

TEST REPORT

CERTIFICATE OF CONFORMITY

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

Report No.: RFBEMI-WTW-P25060631-1

FCC ID: NOIKBN428B

Product: Electronic Display Device

Brand: Rakuten kobo

Model No.: N428B

Received Date: 2025/6/30

Test Date: 2025/7/14 ~ 2025/7/28

Issued Date: 2025/9/18

Applicant: NETRONIX, INC.

Address: No. 945, Boai St., Jubei City, Hsin-Chu, 30265, Taiwan

Factory: (1) NETRONIX, INC.
(2) NTX Electronics YANGZHOU CO., LTD.

Address: (1) No. 945, Boai St., Jubei City, Hsin-Chu, 30265, Taiwan
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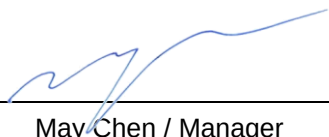
Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

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Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan

FCC Registration / 723255 / TW2022

Designation Number:

Approved by:  , **Date:** 2025/9/18
May Chen / Manager

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Prepared by: Vito Lung / Specialist



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Release Control Record

Issue No.	Description	Date Issued
RFBEMI-WTW-P25060631-1	Original release.	2025/9/18

1 Certificate

Product: Electronic Display Device

Brand: Rakuten kobo

Test Model: N428B

Sample Status: Engineering sample

Applicant: NETRONIX, INC.

Test Date: 2025/7/14 ~ 2025/7/28

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

Measurement procedure: ANSI C63.10-2013
KDB 789033 D02 General UNII Test Procedure New Rules v02r01

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

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(1) 15.407(a)(3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1) 15.407(a)(3)	Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
---	Occupied Bandwidth	-	Reference only.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -8.42 dB at 0.76328 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -5.7 dB at 869.83 MHz
15.407(b) (1/10) 15.407(b) (4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.1 dB at 5150.00 MHz
15.203	Antenna Requirement	Pass	No antenna connector is used.

Notes:

- 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) (±)
RF Output Power	-	1.1 dB
Power Spectral Density	-	1.3 dB
6 dB Bandwidth	-	1050.00 Hz
Occupied Bandwidth	-	1050.00 Hz
AC Power Conducted Emissions	150 kHz ~ 30 MHz	1.9 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.1 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	5.1 dB
	18 GHz ~ 40 GHz	5.3 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	Electronic Display Device
Brand	Rakuten kobo
Test Model	N428B
Status of EUT	Engineering sample
Power Supply Rating	3.87 Vdc from battery 5 Vdc from USB interface
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode
Modulation Technology	OFDM
Transfer Rate	802.11a: up to 54 Mbps 802.11n: up to 150 Mbps 802.11ac: up to 433.3 Mbps
Operating Frequency	5.18 GHz ~ 5.24 GHz 5.745 GHz ~ 5.825 GHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20): 9 802.11n (HT40), 802.11ac (VHT40): 4 802.11ac (VHT80): 2
Output Power	5.18 GHz ~ 5.24 GHz: 16.982 mW (12.3 dBm) 5.745 GHz ~ 5.825 GHz: 15.56 mW (11.92 dBm)
EUT Category	Client device

Note:

1. The EUT model is listed as below.

No.	Model	Color	Different
1	N428B	Black	EUT has two colors: only the color is different, the circuit design is the same.
2		White	

2. The EUT must be supplied with a battery as the following table:

Item	Brand	Model	Specification
Battery	DESAY BATTERY TECHNOLOGY CO., LTD.	K24072300-2410878	Power Rating: 3.87 Vdc, 8.91Wh, 2300mAh

3. The EUT uses following accessories.

Item	Brand	Model	Supplier Model	Color	Specification	Material	TID number
1st source USB Cable	Yih Fone	SH-0846	YF-USB2-A-C-1M(K)	Black	Shielded, 1.0M	TPE	12574
	Yih Fone	SH-0837	YF-USB2-A-C-1M-WH(K)	White	Shielded, 1.0M	TPE	12575
2nd source USB Cable	LUXSHARE-ICT	LB93US005-1H	---	Black	Shielded, 1.0M	TPE	---
	LUXSHARE-ICT	LB93US006-1H	---	White	Shielded, 1.0M	TPE	---

4. The EUT will be supported with the following eMMC and DRAM source.

Source	Item	Brand	Model
Main Source	1st source eMMC	PHISON	PTE7A0YJ-32GE
	1st source DRAM	MICRON	MT53D512M16D1DS-046 WT:D
2nd Source	2nd source eMMC	MK FOUNDER	MKEMF032GT1E-C
	1st source DRAM	MICRON	MT53D512M16D1DS-046 WT:D
3rd Source	3rd source eMMC	FORESEE	FEMDNN032G-C9A55
	2nd source DRAM	KINGSTON	D0811PM2FDGUK

5. There are Bluetooth and WLAN (2.4 GHz & 5 GHz) technology used for the EUT.

6. Simultaneously transmission combination.

Combination	Technology	
1	WLAN (2.4 GHz)	Bluetooth
2	WLAN (5 GHz)	Bluetooth

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

7. 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.

Brand	Model	Antenna Net Gain(dBi)	Frequency range (GHz)	Antenna Type	Connector Type
INPAQ	ACM3-3216-P1-CC-S	3.91	2.4~2.5	Chip	none
		3.41	5.15~5.85		

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

2. The EUT incorporates a SISO function:

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

Note:

1. The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz) and 802.11ac mode for 20 MHz (40 MHz). Therefore the investigated worst case is the representative mode in test report.

3.3 Channel List

FOR 5180 ~ 5240 MHz

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

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210 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. For Radiated, pre-scan Power from AC Adapter via USB Cable / Laptop via USB Cable / Battery and find the worst case as a representative test condition. 2. For AC conduction, pre-scan Power from AC Adapter via USB Cable / Laptop via USB Cable and find the worst case as a representative test condition. 3. EUT can be used in the following ways: X-axis / Y-axis / Z-axis. Pre-scan these ways and find the worst case as a representative test condition. 4. The USB Cable has the following models: SH-0846 / LB93US005-1H. Pre-scan these models of USB Cables and find the worst case as a representative test condition. 5. The eMMC has the following models: PTE7A0YJ-32GE / MKEMF032GT1E-C / FEMDNN032GC9A55. Pre-scan these models of eMMC and find the worst case as a representative test condition. 6. The DRAM has the following models: MT53D512M16D1DS-046 WT:D / D0811PM2FDGUK. Pre-scan these models of DRAM and find the worst case as a representative test condition. 7. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Worst Case:	1. For Radiated Worst Condition: Laptop via USB Cable 2. For AC conduction Worst Condition: AC Adapter via USB Cable 3. X-axis/ Y-axis/ Z-axis Worst Condition: Z-axis 4. USB Cable Worst Condition: LB93US005-1H 5. eMMC Worst Condition: PTE7A0YJ-32GE 6. DRAM Worst Condition: MT53D512M16D1DS-046 WT:D

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

Test Item	Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power / Power Spectral Density / Occupied Bandwidth	802.11a	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
	802.11ac (VHT20)	36, 40, 48, 149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	38, 46, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	42, 155	BPSK	MCS0
6 dB Bandwidth	802.11a	149, 157, 165	BPSK	6Mb/s
	802.11ac (VHT20)	149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	151, 159	BPSK	MCS0
	802.11ac (VHT80)	155	BPSK	MCS0
AC Power Conducted Emissions	802.11ac (VHT80)	42	BPSK	MCS0
Unwanted Emissions below 1 GHz	802.11ac (VHT80)	42	BPSK	MCS0
Unwanted Emissions above 1 GHz	802.11a	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
	802.11ac (VHT20)	36, 40, 48, 149, 157, 165	BPSK	MCS0
	802.11ac (VHT40)	38, 46, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	42, 155	BPSK	MCS0

Note: Both USB cables from the same brand are identical to each other except for exterior color and model names.

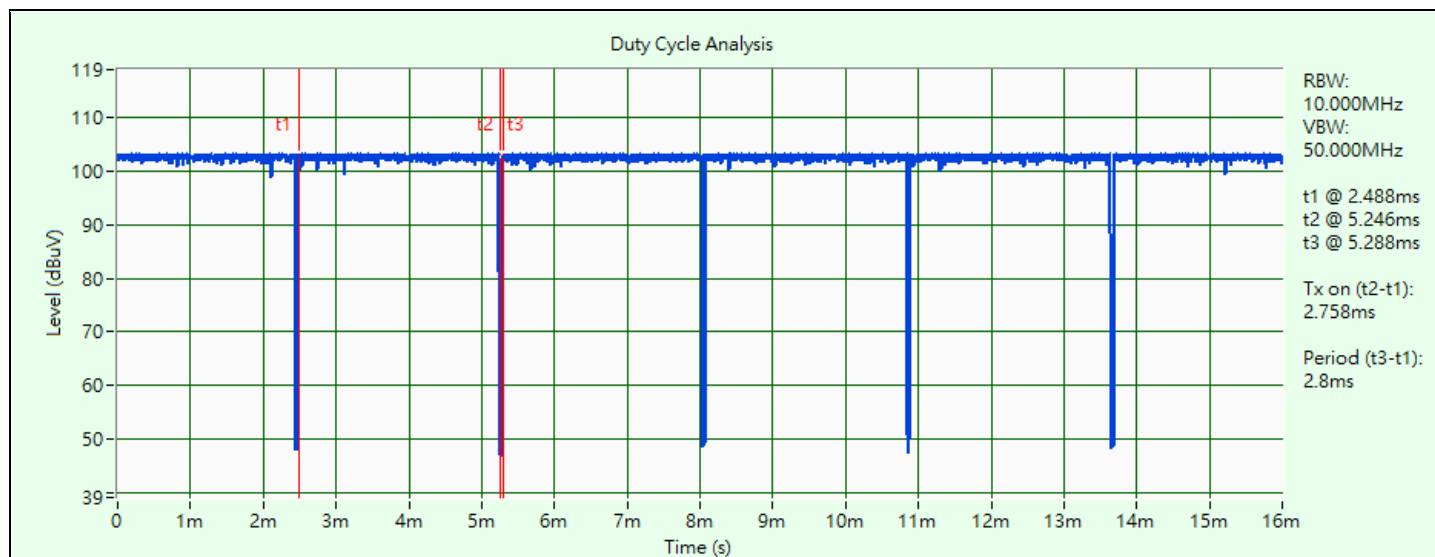
3.5 Duty Cycle of Test Signal

802.11a: Duty cycle = 2.758 ms / 2.8 ms x 100% = 98.5%

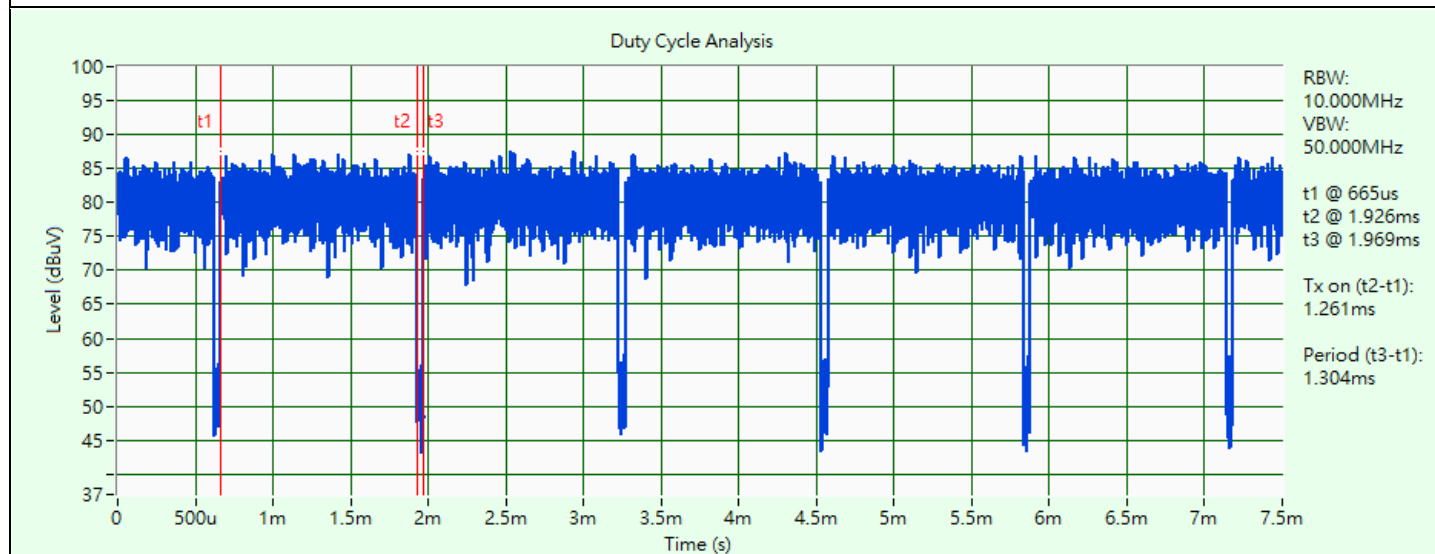
802.11ac (VHT20): Duty cycle = 1.261 ms / 1.304 ms x 100% = 96.7%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.15 \text{ dB}$

802.11ac (VHT40): Duty cycle = 1.26 ms / 1.303 ms x 100% = 96.7%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.15 \text{ dB}$

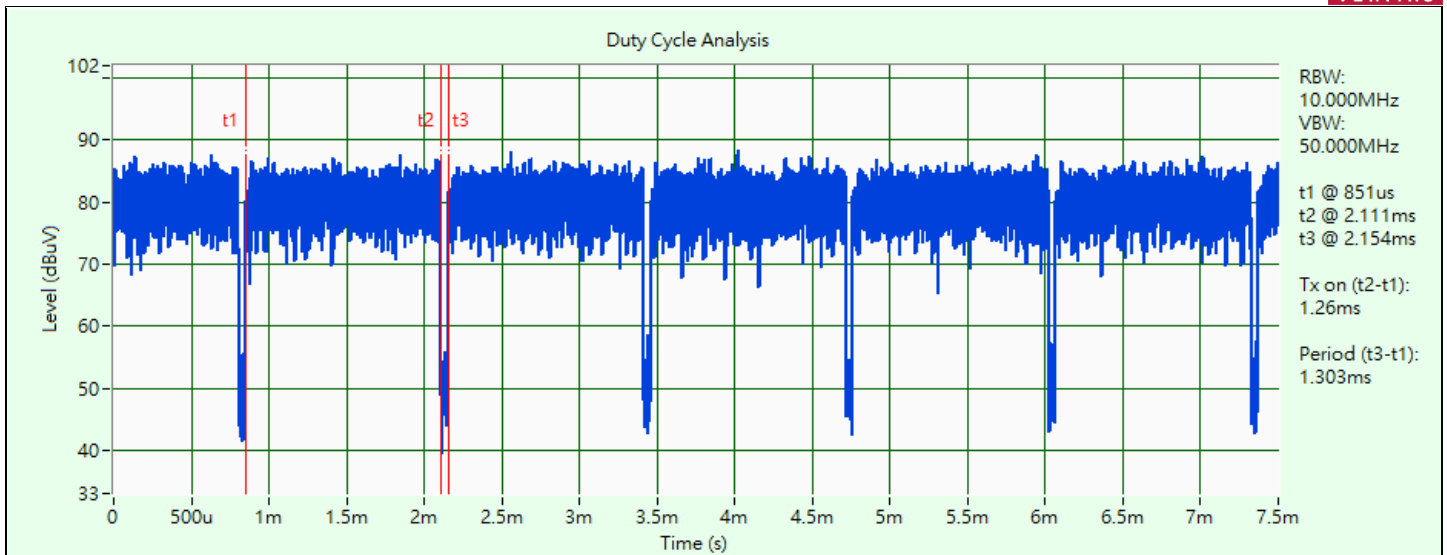
802.11ac (VHT80): Duty cycle = 0.604 ms / 0.648 ms x 100% = 93.2%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 0.31 \text{ dB}$



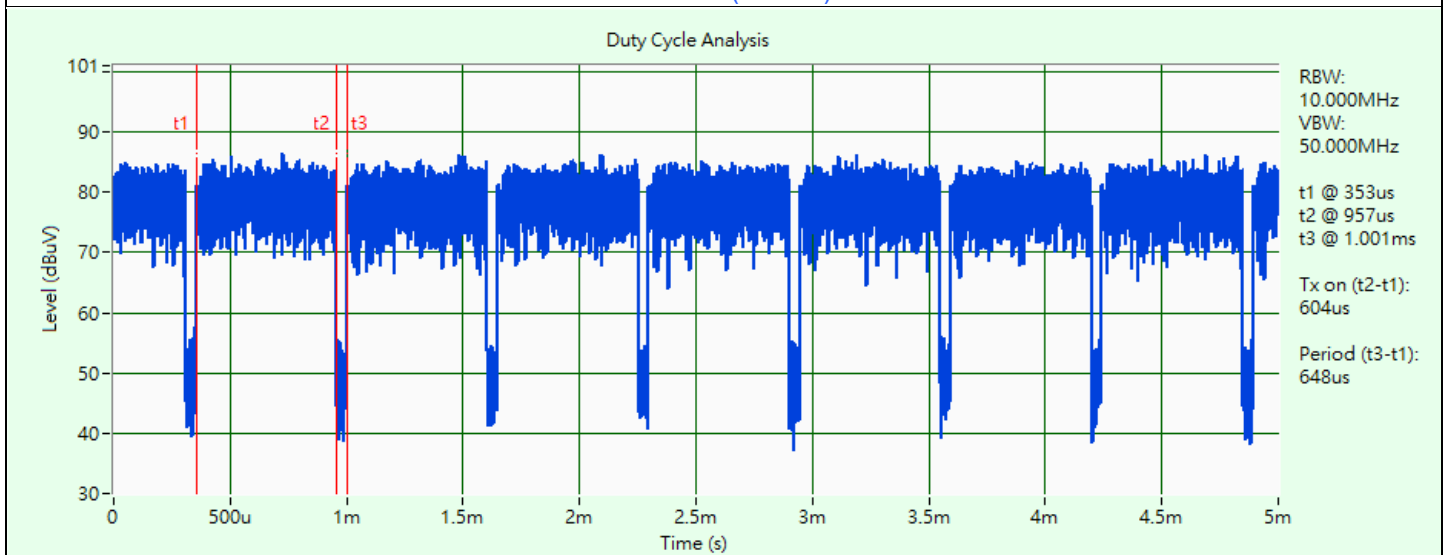
802.11a



802.11ac (VHT20)



802.11ac (VHT40)



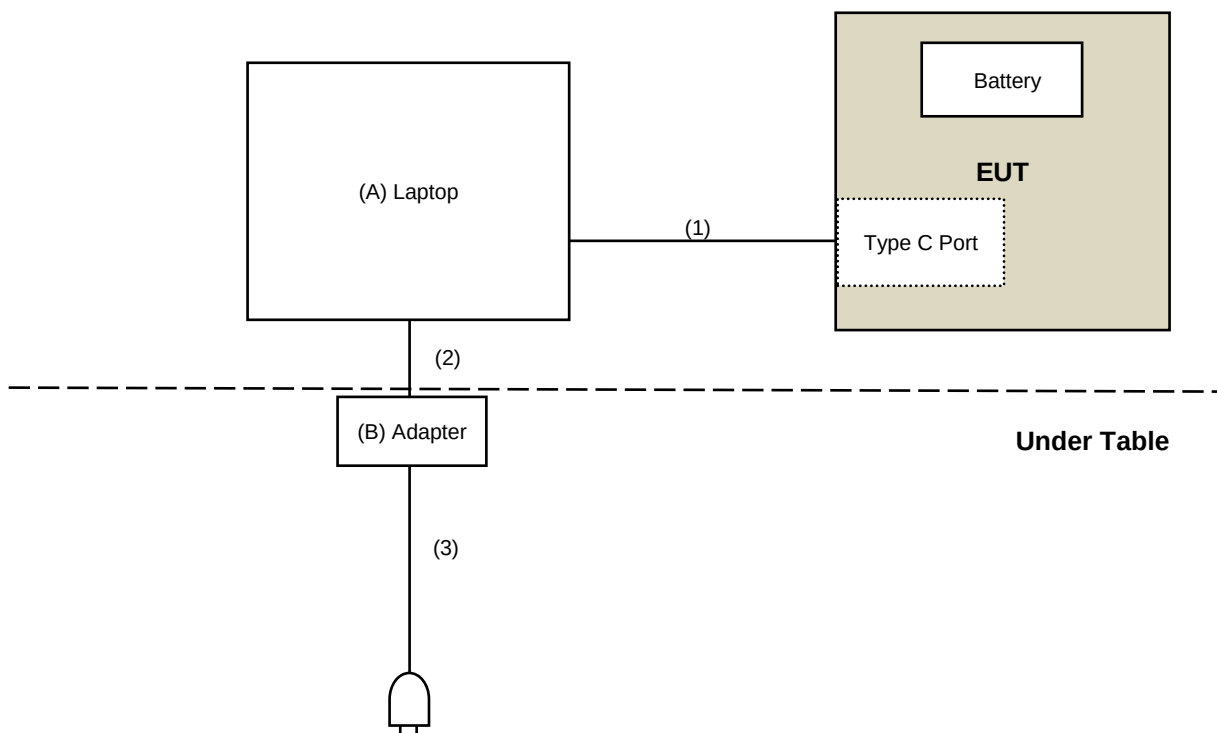
802.11ac (VHT80)

3.6 Test Program Used and Operation Descriptions

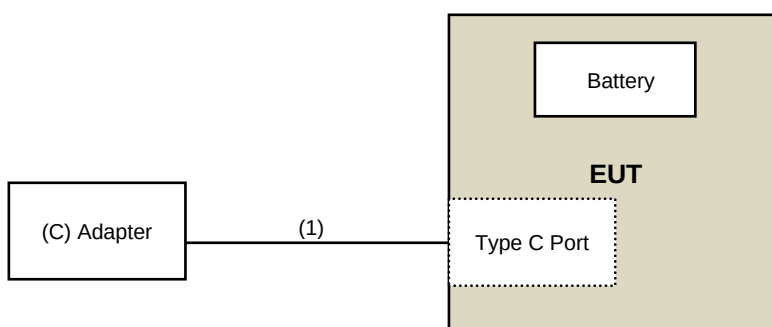
Controlling software (HyperTerminal paste wifitesttool 20250310.txt command) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

For Unwanted Emissions test:



For AC Power Conducted Emission test:



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	DELL	E5520	8Y4DMQ1	N/A	Provided by Lab
B	Adapter	LENOVO	ADLX45YLC3D	N/A	N/A	Provided by Lab
C	Adapter	ASUS	EXA1205UA	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	USB Cable	1	1	YES	0	Supplied by applicant
2	DC Cable	1	1.7	NO	0	Provided by Lab
3	AC Cable	1	0.9	NO	0	Provided by Lab

4 Test Instruments

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

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-20	00800A1K01A-20-02	2025/5/23	2026/5/22
Pulse Power Sensor Anritsu	MA2411B	1726434	2025/6/3	2026/6/2
RF Power Meter Anritsu	ML2495A	1529002	2025/6/3	2026/6/2

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2025/7/22

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
PXA Signal Analyzer Keysight	N9030A	MY55330160	2025/1/16	2026/1/15
Software	ADT_RF Test Software V8	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2025/7/22

4.3 6 dB Bandwidth

Refer to section 4.2 to get the tested date and information of the instruments.

4.4 Occupied Bandwidth

Refer to section 4.2 to get the tested date and information of the instruments.

4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance Telegartner	50 ohm	3	2024/11/1	2025/10/31
EMI Test Receiver R&S	ESCS 30	100375	2025/5/21	2026/5/20
Fixed Attenuator STI	STI02-2200-10	005	2025/2/17	2026/2/16
LISN R&S	ESH3-Z5	835239/001	2025/3/27	2026/3/26
		848773/004	2024/10/7	2025/10/6
RF Coaxial Cable JYEBAO	5D-FB	COCCAB-001	2025/2/17	2026/2/16
Software BVADT	BVADT_Conc_V7.3.7.4	N/A	N/A	N/A

Notes:

1. The test was performed in Conduction 1
2. Tested Date: 2025/7/24

4.6 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-0842	2024/10/8	2025/10/7
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
EMI Test Receiver R&S	ESR7	102026	2025/3/25	2026/3/24
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-02	2025/3/29	2026/3/28
Loop Antenna TESEQ	HLA 6121	63620	2024/10/17	2025/10/16
Preamplifier EMCI	EMC330N	980538	2025/3/29	2026/3/28
	EMC001340	980142	2025/2/17	2026/2/16
PXA Signal Analyzer Keysight	N9030B	MY57141948	2025/5/20	2026/5/19
RF Coaxial Cable PEWC	8D	966-5-1	2025/3/29	2026/3/28
		966-5-2	2025/3/29	2026/3/28
		966-5-3	2025/3/29	2026/3/28
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 5.
2. Tested Date: 2025/7/22

4.7 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
EMI Test Receiver R&S	ESR7	102026	2025/3/25	2026/3/24
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-1819	2024/11/10	2025/11/9
	BBHA 9170	9170-739	2024/11/10	2025/11/9
Preamplifier EMCI	EMC12630SE	980509	2025/1/18	2026/1/17
	EMC184045SE	980387	2024/8/8	2025/8/7
PXA Signal Analyzer Keysight	N9030B	MY57141948	2025/5/20	2026/5/19
RF Coaxial Cable EMCI	EMC102-KM-KM-1200	160924	2025/1/24	2026/1/23
	EMC102-KM-KM-4000	200214	2025/1/24	2026/1/23
	EMC104-SM-SM-1500	180503	2025/3/8	2026/3/7
	EMC104-SM-SM-2000	180501	2025/3/8	2026/3/7
	EMC104-SM-SM-6000	180506	2025/3/8	2026/3/7
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 5.
2. Tested Date: 2025/7/14 ~ 2025/7/28

5 Limits of Test Items

5.1 RF Output Power

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

Operation Band	Limit
U-NII-3	1 Watt (30 dBm)

5.2 Power Spectral Density

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	17 dBm/MHz
	Fixed point-to-point Access Points	
	Indoor Access Point	
	Client devices	11 dBm/MHz

Operation Band	Limit
U-NII-3	30 dBm/500 kHz

5.3 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.

5.4 Occupied Bandwidth

The results are for reference only.

5.5 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.

5.6 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).

5.7 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 5.725-5.850 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.		

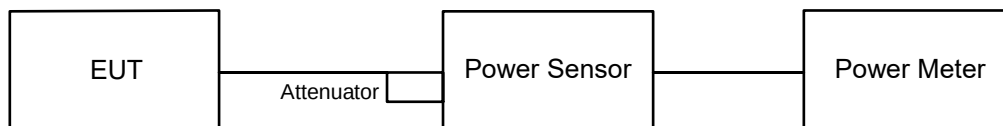
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup

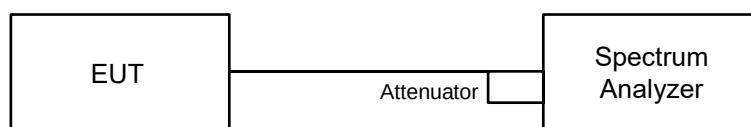


6.1.2 Test Procedure

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.

6.2 Power Spectral Density

6.2.1 Test Setup



6.2.2 Test Procedure

For specified measurement bandwidth 1 MHz:

Method SA-1

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

For specified measurement bandwidth 1 MHz:

Method SA-2

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

For specified measurement bandwidth 500 kHz:

Method SA-1

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
- Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where $\text{BWCF} = 10\log(500 \text{ kHz}/300 \text{ kHz})$
- Sweep points $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq$ RBW / 2, so that narrowband signals are not

lost between frequency bins.)

- e. Sweep time = auto, trigger set to “free run”.
- f. Trace average at least 100 traces in power averaging mode.
- g. Record the max value

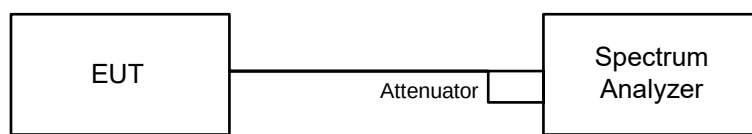
For specified measurement bandwidth 500 kHz:

Method SA-2

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

6.3 6 dB Bandwidth

6.3.1 Test Setup

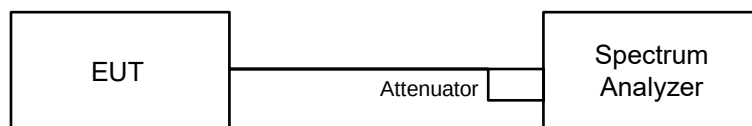


6.3.2 Test Procedure

- a. Set resolution bandwidth (RBW) = 100 kHz.
- b. Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$, 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.

6.4 Occupied Bandwidth

6.4.1 Test Setup

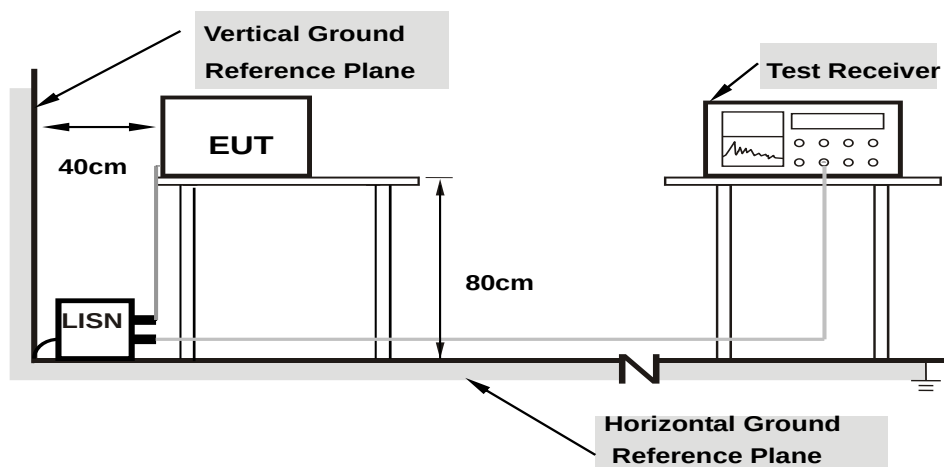


6.4.2 Test Procedure

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.

6.5 AC Power Conducted Emissions

6.5.1 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).

6.5.2 Test Procedure

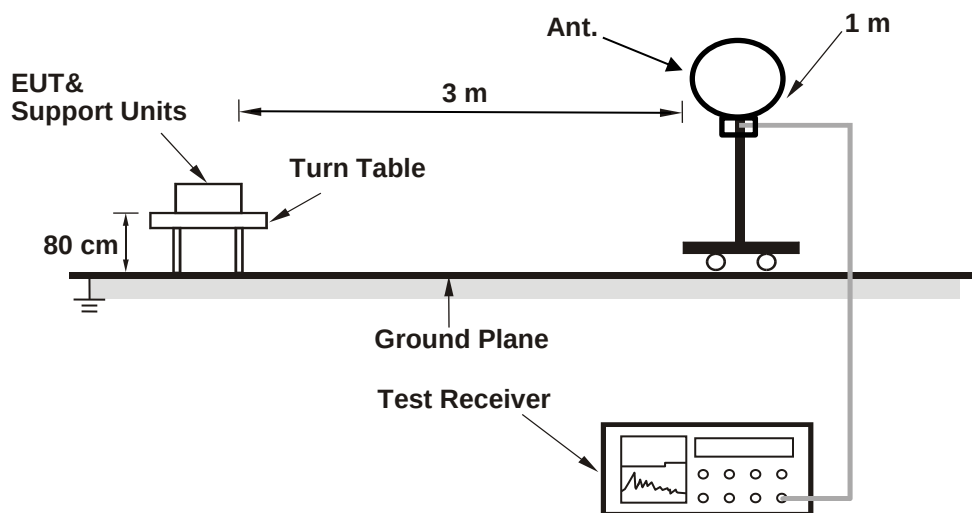
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The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

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

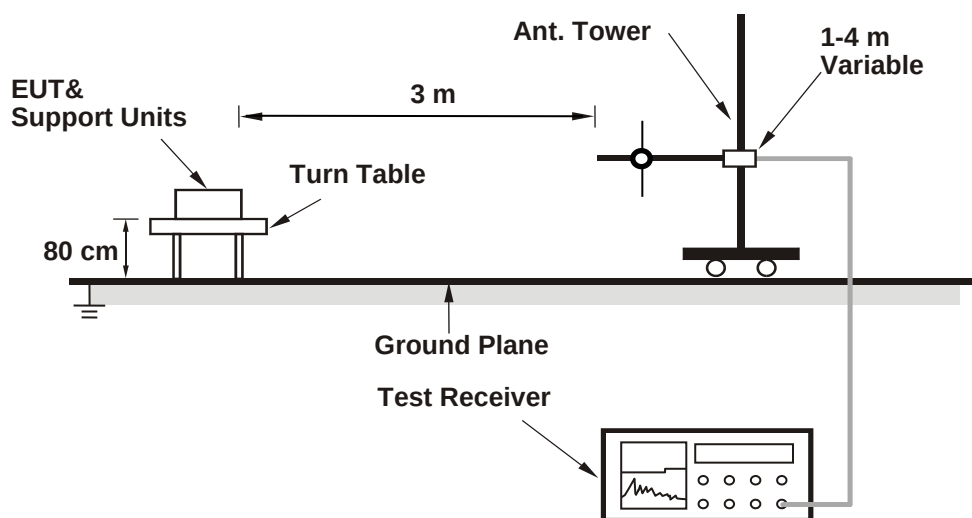
6.6 Unwanted Emissions below 1 GHz

6.6.1 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).

6.6.2 Test Procedure

For Radiated emission below 30 MHz

- 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.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- 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.
- 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:

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

For Radiated emission above 30 MHz

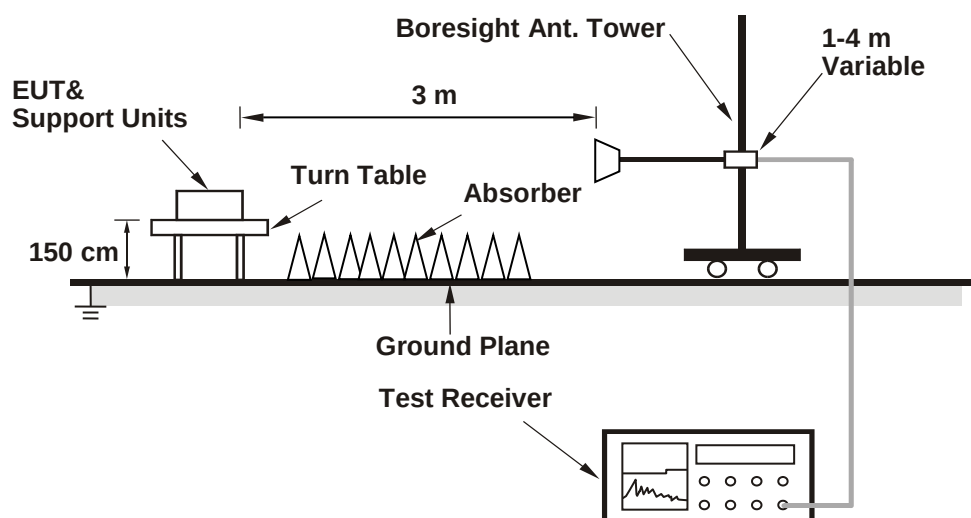
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top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

Notes:

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

6.7 Unwanted Emissions above 1 GHz

6.7.1 Test Setup



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

6.7.2 Test Procedure

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

Notes:

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

7 Test Results of Test Item

7.1 RF Output Power

Input Power:	3.87 Vdc	Environmental Conditions:	23°C, 62% RH	Tested By:	Dolly Chung
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802.11a

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	15.849	12.00	24	Pass
40	5200	15.922	12.02	24	Pass
48	5240	15.488	11.90	24	Pass
149	5745	14.454	11.60	30	Pass
157	5785	14.125	11.50	30	Pass
165	5825	14.256	11.54	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	15.885	12.01	24	Pass
40	5200	15.631	11.94	24	Pass
48	5240	16.032	12.05	24	Pass
149	5745	14.223	11.53	30	Pass
157	5785	13.49	11.30	30	Pass
165	5825	13.366	11.26	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
38	5190	15.849	12.00	24	Pass
46	5230	15.488	11.90	24	Pass
151	5755	14.454	11.60	30	Pass
159	5795	14.191	11.52	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
42	5210	16.982	12.30	24	Pass
155	5775	15.56	11.92	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the output power limit shall not be reduced.

7.2 Power Spectral Density

Input Power:	3.87 Vdc	Environmental Conditions:	23°C, 62% RH	Tested By:	Dolly Chung
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802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
36	5180	0.24	11	Pass
40	5200	-0.07	11	Pass
48	5240	-0.19	11	Pass

Note: For U-NII-1, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
36	5180	-0.75	0.15	-0.60	11	Pass
40	5200	-0.17	0.15	-0.02	11	Pass
48	5240	0.11	0.15	0.26	11	Pass

Note: For U-NII-1, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
38	5190	-2.90	0.15	-2.75	11	Pass
46	5230	-3.14	0.15	-2.99	11	Pass

Note: For U-NII-1, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
42	5210	-5.87	0.31	-5.56	11	Pass

Note: For U-NII-1, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
149	5745	-5.84	-3.62	30	Pass
157	5785	-6.69	-4.47	30	Pass
165	5825	-6.38	-4.16	30	Pass

Note: For U-NII-3, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
149	5745	-6.58	0.15	-4.21	30	Pass
157	5785	-6.55	0.15	-4.18	30	Pass
165	5825	-6.8	0.15	-4.43	30	Pass

Note: For U-NII-3, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
151	5755	-9.25	0.15	-6.88	30	Pass
159	5795	-9.58	0.15	-7.21	30	Pass

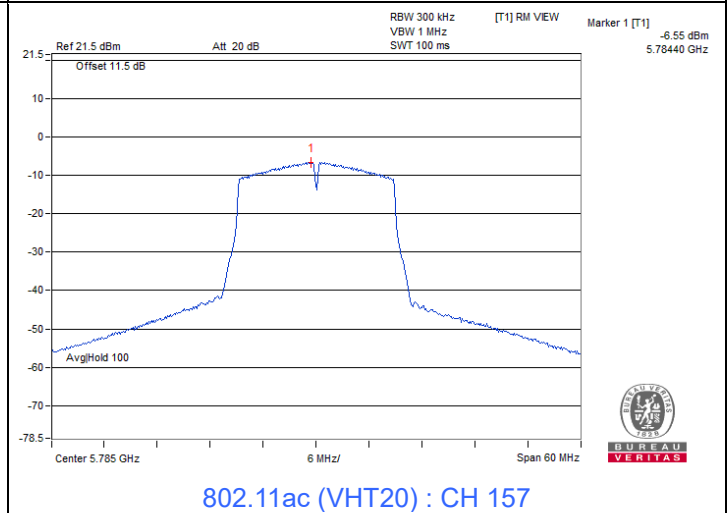
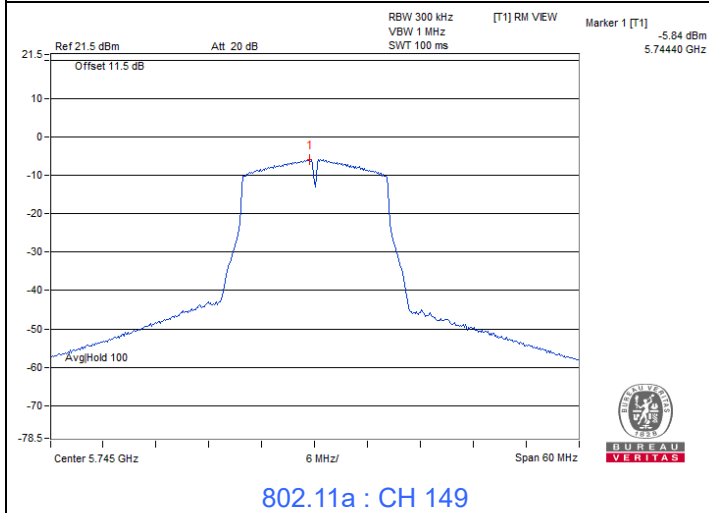
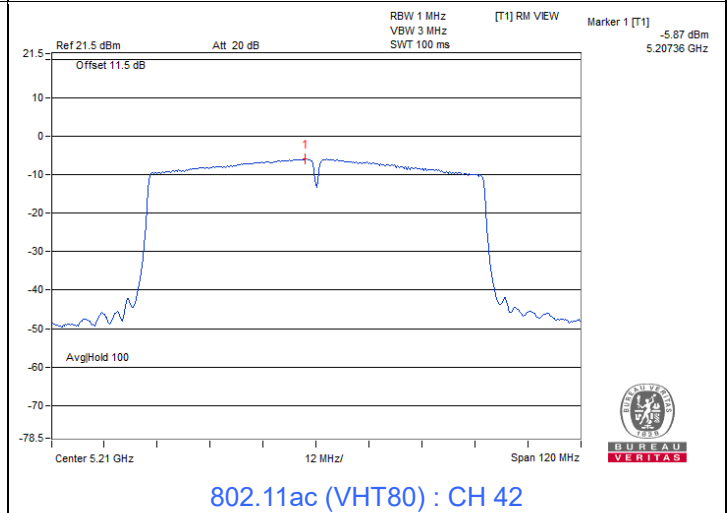
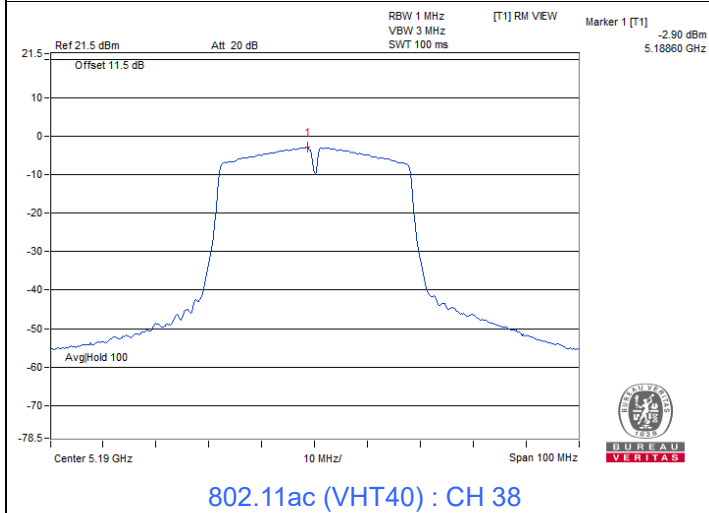
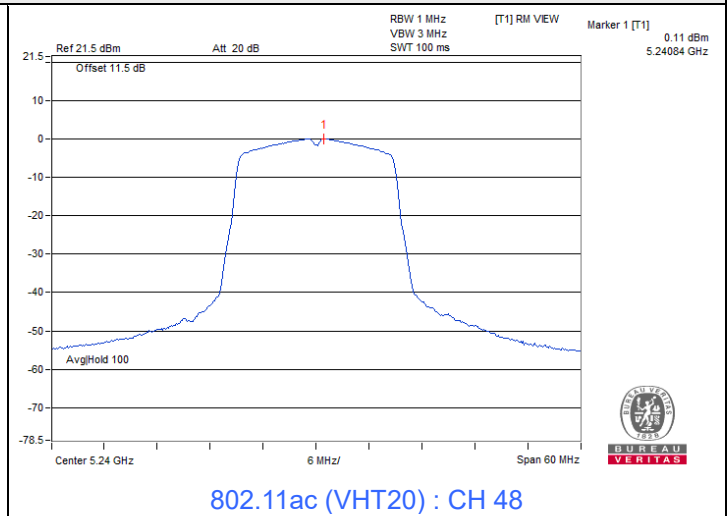
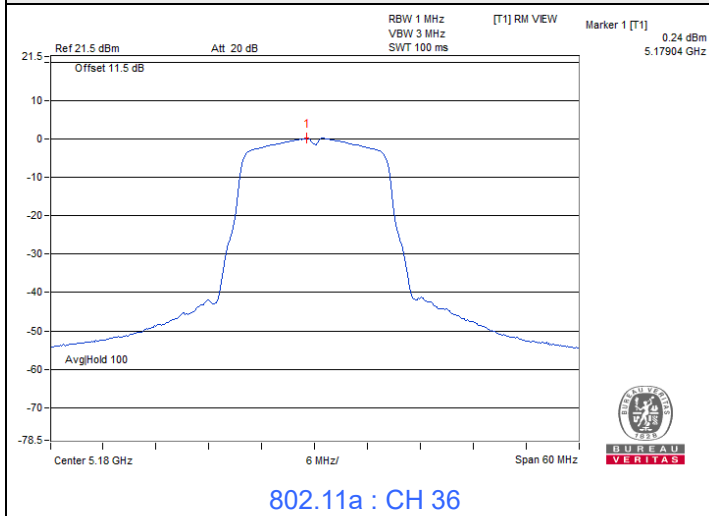
Note: For U-NII-3, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT80)

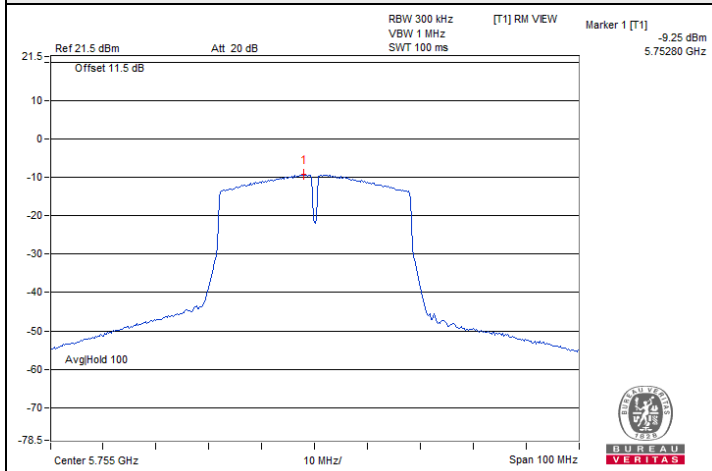
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
155	5775	-11.85	0.31	-9.32	30	Pass

Note: For U-NII-3, the antenna gain is 3.41 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

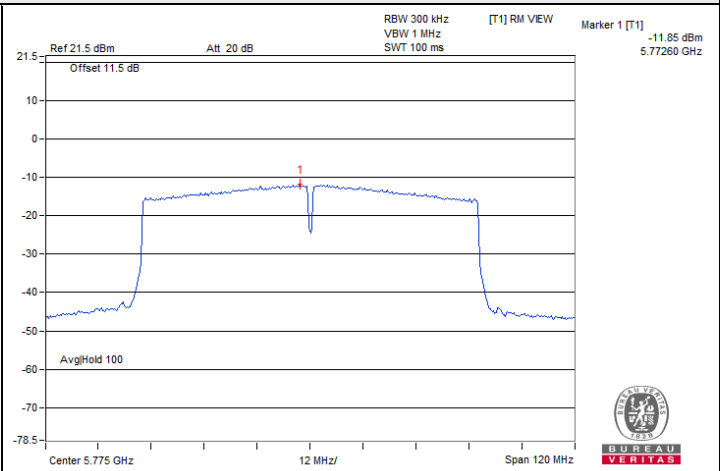
Spectrum Plot of Maximum Value



Spectrum Plot of Maximum Value



802.11ac (VHT40) : CH 151



802.11ac (VHT80) : CH 155

7.3 6 dB Bandwidth

Input Power:	3.87 Vdc	Environmental Conditions:	23°C, 62% RH	Tested By:	Dolly Chung
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802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
149	5745	15.09	0.5	Pass
157	5785	15.45	0.5	Pass
165	5825	14.17	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
149	5745	16.96	0.5	Pass
157	5785	13.46	0.5	Pass
165	5825	15.04	0.5	Pass

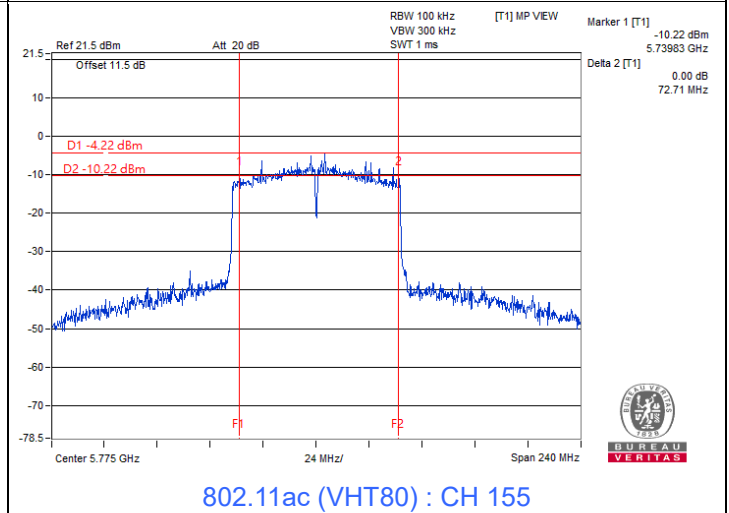
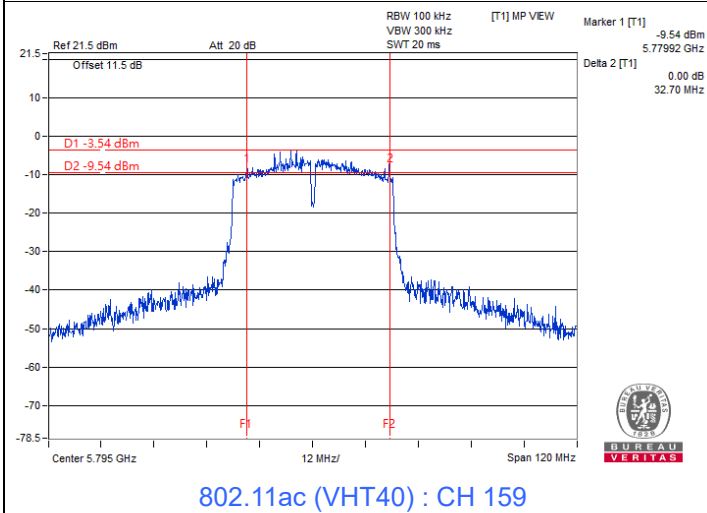
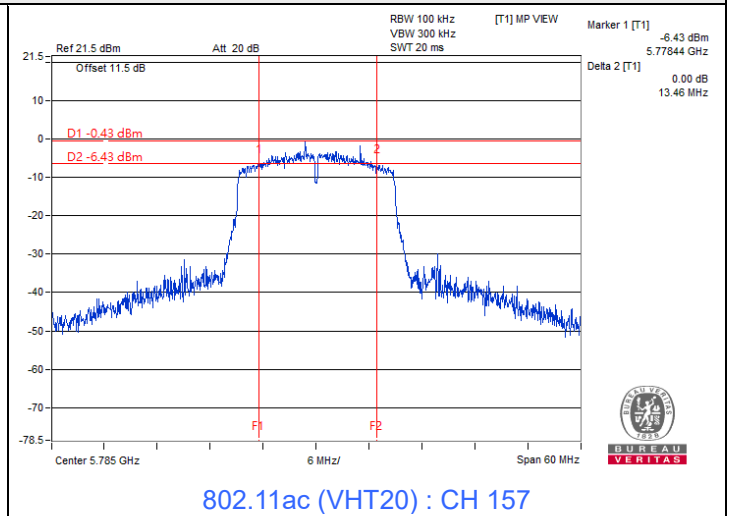
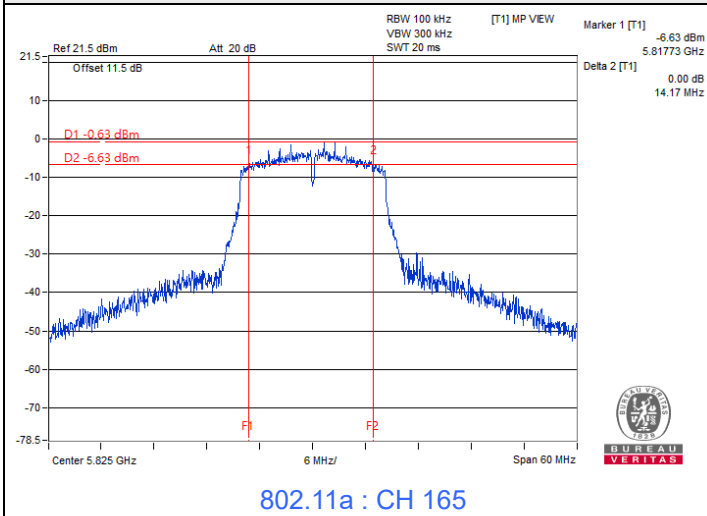
802.11ac (VHT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
151	5755	33.92	0.5	Pass
159	5795	32.7	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
155	5775	72.71	0.5	Pass

Spectrum Plot of Minimum Value



7.4 Occupied Bandwidth

Input Power:	3.87 Vdc	Environmental Conditions:	23°C, 62% RH	Tested By:	Dolly Chung
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802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.44
40	5200	16.44
48	5240	16.38
149	5745	16.32
157	5785	16.56
165	5825	16.56

802.11ac (VHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.64
40	5200	17.58
48	5240	17.58
149	5745	17.52
157	5785	17.58
165	5825	17.7

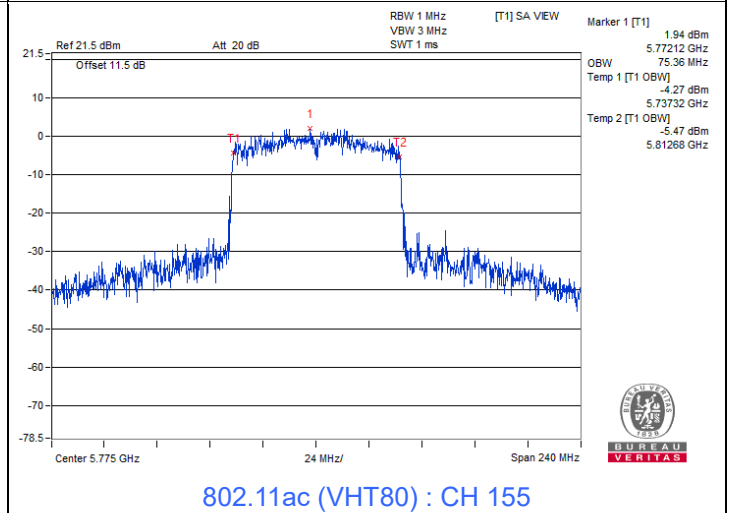
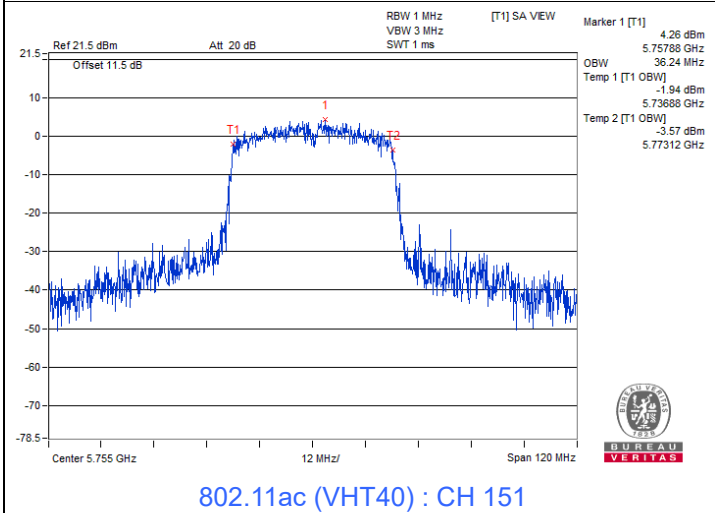
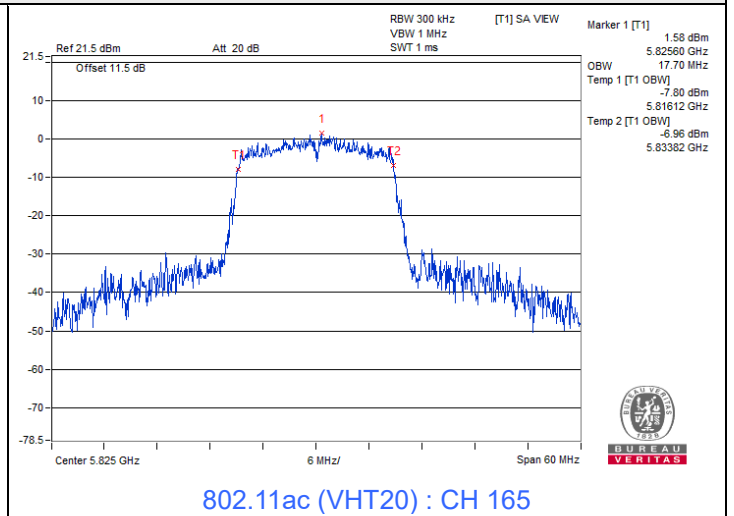
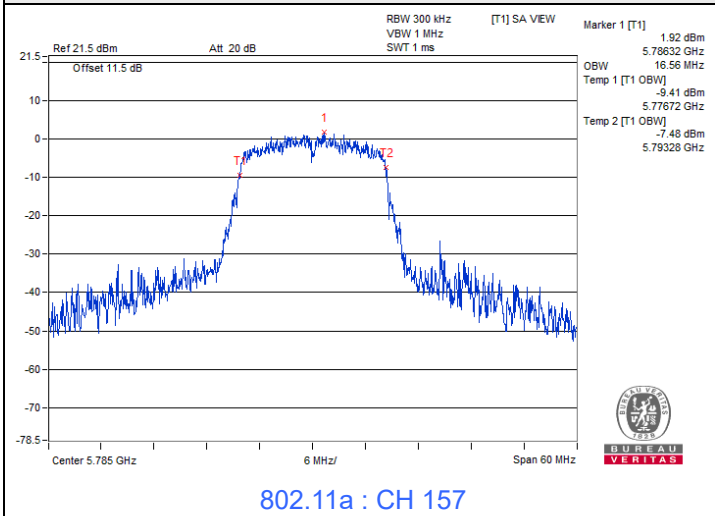
802.11ac (VHT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36
46	5230	35.88
151	5755	36.24
159	5795	36.12

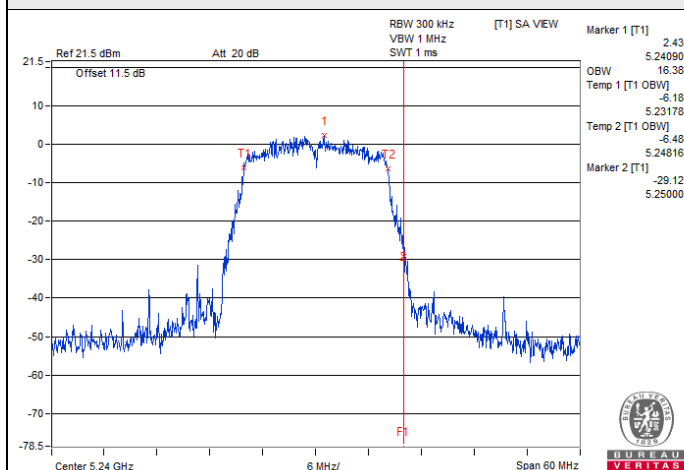
802.11ac (VHT80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.12
155	5775	75.36

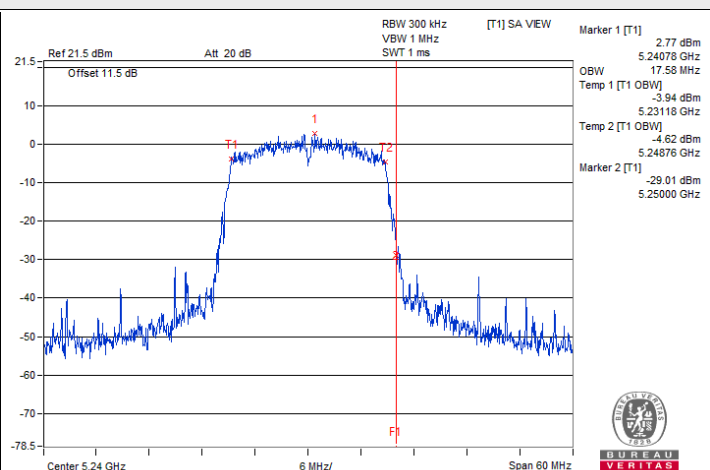
Spectrum Plot of Maximum Value



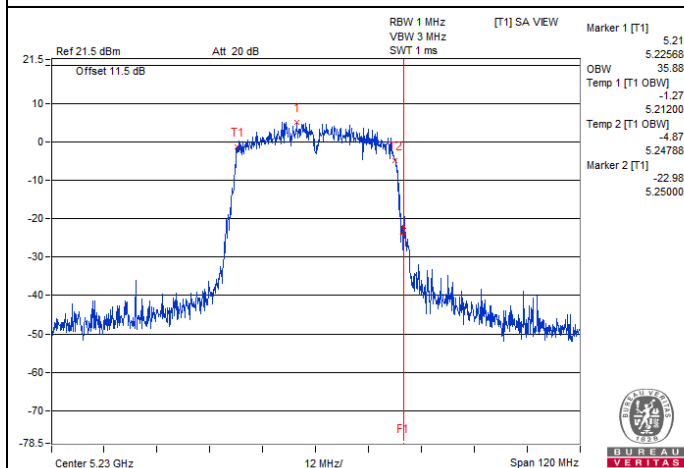
Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2A)



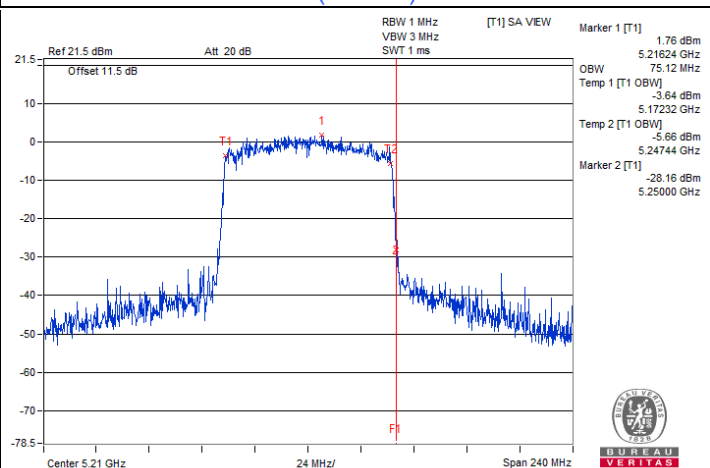
802.11a : CH 48



802.11ac (VHT20) : CH 48

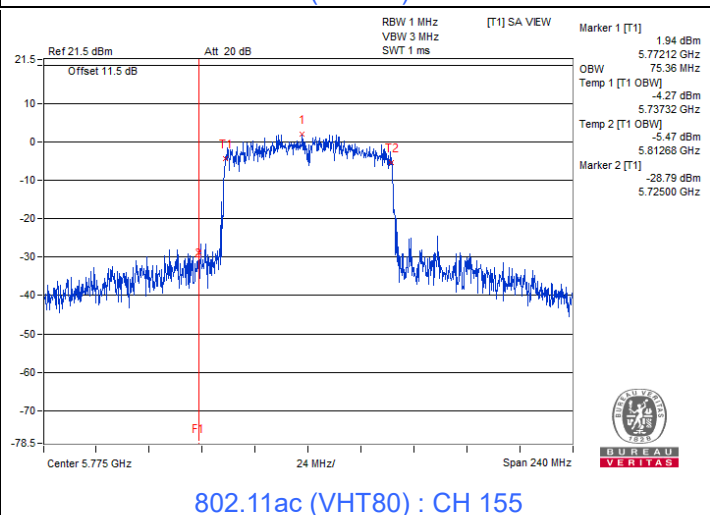
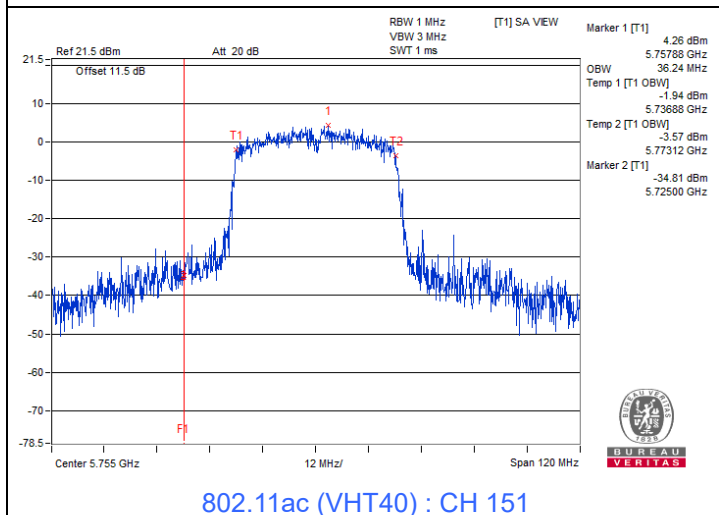
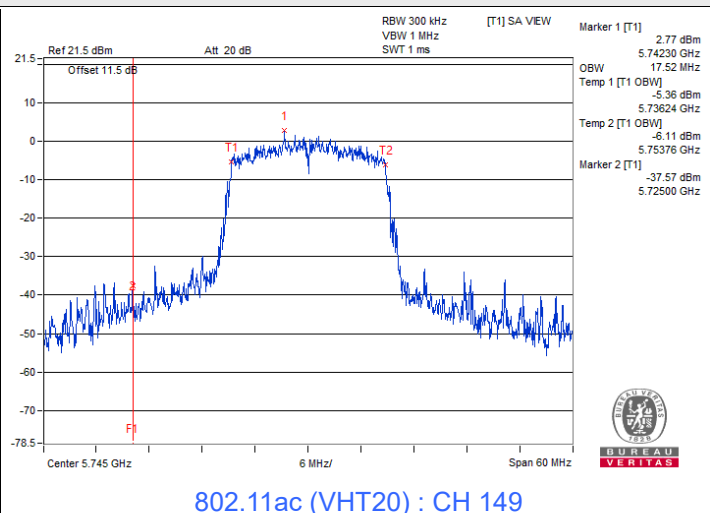
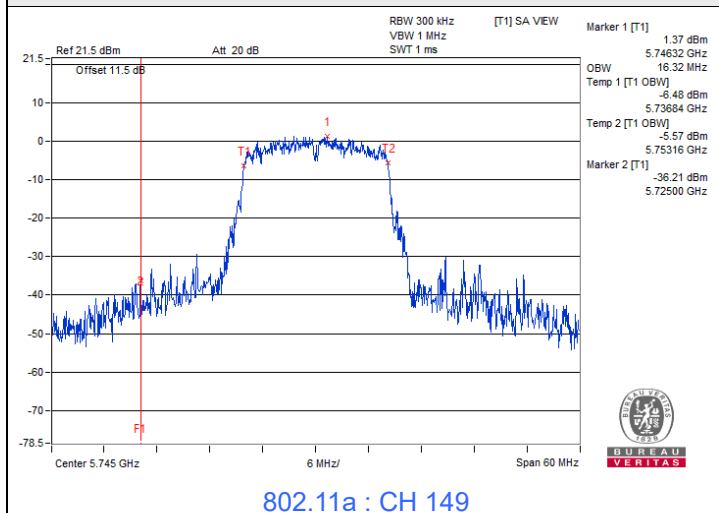


802.11ac (VHT40) : CH 46



802.11ac (VHT80) : CH 42

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



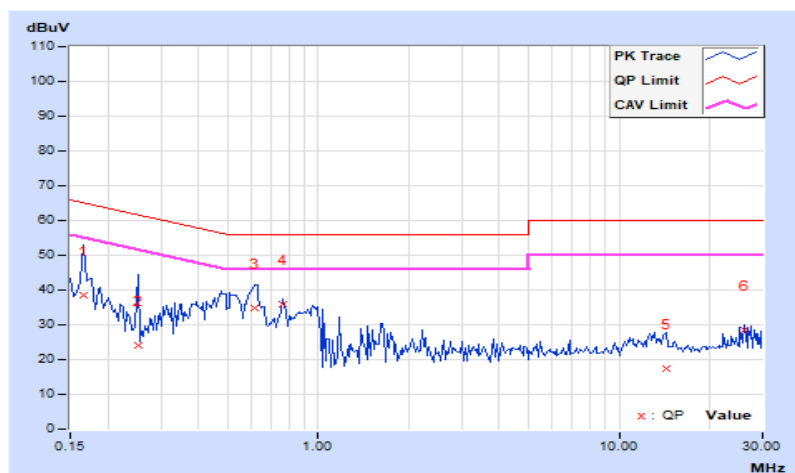
7.5 AC Power Conducted Emissions

RF Mode	802.11ac (VHT80)	Channel	CH 42 : 5210 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68% RH
Tested By	Roy Mai		

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	0.16562	9.97	28.40	8.42	38.37	18.39	65.18	55.18	-26.81	-36.79
2	0.25156	9.99	14.02	-6.48	24.01	3.51	61.71	51.71	-37.70	-48.20
3	0.61094	10.00	24.87	1.83	34.87	11.83	56.00	46.00	-21.13	-34.17
4	0.76328	10.01	25.80	24.68	35.81	34.69	56.00	46.00	-20.19	-11.31
5	14.27344	10.66	6.61	-9.31	17.27	1.35	60.00	50.00	-42.73	-48.65
6	25.95313	11.04	17.36	16.38	28.40	27.42	60.00	50.00	-31.60	-22.58

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

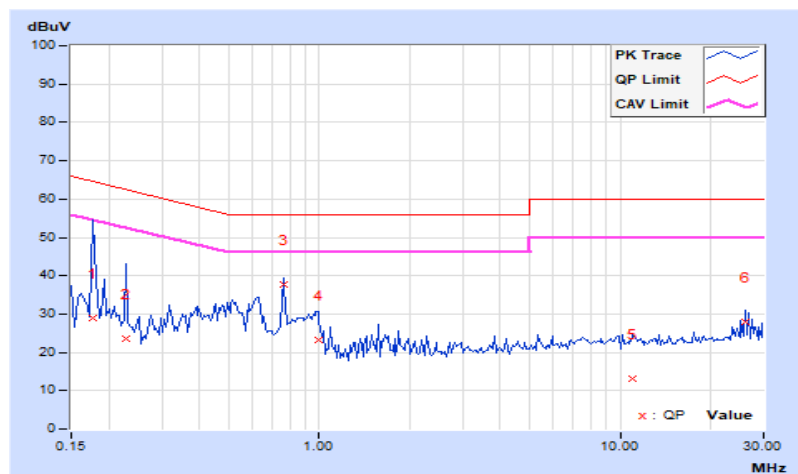


RF Mode	802.11ac (VHT80)	Channel	CH 42 : 5210 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	24 °C, 75% RH
Tested By	Roy Mai		

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	0.17734	10.01	19.06	-2.41	29.07	7.60	64.61	54.61	-35.54	-47.01
2	0.22812	10.02	13.55	-7.08	23.57	2.94	62.52	52.52	-38.95	-49.58
3	0.76328	10.03	27.64	27.55	37.67	37.58	56.00	46.00	-18.33	-8.42
4	0.99375	10.05	13.29	-8.44	23.34	1.61	56.00	46.00	-32.66	-44.39
5	10.98438	10.45	2.75	-9.82	13.20	0.63	60.00	50.00	-46.80	-49.37
6	25.95703	10.85	17.16	16.12	28.01	26.97	60.00	50.00	-31.99	-23.03

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



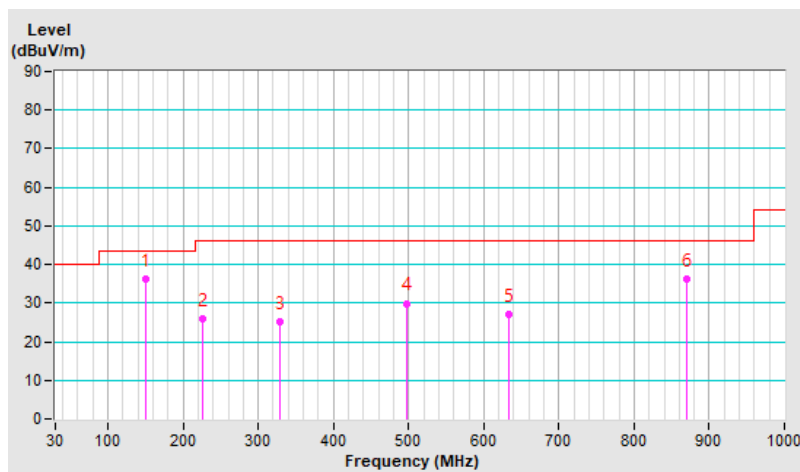
7.6 Unwanted Emissions below 1 GHz

RF Mode	802.11ac (VHT80)	Channel	CH 42 : 5210 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	8 °C, 52% RH
Tested By	Roy Mai		

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	150.01	36.3 QP	43.5	-7.2	1.00 H	126	48.7	-12.4
2	226.72	25.9 QP	46.0	-20.1	1.50 H	147	41.1	-15.2
3	329.22	25.2 QP	46.0	-20.8	2.00 H	221	36.0	-10.8
4	497.88	29.9 QP	46.0	-16.1	1.50 H	224	36.7	-6.8
5	632.52	26.9 QP	46.0	-19.1	2.00 H	33	30.7	-3.8
6	869.83	36.1 QP	46.0	-9.9	3.00 H	36	36.4	-0.3

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 frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

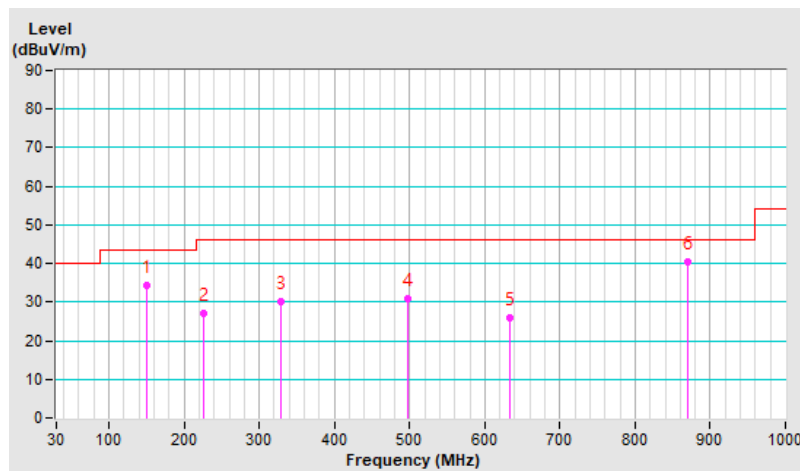


RF Mode	802.11ac (VHT80)	Channel	CH 42 : 5210 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	8 °C, 52% RH
Tested By	Roy Mai		

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	150.01	34.3 QP	43.5	-9.2	3.00 V	148	46.7	-12.4
2	226.72	26.9 QP	46.0	-19.1	1.00 V	153	42.1	-15.2
3	329.22	30.2 QP	46.0	-15.8	2.00 V	221	41.0	-10.8
4	497.88	30.9 QP	46.0	-15.1	1.00 V	251	37.7	-6.8
5	632.52	25.9 QP	46.0	-20.1	1.50 V	36	29.7	-3.8
6	869.83	40.3 QP	46.0	-5.7	3.00 V	247	40.6	-0.3

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 frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.7 Unwanted Emissions above 1 GHz

RF Mode	802.11a	Channel	CH 36 : 5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	67.4 PK	74.0	-6.6	2.32 H	47	64.7	2.7
2	5150.00	53.5 AV	54.0	-0.5	2.32 H	47	50.8	2.7
3	*5180.00	106.5 PK			2.32 H	47	103.9	2.6
4	*5180.00	97.2 AV			2.32 H	47	94.6	2.6
5	#10360.00	41.5 PK	68.2	-26.7	2.35 H	32	29.2	12.3
6	15540.00	38.4 PK	74.0	-35.6	3.62 H	250	26.5	11.9
7	15540.00	23.2 AV	54.0	-30.8	3.62 H	250	11.3	11.9
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	67.3 PK	74.0	-6.7	1.15 V	265	64.6	2.7
2	5150.00	53.8 AV	54.0	-0.2	1.15 V	265	51.1	2.7
3	*5180.00	108.6 PK			1.15 V	265	106.0	2.6
4	*5180.00	98.9 AV			1.15 V	265	96.3	2.6
5	#10360.00	42.8 PK	68.2	-25.4	1.89 V	32	30.5	12.3
6	15540.00	39.1 PK	74.0	-34.9	2.22 V	55	27.2	11.9
7	15540.00	24.7 AV	54.0	-29.3	2.22 V	55	12.8	11.9

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 40 : 5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	109.5 PK			2.50 H	46	106.9	2.6
2	*5200.00	99.1 AV			2.50 H	46	96.5	2.6
3	#10400.00	43.9 PK	68.2	-24.3	1.59 H	58	31.5	12.4
4	15600.00	41.2 PK	74.0	-32.8	2.47 H	281	29.4	11.8
5	15600.00	25.4 AV	54.0	-28.6	2.47 H	281	13.6	11.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	111.9 PK			1.02 V	266	109.3	2.6
2	*5200.00	101.6 AV			1.02 V	266	99.0	2.6
3	#10400.00	45.8 PK	68.2	-22.4	2.20 V	37	33.4	12.4
4	15600.00	42.9 PK	74.0	-31.1	1.10 V	45	31.1	11.8
5	15600.00	26.8 AV	54.0	-27.2	1.10 V	45	15.0	11.8

Remarks:

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

RF Mode	802.11a	Channel	CH 48 : 5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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			2.74 H	6	107.3	2.4
2	*5240.00	99.5 AV			2.74 H	6	97.1	2.4
3	5350.00	48.5 PK	74.0	-25.5	2.79 H	6	46.2	2.3
4	5350.00	37.1 AV	54.0	-16.9	2.79 H	6	34.8	2.3
5	#10480.00	41.3 PK	68.2	-26.9	2.40 H	28	28.9	12.4
6	15720.00	38.2 PK	74.0	-35.8	3.63 H	248	25.9	12.3
7	15720.00	22.8 AV	54.0	-31.2	3.63 H	248	10.5	12.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	111.3 PK			1.39 V	265	108.9	2.4
2	*5240.00	101.5 AV			1.39 V	265	99.1	2.4
3	5350.00	50.1 PK	74.0	-23.9	1.39 V	265	47.8	2.3
4	5350.00	40.0 AV	54.0	-14.0	1.39 V	265	37.7	2.3
5	#10480.00	45.7 PK	68.2	-22.5	2.22 V	47	33.3	12.4
6	15720.00	43.1 PK	74.0	-30.9	1.04 V	43	30.8	12.3
7	15720.00	27.2 AV	54.0	-26.8	1.04 V	43	14.9	12.3

Remarks:

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

RF Mode	802.11a	Channel	CH 149 : 5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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	#5647.40	51.2 PK	68.2	-17.0	1.50 H	192	48.8	2.4
2	*5745.00	103.2 PK			1.50 H	192	100.5	2.7
3	*5745.00	92.9 AV			1.50 H	192	90.2	2.7
4	#5940.70	50.8 PK	68.2	-17.4	1.50 H	192	47.7	3.1
5	11490.00	51.6 PK	74.0	-22.4	2.41 H	21	38.5	13.1
6	11490.00	38.7 AV	54.0	-15.3	2.41 H	21	25.6	13.1
7	#17235.00	41.0 PK	68.2	-27.2	3.59 H	239	23.7	17.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5644.30	51.1 PK	68.2	-17.1	1.03 V	265	48.7	2.4
2	*5745.00	104.6 PK			1.03 V	265	101.9	2.7
3	*5745.00	94.8 AV			1.03 V	265	92.1	2.7
4	#5996.90	51.7 PK	68.2	-16.5	1.03 V	265	48.8	2.9
5	11490.00	52.8 PK	74.0	-21.2	1.96 V	200	39.7	13.1
6	11490.00	38.9 AV	54.0	-15.1	1.96 V	200	25.8	13.1
7	#17235.00	41.7 PK	68.2	-26.5	2.14 V	47	24.4	17.3

Remarks:

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

RF Mode	802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5601.20	48.9 PK	68.2	-19.3	2.41 H	191	46.5	2.4
2	*5785.00	104.6 PK			2.41 H	191	101.8	2.8
3	*5785.00	94.2 AV			2.41 H	191	91.4	2.8
4	#5947.10	50.8 PK	68.2	-17.4	2.41 H	191	47.8	3.0
5	11570.00	51.8 PK	74.0	-22.2	2.39 H	23	38.6	13.2
6	11570.00	38.7 AV	54.0	-15.3	2.39 H	23	25.5	13.2
7	#17355.00	40.7 PK	68.2	-27.5	3.60 H	255	22.6	18.1
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	#5568.70	48.1 PK	68.2	-20.1	1.00 V	249	45.7	2.4
2	*5785.00	104.7 PK			1.00 V	249	101.9	2.8
3	*5785.00	94.6 AV			1.00 V	249	91.8	2.8
4	#6001.40	49.2 PK	68.2	-19.0	1.00 V	249	46.3	2.9
5	11570.00	52.9 PK	74.0	-21.1	1.92 V	185	39.7	13.2
6	11570.00	39.3 AV	54.0	-14.7	1.92 V	185	26.1	13.2
7	#17355.00	41.8 PK	68.2	-26.4	2.09 V	45	23.7	18.1

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	802.11a	Channel	CH 165 : 5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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	#5646.70	48.8 PK	68.2	-19.4	2.10 H	191	46.4	2.4
2	*5825.00	103.5 PK			2.10 H	191	100.5	3.0
3	*5825.00	92.9 AV			2.10 H	191	89.9	3.0
4	#5967.60	49.9 PK	68.2	-18.3	2.10 H	191	47.0	2.9
5	11650.00	52.0 PK	74.0	-22.0	2.36 H	16	39.1	12.9
6	11650.00	38.9 AV	54.0	-15.1	2.36 H	16	26.0	12.9
7	#17475.00	40.2 PK	68.2	-28.0	3.61 H	262	21.1	19.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5626.10	48.9 PK	68.2	-19.3	1.04 V	257	46.5	2.4
2	*5825.00	103.9 PK			1.04 V	257	100.9	3.0
3	*5825.00	93.3 AV			1.04 V	257	90.3	3.0
4	#5977.40	51.3 PK	68.2	-16.9	1.04 V	257	48.4	2.9
5	11650.00	53.1 PK	74.0	-20.9	1.86 V	172	40.2	12.9
6	11650.00	39.7 AV	54.0	-14.3	1.86 V	172	26.8	12.9
7	#17475.00	41.5 PK	68.2	-26.7	2.07 V	50	22.4	19.1

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 36 : 5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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	65.8 PK	74.0	-8.2	2.34 H	45	63.1	2.7
2	5150.00	53.4 AV	54.0	-0.6	2.34 H	45	50.7	2.7
3	*5180.00	104.7 PK			2.34 H	45	102.1	2.6
4	*5180.00	96.7 AV			2.34 H	45	94.1	2.6
5	#10360.00	42.2 PK	68.2	-26.0	2.31 H	48	29.9	12.3
6	15540.00	38.6 PK	74.0	-35.4	3.61 H	260	26.7	11.9
7	15540.00	23.4 AV	54.0	-30.6	3.61 H	260	11.5	11.9
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	65.8 PK	74.0	-8.2	1.18 V	263	63.1	2.7
2	5150.00	53.5 AV	54.0	-0.5	1.18 V	263	50.8	2.7
3	*5180.00	105.6 PK			1.18 V	263	103.0	2.6
4	*5180.00	97.3 AV			1.18 V	263	94.7	2.6
5	#10360.00	46.0 PK	68.2	-22.2	2.23 V	45	33.7	12.3
6	15540.00	42.6 PK	74.0	-31.4	1.14 V	32	30.7	11.9
7	15540.00	26.6 AV	54.0	-27.4	1.14 V	32	14.7	11.9

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 40 : 5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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	108.9 PK			2.34 H	231	106.3	2.6
2	*5200.00	99.9 AV			2.34 H	231	97.3	2.6
3	#10400.00	41.4 PK	68.2	-26.8	2.33 H	21	29.0	12.4
4	15600.00	38.5 PK	74.0	-35.5	3.59 H	240	26.7	11.8
5	15600.00	23.3 AV	54.0	-30.7	3.59 H	240	11.5	11.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	109.8 PK			1.08 V	267	107.2	2.6
2	*5200.00	100.5 AV			1.08 V	267	97.9	2.6
3	#10400.00	45.4 PK	68.2	-22.8	2.19 V	22	33.0	12.4
4	15600.00	43.4 PK	74.0	-30.6	1.05 V	39	31.6	11.8
5	15600.00	27.2 AV	54.0	-26.8	1.05 V	39	15.4	11.8

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 48 : 5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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	105.9 PK			1.50 H	3	103.5	2.4
2	*5240.00	97.2 AV			1.50 H	3	94.8	2.4
3	5350.00	47.9 PK	74.0	-26.1	1.50 H	3	45.6	2.3
4	5350.00	37.3 AV	54.0	-16.7	1.50 H	3	35.0	2.3
5	#10480.00	41.3 PK	68.2	-26.9	2.33 H	31	28.9	12.4
6	15720.00	38.5 PK	74.0	-35.5	3.67 H	260	26.2	12.3
7	15720.00	23.6 AV	54.0	-30.4	3.67 H	260	11.3	12.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	109.9 PK			1.03 V	265	107.5	2.4
2	*5240.00	100.7 AV			1.03 V	265	98.3	2.4
3	5350.00	49.5 PK	74.0	-24.5	1.03 V	265	47.2	2.3
4	5350.00	37.8 AV	54.0	-16.2	1.03 V	265	35.5	2.3
5	#10480.00	45.4 PK	68.2	-22.8	2.14 V	43	33.0	12.4
6	15720.00	42.8 PK	74.0	-31.2	1.05 V	39	30.5	12.3
7	15720.00	26.6 AV	54.0	-27.4	1.05 V	39	14.3	12.3

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 149 : 5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5642.50	51.2 PK	68.2	-17.0	2.92 H	238	48.8	2.4
2	*5745.00	105.7 PK			2.92 H	238	103.0	2.7
3	*5745.00	95.5 AV			2.92 H	238	92.8	2.7
4	#5944.80	49.8 PK	68.2	-18.4	2.92 H	238	46.7	3.1
5	11490.00	51.3 PK	74.0	-22.7	2.43 H	8	38.2	13.1
6	11490.00	38.3 AV	54.0	-15.7	2.43 H	8	25.2	13.1
7	#17235.00	40.7 PK	68.2	-27.5	3.64 H	265	23.4	17.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5626.10	52.2 PK	68.2	-16.0	1.00 V	268	49.8	2.4
2	*5745.00	104.2 PK			1.00 V	268	101.5	2.7
3	*5745.00	94.6 AV			1.00 V	268	91.9	2.7
4	#5979.30	50.8 PK	68.2	-17.4	1.00 V	268	47.9	2.9
5	11490.00	52.7 PK	74.0	-21.3	1.92 V	186	39.6	13.1
6	11490.00	39.1 AV	54.0	-14.9	1.92 V	186	26.0	13.1
7	#17235.00	41.7 PK	68.2	-26.5	2.10 V	55	24.4	17.3

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 157 : 5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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	#1627.33	34.2 PK	68.2	-34.0	1.69 H	167	40.1	-5.9
2	#1627.33	24.8 AV	54.0	-29.2	1.69 H	167	30.7	-5.9
3	#3254.67	37.7 PK	68.2	-30.5	1.47 H	134	39.5	-1.8
4	#3254.67	27.3 AV	54.0	-26.7	1.47 H	134	29.1	-1.8
5	4882.00	40.5 PK	74.0	-33.5	1.70 H	101	38.4	2.1
6	4882.00	31.4 AV	54.0	-22.6	1.70 H	101	29.3	2.1
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	#1627.33	35.6 PK	68.2	-32.6	1.71 V	84	41.5	-5.9
2	#1627.33	26.6 AV	54.0	-27.4	1.71 V	84	32.5	-5.9
3	#3254.67	38.5 PK	68.2	-29.7	1.59 V	84	40.3	-1.8
4	#3254.67	28.0 AV	54.0	-26.0	1.59 V	84	29.8	-1.8
5	4882.00	41.8 PK	74.0	-32.2	1.66 V	121	39.7	2.1
6	4882.00	32.8 AV	54.0	-21.2	1.66 V	121	30.7	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.
5. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11ac (VHT20)	Channel	CH 165 : 5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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	1601.33	34.1 PK	74.0	-39.9	1.67 H	163	40.0	-5.9
2	1601.33	24.4 AV	54.0	-29.6	1.67 H	163	30.3	-5.9
3	#3202.67	37.4 PK	68.2	-30.8	1.42 H	129	38.9	-1.5
4	#3202.67	27.1 AV	54.0	-26.9	1.42 H	129	28.6	-1.5
5	4804.00	40.8 PK	74.0	-33.2	1.75 H	111	38.6	2.2
6	4804.00	31.6 AV	54.0	-22.4	1.75 H	111	29.4	2.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1601.33	35.6 PK	74.0	-38.4	1.73 V	88	41.5	-5.9
2	1601.33	26.7 AV	54.0	-27.3	1.73 V	88	32.6	-5.9
3	#3202.67	38.9 PK	68.2	-29.3	1.62 V	85	40.4	-1.5
4	#3202.67	28.4 AV	54.0	-25.6	1.62 V	85	29.9	-1.5
5	4804.00	41.9 PK	74.0	-32.1	1.70 V	117	39.7	2.2
6	4804.00	33.1 AV	54.0	-20.9	1.70 V	117	30.9	2.2

Remarks:

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

RF Mode	802.11ac (VHT40)	Channel	CH 38 : 5190 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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	63.6 PK	74.0	-10.4	2.32 H	227	60.9	2.7
2	5150.00	50.0 AV	54.0	-4.0	2.32 H	227	47.3	2.7
3	*5190.00	100.9 PK			2.32 H	227	98.3	2.6
4	*5190.00	92.6 AV			2.32 H	227	90.0	2.6
5	#10380.00	41.3 PK	68.2	-26.9	2.31 H	36	29.0	12.3
6	15570.00	38.6 PK	74.0	-35.4	3.57 H	250	26.8	11.8
7	15570.00	23.3 AV	54.0	-30.7	3.57 H	250	11.5	11.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	68.4 PK	74.0	-5.6	1.19 V	272	65.7	2.7
2	5150.00	53.5 AV	54.0	-0.5	1.19 V	272	50.8	2.7
3	*5190.00	100.9 PK			1.19 V	272	98.3	2.6
4	*5190.00	92.8 AV			1.19 V	272	90.2	2.6
5	#10380.00	46.2 PK	68.2	-22.0	2.16 V	42	33.9	12.3
6	15570.00	43.4 PK	74.0	-30.6	1.09 V	49	31.6	11.8
7	15570.00	27.3 AV	54.0	-26.7	1.09 V	49	15.5	11.8

Remarks:

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

RF Mode	802.11ac (VHT40)	Channel	CH 46 : 5230 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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	105.9 PK			2.28 H	41	103.5	2.4
2	*5230.00	97.1 AV			2.28 H	41	94.7	2.4
3	5350.00	53.1 PK	74.0	-20.9	2.28 H	41	50.8	2.3
4	5350.00	42.6 AV	54.0	-11.4	2.28 H	41	40.3	2.3
5	#10460.00	41.7 PK	68.2	-26.5	2.33 H	38	29.3	12.4
6	15690.00	38.0 PK	74.0	-36.0	3.58 H	270	25.6	12.4
7	15690.00	22.7 AV	54.0	-31.3	3.58 H	270	10.3	12.4
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	*5230.00	105.7 PK			1.26 V	264	103.3	2.4
2	*5230.00	97.8 AV			1.26 V	264	95.4	2.4
3	5350.00	55.9 PK	74.0	-18.1	1.26 V	264	53.6	2.3
4	5350.00	43.3 AV	54.0	-10.7	1.26 V	264	41.0	2.3
5	#10460.00	46.0 PK	68.2	-22.2	2.26 V	39	33.6	12.4
6	15690.00	42.8 PK	74.0	-31.2	1.14 V	35	30.4	12.4
7	15690.00	26.6 AV	54.0	-27.4	1.14 V	35	14.2	12.4

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, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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	#5649.40	57.2 PK	68.2	-11.0	2.23 H	237	54.8	2.4
2	*5755.00	103.0 PK			2.23 H	237	100.3	2.7
3	*5755.00	93.5 AV			2.23 H	237	90.8	2.7
4	#5930.30	50.1 PK	68.2	-18.1	2.23 H	237	47.0	3.1
5	11510.00	52.1 PK	74.0	-21.9	2.39 H	19	38.9	13.2
6	11510.00	38.8 AV	54.0	-15.2	2.39 H	19	25.6	13.2
7	#17265.00	40.1 PK	68.2	-28.1	3.64 H	257	22.6	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	#5643.30	58.2 PK	68.2	-10.0	1.02 V	271	55.8	2.4
2	*5755.00	100.8 PK			1.02 V	271	98.1	2.7
3	*5755.00	92.0 AV			1.02 V	271	89.3	2.7
4	#5941.80	50.7 PK	68.2	-17.5	1.02 V	271	47.6	3.1
5	11510.00	53.2 PK	74.0	-20.8	1.96 V	172	40.0	13.2
6	11510.00	39.5 AV	54.0	-14.5	1.96 V	172	26.3	13.2
7	#17265.00	42.0 PK	68.2	-26.2	2.14 V	40	24.5	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.
6. " # " : The radiated frequency is out of the restricted band.

RF Mode	802.11ac (VHT40)	Channel	CH 159 : 5795 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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	#5648.80	52.6 PK	68.2	-15.6	2.23 H	128	50.2	2.4
2	*5795.00	102.1 PK			2.23 H	128	99.1	3.0
3	*5795.00	92.4 AV			2.23 H	128	89.4	3.0
4	#5939.10	55.2 PK	68.2	-13.0	2.23 H	128	52.1	3.1
5	11590.00	52.1 PK	74.0	-21.9	2.41 H	38	39.0	13.1
6	11590.00	39.0 AV	54.0	-15.0	2.41 H	38	25.9	13.1
7	#17385.00	40.6 PK	68.2	-27.6	3.57 H	269	22.2	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5646.20	53.3 PK	68.2	-14.9	1.00 V	268	50.9	2.4
2	*5795.00	101.7 PK			1.00 V	268	98.7	3.0
3	*5795.00	91.9 AV			1.00 V	268	88.9	3.0
4	#5928.40	54.4 PK	68.2	-13.8	1.00 V	268	51.3	3.1
5	11590.00	53.8 PK	74.0	-20.2	1.93 V	174	40.7	13.1
6	11590.00	40.0 AV	54.0	-14.0	1.93 V	174	26.9	13.1
7	#17385.00	41.6 PK	68.2	-26.6	2.08 V	38	23.2	18.4

Remarks:

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

RF Mode	802.11ac (VHT80)	Channel	CH 42 : 5210 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.8 PK	74.0	-7.2	2.19 H	45	64.1	2.7
2	5150.00	53.4 AV	54.0	-0.6	2.19 H	45	50.7	2.7
3	*5210.00	97.9 PK			2.19 H	45	95.4	2.5
4	*5210.00	88.7 AV			2.19 H	45	86.2	2.5
5	5350.00	48.5 PK	74.0	-25.5	2.19 H	45	46.2	2.3
6	5350.00	38.6 AV	54.0	-15.4	2.19 H	45	36.3	2.3
7	#10420.00	41.4 PK	68.2	-26.8	2.29 H	51	29.0	12.4
8	15630.00	38.7 PK	74.0	-35.3	3.59 H	252	26.7	12.0
9	15630.00	23.3 AV	54.0	-30.7	3.59 H	252	11.3	12.0
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	66.8 PK	74.0	-7.2	1.35 V	264	64.1	2.7
2	5150.00	53.9 AV	54.0	-0.1	1.35 V	264	51.2	2.7
3	*5210.00	97.8 PK			1.35 V	264	95.3	2.5
4	*5210.00	89.5 AV			1.35 V	264	87.0	2.5
5	5350.00	50.8 PK	74.0	-23.2	1.35 V	264	48.5	2.3
6	5350.00	39.7 AV	54.0	-14.3	1.35 V	264	37.4	2.3
7	#10420.00	45.2 PK	68.2	-23.0	2.19 V	45	32.8	12.4
8	15630.00	43.1 PK	74.0	-30.9	1.10 V	59	31.1	12.0
9	15630.00	26.8 AV	54.0	-27.2	1.10 V	59	14.8	12.0

Remarks:

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

RF Mode	802.11ac (VHT80)	Channel	CH 155 : 5775 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	12 °C, 60% RH
Tested By	Roy Mai		

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	#5648.50	68.0 PK	68.2	-0.2	1.99 H	237	65.6	2.4
2	*5775.00	99.2 PK			1.99 H	237	96.4	2.8
3	*5775.00	89.3 AV			1.99 H	237	86.5	2.8
4	#5926.40	66.6 PK	68.2	-1.6	1.99 H	237	63.5	3.1
5	11550.00	52.2 PK	74.0	-21.8	2.45 H	38	39.1	13.1
6	11550.00	38.8 AV	54.0	-15.2	2.45 H	38	25.7	13.1
7	#17325.00	40.2 PK	68.2	-28.0	3.55 H	268	22.3	17.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5646.80	66.3 PK	68.2	-1.9	1.17 V	248	63.9	2.4
2	*5775.00	96.7 PK			1.17 V	248	93.9	2.8
3	*5775.00	86.5 AV			1.17 V	248	83.7	2.8
4	#5933.40	61.0 PK	68.2	-7.2	1.17 V	248	57.9	3.1
5	11550.00	52.9 PK	74.0	-21.1	1.87 V	192	39.8	13.1
6	11550.00	39.0 AV	54.0	-15.0	1.87 V	192	25.9	13.1
7	#17325.00	42.3 PK	68.2	-25.9	2.11 V	51	24.4	17.9

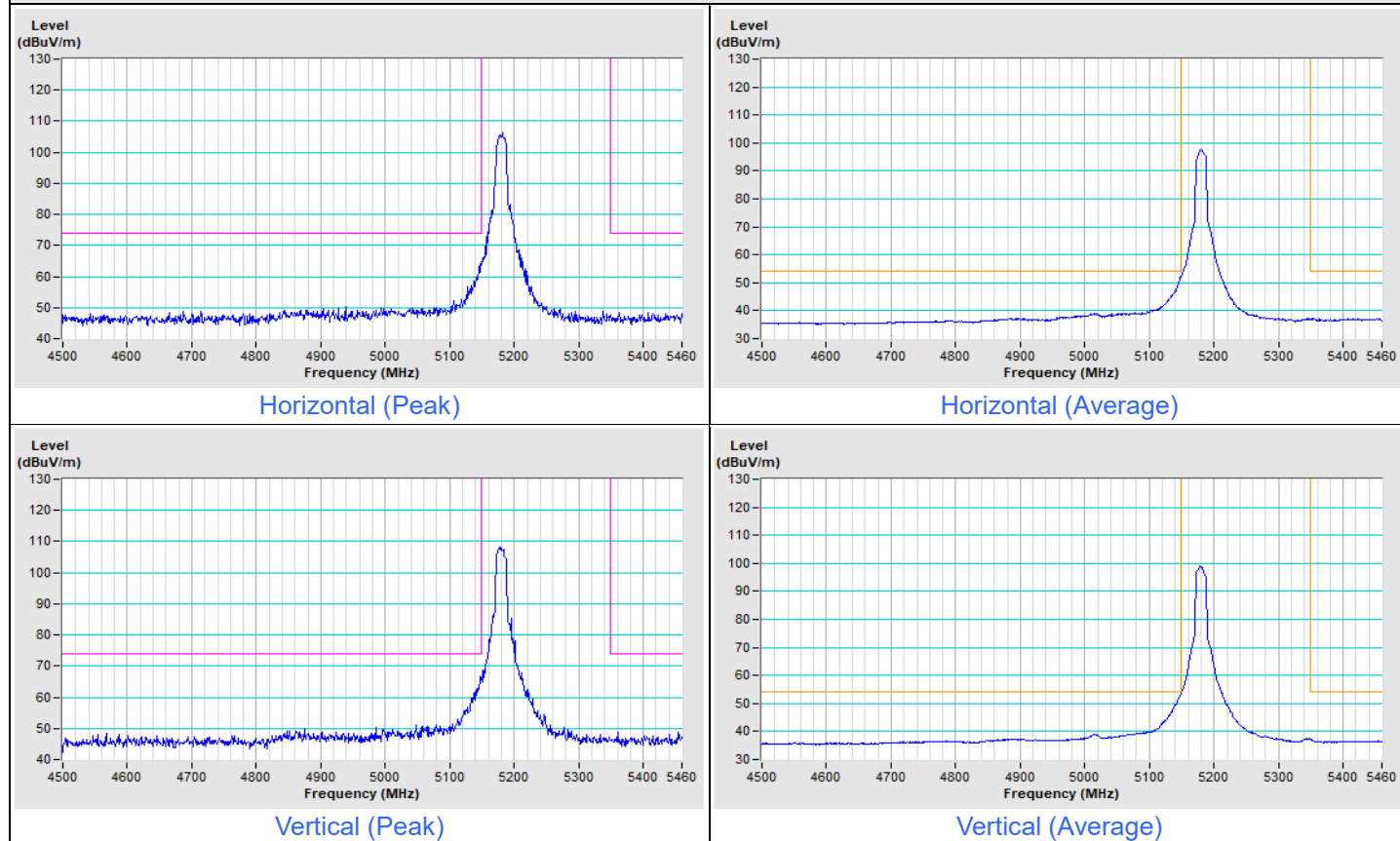
Remarks:

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

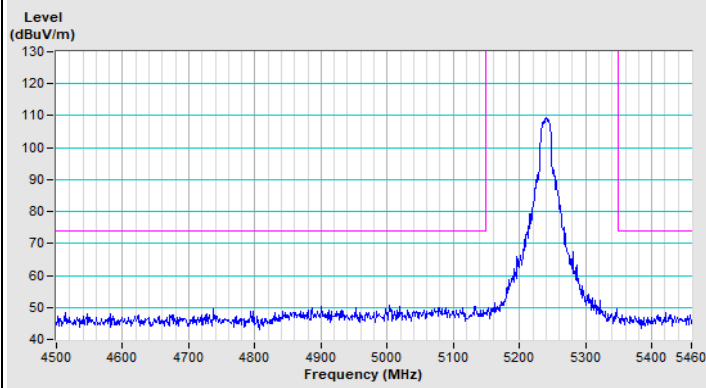
Plot of Band Edge

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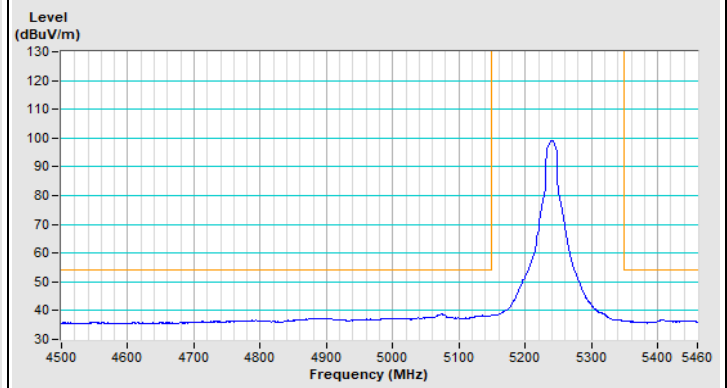
802.11a Channel 36



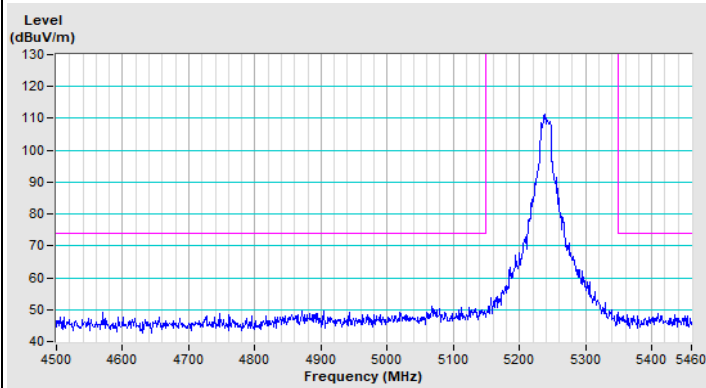
802.11a Channel 48



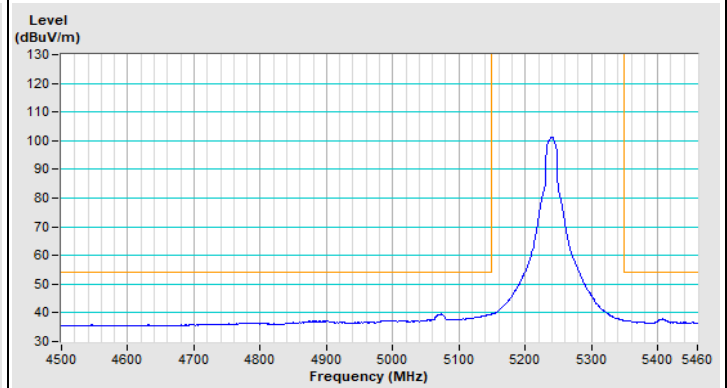
Horizontal (Peak)



Horizontal (Average)

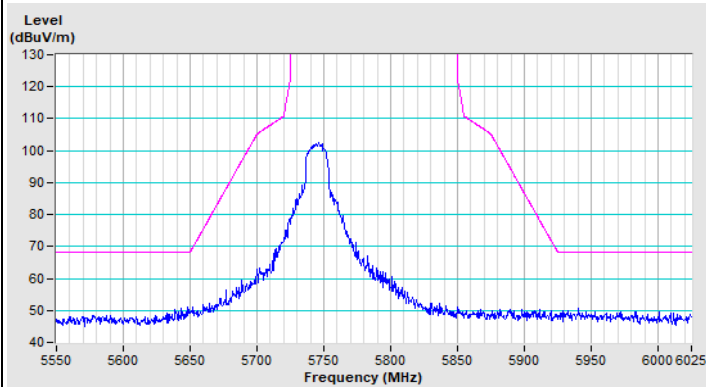


Vertical (Peak)

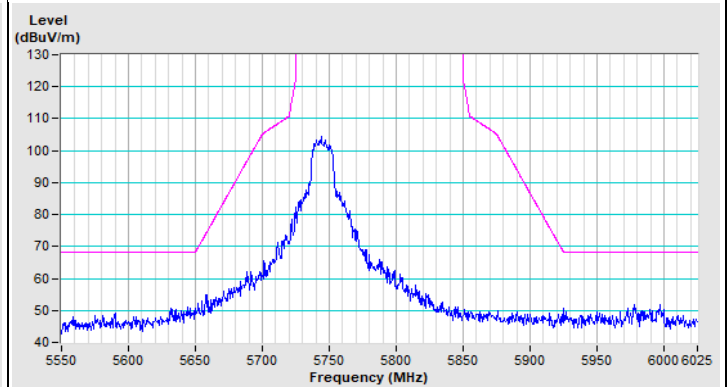


Vertical (Average)

802.11a Channel 149

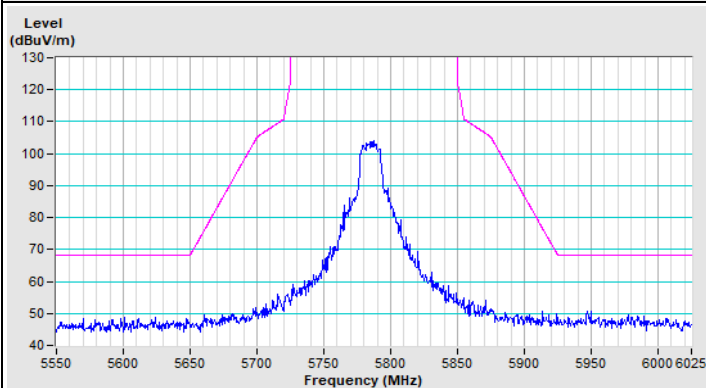


Horizontal (Peak)

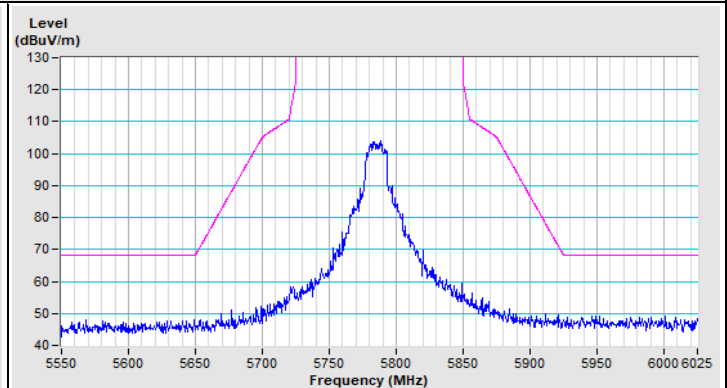


Vertical (Peak)

802.11a Channel 157

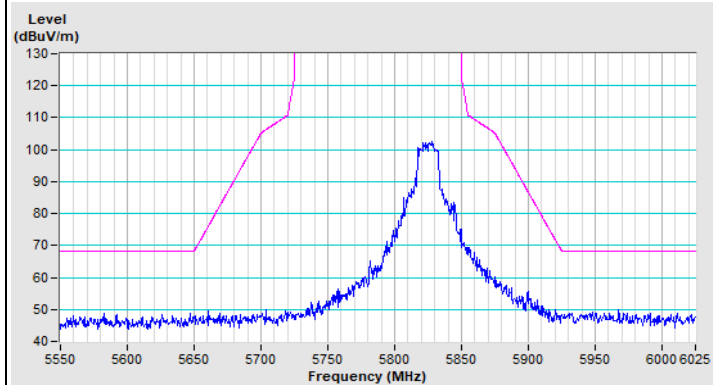


Horizontal (Peak)

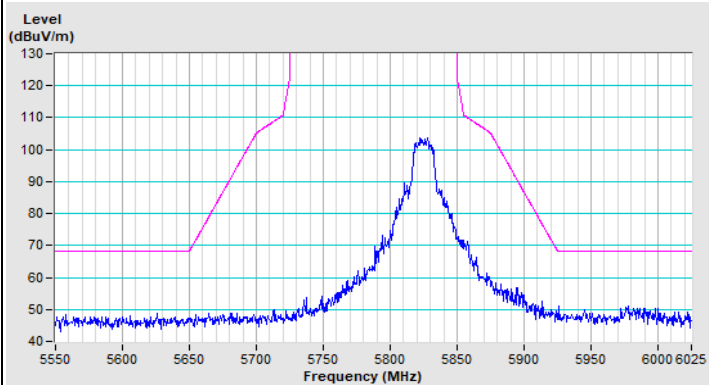


Vertical (Peak)

802.11a Channel 165



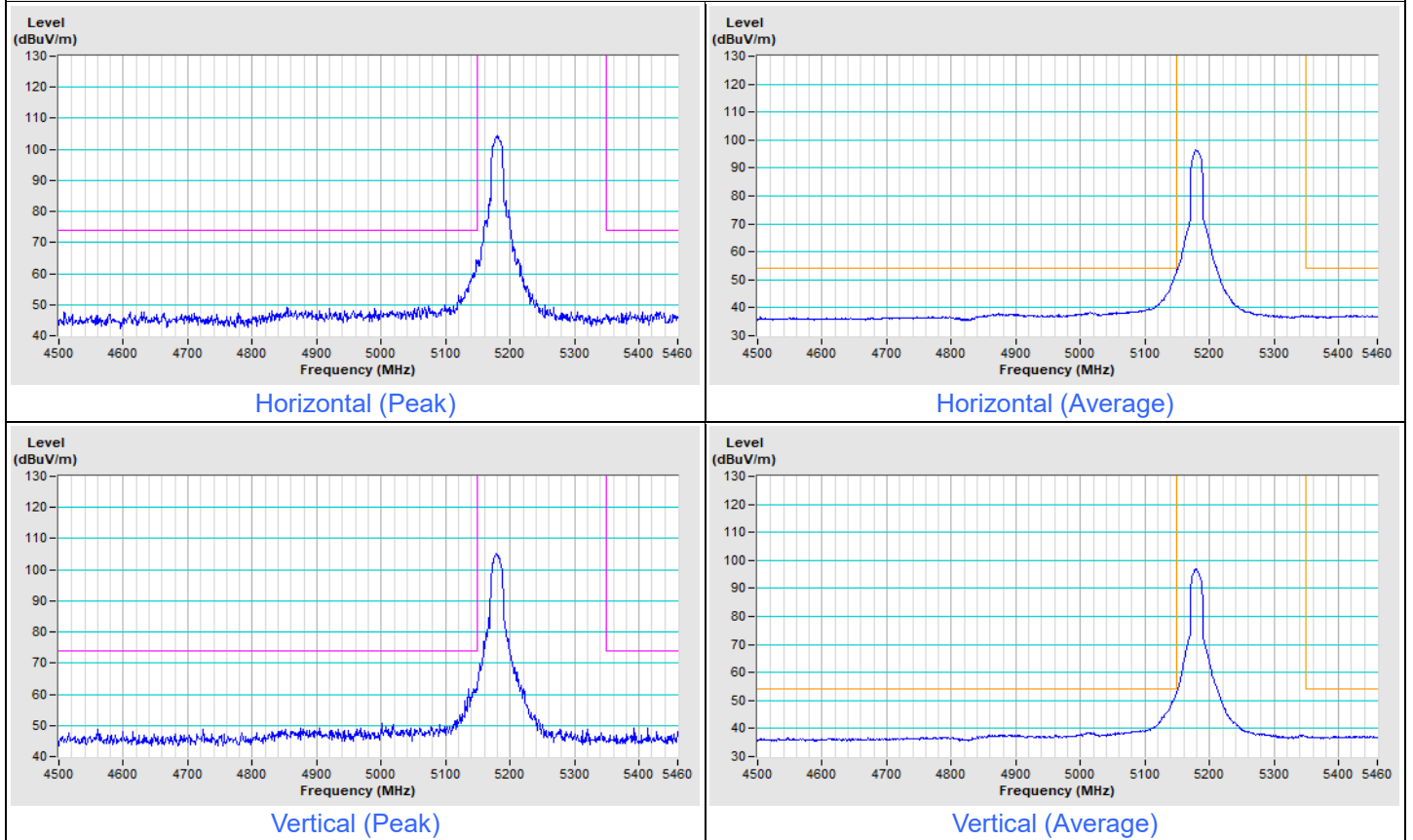
Horizontal (Peak)



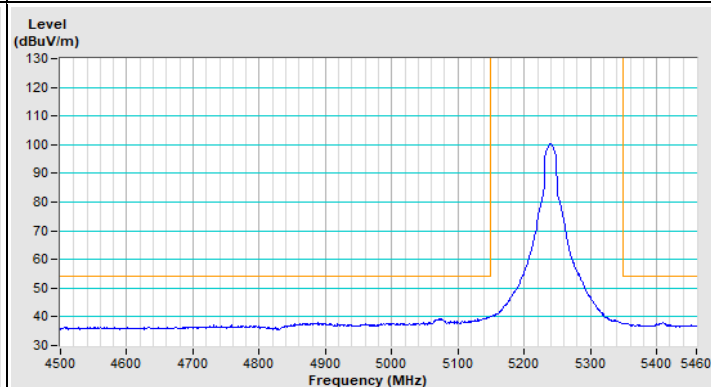
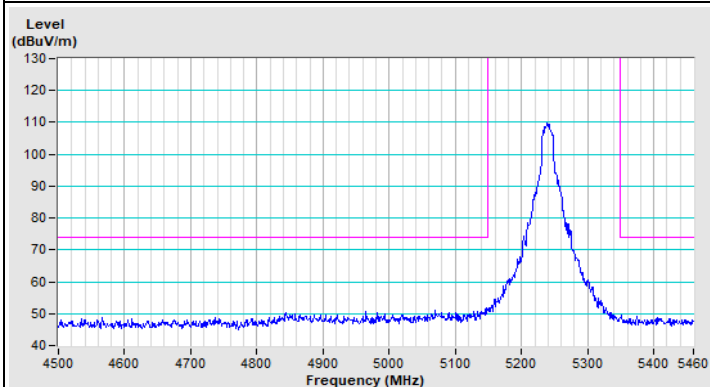
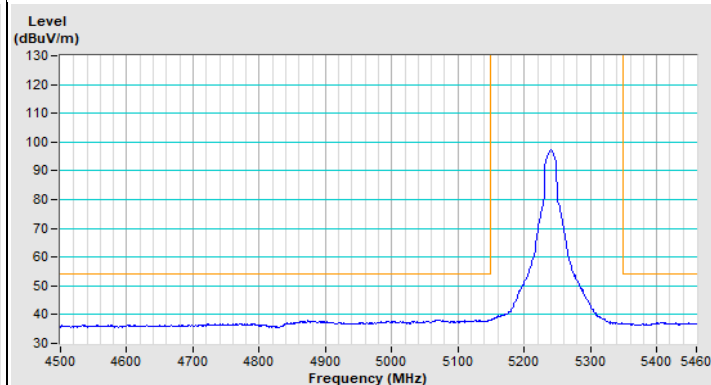
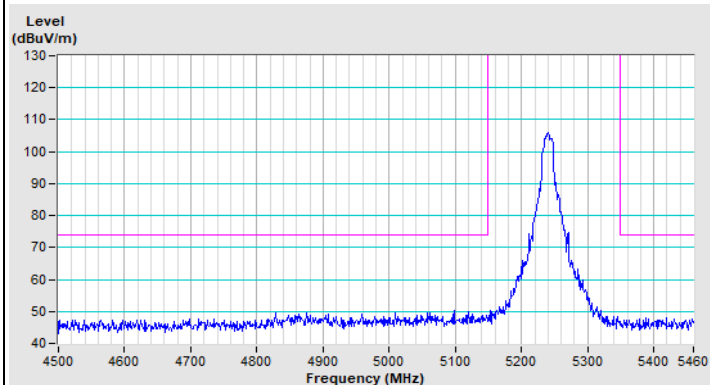
Vertical (Peak)

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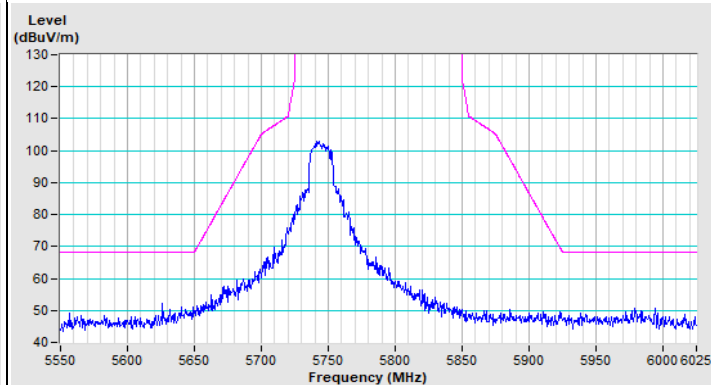
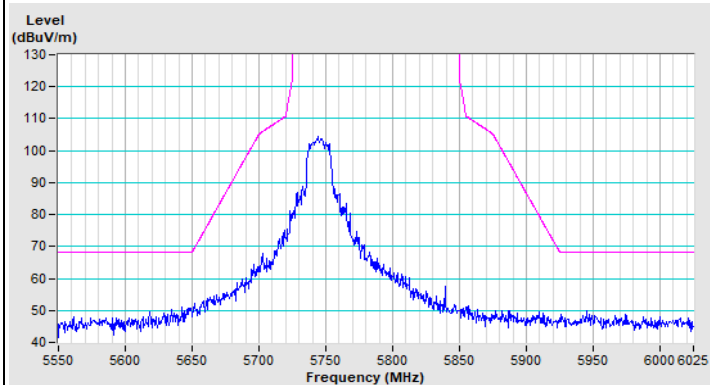
802.11ac (VHT20) Channel 36



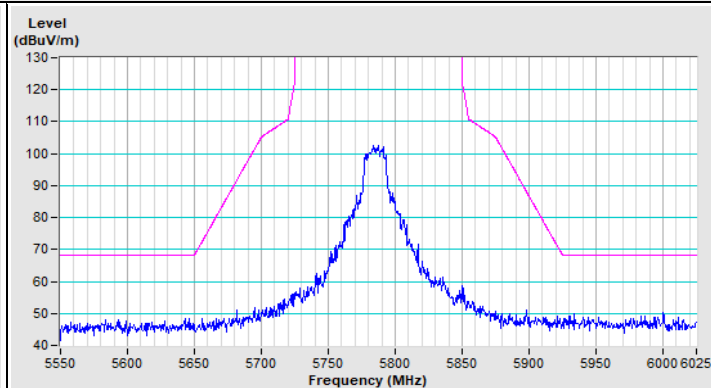
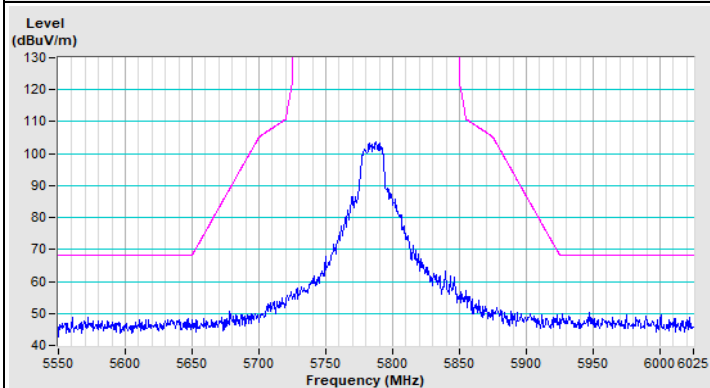
802.11ac (VHT20) Channel 48



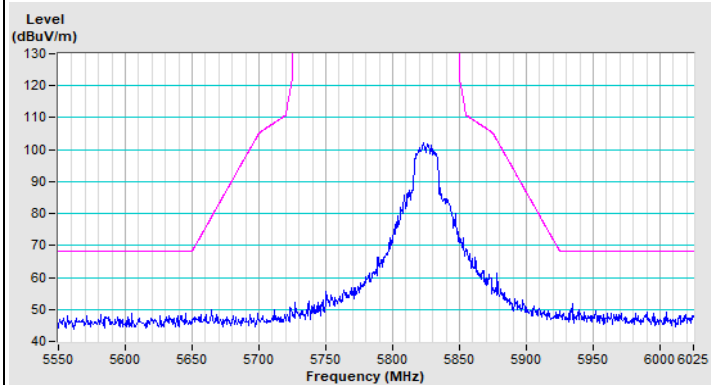
802.11ac (VHT20) Channel 149



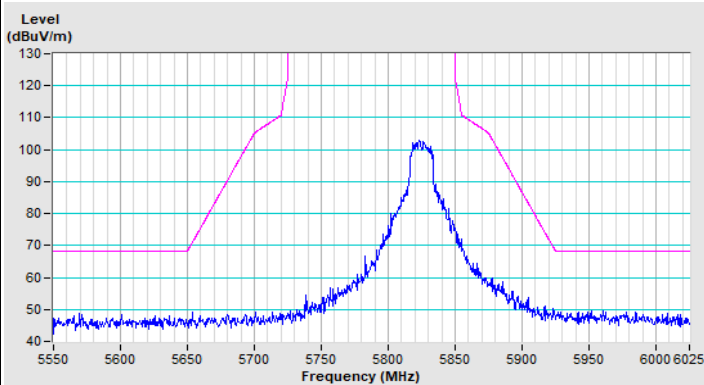
802.11ac (VHT20) Channel 157



802.11ac (VHT20) Channel 165



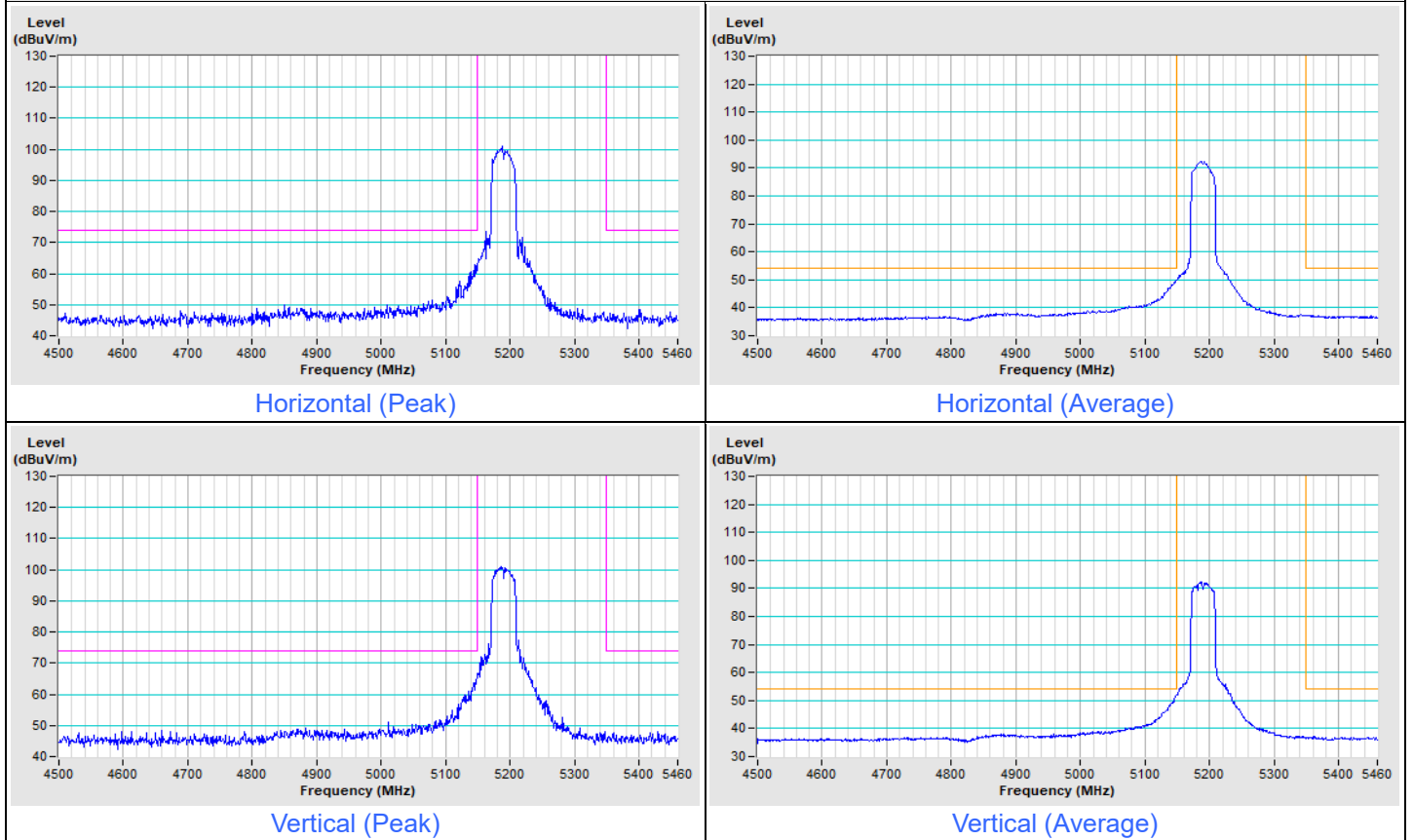
Horizontal (Peak)



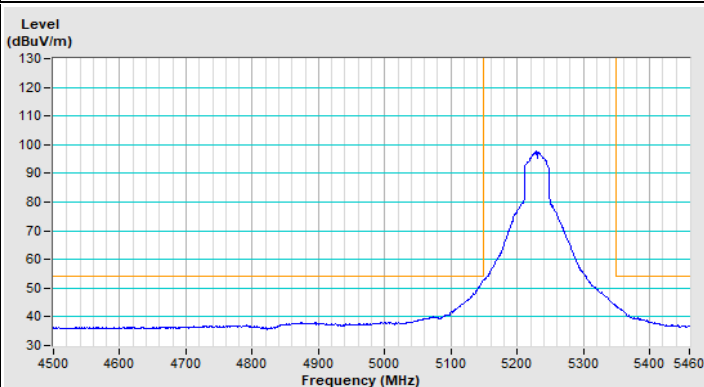
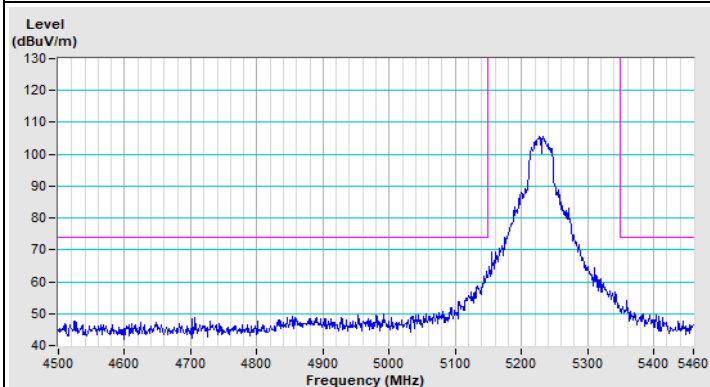
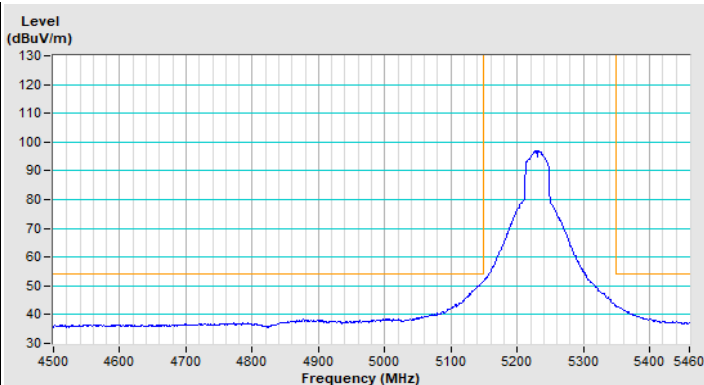
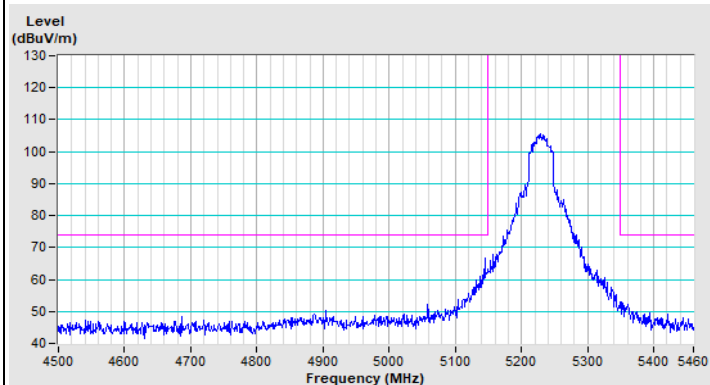
Vertical (Peak)

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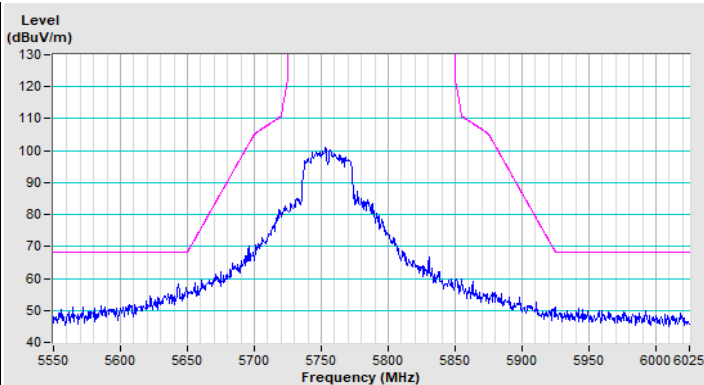
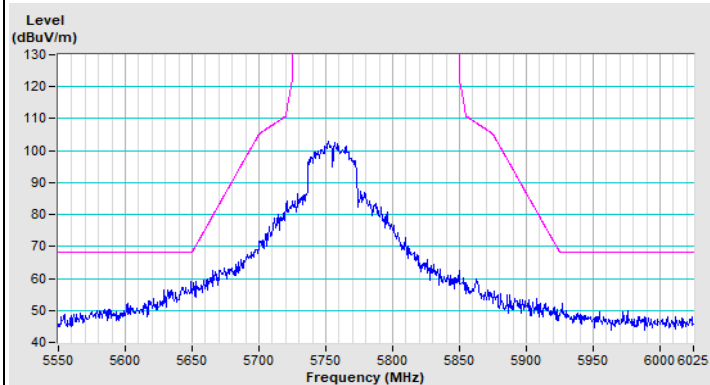
802.11ac (VHT40) Channel 38



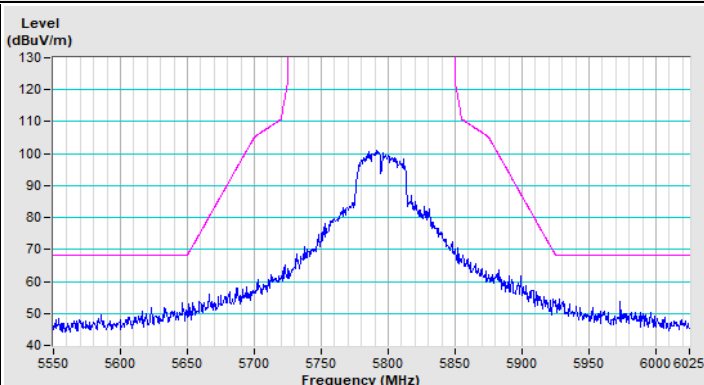
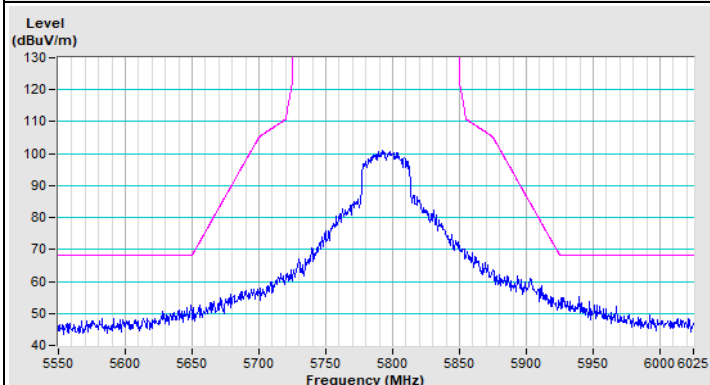
802.11ac (VHT40) Channel 46



802.11ac (VHT40) Channel 151

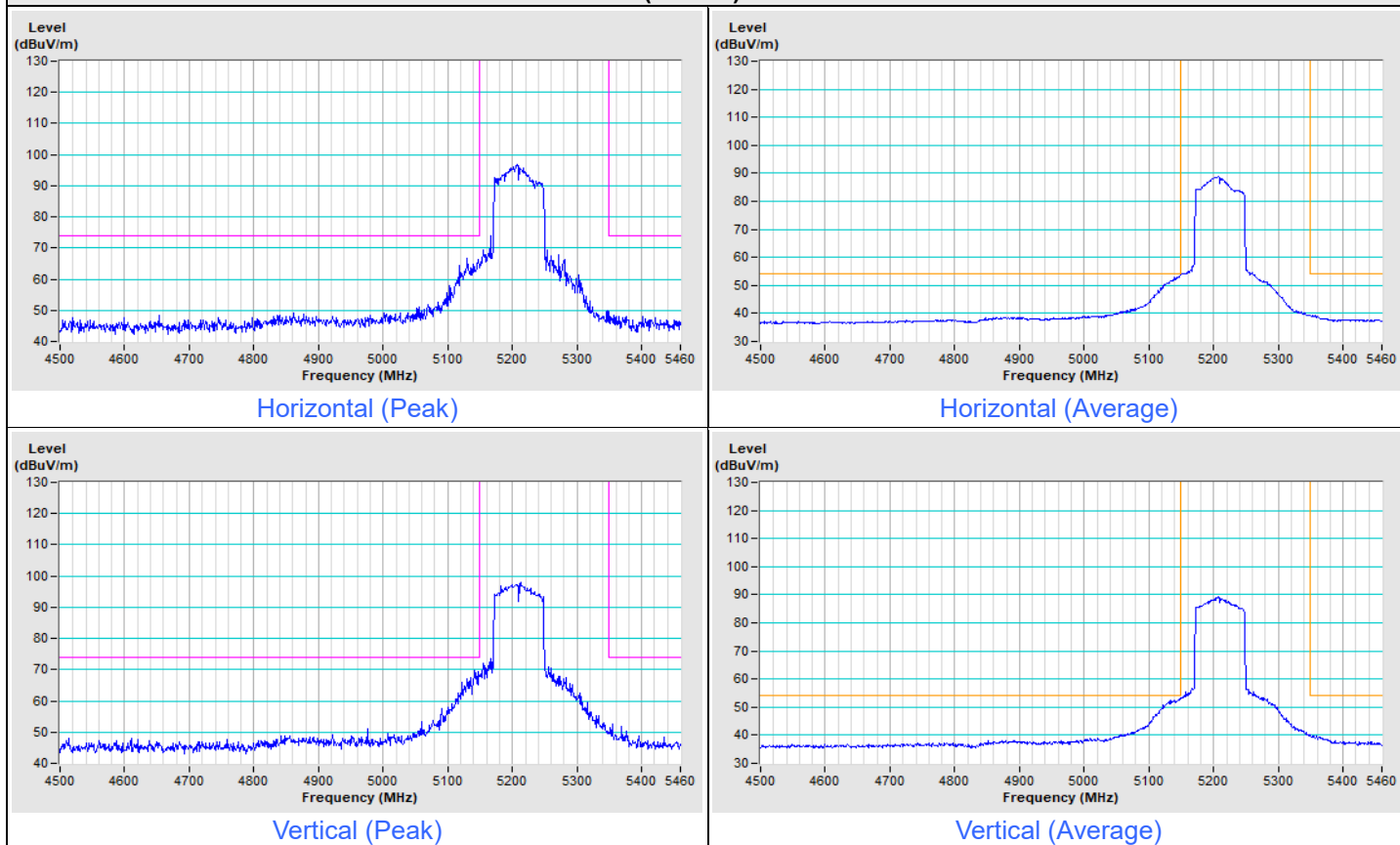


802.11ac (VHT40) Channel 159

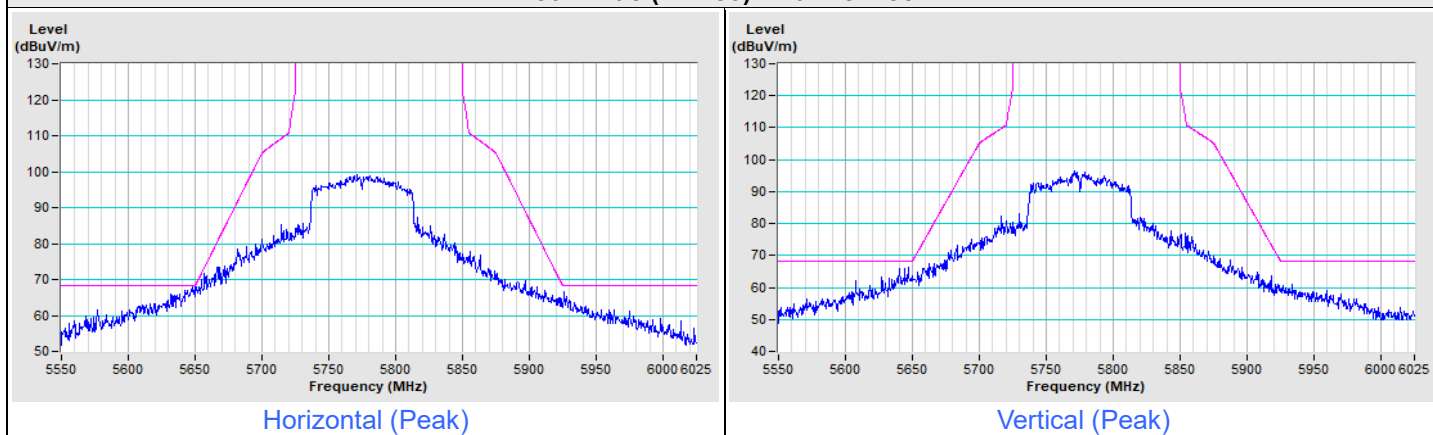


Frequency Range	4.5 GHz ~ 5.46 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
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802.11ac (VHT80) Channel 42



802.11ac (VHT80) Channel 155



8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

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

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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