7	3.27 H	15	49.5	7.0
5	11440.00	60.0 PK	74.0	-14.0	2.66 H	308	41.3	18.7
6	11440.00	46.1 AV	54.0	-7.9	2.66 H	308	27.4	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	#5470.00	55.6 PK	68.2	-12.6	3.97 V	313	49.4	6.2
2	*5720.00	104.6 PK			3.97 V	313	63.8	40.8
3	*5720.00	94.9 AV			3.97 V	313	54.1	40.8
4	#5850.00	56.4 PK	68.2	-11.8	3.97 V	313	49.4	7.0
5	11440.00	59.5 PK	74.0	-14.5	1.86 V	148	40.8	18.7
6	11440.00	45.4 AV	54.0	-8.6	1.86 V	148	26.7	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.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT20)	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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	#5613.60	57.4 PK	68.2	-10.8	3.00 H	9	51.4	6.0
2	*5745.00	107.4 PK			3.00 H	9	66.5	40.9
3	*5745.00	97.3 AV			3.00 H	9	56.4	40.9
4	#5971.60	57.3 PK	68.2	-10.9	3.00 H	9	50.4	6.9
5	11490.00	60.4 PK	74.0	-13.6	2.53 H	306	41.8	18.6
6	11490.00	47.3 AV	54.0	-6.7	2.53 H	306	28.7	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	#5606.00	56.6 PK	68.2	-11.6	1.06 V	136	50.6	6.0
2	*5745.00	106.0 PK			1.06 V	136	65.1	40.9
3	*5745.00	95.9 AV			1.06 V	136	55.0	40.9
4	#5931.60	57.7 PK	68.2	-10.5	1.06 V	136	50.7	7.0
5	11490.00	60.1 PK	74.0	-13.9	1.64 V	138	41.5	18.6
6	11490.00	46.7 AV	54.0	-7.3	1.64 V	138	28.1	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.

RF Mode	TX 802.11ac (VHT20)	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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	#5603.60	57.4 PK	68.2	-10.8	3.09 H	10	51.4	6.0
2	*5785.00	108.3 PK			3.09 H	10	67.3	41.0
3	*5785.00	98.2 AV			3.09 H	10	57.2	41.0
4	#5936.00	57.8 PK	68.2	-10.4	3.09 H	10	50.8	7.0
5	11570.00	60.1 PK	74.0	-13.9	2.52 H	296	41.7	18.4
6	11570.00	47.1 AV	54.0	-6.9	2.52 H	296	28.7	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5620.40	56.6 PK	68.2	-11.6	1.08 V	121	50.6	6.0
2	*5785.00	106.9 PK			1.08 V	121	65.9	41.0
3	*5785.00	96.8 AV			1.08 V	121	55.8	41.0
4	#5983.60	57.7 PK	68.2	-10.5	1.08 V	121	50.8	6.9
5	11570.00	59.8 PK	74.0	-14.2	1.74 V	143	41.4	18.4
6	11570.00	46.3 AV	54.0	-7.7	1.74 V	143	27.9	18.4

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	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	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	#5606.80	56.2 PK	68.2	-12.0	3.19 H	12	50.2	6.0
2	*5825.00	107.9 PK			3.19 H	12	66.7	41.2
3	*5825.00	97.7 AV			3.19 H	12	56.5	41.2
4	#5932.80	57.8 PK	68.2	-10.4	3.19 H	12	50.8	7.0
5	11650.00	60.1 PK	74.0	-13.9	2.53 H	307	41.9	18.2
6	11650.00	46.9 AV	54.0	-7.1	2.53 H	307	28.7	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5632.00	56.2 PK	68.2	-12.0	1.07 V	124	50.2	6.0
2	*5825.00	106.5 PK			1.07 V	124	65.3	41.2
3	*5825.00	96.4 AV			1.07 V	124	55.2	41.2
4	#5994.00	57.6 PK	68.2	-10.6	1.07 V	124	50.7	6.9
5	11650.00	59.9 PK	74.0	-14.1	1.83 V	154	41.7	18.2
6	11650.00	46.0 AV	54.0	-8.0	1.83 V	154	27.8	18.2

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	63.9 PK	74.0	-10.1	3.00 H	16	58.3	5.6
2	5150.00	51.2 AV	54.0	-2.8	3.00 H	16	45.6	5.6
3	*5190.00	105.5 PK			3.00 H	16	65.5	40.0
4	*5190.00	95.5 AV			3.00 H	16	55.5	40.0
5	#10380.00	59.2 PK	68.2	-9.0	2.61 H	317	41.6	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	63.5 PK	74.0	-10.5	1.03 V	129	57.9	5.6
2	5150.00	50.7 AV	54.0	-3.3	1.03 V	129	45.1	5.6
3	*5190.00	104.1 PK			1.03 V	129	64.1	40.0
4	*5190.00	94.1 AV			1.03 V	129	54.1	40.0
5	#10380.00	58.9 PK	68.2	-9.3	1.82 V	151	41.3	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT40)	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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	*5230.00	105.6 PK			3.11 H	18	65.6	40.0
2	*5230.00	95.7 AV			3.11 H	18	55.7	40.0
3	5350.00	56.9 PK	74.0	-17.1	3.11 H	18	51.6	5.3
4	5350.00	45.4 AV	54.0	-8.6	3.11 H	18	40.1	5.3
5	#10460.00	59.0 PK	68.2	-9.2	2.58 H	301	41.5	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	*5230.00	104.3 PK			1.07 V	133	64.3	40.0
2	*5230.00	94.3 AV			1.07 V	133	54.3	40.0
3	5350.00	56.5 PK	74.0	-17.5	1.07 V	133	51.2	5.3
4	5350.00	44.7 AV	54.0	-9.3	1.07 V	133	39.4	5.3
5	#10460.00	58.7 PK	68.2	-9.5	1.77 V	136	41.2	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT40)	Channel	CH 54 : 5270 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	57.5 PK	74.0	-16.5	2.68 H	15	51.9	5.6
2	5150.00	44.9 AV	54.0	-9.1	2.68 H	15	39.3	5.6
3	*5270.00	105.2 PK			2.68 H	15	65.4	39.8
4	*5270.00	95.2 AV			2.68 H	15	55.4	39.8
5	#10540.00	59.5 PK	68.2	-8.7	2.52 H	301	41.8	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	56.9 PK	74.0	-17.1	1.08 V	122	51.3	5.6
2	5150.00	44.3 AV	54.0	-9.7	1.08 V	122	38.7	5.6
3	*5270.00	103.6 PK			1.08 V	122	63.8	39.8
4	*5270.00	93.7 AV			1.08 V	122	53.9	39.8
5	#10540.00	59.2 PK	68.2	-9.0	1.76 V	140	41.5	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT40)	Channel	CH 62 : 5310 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	105.3 PK			2.77 H	16	65.7	39.6
2	*5310.00	95.3 AV			2.77 H	16	55.7	39.6
3	5350.00	61.1 PK	74.0	-12.9	2.77 H	16	55.8	5.3
4	5350.00	47.7 AV	54.0	-6.3	2.77 H	16	42.4	5.3
5	10620.00	59.7 PK	74.0	-14.3	2.44 H	293	41.7	18.0
6	10620.00	46.6 AV	54.0	-7.4	2.44 H	293	28.6	18.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	104.0 PK			1.06 V	118	64.4	39.6
2	*5310.00	93.9 AV			1.06 V	118	54.3	39.6
3	5350.00	59.6 PK	74.0	-14.4	1.06 V	118	54.3	5.3
4	5350.00	46.0 AV	54.0	-8.0	1.06 V	118	40.7	5.3
5	10620.00	59.4 PK	74.0	-14.6	1.86 V	157	41.4	18.0
6	10620.00	46.1 AV	54.0	-7.9	1.86 V	157	28.1	18.0

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 102 : 5510 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.7 PK	74.0	-12.3	3.37 H	19	55.5	6.2
2	5460.00	48.7 AV	54.0	-5.3	3.37 H	19	42.5	6.2
3	#5470.00	66.3 PK	68.2	-1.9	3.37 H	19	60.1	6.2
4	*5510.00	104.0 PK			3.37 H	19	63.5	40.5
5	*5510.00	94.3 AV			3.37 H	19	53.8	40.5
6	11020.00	59.2 PK	74.0	-14.8	2.54 H	296	40.5	18.7
7	11020.00	46.0 AV	54.0	-8.0	2.54 H	296	27.3	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	5460.00	60.7 PK	74.0	-13.3	3.91 V	314	54.5	6.2
2	5460.00	48.3 AV	54.0	-5.7	3.91 V	314	42.1	6.2
3	#5470.00	65.8 PK	68.2	-2.4	3.91 V	314	59.6	6.2
4	*5510.00	103.0 PK			3.91 V	314	62.5	40.5
5	*5510.00	93.9 AV			3.91 V	314	53.4	40.5
6	11020.00	59.0 PK	74.0	-15.0	1.85 V	149	40.3	18.7
7	11020.00	45.7 AV	54.0	-8.3	1.85 V	149	27.0	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT40)	Channel	CH 110 : 5550 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	*5550.00	102.8 PK			3.32 H	20	62.4	40.4
2	*5550.00	92.8 AV			3.32 H	20	52.4	40.4
3	11100.00	59.0 PK	74.0	-15.0	2.55 H	302	41.2	17.8
4	11100.00	45.1 AV	54.0	-8.9	2.55 H	302	27.3	17.8
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	*5550.00	101.8 PK			3.84 V	305	61.4	40.4
2	*5550.00	92.0 AV			3.84 V	305	51.6	40.4
3	11100.00	58.7 PK	74.0	-15.3	1.84 V	156	40.9	17.8
4	11100.00	44.8 AV	54.0	-9.2	1.84 V	156	27.0	17.8

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.

RF Mode	TX 802.11ac (VHT40)	Channel	CH 134 : 5670 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	*5670.00	102.5 PK			3.06 H	18	62.1	40.4
2	*5670.00	92.7 AV			3.06 H	18	52.3	40.4
3	#5725.00	59.7 PK	68.2	-8.5	3.06 H	18	53.2	6.5
4	11340.00	59.4 PK	74.0	-14.6	2.58 H	303	40.5	18.9
5	11340.00	46.3 AV	54.0	-7.7	2.58 H	303	27.4	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	*5670.00	101.7 PK			3.86 V	304	61.3	40.4
2	*5670.00	92.0 AV			3.86 V	304	51.6	40.4
3	#5725.00	56.3 PK	68.2	-11.9	3.86 V	304	49.8	6.5
4	11340.00	59.2 PK	74.0	-14.8	1.88 V	159	40.3	18.9
5	11340.00	45.7 AV	54.0	-8.3	1.88 V	159	26.8	18.9

Remarks:

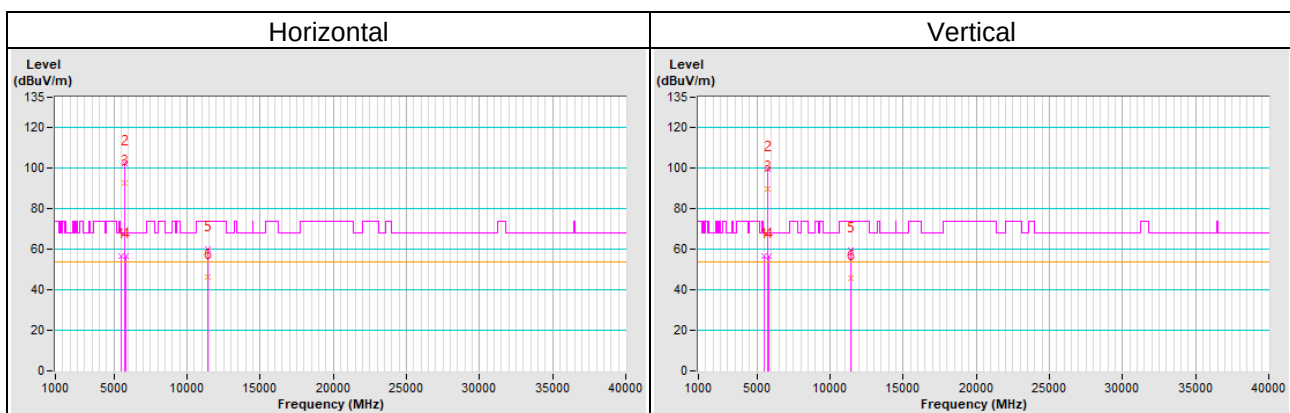
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 142 : 5710 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	#5470.00	56.7 PK	68.2	-11.5	3.28 H	16	50.5	6.2
2	*5710.00	102.3 PK			3.28 H	16	61.6	40.7
3	*5710.00	92.9 AV			3.28 H	16	52.2	40.7
4	#5850.00	56.9 PK	68.2	-11.3	3.28 H	16	49.9	7.0
5	11420.00	60.2 PK	74.0	-13.8	2.49 H	300	41.4	18.8
6	11420.00	46.3 AV	54.0	-7.7	2.49 H	300	27.5	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	#5470.00	56.6 PK	68.2	-11.6	3.86 V	303	50.4	6.2
2	*5710.00	99.4 PK			3.86 V	303	58.7	40.7
3	*5710.00	89.9 AV			3.86 V	303	49.2	40.7
4	#5850.00	56.6 PK	68.2	-11.6	3.86 V	303	49.6	7.0
5	11420.00	59.5 PK	74.0	-14.5	1.81 V	152	40.7	18.8
6	11420.00	46.0 AV	54.0	-8.0	1.81 V	152	27.2	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.
6. " # " : The radiated frequency is out of the restricted band.



RF Mode	TX 802.11ac (VHT40)	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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	#5618.00	57.2 PK	68.2	-11.0	3.37 H	16	51.2	6.0
2	*5755.00	104.2 PK			3.37 H	16	63.3	40.9
3	*5755.00	94.2 AV			3.37 H	16	53.3	40.9
4	#5981.60	58.0 PK	68.2	-10.2	3.37 H	16	51.1	6.9
5	11510.00	60.1 PK	74.0	-13.9	2.51 H	308	41.6	18.5
6	11510.00	47.0 AV	54.0	-7.0	2.51 H	308	28.5	18.5
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	#5637.60	56.4 PK	68.2	-11.8	1.04 V	115	50.4	6.0
2	*5755.00	103.0 PK			1.04 V	115	62.1	40.9
3	*5755.00	92.8 AV			1.04 V	115	51.9	40.9
4	#5950.80	58.0 PK	68.2	-10.2	1.04 V	115	51.1	6.9
5	11510.00	59.8 PK	74.0	-14.2	1.79 V	158	41.3	18.5
6	11510.00	46.2 AV	54.0	-7.8	1.79 V	158	27.7	18.5

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.

RF Mode	TX 802.11ac (VHT40)	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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	#5633.20	56.5 PK	68.2	-11.7	3.09 H	9	50.5	6.0
2	*5795.00	105.8 PK			3.09 H	9	64.7	41.1
3	*5795.00	95.7 AV			3.09 H	9	54.6	41.1
4	#5985.60	57.4 PK	68.2	-10.8	3.09 H	9	50.5	6.9
5	11590.00	59.9 PK	74.0	-14.1	2.64 H	312	41.6	18.3
6	11590.00	46.9 AV	54.0	-7.1	2.64 H	312	28.6	18.3
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	#5629.60	56.9 PK	68.2	-11.3	1.04 V	128	50.9	6.0
2	*5795.00	104.4 PK			1.04 V	128	63.3	41.1
3	*5795.00	94.3 AV			1.04 V	128	53.2	41.1
4	#5992.80	57.4 PK	68.2	-10.8	1.04 V	128	50.5	6.9
5	11590.00	59.5 PK	74.0	-14.5	1.69 V	135	41.2	18.3
6	11590.00	46.0 AV	54.0	-8.0	1.69 V	135	27.7	18.3

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.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT80)	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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	2.76 H	18	59.9	5.6
2	5150.00	53.1 AV	54.0	-0.9	2.76 H	18	47.5	5.6
3	*5210.00	101.6 PK			2.76 H	18	61.6	40.0
4	*5210.00	91.5 AV			2.76 H	18	51.5	40.0
5	#10420.00	59.2 PK	68.2	-9.0	2.56 H	307	41.7	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	63.4 PK	74.0	-10.6	1.06 V	123	57.8	5.6
2	5150.00	51.9 AV	54.0	-2.1	1.06 V	123	46.3	5.6
3	*5210.00	100.3 PK			1.06 V	123	60.3	40.0
4	*5210.00	90.3 AV			1.06 V	123	50.3	40.0
5	#10420.00	58.9 PK	68.2	-9.3	1.79 V	144	41.4	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT80)	Channel	CH 58 : 5290 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/2

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	*5290.00	100.9 PK			2.91 H	18	61.2	39.7
2	*5290.00	90.8 AV			2.91 H	18	51.1	39.7
3	5350.00	66.5 PK	74.0	-7.5	2.91 H	18	61.2	5.3
4	5350.00	49.6 AV	54.0	-4.4	2.91 H	18	44.3	5.3
5	#10580.00	59.4 PK	68.2	-8.8	2.41 H	295	41.6	17.8
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	*5290.00	99.3 PK			1.08 V	132	59.6	39.7
2	*5290.00	89.2 AV			1.08 V	132	49.5	39.7
3	5350.00	65.6 PK	74.0	-8.4	1.08 V	132	60.3	5.3
4	5350.00	48.7 AV	54.0	-5.3	1.08 V	132	43.4	5.3
5	#10580.00	59.2 PK	68.2	-9.0	1.81 V	149	41.4	17.8

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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT80)	Channel	CH 106 : 5530 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.7 PK	74.0	-13.3	3.09 H	17	54.5	6.2
2	5460.00	48.3 AV	54.0	-5.7	3.09 H	17	42.1	6.2
3	#5470.00	64.1 PK	68.2	-4.1	3.09 H	17	57.9	6.2
4	*5530.00	97.5 PK			3.09 H	17	57.1	40.4
5	*5530.00	87.7 AV			3.09 H	17	47.3	40.4
6	11060.00	59.6 PK	74.0	-14.4	2.54 H	307	41.3	18.3
7	11060.00	44.9 AV	54.0	-9.1	2.54 H	307	26.6	18.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.0 PK	74.0	-14.0	3.91 V	306	53.8	6.2
2	5460.00	48.1 AV	54.0	-5.9	3.91 V	306	41.9	6.2
3	#5470.00	62.5 PK	68.2	-5.7	3.91 V	306	56.3	6.2
4	*5530.00	97.0 PK			3.91 V	306	56.6	40.4
5	*5530.00	87.5 AV			3.91 V	306	47.1	40.4
6	11060.00	59.1 PK	74.0	-14.9	1.86 V	153	40.8	18.3
7	11060.00	44.7 AV	54.0	-9.3	1.86 V	153	26.4	18.3

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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT80)	Channel	CH 122 : 5610 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.7 PK	74.0	-17.3	3.42 H	18	50.5	6.2
2	5460.00	43.7 AV	54.0	-10.3	3.42 H	18	37.5	6.2
3	#5470.00	58.0 PK	68.2	-10.2	3.42 H	18	51.8	6.2
4	*5610.00	96.8 PK			3.42 H	18	56.6	40.2
5	*5610.00	87.1 AV			3.42 H	18	46.9	40.2
6	#5725.00	56.9 PK	68.2	-11.3	3.42 H	18	50.4	6.5
7	11220.00	59.7 PK	74.0	-14.3	2.63 H	301	41.4	18.3
8	11220.00	45.6 AV	54.0	-8.4	2.63 H	301	27.3	18.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.7 PK	74.0	-18.3	3.74 V	309	49.5	6.2
2	5460.00	43.4 AV	54.0	-10.6	3.74 V	309	37.2	6.2
3	#5470.00	57.7 PK	68.2	-10.5	3.74 V	309	51.5	6.2
4	*5610.00	96.3 PK			3.74 V	309	56.1	40.2
5	*5610.00	86.5 AV			3.74 V	309	46.3	40.2
6	#5725.00	56.6 PK	68.2	-11.6	3.74 V	309	50.1	6.5
7	11220.00	59.1 PK	74.0	-14.9	1.83 V	148	40.8	18.3
8	11220.00	45.2 AV	54.0	-8.8	1.83 V	148	26.9	18.3

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.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT80)	Channel	CH 138 : 5690 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/6

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	#5470.00	56.5 PK	68.2	-11.7	2.92 H	17	50.3	6.2
2	*5690.00	96.7 PK			2.92 H	17	56.2	40.5
3	*5690.00	87.0 AV			2.92 H	17	46.5	40.5
4	#5850.00	57.2 PK	68.2	-11.0	2.92 H	17	50.2	7.0
5	11380.00	59.5 PK	74.0	-14.5	2.59 H	298	40.7	18.8
6	11380.00	46.0 AV	54.0	-8.0	2.59 H	298	27.2	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	#5470.00	56.4 PK	68.2	-11.8	3.83 V	318	50.2	6.2
2	*5690.00	95.7 PK			3.83 V	318	55.2	40.5
3	*5690.00	86.4 AV			3.83 V	318	45.9	40.5
4	#5850.00	56.6 PK	68.2	-11.6	3.83 V	318	49.6	7.0
5	11380.00	59.3 PK	74.0	-14.7	1.80 V	155	40.5	18.8
6	11380.00	45.6 AV	54.0	-8.4	1.80 V	155	26.8	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.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT80)	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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 70% RH
Tested By	Greg Lin	Test Date	2022/4/7

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	#5643.60	58.4 PK	68.2	-9.8	3.11 H	11	52.4	6.0
2	*5775.00	101.7 PK			3.11 H	11	60.7	41.0
3	*5775.00	91.7 AV			3.11 H	11	50.7	41.0
4	#5937.60	58.2 PK	68.2	-10.0	3.11 H	11	51.2	7.0
5	11550.00	59.8 PK	74.0	-14.2	2.46 H	319	41.4	18.4
6	11550.00	46.7 AV	54.0	-7.3	2.46 H	319	28.3	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5604.80	57.7 PK	68.2	-10.5	1.06 V	119	51.7	6.0
2	*5775.00	100.4 PK			1.06 V	119	59.4	41.0
3	*5775.00	90.3 AV			1.06 V	119	49.3	41.0
4	#5941.20	58.4 PK	68.2	-9.8	1.06 V	119	51.4	7.0
5	11550.00	59.6 PK	74.0	-14.4	1.74 V	155	41.2	18.4
6	11550.00	46.0 AV	54.0	-8.0	1.74 V	155	27.6	18.4

Remarks:

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

9 kHz ~ 1 GHz Worst-Case Data:

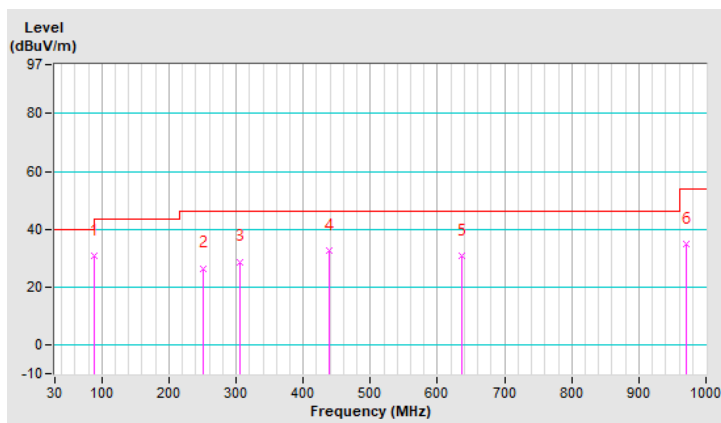
Mode A

RF Mode	TX 802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	20°C, 66% RH
Tested By	Rex Wang	Test Date	2022/4/8

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	89.17	31.0 QP	43.5	-12.5	1.50 H	219	45.8	-14.8
2	250.19	26.5 QP	46.0	-19.5	1.00 H	5	35.4	-8.9
3	305.48	28.8 QP	46.0	-17.2	1.00 H	304	35.6	-6.8
4	439.34	32.6 QP	46.0	-13.4	1.25 H	281	36.3	-3.7
5	637.22	30.6 QP	46.0	-15.4	2.00 H	338	30.5	0.1
6	969.93	35.1 QP	54.0	-18.9	1.00 H	5	28.9	6.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit 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.

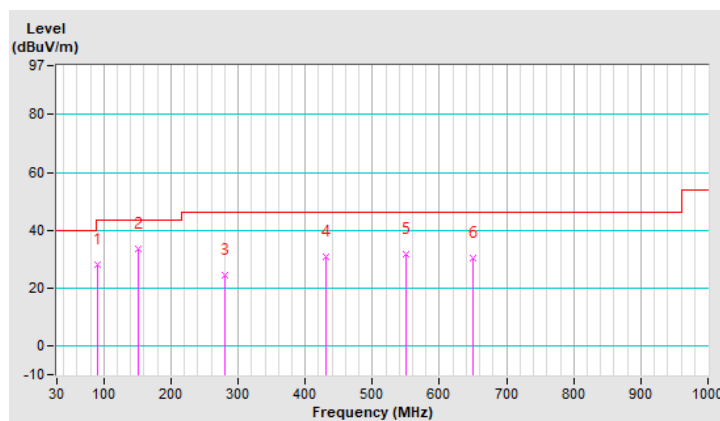


RF Mode	TX 802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	20°C, 66% RH
Tested By	Rex Wang	Test Date	2022/4/8

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	91.11	28.3 QP	43.5	-15.2	1.50 V	335	43.0	-14.7
2	150.28	33.5 QP	43.5	-10.0	1.00 V	2	42.3	-8.8
3	280.26	24.4 QP	46.0	-21.6	1.25 V	235	31.8	-7.4
4	431.58	30.7 QP	46.0	-15.3	1.00 V	165	34.6	-3.9
5	549.92	31.7 QP	46.0	-14.3	2.00 V	302	33.3	-1.6
6	650.80	30.2 QP	46.0	-15.8	1.00 V	302	29.9	0.3

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.



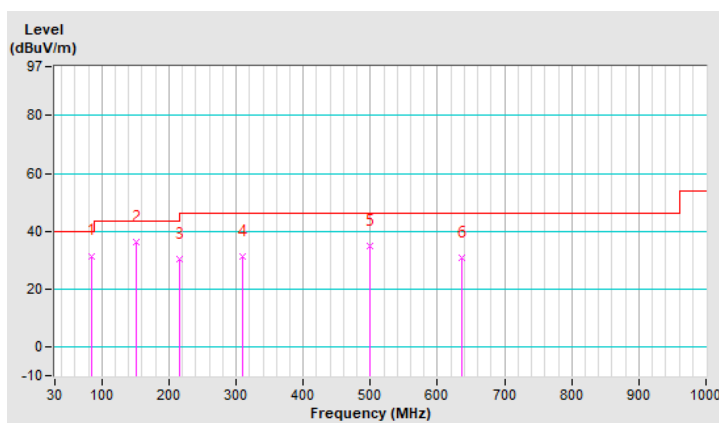
Mode B

RF Mode	TX 802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	20°C, 66% RH
Tested By	Rex Wang	Test Date	2022/4/8

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	85.29	31.5 QP	40.0	-8.5	1.00 H	273	46.0	-14.5
2	150.28	36.3 QP	43.5	-7.2	1.00 H	330	45.1	-8.8
3	216.24	30.2 QP	46.0	-15.8	1.00 H	71	41.4	-11.2
4	310.33	31.3 QP	46.0	-14.7	1.50 H	93	37.7	-6.4
5	499.48	35.1 QP	46.0	-10.9	1.25 H	51	37.6	-2.5
6	637.22	31.0 QP	46.0	-15.0	1.00 H	254	30.9	0.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The 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.

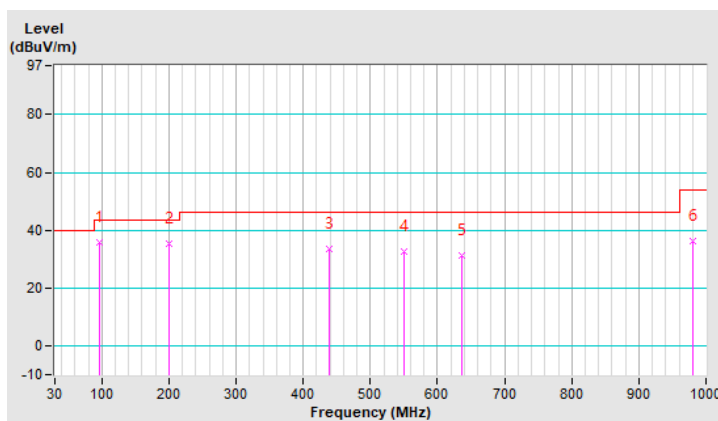


RF Mode	TX 802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	20°C, 66% RH
Tested By	Rex Wang	Test Date	2022/4/8

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	96.93	35.7 QP	43.5	-7.8	1.00 V	24	50.0	-14.3
2	199.75	35.5 QP	43.5	-8.0	1.00 V	99	47.0	-11.5
3	438.37	33.3 QP	46.0	-12.7	1.25 V	73	36.9	-3.6
4	549.92	32.4 QP	46.0	-13.6	1.25 V	357	34.0	-1.6
5	637.22	31.2 QP	46.0	-14.8	1.00 V	349	31.1	0.1
6	979.63	36.1 QP	54.0	-17.9	1.50 V	264	29.8	6.3

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.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

Note: 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.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESR3	102783	Dec. 20, 2021	Dec. 19, 2022
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 04, 2021	Sep. 03, 2022
LISN/AMN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Feb. 17, 2022	Feb. 16, 2023
LISN/AMN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Sep. 17, 2021	Sep. 16, 2022
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 2.
 3. The VCCI Site Registration No. is C-12047.

4.2.3 Test Procedures

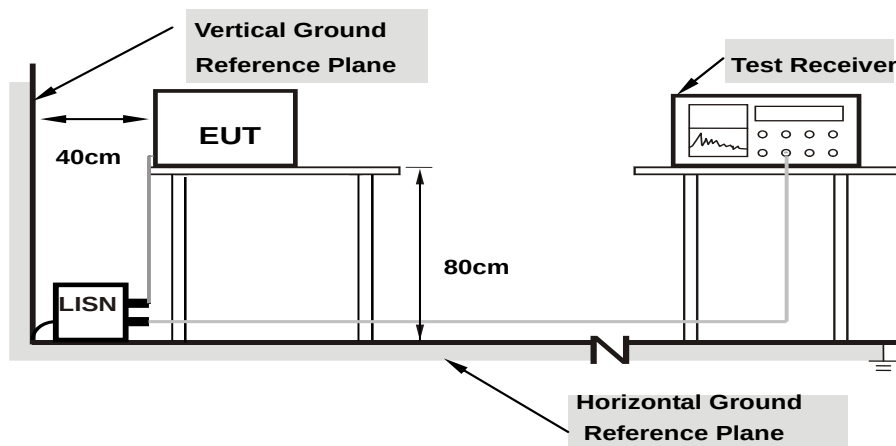
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance 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: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.2.6 EUT Operating Conditions

- Placed the EUT on a testing table.
- Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.2.7 Test Results

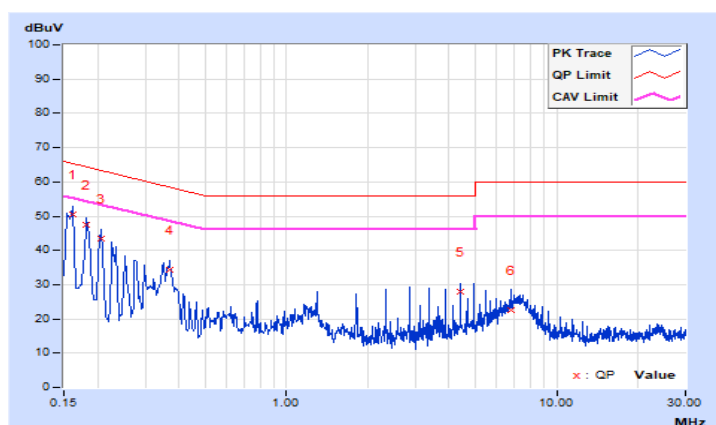
Mode A

Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 73% RH
Tested by	Greg Lin	Test Date	2022/4/8

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	0.16200	10.14	40.43	21.27	50.57	31.41	65.36	55.36	-14.79	-23.95
2	0.18200	10.15	37.33	19.45	47.48	29.60	64.39	54.39	-16.91	-24.79
3	0.20600	10.16	33.44	15.81	43.60	25.97	63.37	53.37	-19.77	-27.40
4	0.37000	10.23	23.97	17.96	34.20	28.19	58.50	48.50	-24.30	-20.31
5	4.41000	10.40	17.52	15.03	27.92	25.43	56.00	46.00	-28.08	-20.57
6	6.74600	10.43	12.09	7.17	22.52	17.60	60.00	50.00	-37.48	-32.40

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

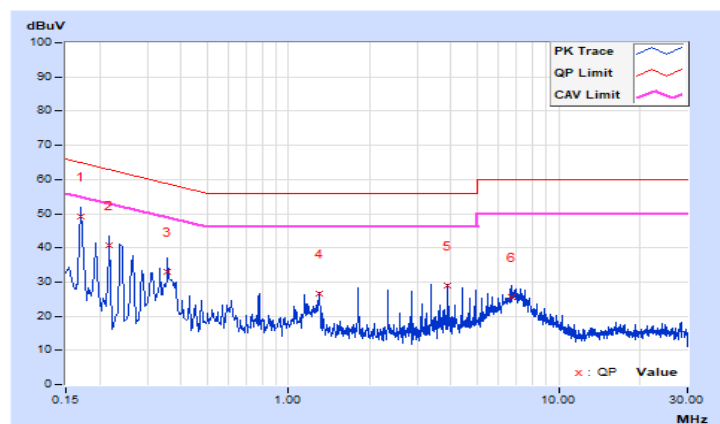


Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 73% RH
Tested by	Greg Lin	Test Date	2022/4/8

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	0.17000	10.16	39.16	20.44	49.32	30.60	64.96	54.96	-15.64	-24.36
2	0.21800	10.20	30.46	11.57	40.66	21.77	62.89	52.89	-22.23	-31.12
3	0.35800	10.25	22.67	12.75	32.92	23.00	58.77	48.77	-25.85	-25.77
4	1.29426	10.32	16.29	14.26	26.61	24.58	56.00	46.00	-29.39	-21.42
5	3.88600	10.40	18.40	16.66	28.80	27.06	56.00	46.00	-27.20	-18.94
6	6.73800	10.45	15.23	10.59	25.68	21.04	60.00	50.00	-34.32	-28.96

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



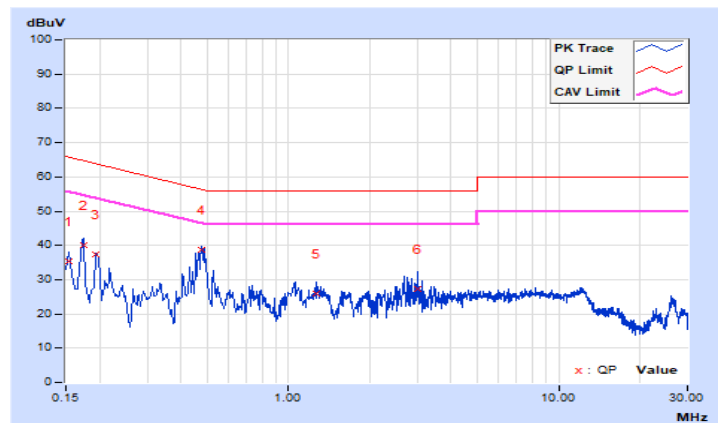
Mode B

Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 73% RH
Tested by	Greg Lin	Test Date	2022/4/8

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	10.13	25.35	13.31	35.48	23.44	65.78	55.78	-30.30	-32.34
2	0.17384	10.13	29.99	16.04	40.12	26.17	64.77	54.77	-24.65	-28.60
3	0.19400	10.14	27.07	14.12	37.21	24.26	63.86	53.86	-26.65	-29.60
4	0.47684	10.16	28.40	22.04	38.56	32.20	56.39	46.39	-17.83	-14.19
5	1.27396	10.20	15.81	10.16	26.01	20.36	56.00	46.00	-29.99	-25.64
6	2.99000	10.23	17.04	8.98	27.27	19.21	56.00	46.00	-28.73	-26.79

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

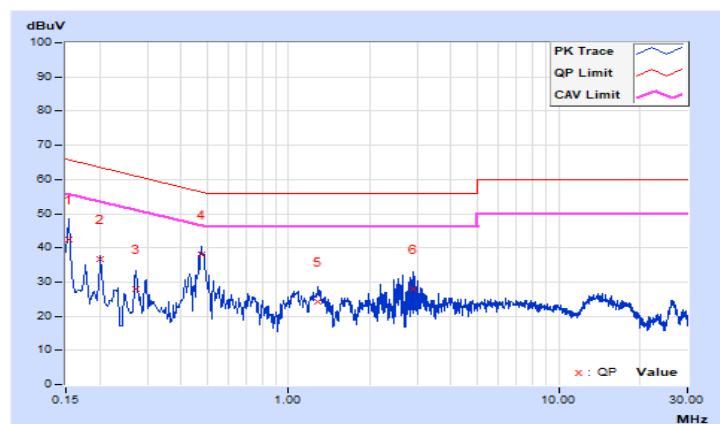


Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 73% RH
Tested by	Greg Lin	Test Date	2022/4/8

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	10.14	32.43	21.86	42.57	32.00	65.78	55.78	-23.21	-23.78
2	0.20200	10.15	26.57	12.23	36.72	22.38	63.53	53.53	-26.81	-31.15
3	0.27400	10.16	17.89	8.43	28.05	18.59	61.00	51.00	-32.95	-32.41
4	0.47400	10.17	27.88	20.27	38.05	30.44	56.44	46.44	-18.39	-16.00
5	1.27800	10.21	13.93	8.39	24.14	18.60	56.00	46.00	-31.86	-27.40
6	2.89400	10.25	17.76	5.89	28.01	16.14	56.00	46.00	-27.99	-29.86

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



4.3 Transmit Power Measurement

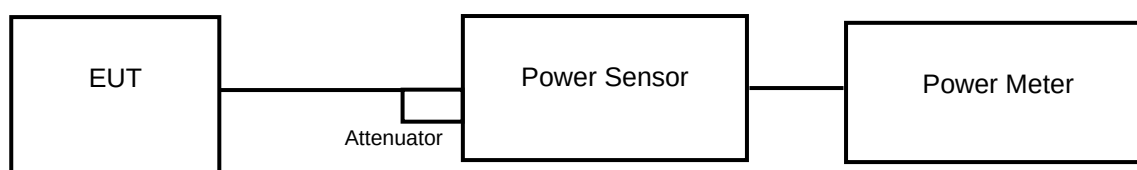
4.3.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125 mW (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	250 mW (24 dBm)
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)

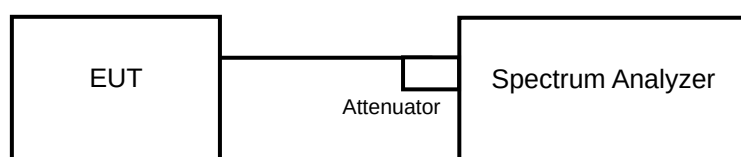
*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

<Power Output Measurement>



<26 dB Bandwidth>



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

Average Power Measurement

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 transmission above 5.725GHz where the EBW crosses 5.725GHz

For channel aggregation (channel 138, 142, 144) measurement refer to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section III Channel Aggregation subpart C. measurement procedures 2 Section.

26 dB Bandwidth

- a. Set RBW = approximately 1 % of the emission bandwidth.
- b. Set the VBW $\geq 3 \times$ RBW.
- c. Detector = Peak.
- d. Trace mode = max hold.
- e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1 %.
- f. For channel aggregation (channel 138, 142, 144) measurement refer to KDB 789033 D02 Section III. CHANNEL AGGREGATION.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 Test Results

Power Output:

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	18.323	12.63	24	Pass
40	5200	18.664	12.71	24	Pass
48	5240	18.239	12.61	24	Pass
52	5260	19.187	12.83	24	Pass
60	5300	19.588	12.92	24	Pass
64	5320	19.099	12.81	24	Pass
100	5500	19.099	12.81	24	Pass
116	5580	19.77	12.96	24	Pass
140	5700	19.32	12.86	24	Pass
144	5720 (U-NII-2C)	14.802	11.70	22.98	Pass
144	5720 (U-NII-3)	2.731	4.36	30	Pass
149	5745	18.75	12.73	30	Pass
157	5785	18.967	12.78	30	Pass
165	5825	18.239	12.61	30	Pass

Note:

For U-NII-2A, U-NII-2C Band:

1. $11 \text{ dBm} + 10\log(21.66) = 24.35\text{dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(21.60) = 24.34\text{dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(21.68) = 24.36\text{dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(21.60) = 24.34\text{dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(21.57) = 24.33\text{dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(21.74) = 24.37\text{dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log(15.78) = 22.98\text{dBm} < 24 \text{ dBm}$.

802.11ac (VHT20)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	19.364	12.87	24	Pass
40	5200	19.634	12.93	24	Pass
48	5240	19.143	12.82	24	Pass
52	5260	18.493	12.67	24	Pass
60	5300	18.88	12.76	24	Pass
64	5320	18.365	12.64	24	Pass
100	5500	18.664	12.71	24	Pass
116	5580	18.88	12.76	24	Pass
140	5700	18.365	12.64	24	Pass
144	5720 (U-NII-2C)	14.189	11.52	23.04	Pass
144	5720 (U-NII-3)	3.311	5.20	30	Pass
149	5745	18.323	12.63	30	Pass
157	5785	18.793	12.74	30	Pass
165	5825	18.365	12.64	30	Pass

Note:

For U-NII-2A, U-NII-2C Band:

- $11 \text{ dBm} + 10\log(21.89) = 24.4\text{dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log(21.86) = 24.39\text{dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log(21.83) = 24.39\text{dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log(21.90) = 24.4\text{dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log(21.84) = 24.39\text{dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log(21.87) = 24.39\text{dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log(16.00) = 23.04\text{dBm} < 24 \text{ dBm}.$

802.11ac (VHT40)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	18.281	12.62	24	Pass
46	5230	18.45	12.66	24	Pass
54	5270	18.793	12.74	24	Pass
62	5310	18.967	12.78	24	Pass
102	5510	18.88	12.76	24	Pass
110	5550	19.099	12.81	24	Pass
134	5670	18.45	12.66	24	Pass
142	5710 (U-NII-2C)	17.041	12.31	24	Pass
142	5710 (U-NII-3)	1.385	1.41	30	Pass
151	5755	18.793	12.74	30	Pass
159	5795	18.323	12.63	30	Pass

Note:

For U-NII-2A, U-NII-2C Band:

1. $11 \text{ dBm} + 10\log(41.28) = 27.15\text{dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(41.24) = 27.15\text{dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(41.24) = 27.15\text{dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(41.26) = 27.15\text{dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(41.30) = 27.15\text{dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(35.59) = 26.51\text{dBm} > 24 \text{ dBm}$.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	9.638	9.84	24	Pass
58	5290	9.931	9.97	24	Pass
106	5530	9.863	9.94	24	Pass
122	5610	9.75	9.89	24	Pass
138	5690 (U-NII-2C)	9.397	9.73	24	Pass
138	5690 (U-NII-3)	0.2877	-5.41	30	Pass
155	5775	9.572	9.81	30	Pass

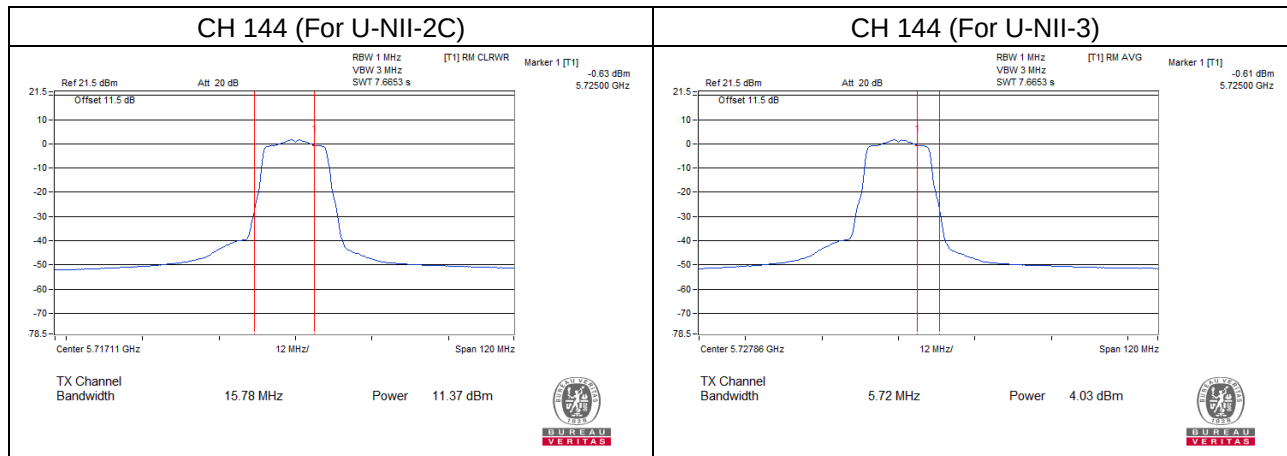
Note:

For U-NII-2A, U-NII-2C Band:

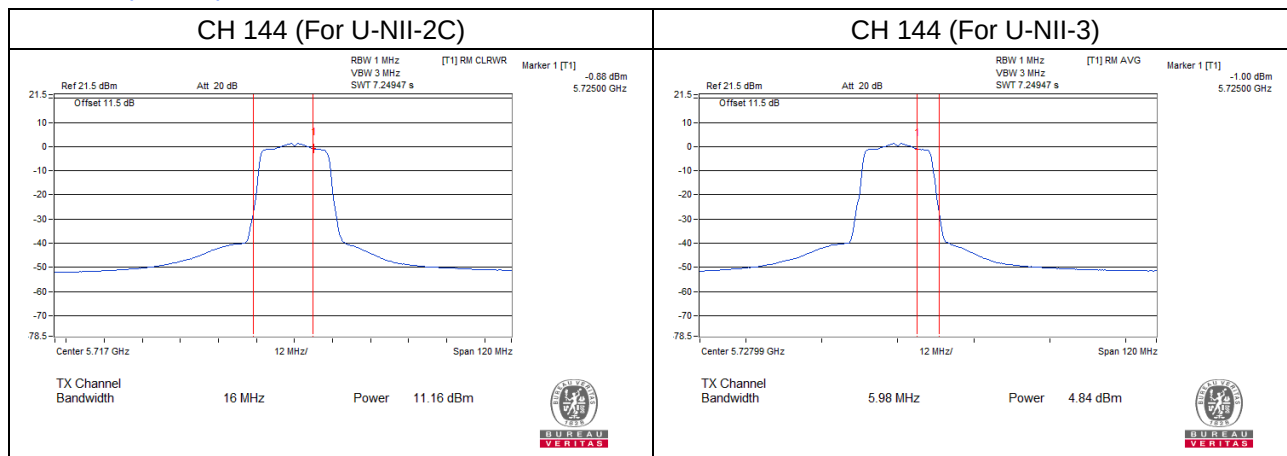
1. $11 \text{ dBm} + 10\log(82.35) = 30.15\text{dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(82.06) = 30.14\text{dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(82.68) = 30.17\text{dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(76.11) = 29.81\text{dBm} > 24 \text{ dBm}$.

Straddle channel power plots:

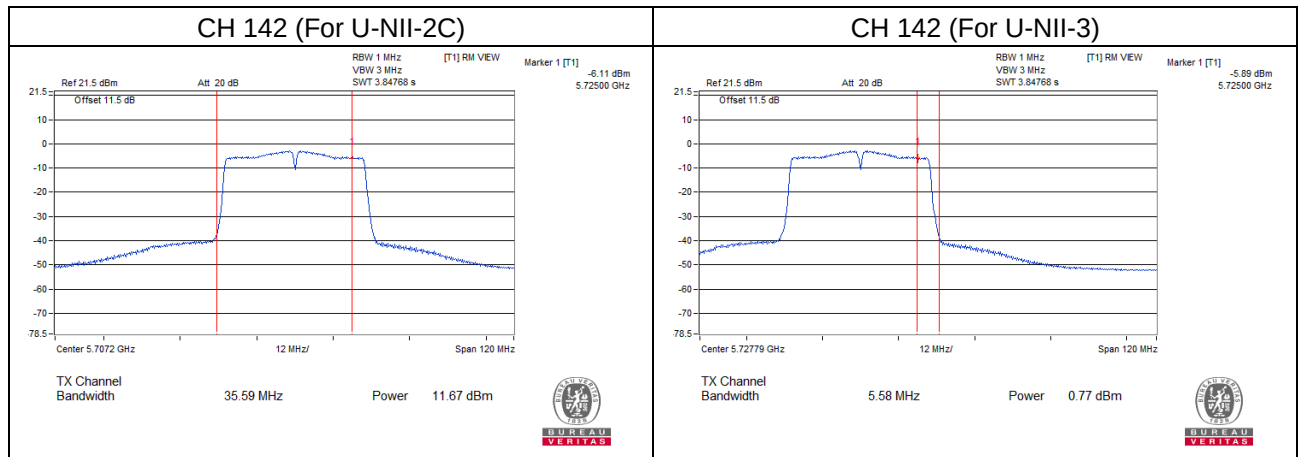
802.11a



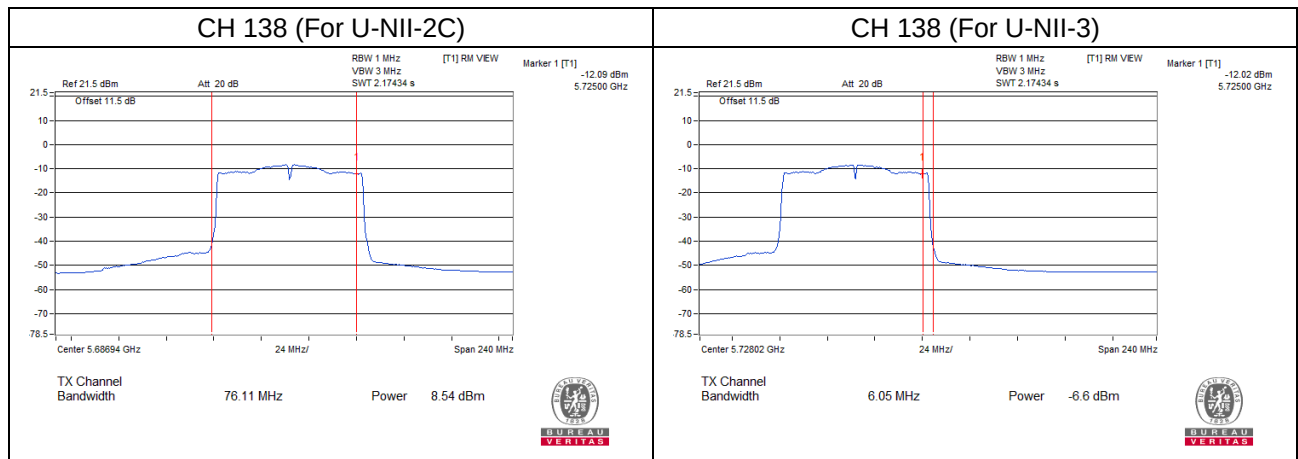
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



26 dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
52	5260	21.66
60	5300	21.60
64	5320	21.68
100	5500	21.60
116	5580	21.57
140	5700	21.74
144	5720 (U-NII-2C)	15.78

802.11ac (VHT20)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
52	5260	21.89
60	5300	21.86
64	5320	21.83
100	5500	21.90
116	5580	21.84
140	5700	21.87
144	5720 (U-NII-2C)	16.00

802.11ac (VHT40)

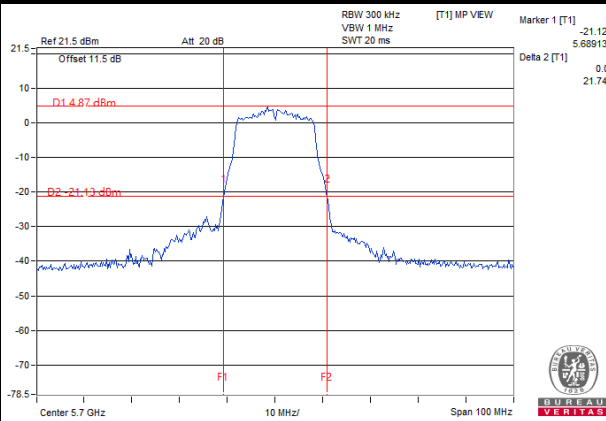
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
54	5270	41.28
62	5310	41.24
102	5510	41.24
110	5550	41.26
134	5670	41.30
142	5710 (U-NII-2C)	35.59

802.11ac (VHT80)

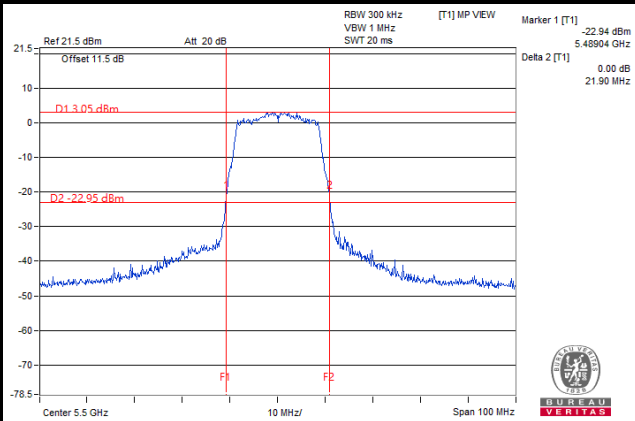
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
58	5290	82.35
106	5530	82.06
122	5610	82.68
138	5690 (U-NII-2C)	76.11

Spectrum Plot of Worst Value

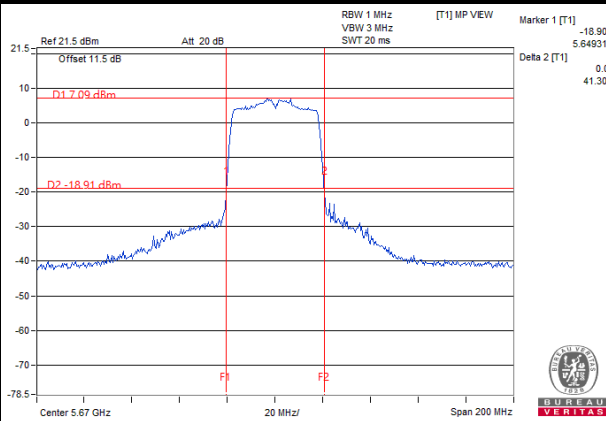
802.11a



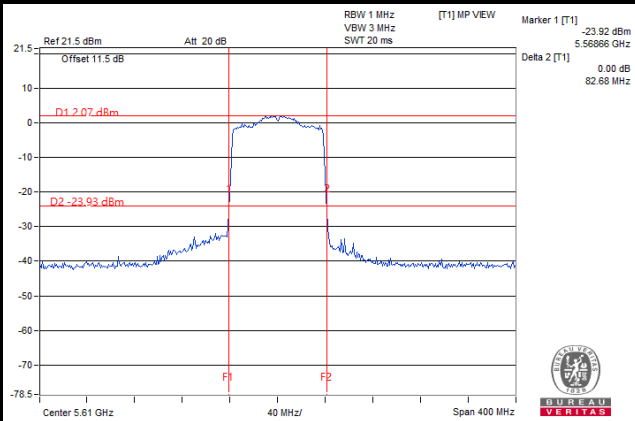
802.11ac (VHT20)



802.11ac (VHT40)

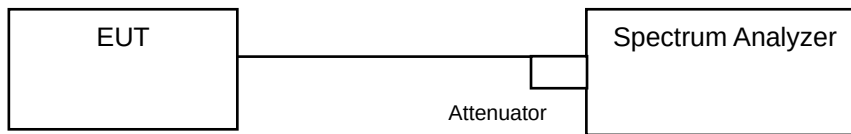


802.11ac (VHT80)



4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 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 SAMPLE. 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.

4.4.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.92
40	5200	16.92
48	5240	16.92
52	5260	16.92
60	5300	16.92
64	5320	16.92
100	5500	16.92
116	5580	16.92
140	5700	16.92
144	5720 (U-NII-2C)	13.52
144	5720 (U-NII-3)	3.40
149	5745	16.92
157	5785	17.04
165	5825	16.92

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.00
40	5200	17.88
48	5240	18.00
52	5260	18.00
60	5300	18.00
64	5320	18.08
100	5500	18.00
116	5580	18.00
140	5700	18.00
144	5720 (U-NII-2C)	14.12
144	5720 (U-NII-3)	4.00
149	5745	18.00
157	5785	18.00
165	5825	18.00

802.11ac (VHT40)

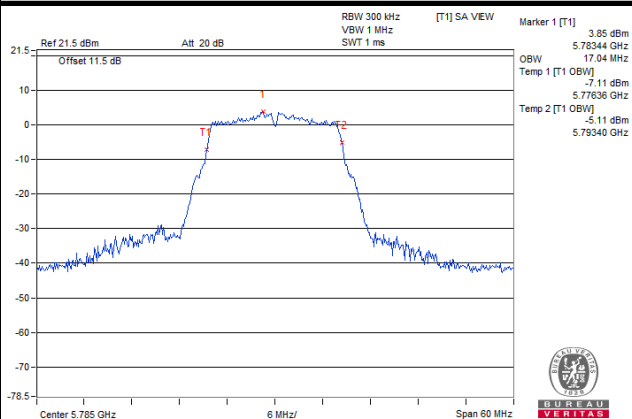
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.60
46	5230	36.48
54	5270	36.48
62	5310	36.60
102	5510	36.60
110	5550	36.48
134	5670	36.48
142	5710 (U-NII-2C)	33.24
142	5710 (U-NII-3)	3.24
151	5755	36.61
159	5795	36.48

802.11ac (VHT80)

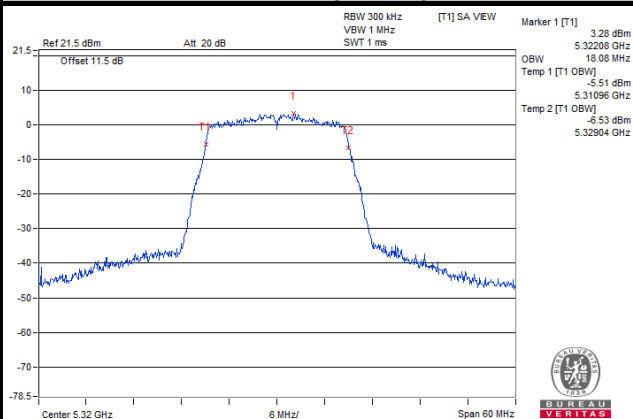
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.60
58	5290	75.84
106	5530	75.60
122	5610	75.60
138	5690 (U-NII-2C)	72.92
138	5690 (U-NII-3)	2.44
155	5775	75.84

Spectrum Plot of Worst Value

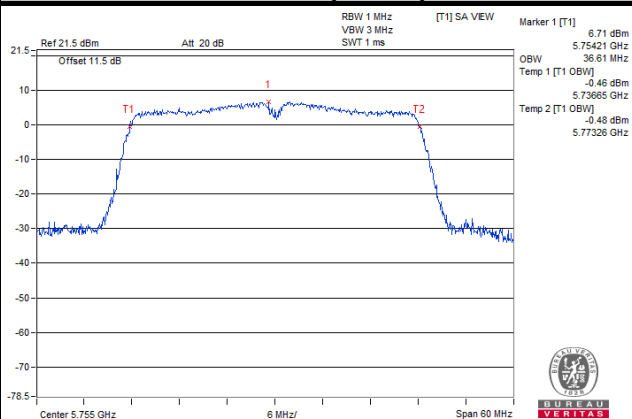
802.11a



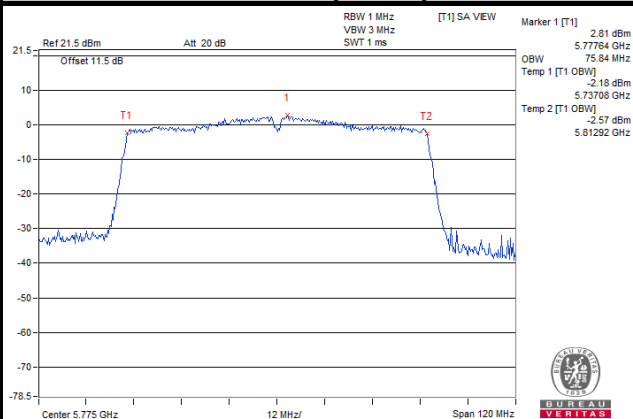
802.11ac (VHT20)



802.11ac (VHT40)



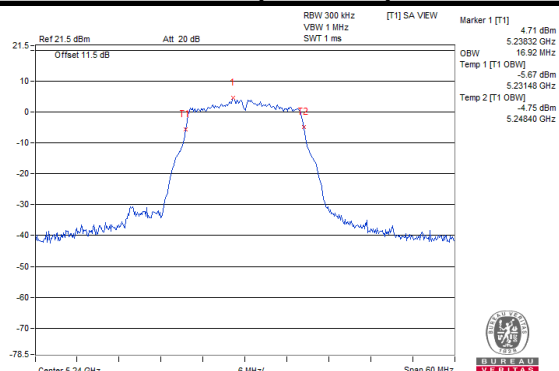
802.11ac (VHT80)



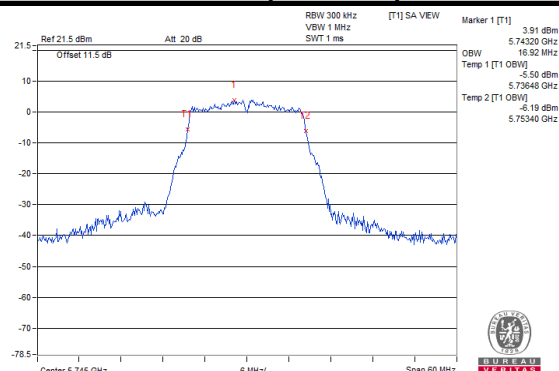
Spectrum Plot for Nearby DFS Band

802.11a

Ch 48 (5240 MHz)

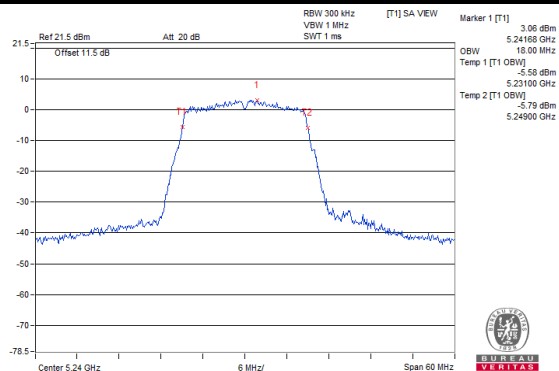


Ch 149 (5745 MHz)

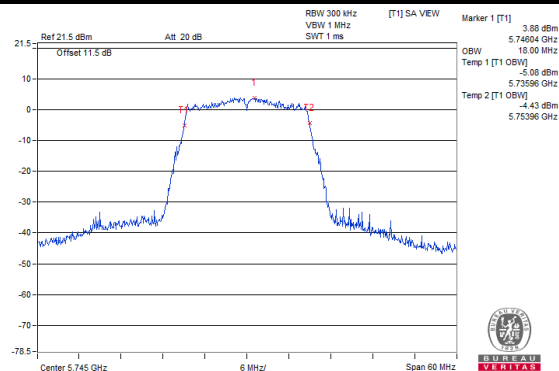


802.11ac (VHT20)

Ch 48 (5240 MHz)

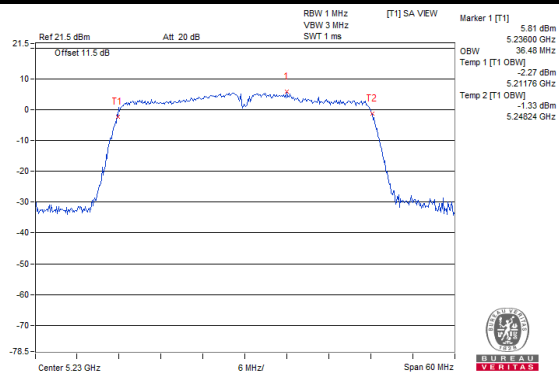


Ch 149 (5745 MHz)

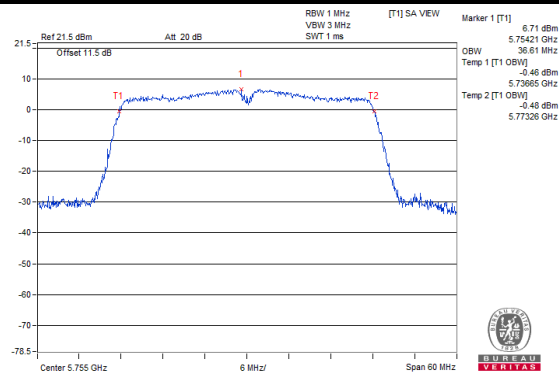


802.11ac (VHT40)

Ch 46 (5230 MHz)

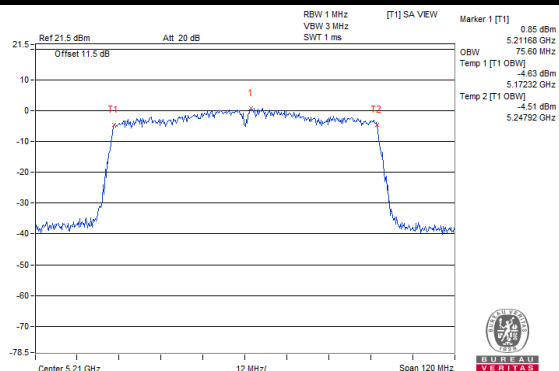


Ch 151 (5755 MHz)

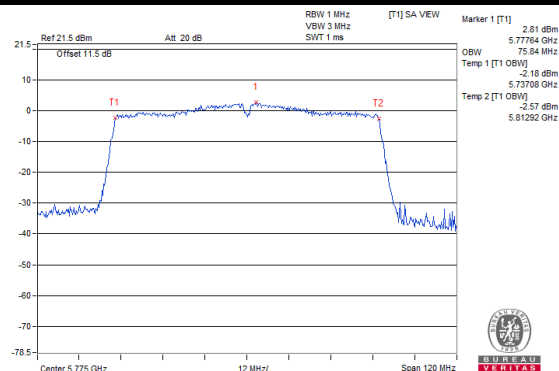


802.11ac (VHT80)

Ch 42 (5210 MHz)



Ch 155 (5775 MHz)

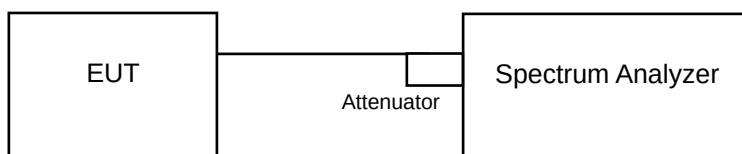


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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
U-NII-2A	√		11 dBm/MHz
U-NII-2C	√		11 dBm/MHz
U-NII-3	√		30 dBm/500 kHz

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

For U-NII-1, U-NII-2A, U-NII-2C band:

Using method SA-2

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW $\geq$ 3 RBW, Detector = RMS
3. Sweep time = auto, trigger set to "free run".
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value and add 10 log (1/duty cycle)

※ For U-NII-3:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW $\geq$ 1 RBW, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500 \text{ kHz} / 300 \text{ kHz})$.
5. Sweep time = auto, trigger set to "free run".
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value and add 10 log (1/duty cycle)

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.5.7 Test Results

For U-NII-1, U-NII-2A, U-NII-2C Band

802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
36	5180	-0.35	0.33	-0.02	11	Pass
40	5200	-0.36	0.33	-0.03	11	Pass
48	5240	-0.35	0.33	-0.02	11	Pass
52	5260	-0.17	0.33	0.16	11	Pass
60	5300	-0.16	0.33	0.17	11	Pass
64	5320	-0.24	0.33	0.09	11	Pass
100	5500	-0.19	0.33	0.14	11	Pass
116	5580	-0.10	0.33	0.23	11	Pass
140	5700	-0.28	0.33	0.05	11	Pass
144	5720 (U-NII-2C)	-0.22	0.33	0.11	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
36	5180	-0.13	0.36	0.23	11	Pass
40	5200	-0.14	0.36	0.22	11	Pass
48	5240	-0.10	0.36	0.26	11	Pass
52	5260	-0.38	0.36	-0.02	11	Pass
60	5300	-0.24	0.36	0.12	11	Pass
64	5320	-0.22	0.36	0.14	11	Pass
100	5500	-0.29	0.36	0.07	11	Pass
116	5580	-0.40	0.36	-0.04	11	Pass
140	5700	-0.31	0.36	0.05	11	Pass
144	5720 (U-NII-2C)	-0.42	0.36	-0.06	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
38	5190	-3.48	0.65	-2.83	11	Pass
46	5230	-3.48	0.65	-2.83	11	Pass
54	5270	-3.14	0.65	-2.49	11	Pass
62	5310	-3.26	0.65	-2.61	11	Pass
102	5510	-3.35	0.65	-2.70	11	Pass
110	5550	-3.32	0.65	-2.67	11	Pass
134	5670	-3.18	0.65	-2.53	11	Pass
142	5710 (U-NII-2C)	-3.24	0.65	-2.59	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

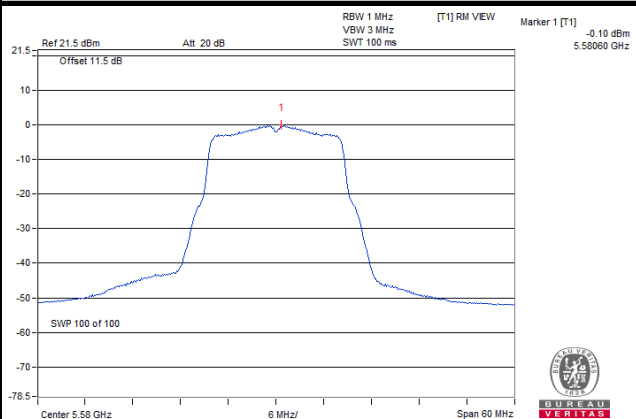
802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
42	5210	-9.12	1.19	-7.93	11	Pass
58	5290	-9.07	1.19	-7.88	11	Pass
106	5530	-9.11	1.19	-7.92	11	Pass
122	5610	-9.02	1.19	-7.83	11	Pass
138	5690 (U-NII-2C)	-9.13	1.19	-7.94	11	Pass

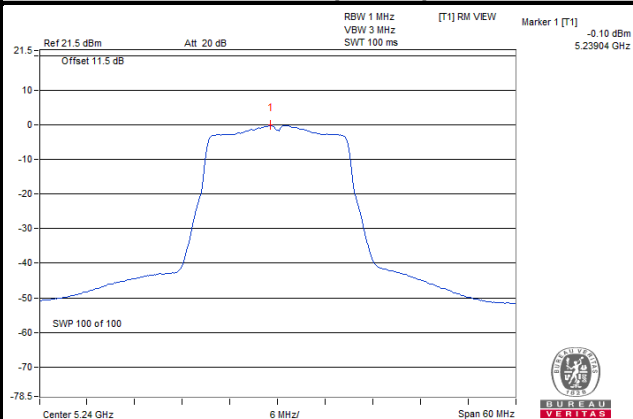
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

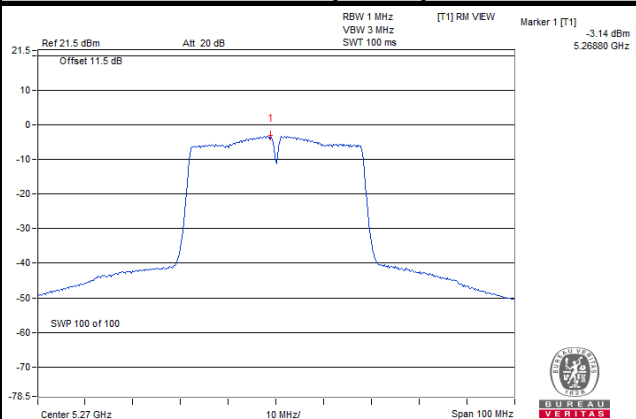
802.11a



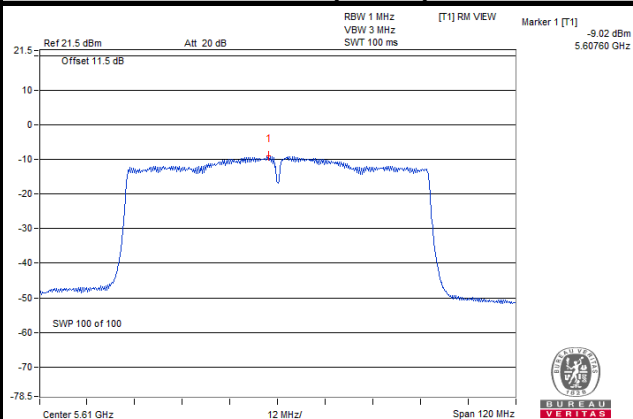
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



For U-NII-3 Band

802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
144	5720 (U-NII-3)	-10.52	-8.3	0.33	-7.97	30	Pass
149	5745	-8.07	-5.85	0.33	-5.52	30	Pass
157	5785	-8.01	-5.79	0.33	-5.46	30	Pass
165	5825	-8.54	-6.32	0.33	-5.99	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
144	5720 (U-NII-3)	-10.99	-8.77	0.36	-8.41	30	Pass
149	5745	-7.62	-5.4	0.36	-5.04	30	Pass
157	5785	-7.45	-5.23	0.36	-4.87	30	Pass
165	5825	-7.58	-5.36	0.36	-5	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
142	5710 (U-NII-3)	-14.34	-12.12	0.65	-11.47	30	Pass
151	5755	-11.51	-9.29	0.65	-8.64	30	Pass
159	5795	-11.9	-9.68	0.65	-9.03	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

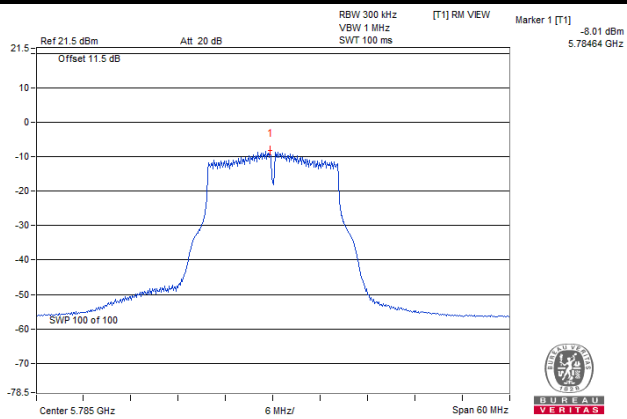
802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
138	5690 (U-NII-3)	-20.62	-18.4	1.19	-17.21	30	Pass
155	5775	-17.09	-14.87	1.19	-13.68	30	Pass

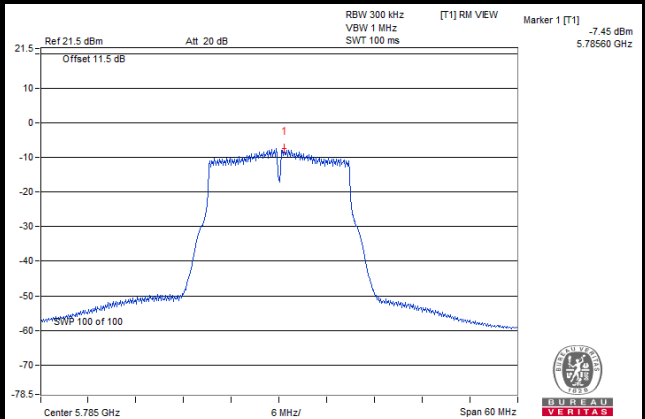
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

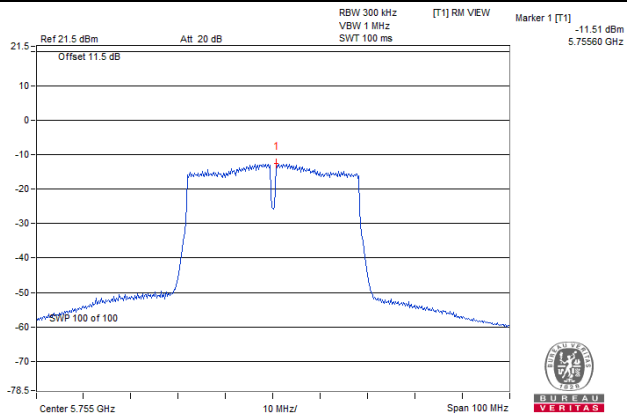
802.11a



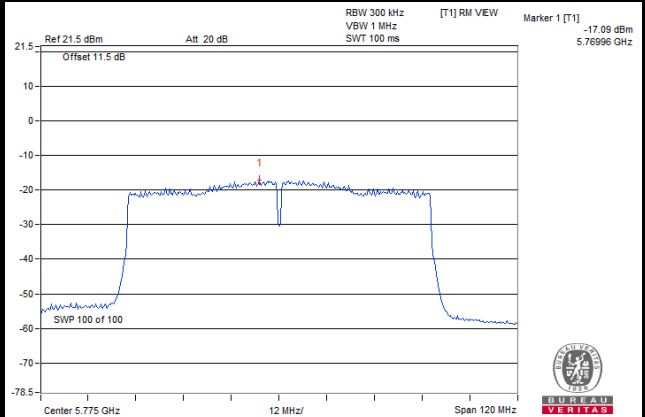
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)

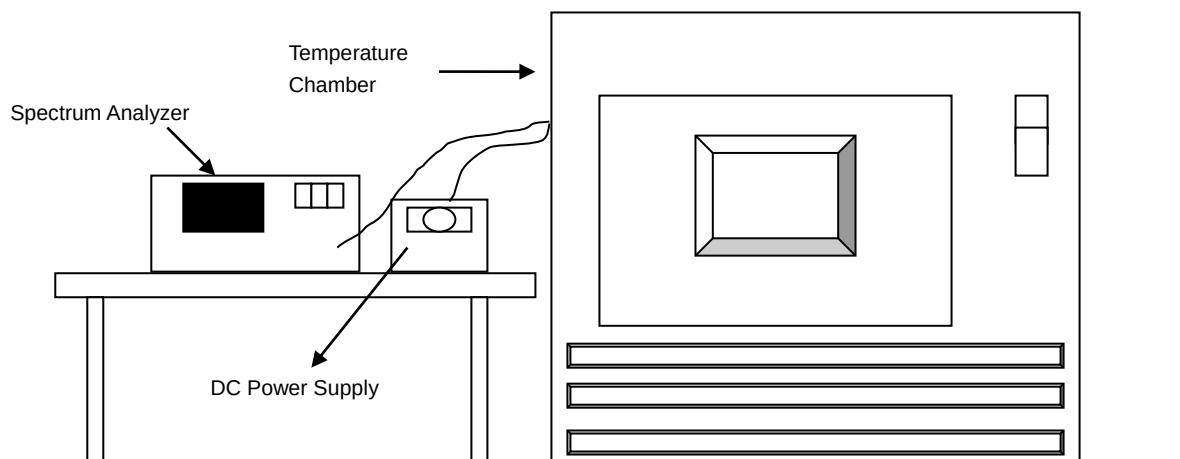


4.6 Frequency Stability

4.6.1 Limit of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal DC 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.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Reading (MHz)	Result	Reading (MHz)	Result	Reading (MHz)	Result	Reading (MHz)	Result
40	120	5210.0123	Pass	5210.0125	Pass	5210.0129	Pass	5210.0119	Pass
30	120	5209.9841	Pass	5209.9859	Pass	5209.9866	Pass	5209.9868	Pass
20	120	5210.0064	Pass	5210.0071	Pass	5210.0082	Pass	5210.0063	Pass
10	120	5210.0232	Pass	5210.0183	Pass	5210.019	Pass	5210.0192	Pass
0	120	5209.9903	Pass	5209.9947	Pass	5209.9909	Pass	5209.9936	Pass

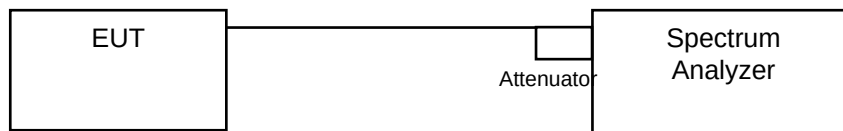
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Reading (MHz)	Result	Reading (MHz)	Result	Reading (MHz)	Result	Reading (MHz)	Result
20	138	5210.0176	Pass	5210.0182	Pass	5210.0142	Pass	5210.0169	Pass
	120	5210.0064	Pass	5210.0071	Pass	5210.0082	Pass	5210.0063	Pass
	102	5210.0085	Pass	5210.0097	Pass	5210.0063	Pass	5210.0059	Pass

4.7 6 dB Bandwidth Measurement

4.7.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

- Set resolution bandwidth (RBW) = 100 kHz
- Set the video bandwidth (VBW) $\geq 3 \times$ 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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.7.7 Test Results

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 (U-NII-3)	3.17	0.5	Pass
149	5745	16.37	0.5	Pass
157	5785	16.38	0.5	Pass
165	5825	16.38	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 (U-NII-3)	3.78	0.5	Pass
149	5745	17.58	0.5	Pass
157	5785	17.34	0.5	Pass
165	5825	17.58	0.5	Pass

802.11ac (VHT40)

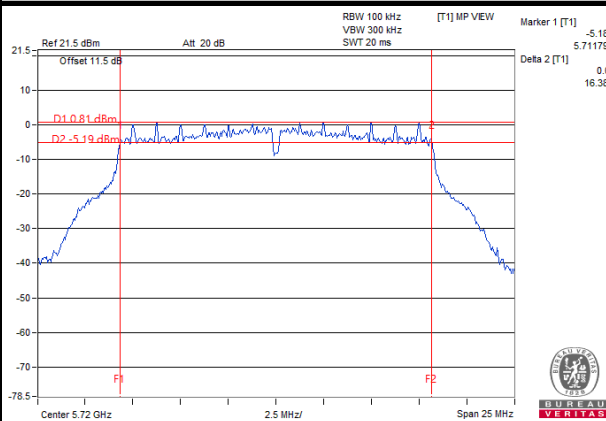
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
142	5710 (U-NII-3)	2.89	0.5	Pass
151	5755	36.10	0.5	Pass
159	5795	36.15	0.5	Pass

802.11ac (VHT80)

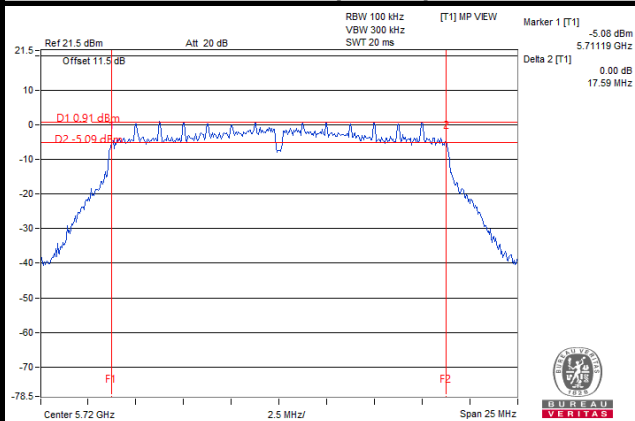
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
138	5690 (U-NII-3)	2.77	0.5	Pass
155	5775	75.56	0.5	Pass

Spectrum Plot of Worst Value

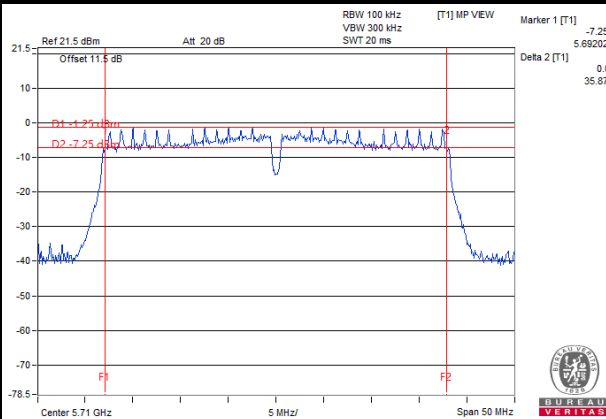
802.11a



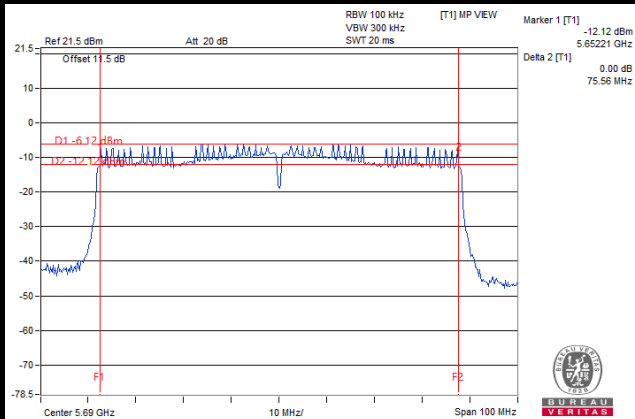
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



Note:

For Ch138 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

For Ch144 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

For Ch142 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

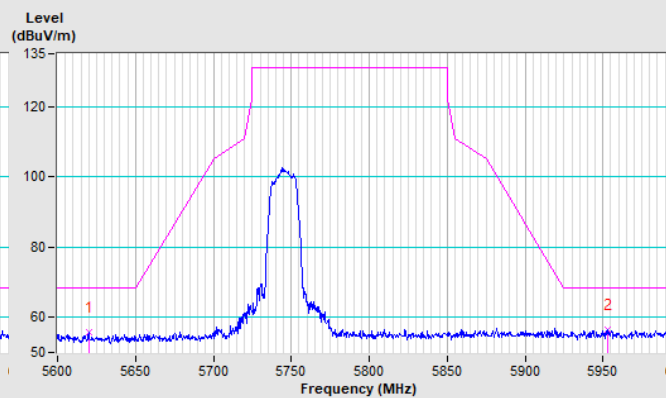
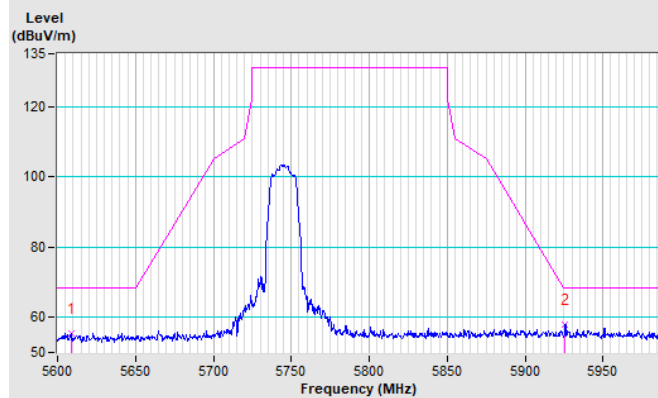
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a

CH 149 5745 MHz

Horizontal

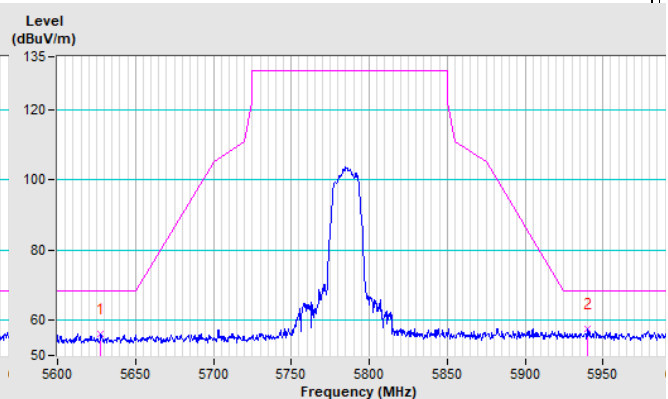
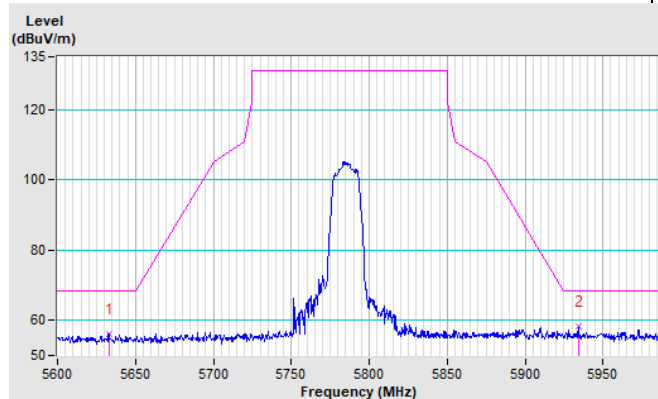
Vertical



CH 157 5785 MHz

Horizontal

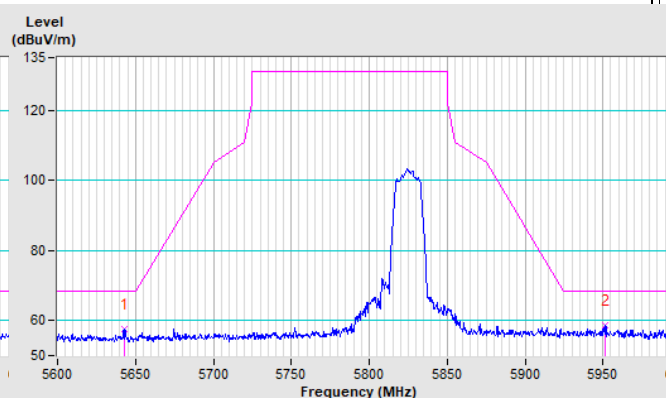
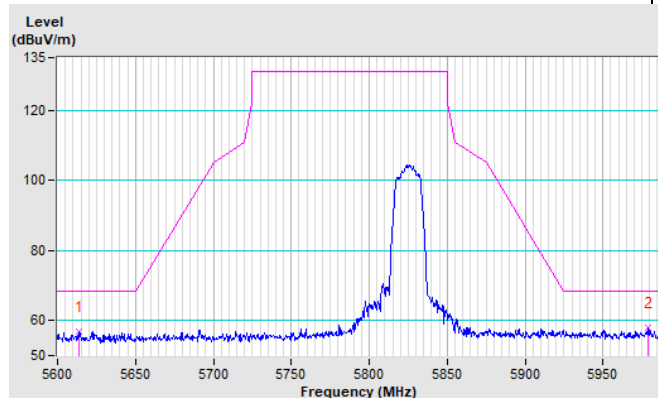
Vertical



CH 165 5825 MHz

Horizontal

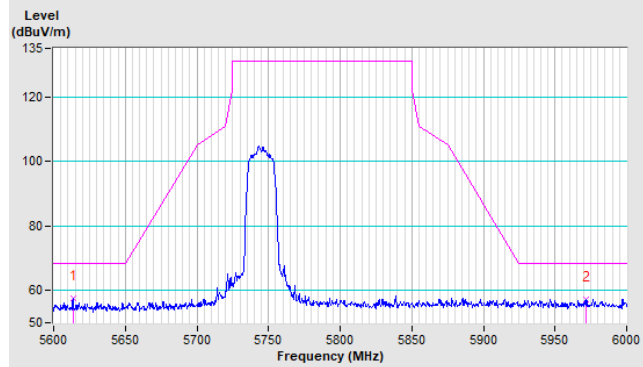
Vertical



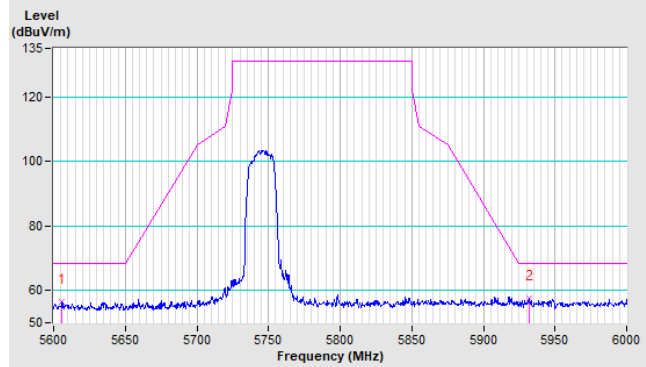
802.11ac (VHT20)

CH 149 5745 MHz

Horizontal

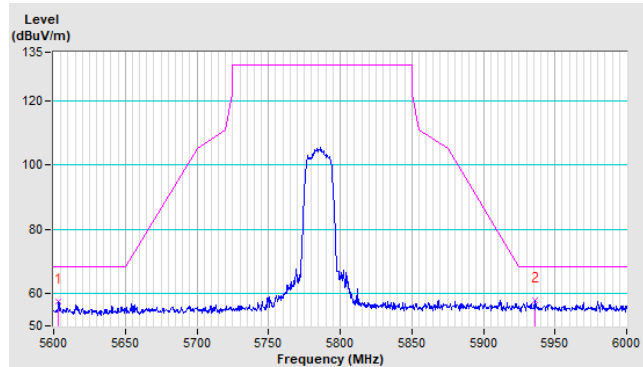


Vertical

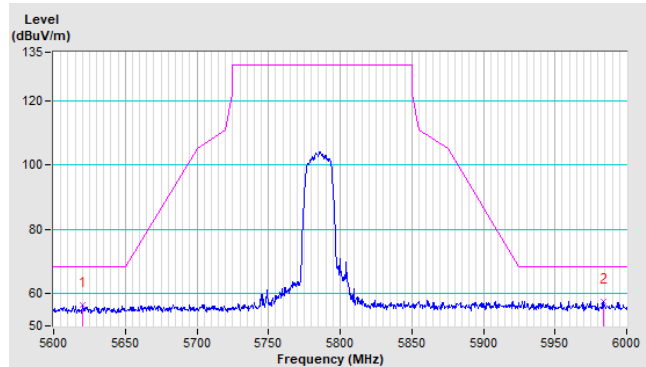


CH 157 5785 MHz

Horizontal

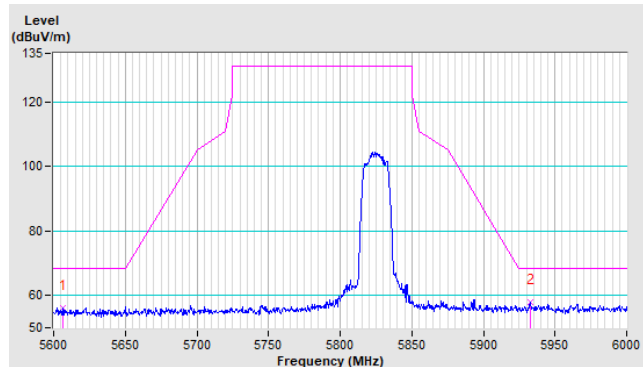


Vertical

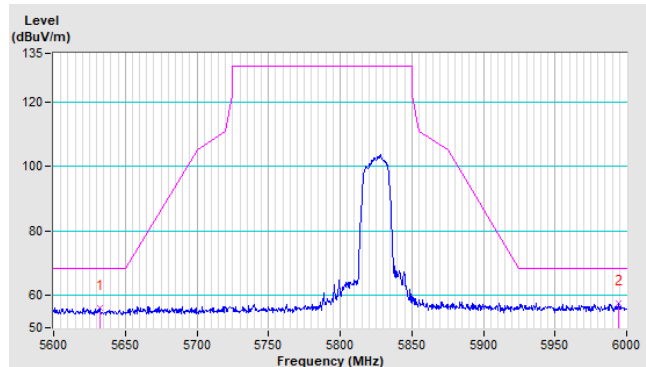


CH 165 5825 MHz

Horizontal



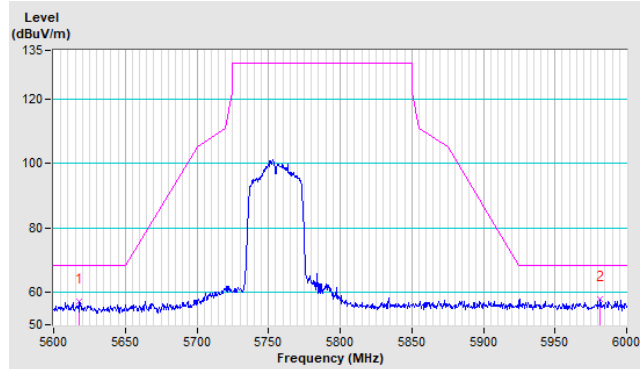
Vertical



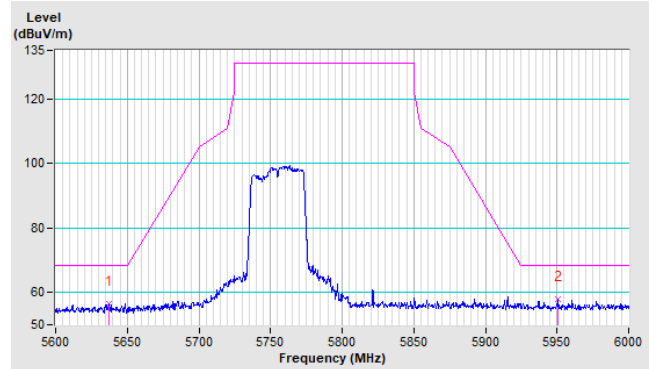
802.11ac (VHT40)

CH 151 5755 MHz

Horizontal

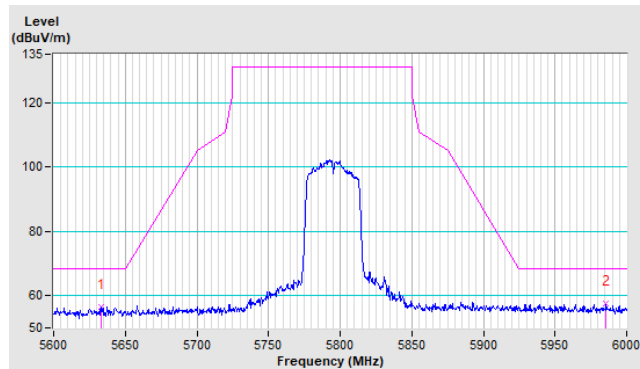


Vertical

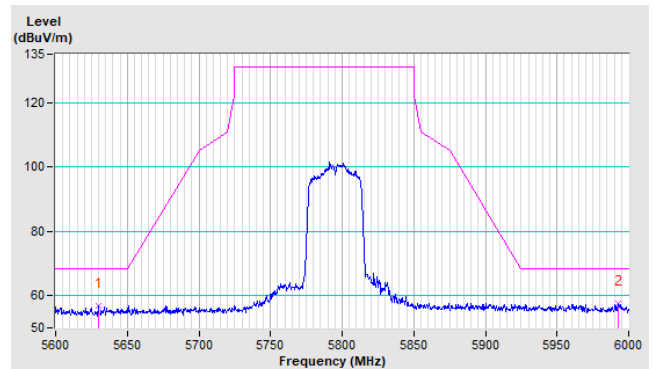


CH 159 5795 MHz

Horizontal



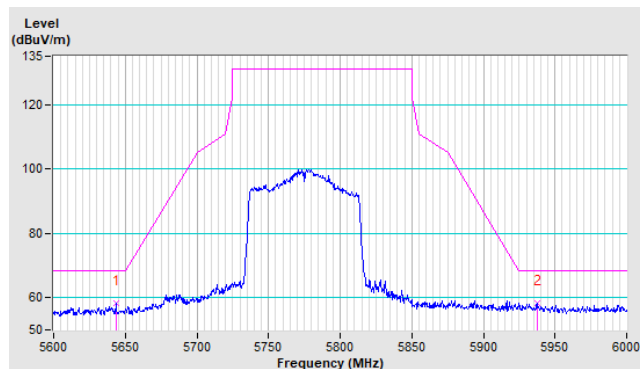
Vertical



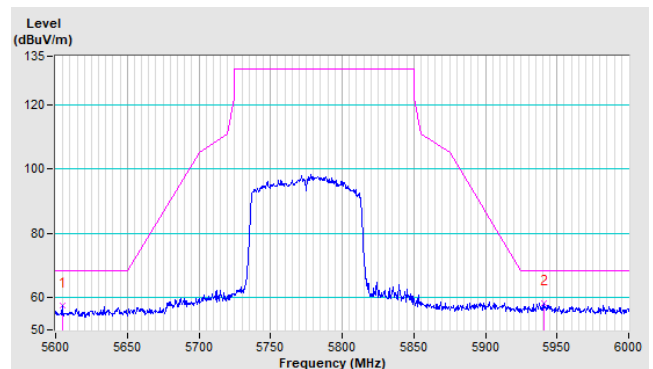
802.11ac (VHT80)

CH 155 5775 MHz

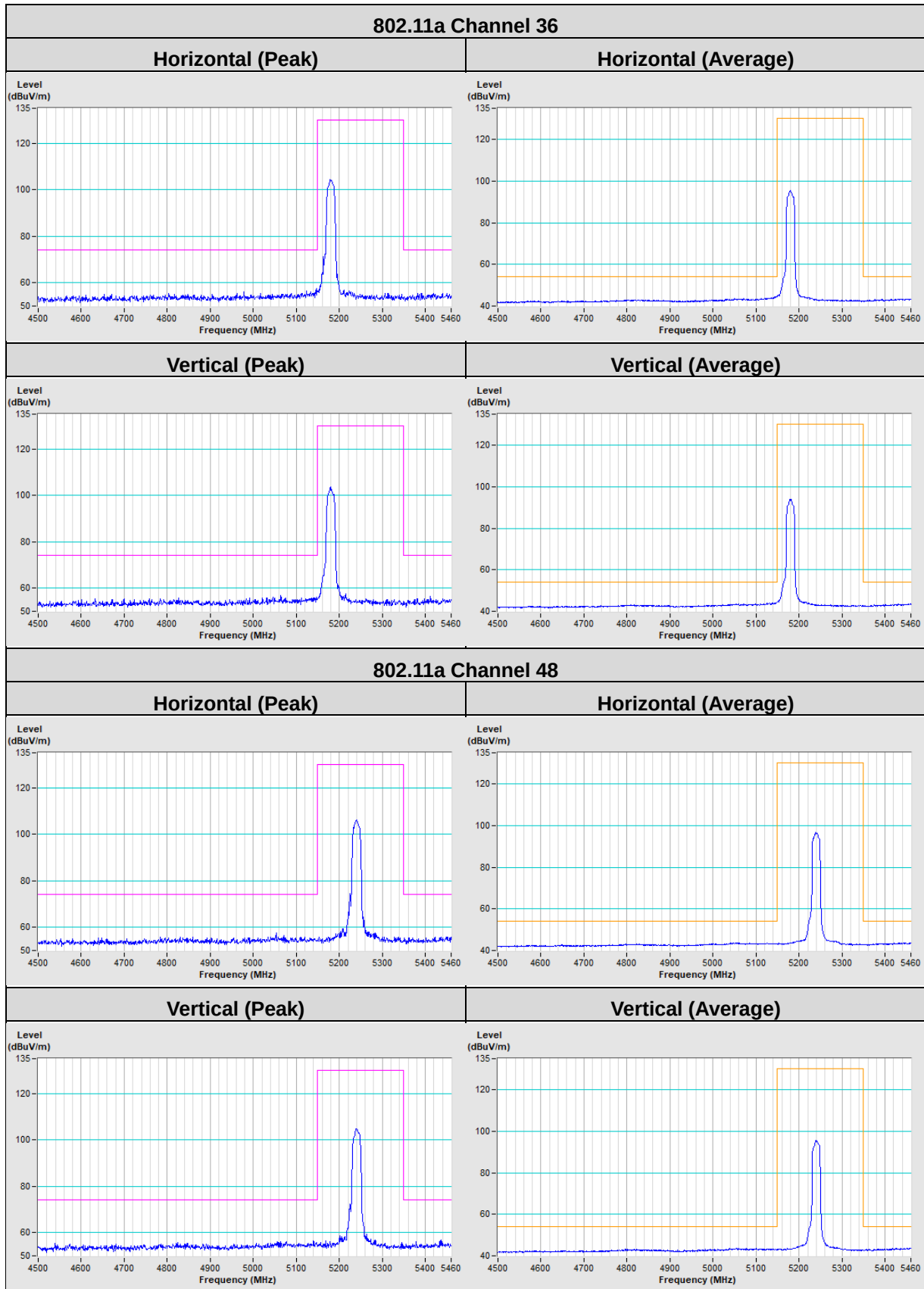
Horizontal

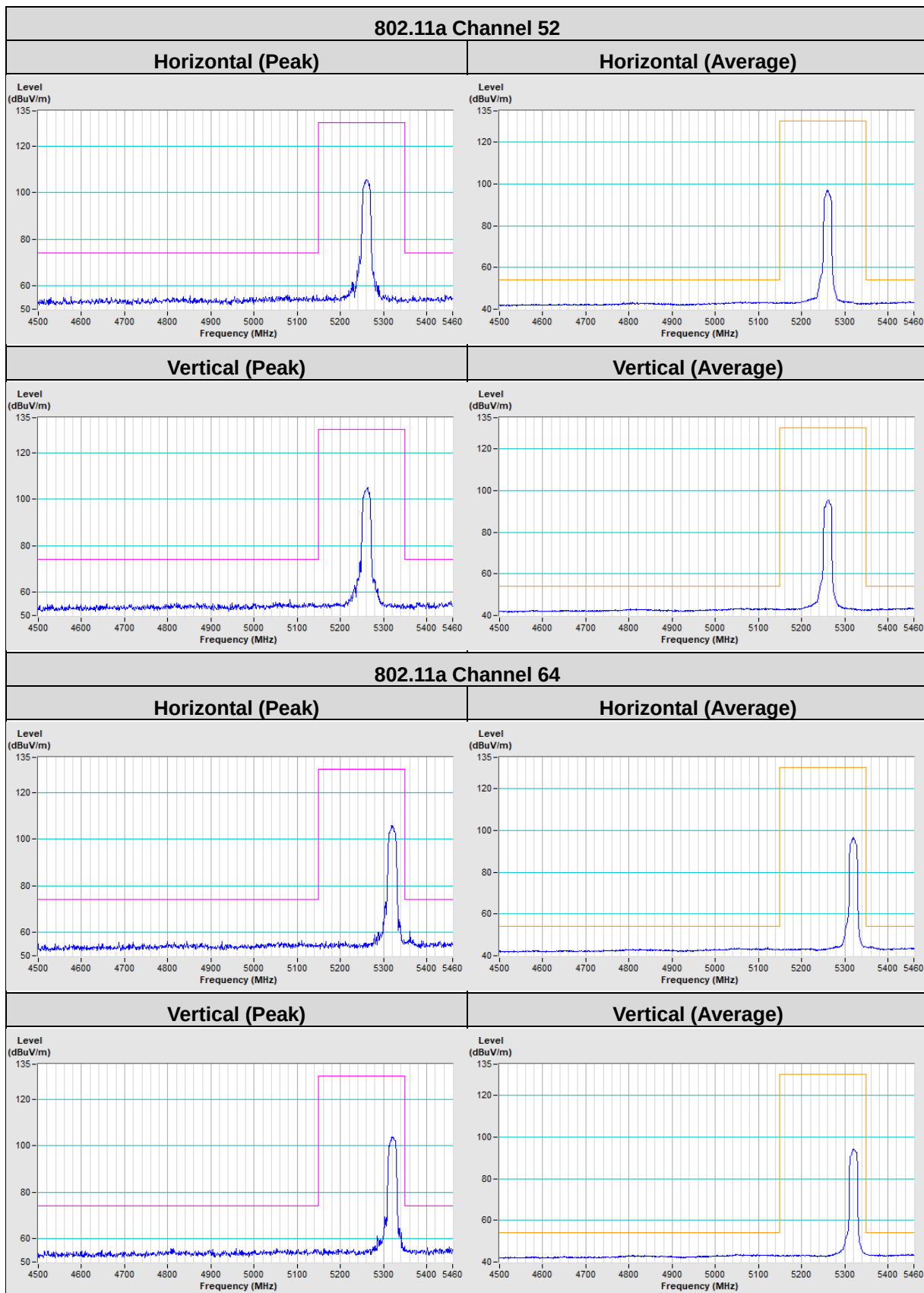


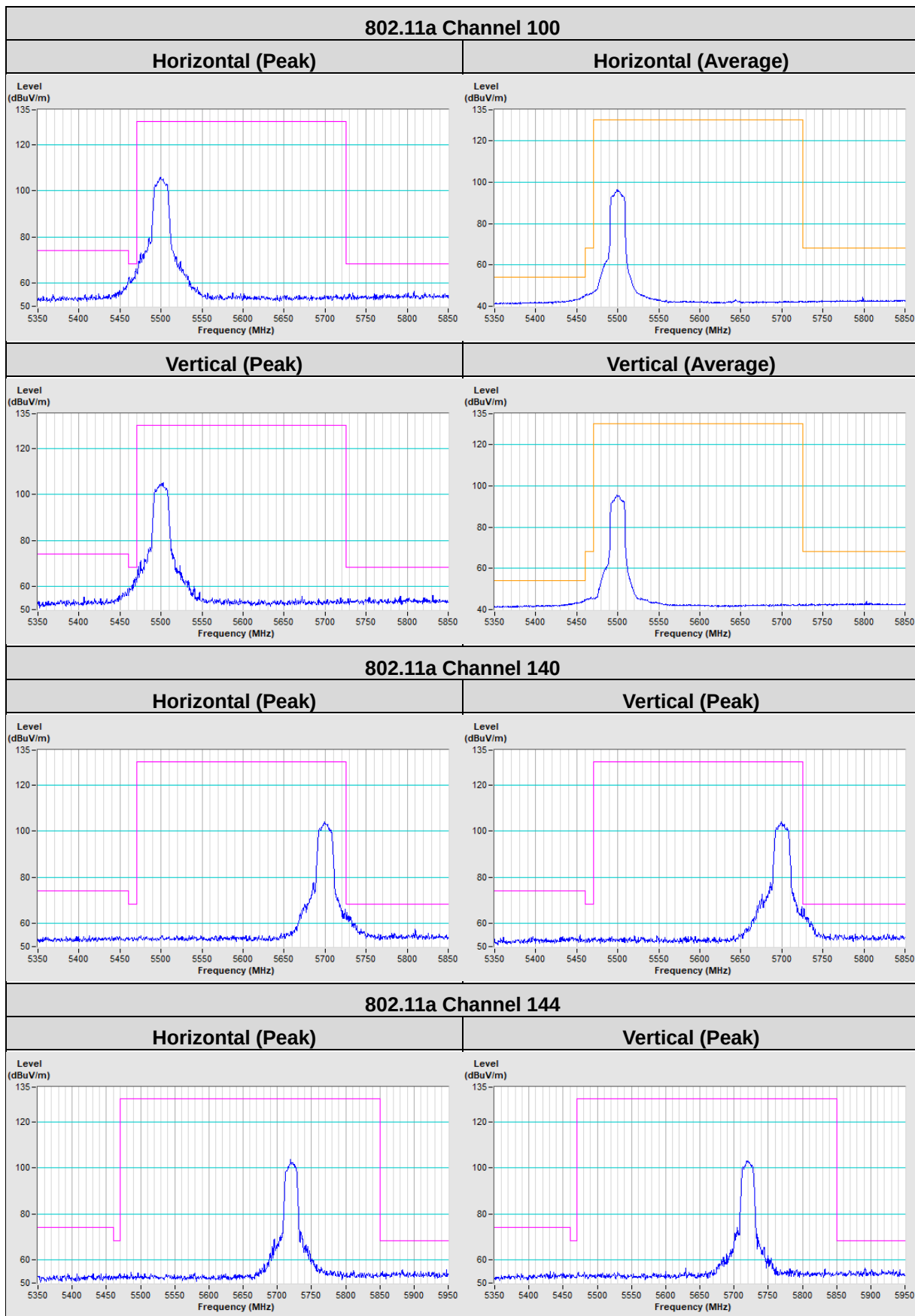
Vertical

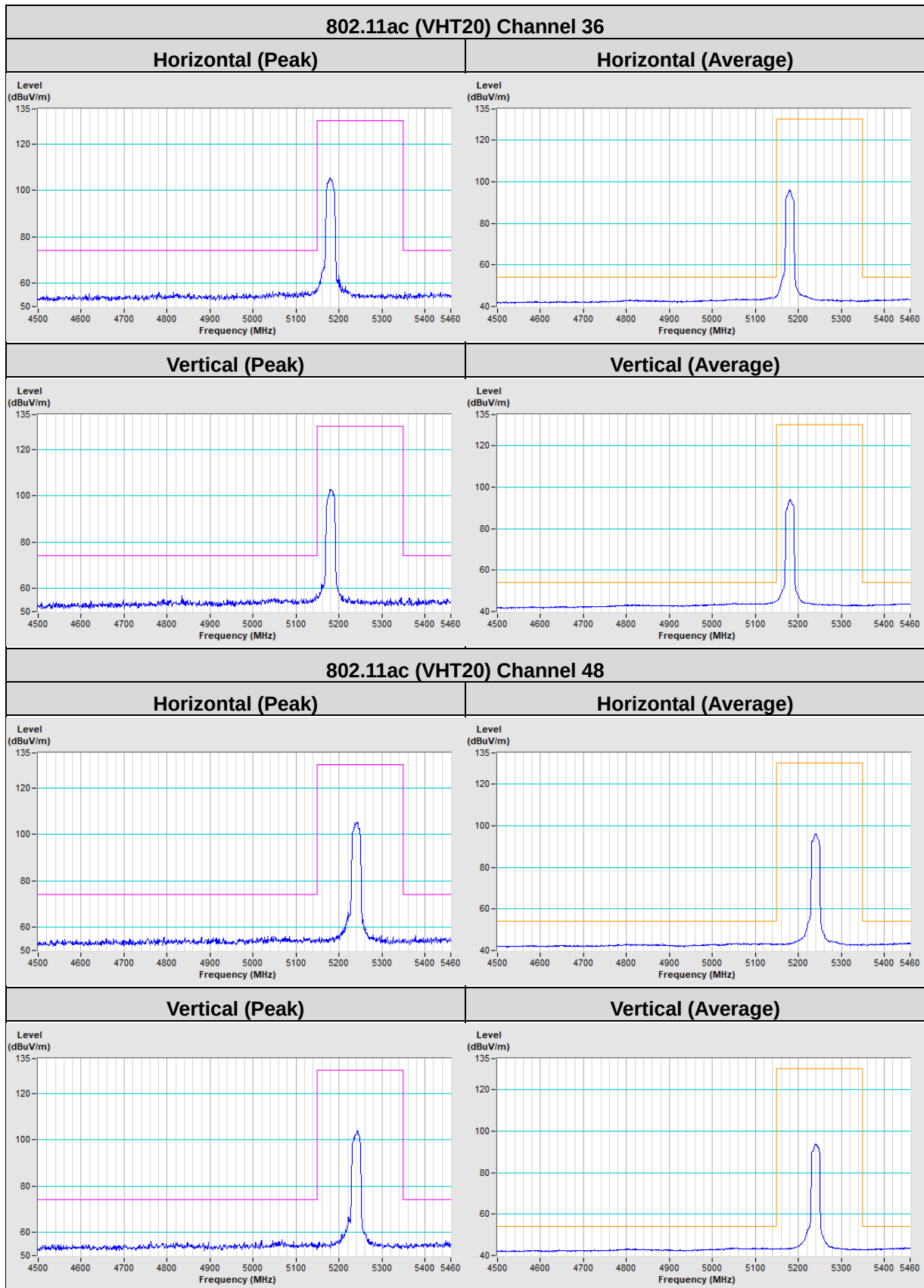


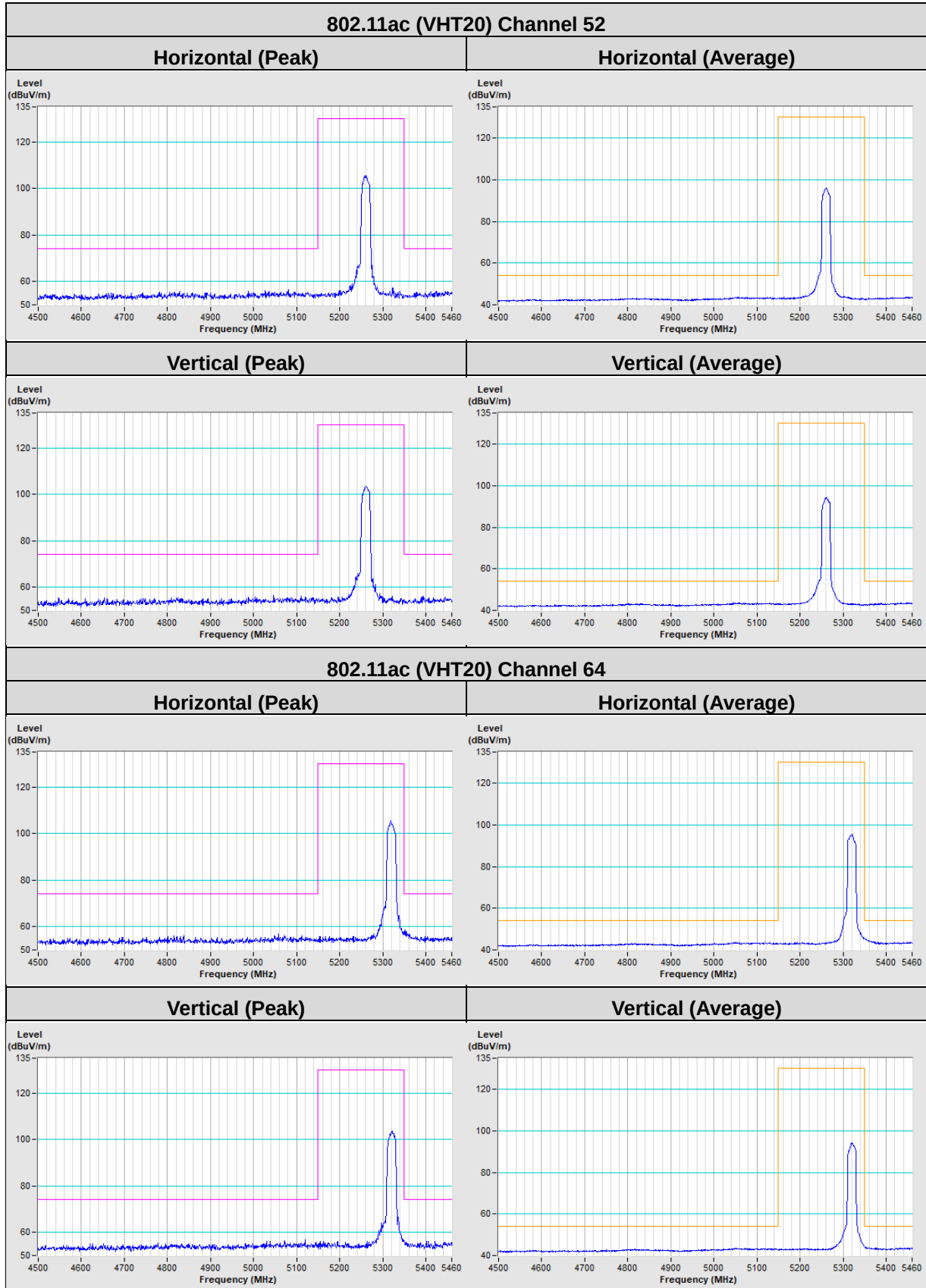
Annex B- Band Edge Measurement

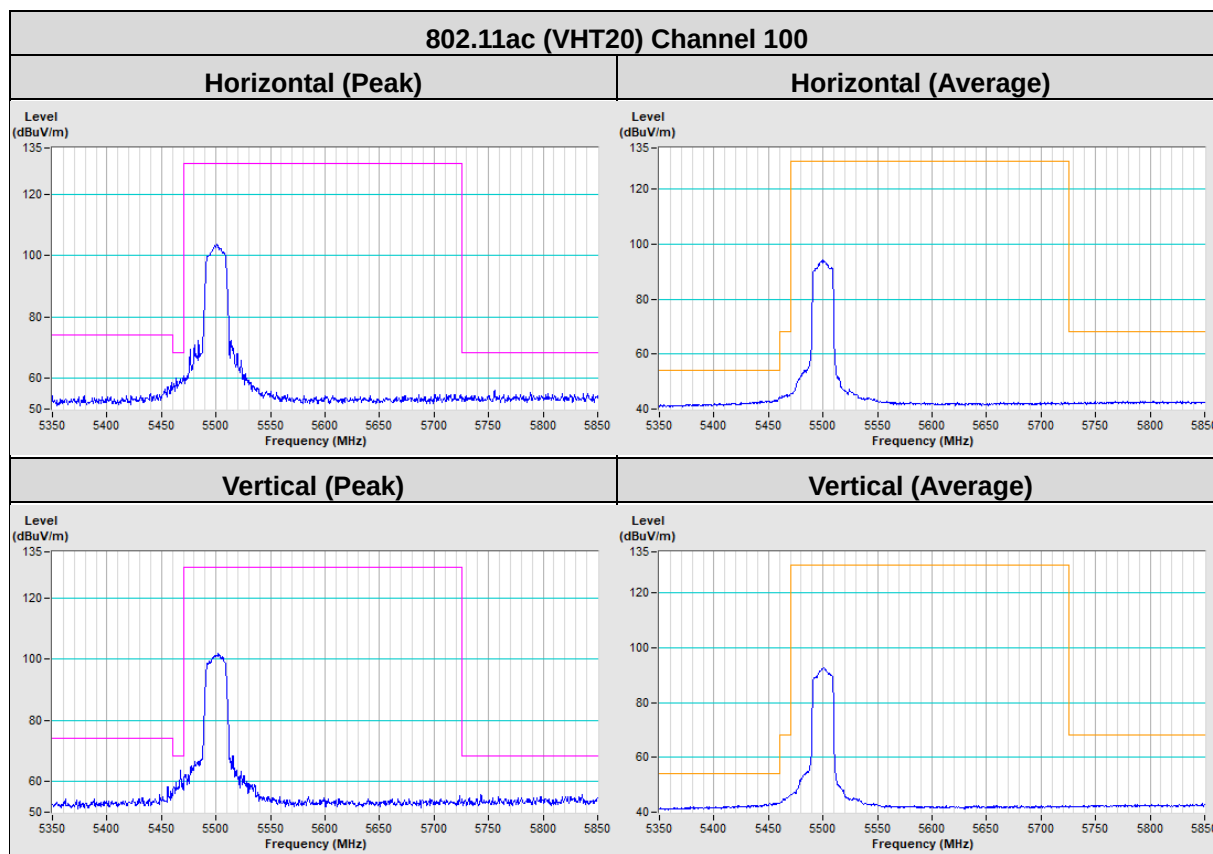


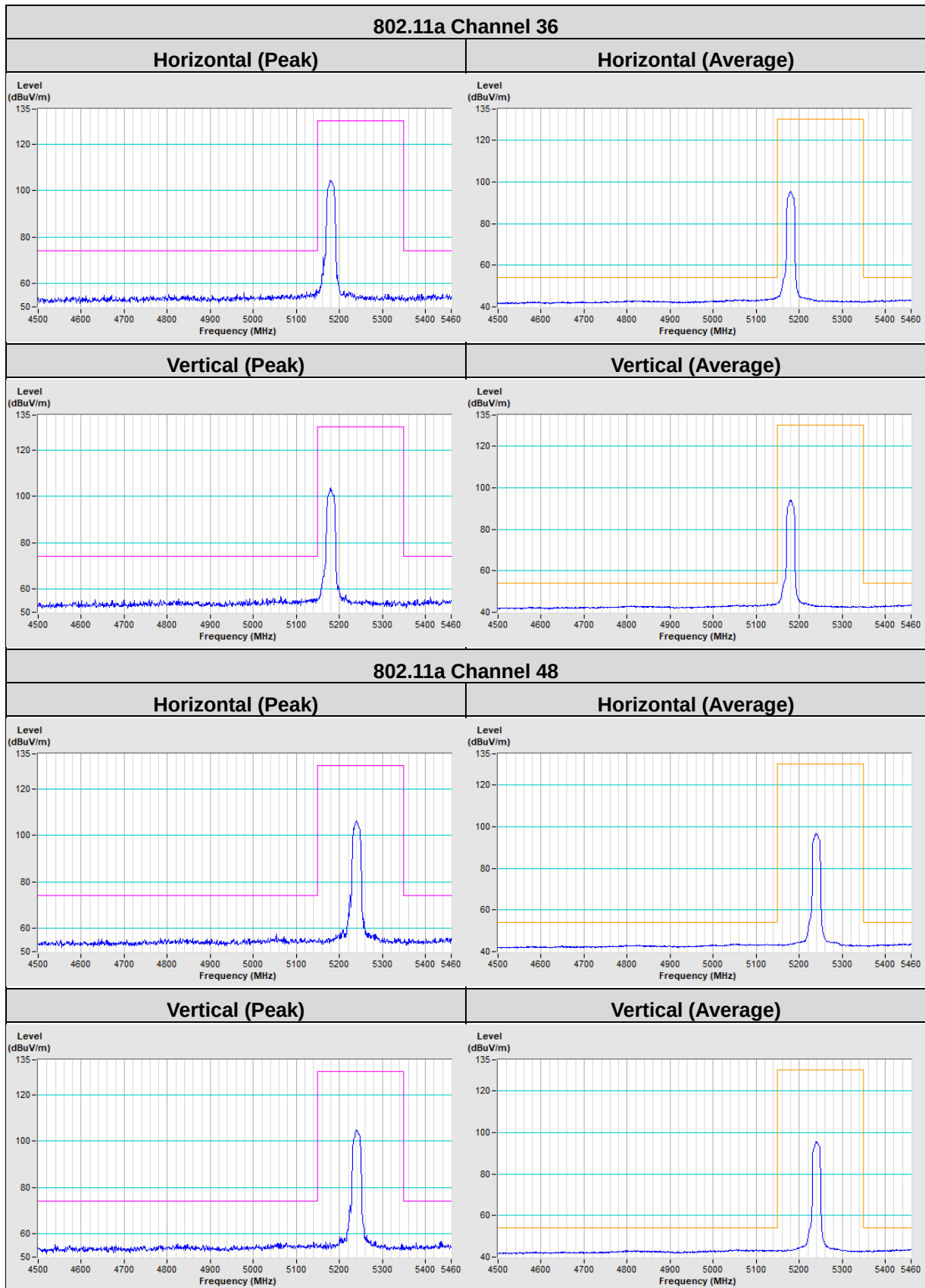


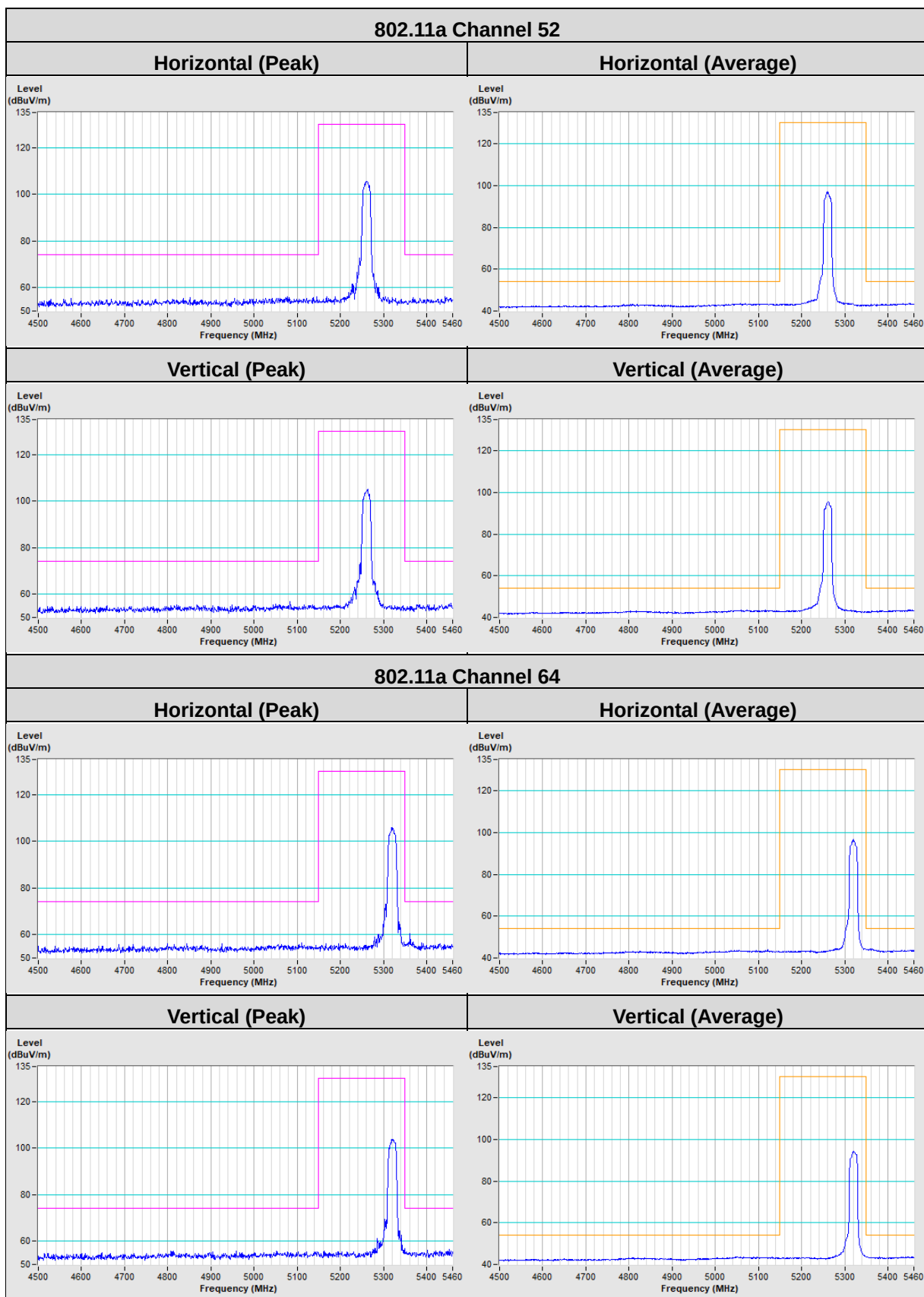


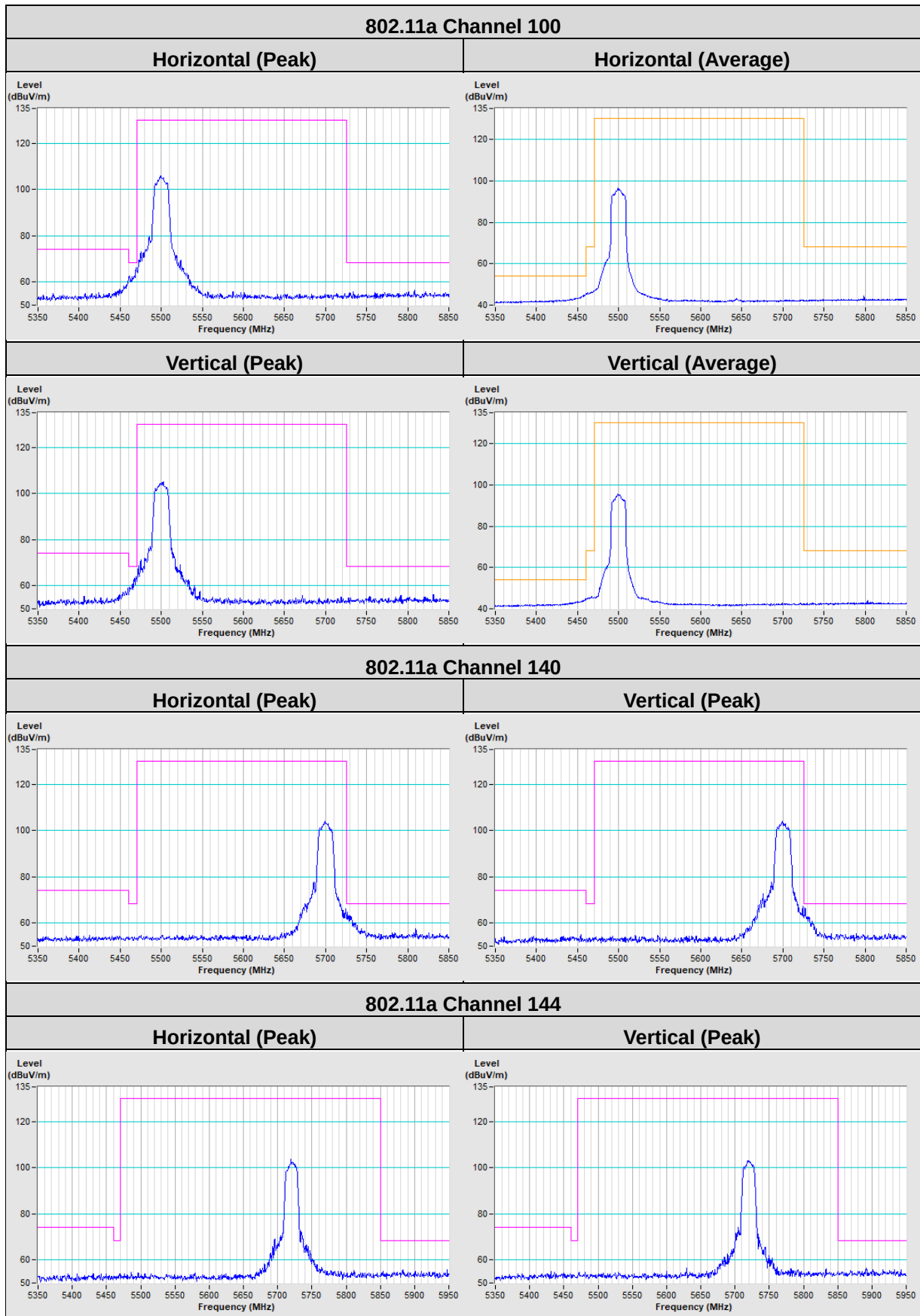


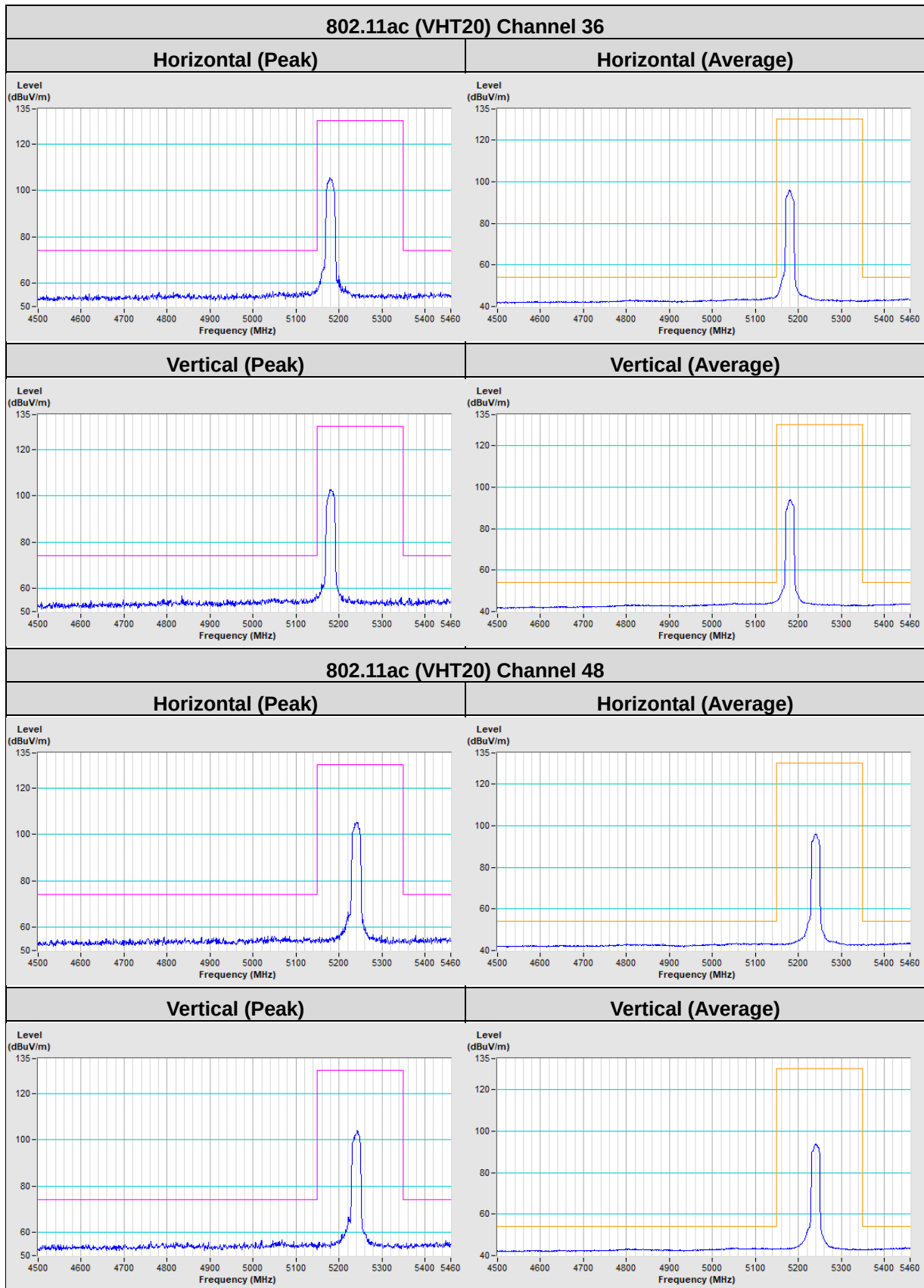


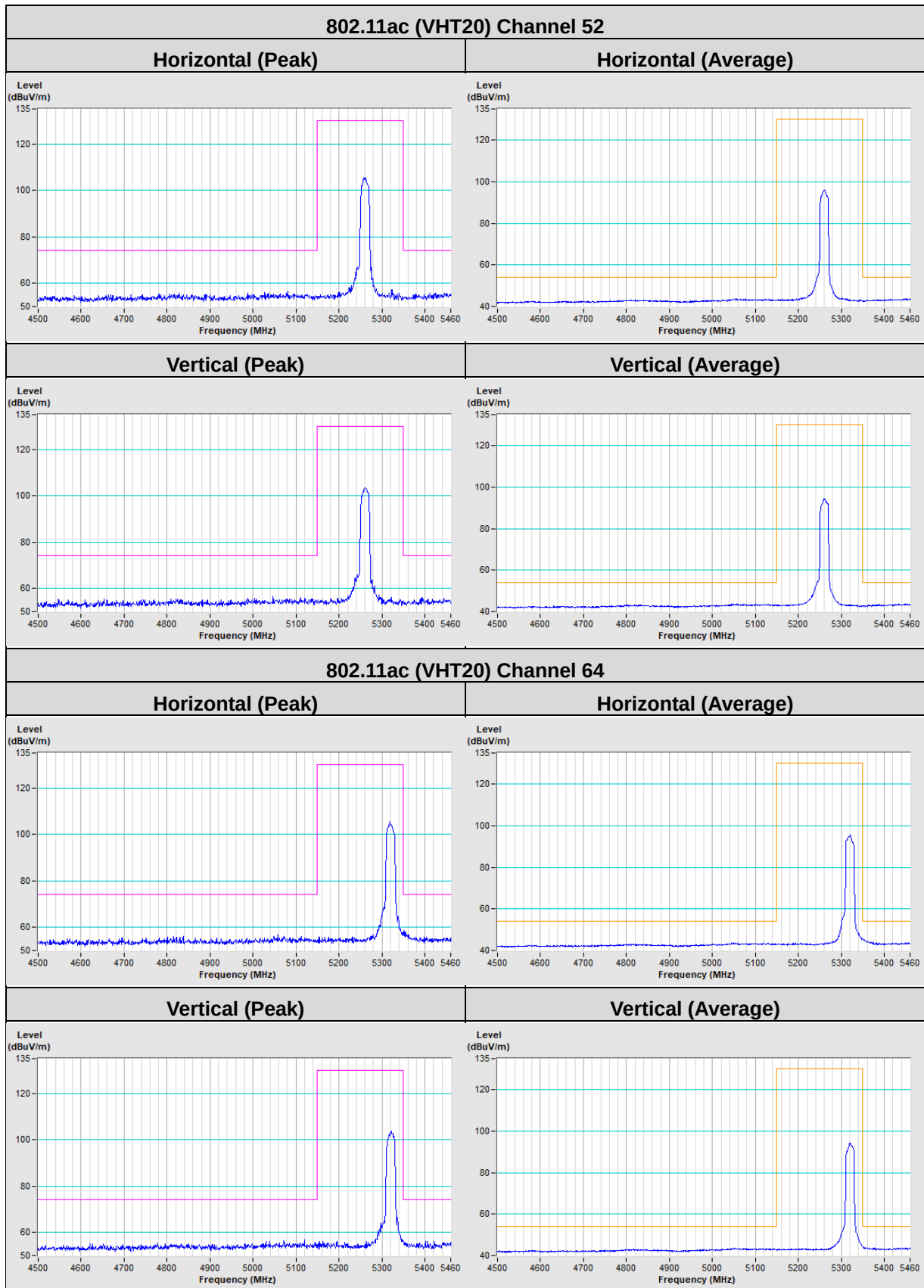


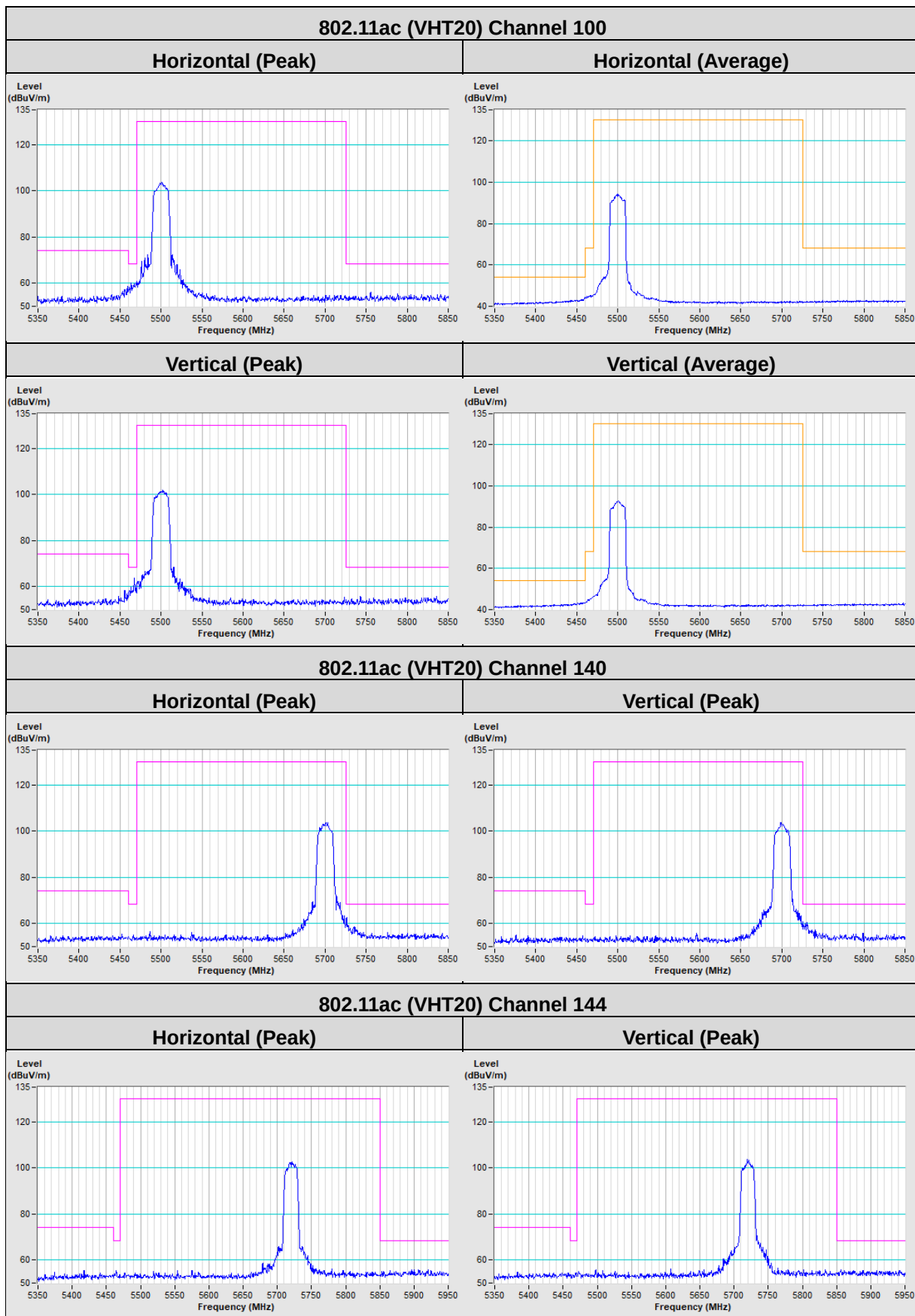


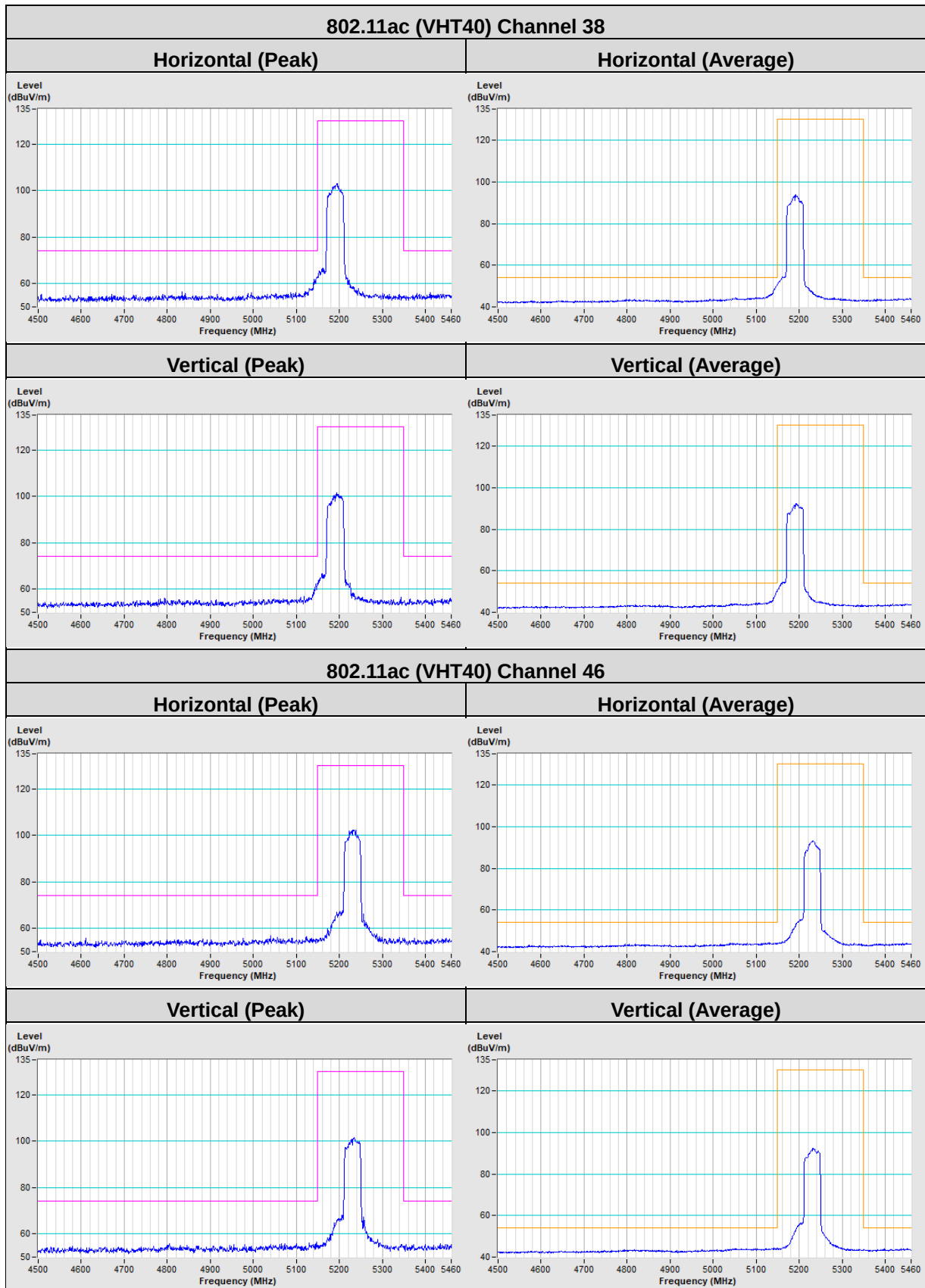


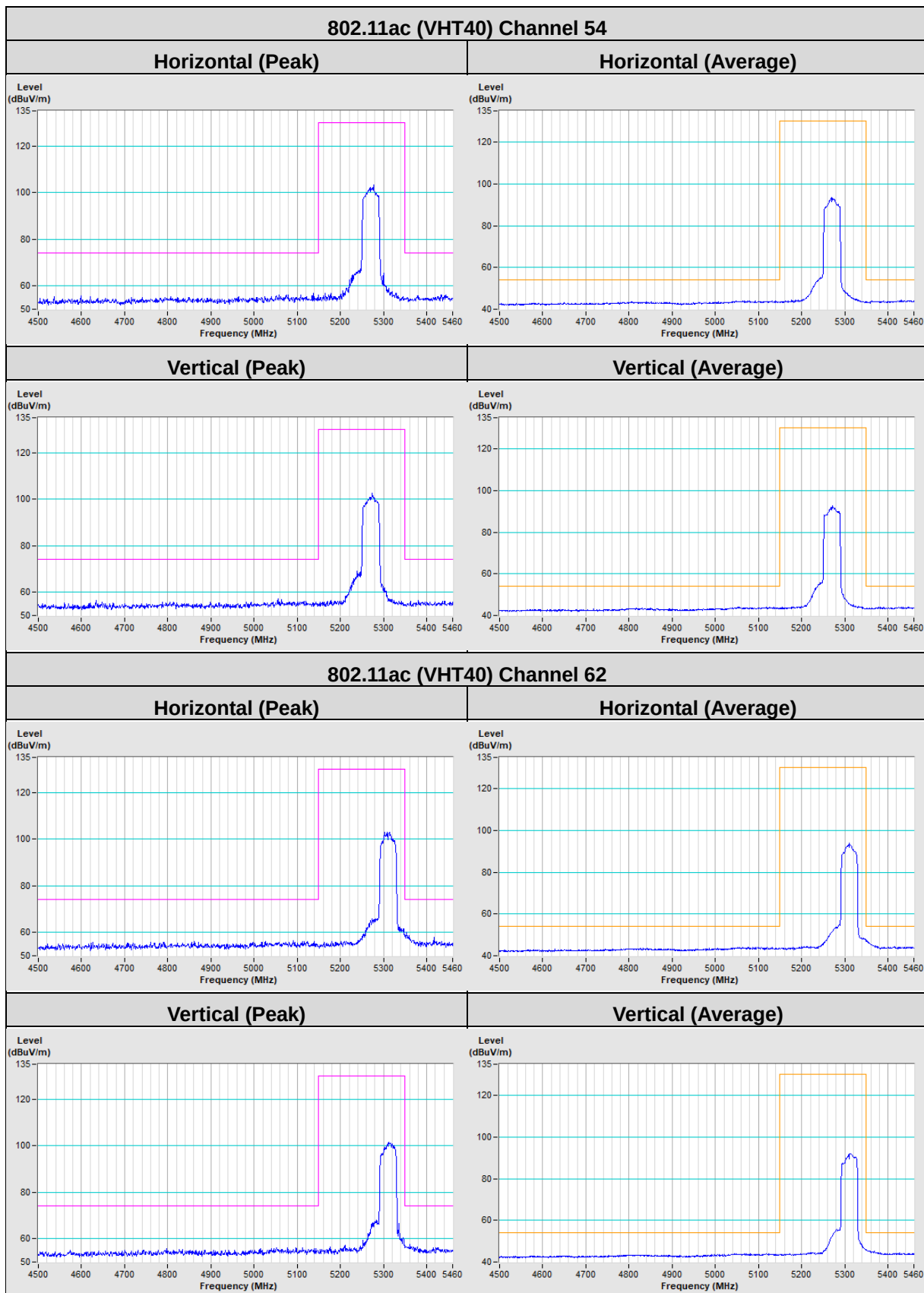


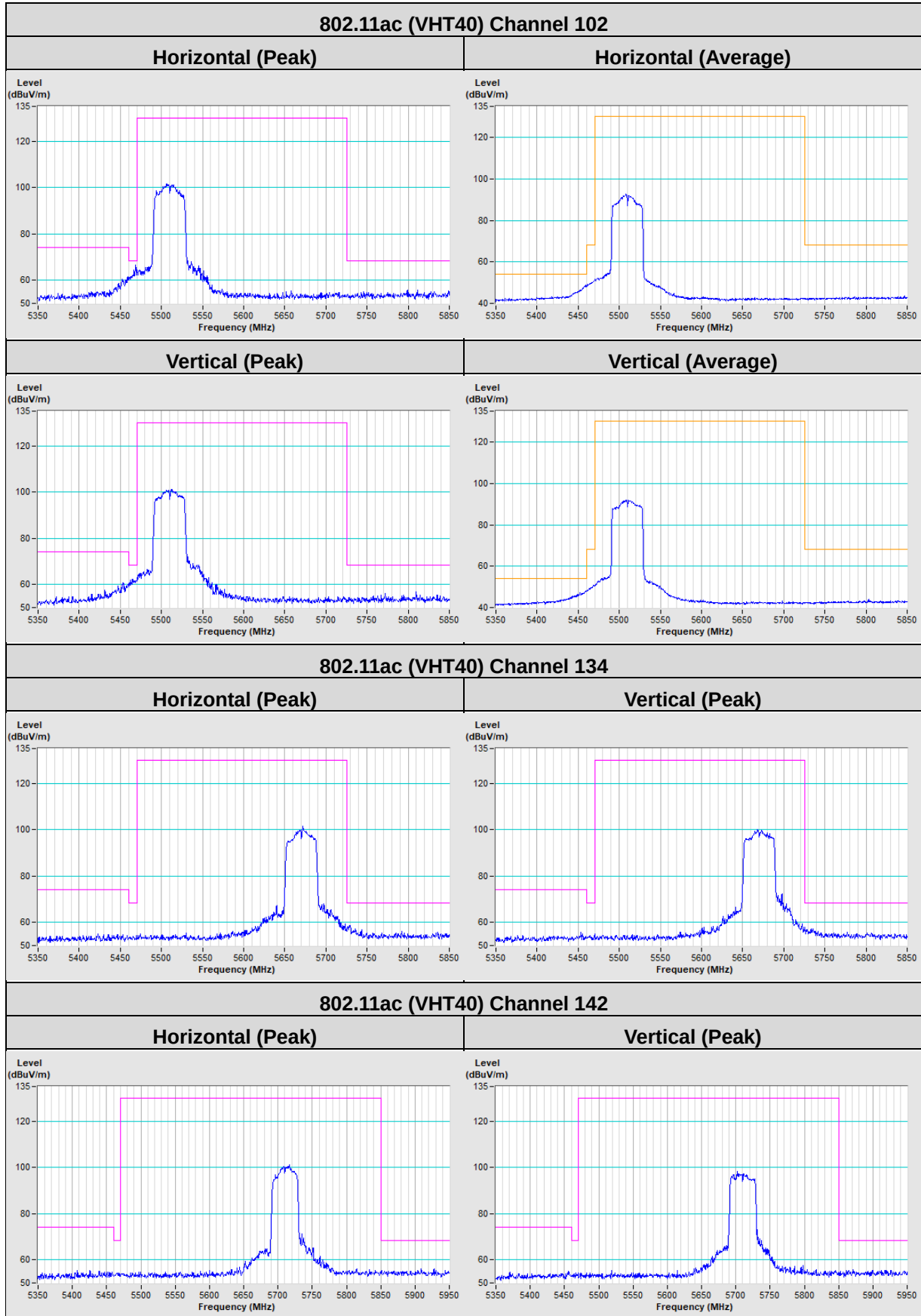


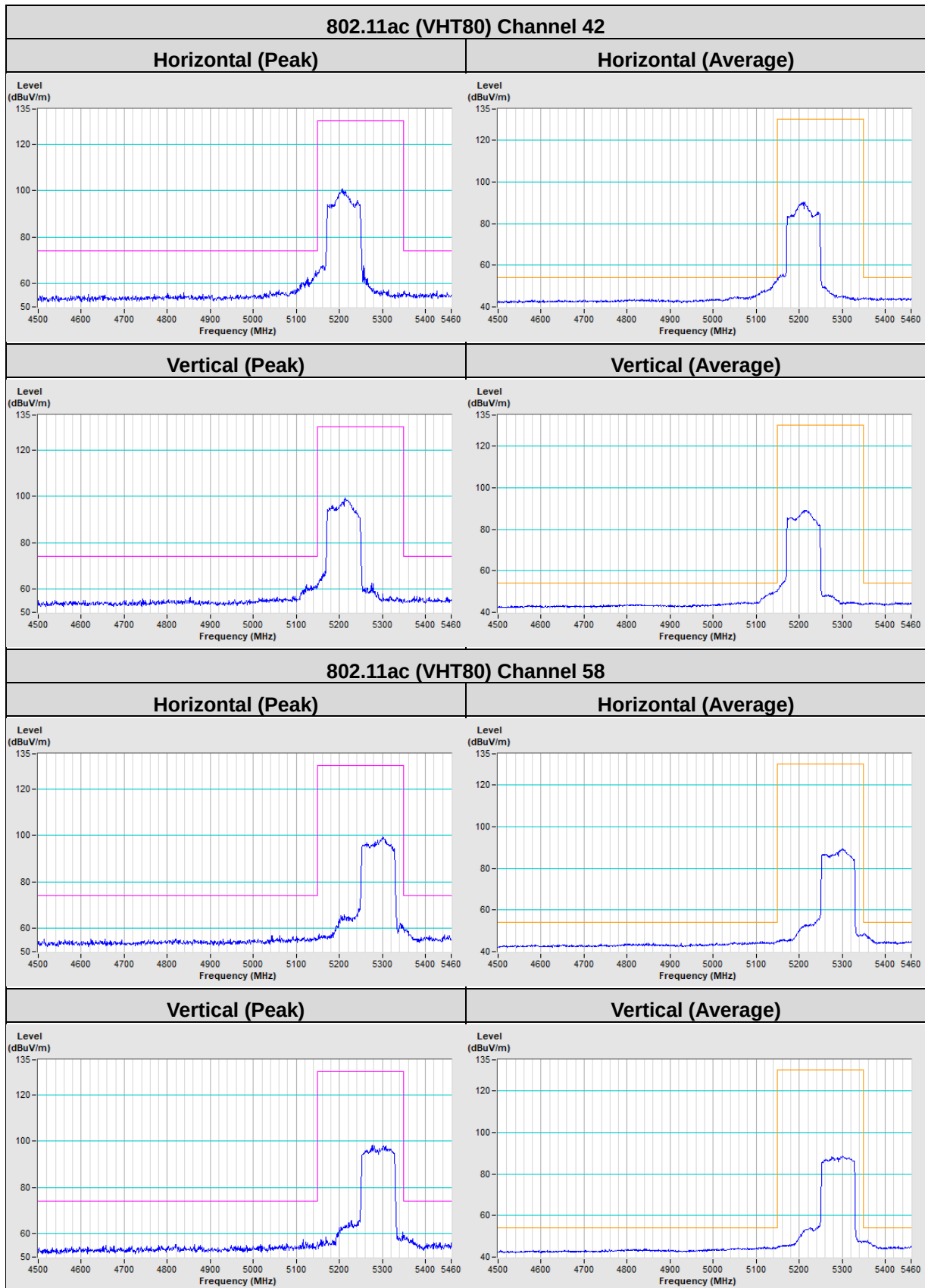


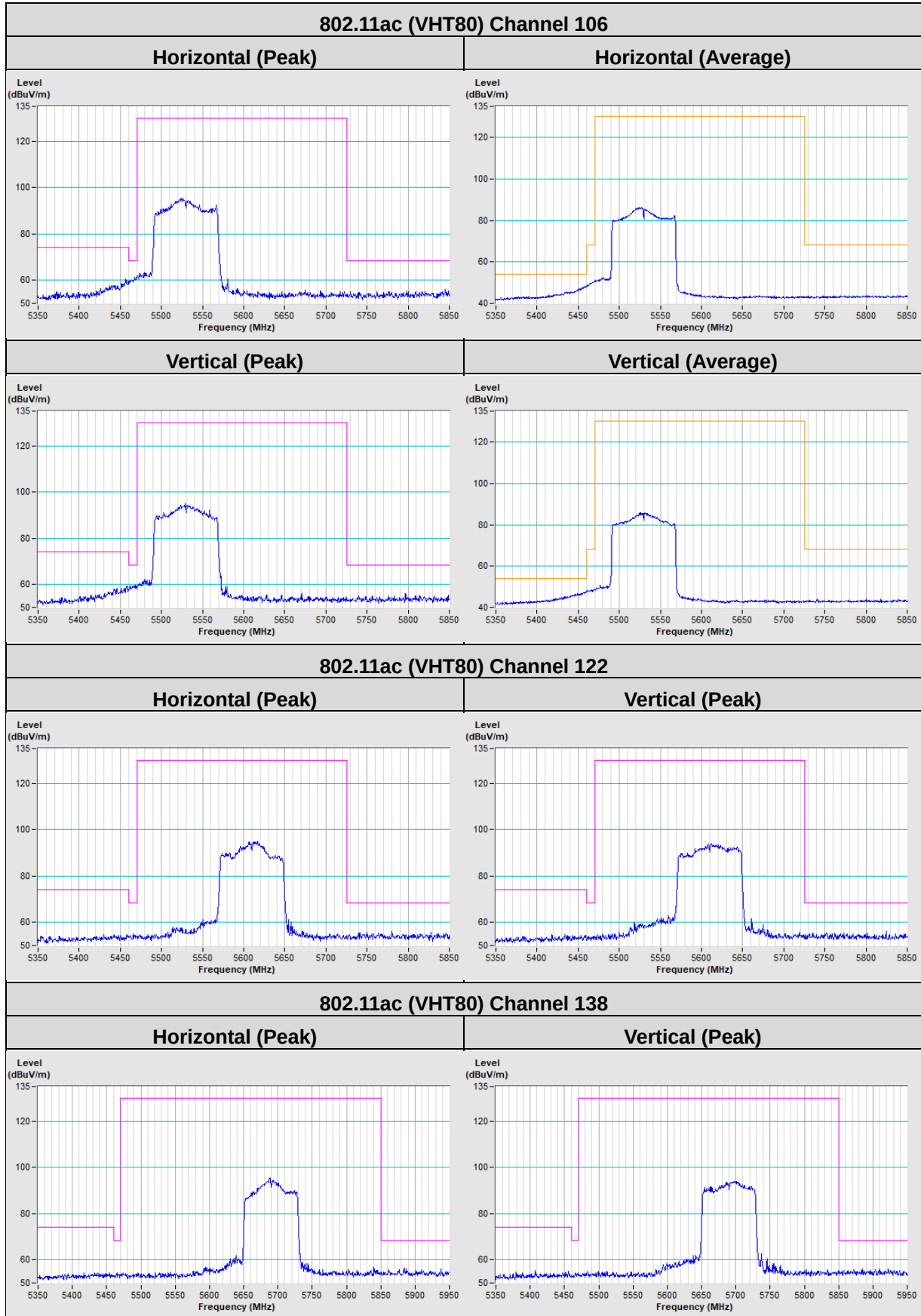












Appendix – Information of the Testing Laboratories

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:

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

--- END ---