

TEST REPORT

CERTIFICATE OF CONFORMITY

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

Report No.: RFBCUG-WTW-P22010682B-1

FCC ID: B32UX7002

Product: Point of Sale Terminal

Brand: Verifone

Model No.: UX700-WBU-2

Received Date: 2022/11/11

Test Date: 2022/11/18 ~ 2022/12/14

Issued Date: 2023/1/13

Applicant: Verifone, Inc.

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

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FCC Registration / 788550 / TW0003

Designation Number:

Approved by: Jeremy Lin, **Date:** 2023/1/13
Jeremy Lin / Project Engineer

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Prepared by : Celine Chou / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBCUG-WTW-P22010682B-1	Original release.	2023/1/13

1 Certificate

Product: Point of Sale Terminal
Brand: Verifone
Model No.: UX700-WBU-2
Sample Status: Engineering sample
Applicant: Verifone, Inc.
Test Date: 2022/11/18 ~ 2022/12/14
Standard: 47 CFR FCC Part 15, Subpart E (Section 15.407)
Measurement procedure: ANSI C63.10-2013
KDB 789033 D02 General UNII Test Procedure New Rules v02r01

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

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(2)	26 dB Bandwidth	Pass	For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.
15.407(a)(1/2/3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
---	Occupied Bandwidth	-	Reference only.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -19.21 dB at 0.15000 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -5.1 dB at 790.48 MHz
15.407(b) (1/2/3/4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -3.2 dB at 5725.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) not a standard connector.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

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

Measurement	Specification	Expanded Uncertainty (k=2) (±)
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.99 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.64 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB

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

2.2 Supplementary Information

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

3 General Information

3.1 General Description of EUT

Product	Point of Sale Terminal
Brand	Verifone
Model No.	UX700-WBU-2
Status of EUT	Engineering sample
Power Supply Rating	9-43Vdc, 2.4A-0.5A
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6 Mbps 802.11n: up to 150 Mbps 802.11ac: up to 433.3 Mbps
Operating Frequency	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5720 MHz, 5745 ~ 5825 MHz
Number of Channel	5180 ~ 5240 MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5260 ~ 5320 MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5500 ~ 5720 MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 12 802.11n (HT40), 802.11ac (VHT40): 6 802.11ac (VHT80): 3 5745 ~ 5825 MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	5180 ~ 5240 MHz: 45.186 mW (16.55 dBm) 5260 ~ 5320 MHz: 44.771 mW (16.51 dBm) 5500 ~ 5720 MHz: 42.767 mW (16.31 dBm) 5745 ~ 5825 MHz: 30.549 mW (14.85 dBm)
EUT Category	Client device

Note:

1. The accessory devices of EUT, please refer to external photo.
2. 2.4GHz & BT or 5GHz & BT technology can transmit at same time.
3. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Gain (dBi)		Antenna Type	Connector Type
2.4GHz	5GHz		
2.60	3.60	Dipole	ipex(MHF)

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

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

5 GHz Band		
Modulation Mode	Tx & Rx Configuration	
802.11a	1TX	1RX
802.11n (HT20)	1TX	1RX
802.11n (HT40)	1TX	1RX
802.11ac (VHT20)	1TX	1RX
802.11ac (VHT40)	1TX	1RX
802.11ac (VHT80)	1TX	1RX

Note: 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.

3.3 Channel List

FOR 5180 ~ 5320 MHz

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

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

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

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

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz

FOR 5500 ~ 5720 MHz

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

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

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

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

3 channels are provided for 802.11ac (VHT80):

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

FOR 5745 ~ 5825 MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775 MHz

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	X-axis/ Y-axis/ Z-axis Worst Condition: Y-axis

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

Test Item	Mode	Tested Channel	Modulation	Data Rate Parameter
26 dB Bandwidth	802.11a	52, 60, 64, 100, 116, 140, 144	BPSK	6Mb/s
	802.11ac (VHT20)	52, 60, 64, 100, 116, 140, 144	BPSK	MCS0
	802.11ac (VHT40)	54, 62, 102, 110, 134, 142	BPSK	MCS0
	802.11ac (VHT80)	58, 106, 122, 138	BPSK	MCS0
RF Output Power	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	6Mb/s
	802.11n (HT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
	802.11n (HT40)	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	BPSK	MCS0
	802.11ac (VHT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	42, 58, 106, 122, 138, 155	BPSK	MCS0
6 dB Bandwidth	802.11a	144, 149, 157, 165	BPSK	6Mb/s
	802.11ac (VHT20)	144, 149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	142, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	138, 155	BPSK	MCS0
Occupied Bandwidth / Power Spectral Density	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	6Mb/s
	802.11ac (VHT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	38, 46, 54, 62, 102, 110, 134, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	442, 58, 106, 122, 138, 155	BPSK	MCS0
Frequency Stability	802.11a	36	un-modulation	-
AC Power Conducted Emissions	802.11a	40	BPSK	6Mb/s
Unwanted Emissions below 1 GHz	802.11a	40	BPSK	6Mb/s
Unwanted Emissions above 1 GHz	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	6Mb/s
	802.11ac (VHT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	38, 46, 54, 62, 102, 110, 134, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	42, 58, 106, 122, 155	BPSK	MCS0

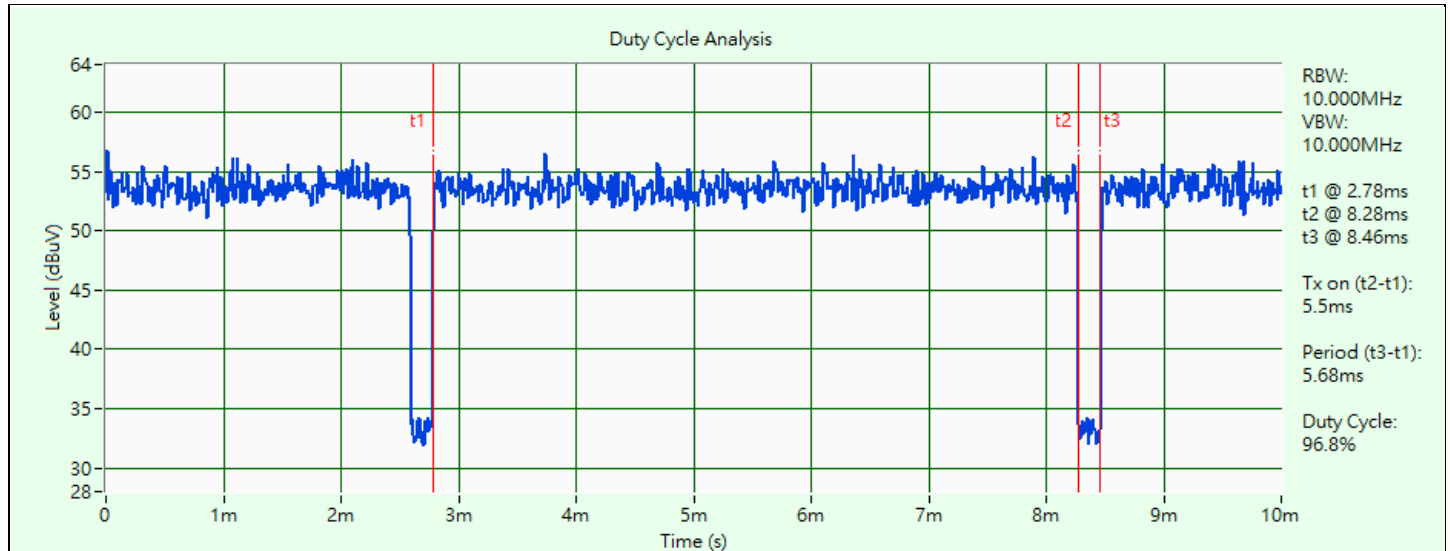
3.5 Duty Cycle of Test Signal

802.11a: Duty cycle = $5.5 \text{ ms} / 5.68 \text{ ms} \times 100\% = 96.8\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 0.14 \text{ dB}$

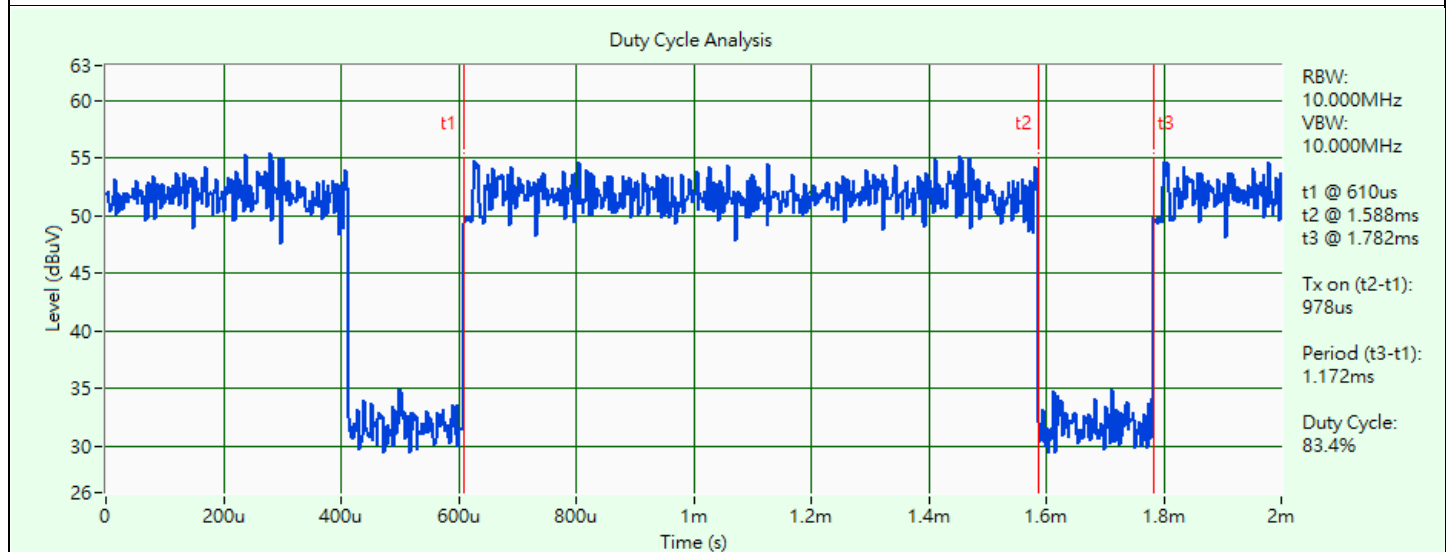
802.11ac (VHT20): Duty cycle = $0.978 \text{ ms} / 1.172 \text{ ms} \times 100\% = 83.4\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 0.79 \text{ dB}$

802.11ac (VHT40): Duty cycle = $0.493 \text{ ms} / 0.69 \text{ ms} \times 100\% = 71.4\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 1.46 \text{ dB}$

802.11ac (VHT80): Duty cycle = $0.249 \text{ ms} / 0.447 \text{ ms} \times 100\% = 55.7\%$, duty factor = $10 \cdot \log (1/\text{Duty cycle}) = 2.54 \text{ dB}$

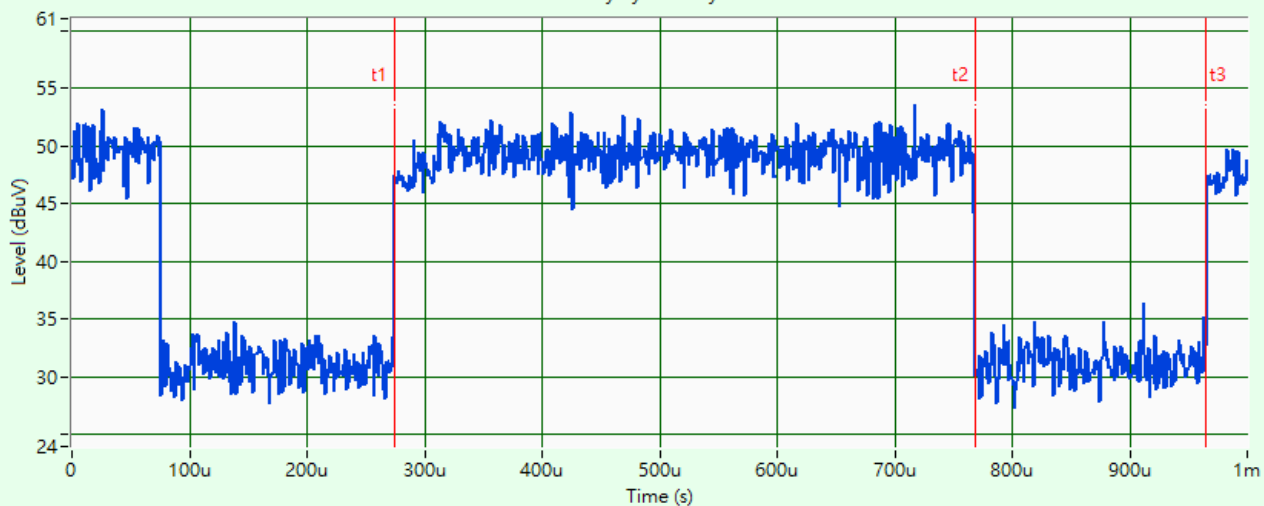


802.11a



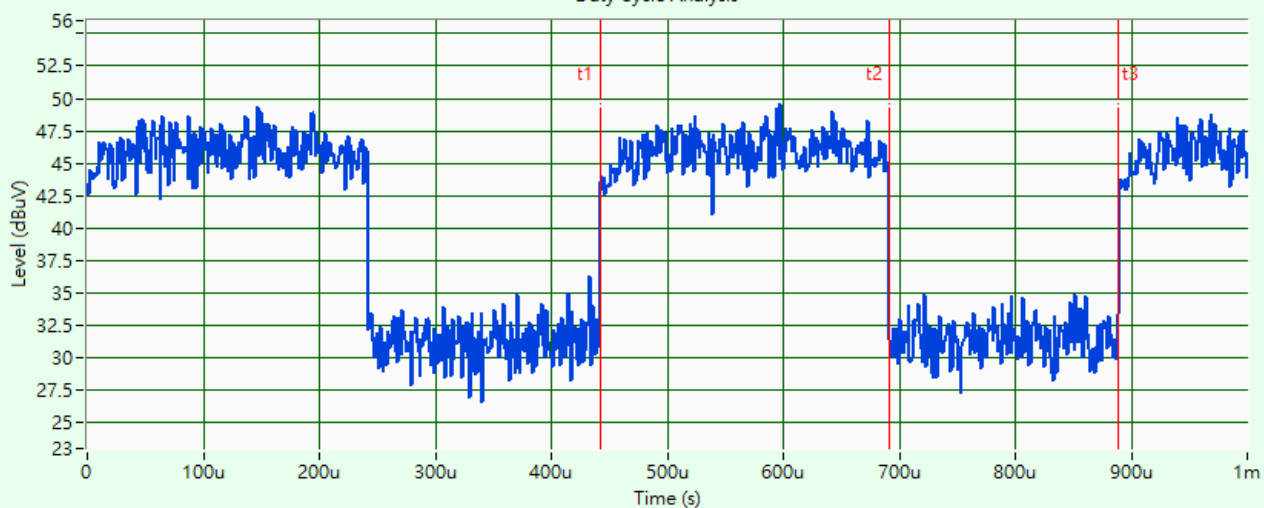
802.11ac (VHT20)

Duty Cycle Analysis



802.11ac (VHT40)

Duty Cycle Analysis

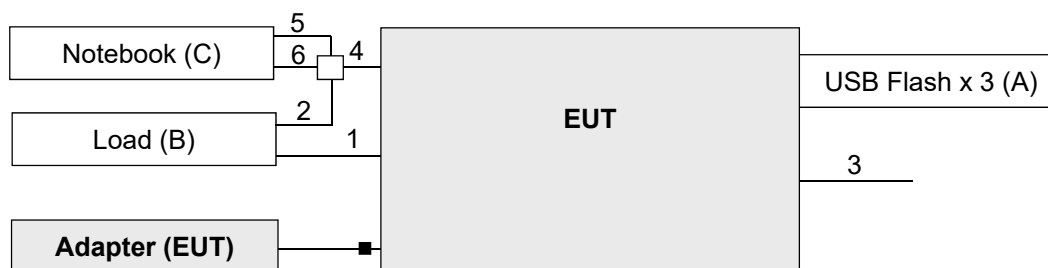


802.11ac (VHT80)

3.6 Test Program Used and Operation Descriptions

Controlling software QRCT Version 3.0.276.0 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	USB Flash x 3	SanDisk	SDDDC3-032G	N/A	N/A	Provided by Lab
B	Load	N/A	N/A	N/A	N/A	Provided by Lab
C	Notebook	DELL	E5430	2RL3YW1	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	LAN Cable	3	1.5	N	0	RJ45, Cat5e
2	LAN Cable	1	1.5	N	0	RJ45, Cat5e
3	USB Cable	1	1.2	Y	0	-
4	RS-232 Cable	1	0.2	N	0	Provided by client
5	USB Cable	1	1.2	Y	0	-
6	RS-232 Cable	1	1.0	N	0	-

4 Test Instruments

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

4.1 26 dB Bandwidth

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

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/12/14

4.2 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Peak Power Analyzer KEYSIGHT	8990B	MY51000485	2022/1/18	2023/1/17
Power sensor Keysight	U2021XA	MY55380009	2022/3/23	2023/3/22
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	100979	2022/3/25	2023/3/24
Wideband Power Sensor(N1923A) KEYSIGHT	N1923A	MY58020002	2022/1/17	2023/1/16

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/12/14

4.3 Power Spectral Density

Refer to section 4.1 to get information of the instruments.

4.4 6 dB Bandwidth

Refer to section 4.1 to get information of the instruments.

4.5 Occupied Bandwidth

Refer to section 4.1 to get information of the instruments.

4.6 Frequency Stability

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

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/12/14

4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
LISN R&S	ESH3-Z5	100311	2022/9/12	2023/9/11
LISN ROHDE & SCHWARZ	ENV216	101826	2022/3/14	2023/3/13
Receiver R&S	ESCI	100412	2022/8/22	2023/8/21
RF Coaxial Cable WOKEN	5D-FB	Cable-cond1-01	2022/1/15	2023/1/14
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2022/8/31	2023/8/30

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2022/12/5

4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Bi_Log Antenna Schwarbeck	VULB9168	9168-155	2022/10/21	2023/10/20
Loop Antenna EMCI	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2022/7/27	2023/7/26
Pre-amplifier EMCI	EMC001340	980201	2022/9/23	2023/9/22
Pre_Amplifier Agilent	8447D	2944A10631	2022/5/14	2023/5/13
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2022/1/15	2023/1/14
RF Coaxial Cable WOKEN	8D-FB	Cable-CH4-01	2022/7/9	2023/7/8
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer R&S	FSW43	101582	2022/4/13	2023/4/12
Test Receiver R&S	ESCI	100424	2021/12/30	2022/12/29
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2022/12/5

4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
Horn Antenna Schwarzbeck	9120D	9120D-408	2022/11/13	2023/11/12
	BBHA 9170	9170-480	2022/11/13	2023/11/12
Pre-Amplifier EMCI	EMC 184045	980116	2022/10/1	2023/9/30
Pre_Amplifier KEYSIGHT	83017A	MY53270295	2022/5/14	2023/5/13
RF cable HUBER+SUHNER	Sucoflex 104	MY 13380+295012/04	2022/5/14	2023/5/13
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2022/7/9	2023/7/8
	EMC102-KM-KM-3000	150929	2022/7/9	2023/7/8
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2022/5/14	2023/5/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer R&S	FSW43	101582	2022/4/13	2023/4/12
Test Receiver R&S	ESCI	100424	2021/12/30	2022/12/29
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2022/11/18 ~ 2022/12/7

5 Limits of Test Items

5.1 26 dB Bandwidth

The results are for reference only.

5.2 RF Output Power

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
	Fixed point-to-point Access Point	1 Watt (30 dBm)
	Indoor Access Point	1 Watt (30 dBm)
	Mobile and Portable client device	250mW (24 dBm)

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

*B is the 26 dB emission bandwidth in megahertz

5.3 Power Spectral Density

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	17 dBm/ MHz
	Fixed point-to-point Access Point	
	Indoor Access Point	
	Mobile and Portable client device	11 dBm/ MHz

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

5.4 6 dB Bandwidth

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

5.5 Occupied Bandwidth

The results are for reference only.

5.6 Frequency Stability

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

5.7 AC Power Conducted Emissions

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

Notes:

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

5.8 Unwanted Emissions below 1 GHz

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

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

Notes:

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

5.9 Unwanted Emissions above 1 GHz

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

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

Notes:

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

Limits of unwanted emission out of the restricted bands

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

For transmitters operating in the 5.15-5.25 GHz band:

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

For transmitters operating in the 5.25-5.35 GHz band:

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

For transmitters operating in the 5.47-5.725 GHz band:

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

For transmitters operating in the 5.725-5.850 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(4)(i)	PK: -27 (dBm/MHz) ^{*1}	PK: 68.2 (dBμV/m) ^{*1}
	PK: 10 (dBm/MHz) ^{*2}	PK: 105.2 (dBμV/m) ^{*2}
	PK: 15.6 (dBm/MHz) ^{*3}	PK: 110.8 (dBμV/m) ^{*3}
	PK: 27 (dBm/MHz) ^{*4}	PK: 122.2 (dBμV/m) ^{*4}

^{*1} beyond 75 MHz or more above of the band edge.

^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

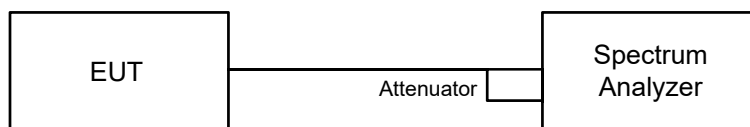
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup

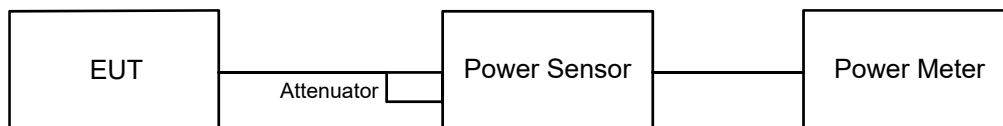


6.1.2 Test Procedure

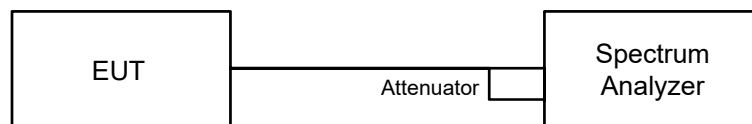
- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = Peak.
- Trace mode = max hold.
- Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement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

6.2 RF Output Power

6.2.1 Test Setup



For channel straddling:



6.2.2 Test Procedure

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

For channel straddling:

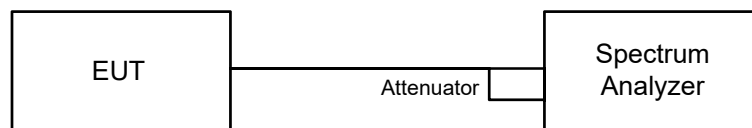
Method SA-2A

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

Note: When measuring straddle channel power, use compute power by integrating the spectrum across the 26 dB EBW or 99% OBW of the signal using the instrument's band power measurement function, with band limits set equal to the EBW or OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 26 dB EBW or 99% OBW of the spectrum.

6.3 Power Spectral Density

6.3.1 Test Setup



6.3.2 Test Procedure

For specified measurement bandwidth 1 MHz:

Method SA-2

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

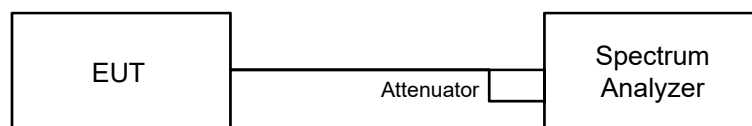
For specified measurement bandwidth 500 kHz:

Method SA-2

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

6.4 6 dB Bandwidth

6.4.1 Test Setup

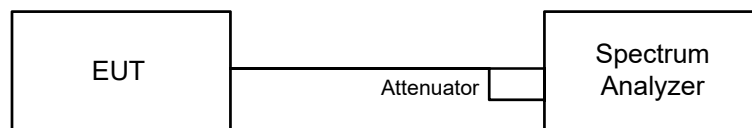


6.4.2 Test Procedure

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

6.5 Occupied Bandwidth

6.5.1 Test Setup

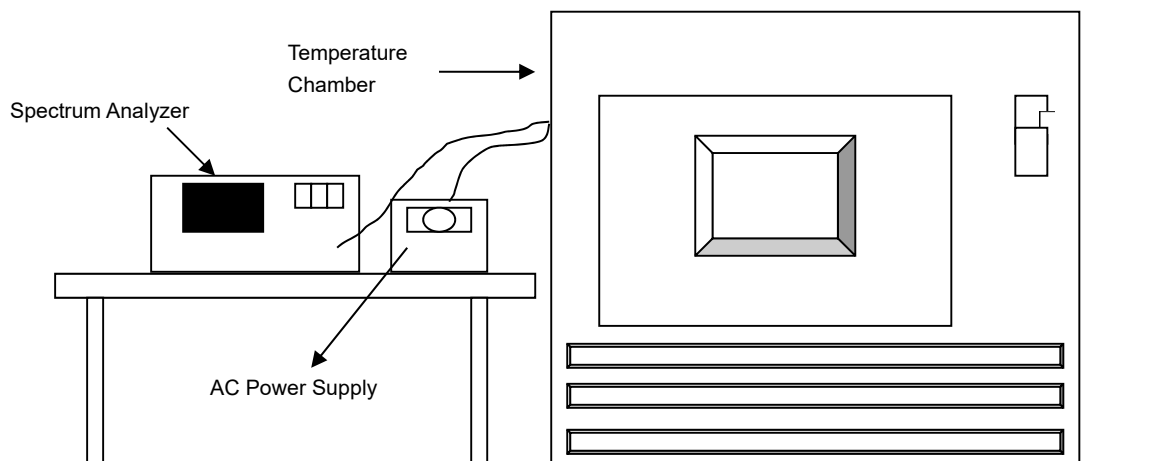


6.5.2 Test Procedure

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

6.6 Frequency Stability

6.6.1 Test Setup

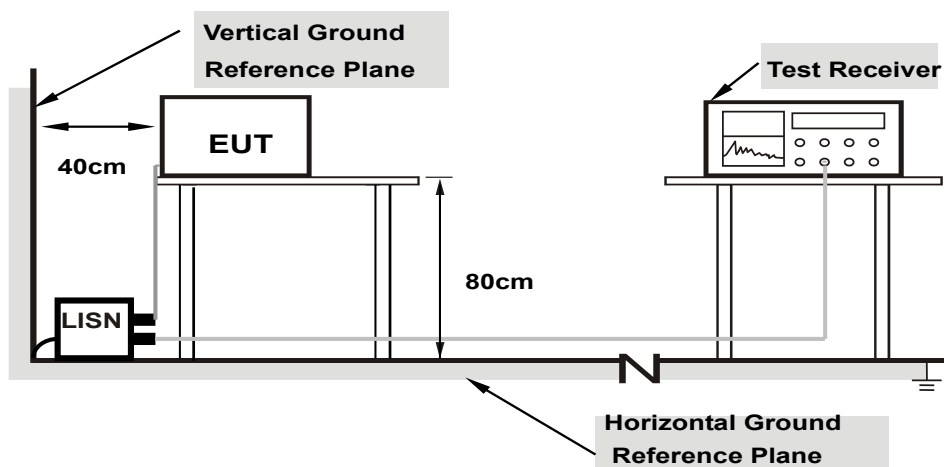


6.6.2 Test Procedure

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

6.7 AC Power Conducted Emissions

6.7.1 Test Setup



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

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

6.7.2 Test Procedure

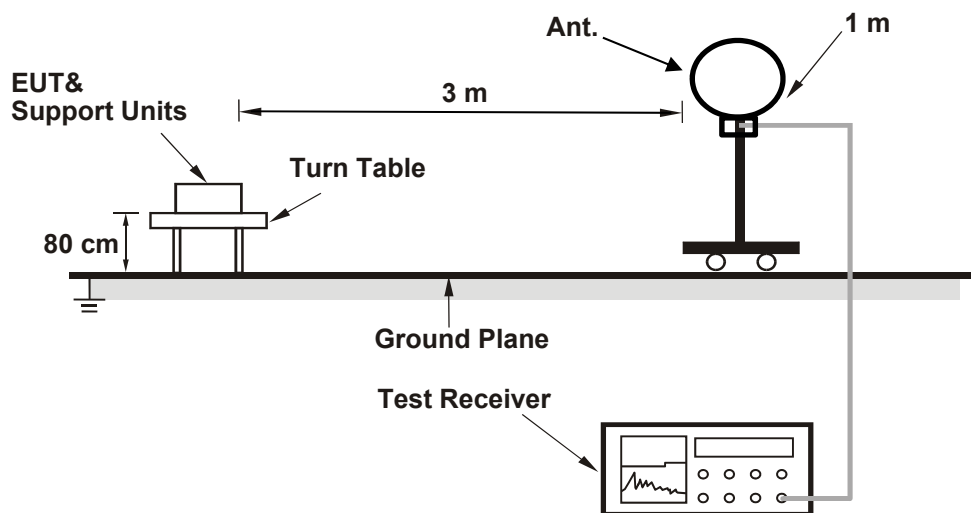
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

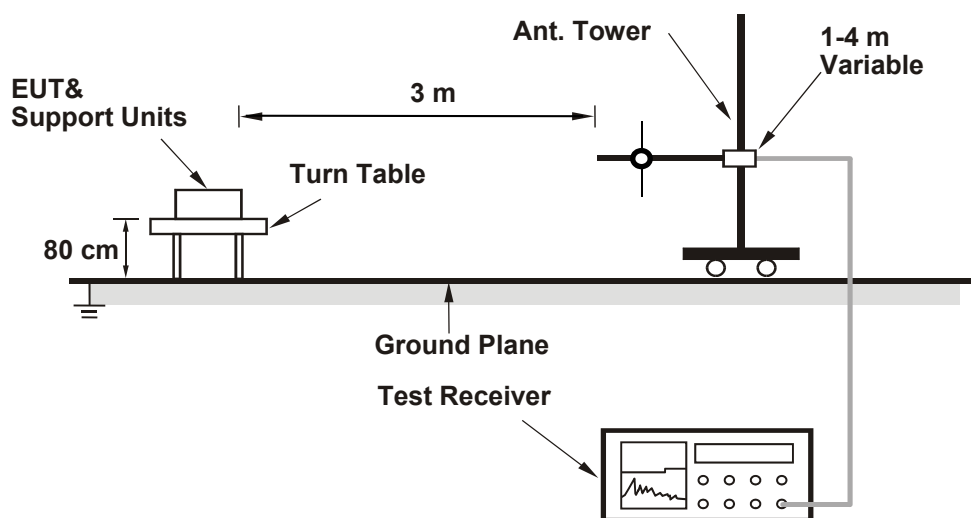
6.8 Unwanted Emissions below 1 GHz

6.8.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.8.2 Test Procedure

For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

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

For Radiated emission above 30 MHz

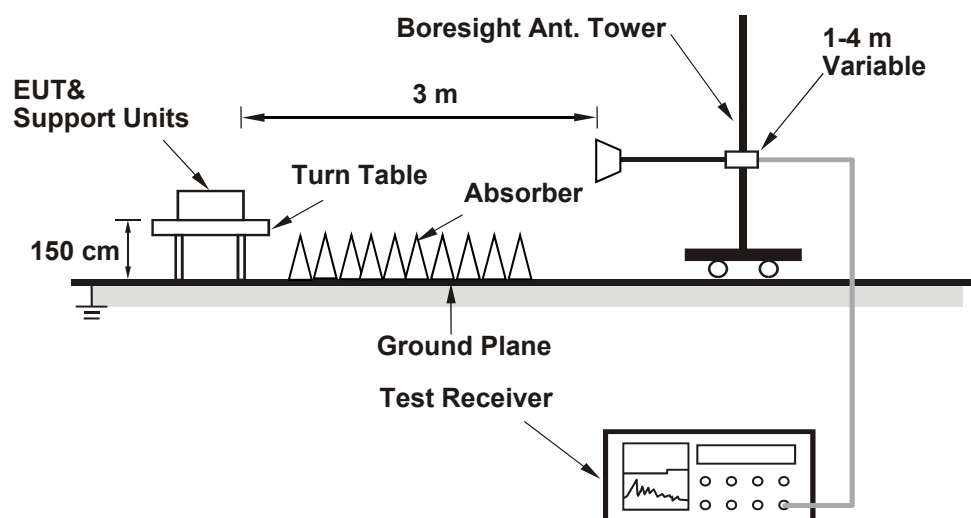
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

6.9 Unwanted Emissions above 1 GHz

6.9.1 Test Setup



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

6.9.2 Test Procedure

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Notes:

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

7 Test Results of Test Item

7.1 26 dB Bandwidth

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

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
52	5260	26.72
60	5300	25.60
64	5320	25.44
100	5500	24.49
116	5580	25.38
140	5700	23.14
144 (U-NII-2C)	5720	16.73
144 (U-NII-3)	5720	6.75

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	26.72	25.26	>	24
60	5300	25.60	25.08	>	24
64	5320	25.44	25.05	>	24
100	5500	24.49	24.88	>	24
116	5580	25.38	25.04	>	24
140	5700	23.14	24.64	>	24
144 (U-NII-2C)	5720	16.73	23.23	<	24

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

802.11ac (VHT20)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
52	5260	28.82
60	5300	27.46
64	5320	25.87
100	5500	24.86
116	5580	24.42
140	5700	23.59
144 (U-NII-2C)	5720	17.03
144 (U-NII-3)	5720	6.95

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	28.82	25.59 > 24
60	5300	27.46	25.38 > 24
64	5320	25.87	25.12 > 24
100	5500	24.86	24.95 > 24
116	5580	24.42	24.87 > 24
140	5700	23.59	24.72 > 24
144 (U-NII-2C)	5720	17.03	23.31 < 24

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

802.11ac (VHT40)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
54	5270	45.38
62	5310	45.65
102	5510	45.37
110	5550	45.27
134	5670	45.14
142 (U-NII-2C)	5710	38.00
142 (U-NII-3)	5710	7.27

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
54	5270	45.38	27.56	>	24
62	5310	45.65	27.59	>	24
102	5510	45.37	27.56	>	24
110	5550	45.27	27.55	>	24
134	5670	45.14	27.54	>	24
142 (U-NII-2C)	5710	38.00	26.79	>	24

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

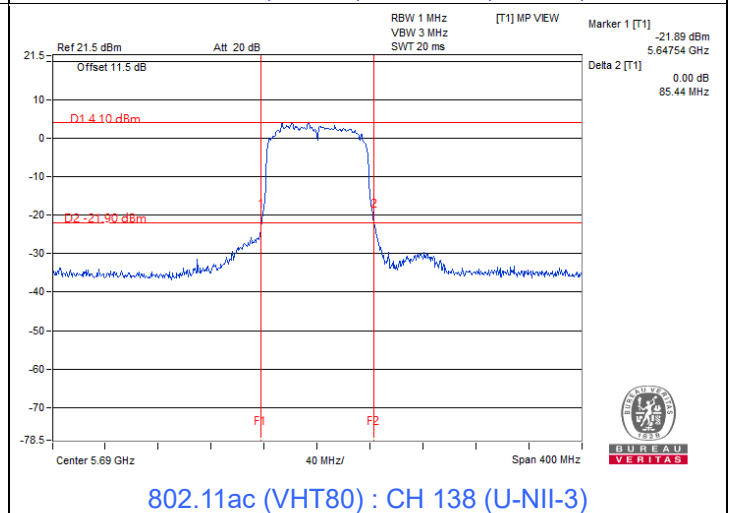
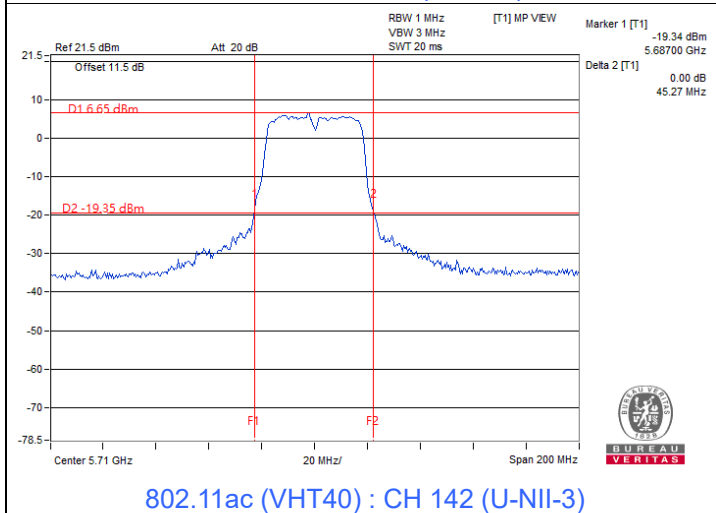
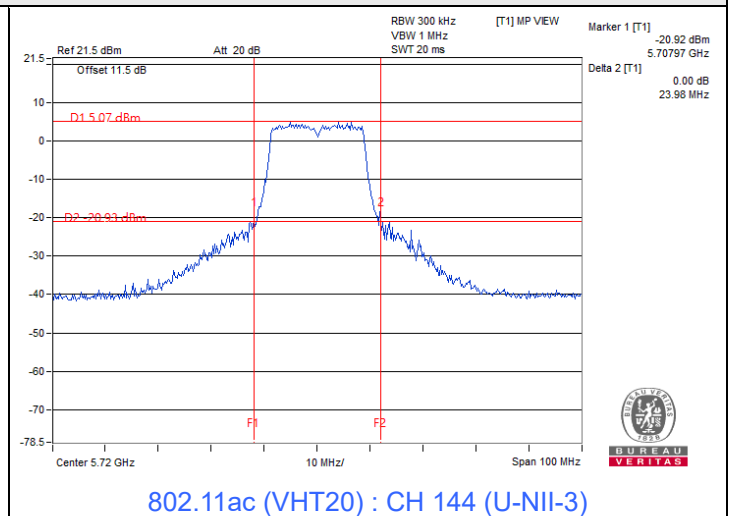
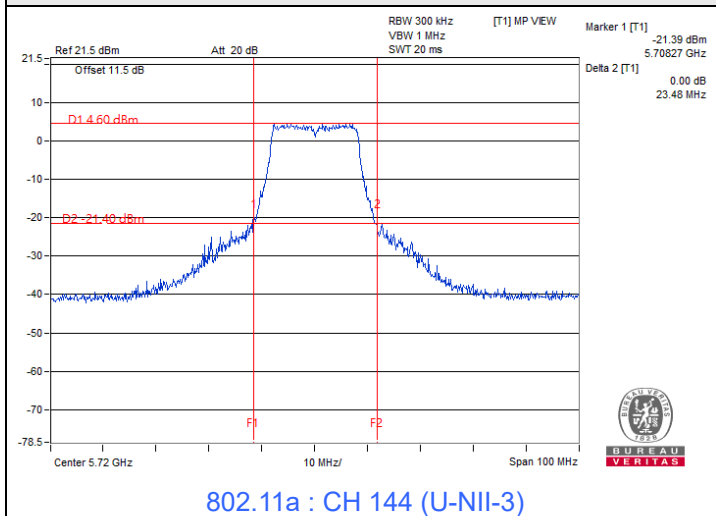
802.11ac (VHT80)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
58	5290	86.19
106	5530	85.88
122	5610	86.04
138 (U-NII-2C)	5690	77.46
138 (U-NII-3)	5690	7.98

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	86.19	30.35	>	24
106	5530	85.88	30.33	>	24
122	5610	86.04	30.34	>	24
138 (U-NII-2C)	5690	77.46	29.89	>	24

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

Spectrum Plot of Minimum Value



Notes:

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

7.2 RF Output Power

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

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	43.351	16.37	24	Pass
40	5200	45.186	16.55	24	Pass
48	5240	44.055	16.44	24	Pass
52	5260	43.853	16.42	24	Pass
60	5300	44.771	16.51	24	Pass
64	5320	44.566	16.49	24	Pass
100	5500	37.068	15.69	24	Pass
116	5580	37.325	15.72	24	Pass
140	5700	31.769	15.02	24	Pass
*144 (U-NII-2C)	5720	24.546	13.90	23.23	Pass
*144 (U-NII-3)	5720	6.382	8.05	30	Pass
149	5745	30.549	14.85	30	Pass
157	5785	28.510	14.55	30	Pass
165	5825	27.353	14.37	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- For U-NII-1, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2A, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	41.020	16.13	24	Pass
40	5200	42.170	16.25	24	Pass
48	5240	41.976	16.23	24	Pass
52	5260	41.783	16.21	24	Pass
60	5300	43.152	16.35	24	Pass
64	5320	42.756	16.31	24	Pass
100	5500	36.475	15.62	24	Pass
116	5580	34.834	15.42	24	Pass
140	5700	30.690	14.87	24	Pass
*144 (U-NII-2C)	5720	24.243	13.85	23.31	Pass
*144 (U-NII-3)	5720	7.024	8.47	30	Pass
149	5745	28.840	14.60	30	Pass
157	5785	27.542	14.40	30	Pass
165	5825	26.424	14.22	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- For U-NII-1, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2A, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
38	5190	32.734	15.15	24	Pass
46	5230	33.806	15.29	24	Pass
54	5270	33.113	15.20	24	Pass
62	5310	33.574	15.26	24	Pass
102	5510	29.376	14.68	24	Pass
110	5550	27.861	14.45	24	Pass
134	5670	25.410	14.05	24	Pass
*142 (U-NII-2C)	5710	30.061	14.78	24	Pass
*142 (U-NII-3)	5710	2.218	3.46	30	Pass
151	5755	22.909	13.60	30	Pass
159	5795	21.777	13.38	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- For U-NII-1, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2A, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	41.305	16.16	24	Pass
40	5200	42.560	16.29	24	Pass
48	5240	42.462	16.28	24	Pass
52	5260	42.267	16.26	24	Pass
60	5300	43.451	16.38	24	Pass
64	5320	43.152	16.35	24	Pass
100	5500	36.813	15.66	24	Pass
116	5580	35.156	15.46	24	Pass
140	5700	30.832	14.89	24	Pass
*144 (U-NII-2C)	5720	24.411	13.88	23.31	Pass
*144 (U-NII-3)	5720	7.105	8.52	30	Pass
149	5745	28.973	14.62	30	Pass
157	5785	27.669	14.42	30	Pass
165	5825	26.669	14.26	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- For U-NII-1, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2A, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
38	5190	32.961	15.18	24	Pass
46	5230	33.963	15.31	24	Pass
54	5270	33.266	15.22	24	Pass
62	5310	33.729	15.28	24	Pass
102	5510	29.580	14.71	24	Pass
110	5550	28.119	14.49	24	Pass
134	5670	25.586	14.08	24	Pass
*142 (U-NII-2C)	5710	30.339	14.82	24	Pass
*142 (U-NII-3)	5710	2.244	3.51	30	Pass
151	5755	23.174	13.65	30	Pass
159	5795	21.928	13.41	30	Pass

Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- For U-NII-1, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2A, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.

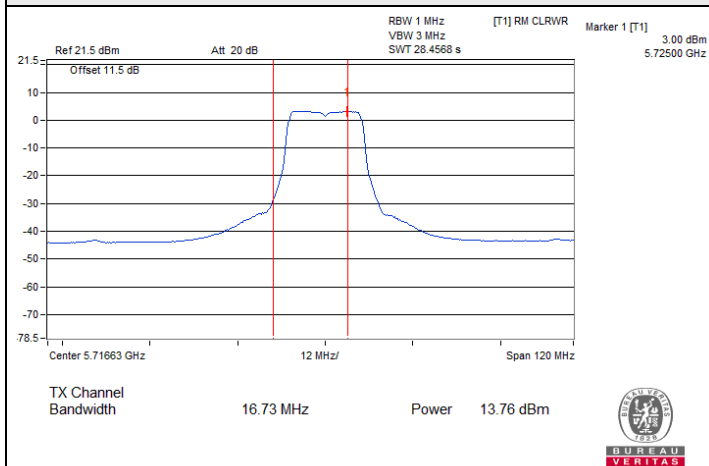
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
42	5210	30.549	14.85	24	Pass
58	5290	27.925	14.46	24	Pass
106	5530	28.379	14.53	24	Pass
122	5610	25.645	14.09	24	Pass
*138 (U-NII-2C)	5690	42.767	16.31	24	Pass
*138 (U-NII-3)	5690	0.798	-0.98	30	Pass
155	5775	21.627	13.35	30	Pass

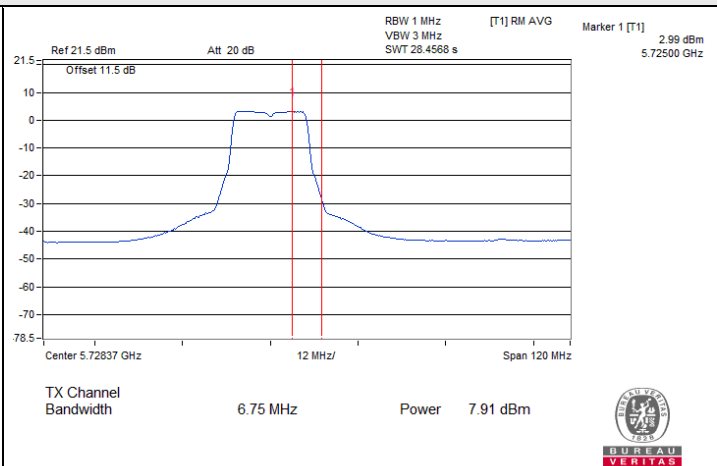
Notes:

- * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
- For U-NII-1, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2A, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-2C, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.
- For U-NII-3, the antenna gain is 3.6 dBi < 6 dBi, so the output power limit shall not be reduced.

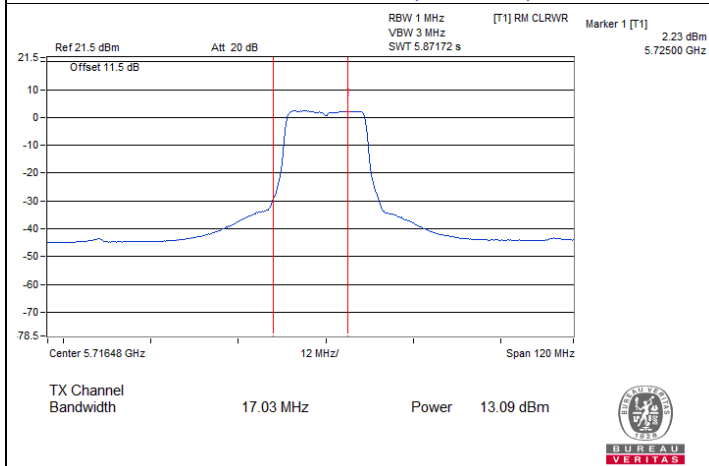
Spectrum Plot for channel straddling



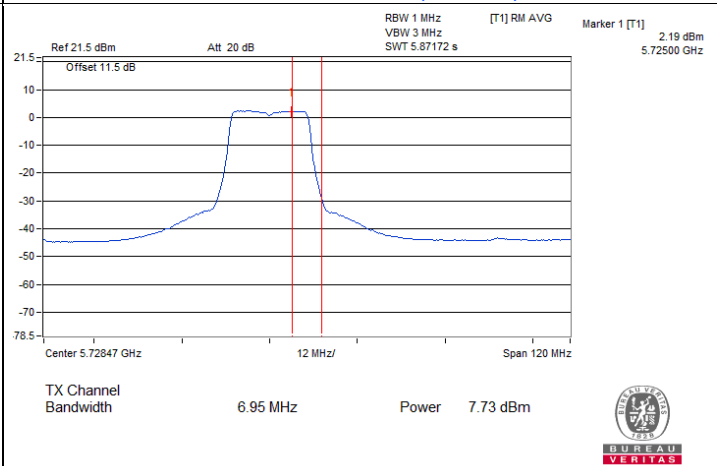
802.11a : CH 144 (U-NII-2C)



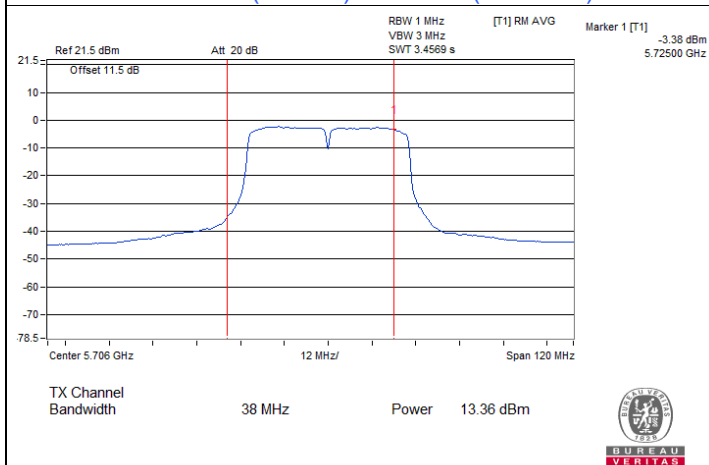
802.11a : CH 144 (U-NII-3)



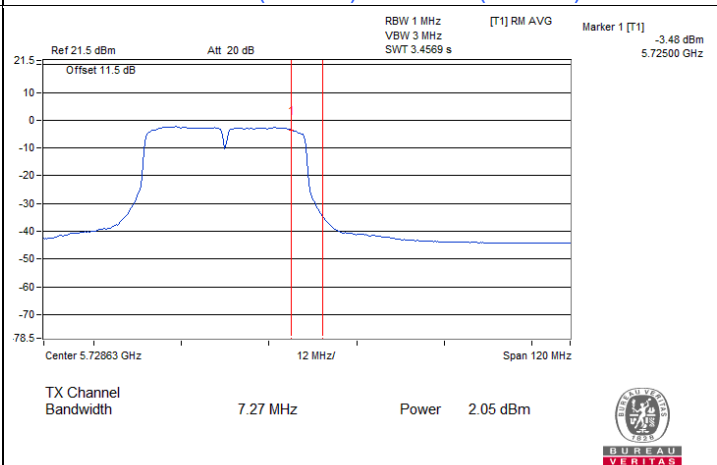
802.11ac (VHT20) : CH 144 (U-NII-2C)



802.11ac (VHT20) : CH 144 (U-NII-3)

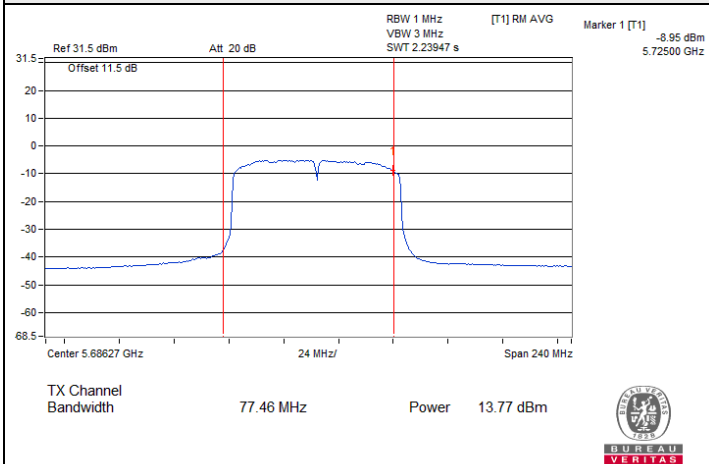


802.11ac (VHT40) : CH 142 (U-NII-2C)

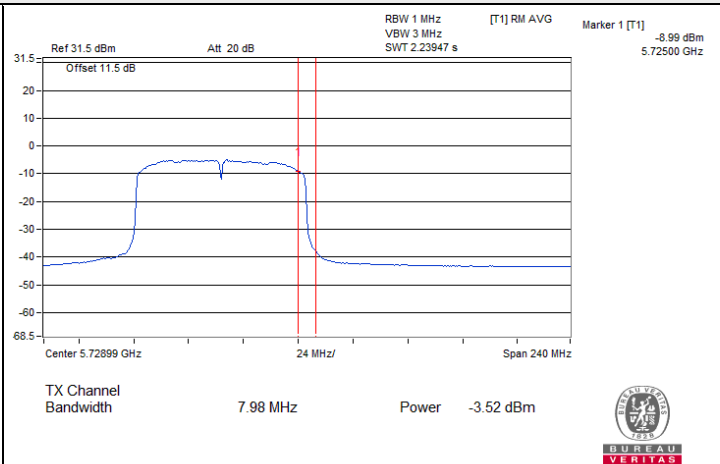


802.11ac (VHT40) : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



802.11ac (VHT80) : CH 138 (U-NII-2C)



802.11ac (VHT80) : CH 138 (U-NII-3)

7.3 Power Spectral Density

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

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
36	5180	3.39	0.14	3.53	11.00	Pass
40	5200	3.63	0.14	3.77	11.00	Pass
48	5240	3.44	0.14	3.58	11.00	Pass
52	5260	3.42	0.14	3.56	11.00	Pass
60	5300	3.60	0.14	3.74	11.00	Pass
64	5320	3.42	0.14	3.56	11.00	Pass
100	5500	2.65	0.14	2.79	11.00	Pass
116	5580	2.74	0.14	2.88	11.00	Pass
140	5700	2.04	0.14	2.18	11.00	Pass
144 (U-NII-2C)	5720	2.10	0.14	2.24	11.00	Pass

Notes:

1. For U-NII-1, the antenna gain is 3.6 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 3.6 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 3.6 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
36	5180	2.92	0.79	3.71	11.00	Pass
40	5200	3.04	0.79	3.83	11.00	Pass
48	5240	3.08	0.79	3.87	11.00	Pass
52	5260	3.07	0.79	3.86	11.00	Pass
60	5300	3.07	0.79	3.86	11.00	Pass
64	5320	3.14	0.79	3.93	11.00	Pass
100	5500	2.49	0.79	3.28	11.00	Pass
116	5580	2.12	0.79	2.91	11.00	Pass
140	5700	1.56	0.79	2.35	11.00	Pass
144 (U-NII-2C)	5720	1.28	0.79	2.07	11.00	Pass

Notes:

1. For U-NII-1, the antenna gain is 3.6 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 3.6 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 3.6 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
38	5190	-1.24	1.46	0.22	11.00	Pass
46	5230	-1.21	1.46	0.25	11.00	Pass
54	5270	-1.20	1.46	0.26	11.00	Pass
62	5310	-1.17	1.46	0.29	11.00	Pass
102	5510	-1.76	1.46	-0.30	11.00	Pass
110	5550	-1.87	1.46	-0.41	11.00	Pass
134	5670	-2.24	1.46	-0.78	11.00	Pass
142 (U-NII-2C)	5710	-2.24	1.46	-0.78	11.00	Pass

Notes:

1. For U-NII-1, the antenna gain is 3.6 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 3.6 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 3.6 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
42	5210	-4.69	2.54	-2.15	11.00	Pass
58	5290	-5.12	2.54	-2.58	11.00	Pass
106	5530	-4.94	2.54	-2.40	11.00	Pass
122	5610	-5.47	2.54	-2.93	11.00	Pass
138 (U-NII-2C)	5690	-5.40	2.54	-2.86	11.00	Pass

Notes:

1. For U-NII-1, the antenna gain is 3.6 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 3.6 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 3.6 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
144 (U-NII-3)	5720	-6.53	0.14	-4.17	30	Pass
149	5745	-6.57	0.14	-4.21	30	Pass
157	5785	-6.71	0.14	-4.35	30	Pass
165	5825	-6.84	0.14	-4.48	30	Pass

Note: For U-NII-3, the antenna gain is 3.6 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
144 (U-NII-3)	5720	-7.37	0.79	-4.36	30	Pass
149	5745	-6.99	0.79	-3.98	30	Pass
157	5785	-7.10	0.79	-4.09	30	Pass
165	5825	-7.33	0.79	-4.32	30	Pass

Note: For U-NII-3, the antenna gain is 3.6 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
142 (U-NII-3)	5710	-12.99	1.46	-9.31	30	Pass
151	5755	-11.49	1.46	-7.81	30	Pass
159	5795	-11.64	1.46	-7.96	30	Pass

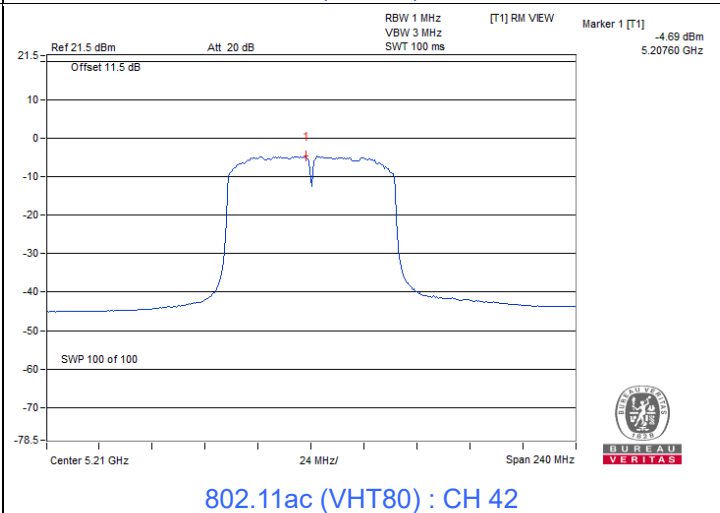
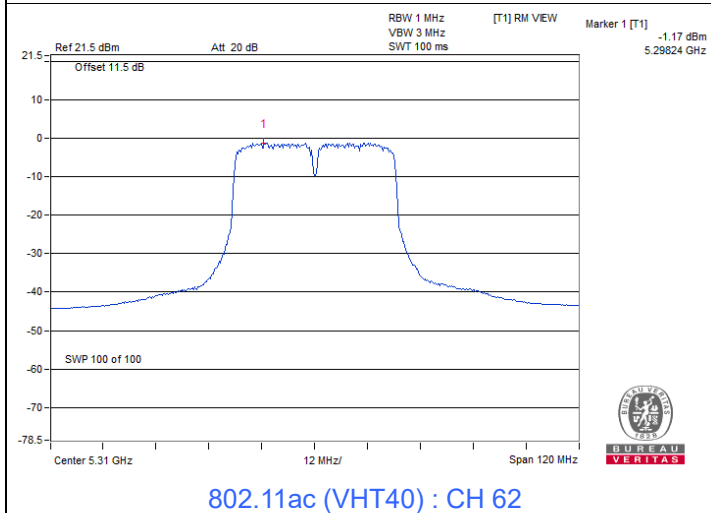
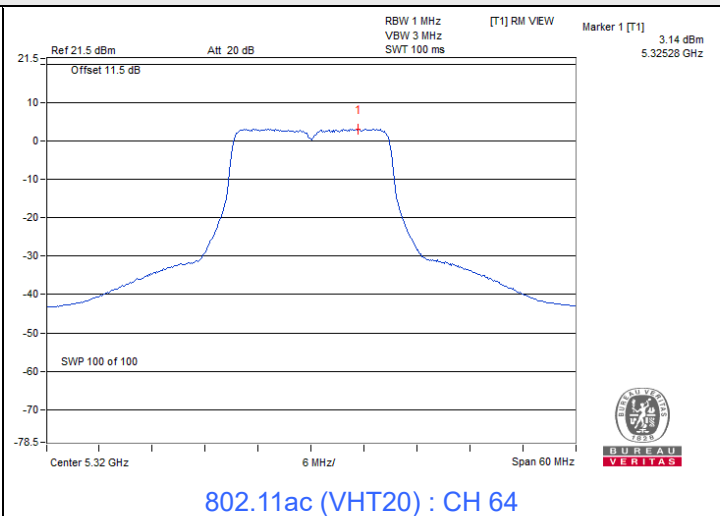
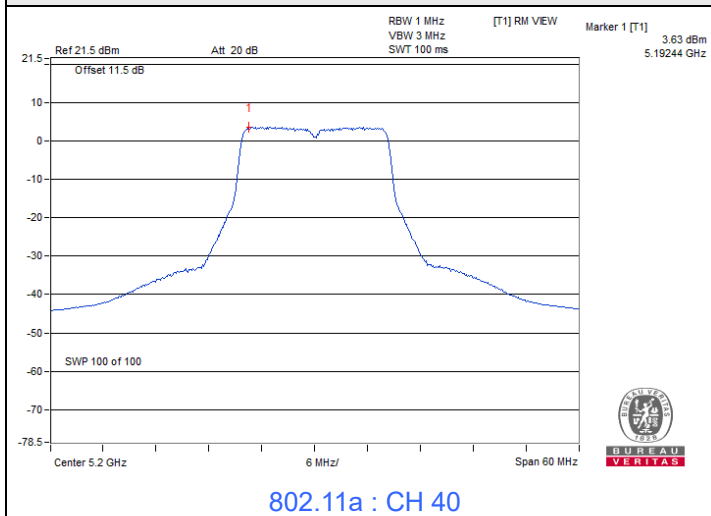
Note: For U-NII-3, the antenna gain is 3.6 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT80)

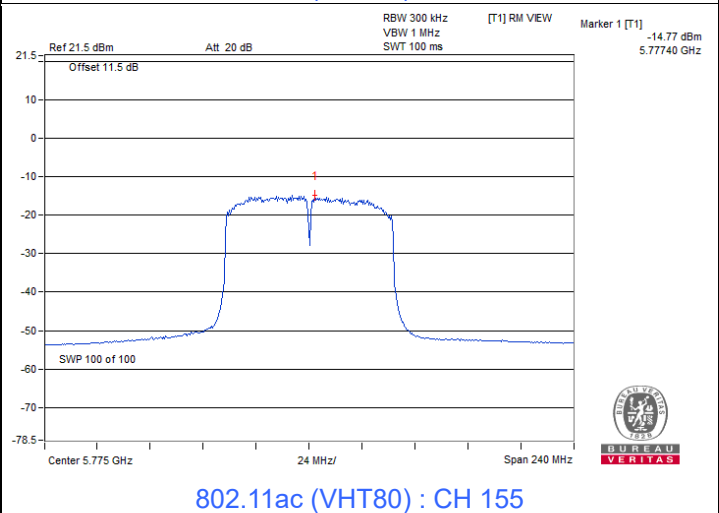
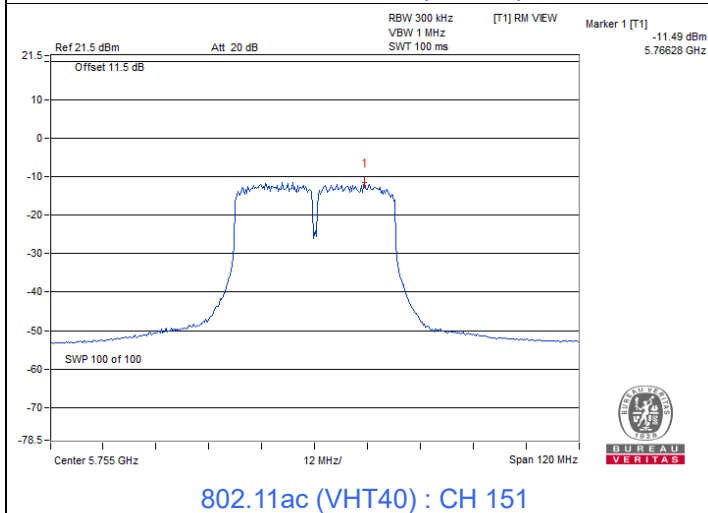
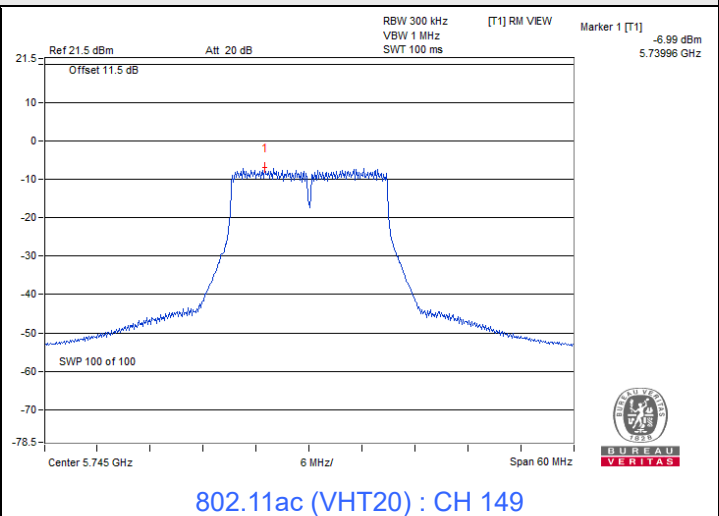
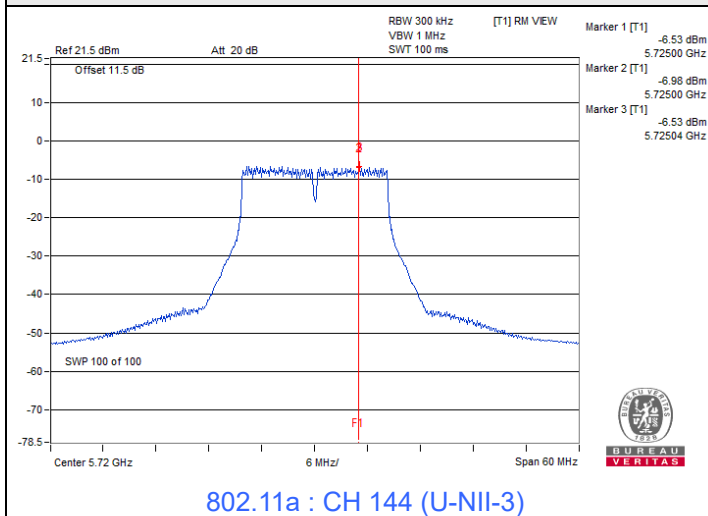
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
138 (U-NII-3)	5690	-18.40	2.54	-13.64	30	Pass
155	5775	-14.77	2.54	-10.01	30	Pass

Note: For U-NII-3, the antenna gain is 3.6 dBi < 6 dBi, so the power density limit shall not be reduced.

Spectrum Plot of Maximum Value



Spectrum Plot of Maximum Value



7.4 6 dB Bandwidth

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

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
144 (U-NII-3)	5720	3.22	0.5	Pass
149	5745	16.46	0.5	Pass
157	5785	16.46	0.5	Pass
165	5825	16.45	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
144 (U-NII-3)	5720	3.81	0.5	Pass
149	5745	17.66	0.5	Pass
157	5785	17.65	0.5	Pass
165	5825	17.66	0.5	Pass

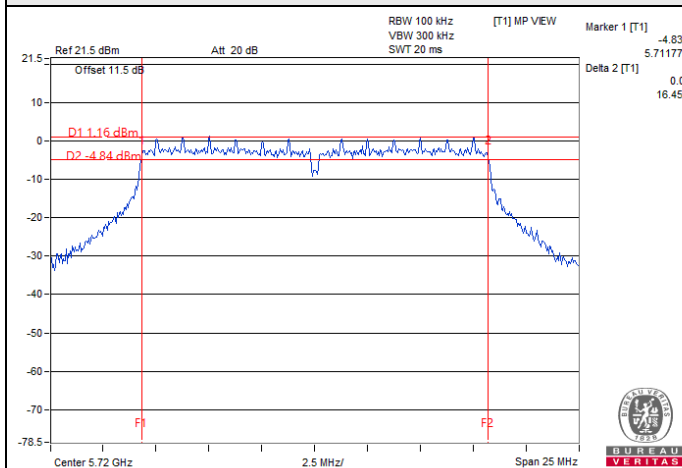
802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
142 (U-NII-3)	5710	2.68	0.5	Pass
151	5755	35.31	0.5	Pass
159	5795	35.5	0.5	Pass

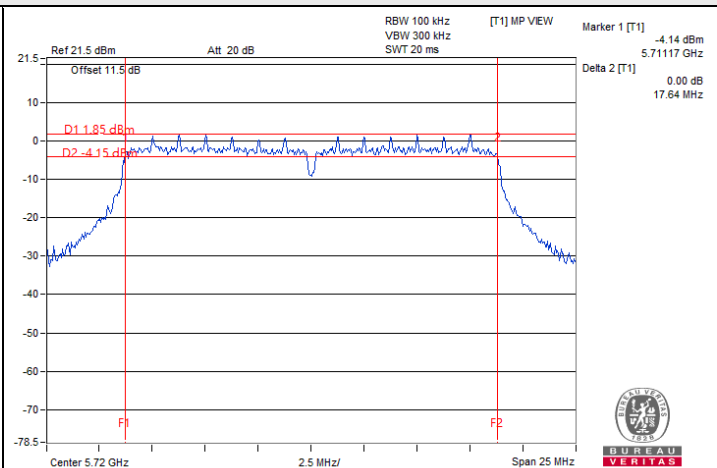
802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
138 (U-NII-3)	5690	2.62	0.5	Pass
155	5775	75.27	0.5	Pass

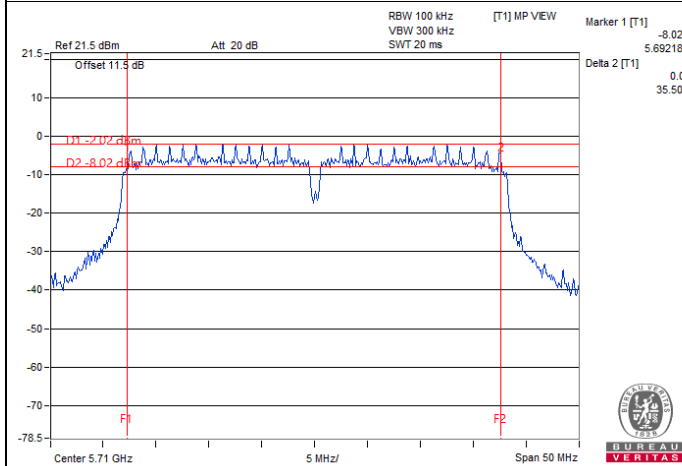
Spectrum Plot of Minimum Value



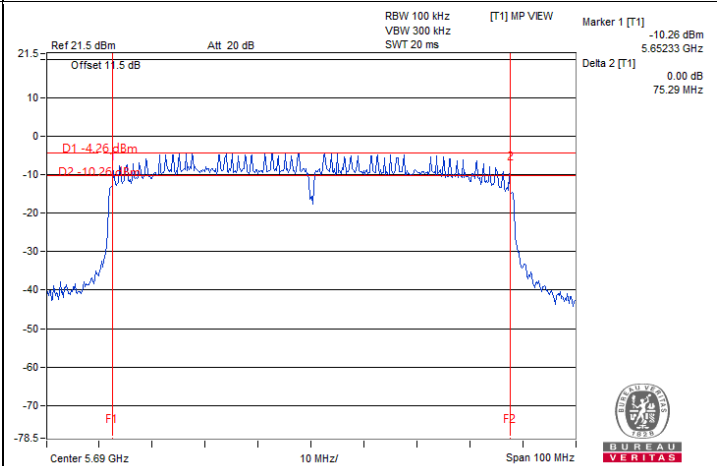
802.11a : CH 144 (U-NII-3)



802.11ac (VHT20) : CH 144 (U-NII-3)



802.11ac (VHT40) : CH 142 (U-NII-3)



802.11ac (VHT80) : CH 138 (U-NII-3)

Notes:

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

7.5 Occupied Bandwidth

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

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.16
40	5200	17.16
48	5240	17.28
52	5260	17.28
60	5300	17.28
64	5320	17.28
100	5500	17.28
116	5580	17.16
140	5700	17.16
144 (U-NII-2C)	5720	13.64
144 (U-NII-3)	5720	3.52
149	5745	17.16
157	5785	17.16
165	5825	17.16

802.11ac (VHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.24
40	5200	18.12
48	5240	18.24
52	5260	18.24
60	5300	18.24
64	5320	18.24
100	5500	18.24
116	5580	18.24
140	5700	18.12
144 (U-NII-2C)	5720	14.12
144 (U-NII-3)	5720	4
149	5745	18.12
157	5785	18.12
165	5825	18.12

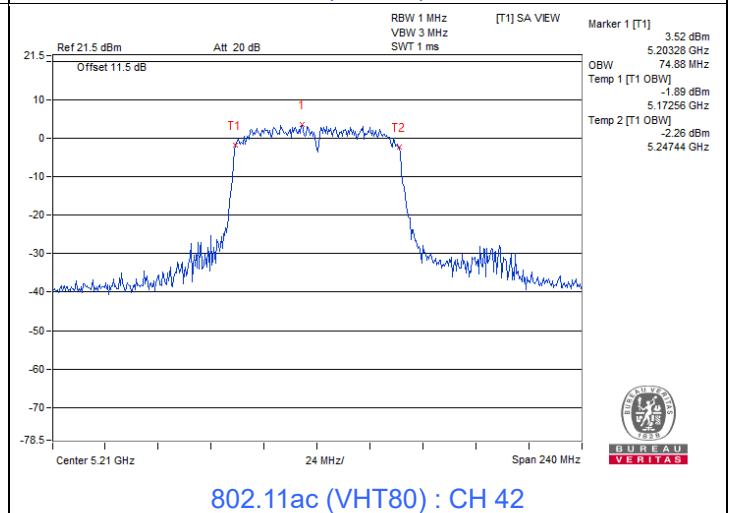
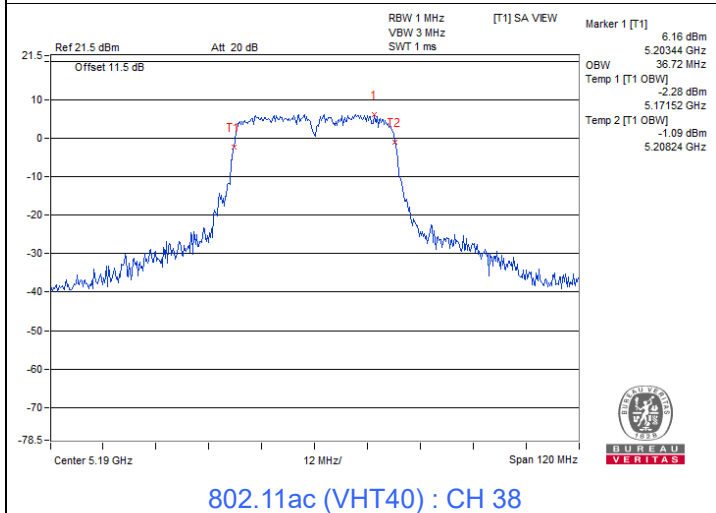
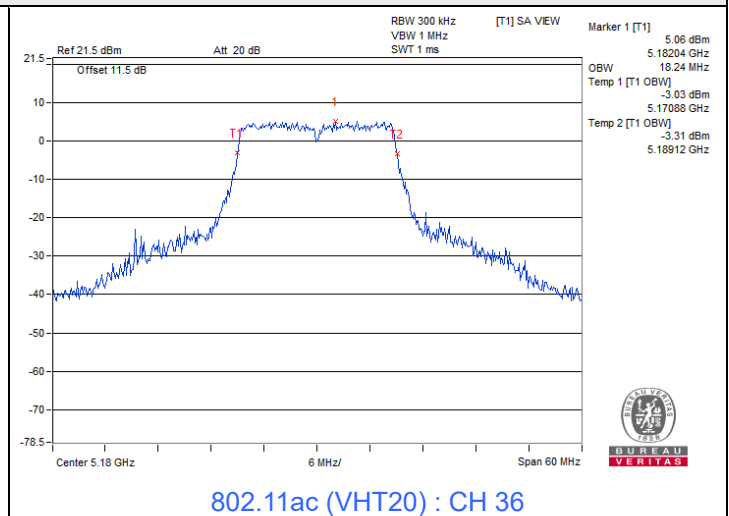
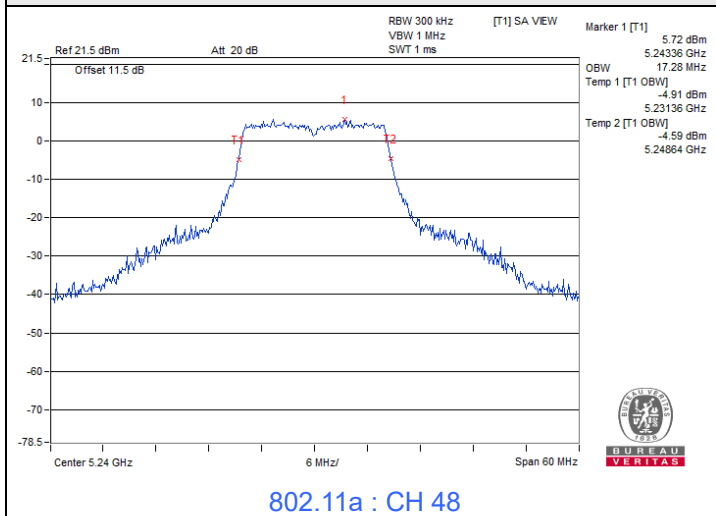
802.11ac (VHT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.72
46	5230	36.72
54	5270	36.72
62	5310	36.72
102	5510	36.72
110	5550	36.72
134	5670	36.72
142 (U-NII-2C)	5710	33.72
142 (U-NII-3)	5710	3.24
151	5755	36.69
159	5795	36.72

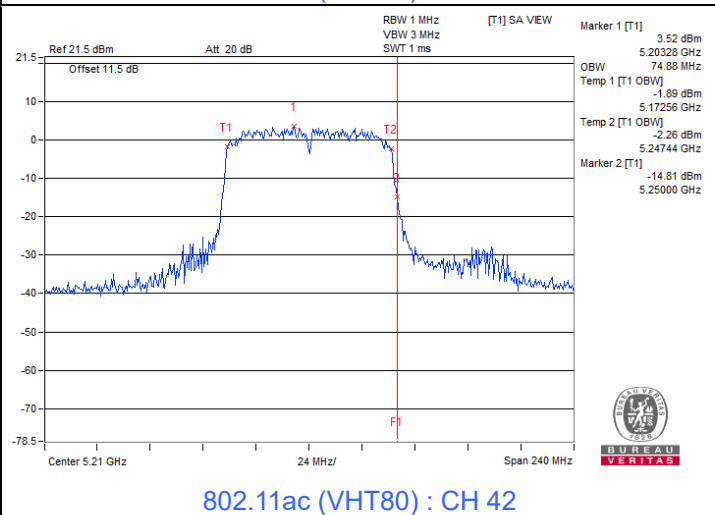
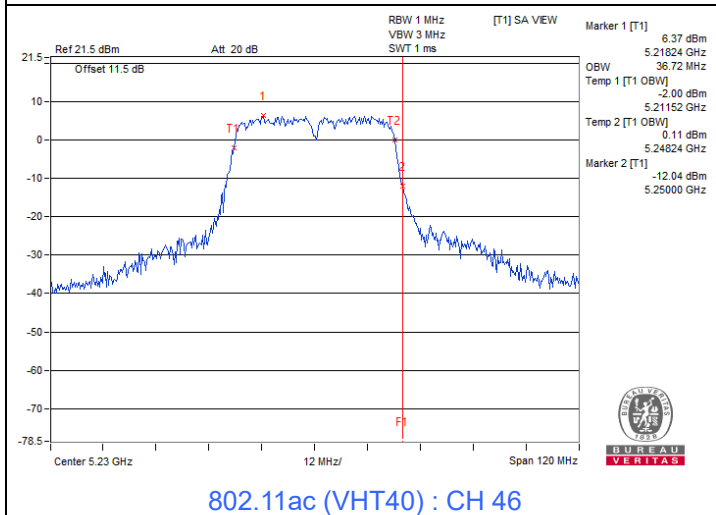
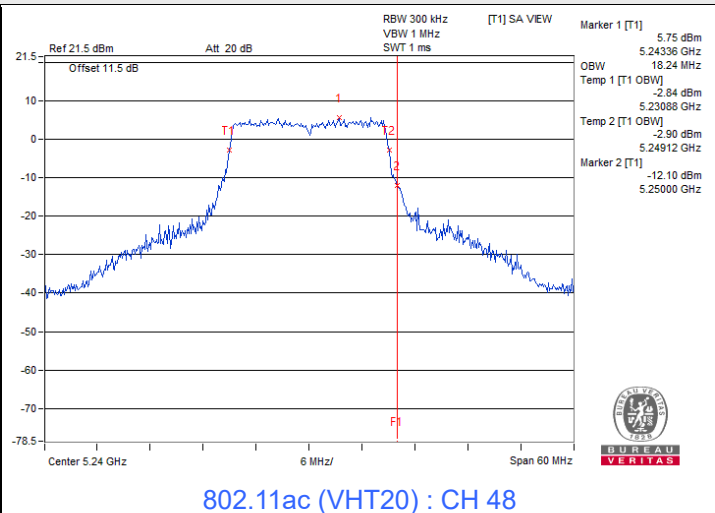
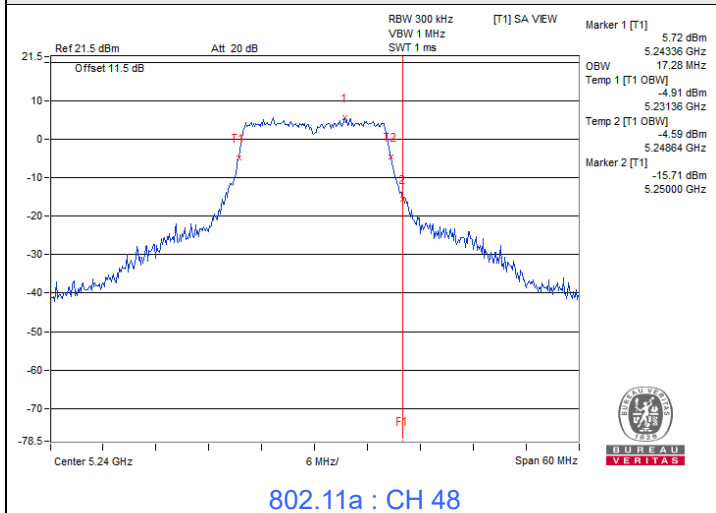
802.11ac (VHT80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	74.88
58	5290	74.88
106	5530	74.88
122	5610	74.88
138 (U-NII-2C)	5690	72.44
138 (U-NII-3)	5690	2.44
155	5775	74.88

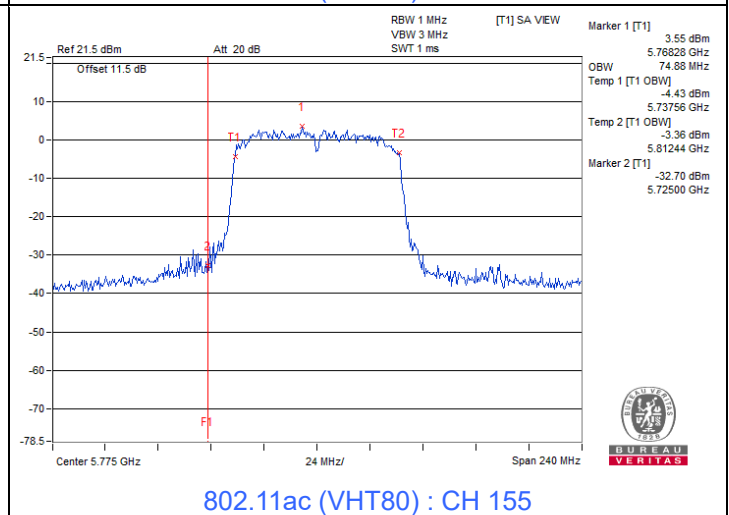
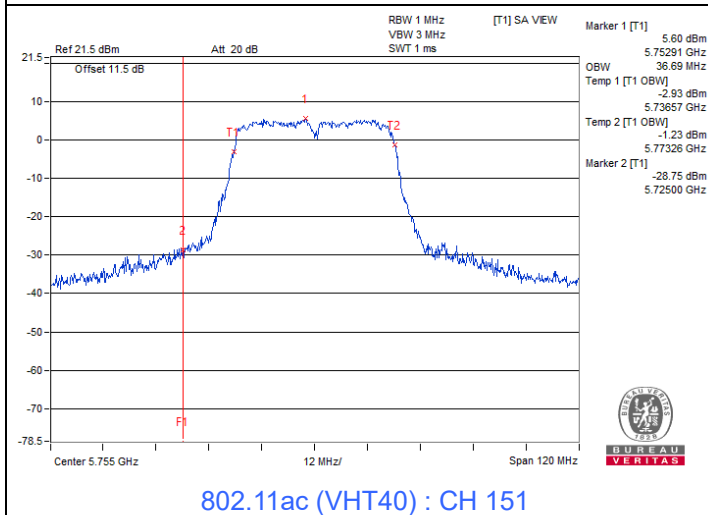
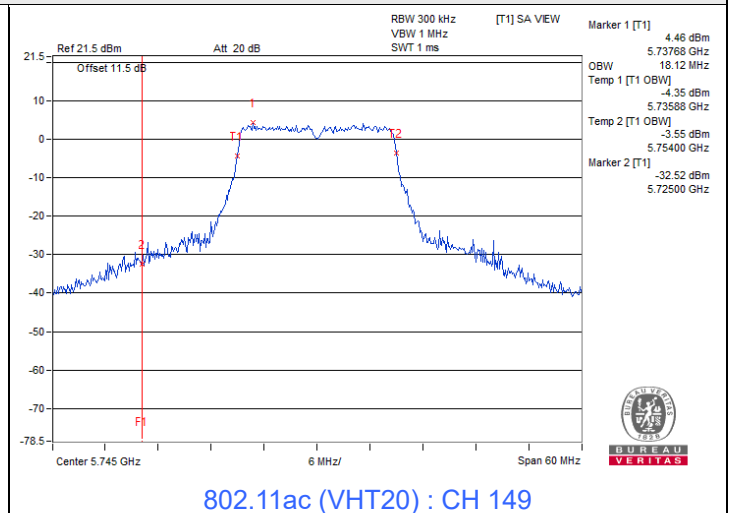
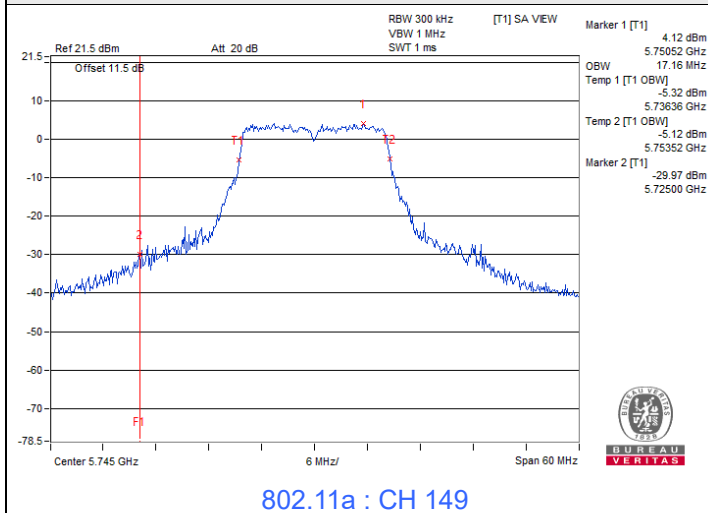
Spectrum Plot of Maximum Value



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



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



7.6 Frequency Stability

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

Frequency Stability Versus Temperature									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
70	120	5180.0197	Pass	5180.0186	Pass	5180.0206	Pass	5180.0196	Pass
60	120	5180.006	Pass	5180.0019	Pass	5180.0053	Pass	5180.0053	Pass
50	120	5179.9966	Pass	5179.9993	Pass	5179.9963	Pass	5179.9968	Pass
40	120	5179.9998	Pass	5180.0015	Pass	5180.0001	Pass	5180.0005	Pass
30	120	5180.0167	Pass	5180.0165	Pass	5180.0159	Pass	5180.0177	Pass
20	120	5180.0093	Pass	5180.0115	Pass	5180.0087	Pass	5180.0093	Pass
10	120	5179.9774	Pass	5179.9777	Pass	5179.9792	Pass	5179.9762	Pass
0	120	5179.9778	Pass	5179.9788	Pass	5179.9783	Pass	5179.9812	Pass
-10	120	5179.9867	Pass	5179.9887	Pass	5179.9854	Pass	5179.9849	Pass
-20	120	5179.9769	Pass	5179.9778	Pass	5179.9778	Pass	5179.9777	Pass
-30	120	5180.0211	Pass	5180.0204	Pass	5180.0211	Pass	5180.0189	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	5180.0077	Pass	5180.0093	Pass	5180.0097	Pass	5180.01	Pass
	120	5180.0093	Pass	5180.0115	Pass	5180.0087	Pass	5180.0093	Pass
	102	5180.0119	Pass	5180.0134	Pass	5180.0126	Pass	5180.0111	Pass

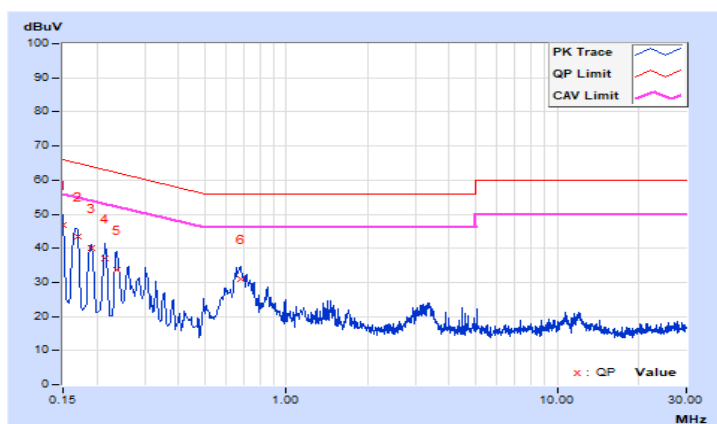
7.7 AC Power Conducted Emissions

RF Mode	802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.62	37.17	17.67	46.79	27.29	66.00	56.00	-19.21	-28.71
2	0.17000	9.63	33.64	14.64	43.27	24.27	64.96	54.96	-21.69	-30.69
3	0.19000	9.64	30.35	11.66	39.99	21.30	64.04	54.04	-24.05	-32.74
4	0.21400	9.64	27.33	10.10	36.97	19.74	63.05	53.05	-26.08	-33.31
5	0.23661	9.65	24.09	9.51	33.74	19.16	62.21	52.21	-28.47	-33.05
6	0.68200	9.69	21.43	14.39	31.12	24.08	56.00	46.00	-24.88	-21.92

Remarks:

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

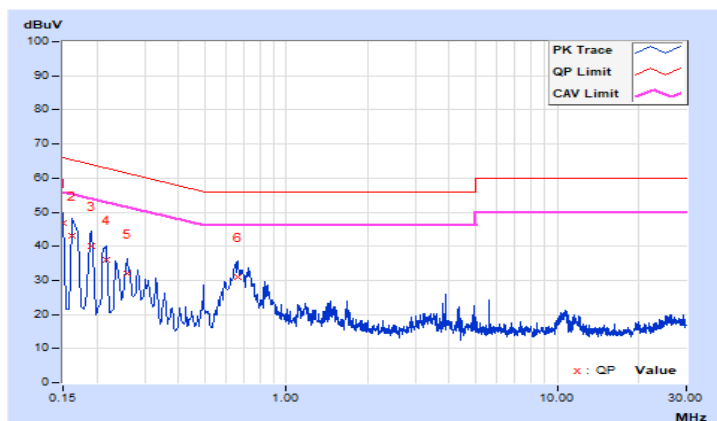


RF Mode	802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.62	37.15	17.78	46.77	27.40	66.00	56.00	-19.23	-28.60
2	0.16200	9.62	33.52	12.66	43.14	22.28	65.36	55.36	-22.22	-33.08
3	0.19000	9.64	30.32	11.35	39.96	20.99	64.04	54.04	-24.08	-33.05
4	0.21690	9.64	26.50	8.61	36.14	18.25	62.94	52.94	-26.80	-34.69
5	0.25800	9.65	22.20	10.92	31.85	20.57	61.50	51.50	-29.65	-30.93
6	0.65937	9.69	21.34	15.75	31.03	25.44	56.00	46.00	-24.97	-20.56

Remarks:

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



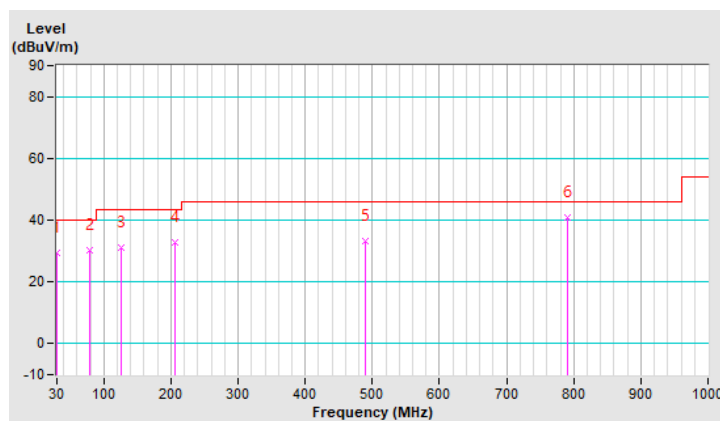
7.8 Unwanted Emissions below 1 GHz

RF Mode	802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.97	29.5 QP	40.0	-10.5	1.00 H	128	40.1	-10.6
2	79.47	30.2 QP	40.0	-9.8	1.00 H	68	43.0	-12.8
3	125.06	31.3 QP	43.5	-12.2	1.49 H	226	41.7	-10.4
4	206.54	32.9 QP	43.5	-10.6	1.00 H	132	44.2	-11.3
5	489.78	33.4 QP	46.0	-12.6	1.49 H	56	37.9	-4.5
6	790.48	40.9 QP	46.0	-5.1	1.49 H	59	38.3	2.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

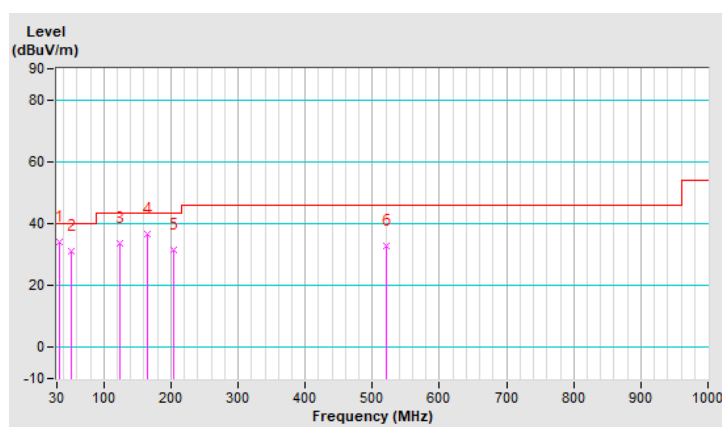


RF Mode	802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	33.88	33.9 QP	40.0	-6.1	1.50 V	109	44.0	-10.1
2	51.34	31.0 QP	40.0	-9.0	1.50 V	263	39.9	-8.9
3	124.09	33.8 QP	43.5	-9.7	1.01 V	120	44.3	-10.5
4	165.80	36.7 QP	43.5	-6.8	1.01 V	160	45.4	-8.7
5	203.63	31.6 QP	43.5	-11.9	1.01 V	70	43.0	-11.4
6	520.82	32.8 QP	46.0	-13.2	1.01 V	272	36.5	-3.7

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



7.9 Unwanted Emissions above 1 GHz

RF Mode	802.11a	Channel	CH 36 : 5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	67.3 PK	74.0	-6.7	1.52 H	142	54.8	12.5
2	5150.00	49.9 AV	54.0	-4.1	1.52 H	142	37.4	12.5
3	*5180.00	109.1 PK			1.52 H	142	66.5	42.6
4	*5180.00	98.7 AV			1.52 H	142	56.1	42.6
5	#10360.00	61.9 PK	68.2	-6.3	1.62 H	225	39.5	22.4
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	5150.00	60.4 PK	74.0	-13.6	1.04 V	294	47.9	12.5
2	5150.00	47.7 AV	54.0	-6.3	1.04 V	294	35.2	12.5
3	*5180.00	104.9 PK			1.04 V	294	62.3	42.6
4	*5180.00	94.6 AV			1.04 V	294	52.0	42.6
5	#10360.00	61.6 PK	68.2	-6.6	1.96 V	301	39.2	22.4

Remarks:

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

RF Mode	802.11a	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	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	109.7 PK			1.53 H	139	67.2	42.5
2	*5200.00	99.1 AV			1.53 H	139	56.6	42.5
3	#10400.00	62.0 PK	68.2	-6.2	1.65 H	228	39.3	22.7
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	*5200.00	104.3 PK			1.01 V	291	61.8	42.5
2	*5200.00	94.2 AV			1.01 V	291	51.7	42.5
3	#10400.00	61.9 PK	68.2	-6.3	1.95 V	298	39.2	22.7

Remarks:

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

RF Mode	802.11a	Channel	CH 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	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	109.4 PK			1.52 H	142	67.0	42.4
2	*5240.00	99.2 AV			1.52 H	142	56.8	42.4
3	5350.00	59.9 PK	74.0	-14.1	1.52 H	142	47.6	12.3
4	5350.00	46.6 AV	54.0	-7.4	1.52 H	142	34.3	12.3
5	#10480.00	62.2 PK	68.2	-6.0	1.65 H	228	39.5	22.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	104.1 PK			1.01 V	291	61.7	42.4
2	*5240.00	94.0 AV			1.01 V	291	51.6	42.4
3	5350.00	59.6 PK	74.0	-14.4	1.01 V	291	47.3	12.3
4	5350.00	46.4 AV	54.0	-7.6	1.01 V	291	34.1	12.3
5	#10480.00	61.9 PK	68.2	-6.3	1.88 V	303	39.2	22.7

Remarks:

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

RF Mode	802.11a	Channel	CH 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	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.1 PK	74.0	-12.9	1.64 H	142	48.6	12.5
2	5150.00	47.0 AV	54.0	-7.0	1.64 H	142	34.5	12.5
3	*5260.00	108.4 PK			1.64 H	142	66.0	42.4
4	*5260.00	98.5 AV			1.64 H	142	56.1	42.4
5	#10520.00	61.9 PK	68.2	-6.3	1.58 H	228	39.4	22.5
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	60.3 PK	74.0	-13.7	1.01 V	294	47.8	12.5
2	5150.00	46.7 AV	54.0	-7.3	1.01 V	294	34.2	12.5
3	*5260.00	105.3 PK			1.01 V	294	62.9	42.4
4	*5260.00	95.3 AV			1.01 V	294	52.9	42.4
5	#10520.00	61.5 PK	68.2	-6.7	1.99 V	308	39.0	22.5

Remarks:

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

RF Mode	802.11a	Channel	CH 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	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	107.9 PK			1.62 H	142	65.4	42.5
2	*5300.00	98.1 AV			1.62 H	142	55.6	42.5
3	10600.00	61.8 PK	74.0	-12.2	1.62 H	235	39.4	22.4
4	10600.00	48.7 AV	54.0	-5.3	1.62 H	235	26.3	22.4
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	*5300.00	104.7 PK			1.06 V	293	62.2	42.5
2	*5300.00	94.5 AV			1.06 V	293	52.0	42.5
3	10600.00	61.6 PK	74.0	-12.4	1.86 V	305	39.2	22.4
4	10600.00	48.5 AV	54.0	-5.5	1.86 V	305	26.1	22.4

Remarks:

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

RF Mode	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	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	107.7 PK			1.63 H	141	65.2	42.5
2	*5320.00	97.4 AV			1.63 H	141	54.9	42.5
3	5350.00	66.3 PK	74.0	-7.7	1.63 H	141	54.0	12.3
4	5350.00	48.5 AV	54.0	-5.5	1.63 H	141	36.2	12.3
5	10640.00	62.2 PK	74.0	-11.8	1.59 H	232	39.5	22.7
6	10640.00	49.2 AV	54.0	-4.8	1.59 H	232	26.5	22.7
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	*5320.00	104.3 PK			1.02 V	286	61.8	42.5
2	*5320.00	93.9 AV			1.02 V	286	51.4	42.5
3	5350.00	60.8 PK	74.0	-13.2	1.02 V	286	48.5	12.3
4	5350.00	47.3 AV	54.0	-6.7	1.02 V	286	35.0	12.3
5	10640.00	61.9 PK	74.0	-12.1	1.87 V	301	39.2	22.7
6	10640.00	48.9 AV	54.0	-5.1	1.87 V	301	26.2	22.7

Remarks:

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

RF Mode	802.11a	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	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.9 PK	74.0	-13.1	1.61 H	132	48.2	12.7
2	5460.00	47.6 AV	54.0	-6.4	1.61 H	132	34.9	12.7
3	#5470.00	63.0 PK	68.2	-5.2	1.61 H	132	50.4	12.6
4	*5500.00	105.1 PK			1.61 H	132	62.0	43.1
5	*5500.00	95.1 AV			1.61 H	132	52.0	43.1
6	11000.00	62.4 PK	74.0	-11.6	1.55 H	229	39.5	22.9
7	11000.00	49.5 AV	54.0	-4.5	1.55 H	229	26.6	22.9
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	5460.00	60.2 PK	74.0	-13.8	1.03 V	273	47.5	12.7
2	5460.00	47.2 AV	54.0	-6.8	1.03 V	273	34.5	12.7
3	#5470.00	61.2 PK	68.2	-7.0	1.03 V	273	48.6	12.6
4	*5500.00	102.5 PK			1.03 V	273	59.4	43.1
5	*5500.00	92.8 AV			1.03 V	273	49.7	43.1
6	11000.00	62.1 PK	74.0	-11.9	1.99 V	307	39.2	22.9
7	11000.00	49.2 AV	54.0	-4.8	1.99 V	307	26.3	22.9

Remarks:

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

RF Mode	802.11a	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	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	105.8 PK			1.58 H	138	62.9	42.9
2	*5580.00	95.6 AV			1.58 H	138	52.7	42.9
3	11160.00	62.7 PK	74.0	-11.3	1.59 H	231	39.5	23.2
4	11160.00	49.7 AV	54.0	-4.3	1.59 H	231	26.5	23.2
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	*5580.00	101.6 PK			1.03 V	262	58.7	42.9
2	*5580.00	91.5 AV			1.03 V	262	48.6	42.9
3	11160.00	62.4 PK	74.0	-11.6	1.95 V	305	39.2	23.2
4	11160.00	49.4 AV	54.0	-4.6	1.95 V	305	26.2	23.2

Remarks:

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

RF Mode	802.11a	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	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	105.4 PK			1.51 H	140	62.4	43.0
2	*5700.00	94.2 AV			1.51 H	140	51.2	43.0
3	#5725.00	63.9 PK	68.2	-4.3	1.51 H	140	50.8	13.1
4	11400.00	63.6 PK	74.0	-10.4	1.58 H	231	39.6	24.0
5	11400.00	50.5 AV	54.0	-3.5	1.58 H	231	26.5	24.0
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	*5700.00	101.6 PK			1.06 V	260	58.6	43.0
2	*5700.00	91.8 AV			1.06 V	260	48.8	43.0
3	#5725.00	61.7 PK	68.2	-6.5	1.06 V	260	48.6	13.1
4	11400.00	63.2 PK	74.0	-10.8	1.97 V	303	39.2	24.0
5	11400.00	50.1 AV	54.0	-3.9	1.97 V	303	26.1	24.0

Remarks:

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

RF Mode	802.11a	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	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	61.4 PK	68.2	-6.8	1.68 H	150	48.8	12.6
2	*5720.00	104.8 PK			1.68 H	150	61.6	43.2
3	*5720.00	94.7 AV			1.68 H	150	51.5	43.2
4	#5850.00	60.9 PK	68.2	-7.3	1.68 H	150	47.5	13.4
5	11440.00	63.5 PK	74.0	-10.5	1.59 H	233	39.5	24.0
6	11440.00	50.4 AV	54.0	-3.6	1.59 H	233	26.4	24.0
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	#5470.00	60.8 PK	68.2	-7.4	1.40 V	275	48.2	12.6
2	*5720.00	101.2 PK			1.40 V	275	58.0	43.2
3	*5720.00	90.9 AV			1.40 V	275	47.7	43.2
4	#5850.00	60.7 PK	68.2	-7.5	1.40 V	275	47.3	13.4
5	11440.00	63.2 PK	74.0	-10.8	2.07 V	305	39.2	24.0
6	11440.00	50.1 AV	54.0	-3.9	2.07 V	305	26.1	24.0

Remarks:

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

RF Mode	802.11a	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	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.00	60.4 PK	68.2	-7.8	1.49 H	143	47.7	12.7
2	*5745.00	108.3 PK			1.49 H	143	64.9	43.4
3	*5745.00	98.5 AV			1.49 H	143	55.1	43.4
4	#5948.40	61.3 PK	68.2	-6.9	1.49 H	143	47.6	13.7
5	11490.00	63.5 PK	74.0	-10.5	1.59 H	236	39.5	24.0
6	11490.00	50.3 AV	54.0	-3.7	1.59 H	236	26.3	24.0
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	#5648.80	59.5 PK	68.2	-8.7	1.02 V	261	46.8	12.7
2	*5745.00	103.6 PK			1.02 V	261	60.2	43.4
3	*5745.00	92.4 AV			1.02 V	261	49.0	43.4
4	#5955.20	61.5 PK	68.2	-6.7	1.02 V	261	47.8	13.7
5	11490.00	63.2 PK	74.0	-10.8	1.98 V	307	39.2	24.0
6	11490.00	50.1 AV	54.0	-3.9	1.98 V	307	26.1	24.0

Remarks:

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

RF Mode	802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5631.60	60.9 PK	68.2	-7.3	1.52 H	137	48.2	12.7
2	*5785.00	106.0 PK			1.52 H	137	62.4	43.6
3	*5785.00	95.8 AV			1.52 H	137	52.2	43.6
4	#5942.00	61.4 PK	68.2	-6.8	1.52 H	137	47.7	13.7
5	11570.00	63.4 PK	74.0	-10.6	1.62 H	241	39.5	23.9
6	11570.00	50.1 AV	54.0	-3.9	1.62 H	241	26.2	23.9
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	#5623.20	60.1 PK	68.2	-8.1	1.00 V	263	47.6	12.5
2	*5785.00	103.4 PK			1.00 V	263	59.8	43.6
3	*5785.00	93.3 AV			1.00 V	263	49.7	43.6
4	#5975.60	61.2 PK	68.2	-7.0	1.00 V	263	47.5	13.7
5	11570.00	63.1 PK	74.0	-10.9	1.95 V	312	39.2	23.9
6	11570.00	49.9 AV	54.0	-4.1	1.95 V	312	26.0	23.9

Remarks:

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

RF Mode	802.11a	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	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5642.80	60.0 PK	68.2	-8.2	1.46 H	140	47.3	12.7
2	*5825.00	105.8 PK			1.46 H	140	62.0	43.8
3	*5825.00	96.0 AV			1.46 H	140	52.2	43.8
4	#5950.80	60.7 PK	68.2	-7.5	1.46 H	140	47.0	13.7
5	11650.00	62.7 PK	74.0	-11.3	1.62 H	232	39.4	23.3
6	11650.00	49.5 AV	54.0	-4.5	1.62 H	232	26.2	23.3
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	#5616.80	59.6 PK	68.2	-8.6	1.04 V	258	47.1	12.5
2	*5825.00	102.2 PK			1.04 V	258	58.4	43.8
3	*5825.00	92.6 AV			1.04 V	258	48.8	43.8
4	#5925.60	61.0 PK	68.2	-7.2	1.04 V	258	47.4	13.6
5	11650.00	62.4 PK	74.0	-11.6	1.95 V	311	39.1	23.3
6	11650.00	49.2 AV	54.0	-4.8	1.95 V	311	25.9	23.3

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, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.1 PK	74.0	-7.9	1.50 H	140	53.6	12.5
2	5150.00	50.1 AV	54.0	-3.9	1.50 H	140	37.6	12.5
3	*5180.00	109.7 PK			1.50 H	140	67.1	42.6
4	*5180.00	100.0 AV			1.50 H	140	57.4	42.6
5	#10360.00	61.7 PK	68.2	-6.5	1.65 H	227	39.3	22.4
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	5150.00	60.0 PK	74.0	-14.0	1.04 V	291	47.5	12.5
2	5150.00	47.7 AV	54.0	-6.3	1.04 V	291	35.2	12.5
3	*5180.00	103.8 PK			1.04 V	291	61.2	42.6
4	*5180.00	94.2 AV			1.04 V	291	51.6	42.6
5	#10360.00	61.5 PK	68.2	-6.7	1.95 V	302	39.1	22.4

Remarks:

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

RF Mode	802.11ac (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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	107.7 PK			1.52 H	139	65.2	42.5
2	*5200.00	98.2 AV			1.52 H	139	55.7	42.5
3	#10400.00	61.9 PK	68.2	-6.3	1.69 H	228	39.2	22.7
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	*5200.00	103.5 PK			1.03 V	291	61.0	42.5
2	*5200.00	94.0 AV			1.03 V	291	51.5	42.5
3	#10400.00	61.7 PK	68.2	-6.5	1.98 V	306	39.0	22.7

Remarks:

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

RF Mode	802.11ac (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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	107.7 PK			1.48 H	143	65.3	42.4
2	*5240.00	98.2 AV			1.48 H	143	55.8	42.4
3	5350.00	59.8 PK	74.0	-14.2	1.48 H	143	47.5	12.3
4	5350.00	46.6 AV	54.0	-7.4	1.48 H	143	34.3	12.3
5	#10480.00	62.1 PK	68.2	-6.1	1.69 H	224	39.4	22.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	103.6 PK			1.02 V	291	61.2	42.4
2	*5240.00	94.0 AV			1.02 V	291	51.6	42.4
3	5350.00	59.5 PK	74.0	-14.5	1.02 V	291	47.2	12.3
4	5350.00	46.4 AV	54.0	-7.6	1.02 V	291	34.1	12.3
5	#10480.00	61.8 PK	68.2	-6.4	1.92 V	302	39.1	22.7

Remarks:

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

RF Mode	802.11ac (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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.4 PK	74.0	-14.6	1.64 H	143	46.9	12.5
2	5150.00	47.0 AV	54.0	-7.0	1.64 H	143	34.5	12.5
3	*5260.00	107.2 PK			1.64 H	143	64.8	42.4
4	*5260.00	97.6 AV			1.64 H	143	55.2	42.4
5	#10520.00	61.8 PK	68.2	-6.4	1.61 H	233	39.3	22.5
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	60.5 PK	74.0	-13.5	1.00 V	293	48.0	12.5
2	5150.00	46.7 AV	54.0	-7.3	1.00 V	293	34.2	12.5
3	*5260.00	104.5 PK			1.00 V	293	62.1	42.4
4	*5260.00	94.8 AV			1.00 V	293	52.4	42.4
5	#10520.00	61.5 PK	68.2	-6.7	1.95 V	302	39.0	22.5

Remarks:

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

RF Mode	802.11ac (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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	106.7 PK			1.63 H	138	64.2	42.5
2	*5300.00	97.3 AV			1.63 H	138	54.8	42.5
3	10600.00	61.6 PK	74.0	-12.4	1.55 H	235	39.2	22.4
4	10600.00	48.6 AV	54.0	-5.4	1.55 H	235	26.2	22.4
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	*5300.00	103.2 PK			1.00 V	292	60.7	42.5
2	*5300.00	94.0 AV			1.00 V	292	51.5	42.5
3	10600.00	61.4 PK	74.0	-12.6	1.95 V	305	39.0	22.4
4	10600.00	48.3 AV	54.0	-5.7	1.95 V	305	25.9	22.4

Remarks:

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

RF Mode	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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	106.6 PK			1.62 H	139	64.1	42.5
2	*5320.00	97.1 AV			1.62 H	139	54.6	42.5
3	5350.00	65.7 PK	74.0	-8.3	1.62 H	139	53.4	12.3
4	5350.00	48.9 AV	54.0	-5.1	1.62 H	139	36.6	12.3
5	10640.00	62.3 PK	74.0	-11.7	1.62 H	235	39.6	22.7
6	10640.00	49.3 AV	54.0	-4.7	1.62 H	235	26.6	22.7
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	*5320.00	103.2 PK			1.08 V	284	60.7	42.5
2	*5320.00	93.6 AV			1.08 V	284	51.1	42.5
3	5350.00	60.0 PK	74.0	-14.0	1.08 V	284	47.7	12.3
4	5350.00	47.0 AV	54.0	-7.0	1.08 V	284	34.7	12.3
5	10640.00	61.9 PK	74.0	-12.1	1.95 V	302	39.2	22.7
6	10640.00	48.9 AV	54.0	-5.1	1.95 V	302	26.2	22.7

Remarks:

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

RF Mode	802.11ac (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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.7 PK	74.0	-13.3	1.55 H	142	48.0	12.7
2	5460.00	48.3 AV	54.0	-5.7	1.55 H	142	35.6	12.7
3	#5470.00	63.1 PK	68.2	-5.1	1.55 H	142	50.5	12.6
4	*5500.00	104.0 PK			1.55 H	142	60.9	43.1
5	*5500.00	94.7 AV			1.55 H	142	51.6	43.1
6	11000.00	62.5 PK	74.0	-11.5	1.58 H	233	39.6	22.9
7	11000.00	49.6 AV	54.0	-4.4	1.58 H	233	26.7	22.9
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	5460.00	60.2 PK	74.0	-13.8	1.05 V	273	47.5	12.7
2	5460.00	47.8 AV	54.0	-6.2	1.05 V	273	35.1	12.7
3	#5470.00	61.2 PK	68.2	-7.0	1.05 V	273	48.6	12.6
4	*5500.00	101.8 PK			1.05 V	273	58.7	43.1
5	*5500.00	92.2 AV			1.05 V	273	49.1	43.1
6	11000.00	62.1 PK	74.0	-11.9	1.92 V	308	39.2	22.9
7	11000.00	49.2 AV	54.0	-4.8	1.92 V	308	26.3	22.9

Remarks:

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

RF Mode	802.11ac (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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	104.6 PK			1.60 H	136	61.7	42.9
2	*5580.00	95.0 AV			1.60 H	136	52.1	42.9
3	11160.00	62.4 PK	74.0	-11.6	1.52 H	228	39.2	23.2
4	11160.00	49.6 AV	54.0	-4.4	1.52 H	228	26.4	23.2
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	*5580.00	100.4 PK			1.00 V	283	57.5	42.9
2	*5580.00	91.0 AV			1.00 V	283	48.1	42.9
3	11160.00	62.2 PK	74.0	-11.8	1.93 V	303	39.0	23.2
4	11160.00	49.4 AV	54.0	-4.6	1.93 V	303	26.2	23.2

Remarks:

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

RF Mode	802.11ac (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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	105.6 PK			1.54 H	138	62.6	43.0
2	*5700.00	96.0 AV			1.54 H	138	53.0	43.0
3	#5725.00	65.0 PK	68.2	-3.2	1.54 H	138	51.9	13.1
4	11400.00	63.5 PK	74.0	-10.5	1.52 H	234	39.5	24.0
5	11400.00	50.5 AV	54.0	-3.5	1.52 H	234	26.5	24.0
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	*5700.00	100.9 PK			1.02 V	263	57.9	43.0
2	*5700.00	91.3 AV			1.02 V	263	48.3	43.0
3	#5725.00	61.6 PK	68.2	-6.6	1.02 V	263	48.5	13.1
4	11400.00	63.0 PK	74.0	-11.0	1.99 V	312	39.0	24.0
5	11400.00	50.1 AV	54.0	-3.9	1.99 V	312	26.1	24.0

Remarks:

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

RF Mode	802.11ac (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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	61.1 PK	68.2	-7.1	1.69 H	150	48.5	12.6
2	*5720.00	103.3 PK			1.69 H	150	60.1	43.2
3	*5720.00	94.0 AV			1.69 H	150	50.8	43.2
4	#5850.00	60.7 PK	68.2	-7.5	1.69 H	150	47.3	13.4
5	11440.00	63.3 PK	74.0	-10.7	1.65 H	238	39.3	24.0
6	11440.00	50.2 AV	54.0	-3.8	1.65 H	238	26.2	24.0
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	#5470.00	60.6 PK	68.2	-7.6	1.39 V	290	48.0	12.6
2	*5720.00	99.7 PK			1.39 V	290	56.5	43.2
3	*5720.00	90.5 AV			1.39 V	290	47.3	43.2
4	#5850.00	60.6 PK	68.2	-7.6	1.39 V	290	47.2	13.4
5	11440.00	63.0 PK	74.0	-11.0	2.06 V	309	39.0	24.0
6	11440.00	49.9 AV	54.0	-4.1	2.06 V	309	25.9	24.0

Remarks:

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

RF Mode	802.11ac (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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5612.00	59.7 PK	68.2	-8.5	1.48 H	140	47.2	12.5
2	*5745.00	107.4 PK			1.48 H	140	64.0	43.4
3	*5745.00	98.2 AV			1.48 H	140	54.8	43.4
4	#5944.80	61.1 PK	68.2	-7.1	1.48 H	140	47.4	13.7
5	11490.00	63.4 PK	74.0	-10.6	1.57 H	233	39.4	24.0
6	11490.00	50.2 AV	54.0	-3.8	1.57 H	233	26.2	24.0
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	#5603.20	59.2 PK	68.2	-9.0	1.02 V	261	46.7	12.5
2	*5745.00	101.6 PK			1.02 V	261	58.2	43.4
3	*5745.00	92.0 AV			1.02 V	261	48.6	43.4
4	#5938.40	60.4 PK	68.2	-7.8	1.02 V	261	46.7	13.7
5	11490.00	63.0 PK	74.0	-11.0	1.96 V	309	39.0	24.0
6	11490.00	50.0 AV	54.0	-4.0	1.96 V	309	26.0	24.0

Remarks:

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

RF Mode	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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5617.60	60.1 PK	68.2	-8.1	1.48 H	141	47.6	12.5
2	*5785.00	105.3 PK			1.48 H	141	61.7	43.6
3	*5785.00	96.1 AV			1.48 H	141	52.5	43.6
4	#5969.60	60.6 PK	68.2	-7.6	1.48 H	141	46.9	13.7
5	11570.00	63.2 PK	74.0	-10.8	1.62 H	235	39.3	23.9
6	11570.00	50.1 AV	54.0	-3.9	1.62 H	235	26.2	23.9
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	#5623.20	59.7 PK	68.2	-8.5	1.01 V	261	47.2	12.5
2	*5785.00	102.2 PK			1.01 V	261	58.6	43.6
3	*5785.00	92.4 AV			1.01 V	261	48.8	43.6
4	#5948.80	61.0 PK	68.2	-7.2	1.01 V	261	47.3	13.7
5	11570.00	62.8 PK	74.0	-11.2	1.89 V	306	38.9	23.9
6	11570.00	49.7 AV	54.0	-4.3	1.89 V	306	25.8	23.9

Remarks:

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

RF Mode	802.11ac (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 = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5624.80	59.4 PK	68.2	-8.8	1.50 H	139	46.9	12.5
2	*5825.00	105.1 PK			1.50 H	139	61.3	43.8
3	*5825.00	94.8 AV			1.50 H	139	51.0	43.8
4	#5941.20	60.5 PK	68.2	-7.7	1.50 H	139	46.8	13.7
5	11650.00	62.5 PK	74.0	-11.5	1.55 H	232	39.2	23.3
6	11650.00	49.4 AV	54.0	-4.6	1.55 H	232	26.1	23.3
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	#5635.20	60.4 PK	68.2	-7.8	1.02 V	261	47.7	12.7
2	*5825.00	101.1 PK			1.02 V	261	57.3	43.8
3	*5825.00	91.4 AV			1.02 V	261	47.6	43.8
4	#5975.60	61.0 PK	68.2	-7.2	1.02 V	261	47.3	13.7
5	11650.00	62.1 PK	74.0	-11.9	1.95 V	305	38.8	23.3
6	11650.00	49.0 AV	54.0	-5.0	1.95 V	305	25.7	23.3

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, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.5 PK	74.0	-7.5	1.54 H	138	54.0	12.5
2	5150.00	49.9 AV	54.0	-4.1	1.54 H	138	37.4	12.5
3	*5190.00	105.2 PK			1.54 H	138	62.6	42.6
4	*5190.00	95.4 AV			1.54 H	138	52.8	42.6
5	#10380.00	61.7 PK	68.2	-6.5	1.65 H	228	39.2	22.5
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	60.9 PK	74.0	-13.1	1.05 V	289	48.4	12.5
2	5150.00	47.9 AV	54.0	-6.1	1.05 V	289	35.4	12.5
3	*5190.00	99.7 PK			1.05 V	289	57.1	42.6
4	*5190.00	90.1 AV			1.05 V	289	47.5	42.6
5	#10380.00	61.3 PK	68.2	-6.9	1.95 V	305	38.8	22.5

Remarks:

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

RF Mode	802.11ac (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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	103.8 PK			1.45 H	144	61.4	42.4
2	*5230.00	94.4 AV			1.45 H	144	52.0	42.4
3	5350.00	60.4 PK	74.0	-13.6	1.45 H	144	48.1	12.3
4	5350.00	47.3 AV	54.0	-6.7	1.45 H	144	35.0	12.3
5	#10460.00	62.0 PK	68.2	-6.2	1.62 H	222	39.3	22.7
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	*5230.00	98.9 PK			1.06 V	293	56.5	42.4
2	*5230.00	89.9 AV			1.06 V	293	47.5	42.4
3	5350.00	60.1 PK	74.0	-13.9	1.06 V	293	47.8	12.3
4	5350.00	47.1 AV	54.0	-6.9	1.06 V	293	34.8	12.3
5	#10460.00	61.4 PK	68.2	-6.8	1.92 V	302	38.7	22.7

Remarks:

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

RF Mode	802.11ac (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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.0 PK	74.0	-13.0	1.61 H	141	48.5	12.5
2	5150.00	47.4 AV	54.0	-6.6	1.61 H	141	34.9	12.5
3	*5270.00	103.1 PK			1.61 H	141	60.7	42.4
4	*5270.00	93.3 AV			1.61 H	141	50.9	42.4
5	#10540.00	61.5 PK	68.2	-6.7	1.62 H	238	39.0	22.5
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	60.3 PK	74.0	-13.7	1.00 V	294	47.8	12.5
2	5150.00	47.0 AV	54.0	-7.0	1.00 V	294	34.5	12.5
3	*5270.00	100.4 PK			1.00 V	294	58.0	42.4
4	*5270.00	90.9 AV			1.00 V	294	48.5	42.4
5	#10540.00	61.3 PK	68.2	-6.9	1.99 V	301	38.8	22.5

Remarks:

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

RF Mode	802.11ac (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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	104.4 PK			1.58 H	139	61.9	42.5
2	*5310.00	94.4 AV			1.58 H	139	51.9	42.5
3	5350.00	65.7 PK	74.0	-8.3	1.58 H	139	53.4	12.3
4	5350.00	49.8 AV	54.0	-4.2	1.58 H	139	37.5	12.3
5	10620.00	61.8 PK	74.0	-12.2	1.55 H	231	39.2	22.6
6	10620.00	48.9 AV	54.0	-5.1	1.55 H	231	26.3	22.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	98.9 PK			1.08 V	294	56.4	42.5
2	*5310.00	90.1 AV			1.08 V	294	47.6	42.5
3	5350.00	61.5 PK	74.0	-12.5	1.08 V	294	49.2	12.3
4	5350.00	47.7 AV	54.0	-6.3	1.08 V	294	35.4	12.3
5	10620.00	61.6 PK	74.0	-12.4	1.93 V	302	39.0	22.6
6	10620.00	48.7 AV	54.0	-5.3	1.93 V	302	26.1	22.6

Remarks:

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

RF Mode	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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.2 PK	74.0	-12.8	1.54 H	142	48.5	12.7
2	5460.00	48.6 AV	54.0	-5.4	1.54 H	142	35.9	12.7
3	#5470.00	63.7 PK	68.2	-4.5	1.54 H	142	51.1	12.6
4	*5510.00	101.3 PK			1.54 H	142	58.2	43.1
5	*5510.00	91.6 AV			1.54 H	142	48.5	43.1
6	11020.00	62.1 PK	74.0	-11.9	1.59 H	235	39.2	22.9
7	11020.00	49.1 AV	54.0	-4.9	1.59 H	235	26.2	22.9
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	5460.00	60.5 PK	74.0	-13.5	1.03 V	281	47.8	12.7
2	5460.00	48.0 AV	54.0	-6.0	1.03 V	281	35.3	12.7
3	#5470.00	61.8 PK	68.2	-6.4	1.03 V	281	49.2	12.6
4	*5510.00	98.7 PK			1.03 V	281	55.6	43.1
5	*5510.00	88.7 AV			1.03 V	281	45.6	43.1
6	11020.00	61.9 PK	74.0	-12.1	1.97 V	308	39.0	22.9
7	11020.00	48.7 AV	54.0	-5.3	1.97 V	308	25.8	22.9

Remarks:

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

RF Mode	802.11ac (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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	101.3 PK			1.59 H	138	58.3	43.0
2	*5550.00	91.4 AV			1.59 H	138	48.4	43.0
3	11100.00	62.0 PK	74.0	-12.0	1.57 H	233	39.0	23.0
4	11100.00	49.2 AV	54.0	-4.8	1.57 H	233	26.2	23.0
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	*5550.00	97.4 PK			1.08 V	271	54.4	43.0
2	*5550.00	88.0 AV			1.08 V	271	45.0	43.0
3	11100.00	61.8 PK	74.0	-12.2	1.98 V	306	38.8	23.0
4	11100.00	48.9 AV	54.0	-5.1	1.98 V	306	25.9	23.0

Remarks:

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

RF Mode	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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	104.2 PK			1.52 H	140	61.1	43.1
2	*5670.00	94.0 AV			1.52 H	140	50.9	43.1
3	#5725.00	62.2 PK	68.2	-6.0	1.52 H	140	49.1	13.1
4	11340.00	62.7 PK	74.0	-11.3	1.57 H	237	39.1	23.6
5	11340.00	49.7 AV	54.0	-4.3	1.57 H	237	26.1	23.6
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	*5670.00	97.8 PK			1.01 V	264	54.7	43.1
2	*5670.00	87.5 AV			1.01 V	264	44.4	43.1
3	#5725.00	61.1 PK	68.2	-7.1	1.01 V	264	48.0	13.1
4	11340.00	62.4 PK	74.0	-11.6	1.99 V	301	38.8	23.6
5	11340.00	49.5 AV	54.0	-4.5	1.99 V	301	25.9	23.6

Remarks:

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

RF Mode	802.11ac (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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	60.1 PK	68.2	-8.1	1.80 H	153	47.5	12.6
2	*5710.00	100.7 PK			1.80 H	153	57.6	43.1
3	*5710.00	90.8 AV			1.80 H	153	47.7	43.1
4	#5850.00	60.8 PK	68.2	-7.4	1.80 H	153	47.4	13.4
5	11420.00	63.3 PK	74.0	-10.7	1.57 H	231	39.2	24.1
6	11420.00	50.1 AV	54.0	-3.9	1.57 H	231	26.0	24.1
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	#5470.00	59.9 PK	68.2	-8.3	1.22 V	288	47.3	12.6
2	*5710.00	96.0 PK			1.22 V	288	52.9	43.1
3	*5710.00	87.0 AV			1.22 V	288	43.9	43.1
4	#5850.00	60.6 PK	68.2	-7.6	1.22 V	288	47.2	13.4
5	11420.00	63.1 PK	74.0	-10.9	2.05 V	302	39.0	24.1
6	11420.00	49.9 AV	54.0	-4.1	2.05 V	302	25.8	24.1

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, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5616.00	60.0 PK	68.2	-8.2	1.51 H	142	47.5	12.5
2	*5755.00	103.6 PK			1.51 H	142	60.2	43.4
3	*5755.00	93.5 AV			1.51 H	142	50.1	43.4
4	#5935.60	60.8 PK	68.2	-7.4	1.51 H	142	47.1	13.7
5	11510.00	62.9 PK	74.0	-11.1	1.53 H	232	39.0	23.9
6	11510.00	50.0 AV	54.0	-4.0	1.53 H	232	26.1	23.9
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	#5614.00	59.4 PK	68.2	-8.8	1.02 V	262	46.9	12.5
2	*5755.00	98.2 PK			1.02 V	262	54.8	43.4
3	*5755.00	88.3 AV			1.02 V	262	44.9	43.4
4	#5984.00	60.9 PK	68.2	-7.3	1.02 V	262	47.3	13.6
5	11510.00	62.6 PK	74.0	-11.4	1.95 V	308	38.7	23.9
6	11510.00	49.6 AV	54.0	-4.4	1.95 V	308	25.7	23.9

Remarks:

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

RF Mode	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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5642.80	59.8 PK	68.2	-8.4	1.48 H	141	47.1	12.7
2	*5795.00	102.0 PK			1.48 H	141	58.3	43.7
3	*5795.00	92.2 AV			1.48 H	141	48.5	43.7
4	#5972.00	60.9 PK	68.2	-7.3	1.48 H	141	47.2	13.7
5	11590.00	62.9 PK	74.0	-11.1	1.62 H	235	39.0	23.9
6	11590.00	49.9 AV	54.0	-4.1	1.62 H	235	26.0	23.9
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	#5647.20	59.9 PK	68.2	-8.3	1.01 V	260	47.2	12.7
2	*5795.00	98.7 PK			1.01 V	260	55.0	43.7
3	*5795.00	88.7 AV			1.01 V	260	45.0	43.7
4	#5949.60	60.8 PK	68.2	-7.4	1.01 V	260	47.1	13.7
5	11590.00	62.7 PK	74.0	-11.3	1.95 V	302	38.8	23.9
6	11590.00	49.7 AV	54.0	-4.3	1.95 V	302	25.8	23.9

Remarks:

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

RF Mode	802.11ac (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 = 5.1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.5 PK	74.0	-7.5	1.46 H	140	54.0	12.5
2	5150.00	50.1 AV	54.0	-3.9	1.46 H	140	37.6	12.5
3	*5210.00	103.2 PK			1.46 H	140	60.7	42.5
4	*5210.00	93.6 AV			1.46 H	140	51.1	42.5
5	5350.00	59.5 PK	74.0	-14.5	1.46 H	140	47.2	12.3
6	5350.00	48.5 AV	54.0	-5.5	1.46 H	140	36.2	12.3
7	#10420.00	61.5 PK	68.2	-6.7	1.69 H	226	38.9	22.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.9 PK	74.0	-13.1	1.03 V	292	48.4	12.5
2	5150.00	48.8 AV	54.0	-5.2	1.03 V	292	36.3	12.5
3	*5210.00	97.4 PK			1.03 V	292	54.9	42.5
4	*5210.00	87.5 AV			1.03 V	292	45.0	42.5
5	5350.00	59.3 PK	74.0	-14.7	1.03 V	292	47.0	12.3
6	5350.00	47.8 AV	54.0	-6.2	1.03 V	292	35.5	12.3
7	#10420.00	61.3 PK	68.2	-6.9	1.93 V	308	38.7	22.6

Remarks:

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

RF Mode	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 = 5.1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.7 PK	74.0	-13.3	1.62 H	140	48.2	12.5
2	5150.00	48.2 AV	54.0	-5.8	1.62 H	140	35.7	12.5
3	*5290.00	100.5 PK			1.62 H	140	58.0	42.5
4	*5290.00	90.7 AV			1.62 H	140	48.2	42.5
5	5350.00	65.5 PK	74.0	-8.5	1.62 H	140	53.2	12.3
6	5350.00	50.4 AV	54.0	-3.6	1.62 H	140	38.1	12.3
7	#10580.00	61.6 PK	68.2	-6.6	1.59 H	235	39.0	22.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.5 PK	74.0	-14.5	1.04 V	295	47.0	12.5
2	5150.00	47.7 AV	54.0	-6.3	1.04 V	295	35.2	12.5
3	*5290.00	97.2 PK			1.04 V	295	54.7	42.5
4	*5290.00	87.0 AV			1.04 V	295	44.5	42.5
5	5350.00	61.8 PK	74.0	-12.2	1.04 V	295	49.5	12.3
6	5350.00	48.2 AV	54.0	-5.8	1.04 V	295	35.9	12.3
7	#10580.00	61.2 PK	68.2	-7.0	1.98 V	302	38.6	22.6

Remarks:

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

RF Mode	802.11ac (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 = 5.1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	62.4 PK	74.0	-11.6	1.58 H	140	49.7	12.7
2	5460.00	50.4 AV	54.0	-3.6	1.58 H	140	37.7	12.7
3	#5470.00	64.3 PK	68.2	-3.9	1.58 H	140	51.7	12.6
4	*5530.00	100.6 PK			1.58 H	140	57.5	43.1
5	*5530.00	90.6 AV			1.58 H	140	47.5	43.1
6	#5725.00	60.4 PK	68.2	-7.8	1.58 H	140	47.3	13.1
7	11060.00	61.9 PK	74.0	-12.1	1.53 H	229	39.0	22.9
8	11060.00	48.9 AV	54.0	-5.1	1.53 H	229	26.0	22.9
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	5460.00	60.5 PK	74.0	-13.5	1.02 V	274	47.8	12.7
2	5460.00	48.8 AV	54.0	-5.2	1.02 V	274	36.1	12.7
3	#5470.00	61.5 PK	68.2	-6.7	1.02 V	274	48.9	12.6
4	*5530.00	95.7 PK			1.02 V	274	52.6	43.1
5	*5530.00	85.6 AV			1.02 V	274	42.5	43.1
6	#5725.00	60.3 PK	68.2	-7.9	1.02 V	274	47.2	13.1
7	11060.00	61.6 PK	74.0	-12.4	1.95 V	308	38.7	22.9
8	11060.00	48.7 AV	54.0	-5.3	1.95 V	308	25.8	22.9

Remarks:

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

RF Mode	802.11ac (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 = 5.1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.6 PK	74.0	-13.4	1.51 H	141	47.9	12.7
2	5460.00	48.5 AV	54.0	-5.5	1.51 H	141	35.8	12.7
3	#5470.00	61.0 PK	68.2	-7.2	1.51 H	141	48.4	12.6
4	*5610.00	101.0 PK			1.51 H	141	58.0	43.0
5	*5610.00	91.0 AV			1.51 H	141	48.0	43.0
6	#5725.00	61.6 PK	68.2	-6.6	1.51 H	141	48.5	13.1
7	11220.00	62.3 PK	74.0	-11.7	1.55 H	234	38.8	23.5
8	11220.00	49.4 AV	54.0	-4.6	1.55 H	234	25.9	23.5
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	5460.00	60.2 PK	74.0	-13.8	1.00 V	270	47.5	12.7
2	5460.00	47.9 AV	54.0	-6.1	1.00 V	270	35.2	12.7
3	#5470.00	60.4 PK	68.2	-7.8	1.00 V	270	47.8	12.6
4	*5610.00	94.7 PK			1.00 V	270	51.7	43.0
5	*5610.00	84.8 AV			1.00 V	270	41.8	43.0
6	#5725.00	61.0 PK	68.2	-7.2	1.00 V	270	47.9	13.1
7	11220.00	62.0 PK	74.0	-12.0	1.99 V	307	38.5	23.5
8	11220.00	49.2 AV	54.0	-4.8	1.99 V	307	25.7	23.5

Remarks:

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

RF Mode	802.11ac (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 = 5.1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	60.6 PK	68.2	-7.6	1.80 H	154	48.0	12.6
2	*5690.00	97.7 PK			1.80 H	154	54.7	43.0
3	*5690.00	87.5 AV			1.80 H	154	44.5	43.0
4	#5850.00	60.7 PK	68.2	-7.5	1.80 H	154	47.3	13.4
5	11380.00	63.0 PK	74.0	-11.0	1.62 H	236	39.0	24.0
6	11380.00	49.9 AV	54.0	-4.1	1.62 H	236	25.9	24.0
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	#5470.00	60.3 PK	68.2	-7.9	1.22 V	276	47.7	12.6
2	*5690.00	94.4 PK			1.22 V	276	51.4	43.0
3	*5690.00	84.3 AV			1.22 V	276	41.3	43.0
4	#5850.00	60.6 PK	68.2	-7.6	1.22 V	276	47.2	13.4
5	11380.00	62.7 PK	74.0	-11.3	2.02 V	302	38.7	24.0
6	11380.00	49.7 AV	54.0	-4.3	2.02 V	302	25.7	24.0

Remarks:

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

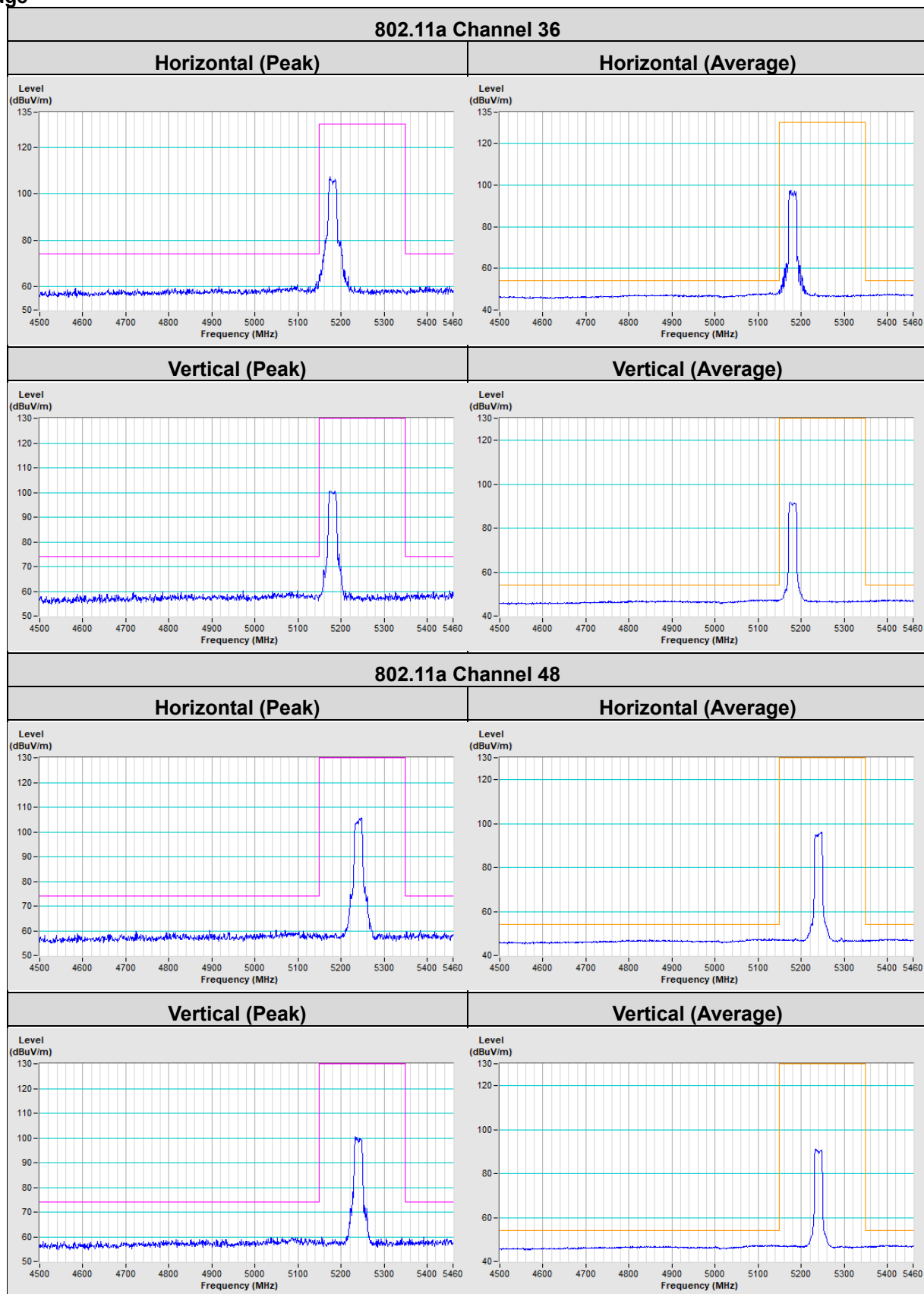
RF Mode	802.11ac (VHT80)	Channel	CH 155 : 5775 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 5.1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

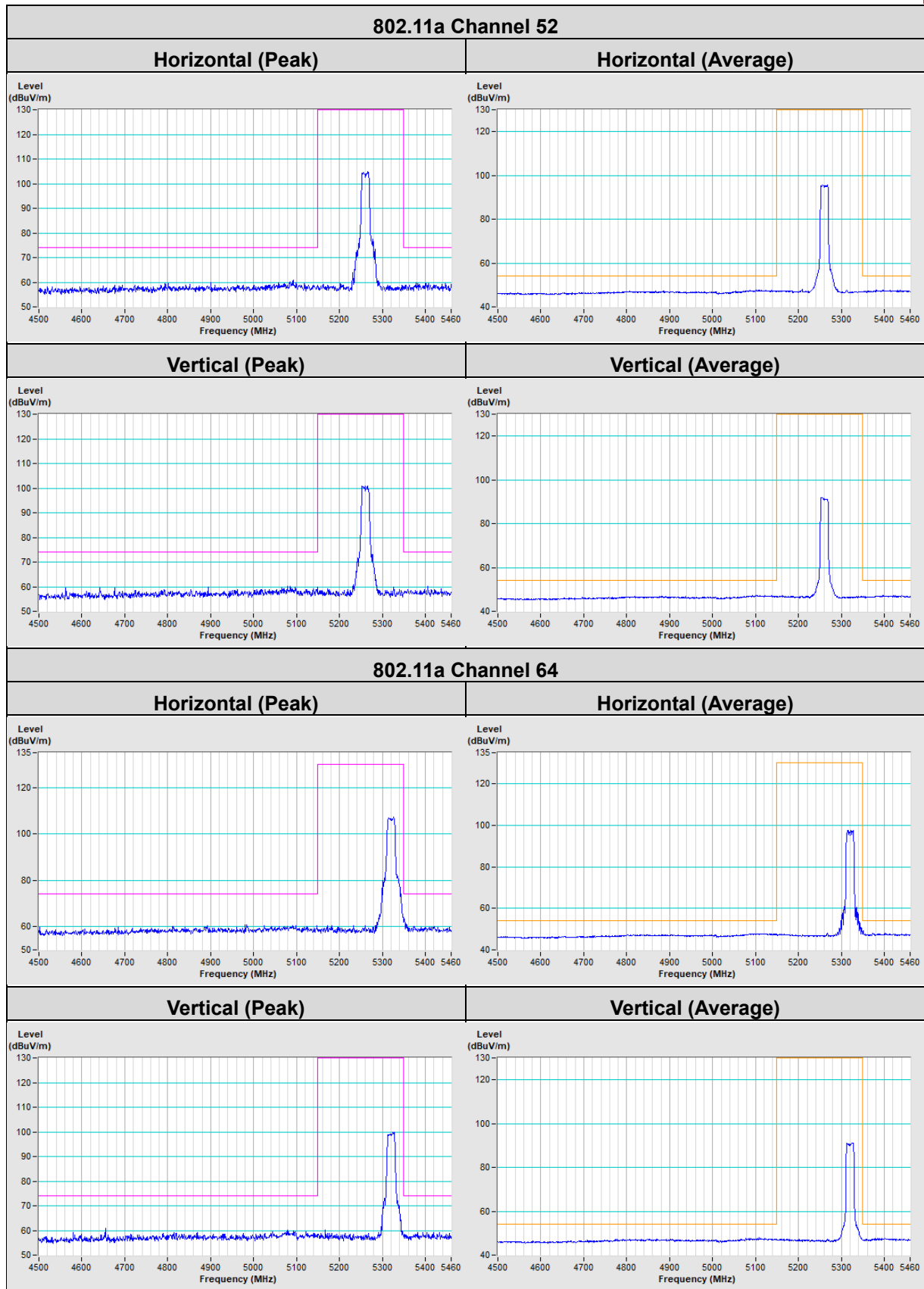
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5630.80	60.3 PK	68.2	-7.9	1.52 H	140	47.6	12.7
2	*5775.00	102.3 PK			1.52 H	140	58.7	43.6
3	*5775.00	92.6 AV			1.52 H	140	49.0	43.6
4	#5978.80	61.1 PK	68.2	-7.1	1.52 H	140	47.4	13.7
5	11550.00	62.8 PK	74.0	-11.2	1.51 H	229	38.9	23.9
6	11550.00	49.7 AV	54.0	-4.3	1.51 H	229	25.8	23.9
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	#5608.40	60.3 PK	68.2	-7.9	1.00 V	262	47.8	12.5
2	*5775.00	96.0 PK			1.00 V	262	52.4	43.6
3	*5775.00	86.3 AV			1.00 V	262	42.7	43.6
4	#5972.00	60.6 PK	68.2	-7.6	1.00 V	262	46.9	13.7
5	11550.00	62.4 PK	74.0	-11.6	1.95 V	316	38.5	23.9
6	11550.00	49.4 AV	54.0	-4.6	1.95 V	316	25.5	23.9

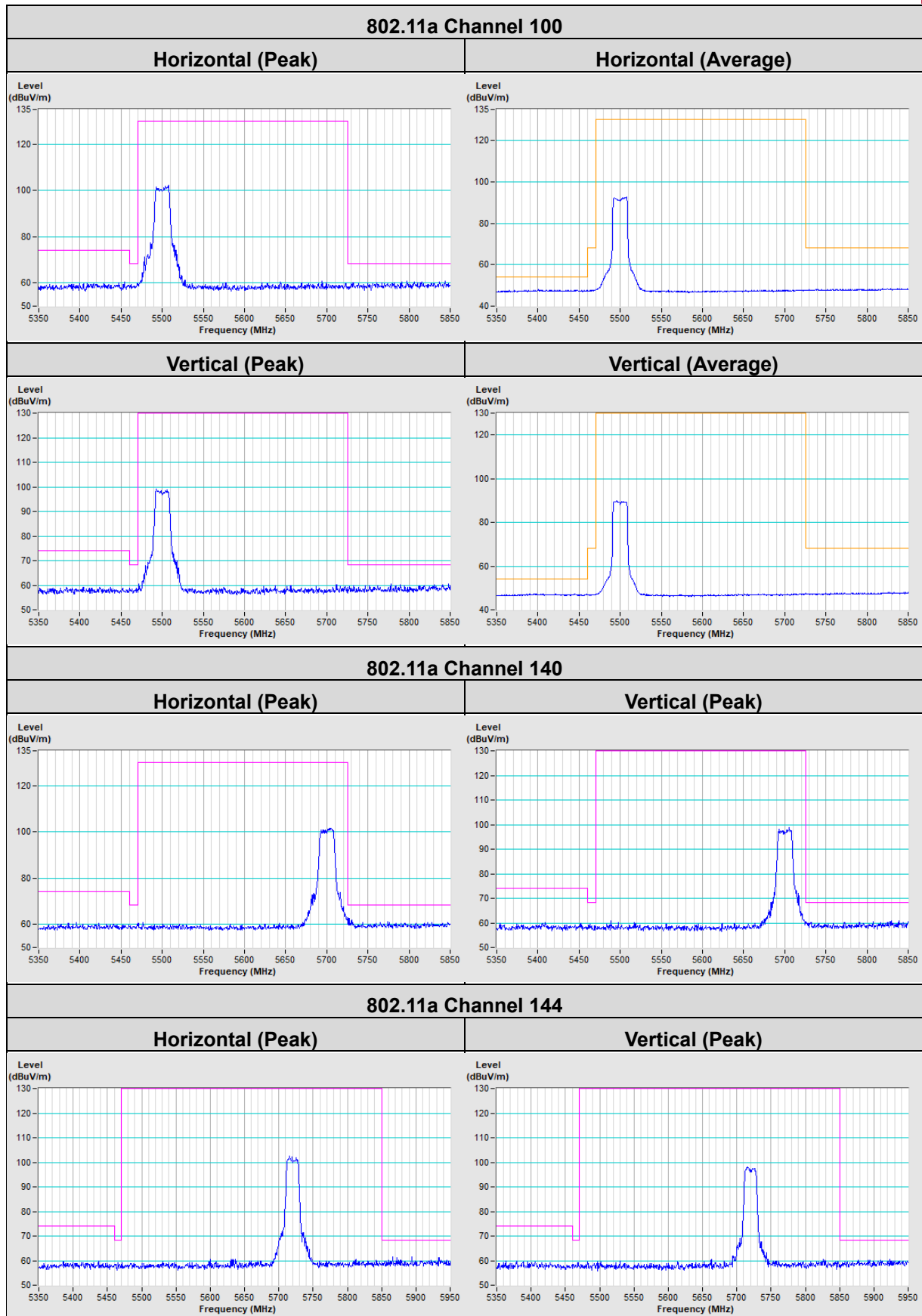
Remarks:

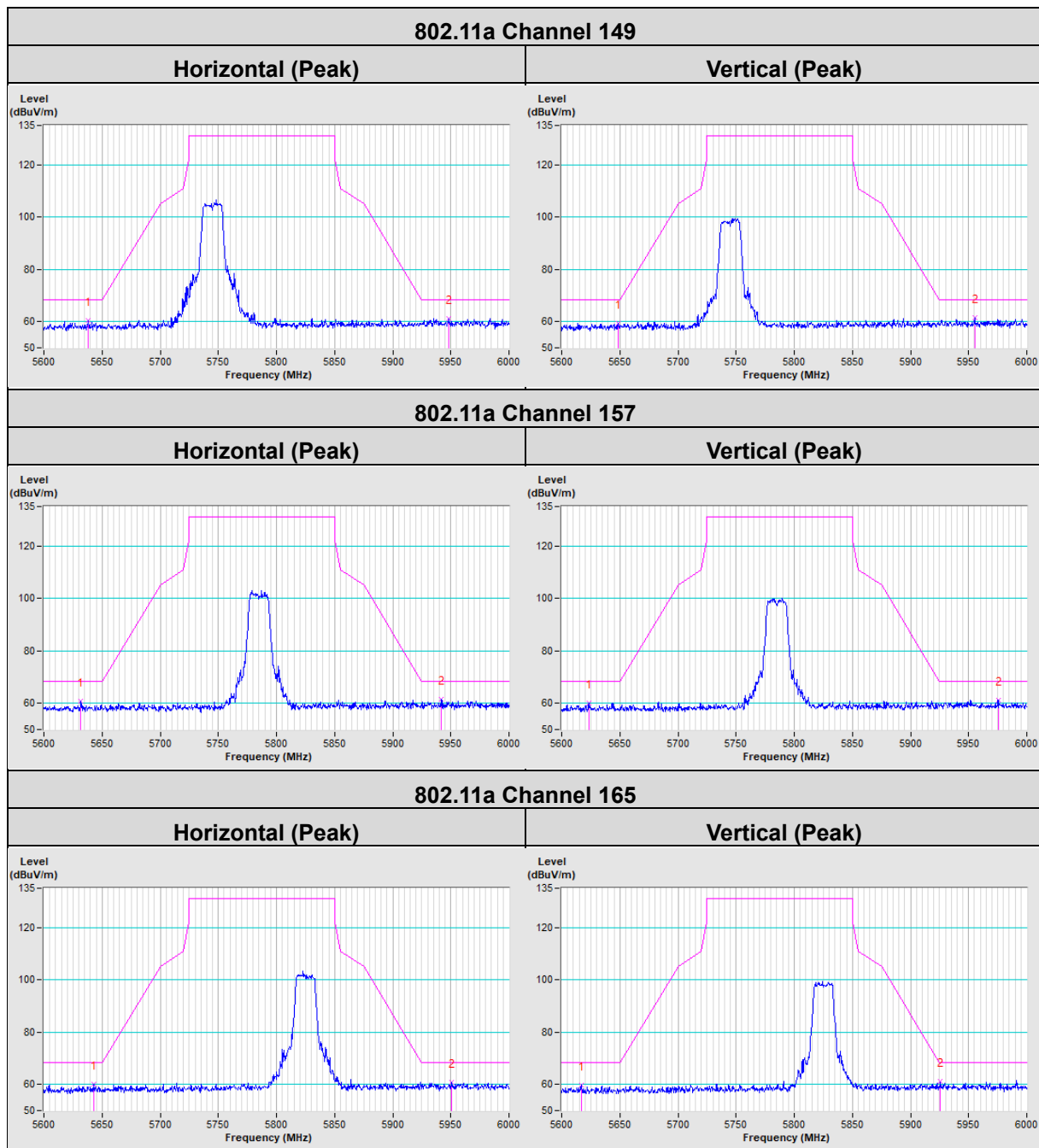
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

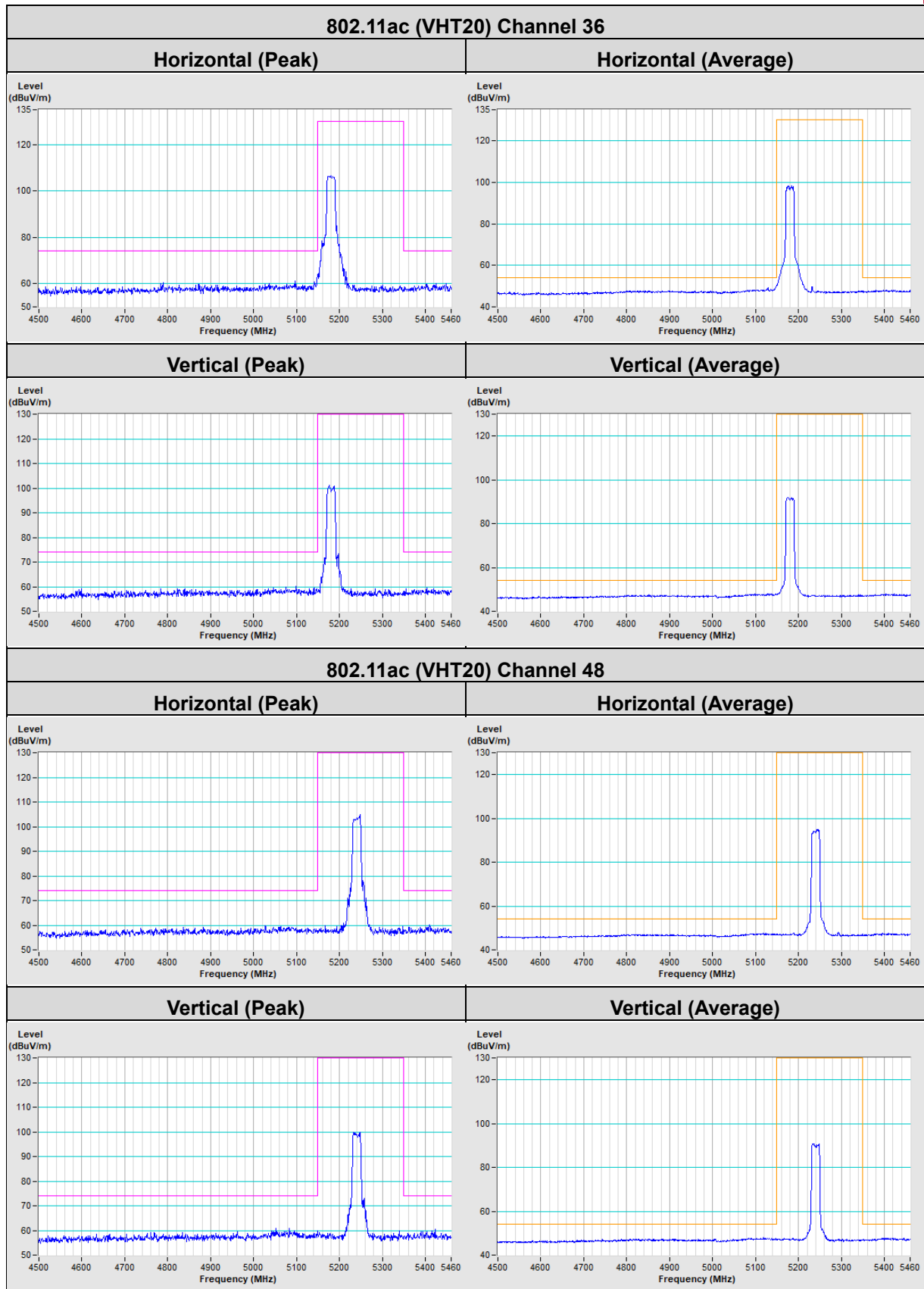
Band Edge

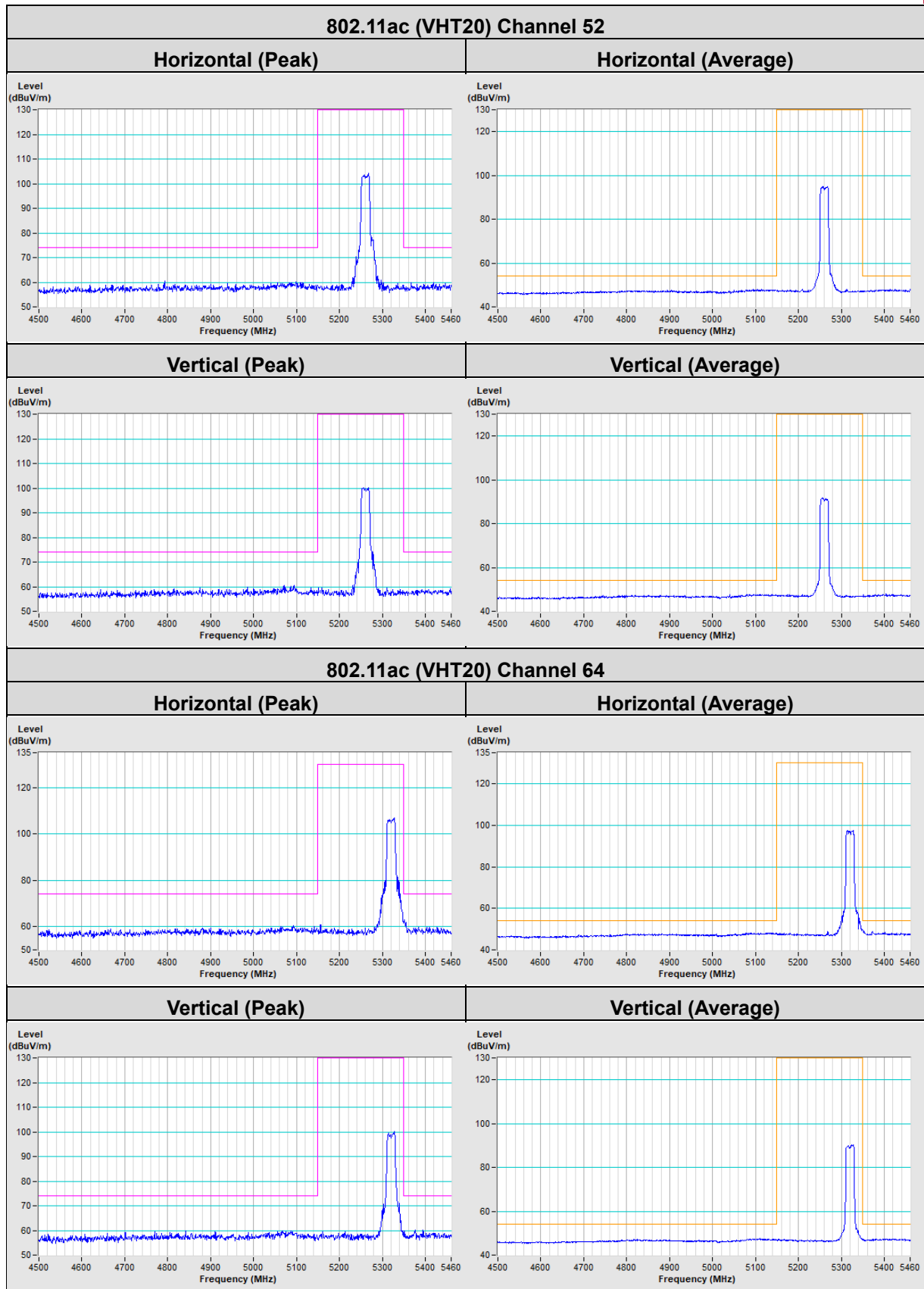


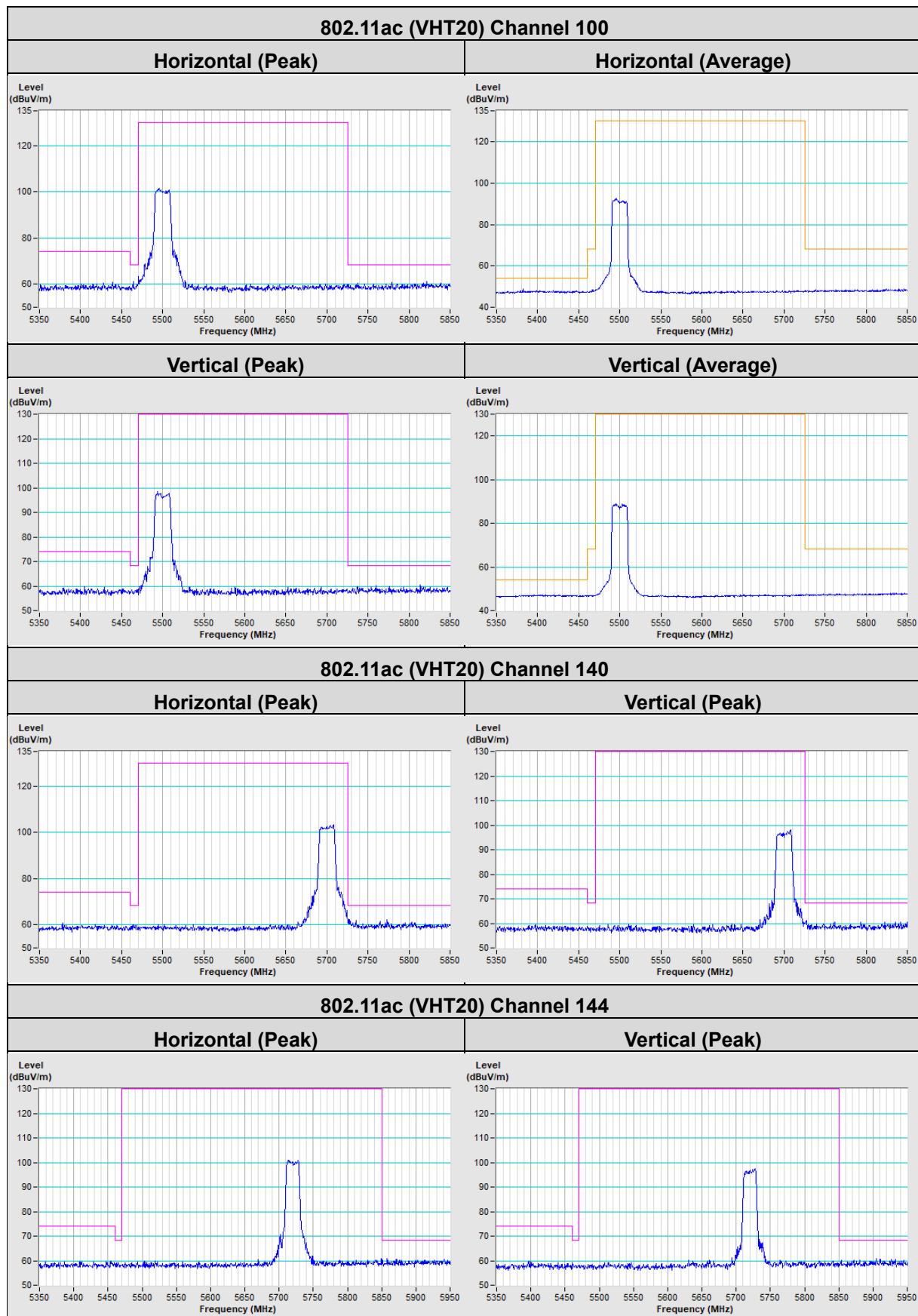


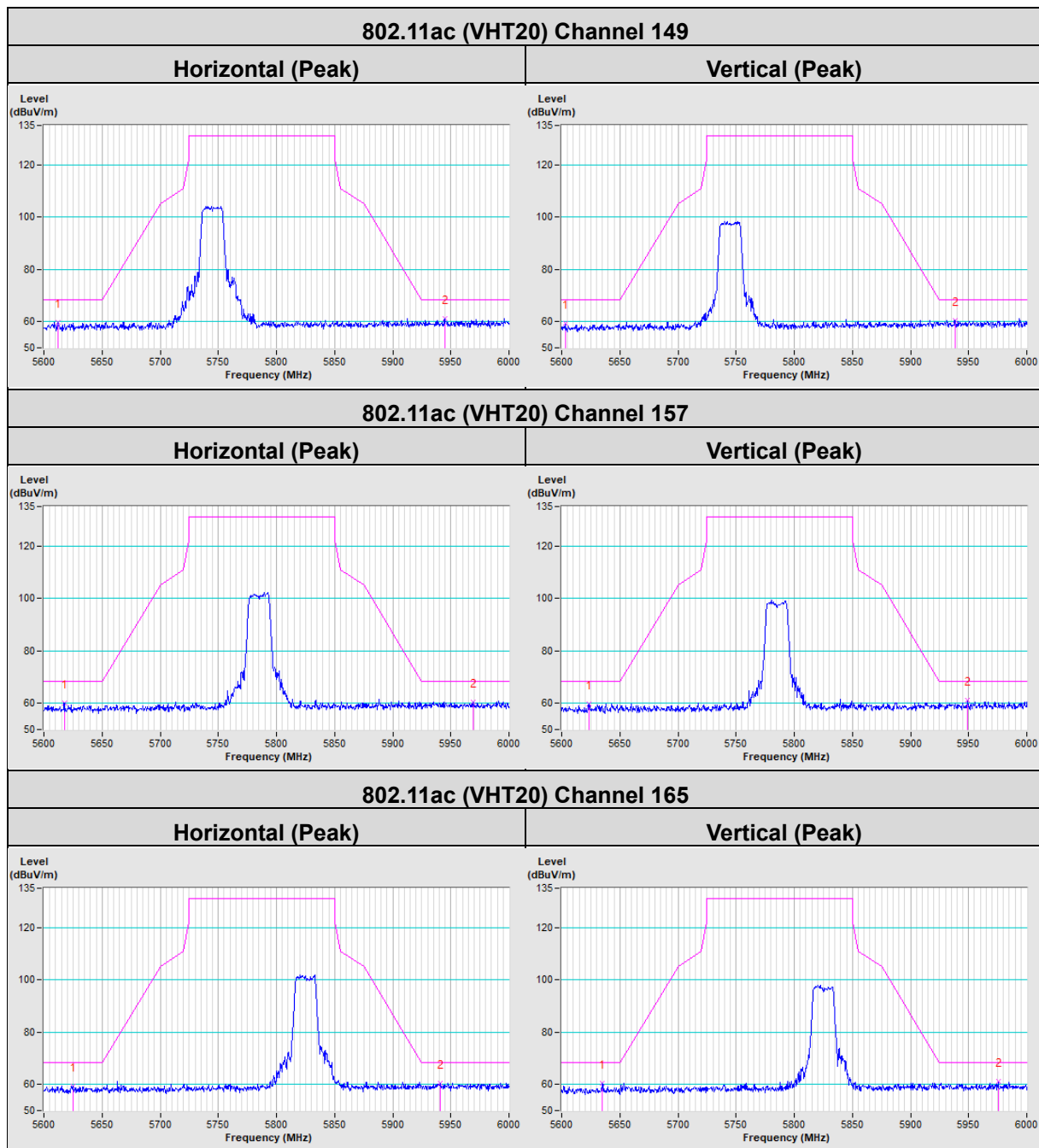


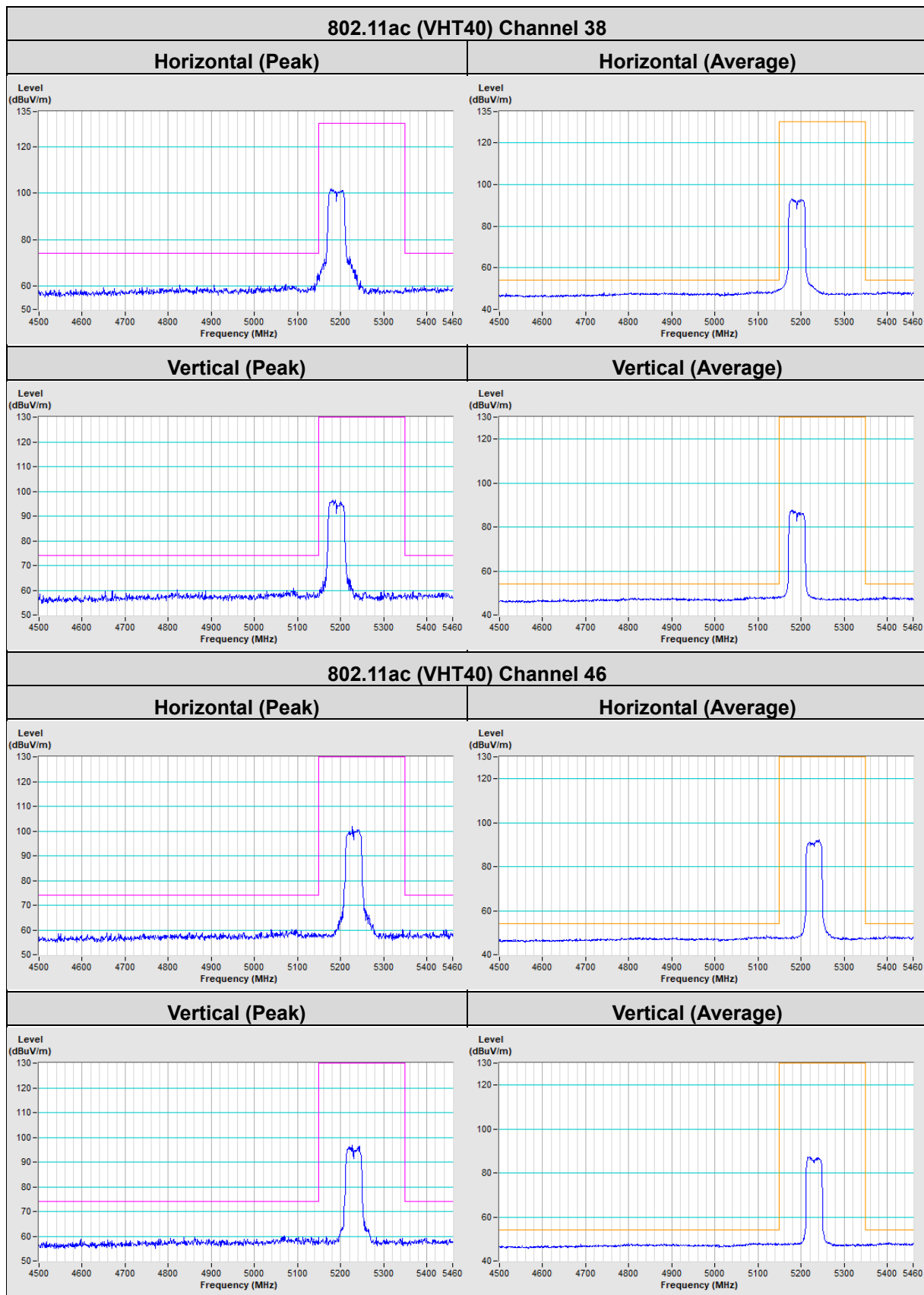


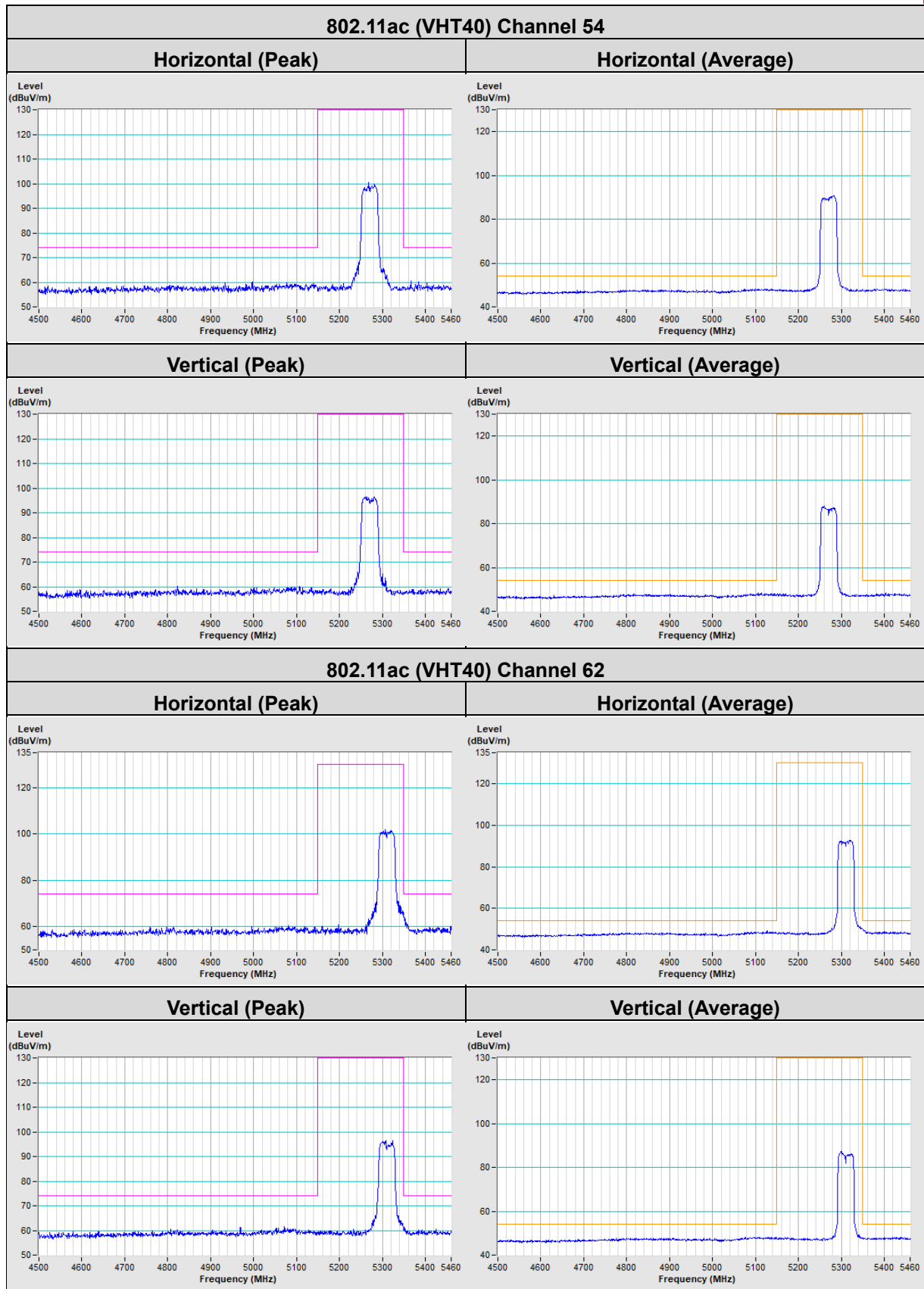


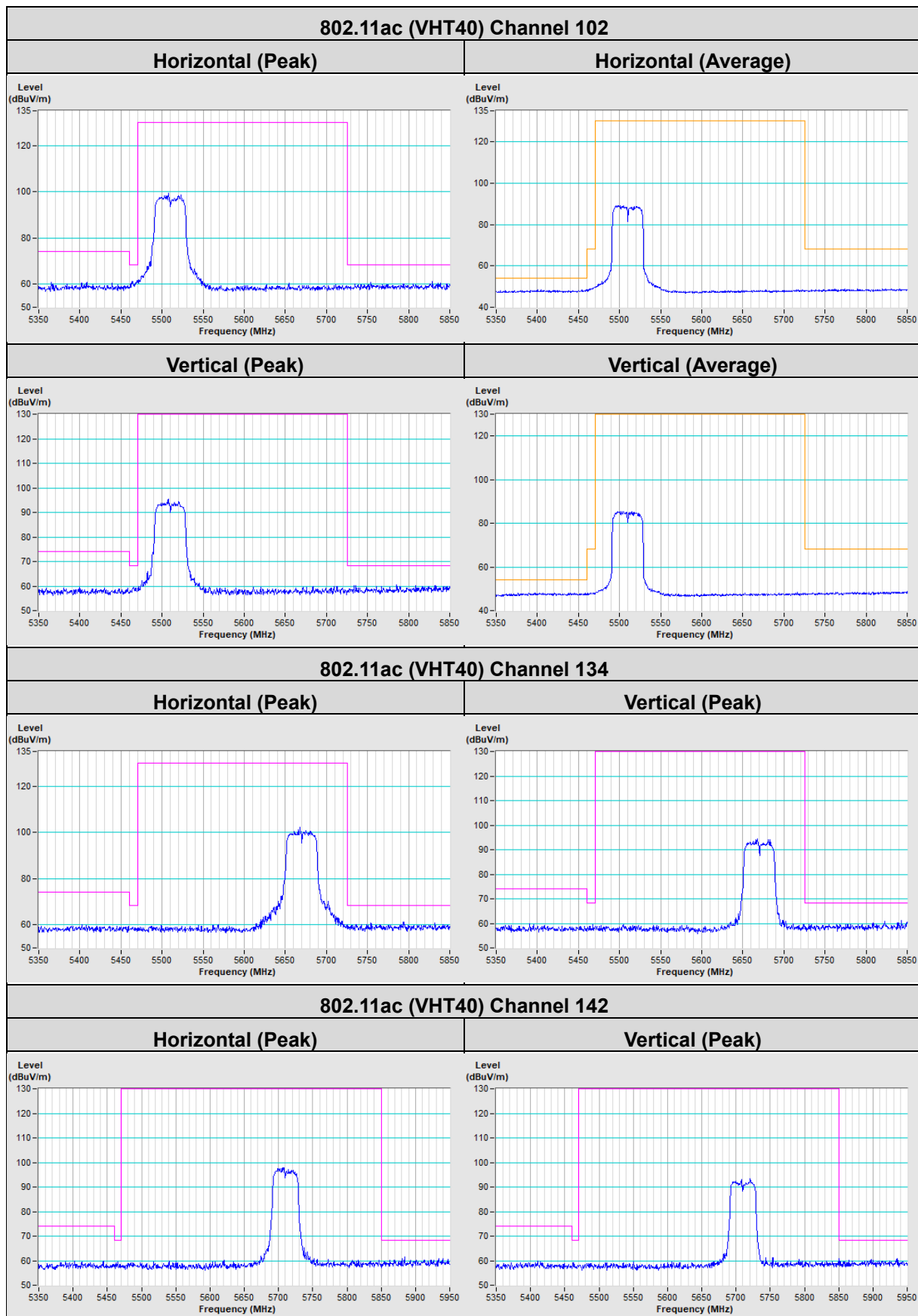


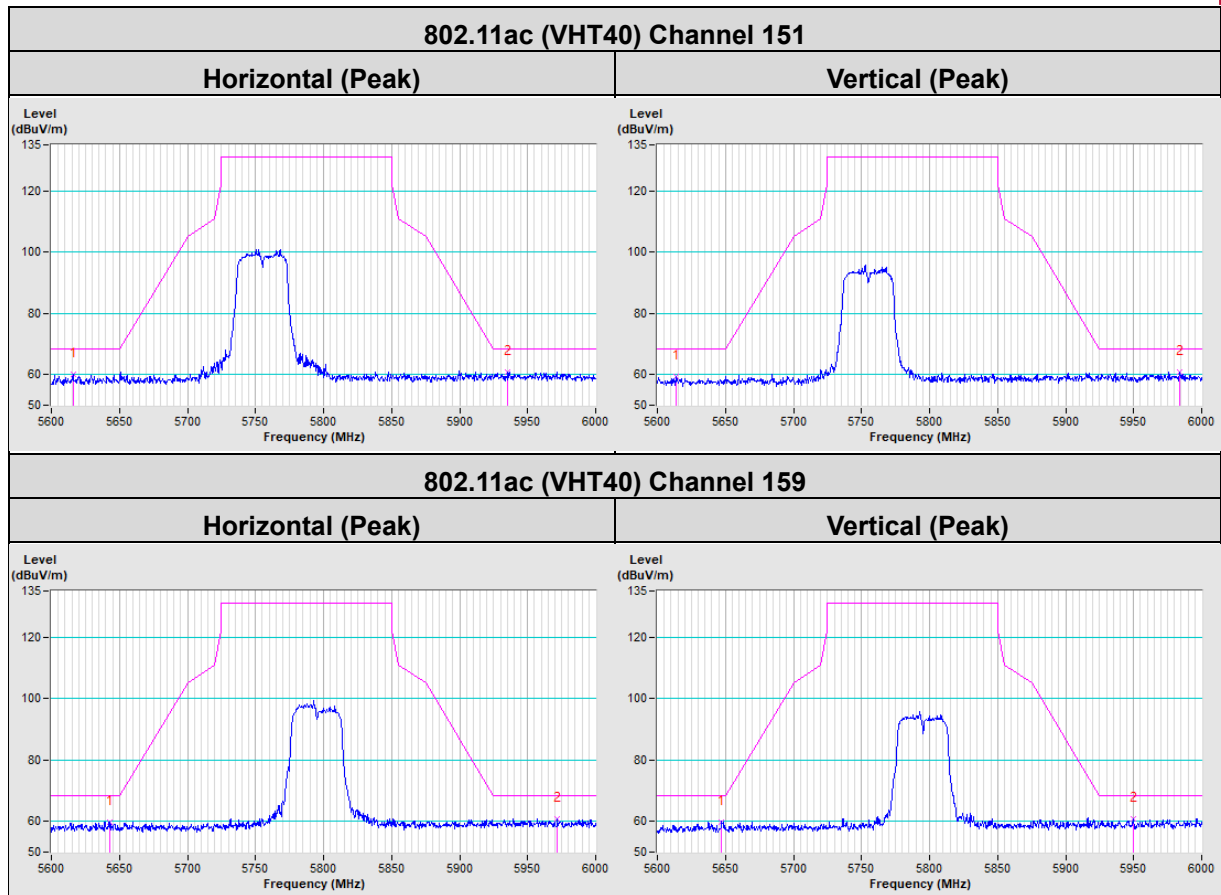


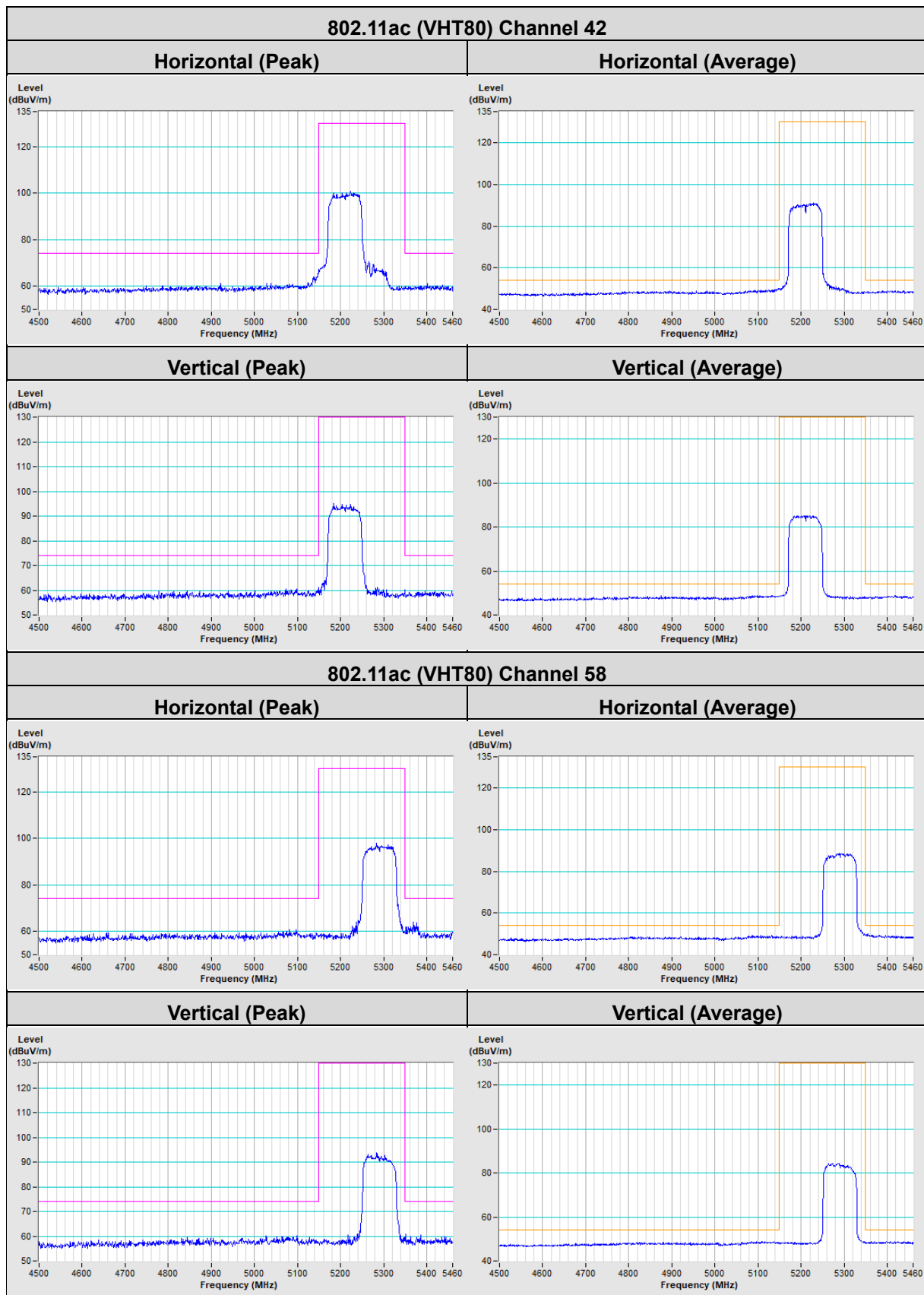


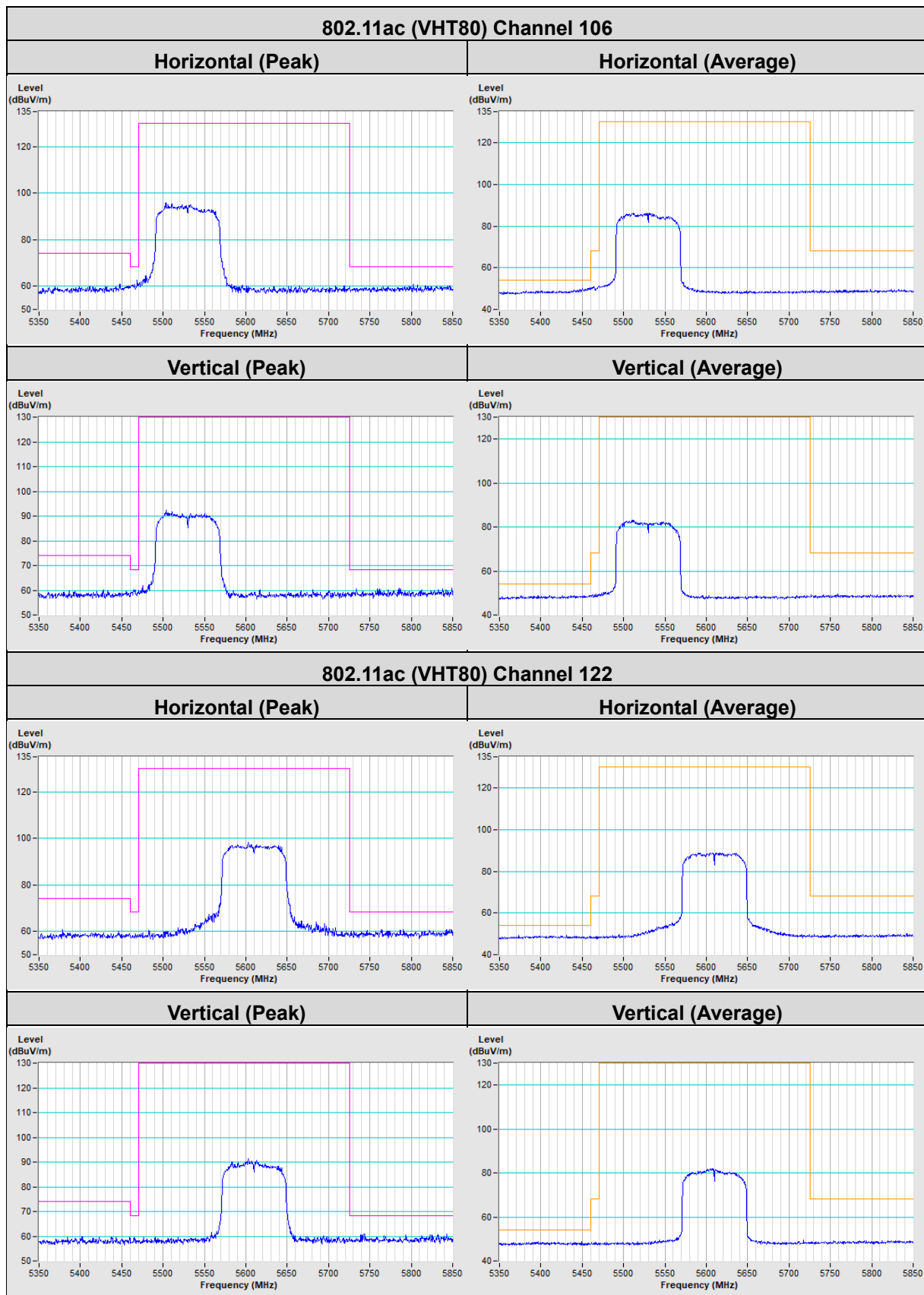


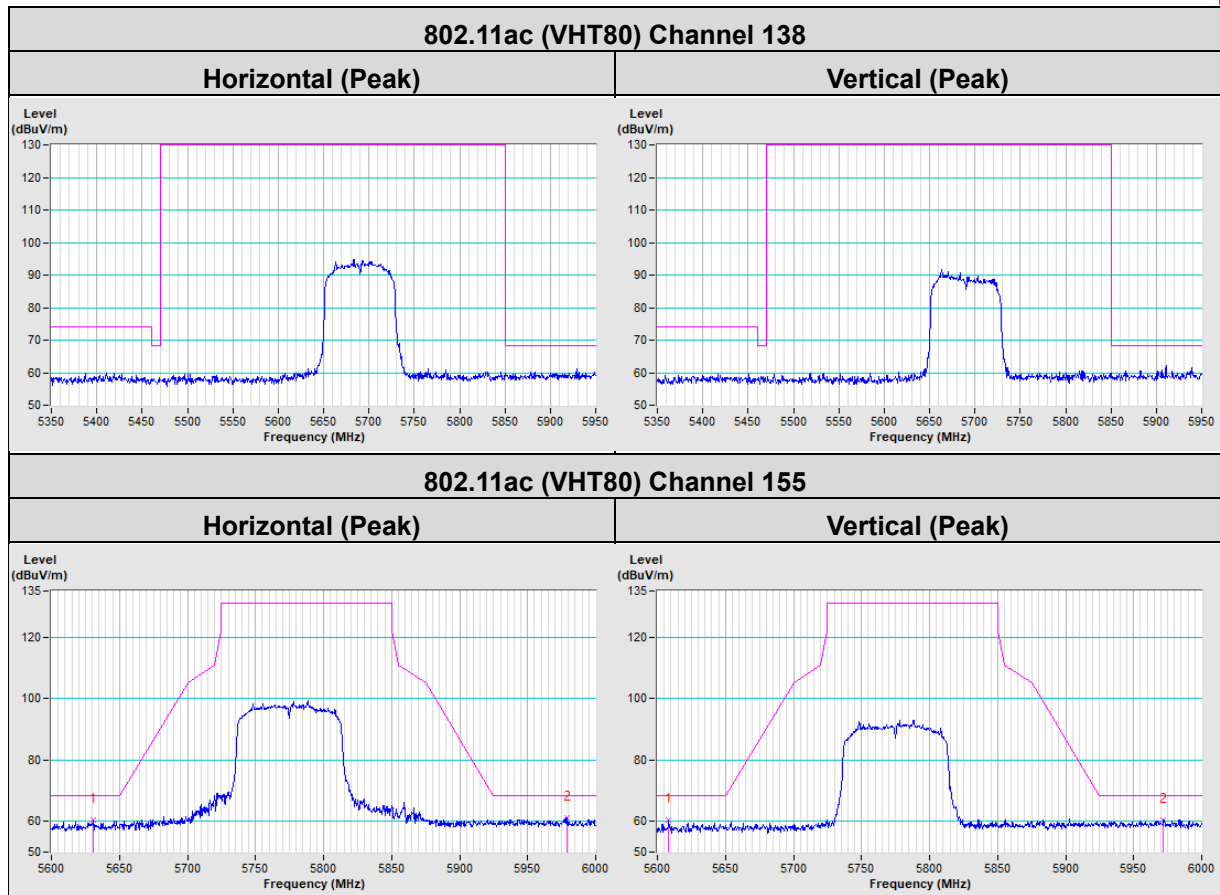












8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

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

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

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

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