TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBEDV-WTW-P23090682-1
FCC ID:	VKF-MASIFDM1
Product:	Masimo Freedom Watch
Brand:	Masimo
Model No.:	Freedom Watch
Received Date:	2023/9/28
Test Date:	2023/11/18 ~ 2023/12/19
Issued Date:	2024/1/25
Applicant:	Masimo Corporation
Address:	52 Discovery, Irvine, CA 92618 USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location (1):	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
Test Location (2):	B2F., No. 215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan
FCC Registration / Designation Number (1):	788550 / TW0003
FCC Registration / Designation Number (2):	427177 / TW0011

Approved by: Jeremy Lin , **Date:** 2024/1/25

Jeremy Lin / Project Engineer

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Prepared by : Celine Chou / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBEDV-WTW-P23090682-1	Original release.	2024/1/25

1 Certificate

Product:	Masimo Freedom Watch
Brand:	Masimo
Test Model:	Freedom Watch
Sample Status:	Engineering sample
Applicant:	Masimo Corporation
Test Date:	2023/11/18 ~ 2023/12/19
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 -19.17 dB at 0.42200 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -1.0 dB at 46.74 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 -1.1 dB at 5150.00 and 5470.00 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:

Measurement	Specification	Expanded Uncertainty (k=2) (±)
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	Masimo Freedom Watch
Brand	Masimo
Test Model	Freedom Watch
Status of EUT	Engineering sample
Power Supply Rating	3.87 Vdc from Battery 5 Vdc from Wireless Charger
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	Up to 433.3 Mbps
Operating Frequency	5.18 GHz ~ 5.24 GHz 5.26 GHz ~ 5.32 GHz 5.50 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: 99.541 mW (19.98 dBm) 5.26 GHz ~ 5.32 GHz: 97.949 mW (19.91 dBm) 5.50 GHz ~ 5.72 GHz: 97.275 mW (19.88 dBm) 5.745 GHz ~ 5.825 GHz: 95.280 mW (19.79 dBm)
EUT Category	Client device

Note:

1. The EUT uses following accessories.

Battery		
Brand	Model	Specification
EVE	EVE443423QH	Power Rating: 3.87 Vdc, 430 mAh, 1.66 Wh
Wireless Charger		
Brand	Model	Specification
Masimo	Masimo Wireless Charger	Power Rating: 5.0 Vdc, 1.5 A

2. Simultaneously transmission condition.

Condition	Technology			
1	WWAN	WLAN 2.4G	-	NFC
2	WWAN	WLAN 5G	BT	NFC
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.				

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Gain (dBi)					Antenna Type	Connector Type
2400-2483.5 MHz	5150-5250 MHz	5250-5350 MHz	5470-5725 MHz	5725-5850 MHz		
-5.7	-6.0	-6.3	-6.5	-7.2	PIFA	Spring

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

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

5 GHz Band		
Modulation Mode	Tx & Rx Configuration	
802.11a	1TX	1RX
802.11n (HT20)	1TX	1RX
802.11n (HT40)	1TX	1RX
802.11ac (VHT20)	1TX	1RX
802.11ac (VHT40)	1TX	1RX
802.11ac (VHT80)	1TX	1RX
Note: The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz) and 802.11ac mode for 20 MHz (40 MHz, 80 MHz) therefore the manufacturer will control the power for 802.11n mode is same as the 802.11ac mode or more 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), 802.11ax (HE80):

Channel	Frequency
155	5775 MHz

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT can be used in the following ways: X/ Y/ Z. Pre-scan in these ways and find the worst case as a representative test condition.
Worst Case:	1. X/ Y/ Z Worst Condition: Z axis. 2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

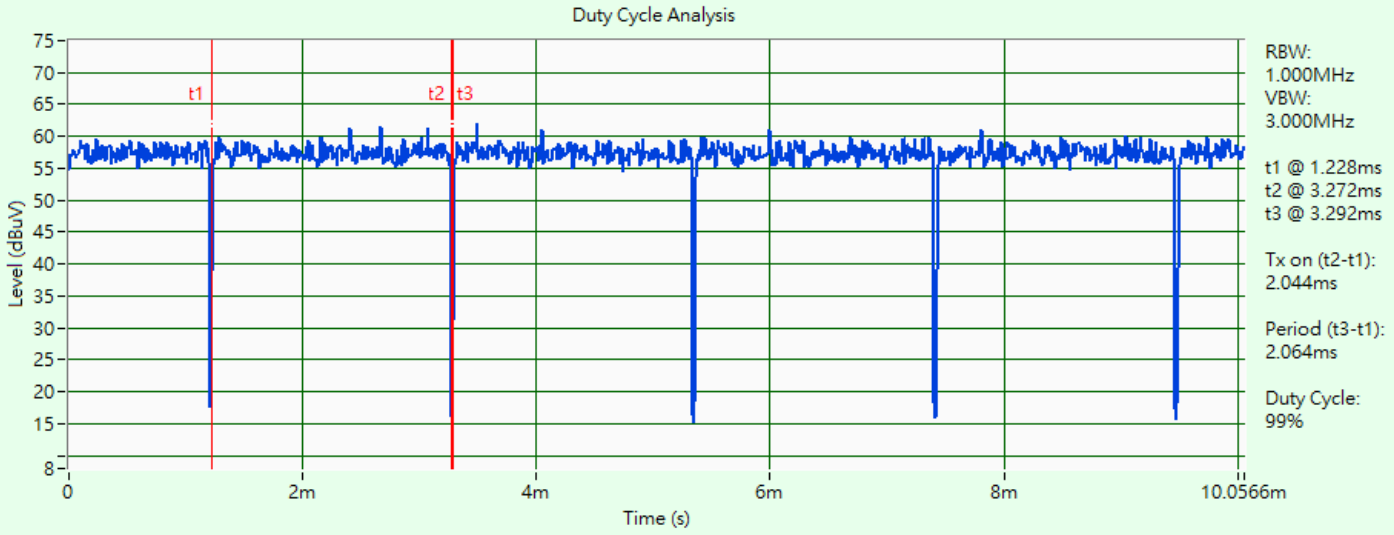
Following channel(s) was (were) selected for the final test as listed below:

Test Item	EUT Configure Mode	Mode	Tested Channel	Modulation	Data Rate Parameter
26 dB Bandwidth	B	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	B	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	B	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	B	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	B	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	B	802.11a	36	-	-

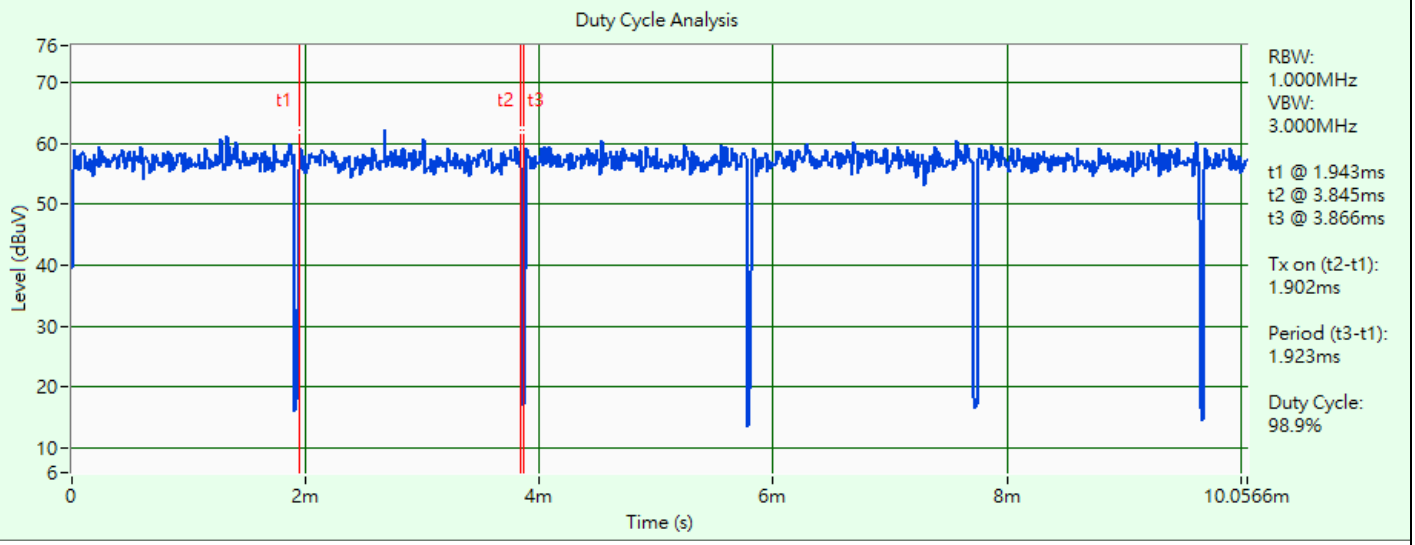
Test Item	EUT Configure Mode	Mode	Tested Channel	Modulation	Data Rate Parameter
AC Power Conducted Emissions	A	802.11a	48	BPSK	6Mb/s
Unwanted Emissions below 1 GHz	A	802.11a	48	BPSK	6Mb/s
Unwanted Emissions above 1 GHz	A	802.11a	36, 40, 48, 52, 60, 64, 100, 116, 140, 144, 149, 157, 165	BPSK	6Mb/s
		802.11ac (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
EUT Configure Mode:	A	EUT + Wireless Charger + Adapter			
	B	EUT only			

3.5 Duty Cycle of Test Signal

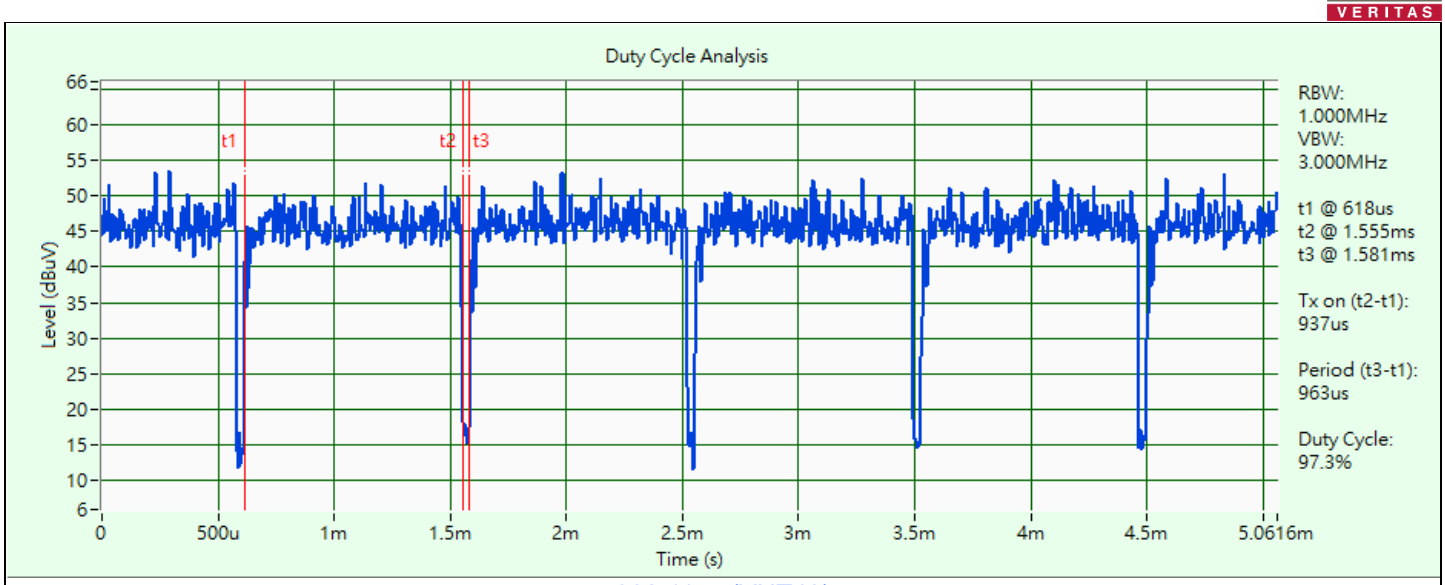
802.11a: Duty cycle = 2.044 ms / 2.064 ms x 100% = 99.0%
802.11ac (VHT20): Duty cycle = 1.902 ms / 1.923 ms x 100% = 98.9%
802.11ac (VHT40): Duty cycle = 0.937 ms / 0.963 ms x 100% = 97.3%, duty factor = 10 * log (1/Duty cycle) = 0.12 dB
802.11ac (VHT80): Duty cycle = 0.456 ms / 0.487 ms x 100% = 93.6%, duty factor = 10 * log (1/Duty cycle) = 0.29 dB



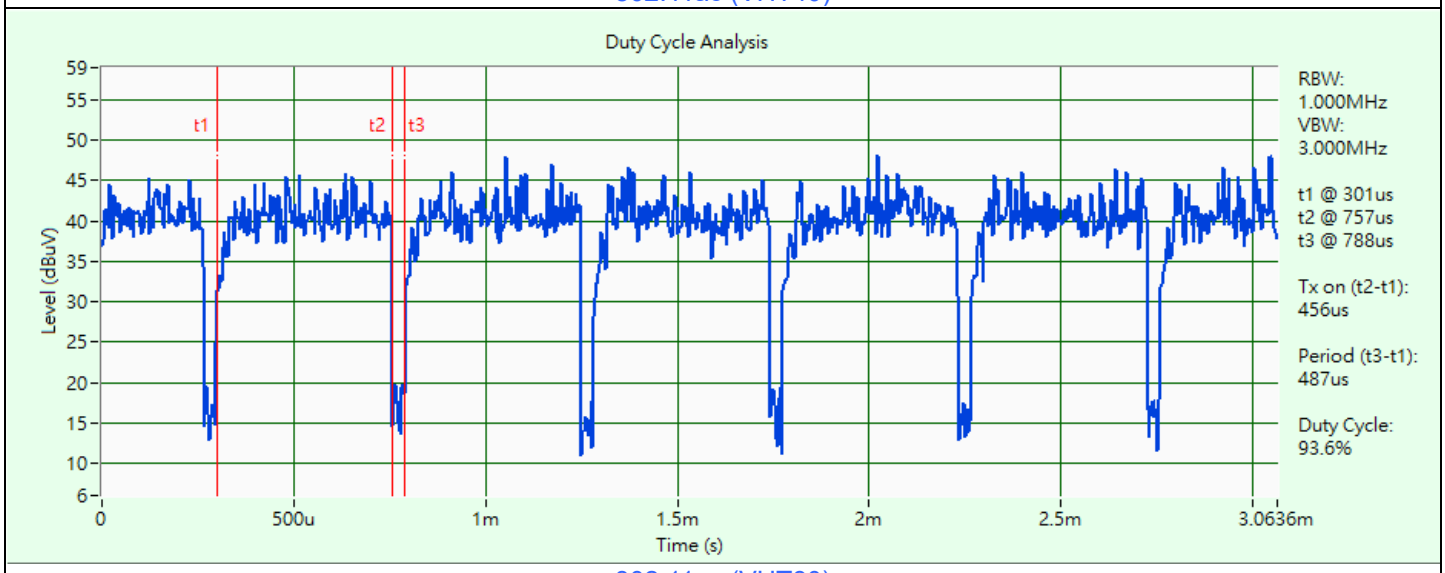
802.11a



802.11ac (VHT20)



802.11ac (VHT40)

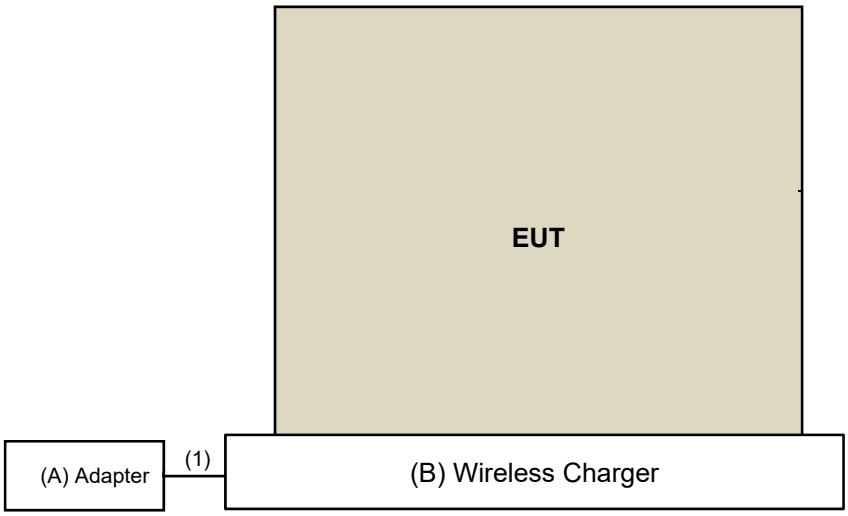


802.11ac (VHT80)

3.6 Test Program Used and Operation Descriptions

Controlling software QRCT4 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	Adapter	Masimo	NY-PW101-05002400	N/A	N/A	Supplied by applicant
B	Wireless Charger	Masimo	N/A	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	USB Cable	1	1	No	0	Supplied by applicant Attached on Wireless Charger

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: 2023/11/23

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: 2023/11/23

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: 2023/11/23

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	ESR3	102783	2022/12/21	2023/12/20
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: 2023/12/11

4.8 Unwanted Emissions below 1 GHz

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

Notes:

1. The test was performed in XD - 966 chamber 6.
2. Tested Date: 2023/12/19

4.9 Unwanted Emissions above 1 GHz

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

Notes:

1. The test was performed in XD - 966 chamber 6.
2. Tested Date: 2023/11/18 ~ 2023/11/21

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.		

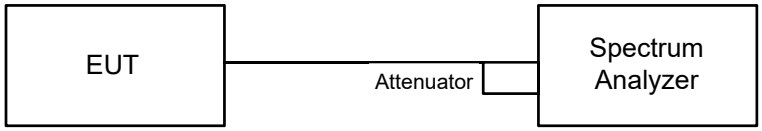
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup



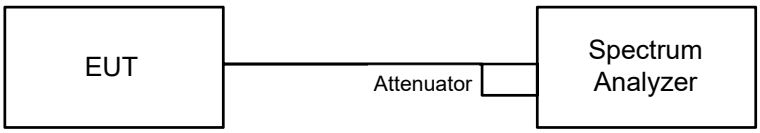
6.1.2 Test Procedure

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

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

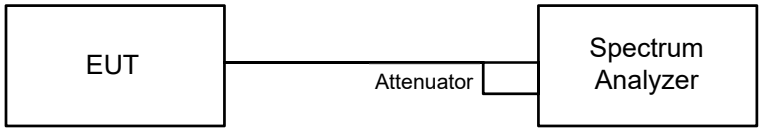
a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 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

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

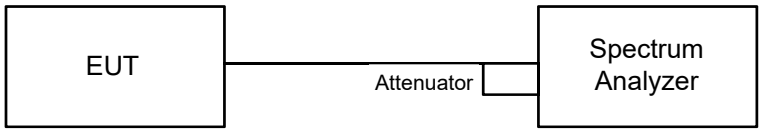


6.4.2 Test Procedure

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

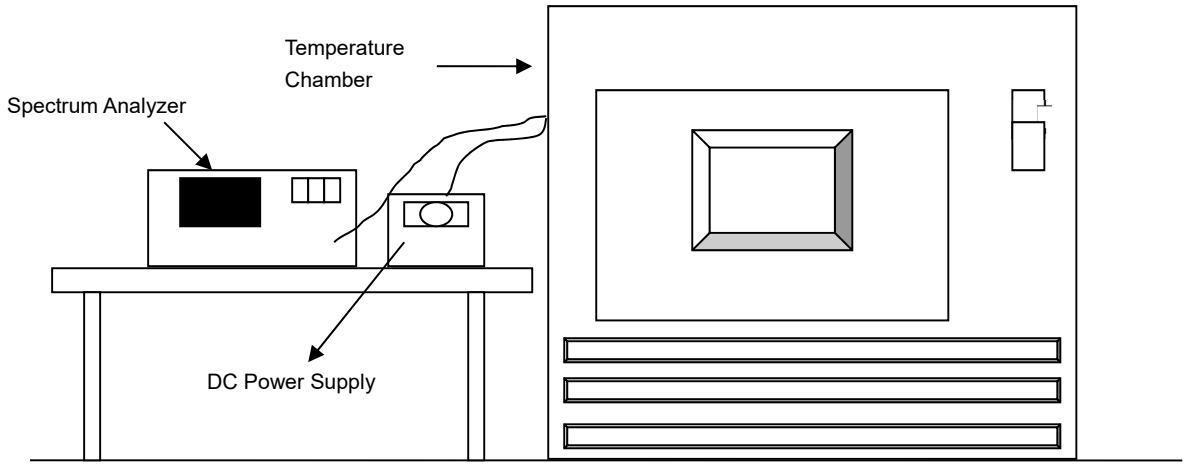


6.5.2 Test Procedure

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

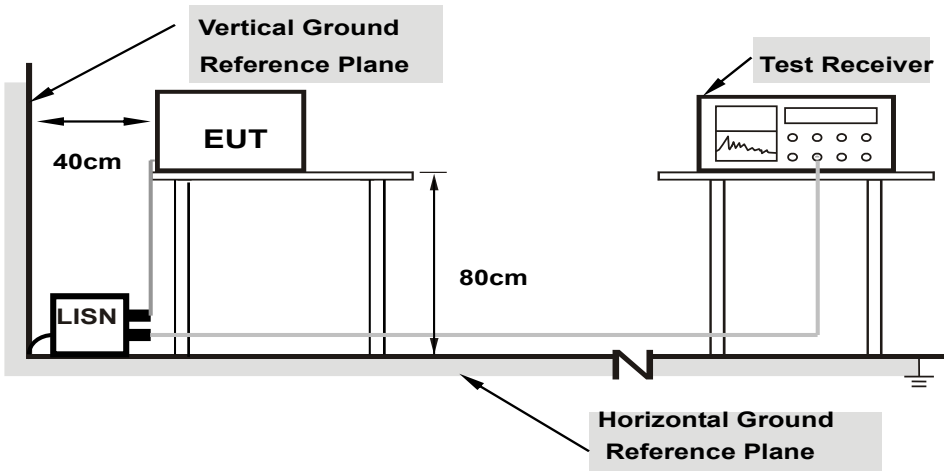


6.6.2 Test Procedure

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.

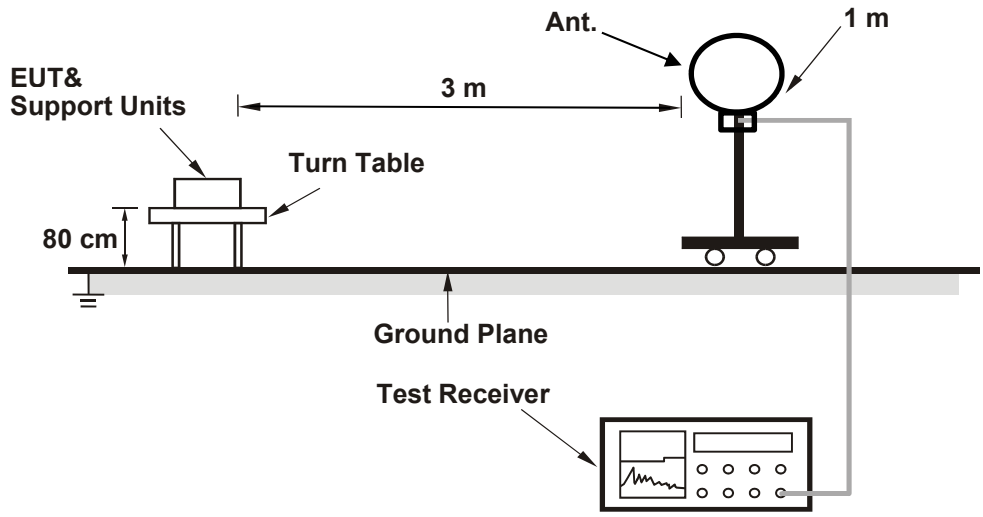
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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.

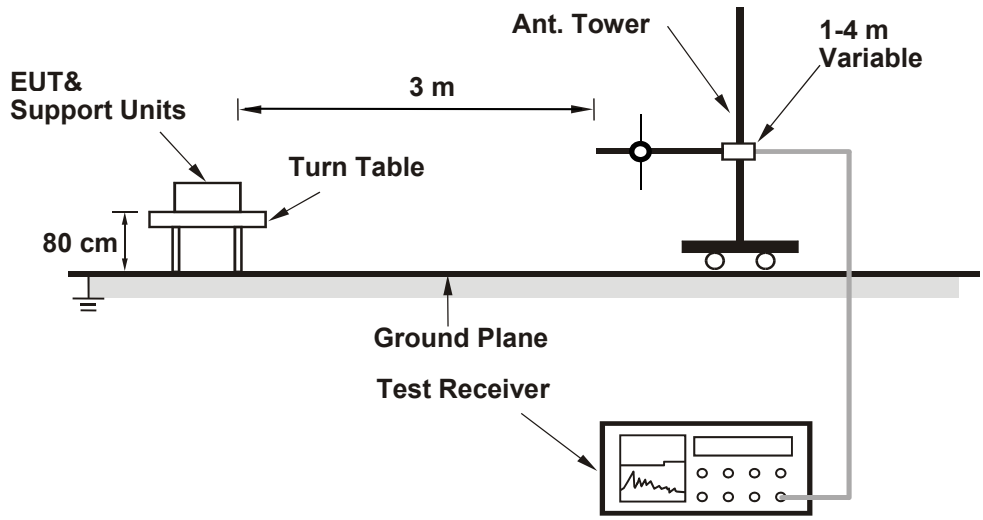
6.8 Unwanted Emissions below 1 GHz

6.8.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.8.2 Test Procedure

For Radiated emission below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

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

For Radiated emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

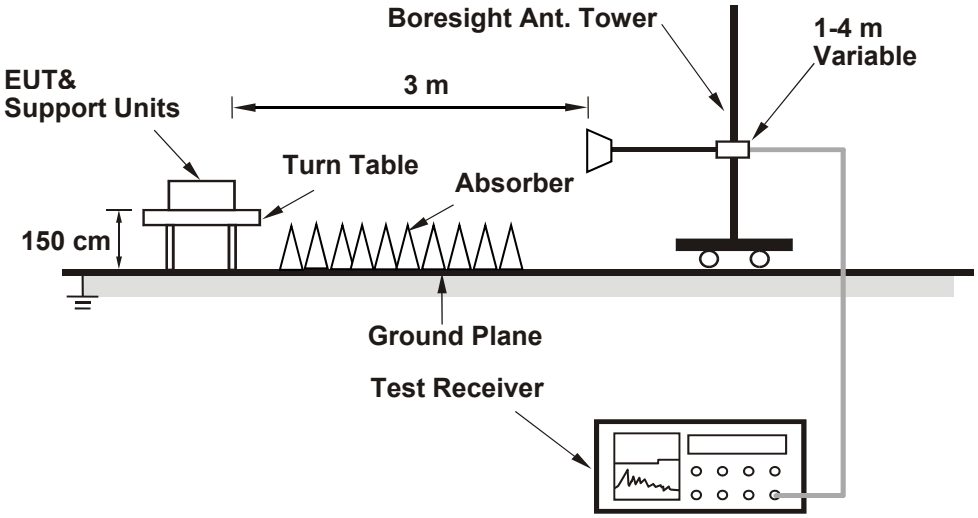
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

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

6.9 Unwanted Emissions above 1 GHz

6.9.1 Test Setup



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

6.9.2 Test Procedure

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:	3.87 Vdc	Environmental Conditions:	25°C, 59% RH	Tested By:	Henry Hsu

802.11a

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
52	5260	25.41
60	5300	28.9
64	5320	30.8
100	5500	32.52
116	5580	33.93
140	5700	28.58
144 (U-NII-2C)	5720	17.68
144 (U-NII-3)	5720	10.32

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	25.41	25.05	>	24
60	5300	28.90	25.60	>	24
64	5320	30.80	25.88	>	24
100	5500	32.52	26.12	>	24
116	5580	33.93	26.30	>	24
140	5700	28.58	25.56	>	24
144 (U-NII-2C)	5720	17.68	23.47	<	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	25.76
60	5300	27.74
64	5320	28.05
100	5500	37.00
116	5580	34.96
140	5700	31.39
144 (U-NII-2C)	5720	19.67
144 (U-NII-3)	5720	11.85

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	25.76	25.10	>	24
60	5300	27.74	25.43	>	24
64	5320	28.05	25.47	>	24
100	5500	37.00	26.68	>	24
116	5580	34.96	26.43	>	24
140	5700	31.39	25.96	>	24
144 (U-NII-2C)	5720	19.67	23.93	<	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	42.02
62	5310	42.20
102	5510	58.22
110	5550	58.90
134	5670	60.46
142 (U-NII-2C)	5710	48.65
142 (U-NII-3)	5710	14.92

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
54	5270	42.02	27.23	>	24
62	5310	42.20	27.25	>	24
102	5510	58.22	28.65	>	24
110	5550	58.90	28.70	>	24
134	5670	60.46	28.81	>	24
142 (U-NII-2C)	5710	48.65	27.87	>	24

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

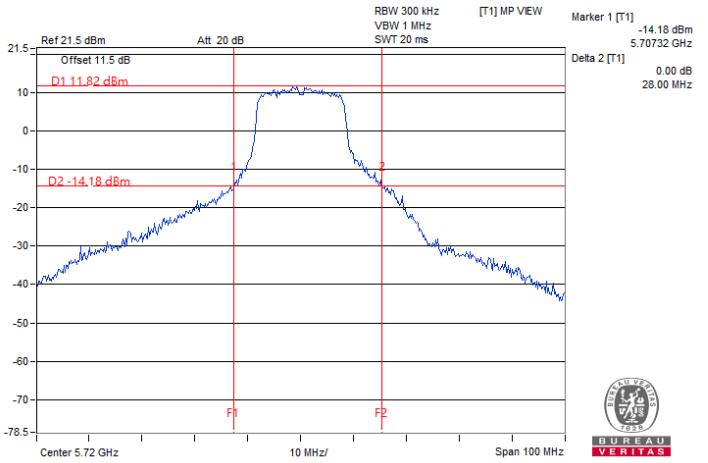
802.11ac (VHT80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
58	5290	103.75
106	5530	87.63
122	5610	111.06
138 (U-NII-2C)	5690	112.07
138 (U-NII-3)	5690	10.40

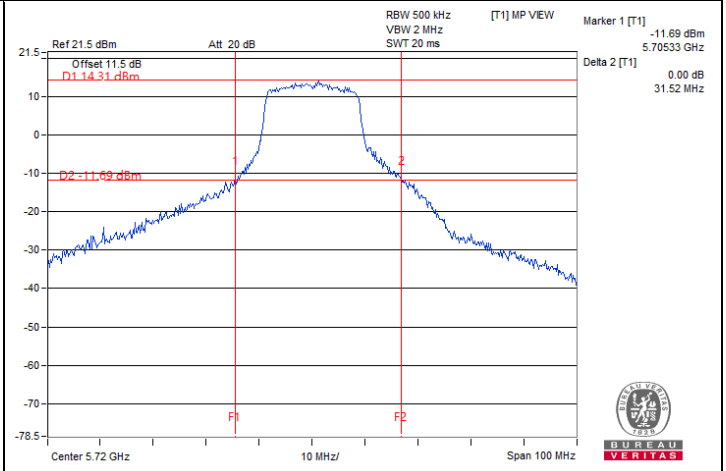
Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	103.75	31.15	>	24
106	5530	87.63	30.42	>	24
122	5610	111.06	31.45	>	24
138 (U-NII-2C)	5690	112.07	31.49	>	24

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

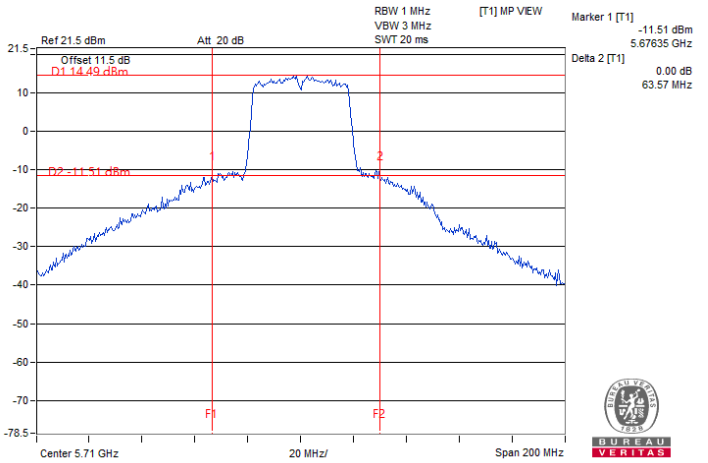
Spectrum Plot of Minimum Value



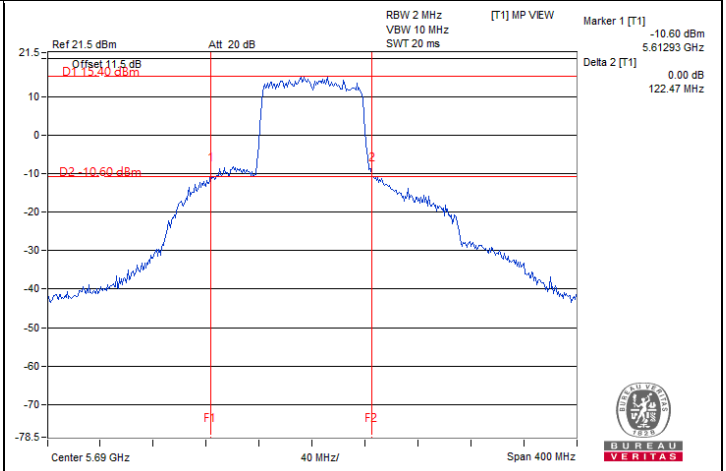
802.11a : CH 144 (U-NII-3)



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:	3.87 Vdc	Environmental Conditions:	25°C, 59% RH	Tested By:	Henry Hsu

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	87.297	19.41	24	Pass
40	5200	95.940	19.82	24	Pass
48	5240	99.541	19.98	24	Pass
52	5260	97.949	19.91	24	Pass
60	5300	97.949	19.91	24	Pass
64	5320	94.406	19.75	24	Pass
100	5500	96.161	19.83	24	Pass
116	5580	97.275	19.88	24	Pass
140	5700	95.940	19.82	24	Pass
*144 (U-NII-2C)	5720	65.615	18.17	23.47	Pass
*144 (U-NII-3)	5720	13.709	11.37	30	Pass
149	5745	91.622	19.62	30	Pass
157	5785	93.325	19.70	30	Pass
165	5825	95.280	19.79	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 -6.0 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the antenna gain is -6.3 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the antenna gain is -6.5 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the antenna gain is -7.2 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	82.414	19.16	24	Pass
40	5200	83.176	19.20	24	Pass
48	5240	95.719	19.81	24	Pass
52	5260	92.683	19.67	24	Pass
60	5300	92.897	19.68	24	Pass
64	5320	89.536	19.52	24	Pass
100	5500	91.411	19.61	24	Pass
116	5580	92.257	19.65	24	Pass
140	5700	91.833	19.63	24	Pass
*144 (U-NII-2C)	5720	65.615	18.17	23.93	Pass
*144 (U-NII-3)	5720	15.560	11.92	30	Pass
149	5745	88.716	19.48	30	Pass
157	5785	89.950	19.54	30	Pass
165	5825	91.622	19.62	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 -6.0 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the antenna gain is -6.3 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the antenna gain is -6.5 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the antenna gain is -7.2 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	52.966	17.24	24	Pass
46	5230	76.033	18.81	24	Pass
54	5270	76.560	18.84	24	Pass
62	5310	74.645	18.73	24	Pass
102	5510	69.823	18.44	24	Pass
110	5550	74.989	18.75	24	Pass
134	5670	76.208	18.82	24	Pass
*142 (U-NII-2C)	5710	60.798	17.84	24	Pass
*142 (U-NII-3)	5710	4.908	6.91	30	Pass
151	5755	74.473	18.72	30	Pass
159	5795	76.384	18.83	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 -6.0 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the antenna gain is -6.3 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the antenna gain is -6.5 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the antenna gain is -7.2 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	84.333	19.26	24	Pass
40	5200	93.541	19.71	24	Pass
48	5240	98.628	19.94	24	Pass
52	5260	95.280	19.79	24	Pass
60	5300	95.060	19.78	24	Pass
64	5320	91.833	19.63	24	Pass
100	5500	93.541	19.71	24	Pass
116	5580	94.624	19.76	24	Pass
140	5700	93.756	19.72	24	Pass
*144 (U-NII-2C)	5720	66.222	18.21	23.93	Pass
*144 (U-NII-3)	5720	15.668	11.95	30	Pass
149	5745	90.991	19.59	30	Pass
157	5785	92.045	19.64	30	Pass
165	5825	94.406	19.75	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 -6.0 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the antenna gain is -6.3 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the antenna gain is -6.5 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the antenna gain is -7.2 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	54.576	17.37	24	Pass
46	5230	78.163	18.93	24	Pass
54	5270	78.886	18.97	24	Pass
62	5310	76.384	18.83	24	Pass
102	5510	72.111	18.58	24	Pass
110	5550	77.446	18.89	24	Pass
134	5670	78.163	18.93	24	Pass
*142 (U-NII-2C)	5710	61.643	17.90	24	Pass
*142 (U-NII-3)	5710	4.999	6.99	30	Pass
151	5755	77.090	18.87	30	Pass
159	5795	78.163	18.93	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 -6.0 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the antenna gain is -6.3 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the antenna gain is -6.5 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the antenna gain is -7.2 dBi < 6 dBi, so the output power limit shall not be reduced.

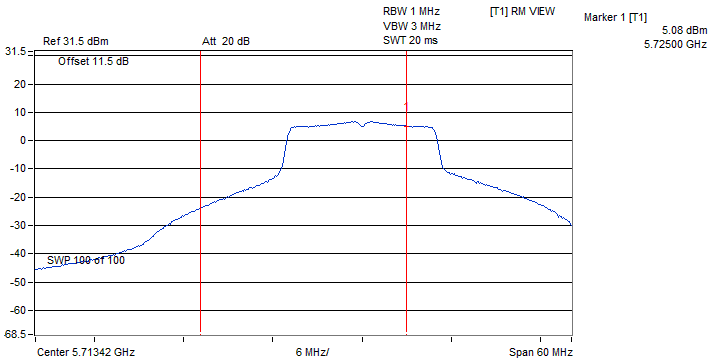
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
42	5210	42.658	16.30	24	Pass
58	5290	70.307	18.47	24	Pass
106	5530	55.976	17.48	24	Pass
122	5610	72.611	18.61	24	Pass
*138 (U-NII-2C)	5690	74.914	18.75	24	Pass
*138 (U-NII-3)	5690	2.842	4.54	30	Pass
155	5775	77.446	18.89	30	Pass

Notes:

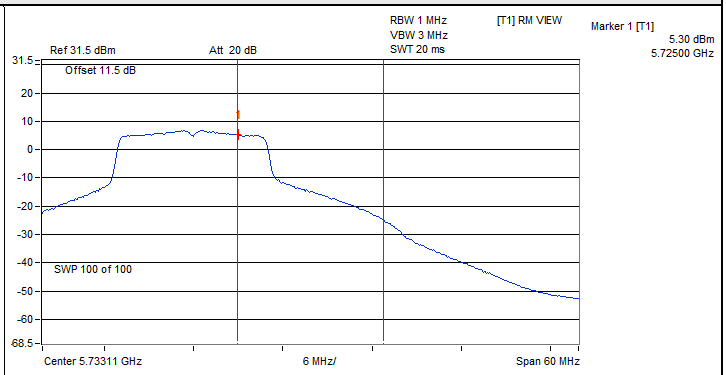
1. * : Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2A and use spectrum analyzer test , the duty factor was included in the total power.
2. For U-NII-1, the antenna gain is -6.0 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the antenna gain is -6.3 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the antenna gain is -6.5 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the antenna gain is -7.2 dBi < 6 dBi, so the output power limit shall not be reduced.

Spectrum Plot for channel straddling



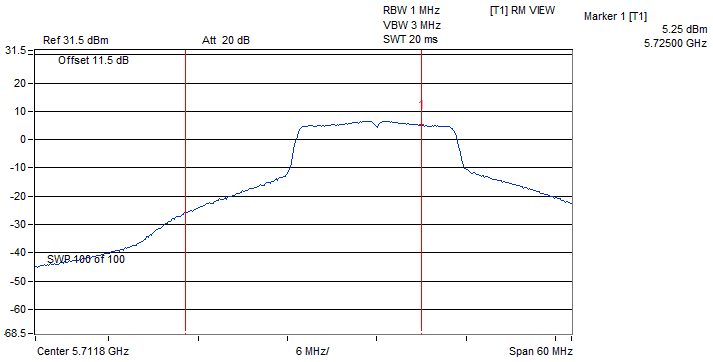
TX Channel Bandwidth 23.16 MHz Power 18.17 dBm

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



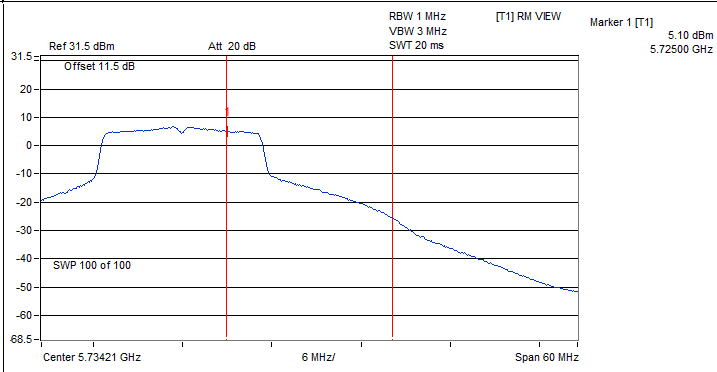
TX Channel Bandwidth 16.22 MHz Power 11.37 dBm

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



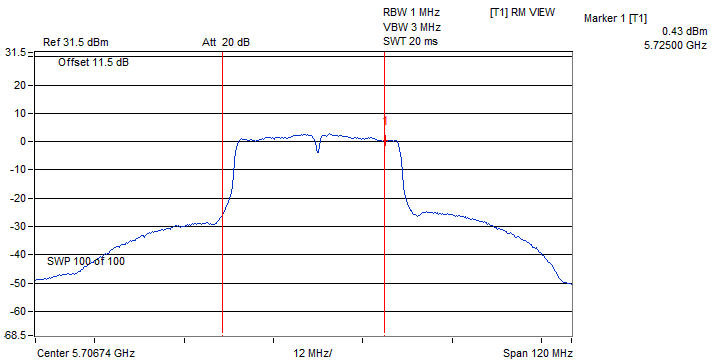
TX Channel Bandwidth 26.41 MHz Power 18.21 dBm

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



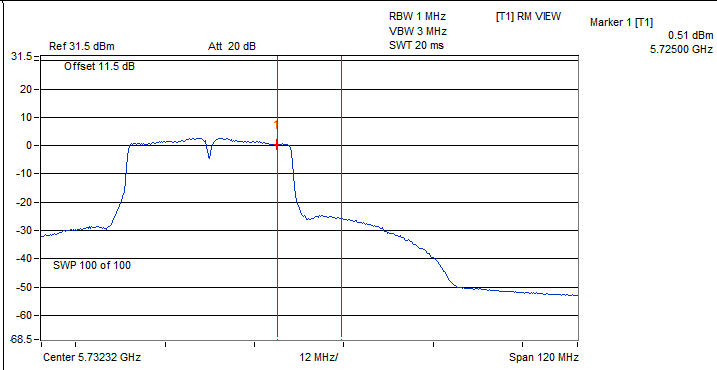
TX Channel Bandwidth 18.42 MHz Power 11.95 dBm

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



TX Channel Bandwidth 36.51 MHz Power 17.78 dBm

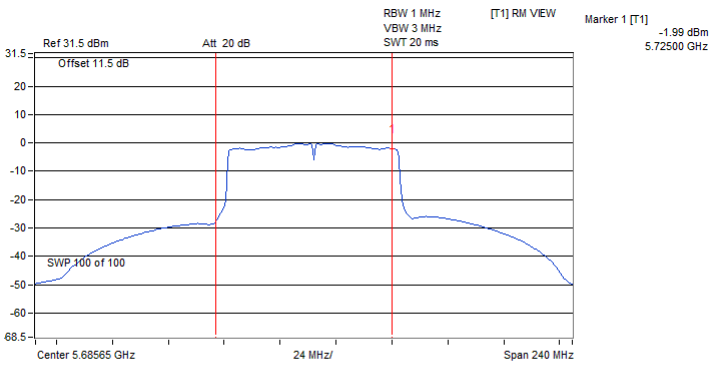
802.11ac (VHT40) : CH 142 (U-NII-2C)



TX Channel Bandwidth 14.64 MHz Power 6.87 dBm

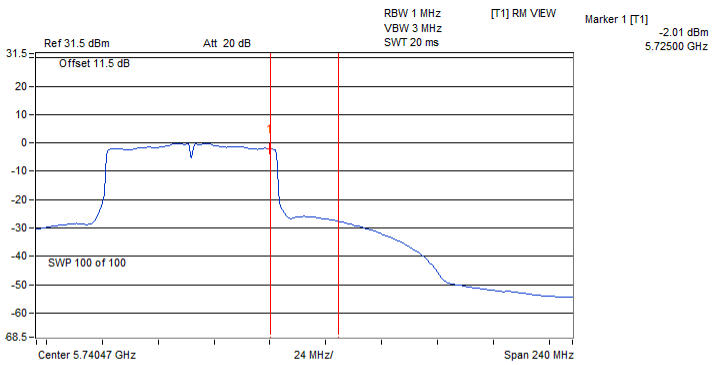
802.11ac (VHT40) : CH 142 (U-NII-3)

Spectrum Plot for channel straddling



TX Channel Bandwidth 78.71 MHz Power 18.46 dBm

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



TX Channel Bandwidth 30.93 MHz Power 4.25 dBm

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

7.3 Power Spectral Density

Input Power:	3.87 Vdc	Environmental Conditions:	25°C, 59% RH	Tested By:	Henry Hsu

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
36	5180	6.45	11	Pass
40	5200	6.82	11	Pass
48	5240	6.97	11	Pass
52	5260	6.91	11	Pass
60	5300	6.92	11	Pass
64	5320	6.72	11	Pass
100	5500	6.84	11	Pass
116	5580	6.87	11	Pass
140	5700	6.82	11	Pass
144 (U-NII-2C)	5720	6.82	11	Pass

Notes:

1. For U-NII-1, the antenna gain is -6.0 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is -6.3 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is -6.5 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	6.24	11	Pass
40	5200	6.71	11	Pass
48	5240	6.96	11	Pass
52	5260	6.80	11	Pass
60	5300	6.79	11	Pass
64	5320	6.62	11	Pass
100	5500	6.69	11	Pass
116	5580	6.75	11	Pass
140	5700	6.72	11	Pass
144 (U-NII-2C)	5720	6.67	11	Pass

Notes:

1. For U-NII-1, the antenna gain is -6.0 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is -6.3 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is -6.5 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
38	5190	1.34	0.12	1.46	11	Pass
46	5230	2.93	0.12	3.05	11	Pass
54	5270	2.99	0.12	3.11	11	Pass
62	5310	2.81	0.12	2.93	11	Pass
102	5510	2.53	0.12	2.65	11	Pass
110	5550	2.89	0.12	3.01	11	Pass
134	5670	2.93	0.12	3.05	11	Pass
142 (U-NII-2C)	5710	2.76	0.12	2.88	11	Pass

Notes:

1. For U-NII-1, the antenna gain is -6.0 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is -6.3 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is -6.5 dBi < 6 dBi, so the power density limit shall not be reduced.

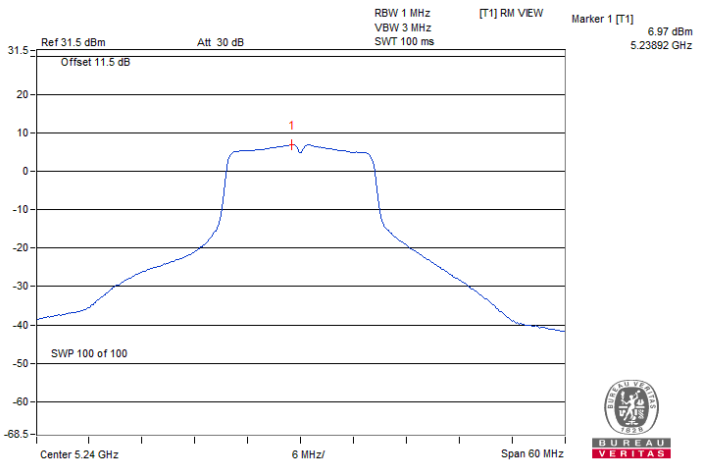
802.11ac (VHT80)

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	-2.50	0.29	-2.21	11	Pass
58	5290	-0.50	0.29	-0.21	11	Pass
106	5530	-1.46	0.29	-1.17	11	Pass
122	5610	-0.01	0.29	0.28	11	Pass
138 (U-NII-2C)	5690	-0.03	0.29	0.26	11	Pass

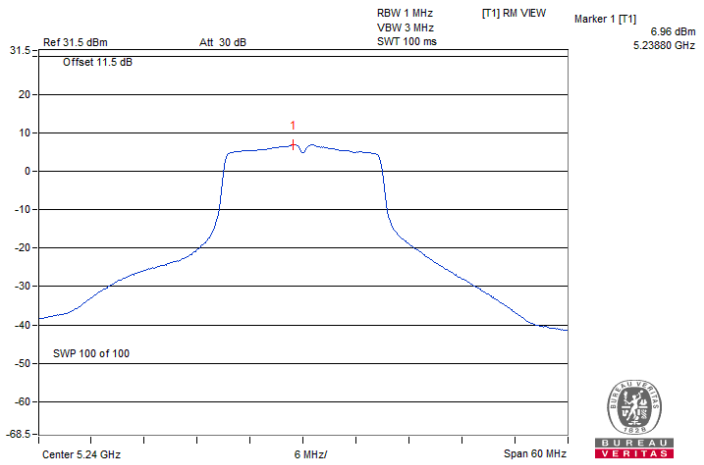
Notes:

1. For U-NII-1, the antenna gain is -6.0 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is -6.3 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is -6.5 dBi < 6 dBi, so the power density limit shall not be reduced.

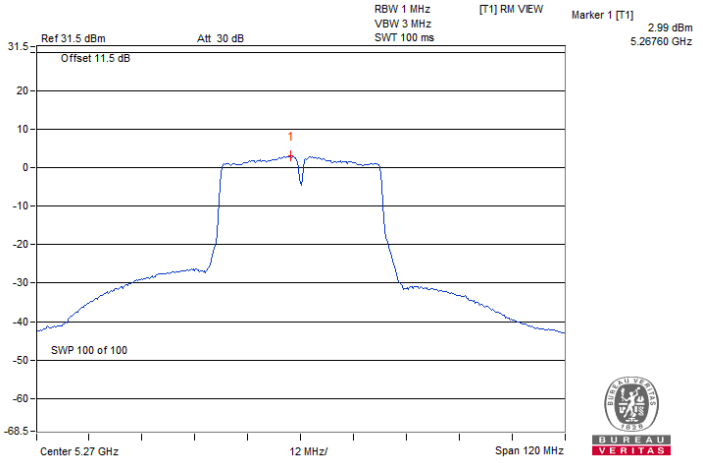
Spectrum Plot of Maximum Value



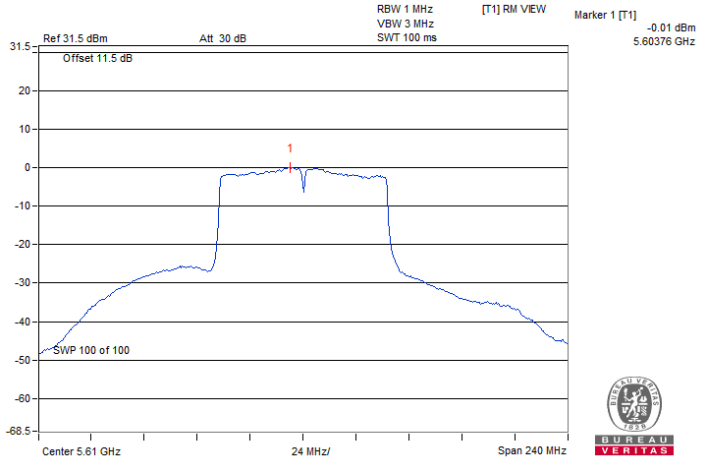
802.11a : CH 48



802.11ac (VHT20) : CH 48



802.11ac (VHT40) : CH 54



802.11ac (VHT80) : CH 122

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
144 (U-NII-3)	5720	-2.82	-0.60	30	Pass
149	5745	-1.44	0.78	30	Pass
157	5785	-1.34	0.88	30	Pass
165	5825	-1.26	0.96	30	Pass

Note: For U-NII-3, the antenna gain is -7.2 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	-2.79	-0.57	30	Pass
149	5745	-1.81	0.41	30	Pass
157	5785	-1.78	0.44	30	Pass
165	5825	-1.63	0.59	30	Pass

Note: For U-NII-3, the antenna gain is -7.2 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
142 (U-NII-3)	5710	-7.39	0.12	-5.05	30	Pass
151	5755	-5.84	0.12	-3.50	30	Pass
159	5795	-5.71	0.12	-3.37	30	Pass

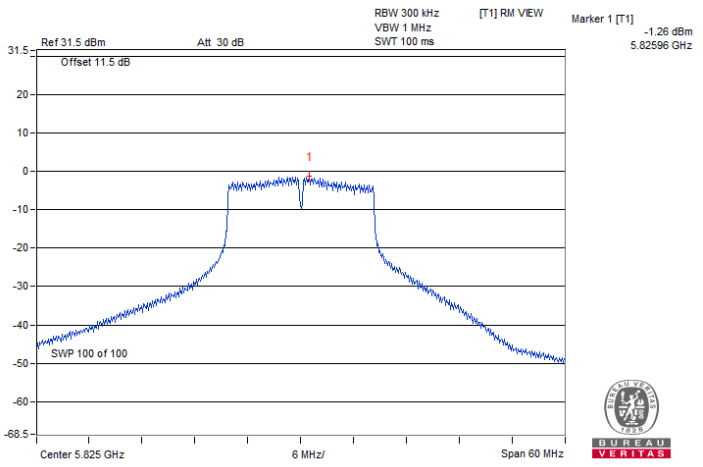
Note: For U-NII-3, the antenna gain is -7.2 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT80)

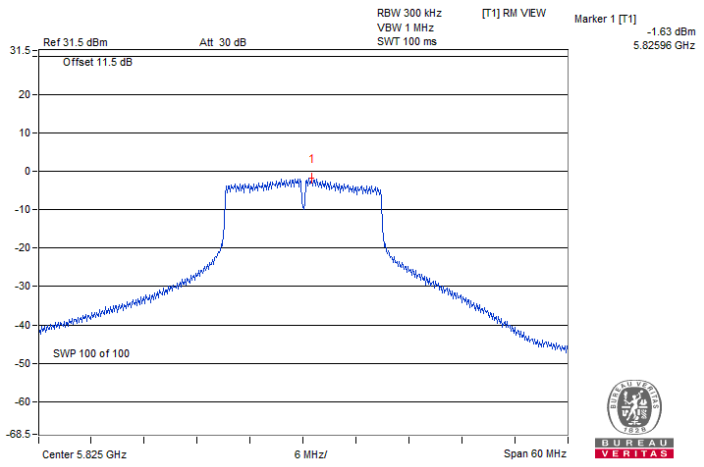
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
138 (U-NII-3)	5690	-10.66	0.29	-8.15	30	Pass
155	5775	-9.69	0.29	-7.18	30	Pass

Note: For U-NII-3, the antenna gain is -7.2 dBi < 6 dBi, so the power density limit shall not be reduced.

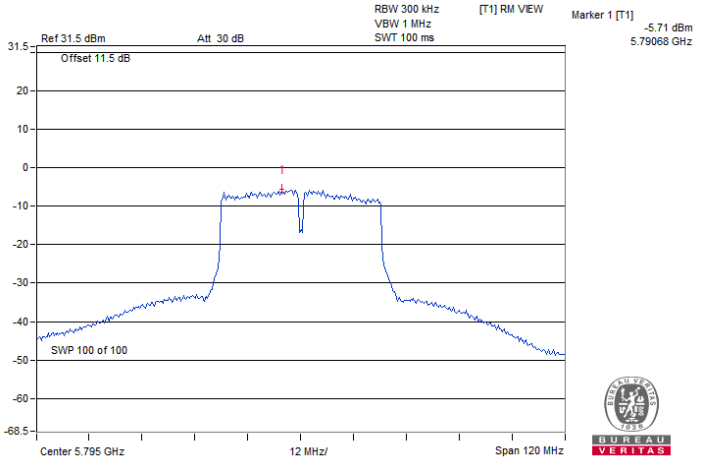
Spectrum Plot of Maximum Value



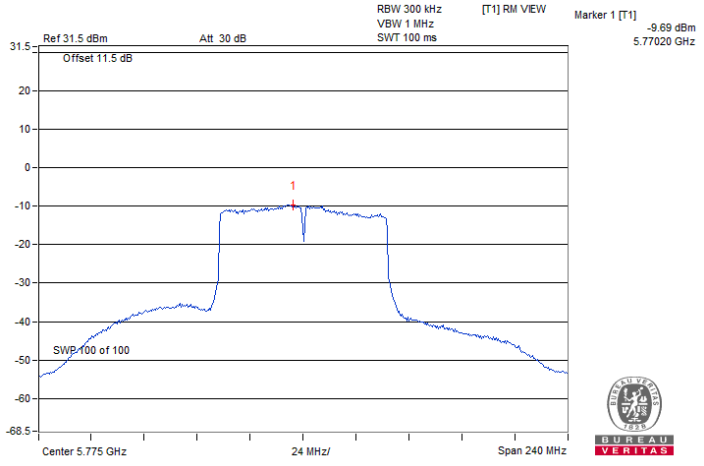
802.11a : CH 165



802.11ac (VHT20) : CH 165



802.11ac (VHT40) : CH 159



802.11ac (VHT80) : CH 155

7.4 6 dB Bandwidth

Input Power:	3.87 Vdc	Environmental Conditions:	25°C, 59% RH	Tested By:	Henry Hsu

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
144 (U-NII-3)	5720	3.16	0.5	Pass
149	5745	16.38	0.5	Pass
157	5785	16.34	0.5	Pass
165	5825	16.11	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
144 (U-NII-3)	5720	3.51	0.5	Pass
149	5745	16.97	0.5	Pass
157	5785	16.95	0.5	Pass
165	5825	16.92	0.5	Pass

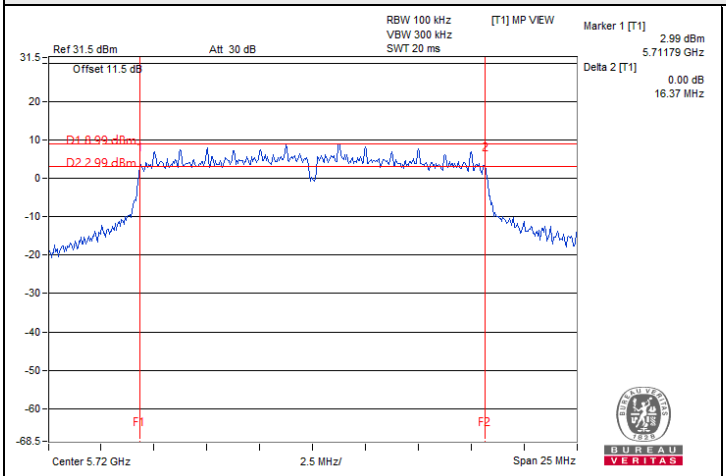
802.11ac (VHT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
142 (U-NII-3)	5710	3.20	0.5	Pass
151	5755	36.38	0.5	Pass
159	5795	36.41	0.5	Pass

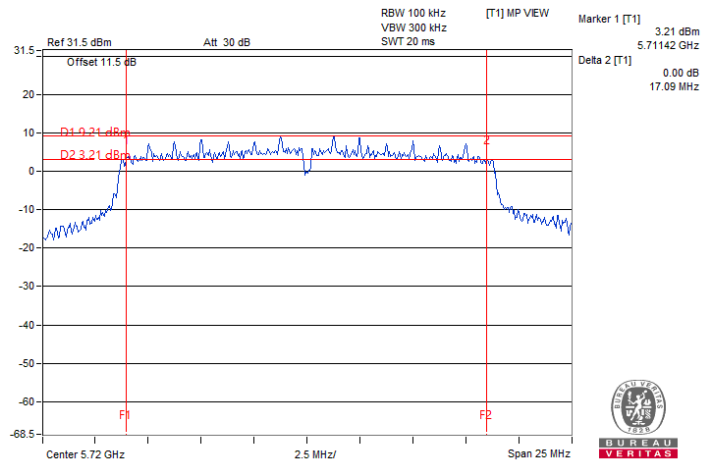
802.11ac (VHT80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
138 (U-NII-3)	5690	2.72	0.5	Pass
155	5775	75.35	0.5	Pass

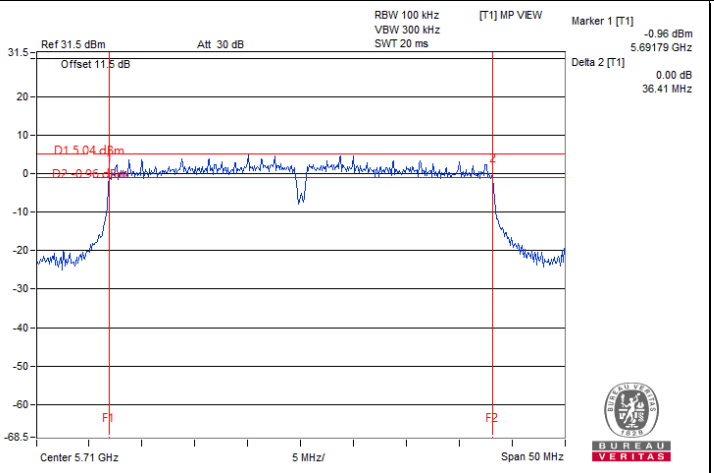
Spectrum Plot of Minimum Value



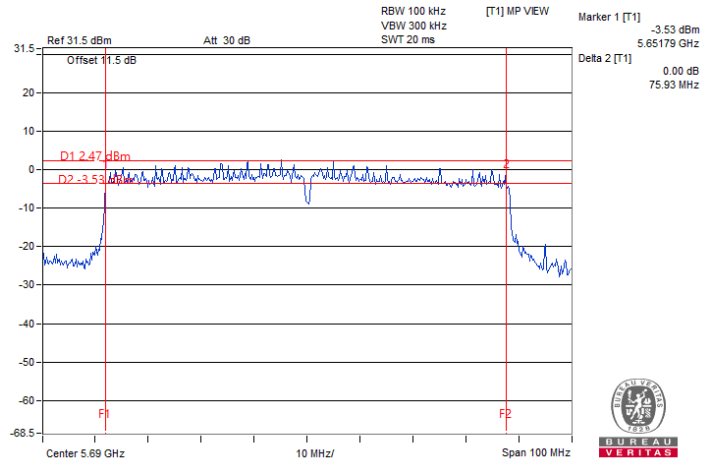
802.11a : CH 144 (U-NII-3)



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:	3.87 Vdc	Environmental Conditions:	25°C, 59% RH	Tested By:	Henry Hsu

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.16
40	5200	17.04
48	5240	16.92
52	5260	16.92
60	5300	17.16
64	5320	17.28
100	5500	17.52
116	5580	17.28
140	5700	17.52
144 (U-NII-2C)	5720	13.52
144 (U-NII-3)	5720	3.64
149	5745	17.02
157	5785	17.12
165	5825	17.21

802.11ac (VHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.12
40	5200	18.12
48	5240	18.00
52	5260	18.12
60	5300	18.24
64	5320	18.24
100	5500	19.08
116	5580	19.32
140	5700	18.84
144 (U-NII-2C)	5720	14.36
144 (U-NII-3)	5720	4.84
149	5745	18.27
157	5785	18.36
165	5825	18.75

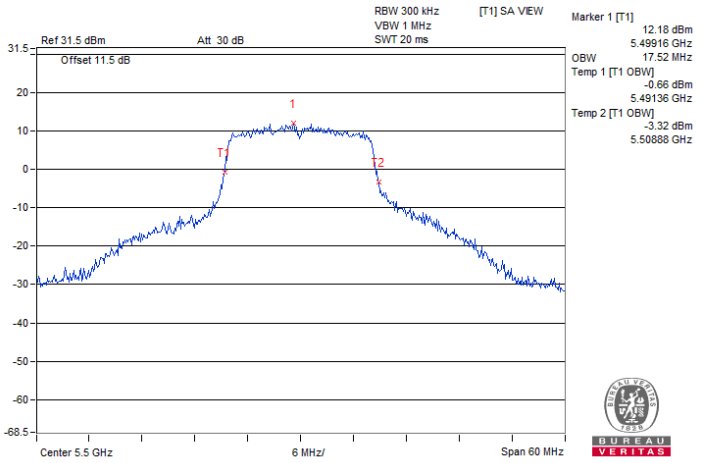
802.11ac (VHT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.72
46	5230	36.72
54	5270	36.72
62	5310	36.72
102	5510	36.72
110	5550	36.92
134	5670	36.96
142 (U-NII-2C)	5710	33.48
142 (U-NII-3)	5710	3.48
151	5755	36.73
159	5795	36.92

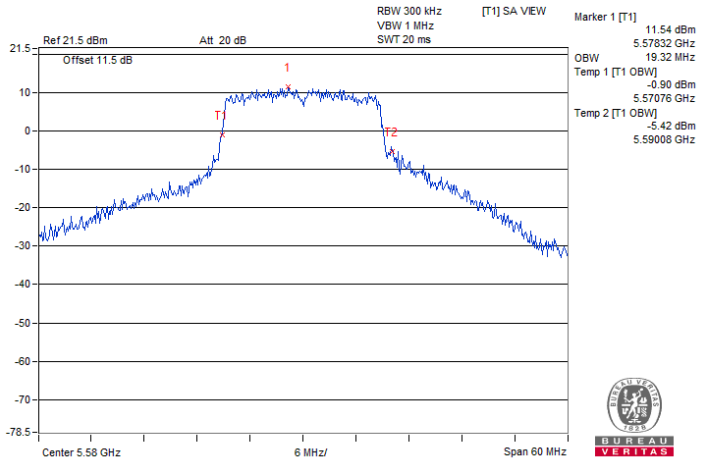
802.11ac (VHT80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.84
58	5290	76.32
106	5530	75.77
122	5610	75.84
138 (U-NII-2C)	5690	73.40
138 (U-NII-3)	5690	2.92
155	5775	76.54

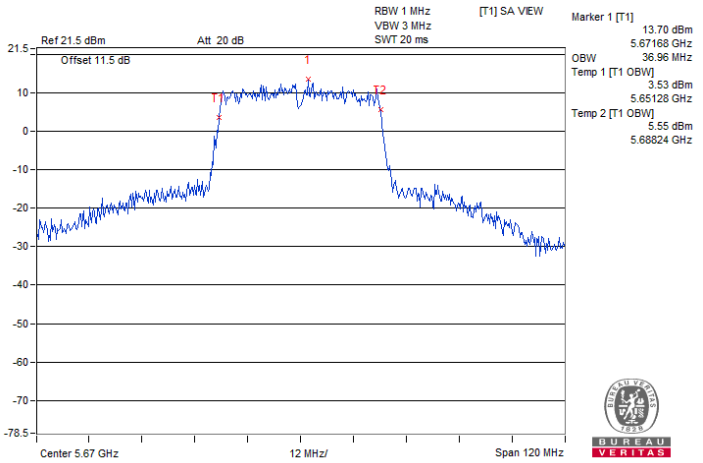
Spectrum Plot of Maximum Value



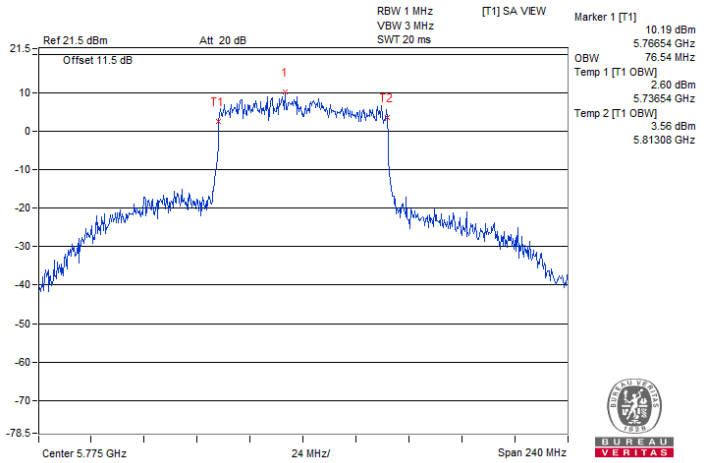
802.11a : CH 100



802.11ac (VHT20) : CH 116



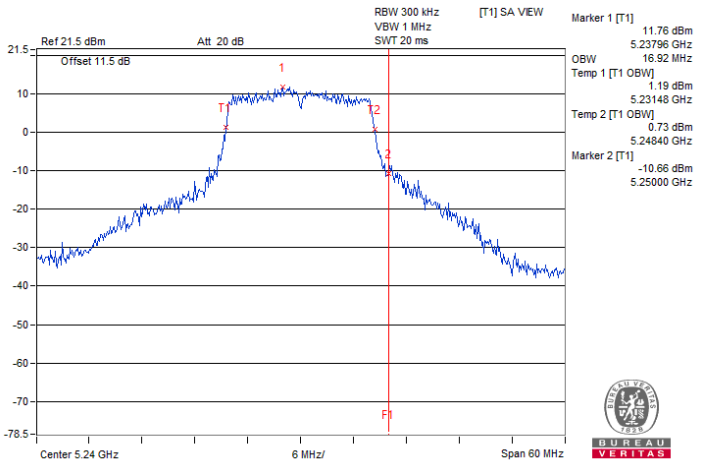
802.11ac (VHT40) : CH 134



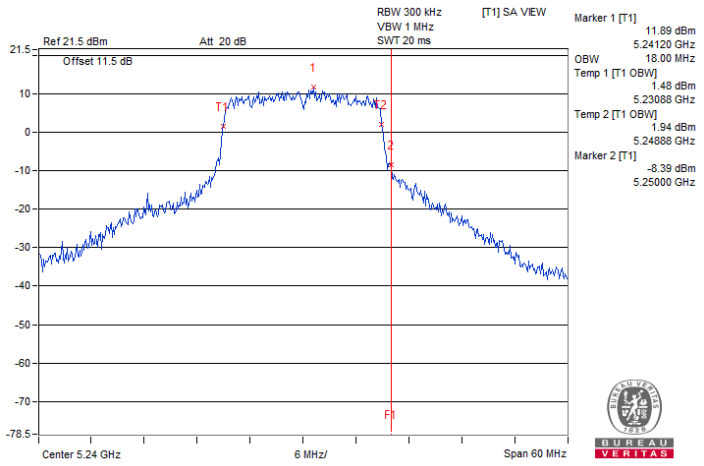
802.11ac (VHT80) : CH 155

Spectrum Plot for nearby DFS band

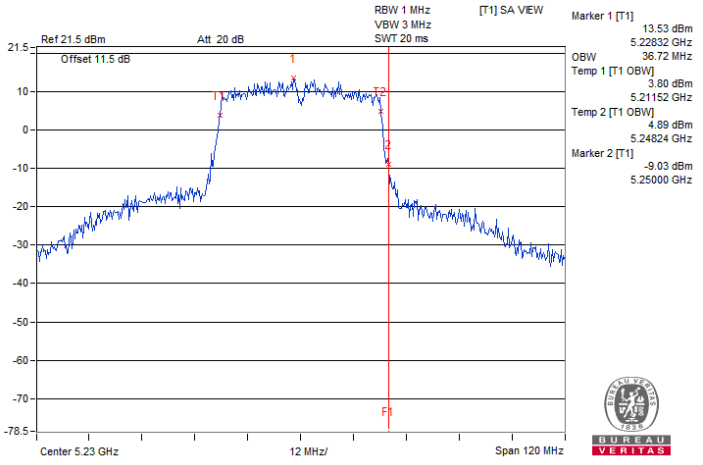
(DFS is required, if 99% OCP straddle into U-NII-2A)



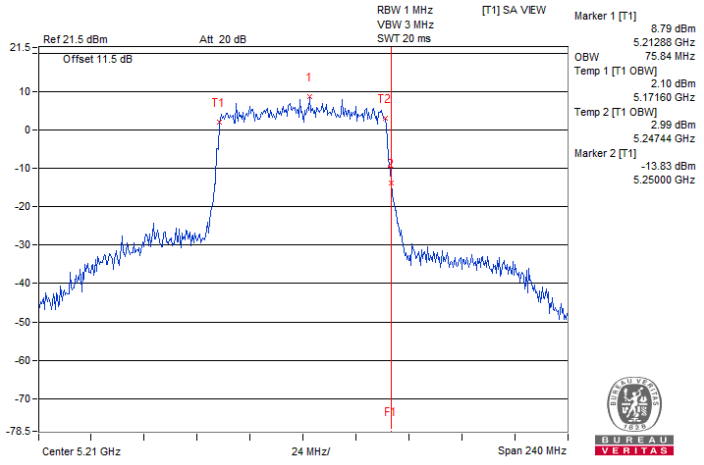
802.11a : CH 48



802.11ac (VHT20) : CH 48



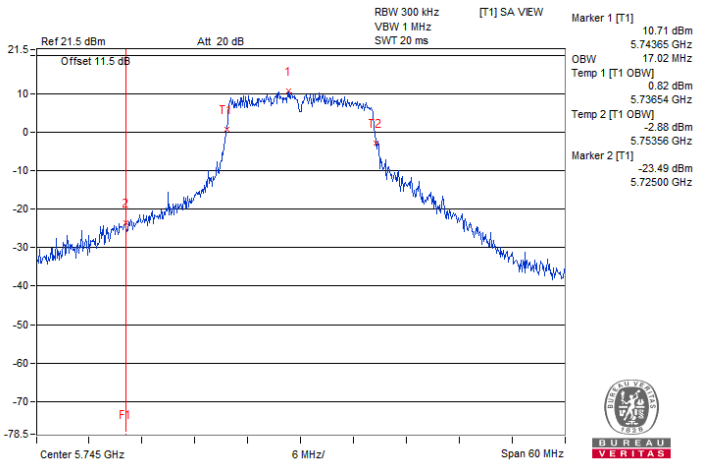
802.11ac (VHT40) : CH 46



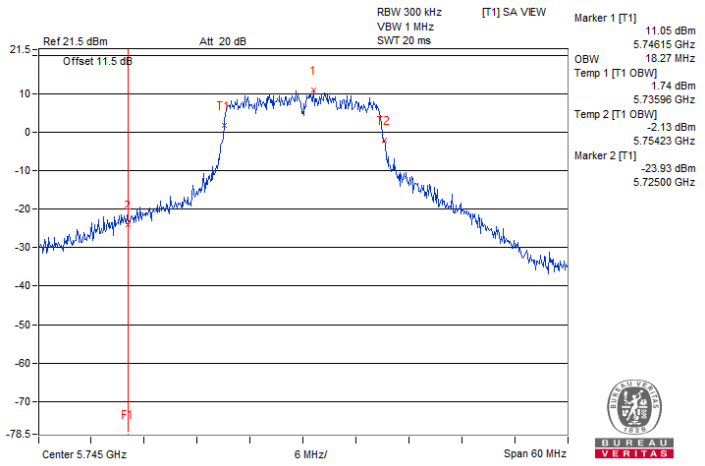
802.11ac (VHT80) : CH 42

Spectrum Plot for nearby DFS band

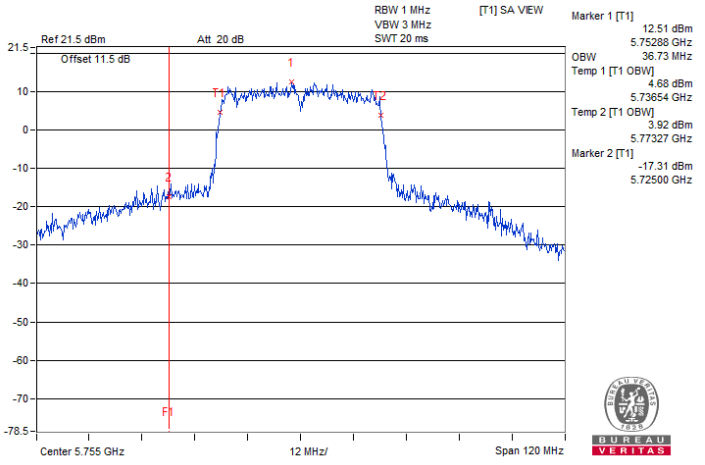
(DFS is required, if 99% OCP straddle into U-NII-2C)



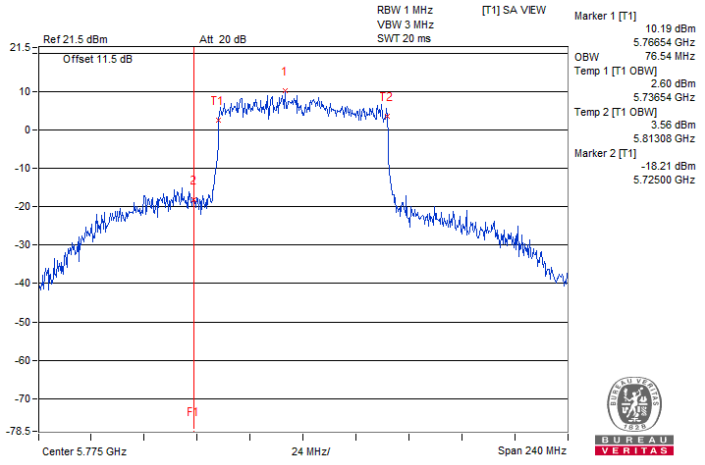
802.11a : CH 149



802.11ac (VHT20) : CH 149



802.11ac (VHT40) : CH 151



802.11ac (VHT80) : CH 155

7.6 Frequency Stability

Input Power:	3.87 Vdc	Environmental Conditions:	25°C, 59% 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
55	3.87	5179.9905	Pass	5179.9894	Pass	5179.9915	Pass	5179.9919	Pass
50	3.87	5179.992	Pass	5179.9931	Pass	5179.9913	Pass	5179.9913	Pass
40	3.87	5179.9878	Pass	5179.9853	Pass	5179.9875	Pass	5179.9836	Pass
30	3.87	5179.9939	Pass	5179.9956	Pass	5179.9942	Pass	5179.9946	Pass
20	3.87	5180.0107	Pass	5180.0105	Pass	5180.0099	Pass	5180.0117	Pass
10	3.87	5180.0042	Pass	5180.0064	Pass	5180.0089	Pass	5180.0043	Pass
0	3.87	5180.0242	Pass	5180.0246	Pass	5180.0274	Pass	5180.0244	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	4.45	5180.0058	Pass	5180.0067	Pass	5180.0062	Pass	5180.004	Pass
	3.87	5180.0107	Pass	5180.0105	Pass	5180.0099	Pass	5180.0117	Pass
	3.29	5180.0102	Pass	5180.007	Pass	5180.0089	Pass	5180.0084	Pass

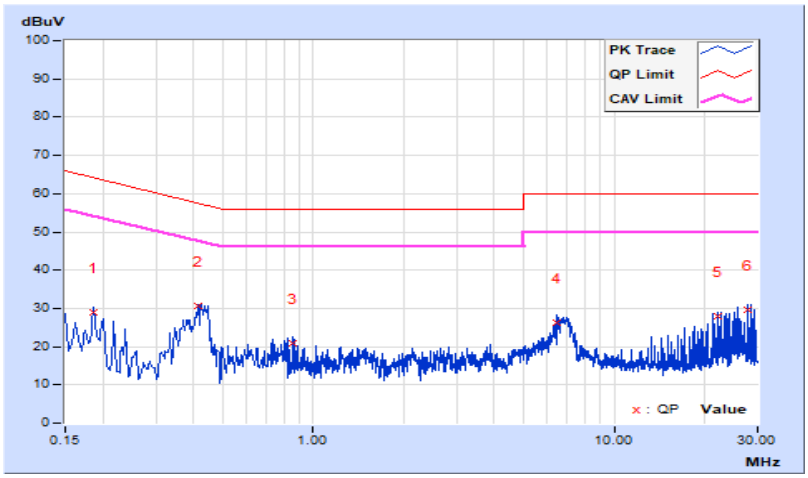
7.7 AC Power Conducted Emissions

RF Mode	802.11a	**Channel**	CH 48：5240 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, 64% RH
Tested By	Vincent Chen		

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	0.18600	10.39	18.67	10.63	29.06	21.02	64.21	54.21	-35.15	-33.19
2	0.41400	10.49	20.22	13.87	30.71	24.36	57.57	47.57	-26.86	-23.21
3	0.85800	10.53	10.30	2.88	20.83	13.41	56.00	46.00	-35.17	-32.59
4	6.47000	10.69	15.71	10.66	26.40	21.35	60.00	50.00	-33.60	-28.65
5	22.02200	10.89	16.93	11.30	27.82	22.19	60.00	50.00	-32.18	-27.81
6	27.72200	10.75	18.87	17.11	29.62	27.86	60.00	50.00	-30.38	-22.14

Remarks:

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

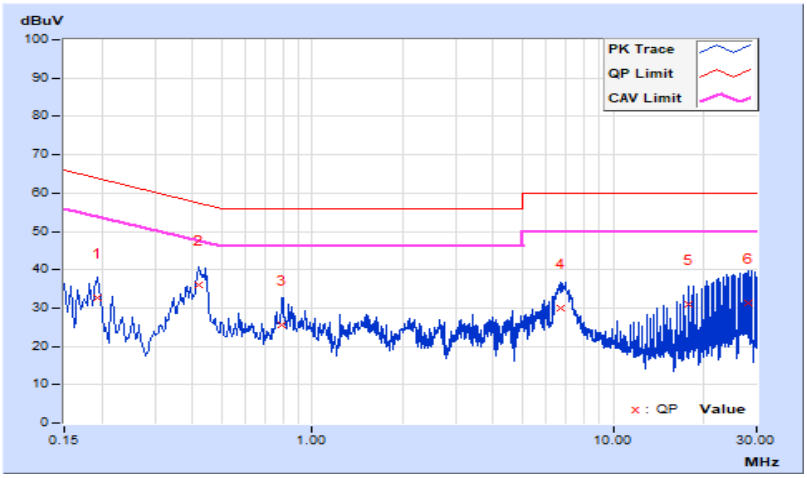


RF Mode	802.11a	**Channel**	CH 48：5240 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 64% RH
Tested By	Vincent Chen		

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	0.19400	10.44	22.12	14.87	32.56	25.31	63.86	53.86	-31.30	-28.55
2	**0.42200**	**10.53**	**25.45**	**17.71**	**35.98**	**28.24**	**57.41**	**47.41**	**-21.43**	**-19.17**
3	0.79497	10.55	15.18	6.64	25.73	17.19	56.00	46.00	-30.27	-28.81
4	6.73800	10.78	19.34	10.17	30.12	20.95	60.00	50.00	-29.88	-29.05
5	17.85000	11.08	19.77	14.70	30.85	25.78	60.00	50.00	-29.15	-24.22
6	28.09400	10.92	20.50	4.49	31.42	15.41	60.00	50.00	-28.58	-34.59

Remarks:

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



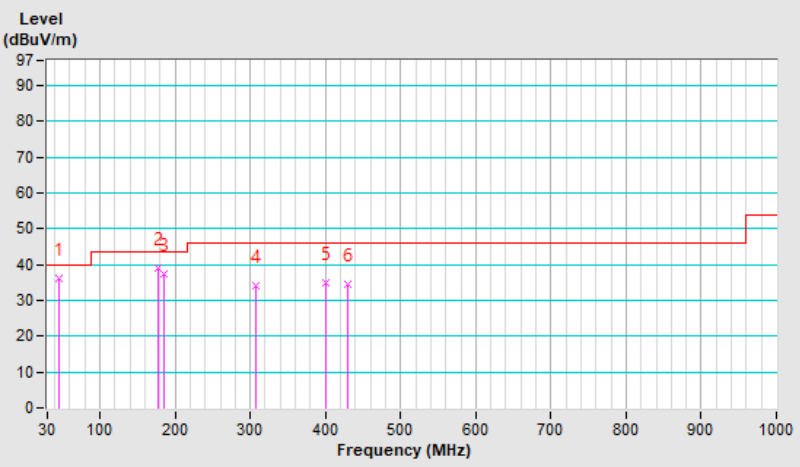
7.8 Unwanted Emissions below 1 GHz

RF Mode	802.11a	**Channel**	CH 48：5240 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	45.90	36.2 QP	40.0	-3.8	1.57 H	36	53.9	-17.7
2	177.74	39.2 QP	43.5	-4.3	1.62 H	22	58.2	-19.0
3	184.48	37.3 QP	43.5	-6.2	1.59 H	346	57.1	-19.8
4	306.60	34.1 QP	46.0	-11.9	1.15 H	24	51.0	-16.9
5	400.21	35.0 QP	46.0	-11.0	1.58 H	274	49.6	-14.6
6	429.99	34.7 QP	46.0	-11.3	1.45 H	107	48.6	-13.9

Remarks:

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

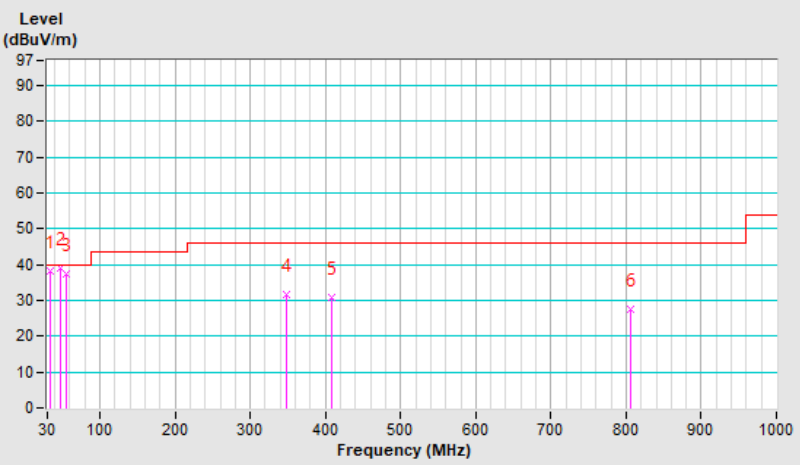


RF Mode	802.11a	**Channel**	CH 48：5240 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 60% RH
Tested By	Charles Hsiao		

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	33.03	38.1 QP	40.0	-1.9	1.54 V	174	57.2	-19.1
2	**46.74**	**39.0 QP**	**40.0**	**-1.0**	**1.55 V**	**157**	**56.8**	**-17.8**
3	54.45	37.3 QP	40.0	-2.7	1.59 V	209	55.3	-18.0
4	348.84	31.7 QP	46.0	-14.3	1.45 V	164	47.8	-16.1
5	407.77	30.8 QP	46.0	-15.2	1.45 V	199	45.3	-14.5
6	805.55	27.5 QP	46.0	-18.5	1.54 V	307	34.5	-7.0

Remarks:

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	64.8 PK	74.0	-9.2	2.54 H	112	52.3	12.5
2	**5150.00**	**52.9 AV**	**54.0**	**-1.1**	**2.54 H**	**112**	**40.4**	**12.5**
3	*5180.00	107.1 PK			2.54 H	112	64.6	42.5
4	*5180.00	98.7 AV			2.54 H	112	56.2	42.5
5	#10360.00	55.3 PK	68.2	-12.9	1.41 H	325	36.8	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	62.3 PK	74.0	-11.7	2.64 V	13	49.8	12.5
2	5150.00	51.0 AV	54.0	-3.0	2.64 V	13	38.5	12.5
3	*5180.00	105.3 PK			2.64 V	13	62.8	42.5
4	*5180.00	96.9 AV			2.64 V	13	54.4	42.5
5	#10360.00	55.0 PK	68.2	-13.2	1.61 V	225	36.5	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	107.4 PK			2.55 H	108	64.9	42.5
2	*5200.00	99.0 AV			2.55 H	108	56.5	42.5
3	#10400.00	55.2 PK	68.2	-13.0	1.29 H	258	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	*5200.00	105.6 PK			2.59 V	12	63.1	42.5
2	*5200.00	97.2 AV			2.59 V	12	54.7	42.5
3	#10400.00	55.7 PK	68.2	-12.5	2.55 V	188	37.2	18.5

Remarks:

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

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	106.8 PK			2.55 H	114	64.1	42.7
2	*5240.00	98.4 AV			2.55 H	114	55.7	42.7
3	5350.00	57.4 PK	74.0	-16.6	2.55 H	114	44.5	12.9
4	5350.00	45.9 AV	54.0	-8.1	2.55 H	114	33.0	12.9
5	#10480.00	54.8 PK	68.2	-13.4	1.83 H	211	36.5	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	*5240.00	105.2 PK			2.62 V	7	62.5	42.7
2	*5240.00	96.8 AV			2.62 V	7	54.1	42.7
3	5350.00	56.3 PK	74.0	-17.7	2.62 V	7	43.4	12.9
4	5350.00	45.8 AV	54.0	-8.2	2.62 V	7	32.9	12.9
5	#10480.00	55.4 PK	68.2	-12.8	1.21 V	52	37.1	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	802.11a	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	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	57.0 PK	74.0	-17.0	2.59 H	116	44.5	12.5
2	5150.00	45.4 AV	54.0	-8.6	2.59 H	116	32.9	12.5
3	*5260.00	107.0 PK			2.59 H	116	64.3	42.7
4	*5260.00	98.1 AV			2.59 H	116	55.4	42.7
5	#10520.00	54.4 PK	68.2	-13.8	1.81 H	246	36.2	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	56.2 PK	74.0	-17.8	2.71 V	18	43.7	12.5
2	5150.00	45.0 AV	54.0	-9.0	2.71 V	18	32.5	12.5
3	*5260.00	105.0 PK			2.71 V	18	62.3	42.7
4	*5260.00	96.5 AV			2.71 V	18	53.8	42.7
5	#10520.00	54.6 PK	68.2	-13.6	1.80 V	211	36.4	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	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	107.4 PK			2.62 H	109	64.6	42.8
2	*5300.00	98.5 AV			2.62 H	109	55.7	42.8
3	10600.00	55.5 PK	74.0	-18.5	1.15 H	154	37.1	18.4
4	10600.00	45.8 AV	54.0	-8.2	1.15 H	154	27.4	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	*5300.00	105.5 PK			2.64 V	38	62.7	42.8
2	*5300.00	96.9 AV			2.64 V	38	54.1	42.8
3	10600.00	55.1 PK	74.0	-18.9	1.53 V	91	36.7	18.4
4	10600.00	45.4 AV	54.0	-8.6	1.53 V	91	27.0	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.

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	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	105.7 PK			2.59 H	117	62.8	42.9
2	*5320.00	97.1 AV			2.59 H	117	54.2	42.9
3	5350.00	57.0 PK	74.0	-17.0	2.59 H	117	44.1	12.9
4	5350.00	47.2 AV	54.0	-6.8	2.59 H	117	34.3	12.9
5	10640.00	55.2 PK	74.0	-18.8	1.12 H	194	36.8	18.4
6	10640.00	45.5 AV	54.0	-8.5	1.12 H	194	27.1	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	103.4 PK			2.69 V	13	60.5	42.9
2	*5320.00	95.2 AV			2.69 V	13	52.3	42.9
3	5350.00	56.8 PK	74.0	-17.2	2.69 V	13	43.9	12.9
4	5350.00	47.1 AV	54.0	-6.9	2.69 V	13	34.2	12.9
5	10640.00	55.1 PK	74.0	-18.9	1.58 V	211	36.7	18.4
6	10640.00	45.5 AV	54.0	-8.5	1.58 V	211	27.1	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 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	2.12 H	52	42.2	13.4
2	5460.00	47.4 AV	54.0	-6.6	2.12 H	52	34.0	13.4
3	#5470.00	60.5 PK	68.2	-7.7	2.12 H	52	47.1	13.4
4	*5500.00	105.8 PK			2.12 H	52	62.5	43.3
5	*5500.00	98.3 AV			2.12 H	52	55.0	43.3
6	11000.00	55.8 PK	74.0	-18.2	1.94 H	233	36.8	19.0
7	11000.00	46.1 AV	54.0	-7.9	1.94 H	233	27.1	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	56.5 PK	74.0	-17.5	1.74 V	29	43.1	13.4
2	5460.00	47.3 AV	54.0	-6.7	1.74 V	29	33.9	13.4
3	#5470.00	47.3 PK	68.2	-20.9	1.74 V	29	33.9	13.4
4	*5500.00	104.6 PK			1.74 V	29	61.3	43.3
5	*5500.00	96.8 AV			1.74 V	29	53.5	43.3
6	11000.00	56.1 PK	74.0	-17.9	1.42 V	193	37.1	19.0
7	11000.00	46.4 AV	54.0	-7.6	1.42 V	193	27.4	19.0

Remarks:

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

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	106.0 PK			2.08 H	54	62.7	43.3
2	*5580.00	98.6 AV			2.08 H	54	55.3	43.3
3	11160.00	55.8 PK	74.0	-18.2	2.14 H	149	36.7	19.1
4	11160.00	46.1 AV	54.0	-7.9	2.14 H	149	27.0	19.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	104.9 PK			1.68 V	24	61.6	43.3
2	*5580.00	97.0 AV			1.68 V	24	53.7	43.3
3	11160.00	56.0 PK	74.0	-18.0	1.52 V	307	36.9	19.1
4	11160.00	46.4 AV	54.0	-7.6	1.52 V	307	27.3	19.1

Remarks:

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

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	107.7 PK			2.14 H	71	64.2	43.5
2	*5700.00	100.0 AV			2.14 H	71	56.5	43.5
3	#5725.00	62.4 PK	68.2	-5.8	2.14 H	71	48.9	13.5
4	11400.00	56.3 PK	74.0	-17.7	1.21 H	218	36.8	19.5
5	11400.00	46.6 AV	54.0	-7.4	1.21 H	218	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	105.8 PK			1.63 V	17	62.3	43.5
2	*5700.00	98.3 AV			1.63 V	17	54.8	43.5
3	#5725.00	60.2 PK	68.2	-8.0	1.63 V	17	46.7	13.5
4	11400.00	56.0 PK	74.0	-18.0	2.71 V	201	36.5	19.5
5	11400.00	46.3 AV	54.0	-7.7	2.71 V	201	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	802.11a	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	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	56.9 PK	74.0	-17.1	2.36 H	129	43.7	13.2
2	5460.00	46.5 AV	54.0	-7.5	2.36 H	129	33.3	13.2
3	#5470.00	56.0 PK	68.2	-12.2	2.36 H	129	42.8	13.2
4	*5720.00	105.9 PK			2.36 H	129	62.6	43.3
5	*5720.00	98.7 AV			2.36 H	129	55.4	43.3
6	11440.00	56.8 PK	74.0	-17.2	1.16 H	252	37.1	19.7
7	11440.00	47.2 AV	54.0	-6.8	1.16 H	252	27.5	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	55.7 PK	74.0	-18.3	2.84 V	12	42.5	13.2
2	5460.00	46.0 AV	54.0	-8.0	2.84 V	12	32.8	13.2
3	#5470.00	55.5 PK	68.2	-12.7	2.84 V	12	42.3	13.2
4	*5720.00	104.5 PK			2.84 V	12	61.2	43.3
5	*5720.00	97.3 AV			2.84 V	12	54.0	43.3
6	11440.00	56.6 PK	74.0	-17.4	1.98 V	42	36.9	19.7
7	11440.00	47.0 AV	54.0	-7.0	1.98 V	42	27.3	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	802.11a	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	#5628.43	57.2 PK	68.2	-11.0	2.44 H	112	44.3	12.9
2	*5745.00	107.2 PK			2.44 H	112	63.8	43.4
3	*5745.00	98.8 AV			2.44 H	112	55.4	43.4
4	#5985.59	57.4 PK	68.2	-10.8	2.44 H	112	43.4	14.0
5	11490.00	57.2 PK	74.0	-16.8	1.81 H	239	37.3	19.9
6	11490.00	47.5 AV	54.0	-6.5	1.81 H	239	27.6	19.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5610.41	56.6 PK	68.2	-11.6	2.74 V	11	43.6	13.0
2	*5745.00	105.2 PK			2.73 V	11	61.8	43.4
3	*5745.00	96.9 AV			2.73 V	11	53.5	43.4
4	#5966.77	56.4 PK	68.2	-11.8	2.84 V	11	42.4	14.0
5	11490.00	56.7 PK	74.0	-17.3	1.14 V	219	36.8	19.9
6	11490.00	47.1 AV	54.0	-6.9	1.14 V	219	27.2	19.9

Remarks:

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

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	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	#5600.80	57.1 PK	68.2	-11.1	2.44 H	122	44.1	13.0
2	*5785.00	107.6 PK			2.44 H	122	64.2	43.4
3	*5785.00	99.0 AV			2.44 H	122	55.6	43.4
4	#5973.97	57.8 PK	68.2	-10.4	2.44 H	122	43.8	14.0
5	11570.00	56.6 PK	74.0	-17.4	2.26 H	71	36.7	19.9
6	11570.00	47.0 AV	54.0	-7.0	1.14 H	145	27.1	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	#5626.83	56.2 PK	68.2	-12.0	2.69 V	24	43.3	12.9
2	*5785.00	105.5 PK			2.69 V	24	62.1	43.4
3	*5785.00	96.9 AV			2.69 V	24	53.5	43.4
4	#5983.58	56.4 PK	68.2	-11.8	2.69 V	24	42.4	14.0
5	11570.00	56.8 PK	74.0	-17.2	2.11 V	218	36.9	19.9
6	11570.00	47.1 AV	54.0	-6.9	2.11 V	218	27.2	19.9

Remarks:

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

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	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	#5650.05	56.7 PK	68.2	-11.5	2.54 H	115	43.6	13.1
2	*5825.00	108.2 PK			2.54 H	115	64.7	43.5
3	*5825.00	99.4 AV			2.54 H	115	55.9	43.5
4	#5992.79	57.3 PK	68.2	-10.9	2.54 H	115	43.3	14.0
5	11650.00	56.6 PK	74.0	-17.4	1.37 H	225	36.7	19.9
6	11650.00	46.9 AV	54.0	-7.1	1.37 H	225	27.0	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	#5649.65	56.5 PK	68.2	-11.7	2.78 V	61	43.4	13.1
2	*5825.00	106.1 PK			2.78 V	61	62.6	43.5
3	*5825.00	97.7 AV			2.78 V	61	54.2	43.5
4	#5931.93	57.3 PK	68.2	-10.9	2.78 V	61	43.5	13.8
5	11650.00	57.1 PK	74.0	-16.9	1.61 V	204	37.2	19.9
6	11650.00	47.5 AV	54.0	-6.5	1.61 V	204	27.6	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 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	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	64.1 PK	74.0	-9.9	2.54 H	112	51.6	12.5
2	5150.00	52.2 AV	54.0	-1.8	2.54 H	112	39.7	12.5
3	*5180.00	106.5 PK			2.54 H	112	64.0	42.5
4	*5180.00	98.2 AV			2.54 H	112	55.7	42.5
5	#10360.00	55.1 PK	68.2	-13.1	1.31 H	281	36.6	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	5150.00	62.2 PK	74.0	-11.8	2.64 V	13	49.7	12.5
2	5150.00	51.6 AV	54.0	-2.4	2.64 V	13	39.1	12.5
3	*5180.00	104.6 PK			2.64 V	13	62.1	42.5
4	*5180.00	96.3 AV			2.64 V	13	53.8	42.5
5	#10360.00	54.9 PK	68.2	-13.3	2.13 V	27	36.4	18.5

Remarks:

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

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	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	106.7 PK			2.55 H	108	64.2	42.5
2	*5200.00	98.4 AV			2.55 H	108	55.9	42.5
3	#10400.00	55.3 PK	68.2	-12.9	1.81 H	172	36.8	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	*5200.00	104.8 PK			2.59 V	12	62.3	42.5
2	*5200.00	96.4 AV			2.59 V	12	53.9	42.5
3	#10400.00	55.7 PK	68.2	-12.5	1.16 V	29	37.2	18.5

Remarks:

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

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	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	106.2 PK			2.55 H	114	63.5	42.7
2	*5240.00	98.0 AV			2.55 H	114	55.3	42.7
3	5350.00	56.3 PK	74.0	-17.7	2.55 H	114	43.4	12.9
4	5350.00	43.8 AV	54.0	-10.2	2.55 H	114	30.9	12.9
5	#10480.00	56.6 PK	68.2	-11.6	1.88 H	296	38.3	18.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	104.8 PK			2.62 V	7	62.1	42.7
2	*5240.00	96.4 AV			2.62 V	7	53.7	42.7
3	5350.00	56.7 PK	74.0	-17.3	2.62 V	7	43.8	12.9
4	5350.00	45.9 AV	54.0	-8.1	2.62 V	7	33.0	12.9
5	#10480.00	55.1 PK	68.2	-13.1	1.51 V	274	36.8	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 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	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.5 PK	74.0	-17.5	2.59 H	116	44.0	12.5
2	5150.00	45.7 AV	54.0	-8.3	2.59 H	116	33.2	12.5
3	*5260.00	106.5 PK			2.59 H	116	63.8	42.7
4	*5260.00	97.9 AV			2.59 H	116	55.2	42.7
5	#10520.00	55.2 PK	68.2	-13.0	1.92 H	152	37.0	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	55.7 PK	74.0	-18.3	2.71 V	18	43.2	12.5
2	5150.00	45.5 AV	54.0	-8.5	2.71 V	18	33.0	12.5
3	*5260.00	103.8 PK			2.71 V	18	61.1	42.7
4	*5260.00	96.2 AV			2.71 V	18	53.5	42.7
5	#10520.00	55.6 PK	68.2	-12.6	2.11 V	49	37.4	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	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	106.9 PK			2.62 H	109	64.1	42.8
2	*5300.00	98.2 AV			2.62 H	109	55.4	42.8
3	10600.00	55.7 PK	74.0	-18.3	1.15 H	284	37.3	18.4
4	10600.00	46.1 AV	54.0	-7.9	1.15 H	284	27.7	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	104.2 PK			2.64 V	38	61.4	42.8
2	*5300.00	96.6 AV			2.64 V	38	53.8	42.8
3	10600.00	55.3 PK	74.0	-18.7	2.06 V	172	36.9	18.4
4	10600.00	45.7 AV	54.0	-8.3	2.06 V	172	27.3	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	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	105.0 PK			2.59 H	117	62.1	42.9
2	*5320.00	96.4 AV			2.59 H	117	53.5	42.9
3	5350.00	56.8 PK	74.0	-17.2	2.59 H	117	43.9	12.9
4	5350.00	47.2 AV	54.0	-6.8	2.59 H	117	34.3	12.9
5	10640.00	55.5 PK	74.0	-18.5	1.92 H	71	37.1	18.4
6	10640.00	45.8 AV	54.0	-8.2	1.92 H	71	27.4	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	*5320.00	103.2 PK			2.69 V	13	60.3	42.9
2	*5320.00	94.8 AV			2.69 V	13	51.9	42.9
3	5350.00	57.8 PK	74.0	-16.2	2.69 V	13	44.9	12.9
4	5350.00	46.9 AV	54.0	-7.1	2.69 V	13	34.0	12.9
5	10640.00	54.9 PK	74.0	-19.1	1.47 V	282	36.5	18.4
6	10640.00	45.3 AV	54.0	-8.7	1.47 V	282	26.9	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 (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	57.4 PK	74.0	-16.6	2.08 H	65	44.0	13.4
2	5460.00	47.2 AV	54.0	-6.8	2.08 H	65	33.8	13.4
3	#5470.00	58.7 PK	68.2	-9.5	2.08 H	65	45.3	13.4
4	*5500.00	107.0 PK			2.08 H	65	63.7	43.3
5	*5500.00	98.0 AV			2.08 H	65	54.7	43.3
6	11000.00	55.7 PK	74.0	-18.3	1.28 H	172	36.7	19.0
7	11000.00	46.1 AV	54.0	-7.9	1.28 H	172	27.1	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	56.5 PK	74.0	-17.5	1.74 V	29	43.1	13.4
2	5460.00	47.1 AV	54.0	-6.9	1.74 V	29	33.7	13.4
3	#5470.00	57.8 PK	68.2	-10.4	1.74 V	29	44.4	13.4
4	*5500.00	104.7 PK			1.74 V	29	61.4	43.3
5	*5500.00	96.7 AV			1.74 V	29	53.4	43.3
6	11000.00	56.2 PK	74.0	-17.8	1.59 V	38	37.2	19.0
7	11000.00	46.5 AV	54.0	-7.5	1.59 V	38	27.5	19.0

Remarks:

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

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	107.3 PK			2.08 H	54	64.0	43.3
2	*5580.00	98.2 AV			2.08 H	54	54.9	43.3
3	11160.00	55.8 PK	74.0	-18.2	1.64 H	150	36.7	19.1
4	11160.00	46.1 AV	54.0	-7.9	1.64 H	150	27.0	19.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	104.9 PK			1.68 V	24	61.6	43.3
2	*5580.00	96.9 AV			1.68 V	24	53.6	43.3
3	11160.00	56.3 PK	74.0	-17.7	2.53 V	72	37.2	19.1
4	11160.00	46.6 AV	54.0	-7.4	2.53 V	72	27.5	19.1

Remarks:

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

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	107.2 PK			2.14 H	71	63.7	43.5
2	*5700.00	99.1 AV			2.14 H	71	55.6	43.5
3	#5725.00	64.8 PK	68.2	-3.4	2.14 H	71	51.3	13.5
4	11400.00	56.3 PK	74.0	-17.7	1.41 H	187	36.8	19.5
5	11400.00	46.6 AV	54.0	-7.4	1.41 H	187	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	105.5 PK			1.63 V	17	62.0	43.5
2	*5700.00	97.6 AV			1.63 V	17	54.1	43.5
3	#5725.00	61.7 PK	68.2	-6.5	1.63 V	17	48.2	13.5
4	11400.00	56.7 PK	74.0	-17.3	1.53 V	270	37.2	19.5
5	11400.00	47.0 AV	54.0	-7.0	1.53 V	270	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	802.11ac (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	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	56.6 PK	74.0	-17.4	2.36 H	129	43.4	13.2
2	5460.00	46.4 AV	54.0	-7.6	2.36 H	129	33.2	13.2
3	#5470.00	54.8 PK	68.2	-13.4	2.36 H	129	41.6	13.2
4	*5720.00	105.5 PK			2.36 H	129	62.2	43.3
5	*5720.00	98.5 AV			2.36 H	129	55.2	43.3
6	11440.00	56.1 PK	74.0	-17.9	1.82 H	302	36.4	19.7
7	11440.00	46.5 AV	54.0	-7.5	1.82 H	302	26.8	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	55.5 PK	74.0	-18.5	2.84 V	12	42.3	13.2
2	5460.00	46.1 AV	54.0	-7.9	2.84 V	12	32.9	13.2
3	#5470.00	54.4 PK	68.2	-13.8	2.84 V	12	41.2	13.2
4	*5720.00	103.7 PK			2.84 V	12	60.4	43.3
5	*5720.00	97.2 AV			2.84 V	12	53.9	43.3
6	11440.00	56.5 PK	74.0	-17.5	2.08 V	152	36.8	19.7
7	11440.00	46.8 AV	54.0	-7.2	2.08 V	152	27.1	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 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	#5650.05	57.5 PK	68.2	-10.7	2.44 H	112	44.4	13.1
2	*5745.00	106.7 PK			2.44 H	112	63.3	43.4
3	*5745.00	98.4 AV			2.44 H	112	55.0	43.4
4	#5985.19	57.7 PK	68.2	-10.5	2.44 H	112	43.7	14.0
5	11490.00	56.7 PK	74.0	-17.3	1.56 H	212	36.8	19.9
6	11490.00	47.1 AV	54.0	-6.9	1.56 H	212	27.2	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	#5635.64	56.4 PK	68.2	-11.8	2.73 V	11	43.5	12.9
2	*5745.00	105.2 PK			2.74 V	11	61.8	43.4
3	*5745.00	96.5 AV			2.74 V	11	53.1	43.4
4	#5991.59	55.0 PK	68.2	-13.2	2.73 V	11	41.0	14.0
5	11490.00	56.5 PK	74.0	-17.5	1.82 V	227	36.6	19.9
6	11490.00	46.9 AV	54.0	-7.1	1.82 V	227	27.0	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.

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	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	#5600.00	57.4 PK	68.2	-10.8	2.44 H	122	44.4	13.0
2	*5785.00	107.2 PK			2.44 H	122	63.8	43.4
3	*5785.00	98.7 AV			2.44 H	122	55.3	43.4
4	#5983.18	58.9 PK	68.2	-9.3	2.44 H	122	44.9	14.0
5	11570.00	56.8 PK	74.0	-17.2	1.53 H	278	36.9	19.9
6	11570.00	47.2 AV	54.0	-6.8	1.53 H	278	27.3	19.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5618.82	57.4 PK	68.2	-10.8	2.69 V	24	44.4	13.0
2	*5785.00	104.9 PK			2.69 V	24	61.5	43.4
3	*5785.00	96.4 AV			2.69 V	24	53.0	43.4
4	#5992.39	58.7 PK	68.2	-9.5	2.69 V	24	44.7	14.0
5	11570.00	56.4 PK	74.0	-17.6	1.42 V	38	36.5	19.9
6	11570.00	46.8 AV	54.0	-7.2	1.42 V	38	26.9	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 (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	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	#5602.00	56.8 PK	68.2	-11.4	2.54 H	115	43.8	13.0
2	*5825.00	107.5 PK			2.54 H	115	64.0	43.5
3	*5825.00	99.1 AV			2.54 H	115	55.6	43.5
4	#5975.98	57.8 PK	68.2	-10.4	2.54 H	115	43.8	14.0
5	11650.00	56.6 PK	74.0	-17.4	2.48 H	117	36.7	19.9
6	11650.00	47.0 AV	54.0	-7.0	2.48 H	117	27.1	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	#5618.42	56.7 PK	68.2	-11.5	2.78 V	61	43.7	13.0
2	*5825.00	106.1 PK			2.54 V	112	62.6	43.5
3	*5825.00	97.4 AV			2.54 V	112	53.9	43.5
4	#5937.94	57.4 PK	68.2	-10.8	2.78 V	61	43.6	13.8
5	11650.00	56.4 PK	74.0	-17.6	2.25 V	17	36.5	19.9
6	11650.00	46.7 AV	54.0	-7.3	2.25 V	17	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.
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=2 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	5150.00	61.2 PK	74.0	-12.8	2.59 H	112	48.7	12.5
2	5150.00	51.8 AV	54.0	-2.2	2.59 H	112	39.3	12.5
3	*5190.00	101.8 PK			2.59 H	112	59.3	42.5
4	*5190.00	93.7 AV			2.59 H	112	51.2	42.5
5	5350.00	56.6 PK	74.0	-17.4	2.59 H	112	43.7	12.9
6	5350.00	45.8 AV	54.0	-8.2	2.59 H	112	32.9	12.9
7	#10380.00	55.4 PK	68.2	-12.8	1.62 H	192	37.0	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	60.2 PK	74.0	-13.8	2.64 V	13	47.7	12.5
2	5150.00	51.4 AV	54.0	-2.6	2.64 V	13	38.9	12.5
3	*5190.00	100.1 PK			2.64 V	13	57.6	42.5
4	*5190.00	91.9 AV			2.64 V	13	49.4	42.5
5	5350.00	56.9 PK	74.0	-17.1	2.64 V	13	44.0	12.9
6	5350.00	45.7 AV	54.0	-8.3	2.64 V	13	32.8	12.9
7	#10380.00	55.3 PK	68.2	-12.9	2.14 V	102	36.9	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.
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=2 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	5150.00	56.2 PK	74.0	-17.8	2.48 H	113	43.7	12.5
2	5150.00	45.7 AV	54.0	-8.3	2.48 H	113	33.2	12.5
3	*5230.00	103.0 PK			2.48 H	113	60.4	42.6
4	*5230.00	95.1 AV			2.48 H	113	52.5	42.6
5	5350.00	56.9 PK	74.0	-17.1	2.48 H	113	44.0	12.9
6	5350.00	45.9 AV	54.0	-8.1	2.48 H	113	33.0	12.9
7	#10460.00	55.6 PK	68.2	-12.6	1.92 H	57	37.3	18.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.3 PK	74.0	-17.7	2.62 V	7	43.8	12.5
2	5150.00	45.5 AV	54.0	-8.5	2.62 V	7	33.0	12.5
3	*5230.00	101.7 PK			2.62 V	7	59.1	42.6
4	*5230.00	93.4 AV			2.62 V	7	50.8	42.6
5	5350.00	57.1 PK	74.0	-16.9	2.62 V	7	44.2	12.9
6	5350.00	46.8 AV	54.0	-7.2	2.62 V	7	33.9	12.9
7	#10460.00	54.8 PK	68.2	-13.4	1.54 V	241	36.5	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 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=2 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	5150.00	55.9 PK	74.0	-18.1	2.43 H	117	43.4	12.5
2	5150.00	45.4 AV	54.0	-8.6	2.43 H	117	32.9	12.5
3	*5270.00	102.9 PK			2.43 H	117	60.2	42.7
4	*5270.00	94.7 AV			2.43 H	117	52.0	42.7
5	5350.00	56.0 PK	74.0	-18.0	2.43 H	117	43.1	12.9
6	5350.00	45.3 AV	54.0	-8.7	2.43 H	117	32.4	12.9
7	#10540.00	55.1 PK	68.2	-13.1	2.24 H	172	36.8	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	55.9 PK	74.0	-18.1	2.71 V	22	43.4	12.5
2	5150.00	45.6 AV	54.0	-8.4	2.71 V	22	33.1	12.5
3	*5270.00	100.5 PK			2.71 V	22	57.8	42.7
4	*5270.00	92.9 AV			2.71 V	22	50.2	42.7
5	5350.00	56.4 PK	74.0	-17.6	2.71 V	22	43.5	12.9
6	5350.00	46.4 AV	54.0	-7.6	2.71 V	22	33.5	12.9
7	#10540.00	55.0 PK	68.2	-13.2	2.14 V	275	36.7	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 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=2 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	5150.00	56.9 PK	74.0	-17.1	2.35 H	107	44.4	12.5
2	5150.00	45.5 AV	54.0	-8.5	2.35 H	107	33.0	12.5
3	*5310.00	102.7 PK			2.35 H	107	59.9	42.8
4	*5310.00	94.7 AV			2.35 H	107	51.9	42.8
5	5350.00	62.0 PK	74.0	-12.0	2.35 H	107	49.1	12.9
6	5350.00	51.3 AV	54.0	-2.7	2.35 H	107	38.4	12.9
7	10620.00	55.8 PK	74.0	-18.2	1.92 H	322	37.4	18.4
8	10620.00	46.2 AV	54.0	-7.8	1.92 H	322	27.8	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	5150.00	56.7 PK	74.0	-17.3	2.77 V	12	44.2	12.5
2	5150.00	45.2 AV	54.0	-8.8	2.77 V	12	32.7	12.5
3	*5310.00	100.7 PK			2.77 V	12	57.9	42.8
4	*5310.00	92.9 AV			2.77 V	12	50.1	42.8
5	5350.00	61.6 PK	74.0	-12.4	2.77 V	12	48.7	12.9
6	5350.00	50.8 AV	54.0	-3.2	2.77 V	12	37.9	12.9
7	10620.00	55.8 PK	74.0	-18.2	1.14 V	16	37.4	18.4
8	10620.00	45.2 AV	54.0	-8.8	1.14 V	16	26.8	18.4

Remarks:

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

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=2 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	64.3 PK	74.0	-9.7	2.08 H	64	51.1	13.2
2	5460.00	52.2 AV	54.0	-1.8	2.08 H	64	39.0	13.2
3	**#5470.00**	**67.1 PK**	**68.2**	**-1.1**	**2.08 H**	**64**	**53.9**	**13.2**
4	*5510.00	102.8 PK			2.08 H	64	59.8	43.0
5	*5510.00	95.4 AV			2.08 H	64	52.4	43.0
6	#5725.00	55.5 PK	68.2	-12.7	2.08 H	64	42.3	13.2
7	11020.00	56.2 PK	74.0	-17.8	2.19 H	224	37.4	18.8
8	11020.00	46.6 AV	54.0	-7.4	2.19 H	224	27.8	18.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.9 PK	74.0	-13.1	1.58 V	35	47.7	13.2
2	5460.00	51.5 AV	54.0	-2.5	1.58 V	35	38.3	13.2
3	#5470.00	66.7 PK	68.2	-1.5	1.58 V	35	53.5	13.2
4	*5510.00	101.3 PK			1.58 V	35	58.3	43.0
5	*5510.00	92.9 AV			1.58 V	35	49.9	43.0
6	#5725.00	55.8 PK	68.2	-12.4	1.58 V	35	42.6	13.2
7	11020.00	56.2 PK	74.0	-17.8	1.53 V	227	37.4	18.8
8	11020.00	46.4 AV	54.0	-7.6	1.53 V	227	27.6	18.8

Remarks:

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

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=2 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	*5550.00	103.1 PK			2.08 H	54	60.1	43.0
2	*5550.00	95.7 AV			2.08 H	54	52.7	43.0
3	11100.00	56.5 PK	74.0	-17.5	1.61 H	312	37.5	19.0
4	11100.00	46.8 AV	54.0	-7.2	1.61 H	312	27.8	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	101.5 PK			1.68 V	24	58.5	43.0
2	*5550.00	93.1 AV			1.68 V	24	50.1	43.0
3	11100.00	56.1 PK	74.0	-17.9	1.42 V	179	37.1	19.0
4	11100.00	46.5 AV	54.0	-7.5	1.42 V	179	27.5	19.0

Remarks:

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

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=2 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	54.3 PK	74.0	-19.7	2.15 H	71	41.1	13.2
2	5460.00	45.4 AV	54.0	-8.6	2.15 H	71	32.2	13.2
3	#5470.00	55.9 PK	68.2	-12.3	2.15 H	71	42.7	13.2
4	*5670.00	104.7 PK			2.15 H	71	61.6	43.1
5	*5670.00	96.9 AV			2.15 H	71	53.8	43.1
6	#5725.00	61.3 PK	68.2	-6.9	2.15 H	71	48.1	13.2
7	11340.00	55.8 PK	74.0	-18.2	1.95 H	124	36.6	19.2
8	11340.00	46.1 AV	54.0	-7.9	1.95 H	124	26.9	19.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.0 PK	74.0	-18.0	1.59 V	22	42.8	13.2
2	5460.00	45.5 AV	54.0	-8.5	1.59 V	22	32.3	13.2
3	#5470.00	55.3 PK	68.2	-12.9	1.59 V	22	42.1	13.2
4	*5670.00	102.8 PK			1.59 V	22	59.7	43.1
5	*5670.00	95.1 AV			1.59 V	22	52.0	43.1
6	#5725.00	61.5 PK	68.2	-6.7	1.59 V	22	48.3	13.2
7	11340.00	56.4 PK	74.0	-17.6	2.82 V	140	37.2	19.2
8	11340.00	46.7 AV	54.0	-7.3	2.82 V	140	27.5	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=2 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	57.0 PK	74.0	-17.0	2.35 H	129	43.8	13.2
2	5460.00	45.8 AV	54.0	-8.2	2.35 H	129	32.6	13.2
3	#5470.00	55.4 PK	68.2	-12.8	2.35 H	129	42.2	13.2
4	*5710.00	102.4 PK			2.35 H	129	59.3	43.1
5	*5710.00	94.0 AV			2.35 H	129	50.9	43.1
6	11420.00	56.3 PK	74.0	-17.7	2.30 H	151	36.8	19.5
7	11420.00	46.7 AV	54.0	-7.3	2.30 H	151	27.2	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	56.6 PK	74.0	-17.4	2.84 V	12	43.4	13.2
2	5460.00	45.6 AV	54.0	-8.4	2.84 V	12	32.4	13.2
3	#5470.00	56.4 PK	68.2	-11.8	2.84 V	12	43.2	13.2
4	*5710.00	100.4 PK			2.84 V	12	57.3	43.1
5	*5710.00	92.2 AV			2.84 V	12	49.1	43.1
6	11420.00	56.2 PK	74.0	-17.8	1.50 V	246	36.7	19.5
7	11420.00	46.7 AV	54.0	-7.3	1.50 V	246	27.2	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 (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=2 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	#5638.04	56.7 PK	68.2	-11.5	2.52 H	112	43.8	12.9
2	*5755.00	103.6 PK			2.52 H	112	60.2	43.4
3	*5755.00	95.2 AV			2.52 H	112	51.8	43.4
4	#5963.16	57.8 PK	68.2	-10.4	2.52 H	112	43.9	13.9
5	11510.00	56.7 PK	74.0	-17.3	2.26 H	192	36.8	19.9
6	11510.00	47.1 AV	54.0	-6.9	2.26 H	192	27.2	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	#5600.40	57.0 PK	68.2	-11.2	2.68 V	4	44.0	13.0
2	*5755.00	102.3 PK			2.68 V	4	58.9	43.4
3	*5755.00	93.8 AV			2.68 V	4	50.4	43.4
4	#5937.54	57.2 PK	68.2	-11.0	2.68 V	4	43.4	13.8
5	11510.00	57.3 PK	74.0	-16.7	1.62 V	301	37.4	19.9
6	11510.00	47.7 AV	54.0	-6.3	1.62 V	301	27.8	19.9

Remarks:

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

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=2 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	#5634.03	57.1 PK	68.2	-11.1	2.61 H	113	44.2	12.9
2	*5795.00	103.4 PK			2.61 H	113	60.0	43.4
3	*5795.00	95.9 AV			2.61 H	113	52.5	43.4
4	#5978.38	57.4 PK	68.2	-10.8	2.61 H	113	43.4	14.0
5	11590.00	56.9 PK	74.0	-17.1	2.45 H	271	36.9	20.0
6	11590.00	47.3 AV	54.0	-6.7	2.45 H	271	27.3	20.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5632.83	57.0 PK	68.2	-11.2	2.78 V	59	44.1	12.9
2	*5795.00	102.8 PK			2.78 V	59	59.4	43.4
3	*5795.00	94.1 AV			2.78 V	59	50.7	43.4
4	#5932.33	58.9 PK	68.2	-9.3	2.78 V	59	45.1	13.8
5	11590.00	57.1 PK	74.0	-16.9	2.16 V	132	37.1	20.0
6	11590.00	47.4 AV	54.0	-6.6	2.16 V	132	27.4	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 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	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.4 PK	74.0	-13.6	2.50 H	114	47.9	12.5
2	5150.00	52.8 AV	54.0	-1.2	2.50 H	114	40.3	12.5
3	*5210.00	98.5 PK			2.50 H	114	55.9	42.6
4	*5210.00	90.2 AV			2.50 H	114	47.6	42.6
5	5350.00	56.3 PK	74.0	-17.7	2.50 H	114	43.4	12.9
6	5350.00	46.1 AV	54.0	-7.9	2.50 H	114	33.2	12.9
7	#10420.00	55.3 PK	68.2	-12.9	2.75 H	190	36.8	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	62.5 PK	74.0	-11.5	2.59 V	20	50.0	12.5
2	5150.00	52.5 AV	54.0	-1.5	2.59 V	20	40.0	12.5
3	*5210.00	96.0 PK			2.59 V	20	53.4	42.6
4	*5210.00	88.7 AV			2.59 V	20	46.1	42.6
5	5350.00	57.6 PK	74.0	-16.4	2.59 V	20	44.7	12.9
6	5350.00	45.9 AV	54.0	-8.1	2.59 V	20	33.0	12.9
7	#10420.00	55.0 PK	68.2	-13.2	1.83 V	220	36.5	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 (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	Karl Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.0 PK	74.0	-18.0	2.35 H	106	43.5	12.5
2	5150.00	45.7 AV	54.0	-8.3	2.35 H	106	33.2	12.5
3	*5290.00	99.6 PK			2.35 H	106	56.8	42.8
4	*5290.00	91.8 AV			2.35 H	106	49.0	42.8
5	5350.00	61.6 PK	74.0	-12.4	2.35 H	106	48.7	12.9
6	5350.00	52.8 AV	54.0	-1.2	2.35 H	106	39.9	12.9
7	#10580.00	55.2 PK	68.2	-13.0	2.27 H	124	36.8	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	5150.00	55.9 PK	74.0	-18.1	2.74 V	24	43.4	12.5
2	5150.00	45.5 AV	54.0	-8.5	2.74 V	24	33.0	12.5
3	*5290.00	97.9 PK			2.74 V	24	55.1	42.8
4	*5290.00	90.0 AV			2.74 V	24	47.2	42.8
5	5350.00	56.6 PK	74.0	-17.4	2.74 V	24	43.7	12.9
6	5350.00	47.1 AV	54.0	-6.9	2.74 V	24	34.2	12.9
7	#10580.00	55.0 PK	68.2	-13.2	1.29 V	301	36.6	18.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, 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	62.6 PK	74.0	-11.4	2.15 H	77	49.4	13.2
2	5460.00	52.6 AV	54.0	-1.4	2.15 H	77	39.4	13.2
3	#5470.00	63.5 PK	68.2	-4.7	2.15 H	77	50.3	13.2
4	*5530.00	97.2 PK			2.15 H	77	54.2	43.0
5	*5530.00	89.8 AV			2.15 H	77	46.8	43.0
6	#5725.00	56.4 PK	68.2	-11.8	2.15 H	77	43.2	13.2
7	11060.00	56.3 PK	74.0	-17.7	1.58 H	166	37.4	18.9
8	11060.00	46.7 AV	54.0	-7.3	1.58 H	166	27.8	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	61.2 PK	74.0	-12.8	1.69 V	41	48.0	13.2
2	5460.00	51.6 AV	54.0	-2.4	1.69 V	41	38.4	13.2
3	#5470.00	63.6 PK	68.2	-4.6	1.69 V	41	50.4	13.2
4	*5530.00	95.8 PK			1.69 V	41	52.8	43.0
5	*5530.00	88.0 AV			1.69 V	41	45.0	43.0
6	#5725.00	56.2 PK	68.2	-12.0	1.69 V	41	43.0	13.2
7	11060.00	55.8 PK	74.0	-18.2	1.36 V	97	36.9	18.9
8	11060.00	46.1 AV	54.0	-7.9	1.36 V	97	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 (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	56.3 PK	74.0	-17.7	2.16 H	65	43.1	13.2
2	5460.00	43.8 AV	54.0	-10.2	2.16 H	65	30.6	13.2
3	#5470.00	55.4 PK	68.2	-12.8	2.16 H	65	42.2	13.2
4	*5610.00	97.9 PK			2.16 H	65	55.0	42.9
5	*5610.00	90.3 AV			2.16 H	65	47.4	42.9
6	#5725.00	57.8 PK	68.2	-10.4	2.16 H	65	44.6	13.2
7	11220.00	55.7 PK	74.0	-18.3	2.61 H	82	36.7	19.0
8	11220.00	46.0 AV	54.0	-8.0	2.61 H	82	27.0	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	57.0 PK	74.0	-17.0	1.82 V	35	43.8	13.2
2	5460.00	45.3 AV	54.0	-8.7	1.82 V	35	32.1	13.2
3	#5470.00	55.3 PK	68.2	-12.9	1.82 V	35	42.1	13.2
4	*5610.00	96.4 PK			1.82 V	35	53.5	42.9
5	*5610.00	88.6 AV			1.82 V	35	45.7	42.9
6	#5725.00	55.7 PK	68.2	-12.5	1.82 V	35	42.5	13.2
7	11220.00	56.3 PK	74.0	-17.7	1.25 V	201	37.3	19.0
8	11220.00	46.6 AV	54.0	-7.4	1.25 V	201	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.
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	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	56.2 PK	74.0	-17.8	2.44 H	128	43.0	13.2
2	5460.00	45.7 AV	54.0	-8.3	2.44 H	128	32.5	13.2
3	#5470.00	56.0 PK	68.2	-12.2	2.44 H	128	42.8	13.2
4	*5690.00	98.0 PK			2.44 H	128	54.9	43.1
5	*5690.00	91.0 AV			2.44 H	128	47.9	43.1
6	11380.00	56.6 PK	74.0	-17.4	1.15 H	209	37.2	19.4
7	11380.00	46.9 AV	54.0	-7.1	1.15 H	209	27.5	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	56.7 PK	74.0	-17.3	2.84 V	19	43.5	13.2
2	5460.00	45.7 AV	54.0	-8.3	2.84 V	19	32.5	13.2
3	#5470.00	45.7 PK	68.2	-22.5	2.84 V	19	32.5	13.2
4	*5690.00	97.2 PK			2.84 V	19	54.1	43.1
5	*5690.00	89.3 AV			2.84 V	19	46.2	43.1
6	11380.00	56.0 PK	74.0	-18.0	2.51 V	136	36.6	19.4
7	11380.00	46.3 AV	54.0	-7.7	2.51 V	136	26.9	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	802.11ac (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	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	#5625.63	56.9 PK	68.2	-11.3	2.60 H	121	44.0	12.9
2	*5775.00	99.9 PK			2.60 H	121	56.5	43.4
3	*5775.00	91.6 AV			2.60 H	121	48.2	43.4
4	#5969.57	57.4 PK	68.2	-10.8	2.60 H	121	43.4	14.0
5	11550.00	56.6 PK	74.0	-17.4	1.01 H	172	36.7	19.9
6	11550.00	46.9 AV	54.0	-7.1	1.01 H	172	27.0	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	#5646.05	56.7 PK	68.2	-11.5	2.57 V	35	43.6	13.1
2	*5775.00	98.1 PK			2.57 V	35	54.7	43.4
3	*5775.00	89.7 AV			2.57 V	35	46.3	43.4
4	#5962.76	57.6 PK	68.2	-10.6	2.57 V	35	43.7	13.9
5	11550.00	56.7 PK	74.0	-17.3	1.24 V	93	36.8	19.9
6	11550.00	47.1 AV	54.0	-6.9	1.24 V	93	27.2	19.9

Remarks:

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

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

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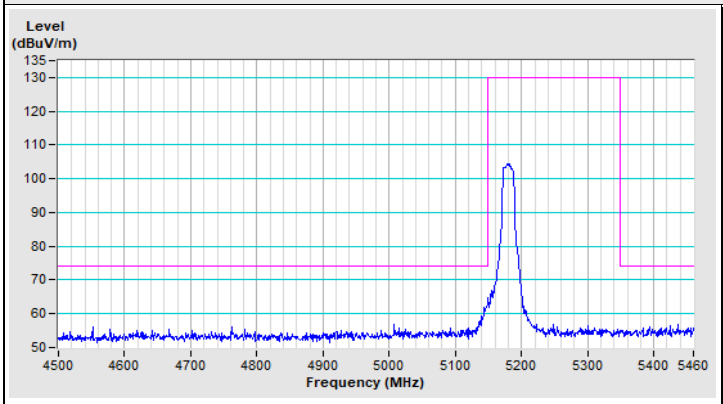
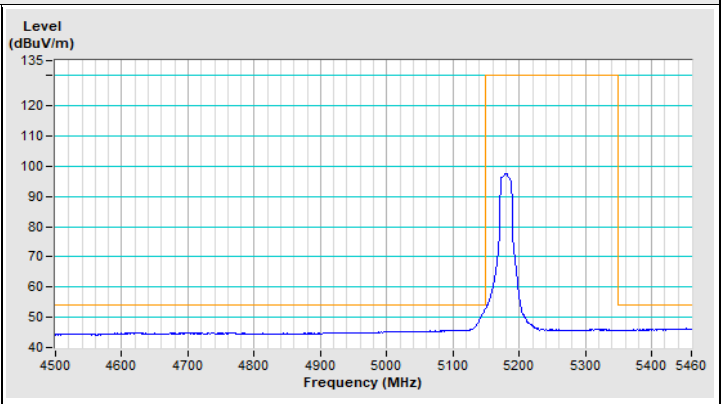


Horizontal (Peak)



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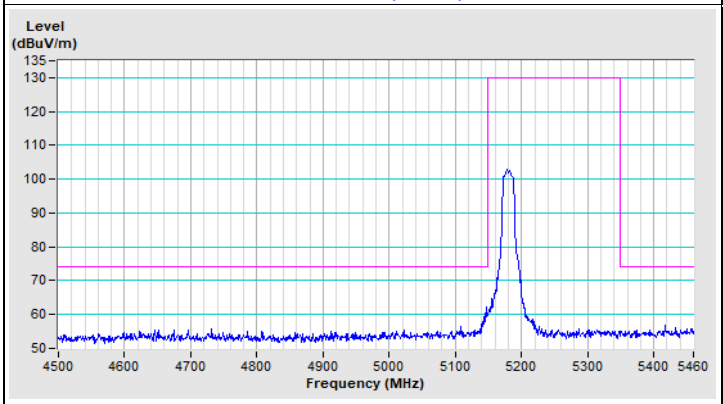
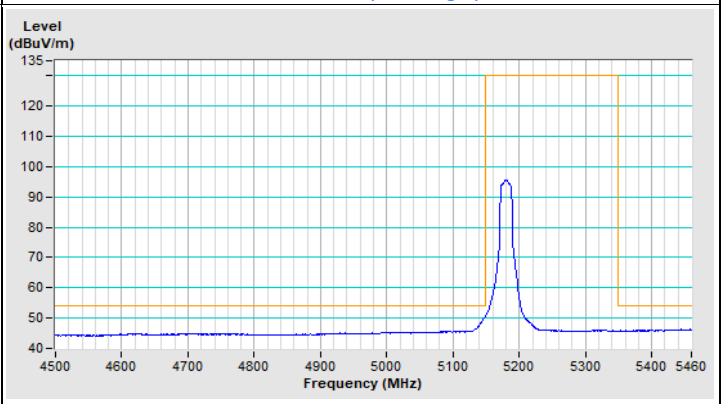


Vertical (Peak)



Vertical (Average)

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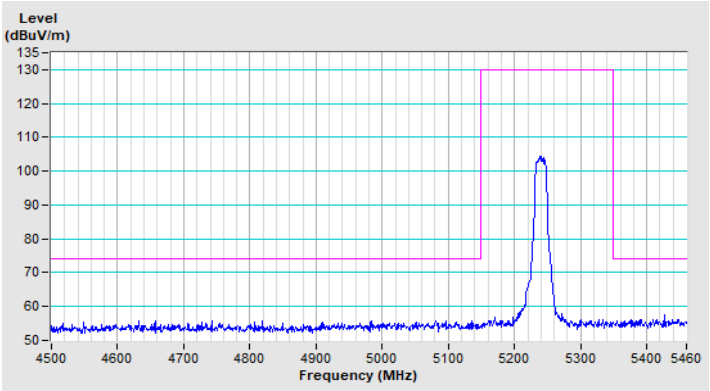

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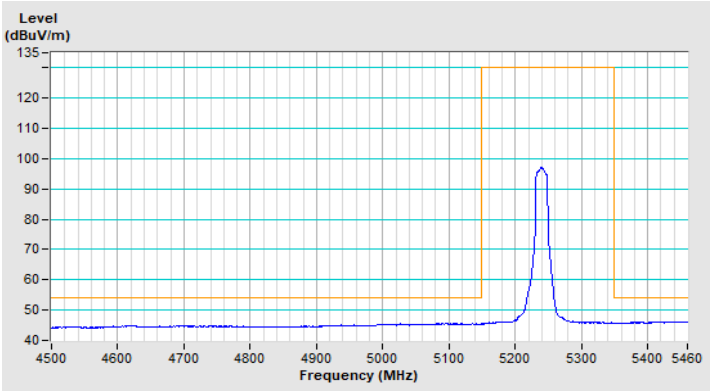

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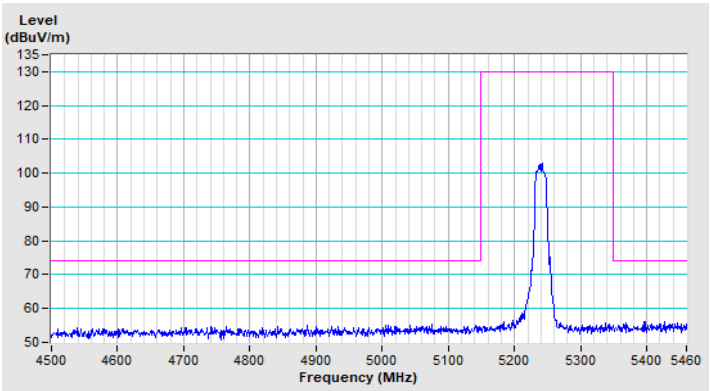
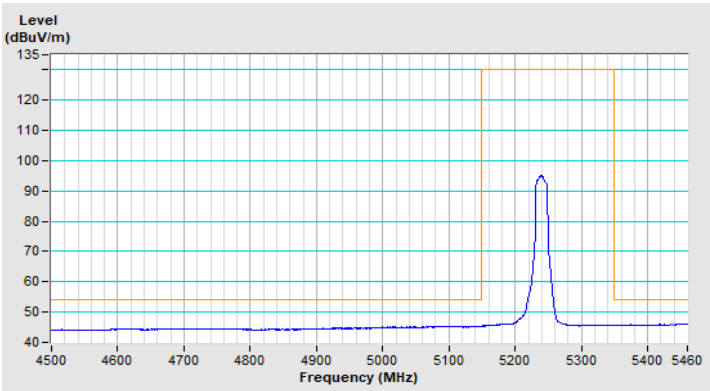
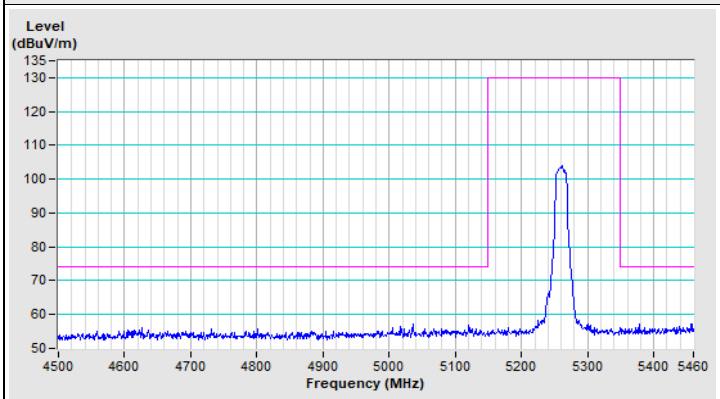


Vertical (Peak)

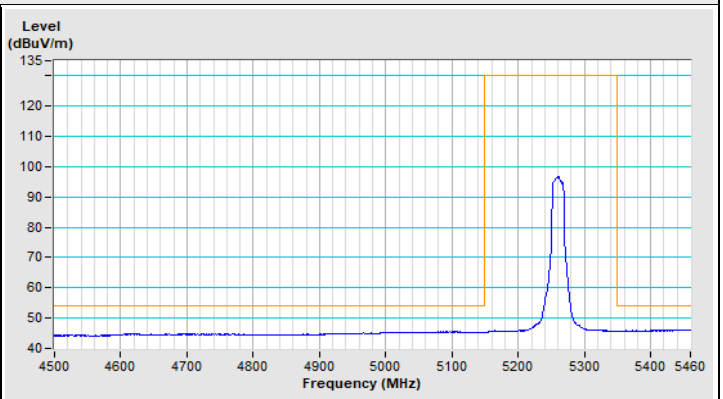


Vertical (Average)

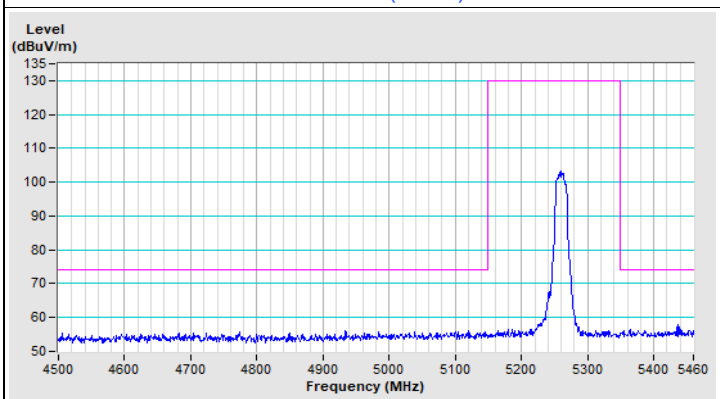
802.11a Channel 52



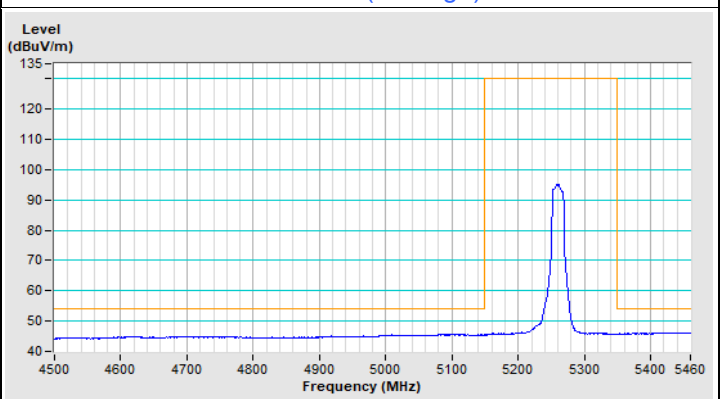
Horizontal (Peak)



Horizontal (Average)

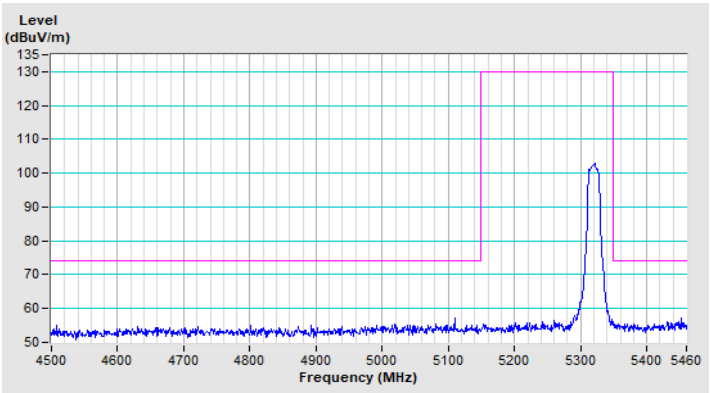


Vertical (Peak)

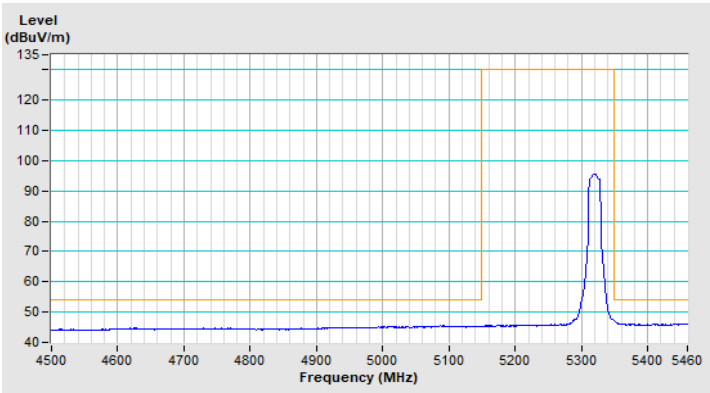


Vertical (Average)

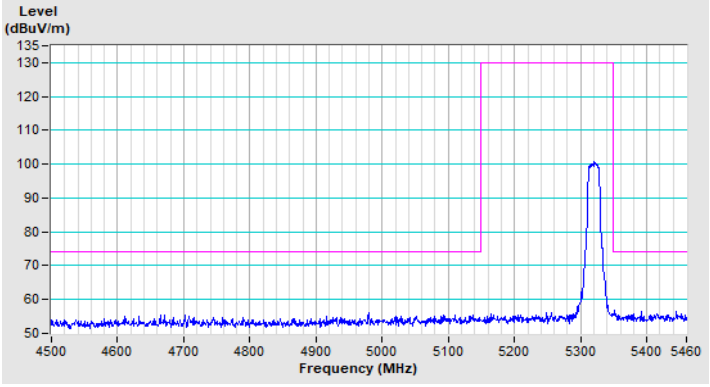
802.11a Channel 64



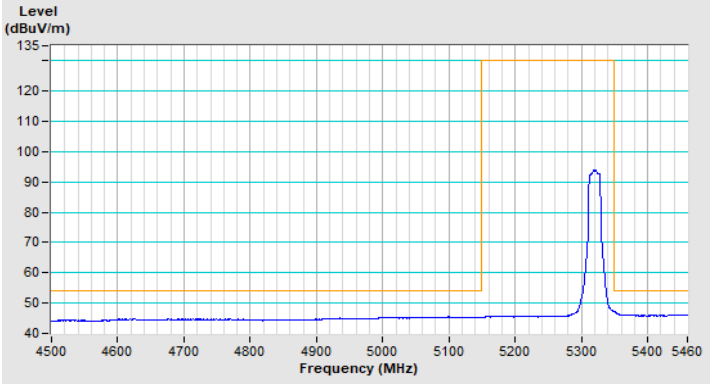
Horizontal (Peak)



Horizontal (Average)



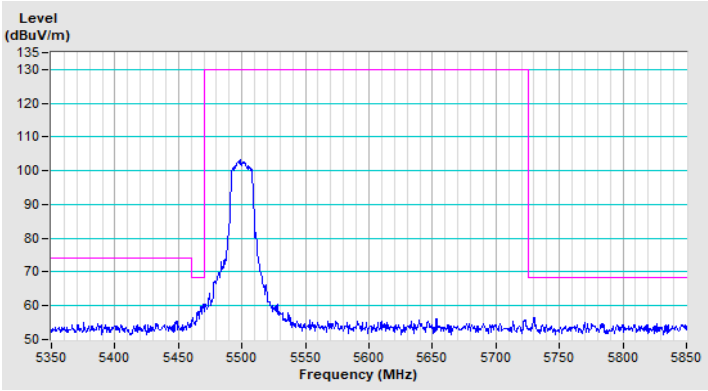
Vertical (Peak)



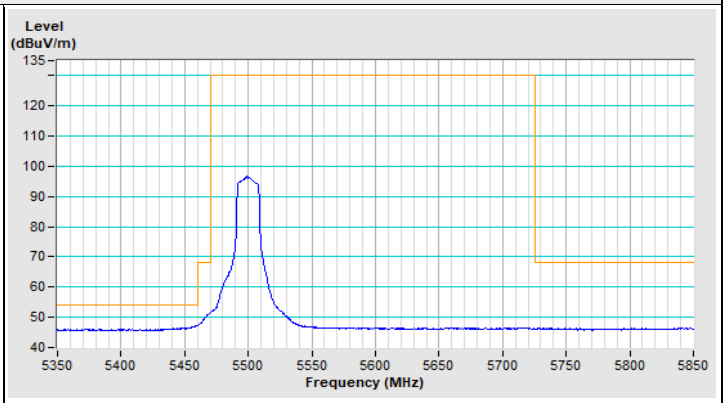
Vertical (Average)

Frequency Range	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

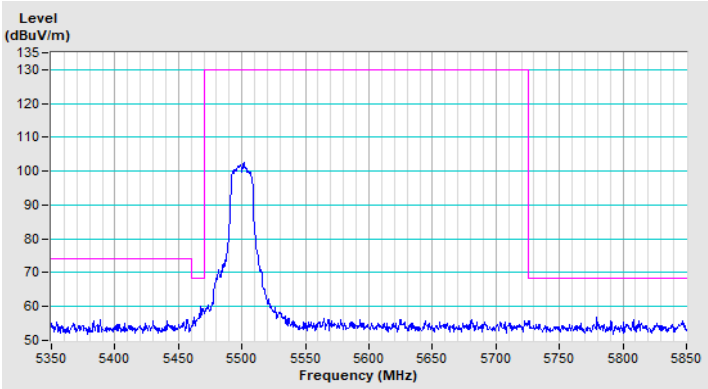
802.11a Channel 100



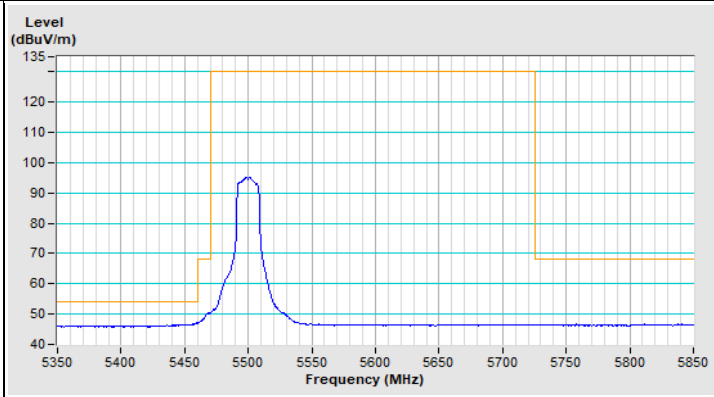
Horizontal (Peak)



Horizontal (Average)

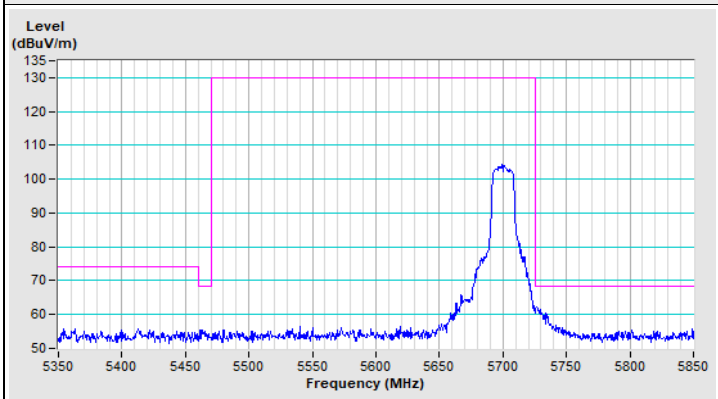


Vertical (Peak)

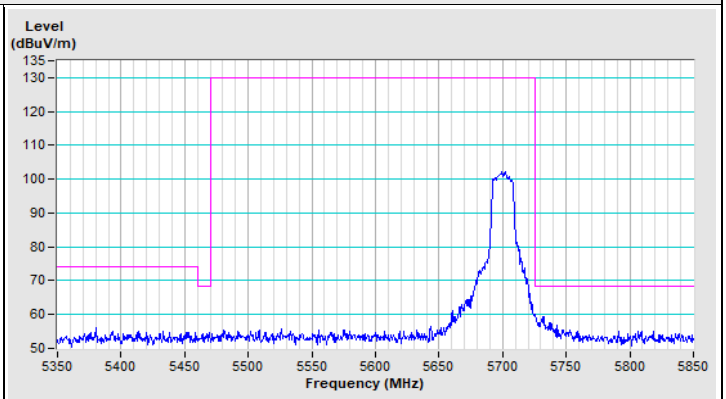


Vertical (Average)

802.11a Channel 140



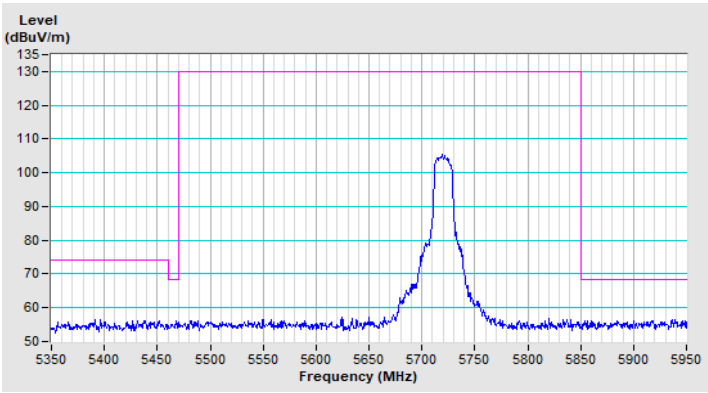
Horizontal (Peak)



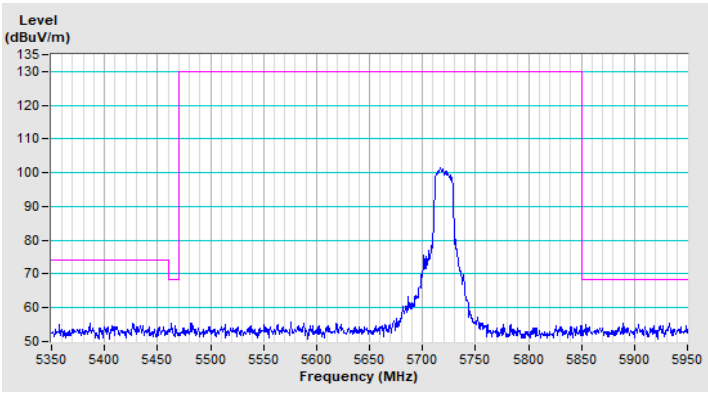
Vertical (Peak)

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

802.11a Channel 144



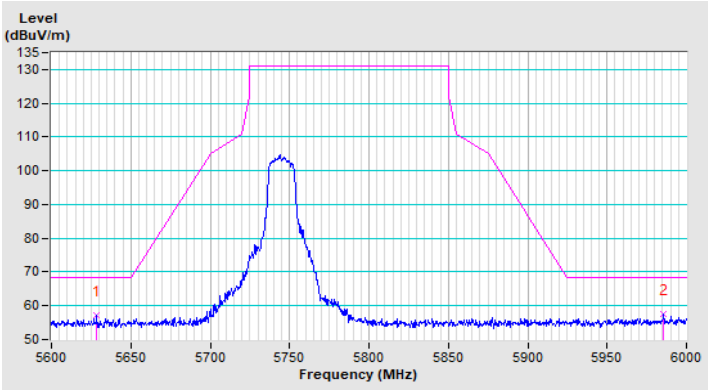
Horizontal (Peak)



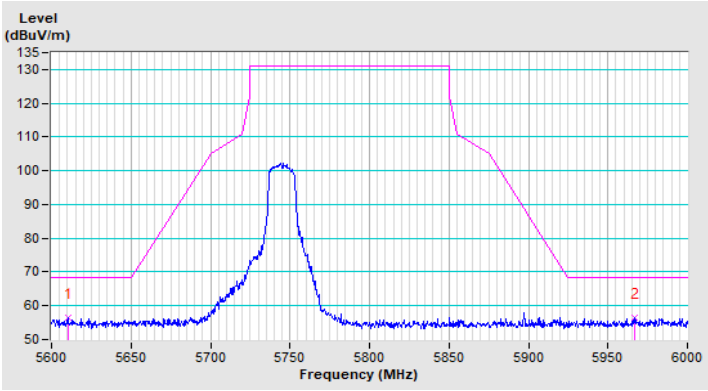
Vertical (Peak)

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

802.11a Channel 149

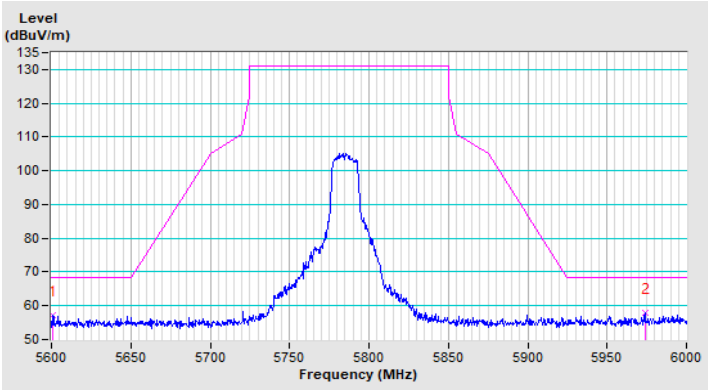


Horizontal (Peak)

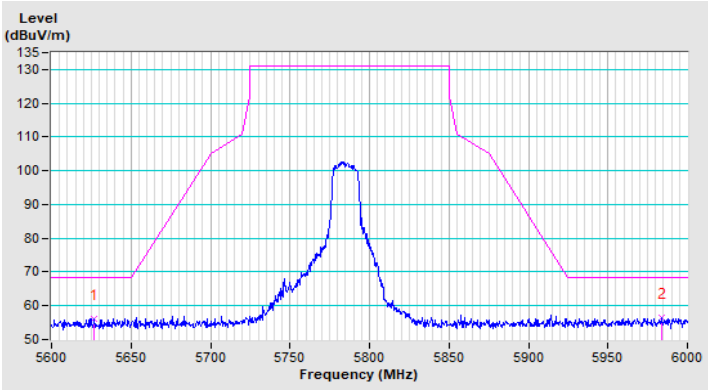


Vertical (Peak)

802.11a Channel 157

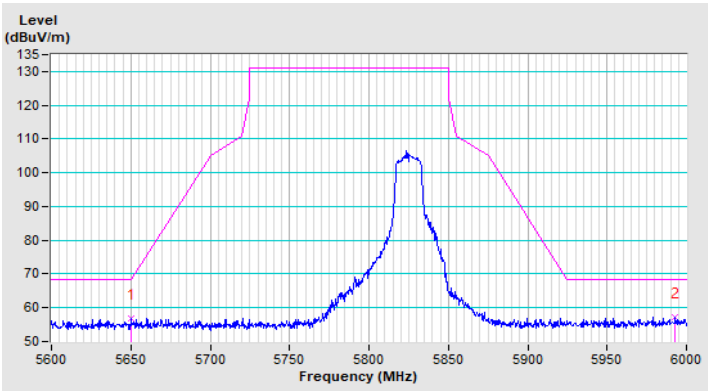


Horizontal (Peak)

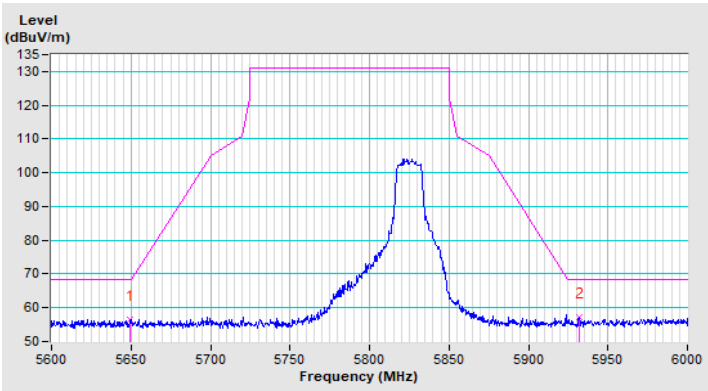


Vertical (Peak)

802.11a Channel 165



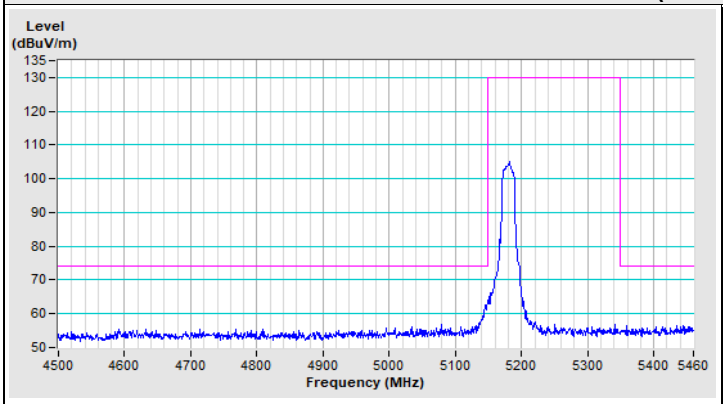
Horizontal (Peak)



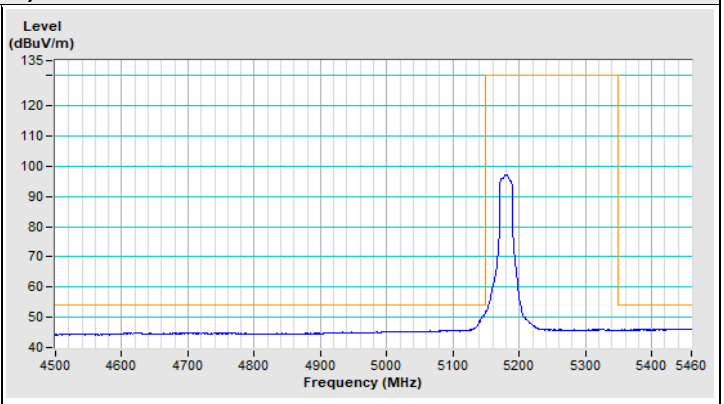
Vertical (Peak)

Frequency Range	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

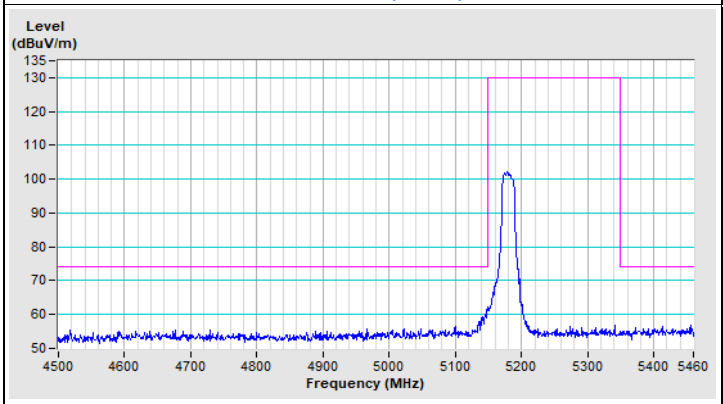
802.11ac (VHT20) Channel 36



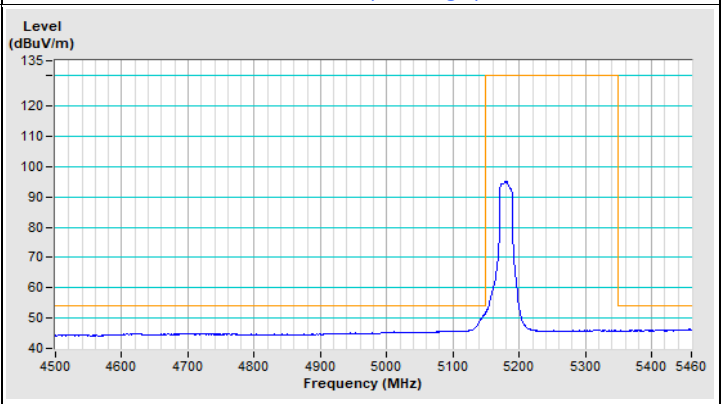
Horizontal (Peak)



Horizontal (Average)

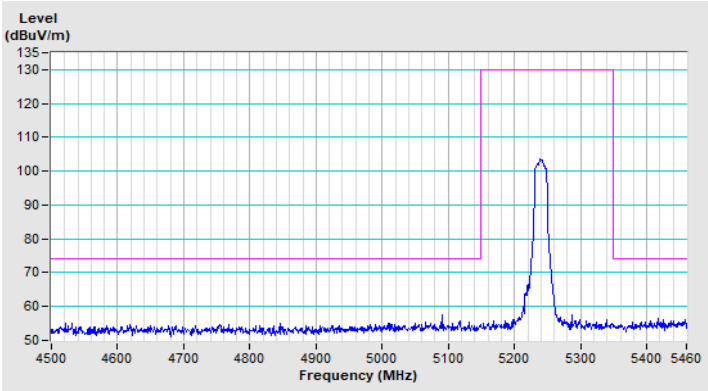


Vertical (Peak)

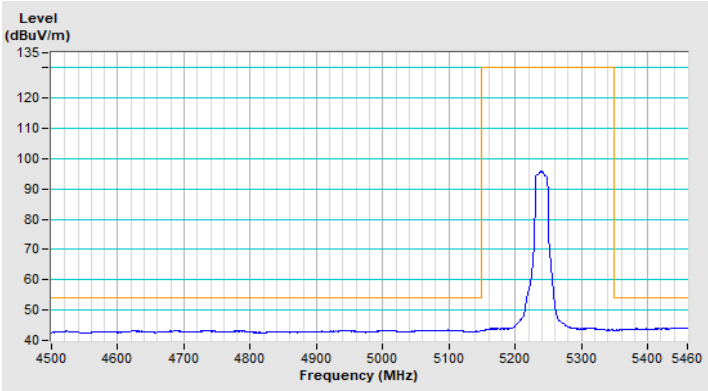


Vertical (Average)

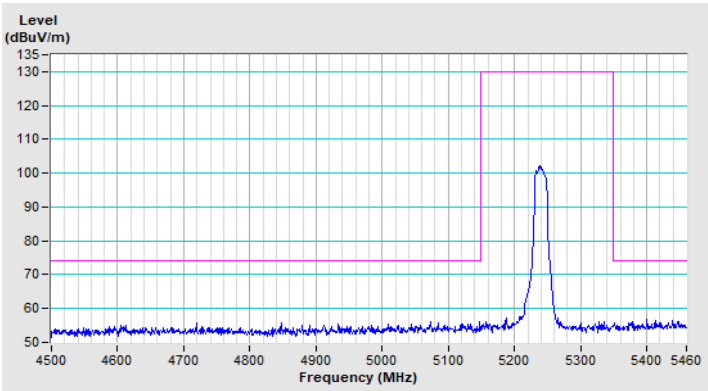
802.11ac (VHT20) Channel 48



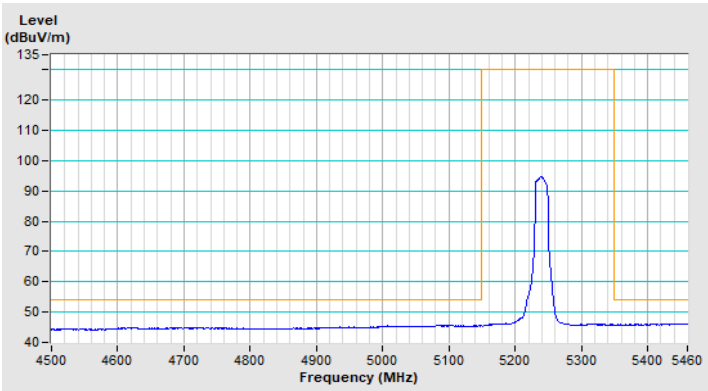
Horizontal (Peak)



Horizontal (Average)

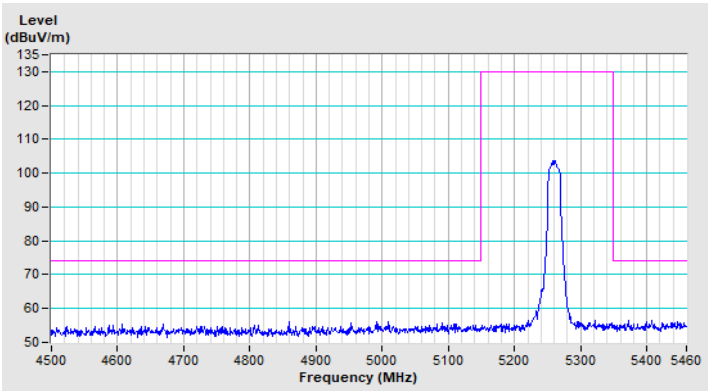


Vertical (Peak)

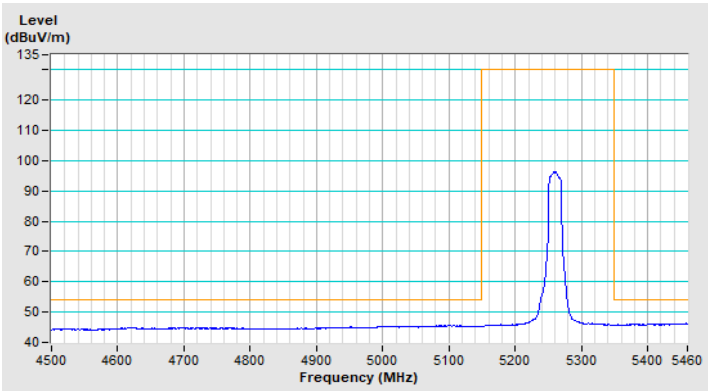


Vertical (Average)

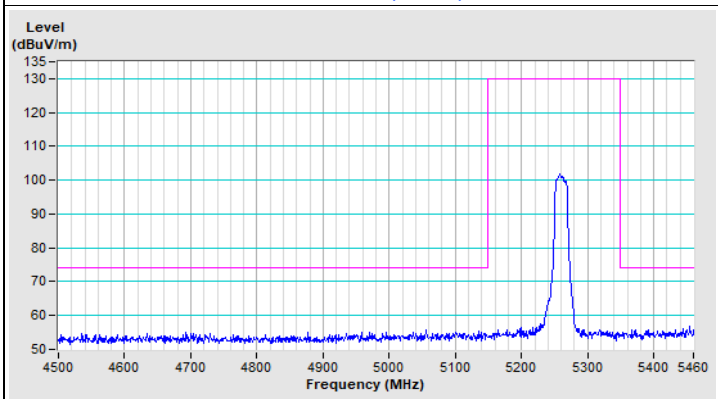
802.11ac (VHT20) Channel 52



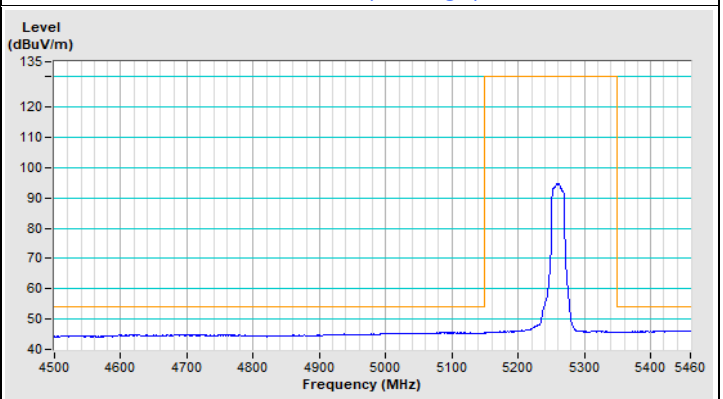
Horizontal (Peak)



Horizontal (Average)

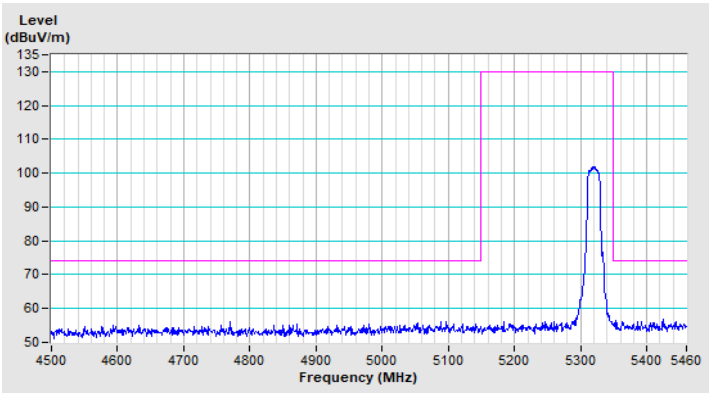


Vertical (Peak)

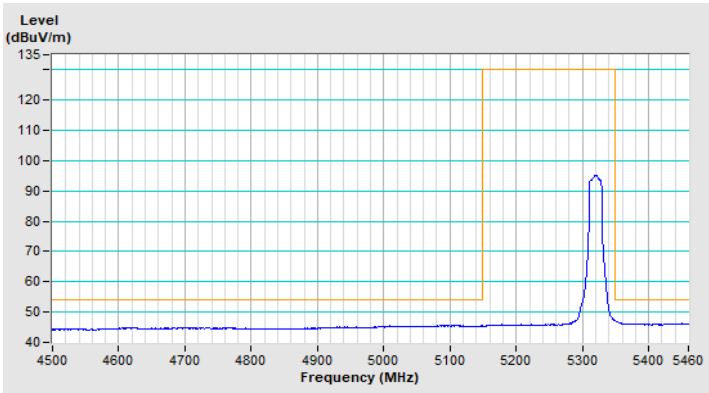


Vertical (Average)

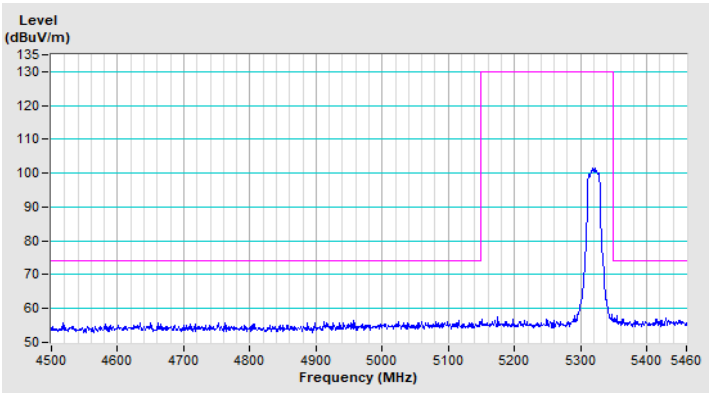
802.11ac (VHT20) Channel 64



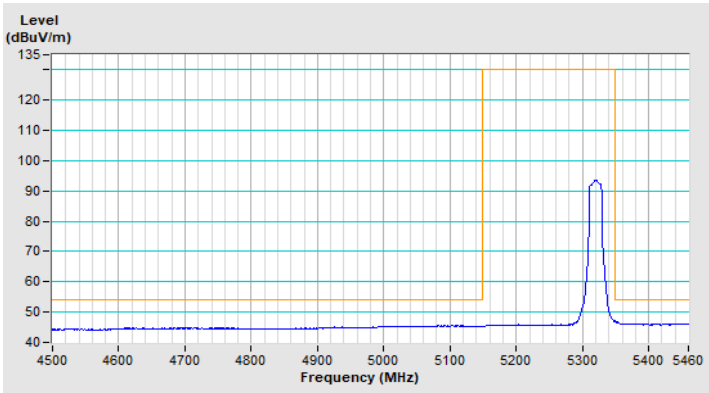
Horizontal (Peak)



Horizontal (Average)



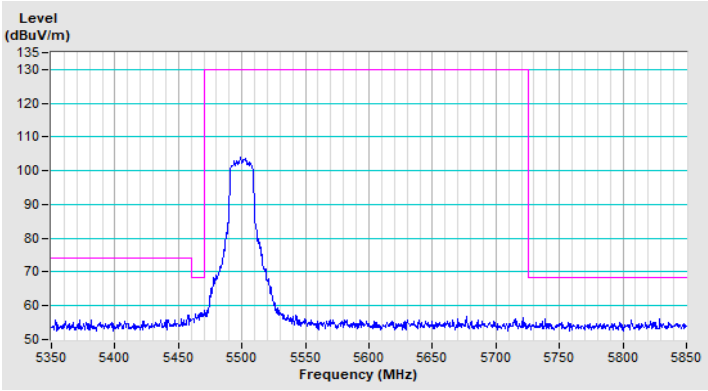
Vertical (Peak)



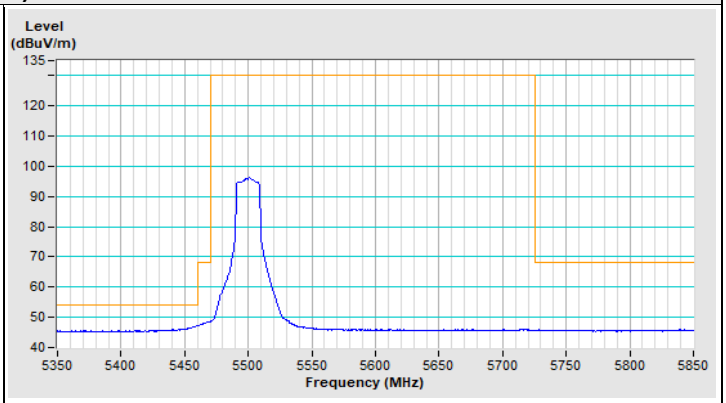
Vertical (Average)

Frequency Range	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

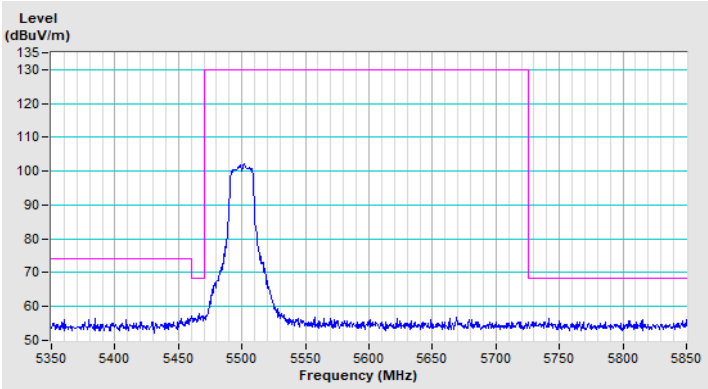
802.11ac (VHT20) Channel 100



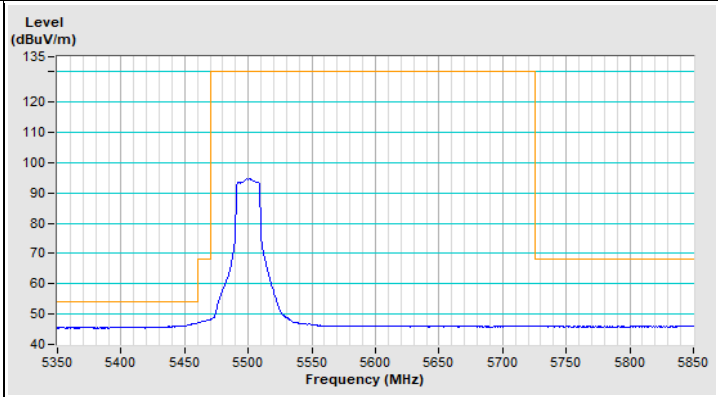
Horizontal (Peak)



Horizontal (Average)

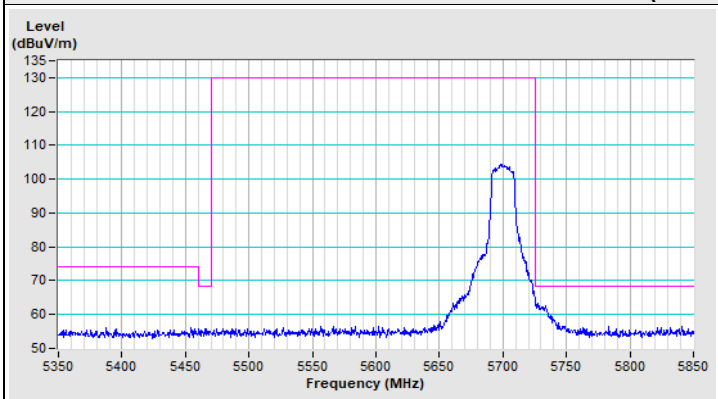


Vertical (Peak)

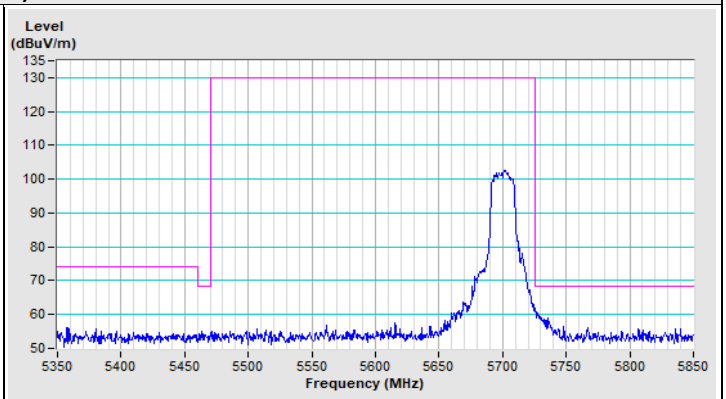


Vertical (Average)

802.11ac (VHT20) Channel 140



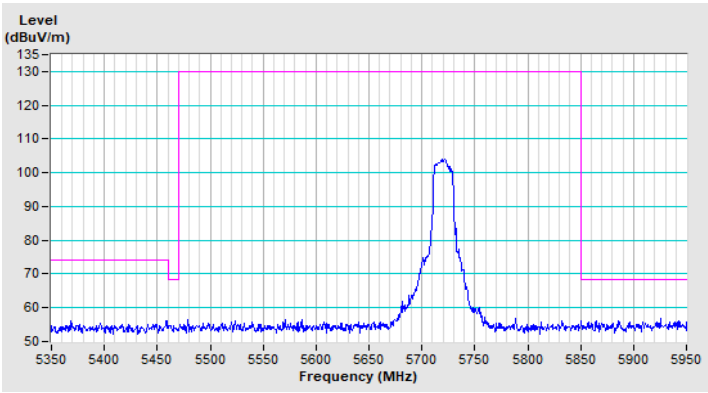
Horizontal (Peak)



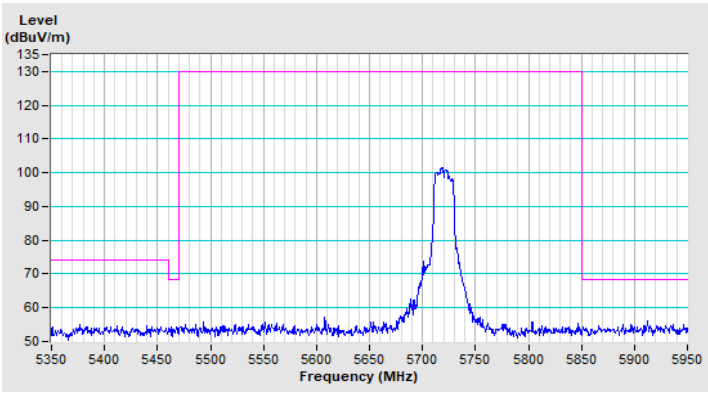
Vertical (Peak)

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



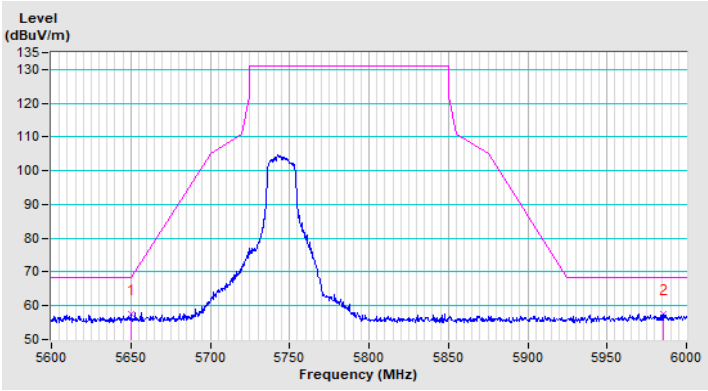
Horizontal (Peak)



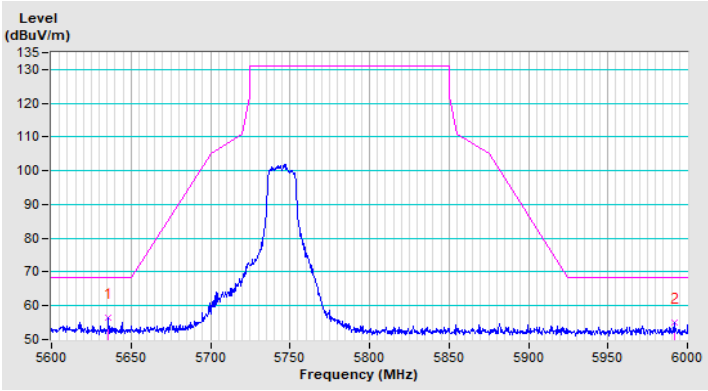
Vertical (Peak)

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

802.11ac (VHT20) Channel 149

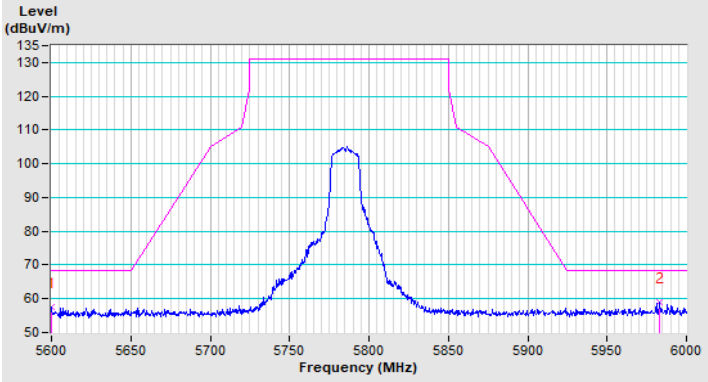


Horizontal (Peak)

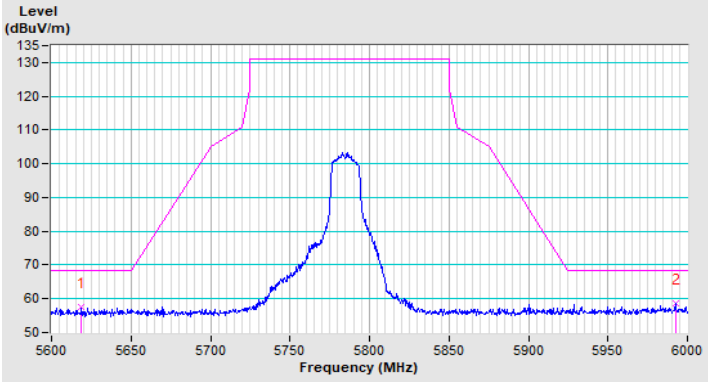


Vertical (Peak)

802.11ac (VHT20) Channel 157

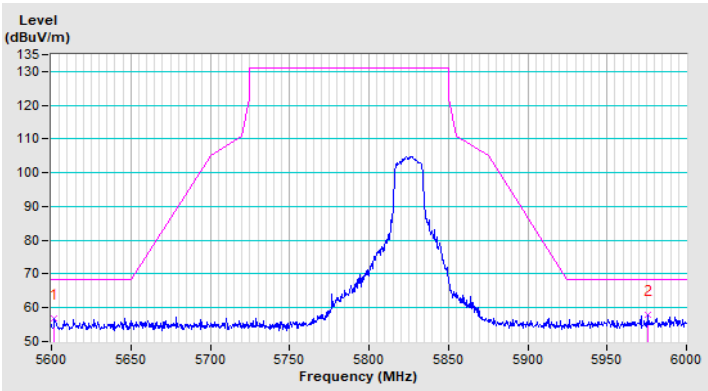


Horizontal (Peak)

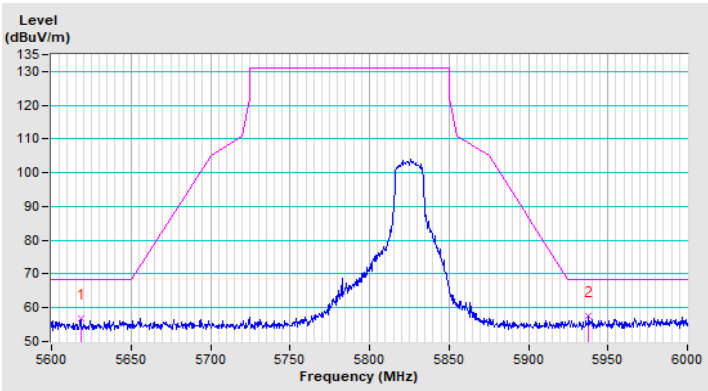


Vertical (Peak)

802.11ac (VHT20) Channel 165



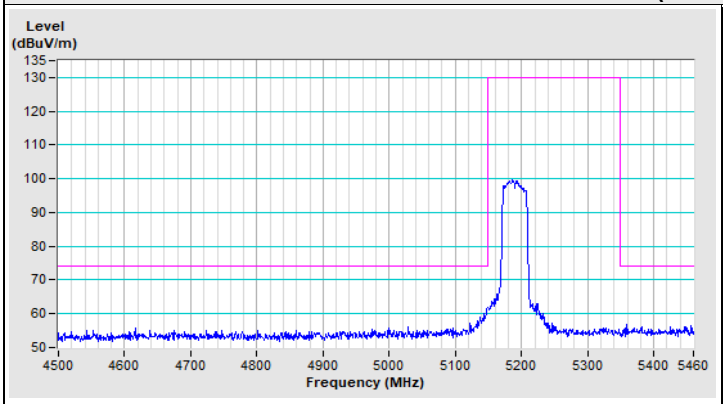
Horizontal (Peak)



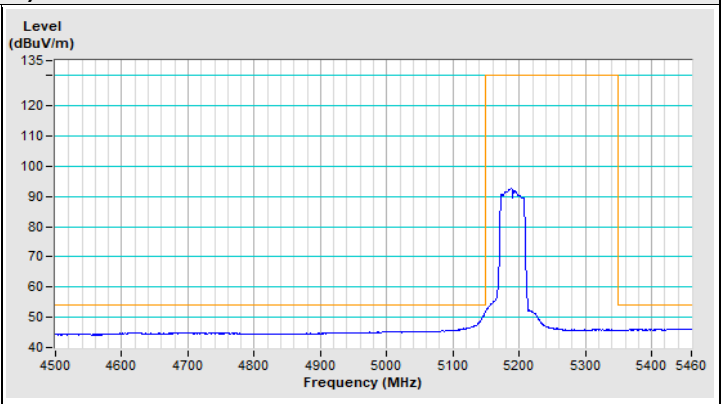
Vertical (Peak)

Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak

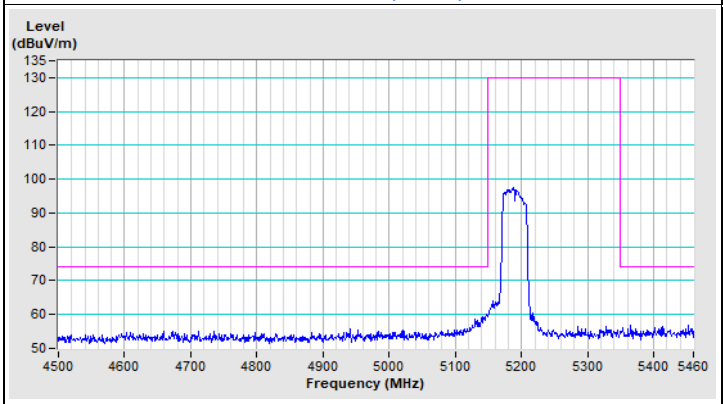
802.11ac (VHT40) Channel 38



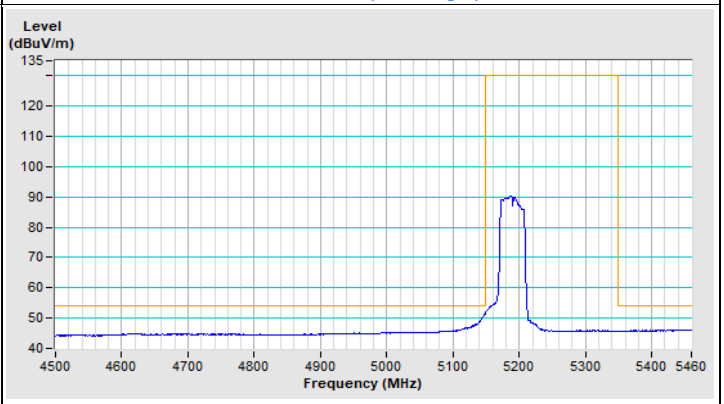
Horizontal (Peak)



Horizontal (Average)

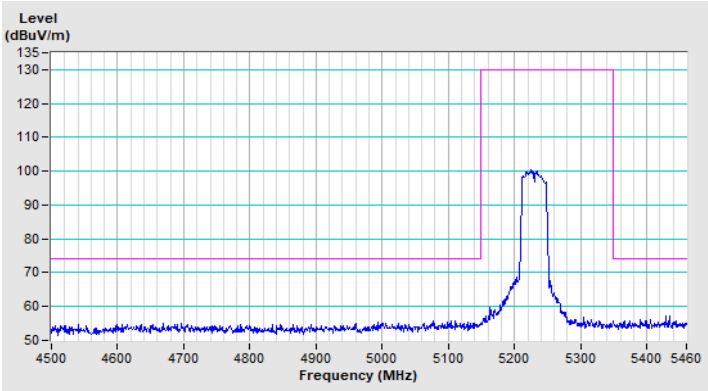


Vertical (Peak)

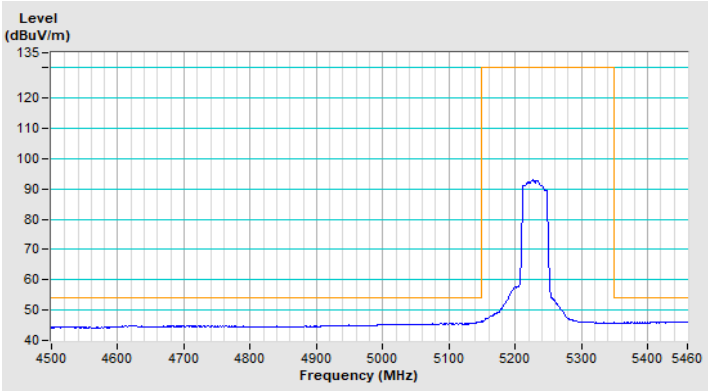


Vertical (Average)

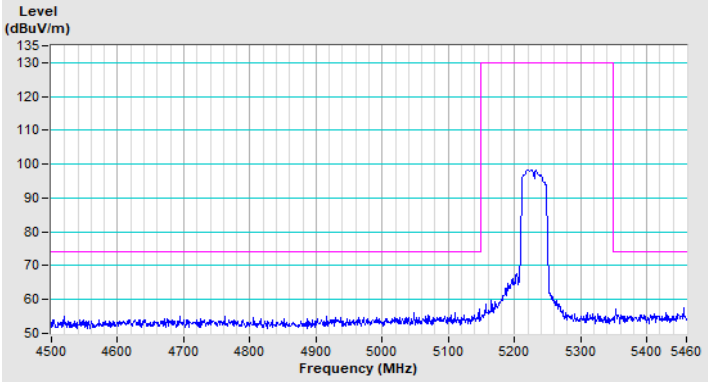
802.11ac (VHT40) Channel 46



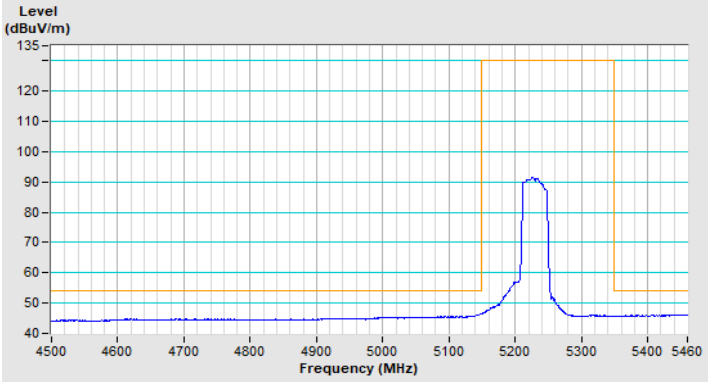
Horizontal (Peak)



Horizontal (Average)

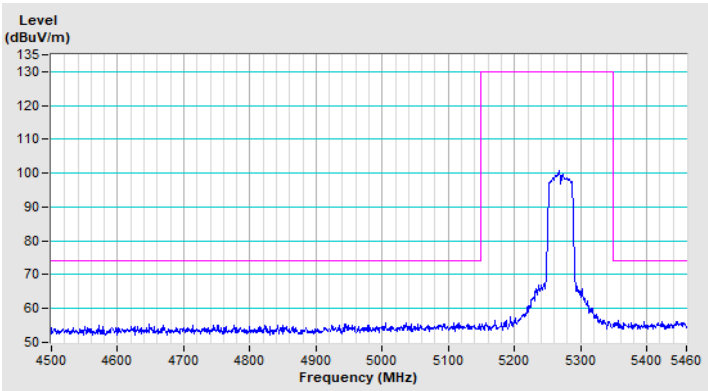


Vertical (Peak)

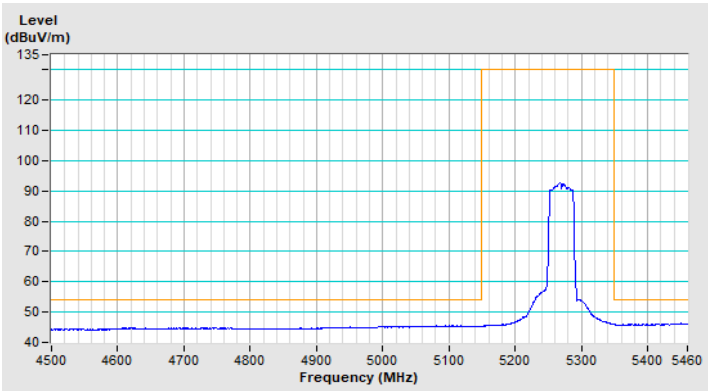


Vertical (Average)

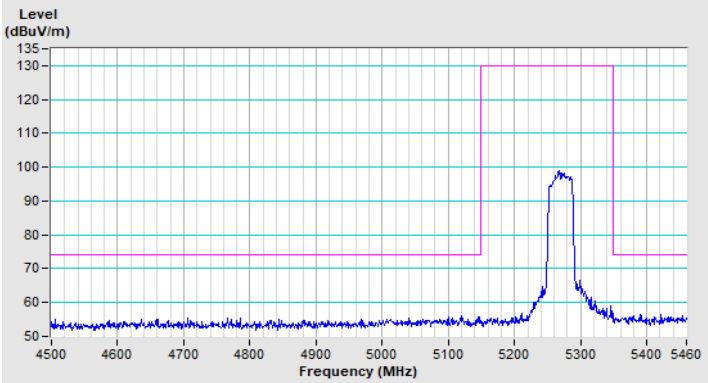
802.11ac (VHT40) Channel 54



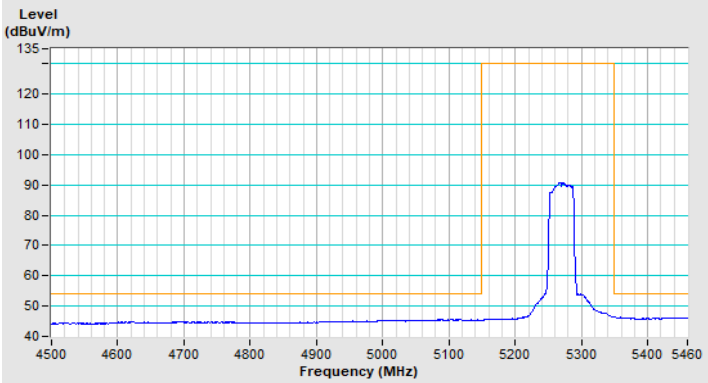
Horizontal (Peak)



Horizontal (Average)

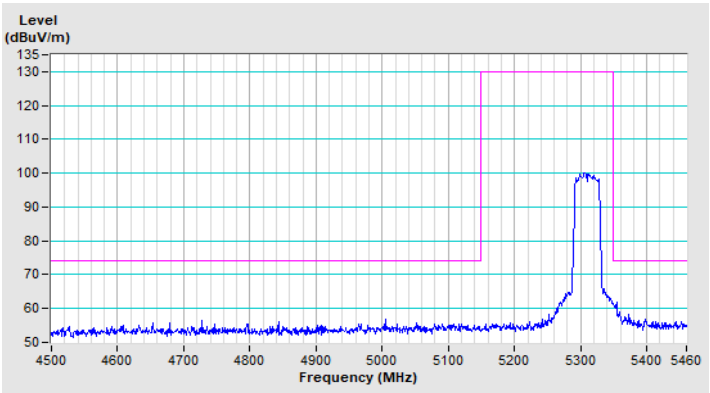


Vertical (Peak)

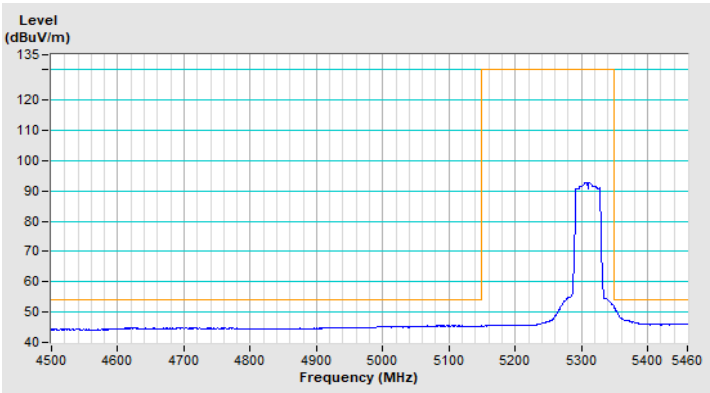


Vertical (Average)

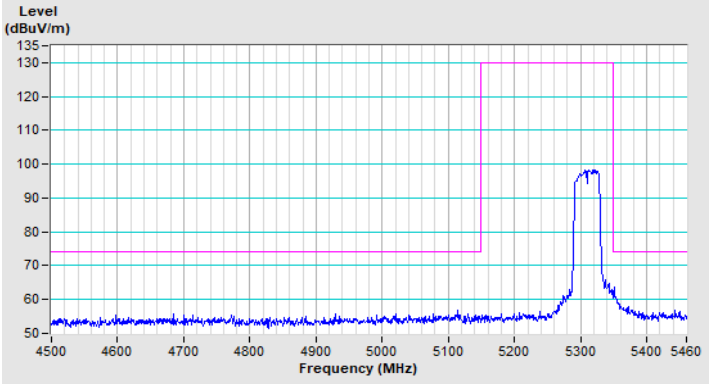
802.11ac (VHT40) Channel 62



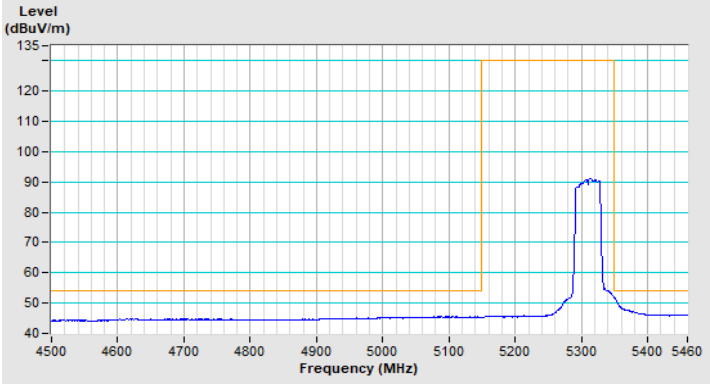
Horizontal (Peak)



Horizontal (Average)



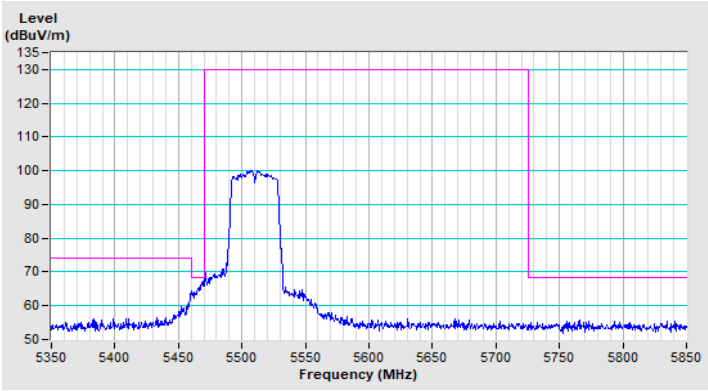
Vertical (Peak)



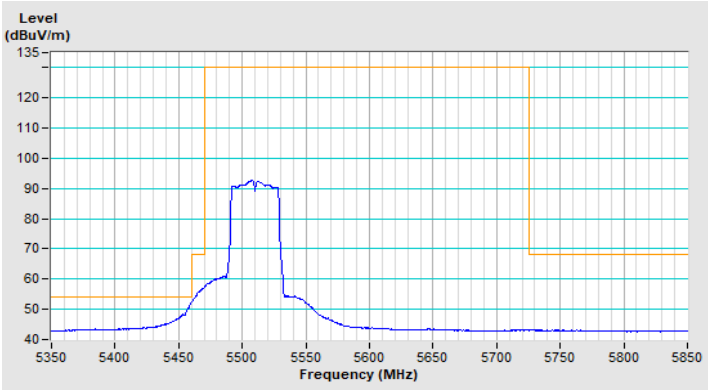
Vertical (Average)

Frequency Range	5.35 GHz ~ 5.85 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak

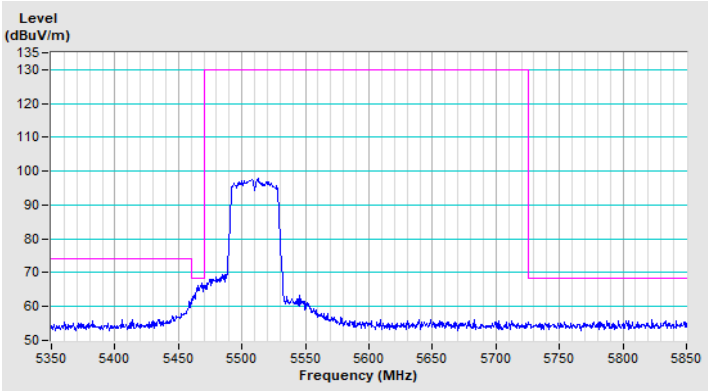
802.11ac (VHT40) Channel 102



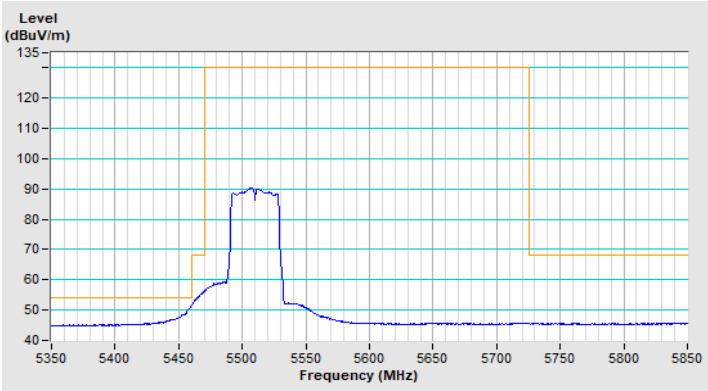
Horizontal (Peak)



Horizontal (Average)

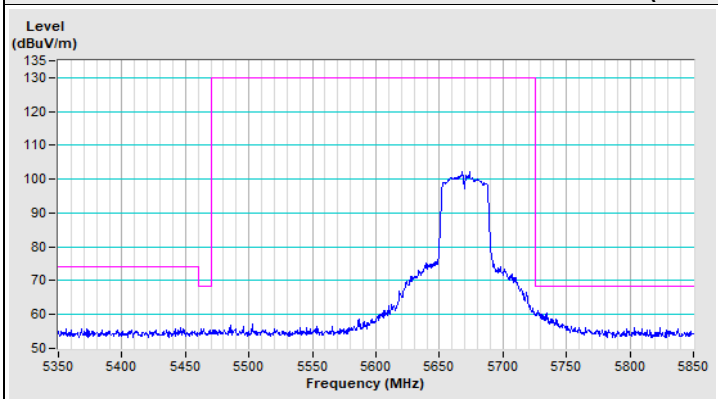


Vertical (Peak)

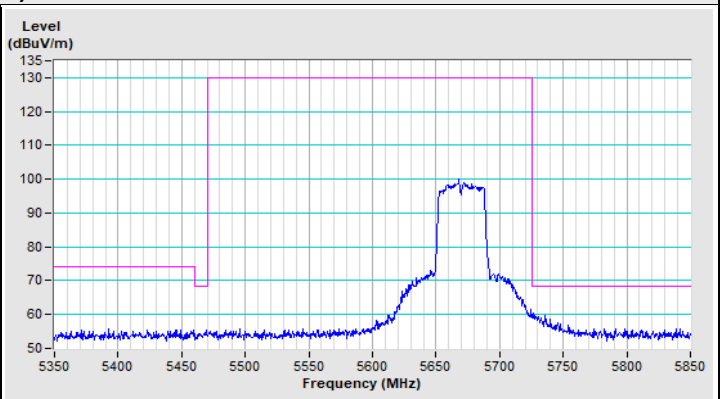


Vertical (Average)

802.11ac (VHT40) Channel 134



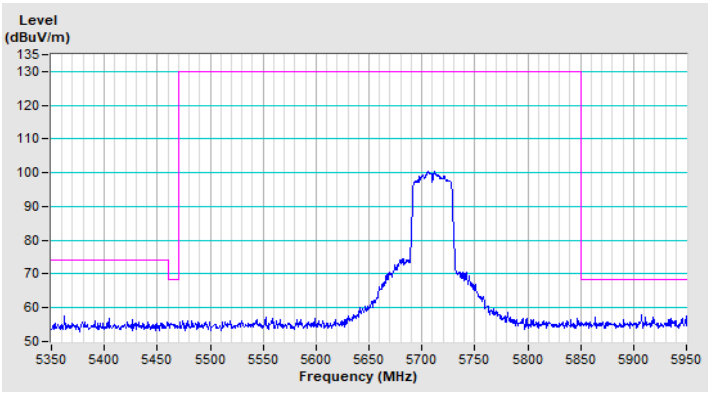
Horizontal (Peak)



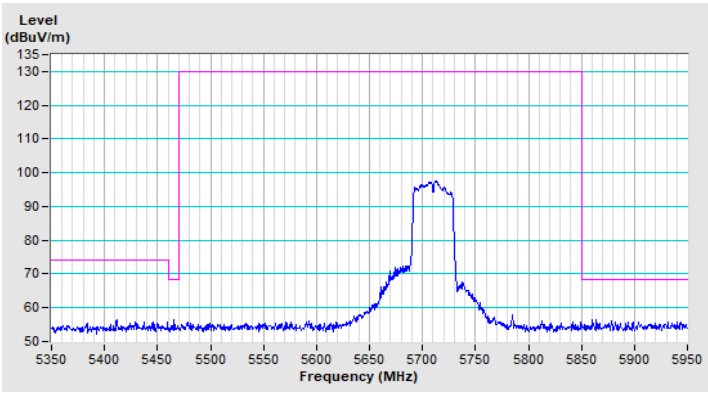
Vertical (Peak)

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



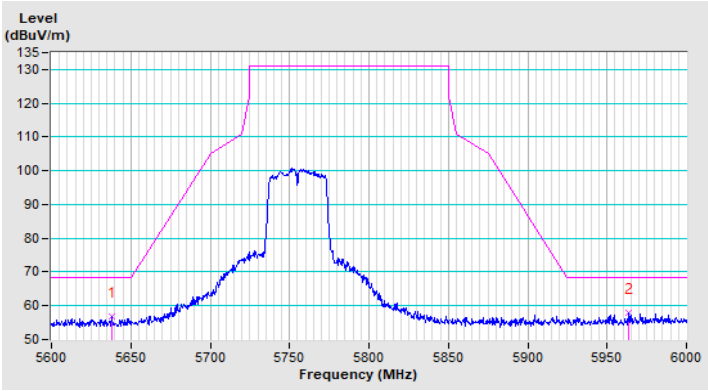
Horizontal (Peak)



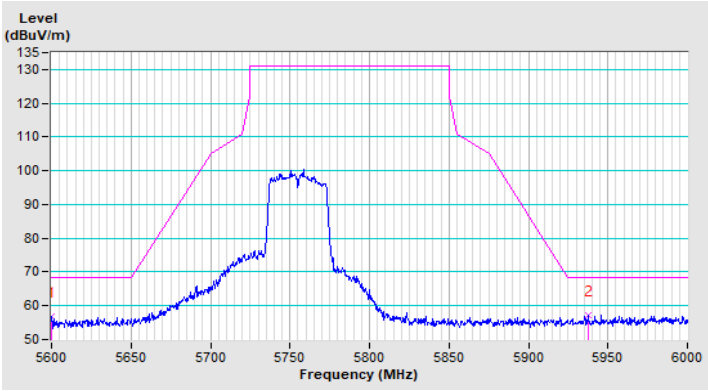
Vertical (Peak)

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

802.11ac (VHT40) Channel 151

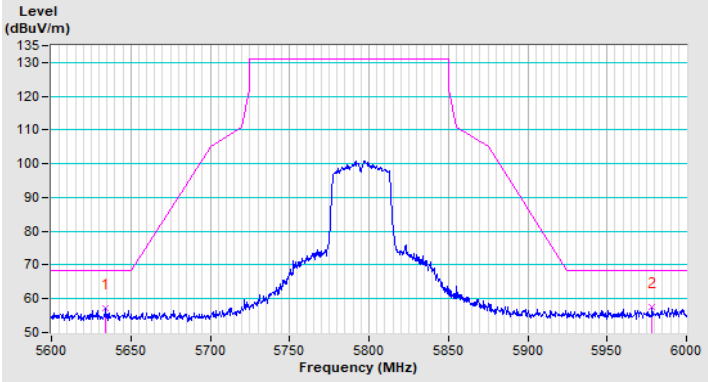


Horizontal (Peak)

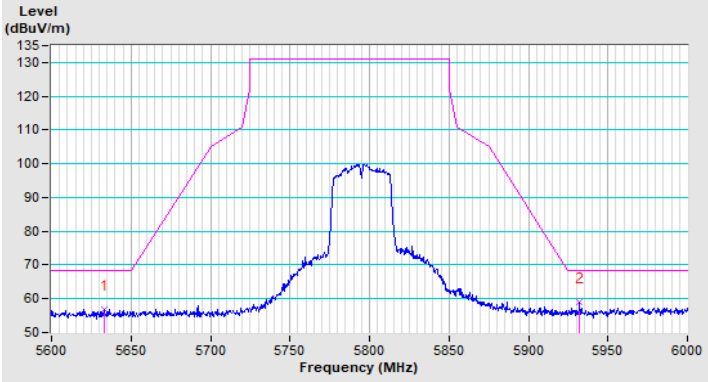


Vertical (Peak)

802.11ac (VHT40) Channel 159



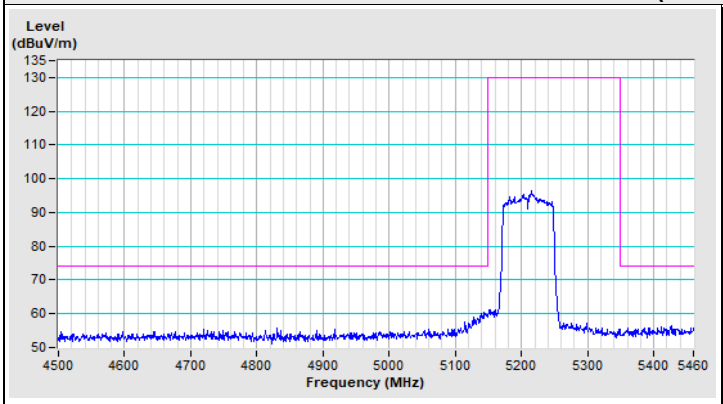
Horizontal (Peak)



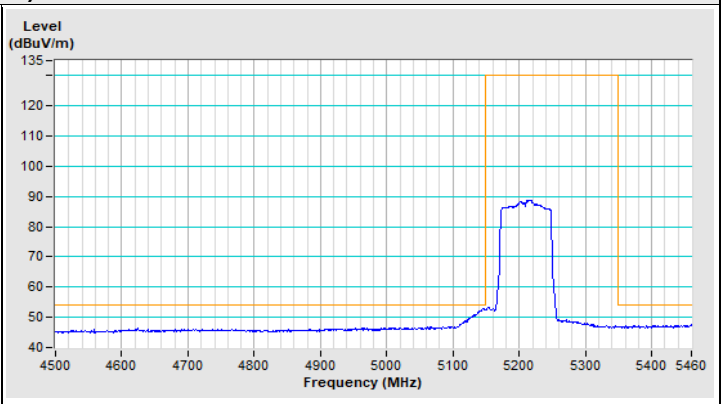
Vertical (Peak)

Frequency Range	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

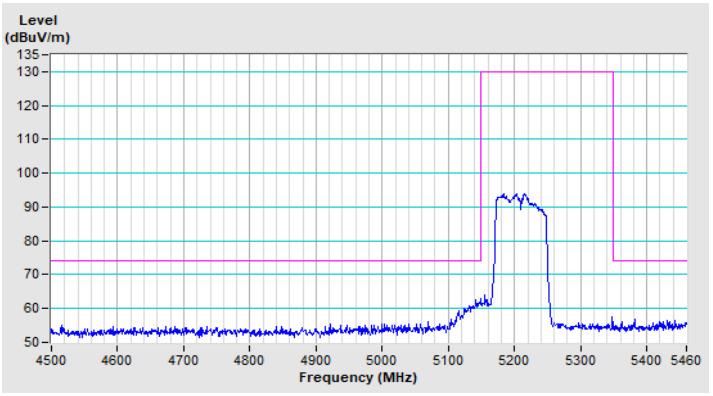
802.11ac (VHT80) Channel 42



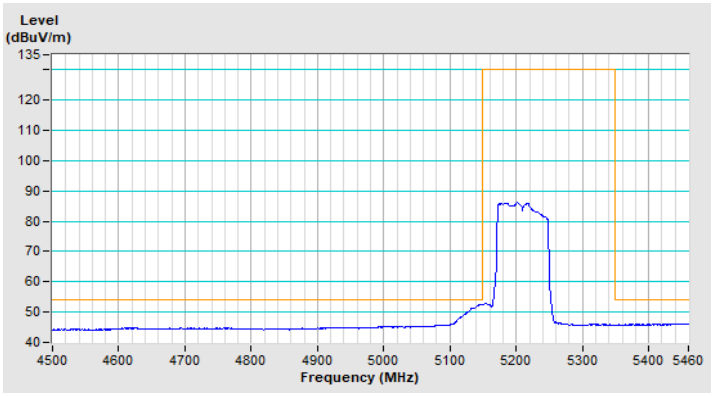
Horizontal (Peak)



Horizontal (Average)

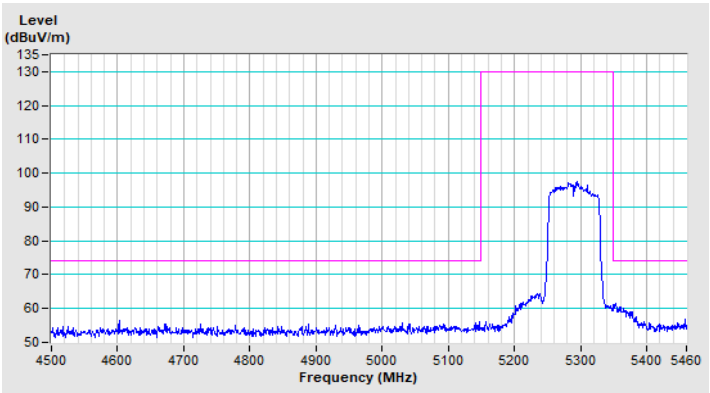


Vertical (Peak)

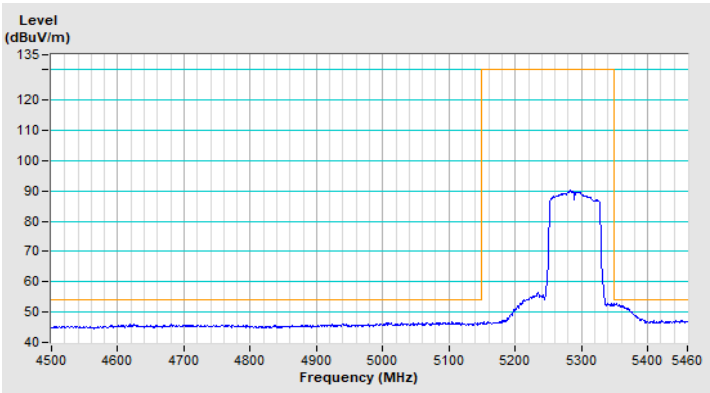


Vertical (Average)

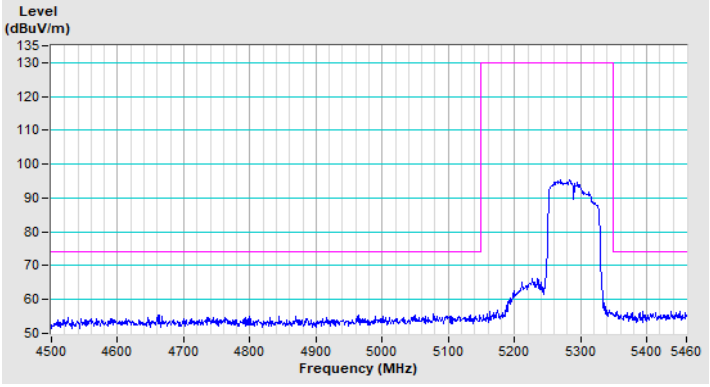
802.11ac (VHT80) Channel 58



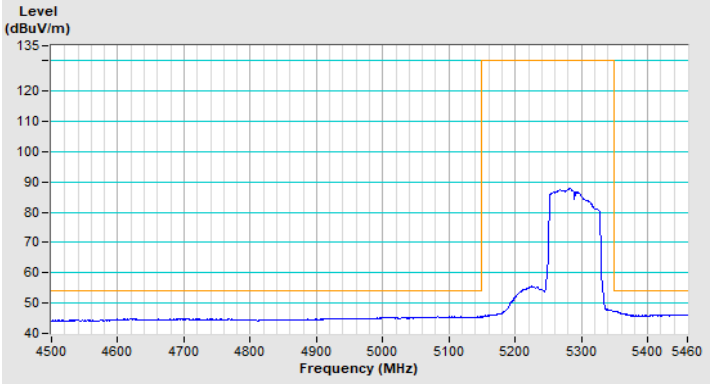
Horizontal (Peak)



Horizontal (Average)



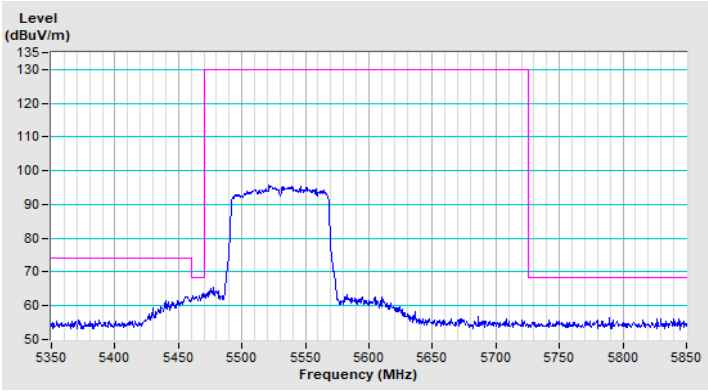
Vertical (Peak)



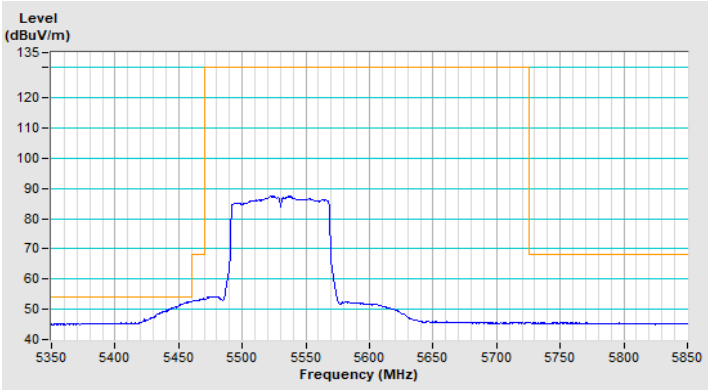
Vertical (Average)

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=3 kHz, DET=Peak

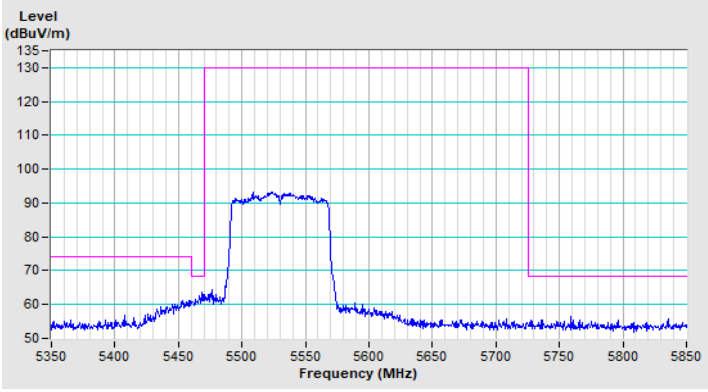
802.11ac (VHT80) Channel 106



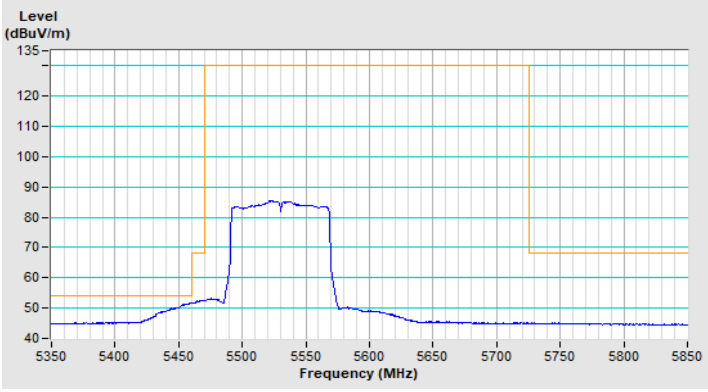
Horizontal (Peak)



Horizontal (Average)

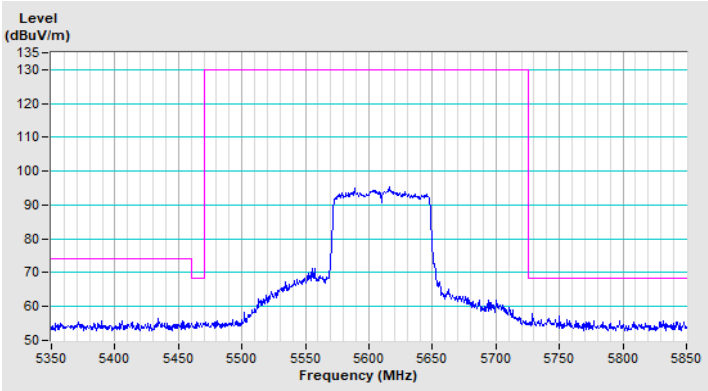


Vertical (Peak)

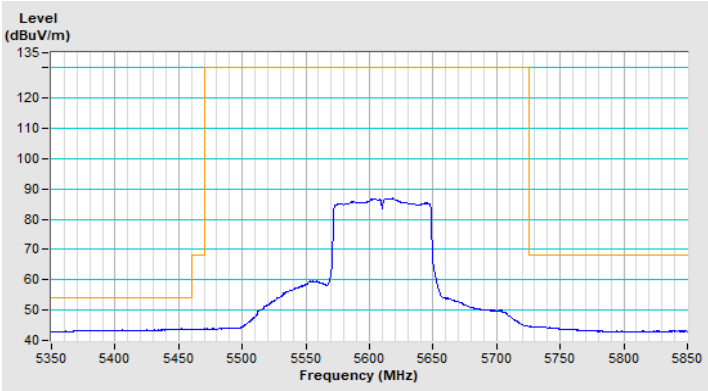


Vertical (Average)

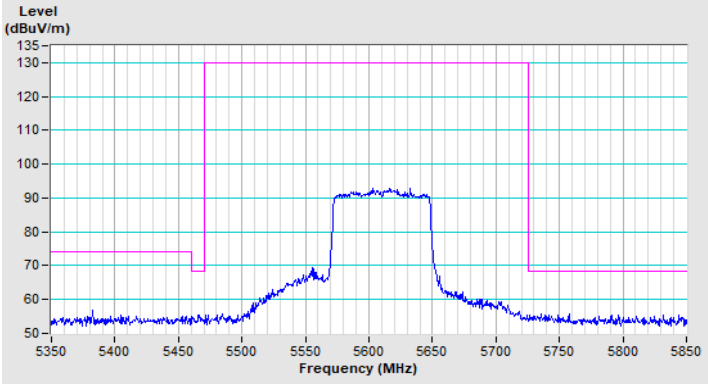
802.11ac (VHT80) Channel 122



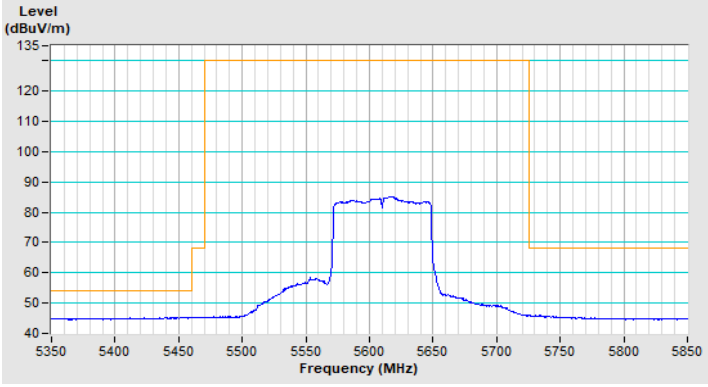
Horizontal (Peak)



Horizontal (Average)



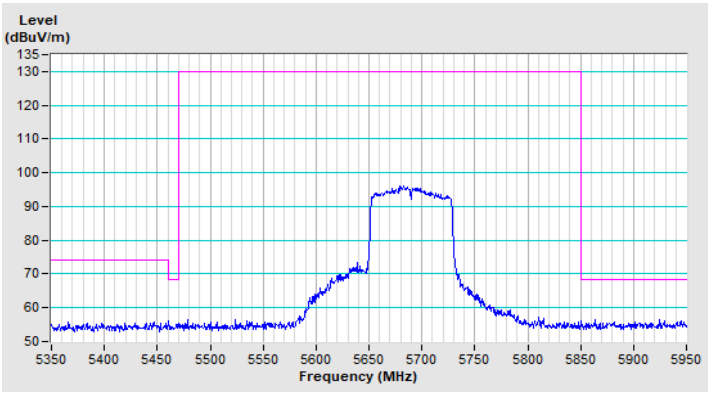
Vertical (Peak)



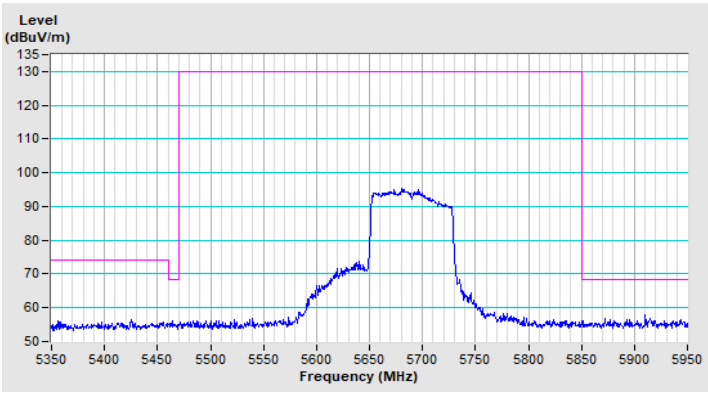
Vertical (Average)

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



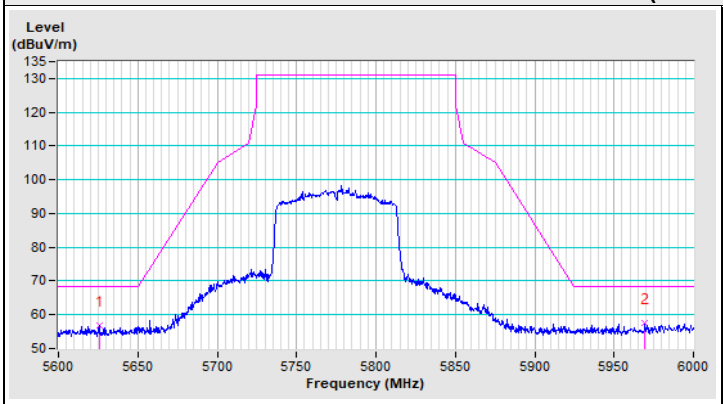
Horizontal (Peak)



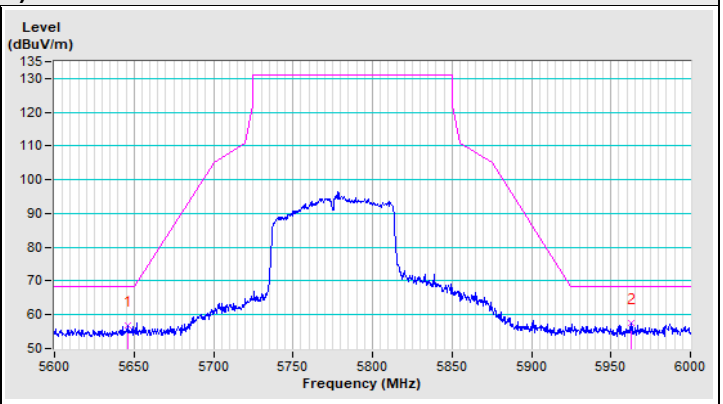
Vertical (Peak)

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

802.11ac (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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Email: service.adt@bureauveritas.com
Web Site: http://ee.bureauveritas.com.tw

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

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