TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: **47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.: RFCMCT-WTW-P23080399-3
FCC ID: 2BDJO-K3Y025A
Product: Connected AI-Powered USB Flash Drive
Brand: Matt3r
Model No.: K3Y
Received Date: 2023/8/18
Test Date: 2023/8/26 ~ 2023/12/21
Issued Date: 2024/4/11

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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:** **2024/4/11**
Jeremy Lin / Project Engineer

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Prepared by : Pettie Chen / Senior Specialist

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Table of Contents

Release Control Record **4**

1 Certificate **5**

2 Summary of Test Results **6**

2.1 Measurement Uncertainty 6
2.2 Supplementary Information 6

3 General Information **7**

3.1 General Description of EUT 7
3.2 Antenna Description of EUT 8
3.3 Channel List 9
3.4 Test Mode Applicability and Tested Channel Detail 11
3.5 Duty Cycle of Test Signal 12
3.6 Test Program Used and Operation Descriptions 14
3.7 Connection Diagram of EUT and Peripheral Devices 14
3.8 Configuration of Peripheral Devices and Cable Connections 14

4 Test Instruments **15**

4.1 26 dB Bandwidth 15
4.2 RF Output Power 15
4.3 Power Spectral Density 15
4.4 6 dB Bandwidth 15
4.5 Occupied Bandwidth 15
4.6 Frequency Stability 16
4.7 AC Power Conducted Emissions 16
4.8 Unwanted Emissions below 1 GHz 17
4.9 Unwanted Emissions above 1 GHz 18

5 Limits of Test Items **19**

5.1 26 dB Bandwidth 19
5.2 RF Output Power 19
5.3 Power Spectral Density 19
5.4 6 dB Bandwidth 19
5.5 Occupied Bandwidth 19
5.6 Frequency Stability 20
5.7 AC Power Conducted Emissions 20
5.8 Unwanted Emissions below 1 GHz 20
5.9 Unwanted Emissions above 1 GHz 21

6 Test Arrangements **22**

6.1 26 dB Bandwidth 22
6.1.1 Test Setup 22
6.1.2 Test Procedure 22
6.2 RF Output Power 23
6.2.1 Test Setup 23
6.2.2 Test Procedure 23
6.3 Power Spectral Density 24
6.3.1 Test Setup 24
6.3.2 Test Procedure 24
6.4 6 dB Bandwidth 25
6.4.1 Test Setup 25
6.4.2 Test Procedure 25
6.5 Occupied Bandwidth 25
6.5.1 Test Setup 25
6.5.2 Test Procedure 25
6.6 Frequency Stability 26
6.6.1 Test Setup 26
6.6.2 Test Procedure 26
6.7 AC Power Conducted Emissions 27

6.7.1 Test Setup 27
6.7.2 Test Procedure 27
6.8 Unwanted Emissions below 1 GHz 28
6.8.1 Test Setup 28
6.8.2 Test Procedure 28
6.9 Unwanted Emissions above 1 GHz 29
6.9.1 Test Setup 29
6.9.2 Test Procedure 29

7 Test Results of Test Item 30

7.1 26 dB Bandwidth 30
7.2 RF Output Power 34
7.3 Power Spectral Density 41
7.4 6 dB Bandwidth 45
7.5 Occupied Bandwidth 47
7.6 Frequency Stability 52
7.7 AC Power Conducted Emissions 53
7.8 Unwanted Emissions below 1 GHz 55
7.9 Unwanted Emissions above 1 GHz 57

8 Pictures of Test Arrangements 125

9 Information of the Testing Laboratories 126

Release Control Record

Issue No.	Description	Date Issued
RFCMCT-WTW-P23080399-3	Original release.	2024/4/11

1 Certificate

Product:	Connected AI-Powered USB Flash Drive
Brand:	Matt3r
Test Model:	K3Y
Sample Status:	Engineering sample
Applicant:	Matt3r Technologies Inc.
Test Date:	2023/8/26 ~ 2023/12/21
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407)
Measurement procedure:	ANSI C63.10-2013 KDB 789033 D02 General UNII Test Procedure New Rules v02r01

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

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(2)	26 dB Bandwidth	Pass	For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.
15.407(a)(1) 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 -15.13 dB at 0.16172 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -2.6 dB at 198.64 MHz
15.407(b) (1/10) 15.407(b) (2/10) 15.407(b) (3/10) 15.407(b) (4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -1.4 dB at 5150.00 MHz
15.203	Antenna Requirement	Pass	No antenna connector is used.

Notes:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. 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:

Parameter	Specification	Uncertainty (±)
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	Connected AI-Powered USB Flash Drive
Brand	Matt3r
Test Model	K3Y
Status of EUT	Engineering sample
Power Supply Rating	5Vdc from host
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode
Modulation Technology	OFDM
Transfer Rate	Up to 433.3 Mbps
Operating Frequency	5.18 GHz ~ 5.24 GHz 5.26 GHz ~ 5.32 GHz 5.5 GHz ~ 5.72 GHz 5.745 GHz ~ 5.825 GHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20): 25 802.11n (HT40), 802.11ac (VHT40): 12 802.11ac (VHT80): 6
Output Power	5.18 GHz ~ 5.24 GHz: 3.251 mW (5.12 dBm) 5.26 GHz ~ 5.32 GHz: 2.958 mW (4.71 dBm) 5.5 GHz ~ 5.72 GHz: 1.69 mW (2.28 dBm) 5.745 GHz ~ 5.825 GHz: 1.972 mW (2.95 dBm)
EUT Category	Client device

Note:

1. 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.	Brand	Model	Gain (dBi)	Antenna Type	Connector Type
			5150~5850 MHz		
1	molex	211964	2.2	Ceramic Loop	NA

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

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

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

Note:
1. The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz), 802.11ac mode for 20 MHz (40 MHz, 80 MHz), therefore the manufacturer will control the power for 802.11n mode is same as the 802.11ac mode or lower than it and investigated worst case to representative mode in test report.

3.3 Channel List

FOR 5180 ~ 5320 MHz

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

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

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

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

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz

FOR 5500 ~ 5720 MHz

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

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

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

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

3 channels are provided for 802.11ac (VHT80):

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

FOR 5745 ~ 5825 MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775 MHz

3.4 Test Mode Applicability and Tested Channel Detail

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

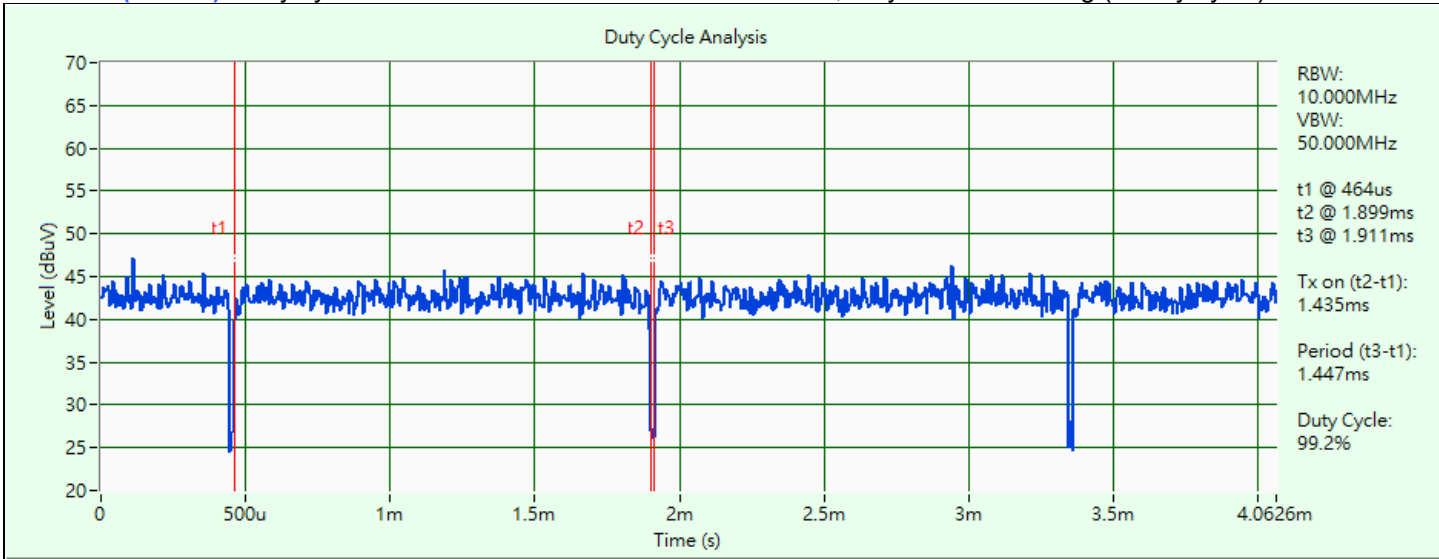
Following channel(s) was (were) selected for the final test as listed below:

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

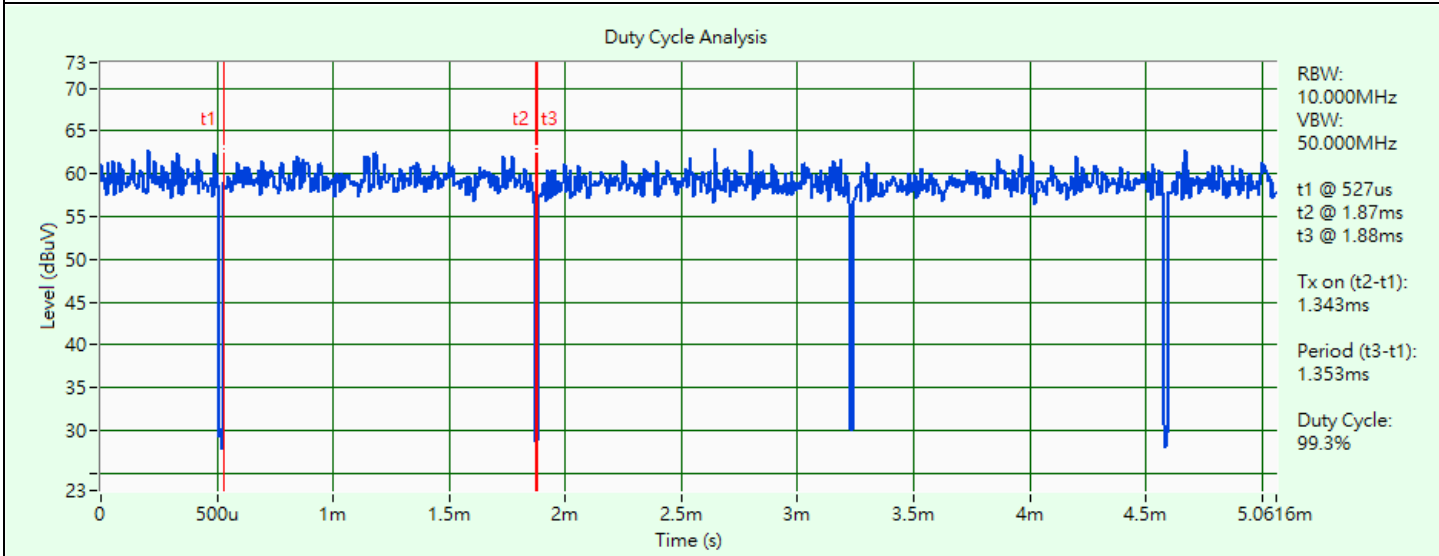
Test Item	Mode	Tested Channel	Modulation	Data Rate Parameter
Unwanted Emissions above 1 GHz	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	6Mb/s
	802.11ac (VHT20)	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	38, 46, 54, 62, 102, 110, 134, 142, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	42, 58, 106, 122, 138, 155	BPSK	MCS0

3.5 Duty Cycle of Test Signal

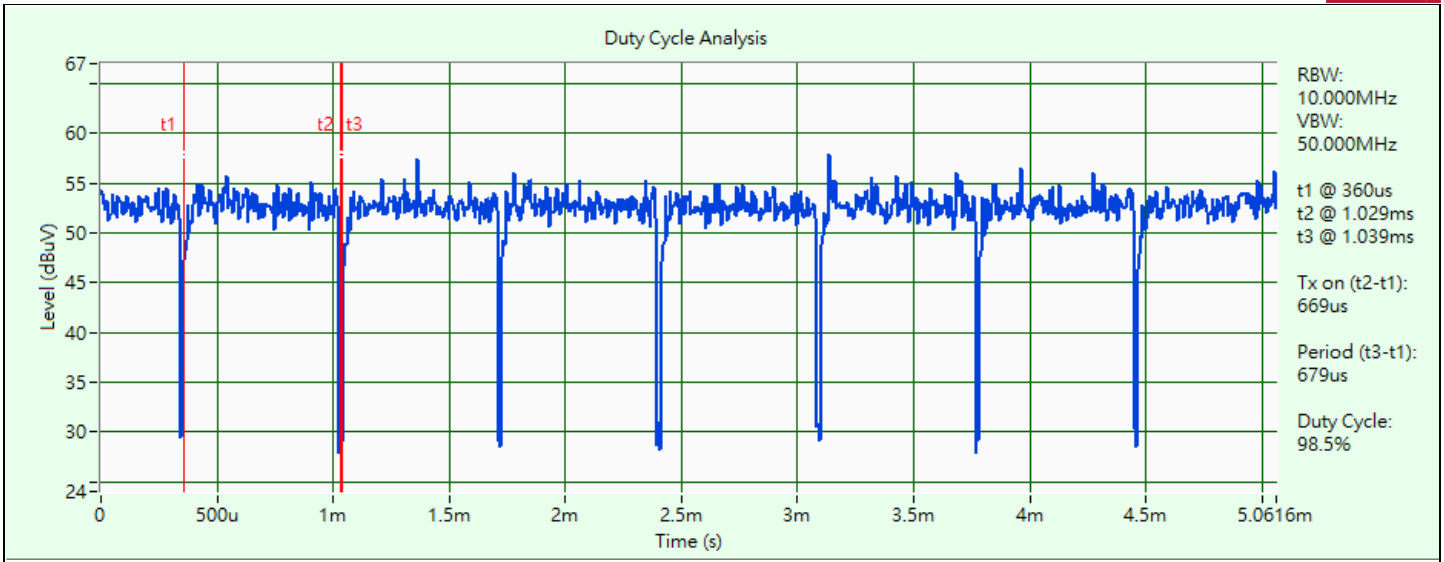
802.11a: Duty cycle = 1.435 ms / 1.447 ms x 100% = 99.2%
802.11ac (VHT20): Duty cycle = 1.343 ms / 1.353 ms x 100% = 99.3%
802.11ac (VHT40): Duty cycle = 0.669 ms / 0.679 ms x 100% = 98.5%
802.11ac (VHT80): Duty cycle = 0.334 ms / 0.351 ms x 100% = 95.2%, duty factor = 10 * log (1/Duty cycle) = 0.22 dB



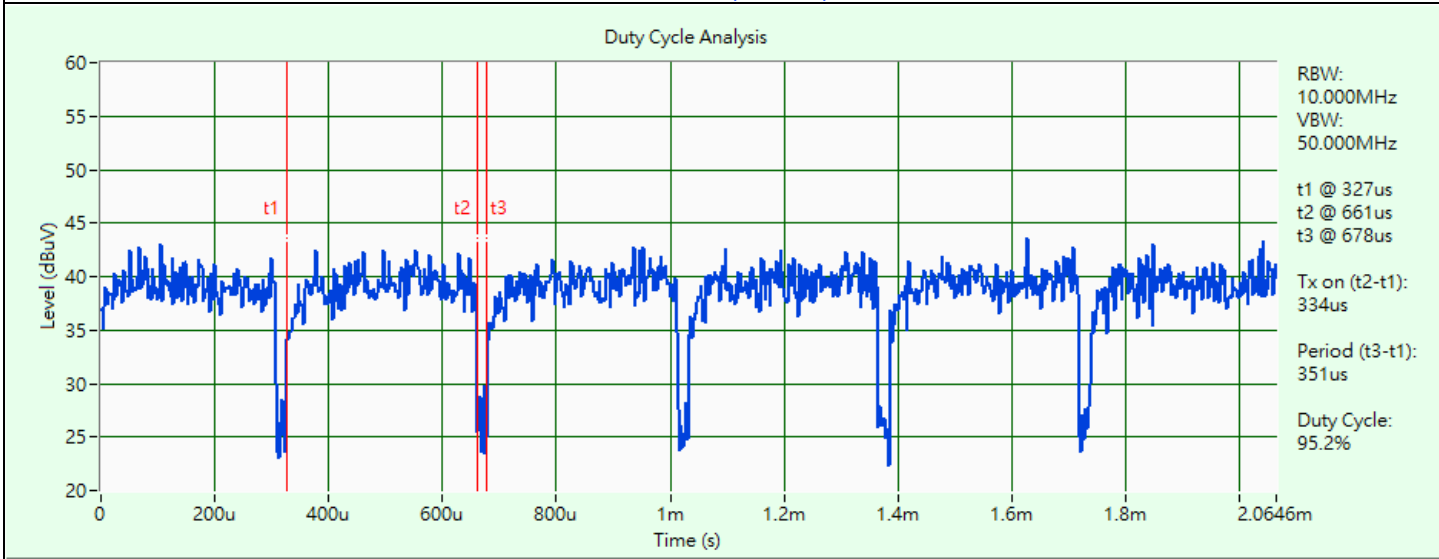
802.11a



802.11ac (VHT20)



802.11ac (VHT40)

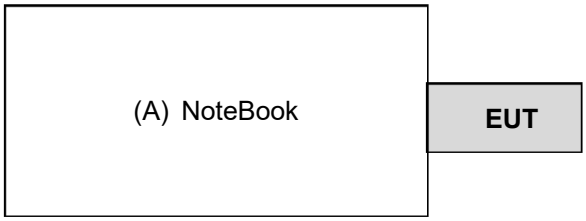


802.11ac (VHT80)

3.6 Test Program Used and Operation Descriptions

Controlling software (Putty 0.62) 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	NoteBook	Lenovo	TP00048A	NA	NA	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
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSU43	100115	2023/1/17	2024/1/16

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/11/29

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
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSU43	100115	2023/1/17	2024/1/16
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: 2023/11/29

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
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSU43	100115	2023/1/17	2024/1/16
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: 2023/11/29

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	2022/10/26	2023/10/25
Loop Antenna Electro-Metrics	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2023/8/8	2024/8/7
MXE EMI Receiver Agilent	N9038A	MY52260177	2022/9/19	2023/9/18
Preamplifier Agilent	310N	187226	2023/6/13	2024/6/12
Preamplifier EMCI	EMC001340	980201	2022/9/23	2023/9/22
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2023/1/7	2024/1/6
RF Coaxial Cable 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: 2023/8/26

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	2022/11/13	2023/11/12
			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: 2023/11/2 ~ 2023/11/28

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 ≦ 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

5.3 Power Spectral Density

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

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

5.4 6 dB Bandwidth

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

5.5 Occupied Bandwidth

The results are for reference only.

5.6 Frequency Stability

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

5.7 AC Power Conducted Emissions

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

Notes:

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

5.8 Unwanted Emissions below 1 GHz

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

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

Notes:

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

5.9 Unwanted Emissions above 1 GHz

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

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

Notes:

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

Limits of unwanted emission out of the restricted bands

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

For transmitters operating in the 5.15-5.25 GHz band:

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

For transmitters operating in the 5.25-5.35 GHz band:

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

For transmitters operating in the 5.47-5.725 GHz band:

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

For transmitters operating in the 5.725-5.850 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(4)(i)	PK: -27 (dBm/MHz) *1 PK: 10 (dBm/MHz) *2 PK: 15.6 (dBm/MHz) *3 PK: 27 (dBm/MHz) *4	PK: 68.2 (dBμV/m) *1 PK: 105.2 (dBμV/m) *2 PK: 110.8 (dBμV/m) *3 PK: 122.2 (dBμV/m) *4
*1 beyond 75 MHz or more above of the band edge. *2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. *3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. *4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.		

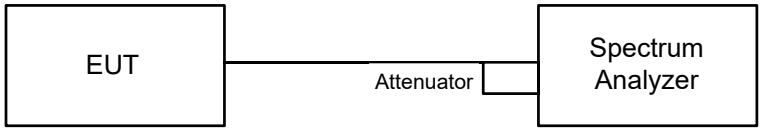
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup



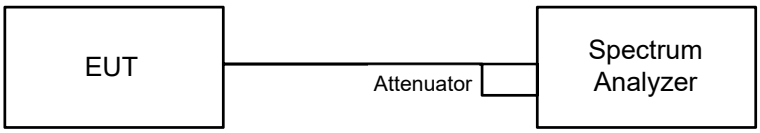
6.1.2 Test Procedure

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

6.2 RF Output Power

6.2.1 Test Setup

For channel straddling:



6.2.2 Test Procedure

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

For channel straddling:

Method SA-1

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ 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. Record the max value

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

For channel straddling:

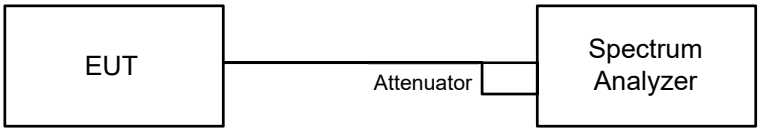
Method SA-2A

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

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

6.3 Power Spectral Density

6.3.1 Test Setup



6.3.2 Test Procedure

For specified measurement bandwidth 1 MHz:
Method SA-1

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ 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. 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 ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ 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/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 ≥ 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 BWCF = 10log(500 kHz/300 kHz)
d. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ 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

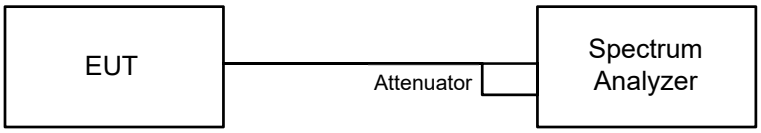
For specified measurement bandwidth 500 kHz:
Method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 300 kHz, Set VBW ≥ 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 BWCF = 10log(500 kHz/300 kHz)
d. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ 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/duty cycle).

6.4 6 dB Bandwidth

6.4.1 Test Setup

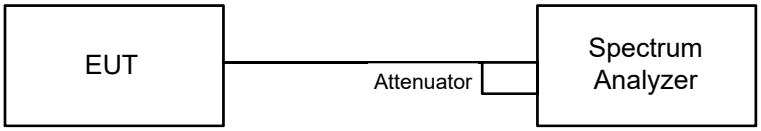


6.4.2 Test Procedure

a. Set resolution bandwidth (RBW) = 100 kHz.
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. 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

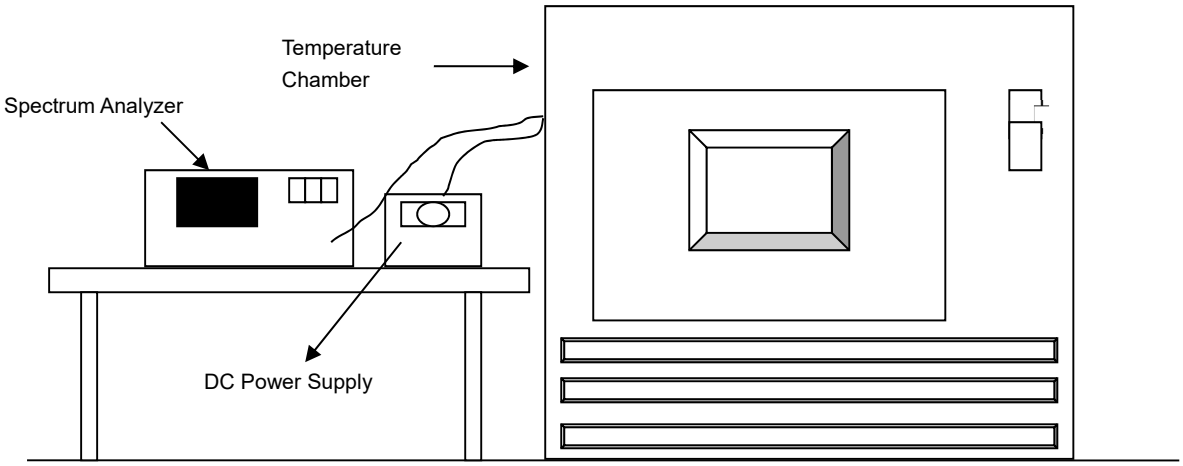


6.5.2 Test Procedure

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

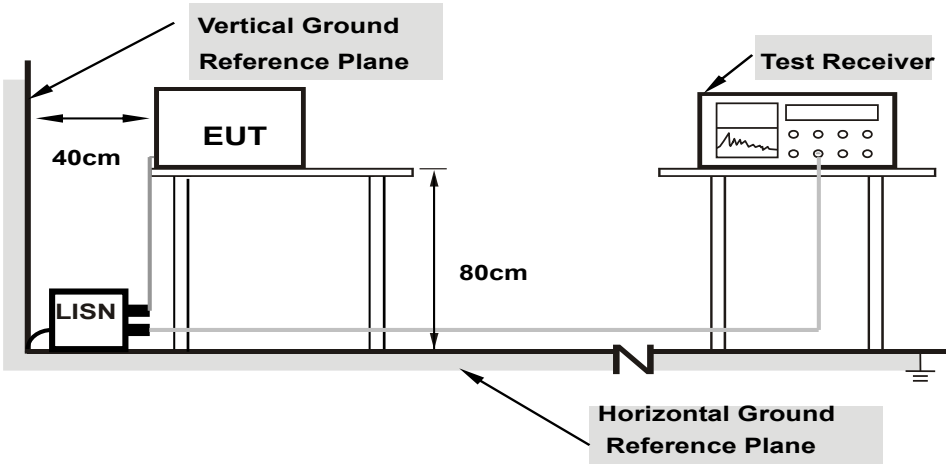


6.6.2 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. 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.
e. Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
f. 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

a. 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.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

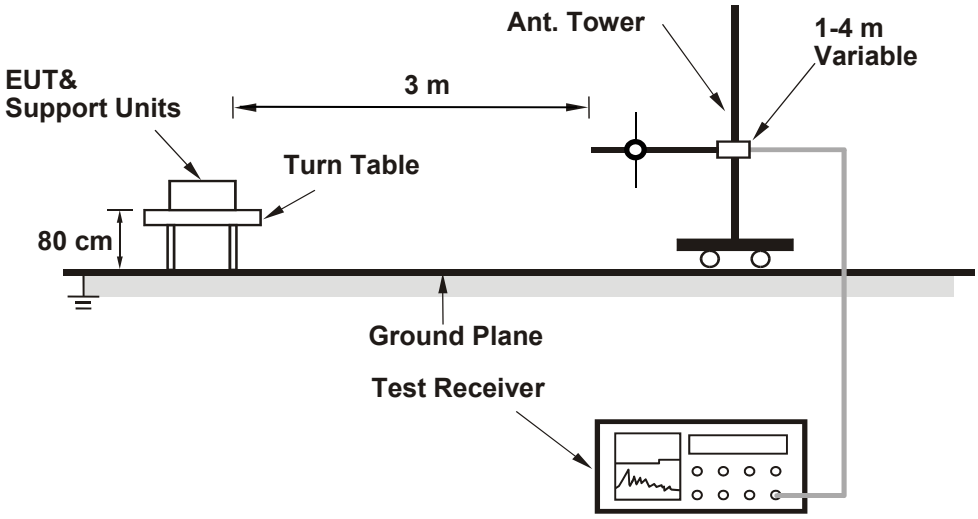
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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.

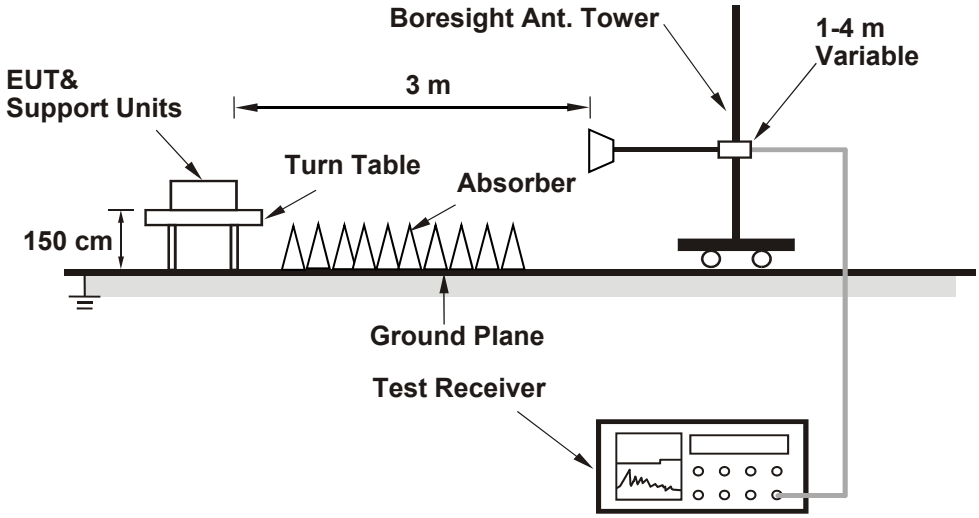
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

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

a. 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.

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 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:

1. 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.
2. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10 Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1 GHz.
3. 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:	5 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Henry Hsu

802.11a

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
52	5260	24.47
60	5300	21.8
64	5320	22.23
100	5500	21.77
116	5580	21.72
140	5700	21.67
144 (U-NII-2C)	5720	15.74
144 (U-NII-3)	5720	5.98

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	24.47	24.88	>	24
60	5300	21.80	24.38	>	24
64	5320	22.23	24.46	>	24
100	5500	21.77	24.37	>	24
116	5580	21.72	24.36	>	24
140	5700	21.67	24.35	>	24
144 (U-NII-2C)	5720	15.74	22.97	<	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)
52	5260	25.27
60	5300	22.02
64	5320	22.54
100	5500	21.96
116	5580	22.02
140	5700	22.08
144 (U-NII-2C)	5720	15.75
144 (U-NII-3)	5720	6.09

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	25.27	25.02	>	24
60	5300	22.02	24.42	>	24
64	5320	22.54	24.52	>	24
100	5500	21.96	24.41	>	24
116	5580	22.02	24.42	>	24
140	5700	22.08	24.43	>	24
144 (U-NII-2C)	5720	15.75	22.97	<	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)
54	5270	40.34
62	5310	40.76
102	5510	42.83
110	5550	40.82
134	5670	40.64
142 (U-NII-2C)	5710	35.18
142 (U-NII-3)	5710	6.67

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
54	5270	40.34	27.05	>	24
62	5310	40.76	27.1	>	24
102	5510	42.83	27.31	>	24
110	5550	40.82	27.1	>	24
134	5670	40.64	27.08	>	24
142 (U-NII-2C)	5710	35.18	26.46	>	24

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

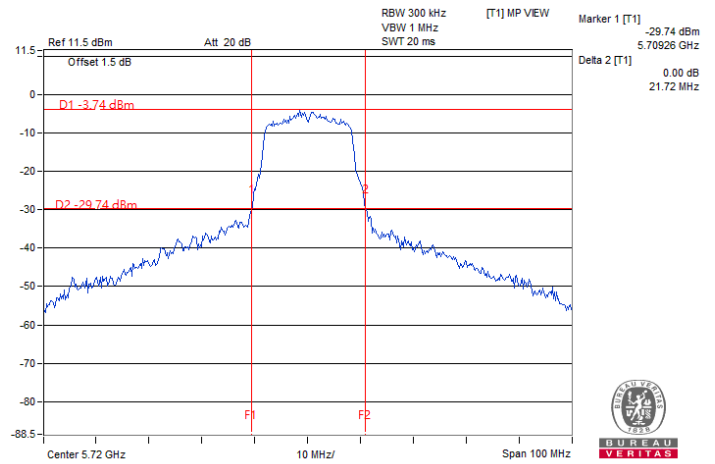
802.11ac (VHT80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
58	5290	83
106	5530	82.85
122	5610	83.31
138 (U-NII-2C)	5690	76.24
138 (U-NII-3)	5690	6.91

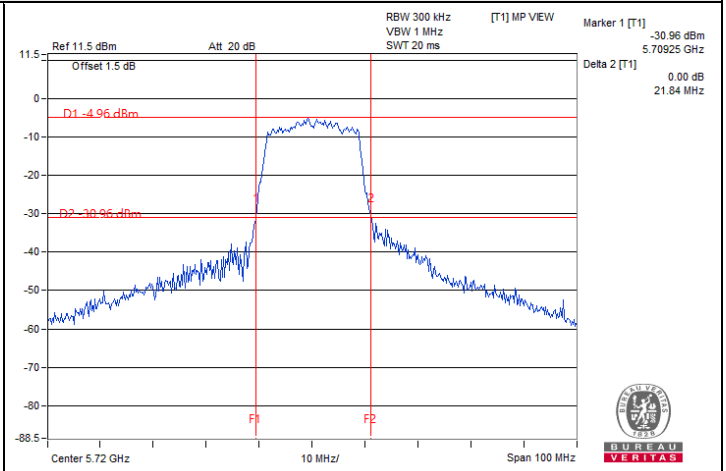
Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	83.00	30.19	>	24
106	5530	82.85	30.18	>	24
122	5610	83.31	30.2	>	24
138 (U-NII-2C)	5690	76.24	29.82	>	24

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

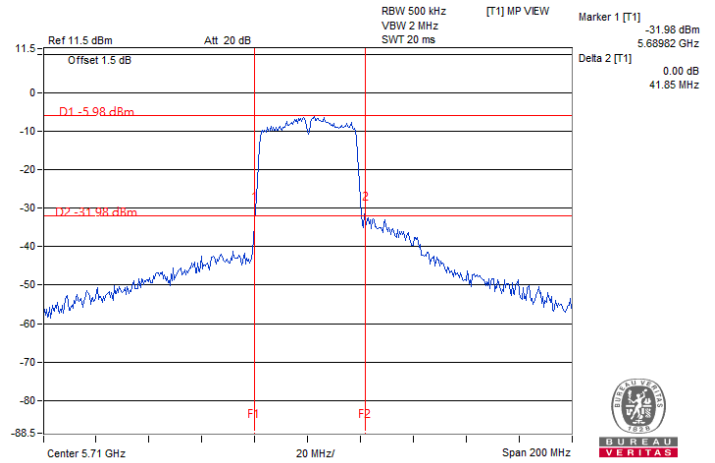
Spectrum Plot of Minimum Value



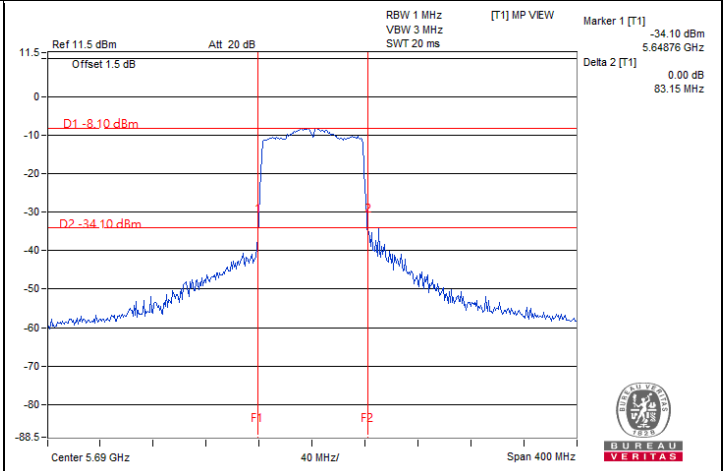
802.11a : CH 144 (U-NII-3)



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



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



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

Notes:

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

7.2 RF Output Power

Input Power:	5 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Henry Hsu

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	1.95	2.90	24	Pass
40	5200	3.155	4.99	24	Pass
48	5240	3.097	4.91	24	Pass
52	5260	2.958	4.71	24	Pass
60	5300	1.563	1.94	24	Pass
64	5320	1.517	1.81	24	Pass
100	5500	0.9311	-0.31	24	Pass
116	5580	1.69	2.28	24	Pass
140	5700	0.912	-0.40	24	Pass
*144 (U-NII-2C)	5720	0.8204	-0.86	22.97	Pass
*144 (U-NII-3)	5720	0.1977	-7.04	30	Pass
149	5745	0.9506	-0.22	30	Pass
157	5785	1.972	2.95	30	Pass
165	5825	1.189	0.75	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. For U-NII-1, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	1.854	2.68	24	Pass
40	5200	3.221	5.08	24	Pass
48	5240	3.062	4.86	24	Pass
52	5260	2.917	4.65	24	Pass
60	5300	1.521	1.82	24	Pass
64	5320	1.384	1.41	24	Pass
100	5500	0.695	-1.58	24	Pass
116	5580	1.355	1.32	24	Pass
140	5700	0.8128	-0.90	24	Pass
*144 (U-NII-2C)	5720	0.673	-1.72	24	Pass
*144 (U-NII-3)	5720	0.1858	-7.31	30	Pass
149	5745	0.861	-0.65	30	Pass
157	5785	1.945	2.89	30	Pass
165	5825	1.114	0.47	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. For U-NII-1, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
38	5190	1.208	0.82	24	Pass
46	5230	2.924	4.66	24	Pass
54	5270	2.6	4.15	24	Pass
62	5310	0.9727	-0.12	24	Pass
102	5510	0.5395	-2.68	24	Pass
110	5550	1.355	1.32	24	Pass
134	5670	0.5188	-2.85	24	Pass
*142 (U-NII-2C)	5710	0.673	-1.72	24	Pass
*142 (U-NII-3)	5710	0.07962	-10.99	30	Pass
151	5755	0.6855	-1.64	30	Pass
159	5795	0.7161	-1.45	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. For U-NII-1, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	1.871	2.72	24	Pass
40	5200	3.251	5.12	24	Pass
48	5240	3.083	4.89	24	Pass
52	5260	2.944	4.69	24	Pass
60	5300	1.528	1.84	24	Pass
64	5320	1.4	1.46	24	Pass
100	5500	0.7228	-1.41	24	Pass
116	5580	1.368	1.36	24	Pass
140	5700	0.8185	-0.87	24	Pass
*144 (U-NII-2C)	5720	0.6902	-1.61	22.97	Pass
*144 (U-NII-3)	5720	0.1888	-7.24	30	Pass
149	5745	0.867	-0.62	30	Pass
157	5785	1.959	2.92	30	Pass
165	5825	1.122	0.50	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. For U-NII-1, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
38	5190	1.219	0.86	24	Pass
46	5230	2.944	4.69	24	Pass
54	5270	2.624	4.19	24	Pass
62	5310	0.9817	-0.08	24	Pass
102	5510	0.5445	-2.64	24	Pass
110	5550	1.365	1.35	24	Pass
134	5670	0.5236	-2.81	24	Pass
*142 (U-NII-2C)	5710	0.6839	-1.65	24	Pass
*142 (U-NII-3)	5710	0.0811	-10.91	30	Pass
151	5755	0.6902	-1.61	30	Pass
159	5795	0.7211	-1.42	30	Pass

Notes:

1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.
2. For U-NII-1, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.

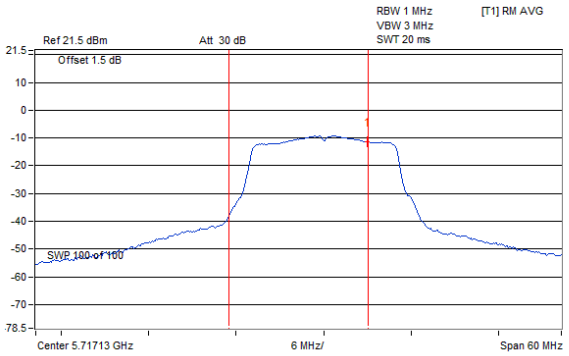
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
42	5210	1.202	0.80	24	Pass
58	5290	0.9247	-0.34	24	Pass
106	5530	0.5358	-2.71	24	Pass
122	5610	0.4943	-3.06	24	Pass
*138 (U-NII-2C)	5690	0.3798	-4.20	24	Pass
*138 (U-NII-3)	5690	0.02068	-16.84	30	Pass
155	5775	0.7145	-1.46	30	Pass

Notes:

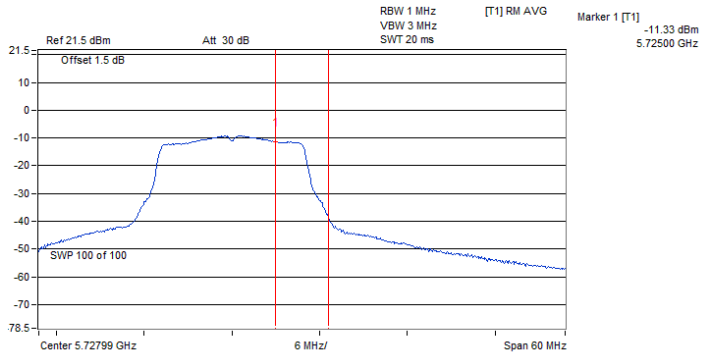
1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. For U-NII-1, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the antenna gain is 2.2 dBi < 6 dBi, so the output power limit shall not be reduced.

Spectrum Plot for channel straddling



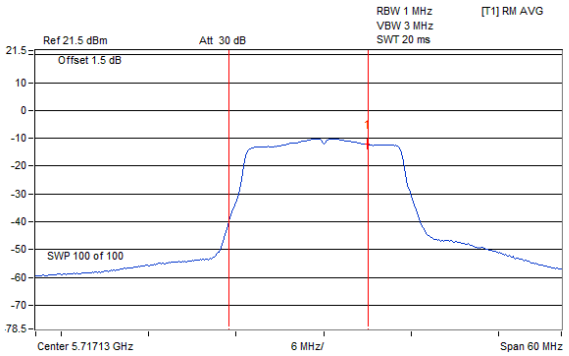
TX Channel Bandwidth 15.74 MHz Power -0.86 dBm

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



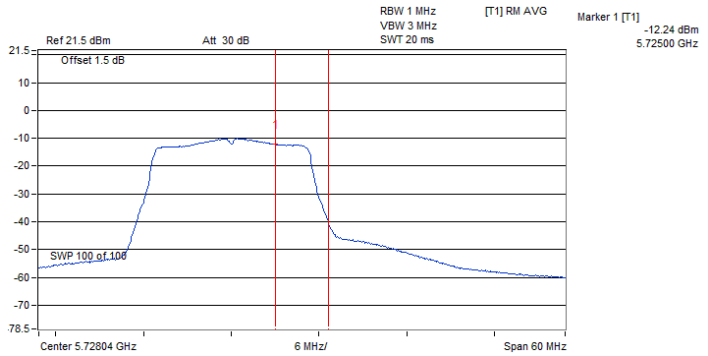
TX Channel Bandwidth 5.98 MHz Power -7.04 dBm

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



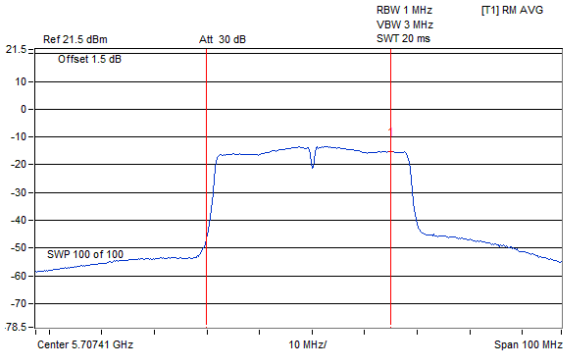
TX Channel Bandwidth 15.75 MHz Power -1.61 dBm

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



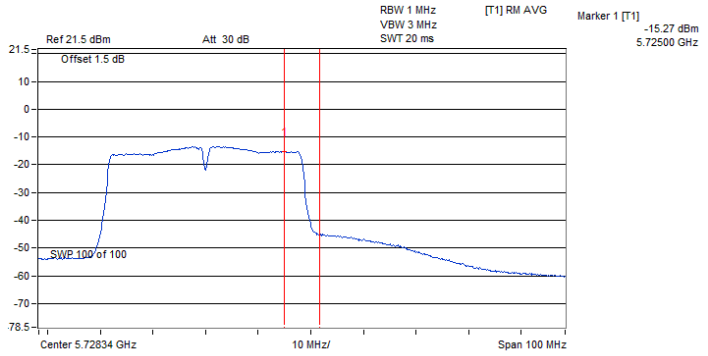
TX Channel Bandwidth 6.09 MHz Power -7.24 dBm

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



TX Channel Bandwidth 35.18 MHz Power -1.65 dBm

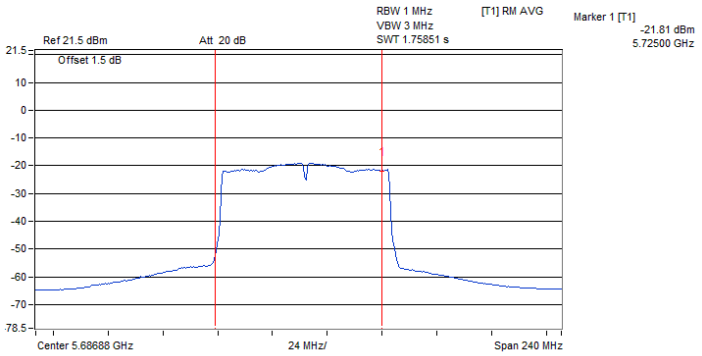
802.11ac (VHT40) : CH 142 (U-NII-2C)



TX Channel Bandwidth 6.67 MHz Power -10.91 dBm

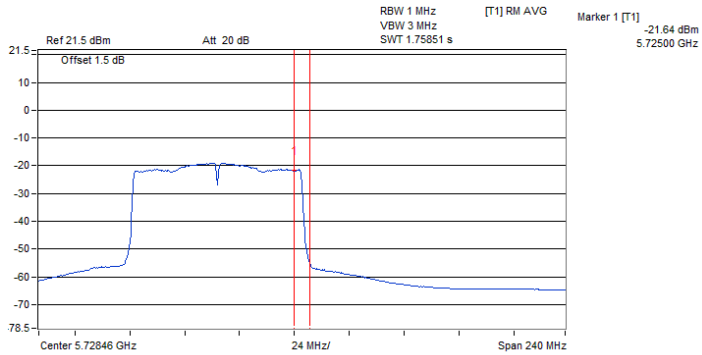
802.11ac (VHT40) : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



TX Channel Bandwidth 76.24 MHz Power -4.42 dBm

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



TX Channel Bandwidth 6.91 MHz Power -17.06 dBm

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

7.3 Power Spectral Density

Input Power:	5 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Henry Hsu

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
36	5180	-10.13	11	Pass
40	5200	-8.01	11	Pass
48	5240	-8.08	11	Pass
52	5260	-8.31	11	Pass
60	5300	-11.05	11	Pass
64	5320	-11.18	11	Pass
100	5500	-13.29	11	Pass
116	5580	-10.73	11	Pass
140	5700	-13.40	11	Pass
144 (U-NII-2C)	5720	-13.26	11	Pass

Notes:

1. For U-NII-1, the antenna gain is 2.2 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 2.2 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 2.2 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
36	5180	-10.26	11	Pass
40	5200	-7.90	11	Pass
48	5240	-8.13	11	Pass
52	5260	-8.30	11	Pass
60	5300	-11.16	11	Pass
64	5320	-11.57	11	Pass
100	5500	-14.44	11	Pass
116	5580	-11.64	11	Pass
140	5700	-13.90	11	Pass
144 (U-NII-2C)	5720	-13.65	11	Pass

Notes:

1. For U-NII-1, the antenna gain is 2.2 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 2.2 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 2.2 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
38	5190	-15.14	11	Pass
46	5230	-11.31	11	Pass
54	5270	-11.77	11	Pass
62	5310	-16.08	11	Pass
102	5510	-18.60	11	Pass
110	5550	-14.68	11	Pass
134	5670	-18.89	11	Pass
142 (U-NII-2C)	5710	-17.62	11	Pass

Notes:

1. For U-NII-1, the antenna gain is 2.2 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 2.2 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 2.2 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
42	5210	-18.18	0.22	-17.96	11	Pass
58	5290	-19.33	0.22	-19.11	11	Pass
106	5530	-21.68	0.22	-21.46	11	Pass
122	5610	-22.04	0.22	-21.82	11	Pass
138 (U-NII-2C)	5690	-21.59	0.22	-21.37	11	Pass

Notes:

1. For U-NII-1, the antenna gain is 2.2 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 2.2 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 2.2 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
144 (U-NII-3)	5720	-19.04	-16.82	30	Pass
149	5745	-19.9	-17.68	30	Pass
157	5785	-17.73	-15.51	30	Pass
165	5825	-19.43	-17.21	30	Pass

Note: For U-NII-3, the antenna gain is 2.2 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
144 (U-NII-3)	5720	-23.48	-21.26	30	Pass
149	5745	-21.8	-19.58	30	Pass
157	5785	-17.52	-15.30	30	Pass
165	5825	-20.59	-18.37	30	Pass

Note: For U-NII-3, the antenna gain is 2.2 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
142 (U-NII-3)	5710	-23.45	-21.23	30	Pass
151	5755	-26.69	-24.47	30	Pass
159	5795	-26.4	-24.18	30	Pass

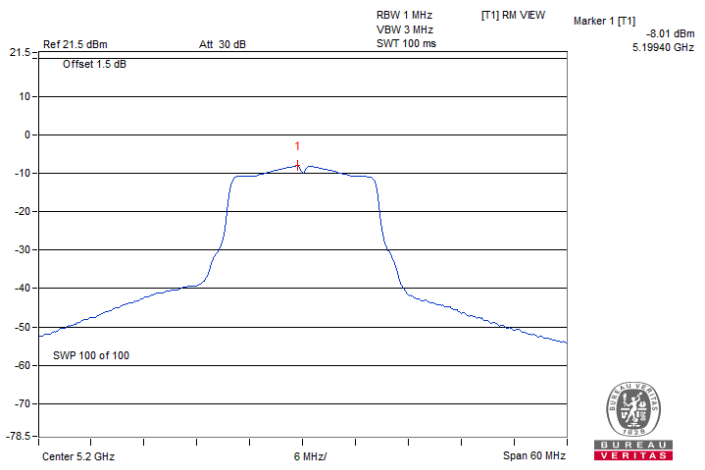
Note: For U-NII-3, the antenna gain is 2.2 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT80)

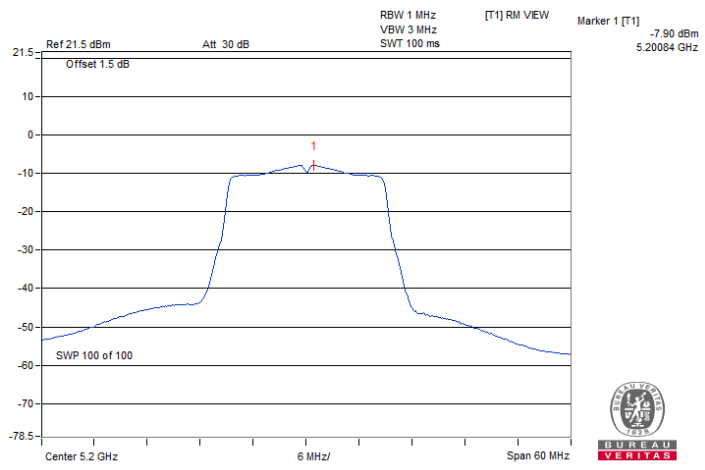
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
138 (U-NII-3)	5690	-30.2	0.22	-27.76	30	Pass
155	5775	-29.65	0.22	-27.21	30	Pass

Note: For U-NII-3, the antenna gain is 2.2 dBi < 6 dBi, so the power density limit shall not be reduced.

Spectrum Plot of Maximum Value

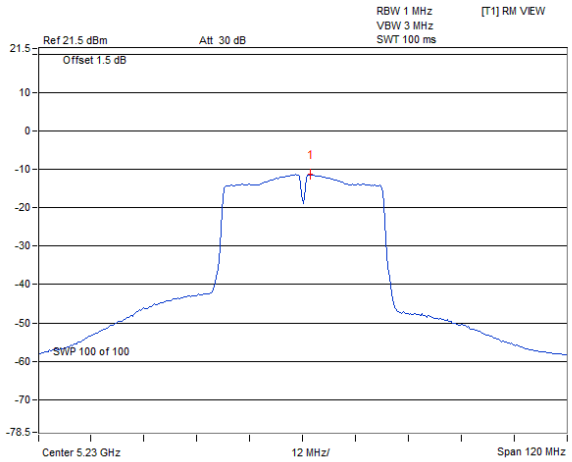


802.11a : CH 40

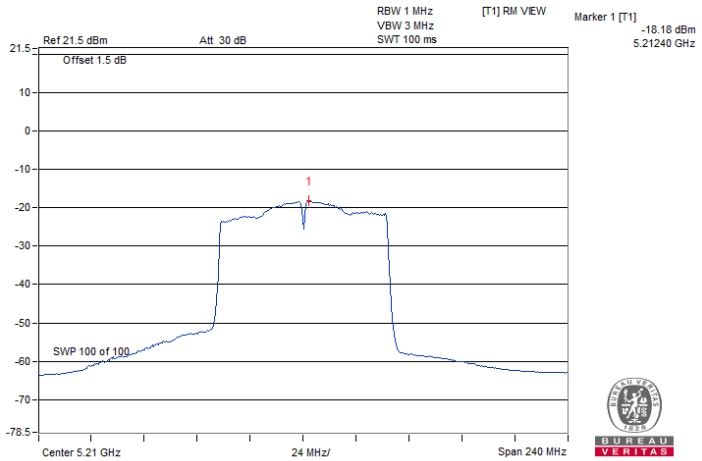


802.11ac (VHT20) : CH 40

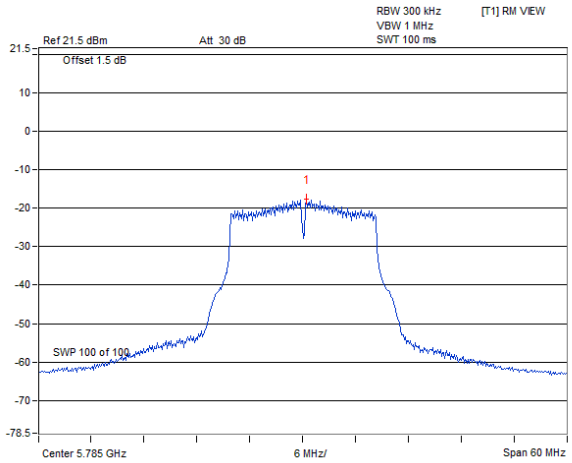
Spectrum Plot of Maximum Value



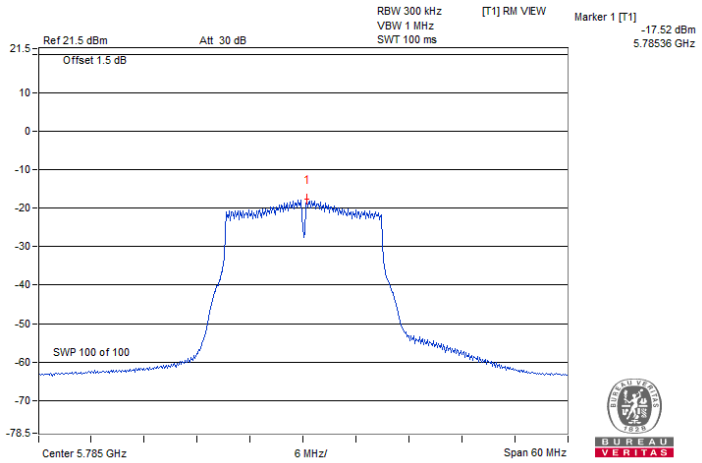
802.11ac (VHT40) : CH 46



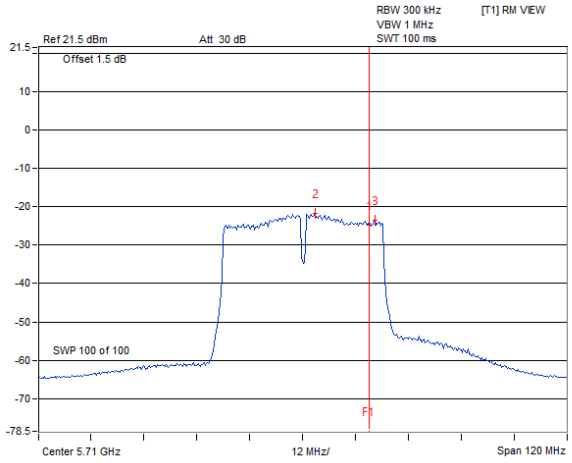
802.11ac (VHT80) : CH 42



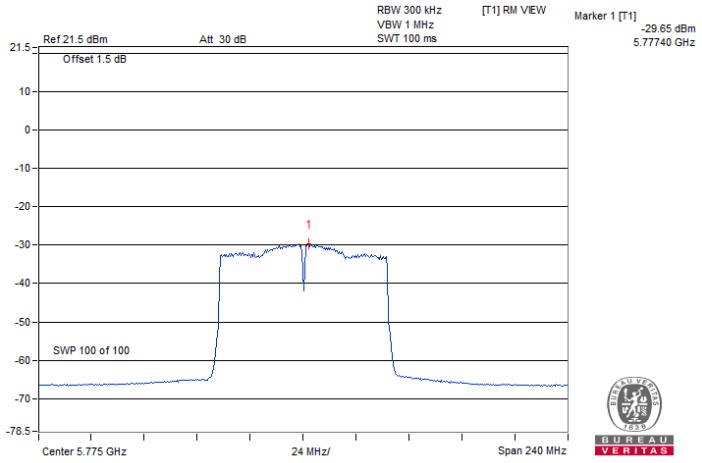
802.11a : CH 157



802.11ac (VHT20) : CH 157



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



802.11ac (VHT80) : CH 155

7.4 6 dB Bandwidth

Input Power:	5 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Henry Hsu

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
144 (U-NII-3)	5720	3.23	0.5	Pass
149	5745	16.35	0.5	Pass
157	5785	16.37	0.5	Pass
165	5825	16.35	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
144 (U-NII-3)	5720	3.82	0.5	Pass
149	5745	17.3	0.5	Pass
157	5785	17.34	0.5	Pass
165	5825	17.1	0.5	Pass

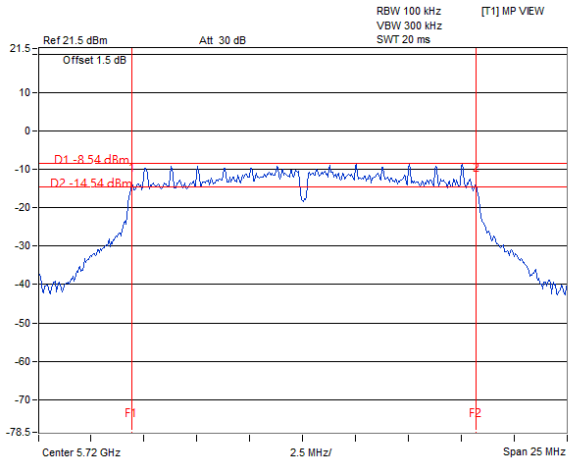
802.11ac (VHT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
142 (U-NII-3)	5710	3.21	0.5	Pass
151	5755	35.8	0.5	Pass
159	5795	35.72	0.5	Pass

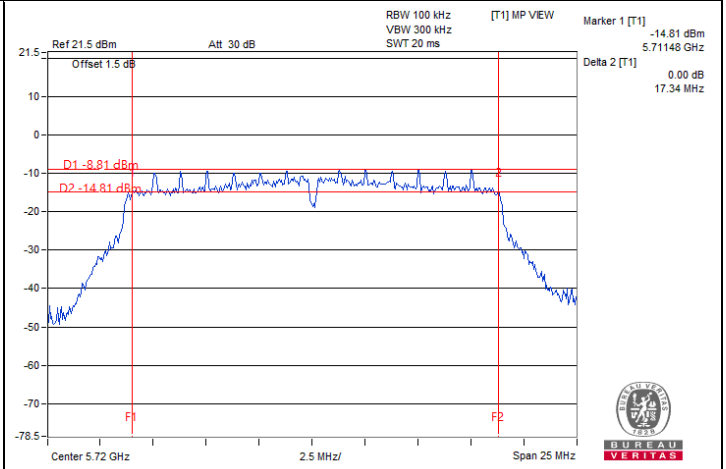
802.11ac (VHT80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
138 (U-NII-3)	5690	3.03	0.5	Pass
155	5775	75.57	0.5	Pass

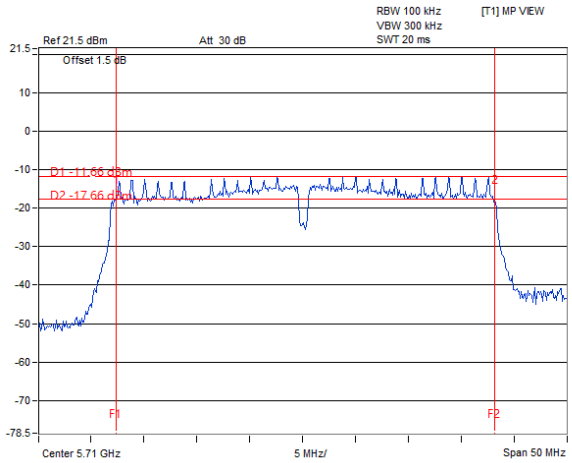
Spectrum Plot of Minimum Value



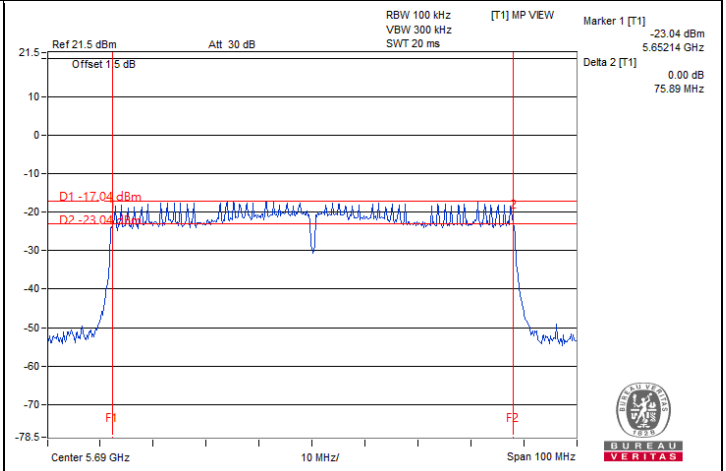
802.11a : CH 144 (U-NII-3)



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



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



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

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

7.5 Occupied Bandwidth

Input Power:	5 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Henry Hsu

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.04
40	5200	17.16
48	5240	16.92
52	5260	17.52
60	5300	17.28
64	5320	17.4
100	5500	17.16
116	5580	16.92
140	5700	17.16
144 (U-NII-2C)	5720	13.52
144 (U-NII-3)	5720	3.64
149	5745	17.02
157	5785	17.11
165	5825	17.02

802.11ac (VHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.12
40	5200	18.12
48	5240	17.88
52	5260	18.12
60	5300	18.12
64	5320	18.12
100	5500	18.12
116	5580	18
140	5700	18.12
144 (U-NII-2C)	5720	14
144 (U-NII-3)	5720	4
149	5745	17.98
157	5785	18.08
165	5825	18.17

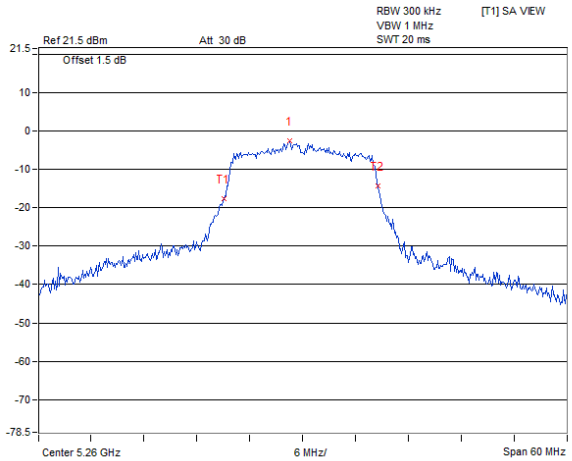
802.11ac (VHT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.48
46	5230	36.72
54	5270	36.48
62	5310	36.72
102	5510	36.48
110	5550	36.54
134	5670	36.72
142 (U-NII-2C)	5710	33.24
142 (U-NII-3)	5710	3.24
151	5755	36.73
159	5795	36.54

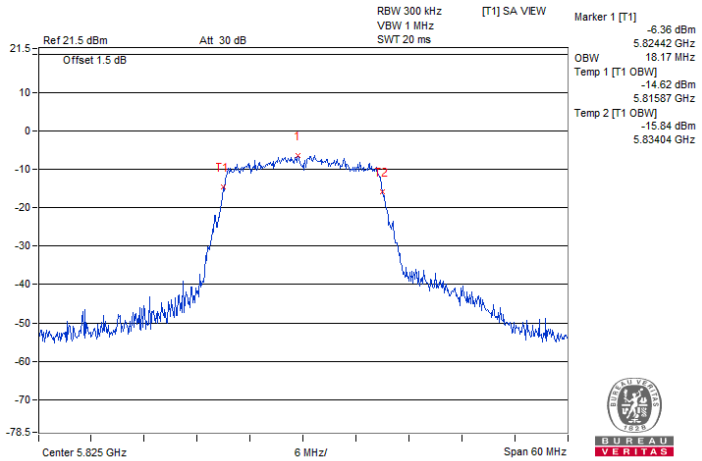
802.11ac (VHT80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.36
58	5290	75.84
106	5530	75.38
122	5610	75.84
138 (U-NII-2C)	5690	72.92
138 (U-NII-3)	5690	2.92
155	5775	75.77

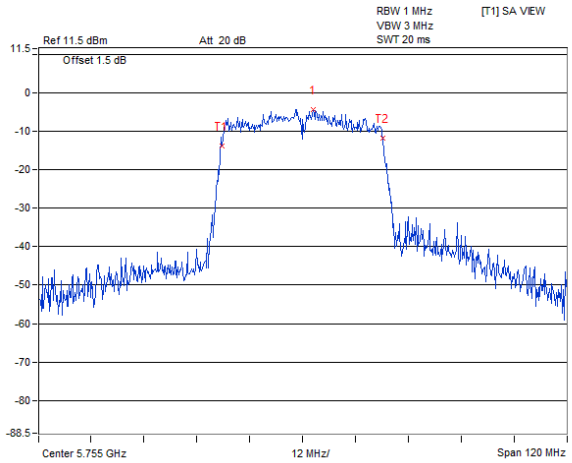
Spectrum Plot of Maximum Value



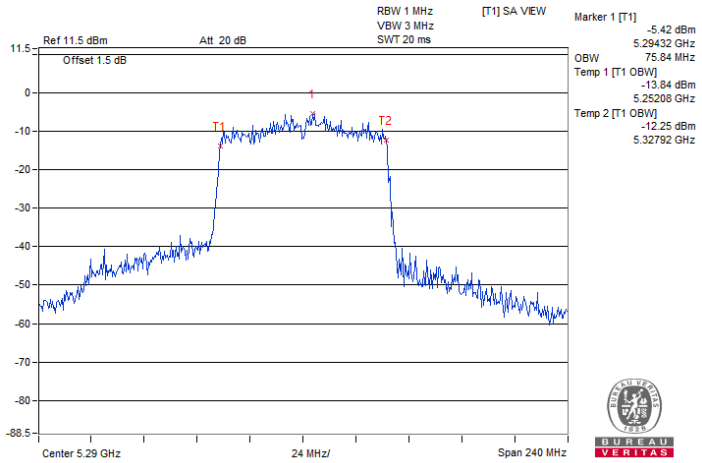
802.11a : CH 52



802.11ac (VHT20) : CH 165



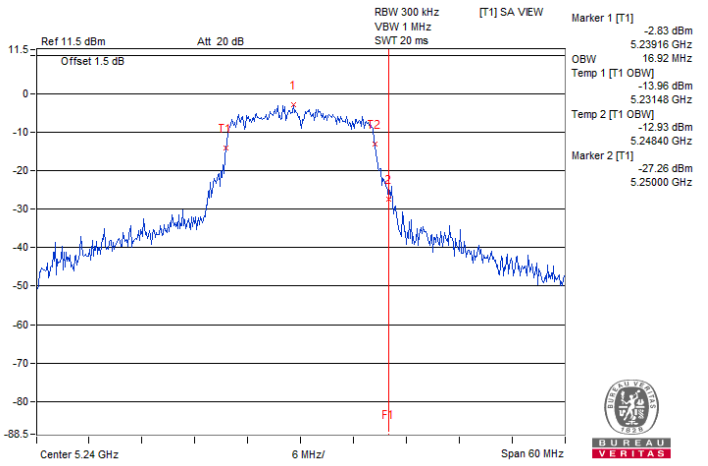
802.11ac (VHT40) : CH 151



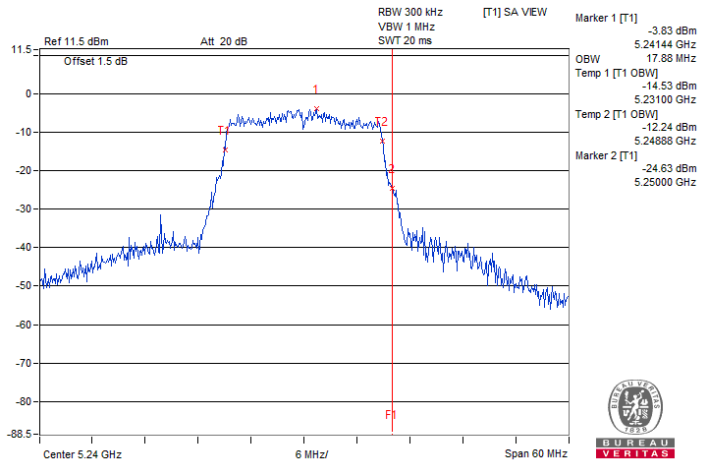
802.11ac (VHT80) : CH 58

Spectrum Plot for nearby DFS band

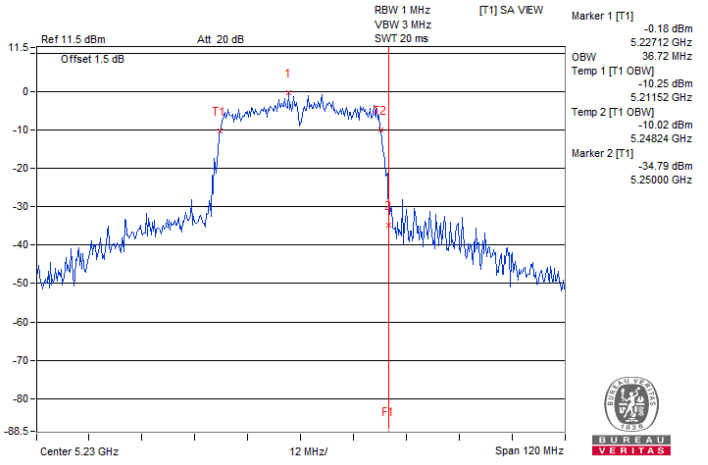
(DFS is required, if 99% OCP straddle into U-NII-2A)



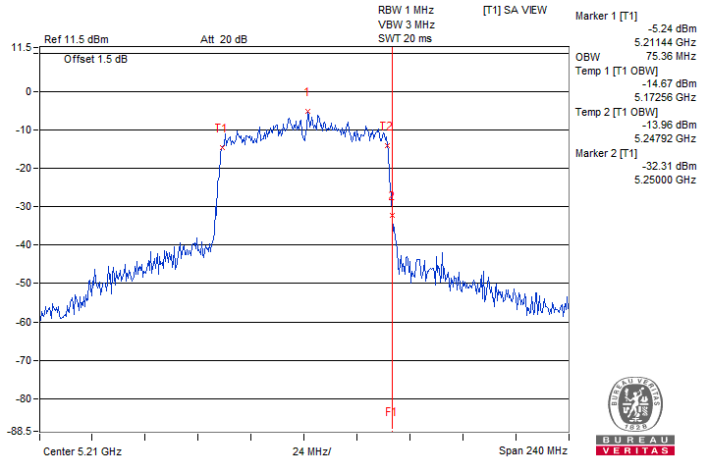
802.11a : CH 48



802.11ac (VHT20) : CH 48



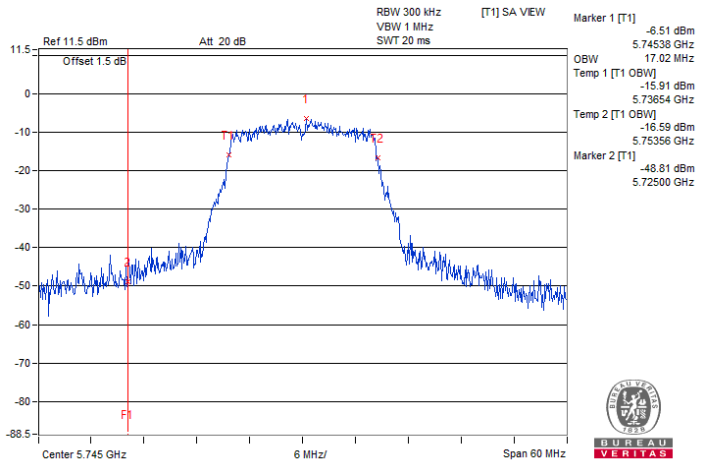
802.11ac (VHT40) : CH 46



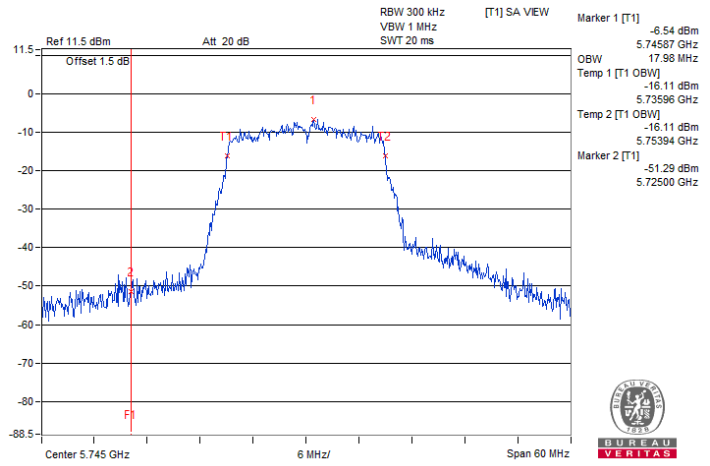
802.11ac (VHT80) : CH 42

Spectrum Plot for nearby DFS band

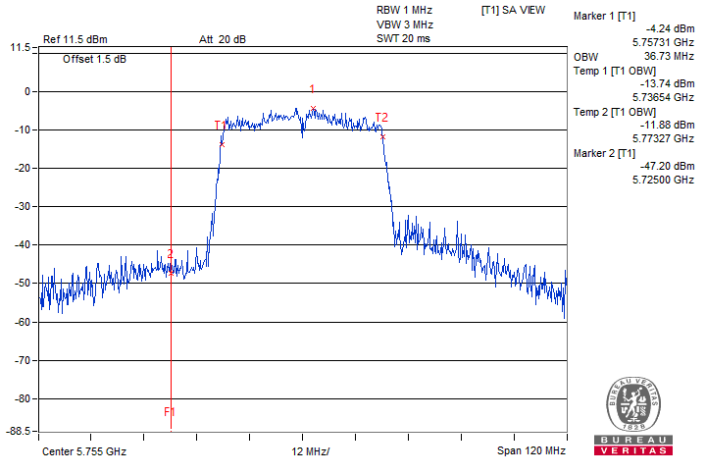
(DFS is required, if 99% OCP straddle into U-NII-2C)



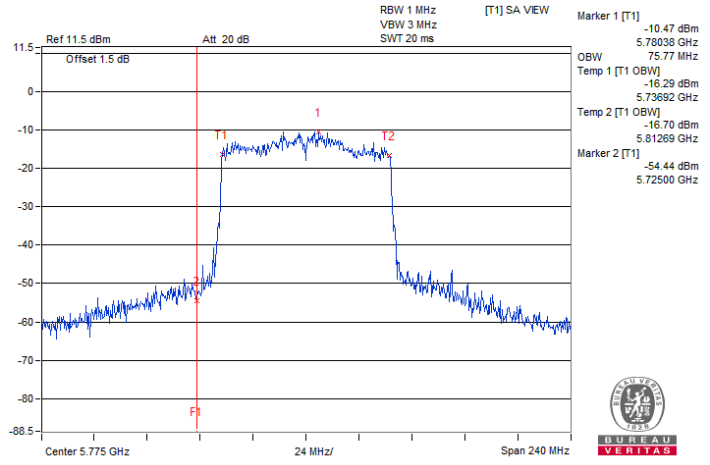
802.11a : CH 149



802.11ac (VHT20) : CH 149



802.11ac (VHT40) : CH 151



802.11ac (VHT80) : CH 155

7.6 Frequency Stability

Input Power:	5 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Henry Hsu

Frequency Stability Versus Temperature									
Operating Frequency: 5180 MHz									
Temp. (℃)	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
60	5	5180.0002	Pass	5179.9991	Pass	5180.0011	Pass	5180.0002	Pass
50	5	5179.9865	Pass	5179.9876	Pass	5179.9859	Pass	5179.9858	Pass
40	5	5179.9824	Pass	5179.9799	Pass	5179.9821	Pass	5179.9782	Pass
30	5	5179.9937	Pass	5179.9902	Pass	5179.9888	Pass	5179.9892	Pass
20	5	5180.0053	Pass	5180.0051	Pass	5180.0044	Pass	5180.0063	Pass
10	5	5180.003	Pass	5180	Pass	5180.0025	Pass	5180.0031	Pass
0	5	5180.0179	Pass	5180.0182	Pass	5180.0197	Pass	5180.0218	Pass
-10	5	5180.0182	Pass	5180.0192	Pass	5180.0187	Pass	5180.0216	Pass
-20	5	5179.9752	Pass	5179.9773	Pass	5179.974	Pass	5179.9734	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (℃)	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	5.75	5180.012	Pass	5180.0129	Pass	5180.013	Pass	5180.0128	Pass
	5	5180.0053	Pass	5180.0051	Pass	5180.0044	Pass	5180.0063	Pass
	4.25	5180.0088	Pass	5180.0081	Pass	5180.0088	Pass	5180.0119	Pass

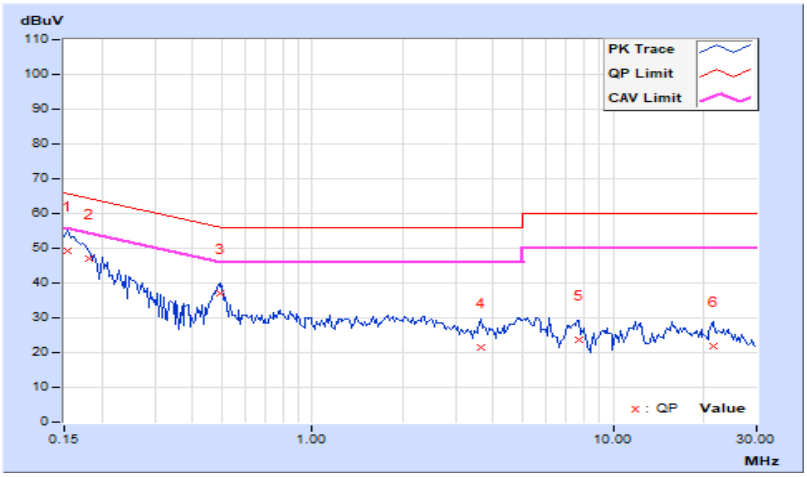
7.7 AC Power Conducted Emissions

RF Mode	802.11ac (VHT20)	**Channel**	CH 40：5200 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 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	38.79	24.66	49.11	34.98	65.79	55.79	-16.68	-20.81
2	0.18125	10.33	36.56	20.64	46.89	30.97	64.43	54.43	-17.54	-23.46
3	0.49375	10.42	26.49	14.51	36.91	24.93	56.10	46.10	-19.19	-21.17
4	3.63281	10.50	11.08	3.52	21.58	14.02	56.00	46.00	-34.42	-31.98
5	7.71484	10.55	13.26	7.59	23.81	18.14	60.00	50.00	-36.19	-31.86
6	21.59766	10.69	11.20	6.14	21.89	16.83	60.00	50.00	-38.11	-33.17

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

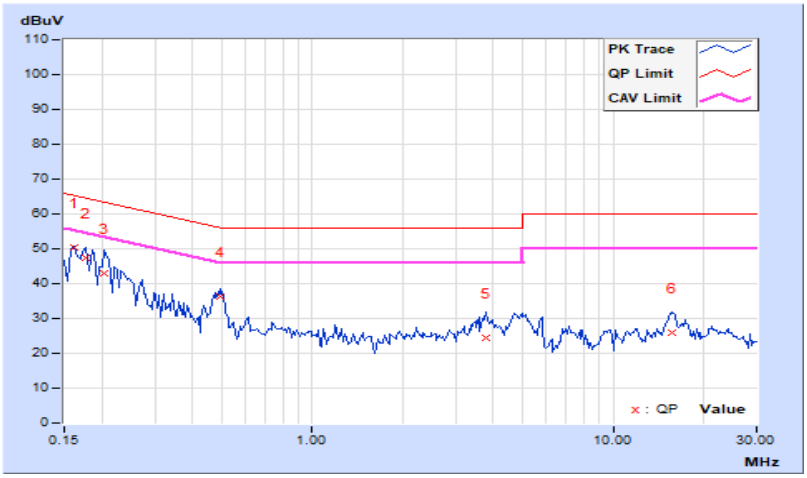


RF Mode	802.11ac (VHT20)	**Channel**	CH 40：5200 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 67% RH
Tested By	Adair Peng		

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	**0.16172**	**10.34**	**39.91**	**23.03**	**50.25**	**33.37**	**65.38**	**55.38**	**-15.13**	**-22.01**
2	0.17734	10.35	37.03	20.25	47.38	30.60	64.61	54.61	-17.23	-24.01
3	0.20469	10.36	32.77	20.02	43.13	30.38	63.42	53.42	-20.29	-23.04
4	0.49375	10.44	26.03	15.46	36.47	25.90	56.10	46.10	-19.63	-20.20
5	3.76563	10.54	13.86	6.05	24.40	16.59	56.00	46.00	-31.60	-29.41
6	15.62891	10.81	15.27	8.53	26.08	19.34	60.00	50.00	-33.92	-30.66

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



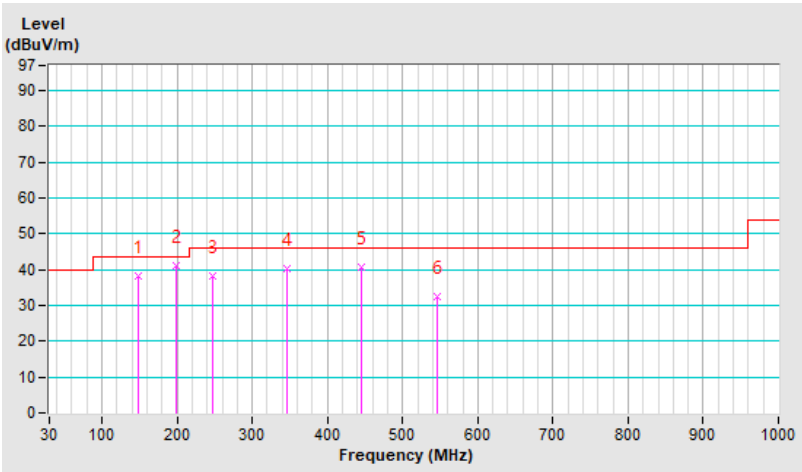
7.8 Unwanted Emissions below 1 GHz

RF Mode	802.11ac (VHT20)	**Channel**	CH 40：5200 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	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	148.33	38.3 QP	43.5	-5.2	1.54 H	174	55.9	-17.6
2	**198.64**	**40.9 QP**	**43.5**	**-2.6**	**1.15 H**	**210**	**61.9**	**-21.0**
3	247.30	38.2 QP	46.0	-7.8	1.54 H	290	57.2	-19.0
4	346.27	40.1 QP	46.0	-5.9	1.17 H	162	56.3	-16.2
5	445.16	40.5 QP	46.0	-5.5	1.75 H	135	54.0	-13.5
6	545.07	32.3 QP	46.0	-13.7	1.62 H	118	44.1	-11.8

Remarks:

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

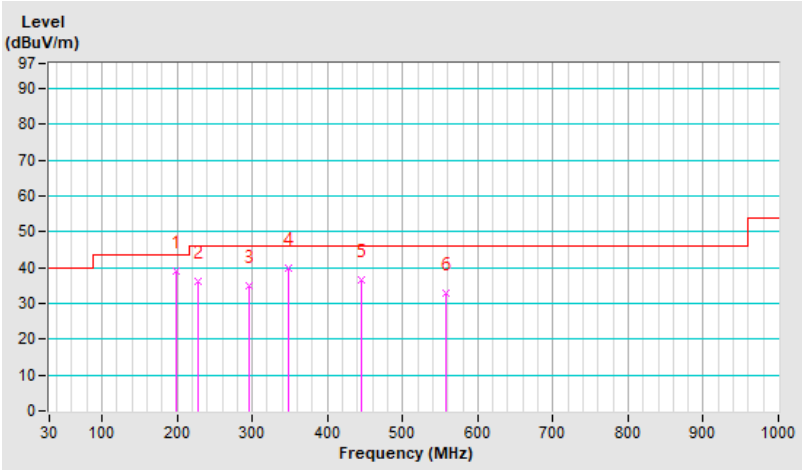


RF Mode	802.11ac (VHT20)	**Channel**	CH 40：5200 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 60% RH
Tested By	Charles Hsiao		

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	198.00	38.9 QP	43.5	-4.6	1.15 V	208	59.8	-20.9
2	228.84	36.1 QP	46.0	-9.9	1.45 V	201	56.6	-20.5
3	296.69	34.9 QP	46.0	-11.1	1.15 V	324	52.2	-17.3
4	348.87	40.0 QP	46.0	-6.0	1.11 V	141	56.2	-16.2
5	444.48	36.5 QP	46.0	-9.5	1.53 V	229	50.0	-13.5
6	557.84	32.8 QP	46.0	-13.2	1.45 V	116	44.4	-11.6

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.7 PK	74.0	-15.3	1.01 H	91	46.2	12.5
2	5150.00	47.7 AV	54.0	-6.3	1.01 H	91	35.2	12.5
3	*5180.00	101.2 PK			1.01 H	91	58.7	42.5
4	*5180.00	93.2 AV			1.01 H	91	50.7	42.5
5	#10360.00	57.3 PK	68.2	-10.9	1.58 H	18	38.8	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	56.4 PK	74.0	-17.6	2.00 V	286	43.9	12.5
2	5150.00	45.8 AV	54.0	-8.2	2.00 V	286	33.3	12.5
3	*5180.00	89.2 PK			2.00 V	286	46.7	42.5
4	*5180.00	81.1 AV			2.00 V	286	38.6	42.5
5	#10360.00	56.6 PK	68.2	-11.6	1.77 V	2	38.1	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.

RF Mode	802.11a	**Channel**	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=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	*5200.00	100.0 PK			1.00 H	91	57.5	42.5
2	*5200.00	92.3 AV			1.00 H	91	49.8	42.5
3	#10400.00	56.8 PK	68.2	-11.4	1.59 H	127	38.3	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	*5200.00	90.3 PK			2.00 V	284	47.8	42.5
2	*5200.00	82.3 AV			2.00 V	284	39.8	42.5
3	#10400.00	56.4 PK	68.2	-11.8	1.18 V	24	37.9	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.

RF Mode	802.11a	Channel	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=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	*5240.00	93.6 PK			1.23 H	77	50.9	42.7
2	*5240.00	86.9 AV			1.23 H	77	44.2	42.7
3	5350.00	56.0 PK	74.0	-18.0	1.23 H	77	43.1	12.9
4	5350.00	46.4 AV	54.0	-7.6	1.23 H	77	33.5	12.9
5	#10480.00	56.5 PK	68.2	-11.7	2.14 H	82	38.2	18.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	89.1 PK			2.00 V	286	46.4	42.7
2	*5240.00	81.3 AV			2.00 V	286	38.6	42.7
3	5350.00	55.4 PK	74.0	-18.6	2.00 V	286	42.5	12.9
4	5350.00	45.3 AV	54.0	-8.7	2.00 V	286	32.4	12.9
5	#10480.00	56.7 PK	68.2	-11.5	1.64 V	229	38.4	18.3

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	57.2 PK	74.0	-16.8	1.01 H	91	44.7	12.5
2	5150.00	47.1 AV	54.0	-6.9	1.01 H	91	34.6	12.5
3	*5180.00	100.0 PK			1.01 H	91	57.5	42.5
4	*5180.00	92.3 AV			1.01 H	91	49.8	42.5
5	#10360.00	57.7 PK	68.2	-10.5	1.15 H	35	39.2	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	53.5 PK	74.0	-20.5	2.00 V	286	41.0	12.5
2	5150.00	44.8 AV	54.0	-9.2	2.00 V	286	32.3	12.5
3	*5180.00	89.7 PK			2.00 V	286	47.2	42.5
4	*5180.00	81.6 AV			2.00 V	286	39.1	42.5
5	#10360.00	57.4 PK	68.2	-10.8	1.45 V	18	38.9	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5200.00	99.8 PK			1.01 H	91	57.3	42.5
2	*5200.00	91.8 AV			1.01 H	91	49.3	42.5
3	#10400.00	57.1 PK	68.2	-11.1	1.15 H	226	38.6	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	*5200.00	88.8 PK			2.00 V	286	46.3	42.5
2	*5200.00	80.5 AV			2.00 V	286	38.0	42.5
3	#10400.00	56.7 PK	68.2	-11.5	1.88 V	21	38.2	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	100.5 PK			1.01 H	91	57.8	42.7
2	*5240.00	92.7 AV			1.01 H	91	50.0	42.7
3	5350.00	55.5 PK	74.0	-18.5	1.01 H	91	42.6	12.9
4	5350.00	45.3 AV	54.0	-8.7	1.01 H	91	32.4	12.9
5	#10480.00	57.7 PK	68.2	-10.5	1.17 H	4	39.4	18.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	88.7 PK			2.00 V	286	46.0	42.7
2	*5240.00	80.6 AV			2.00 V	286	37.9	42.7
3	5350.00	55.0 PK	74.0	-19.0	2.00 V	286	42.1	12.9
4	5350.00	45.1 AV	54.0	-8.9	2.00 V	286	32.2	12.9
5	#10480.00	57.0 PK	68.2	-11.2	1.34 V	322	38.7	18.3

Remarks:

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

RF Mode	802.11ac (VHT40)	Channel	CH 38：5190 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	63.4 PK	74.0	-10.6	1.01 H	91	50.9	12.5
2	5150.00	50.4 AV	54.0	-3.6	1.01 H	91	37.9	12.5
3	*5190.00	94.3 PK			1.01 H	91	51.8	42.5
4	*5190.00	87.2 AV			1.01 H	91	44.7	42.5
5	5350.00	55.2 PK	74.0	-18.8	1.01 H	91	42.3	12.9
6	5350.00	45.1 AV	54.0	-8.9	1.01 H	91	32.2	12.9
7	#10380.00	56.4 PK	68.2	-11.8	1.99 H	34	38.0	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	56.1 PK	74.0	-17.9	2.00 V	286	43.6	12.5
2	5150.00	45.4 AV	54.0	-8.6	2.00 V	286	32.9	12.5
3	*5190.00	83.1 PK			2.00 V	286	40.6	42.5
4	*5190.00	76.2 AV			2.00 V	286	33.7	42.5
5	5350.00	55.0 PK	74.0	-19.0	2.00 V	286	42.1	12.9
6	5350.00	45.0 AV	54.0	-9.0	2.00 V	286	32.1	12.9
7	#10380.00	55.7 PK	68.2	-12.5	1.45 V	17	37.3	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.

RF Mode	802.11ac (VHT40)	Channel	CH 46：5230 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.0 PK	74.0	-14.0	1.01 H	91	47.5	12.5
2	5150.00	46.5 AV	54.0	-7.5	1.01 H	91	34.0	12.5
3	*5230.00	97.4 PK			1.01 H	91	54.8	42.6
4	*5230.00	90.3 AV			1.01 H	91	47.7	42.6
5	5350.00	55.9 PK	74.0	-18.1	1.01 H	91	43.0	12.9
6	5350.00	45.8 AV	54.0	-8.2	1.01 H	91	32.9	12.9
7	#10460.00	56.0 PK	68.2	-12.2	1.99 H	36	37.7	18.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.2 PK	74.0	-18.8	2.00 V	286	42.7	12.5
2	5150.00	45.3 AV	54.0	-8.7	2.00 V	286	32.8	12.5
3	*5230.00	86.1 PK			2.00 V	286	43.5	42.6
4	*5230.00	79.2 AV			2.00 V	286	36.6	42.6
5	5350.00	55.4 PK	74.0	-18.6	2.00 V	286	42.5	12.9
6	5350.00	45.5 AV	54.0	-8.5	2.00 V	286	32.6	12.9
7	#10460.00	56.2 PK	68.2	-12.0	1.05 V	200	37.9	18.3

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.0 PK	74.0	-13.0	1.00 H	73	48.5	12.5
2	**5150.00**	**52.6 AV**	**54.0**	**-1.4**	**1.00 H**	**73**	**40.1**	**12.5**
3	*5210.00	94.7 PK			1.00 H	73	52.1	42.6
4	*5210.00	87.4 AV			1.00 H	73	44.8	42.6
5	5350.00	57.2 PK	74.0	-16.8	1.00 H	73	44.3	12.9
6	5350.00	47.4 AV	54.0	-6.6	1.00 H	73	34.5	12.9
7	#10420.00	55.2 PK	68.2	-13.0	1.83 H	112	36.7	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	5150.00	56.6 PK	74.0	-17.4	2.00 V	277	44.1	12.5
2	5150.00	47.9 AV	54.0	-6.1	2.00 V	277	35.4	12.5
3	*5210.00	84.7 PK			2.00 V	277	42.1	42.6
4	*5210.00	76.2 AV			2.00 V	277	33.6	42.6
5	5350.00	57.0 PK	74.0	-17.0	2.00 V	277	44.1	12.9
6	5350.00	47.2 AV	54.0	-6.8	2.00 V	277	34.3	12.9
7	#10420.00	55.6 PK	68.2	-12.6	2.61 V	182	37.1	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	55.4 PK	74.0	-18.6	1.01 H	91	42.9	12.5
2	5150.00	45.6 AV	54.0	-8.4	1.01 H	91	33.1	12.5
3	*5260.00	101.3 PK			1.01 H	91	58.6	42.7
4	*5260.00	94.1 AV			1.01 H	91	51.4	42.7
5	#10520.00	56.3 PK	68.2	-11.9	1.59 H	326	38.1	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	55.0 PK	74.0	-19.0	2.00 V	286	42.5	12.5
2	5150.00	45.1 AV	54.0	-8.9	2.00 V	286	32.6	12.5
3	*5260.00	90.1 PK			2.00 V	286	47.4	42.7
4	*5260.00	83.1 AV			2.00 V	286	40.4	42.7
5	#10520.00	57.0 PK	68.2	-11.2	1.47 V	7	38.8	18.2

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5300.00	97.6 PK			1.01 H	91	54.8	42.8
2	*5300.00	90.0 AV			1.01 H	91	47.2	42.8
3	10600.00	57.6 PK	74.0	-16.4	1.11 H	141	39.2	18.4
4	10600.00	48.0 AV	54.0	-6.0	1.11 H	141	29.6	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	*5300.00	86.1 PK			2.00 V	286	43.3	42.8
2	*5300.00	79.2 AV			2.00 V	286	36.4	42.8
3	10600.00	57.2 PK	74.0	-16.8	1.64 V	188	38.8	18.4
4	10600.00	47.3 AV	54.0	-6.7	1.64 V	188	28.9	18.4

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	100.3 PK			1.01 H	91	57.4	42.9
2	*5320.00	93.1 AV			1.01 H	91	50.2	42.9
3	5350.00	60.4 PK	74.0	-13.6	1.01 H	91	47.5	12.9
4	5350.00	50.3 AV	54.0	-3.7	1.01 H	91	37.4	12.9
5	10640.00	57.6 PK	74.0	-16.4	1.15 H	196	39.2	18.4
6	10640.00	48.3 AV	54.0	-5.7	1.15 H	196	29.9	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	*5320.00	86.0 PK			2.00 V	286	43.1	42.9
2	*5320.00	79.4 AV			2.00 V	286	36.5	42.9
3	5350.00	56.1 PK	74.0	-17.9	2.00 V	286	43.2	12.9
4	5350.00	45.9 AV	54.0	-8.1	2.00 V	286	33.0	12.9
5	10640.00	57.2 PK	74.0	-16.8	1.05 V	141	38.8	18.4
6	10640.00	47.1 AV	54.0	-6.9	1.05 V	141	28.7	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.3 PK	74.0	-18.7	1.01 H	91	42.8	12.5
2	5150.00	45.4 AV	54.0	-8.6	1.01 H	91	32.9	12.5
3	*5260.00	101.7 PK			1.01 H	91	59.0	42.7
4	*5260.00	94.4 AV			1.01 H	91	51.7	42.7
5	#10520.00	57.5 PK	68.2	-10.7	1.75 H	344	39.3	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.1 PK	74.0	-18.9	2.00 V	286	42.6	12.5
2	5150.00	45.3 AV	54.0	-8.7	2.00 V	286	32.8	12.5
3	*5260.00	90.2 PK			2.00 V	286	47.5	42.7
4	*5260.00	83.7 AV			2.00 V	286	41.0	42.7
5	#10520.00	56.9 PK	68.2	-11.3	1.64 V	182	38.7	18.2

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5300.00	100.4 PK			1.01 H	91	57.6	42.8
2	*5300.00	93.6 AV			1.01 H	91	50.8	42.8
3	10600.00	57.7 PK	74.0	-16.3	1.45 H	144	39.3	18.4
4	10600.00	47.9 AV	54.0	-6.1	1.45 H	144	29.5	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	*5300.00	85.8 PK			2.00 V	286	43.0	42.8
2	*5300.00	78.4 AV			2.00 V	286	35.6	42.8
3	10600.00	57.3 PK	74.0	-16.7	1.45 V	177	38.9	18.4
4	10600.00	47.7 AV	54.0	-6.3	1.45 V	177	29.3	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	98.3 PK			1.01 H	91	55.4	42.9
2	*5320.00	91.1 AV			1.01 H	91	48.2	42.9
3	5350.00	56.2 PK	74.0	-17.8	1.01 H	91	43.3	12.9
4	5350.00	45.9 AV	54.0	-8.1	1.01 H	91	33.0	12.9
5	10640.00	57.6 PK	74.0	-16.4	1.05 H	220	39.2	18.4
6	10640.00	48.2 AV	54.0	-5.8	1.05 H	220	29.8	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	89.2 PK			2.00 V	286	46.3	42.9
2	*5320.00	82.4 AV			2.00 V	286	39.5	42.9
3	5350.00	55.3 PK	74.0	-18.7	2.00 V	286	42.4	12.9
4	5350.00	45.5 AV	54.0	-8.5	2.00 V	286	32.6	12.9
5	10640.00	57.1 PK	74.0	-16.9	1.44 V	194	38.7	18.4
6	10640.00	47.8 AV	54.0	-6.2	1.44 V	194	29.4	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.

RF Mode	802.11ac (VHT40)	Channel	CH 54：5270 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.4 PK	74.0	-18.6	1.01 H	91	42.9	12.5
2	5150.00	45.6 AV	54.0	-8.4	1.01 H	91	33.1	12.5
3	*5270.00	97.3 PK			1.01 H	91	54.6	42.7
4	*5270.00	90.2 AV			1.01 H	91	47.5	42.7
5	5350.00	55.8 PK	74.0	-18.2	1.01 H	91	42.9	12.9
6	5350.00	45.7 AV	54.0	-8.3	1.01 H	91	32.8	12.9
7	#10540.00	57.8 PK	68.2	-10.4	1.83 H	3	39.5	18.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.3 PK	74.0	-18.7	1.01 V	91	42.8	12.5
2	5150.00	45.4 AV	54.0	-8.6	1.01 V	91	32.9	12.5
3	*5270.00	88.3 PK			2.00 V	286	45.6	42.7
4	*5270.00	81.4 AV			2.00 V	286	38.7	42.7
5	5350.00	55.5 PK	74.0	-18.5	1.01 V	91	42.6	12.9
6	5350.00	45.5 AV	54.0	-8.5	1.01 V	91	32.6	12.9
7	#10540.00	57.2 PK	68.2	-11.0	1.42 V	1	38.9	18.3

Remarks:

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

RF Mode	802.11ac (VHT40)	**Channel**	CH 62：5310 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 60% RH
Tested By	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	55.3 PK	74.0	-18.7	1.01 H	91	42.8	12.5
2	5150.00	45.4 AV	54.0	-8.6	1.01 H	91	32.9	12.5
3	*5310.00	94.0 PK			1.01 H	91	51.2	42.8
4	*5310.00	87.2 AV			1.01 H	91	44.4	42.8
5	5350.00	58.2 PK	74.0	-15.8	1.01 H	91	45.3	12.9
6	5350.00	48.0 AV	54.0	-6.0	1.01 H	91	35.1	12.9
7	10620.00	57.8 PK	74.0	-16.2	1.15 H	195	39.4	18.4
8	10620.00	47.9 AV	54.0	-6.1	1.15 H	195	29.5	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	54.8 PK	74.0	-19.2	2.00 V	286	42.3	12.5
2	5150.00	44.9 AV	54.0	-9.1	2.00 V	286	32.4	12.5
3	*5310.00	85.0 PK			2.00 V	286	42.2	42.8
4	*5310.00	78.1 AV			2.00 V	286	35.3	42.8
5	5350.00	55.0 PK	74.0	-19.0	2.00 V	286	42.1	12.9
6	5350.00	45.0 AV	54.0	-9.0	2.00 V	286	32.1	12.9
7	10620.00	57.4 PK	74.0	-16.6	1.45 V	19	39.0	18.4
8	10620.00	47.3 AV	54.0	-6.7	1.45 V	19	28.9	18.4

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.2 PK	74.0	-17.8	1.01 H	91	43.7	12.5
2	5150.00	45.9 AV	54.0	-8.1	1.01 H	91	33.4	12.5
3	*5290.00	92.0 PK			1.01 H	91	49.2	42.8
4	*5290.00	85.4 AV			1.01 H	91	42.6	42.8
5	5350.00	57.0 PK	74.0	-17.0	1.01 H	91	44.1	12.9
6	5350.00	47.2 AV	54.0	-6.8	1.01 H	91	34.3	12.9
7	#10580.00	56.8 PK	68.2	-11.4	1.44 H	174	38.4	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	55.1 PK	74.0	-18.9	2.00 V	286	42.6	12.5
2	5150.00	44.8 AV	54.0	-9.2	2.00 V	286	32.3	12.5
3	*5290.00	83.3 PK			2.00 V	286	40.5	42.8
4	*5290.00	76.4 AV			2.00 V	286	33.6	42.8
5	5350.00	55.4 PK	74.0	-18.6	2.00 V	286	42.5	12.9
6	5350.00	45.6 AV	54.0	-8.4	2.00 V	286	32.7	12.9
7	#10580.00	56.4 PK	68.2	-11.8	1.27 V	210	38.0	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.

RF Mode	802.11a	Channel	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=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	5460.00	55.6 PK	74.0	-18.4	1.01 H	95	42.4	13.2
2	5460.00	45.6 AV	54.0	-8.4	1.01 H	95	32.4	13.2
3	#5470.00	58.4 PK	68.2	-9.8	1.01 H	95	45.2	13.2
4	*5500.00	95.1 PK			1.01 H	95	52.2	42.9
5	*5500.00	87.6 AV			1.01 H	95	44.7	42.9
6	11000.00	55.4 PK	74.0	-18.6	2.26 H	127	36.5	18.9
7	11000.00	45.8 AV	54.0	-8.2	2.26 H	127	26.9	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	55.6 PK	74.0	-18.4	2.00 V	285	42.4	13.2
2	5460.00	45.2 AV	54.0	-8.8	2.00 V	285	32.0	13.2
3	#5470.00	55.2 PK	68.2	-13.0	2.00 V	285	42.0	13.2
4	*5500.00	83.7 PK			2.00 V	285	40.8	42.9
5	*5500.00	77.0 AV			2.00 V	285	34.1	42.9
6	11000.00	56.0 PK	74.0	-18.0	1.52 V	84	37.1	18.9
7	11000.00	46.5 AV	54.0	-7.5	1.52 V	84	27.6	18.9

Remarks:

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

RF Mode	802.11a	**Channel**	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=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	*5580.00	97.8 PK			1.04 H	95	54.9	42.9
2	*5580.00	90.2 AV			1.04 H	95	47.3	42.9
3	11160.00	56.4 PK	74.0	-17.6	1.38 H	166	37.4	19.0
4	11160.00	46.7 AV	54.0	-7.3	1.38 H	166	27.7	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	*5580.00	86.3 PK			2.04 V	283	43.4	42.9
2	*5580.00	79.7 AV			2.04 V	283	36.8	42.9
3	11160.00	56.2 PK	74.0	-17.8	1.47 V	229	37.2	19.0
4	11160.00	46.6 AV	54.0	-7.4	1.47 V	229	27.6	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.

RF Mode	802.11a	Channel	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=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	*5700.00	93.0 PK			1.01 H	55	49.9	43.1
2	*5700.00	85.4 AV			1.01 H	55	42.3	43.1
3	#5725.00	56.0 PK	68.2	-12.2	1.01 H	55	42.8	13.2
4	11400.00	56.3 PK	74.0	-17.7	1.26 H	293	36.8	19.5
5	11400.00	46.6 AV	54.0	-7.4	1.26 H	293	27.1	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	85.2 PK			2.16 V	297	42.1	43.1
2	*5700.00	77.5 AV			2.16 V	297	34.4	43.1
3	#5725.00	56.3 PK	68.2	-11.9	2.16 V	297	43.1	13.2
4	11400.00	56.7 PK	74.0	-17.3	2.05 V	174	37.2	19.5
5	11400.00	47.0 AV	54.0	-7.0	2.05 V	174	27.5	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.

RF Mode	802.11a	Channel	CH 144：5720 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.5 PK	74.0	-18.5	1.00 H	100	42.3	13.2
2	5460.00	45.7 AV	54.0	-8.3	1.00 H	100	32.5	13.2
3	#5470.00	56.0 PK	68.2	-12.2	1.00 H	100	42.8	13.2
4	*5720.00	92.5 PK			1.00 H	100	49.2	43.3
5	*5720.00	85.2 AV			1.00 H	100	41.9	43.3
6	11440.00	58.2 PK	74.0	-15.8	1.59 H	6	38.5	19.7
7	11440.00	48.6 AV	54.0	-5.4	1.59 H	6	28.9	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.3 PK	74.0	-18.7	2.00 V	286	42.1	13.2
2	5460.00	45.4 AV	54.0	-8.6	2.00 V	286	32.2	13.2
3	#5470.00	55.6 PK	68.2	-12.6	2.00 V	286	42.4	13.2
4	*5720.00	86.1 PK			2.00 V	286	42.8	43.3
5	*5720.00	79.4 AV			2.00 V	286	36.1	43.3
6	11440.00	58.0 PK	74.0	-16.0	1.05 V	200	38.3	19.7
7	11440.00	48.1 AV	54.0	-5.9	1.05 V	200	28.4	19.7

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=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	5460.00	55.7 PK	74.0	-18.3	1.01 H	106	42.5	13.2
2	5460.00	45.5 AV	54.0	-8.5	1.01 H	106	32.3	13.2
3	#5470.00	55.8 PK	68.2	-12.4	1.01 H	106	42.6	13.2
4	*5500.00	94.8 PK			1.01 H	106	51.9	42.9
5	*5500.00	86.8 AV			1.01 H	106	43.9	42.9
6	11000.00	55.6 PK	74.0	-18.4	1.23 H	174	36.7	18.9
7	11000.00	46.0 AV	54.0	-8.0	1.23 H	174	27.1	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	56.2 PK	74.0	-17.8	2.03 V	293	43.0	13.2
2	5460.00	45.3 AV	54.0	-8.7	2.03 V	293	32.1	13.2
3	#5470.00	54.6 PK	68.2	-13.6	2.03 V	293	41.4	13.2
4	*5500.00	85.7 PK			2.03 V	293	42.8	42.9
5	*5500.00	77.1 AV			2.03 V	293	34.2	42.9
6	11000.00	55.8 PK	74.0	-18.2	2.52 V	75	36.9	18.9
7	11000.00	46.1 AV	54.0	-7.9	2.52 V	75	27.2	18.9

Remarks:

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

RF Mode	802.11ac (VHT20)	**Channel**	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=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	*5580.00	97.6 PK			1.04 H	95	54.7	42.9
2	*5580.00	89.5 AV			1.04 H	95	46.6	42.9
3	11160.00	56.1 PK	74.0	-17.9	1.38 H	165	37.1	19.0
4	11160.00	46.5 AV	54.0	-7.5	1.38 H	165	27.5	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	*5580.00	88.5 PK			2.04 V	283	45.6	42.9
2	*5580.00	79.8 AV			2.04 V	283	36.9	42.9
3	11160.00	56.6 PK	74.0	-17.4	1.47 V	229	37.6	19.0
4	11160.00	46.9 AV	54.0	-7.1	1.47 V	229	27.9	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.

RF Mode	802.11ac (VHT20)	**Channel**	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=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	*5700.00	92.3 PK			1.01 H	55	49.2	43.1
2	*5700.00	83.7 AV			1.01 H	55	40.6	43.1
3	#5725.00	56.4 PK	68.2	-11.8	1.01 H	55	43.2	13.2
4	11400.00	56.1 PK	74.0	-17.9	2.83 H	107	36.6	19.5
5	11400.00	46.5 AV	54.0	-7.5	2.83 H	107	27.0	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	83.4 PK			2.16 V	297	40.3	43.1
2	*5700.00	75.5 AV			2.16 V	297	32.4	43.1
3	#5725.00	55.3 PK	68.2	-12.9	2.16 V	297	42.1	13.2
4	11400.00	55.9 PK	74.0	-18.1	2.44 V	136	36.4	19.5
5	11400.00	46.3 AV	54.0	-7.7	2.44 V	136	26.8	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.

RF Mode	802.11ac (VHT20)	Channel	CH 144：5720 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.6 PK	74.0	-18.4	1.00 H	91	42.4	13.2
2	5460.00	45.5 AV	54.0	-8.5	1.00 H	91	32.3	13.2
3	#5470.00	55.8 PK	68.2	-12.4	1.00 H	91	42.6	13.2
4	*5720.00	91.1 PK			1.00 H	91	47.8	43.3
5	*5720.00	84.0 AV			1.00 H	91	40.7	43.3
6	11440.00	58.5 PK	74.0	-15.5	1.75 H	108	38.8	19.7
7	11440.00	48.7 AV	54.0	-5.3	1.75 H	108	29.0	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.4 PK	74.0	-18.6	2.00 V	286	42.2	13.2
2	5460.00	45.3 AV	54.0	-8.7	2.00 V	286	32.1	13.2
3	#5470.00	55.6 PK	68.2	-12.6	2.00 V	286	42.4	13.2
4	*5720.00	86.3 PK			2.00 V	286	43.0	43.3
5	*5720.00	79.1 AV			2.00 V	286	35.8	43.3
6	11440.00	58.2 PK	74.0	-15.8	1.57 V	199	38.5	19.7
7	11440.00	48.0 AV	54.0	-6.0	1.57 V	199	28.3	19.7

Remarks:

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

RF Mode	802.11ac (VHT40)	**Channel**	CH 102：5510 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=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	5460.00	56.4 PK	74.0	-17.6	1.01 H	106	43.2	13.2
2	5460.00	44.0 AV	54.0	-10.0	1.01 H	106	30.8	13.2
3	#5470.00	58.7 PK	68.2	-9.5	1.01 H	106	45.5	13.2
4	*5510.00	91.1 PK			1.01 H	106	48.1	43.0
5	*5510.00	83.2 AV			1.01 H	106	40.2	43.0
6	#5725.00	55.1 PK	68.2	-13.1	1.01 H	106	41.9	13.2
7	11020.00	55.6 PK	74.0	-18.4	2.11 H	52	36.8	18.8
8	11020.00	46.1 AV	54.0	-7.9	2.11 H	52	27.3	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	5460.00	55.8 PK	74.0	-18.2	2.03 V	312	42.6	13.2
2	5460.00	45.3 AV	54.0	-8.7	2.03 V	312	32.1	13.2
3	#5470.00	55.3 PK	68.2	-12.9	2.03 V	312	42.1	13.2
4	*5510.00	83.6 PK			2.03 V	312	40.6	43.0
5	*5510.00	74.2 AV			2.03 V	312	31.2	43.0
6	#5725.00	55.7 PK	68.2	-12.5	2.03 V	312	42.5	13.2
7	11020.00	55.5 PK	74.0	-18.5	1.83 V	162	36.7	18.8
8	11020.00	46.0 AV	54.0	-8.0	1.83 V	162	27.2	18.8

Remarks:

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

RF Mode	802.11ac (VHT40)	**Channel**	CH 110：5550 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=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	*5550.00	95.7 PK			1.04 H	84	52.7	43.0
2	*5550.00	88.0 AV			1.04 H	84	45.0	43.0
3	11100.00	56.3 PK	74.0	-17.7	1.59 H	76	37.3	19.0
4	11100.00	46.6 AV	54.0	-7.4	1.59 H	76	27.6	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	*5550.00	88.1 PK			2.06 V	299	45.1	43.0
2	*5550.00	78.6 AV			2.06 V	299	35.6	43.0
3	11100.00	55.4 PK	74.0	-18.6	1.72 V	215	36.4	19.0
4	11100.00	45.6 AV	54.0	-8.4	1.72 V	215	26.6	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.

RF Mode	802.11ac (VHT40)	Channel	CH 134：5670 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=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	5460.00	55.8 PK	74.0	-18.2	1.01 H	109	42.6	13.2
2	5460.00	45.2 AV	54.0	-8.8	1.01 H	109	32.0	13.2
3	#5470.00	54.4 PK	68.2	-13.8	1.01 H	109	41.2	13.2
4	*5670.00	88.3 PK			1.01 H	109	45.2	43.1
5	*5670.00	80.0 AV			1.01 H	109	36.9	43.1
6	#5725.00	55.1 PK	68.2	-13.1	1.01 H	109	41.9	13.2
7	11340.00	56.6 PK	74.0	-17.4	1.53 H	92	37.4	19.2
8	11340.00	46.8 AV	54.0	-7.2	1.53 H	92	27.6	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	56.3 PK	74.0	-17.7	2.16 V	302	43.1	13.2
2	5460.00	45.3 AV	54.0	-8.7	2.16 V	302	32.1	13.2
3	#5470.00	54.8 PK	68.2	-13.4	2.16 V	302	41.6	13.2
4	*5670.00	81.5 PK			2.16 V	302	38.4	43.1
5	*5670.00	73.3 AV			2.16 V	302	30.2	43.1
6	#5725.00	56.0 PK	68.2	-12.2	2.16 V	302	42.8	13.2
7	11340.00	56.3 PK	74.0	-17.7	2.75 V	120	37.1	19.2
8	11340.00	46.6 AV	54.0	-7.4	2.75 V	120	27.4	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.

RF Mode	802.11ac (VHT40)	Channel	CH 142：5710 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.6 PK	74.0	-18.4	1.00 H	83	42.4	13.2
2	5460.00	45.7 AV	54.0	-8.3	1.00 H	83	32.5	13.2
3	#5470.00	56.0 PK	68.2	-12.2	1.00 H	83	42.8	13.2
4	*5710.00	87.4 PK			1.00 H	83	44.3	43.1
5	*5710.00	80.0 AV			1.00 H	83	36.9	43.1
6	11420.00	58.6 PK	74.0	-15.4	1.92 H	306	39.1	19.5
7	11420.00	48.3 AV	54.0	-5.7	1.92 H	306	28.8	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	5460.00	55.3 PK	74.0	-18.7	2.00 V	286	42.1	13.2
2	5460.00	45.0 AV	54.0	-9.0	2.00 V	286	31.8	13.2
3	#5470.00	55.5 PK	68.2	-12.7	2.00 V	286	42.3	13.2
4	*5710.00	83.9 PK			2.00 V	286	40.8	43.1
5	*5710.00	76.4 AV			2.00 V	286	33.3	43.1
6	11420.00	58.1 PK	74.0	-15.9	1.05 V	250	38.6	19.5
7	11420.00	48.0 AV	54.0	-6.0	1.05 V	250	28.5	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.

RF Mode	802.11ac (VHT80)	Channel	CH 106：5530 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=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	5460.00	57.1 PK	74.0	-16.9	1.01 H	106	43.9	13.2
2	5460.00	46.5 AV	54.0	-7.5	1.01 H	106	33.3	13.2
3	#5470.00	58.4 PK	68.2	-9.8	1.01 H	106	45.2	13.2
4	*5530.00	87.9 PK			1.01 H	106	44.9	43.0
5	*5530.00	79.6 AV			1.01 H	106	36.6	43.0
6	#5725.00	56.5 PK	68.2	-11.7	1.01 H	106	43.3	13.2
7	11060.00	55.6 PK	74.0	-18.4	1.98 H	266	36.7	18.9
8	11060.00	46.0 AV	54.0	-8.0	1.98 H	266	27.1	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	56.4 PK	74.0	-17.6	2.03 V	311	43.2	13.2
2	5460.00	45.6 AV	54.0	-8.4	2.03 V	311	32.4	13.2
3	#5470.00	55.6 PK	68.2	-12.6	2.03 V	311	42.4	13.2
4	*5530.00	79.8 PK			2.03 V	311	36.8	43.0
5	*5530.00	70.9 AV			2.03 V	311	27.9	43.0
6	#5725.00	55.5 PK	68.2	-12.7	2.03 V	311	42.3	13.2
7	11060.00	56.4 PK	74.0	-17.6	1.49 V	153	37.5	18.9
8	11060.00	46.8 AV	54.0	-7.2	1.49 V	153	27.9	18.9

Remarks:

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

RF Mode	802.11ac (VHT80)	Channel	CH 122：5610 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=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	5460.00	55.7 PK	74.0	-18.3	1.01 H	106	42.5	13.2
2	5460.00	45.4 AV	54.0	-8.6	1.01 H	106	32.2	13.2
3	#5470.00	54.5 PK	68.2	-13.7	1.01 H	106	41.3	13.2
4	*5610.00	87.7 PK			1.01 H	106	44.8	42.9
5	*5610.00	79.1 AV			1.01 H	106	36.2	42.9
6	#5725.00	55.4 PK	68.2	-12.8	1.01 H	106	42.2	13.2
7	11220.00	55.8 PK	74.0	-18.2	2.22 H	182	36.8	19.0
8	11220.00	46.2 AV	54.0	-7.8	2.22 H	182	27.2	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	55.9 PK	74.0	-18.1	2.03 V	301	42.7	13.2
2	5460.00	45.3 AV	54.0	-8.7	2.03 V	301	32.1	13.2
3	#5470.00	54.5 PK	68.2	-13.7	2.03 V	301	41.3	13.2
4	*5610.00	80.7 PK			2.03 V	301	37.8	42.9
5	*5610.00	71.0 AV			2.03 V	301	28.1	42.9
6	#5725.00	55.1 PK	68.2	-13.1	2.03 V	301	41.9	13.2
7	11220.00	55.8 PK	74.0	-18.2	2.28 V	175	36.8	19.0
8	11220.00	46.1 AV	54.0	-7.9	2.28 V	175	27.1	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.

RF Mode	802.11ac (VHT80)	Channel	CH 138：5690 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	55.3 PK	74.0	-18.7	1.00 H	83	42.1	13.2
2	5460.00	45.4 AV	54.0	-8.6	1.00 H	83	32.2	13.2
3	#5470.00	55.4 PK	68.2	-12.8	1.00 H	83	42.2	13.2
4	*5690.00	84.2 PK			1.00 H	83	41.1	43.1
5	*5690.00	77.4 AV			1.00 H	83	34.3	43.1
6	11380.00	58.6 PK	74.0	-15.4	1.32 H	22	39.2	19.4
7	11380.00	48.5 AV	54.0	-5.5	1.32 H	22	29.1	19.4
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	5460.00	55.1 PK	74.0	-18.9	2.00 V	286	41.9	13.2
2	5460.00	45.2 AV	54.0	-8.8	2.00 V	286	32.0	13.2
3	#5470.00	55.6 PK	68.2	-12.6	2.00 V	286	42.4	13.2
4	*5690.00	80.4 PK			2.00 V	286	37.3	43.1
5	*5690.00	73.3 AV			2.00 V	286	30.2	43.1
6	11380.00	58.2 PK	74.0	-15.8	1.05 V	194	38.8	19.4
7	11380.00	48.1 AV	54.0	-5.9	1.05 V	194	28.7	19.4

Remarks:

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

RF Mode	802.11a	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=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	#5642.04	56.2 PK	68.2	-12.0	1.17 H	55	43.3	12.9
2	*5745.00	92.3 PK			1.17 H	55	48.9	43.4
3	*5745.00	85.2 AV			1.17 H	55	41.8	43.4
4	#5977.18	56.6 PK	68.2	-11.6	1.17 H	55	42.6	14.0
5	11490.00	57.2 PK	74.0	-16.8	1.29 H	322	37.3	19.9
6	11490.00	47.6 AV	54.0	-6.4	1.29 H	322	27.7	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	#5635.24	57.3 PK	68.2	-10.9	2.16 V	305	44.4	12.9
2	*5745.00	85.5 PK			2.16 V	305	42.1	43.4
3	*5745.00	77.6 AV			2.16 V	305	34.2	43.4
4	#5986.39	57.2 PK	68.2	-11.0	2.16 V	305	43.2	14.0
5	11490.00	56.3 PK	74.0	-17.7	1.52 V	159	36.4	19.9
6	11490.00	46.7 AV	54.0	-7.3	1.52 V	159	26.8	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5633.23	55.7 PK	68.2	-12.5	1.00 H	83	42.8	12.9
2	*5785.00	93.1 PK			1.00 H	83	49.7	43.4
3	*5785.00	86.2 AV			1.00 H	83	42.8	43.4
4	#5963.96	55.4 PK	68.2	-12.8	1.00 H	83	41.5	13.9
5	11570.00	59.4 PK	74.0	-14.6	1.64 H	299	39.5	19.9
6	11570.00	49.3 AV	54.0	-4.7	1.64 H	299	29.4	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	#5634.83	55.0 PK	68.2	-13.2	2.00 V	286	42.1	12.9
2	*5785.00	90.3 PK			2.00 V	286	46.9	43.4
3	*5785.00	83.4 AV			2.00 V	286	40.0	43.4
4	#5935.54	55.5 PK	68.2	-12.7	2.00 V	286	41.7	13.8
5	11570.00	59.1 PK	74.0	-14.9	1.59 V	9	39.2	19.9
6	11570.00	49.2 AV	54.0	-4.8	1.59 V	9	29.3	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.84	55.3 PK	68.2	-12.9	1.00 H	83	42.4	12.9
2	*5825.00	90.2 PK			1.00 H	83	46.7	43.5
3	*5825.00	83.4 AV			1.00 H	83	39.9	43.5
4	#5927.53	56.1 PK	68.2	-12.1	1.00 H	83	42.3	13.8
5	11650.00	59.1 PK	74.0	-14.9	1.14 H	4	39.2	19.9
6	11650.00	49.0 AV	54.0	-5.0	1.14 H	4	29.1	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	#5619.62	54.8 PK	68.2	-13.4	2.00 V	286	41.8	13.0
2	*5825.00	88.1 PK			2.00 V	286	44.6	43.5
3	*5825.00	81.3 AV			2.00 V	286	37.8	43.5
4	#5971.97	55.3 PK	68.2	-12.9	2.00 V	286	41.3	14.0
5	11650.00	58.4 PK	74.0	-15.6	1.59 V	5	38.5	19.9
6	11650.00	48.2 AV	54.0	-5.8	1.59 V	5	28.3	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5636.84	54.7 PK	68.2	-13.5	1.00 H	74	41.8	12.9
2	*5745.00	92.2 PK			1.00 H	74	48.8	43.4
3	*5745.00	85.4 AV			1.00 H	74	42.0	43.4
4	#5982.78	55.4 PK	68.2	-12.8	1.00 H	74	41.4	14.0
5	11490.00	57.3 PK	74.0	-16.7	1.59 H	209	37.4	19.9
6	11490.00	48.3 AV	54.0	-5.7	1.59 H	209	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	#5642.84	54.6 PK	68.2	-13.6	2.20 V	3	41.7	12.9
2	*5745.00	88.2 PK			2.20 V	3	44.8	43.4
3	*5745.00	81.6 AV			2.20 V	3	38.2	43.4
4	#5943.94	55.7 PK	68.2	-12.5	2.20 V	3	41.8	13.9
5	11490.00	57.1 PK	74.0	-16.9	1.56 V	199	37.2	19.9
6	11490.00	48.3 AV	54.0	-5.7	1.56 V	199	28.4	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5613.61	55.3 PK	68.2	-12.9	1.00 H	72	42.3	13.0
2	*5785.00	94.1 PK			1.00 H	72	50.7	43.4
3	*5785.00	87.2 AV			1.00 H	72	43.8	43.4
4	#5959.96	55.2 PK	68.2	-13.0	1.00 H	72	41.3	13.9
5	11570.00	57.2 PK	74.0	-16.8	1.05 H	100	37.3	19.9
6	11570.00	48.1 AV	54.0	-5.9	1.05 H	100	28.2	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	#5643.64	54.6 PK	68.2	-13.6	2.15 V	3	41.7	12.9
2	*5785.00	91.1 PK			2.15 V	3	47.7	43.4
3	*5785.00	84.2 AV			2.15 V	3	40.8	43.4
4	#5952.35	55.9 PK	68.2	-12.3	2.15 V	3	42.0	13.9
5	11570.00	57.0 PK	74.0	-17.0	1.95 V	3	37.1	19.9
6	11570.00	47.9 AV	54.0	-6.1	1.95 V	3	28.0	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5601.60	54.7 PK	68.2	-13.5	1.00 H	72	41.7	13.0
2	*5825.00	92.1 PK			1.00 H	72	48.6	43.5
3	*5825.00	85.4 AV			1.00 H	72	41.9	43.5
4	#5939.14	55.9 PK	68.2	-12.3	1.00 H	72	42.1	13.8
5	11650.00	57.8 PK	74.0	-16.2	1.54 H	164	37.9	19.9
6	11650.00	48.4 AV	54.0	-5.6	1.54 H	164	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	#5612.81	54.0 PK	68.2	-14.2	2.00 V	3	41.0	13.0
2	*5825.00	89.2 PK			2.00 V	3	45.7	43.5
3	*5825.00	82.1 AV			2.00 V	3	38.6	43.5
4	#5977.18	54.4 PK	68.2	-13.8	2.00 V	3	40.4	14.0
5	11650.00	57.0 PK	74.0	-17.0	1.57 V	333	37.1	19.9
6	11650.00	47.8 AV	54.0	-6.2	1.57 V	333	27.9	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.

RF Mode	802.11ac (VHT40)	**Channel**	CH 151：5755 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 60% RH
Tested By	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5644.84	54.4 PK	68.2	-13.8	1.00 H	72	41.3	13.1
2	*5755.00	89.3 PK			1.00 H	72	45.9	43.4
3	*5755.00	82.7 AV			1.00 H	72	39.3	43.4
4	#5976.38	55.1 PK	68.2	-13.1	1.00 H	72	41.1	14.0
5	11510.00	58.3 PK	74.0	-15.7	1.59 H	307	38.4	19.9
6	11510.00	48.6 AV	54.0	-5.4	1.59 H	307	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	#5632.43	55.7 PK	68.2	-12.5	2.00 V	3	42.8	12.9
2	*5755.00	85.6 PK			2.00 V	3	42.2	43.4
3	*5755.00	78.4 AV			2.00 V	3	35.0	43.4
4	#5971.97	56.3 PK	68.2	-11.9	2.00 V	3	42.3	14.0
5	11510.00	57.7 PK	74.0	-16.3	1.64 V	188	37.8	19.9
6	11510.00	48.3 AV	54.0	-5.7	1.64 V	188	28.4	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.

RF Mode	802.11ac (VHT40)	Channel	CH 159：5795 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 60% RH
Tested By	Charles Hsiao		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5630.03	54.7 PK	68.2	-13.5	1.01 H	73	41.8	12.9
2	*5795.00	88.1 PK			1.01 H	73	44.7	43.4
3	*5795.00	81.3 AV			1.01 H	73	37.9	43.4
4	#5956.76	55.8 PK	68.2	-12.4	1.01 H	73	41.9	13.9
5	11590.00	57.9 PK	74.0	-16.1	1.27 H	7	37.9	20.0
6	11590.00	48.1 AV	54.0	-5.9	1.27 H	7	28.1	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	#5640.44	54.3 PK	68.2	-13.9	2.00 V	5	41.4	12.9
2	*5795.00	85.9 PK			2.00 V	5	42.5	43.4
3	*5795.00	78.7 AV			2.00 V	5	35.3	43.4
4	#5975.98	55.4 PK	68.2	-12.8	2.00 V	5	41.4	14.0
5	11590.00	57.6 PK	74.0	-16.4	1.05 V	200	37.6	20.0
6	11590.00	47.8 AV	54.0	-6.2	1.05 V	200	27.8	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5603.20	55.0 PK	68.2	-13.2	1.00 H	72	42.0	13.0
2	*5775.00	86.6 PK			1.00 H	72	43.2	43.4
3	*5775.00	79.4 AV			1.00 H	72	36.0	43.4
4	#5931.93	55.2 PK	68.2	-13.0	1.00 H	72	41.4	13.8
5	11550.00	58.0 PK	74.0	-16.0	1.45 H	34	38.1	19.9
6	11550.00	48.0 AV	54.0	-6.0	1.45 H	34	28.1	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	#5617.22	54.6 PK	68.2	-13.6	2.00 V	5	41.6	13.0
2	*5775.00	84.4 PK			2.00 V	5	41.0	43.4
3	*5775.00	77.4 AV			2.00 V	5	34.0	43.4
4	#5956.76	55.0 PK	68.2	-13.2	2.00 V	5	41.1	13.9
5	11550.00	57.3 PK	74.0	-16.7	1.58 V	180	37.4	19.9
6	11550.00	47.8 AV	54.0	-6.2	1.58 V	180	27.9	19.9

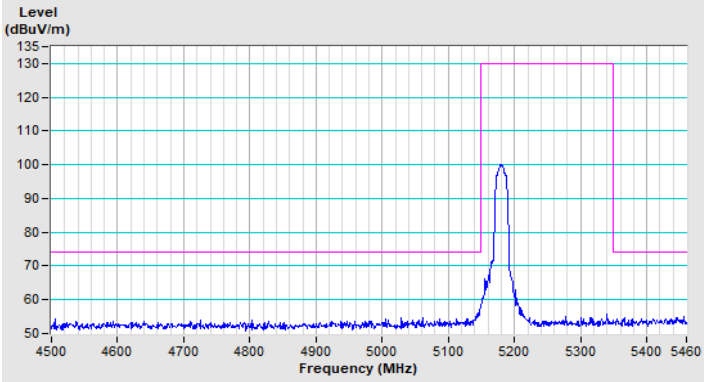
Remarks:

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.

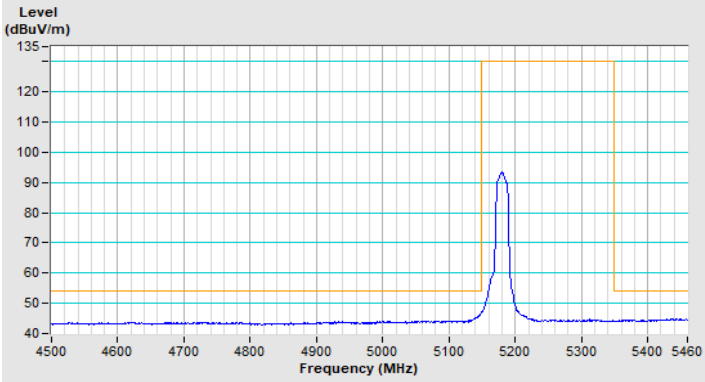
Plot of Band Edge

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

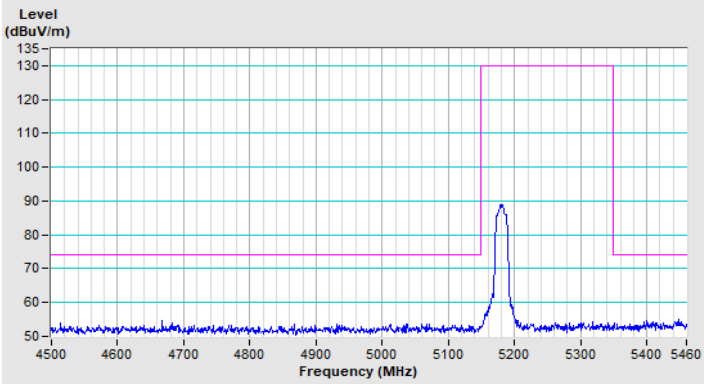
802.11a Channel 36



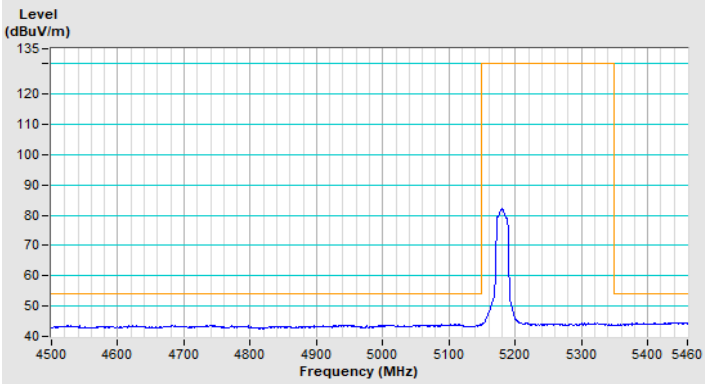
Horizontal (Peak)



Horizontal (Average)

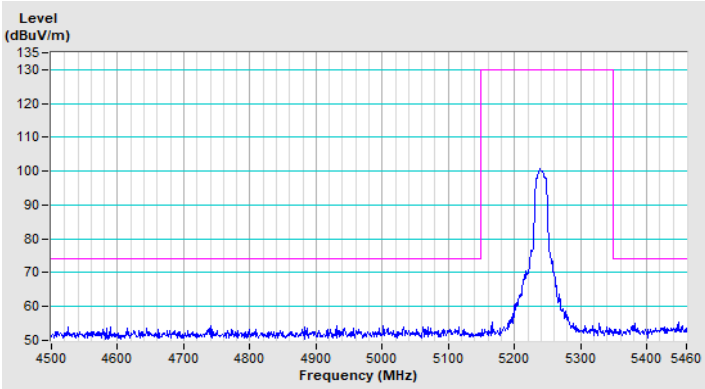


Vertical (Peak)

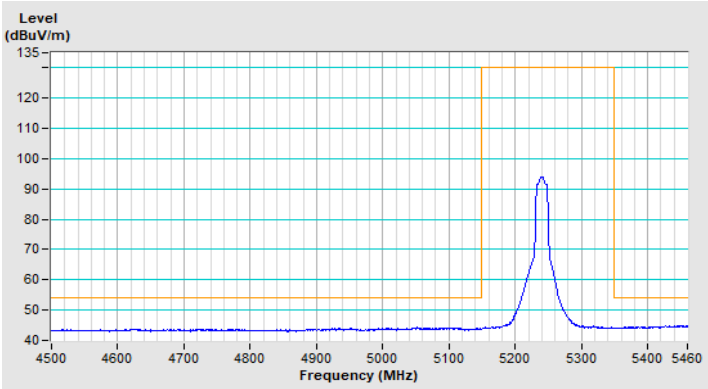


Vertical (Average)

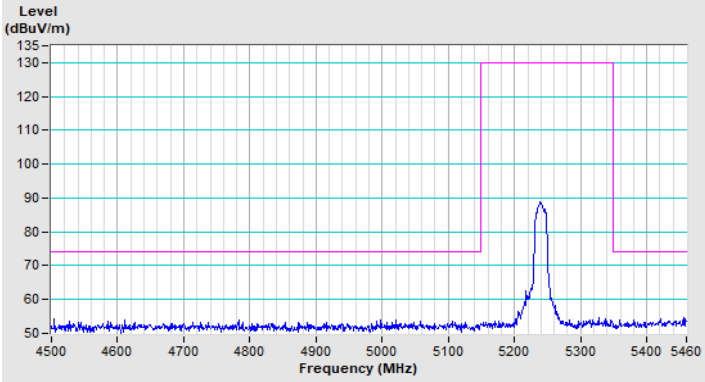
802.11a Channel 48



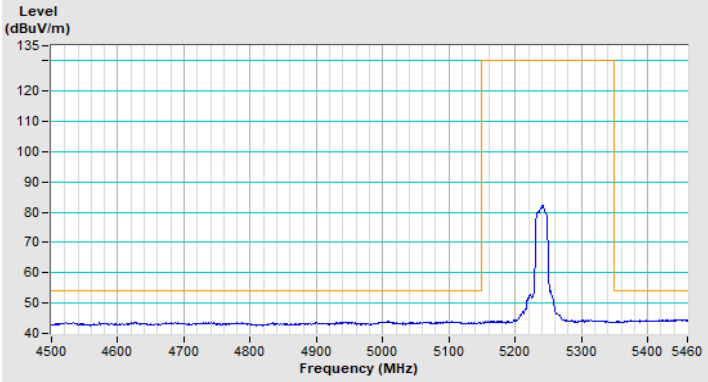
Horizontal (Peak)



Horizontal (Average)



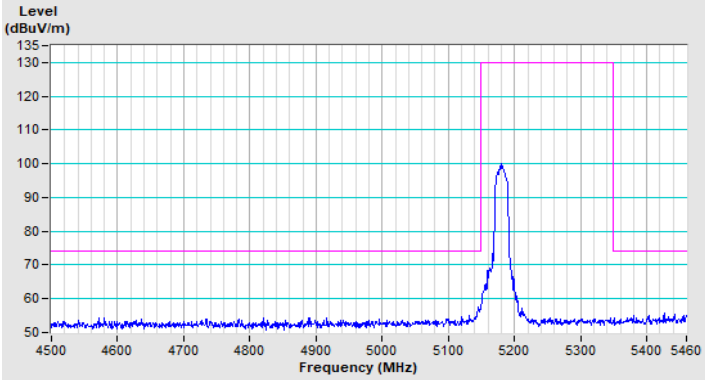
Vertical (Peak)



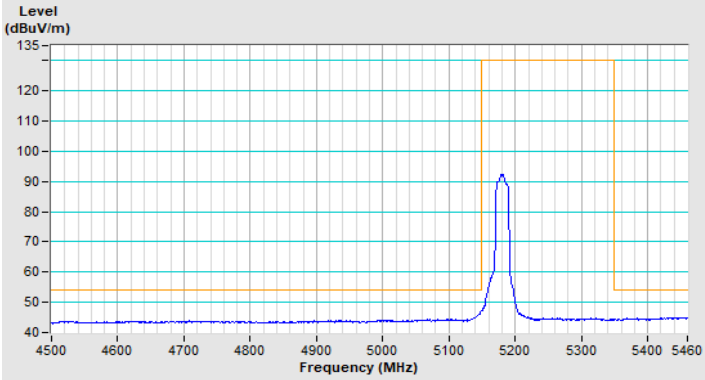
Vertical (Average)

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

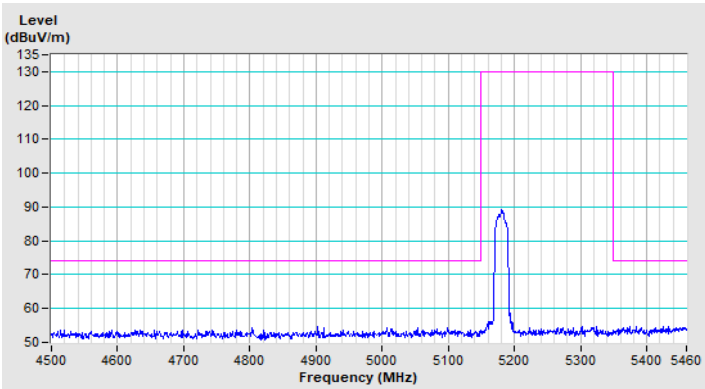
802.11ac (VHT20) Channel 36



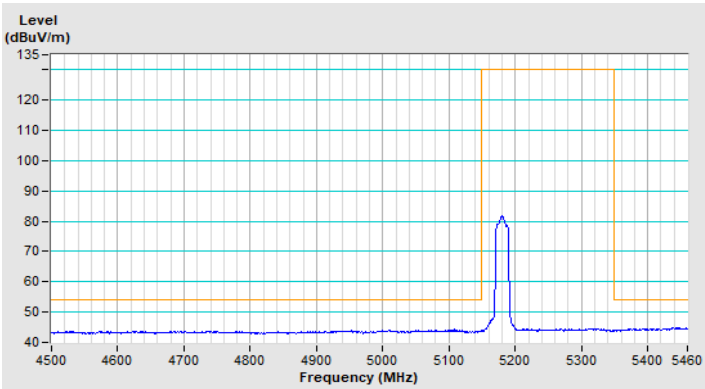
Horizontal (Peak)



Horizontal (Average)

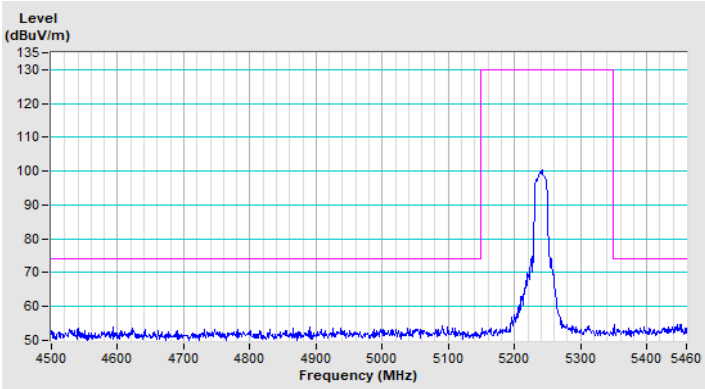


Vertical (Peak)

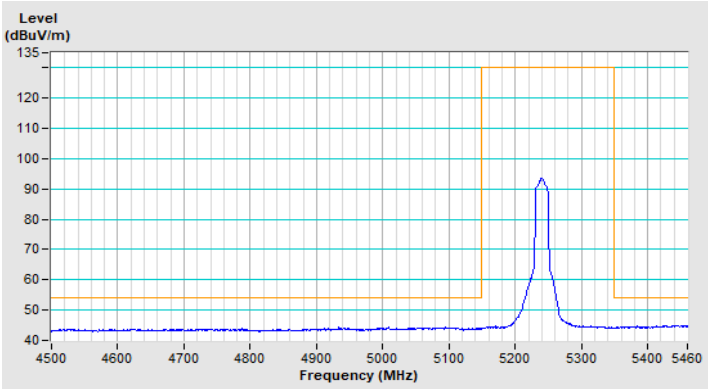


Vertical (Average)

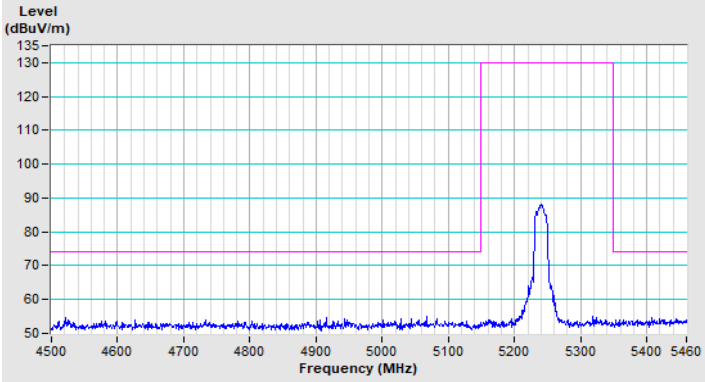
802.11ac (VHT20) Channel 48



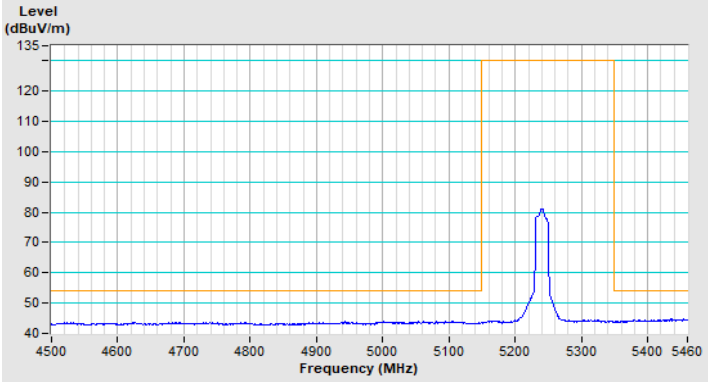
Horizontal (Peak)



Horizontal (Average)



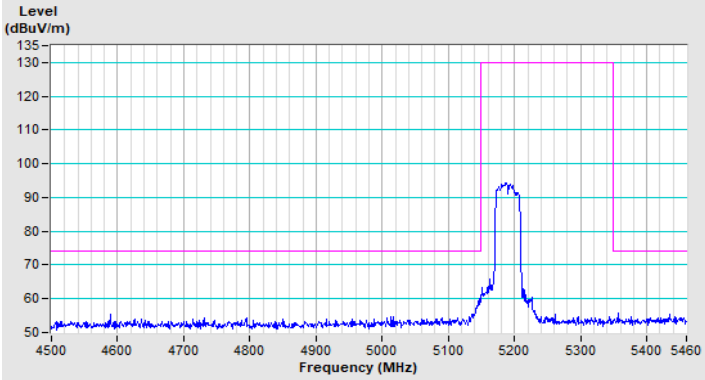
Vertical (Peak)



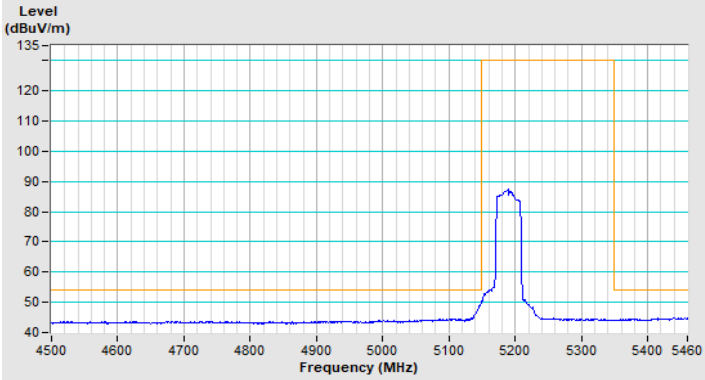
Vertical (Average)

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=10 Hz, DET=Peak

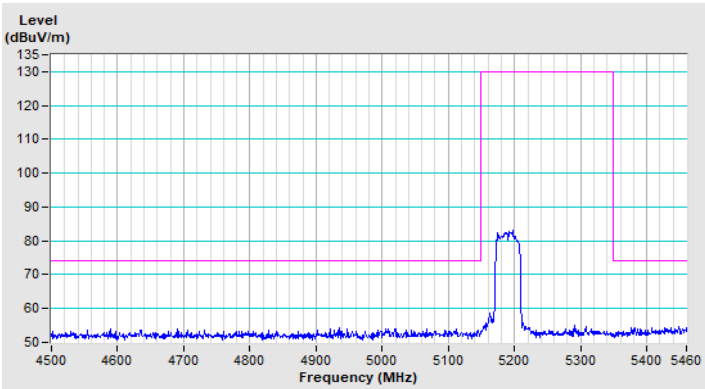
802.11ac (VHT40) Channel 38



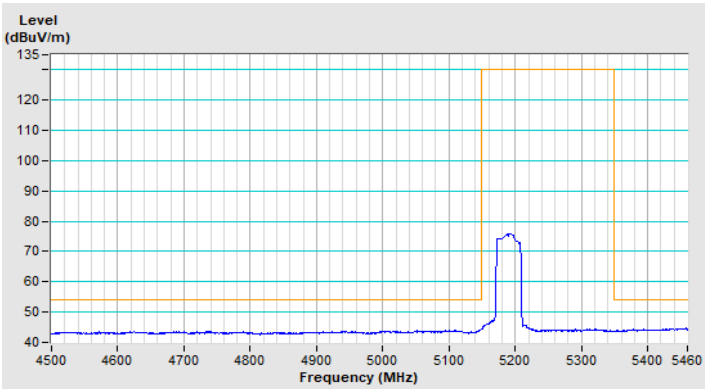
Horizontal (Peak)



Horizontal (Average)

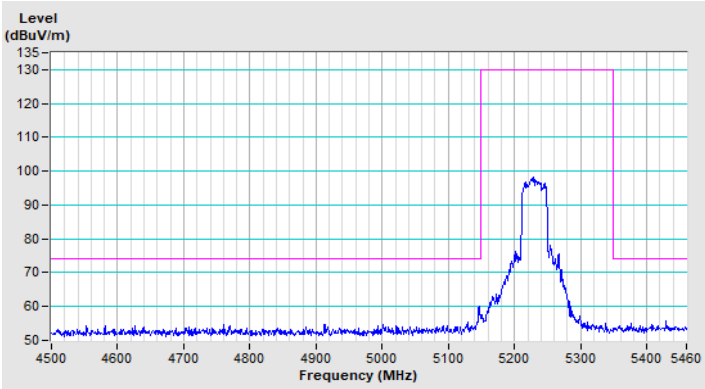


Vertical (Peak)

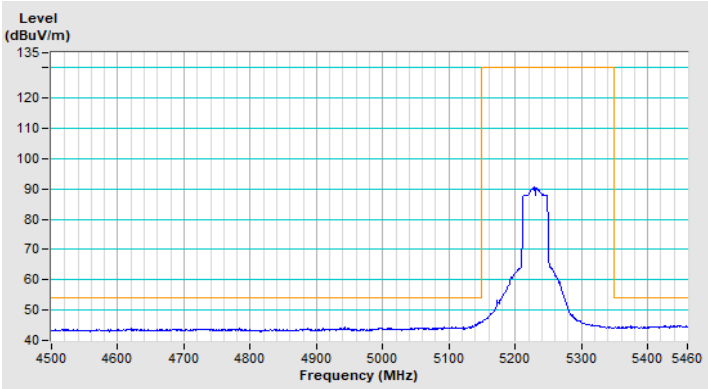


Vertical (Average)

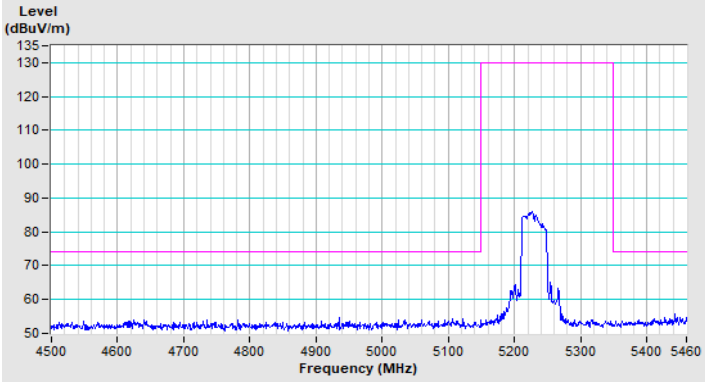
802.11ac (VHT40) Channel 46



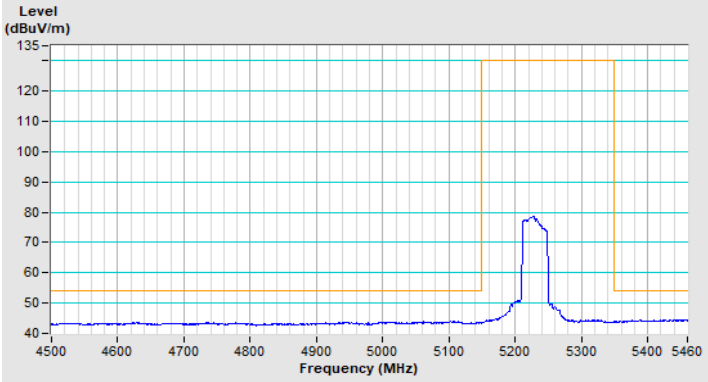
Horizontal (Peak)



Horizontal (Average)



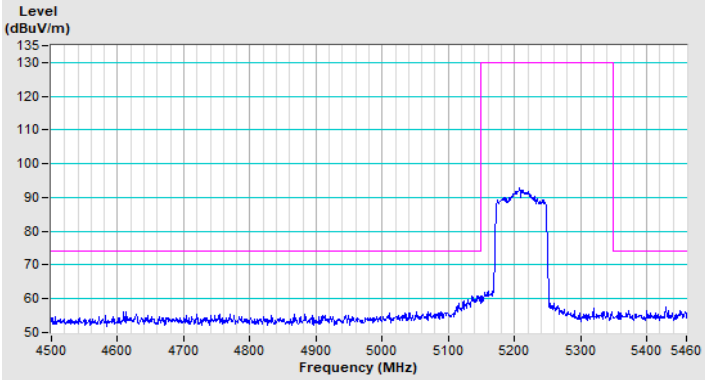
Vertical (Peak)



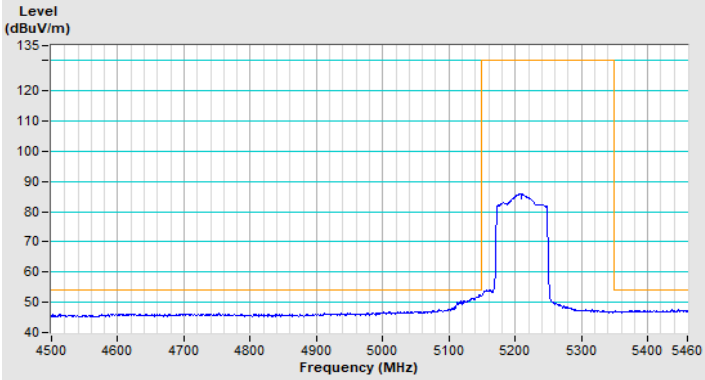
Vertical (Average)

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

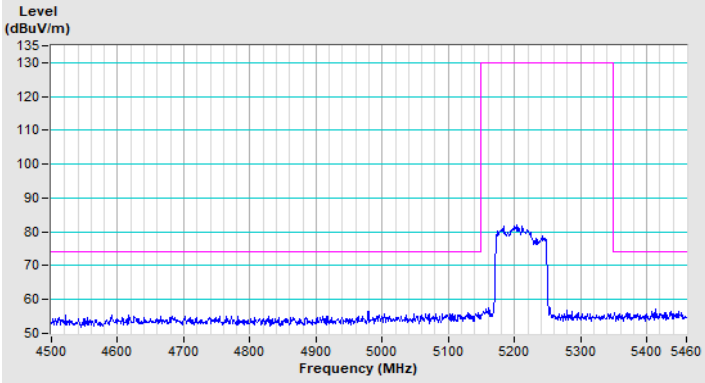
802.11ac (VHT80) Channel 42



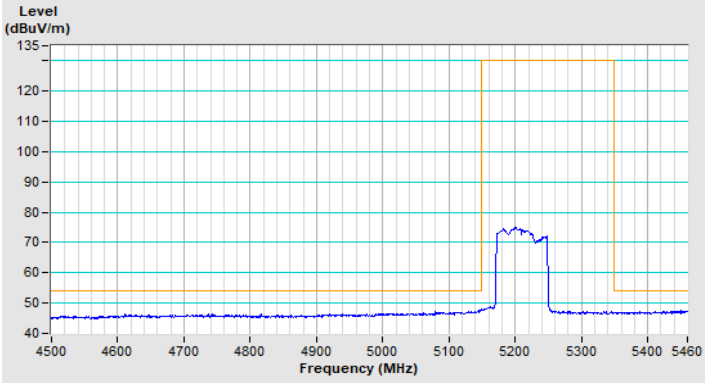
Horizontal (Peak)



Horizontal (Average)



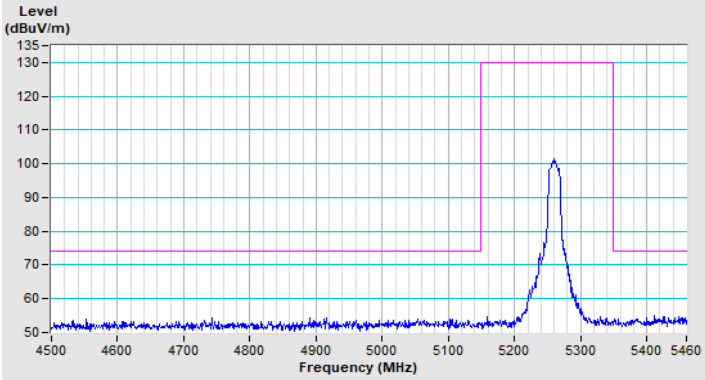
Vertical (Peak)



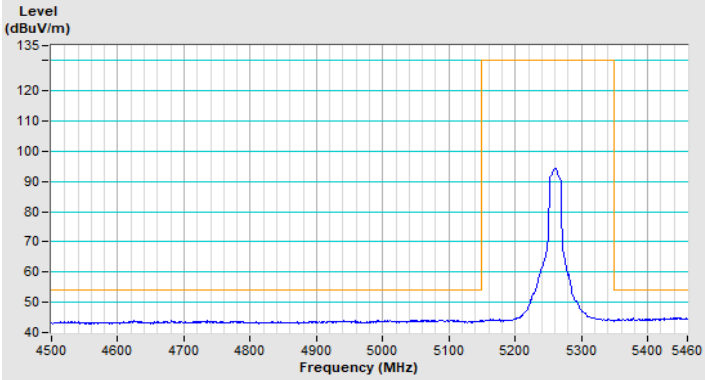
Vertical (Average)

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

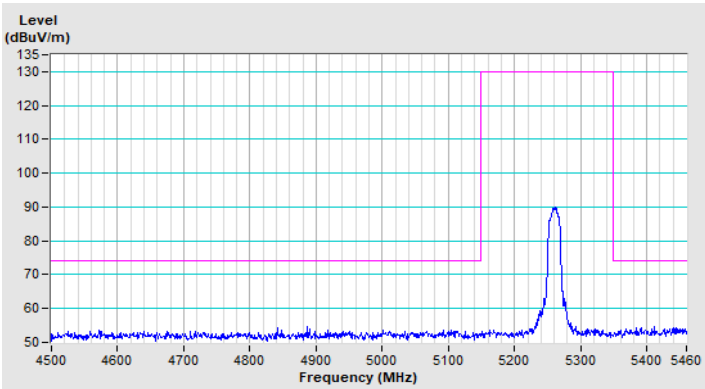
802.11a Channel 52



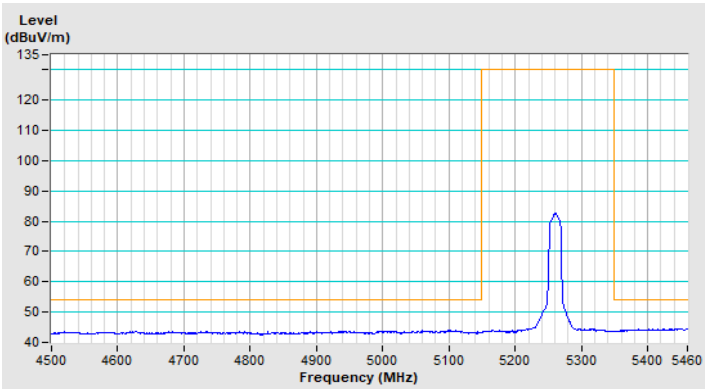
Horizontal (Peak)



Horizontal (Average)

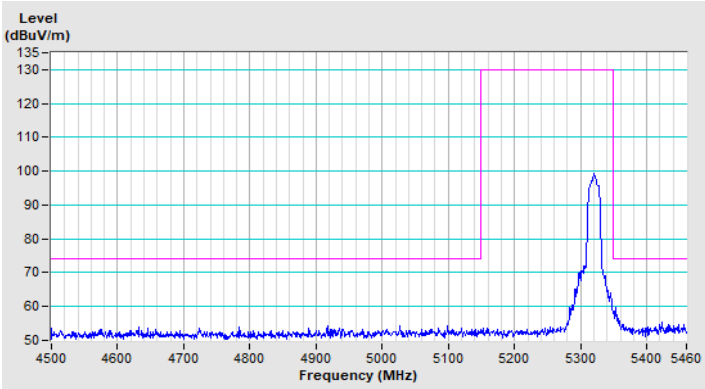


Vertical (Peak)

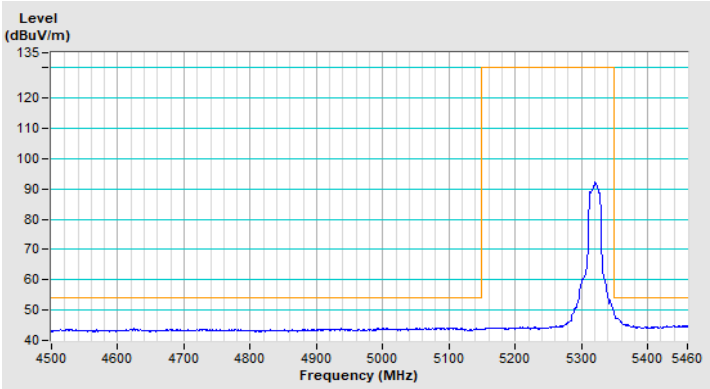


Vertical (Average)

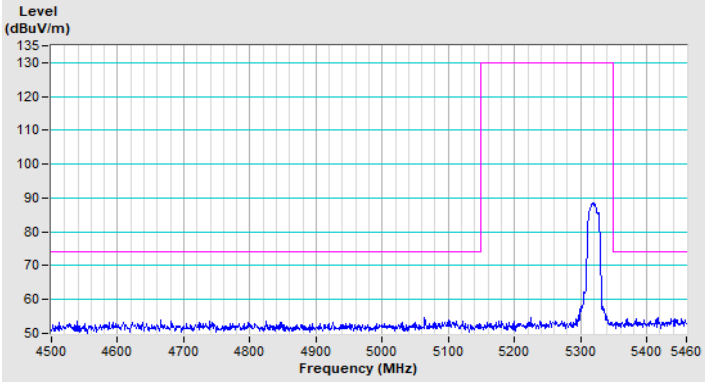
802.11a Channel 64



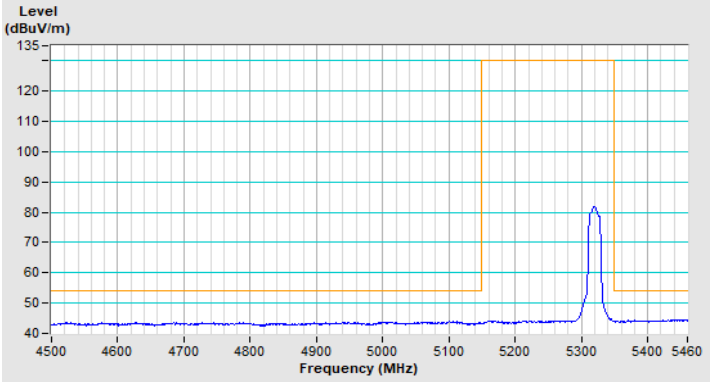
Horizontal (Peak)



Horizontal (Average)



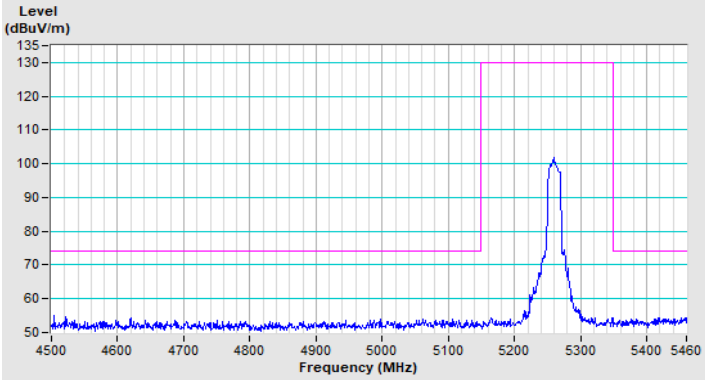
Vertical (Peak)



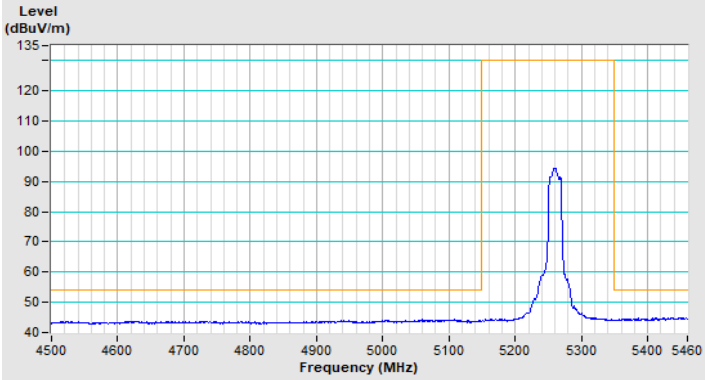
Vertical (Average)

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

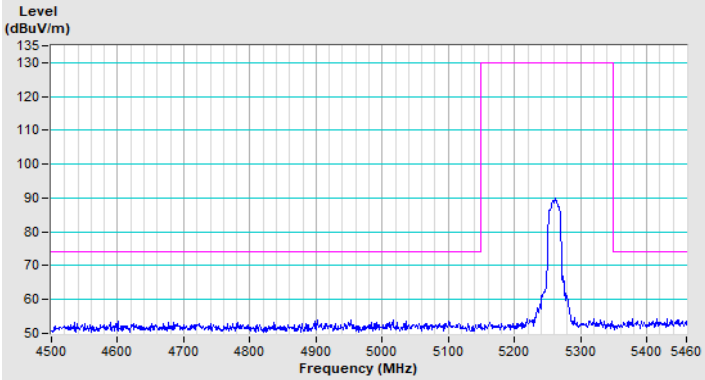
802.11ac (VHT20) Channel 52



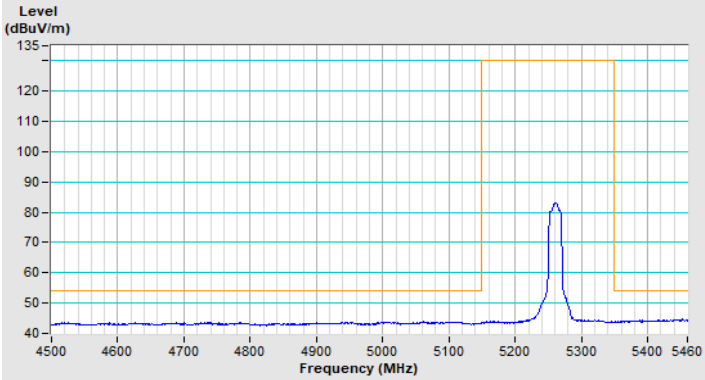
Horizontal (Peak)



Horizontal (Average)

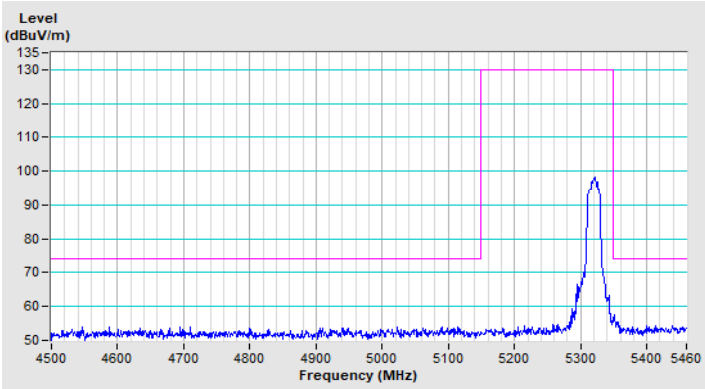


Vertical (Peak)

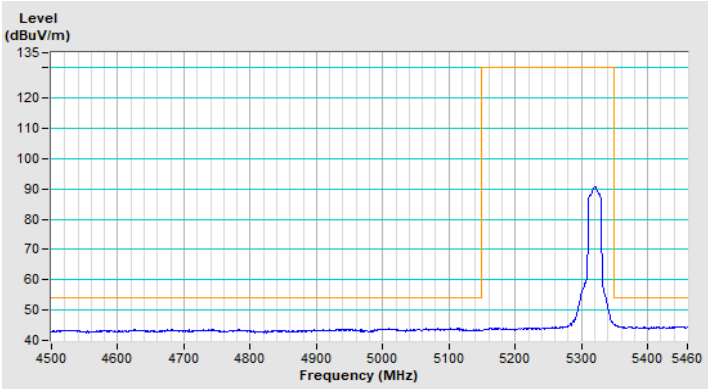


Vertical (Average)

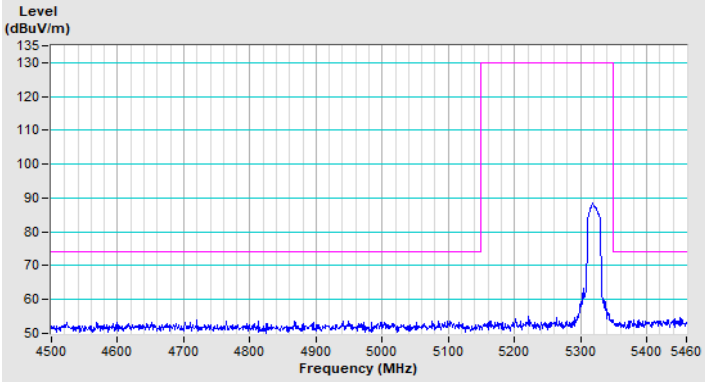
802.11ac (VHT20) Channel 64



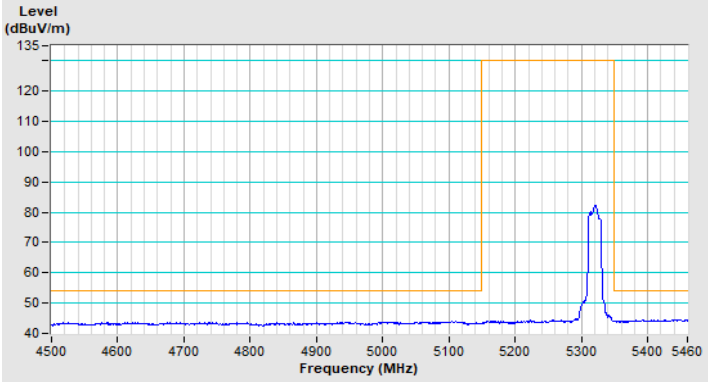
Horizontal (Peak)



Horizontal (Average)



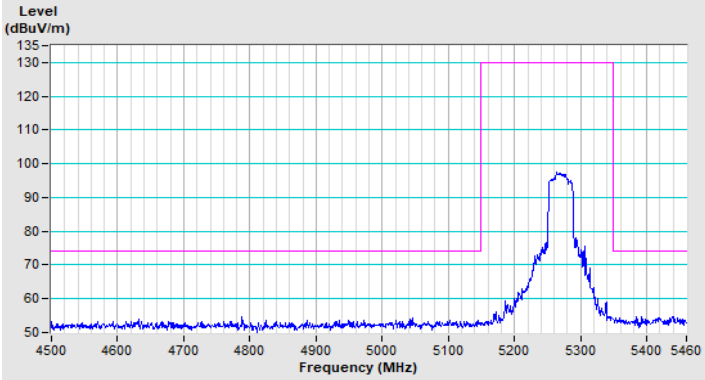
Vertical (Peak)



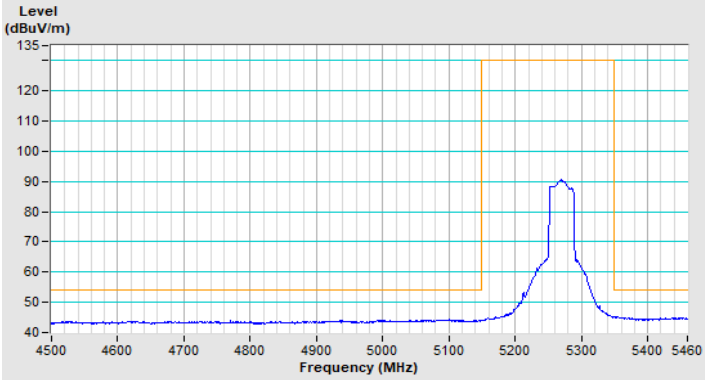
Vertical (Average)

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=10 Hz, DET=Peak

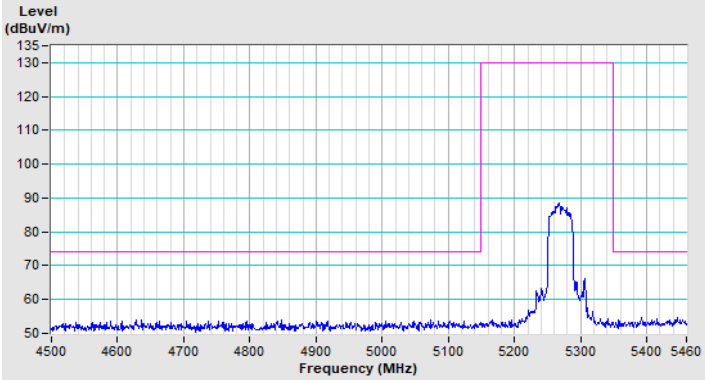
802.11ac (VHT40) Channel 54



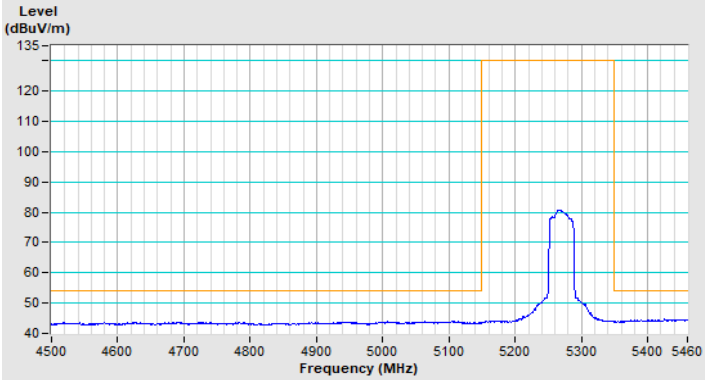
Horizontal (Peak)



Horizontal (Average)

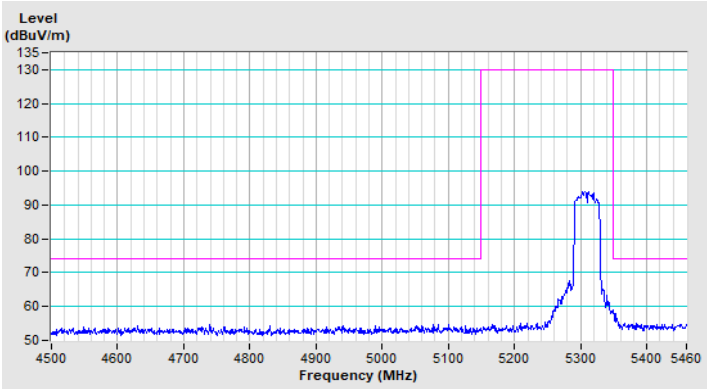


Vertical (Peak)

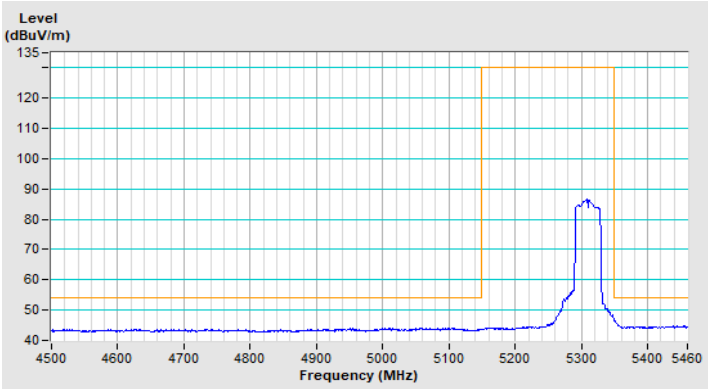


Vertical (Average)

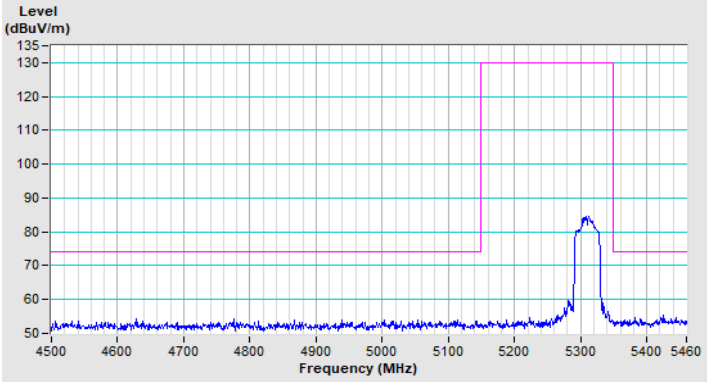
802.11ac (VHT40) Channel 62



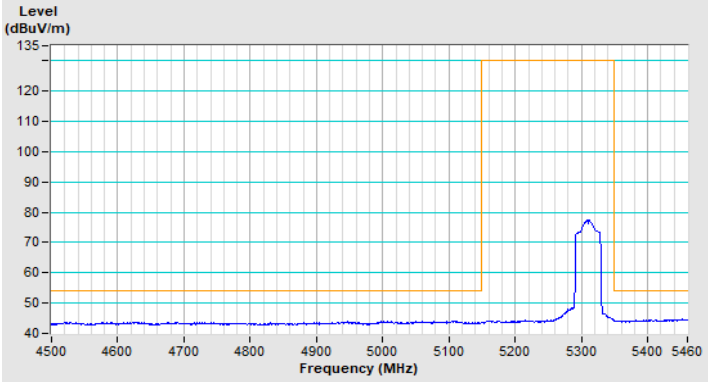
Horizontal (Peak)



Horizontal (Average)



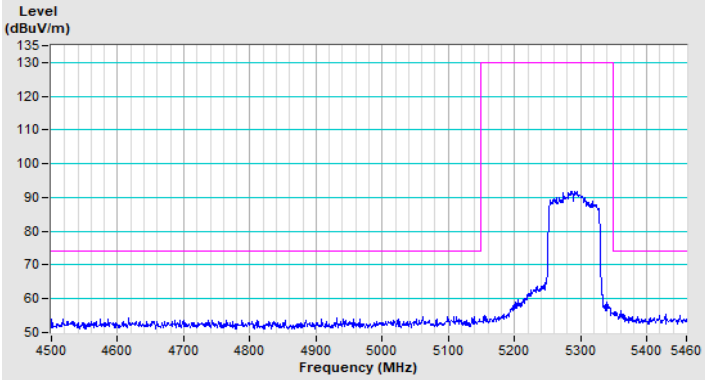
Vertical (Peak)



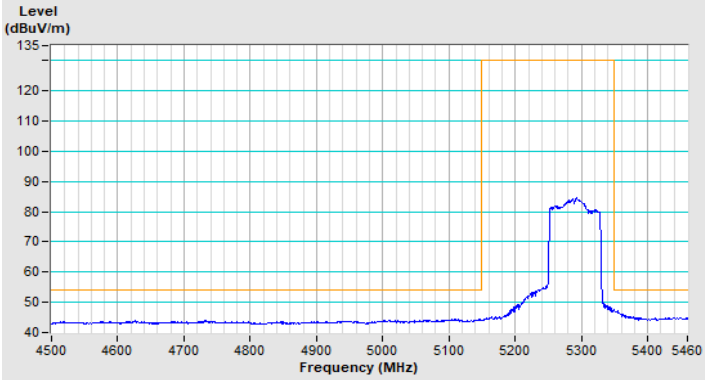
Vertical (Average)

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

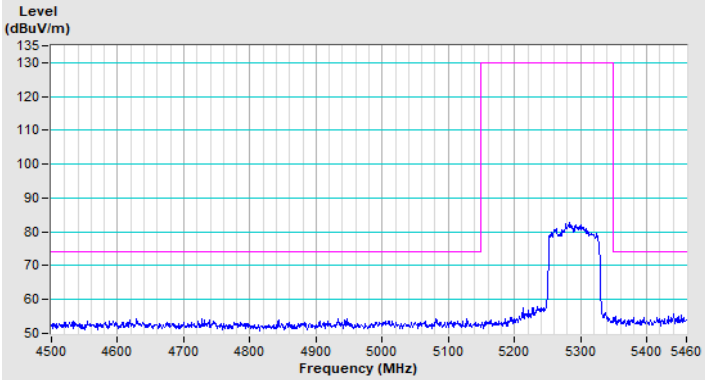
802.11ac (VHT80) Channel 58



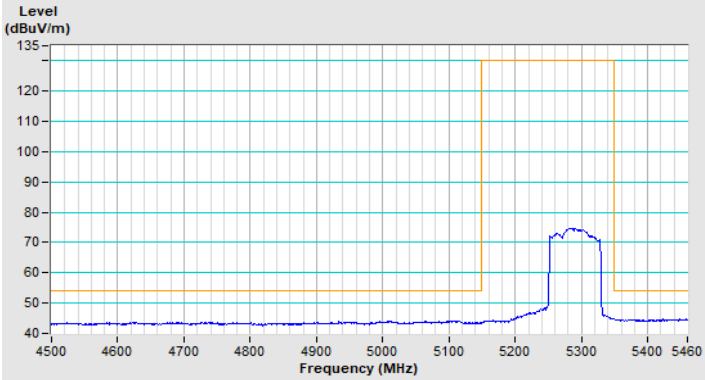
Horizontal (Peak)



Horizontal (Average)



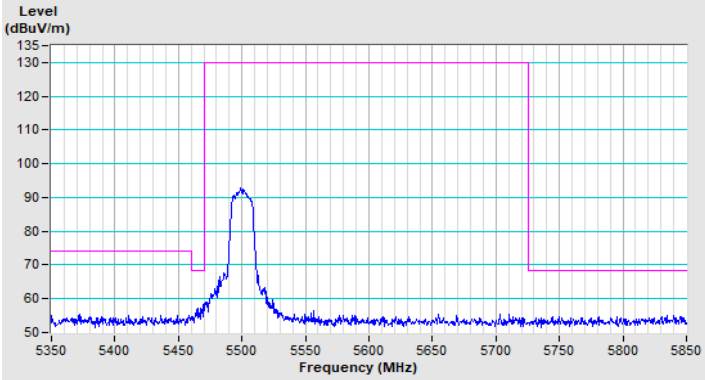
Vertical (Peak)



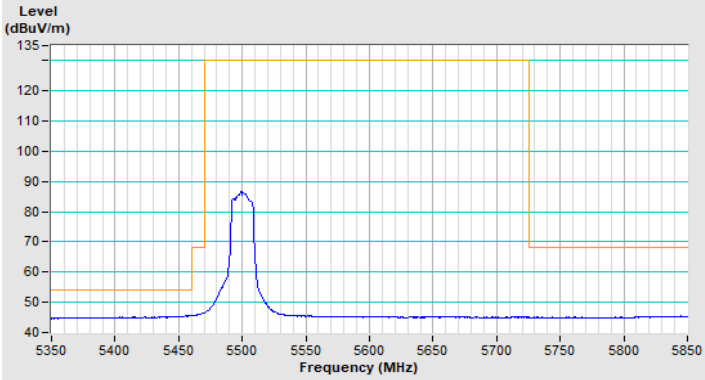
Vertical (Average)

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

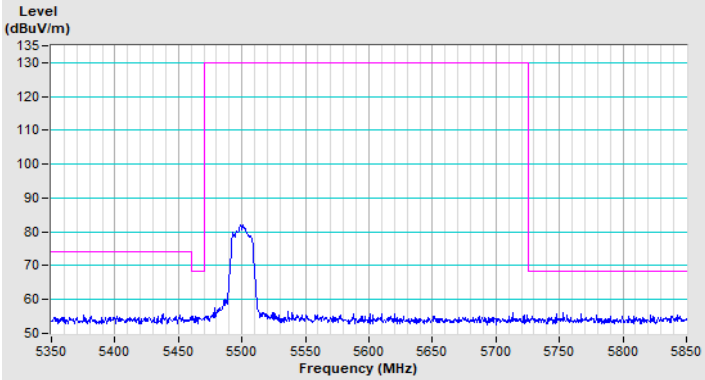
802.11a Channel 100



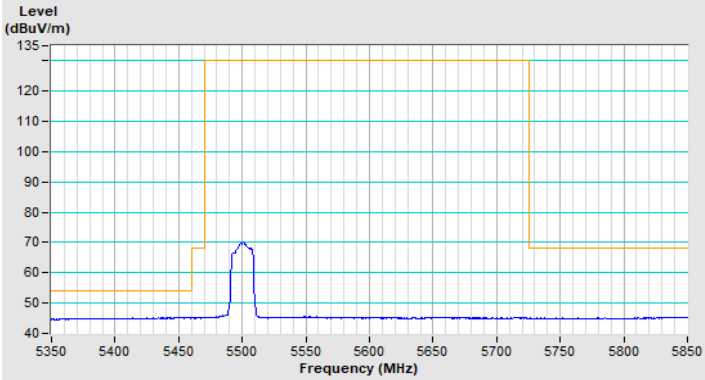
Horizontal (Peak)



Horizontal (Average)

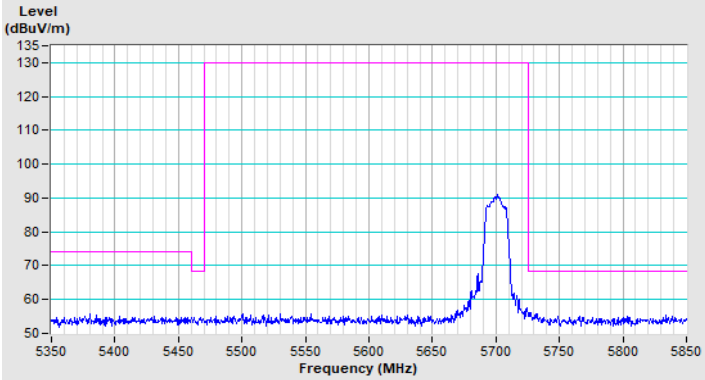


Vertical (Peak)

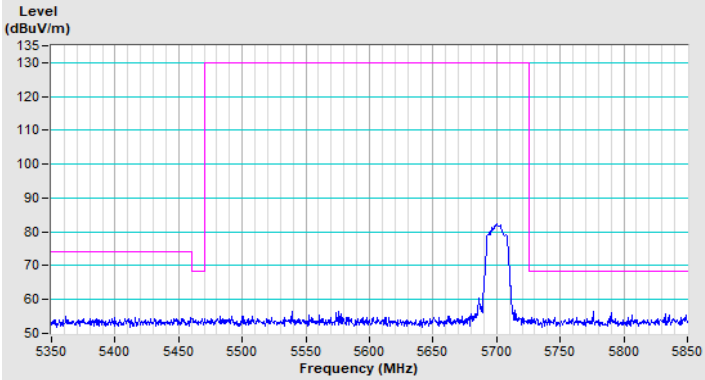


Vertical (Average)

802.11a Channel 140

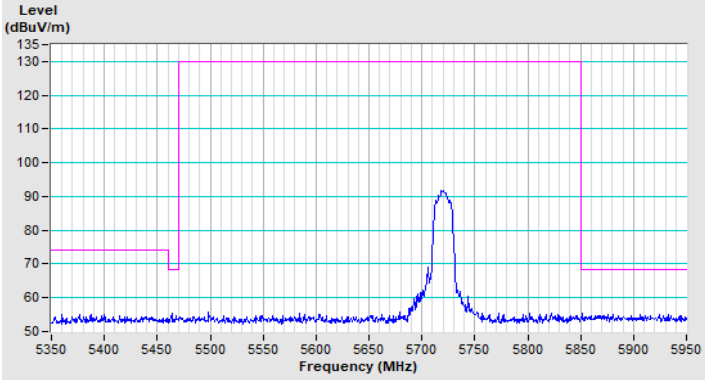
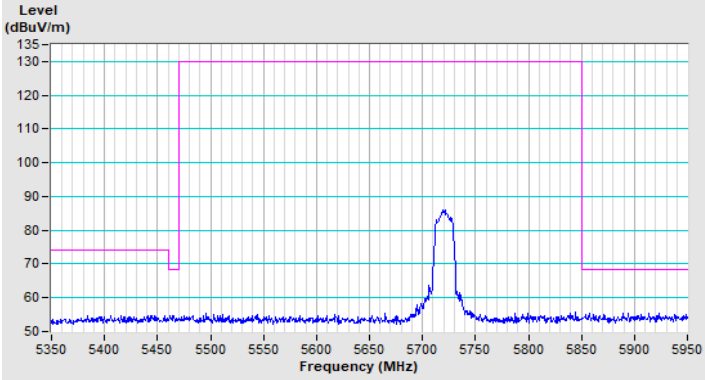


Horizontal (Peak)



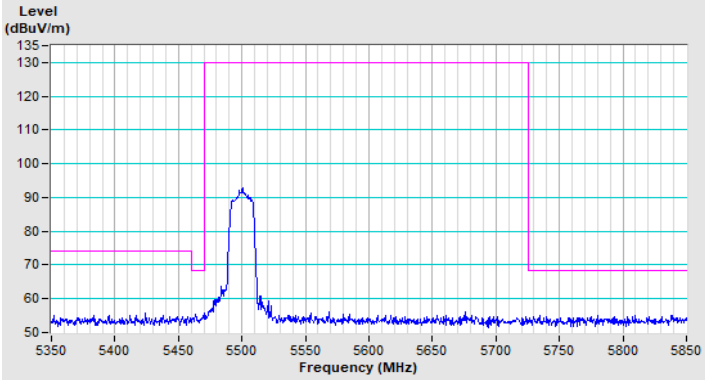
Vertical (Peak)

Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

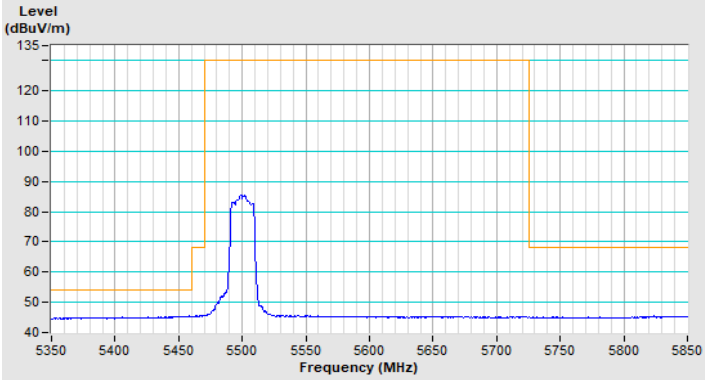
802.11a Channel 144	
 Horizontal (Peak)	 Vertical (Peak)

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

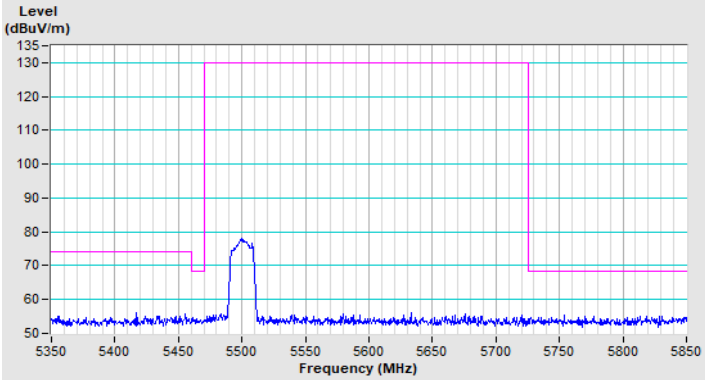
802.11ac (VHT20) Channel 100



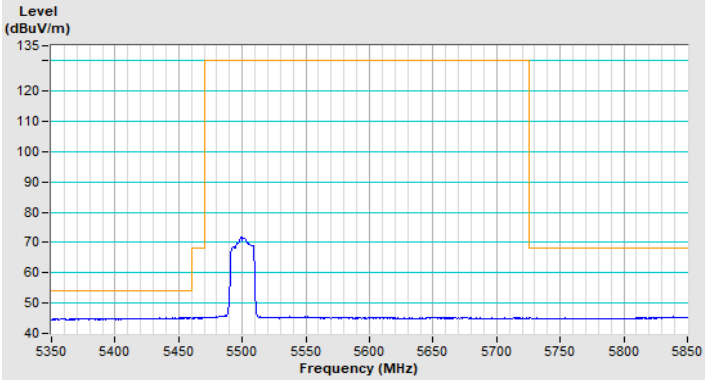
Horizontal (Peak)



Horizontal (Average)

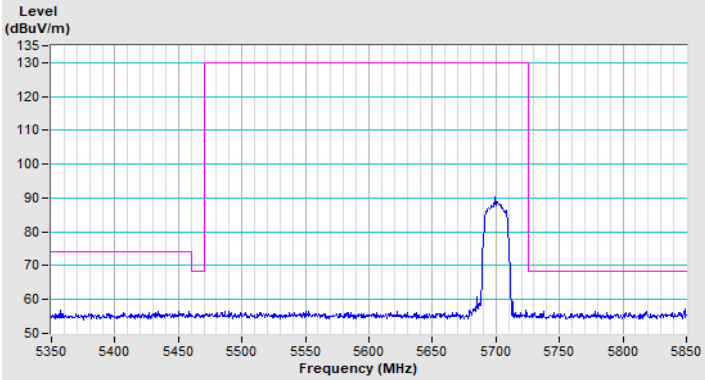


Vertical (Peak)

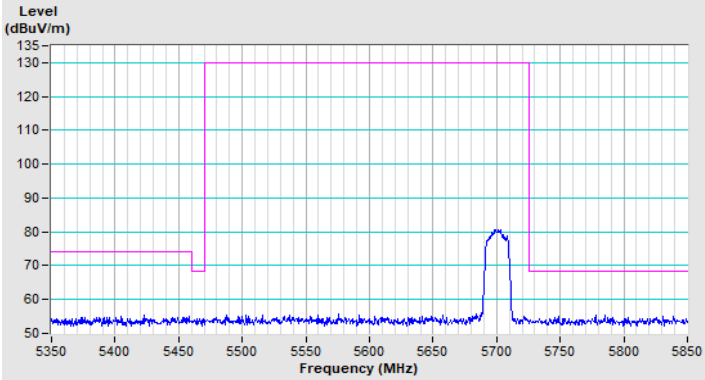


Vertical (Average)

802.11ac (VHT20) Channel 140

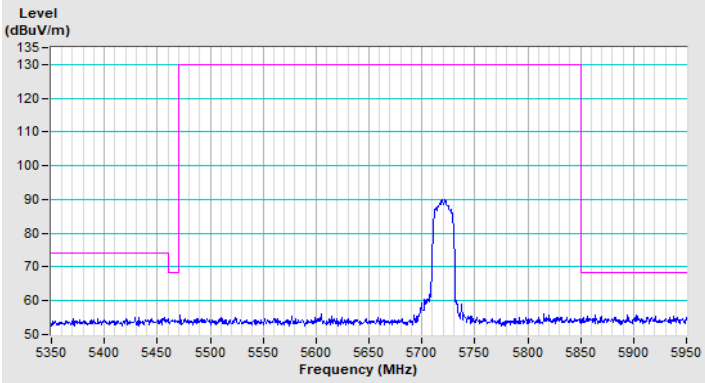
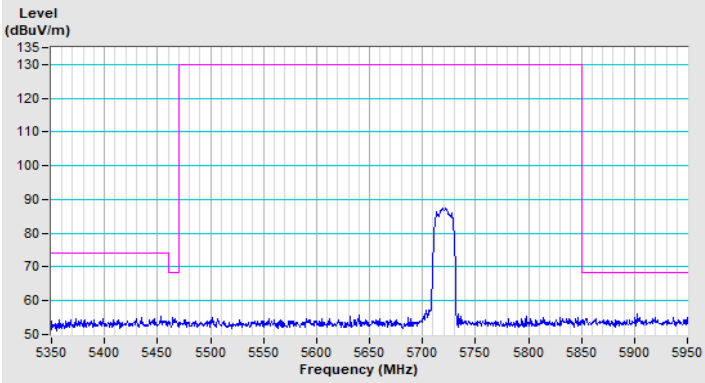


Horizontal (Peak)



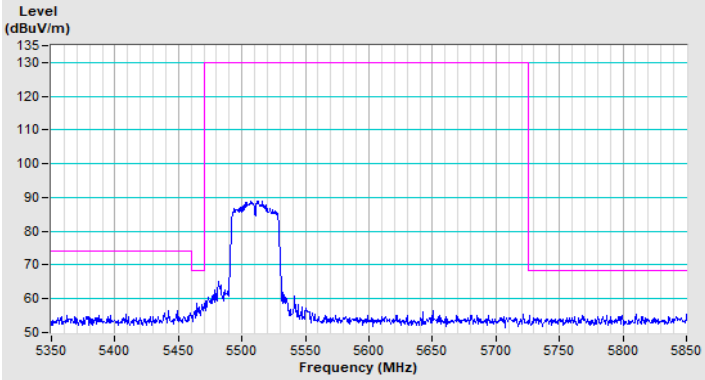
Vertical (Peak)

Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

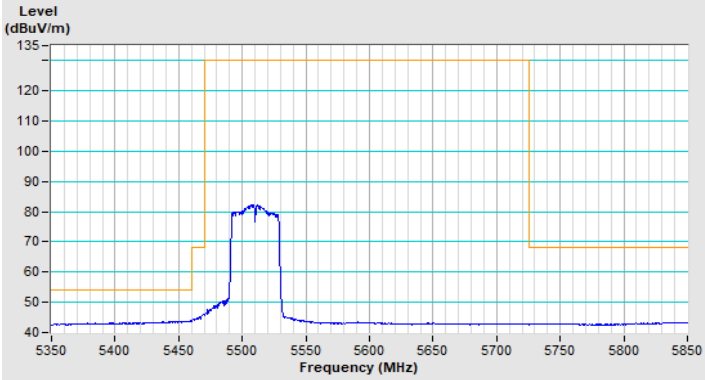
802.11ac (VHT20) Channel 144	
 Horizontal (Peak)	 Vertical (Peak)

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

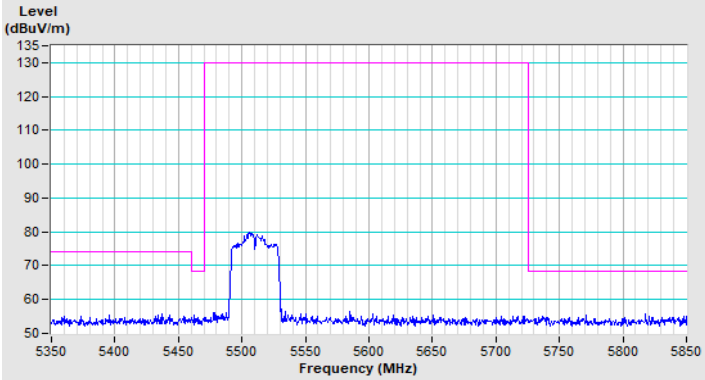
802.11ac (VHT40) Channel 102



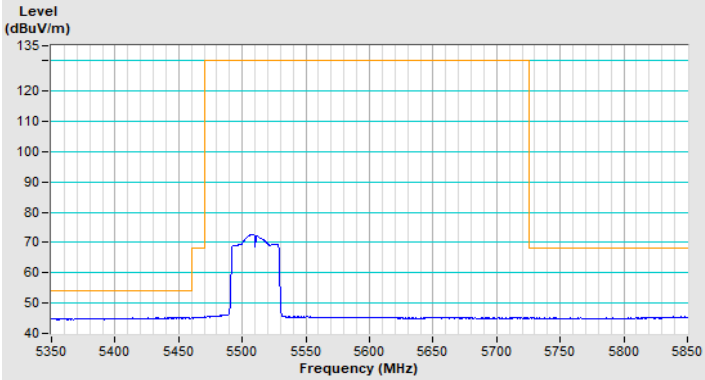
Horizontal (Peak)



Horizontal (Average)

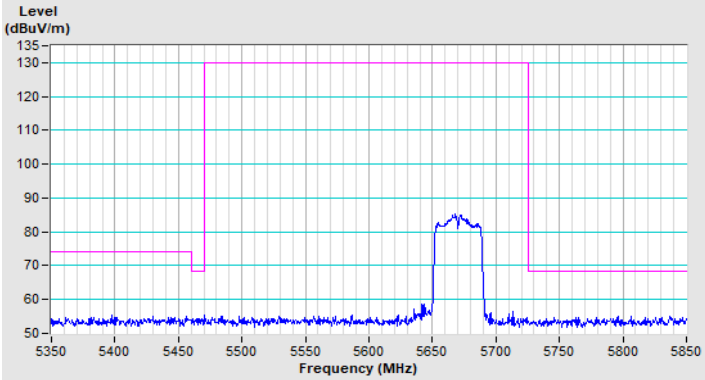


Vertical (Peak)

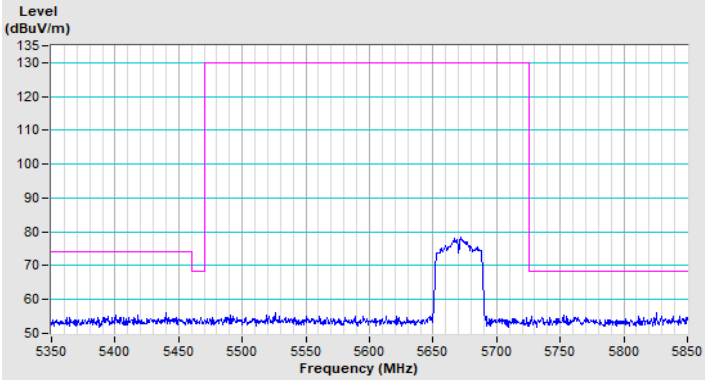


Vertical (Average)

802.11ac (VHT40) Channel 134

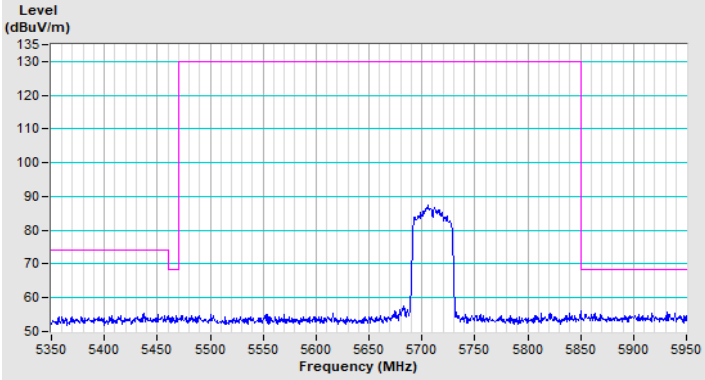
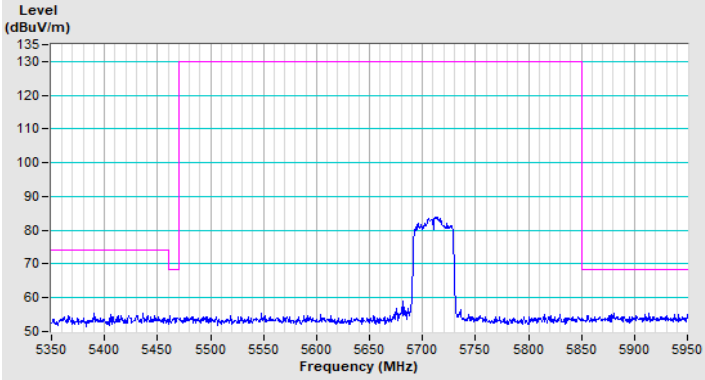


Horizontal (Peak)



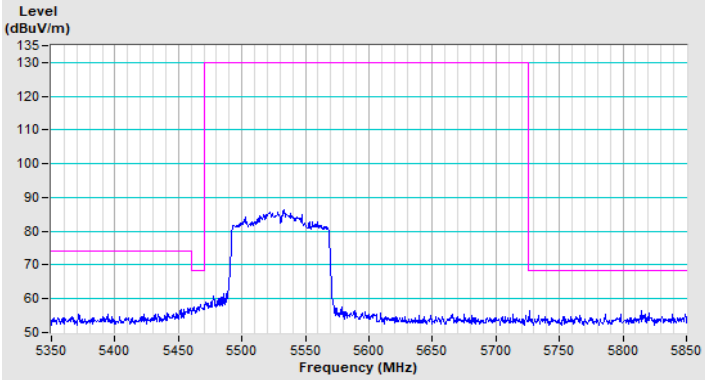
Vertical (Peak)

Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

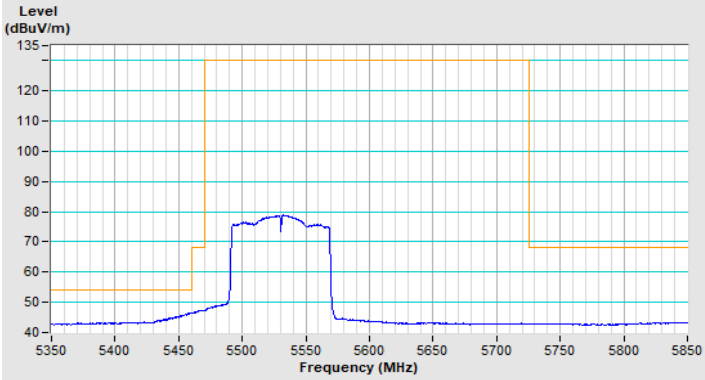
802.11ac (VHT40) Channel 142	
 Horizontal (Peak)	 Vertical (Peak)

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

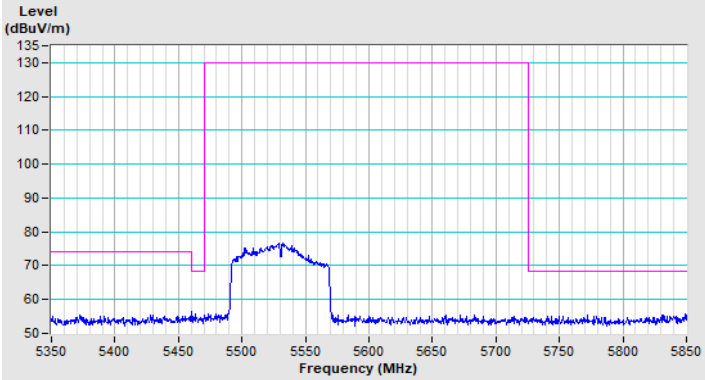
802.11ac (VHT80) Channel 106



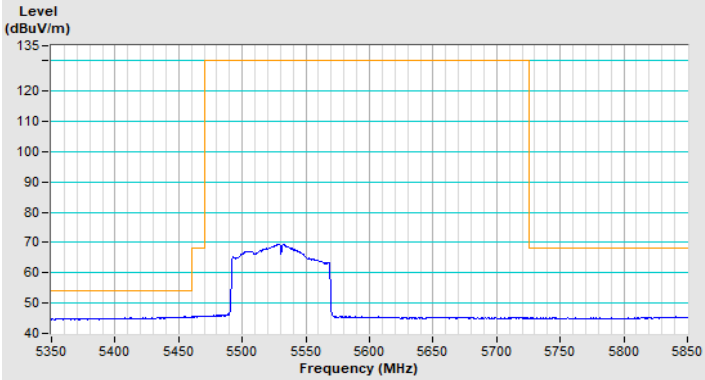
Horizontal (Peak)



Horizontal (Average)

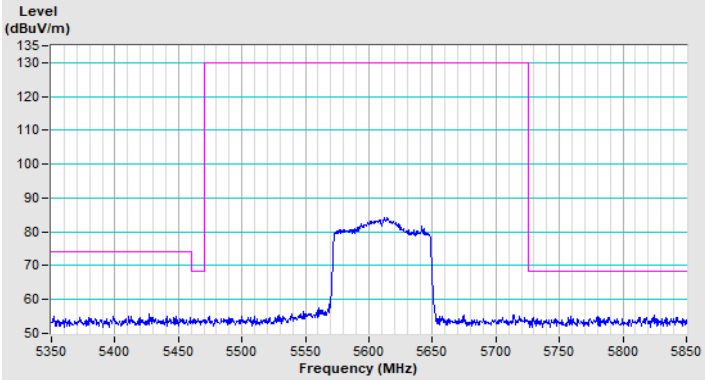


Vertical (Peak)

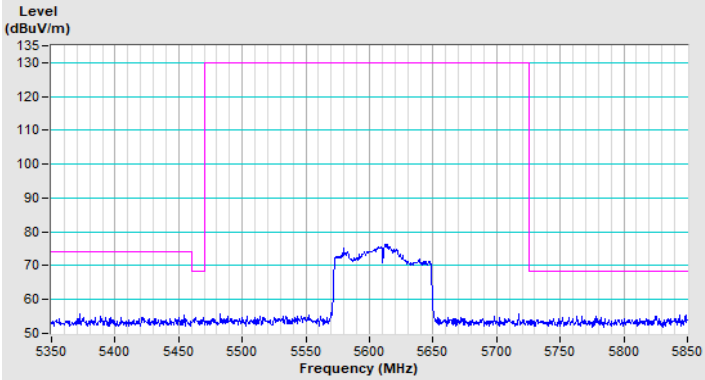


Vertical (Average)

802.11ac (VHT80) Channel 122

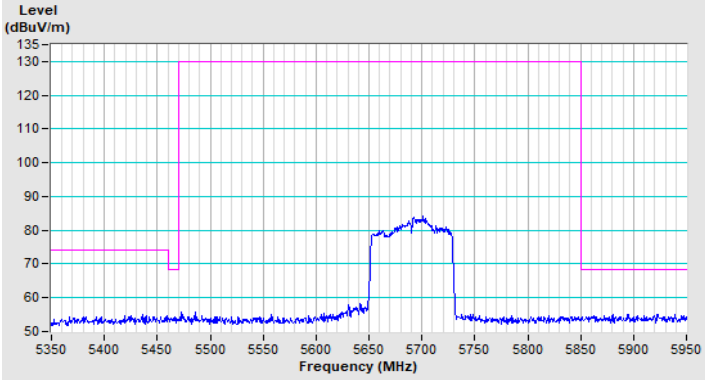
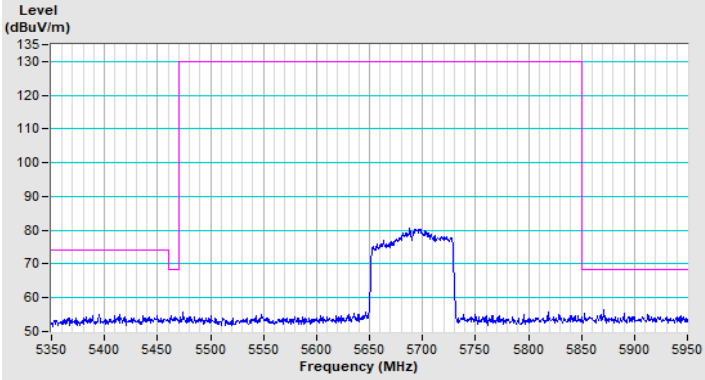


Horizontal (Peak)



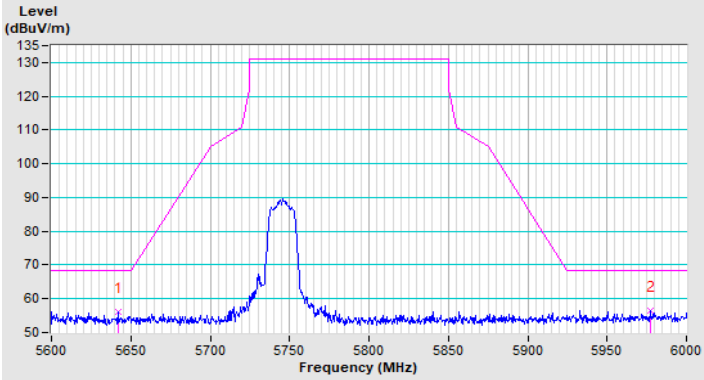
Vertical (Peak)

Frequency Range	5.35 GHz ~ 5.95 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

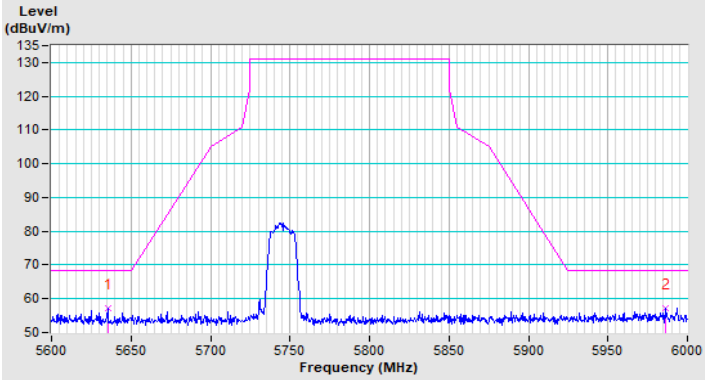
802.11ac (VHT80) Channel 138	
 Horizontal (Peak)	 Vertical (Peak)

Frequency Range	5.6 GHz ~ 6 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

802.11a Channel 149

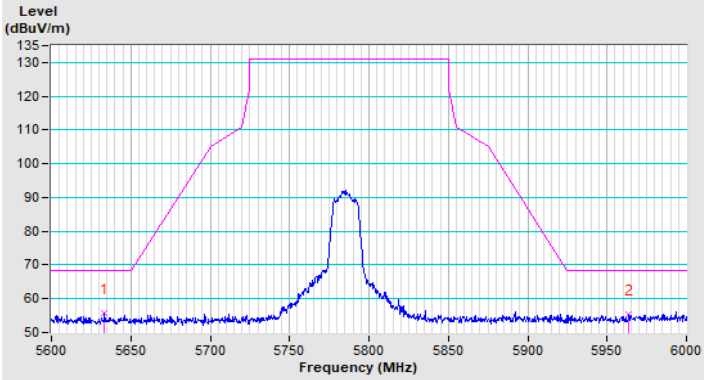


Horizontal (Peak)

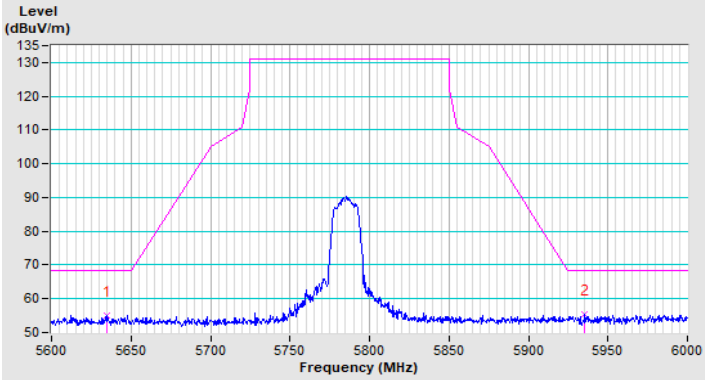


Vertical (Peak)

802.11a Channel 157

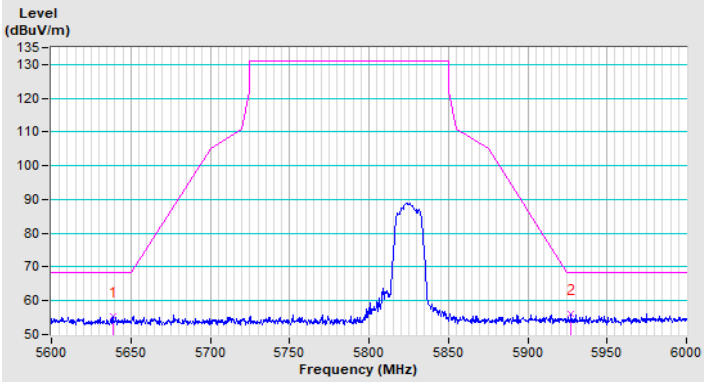


Horizontal (Peak)

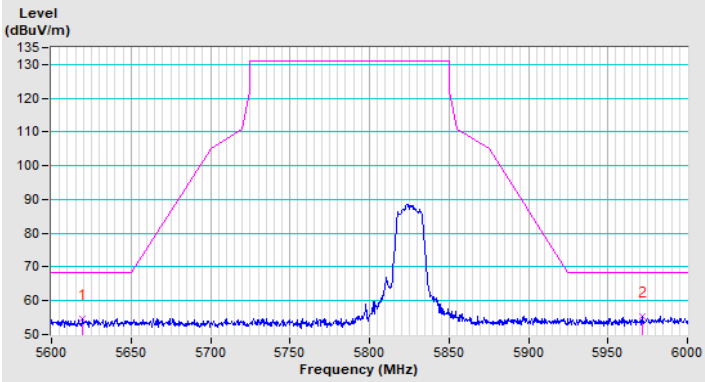


Vertical (Peak)

802.11a Channel 165



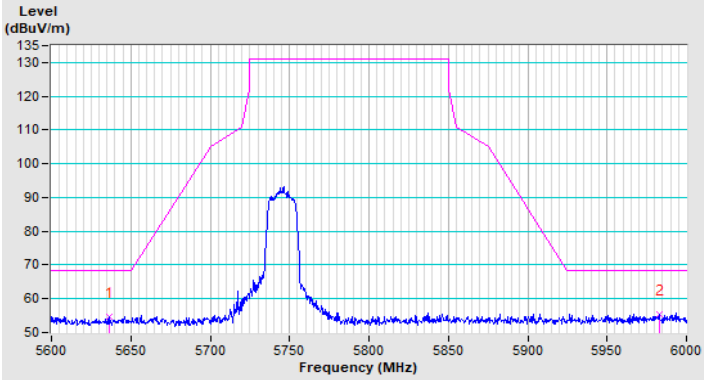
Horizontal (Peak)



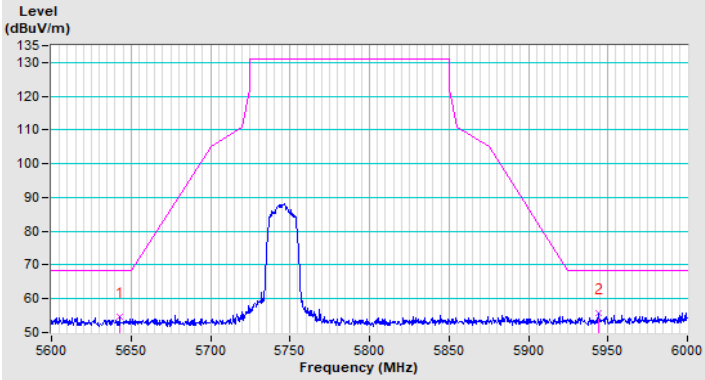
Vertical (Peak)

Frequency Range	5.6 GHz ~ 6 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

802.11ac (VHT20) Channel 149

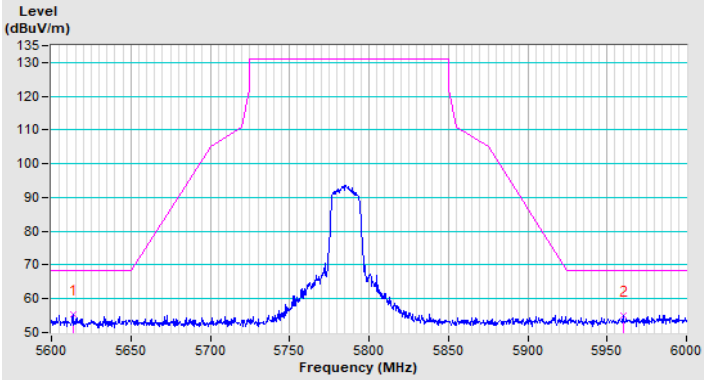


Horizontal (Peak)

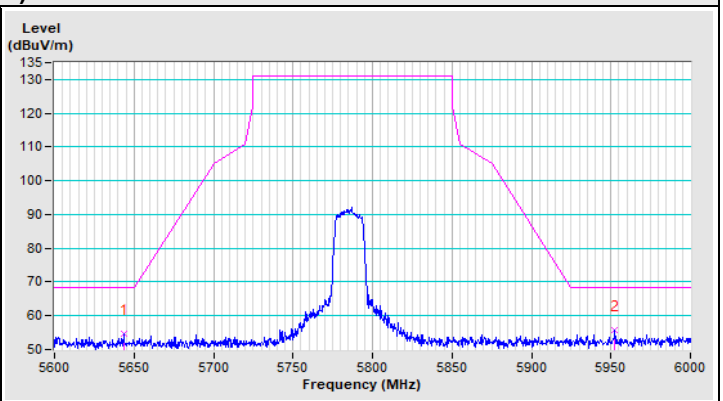


Vertical (Peak)

802.11ac (VHT20) Channel 157

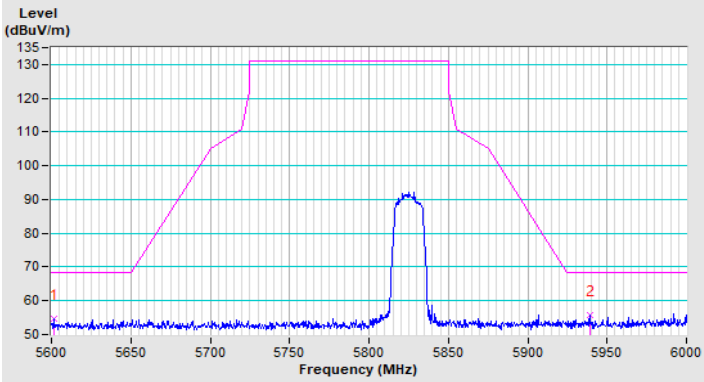


Horizontal (Peak)

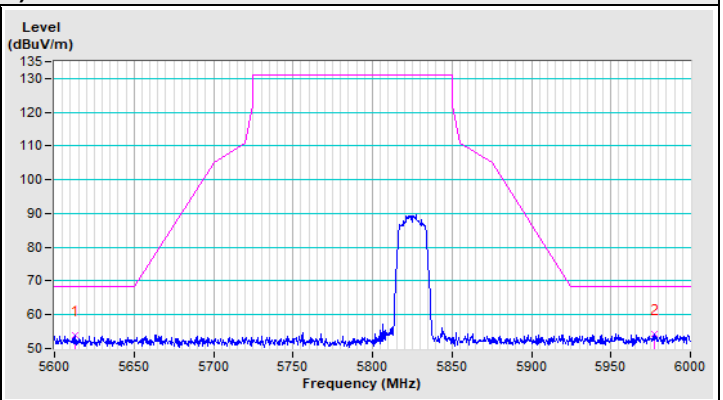


Vertical (Peak)

802.11ac (VHT20) Channel 165



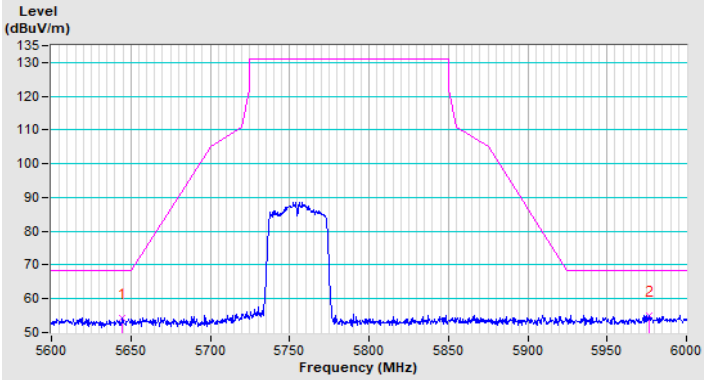
Horizontal (Peak)



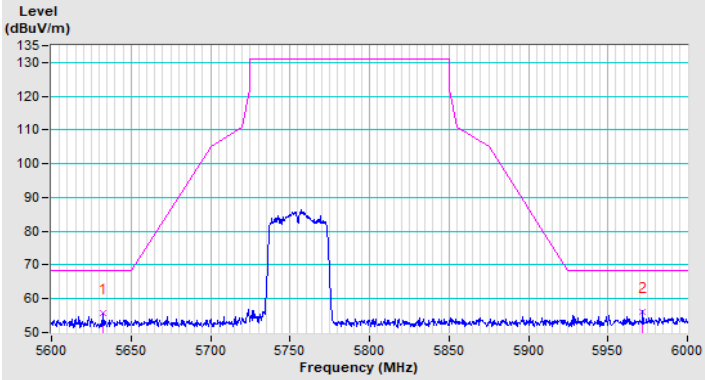
Vertical (Peak)

Frequency Range	5.6 GHz ~ 6 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

802.11ac (VHT40) Channel 151

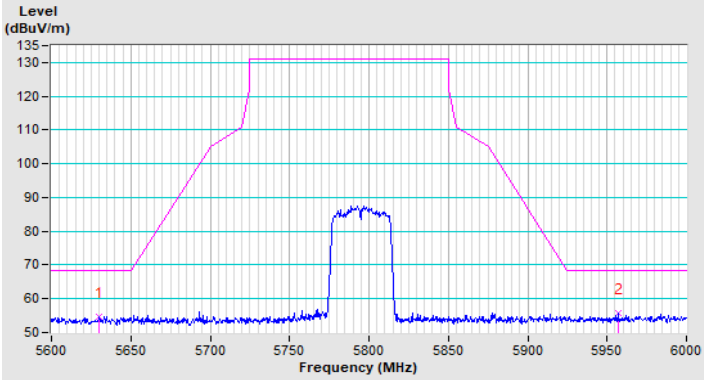


Horizontal (Peak)

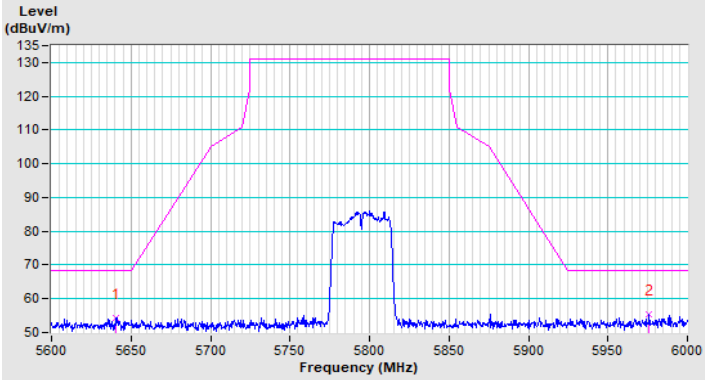


Vertical (Peak)

802.11ac (VHT40) Channel 159

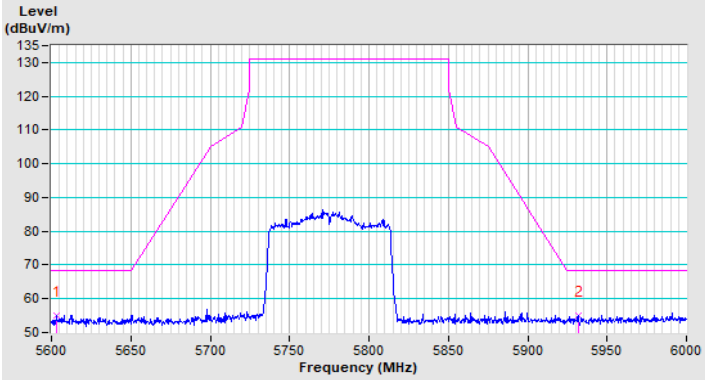
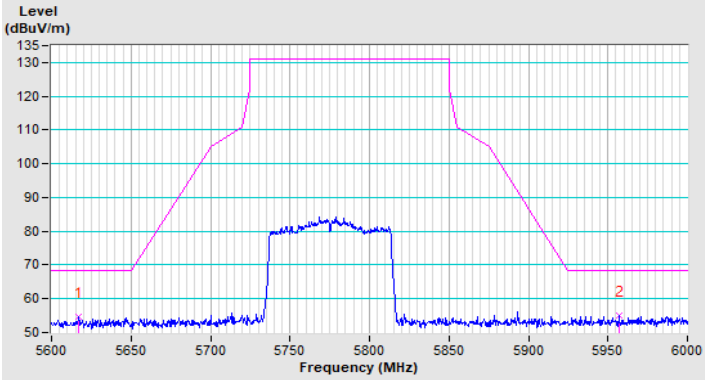


Horizontal (Peak)



Vertical (Peak)

Frequency Range	5.6 GHz ~ 6 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak

802.11ac (VHT80) Channel 155	
	
Horizontal (Peak)	Vertical (Peak)

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

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

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

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

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