TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBDKX-WTW-P22110238-1
FCC ID:	EMJ-TM1
Product:	Smart Doorbell
Brand:	level
Model No.:	M1
Received Date:	2022/11/8
Test Date:	2022/11/29 ~ 2022/12/8
Issued Date:	2023/1/17
Applicant:	PRIMAX ELECTRONICS LTD.
Address:	No. 669, Ruey Kuang Road, Neihu, Taipei, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
FCC Registration / Designation Number:	198487 / TW2021

Approved by: Jeremy Lin , **Date:** 2023/1/17

Jeremy Lin / Project Engineer

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Prepared by : Annie Chang / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBDKX-WTW-P22110238-1	Original release.	2023/1/17

1 Certificate

Product:	Smart Doorbell
Brand:	level
Test Model:	M1
Sample Status:	Engineering sample
Applicant:	PRIMAX ELECTRONICS LTD.
Test Date:	2022/11/29 ~ 2022/12/8
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 KDB 662911 D01 Multiple Transmitter Output v02r01

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

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(2)	26 dB Bandwidth	Pass	For U-NII-2A U-NII-2C Band output power limitation is determined based on 26dBc bandwidth.
15.407(a)(1/2/3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
---	Occupied Bandwidth	-	Reference only.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -23.81 dB at 0.71945 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -14.5 dB at 39.70 MHz
15.407(b) (1/2/3/4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -1.0 dB at 10600.00 MHz
15.203	Antenna Requirement	Pass	No antenna connector is used.

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

2.1 Measurement Uncertainty

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

Measurement	Specification	Expanded Uncertainty (k=2) (±)
AC Power Conducted Emissions	150 kHz ~ 30 MHz	3.00 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	2.38 dB
	30 MHz ~ 1 GHz	5.7 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 6 GHz	4.83 dB
	6 GHz ~ 18 GHz	5.37 dB
	18 GHz ~ 40 GHz	5.24 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	Smart Doorbell
Brand	level
Test Model	M1
Status of EUT	Engineering sample
Power Supply Rating	16-24Vac / EUT internal Battery (3.8Vdc)
Modulation Type	256QAM,64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 300Mbps 802.11ac: up to 866.7Mbps
Operating Frequency	5.18 GHz ~ 5.24 GHz, 5.26 GHz ~ 5.32 GHz, 5.5 GHz ~ 5.7 GHz, 5.745 GHz ~ 5.825 GHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20): 24 802.11n (HT40), 802.11ac (VHT40): 11 802.11ac (VHT80): 5
Output Power	5.18 GHz ~ 5.24 GHz : 65.279 mW (18.15 dBm) 5.26 GHz ~ 5.32 GHz : 64.587 mW (18.1 dBm) 5.5 GHz ~ 5.7 GHz : 71.18 mW (18.52 dBm) 5.745 GHz ~ 5.825 GHz : 138.669 mW (21.42 dBm)
EUT Category	Client device

Note:

1. There are WLAN (2.4 GHz) and WLAN (5 GHz) technology used for the EUT.
2. WLAN (2.4 GHz) and WLAN (5 GHz) technology cannot transmit at same time.
3. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	Gain (dBi)	Antenna Type	Connector Type
1	4.27	PIFA	IPEX
2	4.37	PIFA	IPEX

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

2. The EUT incorporates a MIMO function:

Modulation Mode	TX & RX Configuration	
802.11a	1TX	1RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX
Note: The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz) and 802.11ac mode for 20 MHz (40 MHz) 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 ~ 5700 MHz

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

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

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

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

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	122	5610 MHz

FOR 5745 ~ 5825 MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

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: XYZ 3-axis. Pre-scan in these ways and find the worst case as a representative test condition. 2. For 802.11a module's setting is Diversity. Pre-scan Chain0/ Chain1 and find the worst case as a representative test condition.
Worst Case:	1. X/ Y/ Z Worst Condition: Z Axis for Unwanted Emission above 1GHz and Unwanted Emission below 1GHz. 2. Chain0/ Chain1 Worst Condition: Chain1 is the worse case

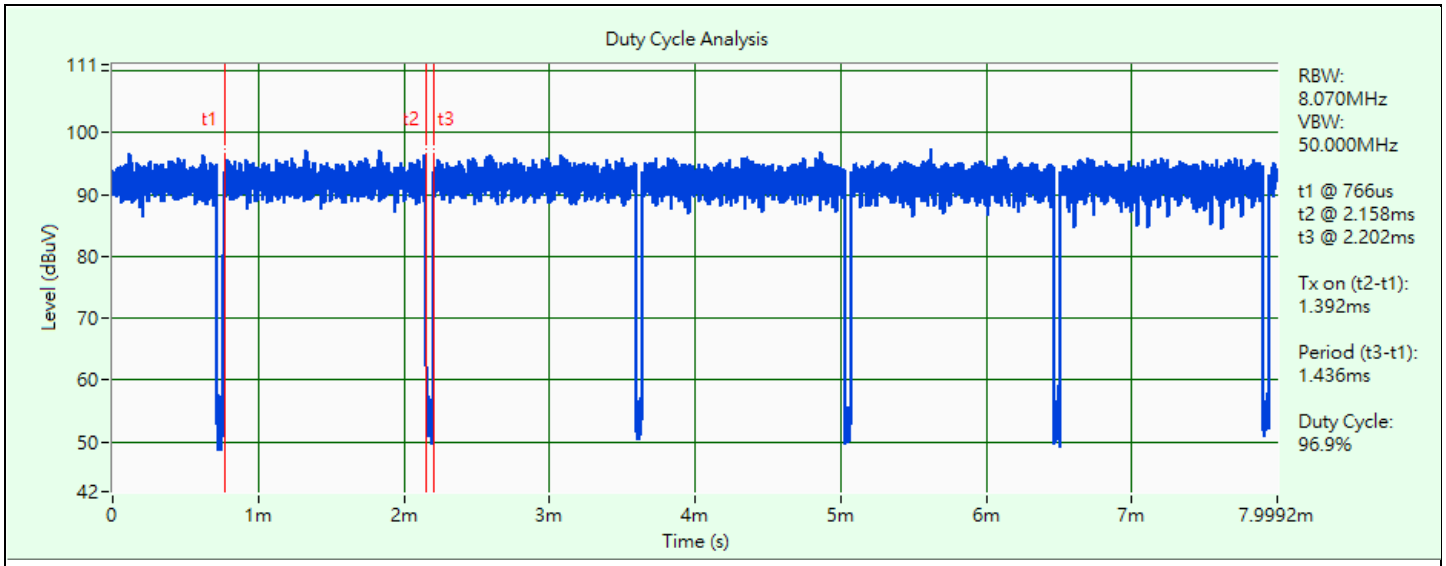
Following channel(s) was (were) selected for the final test as listed below:

Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
26 dB Bandwidth	802.11a	CDD	52, 60, 64, 100, 116, 132, 140	BPSK	6Mb/s
	802.11ac (VHT20)	CDD	52, 60, 64, 100, 116, 132, 140	BPSK	MCS0
	802.11ac (VHT40)	CDD	54, 62, 102, 110, 134	BPSK	MCS0
	802.11ac (VHT80)	CDD	58, 106, 122	BPSK	MCS0
RF Output Power / Power Spectral Density	802.11a	CDD	36, 40, 48, 52, 60, 64, 100, 116, 132, 140, 149, 157, 165	BPSK	6Mb/s
	802.11ac (VHT20)	CDD	36, 40, 48, 52, 60, 64, 100, 116, 132, 140, 149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	CDD	38, 46, 54, 62, 102, 110, 134, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	CDD	42, 58, 106, 122, 155	BPSK	MCS0
6 dB Bandwidth	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
	802.11ac (VHT20)	CDD	149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	CDD	151, 159	BPSK	MCS0
	802.11ac (VHT80)	CDD	155	BPSK	MCS0
Occupied Bandwidth	802.11a	CDD	36, 40, 48, 52, 60, 64, 100, 116, 132, 140, 149, 157, 165	BPSK	6Mb/s
	802.11ac (VHT20)	CDD	36, 40, 48, 52, 60, 64, 100, 116, 132, 140, 149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	CDD	38, 46, 54, 62, 102, 110, 134, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	CDD	42, 58, 106, 122, 155	BPSK	MCS0

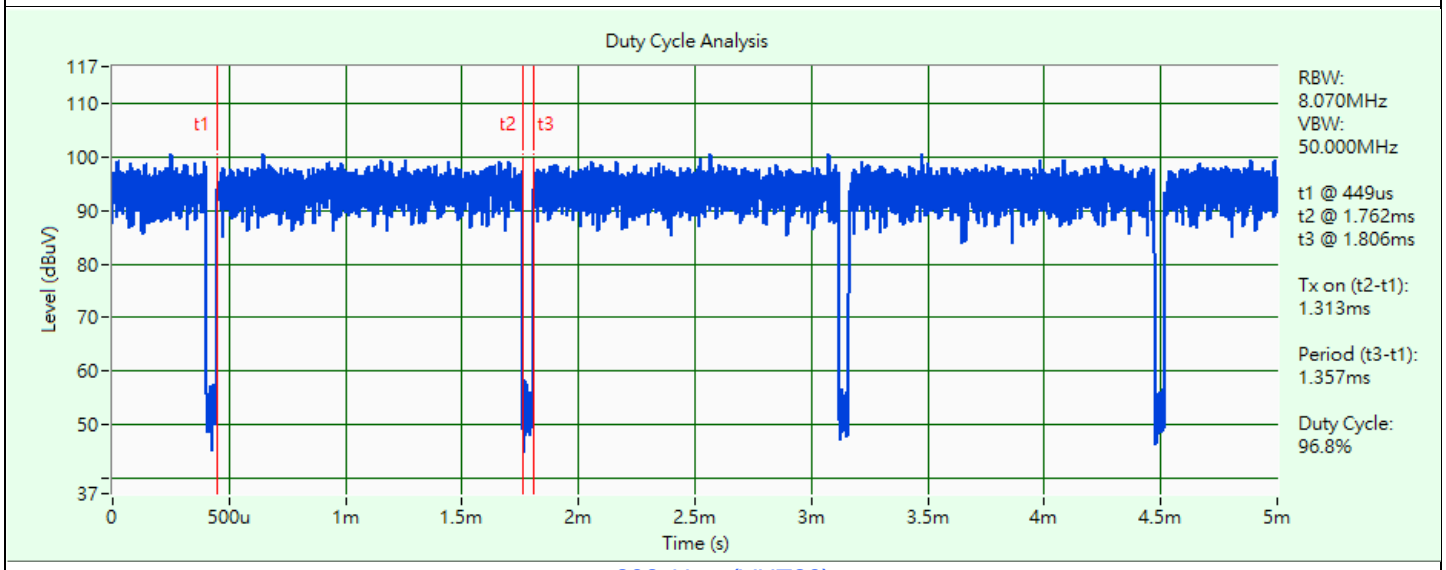
Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Frequency Stability	802.11a	-	36	un-modulation	-
AC Power Conducted Emissions	802.11ac (VHT20)	CDD	165	BPSK	MCS0
Unwanted Emissions below 1 GHz	802.11ac (VHT20)	CDD	165	BPSK	MCS0
Unwanted Emissions above 1 GHz	802.11a	CDD	36, 40, 48, 52, 60, 64, 100, 116, 132, 140, 149, 157, 165	BPSK	6Mb/s
	802.11ac (VHT20)	CDD	36, 40, 48, 52, 60, 64, 100, 116, 132, 140, 149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	CDD	38, 46, 54, 62, 102, 110, 134, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	CDD	42, 58, 106, 122, 155	BPSK	MCS0

3.5 Duty Cycle of Test Signal

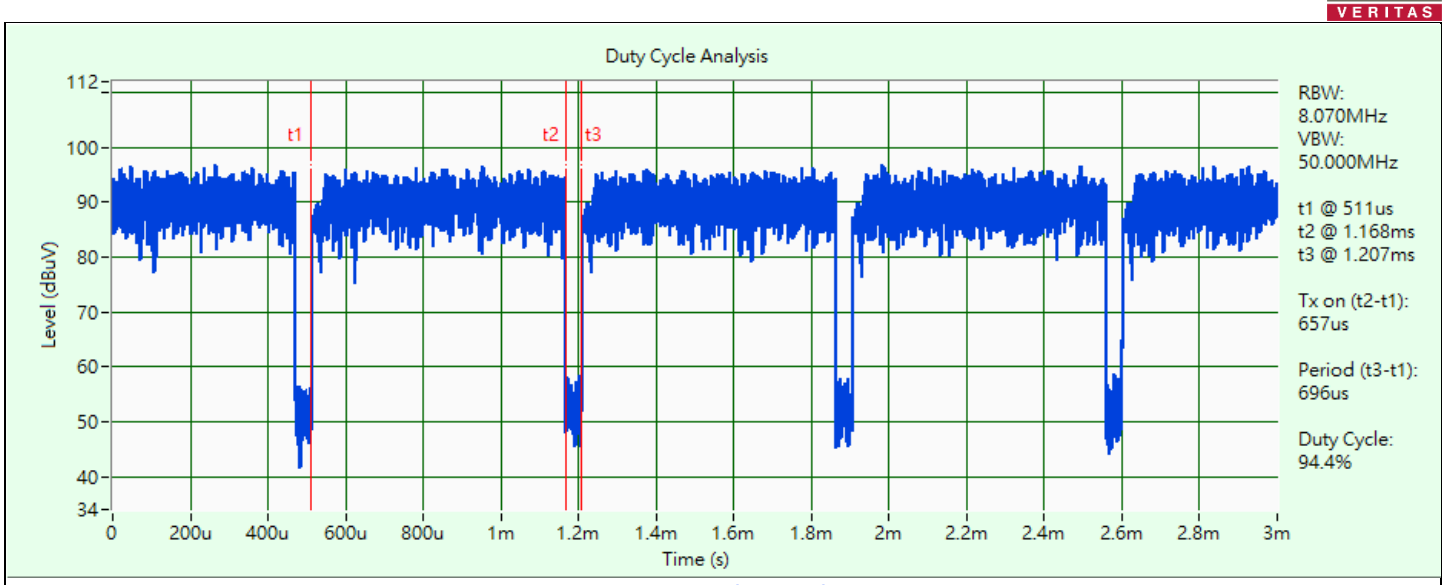
802.11a: Duty cycle = 1.392 ms / 1.436 ms x 100% = 96.9%, duty factor = 10 * log (1/Duty cycle) = 0.14 dB
802.11ac (VHT20): Duty cycle = 1.313 ms / 1.357 ms x 100% = 96.8%, duty factor = 10 * log (1/Duty cycle) = 0.14 dB
802.11ac (VHT40): Duty cycle = 0.657 ms / 0.696 ms x 100% = 94.4%, duty factor = 10 * log (1/Duty cycle) = 0.25 dB
802.11ac (VHT80): Duty cycle = 0.328 ms / 0.37 ms x 100% = 88.6%, duty factor = 10 * log (1/Duty cycle) = 0.52 dB



802.11a



802.11ac (VHT20)



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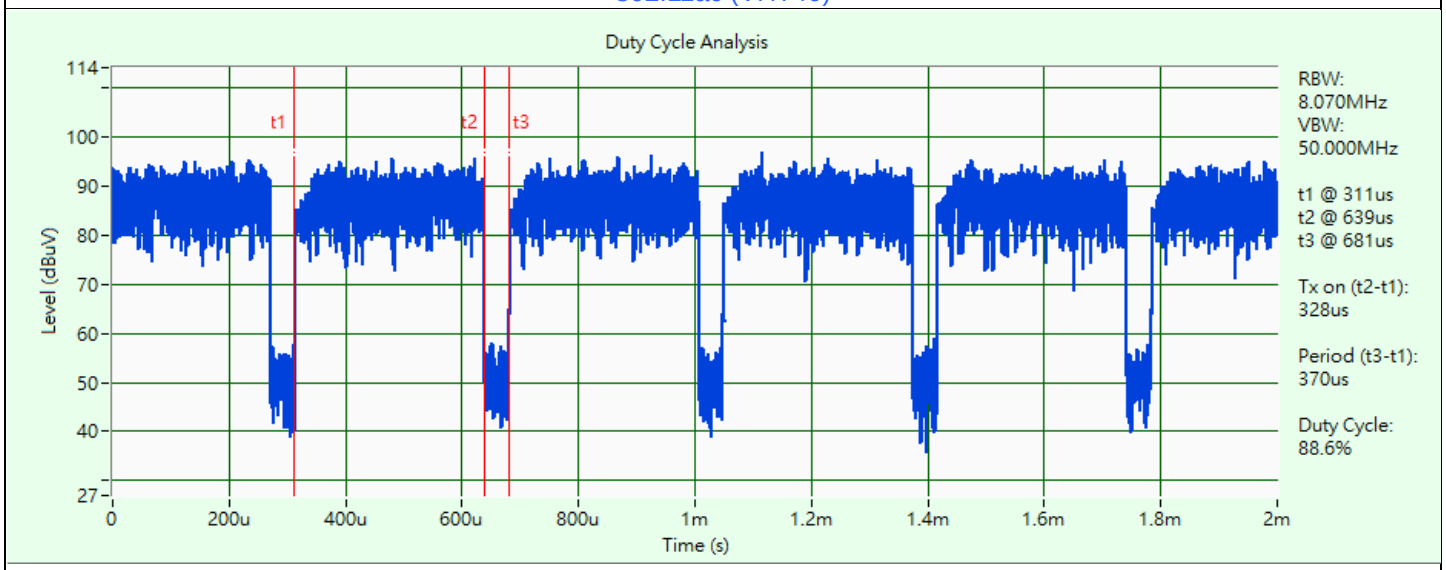
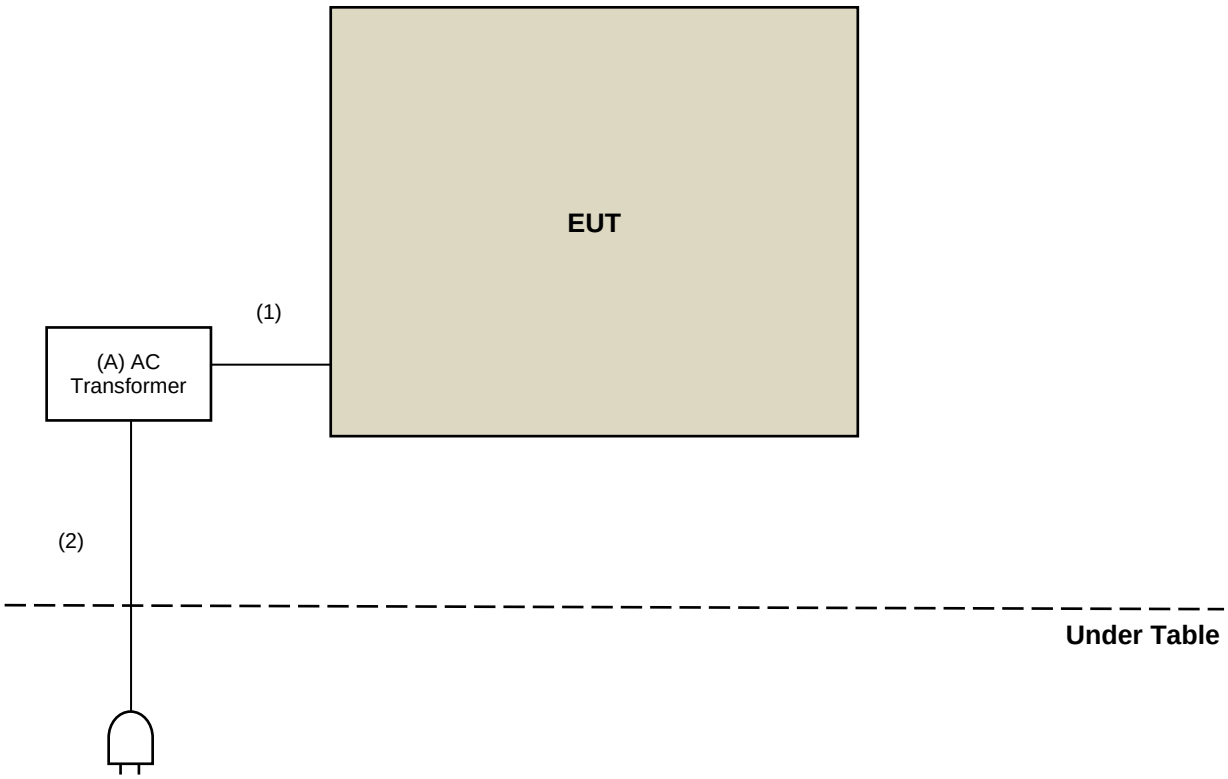


802.11ac (VHT80)

3.6 Test Program Used and Operation Descriptions

Controlling software (Tera Term V4.8) 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	AC Transformer	N/A	N/A	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	AC Cable	1	1.3	N	0	Supplied by applicant
2	AC Cable	1	2	N	0	Supplied by applicant

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
MIMO Powermeasurement Test set (4X4) KEYSIGHT	U2021XA	U2021XA_001	2022/6/13	2023/6/12
MXG Vector Signal Generator KEYSIGHT	N5182B	MY53052658	2022/5/9	2023/5/8
Power Meter Anritsu	ML2495A	1232003	2022/1/9	2023/1/8
Power Sensor Anritsu	MA2411B	1207333	2022/1/9	2023/1/8
Spectrum Analyzer KEYSIGHT	N9030A	MY54490260	2022/7/14	2023/7/13
Spectrum Analyzer R&S	FSV40	101042	2022/9/5	2023/9/4
		101544	2022/5/9	2023/5/8
Temperature & Humidity Chamber TERCHY	MHU-225AU	920409	2022/6/27	2023/6/26
Voltage Meter FLUKE	179	89610322	2022/10/3	2023/10/2

Notes:

1. The test was performed in LK - Oven
2. Tested Date: 2022/12/1

4.2 RF Output Power

Refer to section 4.1 to get information of the instruments.

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

Refer to section 4.1 to get information of the instruments.

4.7 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal LYNICS	0900510	E1-011285	2022/9/19	2023/9/18
		E1-011286	2022/9/19	2023/9/18
50 Ohms Terminator LYNICS	0900510	E1-01-305	2022/2/9	2023/2/8
Attenuator STI	STI02-2200-10	NO.4	2022/9/2	2023/9/1
DC LISN R&S	ESH3-Z6	100219	2022/8/2	2023/8/1
		844950/018	2022/8/2	2023/8/1
DC LISN Schwarzbeck	NNLK 8121	8121-808	2022/4/29	2023/4/28
High Voltage Probe Schwarzbeck	TK9420	00982	2021/12/24	2022/12/23
Isolation Transformer Erika Fiedler	D-65396	017	2022/9/8	2023/9/7
LISN R&S	ENV216	101196	2022/5/24	2023/5/23
LISN Schwarzbeck	NNLK 8121	8121-731	2022/5/26	2023/5/25
		8121-00759	2022/8/18	2023/8/17
	NNLK8129	8129229	2022/6/8	2023/6/7
	NSLK 8128	8128-244	2022/11/8	2023/11/7
RF Coaxial Cable Commate	5D-FB	Cable-CO5-01	2022/1/28	2023/1/27
Software BVADT	Cond_V7.3.7.4	N/A	N/A	N/A
Test Receiver R&S	ESR3	102412	2022/1/22	2023/1/21

Notes:

1. The test was performed in Linkou Conduction 5.
2. Tested Date: 2022/12/8

4.8 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
* LOOP ANTENNA EMCI	LPA600	270	2021/9/2	2023/9/1
Bi_Log Antenna Schwarzbeck	VULB 9168	137	2022/10/21	2023/10/20
Coupling/Dcoupling Network Schwarzbeck	CDNE-M2	00097	2022/6/1	2023/5/31
	CDNE-M3	00091	2022/6/1	2023/5/31
Pre_Amplifier EMCI	EMC001340	980269	2022/6/28	2023/6/27
Pre_Amplifier HP	8447D	2432A03504	2022/2/17	2023/2/16
RF Coaxial Cable Pacific	8D-FB	Cable-CH6-02	2022/6/30	2023/6/29
Software BVADT	Radiated_V7.7.1.1.1	N/A	N/A	N/A
	Radiated_V8.7.08	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	101544	2022/5/9	2023/5/8
Test Receiver Agilent	N9038A	MY51210129	2022/4/8	2023/4/7
		MY51210137	2022/6/9	2023/6/8
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

1. * The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA
2. The test was performed in Linkou 966 Chamber 6 (CH 6).
3. Tested Date: 2022/12/2

4.9 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Band Pass Filter MICRO-TRONICS	BRM17690	005	2022/5/26	2023/5/25
Boresight antenna tower fixture BV	BAF-02	6	N/A	N/A
High Pass Filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	2022/5/26	2023/5/25
Horn Antenna EMCO	3115	00027024	2022/11/13	2023/11/12
		00028257	2022/11/13	2023/11/12
Horn Antenna ETS-Lindgren	3117-PA	00215857	2022/11/13	2023/11/12
Horn Antenna Schwarzbeck	BBHA 9170	212	2022/10/20	2023/10/19
Notch Filter MICRO-TRONICS	BRC50703-01	010	2022/5/26	2023/5/25
Pre-amplifier HP	8449B	3008A01201	2022/2/17	2023/2/16
Pre-amplifier (18GHz-40GHz) EMCI	EMC184045B	980175	2022/9/3	2023/9/2
Pre_Amplifier EMCI	EMC0126545	980076	2022/2/17	2023/2/16
	EMC184045B	980235	2022/2/17	2023/2/16
RF Coaxial Cable EM	EM102-KMKM-3.5+1M	EM102-KMKM-3.5+1M-01	2022/7/7	2023/7/6
RF Coaxial Cable EMCI	EMC104	190801	2022/7/7	2023/7/6
		190804	2022/7/7	2023/7/6
RF Coaxial Cable HUBER SUHNER	SF-104	Cable-CH6-01	2022/9/20	2023/9/19
Software BVADT	Radiated_V7.7.1.1.1	N/A	N/A	N/A
	Radiated_V8.7.08	N/A	N/A	N/A
Spectrum Analyzer Agilent	E4446A	MY51100009	2022/6/27	2023/6/26
Spectrum Analyzer KEYSIGHT	N9030A	MY54490260	2022/7/14	2023/7/13
Spectrum Analyzer R&S	FSV40	101042	2022/9/5	2023/9/4
		101544	2022/5/9	2023/5/8
Test Receiver Agilent	N9038A	MY51210129	2022/4/8	2023/4/7
		MY51210137	2022/6/9	2023/6/8
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

1. The test was performed in Linkou 966 Chamber 6 (CH 6).
2. Tested Date: 2022/11/29 ~ 2022/12/2

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

*B is the 26 dB emission bandwidth in megahertz

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

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

5.3 Power Spectral Density

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

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

5.4 6 dB Bandwidth

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

5.5 Occupied Bandwidth

The results are for reference only.

5.6 Frequency Stability

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

5.7 AC Power Conducted Emissions

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

Notes:

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

5.8 Unwanted Emissions below 1 GHz

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

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

Notes:

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

5.9 Unwanted Emissions above 1 GHz

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

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

Notes:

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

Limits of unwanted emission out of the restricted bands

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

For transmitters operating in the 5.15-5.25 GHz band:

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

For transmitters operating in the 5.25-5.35 GHz band:

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

For transmitters operating in the 5.47-5.725 GHz band:

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

For transmitters operating in the 5.725-5.850 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(4)(i)	PK: -27 (dBm/MHz) *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.		

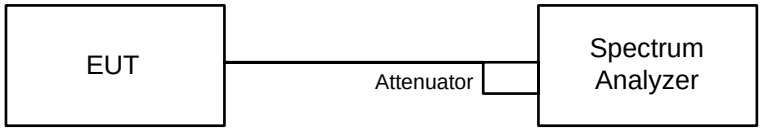
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 26 dB Bandwidth

6.1.1 Test Setup

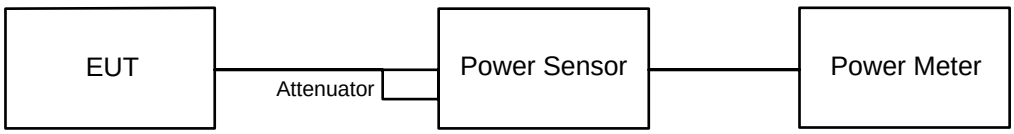


6.1.2 Test Procedure

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

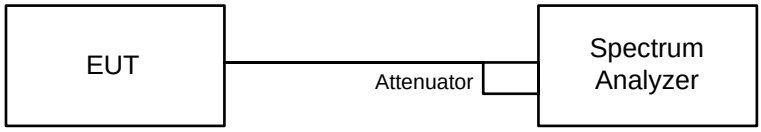


6.2.2 Test Procedure

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

6.3 Power Spectral Density

6.3.1 Test Setup



6.3.2 Test Procedure

For specified measurement bandwidth 1 MHz:
Method SA-2

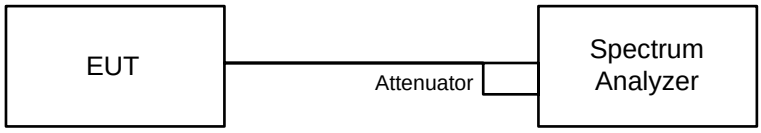
a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Sweep time = auto, trigger 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-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

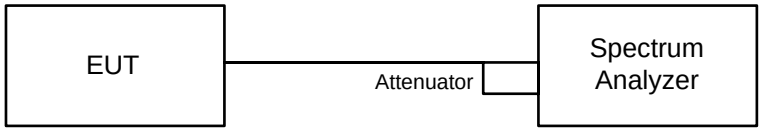


6.4.2 Test Procedure

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

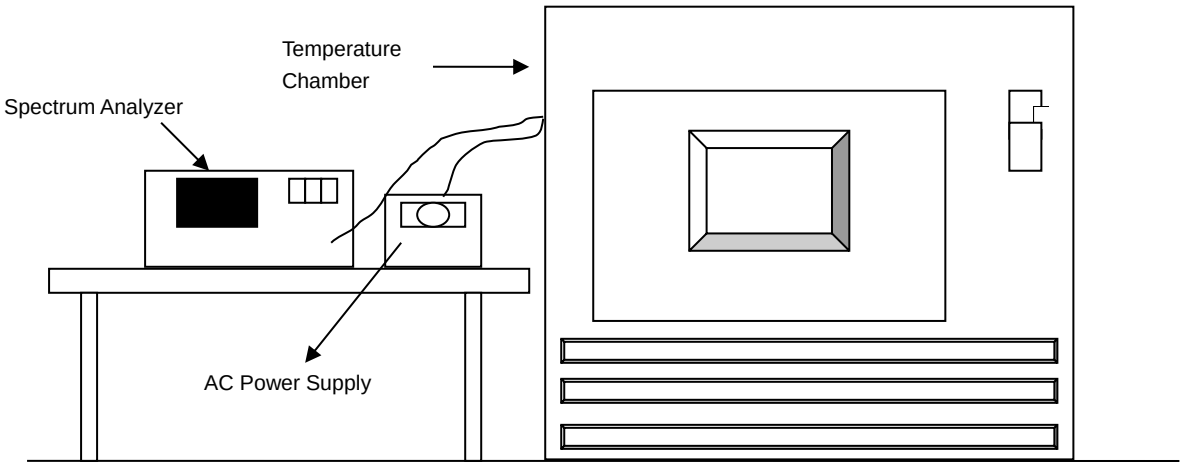


6.5.2 Test Procedure

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

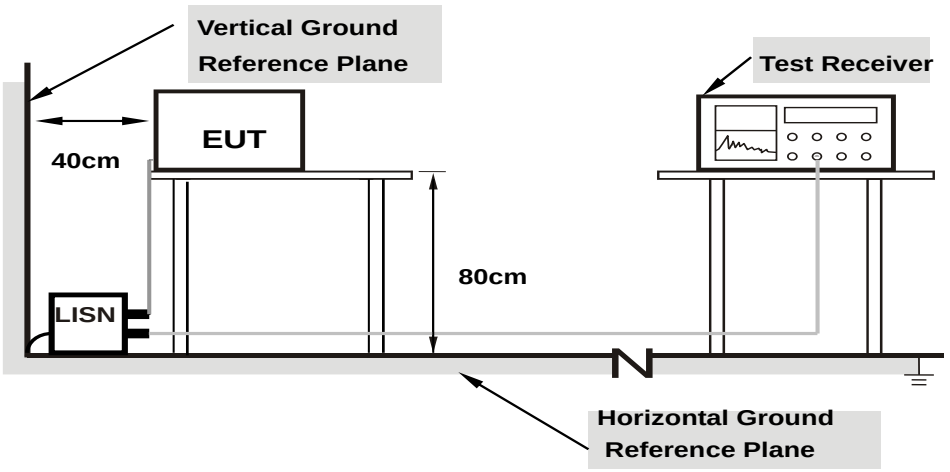


6.6.2 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC 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.

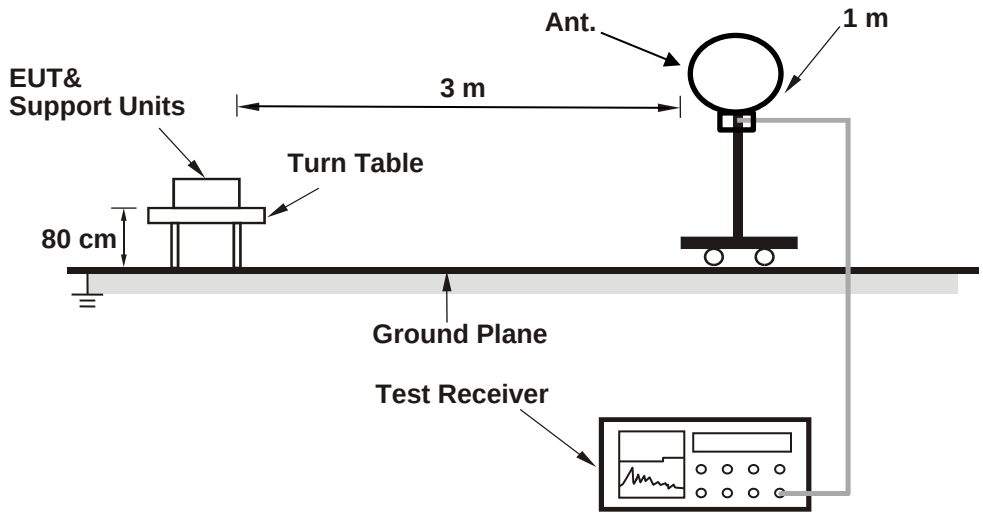
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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.

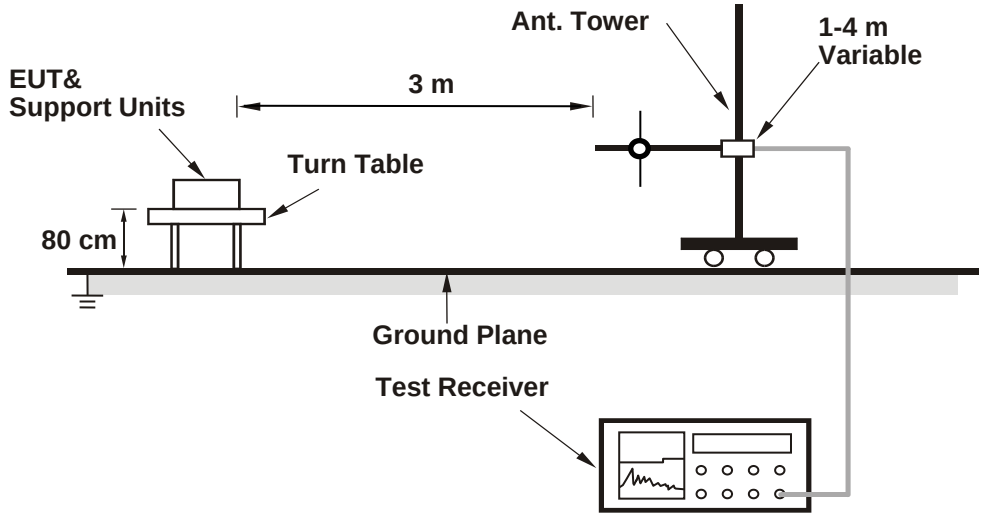
6.8 Unwanted Emissions below 1 GHz

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.

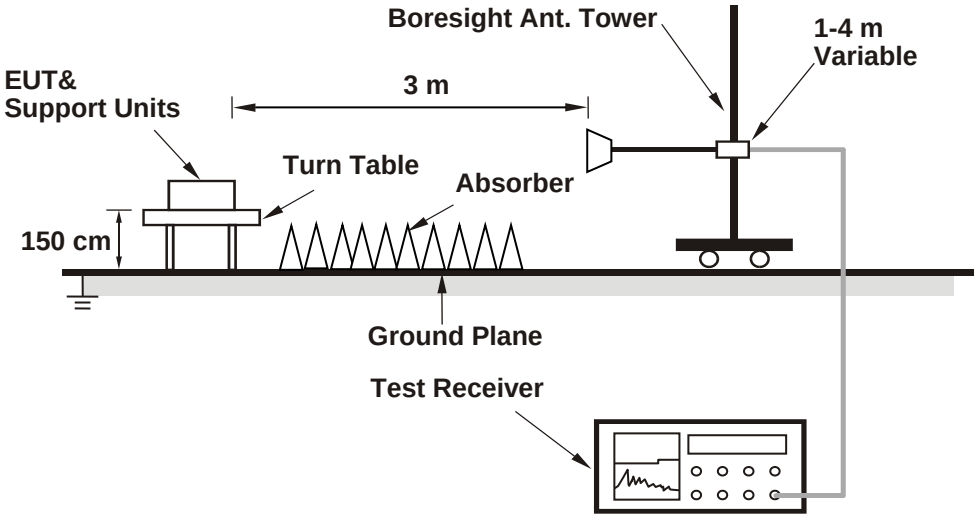
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

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:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Waydi Tuan

802.11a

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
52	5260	20.59
60	5300	20.76
64	5320	20.43
100	5500	20.47
116	5580	28.49
132	5660	29.83
140	5700	28.21

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	20.59	24.13	>	24
60	5300	20.76	24.17	>	24
64	5320	20.43	24.1	>	24
100	5500	20.47	24.11	>	24
116	5580	28.49	25.54	>	24
132	5660	29.83	25.74	>	24
140	5700	28.21	25.5	>	24

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

802.11ac (VHT20)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.72	20.70
60	5300	20.83	20.77
64	5320	20.70	20.66
100	5500	20.75	20.73
116	5580	21.66	21.43
132	5660	24.85	24.22
140	5700	22.12	21.46

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
52	5260	20.70	24.15	>	24
60	5300	20.77	24.17	>	24
64	5320	20.66	24.15	>	24
100	5500	20.73	24.16	>	24
116	5580	21.43	24.31	>	24
132	5660	24.22	24.84	>	24
140	5700	21.46	24.31	>	24

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

802.11ac (VHT40)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	42.06	42.00
62	5310	41.82	41.87
102	5510	41.93	41.86
110	5550	46.11	47.86
134	5670	45.67	45.86

Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
54	5270	42.00	27.23	>	24
62	5310	41.82	27.21	>	24
102	5510	41.86	27.21	>	24
110	5550	46.11	27.63	>	24
134	5670	45.67	27.59	>	24

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

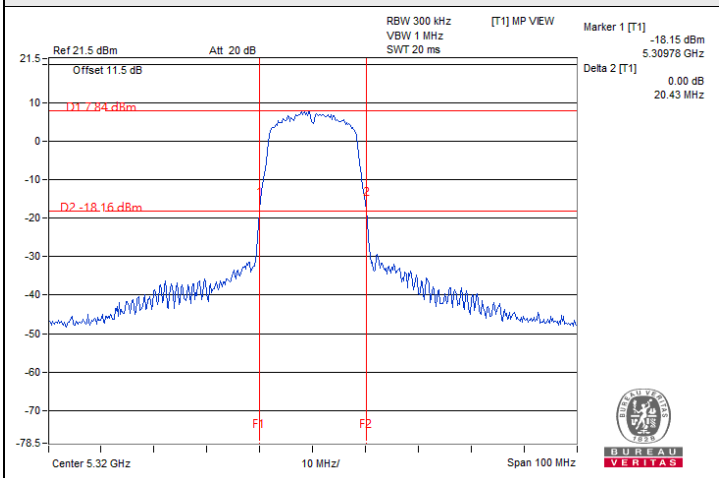
802.11ac (VHT80)

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	82.60	82.48
106	5530	82.38	82.49
122	5610	83.93	82.78

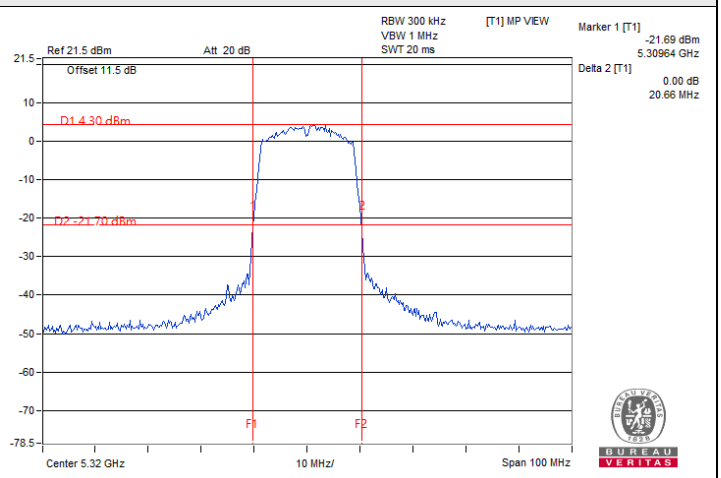
Determined Output Power Limit					
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)		
58	5290	82.48	30.16	>	24
106	5530	82.38	30.15	>	24
122	5610	82.78	30.17	>	24

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

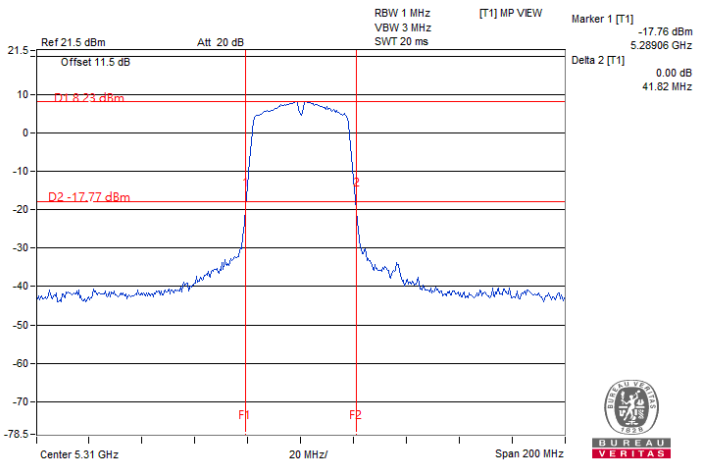
Spectrum Plot of Minimum Value



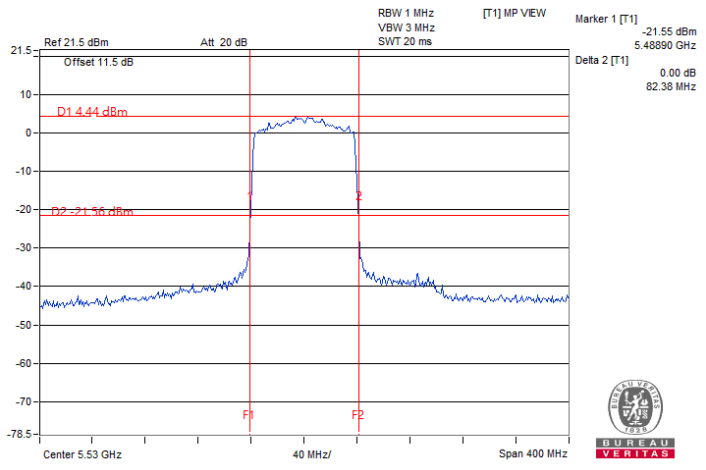
802.11a : CH 64



802.11ac (VHT20) / Chain 1 : CH 64



802.11ac (VHT40) / Chain 0 : CH 62



802.11ac (VHT80) / Chain 0 : CH 106

7.2 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Waydi Tuan

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	53.088	17.25	24	Pass
40	5200	50.933	17.07	24	Pass
48	5240	50.699	17.05	24	Pass
52	5260	51.168	17.09	24	Pass
60	5300	50.234	17.01	24	Pass
64	5320	50.933	17.07	24	Pass
100	5500	53.456	17.28	24	Pass
116	5580	50.234	17.01	24	Pass
132	5660	53.333	17.27	24	Pass
140	5700	54.702	17.38	24	Pass
149	5745	63.826	18.05	30	Pass
157	5785	64.121	18.07	30	Pass
165	5825	63.973	18.06	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the antenna gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
36	5180	12.58	12.75	36.95	15.68	24	Pass
40	5200	12.33	12.44	34.639	15.40	24	Pass
48	5240	12.32	12.47	34.721	15.41	24	Pass
52	5260	14.94	15.18	64.15	18.07	24	Pass
60	5300	14.42	14.56	56.245	17.50	24	Pass
64	5320	13.80	13.91	48.592	16.87	24	Pass
100	5500	14.46	14.59	56.699	17.54	24	Pass
116	5580	14.88	15.61	67.152	18.27	24	Pass
132	5660	15.35	15.57	70.335	18.47	24	Pass
140	5700	15.06	15.59	68.287	18.34	24	Pass
149	5745	18.01	18.35	131.632	21.19	30	Pass
157	5785	18.11	18.22	131.089	21.18	30	Pass
165	5825	18.04	18.75	138.669	21.42	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
38	5190	14.99	15.28	65.279	18.15	24	Pass
46	5230	14.98	15.28	65.206	18.14	24	Pass
54	5270	14.99	15.19	64.587	18.10	24	Pass
62	5310	14.78	15.13	62.644	17.97	24	Pass
102	5510	15.27	15.47	68.888	18.38	24	Pass
110	5550	15.29	15.59	70.031	18.45	24	Pass
134	5670	15.17	15.23	66.228	18.21	24	Pass
151	5755	17.31	17.47	109.674	20.40	30	Pass
159	5795	17.39	17.45	110.418	20.43	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1				
42	5210	14.50	14.64	57.291	17.58	24	Pass
58	5290	13.48	13.63	45.352	16.57	24	Pass
106	5530	13.17	13.31	42.178	16.25	24	Pass
122	5610	15.16	15.84	71.18	18.52	24	Pass
155	5775	18.12	18.13	129.876	21.14	30	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2A, the maximum gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-2C, the maximum gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.
5. For U-NII-3, the maximum gain is 4.37 dBi < 6 dBi, so the output power limit shall not be reduced.

7.3 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Waydi Tuan

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
36	5180	4.13	0.14	4.27	11.00	Pass
40	5200	4.06	0.14	4.20	11.00	Pass
48	5240	3.94	0.14	4.08	11.00	Pass
52	5260	3.91	0.14	4.05	11.00	Pass
60	5300	3.78	0.14	3.92	11.00	Pass
64	5320	3.88	0.14	4.02	11.00	Pass
100	5500	4.59	0.14	4.73	11.00	Pass
116	5580	3.71	0.14	3.85	11.00	Pass
132	5660	3.97	0.14	4.11	11.00	Pass
140	5700	3.51	0.14	3.65	11.00	Pass

Notes:

1. For U-NII-1, the antenna gain is 4.37 dBi < 6dBi, so the power density limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 4.37 dBi < 6 dBi, so the power density limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 4.37 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
36	5180	-0.71	-0.61	0.14	2.49	9.67	Pass
40	5200	-0.71	-0.66	0.14	2.47	9.67	Pass
48	5240	-0.71	-0.84	0.14	2.38	9.67	Pass
52	5260	1.33	1.45	0.14	4.54	9.67	Pass
60	5300	0.89	0.90	0.14	4.05	9.67	Pass
64	5320	0.35	0.38	0.14	3.52	9.67	Pass
100	5500	1.11	1.04	0.14	4.23	9.67	Pass
116	5580	1.39	1.34	0.14	4.52	9.67	Pass
132	5660	1.50	1.49	0.14	4.65	9.67	Pass
140	5700	1.05	0.98	0.14	4.17	9.67	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-1, the directional gain is 7.33 dBi > 6dBi, so the power density limit shall be reduced to 11-(7.33-6) = 9.67 dBm/MHz.
4. For U-NII-2A, the directional gain is 7.33 dBi > 6 dBi, so the power density limit shall be reduced to 11-(7.33-6) = 9.67 dBm/MHz.
5. For U-NII-2C, the directional gain is 7.33 dBi > 6 dBi, so the power density limit shall be reduced to 11-(7.33-6) = 9.67 dBm/MHz.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
38	5190	-1.36	-1.50	0.25	1.83	9.67	Pass
46	5230	-1.56	-1.51	0.25	1.73	9.67	Pass
54	5270	-1.63	-1.50	0.25	1.70	9.67	Pass
62	5310	-1.77	-1.72	0.25	1.52	9.67	Pass
102	5510	-1.08	-0.91	0.25	2.27	9.67	Pass
110	5550	-1.11	-1.11	0.25	2.15	9.67	Pass
134	5670	-1.96	-1.83	0.25	1.37	9.67	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-1, the directional gain is 7.33 dBi > 6dBi, so the power density limit shall be reduced to 11-(7.33-6) = 9.67 dBm/MHz.
4. For U-NII-2A, the directional gain is 7.33 dBi > 6 dBi, so the power density limit shall be reduced to 11-(7.33-6) = 9.67 dBm/MHz.
5. For U-NII-2C, the directional gain is 7.33 dBi > 6 dBi, so the power density limit shall be reduced to 11-(7.33-6) = 9.67 dBm/MHz.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1				
42	5210	-5.41	-5.36	0.52	-1.85	9.67	Pass
58	5290	-6.40	-6.30	0.52	-2.82	9.67	Pass
106	5530	-6.26	-6.24	0.52	-2.72	9.67	Pass
122	5610	-4.55	-4.61	0.52	-1.05	9.67	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-1, the directional gain is 7.33 dBi > 6dBi, so the power density limit shall be reduced to 11-(7.33-6) = 9.67 dBm/MHz.
4. For U-NII-2A, the directional gain is 7.33 dBi > 6 dBi, so the power density limit shall be reduced to 11-(7.33-6) = 9.67 dBm/MHz.
5. For U-NII-2C, the directional gain is 7.33 dBi > 6 dBi, so the power density limit shall be reduced to 11-(7.33-6) = 9.67 dBm/MHz.

802.11a

Channel	Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	PSD w/o Duty Factor (dBm/500kHz)	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
149	5745	-3.94	-1.72	0.14	-1.58	30	Pass
157	5785	-4.03	-1.81	0.14	-1.67	30	Pass
165	5825	-4.17	-1.95	0.14	-1.81	30	Pass

Note: For U-NII-3, the antenna gain is 4.37 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT20)

TX chain	Channel	Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	PSD w/o Duty Factor (dBm/500kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
Chain 0	149	5745	-4.53	-2.31	3.01	0.14	0.84	28.67	Pass
	157	5785	-4.63	-2.41	3.01	0.14	0.74	28.67	Pass
	165	5825	-4.93	-2.71	3.01	0.14	0.44	28.67	Pass
Chain 1	149	5745	-4.58	-2.36	3.01	0.14	0.79	28.67	Pass
	157	5785	-4.48	-2.26	3.01	0.14	0.89	28.67	Pass
	165	5825	-4.93	-2.71	3.01	0.14	0.44	28.67	Pass

Notes:

1. Method E) 2) c) Measure and add 10 log(NANT) dB of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-3, the directional gain is 7.33 dBi > 6 dBi, so the power density limit shall be reduced to 30-(7.33-6) = 28.67 dBm/500kHz.

802.11ac (VHT40)

TX chain	Channel	Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	PSD w/o Duty Factor (dBm/500kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
Chain 0	151	5755	-9.06	-6.84	3.01	0.25	-3.58	28.67	Pass
	159	5795	-8.88	-6.66	3.01	0.25	-3.4	28.67	Pass
Chain 1	151	5755	-8.95	-6.73	3.01	0.25	-3.47	28.67	Pass
	159	5795	-8.88	-6.66	3.01	0.25	-3.4	28.67	Pass

Notes:

1. Method E) 2) c) Measure and add 10 log(NANT) dB of KDB 662911 is using for calculating total power density.
2. Directional gain = $10 \log[(10^{Chain0/20} + 10^{Chain1/20})^2 / 2]$
3. For U-NII-3, the directional gain is 7.33 dBi > 6 dBi, so the power density limit shall be reduced to 30-(7.33-6) = 28.67 dBm/500kHz.

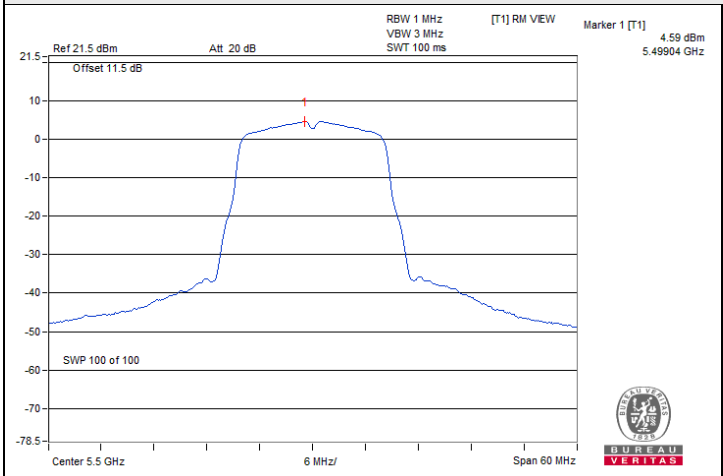
802.11ac (VHT80)

TX chain	Channel	Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	PSD w/o Duty Factor (dBm/500kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
Chain 0	155	5775	-11.46	-9.24	3.01	0.52	-5.71	28.67	Pass
Chain 1	155	5775	-11.02	-8.8	3.01	0.52	-5.27	28.67	Pass

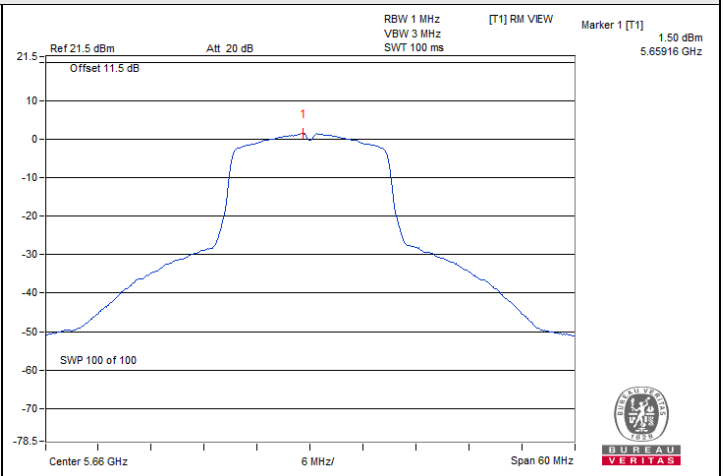
Notes:

1. Method E) 2) c) Measure and add 10 log(NANT) dB of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$)^2 / 2]
3. For U-NII-3, the directional gain is 7.33 dBi > 6 dBi, so the power density limit shall be reduced to 30-(7.33-6) = 28.67 dBm/500kHz.

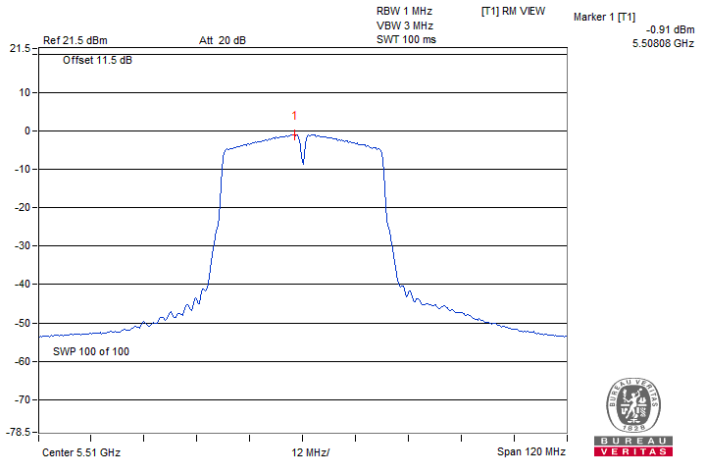
Spectrum Plot of Maximum Value



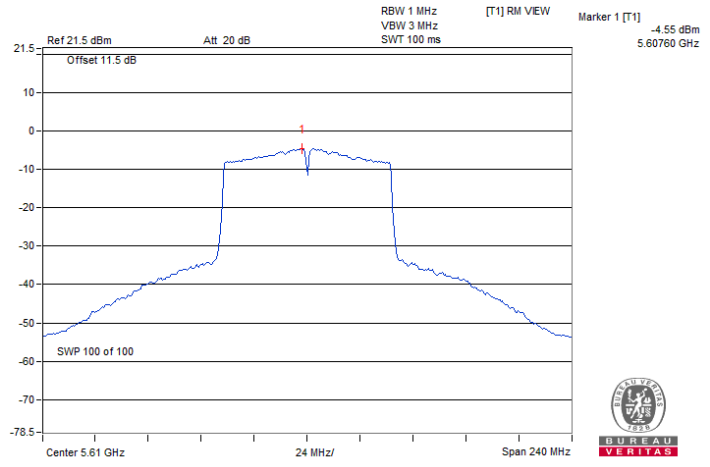
802.11a : CH 100



802.11ac (VHT20) / Chain 0 : CH 132

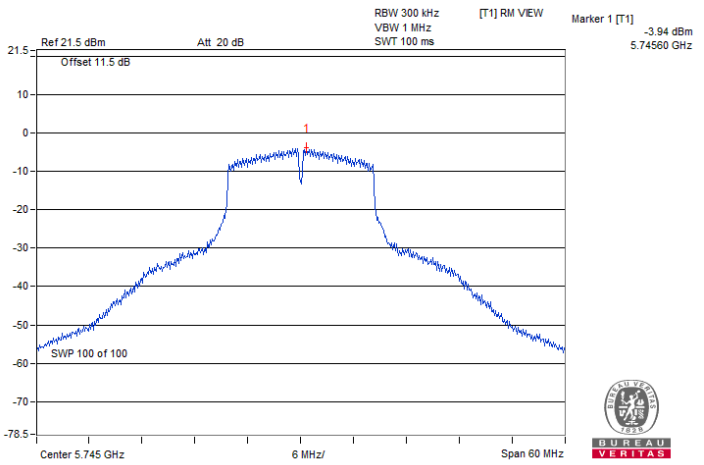


802.11ac (VHT40) / Chain 1 : CH 102

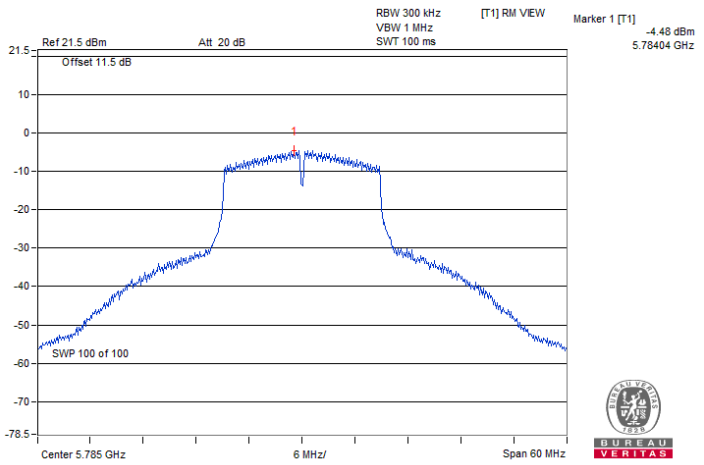


802.11ac (VHT80) / Chain 0 : CH 122

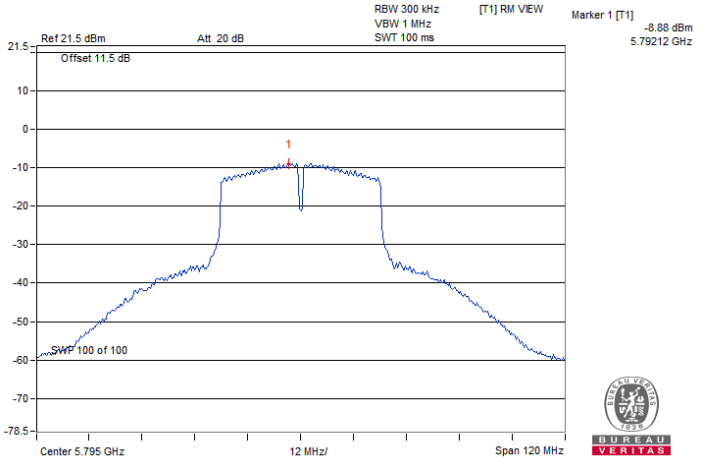
Spectrum Plot of Maximum Value



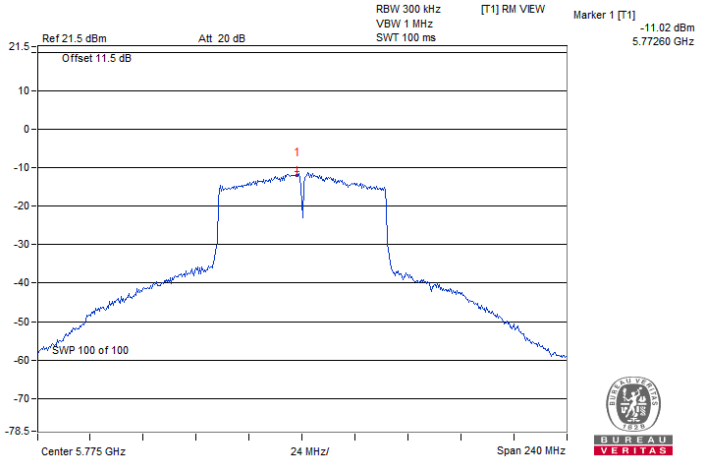
802.11a : CH 149



802.11ac (VHT20) / Chain 1 : CH 157



802.11ac (VHT40) / Chain 0 : CH 159



802.11ac (VHT80) / Chain 1 : CH 155

7.4 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Waydi Tuan

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
149	5745	15.18	0.5	Pass
157	5785	15.2	0.5	Pass
165	5825	15.2	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
149	5745	15.17	15.20	0.5	Pass
157	5785	15.20	15.19	0.5	Pass
165	5825	15.18	15.18	0.5	Pass

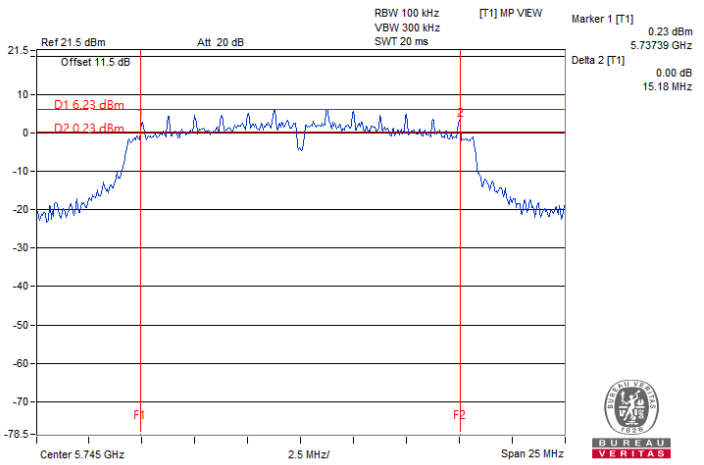
802.11ac (VHT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
151	5755	35.22	35.23	0.5	Pass
159	5795	35.22	35.20	0.5	Pass

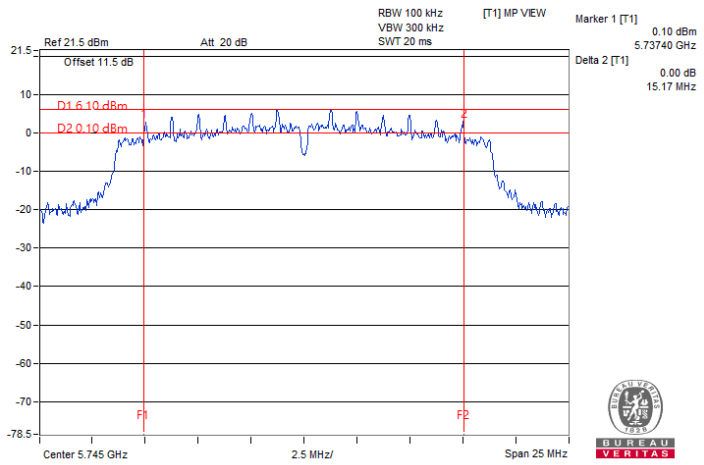
802.11ac (VHT80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1		
155	5775	75.33	75.31	0.5	Pass

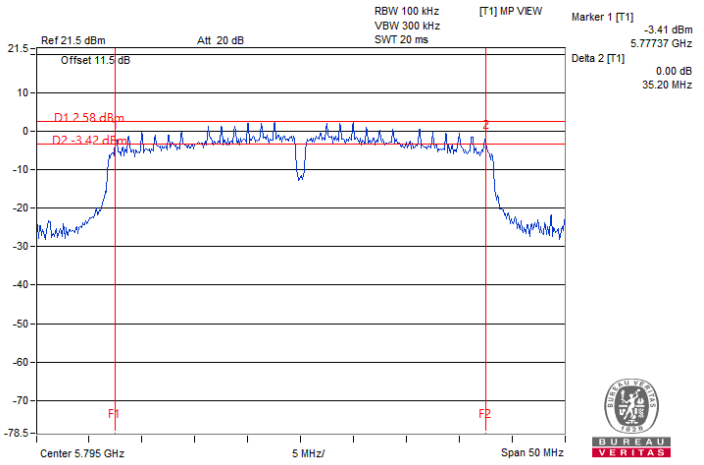
Spectrum Plot of Minimum Value



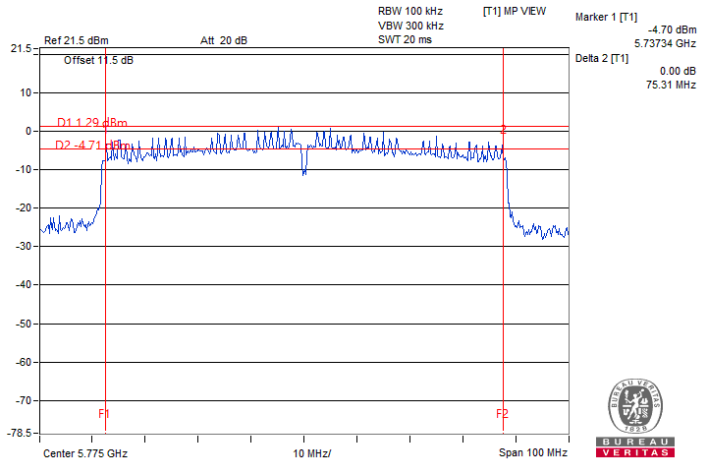
802.11a : CH 149



802.11ac (VHT20) / Chain 0 : CH 149



802.11ac (VHT40) / Chain 1 : CH 159



802.11ac (VHT80) / Chain 1 : CH 155

7.5 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Waydi Tuan

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.68
40	5200	16.68
48	5240	16.92
52	5260	16.92
60	5300	16.92
64	5320	16.68
100	5500	16.8
116	5580	17.16
132	5660	17.28
140	5700	17.16
149	5745	17.76
157	5785	17.4
165	5825	16.92

802.11ac (VHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.64	17.76
40	5200	17.64	17.64
48	5240	17.64	17.64
52	5260	17.64	17.64
60	5300	17.76	17.64
64	5320	17.64	17.64
100	5500	17.64	17.64
116	5580	17.88	17.88
132	5660	17.88	17.88
140	5700	17.88	17.88
149	5745	18.52	18.48
157	5785	18.24	18.24
165	5825	18.00	18.00

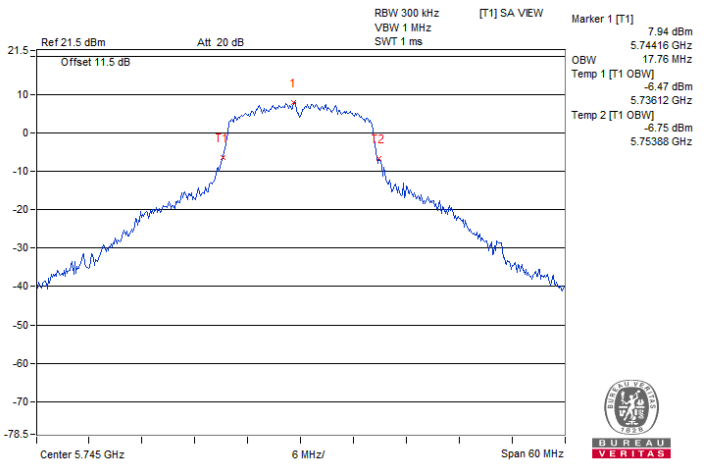
802.11ac (VHT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.12	36.12
46	5230	36.24	36.24
54	5270	36.24	36.24
62	5310	36.12	36.12
102	5510	36.24	36.24
110	5550	36.48	36.24
134	5670	36.72	36.48
151	5755	36.96	36.96
159	5795	36.60	36.60

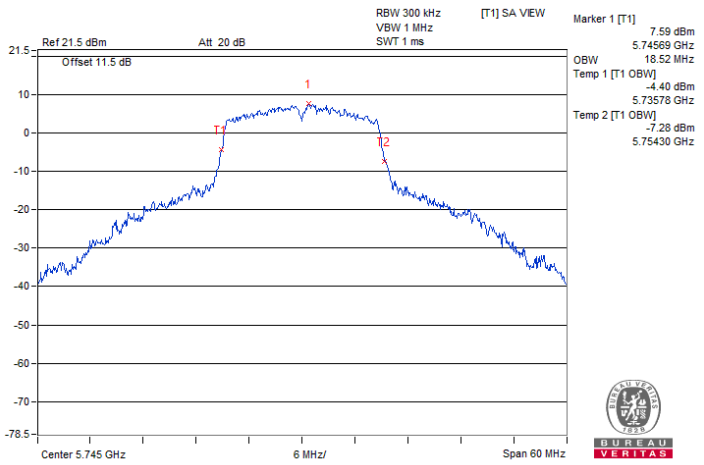
802.11ac (VHT80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.36	76.32
58	5290	75.60	75.60
106	5530	75.36	75.36
122	5610	75.60	75.60
155	5775	76.32	76.32

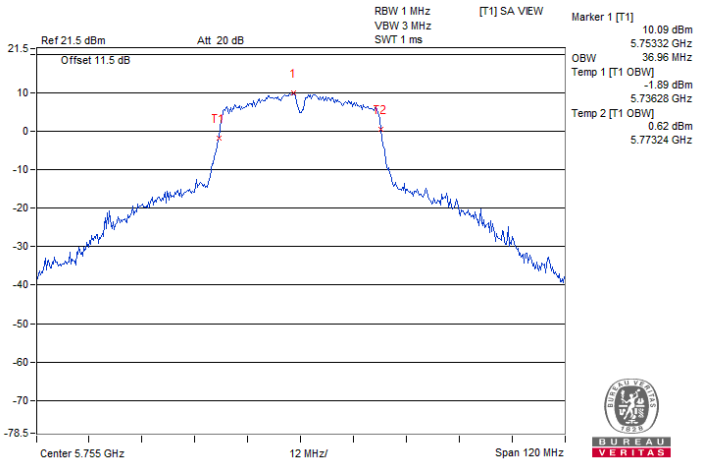
Spectrum Plot of Maximum Value



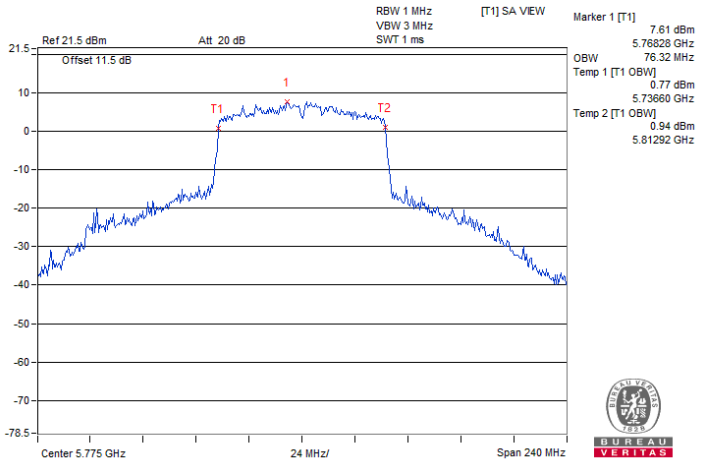
802.11a : CH 149



802.11ac (VHT20) / Chain 0 : CH 149



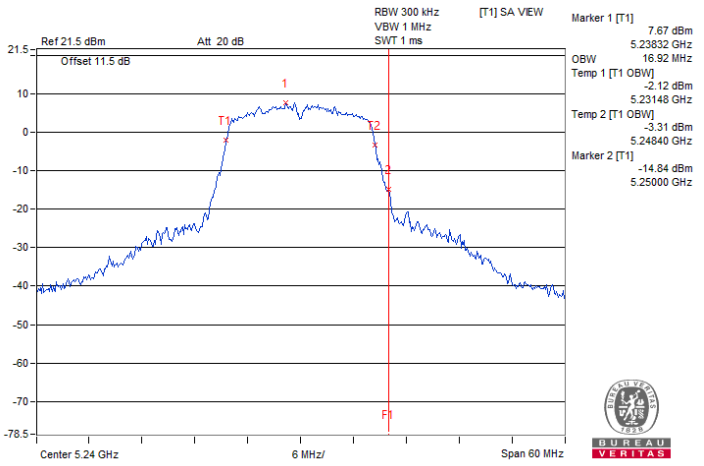
802.11ac (VHT40) / Chain 0 : CH 151



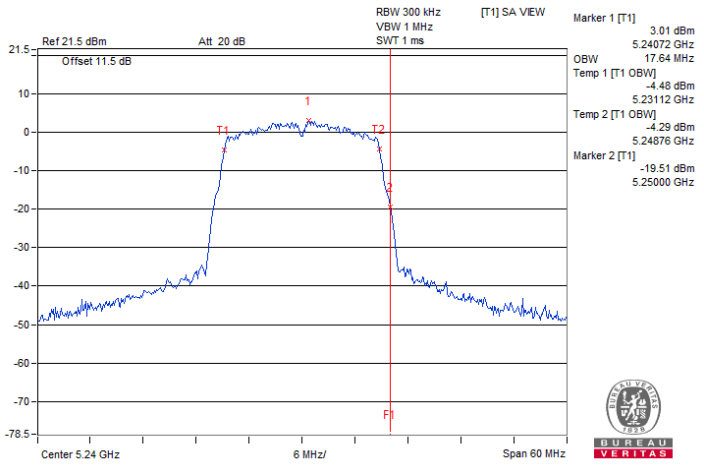
802.11ac (VHT80) / Chain 0 : CH 155

Spectrum Plot for nearby DFS band

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



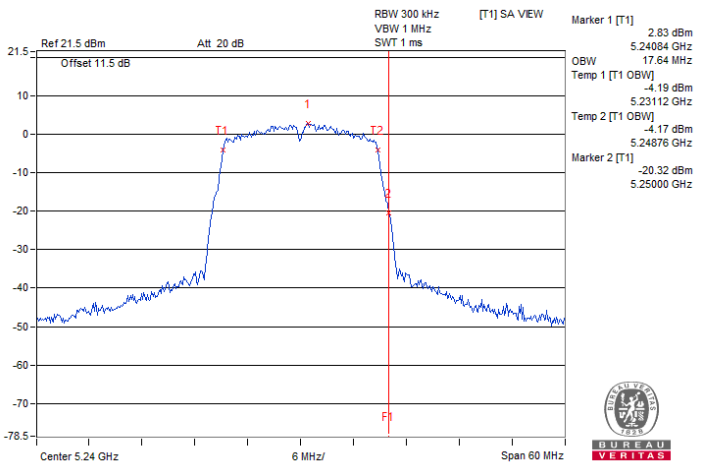
802.11a : CH 48



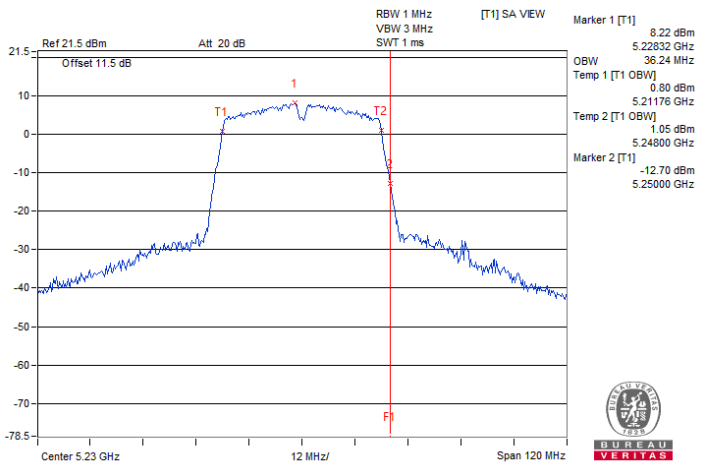
802.11ac (VHT20) / Chain 0 : CH 48

Spectrum Plot for nearby DFS band

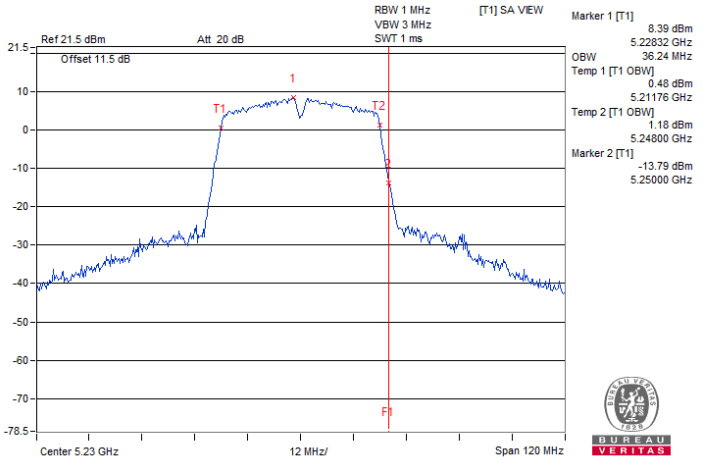
(DFS is required, if 99% OCP straddle into U-NII-2A)



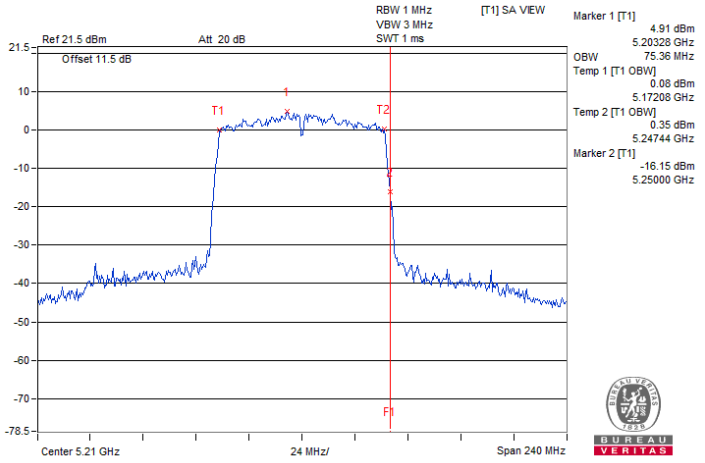
802.11ac (VHT20) / Chain 1 : CH 48



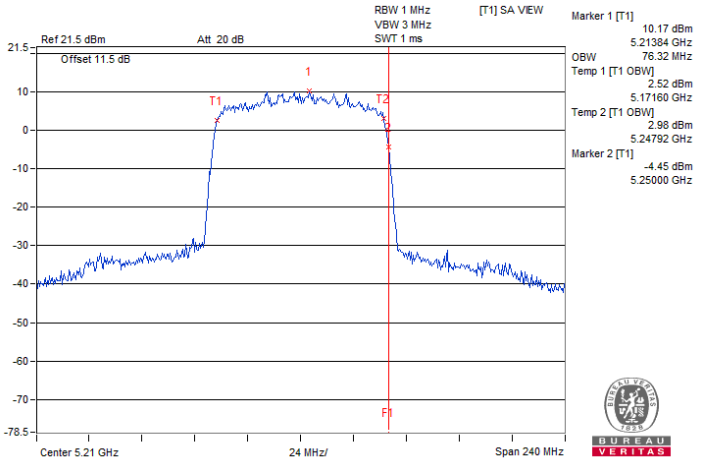
802.11ac (VHT40) / Chain 0 : CH 46



802.11ac (VHT40) / Chain 1 : CH 46



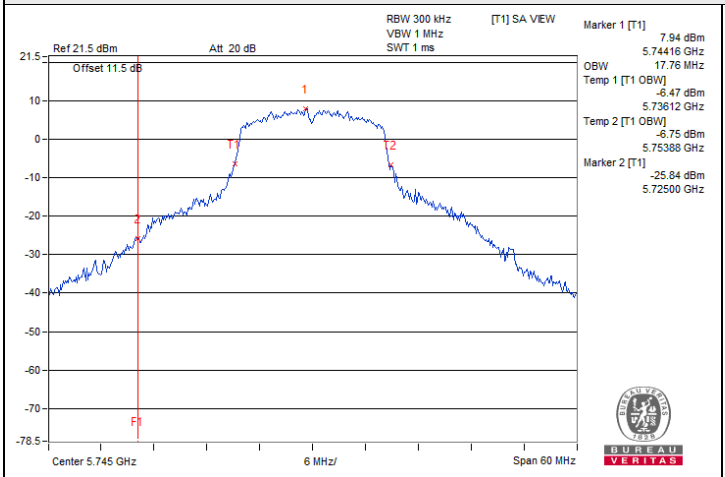
802.11ac (VHT80) / Chain 0 : CH 42



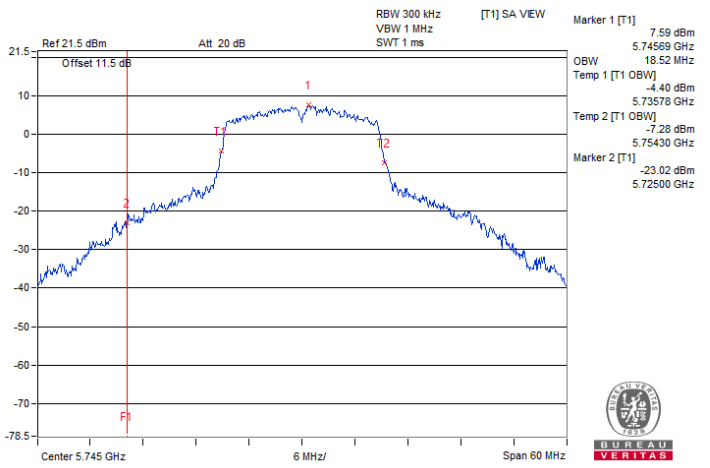
802.11ac (VHT80) / Chain 1 : CH 42

Spectrum Plot for nearby DFS band

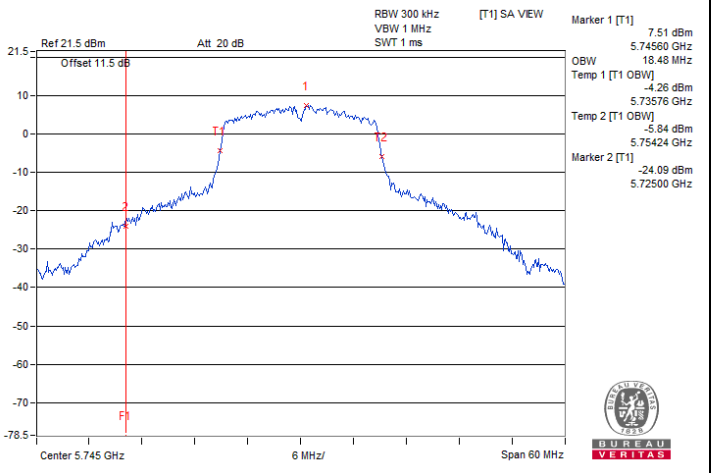
(DFS is required, if 99% OCP straddle into U-NII-2C)



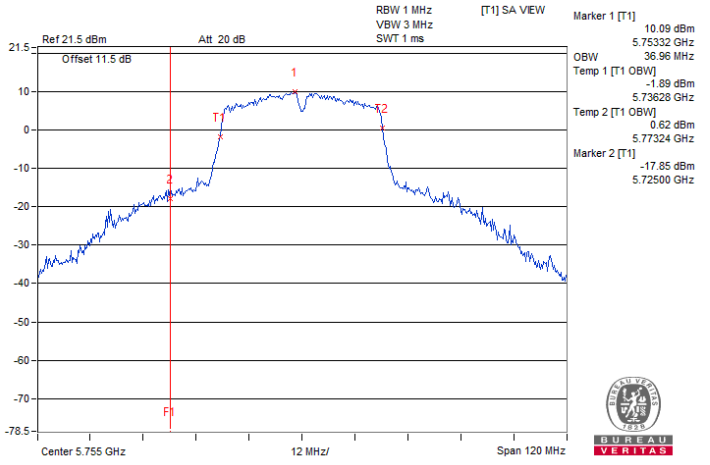
802.11a : CH 149



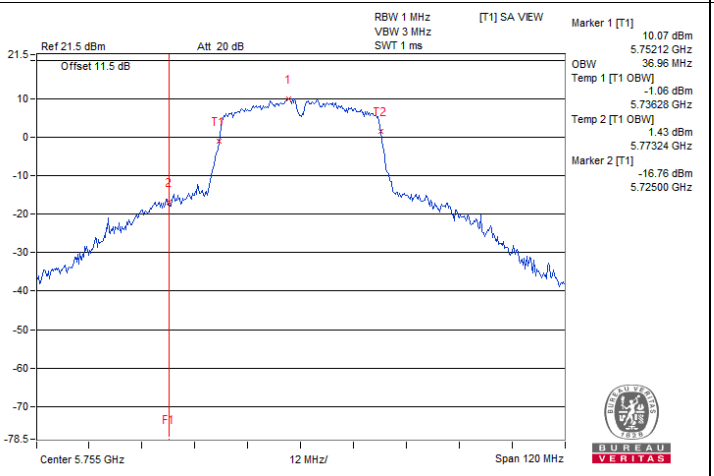
802.11ac (VHT20) / Chain 0 : CH 149



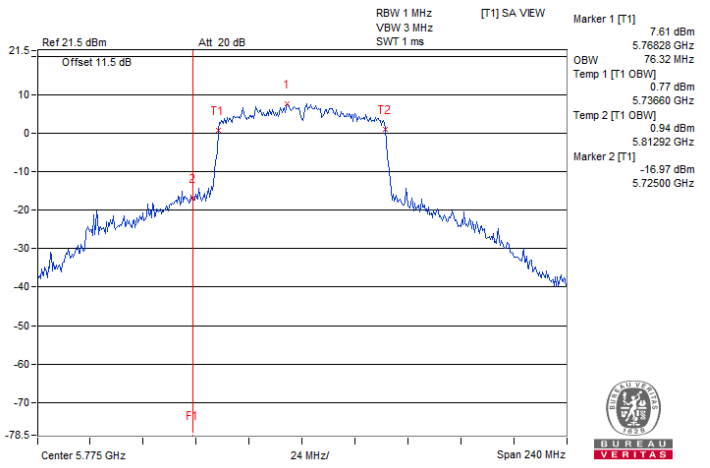
802.11ac (VHT20) / Chain 1 : CH 149



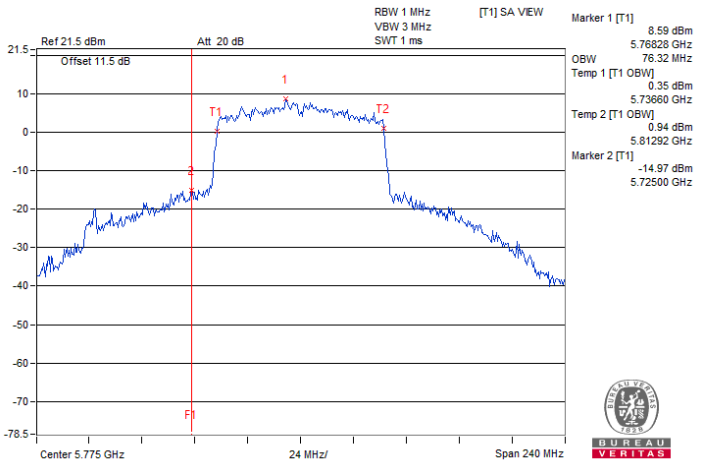
802.11ac (VHT40) / Chain 0 : CH 151



802.11ac (VHT40) / Chain 1 : CH 151



802.11ac (VHT80) / Chain 0 : CH 155

Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2C)	
 802.11ac (VHT80) / Chain 1 : CH 155	

7.6 Frequency Stability

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Waydi Tuan

802.11a

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	20	5179.9986	Pass	5179.9974	Pass	5179.9995	Pass	5179.9985	Pass
50	20	5179.9849	Pass	5179.9859	Pass	5179.9842	Pass	5179.9842	Pass
40	20	5179.9806	Pass	5179.9781	Pass	5179.9804	Pass	5179.9764	Pass
30	20	5179.992	Pass	5179.9886	Pass	5179.9872	Pass	5179.9876	Pass
20	20	5180.0037	Pass	5180.0034	Pass	5180.0028	Pass	5180.0046	Pass
10	20	5180.0014	Pass	5179.9984	Pass	5180.0008	Pass	5180.0014	Pass
0	20	5180.0162	Pass	5180.0165	Pass	5180.018	Pass	5180.0201	Pass
-10	20	5180.0166	Pass	5180.0175	Pass	5180.017	Pass	5180.0199	Pass
-20	20	5179.9736	Pass	5179.9756	Pass	5179.9723	Pass	5179.9718	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	23	5180.0097	Pass	5180.0106	Pass	5180.0106	Pass	5180.0105	Pass
	20	5180.0037	Pass	5180.0034	Pass	5180.0028	Pass	5180.0046	Pass
	17	5180.0065	Pass	5180.0058	Pass	5180.0065	Pass	5180.0095	Pass

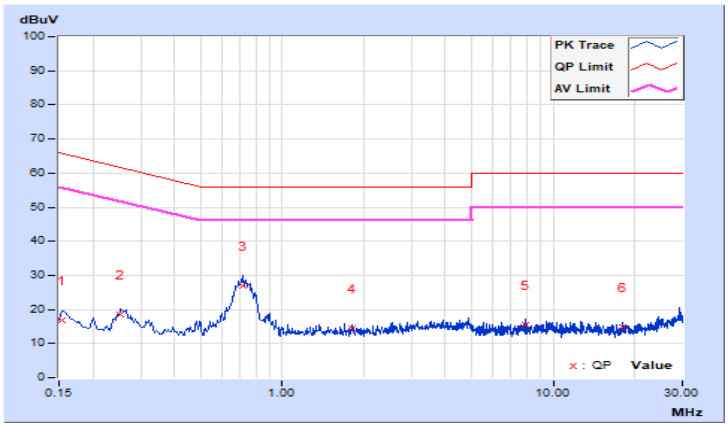
7.7 AC Power Conducted Emissions

RF Mode	802.11ac (VHT20)	**Channel**	CH 165：5825 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**	25°C, 56.3% RH
Tested By	Jed Wu		

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	0.15399	9.92	6.98	2.83	16.90	12.75	65.78	55.78	-48.88	-43.03
2	0.25337	9.92	8.59	2.90	18.51	12.82	61.65	51.65	-43.14	-38.83
3	**0.71945**	**9.93**	**17.01**	**12.26**	**26.94**	**22.19**	**56.00**	**46.00**	**-29.06**	**-23.81**
4	1.80473	9.96	4.65	3.46	14.61	13.42	56.00	46.00	-41.39	-32.58
5	7.91270	10.12	5.43	4.17	15.55	14.29	60.00	50.00	-44.45	-35.71
6	17.97149	10.31	4.56	3.17	14.87	13.48	60.00	50.00	-45.13	-36.52

Remarks:

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

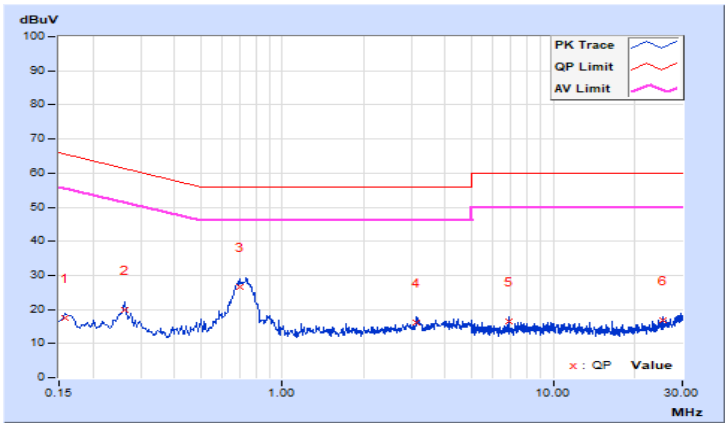


RF Mode	802.11ac (VHT20)	**Channel**	CH 165：5825 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 56.3% RH
Tested By	Jed Wu		

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	0.15768	9.93	7.51	1.19	17.44	11.12	65.59	55.59	-48.15	-44.47
2	0.26172	9.93	10.01	2.60	19.94	12.53	61.38	51.38	-41.44	-38.85
3	0.69551	9.93	16.63	11.91	26.56	21.84	56.00	46.00	-29.44	-24.16
4	3.11744	10.00	6.12	3.88	16.12	13.88	56.00	46.00	-39.88	-32.12
5	6.85934	10.10	6.51	5.23	16.61	15.33	60.00	50.00	-43.39	-34.67
6	25.36097	10.34	6.56	4.96	16.90	15.30	60.00	50.00	-43.10	-34.70

Remarks:

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



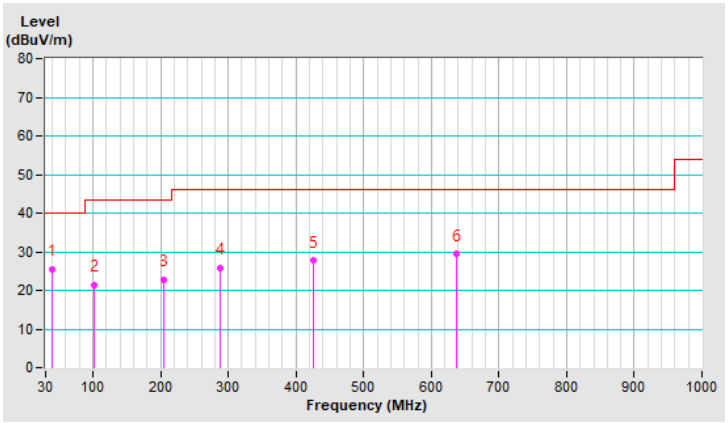
7.8 Unwanted Emissions below 1 GHz

RF Mode	802.11ac (VHT20)	**Channel**	CH 165：5825 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Ian Chang		

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	**39.70**	**25.5 QP**	**40.0**	**-14.5**	**3.16 H**	**219**	**34.8**	**-9.3**
2	101.78	21.4 QP	43.5	-22.1	2.66 H	170	34.0	-12.6
3	203.63	22.8 QP	43.5	-20.7	2.44 H	148	33.3	-10.5
4	288.02	25.7 QP	46.0	-20.3	2.11 H	116	31.9	-6.2
5	424.79	27.7 QP	46.0	-18.3	1.80 H	86	30.5	-2.8
6	637.22	29.4 QP	46.0	-16.6	3.52 H	254	27.3	2.1

Remarks:

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

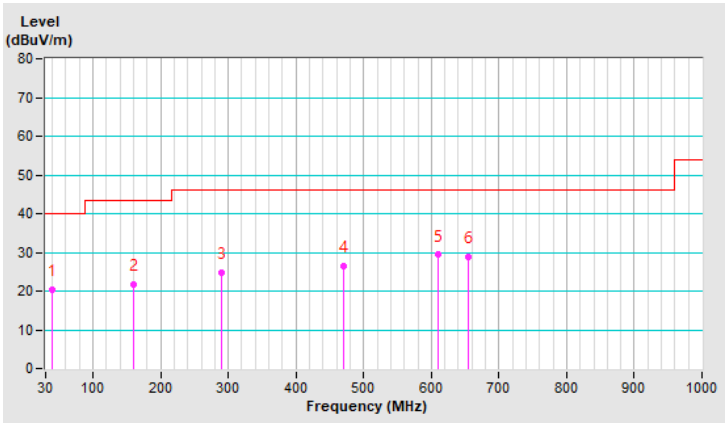


RF Mode	802.11ac (VHT20)	**Channel**	CH 165：5825 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Ian Chang		

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	39.70	20.4 QP	40.0	-19.6	2.02 V	177	29.7	-9.3
2	159.01	21.7 QP	43.5	-21.8	2.48 V	222	29.7	-8.0
3	289.96	24.7 QP	46.0	-21.3	2.76 V	251	30.9	-6.2
4	469.41	26.4 QP	46.0	-19.6	3.11 V	285	28.2	-1.8
5	609.09	29.4 QP	46.0	-16.6	3.65 V	338	28.2	1.2
6	654.68	29.0 QP	46.0	-17.0	1.33 V	109	26.7	2.3

Remarks:

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



7.9 Unwanted Emissions above 1 GHz

RF Mode	802.11a	**Channel**	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	29°C, 62% RH
Tested By	Ian Chang		

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	2.44 H	351	53.7	7.5
2	5150.00	49.3 AV	54.0	-4.7	2.44 H	351	41.8	7.5
3	*5180.00	107.3 PK			2.44 H	351	99.8	7.5
4	*5180.00	99.9 AV			2.44 H	351	92.4	7.5
5	#10360.00	64.0 PK	68.2	-4.2	3.45 H	13	48.6	15.4
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	1.49 V	241	52.7	7.5
2	5150.00	48.6 AV	54.0	-5.4	1.49 V	241	41.1	7.5
3	*5180.00	103.9 PK			1.49 V	241	96.4	7.5
4	*5180.00	96.5 AV			1.49 V	241	89.0	7.5
5	#10360.00	63.4 PK	68.2	-4.8	1.42 V	358	48.0	15.4

Remarks:

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

RF Mode	802.11a	Channel	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

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	106.5 PK			2.43 H	353	99.0	7.5
2	*5200.00	99.2 AV			2.43 H	353	91.7	7.5
3	#10400.00	64.0 PK	68.2	-4.2	3.36 H	26	48.5	15.5
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	103.4 PK			1.52 V	238	95.9	7.5
2	*5200.00	96.4 AV			1.52 V	238	88.9	7.5
3	#10400.00	63.4 PK	68.2	-4.8	1.51 V	336	47.9	15.5

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 (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

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	106.9 PK			2.41 H	348	99.0	7.9
2	*5240.00	99.4 AV			2.41 H	348	91.5	7.9
3	5350.00	58.8 PK	74.0	-15.2	2.41 H	348	50.2	8.6
4	5350.00	48.1 AV	54.0	-5.9	2.41 H	348	39.5	8.6
5	#10480.00	64.3 PK	68.2	-3.9	3.55 H	18	48.4	15.9
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	*5240.00	103.8 PK			1.52 V	244	95.9	7.9
2	*5240.00	96.3 AV			1.52 V	244	88.4	7.9
3	5350.00	57.9 PK	74.0	-16.1	1.52 V	244	49.3	8.6
4	5350.00	47.8 AV	54.0	-6.2	1.52 V	244	39.2	8.6
5	#10480.00	63.5 PK	68.2	-4.7	1.44 V	341	47.6	15.9

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 52：5260 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.6 PK	74.0	-15.4	2.63 H	350	51.1	7.5
2	5150.00	48.1 AV	54.0	-5.9	2.63 H	350	40.6	7.5
3	*5260.00	107.4 PK			2.63 H	350	99.3	8.1
4	*5260.00	99.9 AV			2.63 H	350	91.8	8.1
5	#10520.00	63.9 PK	68.2	-4.3	2.21 H	35	47.9	16.0
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	5150.00	57.7 PK	74.0	-16.3	1.43 V	242	50.2	7.5
2	5150.00	46.9 AV	54.0	-7.1	1.43 V	242	39.4	7.5
3	*5260.00	104.6 PK			1.43 V	242	96.5	8.1
4	*5260.00	96.7 AV			1.43 V	242	88.6	8.1
5	#10520.00	62.5 PK	68.2	-5.7	1.39 V	348	46.5	16.0

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 60：5300 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

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	107.5 PK			2.98 H	340	99.1	8.4
2	*5300.00	100.2 AV			2.98 H	340	91.8	8.4
3	10600.00	64.1 PK	74.0	-9.9	2.19 H	37	48.0	16.1
4	**10600.00**	**53.0 AV**	**54.0**	**-1.0**	**2.19 H**	**37**	**36.9**	**16.1**
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	*5300.00	104.9 PK			1.49 V	246	96.5	8.4
2	*5300.00	97.2 AV			1.49 V	246	88.8	8.4
3	10600.00	63.5 PK	74.0	-10.5	1.41 V	351	47.4	16.1
4	10600.00	51.9 AV	54.0	-2.1	1.41 V	351	35.8	16.1

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 64：5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	107.9 PK			2.96 H	340	99.4	8.5
2	*5320.00	100.0 AV			2.96 H	340	91.5	8.5
3	5350.00	59.6 PK	74.0	-14.4	2.96 H	340	51.0	8.6
4	5350.00	49.4 AV	54.0	-4.6	2.96 H	340	40.8	8.6
5	10640.00	64.1 PK	74.0	-9.9	2.23 H	36	48.1	16.0
6	10640.00	52.6 AV	54.0	-1.4	2.23 H	36	36.6	16.0
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	*5320.00	104.8 PK			1.52 V	240	96.3	8.5
2	*5320.00	97.0 AV			1.52 V	240	88.5	8.5
3	5350.00	58.9 PK	74.0	-15.1	1.52 V	240	50.3	8.6
4	5350.00	48.3 AV	54.0	-5.7	1.52 V	240	39.7	8.6
5	10640.00	63.2 PK	74.0	-10.8	1.39 V	355	47.2	16.0
6	10640.00	51.2 AV	54.0	-2.8	1.39 V	355	35.2	16.0

Remarks:

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

RF Mode	802.11a	Channel	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.3 PK	74.0	-14.7	2.49 H	332	50.5	8.8
2	5460.00	49.9 AV	54.0	-4.1	2.49 H	332	41.1	8.8
3	#5470.00	63.0 PK	68.2	-5.2	2.46 H	332	54.2	8.8
4	*5500.00	107.4 PK			3.49 H	332	98.5	8.9
5	*5500.00	100.1 AV			3.49 H	332	91.2	8.9
6	11000.00	63.3 PK	74.0	-10.7	2.52 H	36	46.4	16.9
7	11000.00	52.4 AV	54.0	-1.6	2.52 H	36	35.5	16.9
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	58.1 PK	74.0	-15.9	1.51 V	245	49.3	8.8
2	5460.00	49.2 AV	54.0	-4.8	1.51 V	245	40.4	8.8
3	#5470.00	61.4 PK	68.2	-6.8	1.51 V	245	52.6	8.8
4	*5500.00	104.1 PK			1.51 V	245	95.2	8.9
5	*5500.00	97.5 AV			1.51 V	245	88.6	8.9
6	11000.00	62.5 PK	74.0	-11.5	1.43 V	353	45.6	16.9
7	11000.00	51.2 AV	54.0	-2.8	1.43 V	353	34.3	16.9

Remarks:

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

RF Mode	802.11a	Channel	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	104.6 PK			2.51 H	354	96.0	8.6
2	*5580.00	97.4 AV			2.51 H	354	88.8	8.6
3	11160.00	59.4 PK	74.0	-14.6	2.59 H	103	42.4	17.0
4	11160.00	48.4 AV	54.0	-5.6	2.59 H	103	31.4	17.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	102.1 PK			1.47 V	240	93.5	8.6
2	*5580.00	93.9 AV			1.47 V	240	85.3	8.6
3	11160.00	58.3 PK	74.0	-15.7	1.42 V	356	41.3	17.0
4	11160.00	47.1 AV	54.0	-6.9	1.42 V	356	30.1	17.0

Remarks:

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

RF Mode	802.11a	Channel	CH 132：5660 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

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	*5660.00	106.4 PK			2.60 H	266	98.2	8.2
2	*5660.00	99.3 AV			2.60 H	266	91.1	8.2
3	11320.00	59.6 PK	74.0	-14.4	2.59 H	110	42.1	17.5
4	11320.00	48.3 AV	54.0	-5.7	2.59 H	110	30.8	17.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5660.00	103.5 PK			1.39 V	244	95.3	8.2
2	*5660.00	96.5 AV			1.39 V	244	88.3	8.2
3	11320.00	58.6 PK	74.0	-15.4	1.52 V	358	41.1	17.5
4	11320.00	46.9 AV	54.0	-7.1	1.52 V	358	29.4	17.5

Remarks:

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

RF Mode	802.11a	Channel	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

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	109.2 PK			3.48 H	112	101.1	8.1
2	*5700.00	102.1 AV			3.48 H	112	94.0	8.1
3	#5725.00	66.7 PK	68.2	-1.5	3.48 H	112	58.6	8.1
4	11400.00	58.6 PK	74.0	-15.4	2.43 H	96	41.0	17.6
5	11400.00	47.5 AV	54.0	-6.5	2.43 H	96	29.9	17.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	106.4 PK			1.39 V	246	98.3	8.1
2	*5700.00	99.5 AV			1.39 V	246	91.4	8.1
3	#5725.00	63.4 PK	68.2	-4.8	1.39 V	246	55.3	8.1
4	11400.00	57.9 PK	74.0	-16.1	1.42 V	352	40.3	17.6
5	11400.00	46.2 AV	54.0	-7.8	1.42 V	352	28.6	17.6

Remarks:

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

RF Mode	802.11a	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 70% RH
Tested By	Ian Chang		

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	*5745.00	108.3 PK			1.29 H	359	100.3	8.0
2	*5745.00	100.4 AV			1.29 H	359	92.4	8.0
3	11490.00	57.3 PK	74.0	-16.7	1.85 H	241	40.3	17.0
4	11490.00	46.7 AV	54.0	-7.3	1.85 H	241	29.7	17.0
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	*5745.00	105.5 PK			1.48 V	247	97.5	8.0
2	*5745.00	97.2 AV			1.48 V	247	89.2	8.0
3	11490.00	56.3 PK	74.0	-17.7	2.13 V	226	39.3	17.0
4	11490.00	45.5 AV	54.0	-8.5	2.13 V	226	28.5	17.0

Remarks:

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

RF Mode	802.11a	Channel	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 70% RH
Tested By	Ian Chang		

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	*5785.00	107.4 PK			1.56 H	354	99.4	8.0
2	*5785.00	99.9 AV			1.56 H	354	91.9	8.0
3	11570.00	57.8 PK	74.0	-16.2	1.64 H	26	40.3	17.5
4	11570.00	47.1 AV	54.0	-6.9	1.64 H	26	29.6	17.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5785.00	104.2 PK			1.43 V	249	96.2	8.0
2	*5785.00	97.2 AV			1.43 V	249	89.2	8.0
3	11570.00	56.8 PK	74.0	-17.2	1.34 V	198	39.3	17.5
4	11570.00	45.9 AV	54.0	-8.1	1.34 V	198	28.4	17.5

Remarks:

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

RF Mode	802.11a	Channel	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 70% RH
Tested By	Ian Chang		

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	*5825.00	107.6 PK			1.42 H	354	99.6	8.0
2	*5825.00	100.2 AV			1.42 H	354	92.2	8.0
3	11650.00	58.2 PK	74.0	-15.8	1.84 H	124	40.2	18.0
4	11650.00	47.4 AV	54.0	-6.6	1.84 H	124	29.4	18.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5825.00	104.2 PK			1.42 V	241	96.2	8.0
2	*5825.00	97.6 AV			1.42 V	241	89.6	8.0
3	11650.00	57.3 PK	74.0	-16.7	1.88 V	132	39.3	18.0
4	11650.00	46.2 AV	54.0	-7.8	1.88 V	132	28.2	18.0

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.9 PK	74.0	-15.1	2.43 H	351	51.4	7.5
2	5150.00	49.0 AV	54.0	-5.0	2.43 H	351	41.5	7.5
3	*5180.00	109.8 PK			2.43 H	351	102.3	7.5
4	*5180.00	102.5 AV			2.43 H	351	95.0	7.5
5	#10360.00	63.3 PK	68.2	-4.9	3.55 H	26	47.9	15.4
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	57.8 PK	74.0	-16.2	1.48 V	244	50.3	7.5
2	5150.00	47.8 AV	54.0	-6.2	1.48 V	244	40.3	7.5
3	*5180.00	107.4 PK			1.48 V	244	99.9	7.5
4	*5180.00	100.1 AV			1.48 V	244	92.6	7.5
5	#10360.00	62.1 PK	68.2	-6.1	1.53 V	355	46.7	15.4

Remarks:

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

RF Mode	802.11ac (VHT20)	**Channel**	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5200.00	108.7 PK			2.41 H	351	101.2	7.5
2	*5200.00	101.8 AV			2.41 H	351	94.3	7.5
3	#10400.00	63.5 PK	68.2	-4.7	3.44 H	12	48.0	15.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5200.00	106.3 PK			1.48 V	245	98.8	7.5
2	*5200.00	99.0 AV			1.48 V	245	91.5	7.5
3	#10400.00	63.1 PK	68.2	-5.1	1.39 V	352	47.6	15.5

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 (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	109.7 PK			2.39 H	354	101.8	7.9
2	*5240.00	102.7 AV			2.39 H	354	94.8	7.9
3	5350.00	58.9 PK	74.0	-15.1	2.39 H	354	50.3	8.6
4	5350.00	48.9 AV	54.0	-5.1	2.39 H	354	40.3	8.6
5	#10480.00	64.1 PK	68.2	-4.1	3.55 H	15	48.2	15.9
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	*5240.00	106.6 PK			1.47 V	250	98.7	7.9
2	*5240.00	99.2 AV			1.47 V	250	91.3	7.9
3	5350.00	58.4 PK	74.0	-15.6	1.47 V	250	49.8	8.6
4	5350.00	48.0 AV	54.0	-6.0	1.47 V	250	39.4	8.6
5	#10480.00	63.5 PK	68.2	-4.7	1.44 V	352	47.6	15.9

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 52：5260 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.7 PK	74.0	-15.3	2.38 H	353	51.2	7.5
2	5150.00	48.3 AV	54.0	-5.7	2.38 H	353	40.8	7.5
3	*5260.00	110.6 PK			2.38 H	353	102.5	8.1
4	*5260.00	103.6 AV			2.38 H	353	95.5	8.1
5	#10520.00	64.6 PK	68.2	-3.6	2.26 H	41	48.6	16.0
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	5150.00	57.7 PK	74.0	-16.3	1.43 V	247	50.2	7.5
2	5150.00	46.8 AV	54.0	-7.2	1.43 V	247	39.3	7.5
3	*5260.00	108.0 PK			1.43 V	247	99.9	8.1
4	*5260.00	100.4 AV			1.43 V	247	92.3	8.1
5	#10520.00	63.2 PK	68.2	-5.0	1.84 V	115	47.2	16.0

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 60：5300 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	29°C, 62% RH
Tested By	Ian Chang		

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	110.3 PK			2.36 H	353	101.9	8.4
2	*5300.00	103.5 AV			2.36 H	353	95.1	8.4
3	10600.00	64.8 PK	74.0	-9.2	2.57 H	32	48.7	16.1
4	**10600.00**	**53.0 AV**	**54.0**	**-1.0**	**2.57 H**	**32**	**36.9**	**16.1**
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	*5300.00	107.0 PK			1.49 V	245	98.6	8.4
2	*5300.00	100.6 AV			1.49 V	245	92.2	8.4
3	10600.00	63.3 PK	74.0	-10.7	1.45 V	355	47.2	16.1
4	10600.00	52.0 AV	54.0	-2.0	1.45 V	355	35.9	16.1

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 64：5320 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

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	110.0 PK			2.56 H	349	101.5	8.5
2	*5320.00	102.9 AV			2.56 H	349	94.4	8.5
3	5350.00	59.7 PK	74.0	-14.3	2.56 H	349	51.1	8.6
4	5350.00	49.3 AV	54.0	-4.7	2.56 H	349	40.7	8.6
5	10640.00	64.3 PK	74.0	-9.7	2.24 H	30	48.3	16.0
6	10640.00	52.9 AV	54.0	-1.1	2.24 H	30	36.9	16.0
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	*5320.00	107.0 PK			1.52 V	246	98.5	8.5
2	*5320.00	99.7 AV			1.52 V	246	91.2	8.5
3	5350.00	58.9 PK	74.0	-15.1	1.52 V	246	50.3	8.6
4	5350.00	48.3 AV	54.0	-5.7	1.52 V	246	39.7	8.6
5	10640.00	63.2 PK	74.0	-10.8	1.36 V	355	47.2	16.0
6	10640.00	51.8 AV	54.0	-2.2	1.36 V	355	35.8	16.0

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 100：5500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.2 PK	74.0	-12.8	1.26 H	336	52.4	8.8
2	5460.00	50.0 AV	54.0	-4.0	1.26 H	336	41.2	8.8
3	#5470.00	61.9 PK	68.2	-6.3	1.26 H	336	53.1	8.8
4	*5500.00	111.2 PK			1.26 H	336	102.3	8.9
5	*5500.00	103.7 AV			1.26 H	336	94.8	8.9
6	11000.00	64.6 PK	74.0	-9.4	2.57 H	36	47.7	16.9
7	11000.00	52.8 AV	54.0	-1.2	2.57 H	36	35.9	16.9
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	59.8 PK	74.0	-14.2	1.53 V	249	51.0	8.8
2	5460.00	49.1 AV	54.0	-4.9	1.53 V	249	40.3	8.8
3	#5470.00	60.8 PK	68.2	-7.4	1.53 V	249	52.0	8.8
4	*5500.00	108.5 PK			1.53 V	249	99.6	8.9
5	*5500.00	100.4 AV			1.53 V	249	91.5	8.9
6	11000.00	63.1 PK	74.0	-10.9	1.34 V	353	46.2	16.9
7	11000.00	51.1 AV	54.0	-2.9	1.34 V	353	34.2	16.9

Remarks:

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

RF Mode	802.11ac (VHT20)	**Channel**	CH 116：5580 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	29°C, 62% RH
Tested By	Ian Chang		

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	110.8 PK			1.26 H	337	102.2	8.6
2	*5580.00	103.4 AV			1.26 H	337	94.8	8.6
3	11160.00	60.7 PK	74.0	-13.3	1.11 H	24	43.7	17.0
4	11160.00	48.9 AV	54.0	-5.1	1.11 H	24	31.9	17.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5580.00	107.9 PK			1.49 V	240	99.3	8.6
2	*5580.00	99.9 AV			1.49 V	240	91.3	8.6
3	11160.00	59.2 PK	74.0	-14.8	1.33 V	357	42.2	17.0
4	11160.00	47.3 AV	54.0	-6.7	1.33 V	357	30.3	17.0

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 132：5660 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

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	*5660.00	110.3 PK			1.02 H	334	102.1	8.2
2	*5660.00	103.1 AV			1.02 H	334	94.9	8.2
3	11320.00	59.1 PK	74.0	-14.9	1.22 H	45	41.6	17.5
4	11320.00	47.9 AV	54.0	-6.1	1.22 H	45	30.4	17.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5660.00	107.7 PK			1.42 V	245	99.5	8.2
2	*5660.00	99.7 AV			1.42 V	245	91.5	8.2
3	11320.00	57.8 PK	74.0	-16.2	1.48 V	355	40.3	17.5
4	11320.00	46.9 AV	54.0	-7.1	1.48 V	355	29.4	17.5

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 140：5700 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

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	110.5 PK			1.36 H	359	102.4	8.1
2	*5700.00	103.2 AV			1.36 H	359	95.1	8.1
3	#5725.00	65.2 PK	68.2	-3.0	1.36 H	359	57.1	8.1
4	11400.00	58.7 PK	74.0	-15.3	1.23 H	47	41.1	17.6
5	11400.00	47.7 AV	54.0	-6.3	1.23 H	47	30.1	17.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	107.6 PK			1.47 V	242	99.5	8.1
2	*5700.00	100.5 AV			1.47 V	242	92.4	8.1
3	#5725.00	62.4 PK	68.2	-5.8	1.47 V	242	54.3	8.1
4	11400.00	57.9 PK	74.0	-16.1	1.36 V	353	40.3	17.6
5	11400.00	47.2 AV	54.0	-6.8	1.36 V	353	29.6	17.6

Remarks:

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

RF Mode	802.11ac (VHT20)	**Channel**	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Ian Chang		

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	*5745.00	113.9 PK			1.37 H	0	105.9	8.0
2	*5745.00	106.5 AV			1.37 H	0	98.5	8.0
3	11490.00	62.5 PK	74.0	-11.5	2.06 H	352	45.5	17.0
4	11490.00	52.2 AV	54.0	-1.8	2.06 H	352	35.2	17.0
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	*5745.00	110.4 PK			1.39 V	245	102.4	8.0
2	*5745.00	103.7 AV			1.39 V	245	95.7	8.0
3	11490.00	61.1 PK	74.0	-12.9	2.35 V	145	44.1	17.0
4	11490.00	51.2 AV	54.0	-2.8	2.35 V	145	34.2	17.0

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 70% RH
Tested By	Ian Chang		

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	*5785.00	113.4 PK			1.58 H	354	105.4	8.0
2	*5785.00	106.1 AV			1.58 H	354	98.1	8.0
3	11570.00	63.4 PK	74.0	-10.6	1.45 H	350	45.9	17.5
4	11570.00	52.0 AV	54.0	-2.0	1.45 H	350	34.5	17.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5785.00	110.4 PK			1.41 V	241	102.4	8.0
2	*5785.00	103.6 AV			1.41 V	241	95.6	8.0
3	11570.00	61.8 PK	74.0	-12.2	1.48 V	352	44.3	17.5
4	11570.00	50.9 AV	54.0	-3.1	1.48 V	352	33.4	17.5

Remarks:

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

RF Mode	802.11ac (VHT20)	**Channel**	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Ian Chang		

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	*5825.00	113.6 PK			1.63 H	355	105.6	8.0
2	*5825.00	105.9 AV			1.63 H	355	97.9	8.0
3	11650.00	63.7 PK	74.0	-10.3	1.34 H	350	45.7	18.0
4	11650.00	51.6 AV	54.0	-2.4	1.34 H	350	33.6	18.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*5825.00	110.2 PK			1.39 V	242	102.2	8.0
2	*5825.00	102.7 AV			1.39 V	242	94.7	8.0
3	11650.00	62.2 PK	74.0	-11.8	1.45 V	354	44.2	18.0
4	11650.00	50.2 AV	54.0	-3.8	1.45 V	354	32.2	18.0

Remarks:

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

RF Mode	802.11ac (VHT40)	Channel	CH 38：5190 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

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	60.5 PK	74.0	-13.5	2.53 H	355	53.0	7.5
2	5150.00	51.2 AV	54.0	-2.8	2.53 H	355	43.7	7.5
3	*5190.00	106.7 PK			2.53 H	355	99.2	7.5
4	*5190.00	99.1 AV			2.53 H	355	91.6	7.5
5	#10380.00	64.2 PK	68.2	-4.0	3.39 H	12	48.6	15.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.8 PK	74.0	-15.2	1.48 V	242	51.3	7.5
2	5150.00	48.8 AV	54.0	-5.2	1.48 V	242	41.3	7.5
3	*5190.00	103.8 PK			1.48 V	242	96.3	7.5
4	*5190.00	96.4 AV			1.48 V	242	88.9	7.5
5	#10380.00	63.4 PK	68.2	-4.8	1.43 V	352	47.8	15.6

Remarks:

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

RF Mode	802.11ac (VHT40)	Channel	CH 46：5230 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	106.6 PK			2.28 H	353	98.8	7.8
2	*5230.00	99.7 AV			2.28 H	353	91.9	7.8
3	5350.00	59.3 PK	74.0	-14.7	2.28 H	353	50.7	8.6
4	5350.00	49.0 AV	54.0	-5.0	2.28 H	353	40.4	8.6
5	#10460.00	64.6 PK	68.2	-3.6	1.78 H	146	48.7	15.9
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	*5230.00	103.3 PK			1.48 V	245	95.5	7.8
2	*5230.00	96.8 AV			1.48 V	245	89.0	7.8
3	5350.00	58.2 PK	74.0	-15.8	1.48 V	245	49.6	8.6
4	5350.00	48.3 AV	54.0	-5.7	1.48 V	245	39.7	8.6
5	#10460.00	63.4 PK	68.2	-4.8	1.42 V	356	47.5	15.9

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 54：5270 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.5 PK	74.0	-15.5	2.60 H	355	51.0	7.5
2	5150.00	48.7 AV	54.0	-5.3	2.60 H	355	41.2	7.5
3	*5270.00	107.5 PK			2.60 H	355	99.4	8.1
4	*5270.00	100.5 AV			2.60 H	355	92.4	8.1
5	#10540.00	62.4 PK	68.2	-5.8	2.60 H	31	46.5	15.9
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	5150.00	57.8 PK	74.0	-16.2	1.48 V	244	50.3	7.5
2	5150.00	47.7 AV	54.0	-6.3	1.48 V	244	40.2	7.5
3	*5270.00	104.6 PK			1.48 V	244	96.5	8.1
4	*5270.00	97.8 AV			1.48 V	244	89.7	8.1
5	#10540.00	61.4 PK	68.2	-6.8	1.41 V	352	45.5	15.9

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 62：5310 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	108.4 PK			2.69 H	354	100.0	8.4
2	*5310.00	101.0 AV			2.69 H	354	92.6	8.4
3	5350.00	63.8 PK	74.0	-10.2	2.69 H	354	55.2	8.6
4	5350.00	51.8 AV	54.0	-2.2	2.69 H	354	43.2	8.6
5	10620.00	62.1 PK	74.0	-11.9	2.29 H	30	46.1	16.0
6	10620.00	52.0 AV	54.0	-2.0	2.29 H	30	36.0	16.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	105.9 PK			1.53 V	247	97.5	8.4
2	*5310.00	98.0 AV			1.53 V	247	89.6	8.4
3	5350.00	61.0 PK	74.0	-13.0	1.53 V	247	52.4	8.6
4	5350.00	48.9 AV	54.0	-5.1	1.53 V	247	40.3	8.6
5	10620.00	61.2 PK	74.0	-12.8	1.40 V	353	45.2	16.0
6	10620.00	51.3 AV	54.0	-2.7	1.40 V	353	35.3	16.0

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 102：5510 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.2 PK	74.0	-12.8	1.40 H	358	52.4	8.8
2	5460.00	50.9 AV	54.0	-3.1	1.40 H	358	42.1	8.8
3	#5470.00	64.8 PK	68.2	-3.4	1.40 H	358	56.0	8.8
4	*5510.00	108.5 PK			1.40 H	358	99.7	8.8
5	*5510.00	101.4 AV			1.40 H	358	92.6	8.8
6	11020.00	61.2 PK	74.0	-12.8	1.14 H	322	44.4	16.8
7	11020.00	50.8 AV	54.0	-3.2	1.14 H	322	34.0	16.8
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	60.0 PK	74.0	-14.0	1.39 V	245	51.2	8.8
2	5460.00	63.7 PK	74.0	-10.3	1.39 V	245	54.9	8.8
3	5460.00	50.1 AV	54.0	-3.9	1.39 V	245	41.3	8.8
4	*5510.00	105.1 PK			1.39 V	245	96.3	8.8
5	*5510.00	98.8 AV			1.39 V	245	90.0	8.8
6	11020.00	60.0 PK	74.0	-14.0	1.48 V	352	43.2	16.8
7	11020.00	49.7 AV	54.0	-4.3	1.48 V	352	32.9	16.8

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 (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Ian Chang		

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	108.3 PK			1.13 H	355	99.5	8.8
2	*5550.00	100.9 AV			1.13 H	355	92.1	8.8
3	11100.00	59.3 PK	74.0	-14.7	1.23 H	324	42.8	16.5
4	11100.00	48.6 AV	54.0	-5.4	1.23 H	324	32.1	16.5
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	*5550.00	105.1 PK			1.42 V	246	96.3	8.8
2	*5550.00	98.1 AV			1.42 V	246	89.3	8.8
3	11100.00	57.8 PK	74.0	-16.2	1.49 V	353	41.3	16.5
4	11100.00	47.6 AV	54.0	-6.4	1.49 V	353	31.1	16.5

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.

RF Mode	802.11ac (VHT40)	Channel	CH 134：5670 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	108.0 PK			1.05 H	354	99.9	8.1
2	*5670.00	100.3 AV			1.05 H	354	92.2	8.1
3	#5725.00	60.7 PK	68.2	-7.5	1.05 H	354	52.6	8.1
4	11340.00	57.0 PK	74.0	-17.0	1.62 H	350	39.6	17.4
5	11340.00	46.7 AV	54.0	-7.3	1.62 H	350	29.3	17.4
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	*5670.00	104.7 PK			1.44 V	248	96.6	8.1
2	*5670.00	97.7 AV			1.44 V	248	89.6	8.1
3	#5725.00	58.4 PK	68.2	-9.8	1.44 V	248	50.3	8.1
4	11340.00	56.0 PK	74.0	-18.0	1.00 V	351	38.6	17.4
5	11340.00	45.7 AV	54.0	-8.3	1.00 V	351	28.3	17.4

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 151：5755 MHz
Frequency Range	1 GHz ~ 40 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 70% RH
Tested By	Ian Chang		

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	*5755.00	110.4 PK			1.30 H	359	102.3	8.1
2	*5755.00	102.9 AV			1.30 H	359	94.8	8.1
3	11510.00	61.0 PK	74.0	-13.0	1.49 H	350	44.0	17.0
4	11510.00	49.2 AV	54.0	-4.8	1.49 H	350	32.2	17.0
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	*5755.00	107.4 PK			1.42 V	244	99.3	8.1
2	*5755.00	99.4 AV			1.42 V	244	91.3	8.1
3	11510.00	60.1 PK	74.0	-13.9	1.41 V	355	43.1	17.0
4	11510.00	48.3 AV	54.0	-5.7	1.41 V	355	31.3	17.0

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 159：5795 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 70% RH
Tested By	Ian Chang		

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	*5795.00	109.9 PK			1.30 H	358	101.9	8.0
2	*5795.00	102.2 AV			1.30 H	358	94.2	8.0
3	11590.00	61.6 PK	74.0	-12.4	1.56 H	358	43.9	17.7
4	11590.00	50.0 AV	54.0	-4.0	1.56 H	358	32.3	17.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5795.00	106.7 PK			1.46 V	246	98.7	8.0
2	*5795.00	99.5 AV			1.46 V	246	91.5	8.0
3	11590.00	60.0 PK	74.0	-14.0	1.42 V	351	42.3	17.7
4	11590.00	49.6 AV	54.0	-4.4	1.42 V	351	31.9	17.7

Remarks:

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

RF Mode	802.11ac (VHT80)	Channel	CH 42：5210 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 5.1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	63.1 PK	74.0	-10.9	2.42 H	353	55.6	7.5
2	5150.00	52.9 AV	54.0	-1.1	2.42 H	353	45.4	7.5
3	*5210.00	102.5 PK			2.42 H	353	94.8	7.7
4	*5210.00	95.9 AV			2.42 H	353	88.2	7.7
5	5350.00	60.0 PK	74.0	-14.0	2.42 H	353	51.4	8.6
6	5350.00	49.6 AV	54.0	-4.4	2.42 H	353	41.0	8.6
7	#10420.00	63.5 PK	68.2	-4.7	3.19 H	11	47.8	15.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.9 PK	74.0	-14.1	1.49 V	243	52.4	7.5
2	5150.00	50.1 AV	54.0	-3.9	1.49 V	243	42.6	7.5
3	*5210.00	99.3 PK			1.49 V	243	91.6	7.7
4	*5210.00	93.2 AV			1.49 V	243	85.5	7.7
5	5350.00	58.9 PK	74.0	-15.1	1.49 V	243	50.3	8.6
6	5350.00	48.8 AV	54.0	-5.2	1.49 V	243	40.2	8.6
7	#10420.00	62.0 PK	68.2	-6.2	1.38 V	355	46.3	15.7

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 (VHT80)	Channel	CH 58：5290 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 5.1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	29°C, 62% RH
Tested By	Ian Chang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.1 PK	74.0	-14.9	2.35 H	354	51.6	7.5
2	5150.00	50.0 AV	54.0	-4.0	2.35 H	354	42.5	7.5
3	*5290.00	104.0 PK			2.35 H	354	95.6	8.4
4	*5290.00	96.6 AV			2.35 H	354	88.2	8.4
5	5350.00	62.7 PK	74.0	-11.3	2.35 H	354	54.1	8.6
6	5350.00	52.9 AV	54.0	-1.1	2.35 H	354	44.3	8.6
7	#10580.00	63.6 PK	68.2	-4.6	2.36 H	36	47.5	16.1
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	5150.00	57.8 PK	74.0	-16.2	1.39 V	248	50.3	7.5
2	5150.00	48.8 AV	54.0	-5.2	1.39 V	248	41.3	7.5
3	*5290.00	100.7 PK			1.39 V	248	92.3	8.4
4	*5290.00	93.8 AV			1.39 V	248	85.4	8.4
5	5350.00	61.0 PK	74.0	-13.0	1.39 V	248	52.4	8.6
6	5350.00	50.6 AV	54.0	-3.4	1.39 V	248	42.0	8.6
7	#10580.00	62.4 PK	68.2	-5.8	1.44 V	351	46.3	16.1

Remarks:

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

RF Mode	802.11ac (VHT80)	Channel	CH 106：5530 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 5.1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Ian Chang		

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	62.0 PK	74.0	-12.0	1.70 H	350	53.2	8.8
2	5460.00	52.8 AV	54.0	-1.2	1.70 H	350	44.0	8.8
3	#5470.00	65.1 PK	68.2	-3.1	1.70 H	350	56.3	8.8
4	*5530.00	103.4 PK			1.70 H	350	94.6	8.8
5	*5530.00	96.6 AV			1.70 H	350	87.8	8.8
6	11060.00	56.7 PK	74.0	-17.3	1.21 H	319	40.1	16.6
7	11060.00	46.2 AV	54.0	-7.8	1.21 H	319	29.6	16.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.0 PK	74.0	-15.0	1.42 V	242	50.2	8.8
2	5460.00	50.0 AV	54.0	-4.0	1.42 V	242	41.2	8.8
3	#5470.00	62.3 PK	68.2	-5.9	1.42 V	242	53.5	8.8
4	*5530.00	99.9 PK			1.42 V	242	91.1	8.8
5	*5530.00	93.2 AV			1.42 V	242	84.4	8.8
6	11060.00	55.7 PK	74.0	-18.3	1.48 V	356	39.1	16.6
7	11060.00	45.2 AV	54.0	-8.8	1.48 V	356	28.6	16.6

Remarks:

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

RF Mode	802.11ac (VHT80)	Channel	CH 122：5610 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 5.1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 69% RH
Tested By	Ian Chang		

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	*5610.00	105.3 PK			1.38 H	357	96.9	8.4
2	*5610.00	97.7 AV			1.38 H	357	89.3	8.4
3	#5725.00	59.8 PK	68.2	-8.4	1.38 H	357	51.7	8.1
4	11220.00	57.6 PK	74.0	-16.4	1.64 H	235	40.2	17.4
5	11220.00	46.8 AV	54.0	-7.2	1.64 H	235	29.4	17.4
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	*5610.00	101.7 PK			1.45 V	242	93.3	8.4
2	*5610.00	94.6 AV			1.45 V	242	86.2	8.4
3	#5725.00	58.4 PK	68.2	-9.8	1.45 V	242	50.3	8.1
4	11220.00	56.5 PK	74.0	-17.5	1.78 V	122	39.1	17.4
5	11220.00	45.7 AV	54.0	-8.3	1.78 V	122	28.3	17.4

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 (AV) RB = 1 MHz, VB = 5.1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 70% RH
Tested By	Ian Chang		

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	*5775.00	107.4 PK			1.44 H	353	99.4	8.0
2	*5775.00	100.0 AV			1.44 H	353	92.0	8.0
3	11550.00	59.1 PK	74.0	-14.9	1.46 H	349	41.7	17.4
4	11550.00	49.8 AV	54.0	-4.2	1.46 H	349	32.4	17.4
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	*5775.00	104.6 PK			1.41 V	245	96.6	8.0
2	*5775.00	97.6 AV			1.41 V	245	89.6	8.0
3	11550.00	57.6 PK	74.0	-16.4	1.43 V	352	40.2	17.4
4	11550.00	48.6 AV	54.0	-5.4	1.43 V	352	31.2	17.4

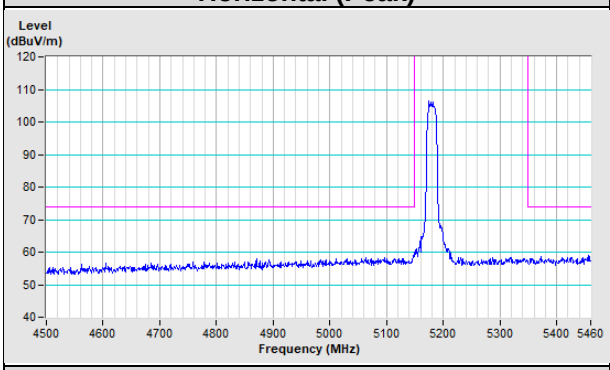
Remarks:

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.

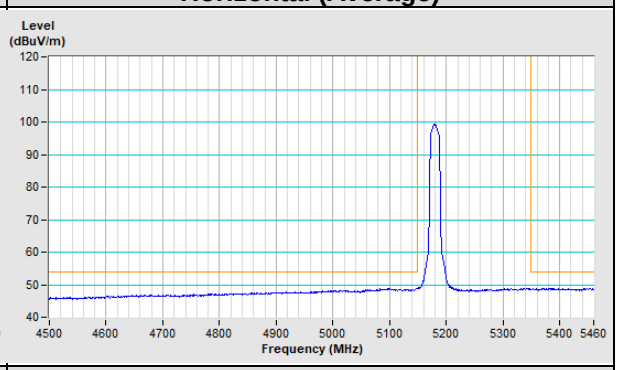
Plot of Band Edge

802.11a Channel 36

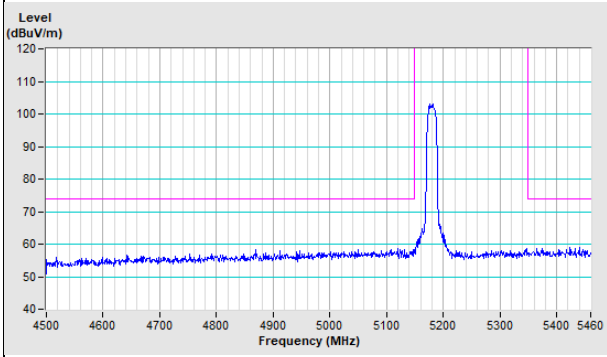
Horizontal (Peak)



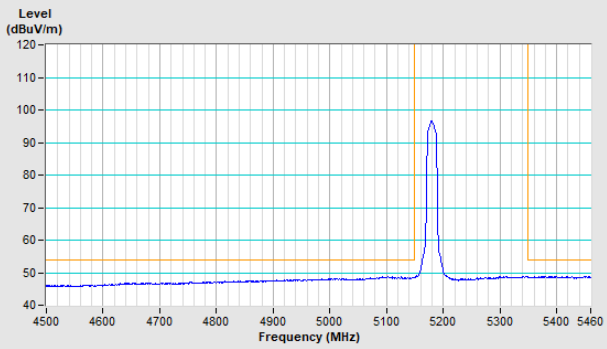
Horizontal (Average)



Vertical (Peak)

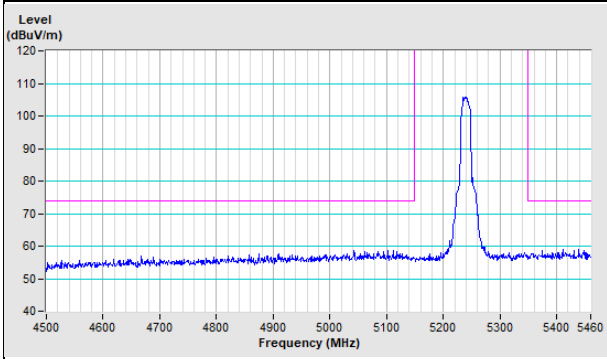


Vertical (Average)

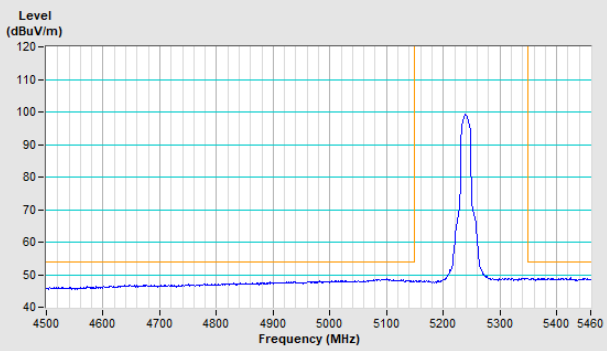


802.11a Channel 48

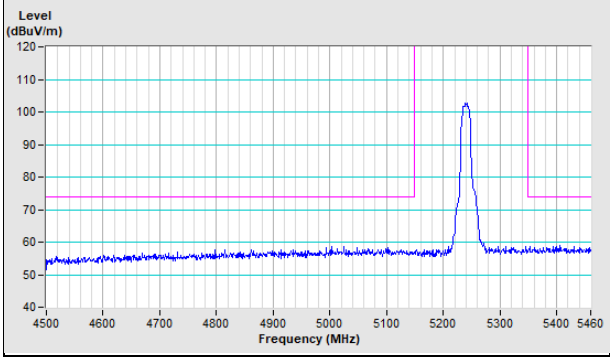
Horizontal (Peak)



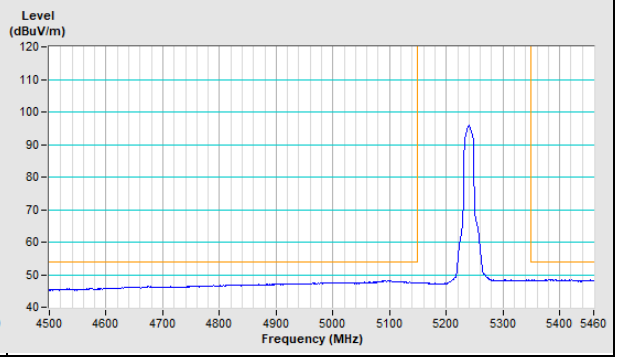
Horizontal (Average)



Vertical (Peak)

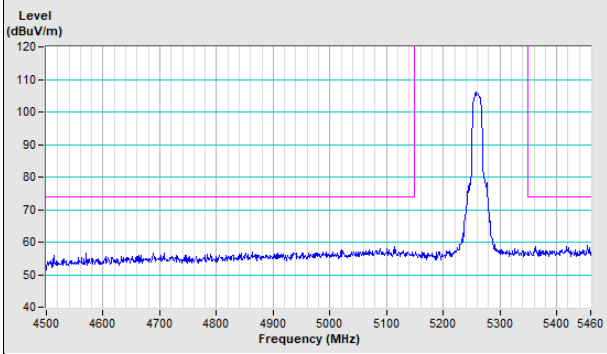


Vertical (Average)

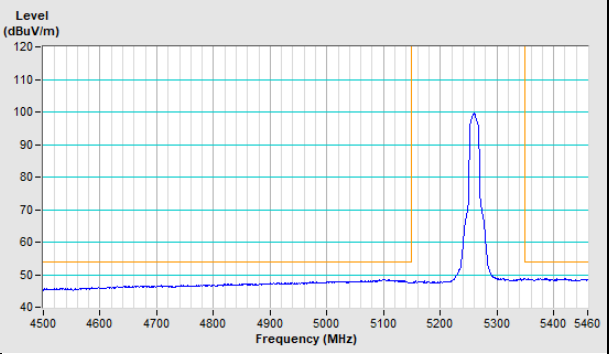


802.11a Channel 52

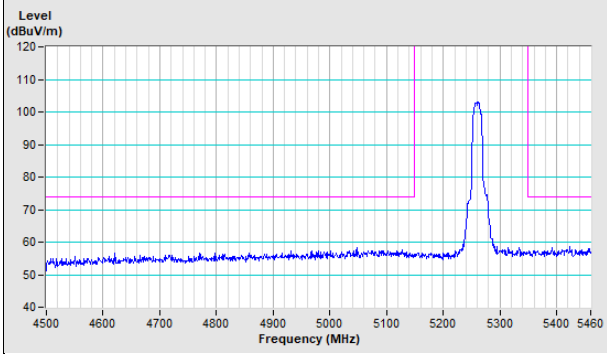
Horizontal (Peak)



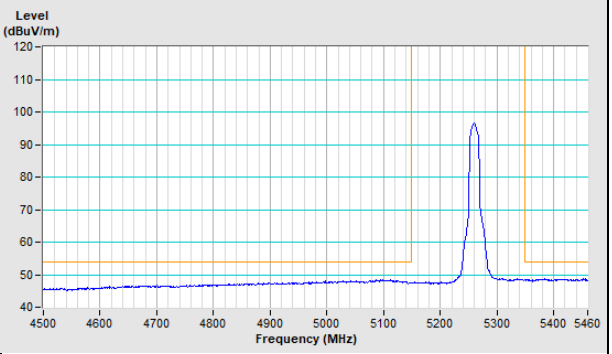
Horizontal (Average)



Vertical (Peak)

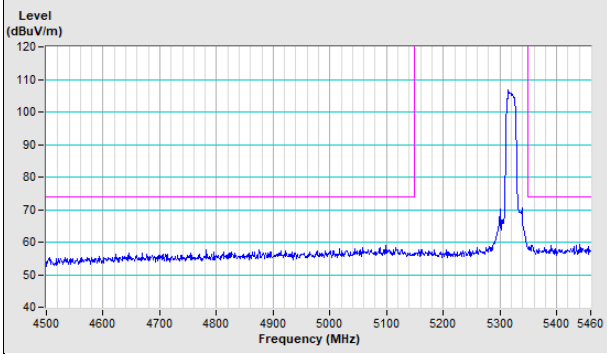


Vertical (Average)

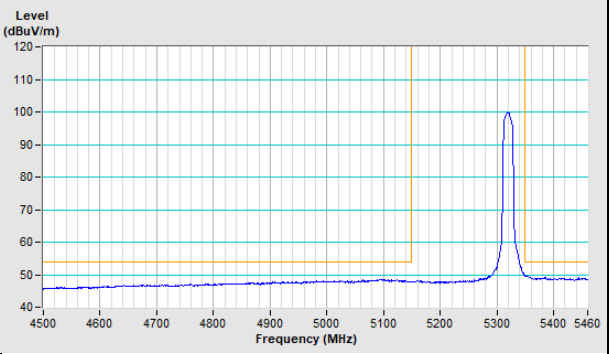


802.11a Channel 64

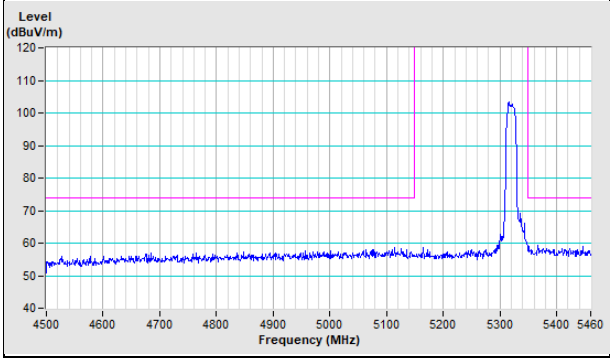
Horizontal (Peak)



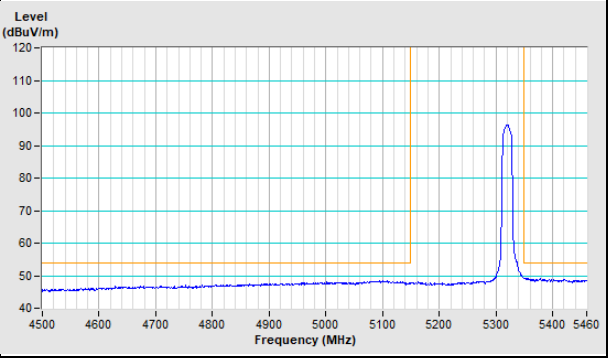
Horizontal (Average)



Vertical (Peak)

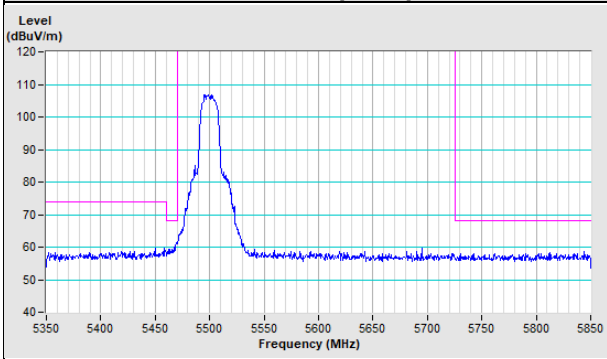


Vertical (Average)

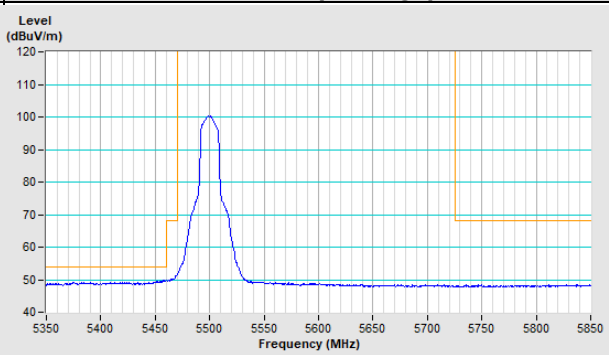


802.11a Channel 100

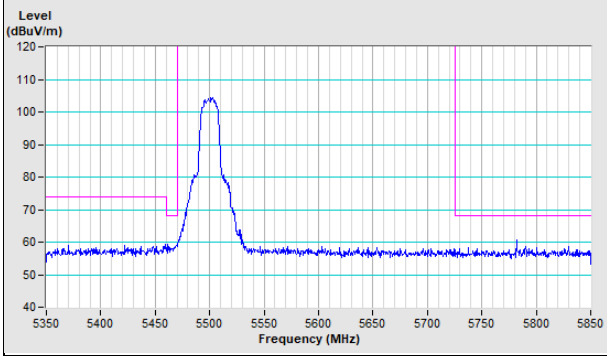
Horizontal (Peak)



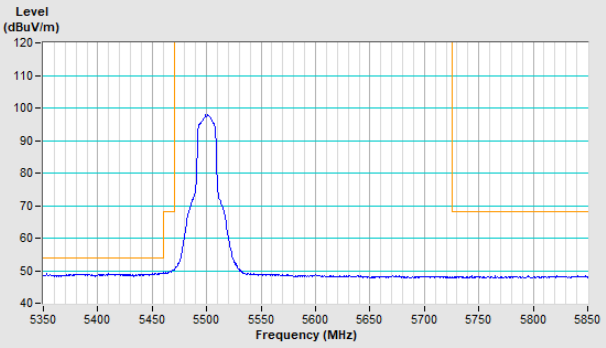
Horizontal (Average)



Vertical (Peak)

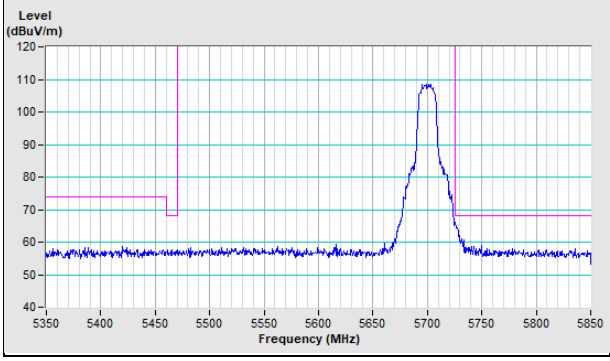


Vertical (Average)

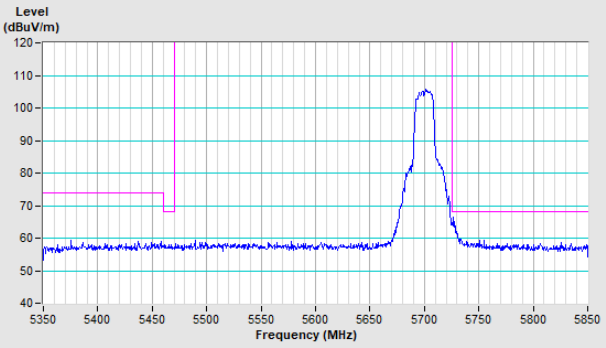


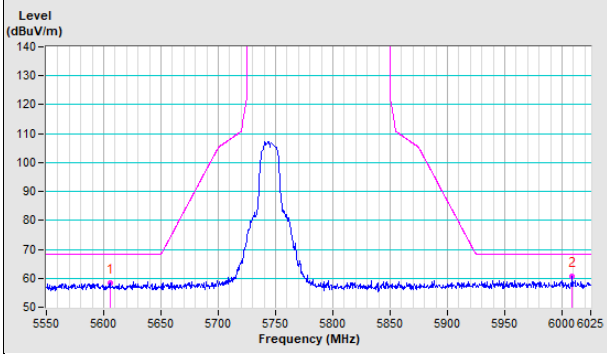
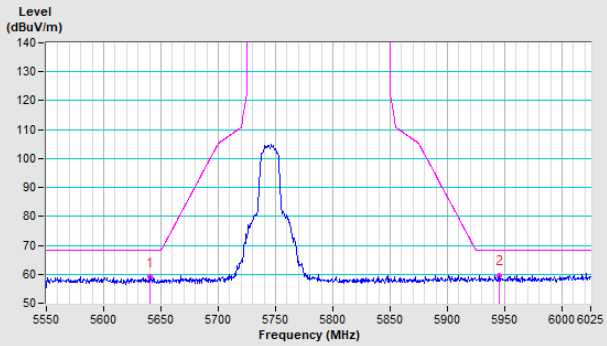
802.11a Channel 140

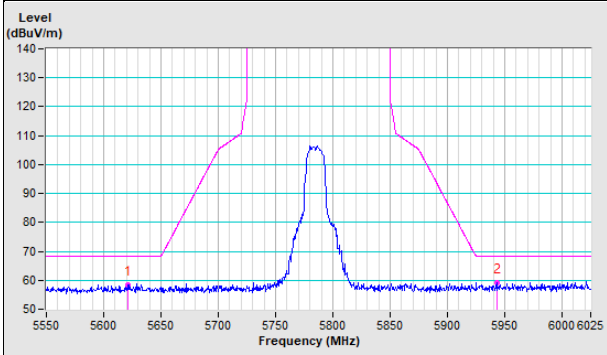
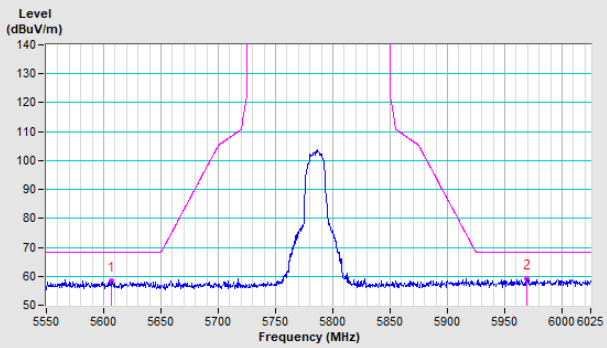
Horizontal (Peak)

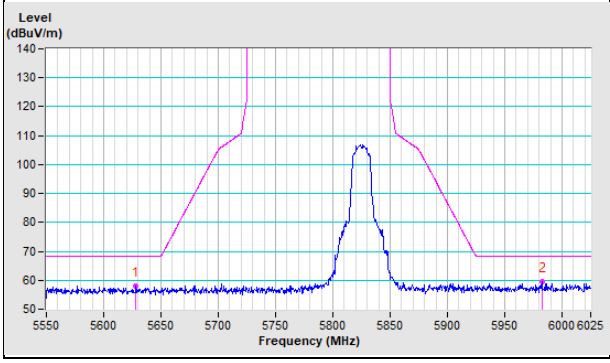
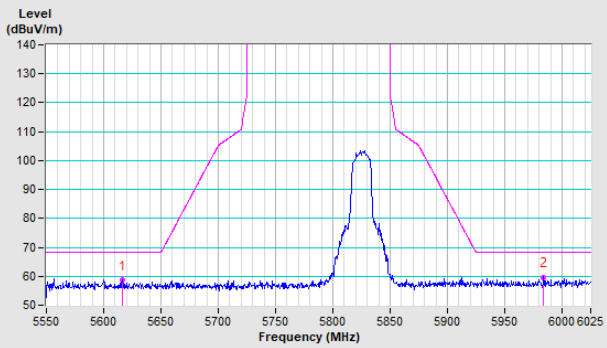


Vertical (Peak)



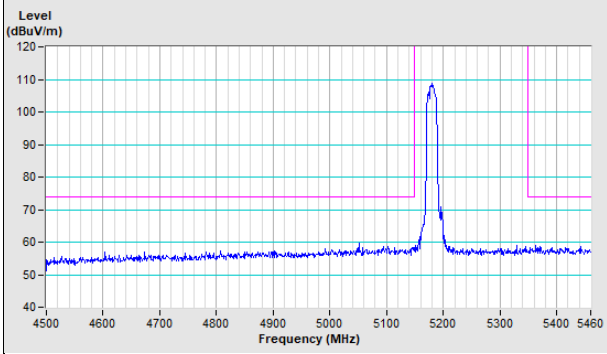
802.11a Channel 149	
Horizontal (Peak)	Vertical (Peak)
	

802.11a Channel 157	
Horizontal (Peak)	Vertical (Peak)
	

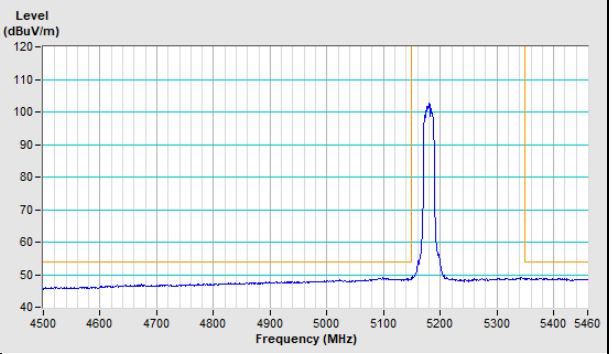
802.11a Channel 165	
Horizontal (Peak)	Vertical (Peak)
	

802.11ac (VHT20) Channel 36

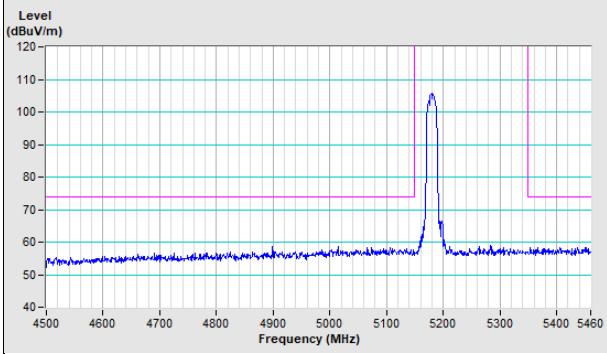
Horizontal (Peak)



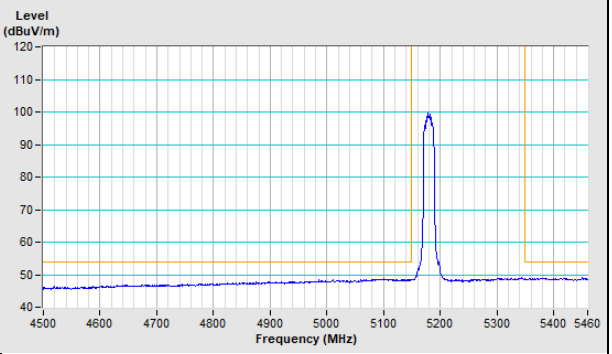
Horizontal (Average)



Vertical (Peak)

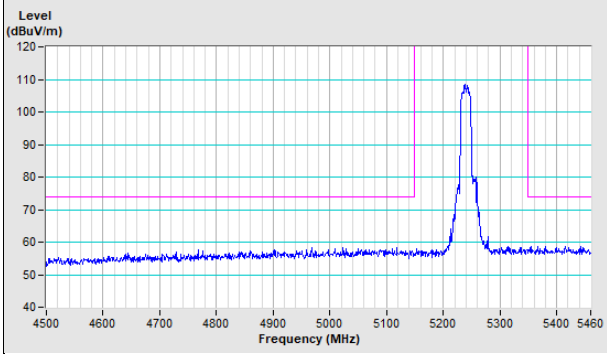


Vertical (Average)

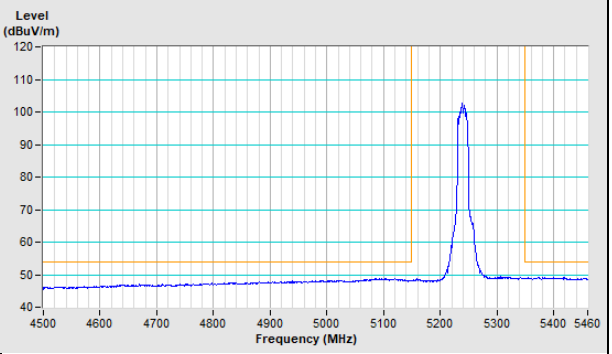


802.11ac (VHT20) Channel 48

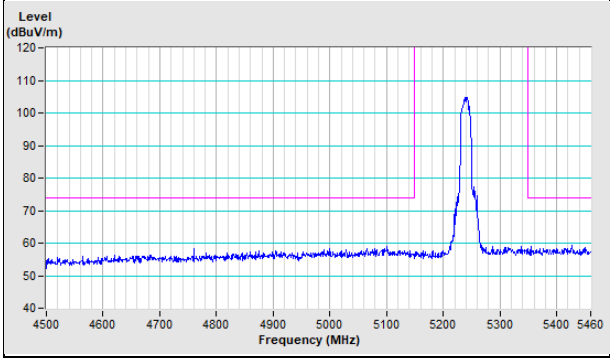
Horizontal (Peak)



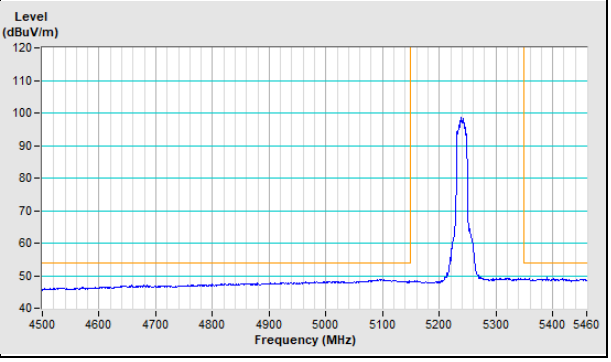
Horizontal (Average)



Vertical (Peak)

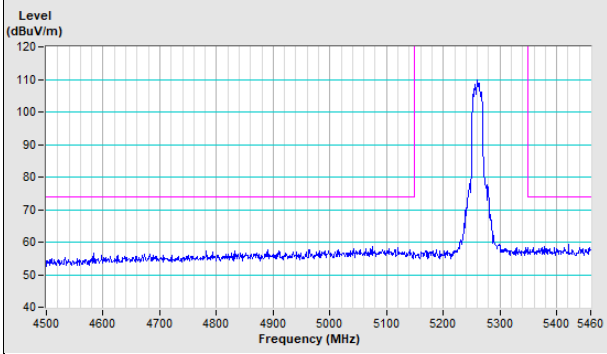


Vertical (Average)

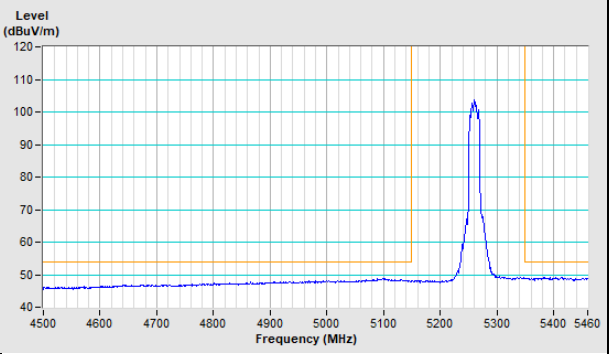


802.11ac (VHT20) Channel 52

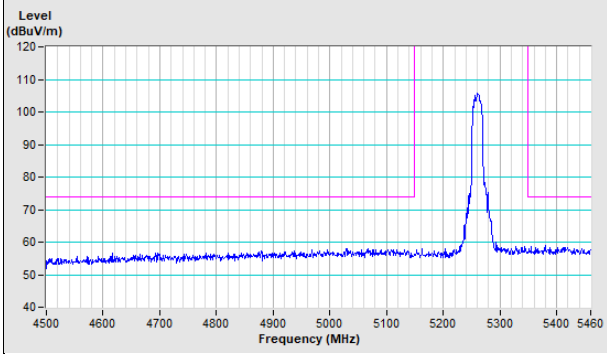
Horizontal (Peak)



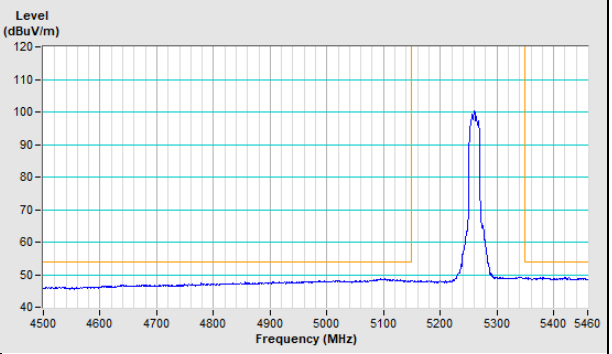
Horizontal (Average)



Vertical (Peak)

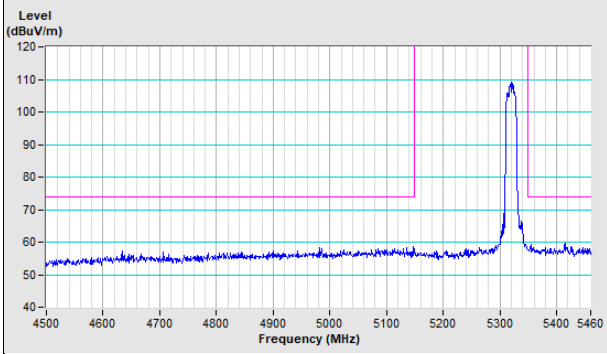


Vertical (Average)

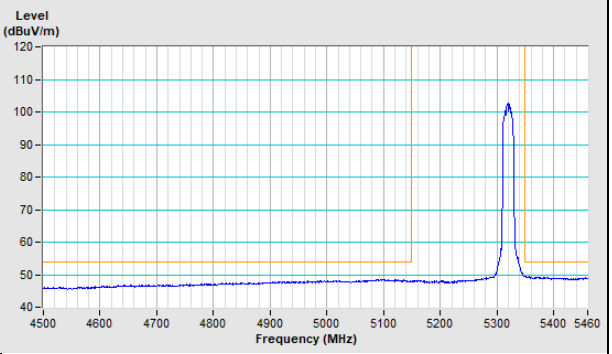


802.11ac (VHT20) Channel 64

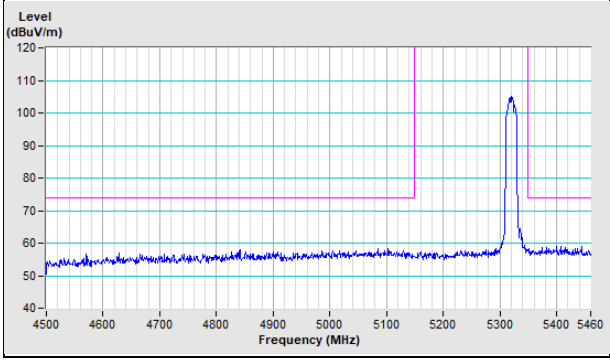
Horizontal (Peak)



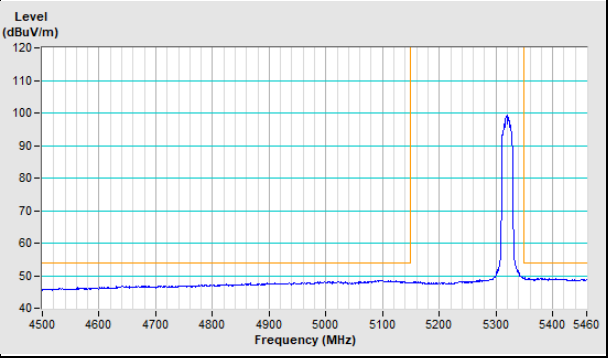
Horizontal (Average)

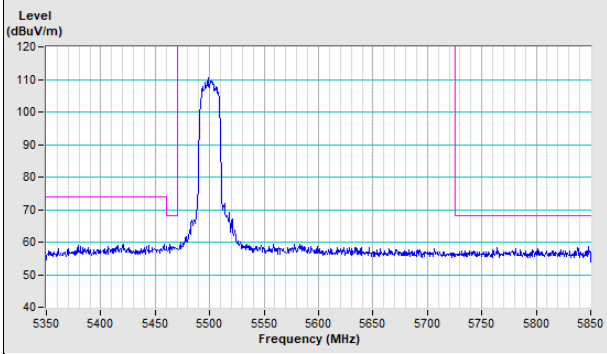
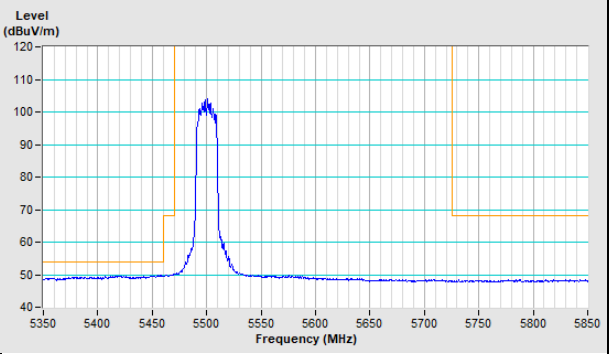
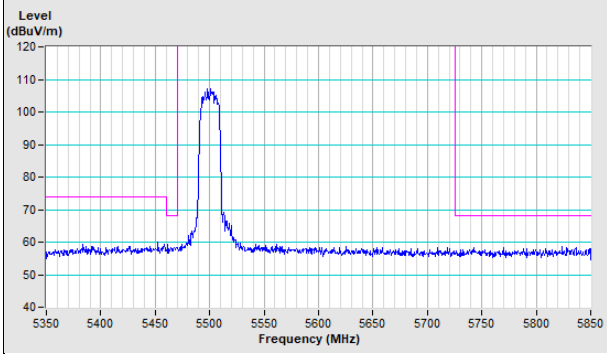
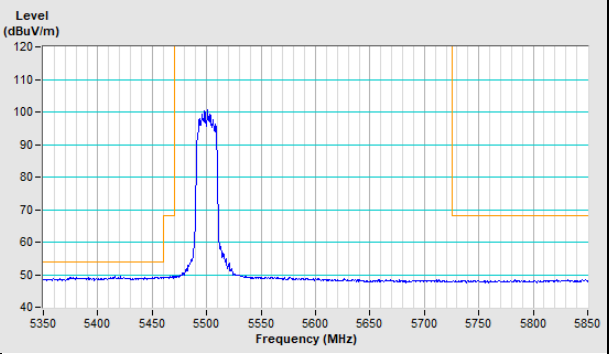
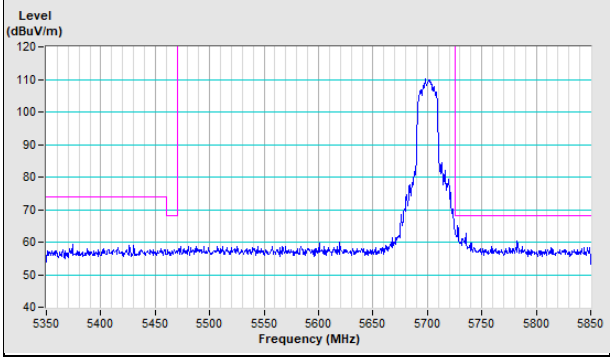
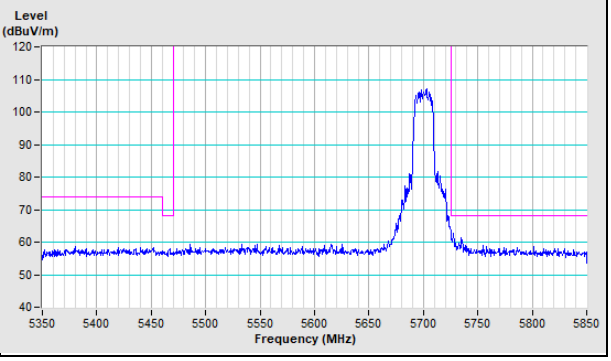


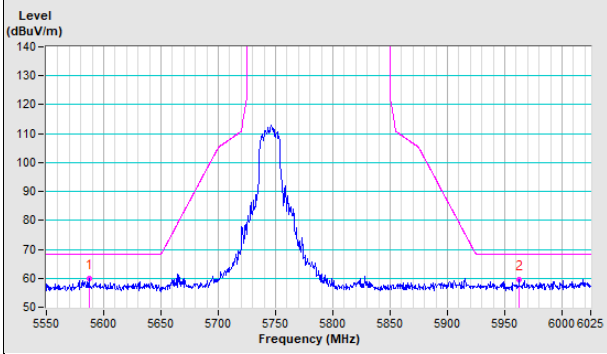
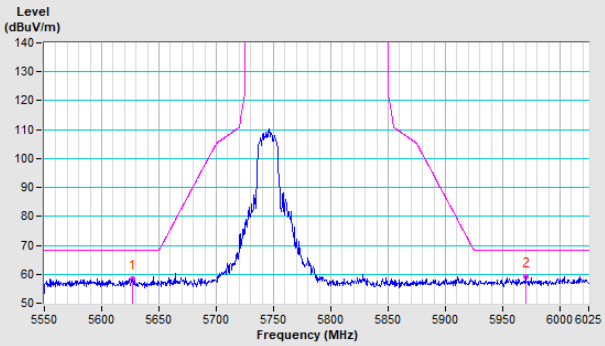
Vertical (Peak)

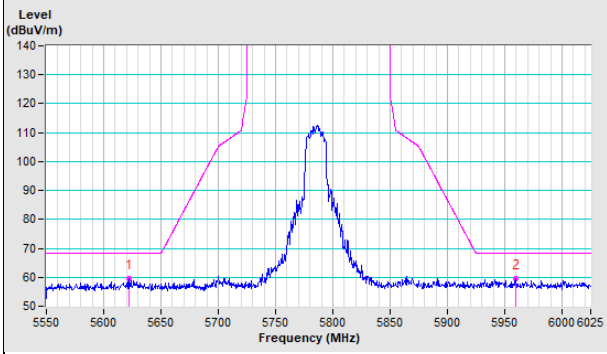
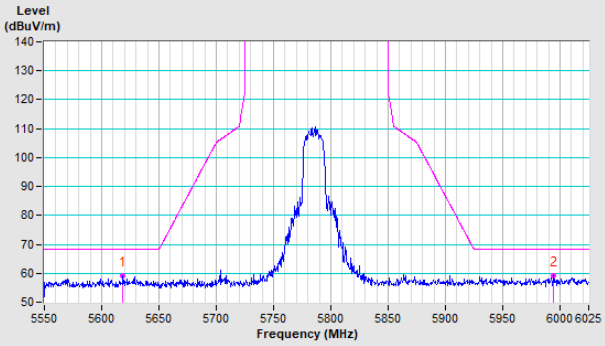


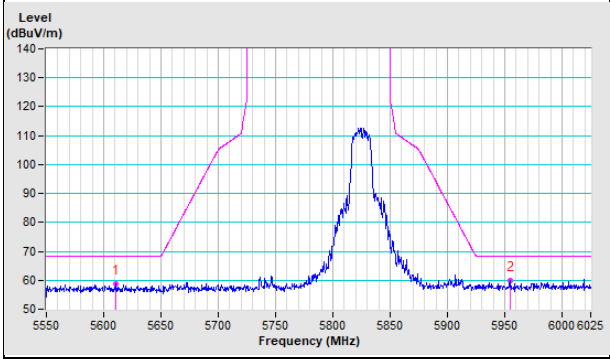
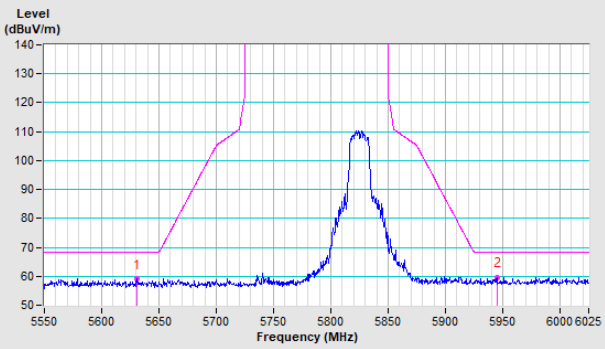
Vertical (Average)



802.11ac (VHT20) Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT20) Channel 140	
Horizontal (Peak)	Vertical (Peak)
	

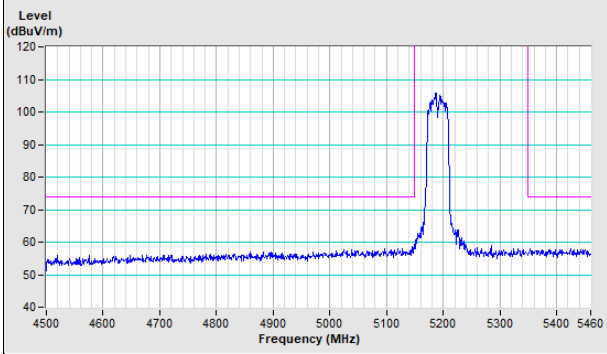
802.11ac (VHT20) Channel 149	
Horizontal (Peak)	Vertical (Peak)
	

802.11ac (VHT20) Channel 157	
Horizontal (Peak)	Vertical (Peak)
	

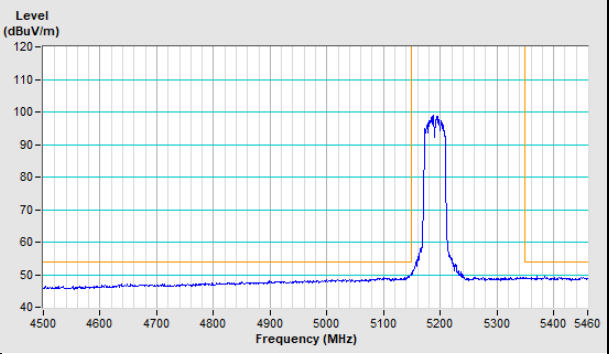
802.11ac (VHT20) Channel 165	
Horizontal (Peak)	Vertical (Peak)
	

802.11ac (VHT40) Channel 38

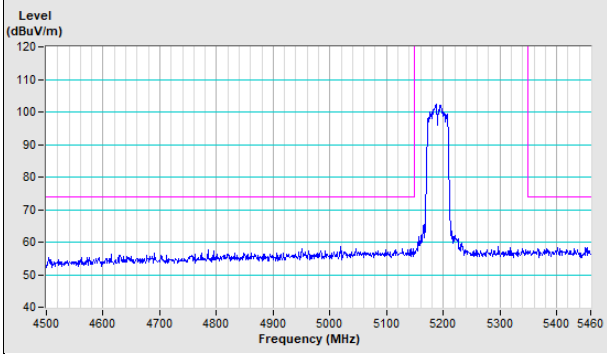
Horizontal (Peak)



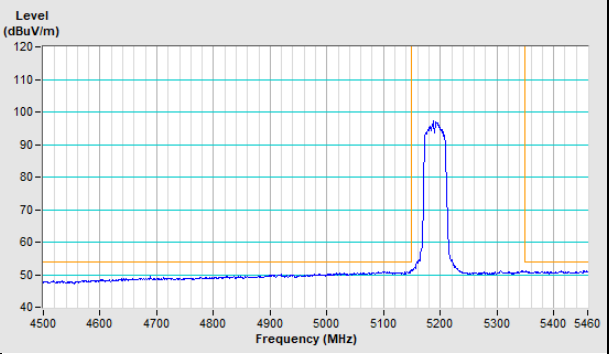
Horizontal (Average)



Vertical (Peak)

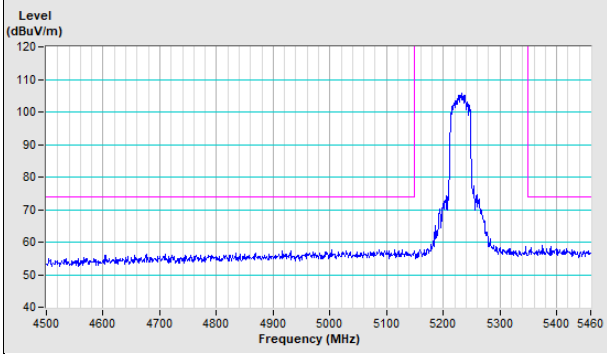


Vertical (Average)

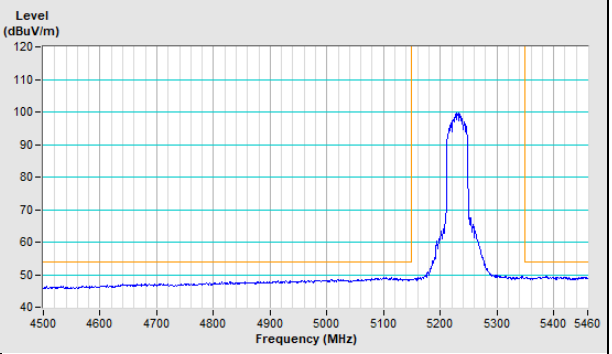


802.11ac (VHT40) Channel 46

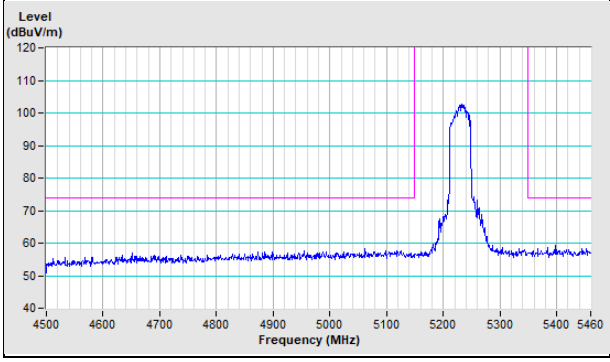
Horizontal (Peak)



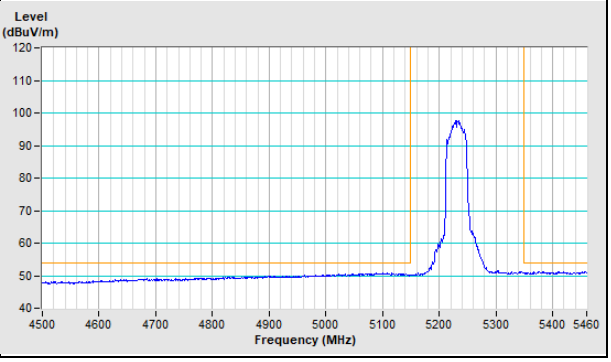
Horizontal (Average)



Vertical (Peak)

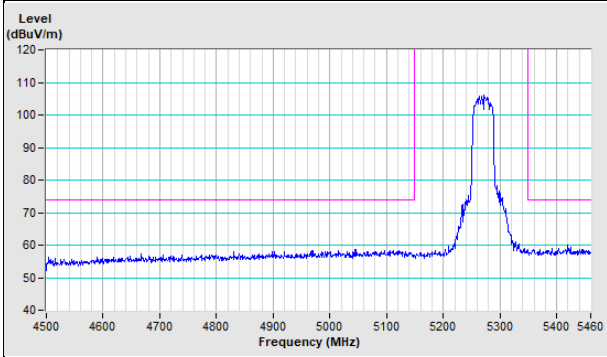


Vertical (Average)

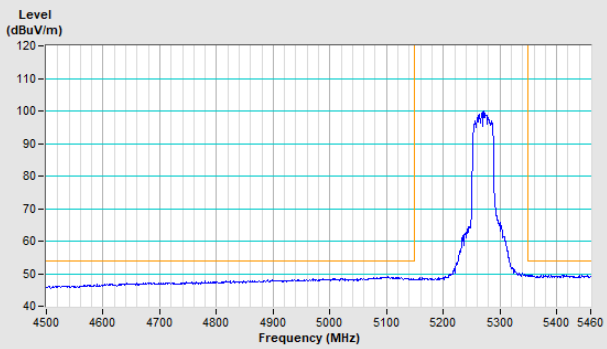


802.11ac (VHT40) Channel 54

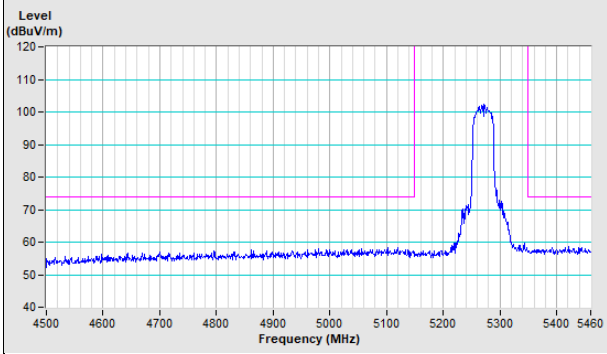
Horizontal (Peak)



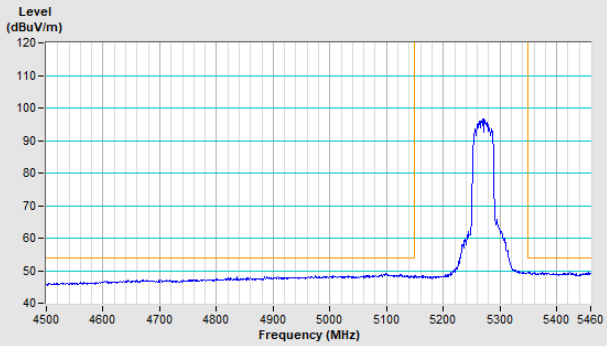
Horizontal (Average)



Vertical (Peak)

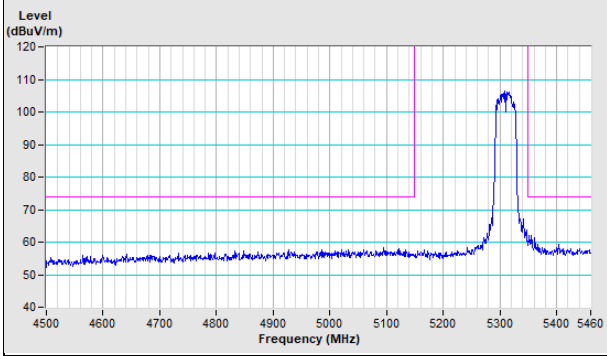


Vertical (Average)

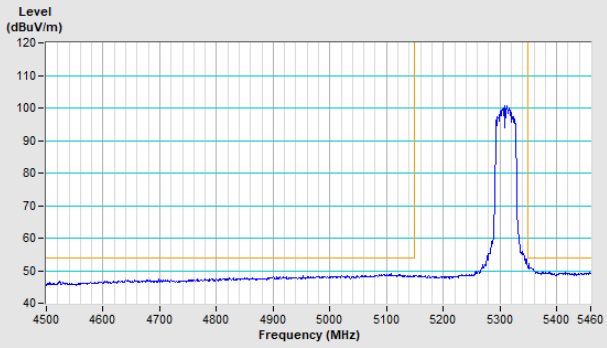


802.11ac (VHT40) Channel 62

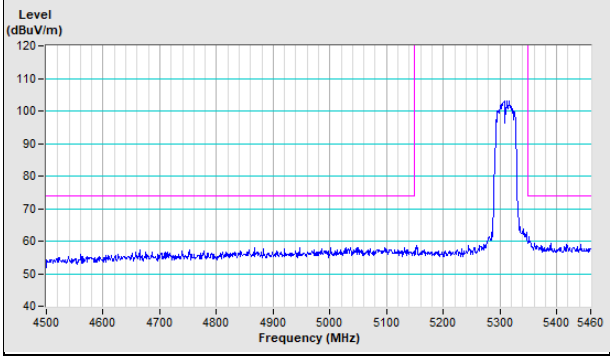
Horizontal (Peak)



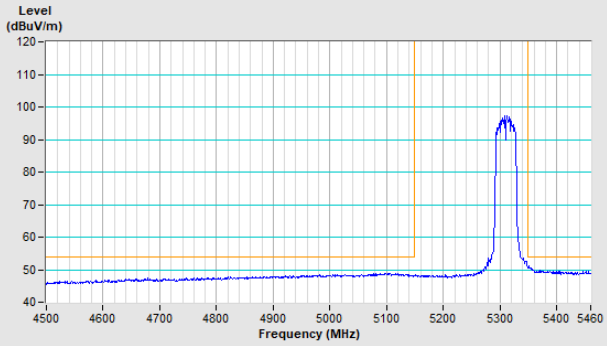
Horizontal (Average)

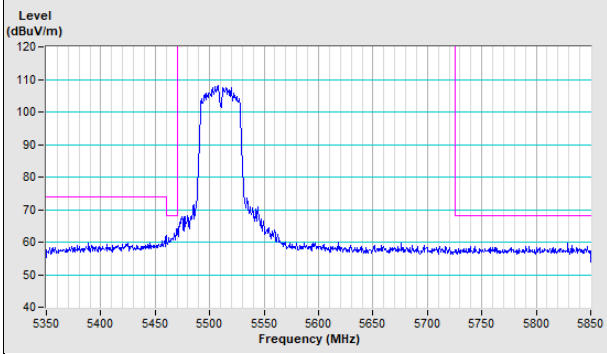
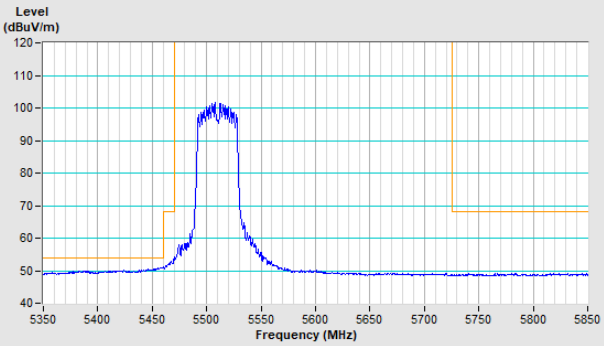
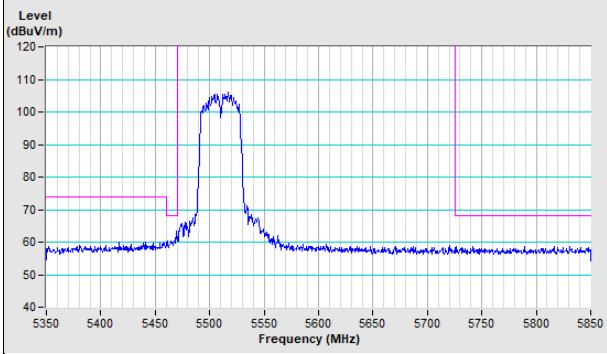
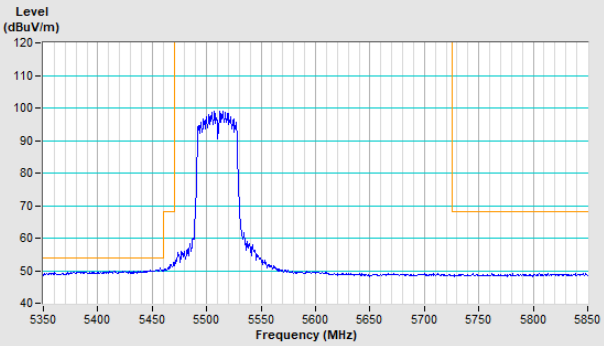
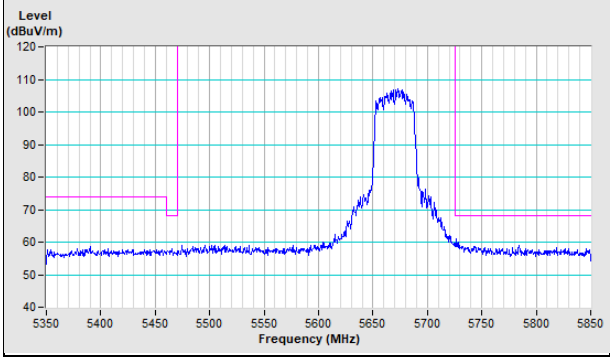
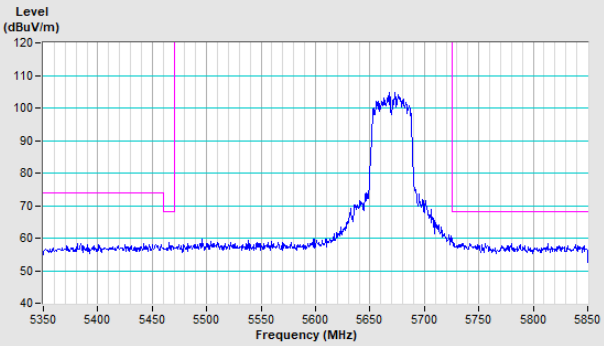


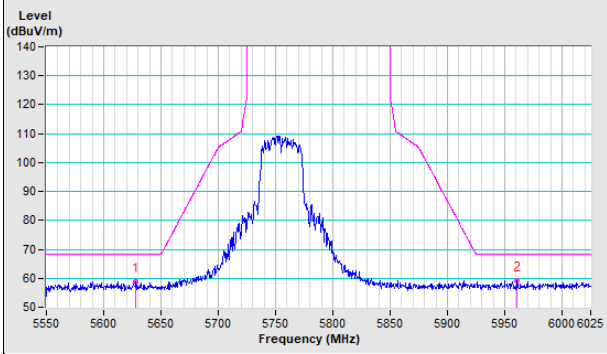
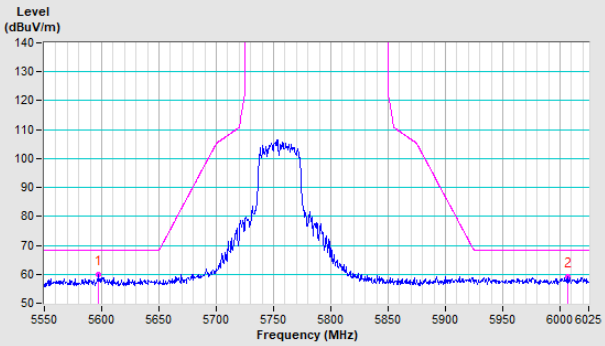
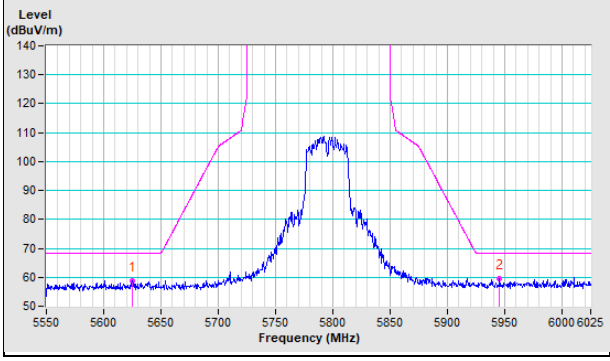
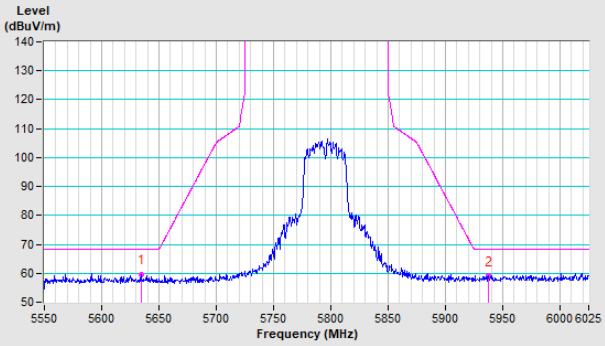
Vertical (Peak)



Vertical (Average)

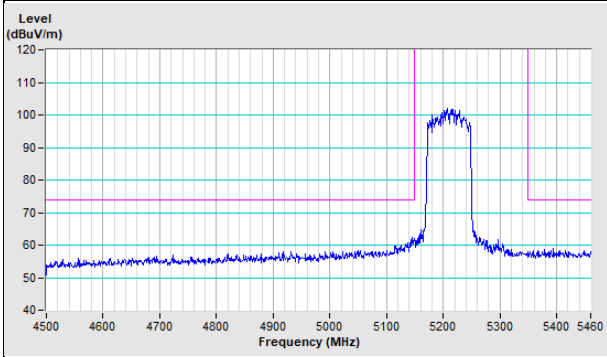


802.11ac (VHT40) Channel 102	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT40) Channel 134	
Horizontal (Peak)	Vertical (Peak)
	

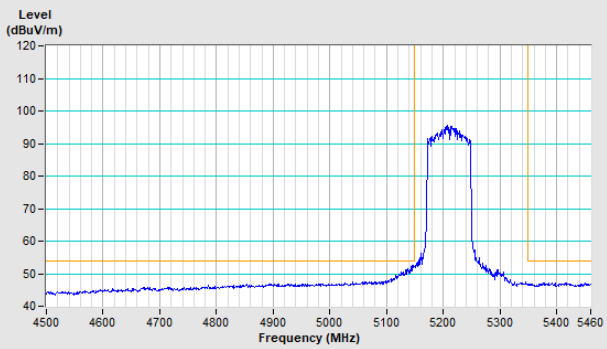
802.11ac (VHT40) Channel 151	
Horizontal (Peak)	Vertical (Peak)
	
802.11ac (VHT40) Channel 159	
Horizontal (Peak)	Vertical (Peak)
	

802.11ac (VHT80) Channel 42

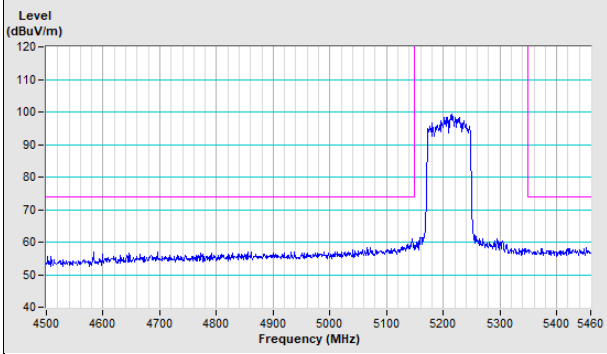
Horizontal (Peak)



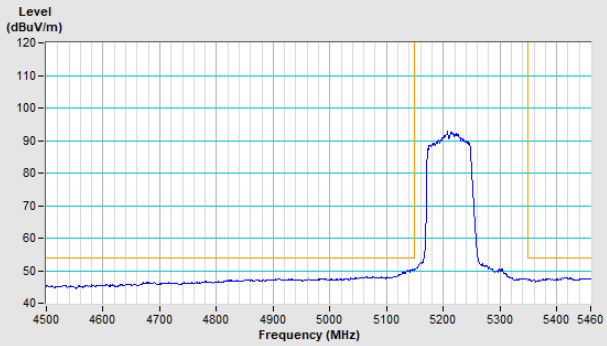
Horizontal (Average)



Vertical (Peak)

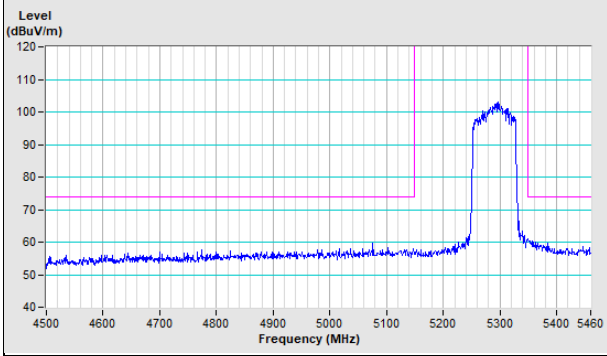


Vertical (Average)

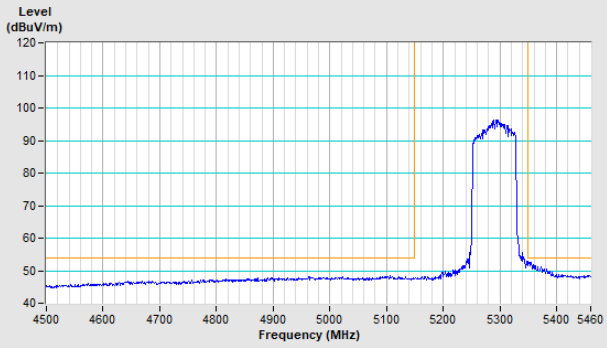


802.11ac (VHT80) Channel 58

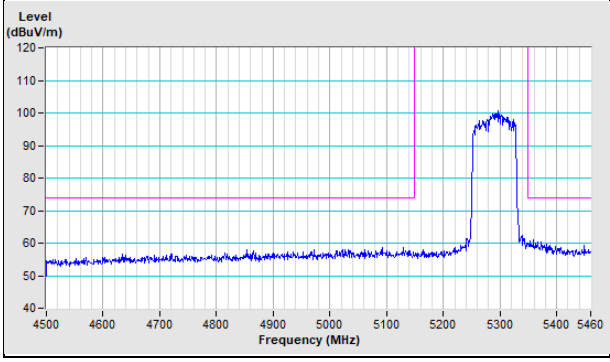
Horizontal (Peak)



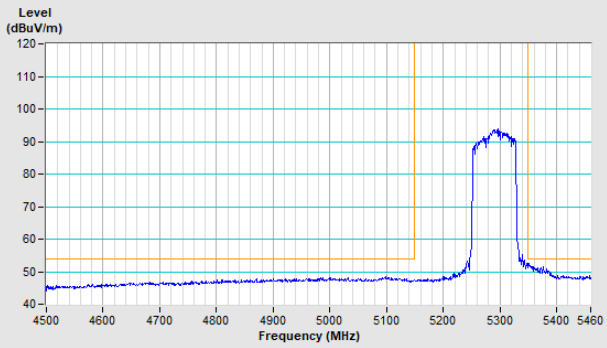
Horizontal (Average)



Vertical (Peak)

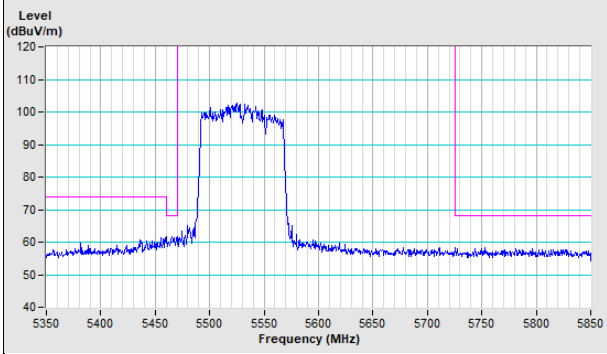


Vertical (Average)

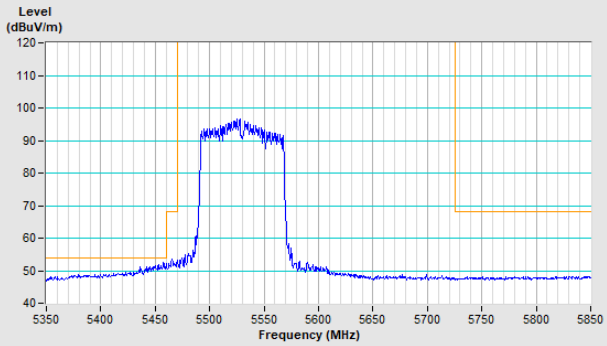


802.11ac (VHT80) Channel 106

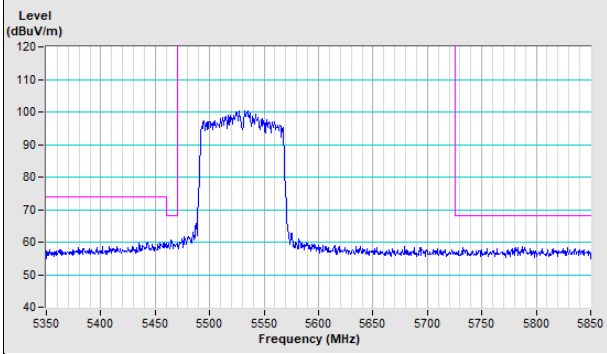
Horizontal (Peak)



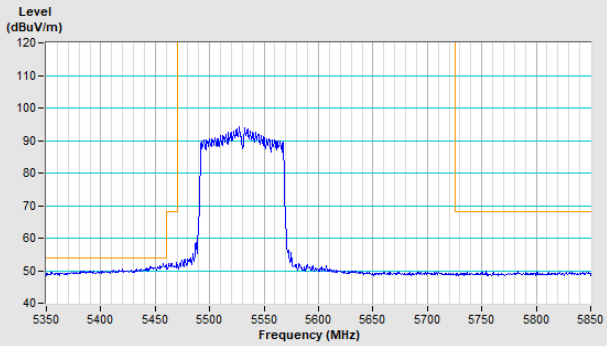
Horizontal (Average)



Vertical (Peak)

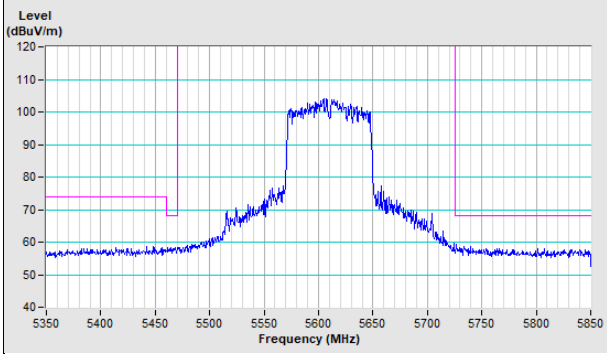


Vertical (Average)

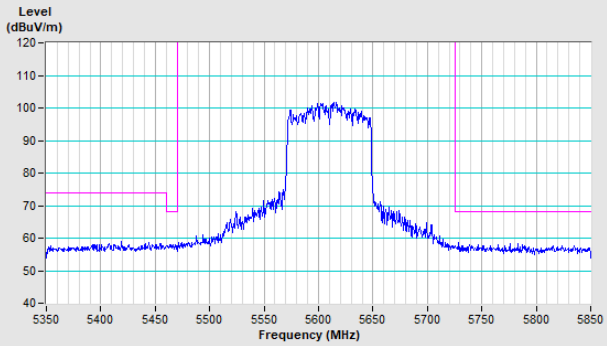


802.11ac (VHT80) Channel 122

Horizontal (Peak)

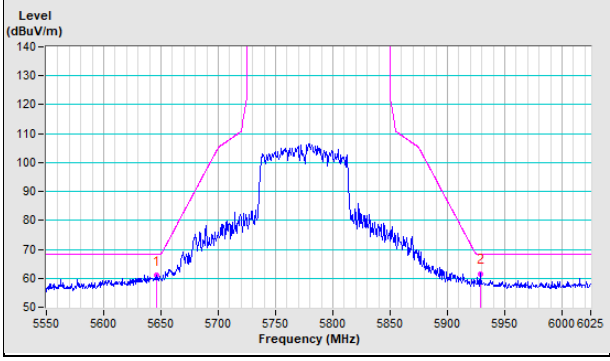


Vertical (Peak)

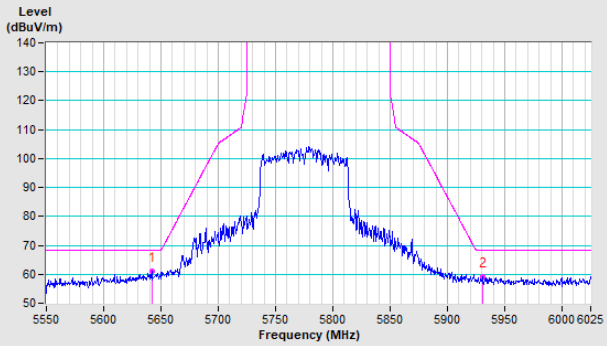


802.11ac (VHT80) Channel 155

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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