

TEST REPORT

CERTIFICATE OF CONFORMITY

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

Report No.: RFBEMI-WTW-P22080178-3

FCC ID: NOIKBN605

Product: Electronic Display Device

Brand: Rakuten kobo

Model No.: N605

Received Date: 2022/8/4

Test Date: 2022/10/18 ~ 2022/10/30

Issued Date: 2022/11/25

Applicant: NETRONIX, INC.

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

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. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kewi Shan Dist., Taoyuan City 33383, Taiwan

FCC Registration / 788550 / TW0003

Designation Number:

Approved by: Jeremy Lin, **Date:** 2022/11/25
Jeremy Lin / Senior Engineer

This test report consists of 71 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The test results in the report only apply to the tested sample. The test results in this report are traceable to the national or international standards.

Prepared by : Pettie Chen / Senior Specialist



Table of Contents

Release Control Record	4
1 Certificate	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Supplementary Information	6
3 General Information	7
3.1 General Description of EUT	7
3.2 Antenna Description of EUT	8
3.3 Channel List	9
3.4 Test Mode Applicability and Tested Channel Detail	10
3.5 Duty Cycle of Test Signal	11
3.6 Test Program Used and Operation Descriptions	13
3.7 Connection Diagram of EUT and Peripheral Devices	13
3.8 Configuration of Peripheral Devices and Cable Connections	13
4 Test Instruments	14
4.1 RF Output Power	14
4.2 Power Spectral Density	14
4.3 6 dB Bandwidth	14
4.4 Occupied Bandwidth	14
4.5 Frequency Stability	15
4.6 AC Power Conducted Emissions	15
4.7 Unwanted Emissions below 1 GHz	16
4.8 Unwanted Emissions above 1 GHz	17
5 Limits of Test Items	18
5.1 RF Output Power	18
5.2 Power Spectral Density	18
5.3 6 dB Bandwidth	18
5.4 Occupied Bandwidth	18
5.5 Frequency Stability	18
5.6 AC Power Conducted Emissions	18
5.7 Unwanted Emissions below 1 GHz	19
5.8 Unwanted Emissions above 1 GHz	20
6 Test Arrangements	21
6.1 RF Output Power	21
6.1.1 Test Setup	21
6.1.2 Test Procedure	21
6.2 Power Spectral Density	21
6.2.1 Test Setup	21
6.2.2 Test Procedure	21
6.3 6 dB Bandwidth	22
6.3.1 Test Setup	22
6.3.2 Test Procedure	22
6.4 Occupied Bandwidth	22
6.4.1 Test Setup	22
6.4.2 Test Procedure	22
6.5 Frequency Stability	23
6.5.1 Test Setup	23
6.5.2 Test Procedure	23
6.6 AC Power Conducted Emissions	24
6.6.1 Test Setup	24
6.6.2 Test Procedure	24
6.7 Unwanted Emissions below 1 GHz	25
6.7.1 Test Setup	25
6.7.2 Test Procedure	26



6.8	Unwanted Emissions above 1 GHz.....	27
6.8.1	Test Setup.....	27
6.8.2	Test Procedure.....	27
7	Test Results of Test Item.....	28
7.1	RF Output Power.....	28
7.2	Power Spectral Density.....	30
7.3	6 dB Bandwidth.....	34
7.4	Occupied Bandwidth.....	36
7.5	Frequency Stability.....	40
7.6	AC Power Conducted Emissions.....	41
7.7	Unwanted Emissions below 1 GHz.....	43
7.8	Unwanted Emissions above 1 GHz.....	45
8	Pictures of Test Arrangements.....	70
9	Information of the Testing Laboratories.....	71



Release Control Record

Issue No.	Description	Date Issued
RFBEMI-WTW-P22080178-3	Original release.	2022/11/25

1 Certificate

Product: Electronic Display Device
Brand: Rakuten kobo
Test Model: N605
Sample Status: Engineering sample
Applicant: NETRONIX, INC.
Test Date: 2022/10/18 ~ 2022/10/30
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)(1/2/3)	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 -18.77 dB at 0.66600 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -4.1 dB at 32.81, 63.74 MHz
15.407(b)(1/2/3/4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.3 dB at 15600.00, 15690.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) not a standard connector.

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) (±)
Occupied Bandwidth	-	491.896 Hz
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.99 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3 dB
	30 MHz ~ 1 GHz	2.93 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	1.76 dB
	18 GHz ~ 40 GHz	1.77 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	N605
Status of EUT	Engineering sample
Power Supply Rating	3.7Vdc (Battery) 5.0Vdc (Adapter or host)
Modulation Type	802.11a: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n (HT20/40): up to 150Mbps 802.11ac (VHT20/40/80): up to 433.3Mbps
Operating Frequency	5180 ~ 5240MHz, 5745 ~ 5825MHz
Number of Channel	5180 ~ 5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5745 ~ 5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	5180 ~ 5240MHz: 15.812 mW (11.99 dBm) 5745 ~ 5825MHz: 7.244 mW (8.60 dBm)
EUT Category	Client device

Note:

1. The EUT uses following accessories.

USB Cable		
Brand	Model	Specification
Yih Fone	SH-0381	1.0m shielded without core
Pen		
Brand	Model	Specification
Rakuten kobo	ME-MPP702-K	-

2. Simultaneously transmission condition.

Condition	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.

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

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	Gain (dBi)	Antenna Type	Connector Type
	5.15~5.85GHz		
1	4.34	Dipole	ipex(MHF)

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

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

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

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 channels are 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. EUT can be used in the following ways: X/ Y/ Z. Pre-scan in these ways and find the worst case as a representative test condition. 2. For AC power conducted emission items: Power from Adapter / Laptop. Only these modes as a representative test condition. 3. For Unwanted Emission (below 1GHz) items: Power from Battery / Adapter. Pre-scan these modes and find the worst case as a representative test condition.
Worst Case:	1. X/ Y/ Z Worst Condition: Z axis. 2. For AC power conducted emission Worst Condition: Power from Adapter 3. For Unwanted Emission (below 1GHz) Worst Condition: Power from Adapter 4. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

Test Item	Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power / Power Spectral Density	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
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
Frequency Stability	802.11a	36	un-modulation	-
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

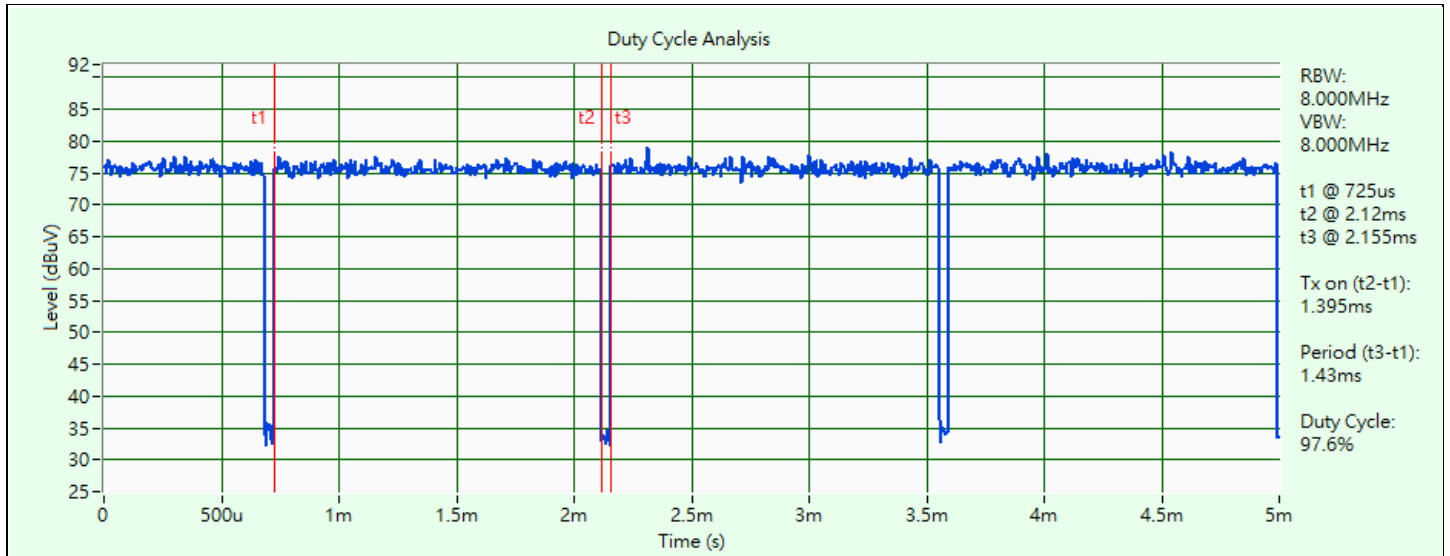
3.5 Duty Cycle of Test Signal

802.11a: Duty cycle = 1.395 ms / 1.43 ms x 100% = 97.6%, duty factor = 10 * log (1/Duty cycle) = 0.11 dB

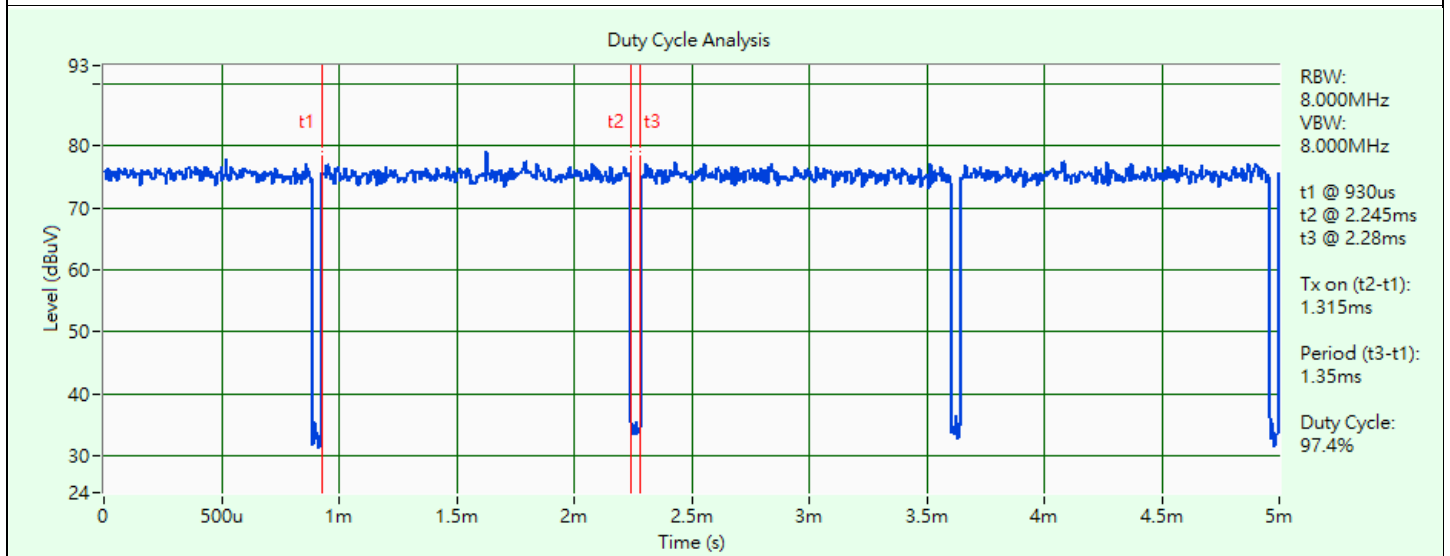
802.11ac (VHT20): Duty cycle = 1.315 ms / 1.35 ms x 100% = 97.4%, duty factor = 10 * log (1/Duty cycle) = 0.11 dB

802.11ac (VHT40): Duty cycle = 0.653 ms / 0.694 ms x 100% = 94.1%, duty factor = 10 * log (1/Duty cycle) = 0.26 dB

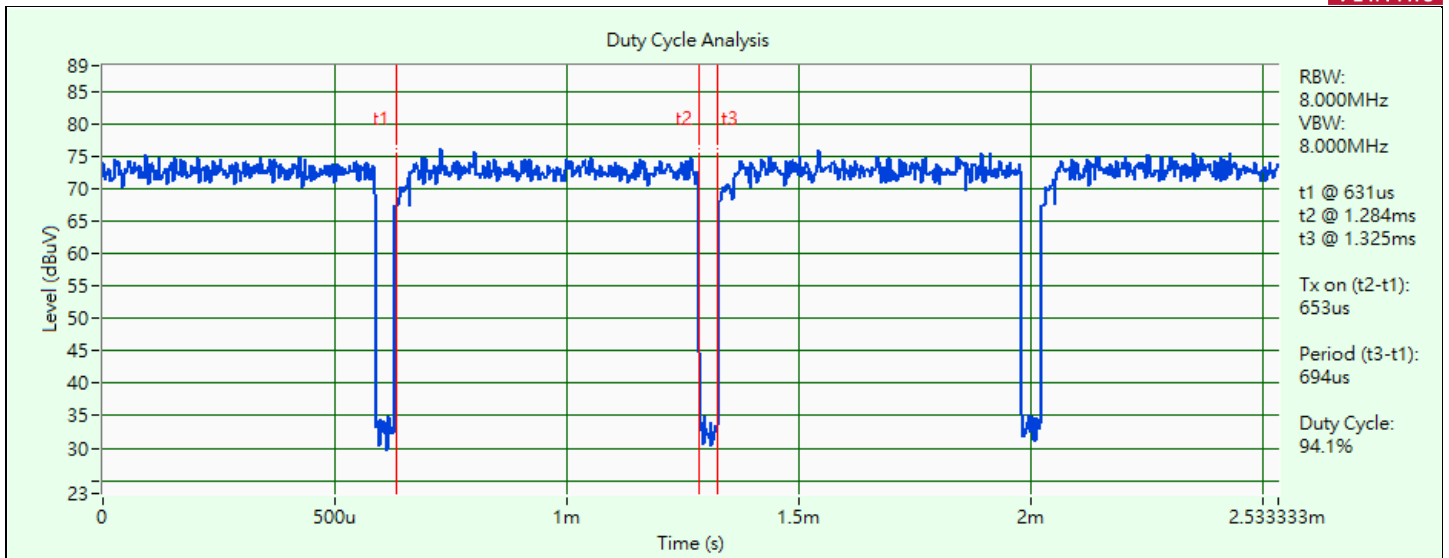
802.11ac (VHT80): Duty cycle = 0.326 ms / 0.366 ms x 100% = 89.1%, duty factor = 10 * log (1/Duty cycle) = 0.50 dB



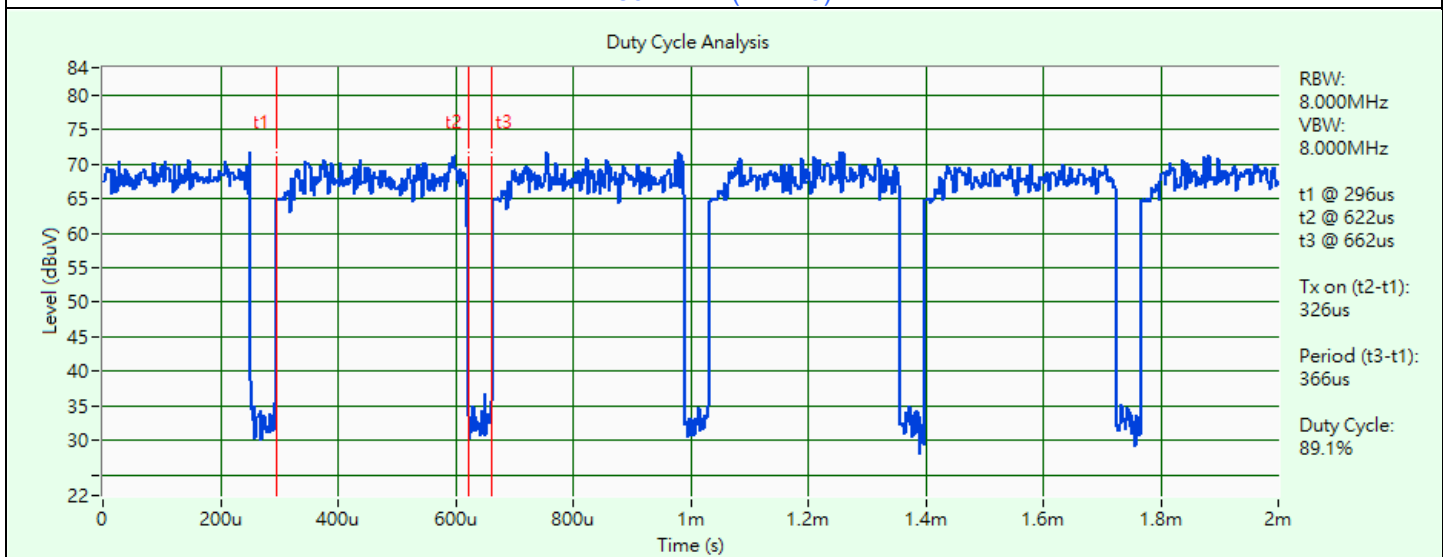
802.11a



802.11ac (VHT20)



802.11ac (VHT40)

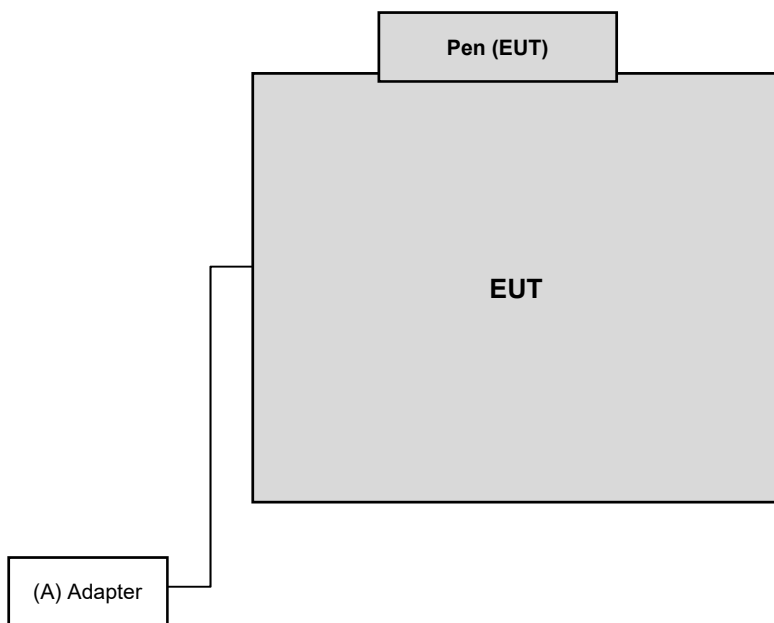


802.11ac (VHT80)

3.6 Test Program Used and Operation Descriptions

Controlling software (Tera Term _4.98) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Adapter	Liteon	PA-1050-39	NA	NA	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Cable	1	1	N	0	Accessory of EUT

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
Peak Power Analyzer Keysight	8990B	MY51000485	2022/1/18	2023/1/17
Power sensor Keysight	U2021XA	MY55380009	2022/3/23	2023/3/22
Wideband Power Sensor Keysight	N1923A	MY58020002	2022/1/17	2023/1/16

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/10/30

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer ROHDE & SCHWARZ	FSV40	100979	2022/3/25	2023/3/24

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/10/30

4.3 6 dB Bandwidth

Refer to section 4.2 to get information of the instruments.

4.4 Occupied Bandwidth

Refer to section 4.2 to get information of the instruments.

4.5 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
3-channel DC power supply JIN YIH Technology	ODP3033	ODP30332128138	N/A	N/A
AC Power Source ExTech	CFW-105	E000603	N/A	N/A
Digital Multimeter Fluke	87-III	70360742	2022/6/23	2023/6/22
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer ROHDE & SCHWARZ	FSV40	100979	2022/3/25	2023/3/24
Temperature & Humidity Chamber TERCHY	HRM-120RF	931022	2022/1/3	2023/1/2

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/10/30

4.6 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
DC-LISN SCHWARZBECK MESS- ELETRONIK	NNBM 8126G	8126G-069	2021/11/10	2022/11/9
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	2022/9/12	2023/9/11
LISN ROHDE & SCHWARZ	ENV216	101826	2022/3/14	2023/3/13
RF Coaxial Cable WOKEN	5D-FB	Cable-cond1-01	2022/1/15	2023/1/14
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A
Test Receiver ROHDE & SCHWARZ	ESCI	100613	2021/12/3	2022/12/2
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2022/8/31	2023/8/30

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2022/10/19

4.7 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Bi-log Broadband Antenna Schwarzbeck	VULB9168	9168-1213	2022/10/20	2023/10/19
Loop Antenna EMCI	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2022/7/27	2023/7/26
Pre-amplifier EMCI	EMC001340	980201	2022/9/23	2023/9/22
Pre_Amplifier EMCI	EMC330N	980782	2022/1/17	2023/1/16
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2022/1/15	2023/1/14
	EMCCFD400-NM-NM-500	201233	2022/1/17	2023/1/16
	EMCCFD400-NM-NM-3000	201235	2022/1/17	2023/1/16
	EMCCFD400-NM-NM-9000	201236	2022/1/17	2023/1/16
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer ROHDE & SCHWARZ	FSW43	101866	2022/1/14	2023/1/13
Test Receiver ROHDE & SCHWARZ	ESR3+	102782	2021/12/10	2022/12/9
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2022/10/20

4.8 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Horn Antenna RFSPIN	DRH18-E	210103A18E	2021/11/14	2022/11/13
Horn Antenna Schwarzbeck	BBHA 9170	9170-1049	2021/11/14	2022/11/13
Pre_Amplifier EMCI	EMC118A45SE	980808	2021/12/30	2022/12/29
	EMC184045SE	980788	2022/1/17	2023/1/16
RF Coaxial Cable EMCI	EMC101G-KM-KM-2000	201254	2022/1/17	2023/1/16
	EMC101G-KM-KM-3000	201257	2022/1/17	2023/1/16
	EMC101G-KM-KM-5000	201260	2022/1/17	2023/1/16
	EMC104-SM-SM-1000	210102	2022/1/17	2023/1/16
	EMC104-SM-SM-3000	201231	2022/1/17	2023/1/16
	EMC104-SM-SM-9000	201243	2022/1/17	2023/1/16
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer ROHDE & SCHWARZ	FSW43	101866	2022/1/14	2023/1/13
Test Receiver ROHDE & SCHWARZ	ESR3+	102782	2021/12/10	2022/12/9
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2022/10/18 ~ 2022/10/19

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 Point	1 Watt (30 dBm)
	Indoor Access Point	1 Watt (30 dBm)
	Mobile and Portable client device	250 mW (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 Point	
	Indoor Access Point	
	Mobile and Portable client device	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 Frequency Stability

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

5.6 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.

5.7 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).

5.8 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)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
5150~5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	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.	

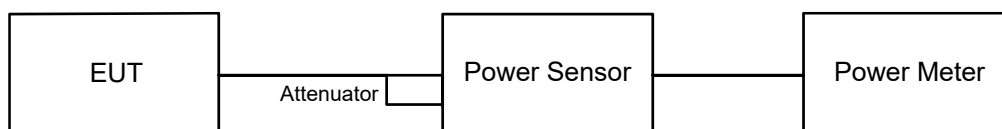
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup

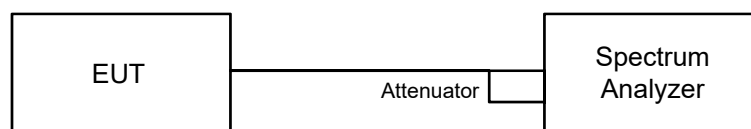


6.1.2 Test Procedure

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-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 $\leq \text{RBW} / 2$, 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 $10 \log (1/\text{duty cycle})$.

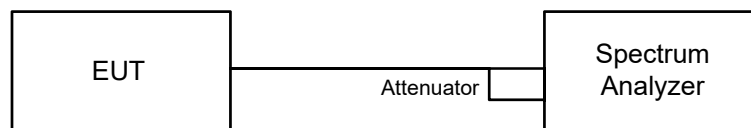
For specified measurement bandwidth 500 kHz:

Method SA-2

- 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 $\leq \text{RBW} / 2$, 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 $10 \log (1/\text{duty cycle})$.

6.3 6 dB Bandwidth

6.3.1 Test Setup

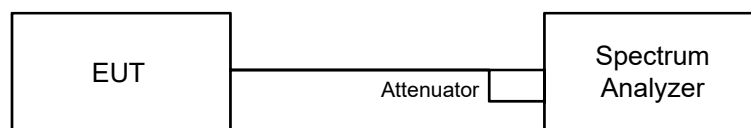


6.3.2 Test Procedure

- Set resolution bandwidth (RBW) = 100 kHz.
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.4 Occupied Bandwidth

6.4.1 Test Setup

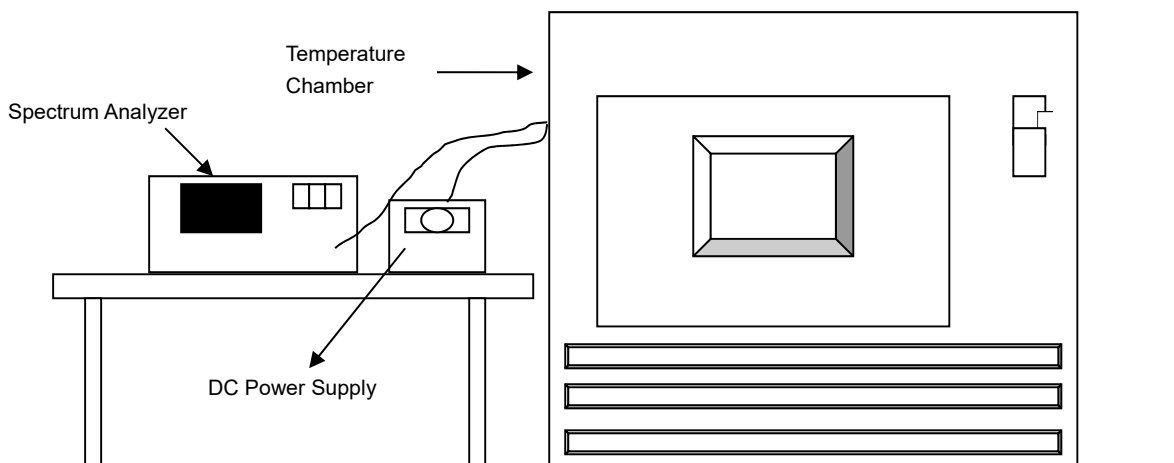


6.4.2 Test Procedure

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 Frequency Stability

6.5.1 Test Setup

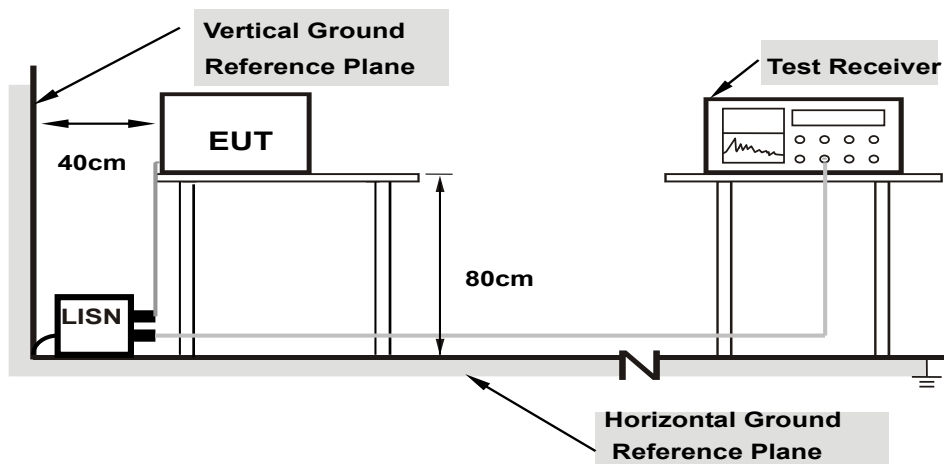


6.5.2 Test Procedure

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

6.6 AC Power Conducted Emissions

6.6.1 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).

6.6.2 Test Procedure

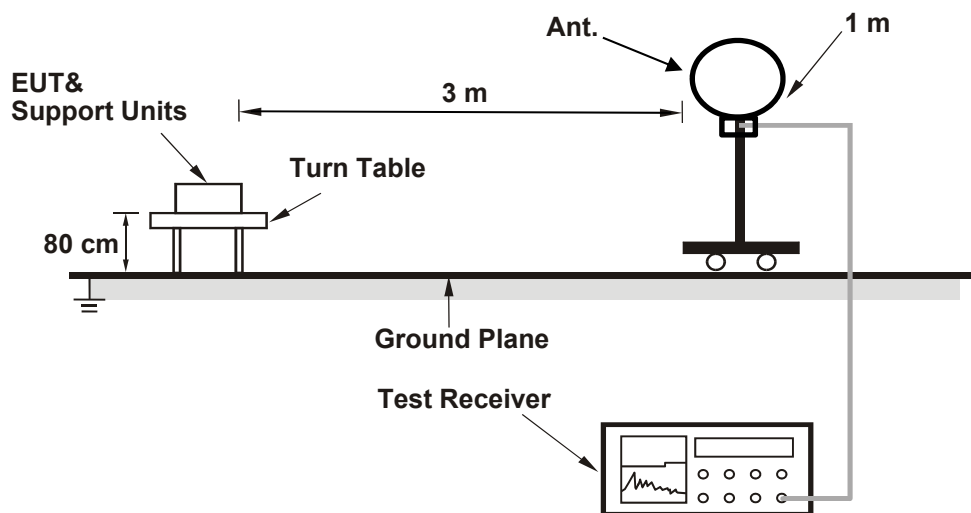
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The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

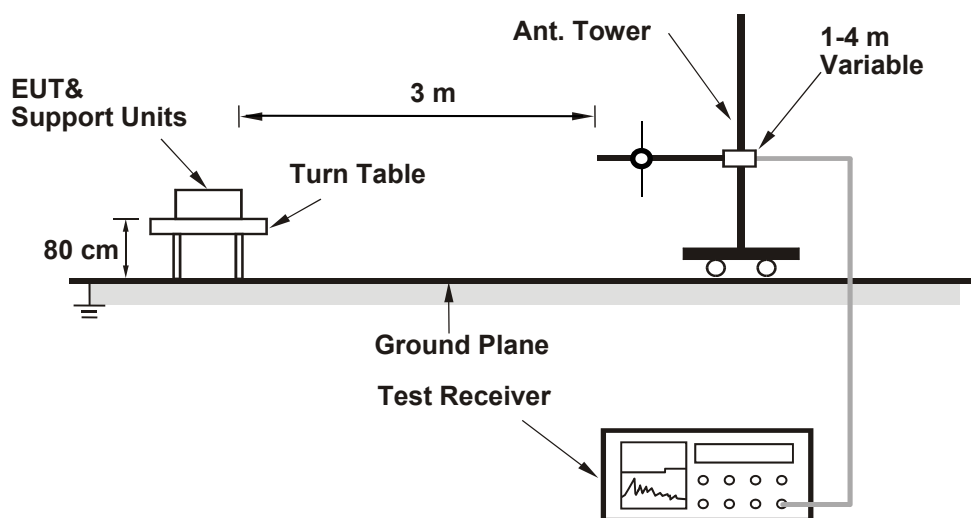
6.7 Unwanted Emissions below 1 GHz

6.7.1 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).

6.7.2 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

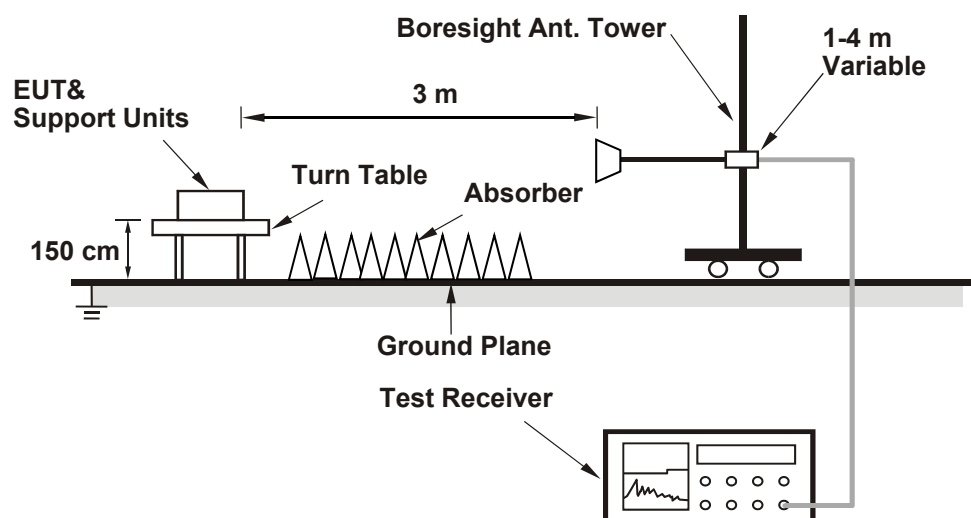
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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.

6.8 Unwanted Emissions above 1 GHz

6.8.1 Test Setup



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

6.8.2 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:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
--------------	----------------	---------------------------	--------------	------------	--------------

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	14.723	11.68	24	Pass
40	5200	14.622	11.65	24	Pass
48	5240	14.555	11.63	24	Pass
149	5745	7.047	8.48	30	Pass
157	5785	6.966	8.43	30	Pass
165	5825	7.031	8.47	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 4.34 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 4.34 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	15.241	11.83	24	Pass
40	5200	15.205	11.82	24	Pass
48	5240	15.205	11.82	24	Pass
149	5745	7.063	8.49	30	Pass
157	5785	7.145	8.54	30	Pass
165	5825	7.194	8.57	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 4.34 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 4.34 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
38	5190	15.276	11.84	24	Pass
46	5230	15.241	11.83	24	Pass
151	5755	7.228	8.59	30	Pass
159	5795	6.776	8.31	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 4.34 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 4.34 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
42	5210	15.812	11.99	24	Pass
155	5775	7.244	8.60	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 4.34 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 4.34 dBi < 6 dBi, so the output power limit shall not be reduced.

7.2 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
--------------	----------------	---------------------------	--------------	------------	--------------

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	-1.38	0.11	-1.27	11.00	Pass
40	5200	-1.22	0.11	-1.11	11.00	Pass
48	5240	-1.30	0.11	-1.19	11.00	Pass

Note: For U-NII-1, the antenna gain is 4.34 dBi < 6dBi, 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	-1.16	0.11	-1.05	11.00	Pass
40	5200	-1.03	0.11	-0.92	11.00	Pass
48	5240	-1.28	0.11	-1.17	11.00	Pass

Note: For U-NII-1, the antenna gain is 4.34 dBi < 6dBi, 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	-4.28	0.26	-4.02	11.00	Pass
46	5230	-4.20	0.26	-3.94	11.00	Pass

Note: For U-NII-1, the antenna gain is 4.34 dBi < 6dBi, 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	-7.16	0.50	-6.66	11.00	Pass

Note: For U-NII-1, the antenna gain is 4.34 dBi < 6dBi, so the power density limit shall not be reduced.

802.11a

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	-11.3	0.11	-8.97	30	Pass
157	5785	-11.05	0.11	-8.72	30	Pass
165	5825	-11.12	0.11	-8.79	30	Pass

Note: For U-NII-3, the antenna gain is 4.34 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/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
149	5745	-10.51	0.11	-8.18	30	Pass
157	5785	-10.48	0.11	-8.15	30	Pass
165	5825	-10.46	0.11	-8.13	30	Pass

Note: For U-NII-3, the antenna gain is 4.34 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
151	5755	-14.12	0.26	-11.64	30	Pass
159	5795	-14.01	0.26	-11.53	30	Pass

Note: For U-NII-3, the antenna gain is 4.34 dBi < 6 dBi, so the power density limit shall not be reduced.

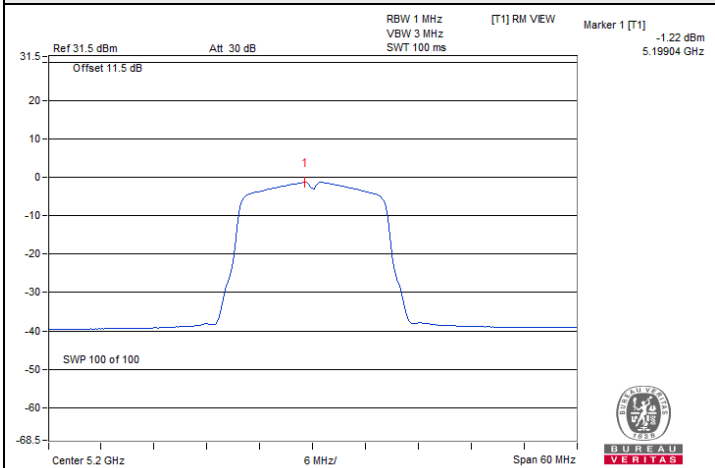
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
155	5775	-17.86	0.5	-15.14	30	Pass

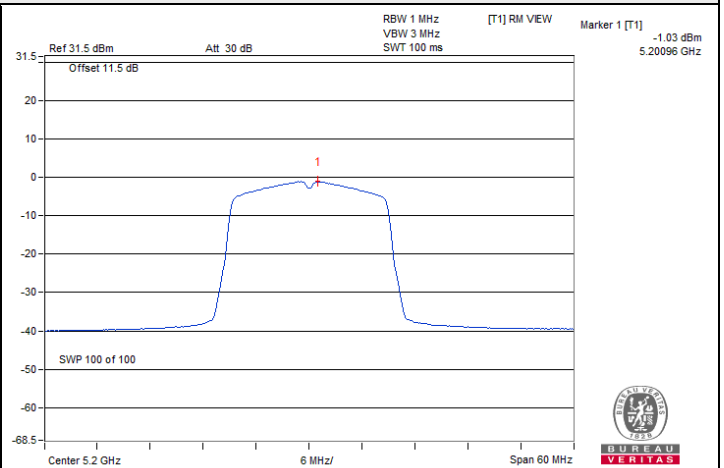
Note: For U-NII-3, the antenna gain is 4.34 dBi < 6 dBi, so the power density limit shall not be reduced.



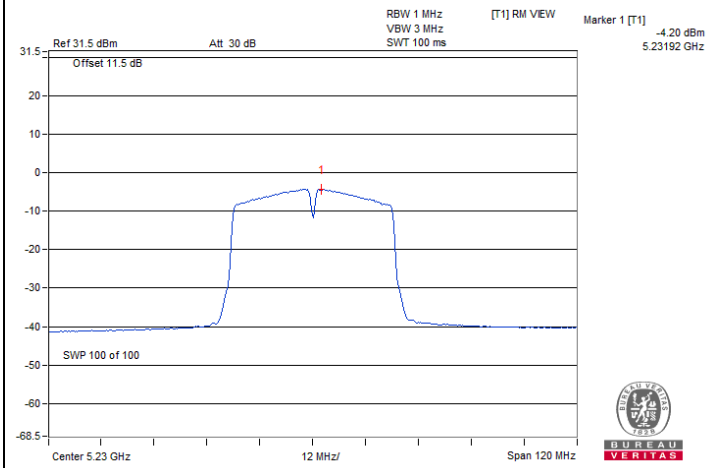
Spectrum Plot of Maximum Value



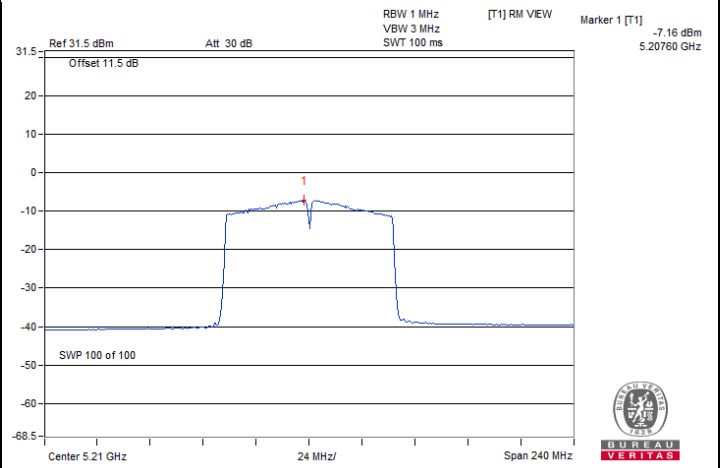
802.11a : CH 40



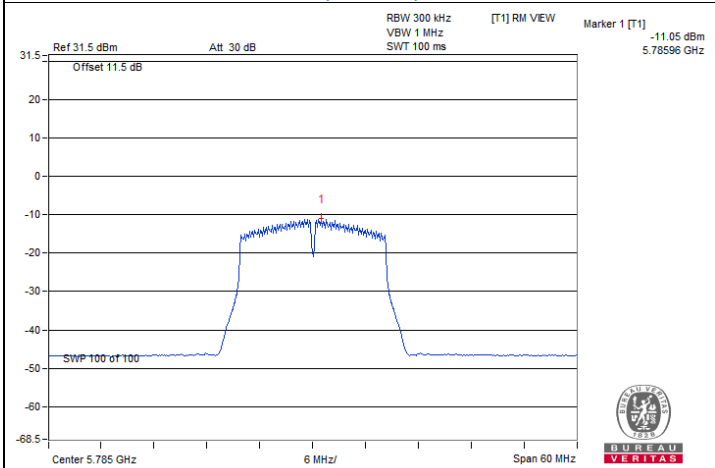
802.11ac (VHT20) : CH 40



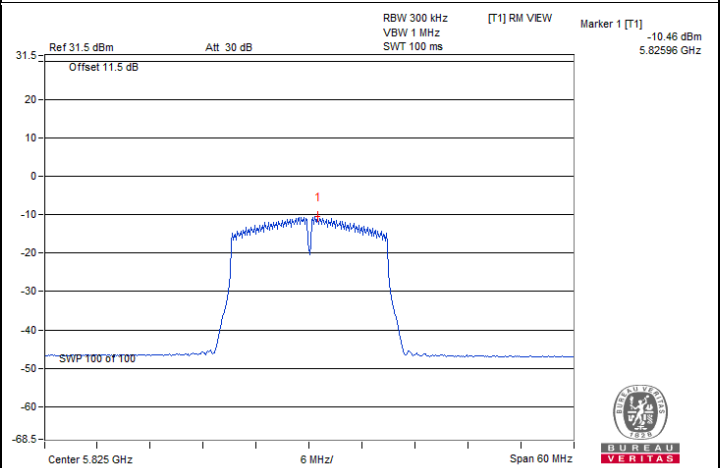
802.11ac (VHT40) : CH 46



802.11ac (VHT80) : CH 42



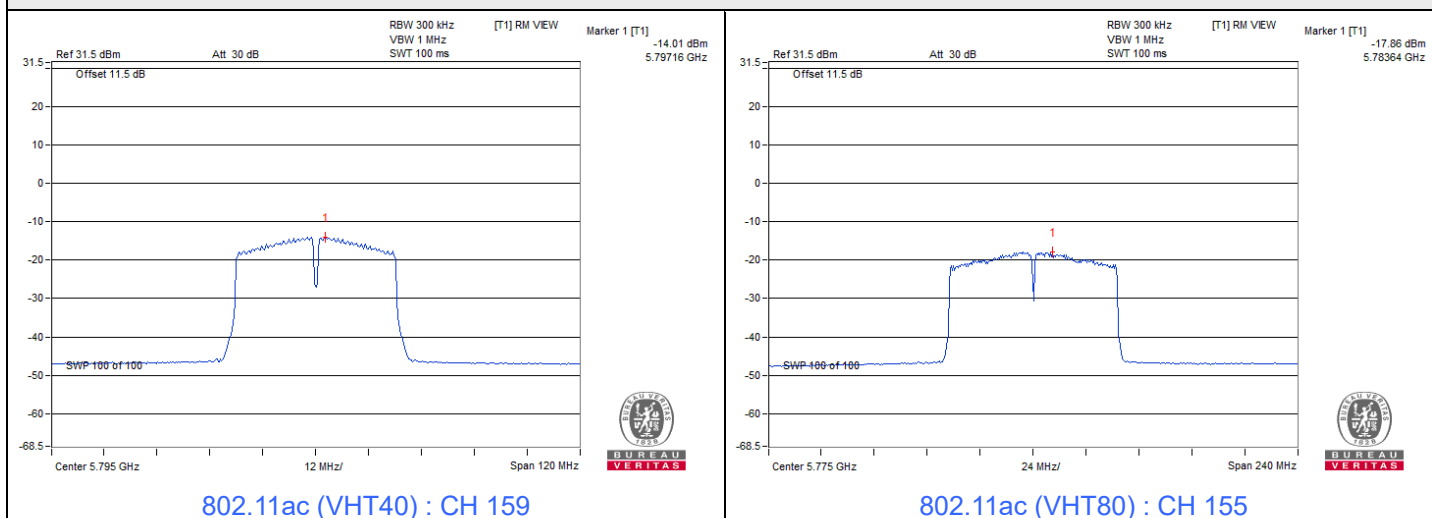
802.11a : CH 157



802.11ac (VHT20) : CH 165



Spectrum Plot of Maximum Value



7.3 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
--------------	----------------	---------------------------	--------------	------------	--------------

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
149	5745	15.14	0.5	Pass
157	5785	15.49	0.5	Pass
165	5825	15.35	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
149	5745	15.19	0.5	Pass
157	5785	15.18	0.5	Pass
165	5825	15.16	0.5	Pass

802.11ac (VHT40)

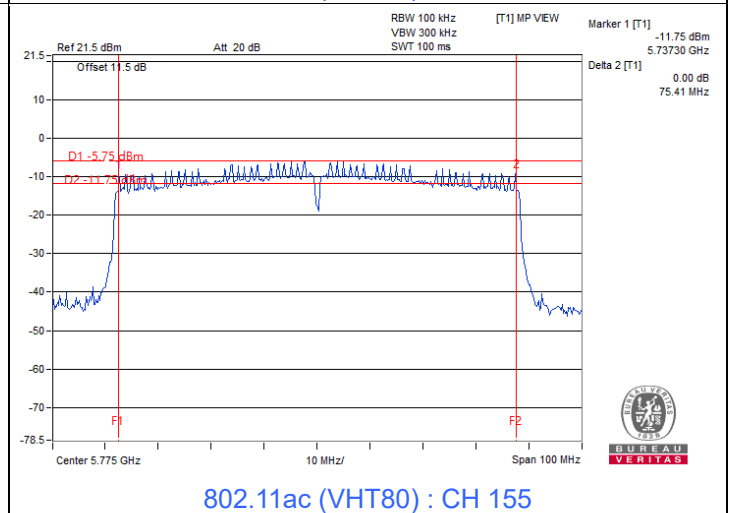
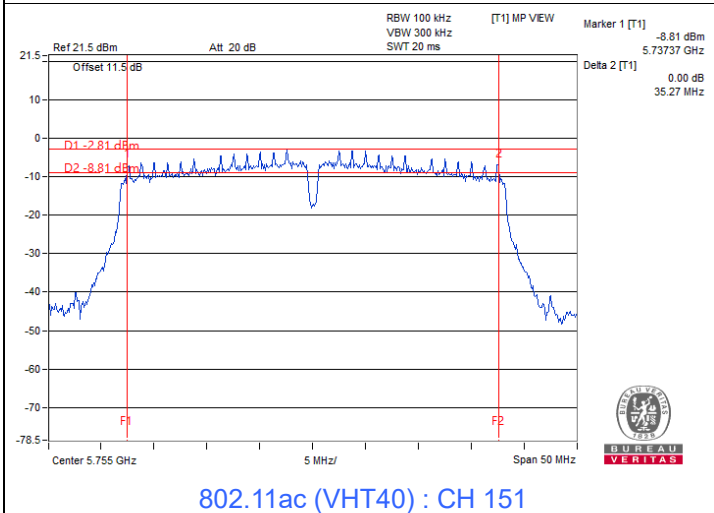
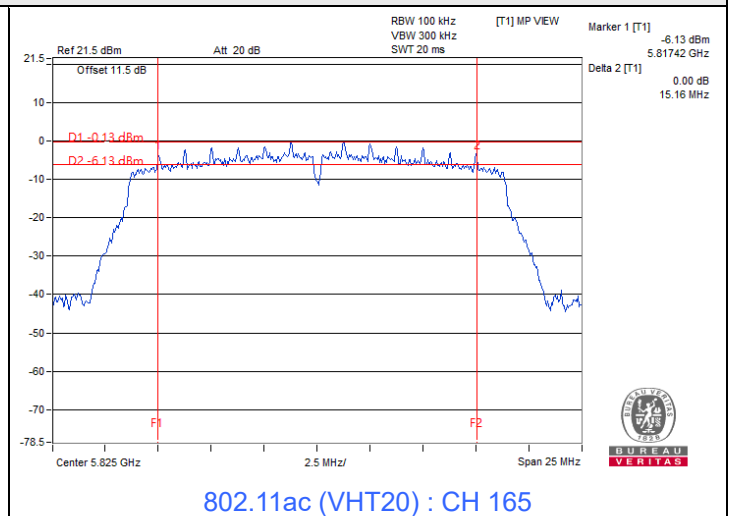
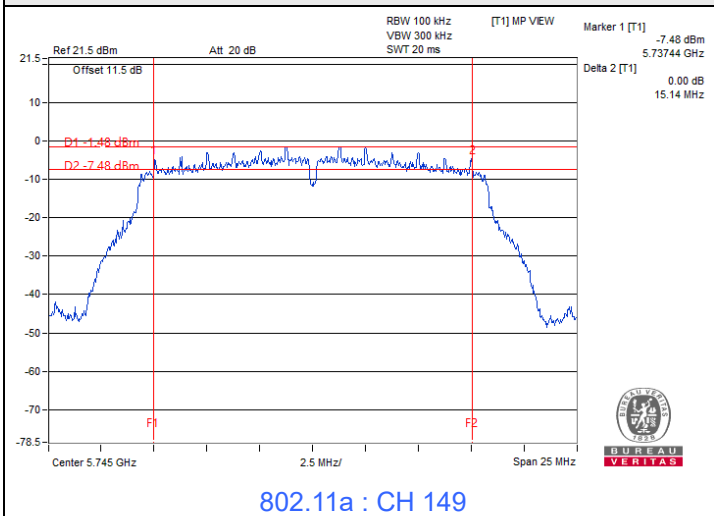
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
151	5755	35.27	0.5	Pass
159	5795	35.27	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
155	5775	75.41	0.5	Pass



Spectrum Plot of Minimum Value



7.4 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
--------------	----------------	---------------------------	--------------	------------	--------------

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.68
40	5200	16.68
48	5240	16.56
149	5745	16.7
157	5785	16.7
165	5825	16.68

802.11ac (VHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.64
40	5200	17.76
48	5240	17.64
149	5745	17.64
157	5785	17.64
165	5825	17.76

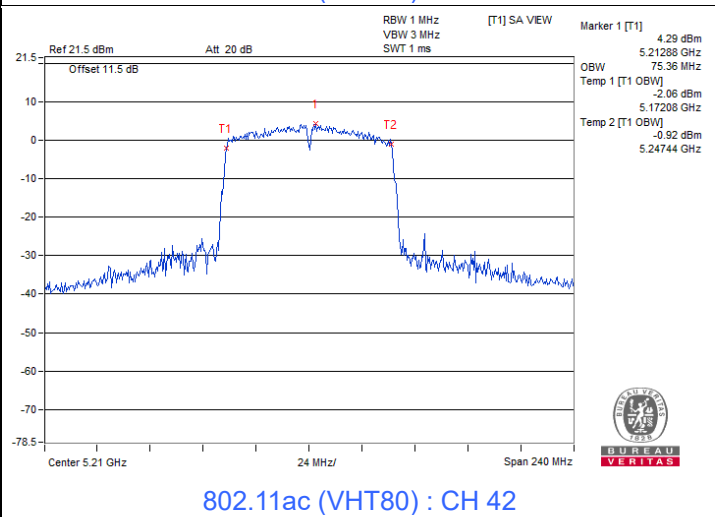
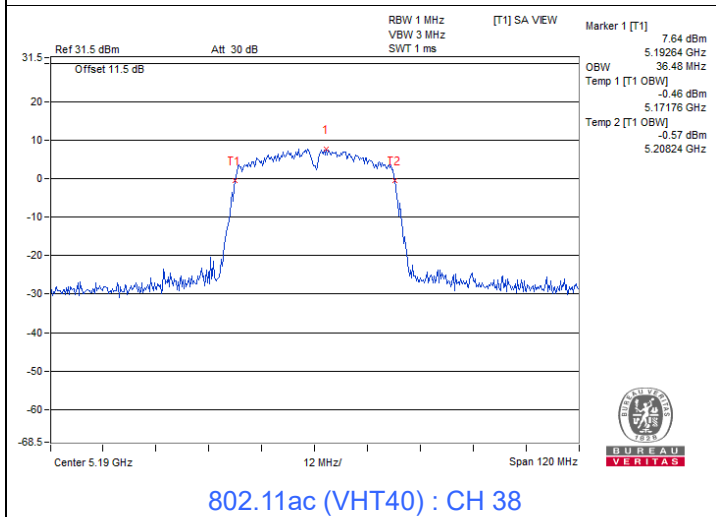
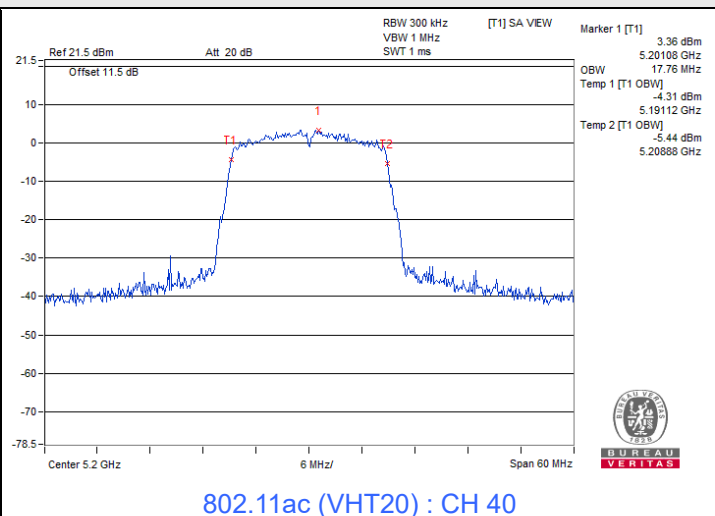
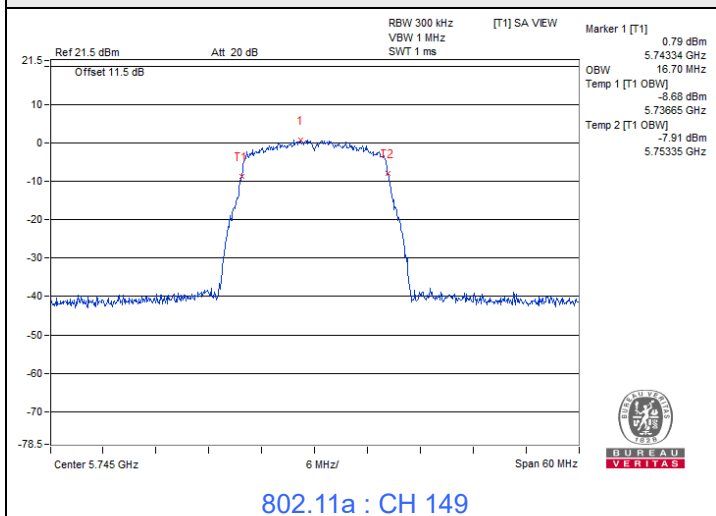
802.11ac (VHT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.48
46	5230	36.24
151	5755	36.48
159	5795	36.48

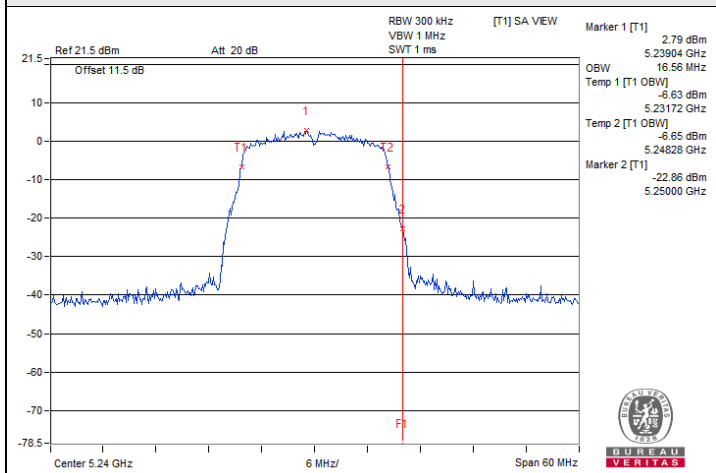
802.11ac (VHT80)

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

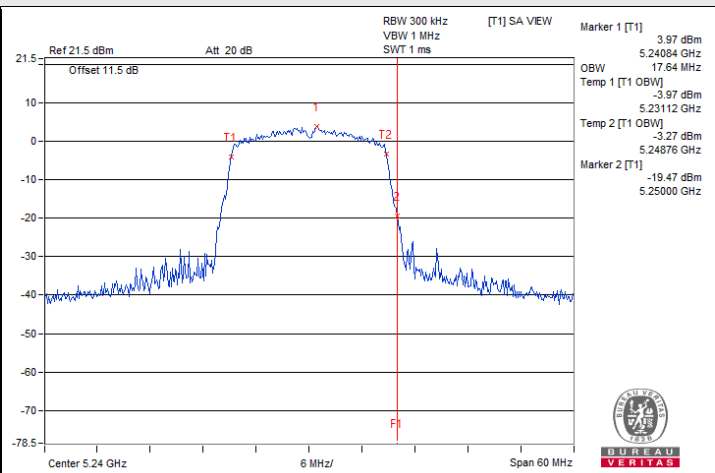
Spectrum Plot of Maximum Value



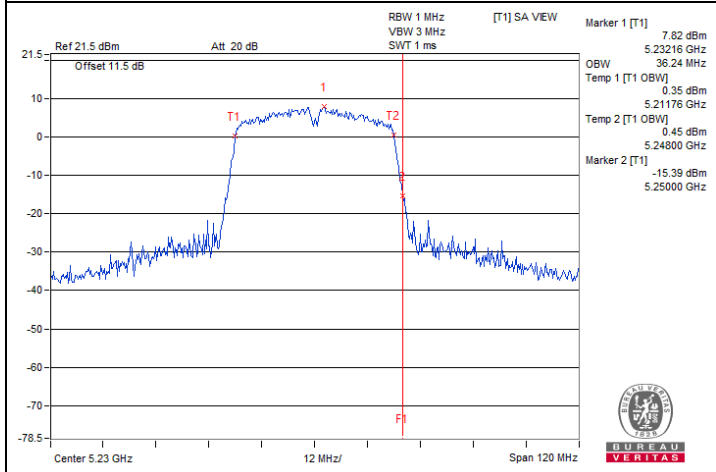
Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2A)



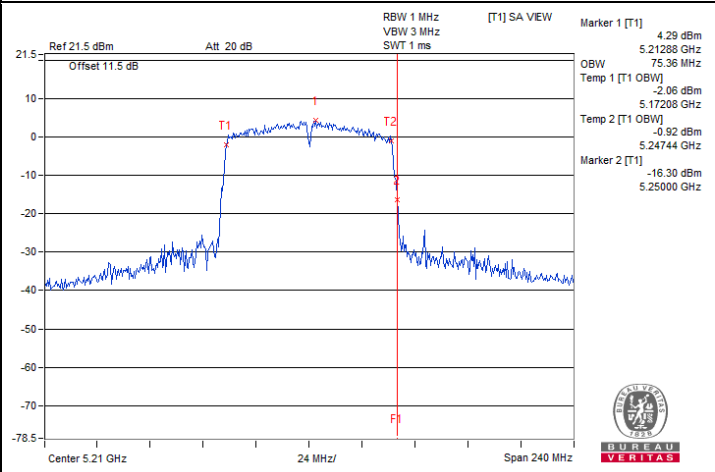
802.11a : CH 48



802.11ac (VHT20) : CH 48



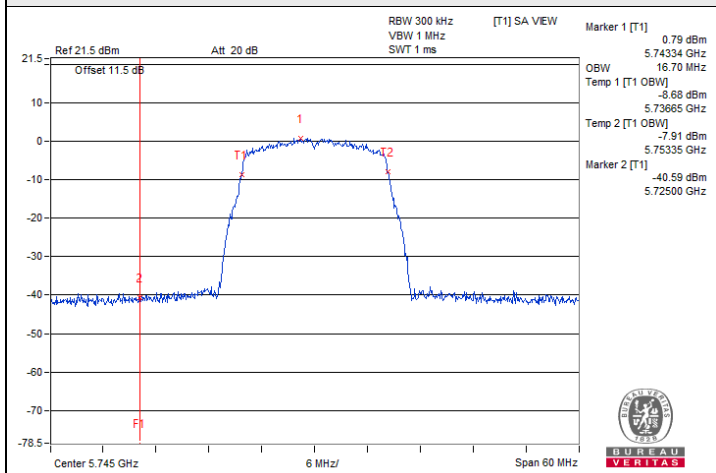
802.11ac (VHT40) : CH 46



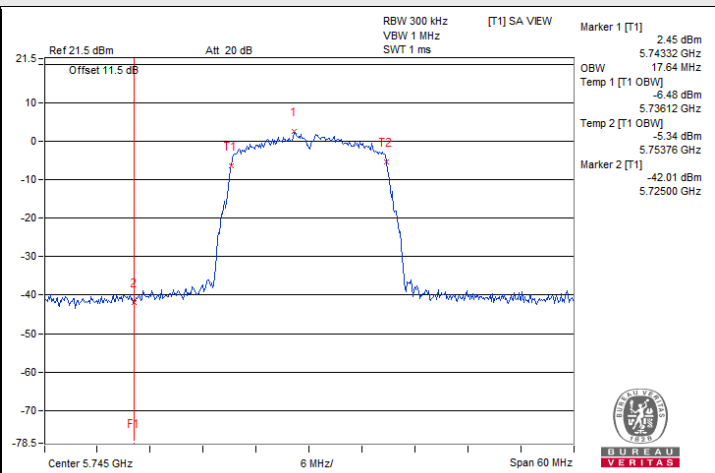
802.11ac (VHT80) : CH 42



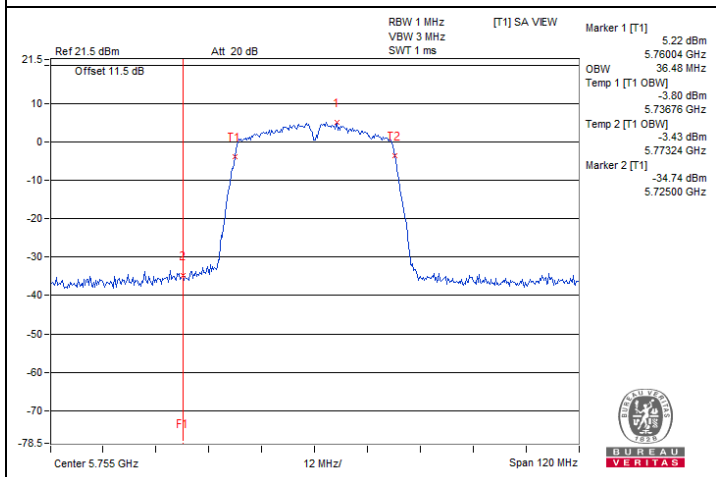
Spectrum Plot for nearby DFS band (DFS is required, if 99% OCP straddle into U-NII-2C)



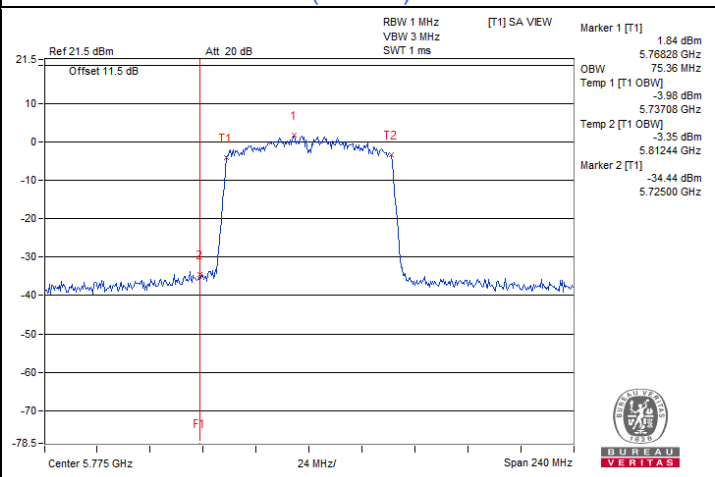
802.11a : CH 149



802.11ac (VHT20) : CH 149



802.11ac (VHT40) : CH 151



802.11ac (VHT80) : CH 155

7.5 Frequency Stability

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
--------------	----------------	---------------------------	--------------	------------	--------------

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
45	3.7	5180.0079	Pass	5180.0068	Pass	5180.0088	Pass	5180.0079	Pass
40	3.7	5179.9943	Pass	5179.9954	Pass	5179.9937	Pass	5179.9936	Pass
30	3.7	5179.9901	Pass	5179.9876	Pass	5179.9898	Pass	5179.9859	Pass
20	3.7	5179.9962	Pass	5179.9979	Pass	5179.9965	Pass	5179.9969	Pass
10	3.7	5180.0131	Pass	5180.0129	Pass	5180.0122	Pass	5180.0141	Pass
0	3.7	5180.0057	Pass	5180.0078	Pass	5180.0103	Pass	5180.0057	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	4.255	5179.9849	Pass	5179.9866	Pass	5179.988	Pass	5179.985	Pass
	3.7	5179.9962	Pass	5179.9979	Pass	5179.9965	Pass	5179.9969	Pass
	3.145	5179.9919	Pass	5179.9929	Pass	5179.9923	Pass	5179.9901	Pass

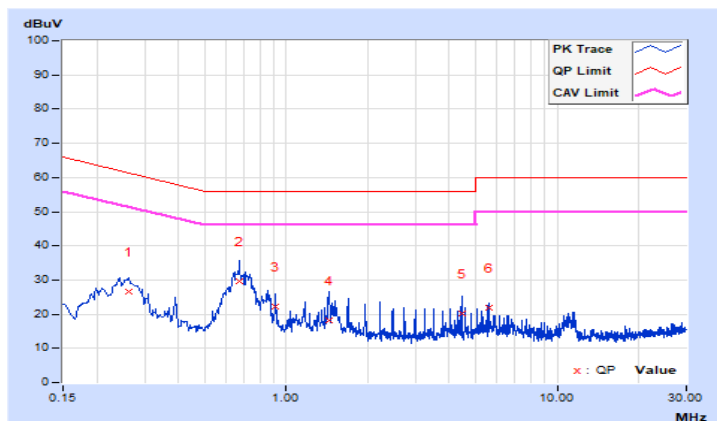
7.6 AC Power Conducted Emissions

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	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Edison Lee		

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	0.26083	9.66	17.01	11.09	26.67	20.75	61.40	51.40	-34.73	-30.65
2	0.66987	9.69	19.95	14.40	29.64	24.09	56.00	46.00	-26.36	-21.91
3	0.91000	9.70	12.62	5.39	22.32	15.09	56.00	46.00	-33.68	-30.91
4	1.43800	9.71	8.56	1.36	18.27	11.07	56.00	46.00	-37.73	-34.93
5	4.47400	9.75	10.35	3.38	20.10	13.13	56.00	46.00	-35.90	-32.87
6	5.57400	9.77	11.99	10.45	21.76	20.22	60.00	50.00	-38.24	-29.78

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

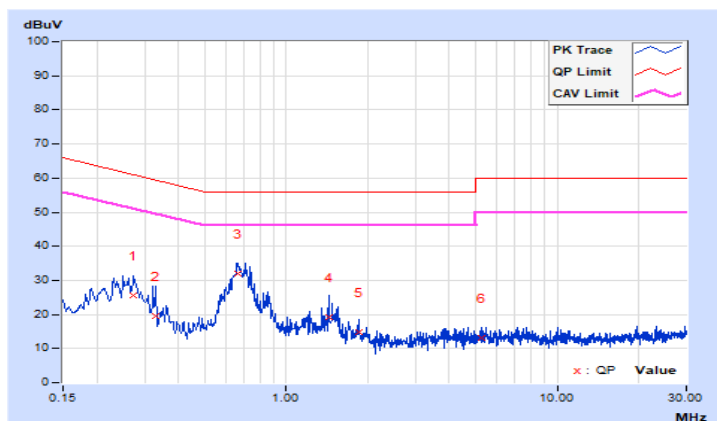


RF Mode	802.11ac (VHT80)	Channel	CH 42 : 5210 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Edison Lee		

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	0.27400	9.66	16.03	11.31	25.69	20.97	61.00	51.00	-35.31	-30.03
2	0.33000	9.67	9.86	3.43	19.53	13.10	59.45	49.45	-39.92	-36.35
3	0.66600	9.69	22.32	17.54	32.01	27.23	56.00	46.00	-23.99	-18.77
4	1.43400	9.71	9.55	0.33	19.26	10.04	56.00	46.00	-36.74	-35.96
5	1.85400	9.73	5.15	3.34	14.88	13.07	56.00	46.00	-41.12	-32.93
6	5.27000	9.76	3.39	1.61	13.15	11.37	60.00	50.00	-46.85	-38.63

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



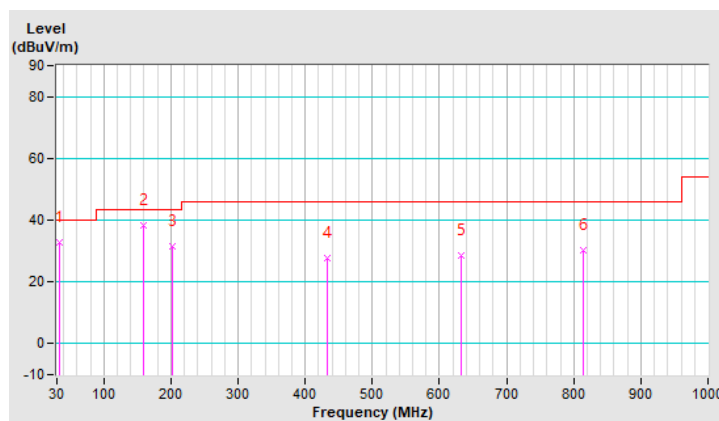
7.7 Unwanted Emissions below 1 GHz

RF Mode	802.11ac (VHT80)	Channel	CH 42 : 5210 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Greg Lin		

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	34.22	32.8 QP	40.0	-7.2	1.00 H	117	47.1	-14.3
2	159.33	38.1 QP	43.5	-5.4	1.25 H	143	51.1	-13.0
3	201.51	31.4 QP	43.5	-12.1	1.50 H	122	48.1	-16.7
4	433.46	27.6 QP	46.0	-18.4	1.50 H	326	36.7	-9.1
5	633.09	28.4 QP	46.0	-17.6	1.00 H	326	33.4	-5.0
6	814.43	30.2 QP	46.0	-15.8	1.00 H	17	32.4	-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 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.

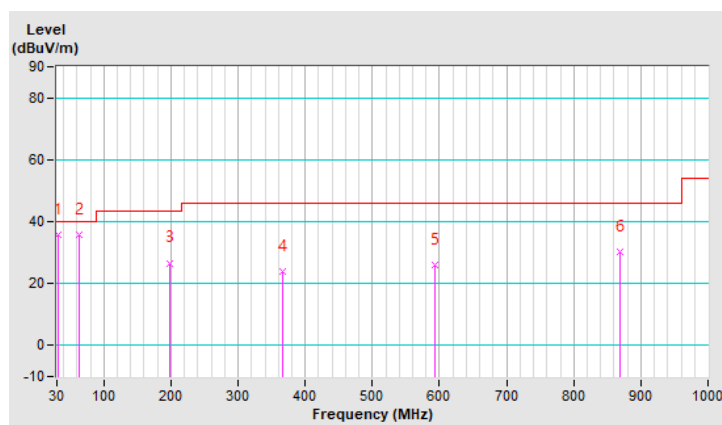


RF Mode	802.11ac (VHT80)	Channel	CH 42 : 5210 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Greg Lin		

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	32.81	35.9 QP	40.0	-4.1	1.25 V	245	50.4	-14.5
2	63.74	35.9 QP	40.0	-4.1	1.50 V	114	50.2	-14.3
3	198.70	26.7 QP	43.5	-16.8	1.00 V	268	43.5	-16.8
4	365.99	23.9 QP	46.0	-22.1	1.00 V	250	34.9	-11.0
5	593.72	26.2 QP	46.0	-19.8	1.25 V	246	31.7	-5.5
6	869.26	30.3 QP	46.0	-15.7	1.50 V	62	31.9	-1.6

Remarks:

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



7.8 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	22°C, 70% RH
Tested By	Greg Lin		

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	58.3 PK	74.0	-15.7	2.25 H	219	55.8	2.5
2	5150.00	47.9 AV	54.0	-6.1	2.25 H	219	45.4	2.5
3	*5180.00	101.1 PK			2.25 H	219	60.8	40.3
4	*5180.00	93.3 AV			2.25 H	219	53.0	40.3
5	#10360.00	56.1 PK	68.2	-12.1	1.93 H	104	47.6	8.5
6	15540.00	62.5 PK	74.0	-11.5	1.11 H	169	51.8	10.7
7	15540.00	52.9 AV	54.0	-1.1	1.11 H	169	42.2	10.7
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	57.6 PK	74.0	-16.4	2.94 V	254	55.1	2.5
2	5150.00	47.6 AV	54.0	-6.4	2.94 V	254	45.1	2.5
3	*5180.00	100.1 PK			2.94 V	254	59.8	40.3
4	*5180.00	92.1 AV			2.94 V	254	51.8	40.3
5	#10360.00	56.9 PK	68.2	-11.3	2.06 V	204	48.4	8.5
6	15540.00	63.1 PK	74.0	-10.9	2.06 V	225	52.4	10.7
7	15540.00	53.5 AV	54.0	-0.5	2.06 V	225	42.8	10.7

Remarks:

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



RF Mode	802.11a	Channel	CH 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	22°C, 70% RH
Tested By	Greg Lin		

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	101.6 PK			2.23 H	212	61.4	40.2
2	*5200.00	93.8 AV			2.23 H	212	53.6	40.2
3	#10400.00	55.9 PK	68.2	-12.3	1.92 H	96	47.5	8.4
4	15600.00	62.7 PK	74.0	-11.3	1.18 H	172	51.7	11.0
5	15600.00	53.1 AV	54.0	-0.9	1.18 H	172	42.1	11.0

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	*5200.00	100.6 PK			2.87 V	251	60.4	40.2
2	*5200.00	92.5 AV			2.87 V	251	52.3	40.2
3	#10400.00	56.7 PK	68.2	-11.5	2.12 V	197	48.3	8.4
4	15600.00	63.5 PK	74.0	-10.5	2.05 V	227	52.5	11.0
5	15600.00	53.7 AV	54.0	-0.3	2.05 V	227	42.7	11.0

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 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	22°C, 70% RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	100.8 PK			2.86 H	229	60.7	40.1
2	*5240.00	93.2 AV			2.86 H	229	53.1	40.1
3	5350.00	57.0 PK	74.0	-17.0	2.86 H	229	54.9	2.1
4	5350.00	47.2 AV	54.0	-6.8	2.86 H	229	45.1	2.1
5	#10480.00	56.0 PK	68.2	-12.2	1.92 H	103	47.5	8.5
6	15720.00	63.7 PK	74.0	-10.3	1.16 H	172	51.9	11.8
7	15720.00	53.3 AV	54.0	-0.7	1.16 H	172	41.5	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	*5240.00	99.5 PK			2.87 V	248	59.4	40.1
2	*5240.00	91.9 AV			2.87 V	248	51.8	40.1
3	5350.00	55.9 PK	74.0	-18.1	2.87 V	248	53.8	2.1
4	5350.00	46.7 AV	54.0	-7.3	2.87 V	248	44.6	2.1
5	#10480.00	56.9 PK	68.2	-11.3	2.12 V	204	48.4	8.5
6	15720.00	64.4 PK	74.0	-9.6	2.05 V	226	52.6	11.8
7	15720.00	53.5 AV	54.0	-0.5	2.05 V	226	41.7	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 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	22°C, 70% RH
Tested By	Greg Lin		

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	#5631.20	56.4 PK	68.2	-11.8	1.23 H	293	53.1	3.3
2	*5745.00	110.4 PK			1.23 H	293	68.7	41.7
3	*5745.00	104.2 AV			1.23 H	293	62.5	41.7
4	#5929.60	56.6 PK	68.2	-11.6	1.23 H	293	52.9	3.7
5	11490.00	57.5 PK	74.0	-16.5	1.76 H	112	47.9	9.6
6	11490.00	47.3 AV	54.0	-6.7	1.76 H	112	37.7	9.6
7	#17235.00	64.3 PK	68.2	-3.9	1.16 H	157	54.6	9.7

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	#5635.60	58.7 PK	68.2	-9.5	3.02 V	259	55.3	3.4
2	*5745.00	108.0 PK			3.02 V	259	66.3	41.7
3	*5745.00	101.5 AV			3.02 V	259	59.8	41.7
4	#5950.40	58.7 PK	68.2	-9.5	3.02 V	259	54.9	3.8
5	11490.00	58.2 PK	74.0	-15.8	2.23 V	204	48.6	9.6
6	11490.00	48.0 AV	54.0	-6.0	2.23 V	204	38.4	9.6
7	#17235.00	66.9 PK	68.2	-1.3	2.14 V	229	57.2	9.7

Remarks:

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



RF Mode	802.11a	Channel	CH 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	22°C, 70% RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5633.20	56.7 PK	68.2	-11.5	1.17 H	292	53.4	3.3
2	*5785.00	110.5 PK			1.17 H	292	68.7	41.8
3	*5785.00	103.8 AV			1.17 H	292	62.0	41.8
4	#5976.40	58.1 PK	68.2	-10.1	1.17 H	292	54.1	4.0
5	11570.00	57.3 PK	74.0	-16.7	1.73 H	114	47.7	9.6
6	11570.00	47.2 AV	54.0	-6.8	1.73 H	114	37.6	9.6
7	#17355.00	65.5 PK	68.2	-2.7	1.19 H	162	55.8	9.7

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	#5633.20	57.2 PK	68.2	-11.0	3.06 V	262	53.9	3.3
2	*5785.00	107.0 PK			3.06 V	262	65.2	41.8
3	*5785.00	101.0 AV			3.06 V	262	59.2	41.8
4	#5981.20	56.9 PK	68.2	-11.3	3.06 V	262	52.9	4.0
5	11570.00	58.0 PK	74.0	-16.0	2.09 V	194	48.4	9.6
6	11570.00	47.9 AV	54.0	-6.1	2.09 V	194	38.3	9.6
7	#17355.00	66.6 PK	68.2	-1.6	2.14 V	228	56.9	9.7

Remarks:

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



RF Mode	802.11a	Channel	CH 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	22°C, 70% RH
Tested By	Greg Lin		

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	#5639.60	57.9 PK	68.2	-10.3	1.26 H	292	54.5	3.4
2	*5825.00	110.7 PK			1.26 H	292	68.9	41.8
3	*5825.00	104.1 AV			1.26 H	292	62.3	41.8
4	#5964.00	57.8 PK	68.2	-10.4	1.26 H	292	53.9	3.9
5	11650.00	57.3 PK	74.0	-16.7	2.03 H	102	47.8	9.5
6	11650.00	47.2 AV	54.0	-6.8	2.03 H	102	37.7	9.5
7	#17475.00	66.2 PK	68.2	-2.0	1.14 H	168	56.3	9.9

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	#5608.00	56.8 PK	68.2	-11.4	3.01 V	264	53.6	3.2
2	*5825.00	108.1 PK			3.01 V	264	66.3	41.8
3	*5825.00	101.5 AV			3.01 V	264	59.7	41.8
4	#5945.60	58.0 PK	68.2	-10.2	3.01 V	264	54.3	3.7
5	11650.00	58.0 PK	74.0	-16.0	2.17 V	189	48.5	9.5
6	11650.00	47.8 AV	54.0	-6.2	2.17 V	189	38.3	9.5
7	#17475.00	66.3 PK	68.2	-1.9	2.03 V	219	56.4	9.9

Remarks:

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



RF Mode	802.11ac (VHT20)	Channel	CH 36 : 5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Greg Lin		

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	58.2 PK	74.0	-15.8	2.84 H	283	55.7	2.5
2	5150.00	47.7 AV	54.0	-6.3	2.84 H	283	45.2	2.5
3	*5180.00	100.4 PK			2.84 H	283	60.1	40.3
4	*5180.00	92.9 AV			2.84 H	283	52.6	40.3
5	#10360.00	56.2 PK	68.2	-12.0	1.86 H	103	47.7	8.5
6	15540.00	62.6 PK	74.0	-11.4	1.08 H	167	51.9	10.7
7	15540.00	53.0 AV	54.0	-1.0	1.08 H	167	42.3	10.7

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	57.3 PK	74.0	-16.7	2.99 V	251	54.8	2.5
2	5150.00	47.1 AV	54.0	-6.9	2.99 V	251	44.6	2.5
3	*5180.00	99.3 PK			2.99 V	251	59.0	40.3
4	*5180.00	91.7 AV			2.99 V	251	51.4	40.3
5	#10360.00	57.0 PK	68.2	-11.2	2.09 V	201	48.5	8.5
6	15540.00	62.9 PK	74.0	-11.1	2.03 V	234	52.2	10.7
7	15540.00	53.4 AV	54.0	-0.6	2.03 V	234	42.7	10.7

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 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	22°C, 70% RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	100.9 PK			2.27 H	213	60.7	40.2
2	*5200.00	93.4 AV			2.27 H	213	53.2	40.2
3	#10400.00	55.9 PK	68.2	-12.3	1.87 H	102	47.5	8.4
4	15600.00	62.8 PK	74.0	-11.2	1.16 H	179	51.8	11.0
5	15600.00	53.2 AV	54.0	-0.8	1.16 H	179	42.2	11.0

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	*5200.00	99.7 PK			2.89 V	258	59.5	40.2
2	*5200.00	92.1 AV			2.89 V	258	51.9	40.2
3	#10400.00	56.8 PK	68.2	-11.4	2.07 V	196	48.4	8.4
4	15600.00	63.6 PK	74.0	-10.4	2.07 V	228	52.6	11.0
5	15600.00	53.6 AV	54.0	-0.4	2.07 V	228	42.6	11.0

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 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	22°C, 70% RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	100.6 PK			2.98 H	203	60.5	40.1
2	*5240.00	93.1 AV			2.98 H	203	53.0	40.1
3	5350.00	57.3 PK	74.0	-16.7	2.98 H	203	55.2	2.1
4	5350.00	47.4 AV	54.0	-6.6	2.98 H	203	45.3	2.1
5	#10480.00	55.9 PK	68.2	-12.3	1.87 H	106	47.4	8.5
6	15720.00	63.6 PK	74.0	-10.4	1.17 H	163	51.8	11.8
7	15720.00	53.4 AV	54.0	-0.6	1.17 H	163	41.6	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	*5240.00	99.3 PK			2.93 V	250	59.2	40.1
2	*5240.00	91.7 AV			2.93 V	250	51.6	40.1
3	5350.00	56.8 PK	74.0	-17.2	2.93 V	250	54.7	2.1
4	5350.00	46.9 AV	54.0	-7.1	2.93 V	250	44.8	2.1
5	#10480.00	57.1 PK	68.2	-11.1	2.05 V	201	48.6	8.5
6	15720.00	64.4 PK	74.0	-9.6	2.07 V	223	52.6	11.8
7	15720.00	53.6 AV	54.0	-0.4	2.07 V	223	41.8	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 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	22°C, 70% RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5608.80	58.5 PK	68.2	-9.7	1.25 H	292	55.3	3.2
2	*5745.00	110.2 PK			1.25 H	292	68.5	41.7
3	*5745.00	104.0 AV			1.25 H	292	62.3	41.7
4	#5970.40	58.3 PK	68.2	-9.9	1.25 H	292	54.4	3.9
5	11490.00	57.4 PK	74.0	-16.6	1.75 H	113	47.8	9.6
6	11490.00	47.2 AV	54.0	-6.8	1.75 H	113	37.6	9.6

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	#5603.20	55.9 PK	68.2	-12.3	3.59 V	194	52.7	3.2
2	*5745.00	109.2 PK			3.59 V	194	67.5	41.7
3	*5745.00	100.7 AV			3.59 V	194	59.0	41.7
4	#5936.80	57.9 PK	68.2	-10.3	3.59 V	194	54.2	3.7
5	11490.00	55.9 PK	74.0	-18.1	2.24 V	201	46.3	9.6
6	11490.00	48.3 AV	54.0	-5.7	2.24 V	201	38.7	9.6

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.

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	22°C, 70% RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5623.60	58.2 PK	68.2	-10.0	1.18 H	293	54.9	3.3
2	*5785.00	110.6 PK			1.18 H	293	68.8	41.8
3	*5785.00	104.7 AV			1.18 H	293	62.9	41.8
4	#5954.40	60.3 PK	68.2	-7.9	1.18 H	293	56.5	3.8
5	11570.00	57.2 PK	74.0	-16.8	1.75 H	123	47.6	9.6
6	11570.00	47.1 AV	54.0	-6.9	1.75 H	123	37.5	9.6

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	#5603.60	58.0 PK	68.2	-10.2	3.55 V	195	54.8	3.2
2	*5785.00	109.8 PK			3.55 V	195	68.0	41.8
3	*5785.00	103.8 AV			3.55 V	195	62.0	41.8
4	#5984.40	58.2 PK	68.2	-10.0	3.55 V	195	54.2	4.0
5	11570.00	57.8 PK	74.0	-16.2	2.09 V	199	48.2	9.6
6	11570.00	47.8 AV	54.0	-6.2	2.09 V	199	38.2	9.6

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 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	22°C, 70% RH
Tested By	Greg Lin		

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	#5618.00	57.5 PK	68.2	-10.7	1.12 H	293	54.2	3.3
2	*5825.00	110.2 PK			1.12 H	293	68.4	41.8
3	*5825.00	104.3 AV			1.12 H	293	62.5	41.8
4	#5958.40	58.6 PK	68.2	-9.6	1.12 H	293	54.7	3.9
5	11650.00	57.0 PK	74.0	-17.0	2.04 H	111	47.5	9.5
6	11650.00	47.0 AV	54.0	-7.0	2.04 H	111	37.5	9.5

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	#5635.20	56.7 PK	68.2	-11.5	3.52 V	201	53.3	3.4
2	*5825.00	109.7 PK			3.52 V	201	67.9	41.8
3	*5825.00	103.7 AV			3.52 V	201	61.9	41.8
4	#5971.20	57.6 PK	68.2	-10.6	3.52 V	201	53.6	4.0
5	11650.00	57.7 PK	74.0	-16.3	2.15 V	188	48.2	9.5
6	11650.00	47.8 AV	54.0	-6.2	2.15 V	188	38.3	9.5

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 38 : 5190 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	64.0 PK	74.0	-10.0	2.43 H	251	61.5	2.5
2	5150.00	53.3 AV	54.0	-0.7	2.43 H	251	50.8	2.5
3	*5190.00	101.2 PK			2.43 H	251	60.9	40.3
4	*5190.00	92.9 AV			2.43 H	251	52.6	40.3
5	#10380.00	55.9 PK	68.2	-12.3	1.86 H	102	47.4	8.5
6	15570.00	62.4 PK	74.0	-11.6	1.13 H	165	51.6	10.8
7	15570.00	52.6 AV	54.0	-1.4	1.13 H	165	41.8	10.8

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	61.8 PK	74.0	-12.2	2.98 V	252	59.3	2.5
2	5150.00	50.9 AV	54.0	-3.1	2.98 V	252	48.4	2.5
3	*5190.00	99.9 PK			2.98 V	252	59.6	40.3
4	*5190.00	91.7 AV			2.98 V	252	51.4	40.3
5	#10380.00	56.7 PK	68.2	-11.5	2.03 V	191	48.2	8.5
6	15570.00	63.1 PK	74.0	-10.9	2.03 V	227	52.3	10.8
7	15570.00	53.0 AV	54.0	-1.0	2.03 V	227	42.2	10.8

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 (AV) RB = 1 MHz, VB = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Greg Lin		

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	102.2 PK			2.42 H	251	62.1	40.1
2	*5230.00	94.0 AV			2.42 H	251	53.9	40.1
3	5350.00	56.4 PK	74.0	-17.6	2.42 H	251	54.3	2.1
4	5350.00	47.5 AV	54.0	-6.5	2.42 H	251	45.4	2.1
5	#10460.00	55.8 PK	68.2	-12.4	1.91 H	94	47.3	8.5
6	15690.00	63.3 PK	74.0	-10.7	1.13 H	162	51.7	11.6
7	15690.00	53.2 AV	54.0	-0.8	1.13 H	162	41.6	11.6

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	*5230.00	100.9 PK			2.87 V	251	60.8	40.1
2	*5230.00	92.7 AV			2.87 V	251	52.6	40.1
3	5350.00	56.2 PK	74.0	-17.8	2.87 V	251	54.1	2.1
4	5350.00	46.8 AV	54.0	-7.2	2.87 V	251	44.7	2.1
5	#10460.00	56.6 PK	68.2	-11.6	2.17 V	203	48.1	8.5
6	15690.00	63.8 PK	74.0	-10.2	2.08 V	221	52.2	11.6
7	15690.00	53.7 AV	54.0	-0.3	2.08 V	221	42.1	11.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Greg Lin		

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	#5641.20	59.4 PK	68.2	-8.8	1.13 H	293	56.0	3.4
2	*5755.00	108.3 PK			1.13 H	293	66.5	41.8
3	*5755.00	102.5 AV			1.13 H	293	60.7	41.8
4	#5981.60	59.6 PK	68.2	-8.6	1.13 H	293	55.6	4.0
5	11510.00	57.8 PK	74.0	-16.2	1.78 H	120	48.2	9.6
6	11510.00	47.6 AV	54.0	-6.4	1.78 H	120	38.0	9.6

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	#5648.00	60.0 PK	68.2	-8.2	3.50 V	200	56.6	3.4
2	*5755.00	107.1 PK			3.50 V	200	65.3	41.8
3	*5755.00	101.0 AV			3.50 V	200	59.2	41.8
4	#5935.60	58.0 PK	68.2	-10.2	3.50 V	200	54.3	3.7
5	11510.00	58.3 PK	74.0	-15.7	2.01 V	193	48.7	9.6
6	11510.00	48.1 AV	54.0	-5.9	2.01 V	193	38.5	9.6

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.



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 = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Greg Lin		

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	#5642.00	57.4 PK	68.2	-10.8	1.16 H	293	54.0	3.4
2	*5795.00	108.2 PK			1.16 H	293	66.4	41.8
3	*5795.00	101.8 AV			1.16 H	293	60.0	41.8
4	#5927.60	59.0 PK	68.2	-9.2	1.16 H	293	55.3	3.7
5	11590.00	57.4 PK	74.0	-16.6	1.76 H	123	47.9	9.5
6	11590.00	47.1 AV	54.0	-6.9	1.76 H	123	37.6	9.5

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	#5624.00	56.3 PK	68.2	-11.9	3.58 V	204	53.0	3.3
2	*5795.00	107.6 PK			3.58 V	204	65.8	41.8
3	*5795.00	101.3 AV			3.58 V	204	59.5	41.8
4	#5956.40	56.5 PK	68.2	-11.7	3.58 V	204	52.7	3.8
5	11590.00	58.4 PK	74.0	-15.6	2.09 V	198	48.9	9.5
6	11590.00	48.1 AV	54.0	-5.9	2.09 V	198	38.6	9.5

Remarks:

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



RF Mode	802.11ac (VHT80)	Channel	CH 42 : 5210 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 10 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	64.9 PK	74.0	-9.1	2.43 H	252	62.4	2.5
2	5150.00	53.2 AV	54.0	-0.8	2.43 H	252	50.7	2.5
3	*5210.00	96.6 PK			2.43 H	252	56.4	40.2
4	*5210.00	88.6 AV			2.43 H	252	48.4	40.2
5	#10420.00	55.6 PK	68.2	-12.6	1.83 H	92	47.2	8.4

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	61.9 PK	74.0	-12.1	2.92 V	248	59.4	2.5
2	5150.00	52.1 AV	54.0	-1.9	2.92 V	248	49.6	2.5
3	*5210.00	95.1 PK			2.92 V	248	54.9	40.2
4	*5210.00	87.4 AV			2.92 V	248	47.2	40.2
5	#10420.00	56.2 PK	68.2	-12.0	2.02 V	189	47.8	8.4

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 = 10 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	22°C, 70% RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5650.00	67.2 PK	68.2	-1.0	1.29 H	292	63.8	3.4
2	*5775.00	103.2 PK			1.29 H	292	61.5	41.7
3	*5775.00	95.9 AV			1.29 H	292	54.2	41.7
4	#5928.00	66.1 PK	68.2	-2.1	1.29 H	292	62.4	3.7
5	11550.00	57.6 PK	74.0	-16.4	1.82 H	115	48.0	9.6
6	11550.00	47.5 AV	54.0	-6.5	1.82 H	115	37.9	9.6

Antenna Polarity & Test Distance : Vertical at 3 m

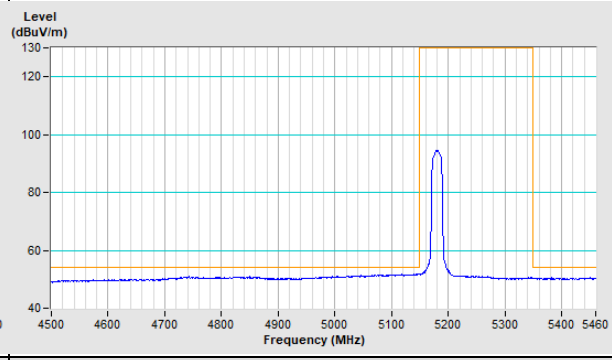
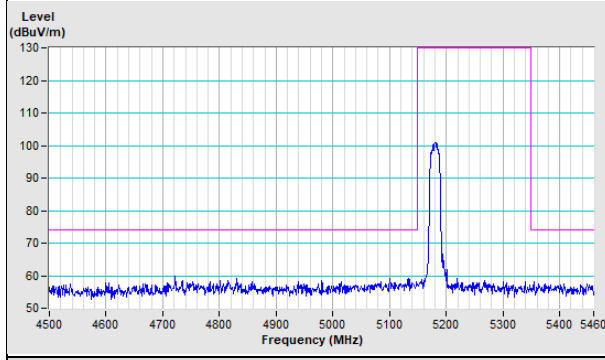
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5640.80	61.9 PK	68.2	-6.3	3.55 V	190	58.5	3.4
2	*5775.00	103.8 PK			3.55 V	190	62.1	41.7
3	*5775.00	96.2 AV			3.55 V	190	54.5	41.7
4	#5927.20	60.9 PK	68.2	-7.3	3.55 V	190	57.2	3.7
5	11550.00	56.6 PK	74.0	-17.4	2.10 V	198	47.0	9.6
6	11550.00	48.6 AV	54.0	-5.4	2.10 V	198	39.0	9.6

Remarks:

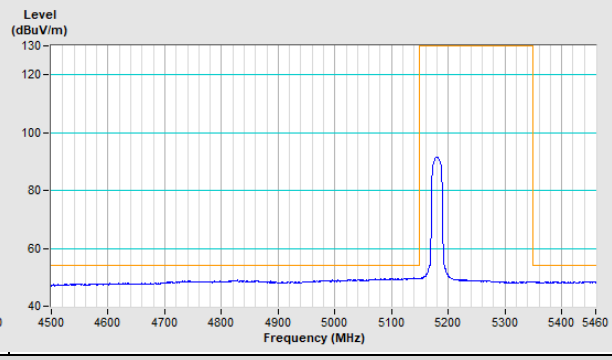
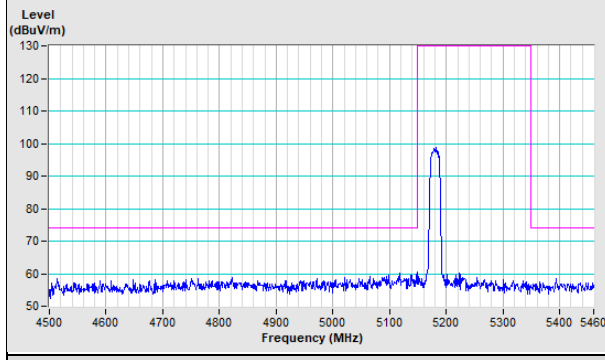
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

802.11a Channel 36

Horizontal (Peak) **Horizontal (Average)**

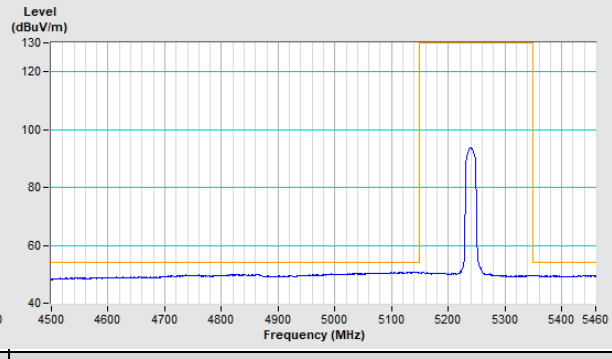
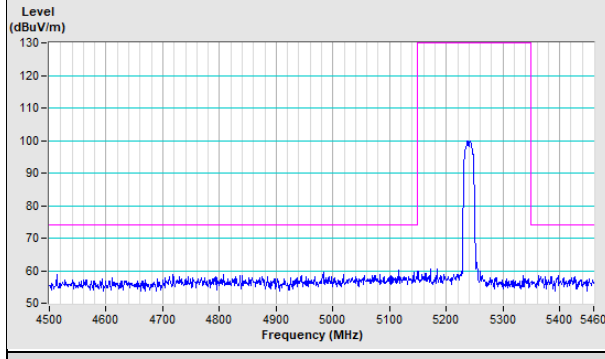


Vertical (Peak) **Vertical (Average)**

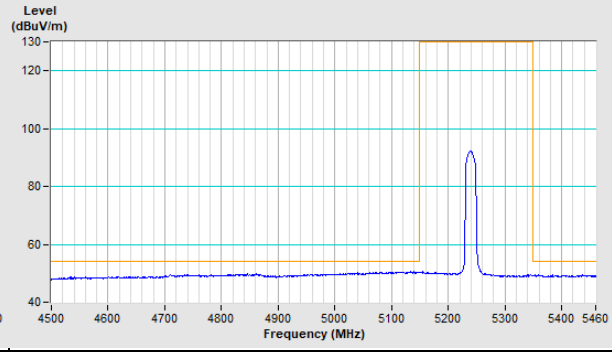
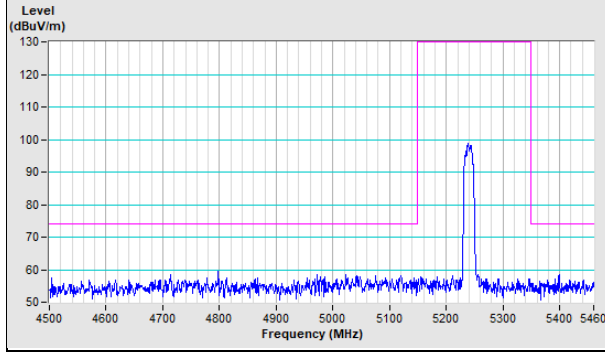


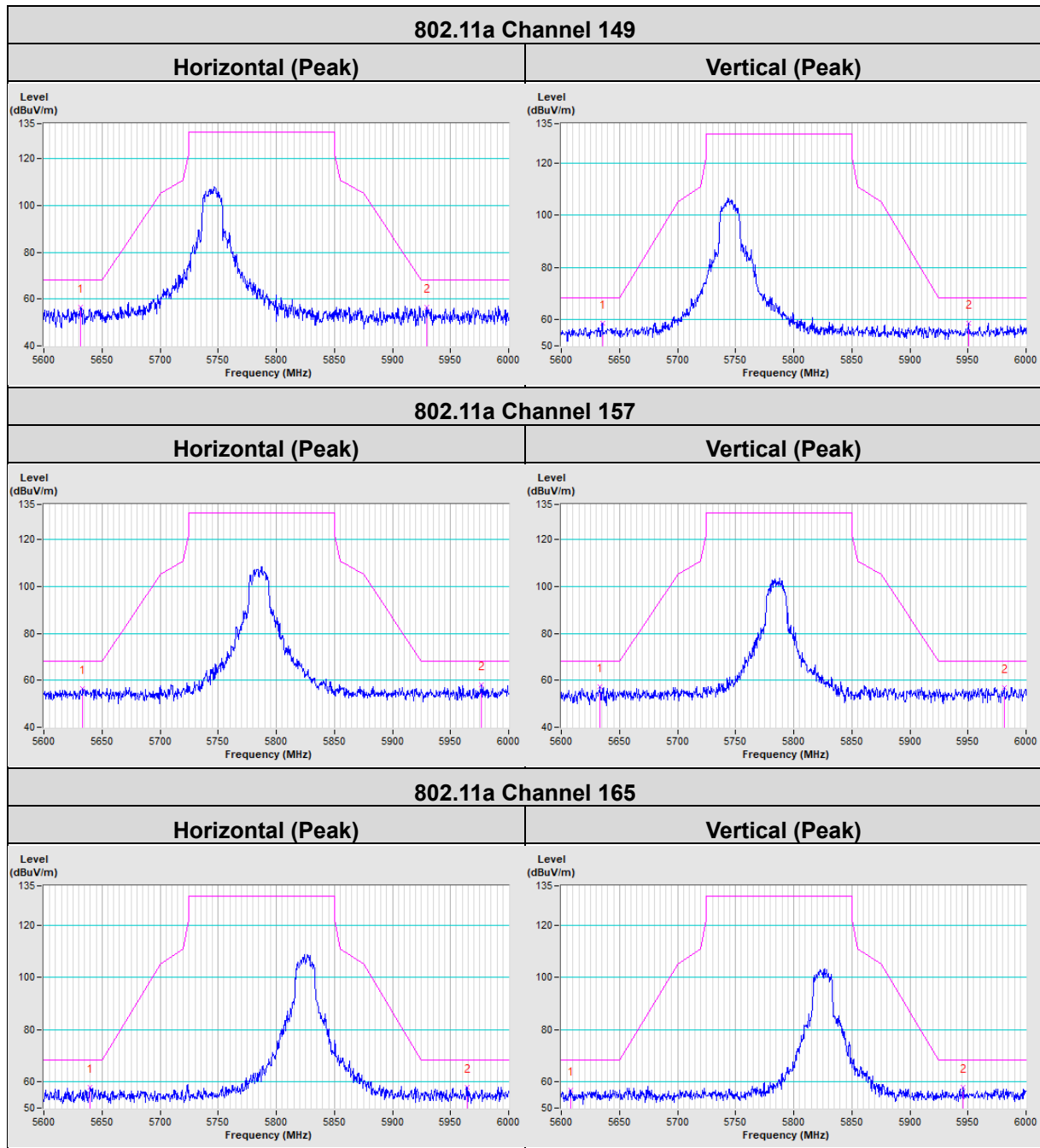
802.11a Channel 48

Horizontal (Peak) **Horizontal (Average)**

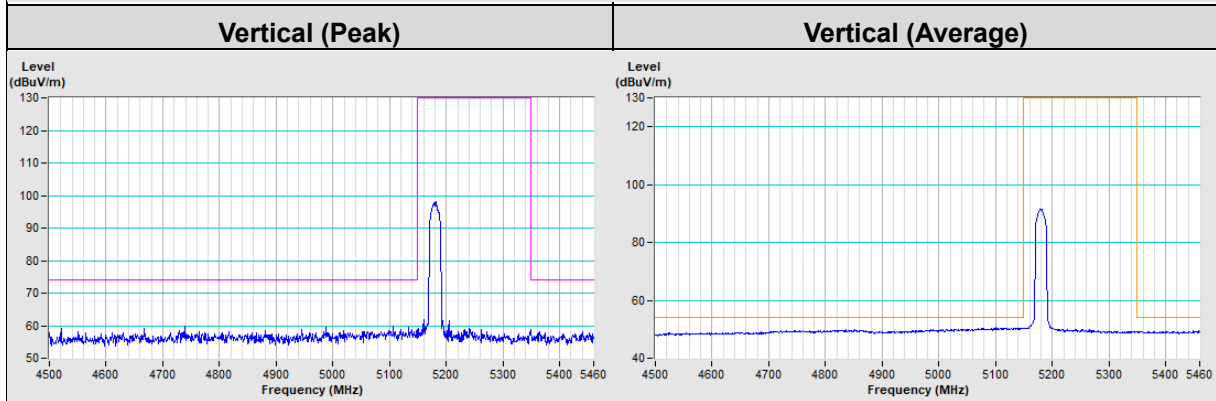
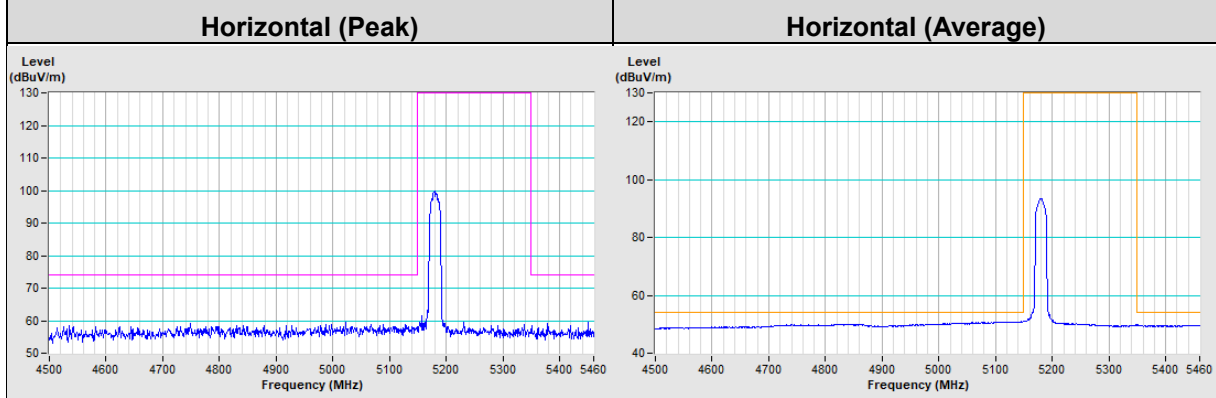


Vertical (Peak) **Vertical (Average)**

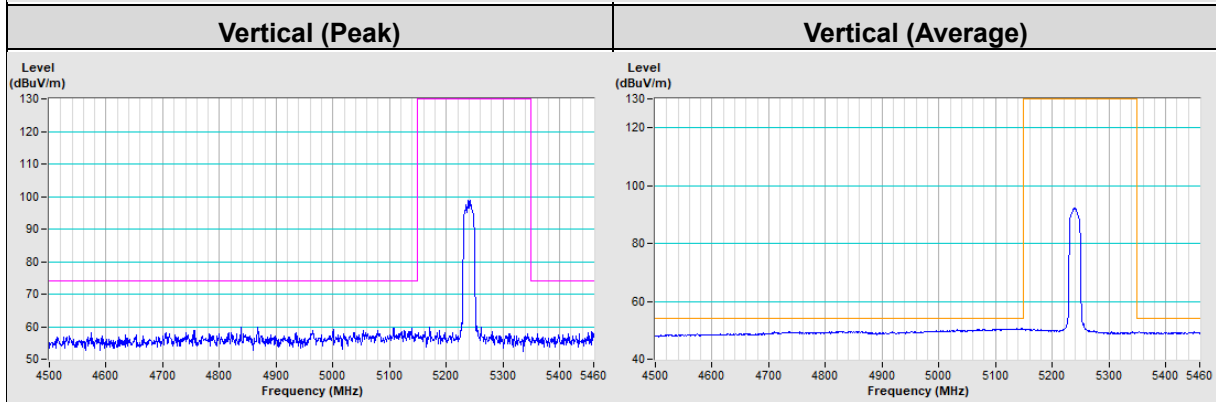
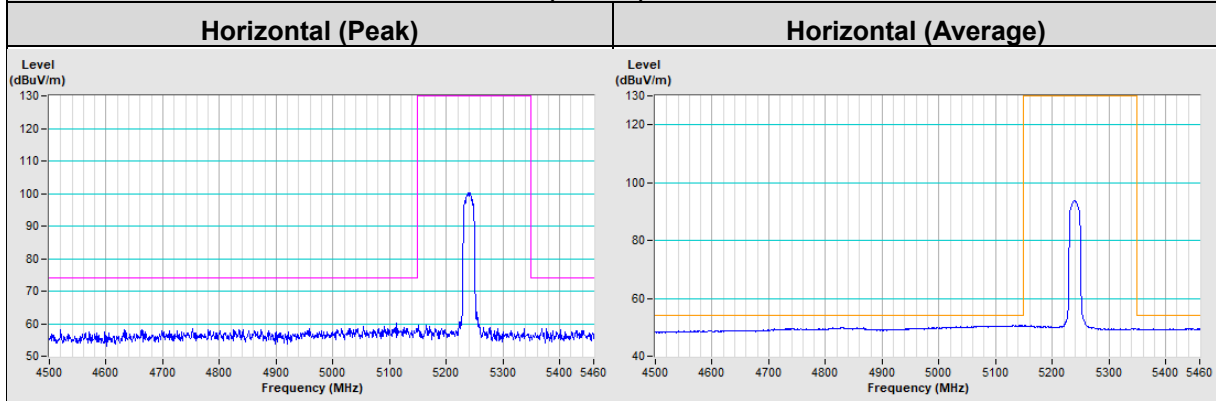




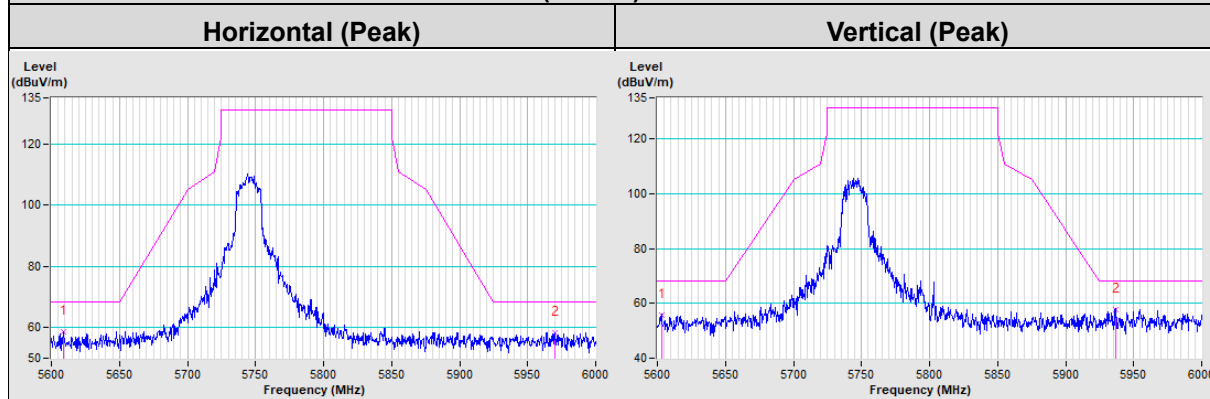
802.11ac (VHT20) Channel 36



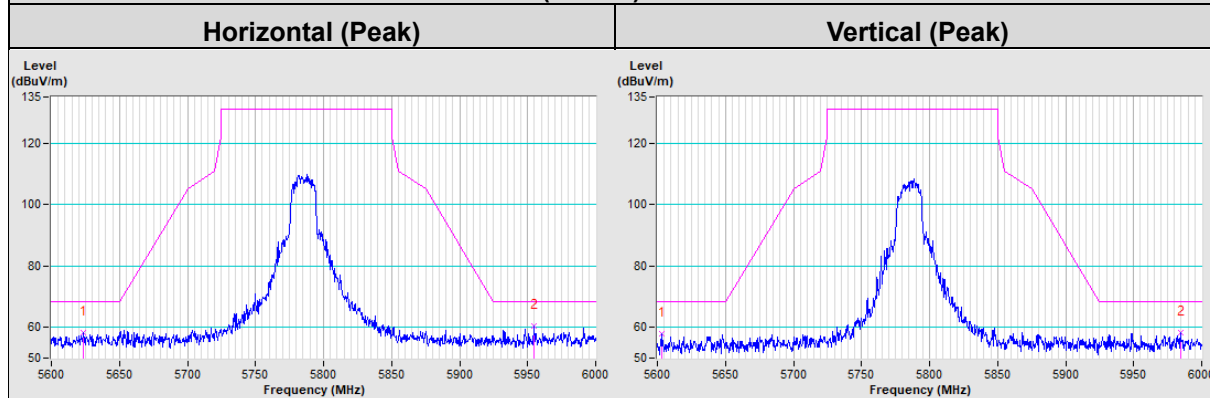
802.11ac (VHT20) Channel 48



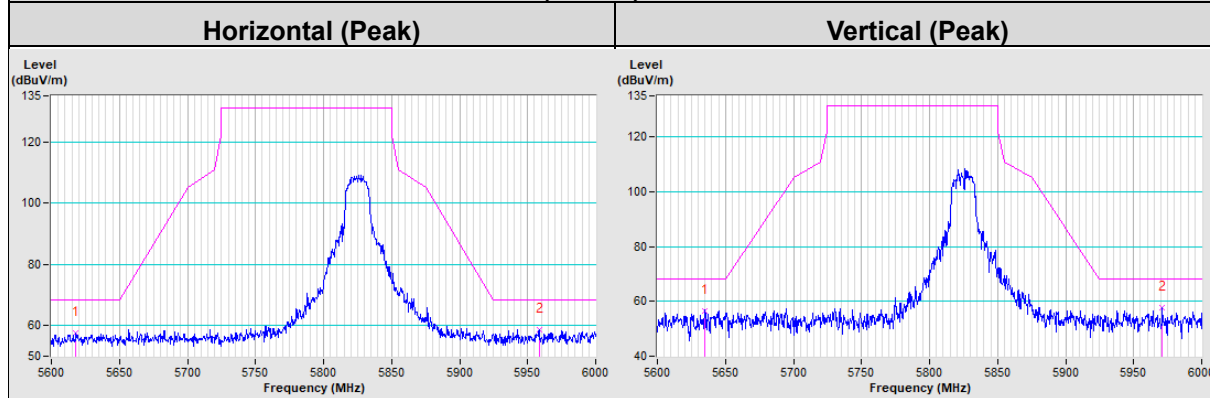
802.11ac (VHT20) Channel 149



802.11ac (VHT20) Channel 157

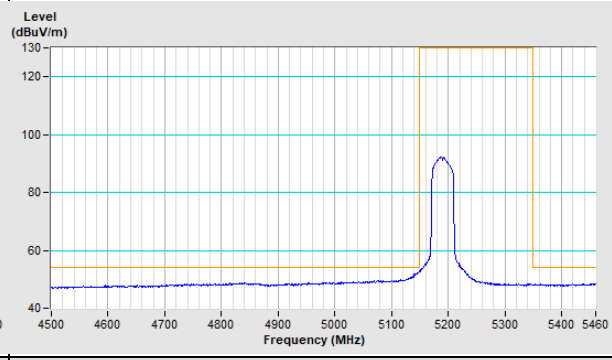
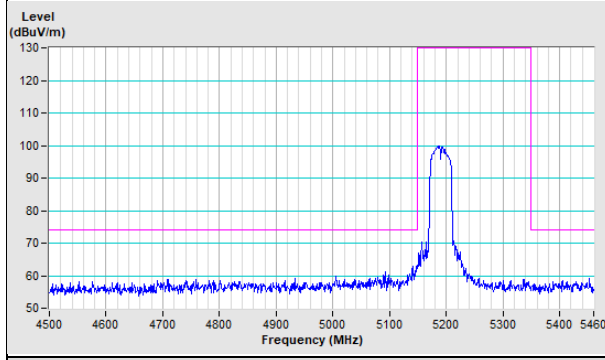


802.11ac (VHT20) Channel 165

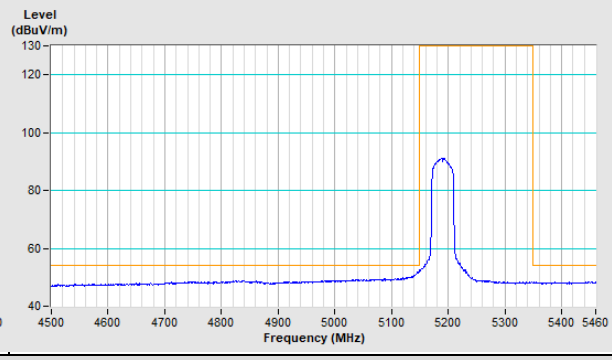
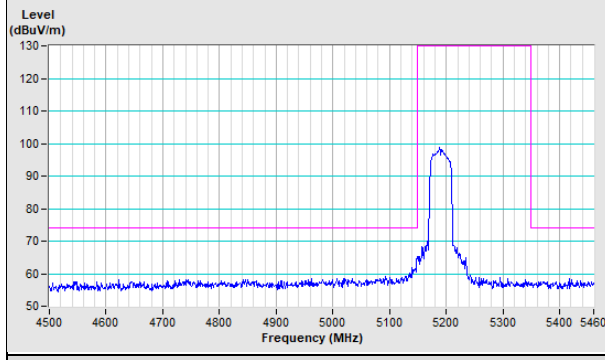


802.11ac (VHT40) Channel 38

Horizontal (Peak) **Horizontal (Average)**

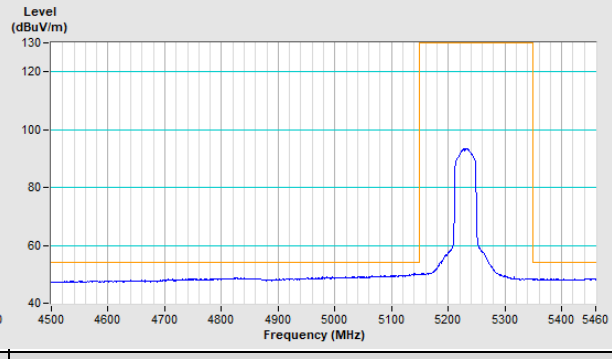
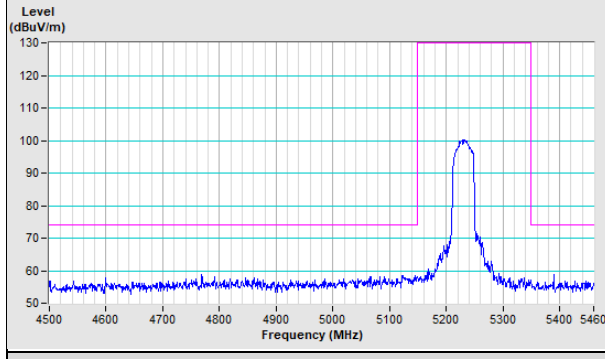


Vertical (Peak) **Vertical (Average)**

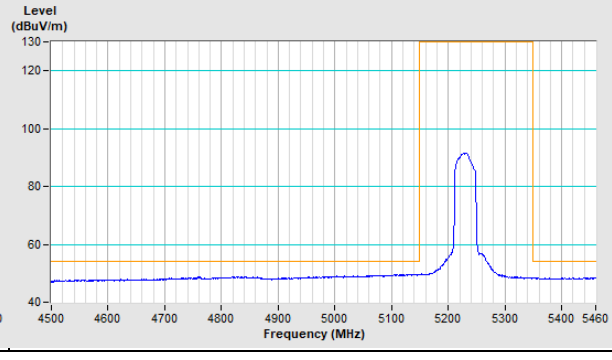
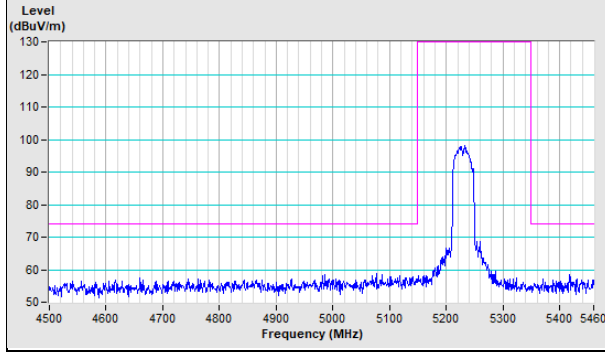


802.11ac (VHT40) Channel 46

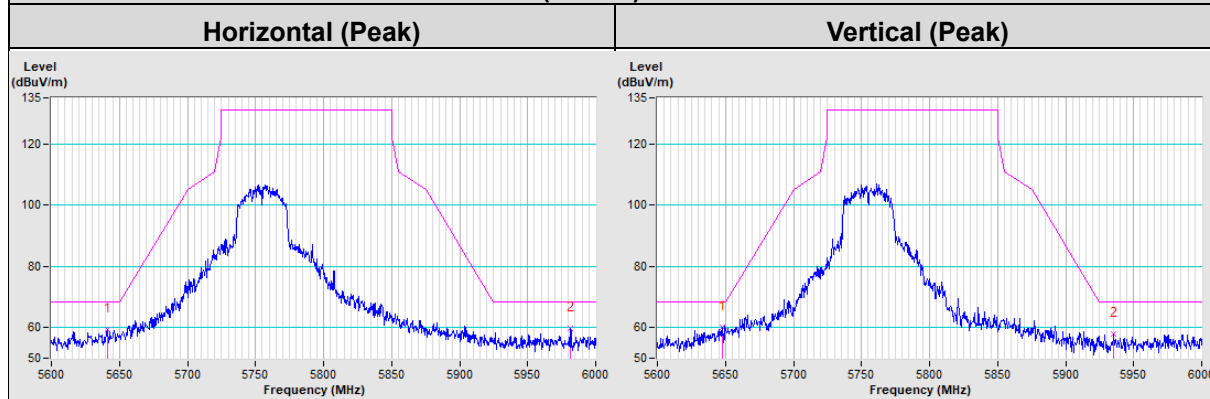
Horizontal (Peak) **Horizontal (Average)**



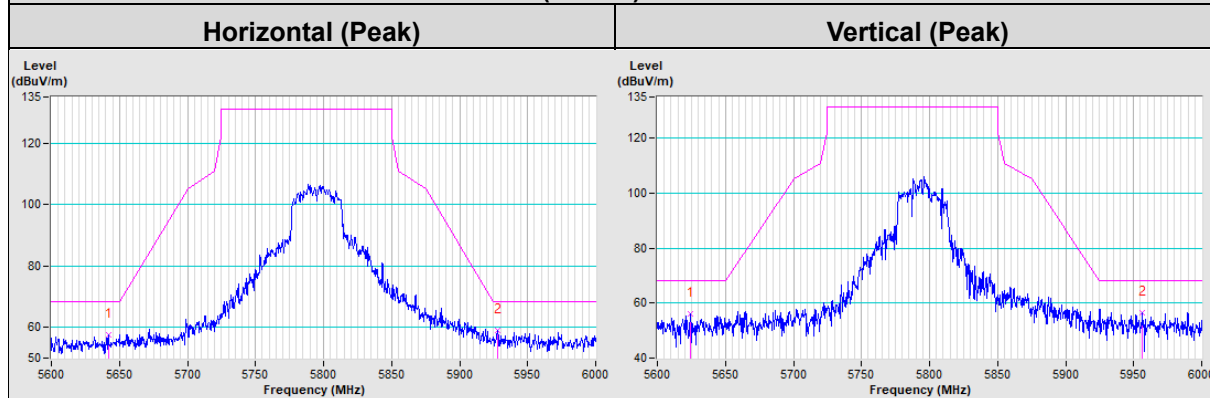
Vertical (Peak) **Vertical (Average)**



802.11ac (VHT40) Channel 151



802.11ac (VHT40) Channel 159



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:

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

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.

--- END ---