

# TEST REPORT

## CERTIFICATE OF CONFORMITY

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

**Report No.:** RFCDVB-WTW-P23100016-4

**FCC ID:** QYLZ11WD

**Contains FCC ID:** QYLPN7150Z11

**Product:** Tablet

**Brand:** Getac

**Model No.:** ZX10

**Series Model:** ZX10Y (Y= 10 characters, Y can be 0-9, a-z, A-Z, “ - “, “ \_ ”, “ / ”, “ \ ” or blank for marketing purpose and no impact safety related critical components and constructions.)

**Received Date:** 2023/10/3

**Test Date:** 2023/12/12 ~ 2023/12/21

**Issued Date:** 2024/1/11

**Applicant:** Getac Technology Corporation.

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**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
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**FCC Registration /  
Designation Number(1):** 788550 / TW0003

**FCC Registration /  
Designation Number(2):** 427177 / TW0011

**Approved by:** \_\_\_\_\_

*Jeremy Lin*

**Date:** \_\_\_\_\_

**2024/1/11**

Jeremy Lin / Project Engineer

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Prepared by : Gina Liu / Specialist

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## Release Control Record

Issue No.	Description	Date Issued
RFCDVB-WTW-P23100016-4	Original release.	2024/1/11

## 1 Certificate

**Product:** Tablet

**Brand:** Getac

**Test Model:** ZX10

**Series Model:** ZX10Y (Y= 10 characters, Y can be 0-9, a-z, A-Z, “ - “, “ \_ ”, “ / ”, “ \ ” or blank for marketing purpose and no impact safety related critical components and constructions.)

**Sample Status:** Engineering sample

**Applicant:** Getac Technology Corporation.

**Test Date:** 2023/12/12 ~ 2023/12/21

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

**Measurement** ANSI C63.10-2013

**procedure:** KDB 789033 D02 General UNII Test Procedure New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

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

## 2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(2)	26 dB Bandwidth	Pass	For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.
15.407(a)(1) 15.407(a)(2) 15.407(a)(3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1) 15.407(a)(2) 15.407(a)(3)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	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 -15.80 dB at 0.44297 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -13.7 dB at 63.11 MHz
15.407(b) (1/10) 15.407(b) (2/10) 15.407(b) (3/10) 15.407(b) (4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -5.4 dB at 11550.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is IPEX not a standard connector.

### Notes:

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

### 2.1 Measurement Uncertainty

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

Measurement	Specification	Expanded Uncertainty (k=2) (±)
26 dB Bandwidth	-	206.5 Hz
RF Output Power	-	1.371 dB
Power Spectral Density	-	1.017 dB
6 dB Bandwidth	-	206.5 Hz
Occupied Bandwidth	-	72 Hz
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.88 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	2.44 dB
	30 MHz ~ 1 GHz	2.02 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	1.01 dB
	18 GHz ~ 40 GHz	1.15 dB

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

## 2.2 Supplementary Information

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

## 3 General Information

### 3.1 General Description of EUT

Product	Tablet
Brand	Getac
Test Model	ZX10
Series Model	ZX10Y (Y= 10 characters, Y can be 0-9, a-z, A-Z, “ - “, “ _ “, “ / “, “ \ “ or blank for marketing purpose and no impact safety related critical components and constructions.)
Status of EUT	Engineering sample
Power Supply Rating	19Vdc (from adapter) 3.84Vdc (from battery)
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode
Modulation Technology	OFDM
Transfer Rate	Up to 867 Mbps
Operating Frequency	5.18 GHz ~ 5.24 GHz 5.26 GHz ~ 5.32 GHz 5.5 GHz ~ 5.7 GHz 5.745 GHz ~ 5.825 GHz
Number of Channel	5180 ~ 5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5260 ~ 5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5500 ~ 5700MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 11 802.11n (HT40), 802.11ac (VHT40): 5 802.11ac (VHT80): 2 5745 ~ 5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	5.18 GHz ~ 5.24 GHz : 13.744 mW (11.38 dBm) 5.26 GHz ~ 5.32 GHz : 13.669 mW (11.36 dBm) 5.5 GHz ~ 5.7 GHz : 13.301 mW (11.24 dBm) 5.745 GHz ~ 5.825 GHz : 10.617 mW (10.26 dBm)
EUT Category	Client device

Note:

1. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter	FSP	FSP065-RBBN3	I/P: 100-240 Vac, 50-60Hz, 1.5 A O/P: 19.0 Vdc, 3.42 A 1.47m non-shielded cable with 1 core
Battery	Getac	BP1S2P4990B	Power Rating: 3.84 Vdc, 37.4 Wh, 9740 mAh
Power cord	I-SHENG ELECTRIC WIRE & CABLE CO., LTD.	SP-305B+IS-034	1.7M
Touch pen	Getac	GT-090S	N/A

2. EUT has following configuration.

Part	Brand	Model	Note
CPU	Qualcomm	SDA 660	-
Memory	Samsung	KM3V6001CM-B705	4GB
VIDEO CONTROLLER	Qualcomm	Adreno GU 512	-
eMMC Storage	Samsung	-	64GB
DISPLAY	AUO	G101UAN2.0	-
Touch Screen	EETI	EXC80H60	-
Real Camera	Unison	MV21A6A1-TF5D	16M PLCC MIPI
Front Camera	Unison	MV2980A1-TF4R-P	8M PLCC MIPI
WLAN/BT	Qualcomm	WCN3990	-
HF-RFID	Getac	PN7150	-
Digitizer	EMRight	96-P28-20010	-
GPS	Locosys	MC-1010-V2B	-
Barcode Reader	Honeywell	N6703SR-W5-103	-
Smart Card Option Bay	Alcor	AU9560-GBS-GR	-
High capacity battery	Getac	BP1S2P4990B	-

3. Simultaneously transmission condition.

Condition	Technology	
1	WLAN 2.4G	Bluetooth
2	WLAN 5G	Bluetooth

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

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



### 3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	Gain (dBi)					Antenna Type	Connector Type
	2400~2500 MHz	5180 ~ 5240 MHz	5260 ~ 5320 MHz	5500 ~ 5720 MHz	5745 ~ 5825 MHz		
1	1.84	0.74	0.62	-1.17	-1.96	PIFA	IPEX
2	-3.3	3.08	2.84	2.59	2.90	PIFA	IPEX

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

2. The EUT incorporates a MIMO function:

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

Note:

- The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz) and 802.11ac mode for 20 MHz (40 MHz, 80 MHz), therefore the investigated worst case to representative mode in test report.

### 3.3 Channel List

#### FOR 5180 ~ 5320 MHz

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

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 ~ 5700 MHz

11 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		

5 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		

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 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), 802.11ax (HE80):

Channel	Frequency
155	5775 MHz

### 3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	1. X-axis/ Y-axis/ Z-axis Worst Condition: X-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	BPSK	6Mb/s
	802.11ac (VHT20)	52, 60, 64, 100, 116, 140	BPSK	MCS0
	802.11ac (VHT40)	54, 62, 102, 110, 134	BPSK	MCS0
	802.11ac (VHT80)	58, 106, 122	BPSK	MCS0
RF Output Power / Power Spectral Density	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	6Mb/s
	802.11n (HT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 149, 157, 165	BPSK	MCS0
	802.11n (HT40)	38, 46, 54, 62, 102, 110, 134, 151, 159	BPSK	MCS0
	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
6 dB Bandwidth	802.11a	149, 157, 165	BPSK	6Mb/s
	802.11ac (VHT20)	149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	151, 159	BPSK	MCS0
	802.11ac (VHT80)	155	BPSK	MCS0
Occupied Bandwidth	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
Frequency Stability	802.11a	36	unmodulated	-
AC Power Conducted Emissions	802.11ac (VHT40)	46	BPSK	MCS0
Unwanted Emissions below 1 GHz	802.11ac (VHT40)	46	BPSK	MCS0
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

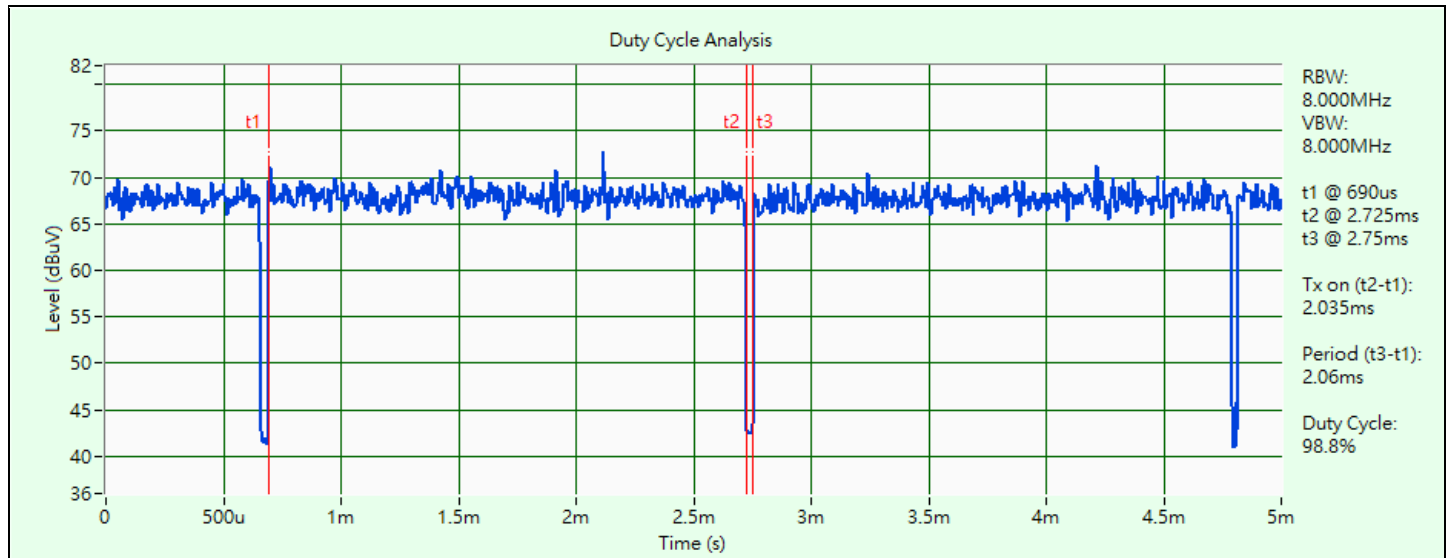
### 3.5 Duty Cycle of Test Signal

**802.11a:** Duty cycle = 2.035 ms / 2.06 ms x 100% = 98.8%

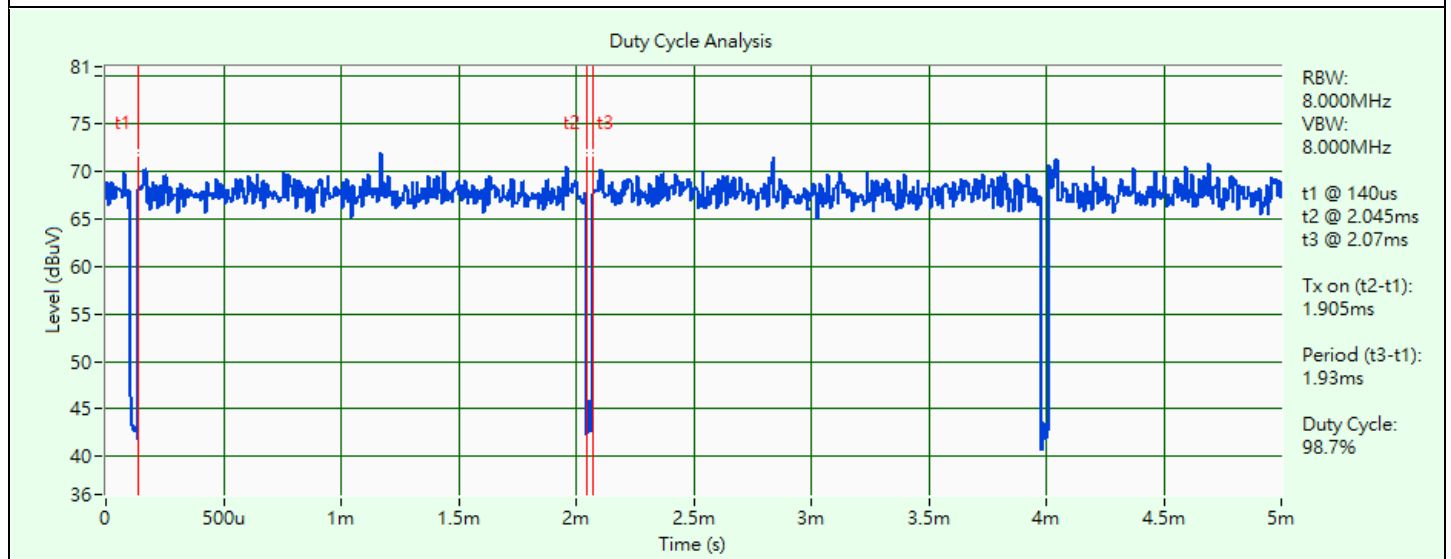
**802.11ac (VHT20):** Duty cycle = 1.905 ms / 1.93 ms x 100% = 98.7%

**802.11ac (VHT40):** Duty cycle = 0.945 ms / 0.97 ms x 100% = 97.4%, duty factor = 10 \* log (1/Duty cycle) = 0.11 dB

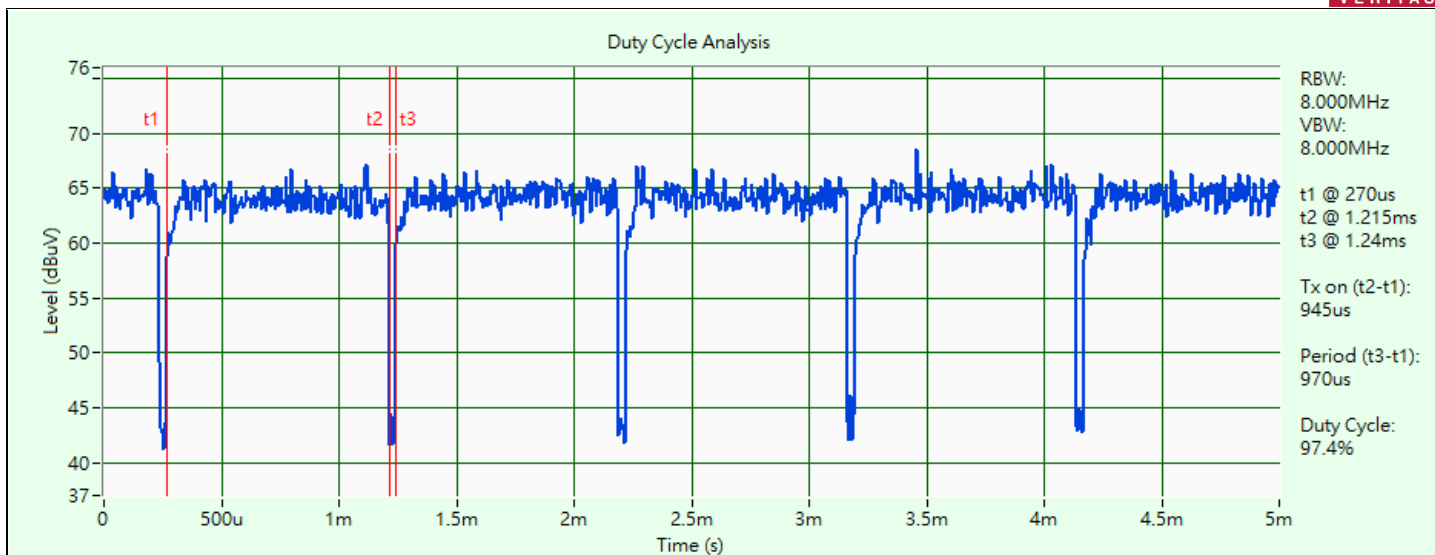
**802.11ac (VHT80):** Duty cycle = 0.462 ms / 0.492 ms x 100% = 93.9%, duty factor = 10 \* log (1/Duty cycle) = 0.27 dB



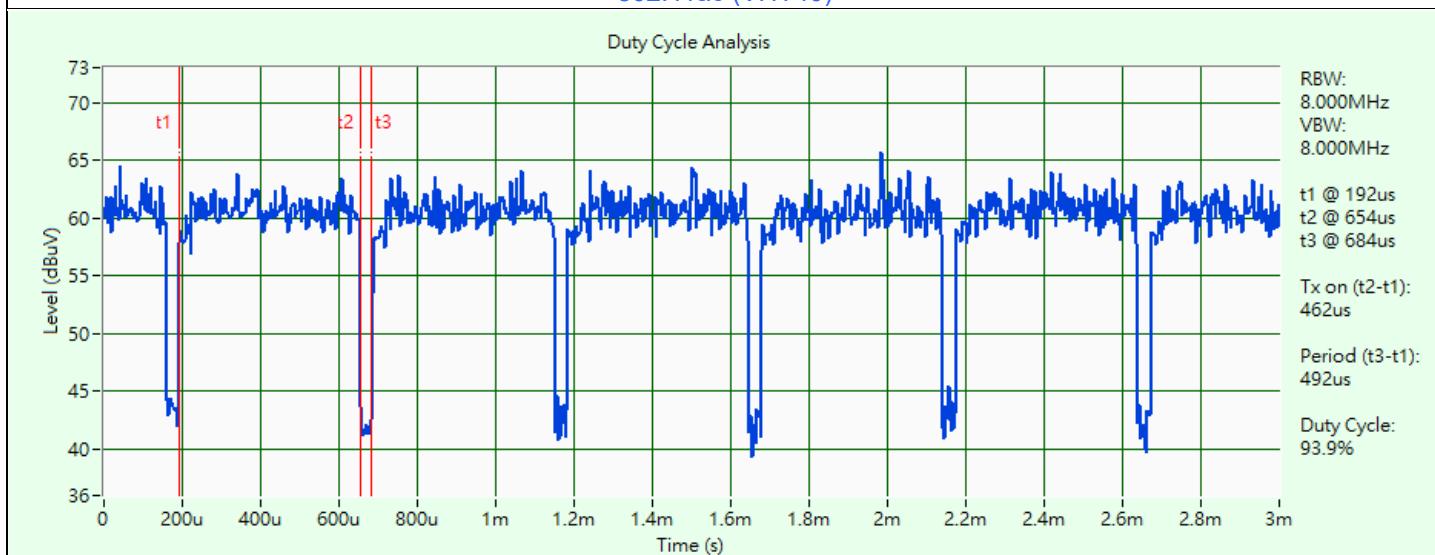
802.11a



802.11ac (VHT20)



802.11ac (VHT40)

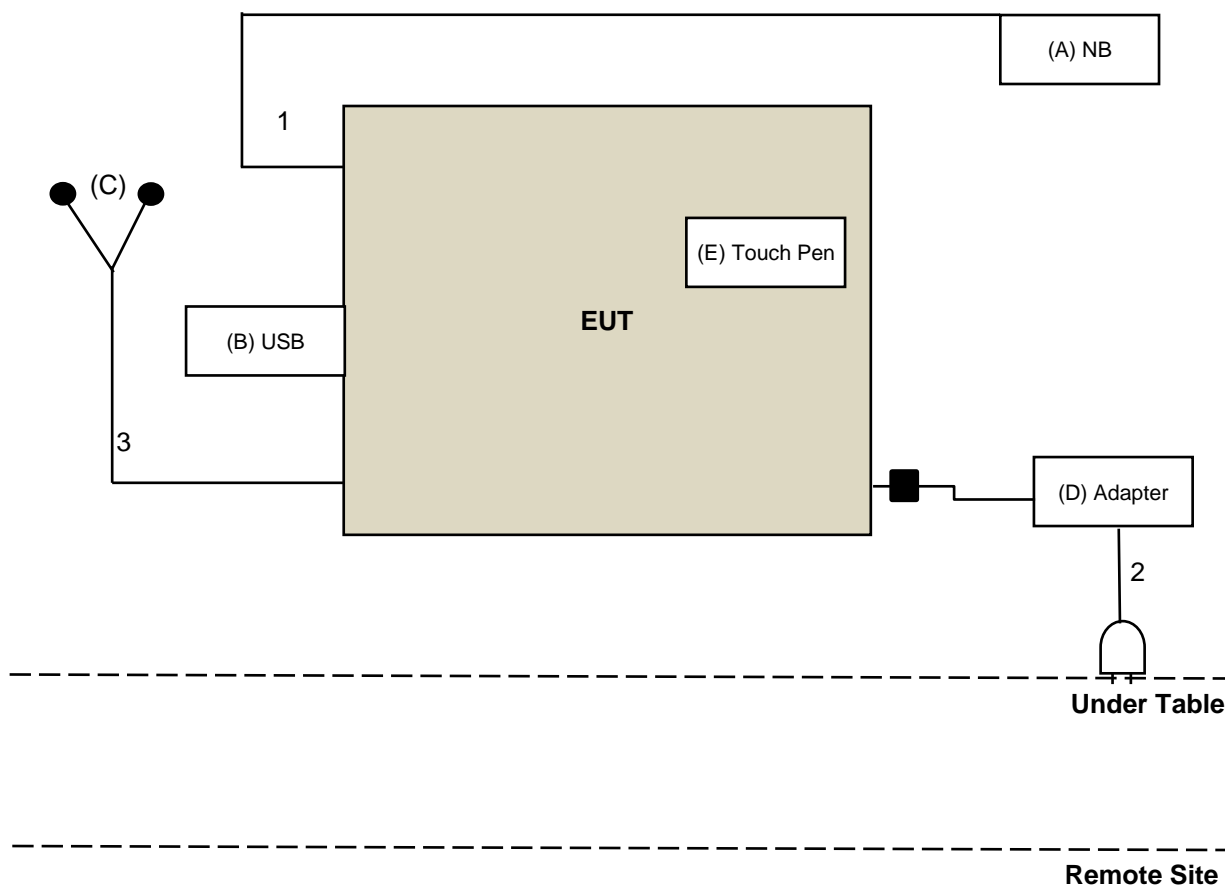


802.11ac (VHT80)

### 3.6 Test Program Used and Operation Descriptions

Controlling software QRCT version 4.0.00177.0 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	NB	Lenovo	TP00048A	NA	NA	Provided by Lab
B	USB Flash	SanDisk	SDDDC3-032G	NA	NA	Provided by Lab
C	Earphone	Funkey	FK-130102	NA	NA	Provided by Lab
D	Adapter	FSP	FSP065-RBBN3	NA	NA	Supplied by applicant
E	Touch Pen	Getac	GT-090S	NA	NA	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	USB typeC Cable	1	1	Y	0	Provided by Lab
2	AC Cable	1	1.8	N	0	Accessory of EUT
3	Earphone cable	1	1.5	N	0	Provided by Lab

## 4 Test Instruments

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

### 4.1 26 dB Bandwidth

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal & Spectrum Analyzer R&S	FSV3044	101504	2023/6/5	2024/6/4
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/12/18

### 4.2 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Peak Power Analyzer Keysight	8990B	MY51000485	2023/1/19	2024/1/18
Wideband Power Sensor Keysight	N1923A	MY58020002	2023/1/18	2024/1/17
		MY58140009	2023/1/18	2024/1/17

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/12/18

### 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
3-channel DC power supply JIN YIH Technology	ODP3033	ODP30332128138	N/A	N/A
Digital Multimeter Fluke	87-III	70360742	2023/7/6	2024/7/5
Signal & Spectrum Analyzer R&S	FSV3044	101504	2023/6/5	2024/6/4
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Terchy	HRM-120RF	931022	2022/12/27	2023/12/26

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/12/18

#### 4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance HUBER+SUHNER	E1-011276	01	2023/2/1	2024/1/31
	E1-011312	10	2023/1/30	2024/1/29
	E1-011591	17	2023/2/1	2024/1/31
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2023/11/7	2024/11/6
EMI Test Receiver R&S	ESCS 30	100288	2023/1/3	2024/1/2
Fixed Attenuator SGH	BNC10W10dB	PAD-COND2-01	2023/9/2	2024/9/1
LISN R&S	ESH2-Z5	100100	2023/3/7	2024/3/6
	ESH3-Z5	100312	2023/9/12	2024/9/11
RF Coaxial Cable Woken	5D-FB	Cable-cond2-01	2023/9/2	2024/9/1
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2023/8/31	2024/8/30

Notes:

1. The test was performed in HY - Conduction 2.
2. Tested Date: 2023/12/21

#### 4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	UNAT_5+	PAD-CH6-01	N/A	N/A
Antenna Tower Controller Max-Full	MF-7802	N/A	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-616	2023/10/18	2024/10/17
Loop Antenna Electro-Metrics	EM-6879	269	2023/9/23	2024/9/22
Loop Antenna TESEQ	HLA 6121	45745	2023/8/8	2024/8/7
MXE EMI Receiver Agilent	N9038A	MY52260177	2023/9/15	2024/9/14
Preamplifier Agilent	310N	187226	2023/6/13	2024/6/12
Preamplifier EMCI	EMC001340	980201	2023/9/27	2024/9/26
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2023/1/7	2024/1/6
RF Coaxial Cable ETS-Lindgren	EMC104-SM-SM-10000	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-4)	2023/6/13	2024/6/12
	RFC-SMS-100-SMS-24-IN	Cable-CH1-02(RFC-SMS-100-SMS-24)	2023/6/13	2024/6/12
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	TT-1510	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802	N/A	N/A	N/A

Notes:

1. The test was performed in XD - 966 chamber 6.
2. Tested Date: 2023/12/14

#### 4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	UNAT_5+	PAD-CH6-01	N/A	N/A
Antenna Tower Controller Max-Full	MF-7802	N/A	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	8	N/A	N/A
Horn Antenna ETS-Lindgren	3117	00143293	2023/11/12	2024/11/11
Horn Antenna Schwarzbeck	BBHA 9170	BBHA9170241	2023/10/16	2024/10/15
MXE EMI Receiver Agilent	N9038A	MY52260177	2023/9/15	2024/9/14
Preamplifier Agilent	83017A	MY39501373	2023/6/13	2024/6/12
Preamplifier EMCI	EMC 184045	980116	2023/9/27	2024/9/26
RF Coaxial Cable ETS-Lindgren	EMC104-SM-SM-10000	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-4)	2023/6/13	2024/6/12
	RFC-SMS-100-SMS-24-IN	Cable-CH1-02(RFC-SMS-100-SMS-24)	2023/6/13	2024/6/12
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	2023/1/7	2024/1/6
RF Coaxial Cable HUBER+SUHNER&EMCI	SUCOFLEX 104& EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	2023/1/7	2024/1/6
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	TT-1510	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802	N/A	N/A	N/A

Notes:

1. The test was performed in XD - 966 chamber 6.
2. Tested Date: 2023/12/12 ~ 2023/12/14

## 5 Limits of Test Items

### 5.1 26 dB Bandwidth

The results are for reference only.

### 5.2 RF Output Power

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

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

\*B is the 26 dB emission bandwidth in megahertz

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

Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$ ;

Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  MHz for any  $N_{ANT}$ ;

Array Gain =  $5 \log(N_{ANT}/N_{SS})$  dB or 3 dB, whichever is less, for 20-MHz channel widths with  $N_{ANT} \geq 5$ .

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

### 5.3 Power Spectral Density

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

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

### 5.4 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) <sup>*1</sup>	PK: 68.2 (dBµV/m) <sup>*1</sup>
	PK: 10 (dBm/MHz) <sup>*2</sup>	PK: 105.2 (dBµV/m) <sup>*2</sup>
	PK: 15.6 (dBm/MHz) <sup>*3</sup>	PK: 110.8 (dBµV/m) <sup>*3</sup>
	PK: 27 (dBm/MHz) <sup>*4</sup>	PK: 122.2 (dBµV/m) <sup>*4</sup>

<sup>\*1</sup> beyond 75 MHz or more above of the band edge.

<sup>\*2</sup> below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

<sup>\*3</sup> below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

<sup>\*4</sup> from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

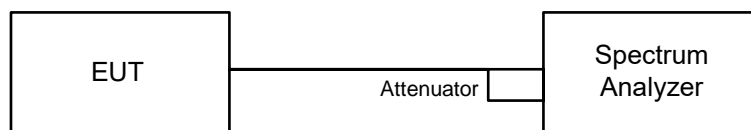
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

## 6 Test Arrangements

### 6.1 26 dB Bandwidth

#### 6.1.1 Test Setup

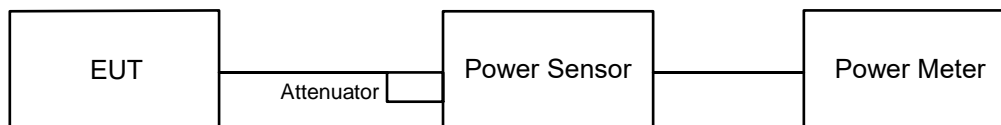


#### 6.1.2 Test Procedure

- 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

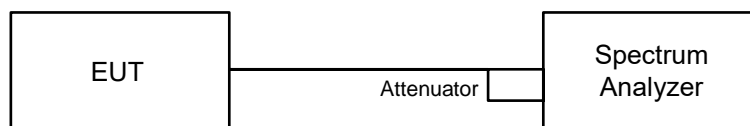


#### 6.2.2 Test Procedure

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.

### 6.3 Power Spectral Density

#### 6.3.1 Test Setup



#### 6.3.2 Test Procedure

##### For specified measurement bandwidth 1 MHz:

##### Method SA-1

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
- Sweep points ≥  $[2 \times \text{span} / \text{RBW}]$ . (This gives bin-to-bin spacing ≤ 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.
- Record the max value

### For specified measurement bandwidth 1 MHz:

#### Method SA-2

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

### For specified measurement bandwidth 500 kHz:

#### Method SA-1

- a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- b. Set RBW = 300 kHz, Set VBW  $\geq$  1 MHz, Detector = RMS
- c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where  $\text{BWCF} = 10\log(500 \text{ kHz}/300 \text{ kHz})$
- d. 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.)
- e. Sweep time = auto, trigger set to “free run”.
- f. Trace average at least 100 traces in power averaging mode.
- g. Record the max value

### For specified measurement bandwidth 500 kHz:

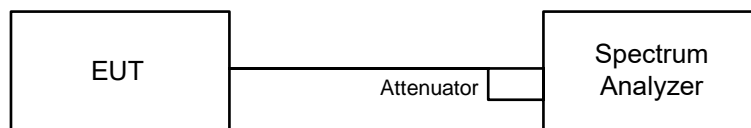
#### Method SA-2

- a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- b. Set RBW = 300 kHz, Set VBW  $\geq$  1 MHz, Detector = RMS
- c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where  $\text{BWCF} = 10\log(500 \text{ kHz}/300 \text{ kHz})$
- d. 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.)
- e. Sweep time = auto, trigger set to “free run”.
- f. Trace average at least 100 traces in power averaging mode.
- g. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
- h. Record the max value and add  $10 \log (1/\text{duty cycle})$ .



## 6.4 6 dB Bandwidth

### 6.4.1 Test Setup

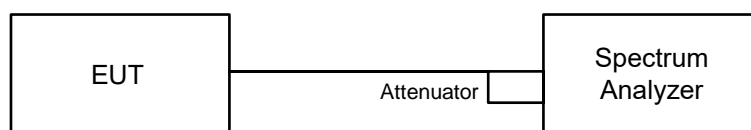


### 6.4.2 Test Procedure

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

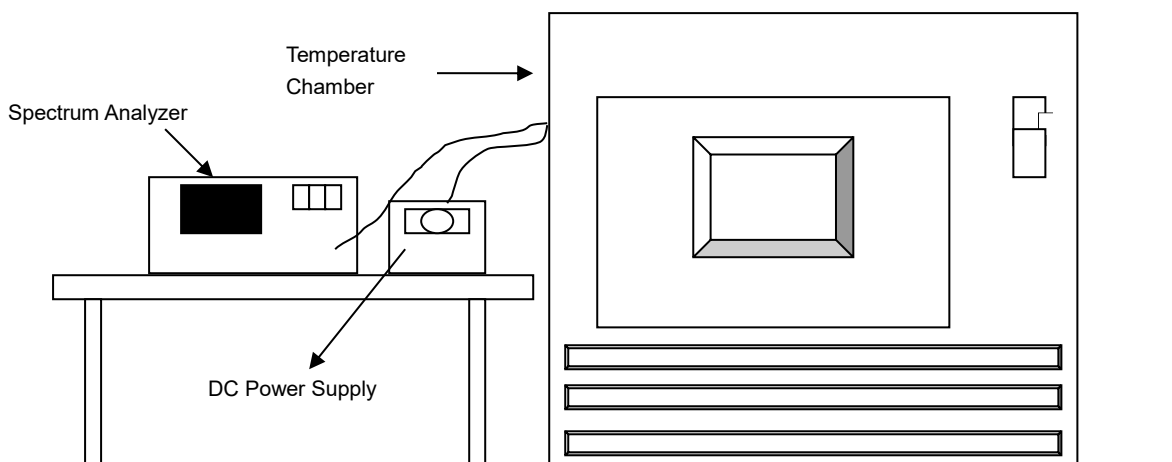


### 6.5.2 Test Procedure

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

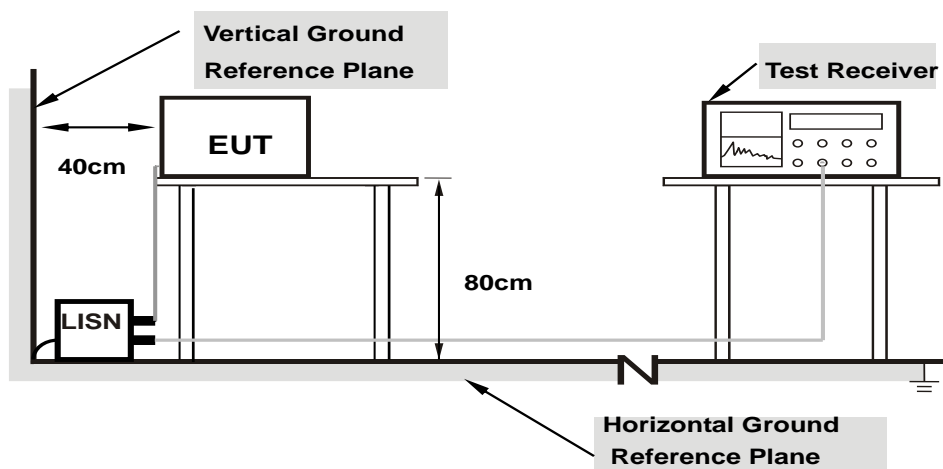


### 6.6.2 Test Procedure

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

## 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

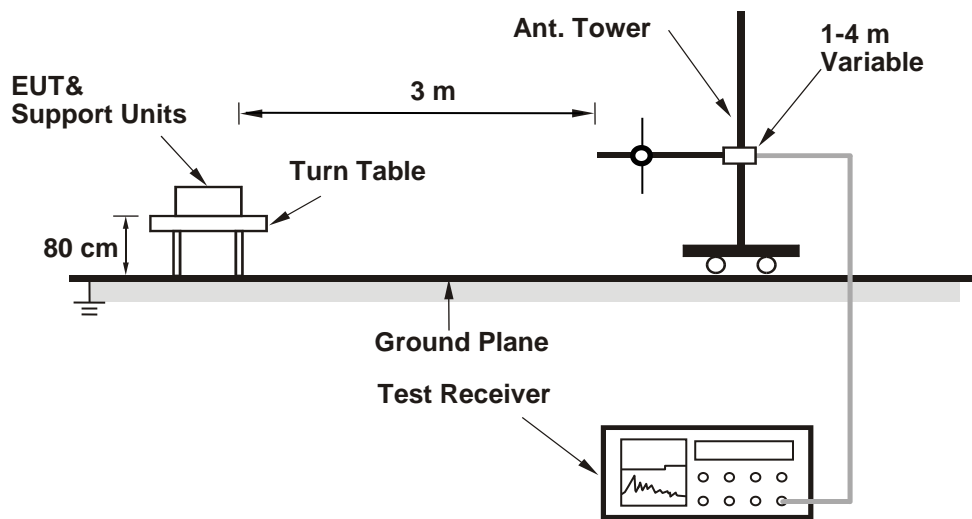
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The 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 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 above 30 MHz

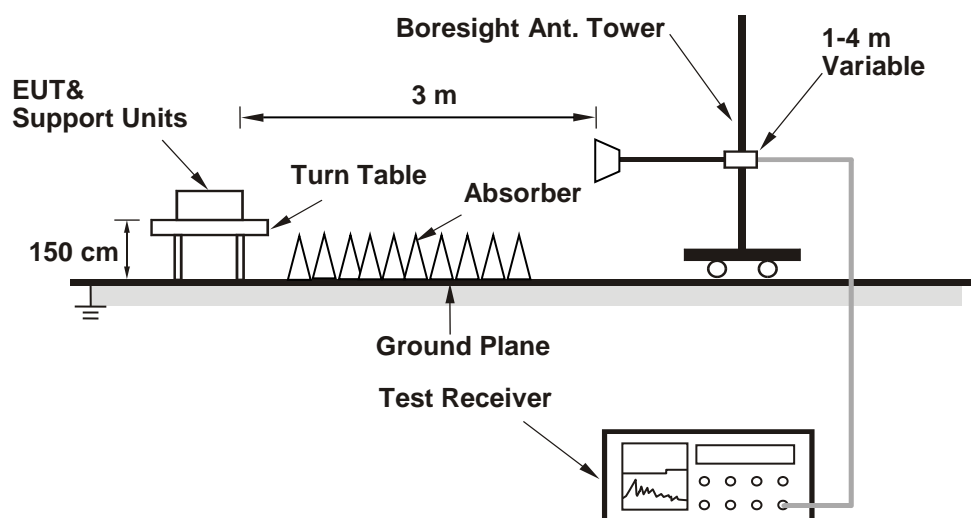
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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:	3.84 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Gary Lin
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#### 802.11a

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	22.75	21.98
60	5300	22.77	23.12
64	5320	22.83	22.59
100	5500	22.65	22.11
116	5580	22.11	23.68
140	5700	23.34	22.42

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	21.98	24.42 > 24
60	5300	22.77	24.57 > 24
64	5320	22.59	24.53 > 24
100	5500	22.11	24.44 > 24
116	5580	22.11	24.44 > 24
140	5700	22.42	24.5 > 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)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	23.78	23.94
60	5300	23.70	24.45
64	5320	24.21	24.89
100	5500	24.87	25.14
116	5580	25.14	25.09
140	5700	24.55	25.07

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	23.78	24.76 > 24
60	5300	23.70	24.74 > 24
64	5320	24.21	24.83 > 24
100	5500	24.87	24.95 > 24
116	5580	25.09	24.99 > 24
140	5700	24.55	24.9 > 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)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	41.75	41.60
62	5310	41.30	41.70
102	5510	41.97	41.25
110	5550	41.68	41.33
134	5670	41.68	41.33

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
54	5270	41.60	27.19 > 24
62	5310	41.30	27.15 > 24
102	5510	41.25	27.15 > 24
110	5550	41.33	27.16 > 24
134	5670	41.33	27.16 > 24

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

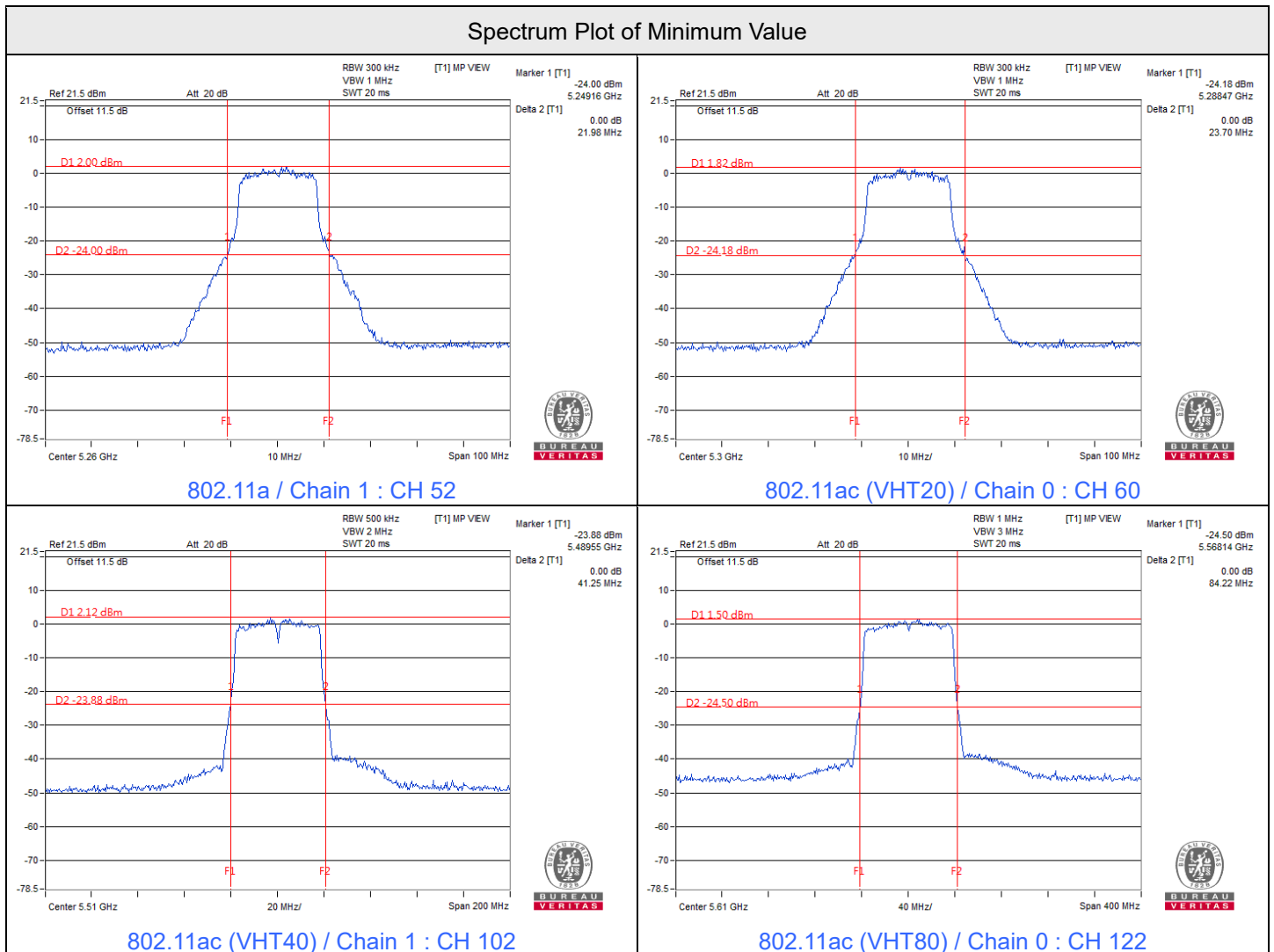


802.11ac (VHT80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	84.69	84.34
106	5530	84.52	85.42
122	5610	84.22	84.77

Determined Output Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
58	5290	84.34	30.26 > 24
106	5530	84.52	30.26 > 24
122	5610	84.22	30.25 > 24

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



## 7.2 RF Output Power

Input Power:	3.84 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Gary Lin
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### 802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	8.29	8.23	13.398	11.27	24	Pass
40	5200	8.28	8.11	13.201	11.21	24	Pass
48	5240	8.30	8.13	13.262	11.23	24	Pass
52	5260	8.19	8.08	13.019	11.15	24	Pass
60	5300	8.04	7.90	12.534	10.98	24	Pass
64	5320	8.12	7.97	12.752	11.06	24	Pass
100	5500	8.11	8.07	12.884	11.10	24	Pass
116	5580	8.08	8.01	12.751	11.06	24	Pass
140	5700	8.01	8.03	12.677	11.03	24	Pass
149	5745	7.09	6.91	10.026	10.01	30	Pass
157	5785	7.06	7.00	10.093	10.04	30	Pass
165	5825	7.19	6.90	10.134	10.06	30	Pass

#### Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 3.08 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 2.84 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 2.59 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 2.9 dBi < 6 dBi, so the output power limit shall not be reduced.

**802.11n (HT20)**

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	8.12	7.96	12.738	11.05	24	Pass
40	5200	8.22	8.02	12.976	11.13	24	Pass
48	5240	8.13	7.98	12.782	11.07	24	Pass
52	5260	8.00	8.02	12.648	11.02	24	Pass
60	5300	8.19	7.99	12.887	11.10	24	Pass
64	5320	8.14	8.10	12.973	11.13	24	Pass
100	5500	8.15	8.06	12.929	11.12	24	Pass
116	5580	8.08	8.03	12.78	11.07	24	Pass
140	5700	8.09	7.92	12.636	11.02	24	Pass
149	5745	7.06	6.98	10.07	10.03	30	Pass
157	5785	7.00	6.94	9.955	9.98	30	Pass
165	5825	7.10	6.90	10.026	10.01	30	Pass

**Notes:**

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 3.08 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 2.84 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 2.59 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 2.9 dBi < 6 dBi, so the output power limit shall not be reduced.

**802.11n (HT40)**

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	8.18	7.99	12.872	11.10	24	Pass
46	5230	8.42	8.26	13.649	11.35	24	Pass
54	5270	8.06	8.06	12.795	11.07	24	Pass
62	5310	8.18	7.93	12.785	11.07	24	Pass
102	5510	8.02	7.98	12.619	11.01	24	Pass
110	5550	8.13	7.94	12.724	11.05	24	Pass
134	5670	8.02	8.00	12.648	11.02	24	Pass
151	5755	7.14	6.98	10.165	10.07	30	Pass
159	5795	7.13	6.99	10.165	10.07	30	Pass

**Notes:**

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 3.08 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 2.84 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 2.59 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 2.9 dBi < 6 dBi, so the output power limit shall not be reduced.

**802.11ac (VHT20)**

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	8.15	7.99	12.826	11.08	24	Pass
40	5200	8.24	8.06	13.065	11.16	24	Pass
48	5240	8.17	8.00	12.871	11.10	24	Pass
52	5260	8.00	8.09	12.751	11.06	24	Pass
60	5300	8.01	8.06	12.721	11.05	24	Pass
64	5320	8.06	7.91	12.578	11.00	24	Pass
100	5500	8.07	8.07	12.824	11.08	24	Pass
116	5580	8.00	8.10	12.766	11.06	24	Pass
140	5700	8.19	7.98	12.872	11.10	24	Pass
149	5745	7.03	6.92	9.967	9.99	30	Pass
157	5785	7.17	6.98	10.201	10.09	30	Pass
165	5825	7.17	6.94	10.155	10.07	30	Pass

**Notes:**

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 3.08 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 2.84 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 2.59 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 2.9 dBi < 6 dBi, so the output power limit shall not be reduced.

**802.11ac (VHT40)**

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	8.21	8.03	12.975	11.13	24	Pass
46	5230	8.45	8.29	13.744	11.38	24	Pass
54	5270	8.19	7.96	12.843	11.09	24	Pass
62	5310	8.15	8.08	12.958	11.13	24	Pass
102	5510	8.09	8.07	12.854	11.09	24	Pass
110	5550	8.06	7.98	12.678	11.03	24	Pass
134	5670	8.17	7.99	12.857	11.09	24	Pass
151	5755	7.07	6.97	10.071	10.03	30	Pass
159	5795	7.18	6.97	10.201	10.09	30	Pass

**Notes:**

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 3.08 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 2.84 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 2.59 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 2.9 dBi < 6 dBi, so the output power limit shall not be reduced.

**802.11ac (VHT80)**

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	8.23	8.06	13.05	11.16	24	Pass
58	5290	8.48	8.21	13.669	11.36	24	Pass
106	5530	8.49	7.95	13.301	11.24	24	Pass
122	5610	8.00	7.90	12.476	10.96	24	Pass
155	5775	7.45	7.04	10.617	10.26	30	Pass

**Notes:**

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 3.08 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 2.84 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 2.59 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 2.9 dBi < 6 dBi, so the output power limit shall not be reduced.

### 7.3 Power Spectral Density

Input Power:	3.84 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Gary Lin
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#### 802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1			
36	5180	-3.43	-3.51	-0.46	11	Pass
40	5200	-3.50	-3.76	-0.62	11	Pass
48	5240	-3.42	-3.76	-0.58	11	Pass
52	5260	-3.25	-3.48	-0.35	11	Pass
60	5300	-3.17	-3.34	-0.24	11	Pass
64	5320	-3.67	-3.75	-0.70	11	Pass
100	5500	-3.18	-3.35	-0.25	11	Pass
116	5580	-3.24	-3.49	-0.35	11	Pass
140	5700	-3.31	-3.45	-0.37	11	Pass

#### Notes:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-1, the directional gain is 5 dBi < 6dBi, so the power density limit shall not be reduced.
- For U-NII-2A, the directional gain is 4.81 dBi < 6 dBi, so the power density limit shall not be reduced.
- For U-NII-2C, the directional gain is 3.92 dBi < 6 dBi, so the power density limit shall not be reduced.

### 802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1			
36	5180	-4.01	-4.13	-1.06	11	Pass
40	5200	-3.97	-4.09	-1.02	11	Pass
48	5240	-4.02	-4.17	-1.08	11	Pass
52	5260	-3.88	-4.07	-0.96	11	Pass
60	5300	-3.88	-4.07	-0.96	11	Pass
64	5320	-3.68	-3.80	-0.73	11	Pass
100	5500	-3.66	-3.85	-0.74	11	Pass
116	5580	-3.88	-4.07	-0.96	11	Pass
140	5700	-3.83	-3.91	-0.86	11	Pass

#### Notes:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-1, the directional gain is 5 dBi < 6dBi, so the power density limit shall not be reduced.
- For U-NII-2A, the directional gain is 4.81 dBi < 6 dBi, so the power density limit shall not be reduced.
- For U-NII-2C, the directional gain is 3.92 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)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
38	5190	-6.95	-7.15	0.11	-3.93	11	Pass
46	5230	-6.73	-6.87	0.11	-3.68	11	Pass
54	5270	-6.83	-7.03	0.11	-3.81	11	Pass
62	5310	-6.94	-7.16	0.11	-3.93	11	Pass
102	5510	-6.97	-7.21	0.11	-3.97	11	Pass
110	5550	-7.05	-7.24	0.11	-4.02	11	Pass
134	5670	-6.57	-6.79	0.11	-3.56	11	Pass

#### Notes:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-1, the directional gain is 5 dBi < 6dBi, so the power density limit shall not be reduced.
- For U-NII-2A, the directional gain is 4.81 dBi < 6 dBi, so the power density limit shall not be reduced.
- For U-NII-2C, the directional gain is 3.92 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)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
42	5210	-10.38	-10.54	0.27	-7.18	11	Pass
58	5290	-9.97	-10.24	0.27	-6.82	11	Pass
106	5530	-10.29	-10.40	0.27	-7.06	11	Pass
122	5610	-10.42	-10.60	0.27	-7.23	11	Pass

#### Notes:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-1, the directional gain is 5 dBi < 6dBi, so the power density limit shall not be reduced.
- For U-NII-2A, the directional gain is 4.81 dBi < 6 dBi, so the power density limit shall not be reduced.
- For U-NII-2C, the directional gain is 3.92 dBi < 6 dBi, so the power density limit shall not be reduced.

### 802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)		Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1				
149	5745	-12.14	-12.31	-9.21	-6.99	30	Pass
157	5785	-12.17	-12.33	-9.24	-7.02	30	Pass
165	5825	-12.37	-12.53	-9.44	-7.22	30	Pass

#### Notes:

- Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-3, the directional gain is 3.82 dBi < 6 dBi, so the power density limit shall not be reduced.

### 802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)		Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1				
149	5745	-12.61	-12.81	-9.7	-7.48	30	Pass
157	5785	-12.65	-12.84	-9.73	-7.51	30	Pass
165	5825	-12.82	-12.94	-9.87	-7.65	30	Pass

#### Notes:

- Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-3, the directional gain is 3.82 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)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
151	5755	-15.69	-15.89	-12.78	0.11	-10.45	30	Pass
159	5795	-15.79	-16.02	-12.89	0.11	-10.56	30	Pass

Notes:

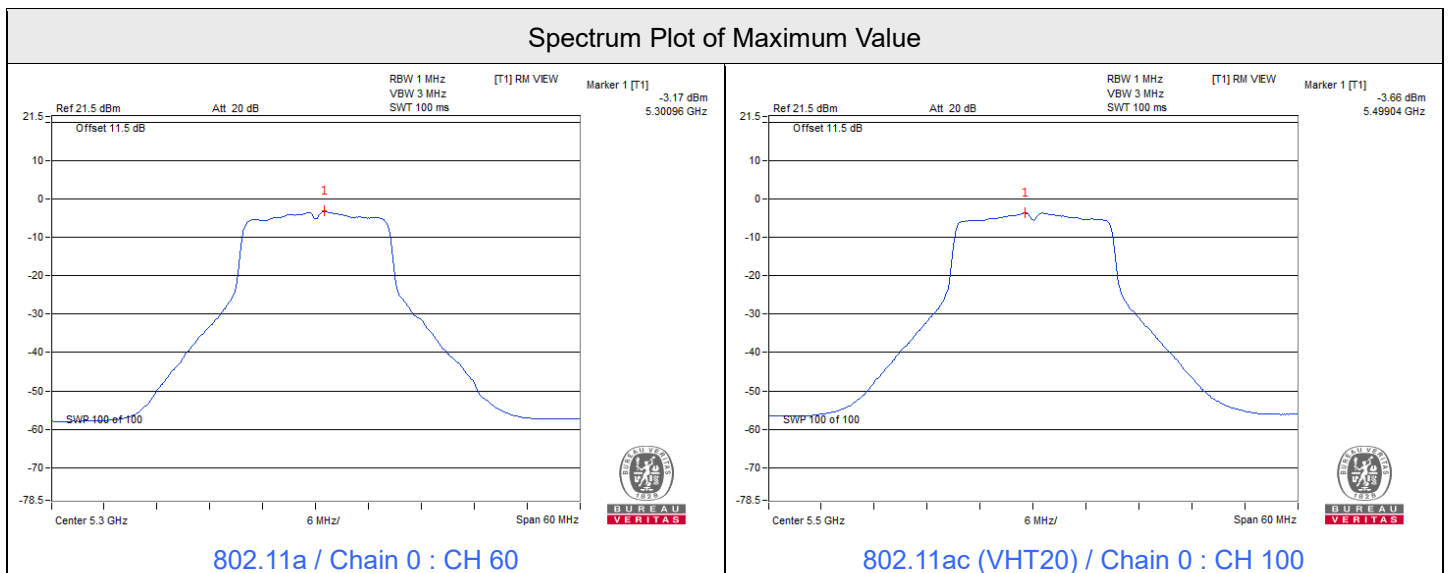
- Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-3, the directional gain is 3.82 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT80)

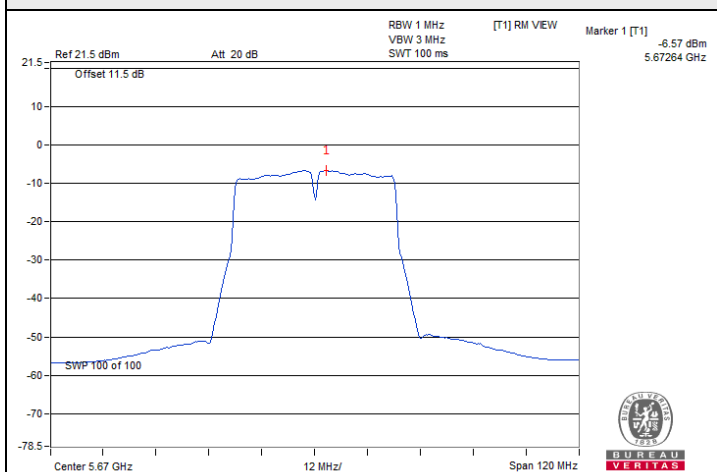
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)		Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1					
155	5775	-18.58	-18.75	-15.65	0.27	-13.16	30	Pass

Notes:

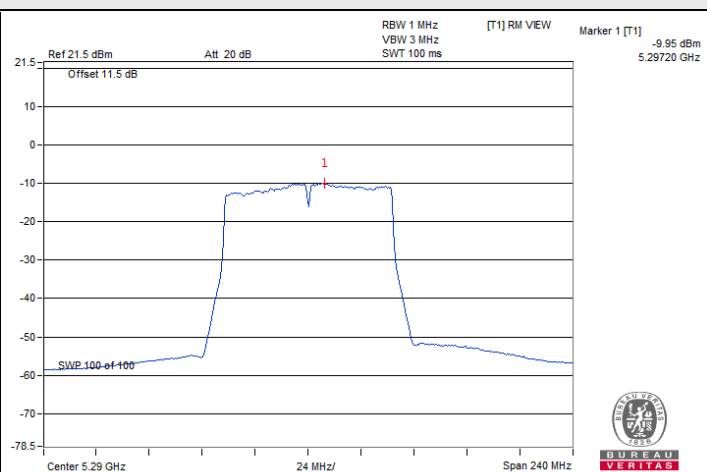
- Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
- Directional gain =  $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20})^2 / 2]$
- For U-NII-3, the directional gain is 3.82 dBi < 6 dBi, so the power density limit shall not be reduced.



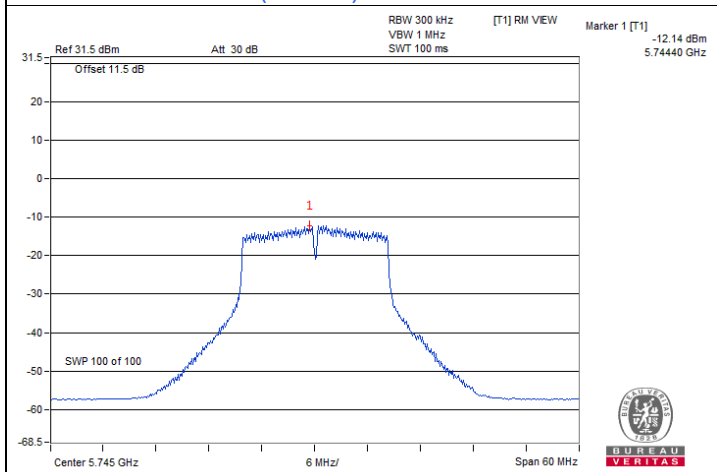
### Spectrum Plot of Maximum Value



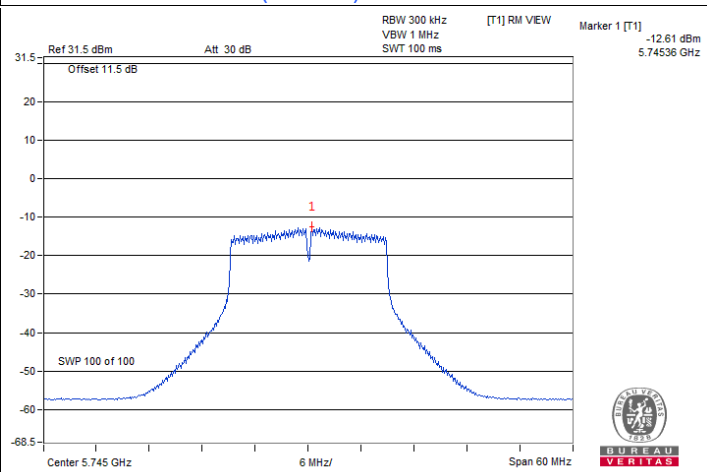
802.11ac (VHT40) / Chain 0 : CH 134



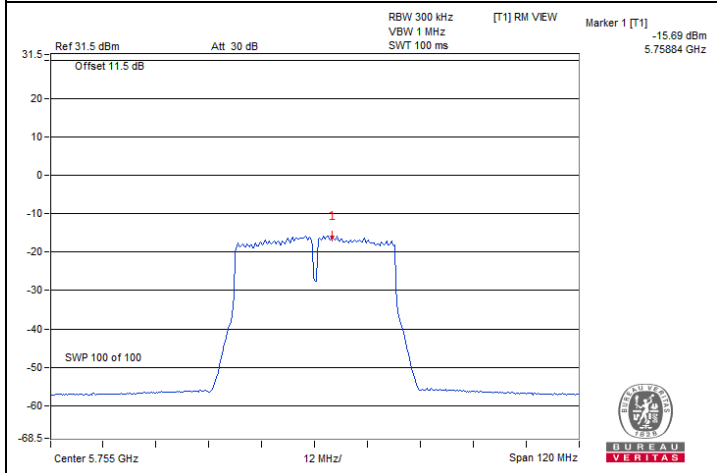
802.11ac (VHT80) / Chain 0 : CH 58



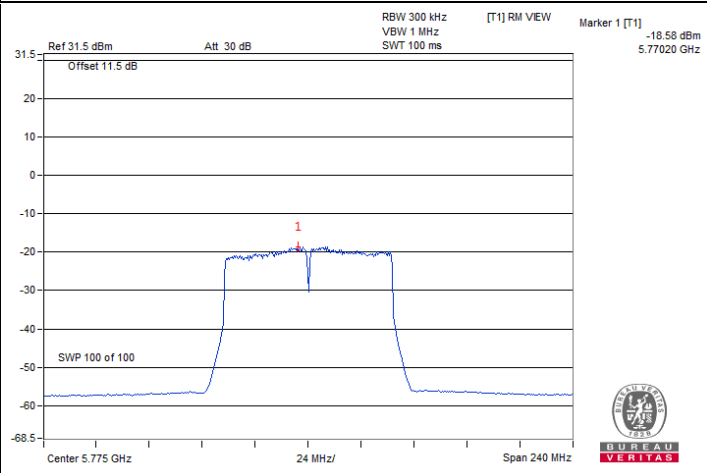
802.11a / Chain 0 : CH 149



802.11ac (VHT20) / Chain 0 : CH 149



802.11ac (VHT40) / Chain 0 : CH 151



802.11ac (VHT80) / Chain 0 : CH 155

#### 7.4 6 dB Bandwidth

Input Power:	3.84 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Gary Lin
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#### 802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
149	5745	15.48	15.51	0.5	Pass
157	5785	15.70	15.50	0.5	Pass
165	5825	15.53	15.67	0.5	Pass

#### 802.11ac (VHT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
149	5745	17.31	17.56	0.5	Pass
157	5785	16.97	16.98	0.5	Pass
165	5825	16.96	16.94	0.5	Pass

#### 802.11ac (VHT40)

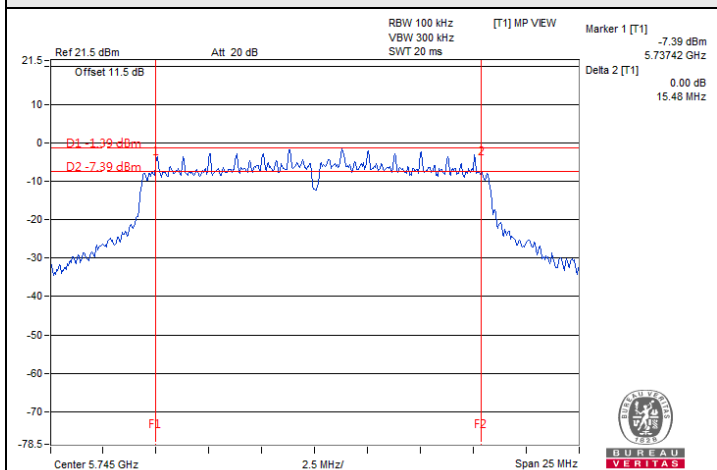
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
151	5755	36.37	36.43	0.5	Pass
159	5795	36.33	36.31	0.5	Pass

#### 802.11ac (VHT80)

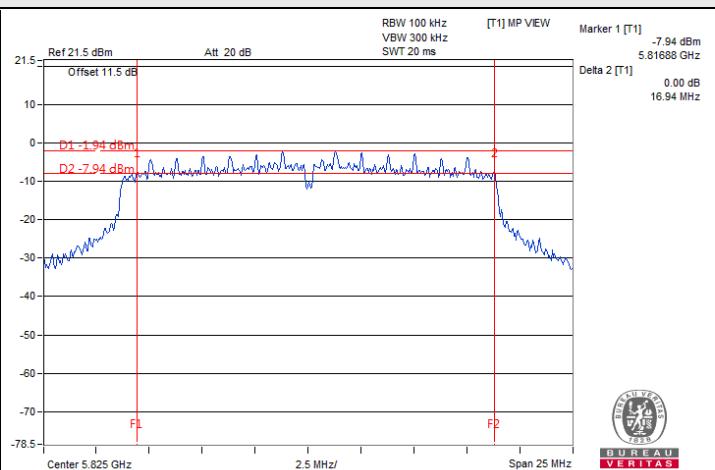
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
155	5775	75.46	75.47	0.5	Pass



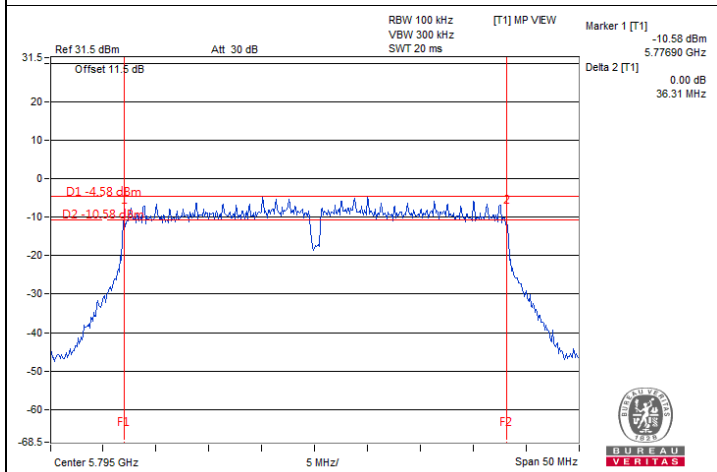
### Spectrum Plot of Minimum Value



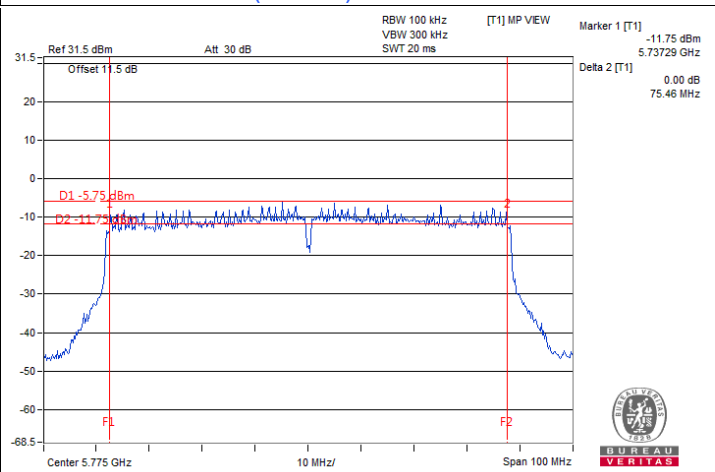
802.11a / Chain 0 : CH 149



802.11ac (VHT20) / Chain 1 : CH 165



802.11ac (VHT40) / Chain 1 : CH 159



802.11ac (VHT80) / Chain 0 : CH 155

## 7.5 Occupied Bandwidth

Input Power:	3.84 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Gary Lin
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### 802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.56	16.68
40	5200	16.68	16.56
48	5240	16.56	16.68
52	5260	16.68	16.56
60	5300	16.68	16.68
64	5320	16.56	16.68
100	5500	16.56	16.56
116	5580	16.68	16.68
140	5700	16.68	16.68
149	5745	16.56	16.56
157	5785	16.56	16.68
165	5825	16.68	16.56

### 802.11ac (VHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.76	17.88
40	5200	17.76	17.76
48	5240	17.76	17.88
52	5260	17.76	17.76
60	5300	17.88	17.76
64	5320	17.76	17.76
100	5500	17.88	17.76
116	5580	17.88	17.76
140	5700	17.76	17.76
149	5745	17.76	17.88
157	5785	17.76	17.76
165	5825	17.76	17.76

**802.11ac (VHT40)**

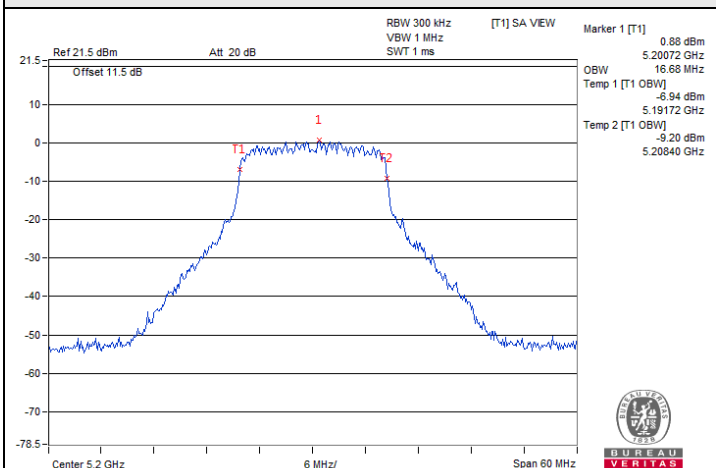
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.48	36.48
46	5230	36.48	36.48
54	5270	36.48	36.48
62	5310	36.72	36.48
102	5510	36.48	36.48
110	5550	36.48	36.48
134	5670	36.48	36.72
151	5755	36.48	36.48
159	5795	36.72	36.48

**802.11ac (VHT80)**

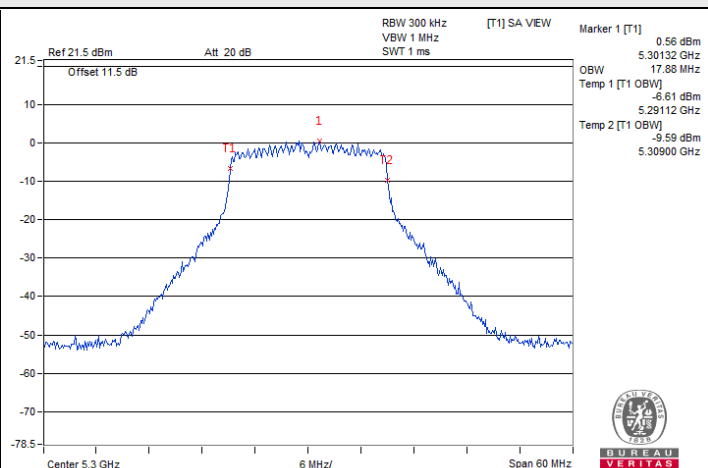
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.84	75.84
58	5290	75.84	75.84
106	5530	75.84	75.84
122	5610	75.84	75.84
155	5775	75.84	75.84



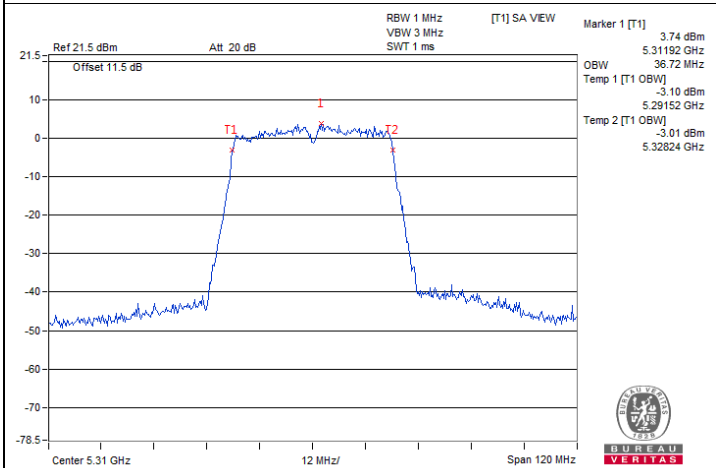
### Spectrum Plot of Maximum Value



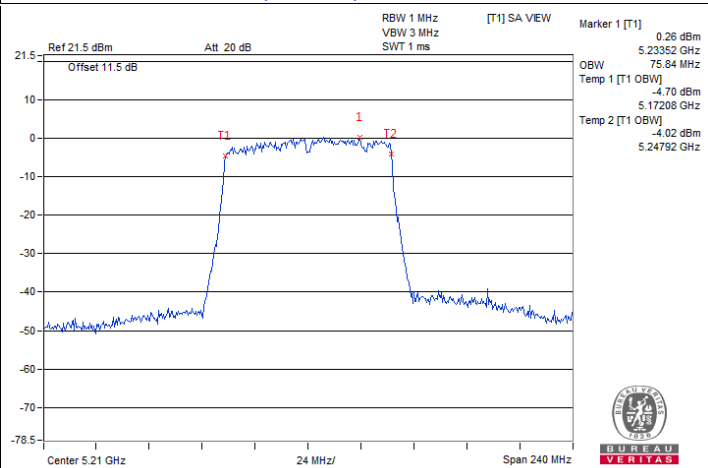
802.11a / Chain 0 : CH 40



802.11ac (VHT20) / Chain 0 : CH 60

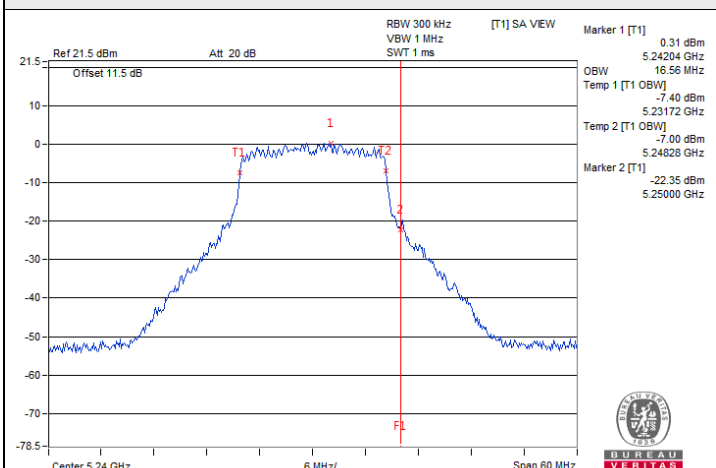


802.11ac (VHT40) / Chain 0 : CH 62

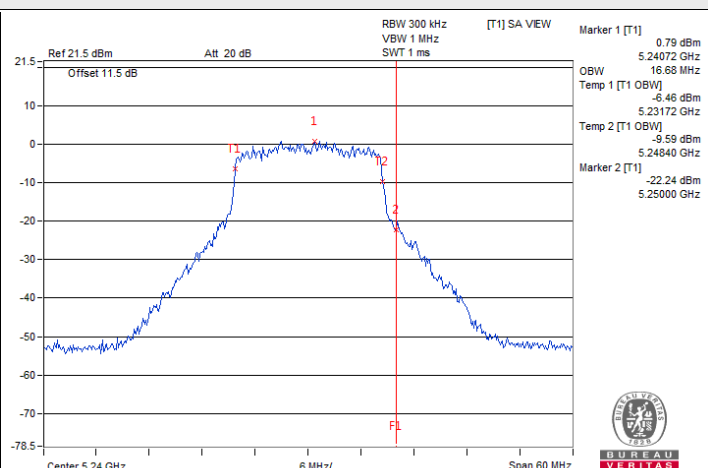


802.11ac (VHT80) / Chain 0 : CH 42

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

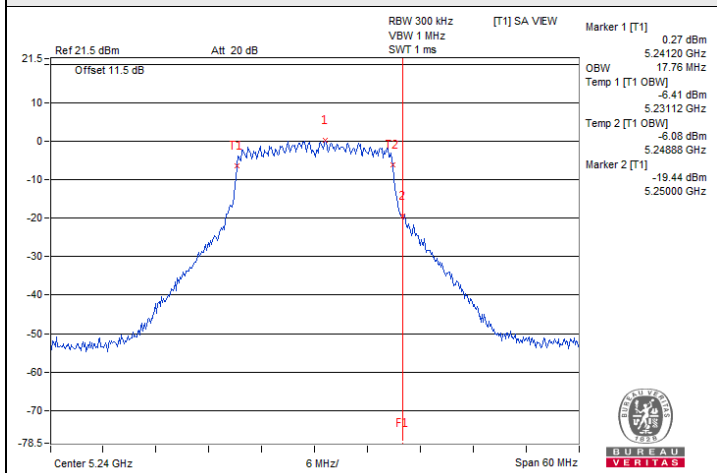


802.11a / Chain 0 : CH 48

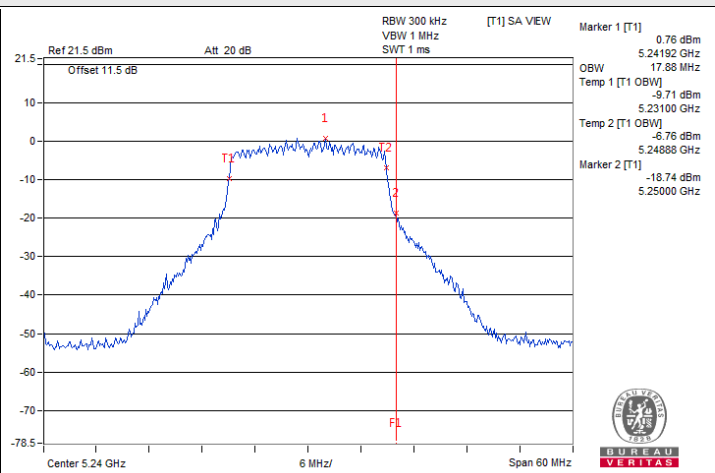


802.11a / Chain 1 : CH 48

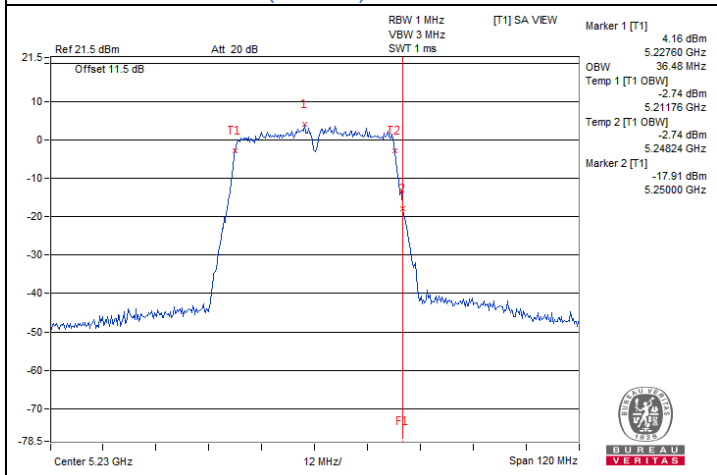
### Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2A)



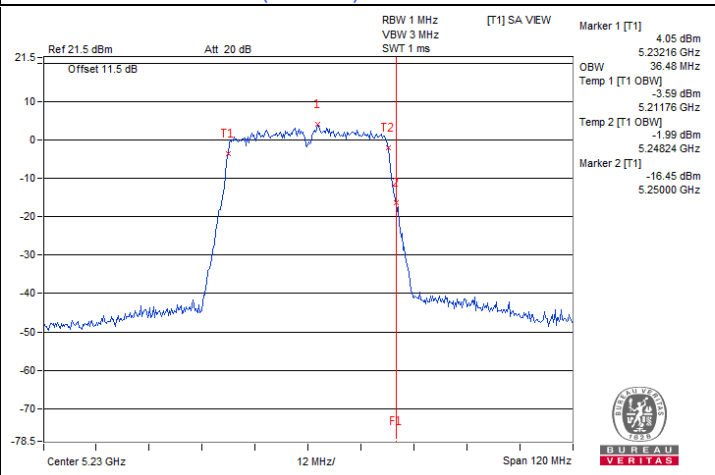
802.11ac (VHT20) / Chain 0 : CH 48



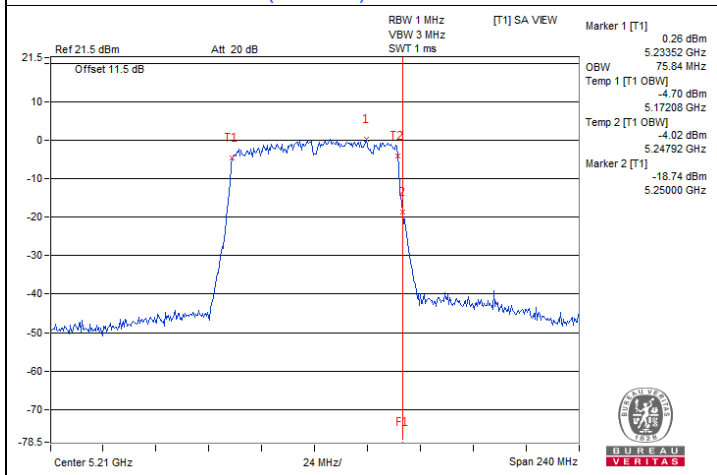
802.11ac (VHT20) / Chain 1 : CH 48



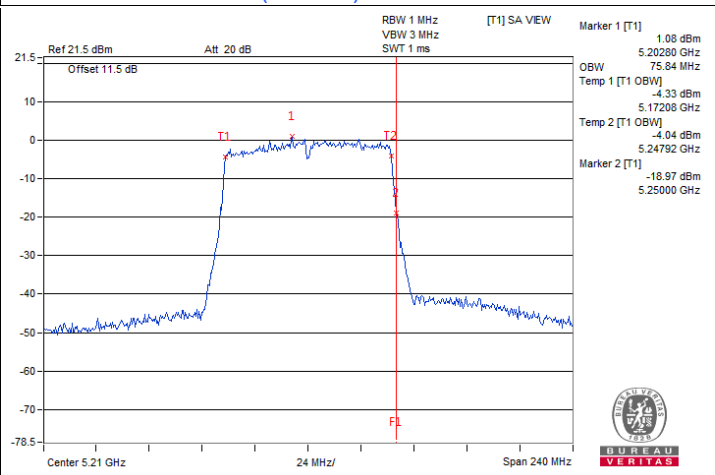
802.11ac (VHT40) / Chain 0 : CH 46



802.11ac (VHT40) / Chain 1 : CH 46



802.11ac (VHT80) / Chain 0 : CH 42

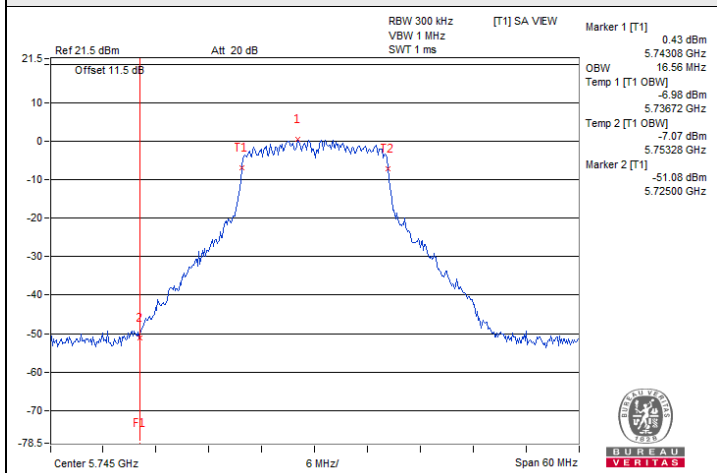


802.11ac (VHT80) / Chain 1 : CH 42

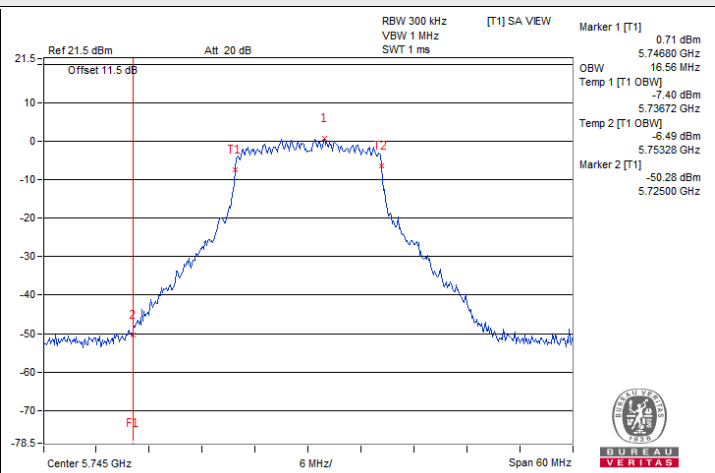




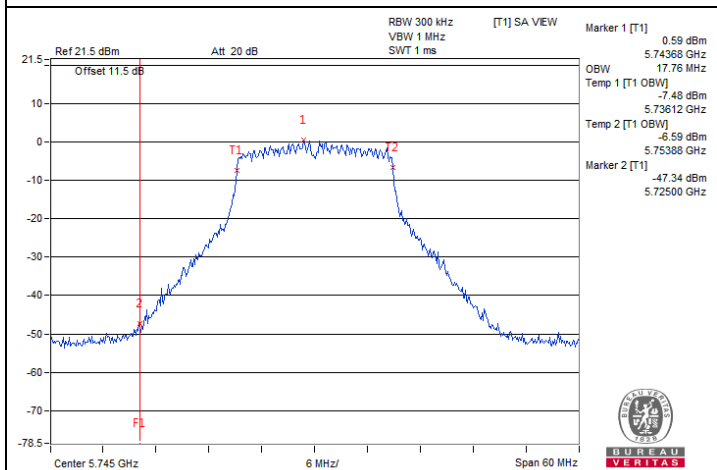
### Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2C)



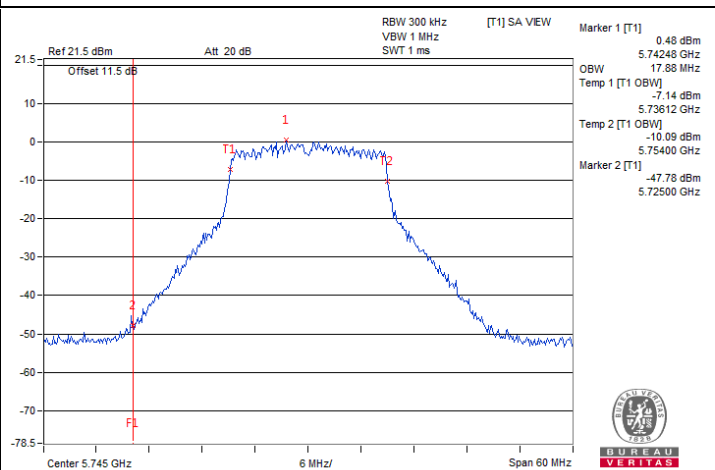
802.11a / Chain 0 : CH 149



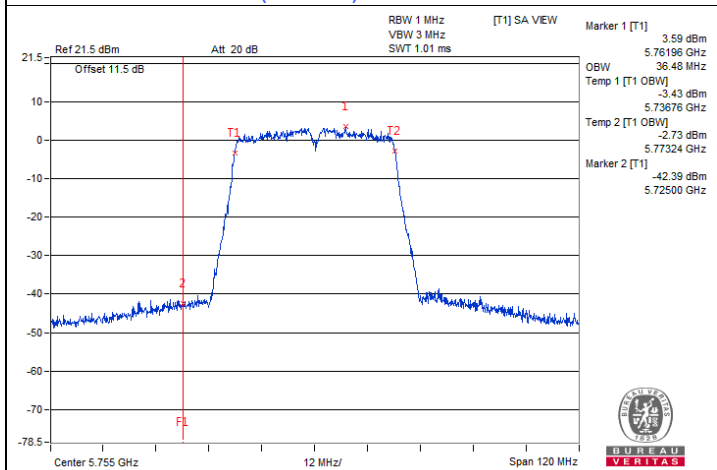
802.11a / Chain 1 : CH 149



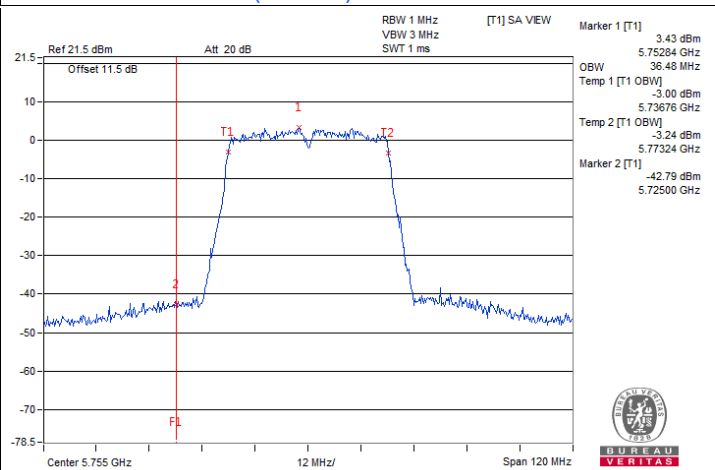
802.11ac (VHT20) / Chain 0 : CH 149



802.11ac (VHT20) / Chain 1 : CH 149

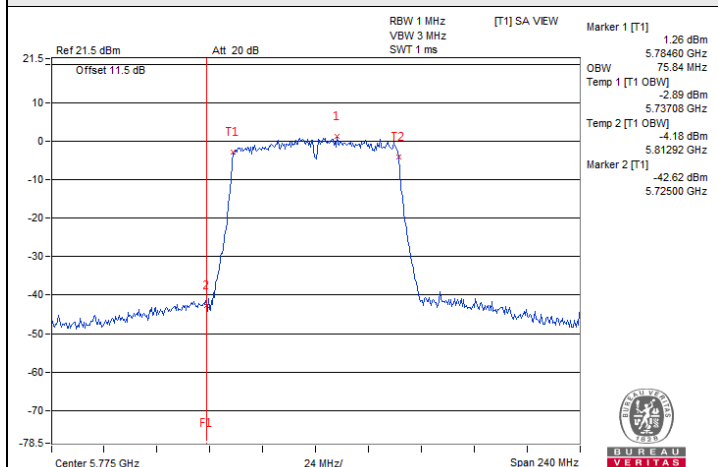


802.11ac (VHT40) / Chain 0 : CH 151

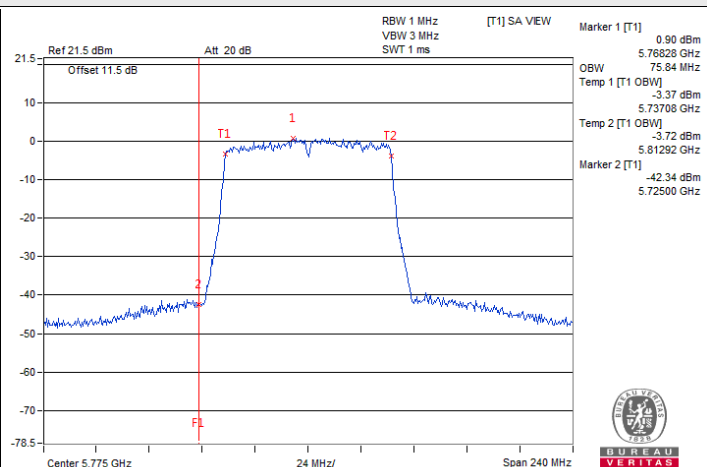


802.11ac (VHT40) / Chain 1 : CH 151

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



802.11ac (VHT80) / Chain 0 : CH 155



802.11ac (VHT80) / Chain 1 : CH 155

## 7.6 Frequency Stability

Input Power:	3.84 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Gary Lin
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### Frequency Stability Versus Temperature

Operating Frequency: 5180 MHz

Temp. (°C)	Power Supply (Vdc)	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
40	3.84	5179.999	Pass	5179.9979	Pass	5179.9999	Pass	5179.999	Pass
30	3.84	5179.9853	Pass	5179.9864	Pass	5179.9846	Pass	5179.9846	Pass
20	3.84	5179.9811	Pass	5179.9786	Pass	5179.9808	Pass	5179.9769	Pass
10	3.84	5179.9924	Pass	5179.989	Pass	5179.9876	Pass	5179.988	Pass
0	3.84	5180.0041	Pass	5180.0038	Pass	5180.0032	Pass	5180.0051	Pass

### Frequency Stability Versus Voltage

Operating Frequency: 5180 MHz

Temp. (°C)	Power Supply (Vdc)	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	4.416	5179.9831	Pass	5179.9801	Pass	5179.9826	Pass	5179.9832	Pass
	3.84	5179.9811	Pass	5179.9786	Pass	5179.9808	Pass	5179.9769	Pass
	3.264	5179.9865	Pass	5179.9868	Pass	5179.9882	Pass	5179.9904	Pass

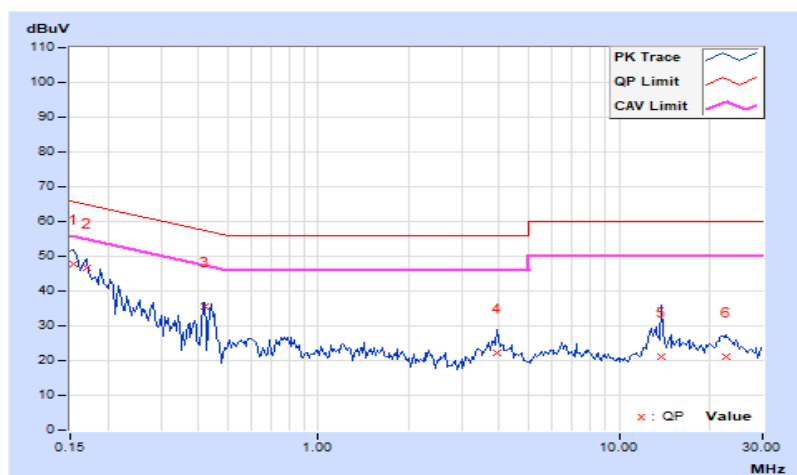
## 7.7 AC Power Conducted Emissions

RF Mode	802.11ac (VHT40)	Channel	CH 46 : 5230 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, 67% RH
Tested By	Adair Peng		

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	0.15391	10.32	37.53	21.58	47.85	31.90	65.79	55.79	-17.94	-23.89
2	0.16953	10.33	36.41	21.83	46.74	32.16	64.98	54.98	-18.24	-22.82
3	0.41953	10.42	25.07	21.18	35.49	31.60	57.46	47.46	-21.97	-15.86
4	3.91406	10.52	11.84	1.16	22.36	11.68	56.00	46.00	-33.64	-34.32
5	13.77734	10.64	10.35	2.30	20.99	12.94	60.00	50.00	-39.01	-37.06
6	22.63281	10.66	10.45	5.19	21.11	15.85	60.00	50.00	-38.89	-34.15

### 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

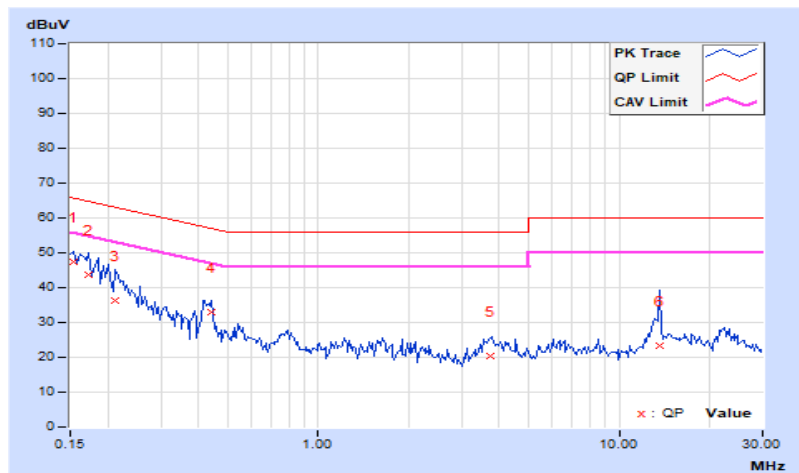


RF Mode	802.11ac (VHT40)	Channel	CH 46 : 5230 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Adair Peng		

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	0.15391	10.33	37.03	21.60	47.36	31.93	65.79	55.79	-18.43	-23.86
2	0.17344	10.34	33.35	21.08	43.69	31.42	64.79	54.79	-21.10	-23.37
3	0.21250	10.37	26.03	10.77	36.40	21.14	63.11	53.11	-26.71	-31.97
<b>4</b>	<b>0.44297</b>	<b>10.44</b>	<b>22.67</b>	<b>20.77</b>	<b>33.11</b>	<b>31.21</b>	<b>57.01</b>	<b>47.01</b>	<b>-23.90</b>	<b>-15.80</b>
5	3.71094	10.53	10.02	2.54	20.55	13.07	56.00	46.00	-35.45	-32.93
6	13.63672	10.75	12.52	3.48	23.27	14.23	60.00	50.00	-36.73	-35.77

**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



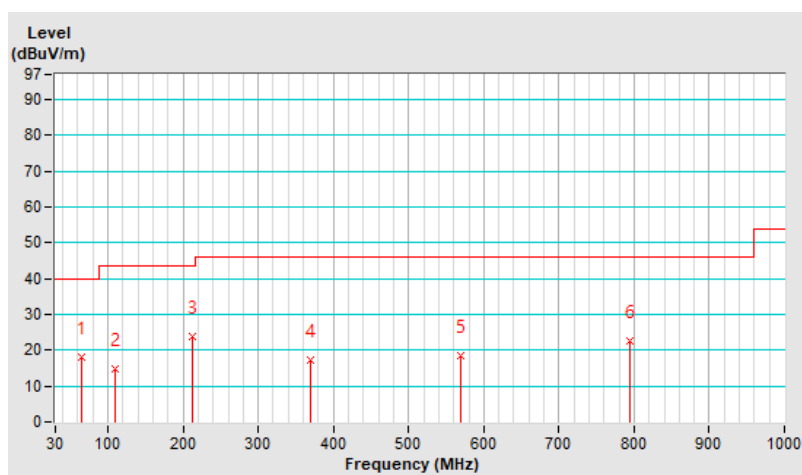
## 7.8 Unwanted Emissions below 1 GHz

RF Mode	802.11ac (VHT40)	Channel	CH 46 : 5230 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	64.18	17.9 QP	40.0	-22.1	1.27 H	214	21.4	-3.5
2	109.43	14.9 QP	43.5	-28.6	1.92 H	47	18.4	-3.5
3	213.08	23.9 QP	43.5	-19.6	1.48 H	239	27.4	-3.5
4	369.25	17.1 QP	46.0	-28.9	2.56 H	204	20.6	-3.5
5	569.96	18.3 QP	46.0	-27.7	2.17 H	104	21.8	-3.5
6	794.32	22.7 QP	46.0	-23.3	1.15 H	271	26.2	-3.5

### Remarks:

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

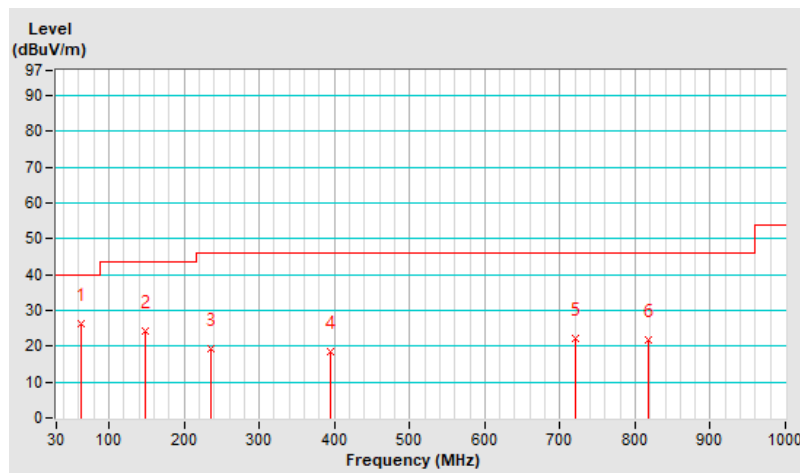


<b>RF Mode</b>	802.11ac (VHT40)	<b>Channel</b>	CH 46 : 5230 MHz
<b>Frequency Range</b>	30 MHz ~ 1 GHz	<b>Detector Function &amp; Bandwidth</b>	QP: RB=120kHz, DET=Quasi-Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	63.11	26.3 QP	40.0	-13.7	1.86 V	229	29.8	-3.5
2	149.14	24.3 QP	43.5	-19.2	1.77 V	216	27.8	-3.5
3	236.59	19.2 QP	46.0	-26.8	2.26 V	11	22.7	-3.5
4	395.26	18.6 QP	46.0	-27.4	1.87 V	26	22.1	-3.5
5	720.60	22.1 QP	46.0	-23.9	1.49 V	316	25.6	-3.5
6	817.10	21.7 QP	46.0	-24.3	1.29 V	282	25.2	-3.5

**Remarks:**

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



## 7.9 Unwanted Emissions above 1 GHz

<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 36 : 5180 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.5 PK	74.0	-18.5	1.04 H	92	42.5	13.0
2	5150.00	45.1 AV	54.0	-8.9	1.04 H	92	32.1	13.0
3	*5180.00	104.2 PK			1.02 H	105	61.3	42.9
4	*5180.00	96.7 AV			1.02 H	105	53.8	42.9
5	#10360.00	55.7 PK	68.2	-12.5	2.15 H	177	36.9	18.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.6 PK	74.0	-17.4	1.62 V	192	43.6	13.0
2	5150.00	45.1 AV	54.0	-8.9	1.62 V	192	32.1	13.0
3	*5180.00	100.8 PK			1.64 V	209	57.9	42.9
4	*5180.00	93.1 AV			1.64 V	209	50.2	42.9
5	#10360.00	55.2 PK	68.2	-13.0	1.25 V	196	36.4	18.8

### Remarks:

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





<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 40 : 5200 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	103.9 PK			1.08 H	117	61.0	42.9
2	*5200.00	96.9 AV			1.08 H	117	54.0	42.9
3	#10400.00	54.2 PK	68.2	-14.0	2.81 H	104	35.4	18.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	100.5 PK			1.59 V	213	57.6	42.9
2	*5200.00	92.8 AV			1.59 V	213	49.9	42.9
3	#10400.00	54.4 PK	68.2	-13.8	1.24 V	257	35.6	18.8

**Remarks:**

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



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 48 : 5240 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	104.0 PK			1.94 H	100	61.0	43.0
2	*5240.00	95.2 AV			1.94 H	100	52.2	43.0
3	5350.00	56.4 PK	74.0	-17.6	1.82 H	77	43.0	13.4
4	5350.00	45.0 AV	54.0	-9.0	1.82 H	77	31.6	13.4
5	#10480.00	54.2 PK	68.2	-14.0	2.16 H	104	35.7	18.5

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	99.1 PK			1.53 V	208	56.1	43.0
2	*5240.00	91.3 AV			1.53 V	208	48.3	43.0
3	5350.00	56.0 PK	74.0	-18.0	1.36 V	203	42.6	13.4
4	5350.00	44.8 AV	54.0	-9.2	1.36 V	203	31.4	13.4
5	#10480.00	54.7 PK	68.2	-13.5	1.82 V	47	36.2	18.5

**Remarks:**

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



<b>RF Mode</b>	802.11ac (VHT20)	<b>Channel</b>	CH 36 : 5180 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	54.8 PK	74.0	-19.2	1.09 H	82	41.8	13.0
2	5150.00	44.6 AV	54.0	-9.4	1.09 H	82	31.6	13.0
3	*5180.00	103.8 PK			1.02 H	105	60.9	42.9
4	*5180.00	94.2 AV			1.02 H	105	51.3	42.9
5	#10360.00	54.7 PK	68.2	-13.5	1.14 H	215	35.9	18.8

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.3 PK	74.0	-17.7	1.49 V	176	43.3	13.0
2	5150.00	44.6 AV	54.0	-9.4	1.49 V	176	31.6	13.0
3	*5180.00	100.0 PK			1.64 V	209	57.1	42.9
4	*5180.00	90.5 AV			1.64 V	209	47.6	42.9
5	#10360.00	54.9 PK	68.2	-13.3	2.05 V	134	36.1	18.8

**Remarks:**

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



<b>RF Mode</b>	802.11ac (VHT20)	<b>Channel</b>	CH 40 : 5200 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	103.6 PK			1.08 H	117	60.7	42.9
2	*5200.00	93.9 AV			1.08 H	117	51.0	42.9
3	#10400.00	55.1 PK	68.2	-13.1	1.18 H	201	36.3	18.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	99.7 PK			1.59 V	213	56.8	42.9
2	*5200.00	90.2 AV			1.59 V	213	47.3	42.9
3	#10400.00	54.7 PK	68.2	-13.5	2.22 V	149	35.9	18.8

**Remarks:**

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

<b>RF Mode</b>	802.11ac (VHT20)	<b>Channel</b>	CH 48 : 5240 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	104.1 PK			1.94 H	100	61.1	43.0
2	*5240.00	94.7 AV			1.94 H	100	51.7	43.0
3	5350.00	55.2 PK	74.0	-18.8	1.75 H	100	41.8	13.4
4	5350.00	45.1 AV	54.0	-8.9	1.75 H	100	31.7	13.4
5	#10480.00	54.1 PK	68.2	-14.1	1.90 H	220	35.6	18.5

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	100.0 PK			1.53 V	208	57.0	43.0
2	*5240.00	90.8 AV			1.53 V	208	47.8	43.0
3	5350.00	55.8 PK	74.0	-18.2	1.53 V	162	42.4	13.4
4	5350.00	44.6 AV	54.0	-9.4	1.53 V	162	31.2	13.4
5	#10480.00	54.4 PK	68.2	-13.8	1.58 V	347	35.9	18.5

**Remarks:**

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



<b>RF Mode</b>	802.11ac (VHT40)	<b>Channel</b>	CH 38 : 5190 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.4 PK	74.0	-18.6	1.24 H	104	42.4	13.0
2	5150.00	44.4 AV	54.0	-9.6	1.24 H	104	31.4	13.0
3	*5190.00	101.2 PK			1.02 H	107	58.3	42.9
4	*5190.00	92.9 AV			1.02 H	107	50.0	42.9
5	5350.00	55.3 PK	74.0	-18.7	1.02 H	113	41.9	13.4
6	5350.00	45.6 AV	54.0	-8.4	1.02 H	113	32.2	13.4
7	#10380.00	54.9 PK	68.2	-13.3	1.53 H	228	36.2	18.7

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.1 PK	74.0	-17.9	1.64 V	153	43.1	13.0
2	5150.00	44.5 AV	54.0	-9.5	1.64 V	153	31.5	13.0
3	*5190.00	97.9 PK			1.65 V	184	55.0	42.9
4	*5190.00	87.8 AV			1.65 V	184	44.9	42.9
5	5350.00	56.1 PK	74.0	-17.9	1.04 V	93	42.7	13.4
6	5350.00	45.2 AV	54.0	-8.8	1.04 V	93	31.8	13.4
7	#10380.00	54.7 PK	68.2	-13.5	1.15 V	71	36.0	18.7

**Remarks:**

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

<b>RF Mode</b>	802.11ac (VHT40)	<b>Channel</b>	CH 46 : 5230 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.9 PK	74.0	-18.1	1.85 H	100	42.9	13.0
2	5150.00	44.2 AV	54.0	-9.8	1.85 H	100	31.2	13.0
3	*5230.00	102.2 PK			1.94 H	100	59.2	43.0
4	*5230.00	93.3 AV			1.94 H	100	50.3	43.0
5	5350.00	55.8 PK	74.0	-18.2	2.01 H	128	42.4	13.4
6	5350.00	46.8 AV	54.0	-7.2	2.01 H	128	33.4	13.4
7	#10460.00	54.3 PK	68.2	-13.9	1.81 H	230	35.8	18.5

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.5 PK	74.0	-18.5	1.52 V	189	42.5	13.0
2	5150.00	44.2 AV	54.0	-9.8	1.52 V	189	31.2	13.0
3	*5230.00	98.2 PK			1.53 V	206	55.2	43.0
4	*5230.00	89.3 AV			1.53 V	206	46.3	43.0
5	5350.00	56.3 PK	74.0	-17.7	1.44 V	162	42.9	13.4
6	5350.00	46.0 AV	54.0	-8.0	1.44 V	162	32.6	13.4
7	#10460.00	55.7 PK	68.2	-12.5	1.72 V	252	37.2	18.5

**Remarks:**

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

<b>RF Mode</b>	802.11ac (VHT80)	<b>Channel</b>	CH 42 : 5210 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.1 PK	74.0	-18.9	1.89 H	95	42.1	13.0
2	5150.00	44.5 AV	54.0	-9.5	1.89 H	95	31.5	13.0
3	*5210.00	98.8 PK			1.94 H	95	55.9	42.9
4	*5210.00	90.0 AV			1.94 H	95	47.1	42.9
5	5350.00	55.8 PK	74.0	-18.2	1.84 H	83	42.4	13.4
6	5350.00	44.8 AV	54.0	-9.2	1.84 H	83	31.4	13.4
7	#10420.00	54.2 PK	68.2	-14.0	1.19 H	311	35.5	18.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	54.9 PK	74.0	-19.1	1.61 V	208	41.9	13.0
2	5150.00	44.4 AV	54.0	-9.6	1.61 V	208	31.4	13.0
3	*5210.00	94.7 PK			1.64 V	204	51.8	42.9
4	*5210.00	86.1 AV			1.64 V	204	43.2	42.9
5	5350.00	55.8 PK	74.0	-18.2	1.33 V	159	42.4	13.4
6	5350.00	45.0 AV	54.0	-9.0	1.33 V	159	31.6	13.4
7	#10420.00	54.4 PK	68.2	-13.8	1.35 V	48	35.7	18.7

**Remarks:**

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





<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 52 : 5260 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.0 PK	74.0	-19.0	2.12 H	245	42.0	13.0
2	5150.00	44.3 AV	54.0	-9.7	2.12 H	245	31.3	13.0
3	*5260.00	103.1 PK			1.95 H	106	60.0	43.1
4	*5260.00	95.6 AV			1.95 H	106	52.5	43.1
5	#10520.00	53.8 PK	68.2	-14.4	1.49 H	110	35.4	18.4

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.4 PK	74.0	-18.6	1.59 V	220	42.4	13.0
2	5150.00	44.5 AV	54.0	-9.5	1.59 V	220	31.5	13.0
3	*5260.00	99.8 PK			1.63 V	224	56.7	43.1
4	*5260.00	92.1 AV			1.63 V	224	49.0	43.1
5	#10520.00	54.2 PK	68.2	-14.0	1.92 V	322	35.8	18.4

**Remarks:**

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



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 60 : 5300 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	102.7 PK			1.93 H	107	59.7	43.0
2	*5300.00	95.2 AV			1.93 H	107	52.2	43.0
3	10600.00	54.8 PK	74.0	-19.2	1.57 H	84	36.2	18.6
4	10600.00	45.1 AV	54.0	-8.9	1.57 H	84	26.5	18.6

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	99.4 PK			1.49 V	208	56.4	43.0
2	*5300.00	91.7 AV			1.49 V	208	48.7	43.0
3	10600.00	54.6 PK	74.0	-19.4	1.72 V	145	36.0	18.6
4	10600.00	44.9 AV	54.0	-9.1	1.72 V	145	26.3	18.6

**Remarks:**

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



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 64 : 5320 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	101.8 PK			1.95 H	93	58.6	43.2
2	*5320.00	94.7 AV			1.95 H	93	51.5	43.2
3	5350.00	55.3 PK	74.0	-18.7	2.21 H	92	41.9	13.4
4	5350.00	44.9 AV	54.0	-9.1	2.21 H	92	31.5	13.4
5	10640.00	54.3 PK	74.0	-19.7	1.26 H	210	35.7	18.6
6	10640.00	44.7 AV	54.0	-9.3	1.26 H	210	26.1	18.6

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	98.3 PK			1.71 V	237	55.1	43.2
2	*5320.00	89.2 AV			1.71 V	237	46.0	43.2
3	5350.00	56.1 PK	74.0	-17.9	1.69 V	251	42.7	13.4
4	5350.00	44.9 AV	54.0	-9.1	1.69 V	251	31.5	13.4
5	10640.00	54.1 PK	74.0	-19.9	1.06 V	289	35.5	18.6
6	10640.00	44.5 AV	54.0	-9.5	1.06 V	289	25.9	18.6

**Remarks:**

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

<b>RF Mode</b>	802.11ac (VHT20)	<b>Channel</b>	CH 52 : 5260 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.6 PK	74.0	-18.4	1.86 H	114	42.6	13.0
2	5150.00	44.5 AV	54.0	-9.5	1.86 H	114	31.5	13.0
3	*5260.00	102.7 PK			1.95 H	106	59.6	43.1
4	*5260.00	93.1 AV			1.95 H	106	50.0	43.1
5	#10520.00	54.6 PK	68.2	-13.6	1.82 H	151	36.2	18.4

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.0 PK	74.0	-18.0	1.63 V	224	43.0	13.0
2	5150.00	44.4 AV	54.0	-9.6	1.63 V	224	31.4	13.0
3	*5260.00	99.6 PK			1.63 V	224	56.5	43.1
4	*5260.00	90.1 AV			1.63 V	224	47.0	43.1
5	#10520.00	54.2 PK	68.2	-14.0	1.18 V	175	35.8	18.4

**Remarks:**

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



<b>RF Mode</b>	802.11ac (VHT20)	<b>Channel</b>	CH 60 : 5300 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	102.4 PK			1.93 H	107	59.4	43.0
2	*5300.00	92.8 AV			1.93 H	107	49.8	43.0
3	10600.00	54.1 PK	74.0	-19.9	1.91 H	154	35.5	18.6
4	10600.00	44.4 AV	54.0	-9.6	1.91 H	154	25.8	18.6

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	99.2 PK			1.49 V	208	56.2	43.0
2	*5300.00	89.8 AV			1.49 V	208	46.8	43.0
3	10600.00	54.9 PK	74.0	-19.1	1.62 V	304	36.3	18.6
4	10600.00	45.3 AV	54.0	-8.7	1.62 V	304	26.7	18.6

**Remarks:**

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



<b>RF Mode</b>	802.11ac (VHT20)	<b>Channel</b>	CH 64 : 5320 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	102.9 PK			1.95 H	93	59.7	43.2
2	*5320.00	93.4 AV			1.95 H	93	50.2	43.2
3	5350.00	55.5 PK	74.0	-18.5	1.92 H	75	42.1	13.4
4	5350.00	44.8 AV	54.0	-9.2	1.92 H	75	31.4	13.4
5	10640.00	54.3 PK	74.0	-19.7	1.13 H	174	35.7	18.6
6	10640.00	44.6 AV	54.0	-9.4	1.13 H	174	26.0	18.6

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	98.5 PK			1.71 V	237	55.3	43.2
2	*5320.00	88.6 AV			1.71 V	237	45.4	43.2
3	5350.00	55.6 PK	74.0	-18.4	1.70 V	254	42.2	13.4
4	5350.00	44.9 AV	54.0	-9.1	1.70 V	254	31.5	13.4
5	10640.00	54.9 PK	74.0	-19.1	1.78 V	259	36.3	18.6
6	10640.00	45.3 AV	54.0	-8.7	1.78 V	259	26.7	18.6

**Remarks:**

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



<b>RF Mode</b>	802.11ac (VHT40)	<b>Channel</b>	CH 54 : 5270 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.0 PK	74.0	-18.0	1.84 H	109	43.0	13.0
2	5150.00	44.3 AV	54.0	-9.7	1.84 H	109	31.3	13.0
3	*5270.00	98.7 PK			1.95 H	115	55.7	43.0
4	*5270.00	90.6 AV			1.95 H	115	47.6	43.0
5	5350.00	56.2 PK	74.0	-17.8	2.24 H	115	42.8	13.4
6	5350.00	45.0 AV	54.0	-9.0	2.24 H	115	31.6	13.4
7	#10540.00	54.4 PK	68.2	-13.8	1.61 H	180	35.9	18.5
8	#10540.00	44.7 AV	54.0	-9.3	1.61 H	180	26.2	18.5

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.1 PK	74.0	-18.9	1.49 V	221	42.1	13.0
2	5150.00	44.4 AV	54.0	-9.6	1.49 V	221	31.4	13.0
3	*5270.00	95.2 PK			1.63 V	224	52.2	43.0
4	*5270.00	86.8 AV			1.63 V	224	43.8	43.0
5	5350.00	55.1 PK	74.0	-18.9	1.71 V	186	41.7	13.4
6	5350.00	45.1 AV	54.0	-8.9	1.71 V	186	31.7	13.4
7	#10540.00	54.6 PK	68.2	-13.6	1.88 V	160	36.1	18.5
8	#10540.00	44.9 AV	54.0	-9.1	1.88 V	160	26.4	18.5

**Remarks:**

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



<b>RF Mode</b>	802.11ac (VHT40)	<b>Channel</b>	CH 62 : 5310 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.3 PK	74.0	-18.7	1.89 H	112	42.3	13.0
2	5150.00	44.4 AV	54.0	-9.6	1.89 H	112	31.4	13.0
3	*5310.00	97.7 PK			1.95 H	115	54.7	43.0
4	*5310.00	89.2 AV			1.95 H	115	46.2	43.0
5	5350.00	55.6 PK	74.0	-18.4	2.01 H	143	42.2	13.4
6	5350.00	45.3 AV	54.0	-8.7	2.01 H	143	31.9	13.4
7	10620.00	54.2 PK	74.0	-19.8	1.82 H	244	35.6	18.6
8	10620.00	44.5 AV	54.0	-9.5	1.82 H	244	25.9	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.0 PK	74.0	-18.0	1.65 V	234	43.0	13.0
2	5150.00	44.5 AV	54.0	-9.5	1.65 V	234	31.5	13.0
3	*5310.00	95.0 PK			1.71 V	237	52.0	43.0
4	*5310.00	85.4 AV			1.71 V	237	42.4	43.0
5	5350.00	55.8 PK	74.0	-18.2	1.90 V	213	42.4	13.4
6	5350.00	45.1 AV	54.0	-8.9	1.90 V	213	31.7	13.4
7	10620.00	54.5 PK	74.0	-19.5	1.09 V	288	35.9	18.6
8	10620.00	44.8 AV	54.0	-9.2	1.09 V	288	26.2	18.6

**Remarks:**

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





<b>RF Mode</b>	802.11ac (VHT80)	<b>Channel</b>	CH 58 : 5290 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Karl Lee		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.7 PK	74.0	-18.3	1.95 H	121	42.7	13.0
2	5150.00	44.1 AV	54.0	-9.9	1.95 H	121	31.1	13.0
3	*5290.00	94.7 PK			1.96 H	108	51.7	43.0
4	*5290.00	86.6 AV			1.96 H	108	43.6	43.0
5	5350.00	55.9 PK	74.0	-18.1	1.74 H	124	42.5	13.4
6	5350.00	45.3 AV	54.0	-8.7	1.74 H	124	31.9	13.4
7	#10580.00	54.8 PK	68.2	-13.4	1.90 H	29	36.3	18.5

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.5 PK	74.0	-18.5	1.64 V	237	42.5	13.0
2	5150.00	44.4 AV	54.0	-9.6	1.64 V	237	31.4	13.0
3	*5290.00	91.9 PK			1.68 V	237	48.9	43.0
4	*5290.00	82.9 AV			1.68 V	237	39.9	43.0
5	5350.00	55.6 PK	74.0	-18.4	1.81 V	235	42.2	13.4
6	5350.00	45.3 AV	54.0	-8.7	1.81 V	235	31.9	13.4
7	#10580.00	54.2 PK	68.2	-14.0	1.25 V	294	35.7	18.5

**Remarks:**

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



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 100 : 5500 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.1 PK	74.0	-17.9	2.00 H	107	42.7	13.4
2	5460.00	46.0 AV	54.0	-8.0	2.00 H	107	32.6	13.4
3	#5470.00	56.8 PK	68.2	-11.4	2.00 H	107	43.4	13.4
4	*5500.00	104.8 PK			2.00 H	107	61.5	43.3
5	*5500.00	96.0 AV			2.00 H	107	52.7	43.3
6	11000.00	57.5 PK	74.0	-16.5	1.67 H	190	38.5	19.0
7	11000.00	47.6 AV	54.0	-6.4	1.67 H	190	28.6	19.0

**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	5460.00	55.6 PK	74.0	-18.4	1.69 V	275	42.2	13.4
2	5460.00	45.5 AV	54.0	-8.5	1.69 V	275	32.1	13.4
3	#5470.00	55.8 PK	68.2	-12.4	1.69 V	275	42.4	13.4
4	*5500.00	100.2 PK			1.69 V	275	56.9	43.3
5	*5500.00	92.3 AV			1.69 V	275	49.0	43.3
6	11000.00	57.3 PK	74.0	-16.7	1.05 V	214	38.3	19.0
7	11000.00	47.2 AV	54.0	-6.8	1.05 V	214	28.2	19.0

**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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 116 : 5580 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	104.0 PK			2.00 H	107	60.7	43.3
2	*5580.00	96.3 AV			2.00 H	107	53.0	43.3
3	11160.00	58.0 PK	74.0	-16.0	1.95 H	36	38.9	19.1
4	11160.00	48.0 AV	54.0	-6.0	1.95 H	36	28.9	19.1

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	100.1 PK			1.69 V	275	56.8	43.3
2	*5580.00	92.3 AV			1.69 V	275	49.0	43.3
3	11160.00	57.8 PK	74.0	-16.2	1.65 V	228	38.7	19.1
4	11160.00	47.6 AV	54.0	-6.4	1.65 V	228	28.5	19.1

**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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 140 : 5700 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	102.0 PK			2.00 H	113	58.5	43.5
2	*5700.00	94.4 AV			2.00 H	113	50.9	43.5
3	#5725.00	56.5 PK	68.2	-11.7	2.00 H	113	43.0	13.5
4	11400.00	57.6 PK	74.0	-16.4	1.57 H	180	38.1	19.5
5	11400.00	47.5 AV	54.0	-6.5	1.57 H	180	28.0	19.5

**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	*5700.00	98.2 PK			1.69 V	275	54.7	43.5
2	*5700.00	90.4 AV			1.69 V	275	46.9	43.5
3	#5725.00	55.8 PK	68.2	-12.4	1.69 V	275	42.3	13.5
4	11400.00	57.3 PK	74.0	-16.7	1.57 V	150	37.8	19.5
5	11400.00	47.2 AV	54.0	-6.8	1.57 V	150	27.7	19.5

**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.



<b>RF Mode</b>	802.11ac (VHT20)	<b>Channel</b>	CH 100 : 5500 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.5 PK	74.0	-18.5	2.00 H	107	42.1	13.4
2	5460.00	45.6 AV	54.0	-8.4	2.00 H	107	32.2	13.4
3	#5470.00	55.8 PK	68.2	-12.4	2.00 H	107	42.4	13.4
4	*5500.00	103.0 PK			2.00 H	107	59.7	43.3
5	*5500.00	95.5 AV			2.00 H	107	52.2	43.3
6	11000.00	57.8 PK	74.0	-16.2	1.59 H	306	38.8	19.0
7	11000.00	47.9 AV	54.0	-6.1	1.59 H	306	28.9	19.0

**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	5460.00	55.4 PK	74.0	-18.6	1.69 V	275	42.0	13.4
2	5460.00	45.5 AV	54.0	-8.5	1.69 V	275	32.1	13.4
3	#5470.00	55.7 PK	68.2	-12.5	1.69 V	275	42.3	13.4
4	*5500.00	99.2 PK			1.69 V	275	55.9	43.3
5	*5500.00	91.7 AV			1.69 V	275	48.4	43.3
6	11000.00	57.3 PK	74.0	-16.7	1.75 V	198	38.3	19.0
7	11000.00	47.4 AV	54.0	-6.6	1.75 V	198	28.4	19.0

**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.



<b>RF Mode</b>	802.11ac (VHT20)	<b>Channel</b>	CH 116 : 5580 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	103.1 PK			2.00 H	107	59.8	43.3
2	*5580.00	95.4 AV			2.00 H	107	52.1	43.3
3	11160.00	58.0 PK	74.0	-16.0	1.75 H	222	38.9	19.1
4	11160.00	48.1 AV	54.0	-5.9	1.75 H	222	29.0	19.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	99.3 PK			1.69 V	275	56.0	43.3
2	*5580.00	91.4 AV			1.69 V	275	48.1	43.3
3	11160.00	57.6 PK	74.0	-16.4	1.75 V	44	38.5	19.1
4	11160.00	47.4 AV	54.0	-6.6	1.75 V	44	28.3	19.1

**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.



<b>RF Mode</b>	802.11ac (VHT20)	<b>Channel</b>	CH 140 : 5700 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	101.1 PK			2.00 H	113	57.6	43.5
2	*5700.00	93.6 AV			2.00 H	113	50.1	43.5
3	#5725.00	56.0 PK	68.2	-12.2	2.00 H	113	42.5	13.5
4	11400.00	57.7 PK	74.0	-16.3	1.59 H	6	38.2	19.5
5	11400.00	47.6 AV	54.0	-6.4	1.59 H	6	28.1	19.5

**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	*5700.00	97.8 PK			1.69 V	275	54.3	43.5
2	*5700.00	89.3 AV			1.69 V	275	45.8	43.5
3	#5725.00	55.5 PK	68.2	-12.7	1.69 V	275	42.0	13.5
4	11400.00	57.3 PK	74.0	-16.7	1.05 V	200	37.8	19.5
5	11400.00	47.1 AV	54.0	-6.9	1.05 V	200	27.6	19.5

**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.



<b>RF Mode</b>	802.11ac (VHT40)	<b>Channel</b>	CH 102 : 5510 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.6 PK	74.0	-18.4	2.00 H	107	42.2	13.4
2	5460.00	45.5 AV	54.0	-8.5	2.00 H	107	32.1	13.4
3	#5470.00	56.0 PK	68.2	-12.2	2.00 H	107	42.6	13.4
4	*5510.00	101.0 PK			2.00 H	107	57.7	43.3
5	*5510.00	93.6 AV			2.00 H	107	50.3	43.3
6	#5725.00	55.7 PK	68.2	-12.5	2.00 H	107	42.2	13.5
7	11020.00	57.6 PK	74.0	-16.4	1.95 H	59	38.7	18.9
8	11020.00	47.8 AV	54.0	-6.2	1.95 H	59	28.9	18.9

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.4 PK	74.0	-18.6	1.68 V	275	42.0	13.4
2	5460.00	45.4 AV	54.0	-8.6	1.68 V	275	32.0	13.4
3	#5470.00	55.6 PK	68.2	-12.6	1.68 V	275	42.2	13.4
4	*5510.00	96.0 PK			1.68 V	275	52.7	43.3
5	*5510.00	88.2 AV			1.68 V	275	44.9	43.3
6	#5725.00	55.4 PK	68.2	-12.8	1.68 V	275	41.9	13.5
7	11020.00	57.3 PK	74.0	-16.7	1.05 V	214	38.4	18.9
8	11020.00	47.2 AV	54.0	-6.8	1.05 V	214	28.3	18.9

**Remarks:**

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





<b>RF Mode</b>	802.11ac (VHT40)	<b>Channel</b>	CH 110 : 5550 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	100.3 PK			2.00 H	107	57.1	43.2
2	*5550.00	92.7 AV			2.00 H	107	49.5	43.2
3	11100.00	57.6 PK	74.0	-16.4	1.78 H	88	38.5	19.1
4	11100.00	47.7 AV	54.0	-6.3	1.78 H	88	28.6	19.1
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	*5550.00	96.2 PK			1.69 V	275	53.0	43.2
2	*5550.00	88.4 AV			1.69 V	275	45.2	43.2
3	11100.00	57.3 PK	74.0	-16.7	1.75 V	45	38.2	19.1
4	11100.00	47.5 AV	54.0	-6.5	1.75 V	45	28.4	19.1

**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.



<b>RF Mode</b>	802.11ac (VHT40)	<b>Channel</b>	CH 134 : 5670 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.6 PK	74.0	-18.4	2.00 H	113	42.2	13.4
2	5460.00	45.7 AV	54.0	-8.3	2.00 H	113	32.3	13.4
3	#5470.00	55.9 PK	68.2	-12.3	2.00 H	113	42.5	13.4
4	*5670.00	98.2 PK			2.00 H	113	54.8	43.4
5	*5670.00	90.4 AV			2.00 H	113	47.0	43.4
6	#5725.00	55.8 PK	68.2	-12.4	2.00 H	113	42.3	13.5
7	11340.00	58.0 PK	74.0	-16.0	1.05 H	200	38.8	19.2
8	11340.00	48.1 AV	54.0	-5.9	1.05 H	200	28.9	19.2
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	5460.00	55.4 PK	74.0	-18.6	2.00 V	275	42.0	13.4
2	5460.00	45.6 AV	54.0	-8.4	2.00 V	275	32.2	13.4
3	#5470.00	55.6 PK	68.2	-12.6	2.00 V	275	42.2	13.4
4	*5670.00	95.8 PK			2.00 V	275	52.4	43.4
5	*5670.00	87.7 AV			2.00 V	275	44.3	43.4
6	#5725.00	55.5 PK	68.2	-12.7	2.00 V	275	42.0	13.5
7	11340.00	57.7 PK	74.0	-16.3	1.05 V	200	38.5	19.2
8	11340.00	47.8 AV	54.0	-6.2	1.05 V	200	28.6	19.2

**Remarks:**

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



<b>RF Mode</b>	802.11ac (VHT80)	<b>Channel</b>	CH 106 : 5530 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.6 PK	74.0	-18.4	2.00 H	113	42.2	13.4
2	5460.00	45.7 AV	54.0	-8.3	2.00 H	113	32.3	13.4
3	#5470.00	56.0 PK	68.2	-12.2	2.00 H	113	42.6	13.4
4	*5530.00	98.0 PK			2.00 H	113	54.8	43.2
5	*5530.00	90.3 AV			2.00 H	113	47.1	43.2
6	#5725.00	55.7 PK	68.2	-12.5	2.00 H	113	42.2	13.5
7	11060.00	58.2 PK	74.0	-15.8	1.59 H	64	39.2	19.0
8	11060.00	48.3 AV	54.0	-5.7	1.59 H	64	29.3	19.0

**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	5460.00	55.5 PK	74.0	-18.5	2.00 V	275	42.1	13.4
2	5460.00	45.6 AV	54.0	-8.4	2.00 V	275	32.2	13.4
3	#5470.00	55.7 PK	68.2	-12.5	2.00 V	275	42.3	13.4
4	*5530.00	94.2 PK			2.00 V	275	51.0	43.2
5	*5530.00	86.6 AV			2.00 V	275	43.4	43.2
6	#5725.00	55.5 PK	68.2	-12.7	2.00 V	275	42.0	13.5
7	11060.00	57.6 PK	74.0	-16.4	1.05 V	275	38.6	19.0
8	11060.00	47.5 AV	54.0	-6.5	1.05 V	275	28.5	19.0

**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.



<b>RF Mode</b>	802.11ac (VHT80)	<b>Channel</b>	CH 122 : 5610 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.1 PK	74.0	-17.9	2.00 H	113	42.7	13.4
2	5460.00	45.9 AV	54.0	-8.1	2.00 H	113	32.5	13.4
3	#5470.00	56.3 PK	68.2	-11.9	2.00 H	113	42.9	13.4
4	*5610.00	96.3 PK			2.00 H	113	53.0	43.3
5	*5610.00	88.2 AV			2.00 H	113	44.9	43.3
6	#5725.00	55.8 PK	68.2	-12.4	2.00 H	113	42.3	13.5
7	11220.00	58.3 PK	74.0	-15.7	1.57 H	360	39.2	19.1
8	11220.00	48.4 AV	54.0	-5.6	1.57 H	360	29.3	19.1
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	5460.00	55.6 PK	74.0	-18.4	2.00 V	275	42.2	13.4
2	5460.00	45.7 AV	54.0	-8.3	2.00 V	275	32.3	13.4
3	#5470.00	55.8 PK	68.2	-12.4	2.00 V	275	42.4	13.4
4	*5610.00	93.1 PK			2.00 V	275	49.8	43.3
5	*5610.00	85.5 AV			2.00 V	275	42.2	43.3
6	#5725.00	55.6 PK	68.2	-12.6	2.00 V	275	42.1	13.5
7	11220.00	57.7 PK	74.0	-16.3	1.59 V	306	38.6	19.1
8	11220.00	47.6 AV	54.0	-6.4	1.59 V	306	28.5	19.1

**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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 149 : 5745 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5644.44	55.8 PK	68.2	-12.4	2.00 H	113	42.5	13.3
2	*5745.00	103.1 PK			2.00 H	113	59.5	43.6
3	*5745.00	95.3 AV			2.00 H	113	51.7	43.6
4	#5955.16	56.6 PK	68.2	-11.6	2.00 H	113	42.3	14.3
5	11490.00	58.2 PK	74.0	-15.8	1.59 H	344	38.4	19.8
6	11490.00	48.1 AV	54.0	-5.9	1.59 H	344	28.3	19.8

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5636.04	55.7 PK	68.2	-12.5	2.00 V	275	42.4	13.3
2	*5745.00	101.0 PK			2.00 V	275	57.4	43.6
3	*5745.00	93.4 AV			2.00 V	275	49.8	43.6
4	#5941.94	56.5 PK	68.2	-11.7	2.00 V	275	42.2	14.3
5	11490.00	57.6 PK	74.0	-16.4	1.05 V	274	37.8	19.8
6	11490.00	47.8 AV	54.0	-6.2	1.05 V	274	28.0	19.8

**Remarks:**

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



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 157 : 5785 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBUV)	Correction Factor (dB/m)
1	#5608.81	56.0 PK	68.2	-12.2	2.00 H	113	42.6	13.4
2	*5785.00	103.0 PK			2.00 H	113	59.4	43.6
3	*5785.00	95.3 AV			2.00 H	113	51.7	43.6
4	#5988.39	56.4 PK	68.2	-11.8	2.00 H	113	42.1	14.3
5	11570.00	58.2 PK	74.0	-15.8	1.95 H	3	38.2	20.0
6	11570.00	48.3 AV	54.0	-5.7	1.95 H	3	28.3	20.0

**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	#5610.41	56.3 PK	68.2	-11.9	2.00 V	275	42.9	13.4
2	*5785.00	101.6 PK			2.00 V	275	58.0	43.6
3	*5785.00	93.6 AV			2.00 V	275	50.0	43.6
4	#5959.16	56.0 PK	68.2	-12.2	2.00 V	275	41.7	14.3
5	11570.00	57.8 PK	74.0	-16.2	1.59 V	6	37.8	20.0
6	11570.00	47.6 AV	54.0	-6.4	1.59 V	6	27.6	20.0

**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.



<b>RF Mode</b>	802.11a	<b>Channel</b>	CH 165 : 5825 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5620.42	56.4 PK	68.2	-11.8	2.00 H	115	43.0	13.4
2	*5825.00	102.2 PK			2.00 H	115	58.5	43.7
3	*5825.00	94.4 AV			2.00 H	115	50.7	43.7
4	#5943.54	56.8 PK	68.2	-11.4	2.00 H	115	42.5	14.3
5	11650.00	58.3 PK	74.0	-15.7	1.57 H	151	38.4	19.9
6	11650.00	48.2 AV	54.0	-5.8	1.57 H	151	28.3	19.9

**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	#5628.83	55.1 PK	68.2	-13.1	2.00 V	275	41.8	13.3
2	*5825.00	100.0 PK			2.00 V	275	56.3	43.7
3	*5825.00	92.3 AV			2.00 V	275	48.6	43.7
4	#5952.75	56.4 PK	68.2	-11.8	2.00 V	275	42.1	14.3
5	11650.00	58.0 PK	74.0	-16.0	1.05 V	211	38.1	19.9
6	11650.00	48.1 AV	54.0	-5.9	1.05 V	211	28.2	19.9

**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.



<b>RF Mode</b>	802.11ac (VHT20)	<b>Channel</b>	CH 149 : 5745 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5621.22	55.4 PK	68.2	-12.8	2.00 H	115	42.0	13.4
2	*5745.00	102.8 PK			2.00 H	115	59.2	43.6
3	*5745.00	94.7 AV			2.00 H	115	51.1	43.6
4	#5988.39	57.3 PK	68.2	-10.9	2.00 H	115	43.0	14.3
5	11490.00	58.3 PK	74.0	-15.7	1.56 H	299	38.5	19.8
6	11490.00	48.5 AV	54.0	-5.5	1.56 H	299	28.7	19.8

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5634.83	55.4 PK	68.2	-12.8	2.00 V	275	42.1	13.3
2	*5745.00	100.7 PK			2.00 V	275	57.1	43.6
3	*5745.00	92.6 AV			2.00 V	275	49.0	43.6
4	#5974.77	56.2 PK	68.2	-12.0	2.00 V	275	41.9	14.3
5	11490.00	58.1 PK	74.0	-15.9	1.95 V	66	38.3	19.8
6	11490.00	47.9 AV	54.0	-6.1	1.95 V	66	28.1	19.8

**Remarks:**

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





<b>RF Mode</b>	802.11ac (VHT20)	<b>Channel</b>	CH 157 : 5785 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5623.22	55.5 PK	68.2	-12.7	2.00 H	115	42.2	13.3
2	*5785.00	102.0 PK			2.00 H	115	58.4	43.6
3	*5785.00	94.1 AV			2.00 H	115	50.5	43.6
4	#5987.99	56.3 PK	68.2	-11.9	2.00 H	115	42.0	14.3
5	11570.00	58.2 PK	74.0	-15.8	1.59 H	326	38.2	20.0
6	11570.00	48.3 AV	54.0	-5.7	1.59 H	326	28.3	20.0
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	#5614.01	55.7 PK	68.2	-12.5	2.00 V	276	42.3	13.4
2	*5785.00	100.2 PK			2.00 V	276	56.6	43.6
3	*5785.00	92.3 AV			2.00 V	276	48.7	43.6
4	#5964.76	56.0 PK	68.2	-12.2	2.00 V	276	41.7	14.3
5	11570.00	57.9 PK	74.0	-16.1	1.58 V	255	37.9	20.0
6	11570.00	47.9 AV	54.0	-6.1	1.58 V	255	27.9	20.0

**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.



<b>RF Mode</b>	802.11ac (VHT20)	<b>Channel</b>	CH 165 : 5825 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5642.44	55.6 PK	68.2	-12.6	2.00 H	115	42.4	13.2
2	*5825.00	100.8 PK			2.00 H	115	57.1	43.7
3	*5825.00	92.7 AV			2.00 H	115	49.0	43.7
4	#5969.97	56.3 PK	68.2	-11.9	2.00 H	115	42.0	14.3
5	11650.00	58.4 PK	74.0	-15.6	1.95 H	5	38.5	19.9
6	11650.00	48.3 AV	54.0	-5.7	1.95 H	5	28.4	19.9

**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	#5640.44	55.9 PK	68.2	-12.3	2.00 V	275	42.6	13.3
2	*5825.00	98.8 PK			2.00 V	275	55.1	43.7
3	*5825.00	90.3 AV			2.00 V	275	46.6	43.7
4	#5981.58	56.4 PK	68.2	-11.8	2.00 V	275	42.1	14.3
5	11650.00	57.9 PK	74.0	-16.1	1.45 V	274	38.0	19.9
6	11650.00	48.0 AV	54.0	-6.0	1.45 V	274	28.1	19.9

**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.



<b>RF Mode</b>	802.11ac (VHT40)	<b>Channel</b>	CH 151 : 5755 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5621.22	56.2 PK	68.2	-12.0	2.00 H	115	42.8	13.4
2	*5755.00	99.1 PK			2.00 H	115	55.5	43.6
3	*5755.00	91.6 AV			2.00 H	115	48.0	43.6
4	#5973.97	56.9 PK	68.2	-11.3	2.00 H	115	42.6	14.3
5	11510.00	58.2 PK	74.0	-15.8	1.75 H	189	38.3	19.9
6	11510.00	48.4 AV	54.0	-5.6	1.75 H	189	28.5	19.9

**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	#5616.02	56.5 PK	68.2	-11.7	2.00 V	275	43.1	13.4
2	*5755.00	97.2 PK			2.00 V	275	53.6	43.6
3	*5755.00	89.4 AV			2.00 V	275	45.8	43.6
4	#5979.98	55.9 PK	68.2	-12.3	2.00 V	275	41.6	14.3
5	11510.00	58.1 PK	74.0	-15.9	1.75 V	54	38.2	19.9
6	11510.00	47.7 AV	54.0	-6.3	1.75 V	54	27.8	19.9

**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.



<b>RF Mode</b>	802.11ac (VHT40)	<b>Channel</b>	CH 159 : 5795 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5644.44	55.9 PK	68.2	-12.3	2.00 H	115	42.6	13.3
2	*5795.00	98.0 PK			2.00 H	115	54.4	43.6
3	*5795.00	90.2 AV			2.00 H	115	46.6	43.6
4	#5981.18	56.6 PK	68.2	-11.6	2.00 H	115	42.3	14.3
5	11590.00	58.3 PK	74.0	-15.7	1.75 H	289	38.3	20.0
6	11590.00	48.4 AV	54.0	-5.6	1.75 H	289	28.4	20.0

**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	#5638.04	55.8 PK	68.2	-12.4	2.00 V	275	42.5	13.3
2	*5795.00	97.0 PK			2.00 V	275	53.4	43.6
3	*5795.00	89.1 AV			2.00 V	275	45.5	43.6
4	#5962.36	56.3 PK	68.2	-11.9	2.00 V	275	42.0	14.3
5	11590.00	57.8 PK	74.0	-16.2	1.95 V	334	37.8	20.0
6	11590.00	47.9 AV	54.0	-6.1	1.95 V	334	27.9	20.0

**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.



<b>RF Mode</b>	802.11ac (VHT80)	<b>Channel</b>	CH 155 : 5775 MHz
<b>Frequency Range</b>	1 GHz ~ 40 GHz	<b>Detector Function &amp; Bandwidth</b>	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
<b>Input Power</b>	120 Vac, 60 Hz	<b>Environmental Conditions</b>	25°C, 60% RH
<b>Tested By</b>	Charles Hsiao		

**Antenna Polarity & Test Distance : Horizontal at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5602.40	55.9 PK	68.2	-12.3	2.00 H	115	42.5	13.4
2	*5775.00	97.1 PK			2.00 H	115	53.5	43.6
3	*5775.00	89.6 AV			2.00 H	115	46.0	43.6
4	#5983.98	56.2 PK	68.2	-12.0	2.00 H	115	41.9	14.3
5	11550.00	58.3 PK	74.0	-15.7	1.85 H	119	38.4	19.9
6	11550.00	48.6 AV	54.0	-5.4	1.85 H	119	28.7	19.9

**Antenna Polarity & Test Distance : Vertical at 3 m**

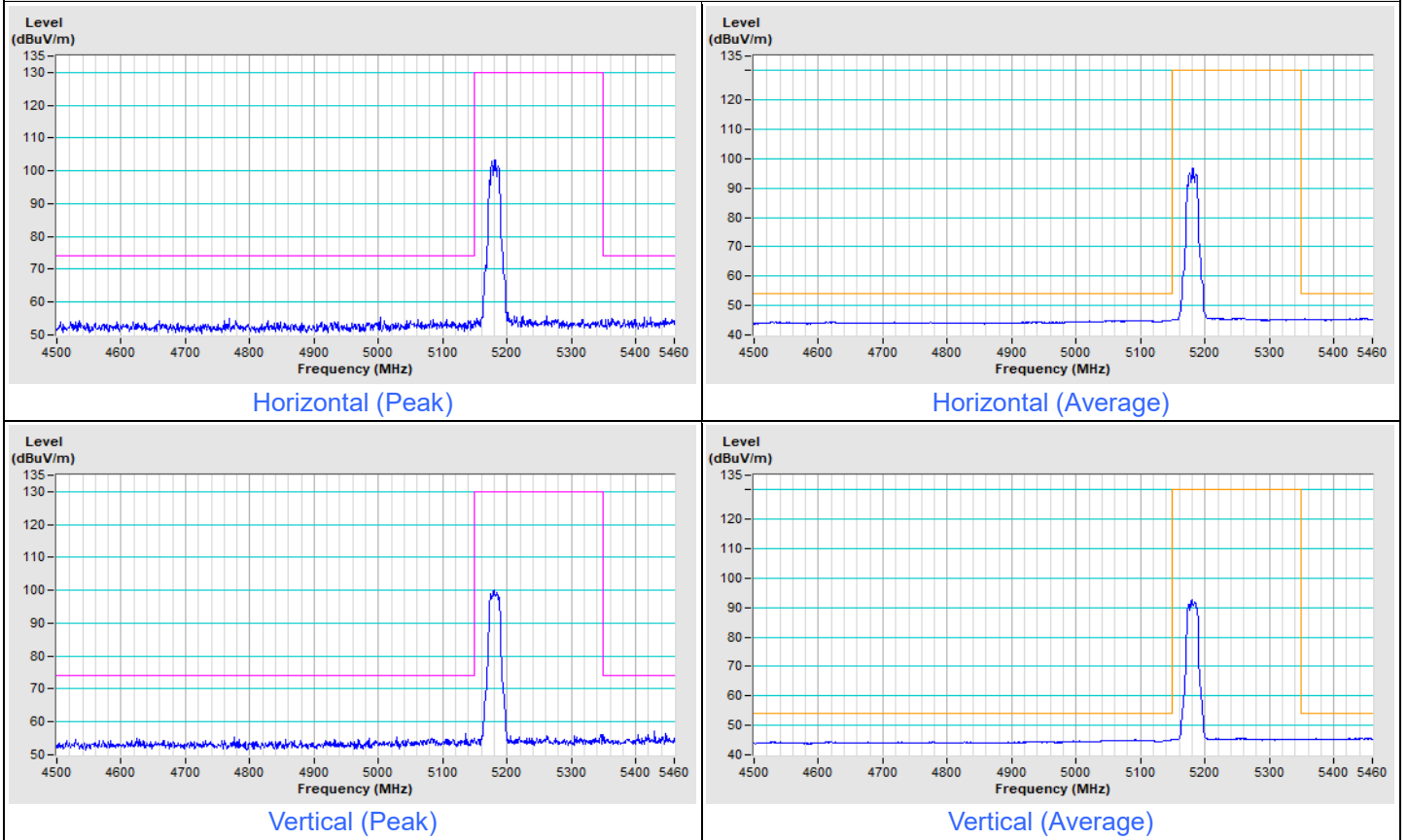
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5610.81	55.6 PK	68.2	-12.6	2.00 V	275	42.2	13.4
2	*5775.00	95.2 PK			2.00 V	275	51.6	43.6
3	*5775.00	87.3 AV			2.00 V	275	43.7	43.6
4	#5989.59	56.3 PK	68.2	-11.9	2.00 V	275	42.0	14.3
5	11550.00	57.9 PK	74.0	-16.1	1.75 V	154	38.0	19.9
6	11550.00	48.1 AV	54.0	-5.9	1.75 V	154	28.2	19.9

**Remarks:**

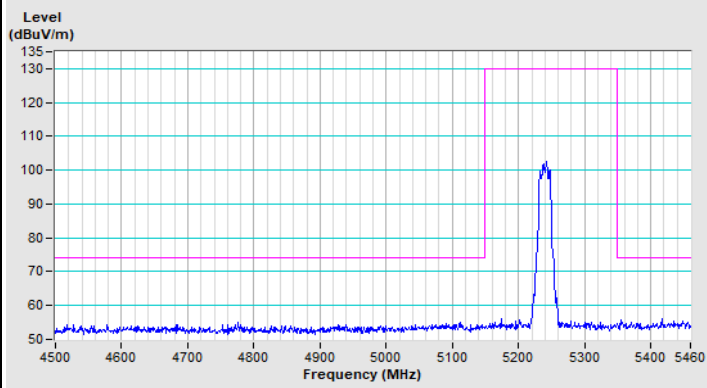
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " \* " : Fundamental frequency,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

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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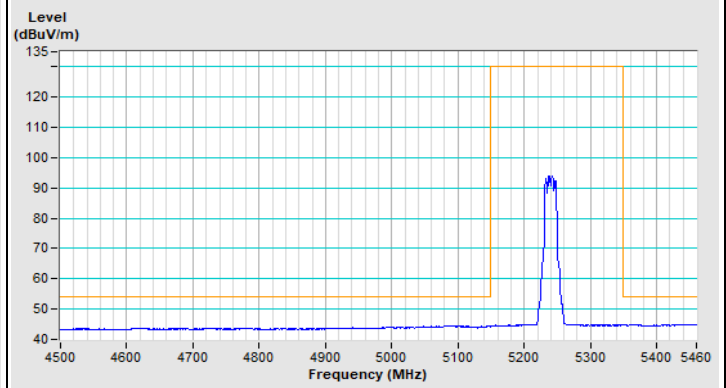
### 802.11a Channel 36



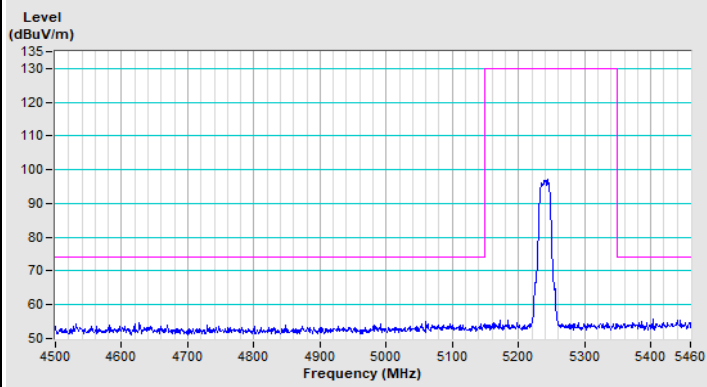
### 802.11a Channel 48



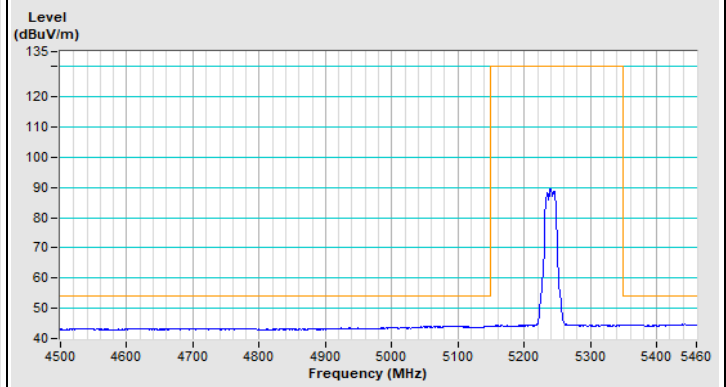
Horizontal (Peak)



Horizontal (Average)



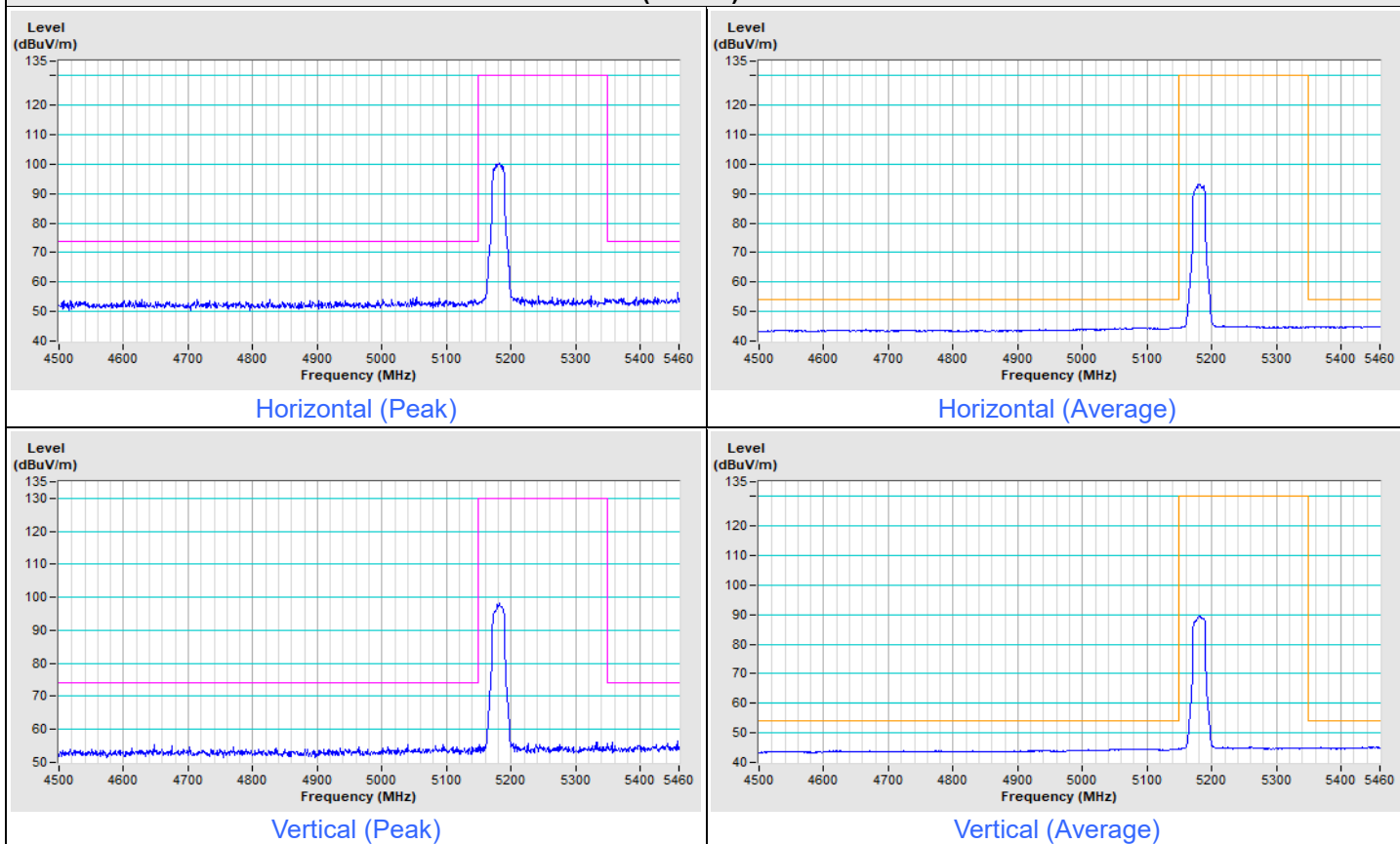
Vertical (Peak)



Vertical (Average)

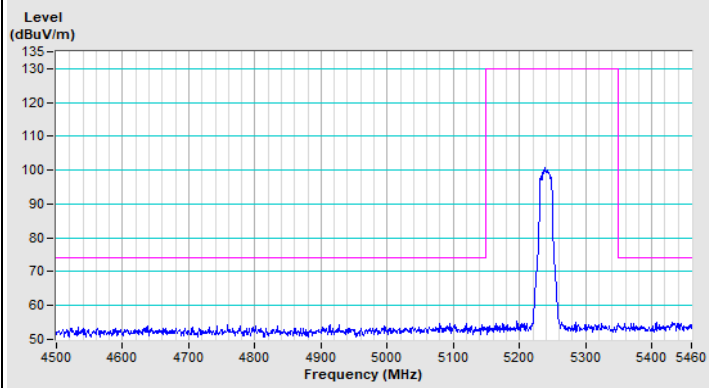
Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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### 802.11ac (VHT20) Channel 36

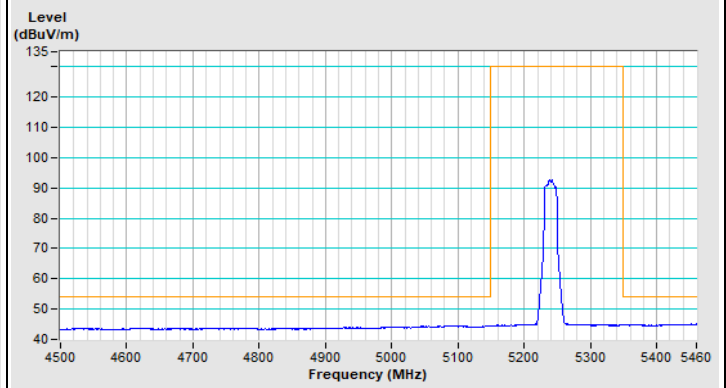




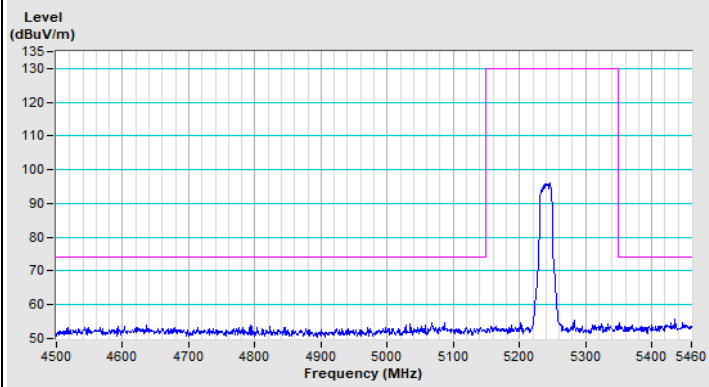
### 802.11ac (VHT20) Channel 48



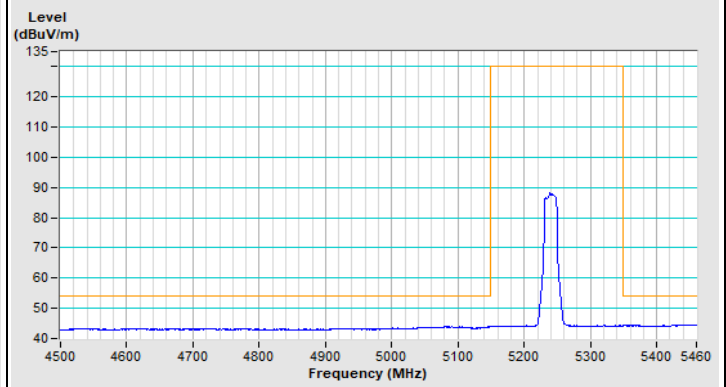
Horizontal (Peak)



Horizontal (Average)



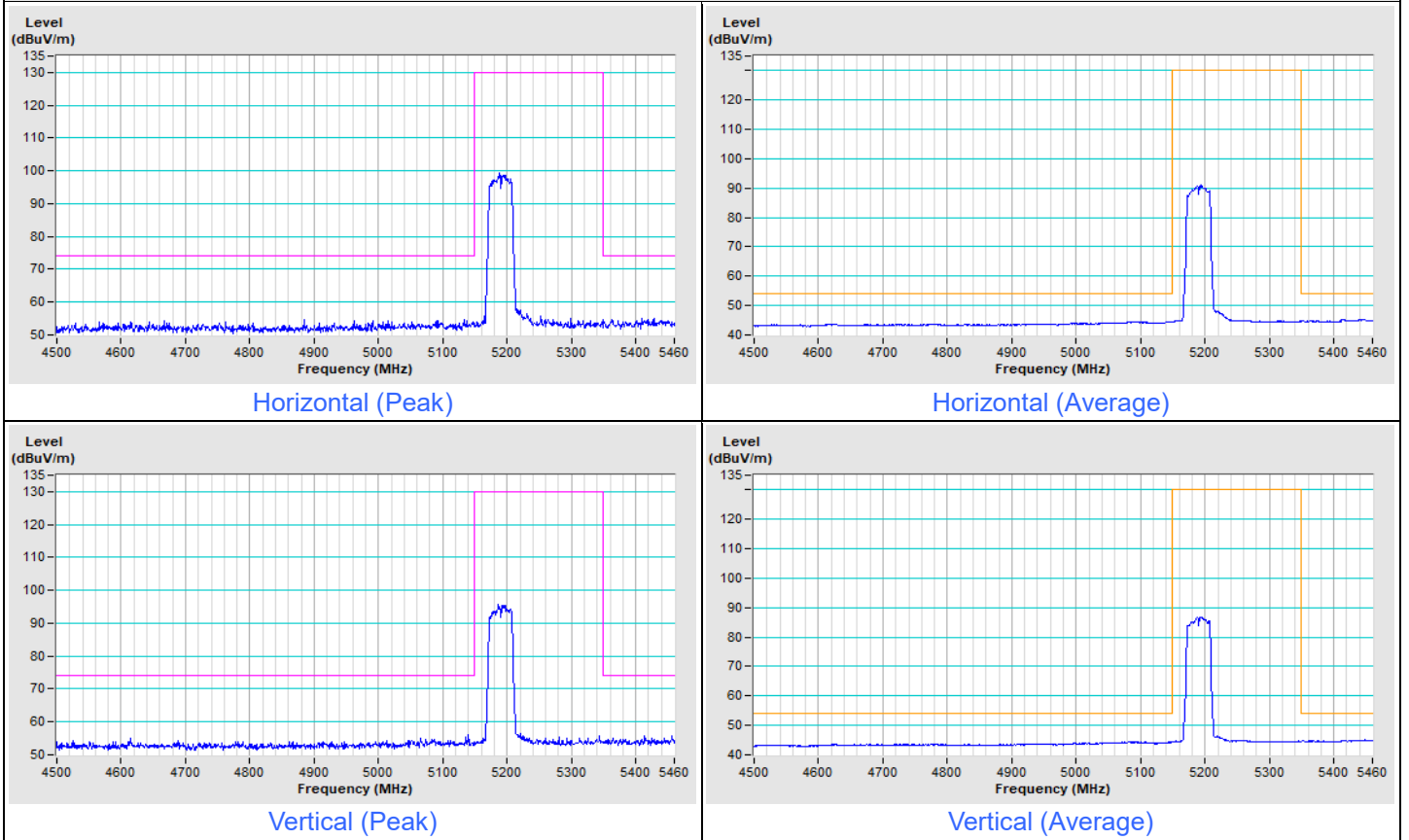
Vertical (Peak)



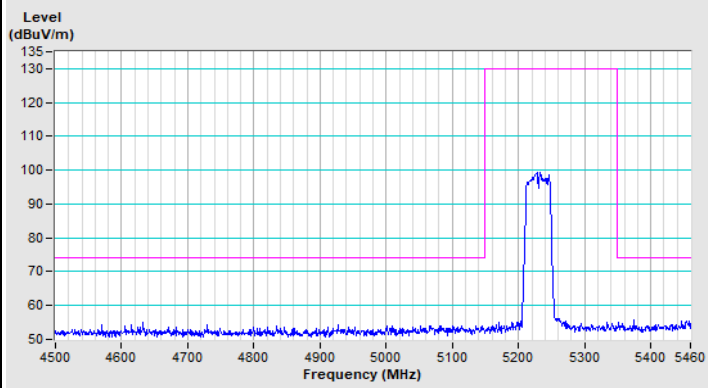
Vertical (Average)

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
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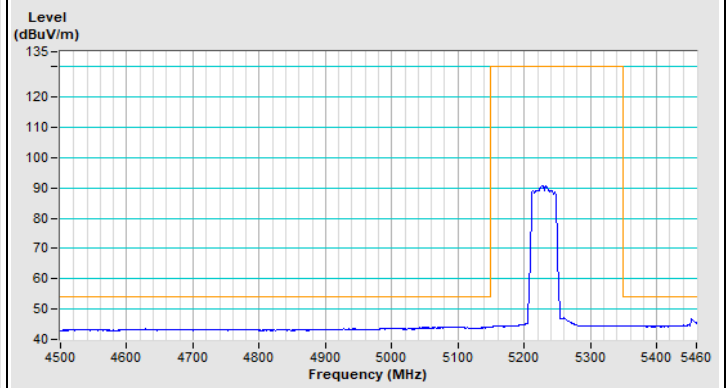
**802.11ac (VHT40) Channel 38**



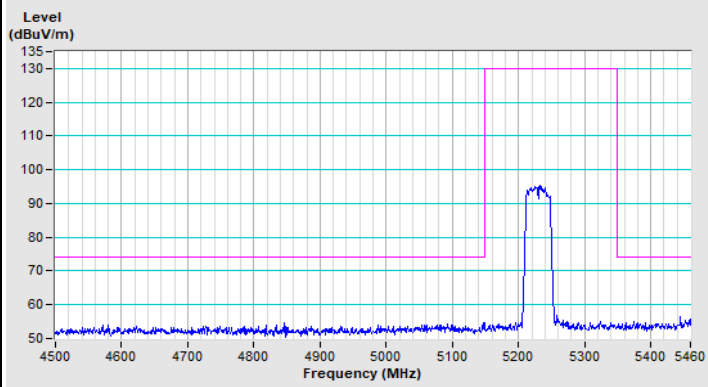
### 802.11ac (VHT40) Channel 46



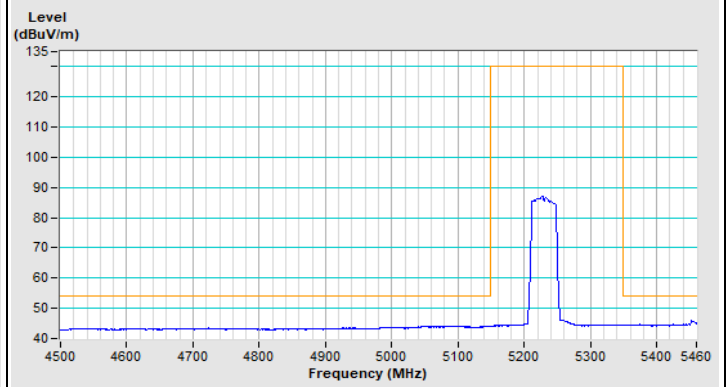
Horizontal (Peak)



Horizontal (Average)



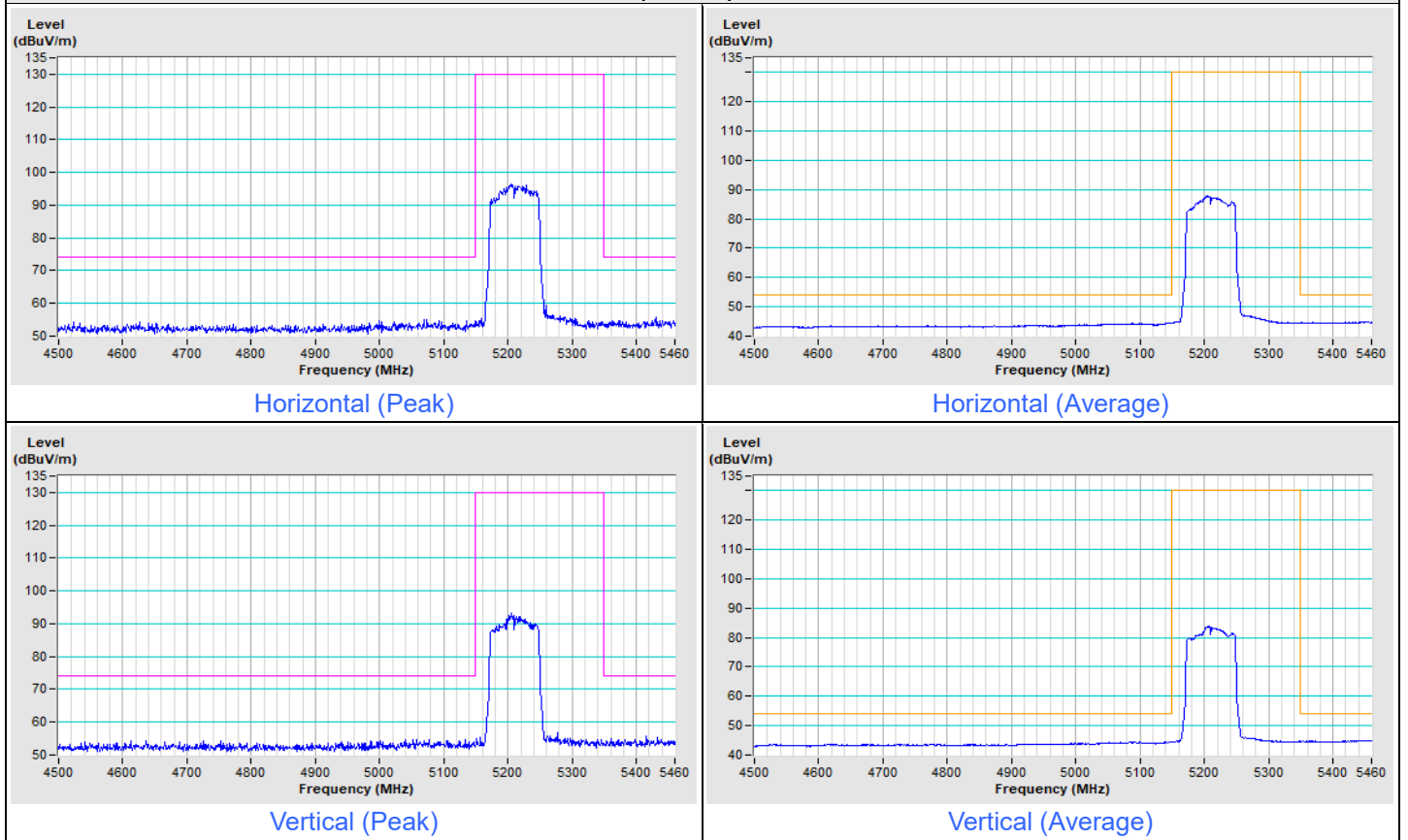
Vertical (Peak)



Vertical (Average)

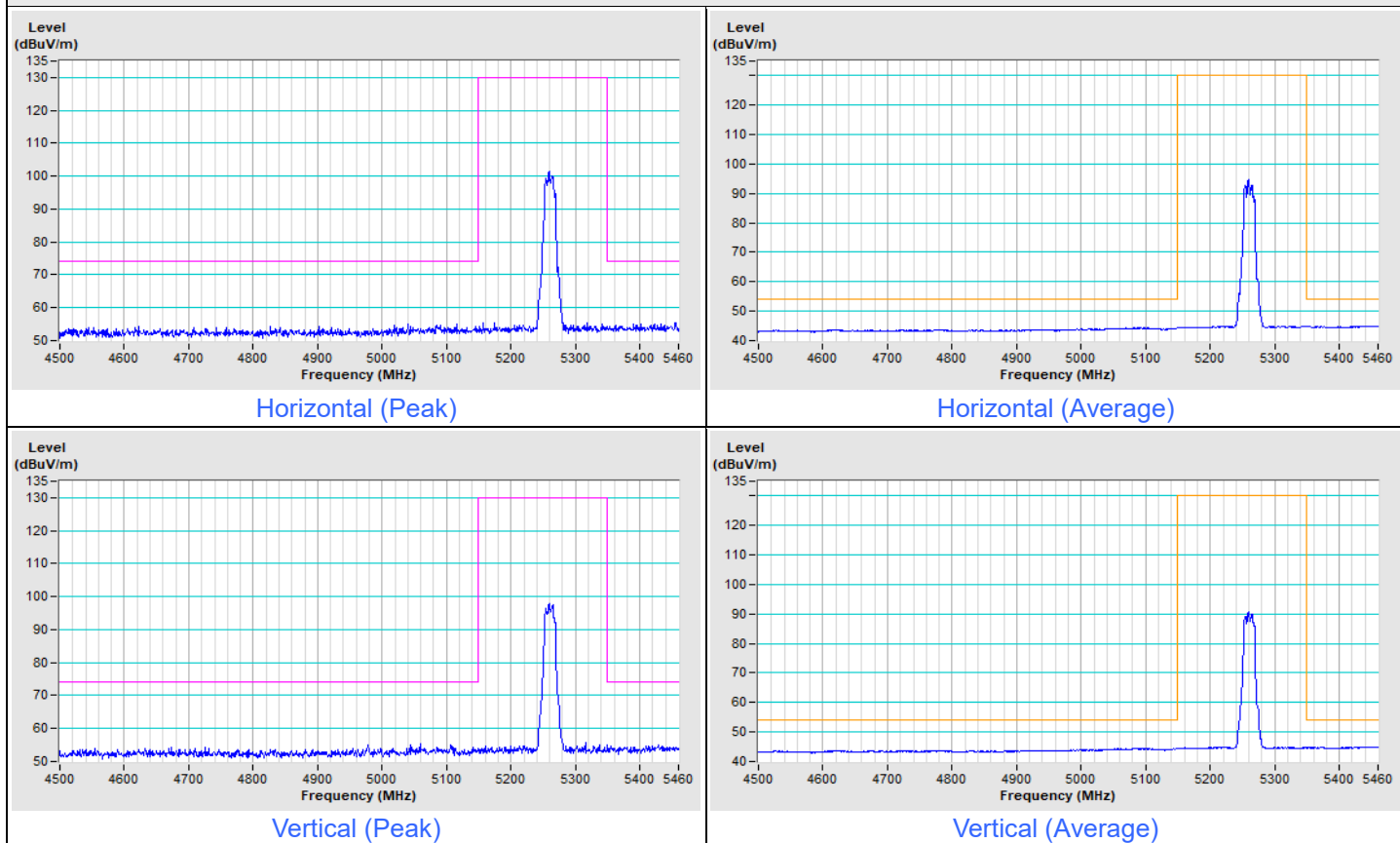
Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
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**802.11ac (VHT80) Channel 42**

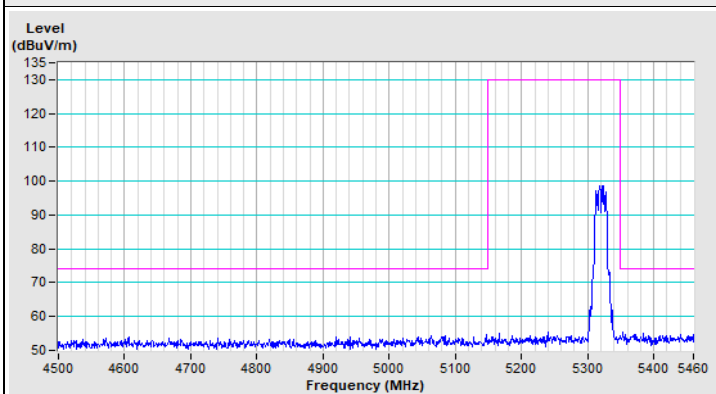


Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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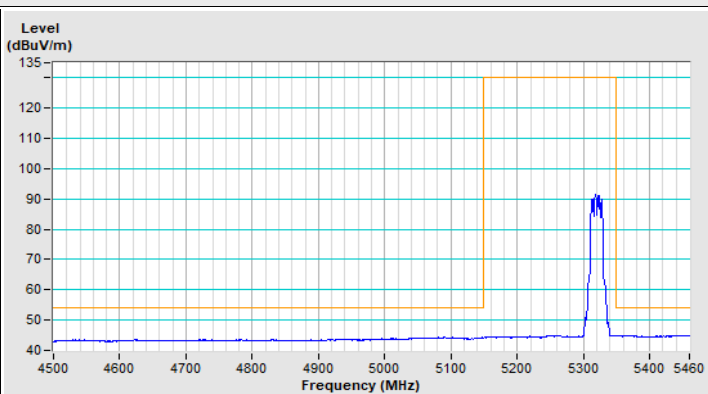
### 802.11a Channel 52



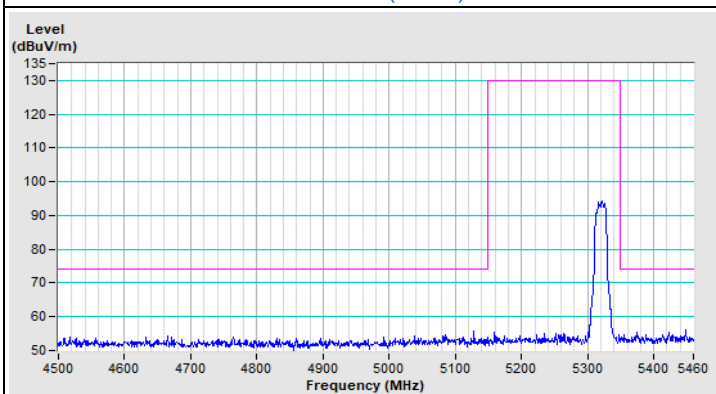
### 802.11a Channel 64



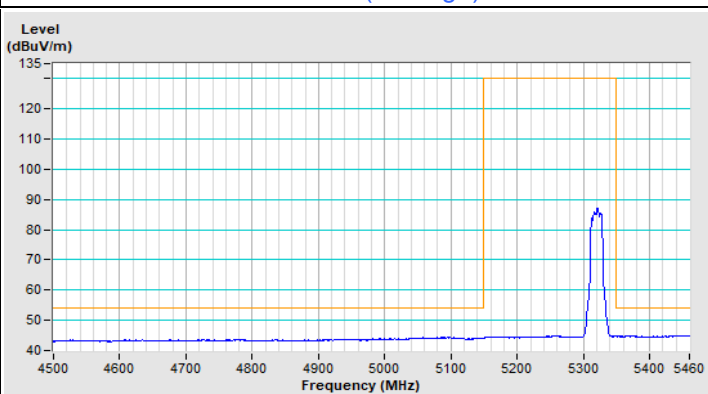
Horizontal (Peak)



Horizontal (Average)



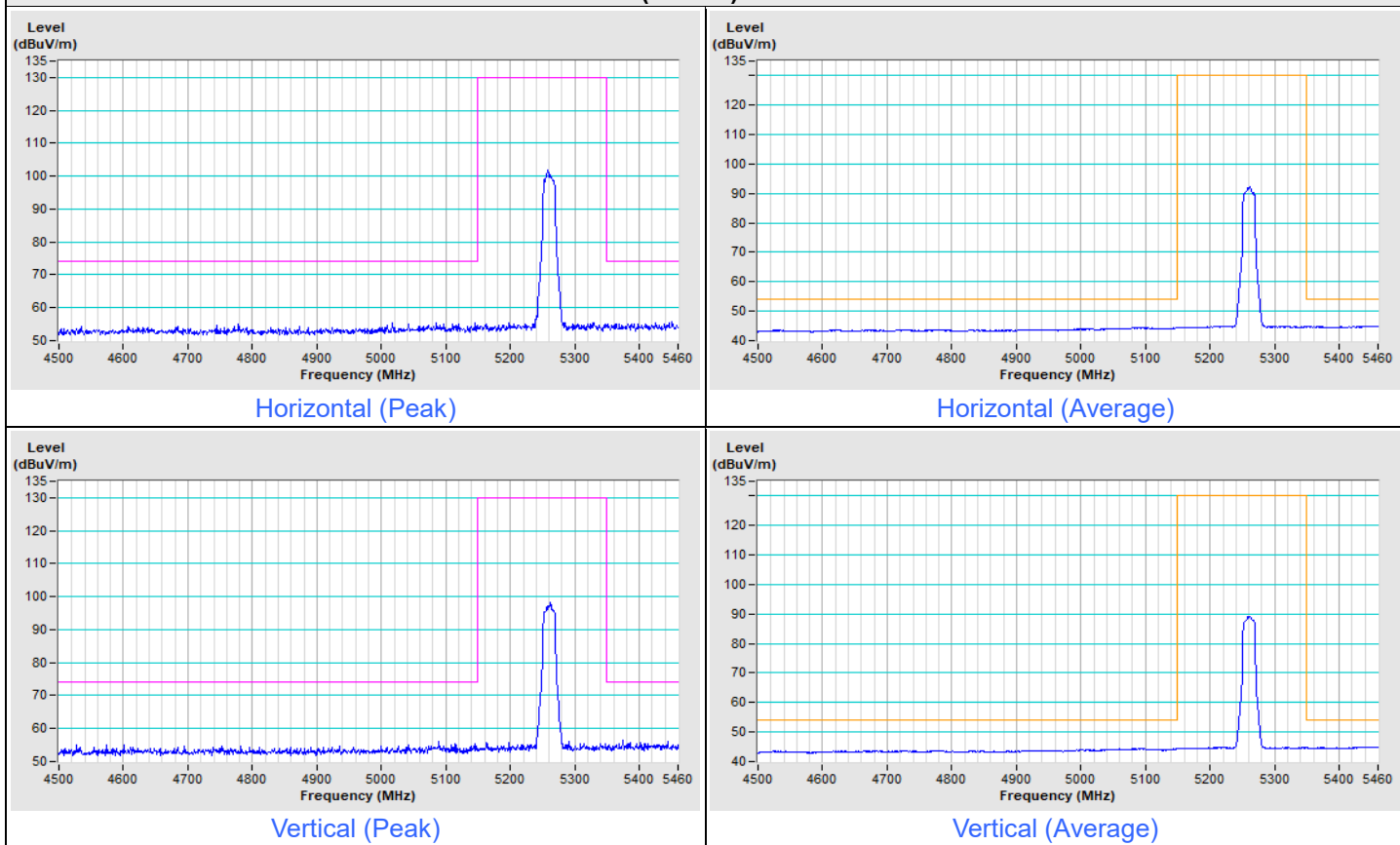
Vertical (Peak)



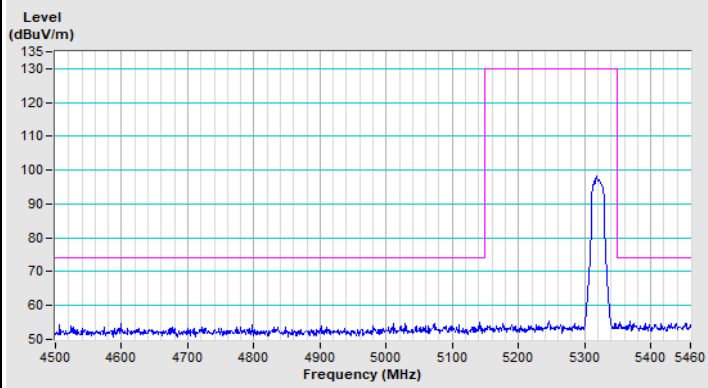
Vertical (Average)

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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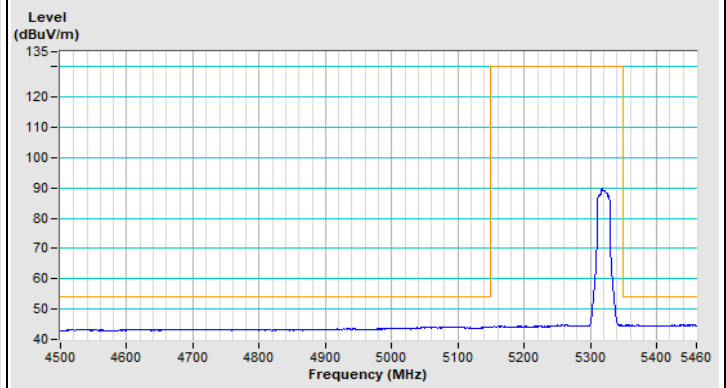
### 802.11ac (VHT20) Channel 52



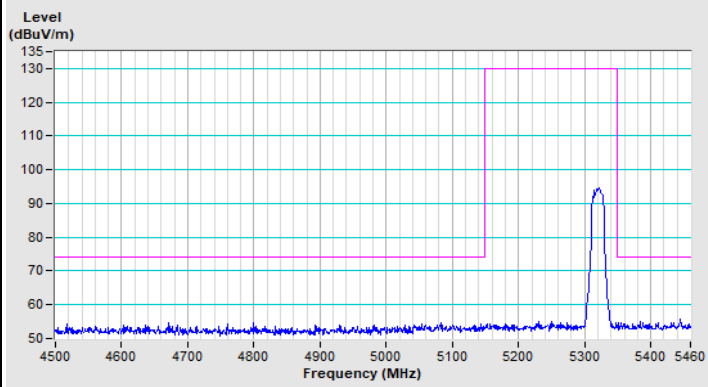
### 802.11ac (VHT20) Channel 64



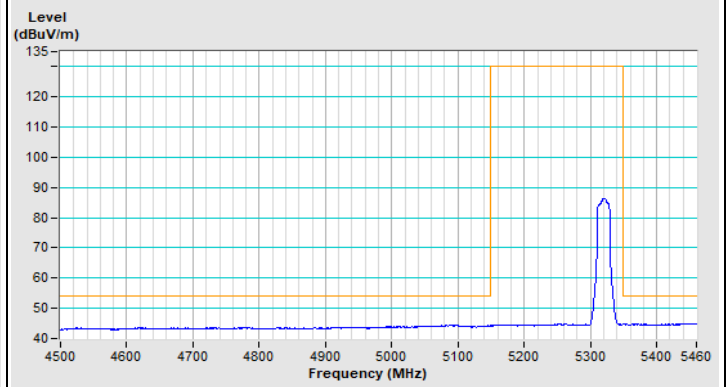
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)

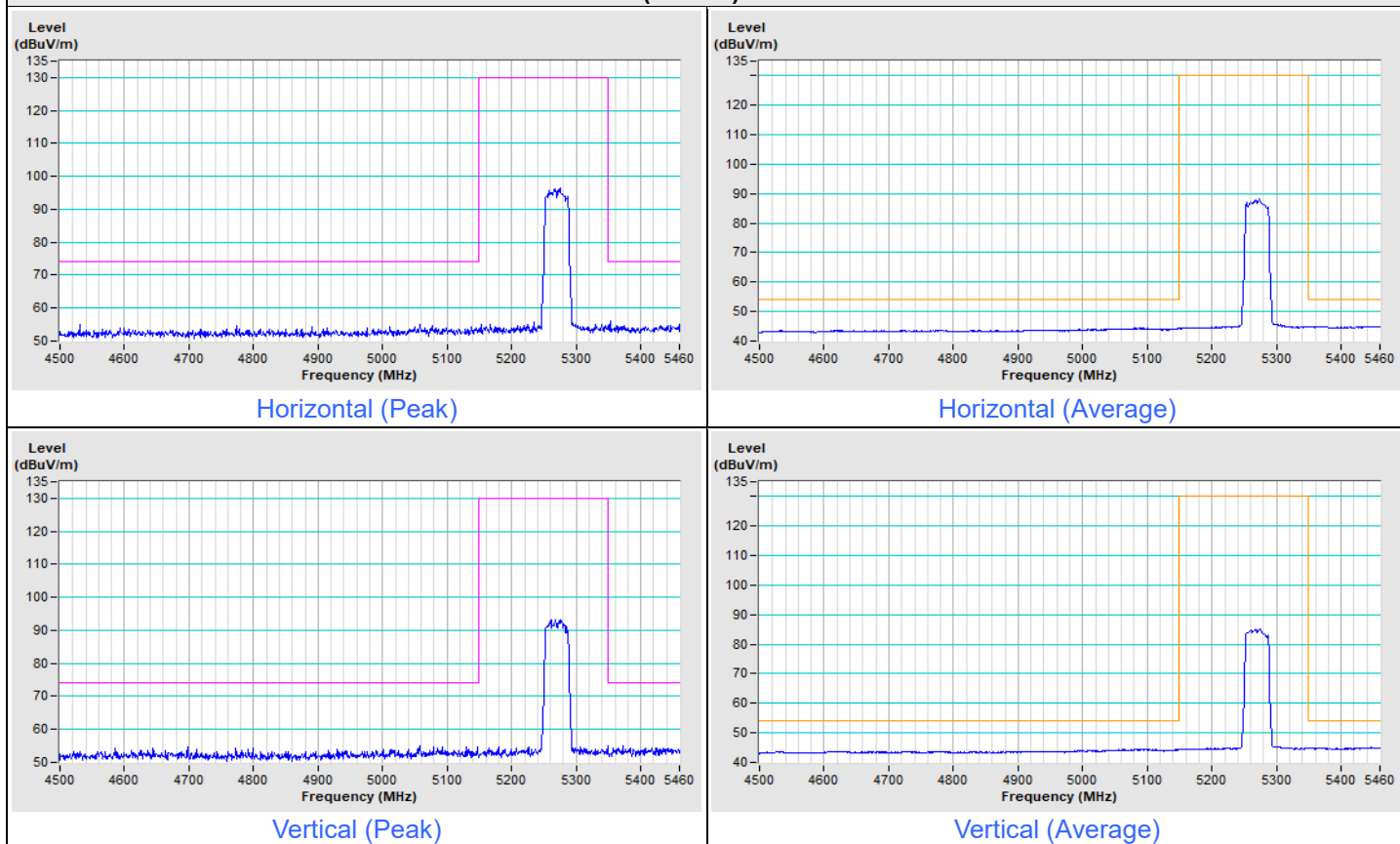


Vertical (Average)

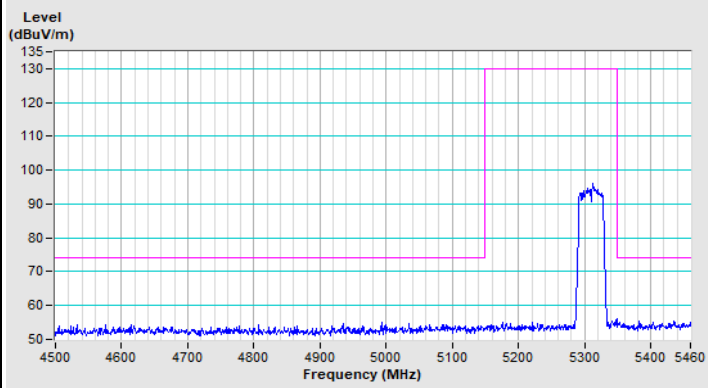


Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
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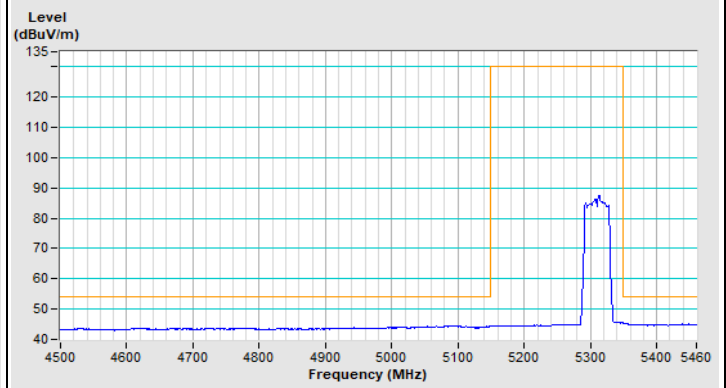
### 802.11ac (VHT40) Channel 54



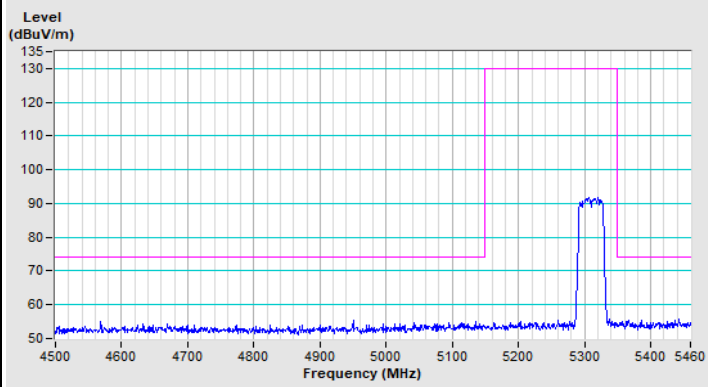
### 802.11ac (VHT40) Channel 62



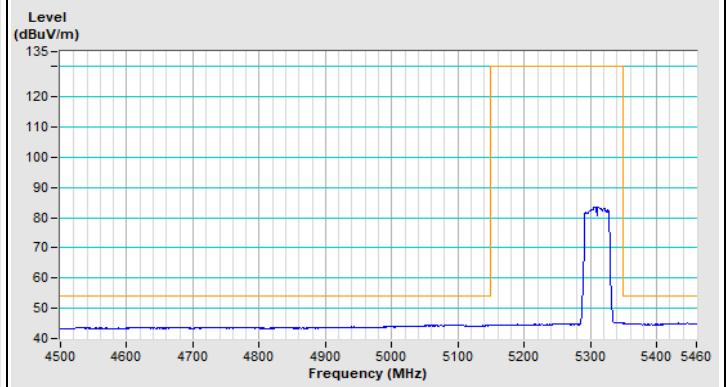
Horizontal (Peak)



Horizontal (Average)



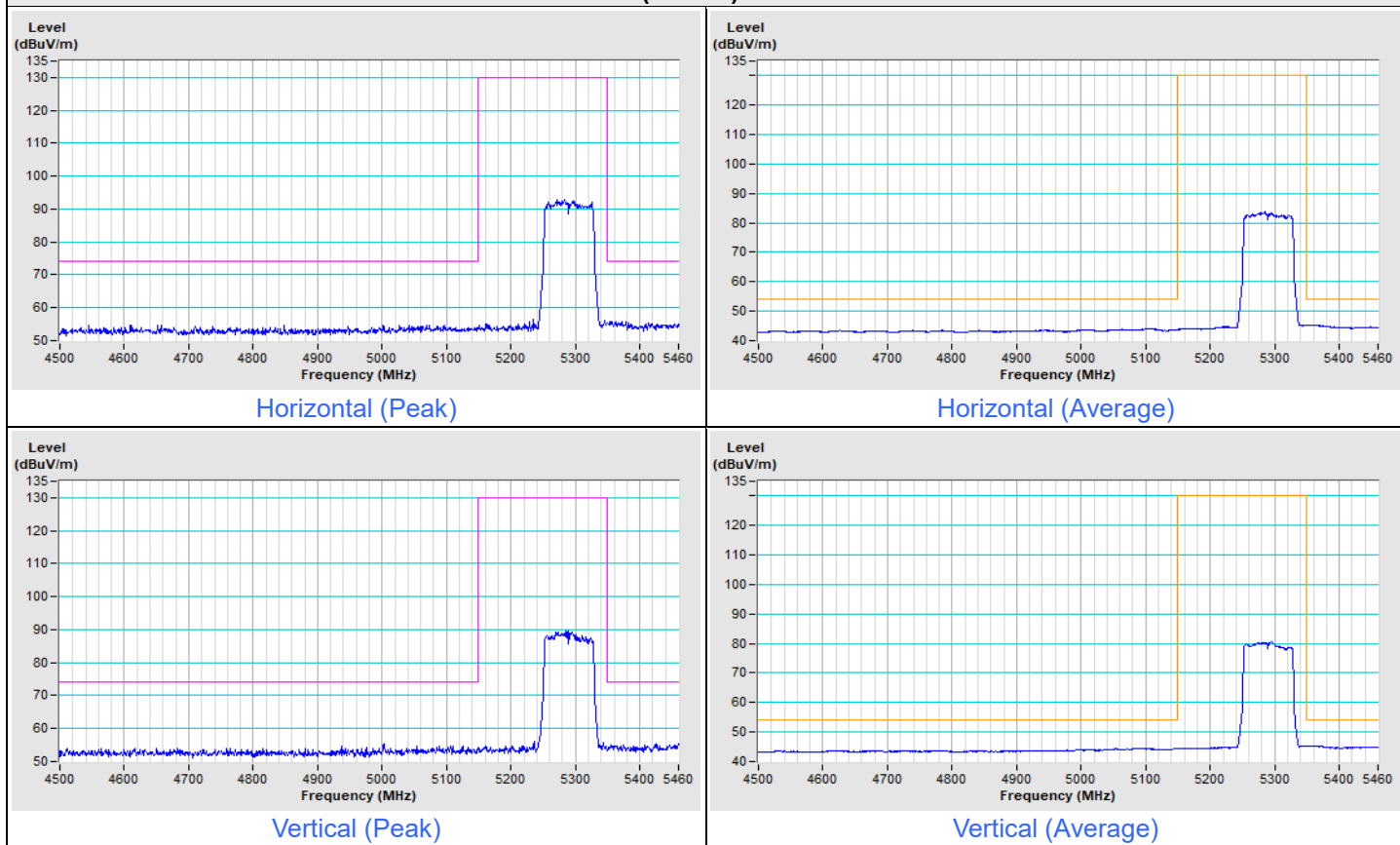
Vertical (Peak)



Vertical (Average)

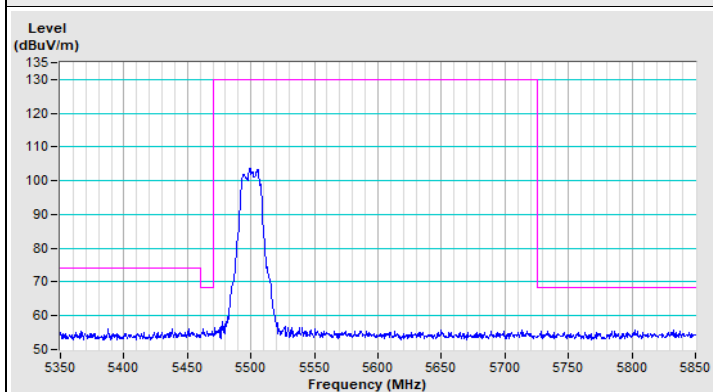
Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
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**802.11ac (VHT80) Channel 58**

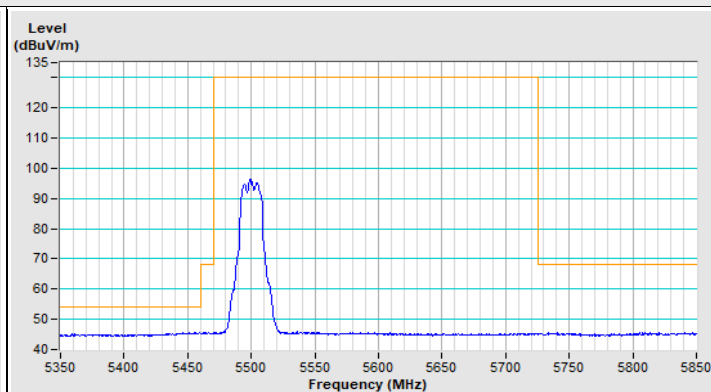


Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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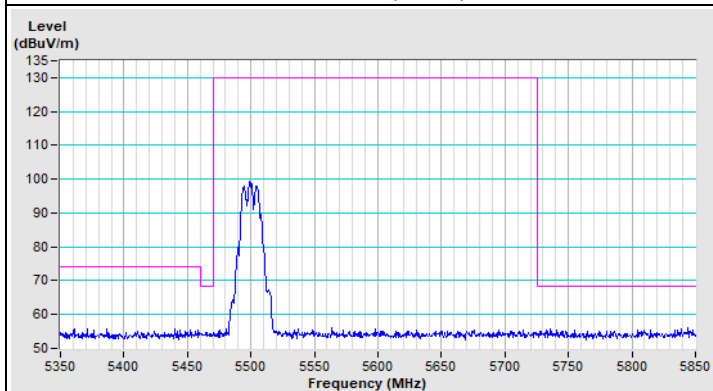
### 802.11a Channel 100



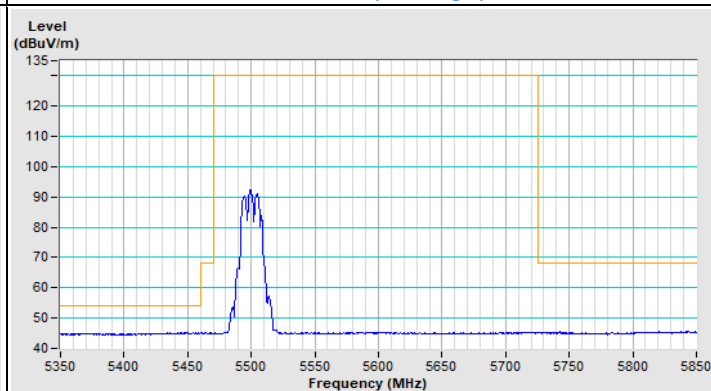
Horizontal (Peak)



Horizontal (Average)

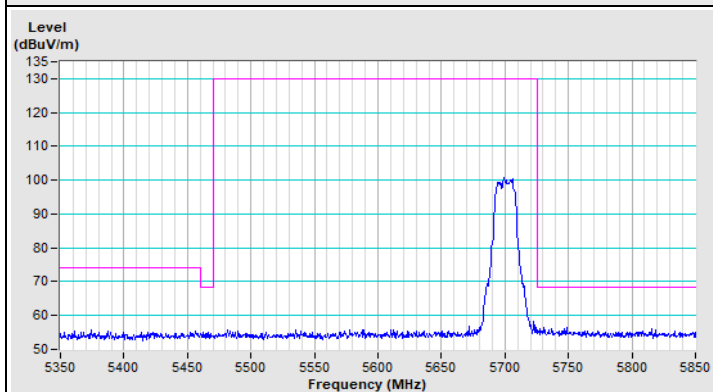


Vertical (Peak)

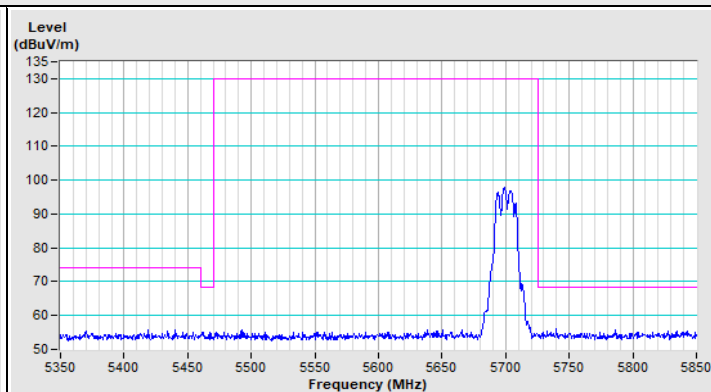


Vertical (Average)

### 802.11a Channel 140



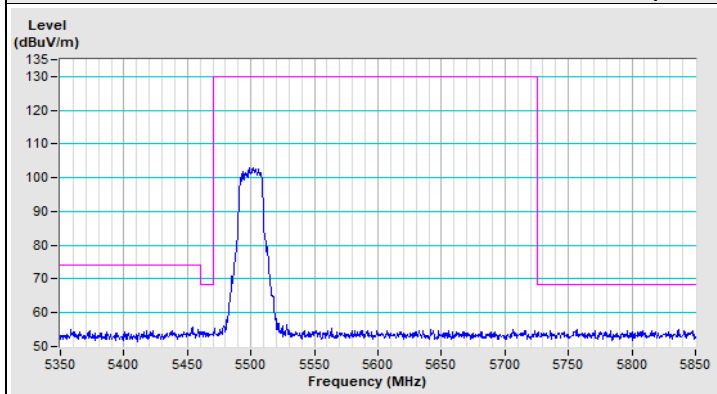
Horizontal (Peak)



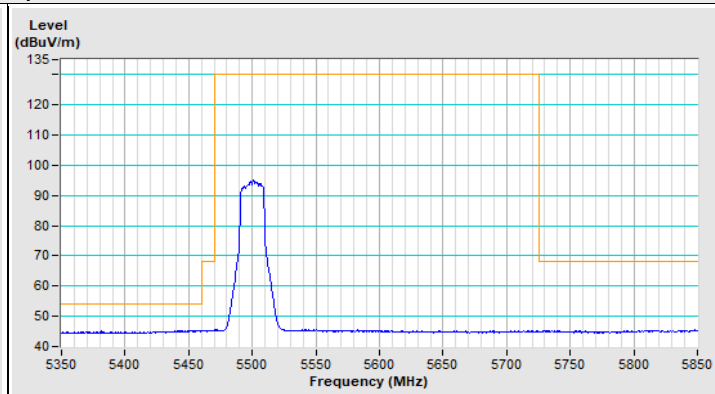
Vertical (Peak)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
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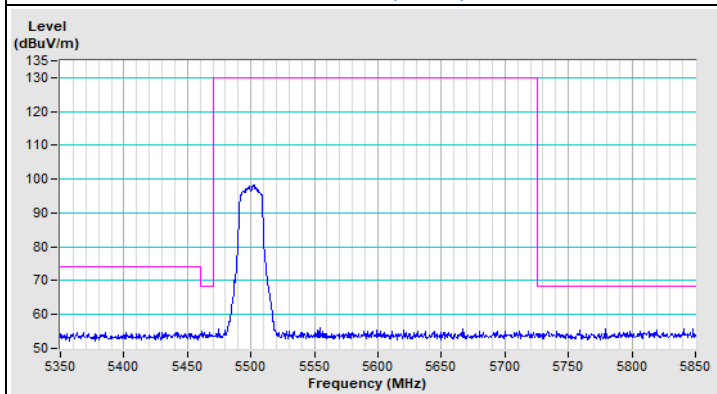
### 802.11ac (VHT20) Channel 100



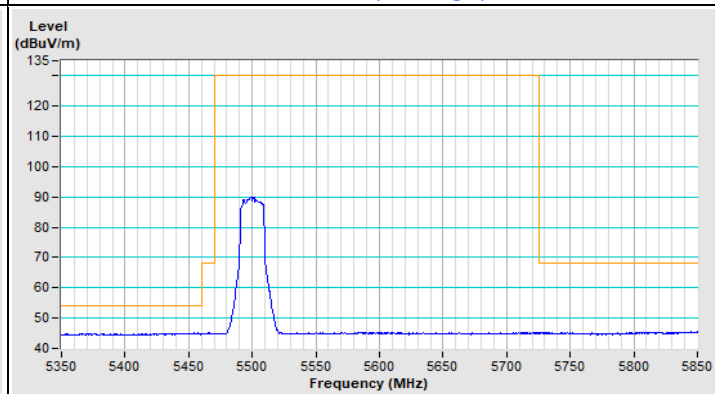
Horizontal (Peak)



Horizontal (Average)

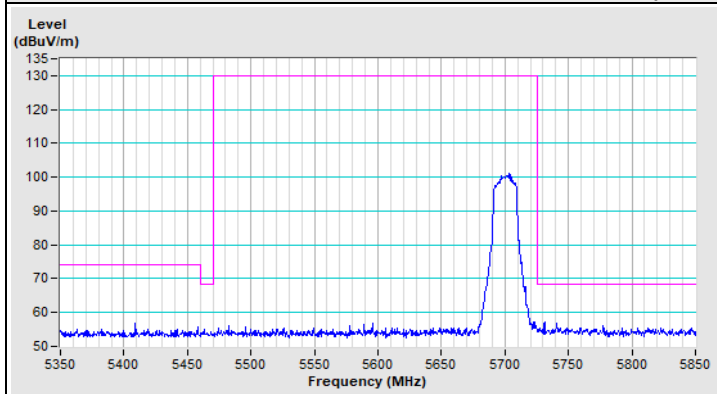


Vertical (Peak)

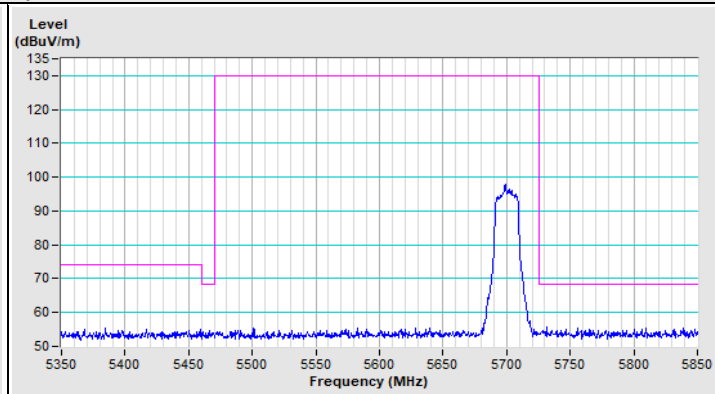


Vertical (Average)

### 802.11ac (VHT20) Channel 140



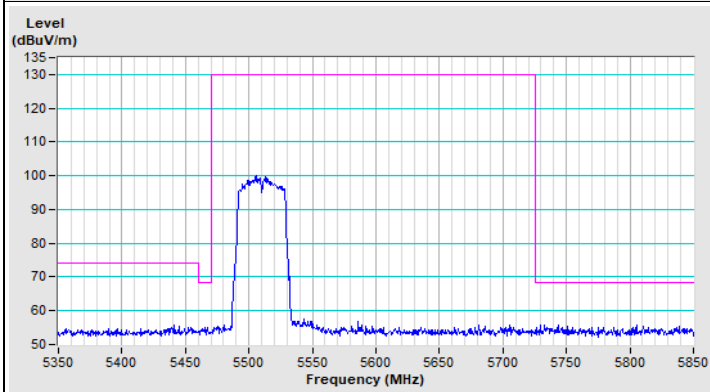
Horizontal (Peak)



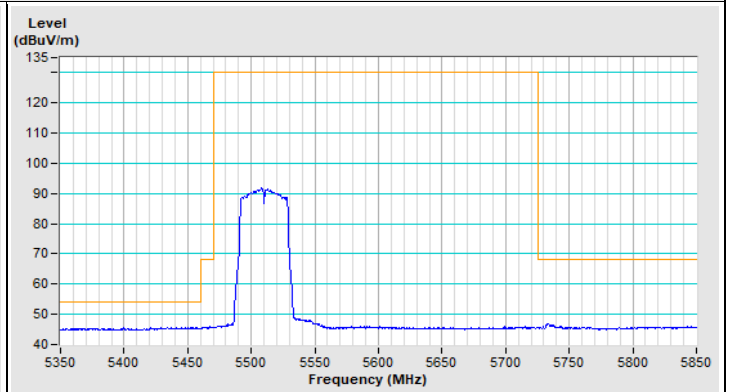
Vertical (Peak)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
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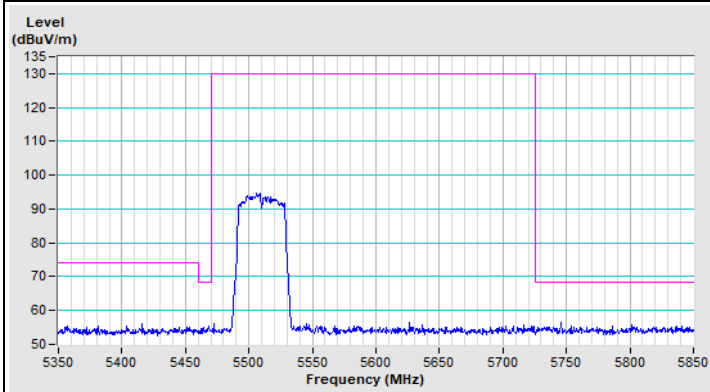
### 802.11ac (VHT40) Channel 102



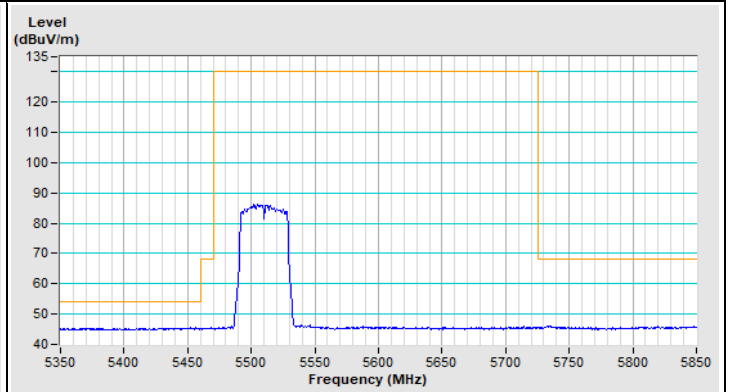
Horizontal (Peak)



Horizontal (Average)

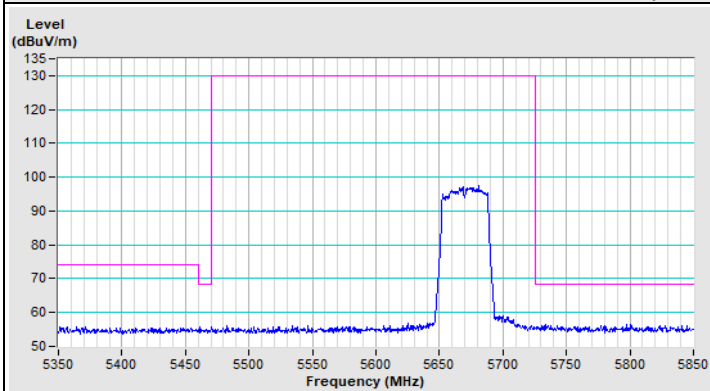


Vertical (Peak)

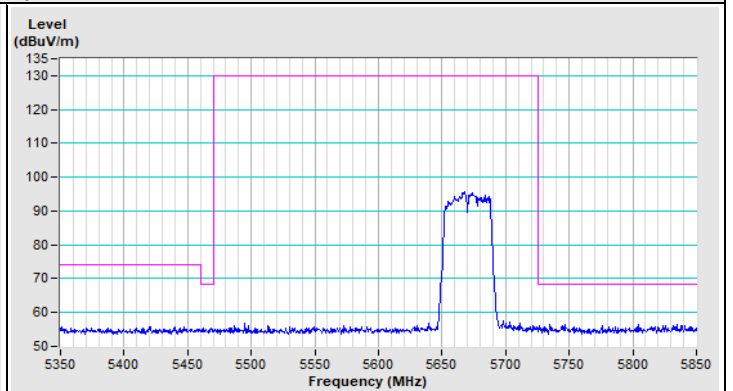


Vertical (Average)

### 802.11ac (VHT40) Channel 134



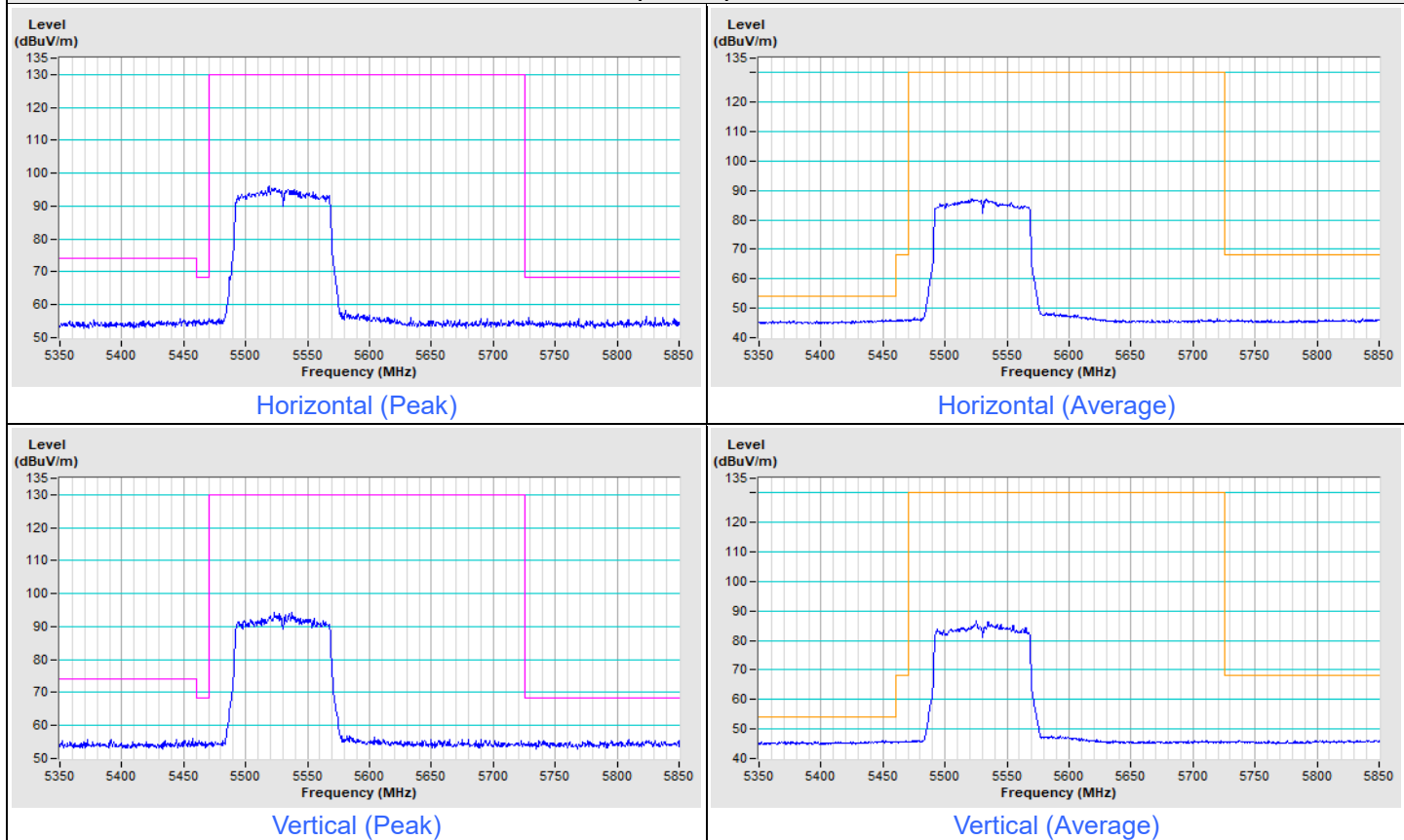
Horizontal (Peak)



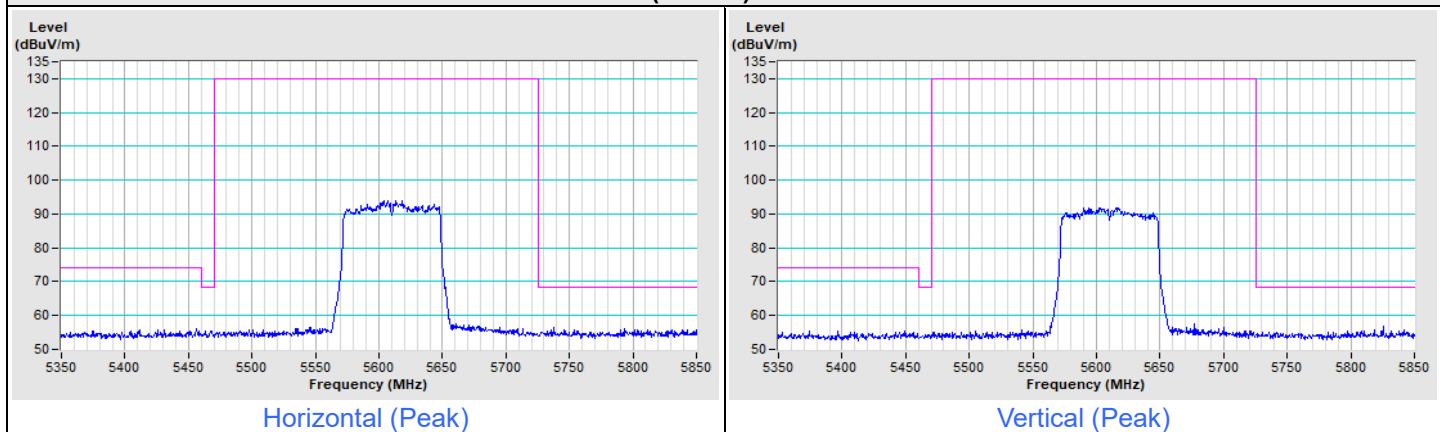
Vertical (Peak)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
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### 802.11ac (VHT80) Channel 106

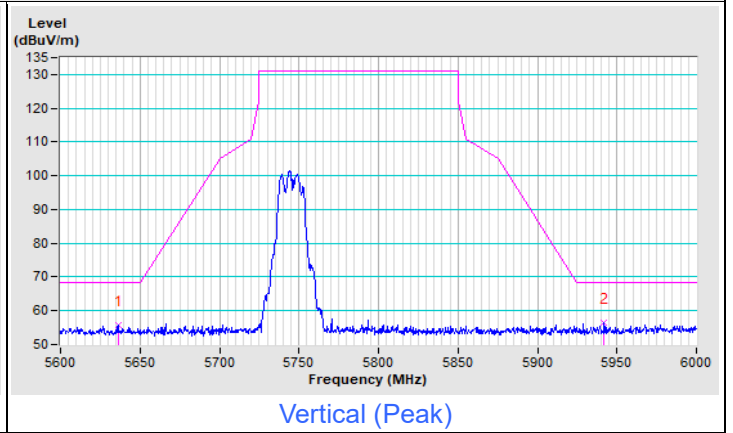
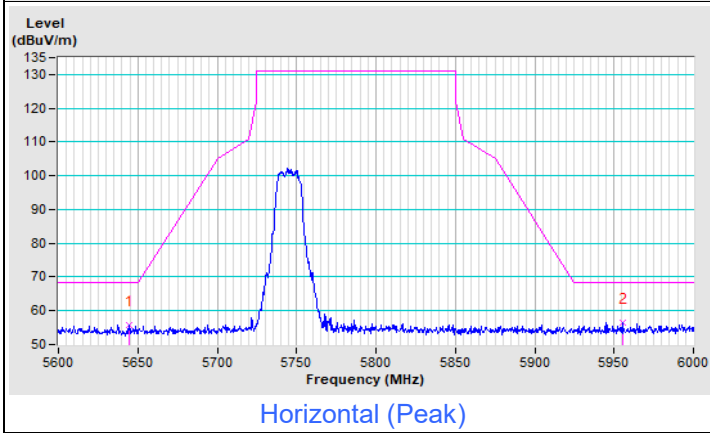


### 802.11ac (VHT80) Channel 122

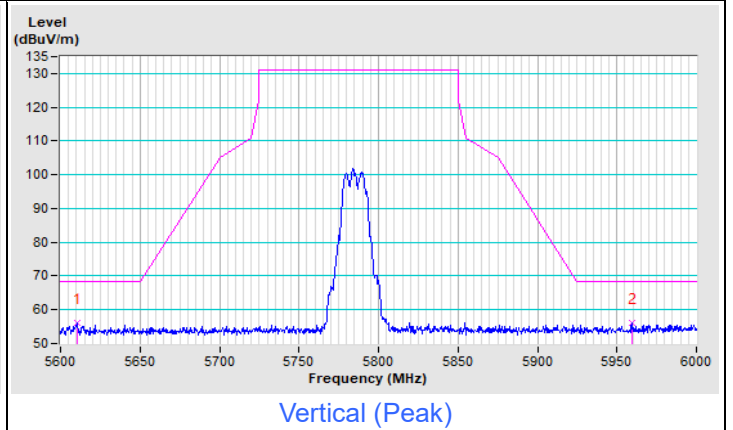
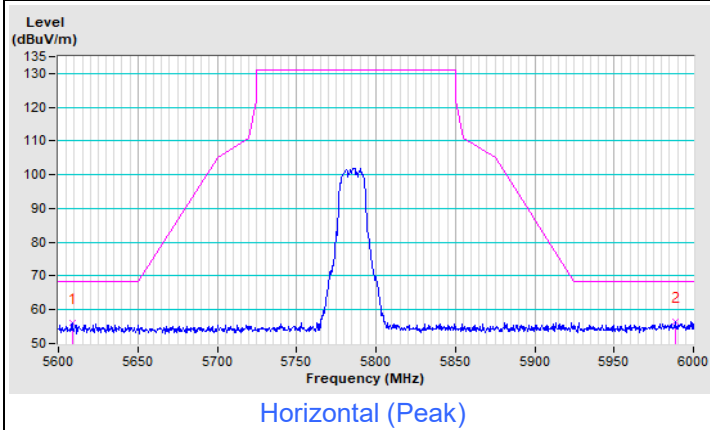


Frequency Range	5.6 GHz ~ 6.0 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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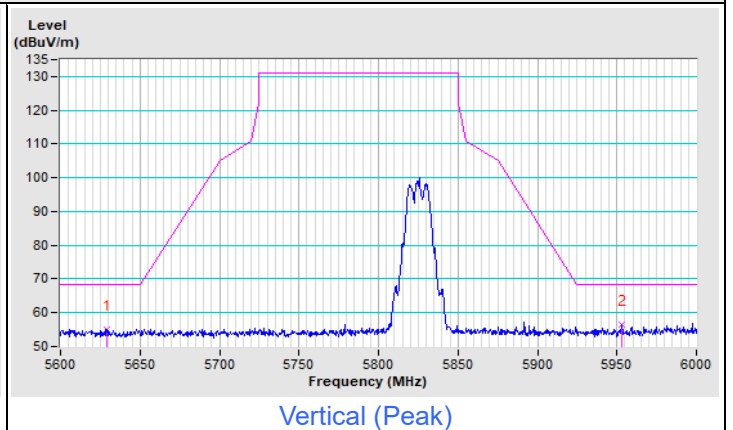
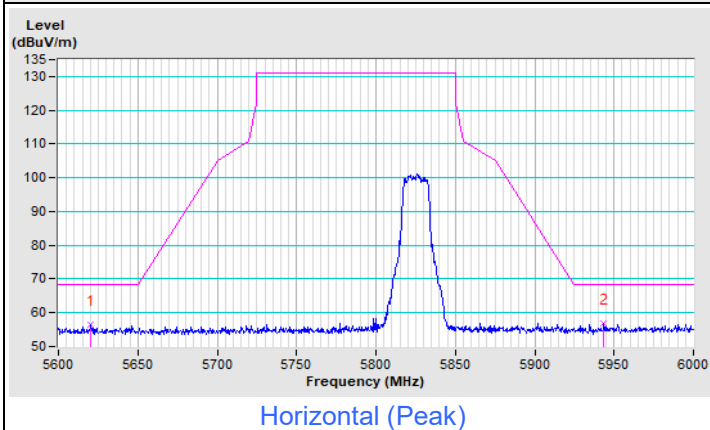
### 802.11a Channel 149



### 802.11a Channel 157



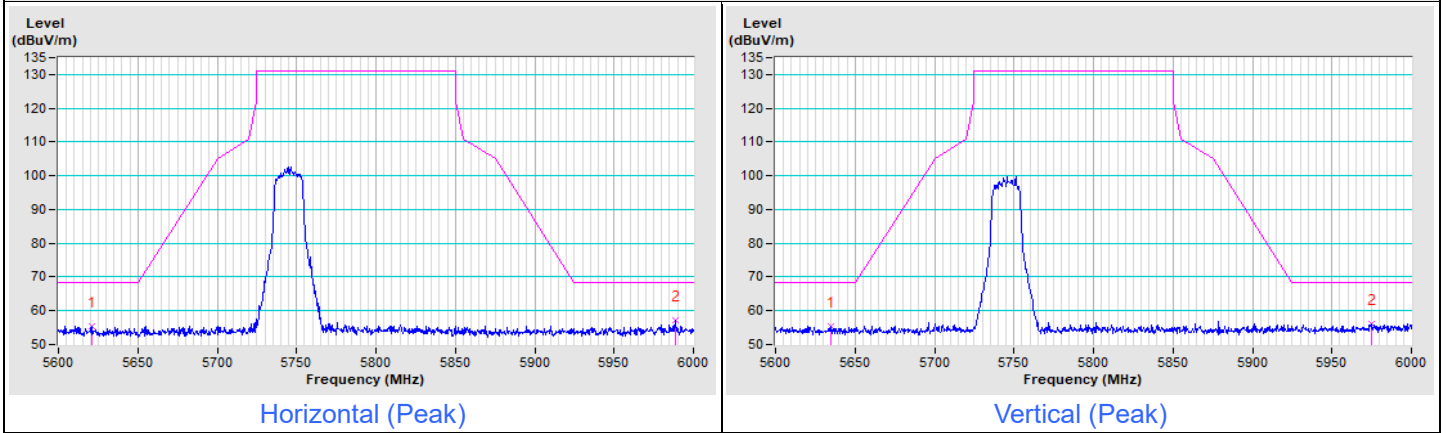
### 802.11a Channel 165



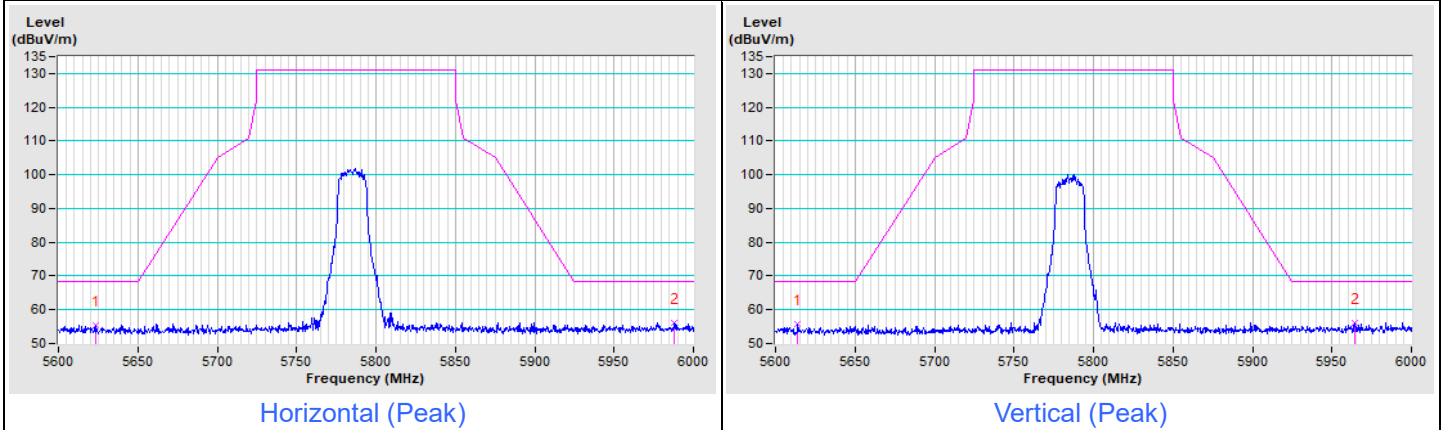


Frequency Range	5.6 GHz ~ 6.0 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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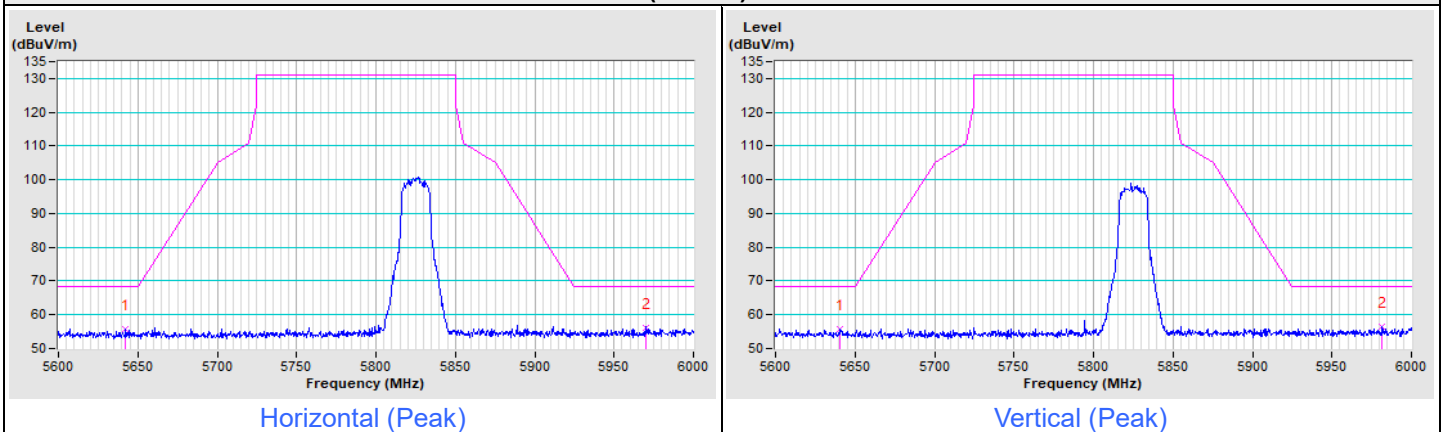
### 802.11ac (VHT20) Channel 149



### 802.11ac (VHT20) Channel 157

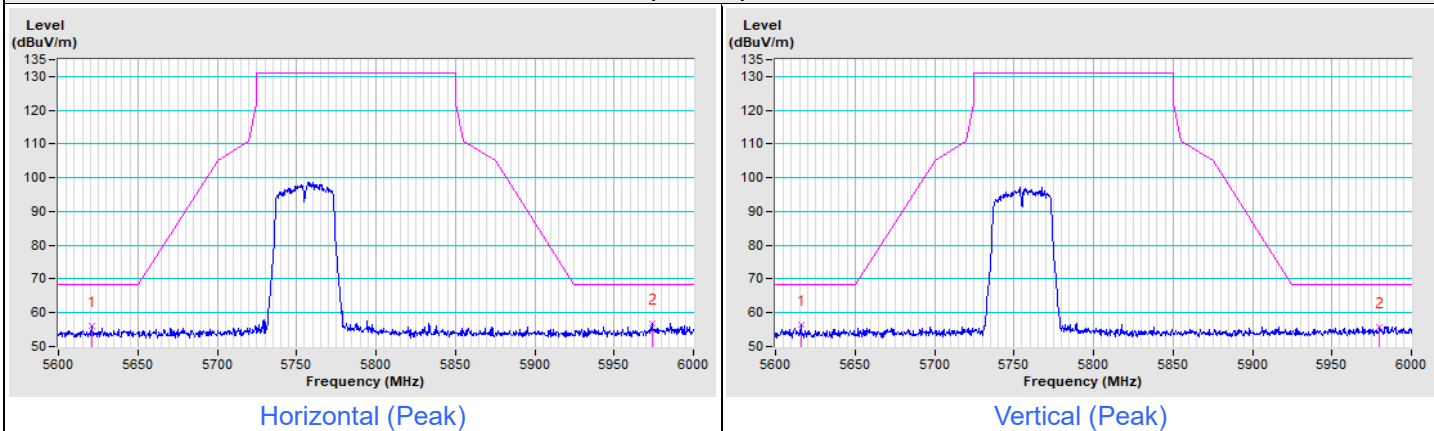


### 802.11ac (VHT20) Channel 165

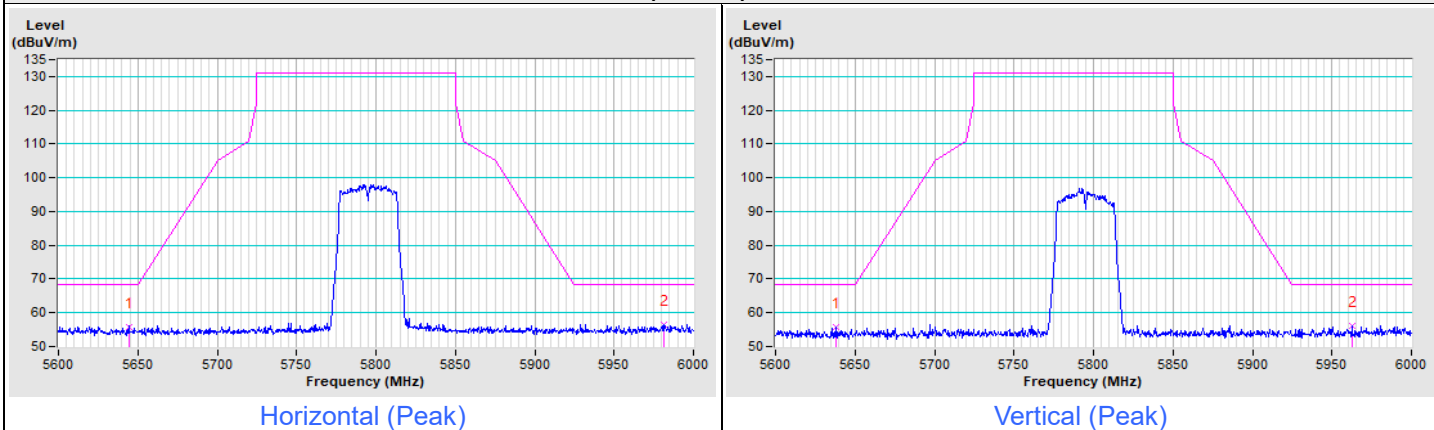


Frequency Range	5.6 GHz ~ 6.0 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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### 802.11ac (VHT40) Channel 151

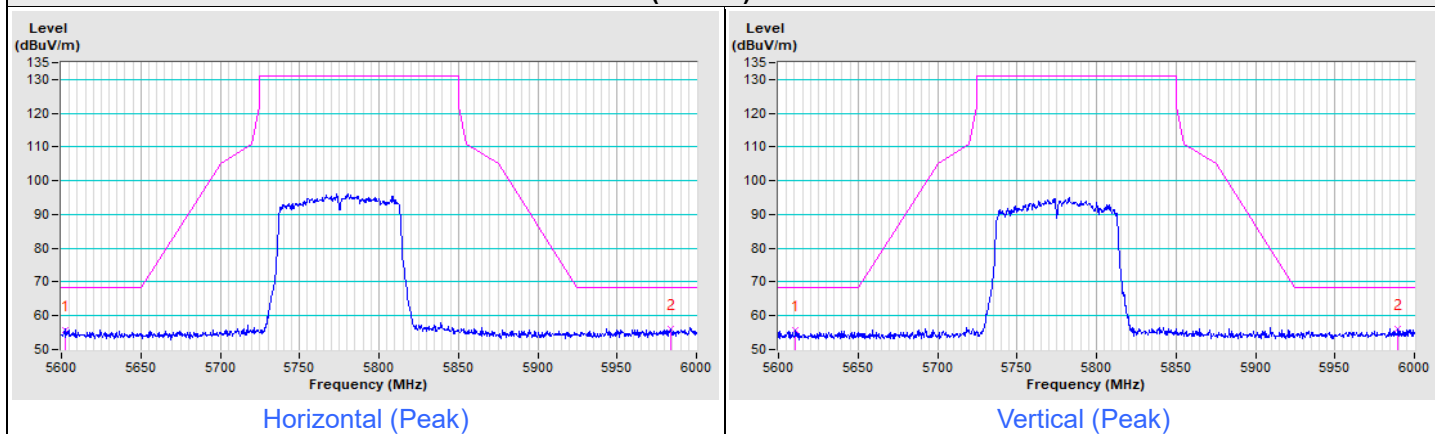


### 802.11ac (VHT40) Channel 159



Frequency Range	5.6 GHz ~ 6.0 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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### 802.11ac (VHT80) Channel 155



## 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.

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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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