TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBAPP-WTW-P22110606-1
FCC ID:	PD5-NWA1050
Product:	Outdoor Wireless AP
Brand:	Nile Global
Model No.:	NWA 1050
Received Date:	2022/11/22
Test Date:	2022/12/6 ~ 2023/1/17
Issued Date:	2023/2/17
Applicant:	Delta Electronics, Inc.
Address:	31-1 Shien Pan Rd., Kuei San Industrial Zone, Taoyuan City, 333 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 / Designation Number:	788550 / TW0003

Approved by: Jeremy . Lin , **Date:** 2023/2/17

Jeremy Lin / Project Engineer

This test report consists of 132 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 : Polly Chien / Specialist

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RFBAPP-WTW-P22110606-1	Original release.	2023/2/17

1 Certificate

Product:	Outdoor Wireless AP
Brand:	Nile Global
Test Model:	NWA 1050
Sample Status:	Engineering Sample
Applicant:	Delta Electronics, Inc.
Test Date:	2022/12/6 ~ 2023/1/17
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407)
Measurement procedure:	ANSI C63.10-2013 KDB 789033 D02 General UNII Test Procedure New Rules v02r01 KDB 662911 D01 Multiple Transmitter Output v02r01

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

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(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 -5.25 dB at 21.37800 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -5.3 dB at 54.25 MHz
15.407(b) (1/2/3/4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.2 dB at 5150.00 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) (±)
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.79 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.64 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 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	Outdoor Wireless AP
Brand	Nile Global
Test Model	NWA 1050
Status of EUT	Engineering Sample
Power Supply Rating	56Vdc (From POE)
Modulation Type	256QAM for OFDM in 11ac mode 1024QAM for OFDMA in 11ax HE mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n (HT20/40): 6.5 to 600Mbps (MCS0 to MCS31) 802.11ac (VHT20/40/80): up to 3466.7Mbps (MCS0 to MCS9, NSS=1 to 4) 802.11ax: up to 4803.9Mbps (MCS0 to MCS11, NSS=1 to 4)
Operating Frequency	5180 ~ 5240MHz, 5745 ~ 5825MHz
Number of Channel	For QCN-5154 Module: 5180~5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 4 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2 802.11ac (VHT80), 802.11ax (HE80): 1 5745~5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 5 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2 802.11ac (VHT80), 802.11ax (HE80): 1 For QCA-9889 Module: 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	For QCN-5154 Module: CDD Mode: 5180 ~ 5240MHz: 49.524 mW (16.95 dBm) 5745 ~ 5825MHz: 480.161mW (26.81 dBm) Beamforming Mode: 5180 ~ 5240MHz: 20.908 mW (13.20 dBm) 5745 ~ 5825MHz: 190.504 mW (22.80 dBm) For QCA-9889 Module: CDD Mode: 5180 ~ 5240MHz: 25.003 mW (13.98 dBm) 5745 ~ 5825MHz: 24.831mW (13.95 dBm)
EUT Category	Outdoor Access Point

Note:

1. The EUT uses following accessories.

POE (Support unit)		
Brand	Model	Specification
CISCO	DPSN-35FB A	AC Input : 100-240Vac, 50/60Hz,0.8A DC Output : 56Vdc, 0.55A

2. There are four modules for the EUT.

Module	Function	Radio
QCN-5124	WLAN 2.4G (TX/RX)	1
QCN-5154	WLAN 5G (TX/RX)	2
QCA-9889	WLAN 2.4G & 5G (TX/RX)	3
CSR8811	BT LE	4

3. Simultaneously transmission condition.

Condition	Technology	
1	WLAN (Radio 1+2)	Bluetooth (Radio 4)
2	WLAN 2.4 GHz (Radio 3)	Bluetooth (Radio 4)
3	WLAN 5 GHz (Radio 3)	Bluetooth (Radio 4)
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.		

4. 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 Type	PIFA		
Antenna Connector	Ipex(MHF)		
Antenna No.	Gain (dBi)		
	2.4~2.4835GHz	5.15~5.25GHz	5.725~5.85GHz
2G1	6.6	-	-
2G2	7.2	-	-
2G3	7	-	-
2G4	7.1	-	-
5G1	-	6.1	7.2
5G2	-	7.1	7.4
5G3	-	6.4	6
5G4	-	6.5	6.7
Dual Band (DB)	6.8	5.9	6.9
BLE	6.1	-	-

2. The EUT will install (90º vertical) at outdoor area, the highest antenna gain from the horizon above 30 degrees as below, for more detail information please refer to antenna specification and user manual.

Module	Antenna Model	Antenna gain
QCN-5154	C393-510119-A(SRF2022682)	Chain 0: 2.69 dBi Chain 1: -1.32 dBi Chain 2: 0.57 dBi Chain 3: 3.92 dBi
QCA-9889	C393-510119-A(SRF2022682)	Chain 0: -0.047 dBi

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

3. The EUT incorporates a MIMO function:

QCN-5154 Module

5 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11a	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
802.11ac (VHT20)	4TX	4RX
802.11ac (VHT40)	4TX	4RX
802.11ac (VHT80)	4TX	4RX
802.11ac (VHT80+80)	2TX+2TX	2RX+2RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
802.11ax (HE80)	4TX	4RX
802.11ax (HE80+80)	2TX+2TX	2RX+2RX

QCA-9889 Module

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. All of modulation mode support beamforming function except 802.11a modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz), 802.11ac mode for 20 MHz (40 MHz, 80 MHz) and 802.11ax mode for 20 MHz (40 MHz, 80 MHz), therefore the manufacturer will control the power for 802.11n/ac mode is the same as the 802.11ax or more lower than it and investigated worst case to representative mode in test report.
4. The EUT doesn't support Tone RU mode.

3.3 Channel List

FOR 5180 ~ 5240 MHz

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

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), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80), 802.11ac (VHT80+VHT80), 802.11ax (HE80+HE80):

Channel	Frequency
42	5210 MHz

FOR 5745 ~ 5825 MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20) and 802.11ax (HE20):

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) and 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80), 802.11ac (VHT80+VHT80), 802.11ax (HE80+HE80):

Channel	Frequency
155	5775 MHz

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	The EUT's antenna (PIFA) had been pre-tested on the positioned of each 3 axis (X-axis/ Y-axis/ Z-axis). Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	Worst Condition: The worst case was X-axis.

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

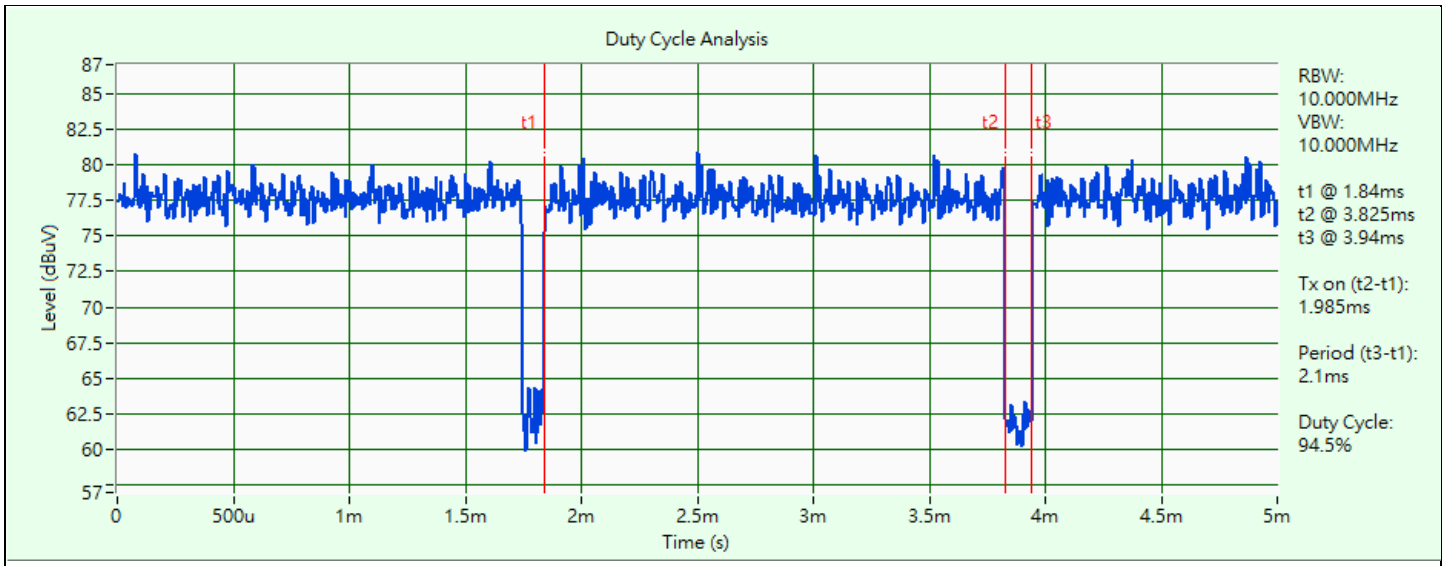
Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	A	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD & Beamforming	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD & Beamforming	38, 46, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD & Beamforming	42, 155	BPSK	MCS0
		802.11ax (HE80+80)	CDD & Beamforming	42+155	BPSK	MCS0
	B	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ac (VHT20)	CDD	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ac (VHT40)	CDD	38, 46, 151, 159	BPSK	MCS0
		802.11ac (VHT80)	CDD	42, 155	BPSK	MCS0
6 dB Bandwidth	A	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	155	BPSK	MCS0
		802.11ax (HE80+80)	CDD	42+155	BPSK	MCS0
	B	802.11a	CDD	149, 157, 165	BPSK	6Mb/s
		802.11ac (VHT20)	CDD	149, 157, 165	BPSK	MCS0
		802.11ac (VHT40)	CDD	151, 159	BPSK	MCS0
		802.11ac (VHT80)	CDD	155	BPSK	MCS0

Test Item	EUT Configure Mode	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Occupied Bandwidth / Power Spectral Density	A	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	38, 46, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	42, 155	BPSK	MCS0
		802.11ax (HE80+80)	CDD	42+155	BPSK	MCS0
	B	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ac (VHT20)	CDD	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ac (VHT40)	CDD	38, 46, 151, 159	BPSK	MCS0
		802.11ac (VHT80)	CDD	42, 155	BPSK	MCS0
Frequency Stability	A, B	802.11a	CDD	36	-	-
AC Power Conducted Emissions	A	802.11a	CDD	157	BPSK	6Mb/s
	B	802.11a	CDD	40	BPSK	6Mb/s
Unwanted Emissions below 1 GHz	A	802.11a	CDD	157	BPSK	6Mb/s
	B	802.11a	CDD	40	BPSK	6Mb/s
Unwanted Emissions above 1 GHz	A	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ax (HE20)	CDD	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ax (HE40)	CDD	38, 46, 151, 159	BPSK	MCS0
		802.11ax (HE80)	CDD	42, 155	BPSK	MCS0
		802.11ax (HE80+80)	CDD	42+155	BPSK	MCS0
	B	802.11a	CDD	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
		802.11ac (VHT20)	CDD	36, 40, 48, 149, 157, 165	BPSK	MCS0
		802.11ac (VHT40)	CDD	38, 46, 151, 159	BPSK	MCS0
		802.11ac (VHT80)	CDD	42, 155	BPSK	MCS0
EUT Configure Mode:	A	5GHz Radio 2: QCN-5154 Module				
	B	Scan Radio 3: QCA-9889 Module				

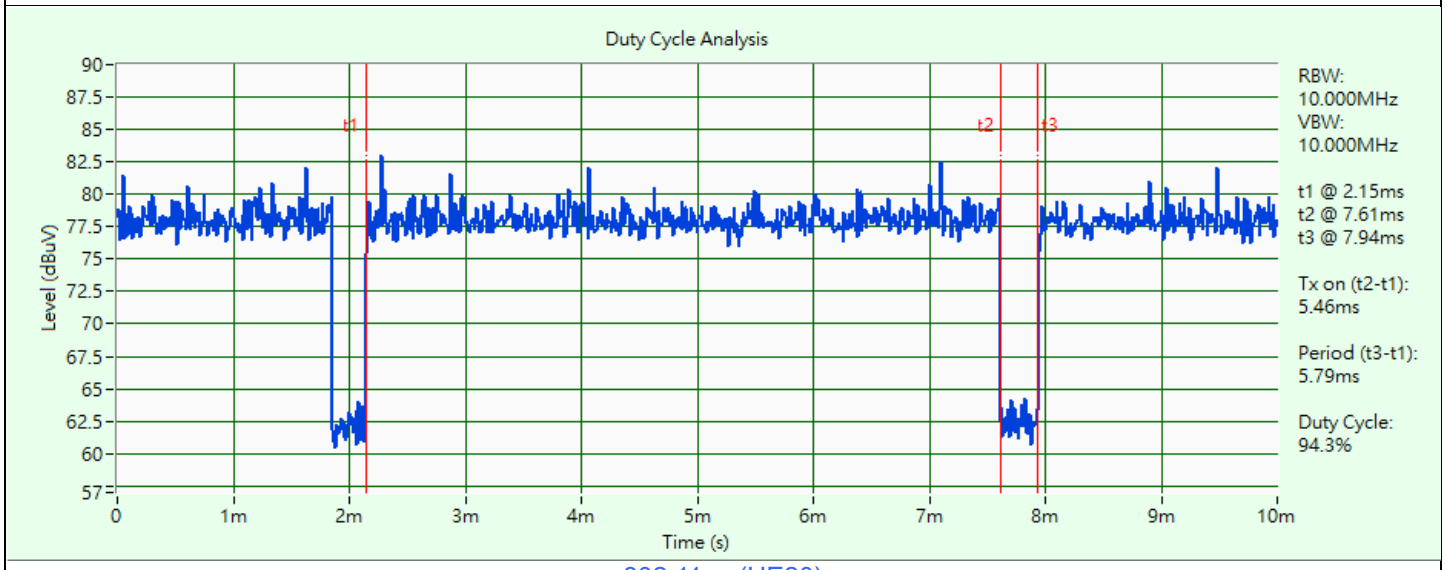
3.5 Duty Cycle of Test Signal

Mode A: 5GHz Radio 2: QCN-5154 Module

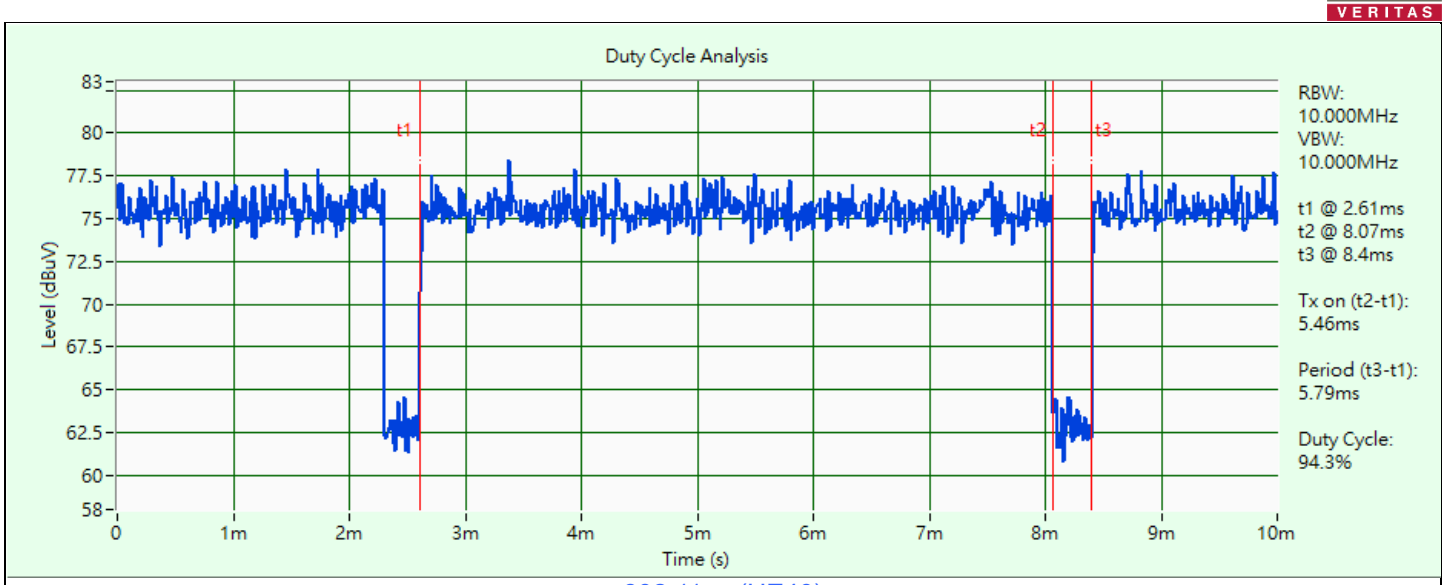
802.11a: Duty cycle = 1.985 ms / 2.1 ms x 100% = 94.5%, duty factor = 10 * log (1/Duty cycle) = 0.24 dB
802.11ax (HE20): Duty cycle = 5.46 ms / 5.79 ms x 100% = 94.3%, duty factor = 10 * log (1/Duty cycle) = 0.25 dB
802.11ax (HE40): Duty cycle = 5.46 ms / 5.79 ms x 100% = 94.3%, duty factor = 10 * log (1/Duty cycle) = 0.25 dB
802.11ax (HE80): Duty cycle = 5.46 ms / 5.77 ms x 100% = 94.6%, duty factor = 10 * log (1/Duty cycle) = 0.24 dB
802.11ax (HE80+80): Duty cycle = 5.46 ms / 5.77 ms x 100% = 94.6%, duty factor = 10 * log (1/Duty cycle) = 0.24 dB



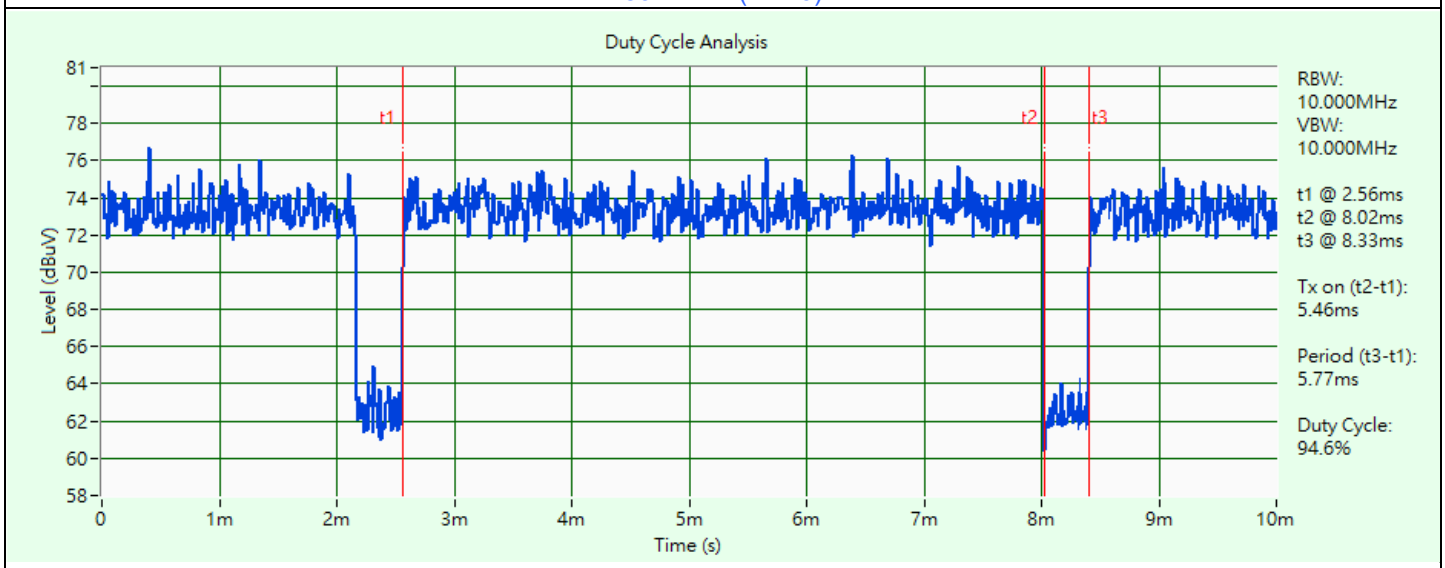
802.11a



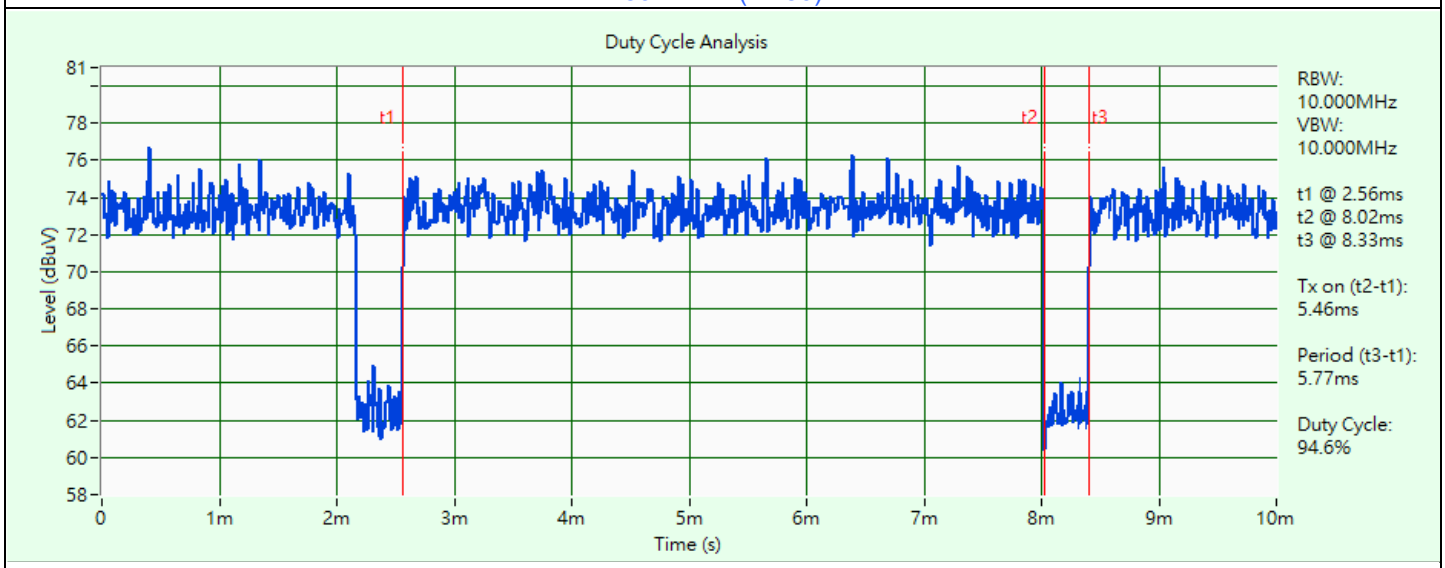
802.11ax (HE20)



802.11ax (HE40)



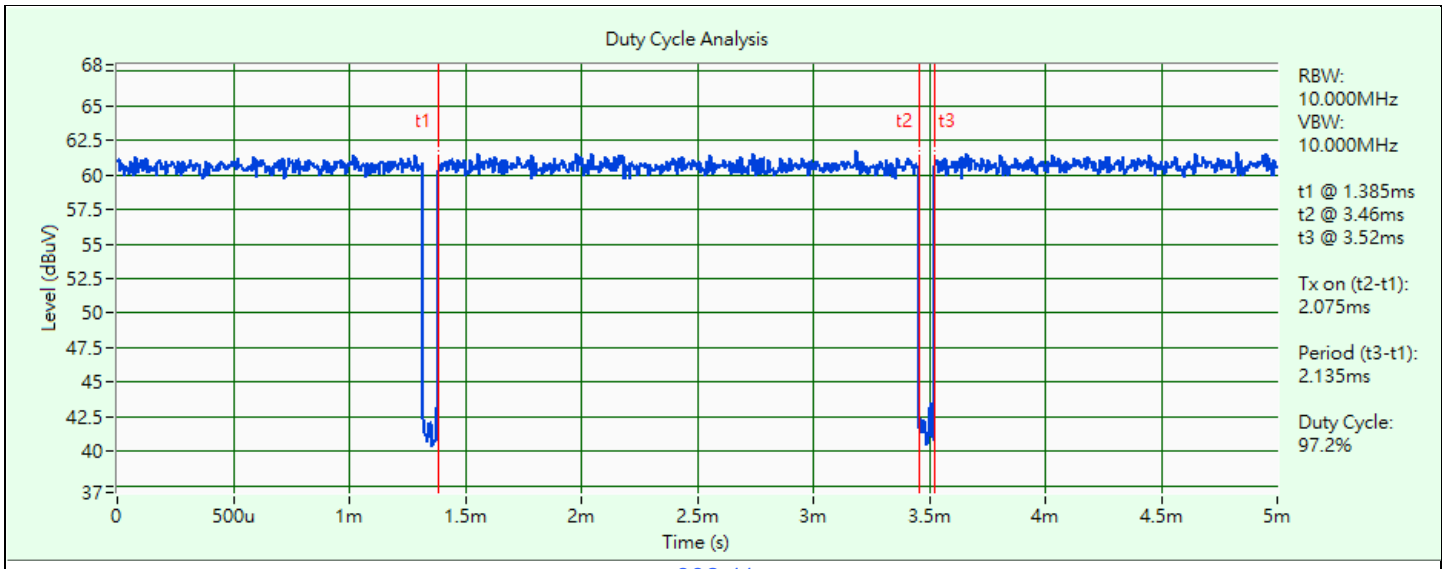
802.11ax (HE80)



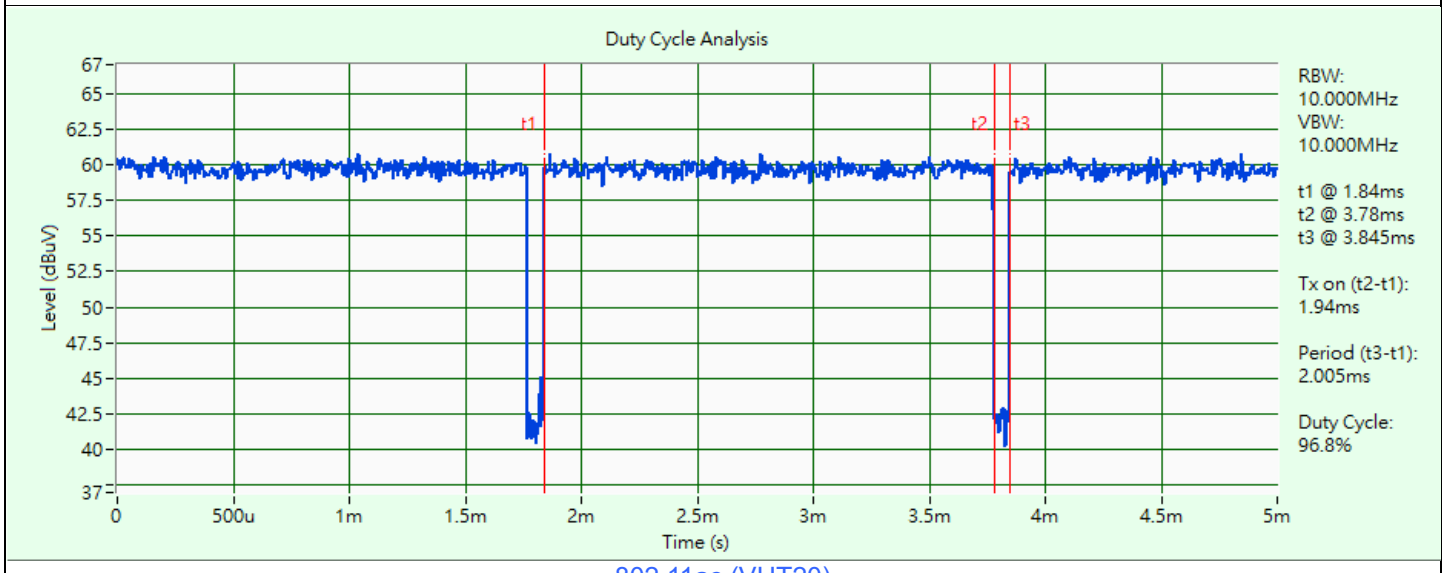
802.11ax (HE80+80)

Mode B: Scan Radio 3: QCA-9889 Module

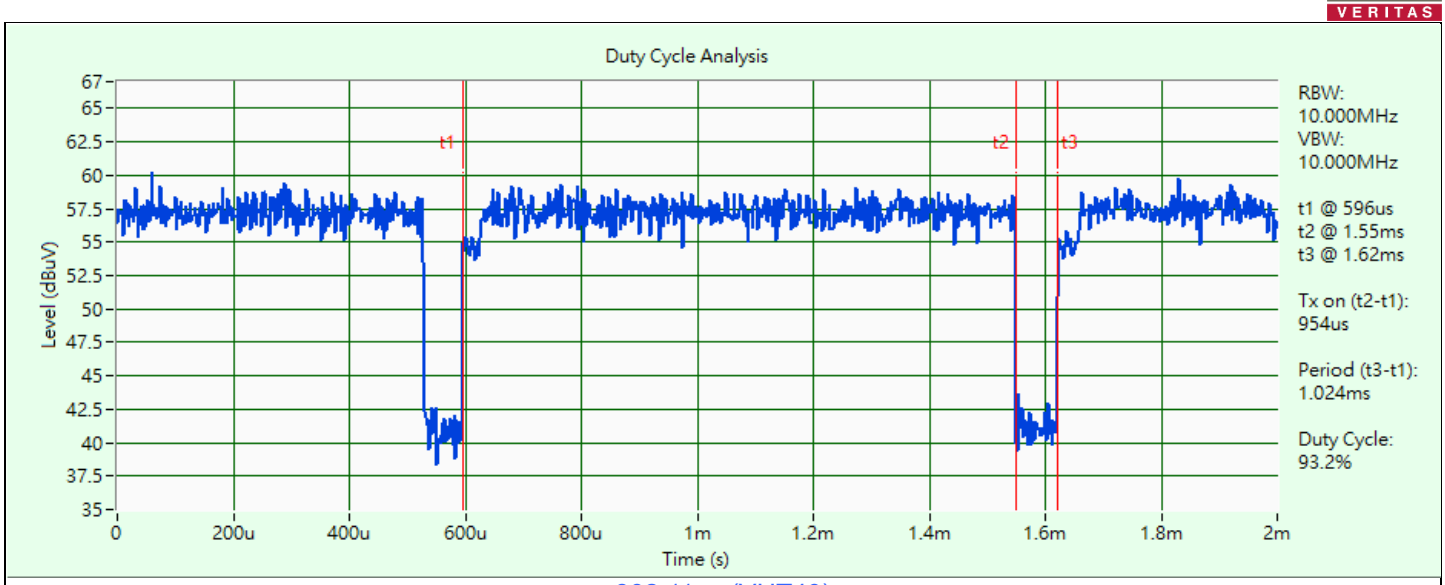
802.11a: Duty cycle = 2.075 ms / 2.135 ms x 100% = 97.2%, duty factor = 10 * log (1/Duty cycle) = 0.12 dB
802.11ac (VHT20): Duty cycle = 1.94 ms / 2.005 ms x 100% = 96.8%, duty factor = 10 * log (1/Duty cycle) = 0.14 dB
802.11ac (VHT40): Duty cycle = 0.954 ms / 1.024 ms x 100% = 93.2%, duty factor = 10 * log (1/Duty cycle) = 0.31 dB
802.11ac (VHT80): Duty cycle = 0.465 ms / 0.531 ms x 100% = 87.6%, duty factor = 10 * log (1/Duty cycle) = 0.58 dB



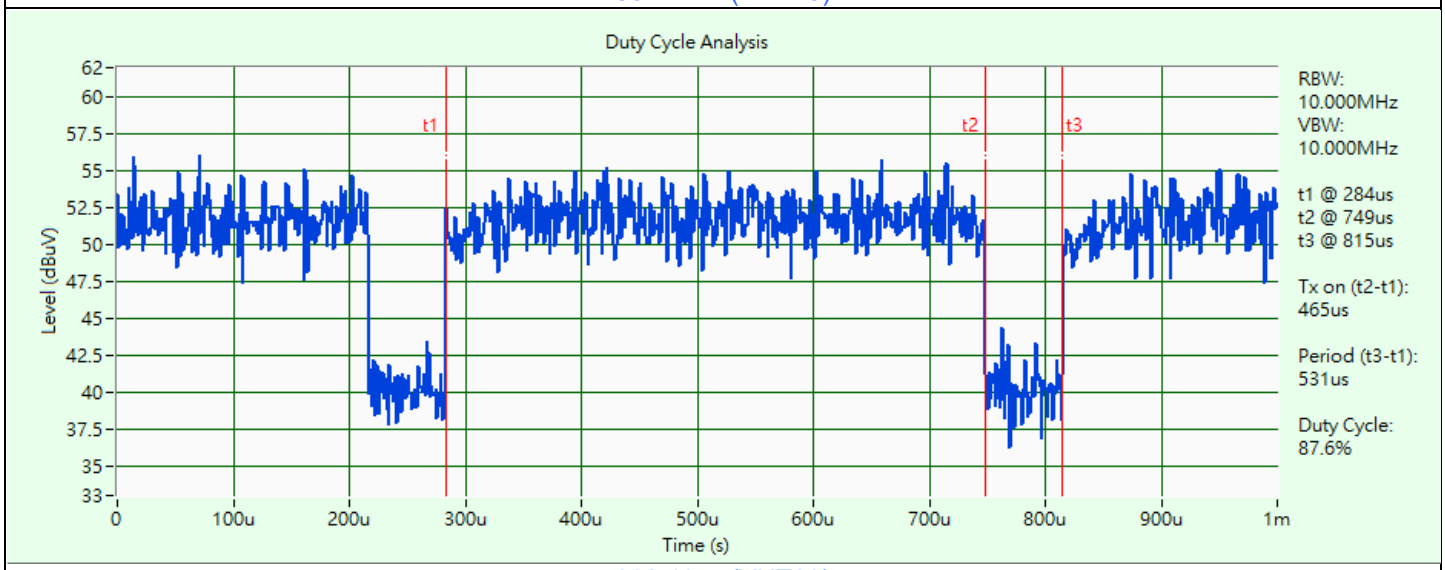
802.11a



802.11ac (VHT20)



802.11ac (VHT40)

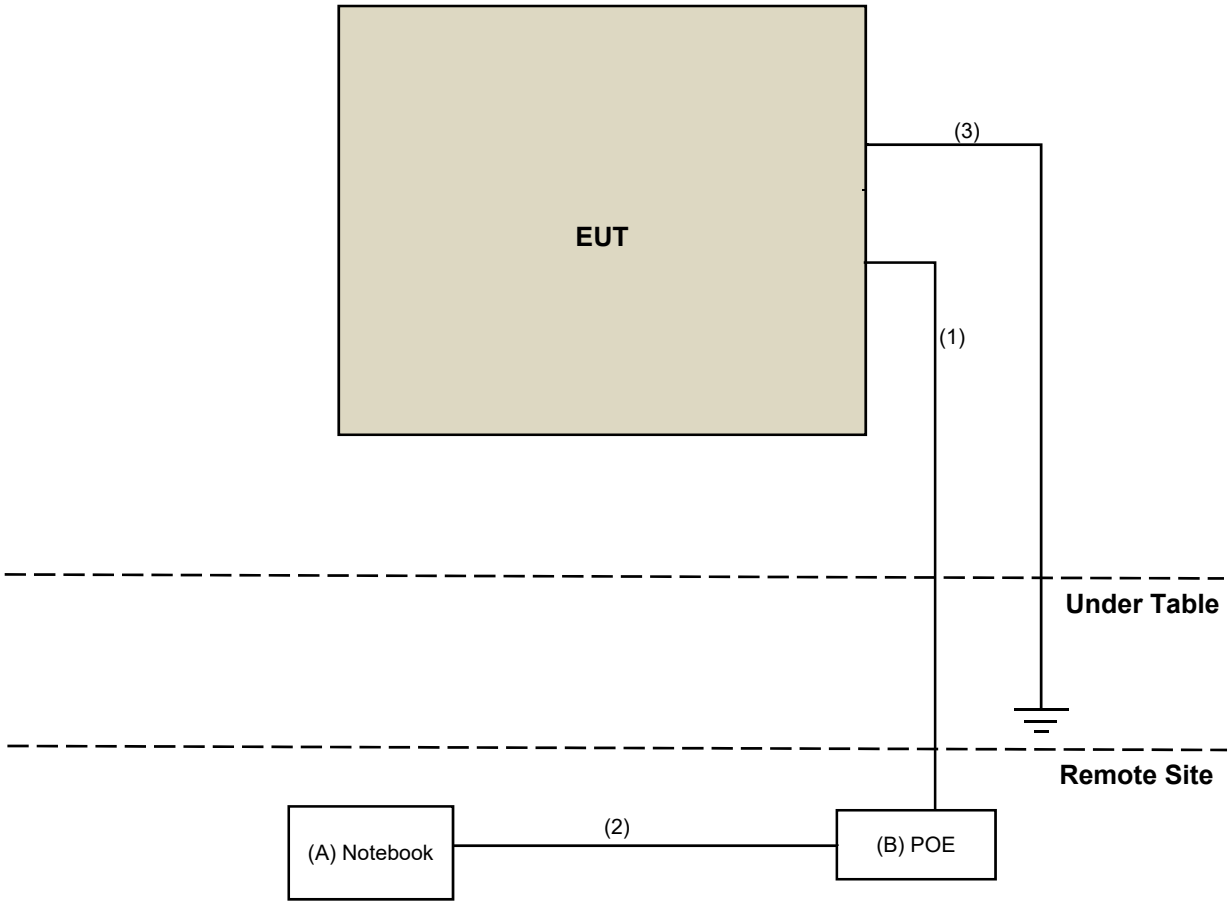


802.11ac (VHT80)

3.6 Test Program Used and Operation Descriptions

Controlling software (QSPR V5.0-00196) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Notebook	CISCO	DPSN-35FB A	2RL3YW1	FCC DoC Approved	Provided by Lab
B	POE	YAMAHA	YPS-PoE-AT	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	1.5	No	0	Provided by Lab
2	RJ-45 Cable	1	1.5	No	0	Provided by Lab
3	GND Cable	1	1.2	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
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190004/MY55190007/MY55210005	2022/7/13	2023/7/12

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/1/17

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 R&S	FSV40	100979	2022/3/25	2023/3/24

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/1/17

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
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 R&S	FSV40	100979	2022/3/25	2023/3/24
Temperature & Humidity Chamber TERCHY	HRM-120RF	931022	2022/12/27	2023/12/26

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/1/17

4.6 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
LISN R&S	ESH3-Z5	100311	2022/9/12	2023/9/11
LISN ROHDE & SCHWARZ	ENV216	101826	2022/3/14	2023/3/13
Receiver R&S	ESCI	100412	2022/8/22	2023/8/21
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
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: 2022/12/12

4.7 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Bi_Log Antenna Schwarbeck	VULB9168	9168-155	2022/10/21	2023/10/20
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 Agilent	8447D	2944A10631	2022/5/14	2023/5/13
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2022/1/15	2023/1/14
RF Coaxial Cable WOKEN	8D-FB	Cable-CH4-01	2022/7/9	2023/7/8
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer R&S	FSW43	101582	2022/4/13	2023/4/12
Test Receiver R&S	ESCI	100424	2021/12/30	2022/12/29
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2022/12/12

4.8 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
Horn Antenna Schwarzbeck	9120D	9120D-408	2022/11/13	2023/11/12
	BBHA 9170	9170-480	2022/11/13	2023/11/12
		BBHA9170241	2022/10/20	2023/10/19
		BBHA9170243	2022/11/13	2023/11/12
Pre-Ammlifier EMCI	EMC 184045	980116	2022/10/1	2023/9/30
Pre_Amplifier KEYSIGHT	83017A	MY53270295	2022/5/14	2023/5/13
RF cable HUBER+SUHNER	Sucoflex 104	MY 13380+295012/04	2022/5/14	2023/5/13
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2022/7/9	2023/7/8
	EMC102-KM-KM-3000	150929	2022/7/9	2023/7/8
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2022/5/14	2023/5/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer R&S	FSW43	101582	2022/4/13	2023/4/12
Test Receiver R&S	ESCI	100424	2021/12/30	2022/12/29
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2022/12/6 ~ 2022/12/8

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 ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
	Fixed point-to-point Access Point	1 Watt (30 dBm)
	Indoor Access Point	1 Watt (30 dBm)
	Mobile and Portable client device	250mW (24 dBm)

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

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

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

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

5.2 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:

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

6 Test Arrangements

6.1 RF Output Power

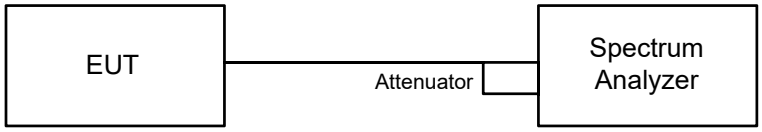
6.1.1 Test Setup

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-2

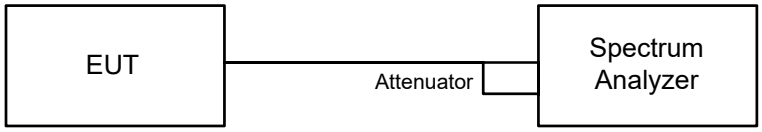
a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Sweep time = auto, trigger set to “free run”.
e. Trace average at least 100 traces in power averaging mode.
f. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
g. Record the max value and add 10 log (1/duty cycle).

For specified measurement bandwidth 500 kHz:
Method SA-2

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

6.3 6 dB Bandwidth

6.3.1 Test Setup

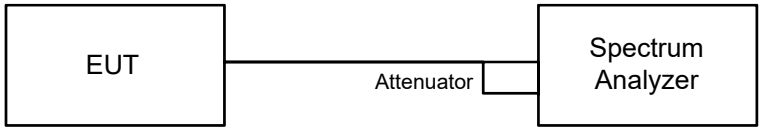


6.3.2 Test Procedure

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

6.4 Occupied Bandwidth

6.4.1 Test Setup

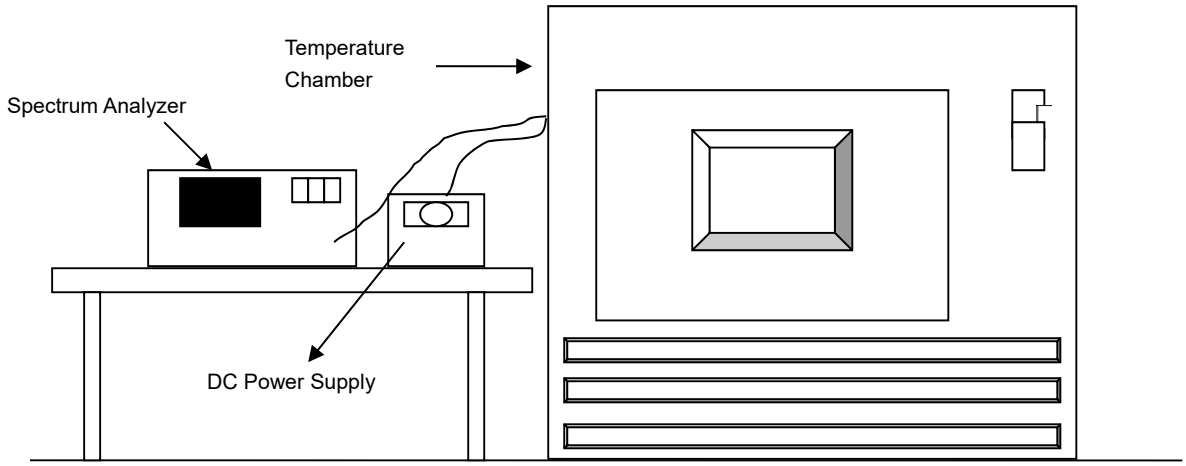


6.4.2 Test Procedure

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

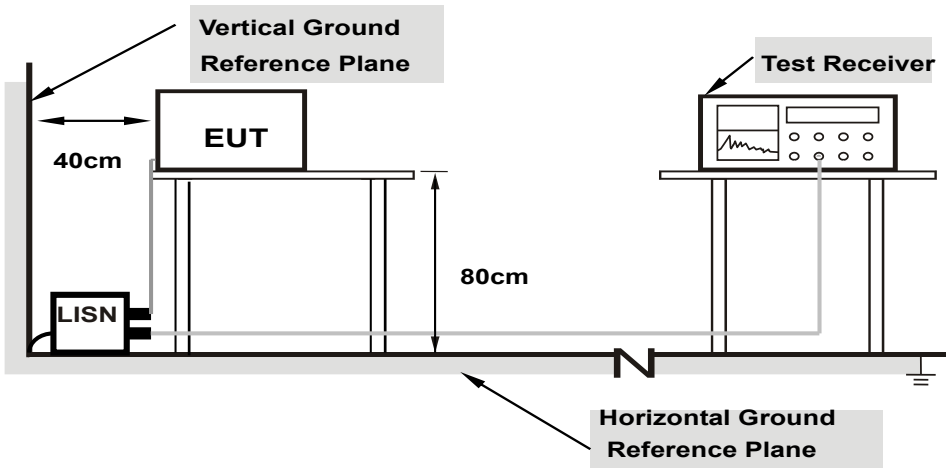


6.5.2 Test Procedure

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

6.6 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

a. The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.

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

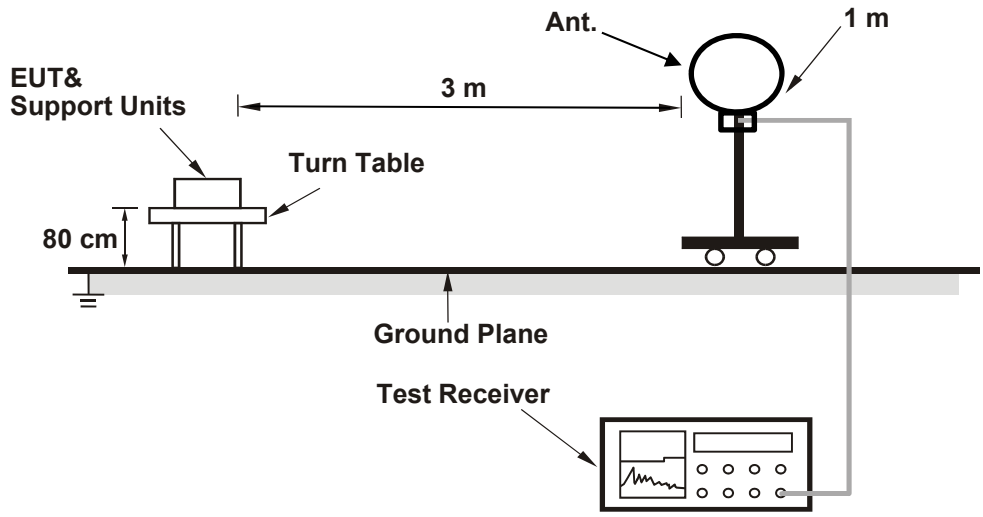
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

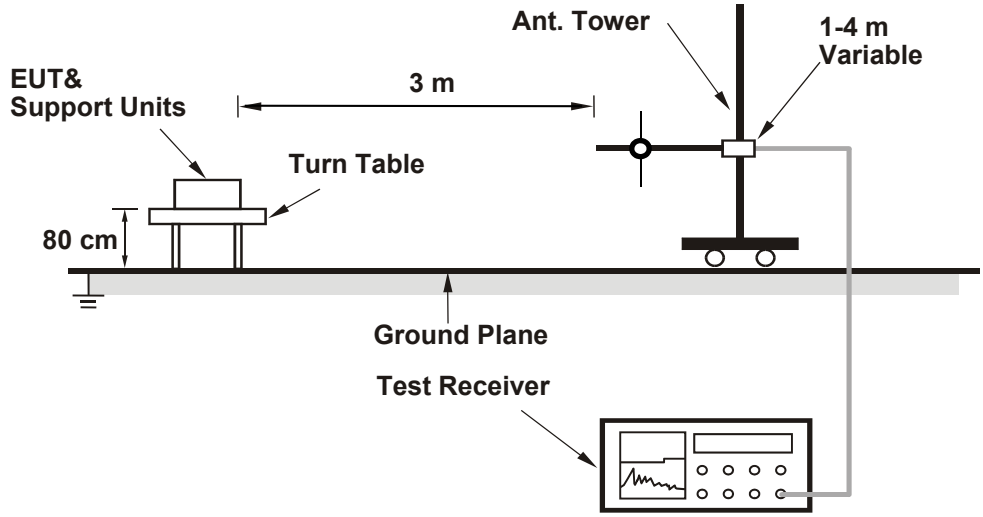
6.7 Unwanted Emissions below 1 GHz

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.

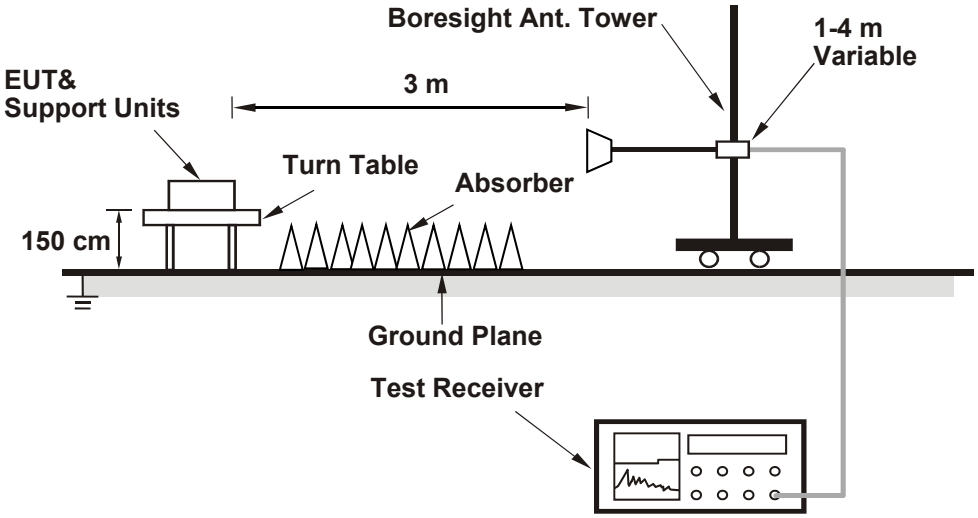
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

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

a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

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

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

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

e. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Notes:

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

7 Test Results of Test Item

7.1 RF Output Power

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

Mode A: 5GHz Radio 2: QCN-5154 Module

CDD Mode

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	10.69	10.78	10.72	10.72	47.296	16.75	28.9	Pass
40	5200	10.74	10.82	10.74	10.74	47.651	16.78	28.9	Pass
48	5240	10.71	10.81	10.73	10.72	47.46	16.76	28.9	Pass
149	5745	20.71	20.91	20.60	20.53	468.866	26.71	28.6	Pass
157	5785	20.65	20.98	20.63	20.56	470.833	26.73	28.6	Pass
165	5825	20.75	20.94	20.70	20.59	475.057	26.77	28.6	Pass

Chan.	Chan. Freq. (MHz)	Total Power (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
36	5180	16.75	3.92	116.681	20.67	21	Pass
40	5200	16.78	3.92	117.49	20.70	21	Pass
48	5240	16.76	3.92	116.95	20.68	21	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the directional gain is 7.1 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7.1-6) = 28.9 dBm.
3. For U-NII-3, the directional gain is 7.4 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7.4-6) = 28.6 dBm.
4. For U-NII-1, the gain of above 30 degrees from the horizon is 3.92 dBi, EIRP (dBm) = Average Power (dBm) + 3.92 dBi

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	10.85	10.82	10.83	10.92	48.705	16.88	28.9	Pass
40	5200	10.89	10.85	10.82	10.90	48.817	16.89	28.9	Pass
48	5240	10.86	10.84	10.79	10.88	48.565	16.86	28.9	Pass
149	5745	20.71	20.98	20.65	20.71	476.98	26.79	28.6	Pass
157	5785	20.87	20.96	20.58	20.67	477.887	26.79	28.6	Pass
165	5825	20.94	20.95	20.54	20.73	480.161	26.81	28.6	Pass

Chan.	Chan. Freq. (MHz)	Total Power (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
36	5180	16.88	3.92	120.226	20.80	21	Pass
40	5200	16.89	3.92	120.504	20.81	21	Pass
48	5240	16.86	3.92	119.674	20.78	21	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the directional gain is 7.1 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7.1-6) = 28.9 dBm.
3. For U-NII-3, the directional gain is 7.4 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7.4-6) = 28.6 dBm.
4. For U-NII-1, the gain of above 30 degrees from the horizon is 3.92 dBi, EIRP (dBm) = Average Power (dBm) + 3.92 dBi

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	10.92	10.91	10.93	10.95	49.524	16.95	28.9	Pass
46	5230	10.90	10.89	10.92	10.92	49.296	16.93	28.9	Pass
151	5755	20.79	20.97	20.56	20.63	474.35	26.76	28.6	Pass
159	5795	20.91	20.91	20.55	20.78	479.796	26.81	28.6	Pass

Chan.	Chan. Freq. (MHz)	Total Power (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
38	5190	16.95	3.92	122.18	20.87	21	Pass
46	5230	16.93	3.92	121.619	20.85	21	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 7.1 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7.1-6) = 28.9 dBm.
3. For U-NII-3, the maximum gain is 7.4 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7.4-6) = 28.6 dBm.
4. For U-NII-1, the gain of above 30 degrees from the horizon is 3.92 dBi, EIRP (dBm) = Average Power (dBm) + 3.92 dBi

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	10.72	10.67	10.53	10.78	46.737	16.70	28.9	Pass
155	5775	20.90	20.98	20.57	20.61	477.446	26.79	28.6	Pass

Chan.	Chan. Freq. (MHz)	Total Power (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
42	5210	16.70	3.92	115.345	20.62	21	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 7.1 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7.1-6) = 28.9 dBm.
3. For U-NII-3, the maximum gain is 7.4 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7.4-6) = 28.6 dBm.
4. For U-NII-1, the gain of above 30 degrees from the horizon is 3.92 dBi, EIRP (dBm) = Average Power (dBm) + 3.92 dBi

802.11ax (HE80+80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
42+155(L)	5210	13.69	13.75	-	-	47.102	16.73	28.9	Pass
42+155(H)	5775	-	-	13.32	13.38	43.255	16.36	28.6	Pass

Chan.	Chan. Freq. (MHz)	Total Power (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
42+155(L)	5210	16.73	3.92	116.145	20.65	21	Pass

Notes:

1. Directional gain is the maximum gain of antennas.
2. For U-NII-1, the maximum gain is 7.1 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7.1-6) = 28.9 dBm.
3. For U-NII-3, the maximum gain is 7.4 dBi > 6 dBi, so the output power limit shall be reduced to 30-(7.4-6) = 28.6 dBm.
4. For U-NII-1, the gain of above 30 degrees from the horizon is 3.92 dBi, EIRP (dBm) = Average Power (dBm) + 3.92 dBi

Beamforming Mode

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	7.16	7.12	7.11	7.21	20.753	13.17	23.45	Pass
40	5200	7.17	7.14	7.11	7.22	20.801	13.18	23.45	Pass
48	5240	7.15	7.13	7.08	7.17	20.669	13.15	23.45	Pass
149	5745	16.73	16.97	16.63	16.70	189.671	22.78	23.14	Pass
157	5785	16.85	16.95	16.56	16.63	189.278	22.77	23.14	Pass
165	5825	16.93	16.94	16.52	16.71	190.504	22.80	23.14	Pass

Chan.	Chan. Freq. (MHz)	Total Power (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
36	5180	13.17	7.71	122.462	20.88	21	Pass
40	5200	13.18	7.71	122.744	20.89	21	Pass
48	5240	13.15	7.71	121.899	20.86	21	Pass

Notes:

1. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20} + 10^{Chain2/20} + 10^{Chain3/20})^2$ / 4]
2. For U-NII-1, the directional gain is 12.55 dBi > 6 dBi, so the output power limit shall be reduced to 30-(12.55-6) = 23.45 dBm.
3. For U-NII-3, the directional gain is 12.86 dBi > 6 dBi, so the output power limit shall be reduced to 30-(12.86-6) = 23.14 dBm.
4. For U-NII-1, the gain of above 30 degrees from the horizon is 7.71 dBi, EIRP (dBm) = Average Power (dBm) + 7.71 dBi

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	7.20	7.18	7.15	7.20	20.908	13.20	23.45	Pass
46	5230	7.16	7.14	7.11	7.21	20.777	13.18	23.45	Pass
151	5755	16.77	16.95	16.53	16.63	188.082	22.74	23.14	Pass
159	5795	16.93	16.87	16.54	16.75	190.355	22.80	23.14	Pass

Chan.	Chan. Freq. (MHz)	Total Power (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
38	5190	13.20	7.71	123.31	20.91	21	Pass
46	5230	13.18	7.71	122.744	20.89	21	Pass

Notes:

1. Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$ + $10^{Chain2/20}$ + $10^{Chain3/20}$)^2 / 4]
2. For U-NII-1, the directional gain is 12.55 dBi > 6 dBi, so the output power limit shall be reduced to 30-(12.55-6) = 23.45 dBm.
3. For U-NII-3, the directional gain is 12.86 dBi > 6 dBi, so the output power limit shall be reduced to 30-(12.86-6) = 23.14 dBm.
4. For U-NII-1, the gain of above 30 degrees from the horizon is 7.71 dBi, EIRP (dBm) = Average Power (dBm) + 7.71 dBi

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	7.21	7.06	6.98	7.18	20.555	13.13	23.45	Pass
155	5775	16.89	16.96	16.54	16.58	189.105	22.77	23.14	Pass

Chan.	Chan. Freq. (MHz)	Total Power (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
42	5210	13.13	7.71	121.339	20.84	21	Pass

Notes:

1. Directional gain = 10 log[($10^{Chain0/20}$ + $10^{Chain1/20}$ + $10^{Chain2/20}$ + $10^{Chain3/20}$)^2 / 4]
2. For U-NII-1, the directional gain is 12.55 dBi > 6 dBi, so the output power limit shall be reduced to 30-(12.55-6) = 23.45 dBm.
3. For U-NII-3, the directional gain is 12.86 dBi > 6 dBi, so the output power limit shall be reduced to 30-(12.86-6) = 23.14 dBm.
4. For U-NII-1, the gain of above 30 degrees from the horizon is 7.71 dBi, EIRP (dBm) = Average Power (dBm) + 7.71 dBi

802.11ax (HE80+80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
42+155(L)	5210	10.16	10.20	-	-	20.847	13.19	26.38	Pass
42+155(H)	5775	-	-	9.84	9.89	19.388	12.88	26.63	Pass

Chan.	Chan. Freq. (MHz)	Total Power (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
42+155(L)	5210	13.19	7.71	123.027	20.90	21	Pass

Notes:

1. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
2. For U-NII-1, the directional gain is 9.62 dBi > 6 dBi, so the output power limit shall be reduced to 30-(9.62-6) = 26.38 dBm.
3. For U-NII-3, the directional gain is 9.37 dBi > 6 dBi, so the output power limit shall be reduced to 30-(9.37-6) = 26.54 dBm.
4. For U-NII-1, the gain of above 30 degrees from the horizon is 7.71 dBi, EIRP (dBm) = Average Power (dBm) + 7.71 dBi

Mode B: Scan Radio 3: QCA-9889 Module

CDD Mode

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
36	5180	24.774	13.94	30	-0.047	24.508	13.893	21	Pass
40	5200	24.604	13.91	30	-0.047	24.339	13.863	21	Pass
48	5240	24.946	13.97	30	-0.047	24.677	13.923	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
149	5745	22.856	13.59	29.1	Pass
157	5785	23.281	13.67	29.1	Pass
165	5825	23.714	13.75	29.1	Pass

Notes:

1. For U-NII-1, the antenna gain is 5.9 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 6.9 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.9-6) = 29.1 dBm.
3. For U-NII-1, the gain of above 30 degrees from the horizon is -0.047 dBi, EIRP (dBm) = Average Power (dBm) + (-0.047) dBi

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
36	5180	24.547	13.90	30	-0.047	24.283	13.853	21	Pass
40	5200	25.003	13.98	30	-0.047	24.734	13.933	21	Pass
48	5240	24.604	13.91	30	-0.047	24.339	13.863	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
149	5745	24.547	13.90	29.1	Pass
157	5785	24.831	13.95	29.1	Pass
165	5825	23.55	13.72	29.1	Pass

Notes:

1. For U-NII-1, the antenna gain is 5.9 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 6.9 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.9-6) = 29.1 dBm.
3. For U-NII-1, the gain of above 30 degrees from the horizon is -0.047 dBi, EIRP (dBm) = Average Power (dBm) + (-0.047) dBi

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
38	5190	22.961	13.61	30	-0.047	22.714	13.563	21	Pass
46	5230	23.496	13.71	30	-0.047	23.243	13.663	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
151	5755	23.121	13.64	29.1	Pass
159	5795	23.335	13.68	29.1	Pass

Notes:

1. For U-NII-1, the antenna gain is 5.9 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 6.9 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.9-6) = 29.1 dBm.
3. For U-NII-1, the gain of above 30 degrees from the horizon is -0.047 dBi, EIRP (dBm) = Average Power (dBm) + (-0.047) dBi

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Above 30 Deg. Gain (dBi)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
42	5210	11.246	10.51	30	-0.047	11.125	10.463	21	Pass

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
155	5775	24.322	13.86	29.1	Pass

Notes:

1. For U-NII-1, the antenna gain is 5.9 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 6.9 dBi > 6 dBi, so the output power limit shall be reduced to 30-(6.9-6) = 29.1 dBm.
3. For U-NII-1, the gain of above 30 degrees from the horizon is -0.047 dBi, EIRP (dBm) = Average Power (dBm) + (-0.047) dBi

7.2 Power Spectral Density

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

Mode A: 5GHz Radio 2: QCN-5154 Module

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	-2.45	-2.39	-2.39	-2.43	0.24	3.85	10.45	Pass
40	5200	-2.26	-2.25	-2.31	-2.72	0.24	3.88	10.45	Pass
48	5240	-2.37	-2.37	-2.43	-2.46	0.24	3.85	10.45	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20} + 10^{Chain2/20} + 10^{Chain3/20})^2$ / 4]
3. For U-NII-1, the directional gain is 12.55 dBi > 6dBi, so the power density limit shall be reduced to 17-(12.55-6) = 10.45 dBm/MHz.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	-2.33	-2.29	-2.30	-2.09	0.25	4.02	10.45	Pass
40	5200	-2.20	-2.39	-2.35	-2.22	0.25	3.98	10.45	Pass
48	5240	-2.29	-2.08	-2.34	-2.52	0.25	3.97	10.45	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20} + 10^{Chain2/20} + 10^{Chain3/20})^2$ / 4]
3. For U-NII-1, the directional gain is 12.55 dBi > 6dBi, so the power density limit shall be reduced to 17-(12.55-6) = 10.45 dBm/MHz.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	-5.37	-5.10	-5.13	-5.20	0.25	1.07	10.45	Pass
46	5230	-5.32	-5.27	-5.27	-5.06	0.25	1.04	10.45	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20} + 10^{Chain2/20} + 10^{Chain3/20})^2$ / 4]
3. For U-NII-1, the directional gain is 12.55 dBi > 6dBi, so the power density limit shall be reduced to 17-(12.55-6) = 10.45 dBm/MHz.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-8.37	-8.59	-8.50	-8.24	0.24	-2.16	10.45	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20} + 10^{Chain2/20} + 10^{Chain3/20})^2$ / 4]
3. For U-NII-1, the directional gain is 12.55 dBi > 6dBi, so the power density limit shall be reduced to 17-(12.55-6) = 10.45 dBm/MHz.

802.11ax (HE80+80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3				
42+155(L)	5210	-5.14	-5.24	-	-	0.24	-1.94	13.38	Pass

Notes:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20} + 10^{Chain2/20} + 10^{Chain3/20})^2$ / 2]
3. For U-NII-1, the directional gain is 9.62 dBi > 6dBi, so the power density limit shall be reduced to 17-(9.62-6) = 13.38 dBm/MHz.

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
149	5745	0.14	0.34	0.01	-0.06	6.13	0.24	8.59	23.14	Pass
157	5785	0.08	0.48	0.18	0.07	6.23	0.24	8.69	23.14	Pass
165	5825	0.22	0.36	0.19	0.16	6.25	0.24	8.71	23.14	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20} + 10^{Chain2/20} + 10^{Chain3/20})^2$ / 4]
3. For U-NII-3, the directional gain is 12.86 dBi > 6 dBi, so the power density limit shall be reduced to 30-(12.86-6) = 23.14 dBm/500kHz.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
149	5745	-1.28	-1.03	-1.33	-1.22	4.81	0.25	7.28	23.14	Pass
157	5785	-1.15	-1.03	-1.40	-1.31	4.8	0.25	7.27	23.14	Pass
165	5825	-1.08	-1.04	-1.55	-1.16	4.82	0.25	7.29	23.14	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20} + 10^{Chain2/20} + 10^{Chain3/20})^2$ / 4]
3. For U-NII-3, the directional gain is 12.86 dBi > 6 dBi, so the power density limit shall be reduced to 30-(12.86-6) = 23.14 dBm/500kHz.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
151	5755	-4.04	-3.85	-4.30	-4.15	1.94	0.25	4.41	23.14	Pass
159	5795	-3.83	-3.83	-4.33	-4.09	2.01	0.25	4.48	23.14	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20} + 10^{Chain2/20} + 10^{Chain3/20})^2$ / 4]
3. For U-NII-3, the directional gain is 12.86 dBi > 6 dBi, so the power density limit shall be reduced to 30-(12.86-6) = 23.14 dBm/500kHz.

802.11ax (HE80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
155	5775	-7.49	-7.44	-7.89	-7.84	-1.64	0.24	0.82	23.14	Pass

Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20} + 10^{Chain2/20} + 10^{Chain3/20})^2$ / 4]
3. For U-NII-3, the directional gain is 12.86 dBi > 6 dBi, so the power density limit shall be reduced to 30-(12.86-6) = 23.14 dBm/500kHz.

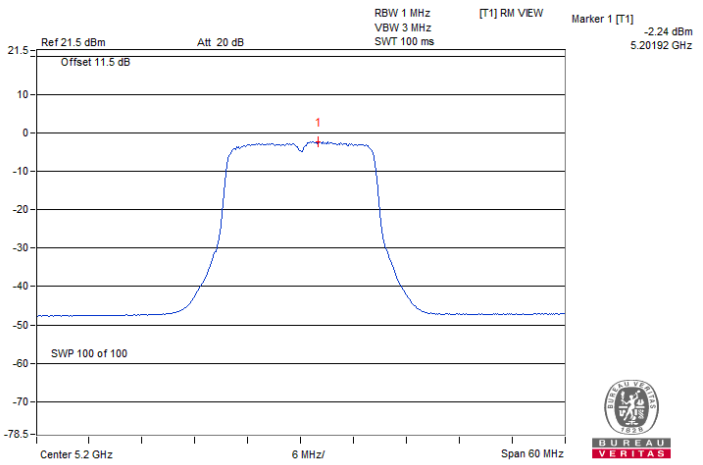
802.11ax (HE80+80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)				Total PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3					
42+155(H)	5775	-	-	-16.08	-15.97	-13.01	0.24	-10.55	26.63	Pass

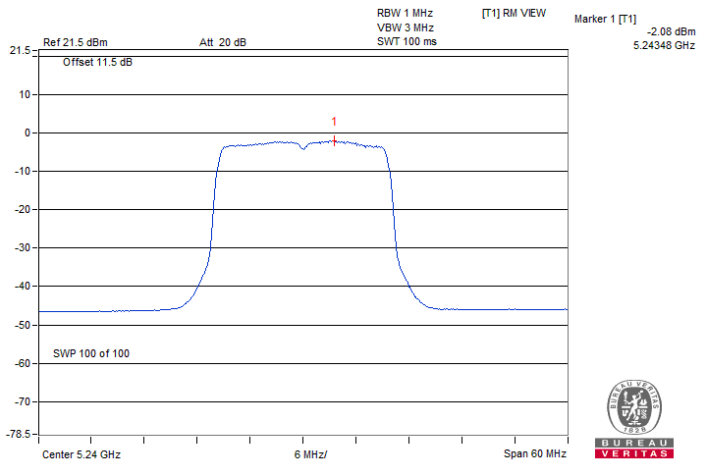
Notes:

1. Method E) 2) b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{Chain0/20} + 10^{Chain1/20})^2$ / 2]
3. For U-NII-3, the directional gain is 9.37 dBi > 6 dBi, so the power density limit shall be reduced to 30-(9.37-6) = 26.63 dBm/500kHz.

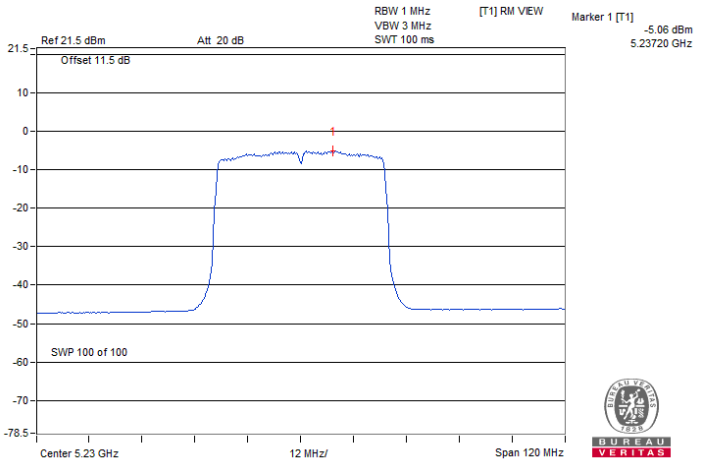
Spectrum Plot of Maximum Value



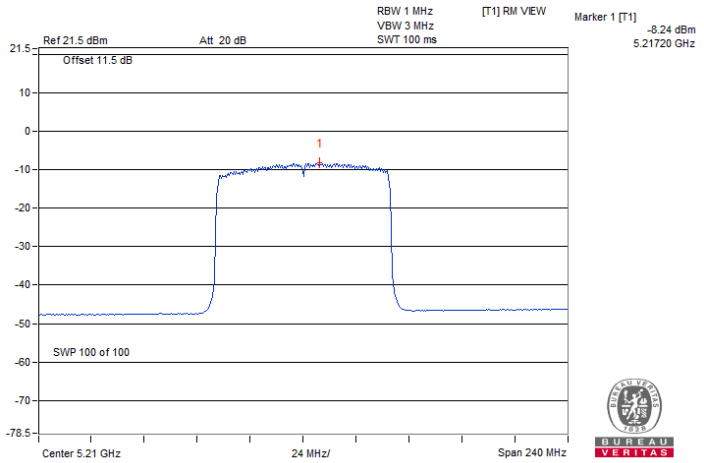
802.11a / Chain 1 : CH 40



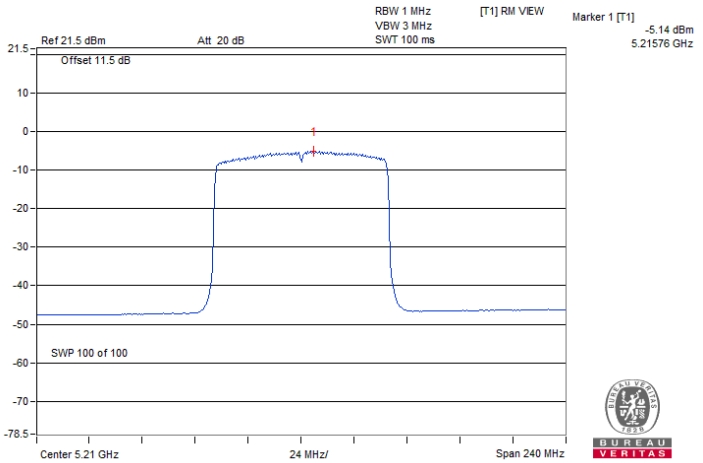
802.11ax (HE20) / Chain 1 : CH 48



802.11ax (HE40) / Chain 3 : CH 46

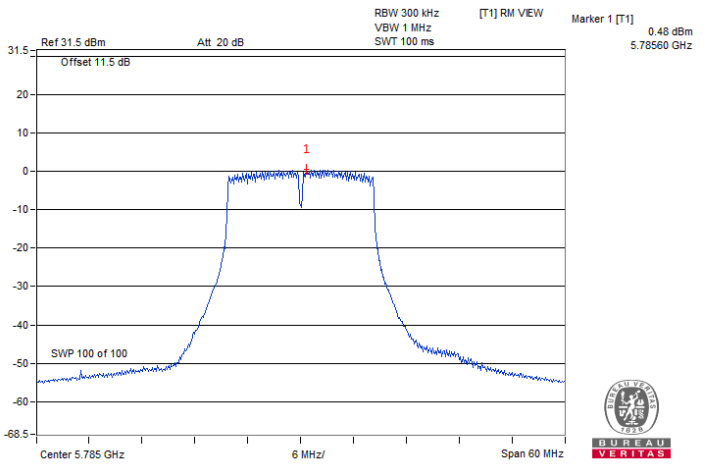


802.11ax (HE80) / Chain 3 : CH 42

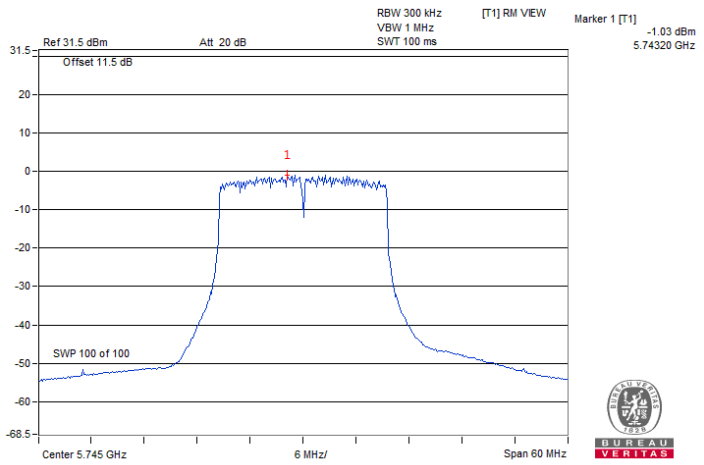


802.11ax (HE80+80) / Chain 0 : CH 42

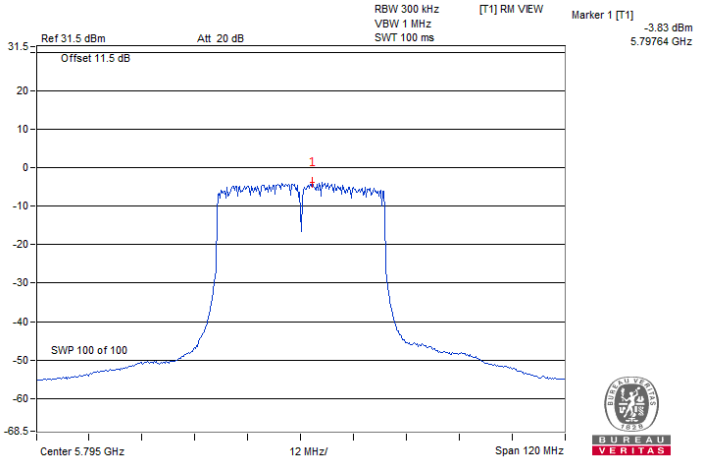
Spectrum Plot of Maximum Value



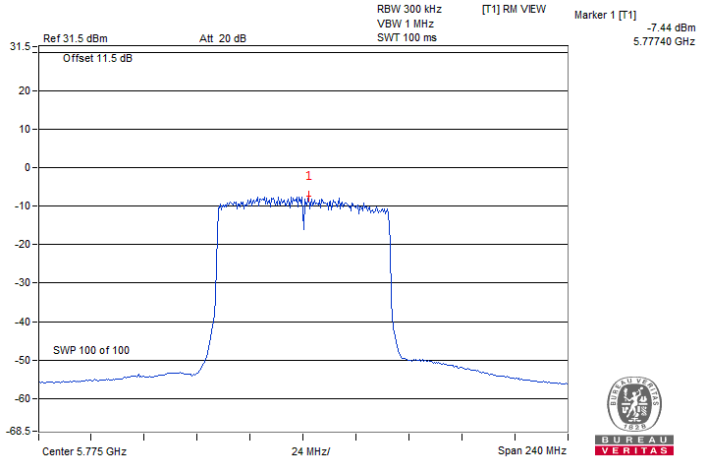
802.11a / Chain 1 : CH 157



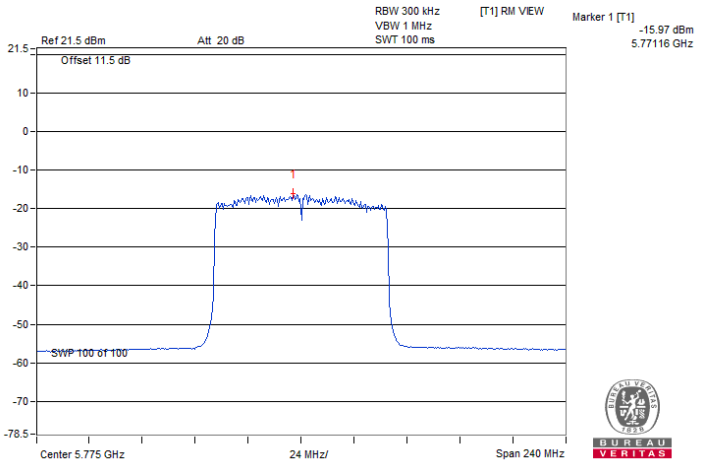
802.11ax (HE20) / Chain 1 : CH 149



802.11ax (HE40) / Chain 0 : CH 159



802.11ax (HE80) / Chain 1 : CH 155



802.11ax (HE80+80) / Chain 3 : CH 155

Mode B: Scan Radio 3: QCA-9889 Module

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	0.86	0.12	0.98	17	Pass
40	5200	0.83	0.12	0.95	17	Pass
48	5240	0.94	0.12	1.06	17	Pass

Note: For U-NII-1, the antenna gain is 5.9 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	0.86	0.14	1.00	17	Pass
40	5200	0.93	0.14	1.07	17	Pass
48	5240	0.93	0.14	1.07	17	Pass

Note: For U-NII-1, the antenna gain is 5.9 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	-2.32	0.31	-2.01	17	Pass
46	5230	-2.41	0.31	-2.10	17	Pass

Note: For U-NII-1, the antenna gain is 5.9 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	-8.44	0.58	-7.86	17	Pass

Note: For U-NII-1, the antenna gain is 5.9 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	-7.18	0.12	-4.84	29.1	Pass
157	5785	-7.08	0.12	-4.74	29.1	Pass
165	5825	-7.01	0.12	-4.67	29.1	Pass

Note: For U-NII-3, the antenna gain is 6.9 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.9-6) = 29.1 dBm/500kHz.

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	-7.13	0.14	-4.77	29.1	Pass
157	5785	-7.02	0.14	-4.66	29.1	Pass
165	5825	-7.33	0.14	-4.97	29.1	Pass

Note: For U-NII-3, the antenna gain is 6.9 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.9-6) = 29.1 dBm/500kHz.

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	-10.57	0.31	-8.04	29.1	Pass
159	5795	-10.54	0.31	-8.01	29.1	Pass

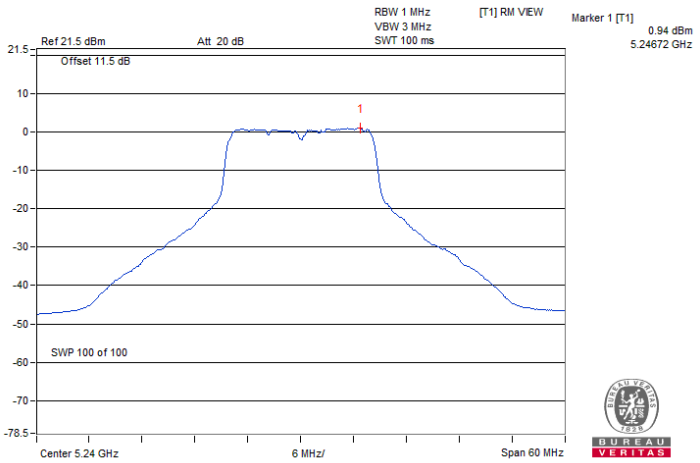
Note: For U-NII-3, the antenna gain is 6.9 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.9-6) = 29.1 dBm/500kHz.

802.11ac (VHT80)

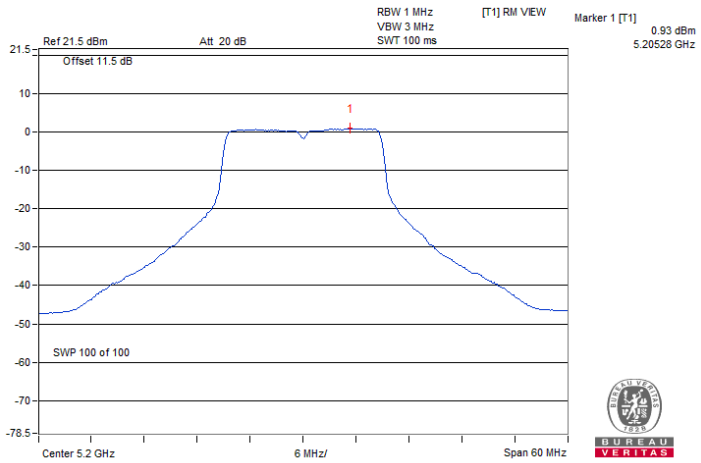
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
155	5775	-14.04	0.58	-11.24	29.1	Pass

Note: For U-NII-3, the antenna gain is 6.9 dBi > 6 dBi, so the power density limit shall be reduced to 30-(6.9-6) = 29.1 dBm/500kHz.

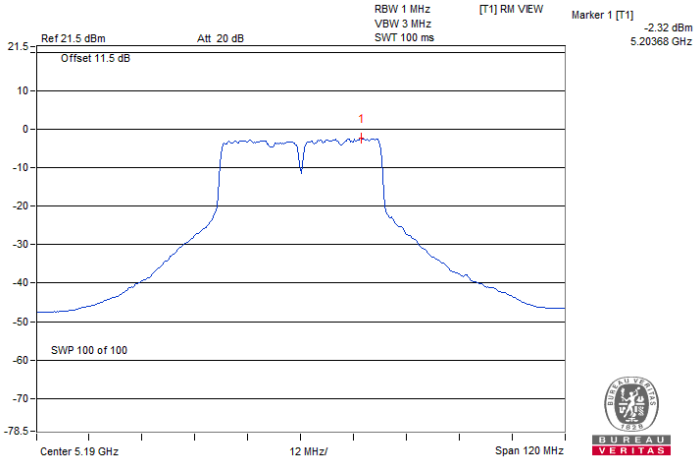
Spectrum Plot of Maximum Value



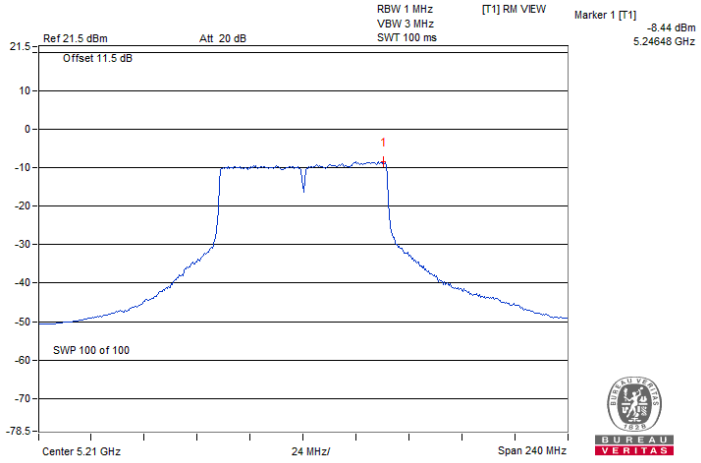
802.11a : CH 48



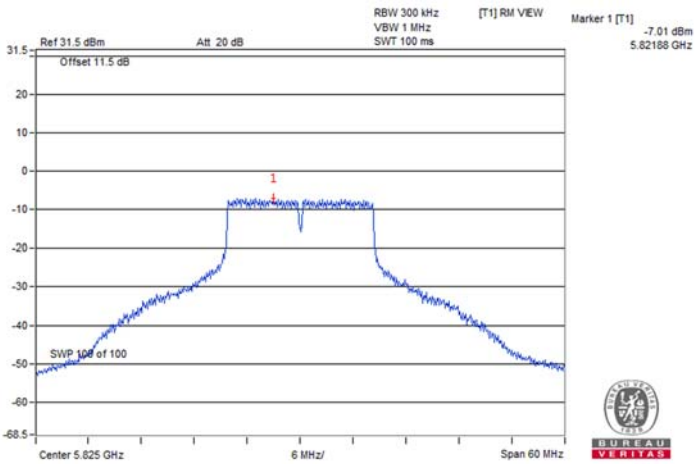
802.11ac (VHT20) : CH 40



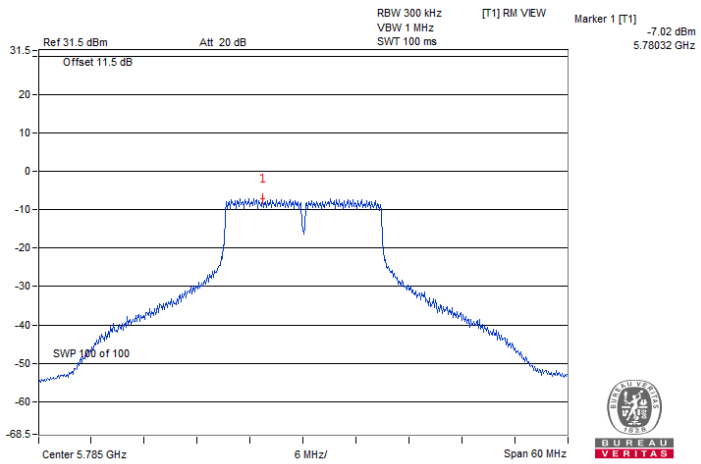
802.11ac (VHT40) : CH 38



802.11ac (VHT80) : CH 42

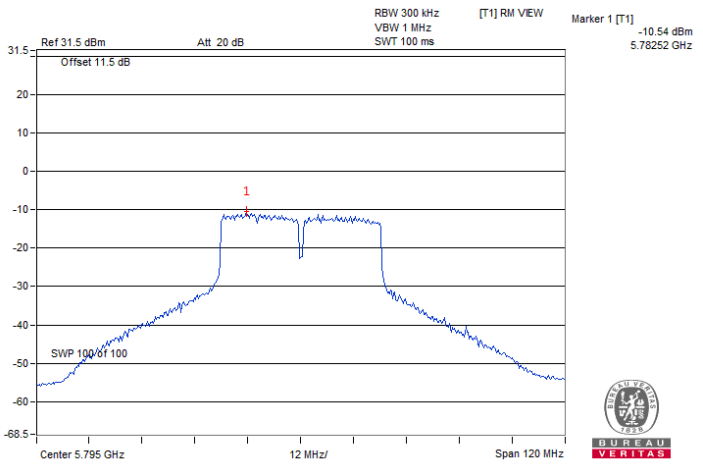


802.11a : CH 165

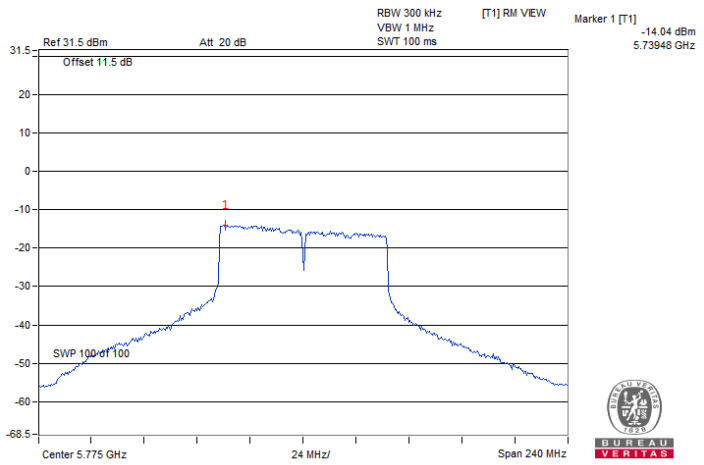


802.11ac (VHT20) : CH 157

Spectrum Plot of Maximum Value



802.11ac (VHT40) : CH 159



802.11ac (VHT80) : CH 155

7.3 6 dB Bandwidth

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

Mode A: 5GHz Radio 2: QCN-5154 Module

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	16.37	16.39	16.39	16.37	0.5	Pass
157	5785	16.33	16.36	16.35	16.35	0.5	Pass
165	5825	16.35	16.37	16.36	16.36	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	18.90	18.98	19.00	18.96	0.5	Pass
157	5785	18.98	18.83	19.03	19.02	0.5	Pass
165	5825	19.00	18.92	18.97	18.95	0.5	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
151	5755	38.11	38.04	37.90	38.03	0.5	Pass
159	5795	37.98	38.04	37.94	38.06	0.5	Pass

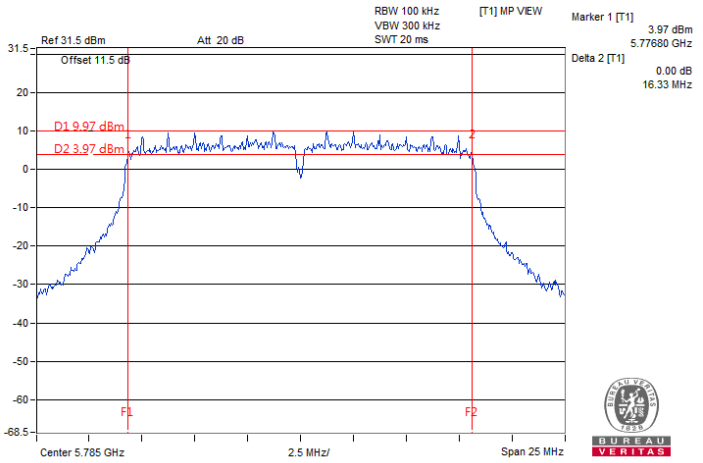
802.11ax (HE80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	77.58	77.85	76.73	77.29	0.5	Pass

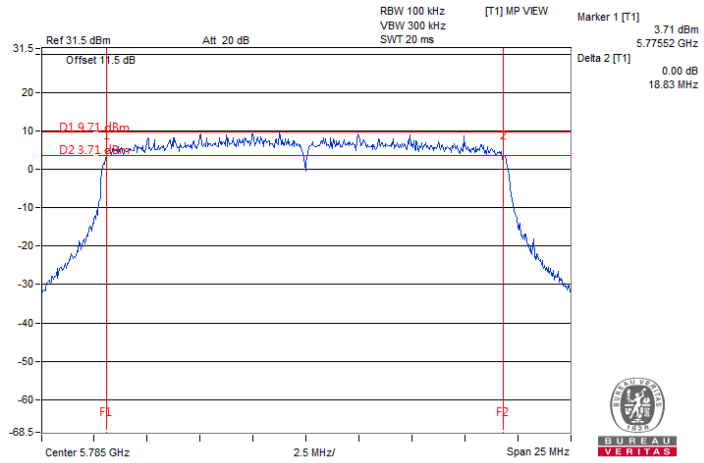
802.11ax (HE80+80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Test Result
		Chain 0	Chain 1	Chain 2	Chain 3		
42+155(H)	5775	-	-	77.92	77.58	0.5	Pass

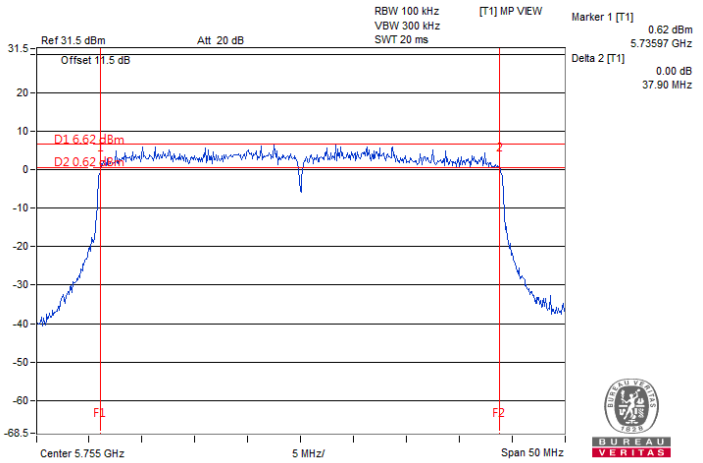
Spectrum Plot of Minimum Value



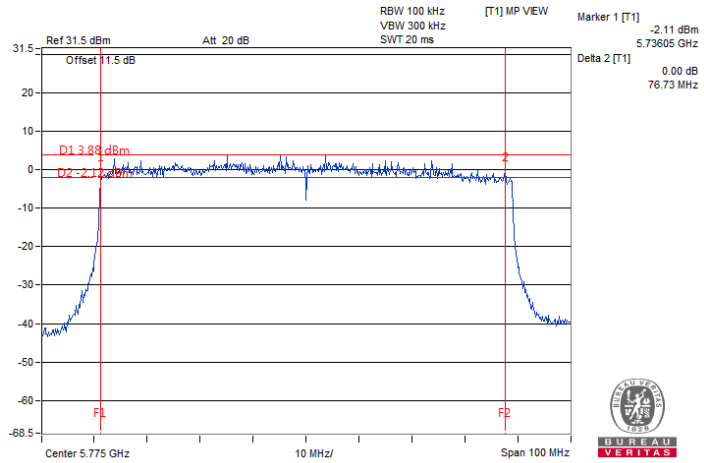
802.11a / Chain 0 : CH 157



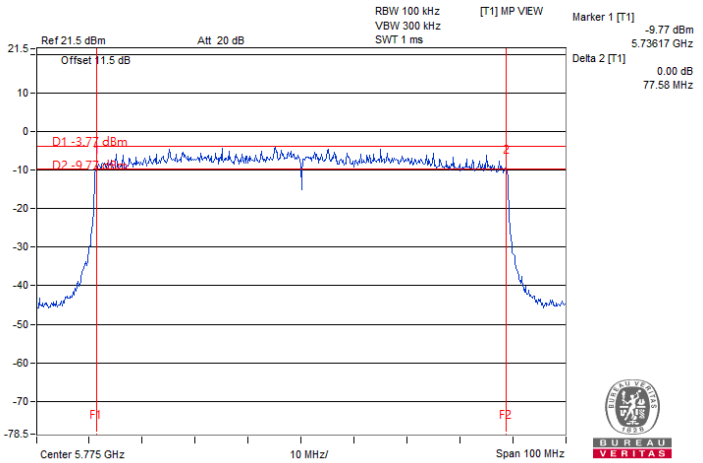
802.11ax (HE20) / Chain 1 : CH 157



802.11ax (HE40) / Chain 2 : CH 151



802.11ax (HE80) / Chain 2 : CH 155



802.11ax (HE80+80) / Chain 3 : CH 155

Mode B: Scan Radio 3: QCA-9889 Module

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
149	5745	16.12	0.5	Pass
157	5785	16.09	0.5	Pass
165	5825	16.06	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
149	5745	17.21	0.5	Pass
157	5785	16.95	0.5	Pass
165	5825	17.2	0.5	Pass

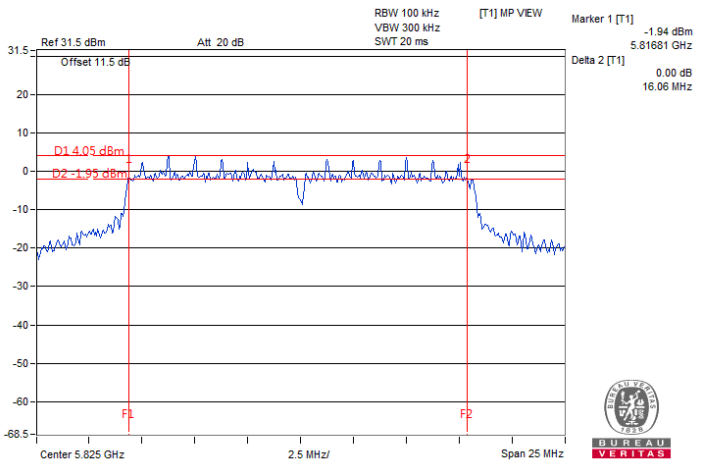
802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
151	5755	36.03	0.5	Pass
159	5795	35.88	0.5	Pass

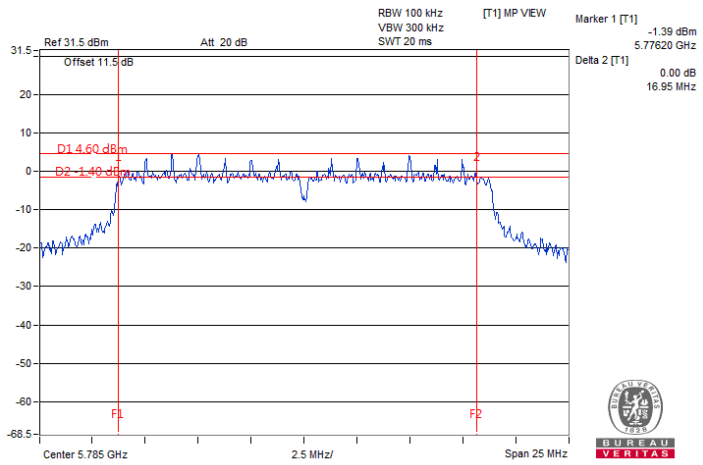
802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
155	5775	73.33	0.5	Pass

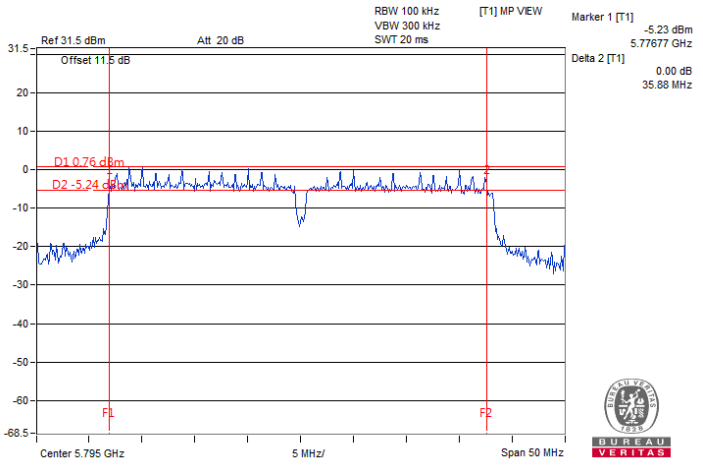
Spectrum Plot of Minimum Value



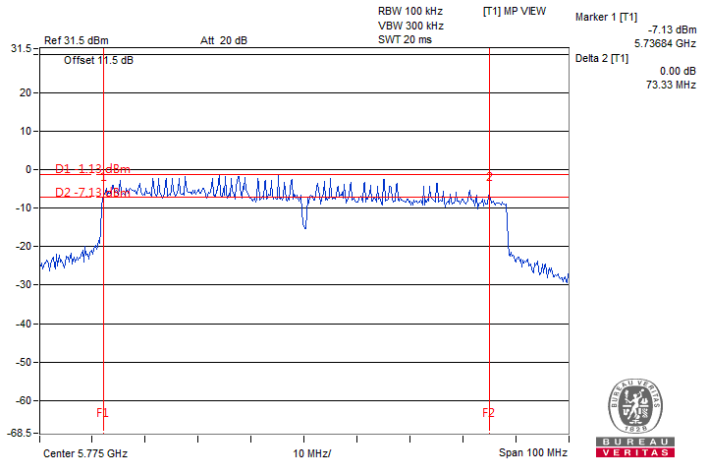
802.11a : CH 165



802.11ac (VHT20) : CH 157



802.11ac (VHT40) : CH 159



802.11ac (VHT80) : CH 155

7.4 Occupied Bandwidth

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

Mode A: 5GHz Radio 2: QCN-5154 Module

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	16.44	16.44	16.44	16.44
40	5200	16.44	16.44	16.44	16.44
48	5240	16.44	16.44	16.44	16.44
149	5745	16.44	16.44	16.54	16.44
157	5785	16.44	16.54	16.44	16.54
165	5825	16.44	16.44	16.44	16.44

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	18.96	18.96	18.96	18.96
40	5200	18.96	18.96	19.08	18.96
48	5240	18.96	18.96	18.96	19.08
149	5745	18.94	18.94	19.04	19.04
157	5785	18.94	18.94	19.04	18.94
165	5825	18.94	19.04	19.04	18.94

802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	38.16	37.92	38.16	37.92
46	5230	37.92	37.92	37.92	37.92
151	5755	37.92	37.89	37.89	38.08
159	5795	38.08	38.08	37.89	38.27

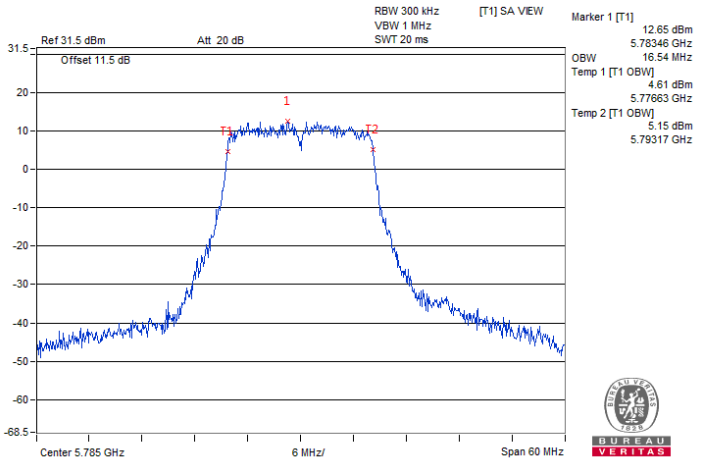
802.11ax (HE80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	77.28	77.76	77.28	77.76
155	5775	77.28	77.69	77.31	76.54

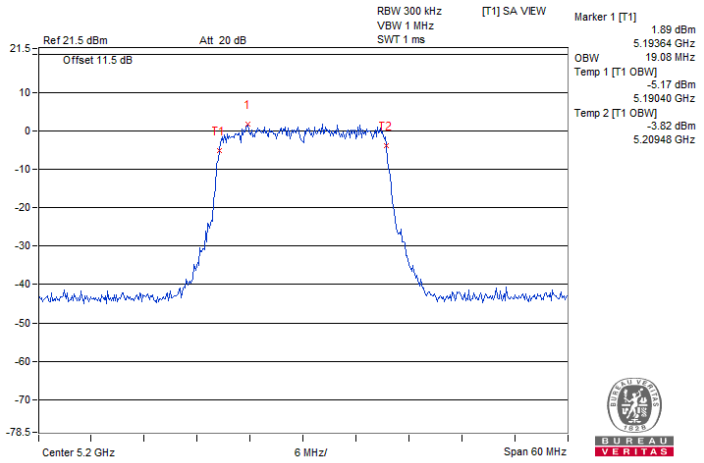
802.11ax (HE80+80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42+155(L)	5210	77.28	76.80	-	-
42+155(H)	5775	-	-	77.57	77.57

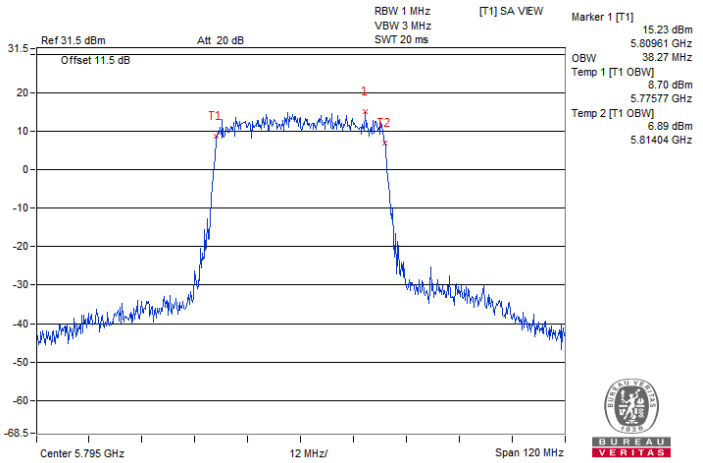
Spectrum Plot of Maximum Value



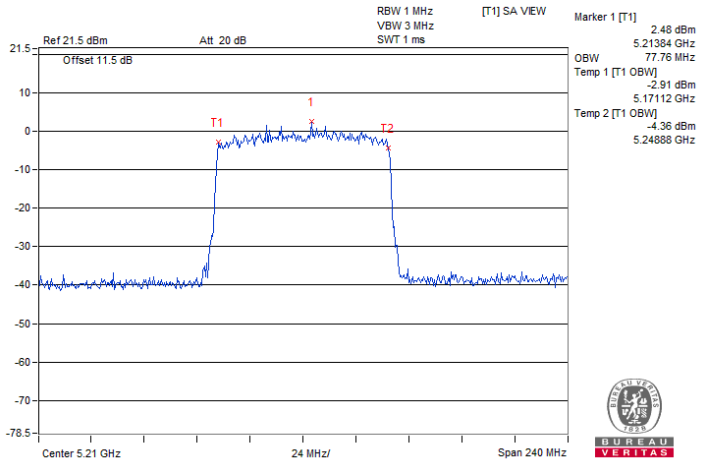
802.11a / Chain 1 : CH 157



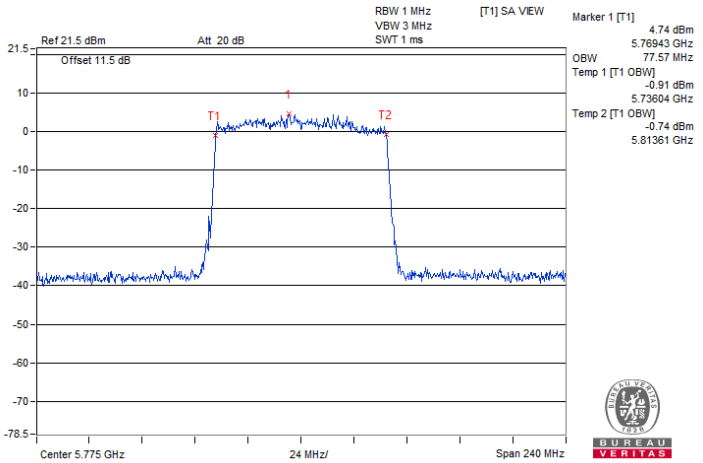
802.11ax (HE20) / Chain 2 : CH 40



802.11ax (HE40) / Chain 3 : CH 159



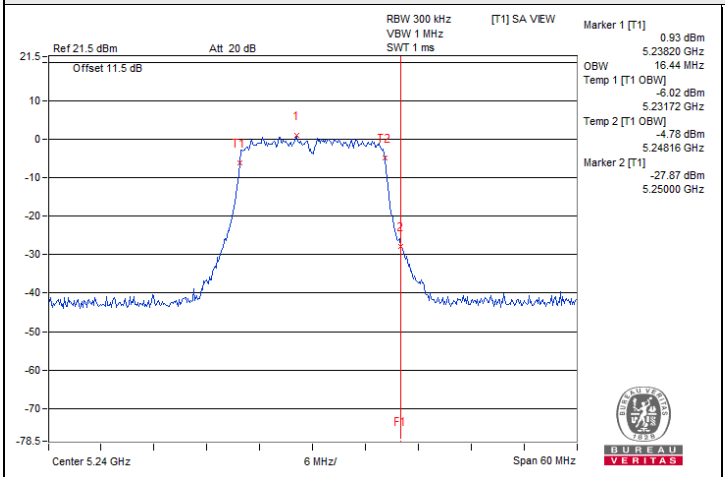
802.11ax (HE80) / Chain 1 : CH 42



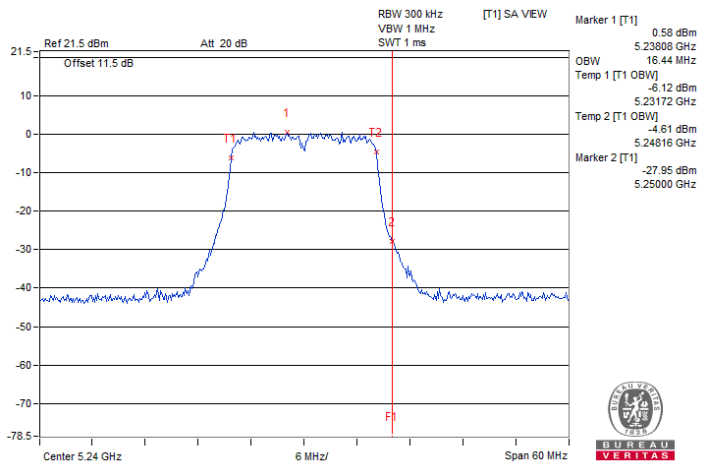
802.11ax (HE80+80) / Chain 2 : CH 155

Spectrum Plot for nearby DFS band

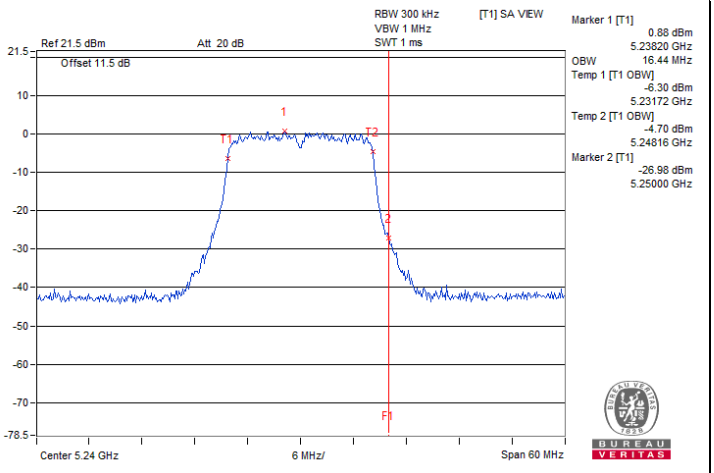
(DFS is required, if 99% OCP straddle into U-NII-2A)



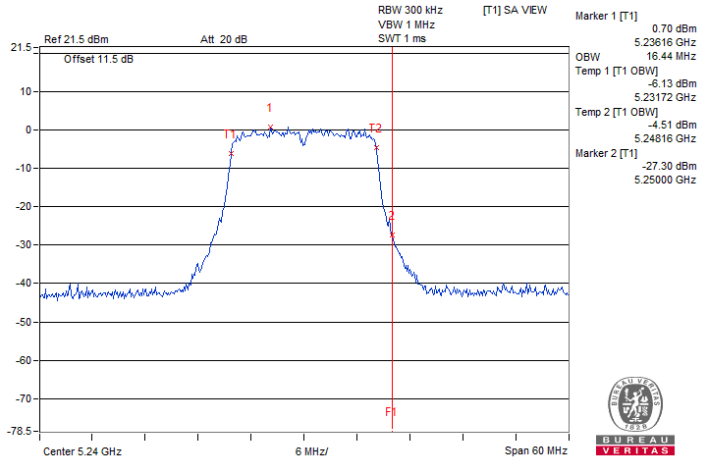
802.11a / Chain 0 : CH 48



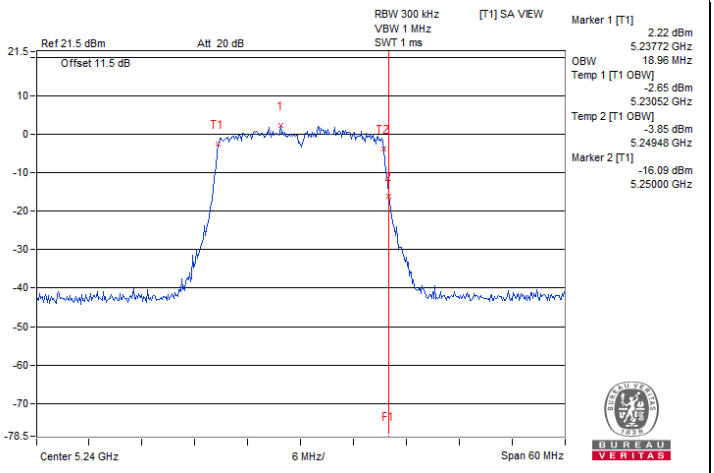
802.11a / Chain 1 : CH 48



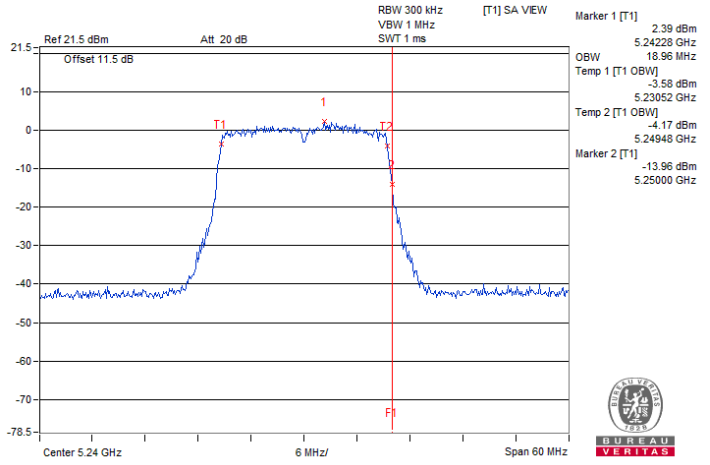
802.11a / Chain 2 : CH 48



802.11a / Chain 3 : CH 48



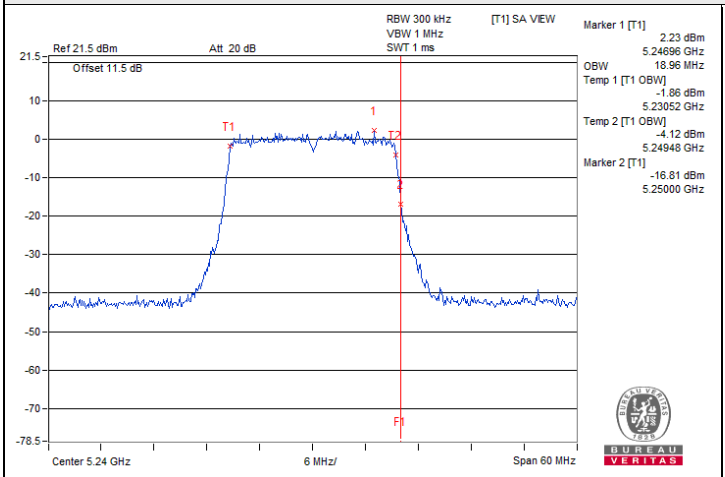
802.11ax (HE20) / Chain 0 : CH 48



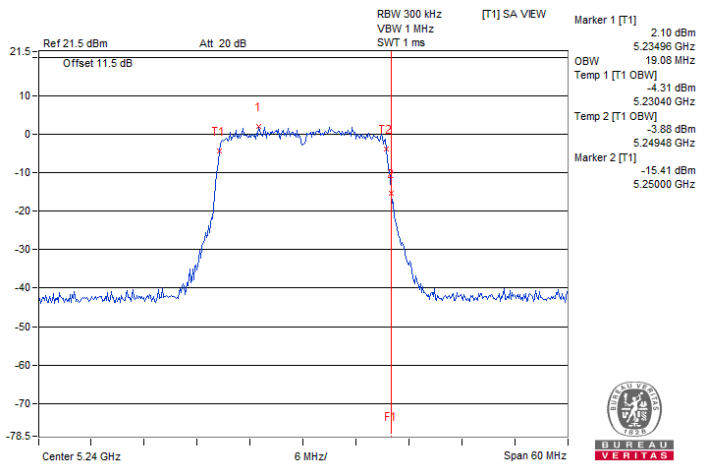
802.11ax (HE20) / Chain 1 : CH 48

Spectrum Plot for nearby DFS band

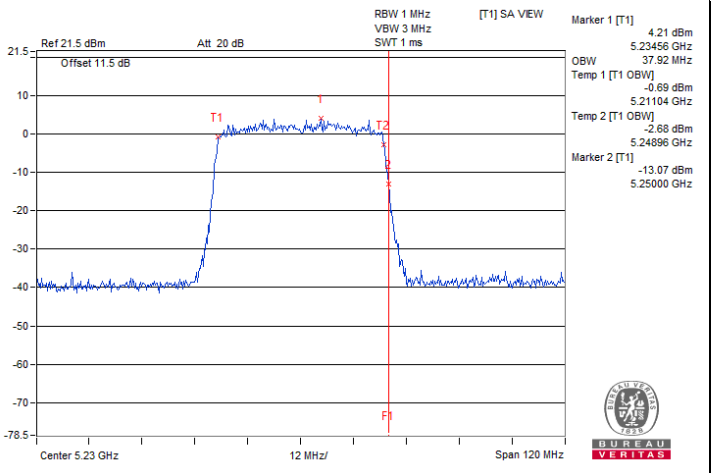
(DFS is required, if 99% OCP straddle into U-NII-2A)



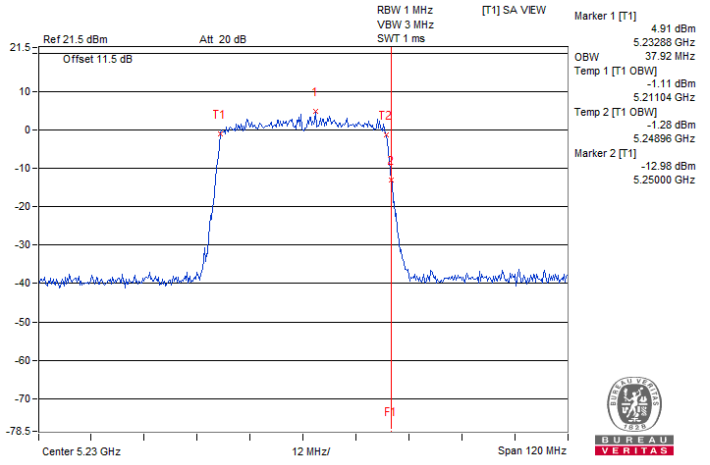
802.11ax (HE20) / Chain 2 : CH 48



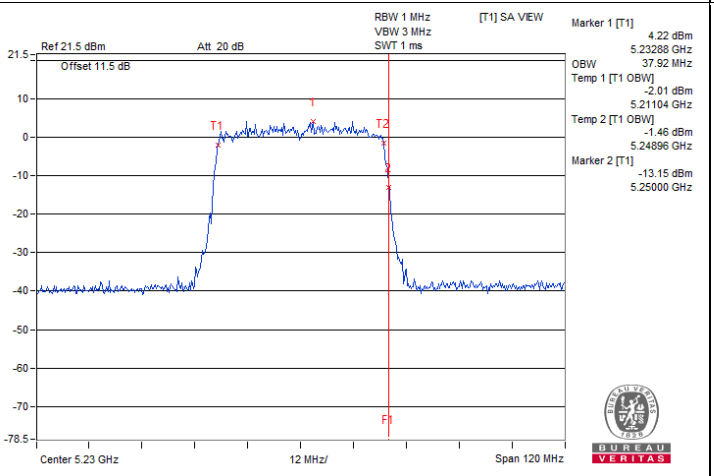
802.11ax (HE20) / Chain 3 : CH 48



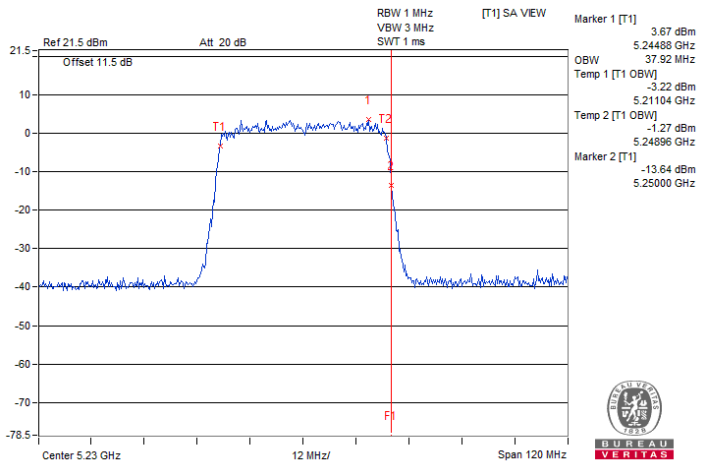
802.11ax (HE40) / Chain 0 : CH 46



802.11ax (HE40) / Chain 1 : CH 46



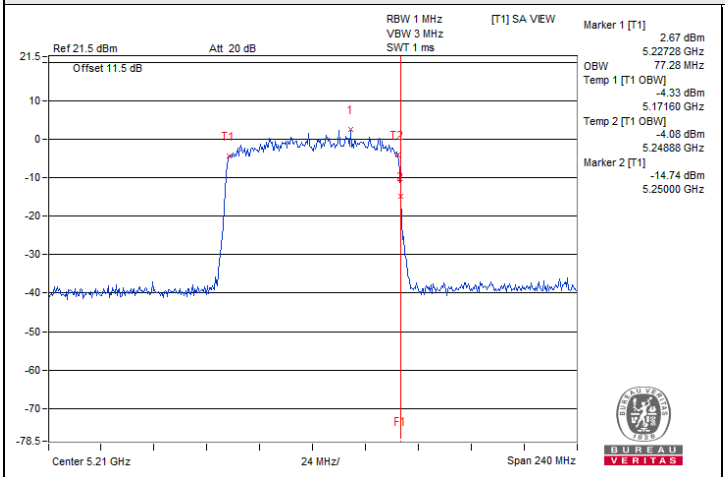
802.11ax (HE40) / Chain 2 : CH 46



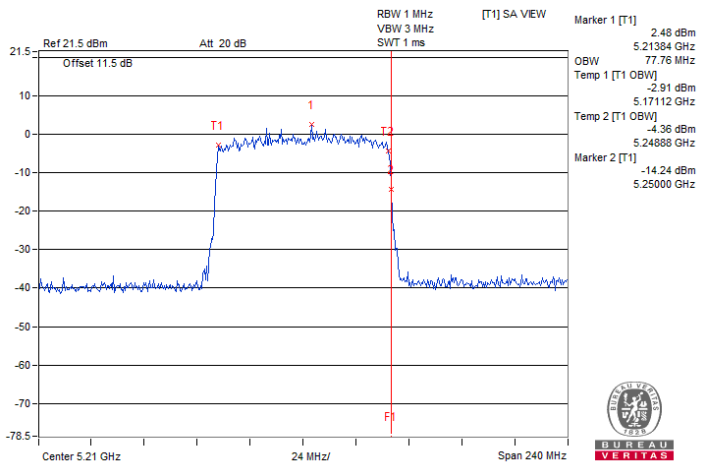
802.11ax (HE40) / Chain 3 : CH 46

Spectrum Plot for nearby DFS band

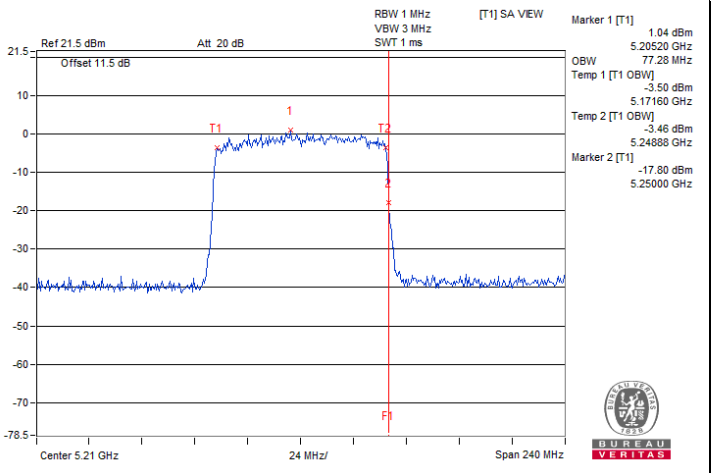
(DFS is required, if 99% OCP straddle into U-NII-2A)



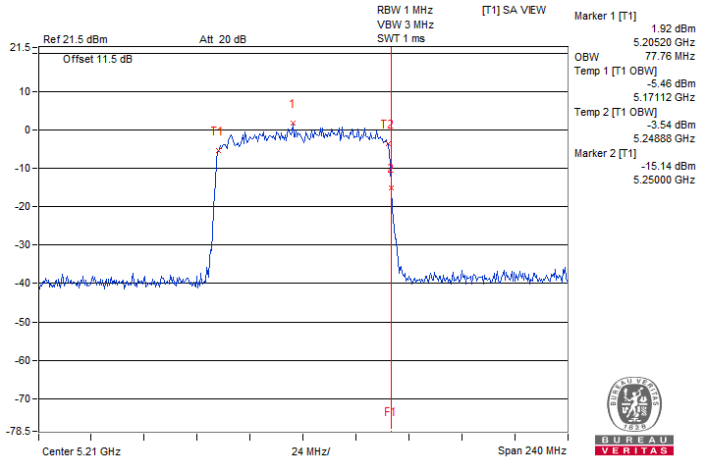
802.11ax (HE80) / Chain 0 : CH 42



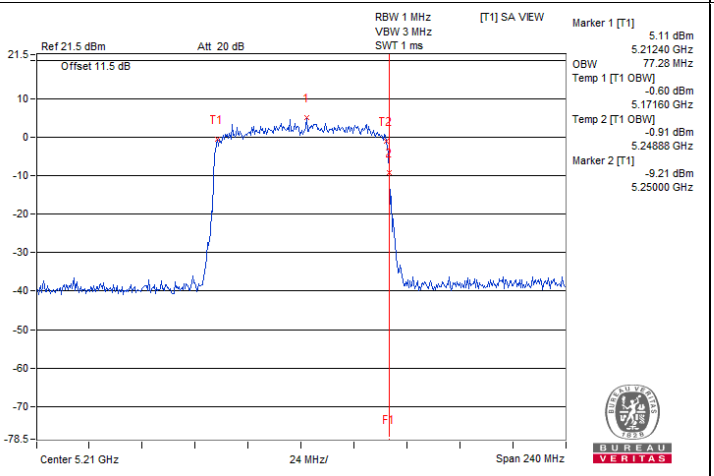
802.11ax (HE80) / Chain 1 : CH 42



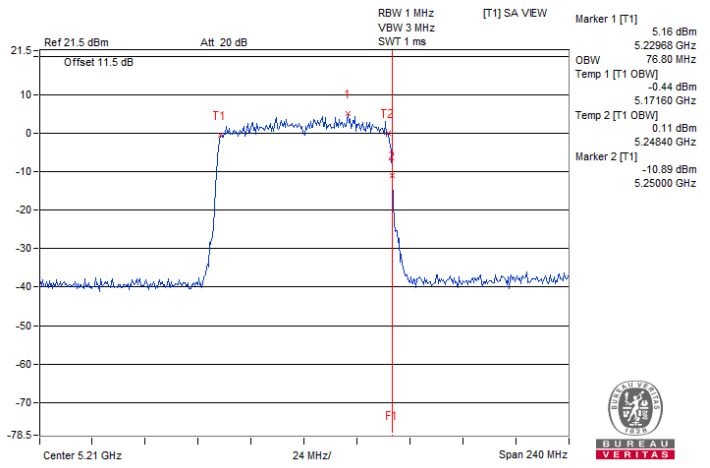
802.11ax (HE80) / Chain 2 : CH 42



802.11ax (HE80) / Chain 3 : CH 42



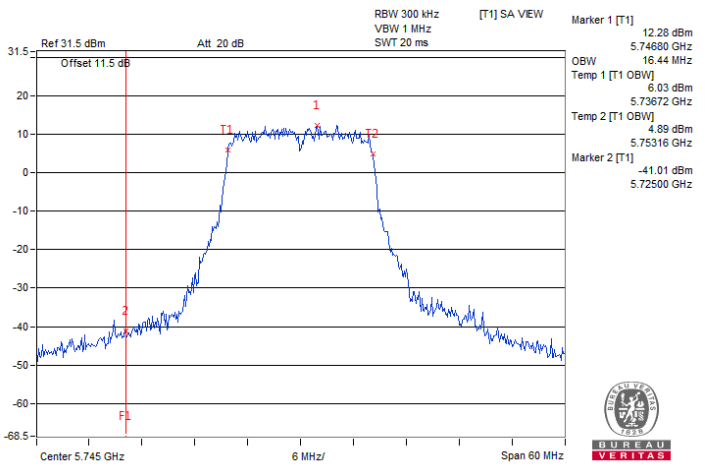
802.11ax (HE80+80) / Chain 0 : CH 42



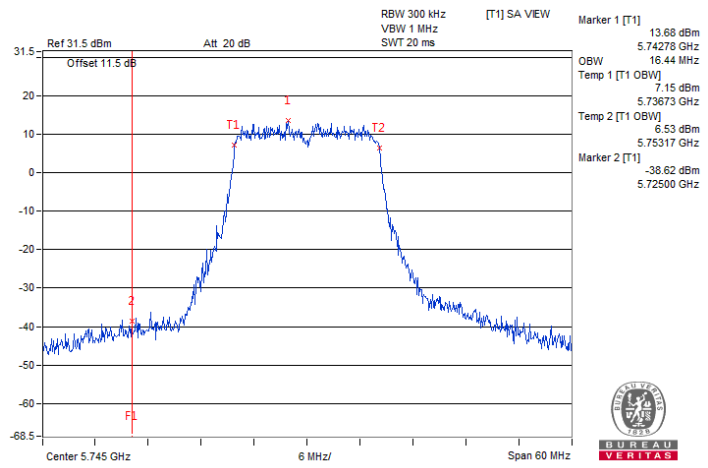
802.11ax (HE80+80) / Chain 1 : CH 42

Spectrum Plot for nearby DFS band

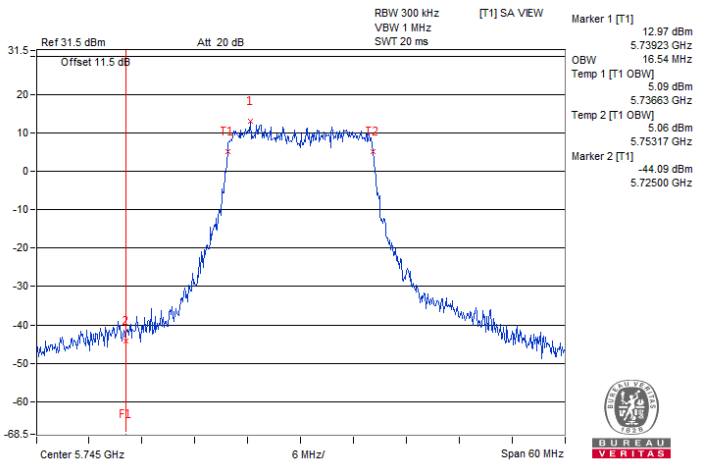
(DFS is required, if 99% OCP straddle into U-NII-2C)



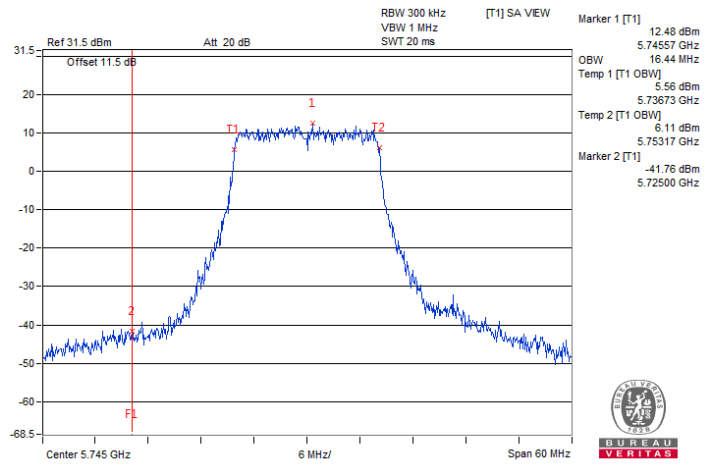
802.11a / Chain 0 : CH 149



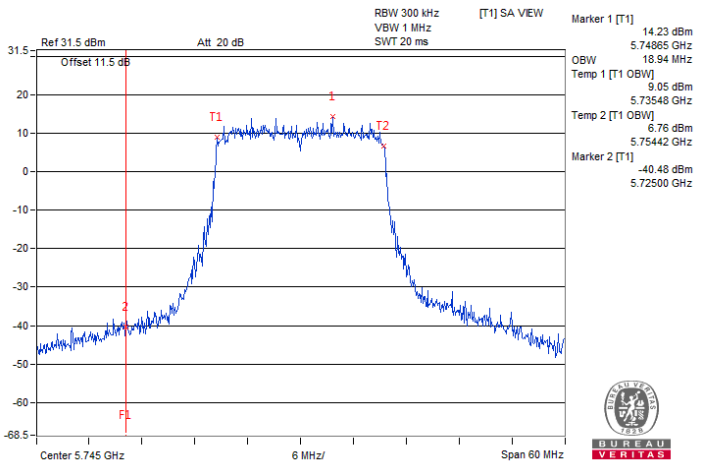
802.11a / Chain 1 : CH 149



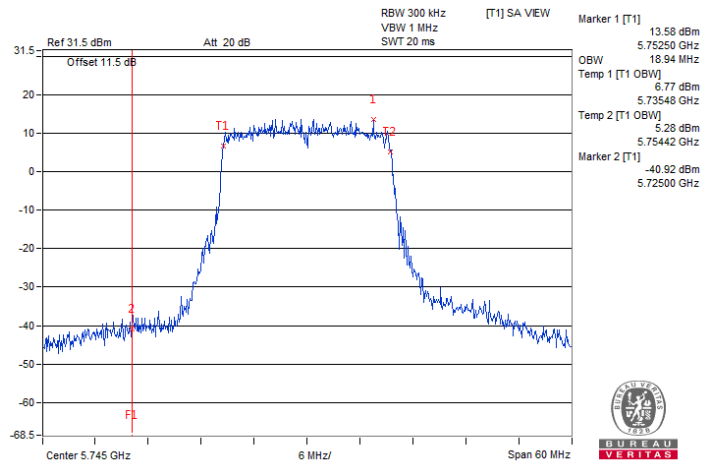
802.11a / Chain 2 : CH 149



802.11a / Chain 3 : CH 149



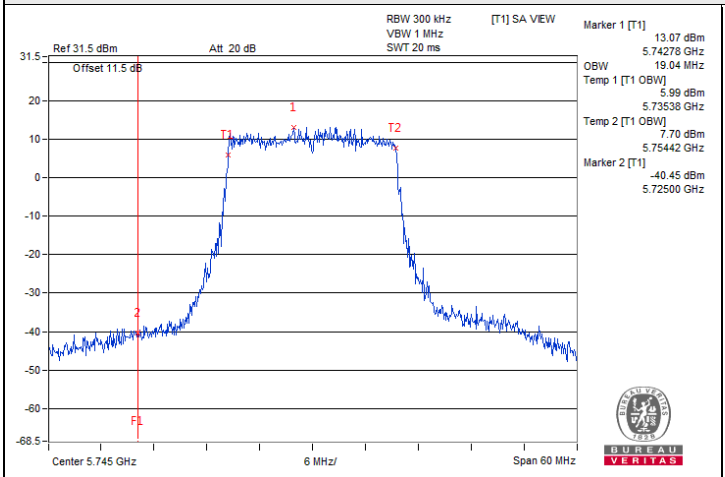
802.11ax (HE20) / Chain 0 : CH 149



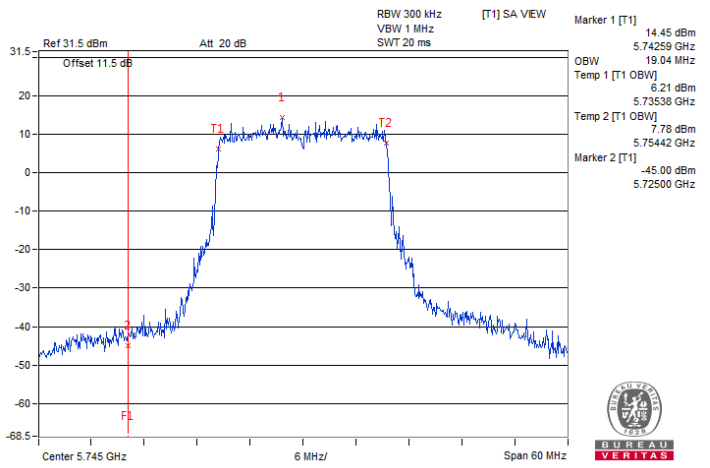
802.11ax (HE20) / Chain 1 : CH 149

Spectrum Plot for nearby DFS band

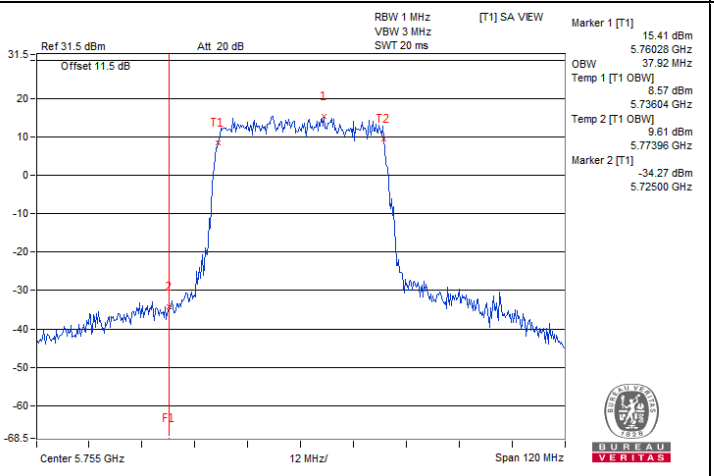
(DFS is required, if 99% OCP straddle into U-NII-2C)



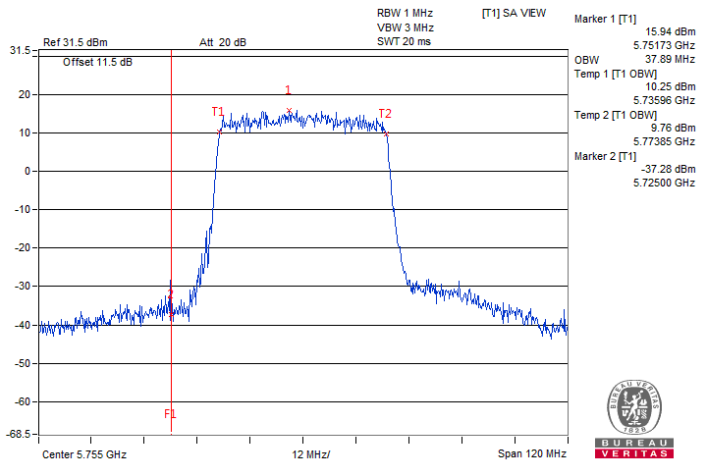
802.11ax (HE20) / Chain 2 : CH 149



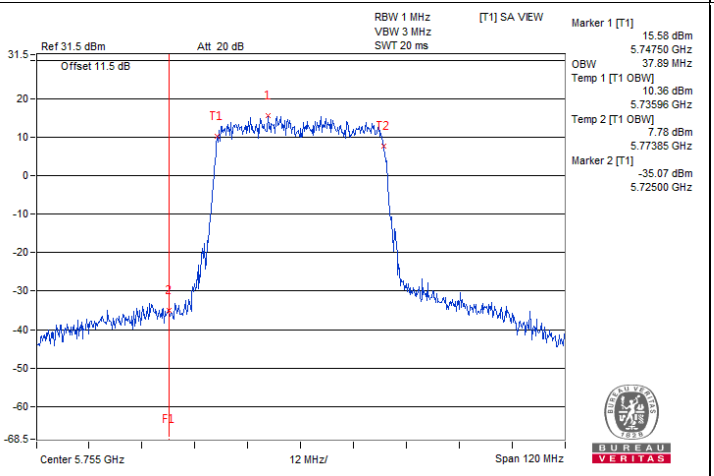
802.11ax (HE20) / Chain 3 : CH 149



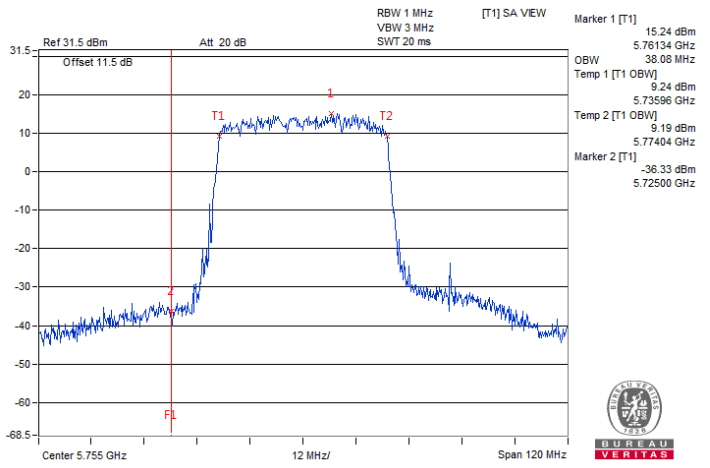
802.11ax (HE40) / Chain 0 : CH 151



802.11ax (HE40) / Chain 1 : CH 151



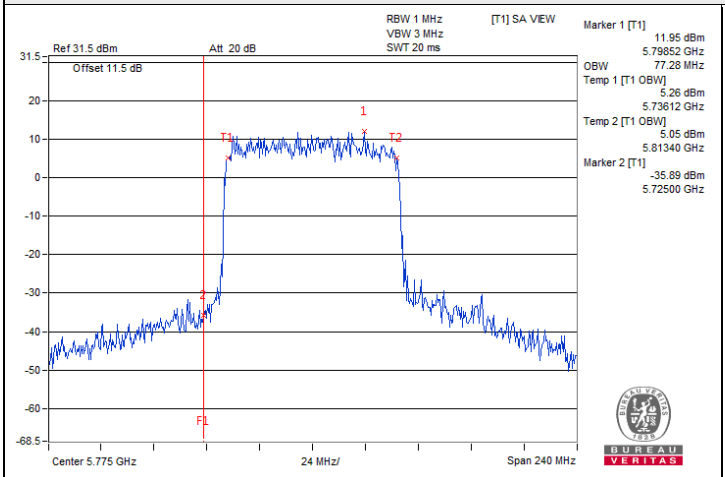
802.11ax (HE40) / Chain 2 : CH 151



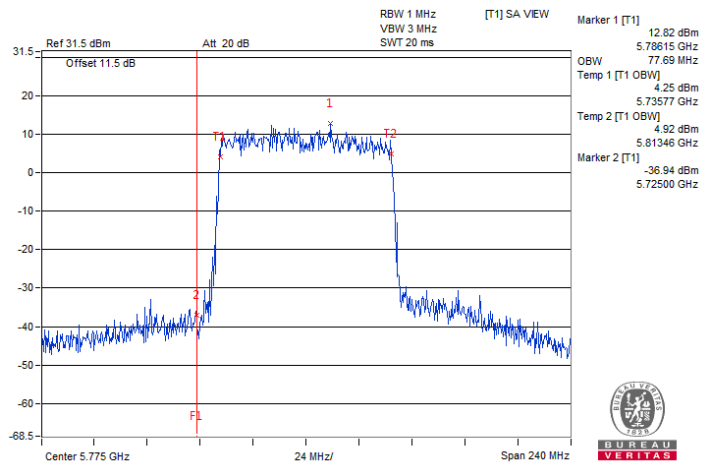
802.11ax (HE40) / Chain 3 : CH 151

Spectrum Plot for nearby DFS band

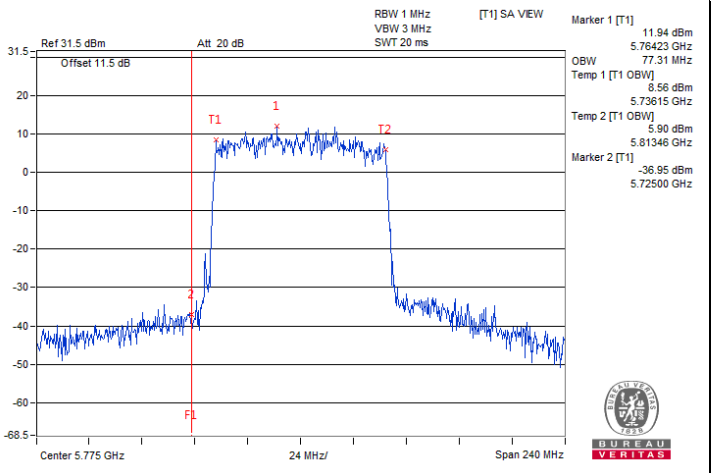
(DFS is required, if 99% OCP straddle into U-NII-2C)



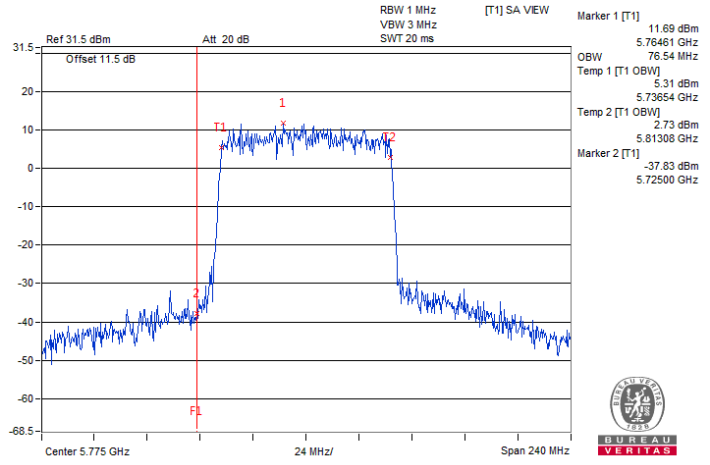
802.11ax (HE80) / Chain 0 : CH 155



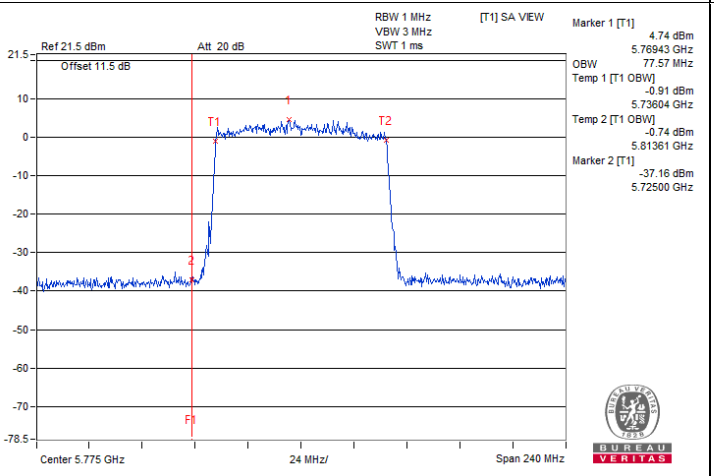
802.11ax (HE80) / Chain 1 : CH 155



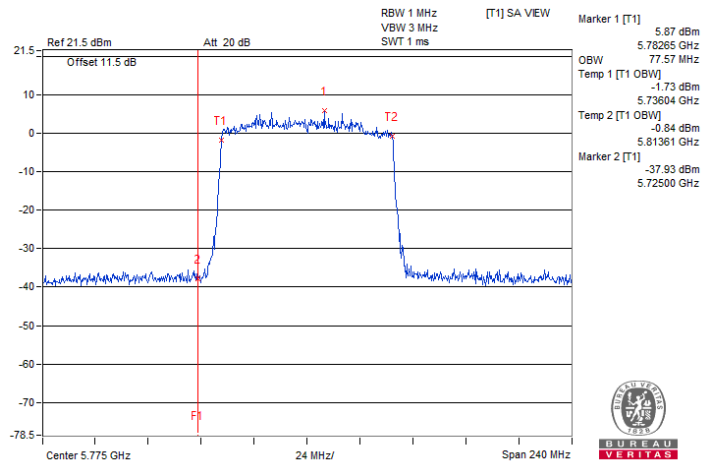
802.11ax (HE80) / Chain 2 : CH 155



802.11ax (HE80) / Chain 3 : CH 155



802.11ax (HE80+80) / Chain 2 : CH 155



802.11ax (HE80+80) / Chain 3 : CH 155

Mode B: Scan Radio 3: QCA-9889 Module

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.28
40	5200	17.28
48	5240	17.4
149	5745	17.28
157	5785	18
165	5825	19.68

802.11ac (VHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.24
40	5200	18.24
48	5240	18.24
149	5745	18.36
157	5785	18.65
165	5825	20.19

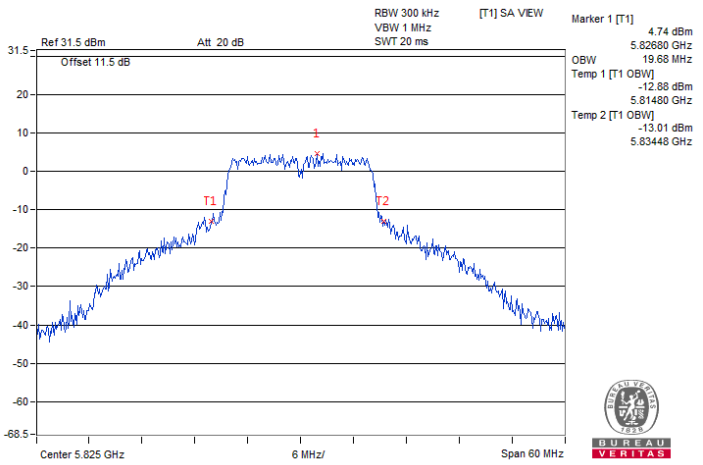
802.11ac (VHT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	37.44
46	5230	37.68
151	5755	37.92
159	5795	37.92

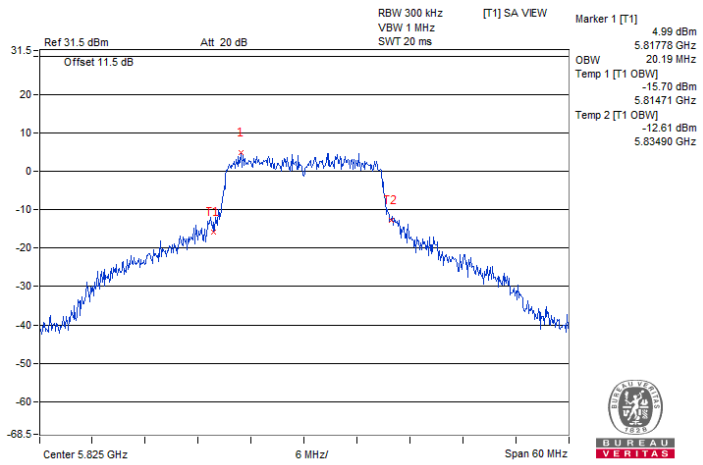
802.11ac (VHT80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	76.8
155	5775	77.28

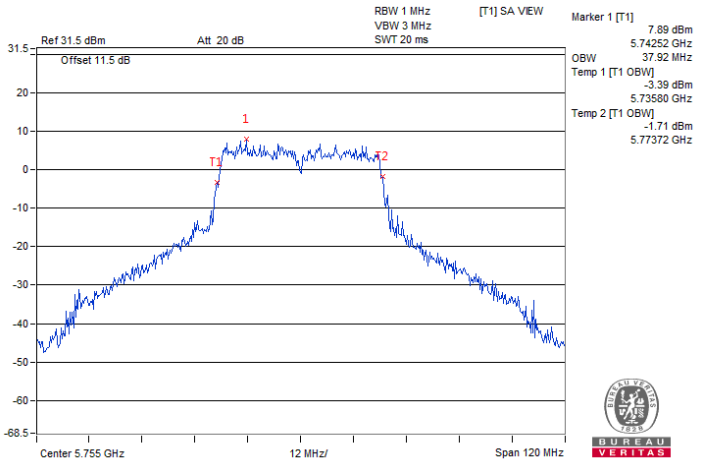
Spectrum Plot of Maximum Value



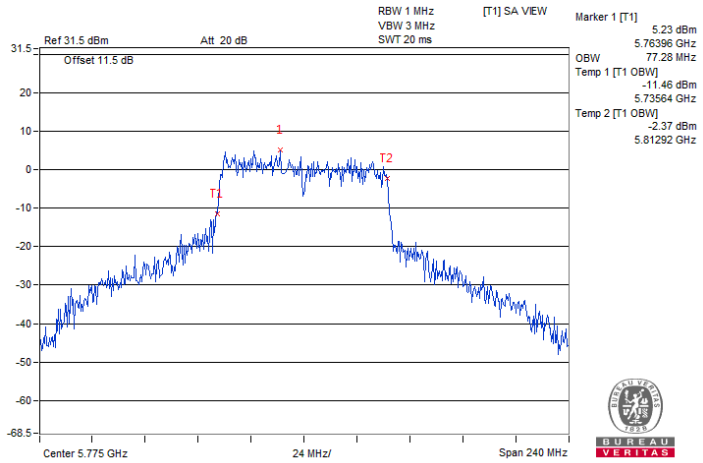
802.11a : CH 165



802.11ac (VHT20) : CH 165



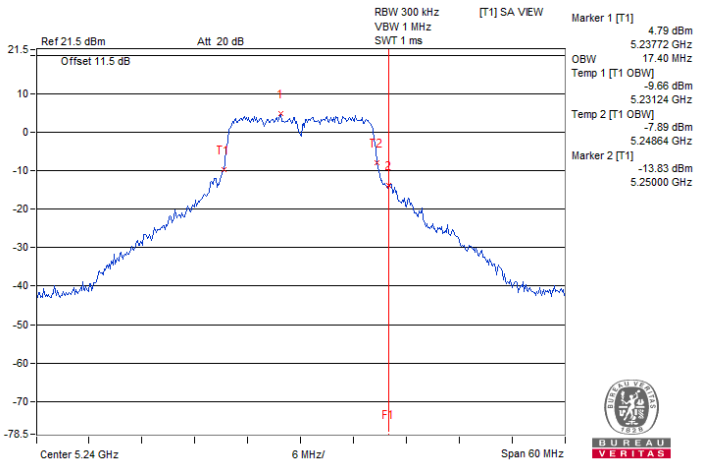
802.11ac (VHT40) : CH 151



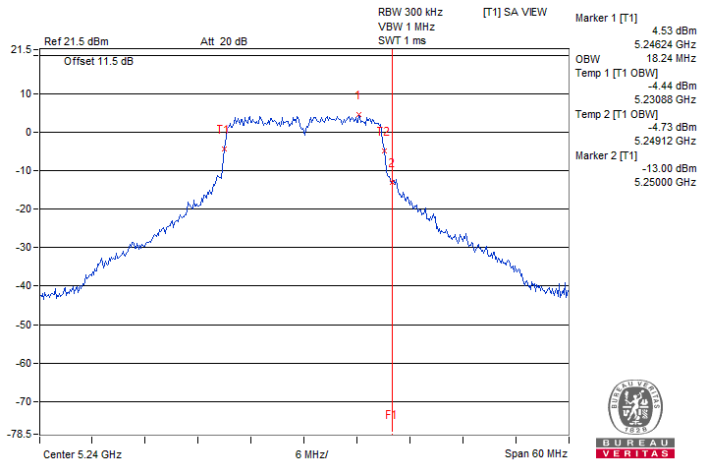
802.11ac (VHT80) : CH 155

Spectrum Plot for nearby DFS band

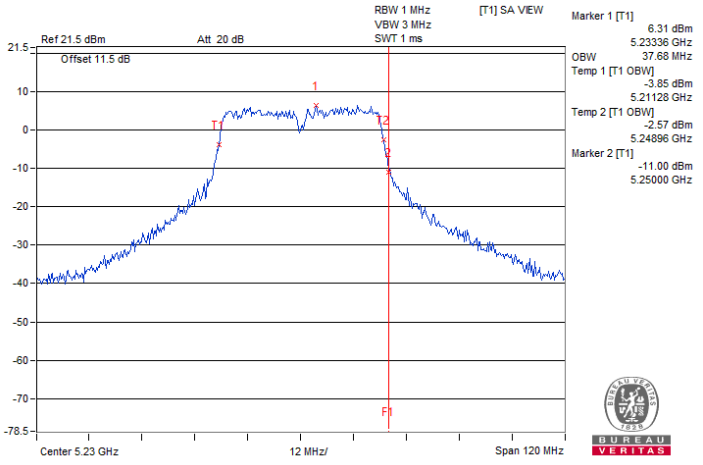
(DFS is required, if 99% OCP straddle into U-NII-2A)



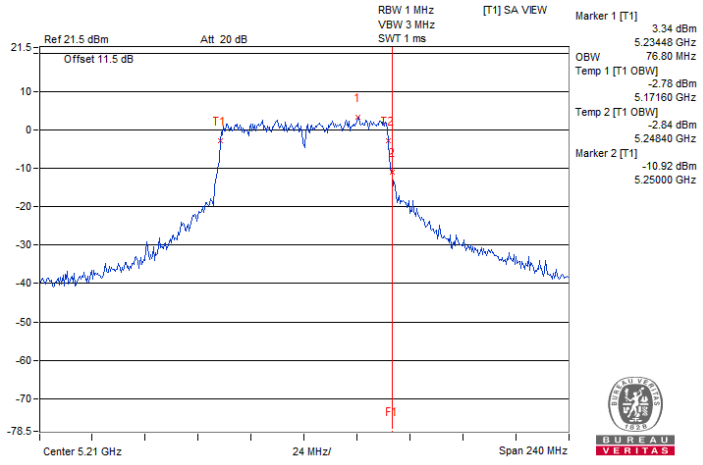
802.11a : CH 48



802.11ac (VHT20) : CH 48



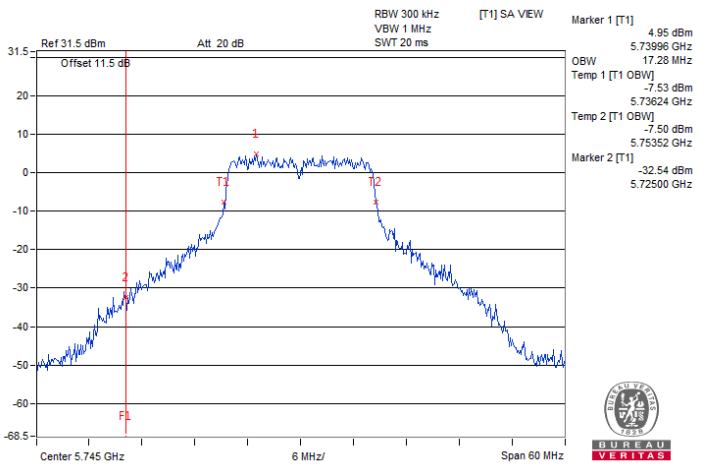
802.11ac (VHT40) : CH 46



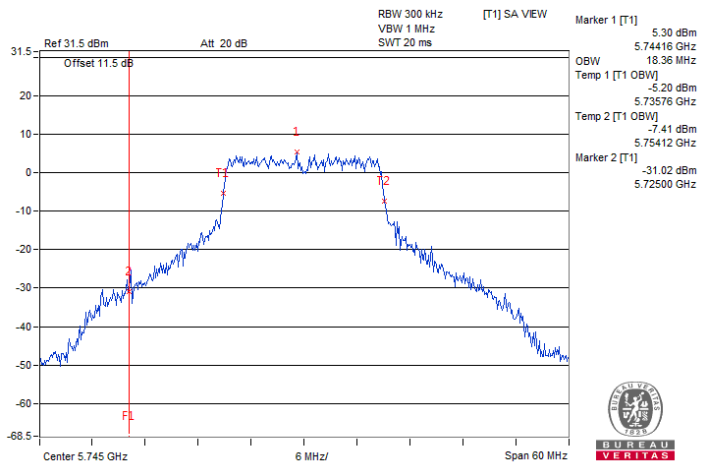
802.11ac (VHT80) : CH 42

Spectrum Plot for nearby DFS band

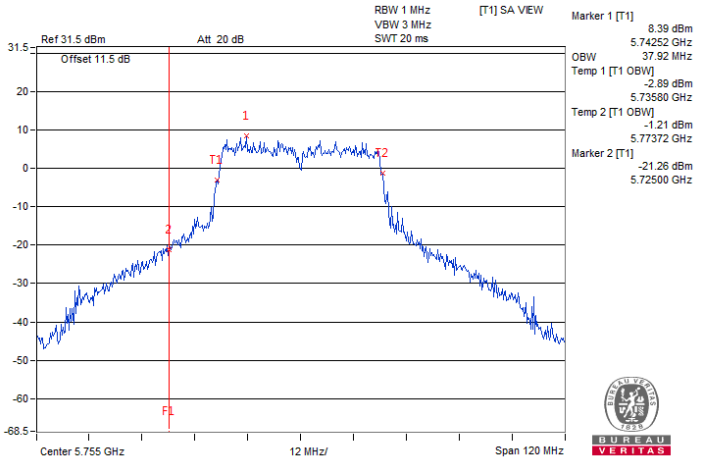
(DFS is required, if 99% OCP straddle into U-NII-2C)



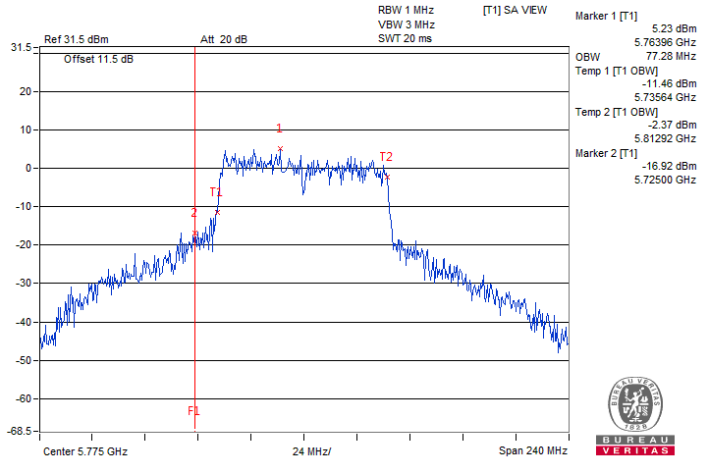
802.11a : CH 149



802.11ac (VHT20) : CH 149



802.11ac (VHT40) : CH 151



802.11ac (VHT80) : CH 155

7.5 Frequency Stability

Input Power:	56Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang

Mode A: 5GHz Radio 2: QCN-5154 Module

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
55	56	5180.0122	Pass	5180.0087	Pass	5180.009	Pass	5180.0093	Pass
50	56	5180.0244	Pass	5180.0259	Pass	5180.0251	Pass	5180.0236	Pass
40	56	5180.026	Pass	5180.0228	Pass	5180.0257	Pass	5180.021	Pass
30	56	5179.9894	Pass	5179.9915	Pass	5179.9876	Pass	5179.9915	Pass
20	56	5180.006	Pass	5180.0082	Pass	5180.0081	Pass	5180.0057	Pass
10	56	5180.0114	Pass	5180.0152	Pass	5180.0156	Pass	5180.013	Pass
0	56	5180.0192	Pass	5180.0185	Pass	5180.0204	Pass	5180.0201	Pass
-10	56	5180.0106	Pass	5180.0131	Pass	5180.0123	Pass	5180.0119	Pass
-20	56	5180.0092	Pass	5180.0065	Pass	5180.0087	Pass	5180.0074	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	64.4	5180.011	Pass	5180.0105	Pass	5180.0135	Pass	5180.0136	Pass
	56	5180.006	Pass	5180.0082	Pass	5180.0081	Pass	5180.0057	Pass
	47.6	5180.005	Pass	5180.0056	Pass	5180.0012	Pass	5180.0053	Pass

Mode B: Scan Radio 3: QCA-9889 Module

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
55	56	5180.0185	Pass	5180.0174	Pass	5180.0194	Pass	5180.0184	Pass
50	56	5180.0049	Pass	5180.0008	Pass	5180.0042	Pass	5180.0042	Pass
40	56	5179.9954	Pass	5179.9982	Pass	5179.9952	Pass	5179.9965	Pass
30	56	5180.0067	Pass	5180.0085	Pass	5180.0071	Pass	5180.0075	Pass
20	56	5180.012	Pass	5180.0118	Pass	5180.0112	Pass	5180.013	Pass
10	56	5180.0047	Pass	5180.0069	Pass	5180.0093	Pass	5180.0047	Pass
0	56	5179.9728	Pass	5179.9731	Pass	5179.9746	Pass	5179.9767	Pass
-10	56	5179.9732	Pass	5179.9742	Pass	5179.9737	Pass	5179.9766	Pass
-20	56	5179.9821	Pass	5179.9841	Pass	5179.9808	Pass	5179.9802	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	64.4	5180.0218	Pass	5180.0227	Pass	5180.0228	Pass	5180.0226	Pass
	56	5180.012	Pass	5180.0118	Pass	5180.0112	Pass	5180.013	Pass
	47.6	5180.0186	Pass	5180.0179	Pass	5180.0187	Pass	5180.0165	Pass

7.6 AC Power Conducted Emissions

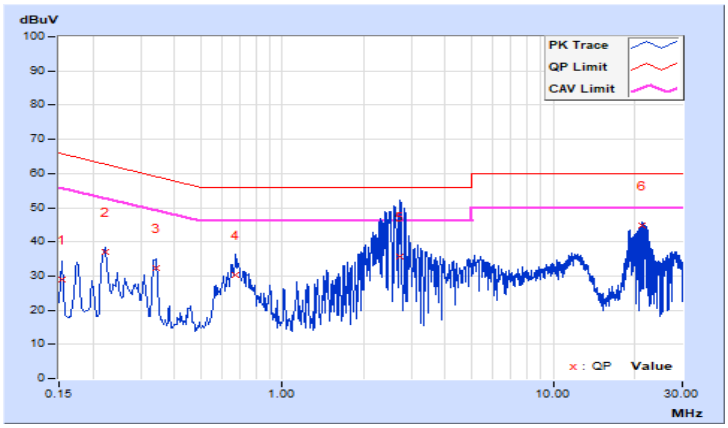
Mode A: 5GHz Radio 2: QCN-5154 Module

RF Mode	802.11a	**Channel**	CH 157：5785 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 66% RH
Tested By	Titan Hsu		

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	0.15400	9.62	19.48	6.39	29.10	16.01	65.78	55.78	-36.68	-39.77
2	0.22200	9.65	27.22	20.15	36.87	29.80	62.74	52.74	-25.87	-22.94
3	0.34125	9.68	22.68	18.24	32.36	27.92	59.17	49.17	-26.81	-21.25
4	0.66987	9.69	20.73	15.26	30.42	24.95	56.00	46.00	-25.58	-21.05
5	2.72600	9.73	26.07	14.68	35.80	24.41	56.00	46.00	-20.20	-21.59
6	**21.37800**	**9.87**	**34.99**	**34.58**	**44.86**	**44.45**	**60.00**	**50.00**	**-15.14**	**-5.55**

Remarks:

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

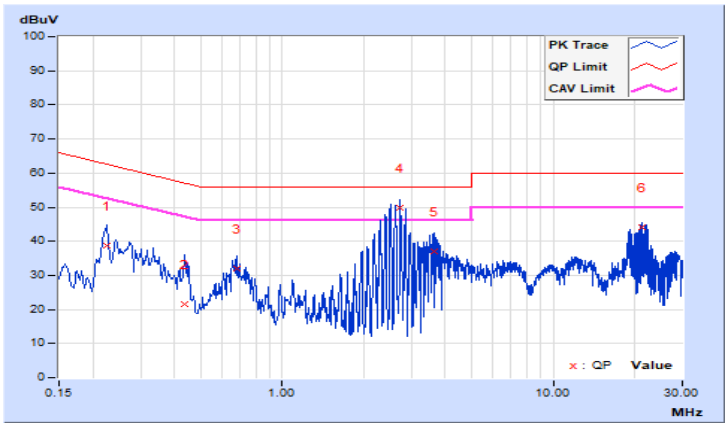


RF Mode	802.11a	**Channel**	CH 157：5785 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 66% RH
Tested By	Titan Hsu		

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	0.22565	9.65	29.09	24.97	38.74	34.62	62.61	52.61	-23.87	-17.99
2	0.43800	9.69	12.00	7.06	21.69	16.75	57.10	47.10	-35.41	-30.35
3	0.67800	9.69	22.17	16.06	31.86	25.75	56.00	46.00	-24.14	-20.25
4	2.72600	9.74	40.24	25.49	49.98	35.23	56.00	46.00	-6.02	-10.77
5	3.62600	9.75	27.32	10.43	37.07	20.18	56.00	46.00	-18.93	-25.82
6	21.18200	9.89	34.05	32.77	43.94	42.66	60.00	50.00	-16.06	-7.34

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



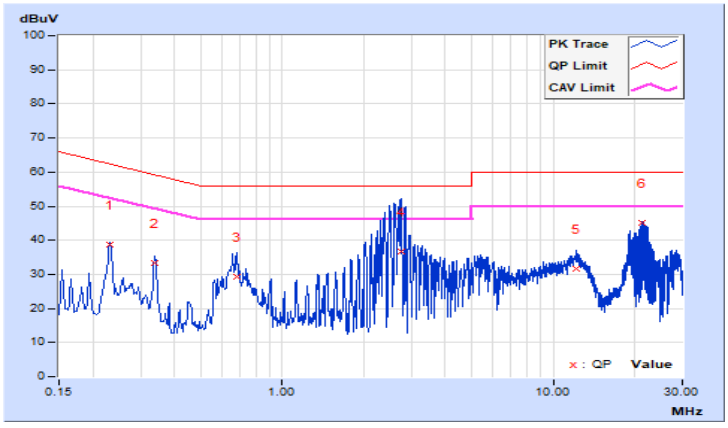
Mode B: Scan Radio 3: QCA-9889 Module

RF Mode	802.11a	**Channel**	CH 40：5200 MHz
Frequency Range	150 kHz ~ 30 MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 66% RH
Tested By	Titan Hsu		

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	0.23000	9.65	29.21	17.65	38.86	27.30	62.45	52.45	-23.59	-25.15
2	0.33800	9.67	23.59	20.87	33.26	30.54	59.25	49.25	-25.99	-18.71
3	0.68200	9.69	19.54	14.22	29.23	23.91	56.00	46.00	-26.77	-22.09
4	2.73800	9.73	27.02	6.01	36.75	15.74	56.00	46.00	-19.25	-30.26
5	12.15000	9.83	21.86	12.84	31.69	22.67	60.00	50.00	-28.31	-27.33
6	**21.37800**	**9.87**	**35.15**	**34.88**	**45.02**	**44.75**	**60.00**	**50.00**	**-14.98**	**-5.25**

Remarks:

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

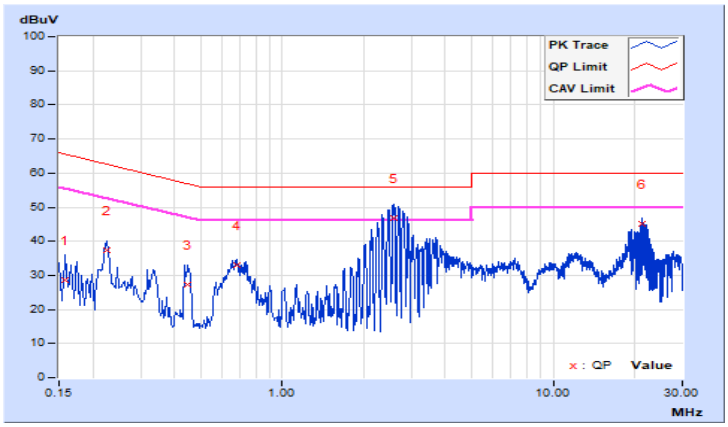


RF Mode	802.11a	Channel	CH 40：5200 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	0.15800	9.62	18.93	3.08	28.55	12.70	65.57	55.57	-37.02	-42.87
2	0.22600	9.65	27.73	21.13	37.38	30.78	62.60	52.60	-25.22	-21.82
3	0.44600	9.69	17.64	11.44	27.33	21.13	56.95	46.95	-29.62	-25.82
4	0.67697	9.69	23.33	17.93	33.02	27.62	56.00	46.00	-22.98	-18.38
5	2.57400	9.74	36.95	22.80	46.69	32.54	56.00	46.00	-9.31	-13.46
6	21.37800	9.89	35.17	34.68	45.06	44.57	60.00	50.00	-14.94	-5.43

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

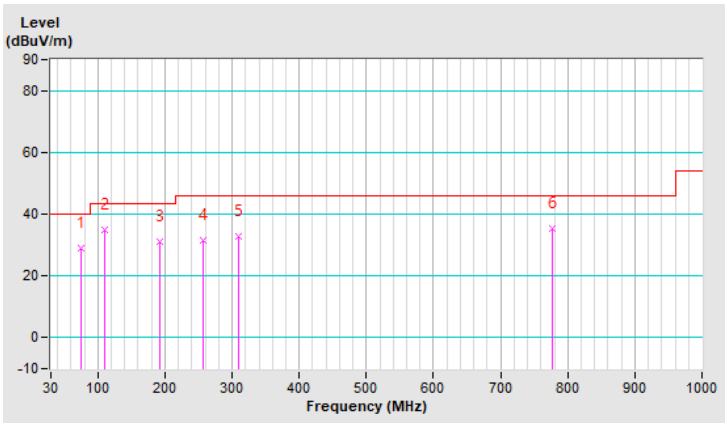
Mode A: 5GHz Radio 2: QCN-5154 Module

RF Mode	802.11a	Channel	CH 157：5785 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	75.59	28.8 QP	40.0	-11.2	1.00 H	113	40.6	-11.8
2	110.51	34.9 QP	43.5	-8.6	1.00 H	59	46.6	-11.7
3	191.99	31.0 QP	43.5	-12.5	1.00 H	59	42.3	-11.3
4	256.01	31.7 QP	46.0	-14.3	1.99 H	167	40.7	-9.0
5	309.36	32.8 QP	46.0	-13.2	1.99 H	68	39.9	-7.1
6	777.87	35.3 QP	46.0	-10.7	1.99 H	145	32.8	2.5

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 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.

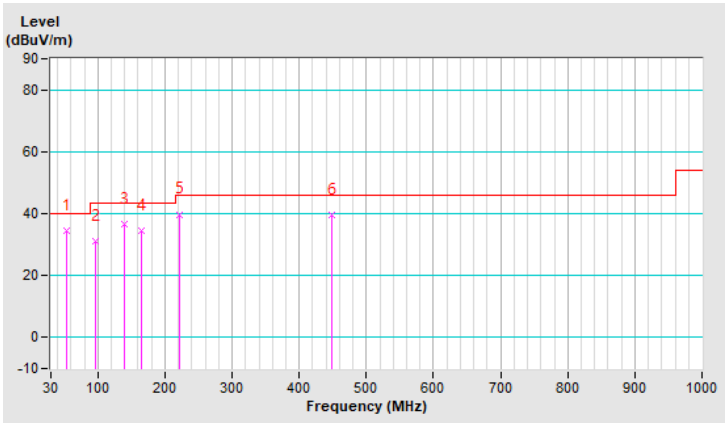


RF Mode	802.11a	Channel	CH 157：5785 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	**54.25**	**34.7 QP**	**40.0**	**-5.3**	**1.00 V**	**52**	**43.8**	**-9.1**
2	96.93	31.2 QP	43.5	-12.3	1.00 V	109	45.0	-13.8
3	139.61	36.5 QP	43.5	-7.0	1.00 V	172	45.7	-9.2
4	164.83	34.5 QP	43.5	-9.0	1.00 V	52	43.2	-8.7
5	221.09	39.8 QP	46.0	-6.2	1.00 V	111	50.9	-11.1
6	449.04	39.7 QP	46.0	-6.3	1.00 V	109	44.5	-4.8

Remarks:

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



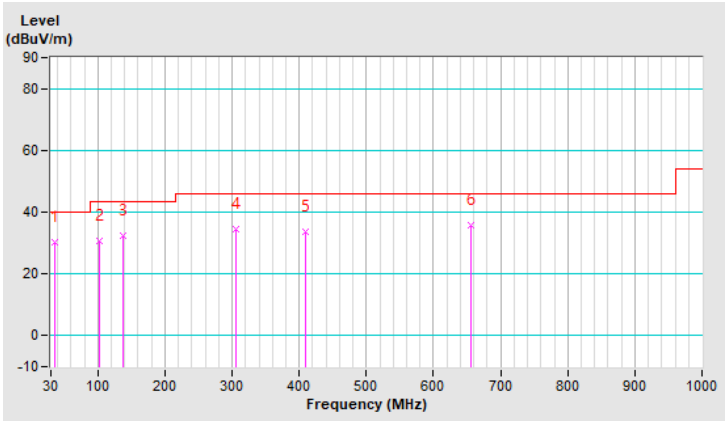
Mode B: Scan Radio 3: QCA-9889 Module

RF Mode	802.11a	**Channel**	CH 40：5200 MHz
Frequency Range	9 kHz ~ 1 GHz	**Detector Function & Bandwidth**	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	23°C, 66% RH
Tested By	Titan Hsu		

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	36.79	30.3 QP	40.0	-9.7	1.49 H	52	40.1	-9.8
2	101.78	30.6 QP	43.5	-12.9	1.00 H	352	43.7	-13.1
3	136.70	32.3 QP	43.5	-11.2	1.49 H	168	41.6	-9.3
4	306.45	34.7 QP	46.0	-11.3	1.49 H	52	41.9	-7.2
5	409.27	33.5 QP	46.0	-12.5	1.49 H	115	39.2	-5.7
6	655.65	35.7 QP	46.0	-10.3	1.49 H	52	36.5	-0.8

Remarks:

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

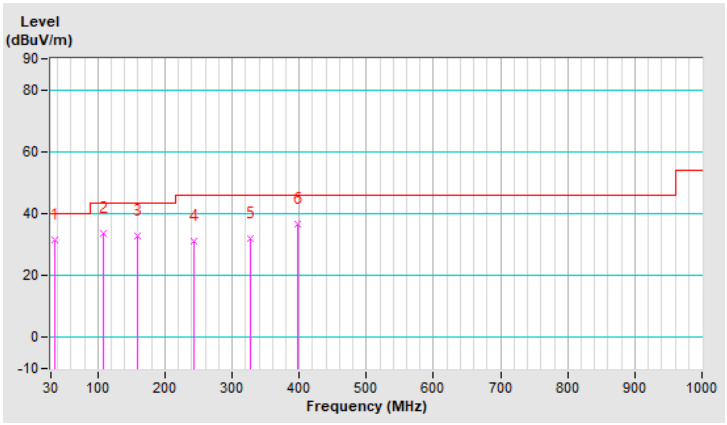


RF Mode	802.11a	Channel	CH 40：5200 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	35.82	31.7 QP	40.0	-8.3	1.49 V	53	41.6	-9.9
2	108.57	33.5 QP	43.5	-10.0	1.49 V	172	45.3	-11.8
3	159.01	32.9 QP	43.5	-10.6	1.49 V	168	41.4	-8.5
4	242.43	31.1 QP	46.0	-14.9	1.49 V	67	40.5	-9.4
5	327.79	31.8 QP	46.0	-14.2	1.49 V	53	38.6	-6.8
6	398.60	36.5 QP	46.0	-9.5	1.49 V	56	42.4	-5.9

Remarks:

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

Mode A: 5GHz Radio 2: QCN-5154 Module

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**	24°C, 68% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	59.5 PK	74.0	-14.5	2.54 H	204	47.0	12.5
2	5150.00	46.0 AV	54.0	-8.0	2.54 H	204	33.5	12.5
3	*5180.00	108.9 PK			2.54 H	204	66.3	42.6
4	*5180.00	99.9 AV			2.54 H	204	57.3	42.6
5	#10360.00	61.6 PK	68.2	-6.6	2.41 H	130	39.2	22.4
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	59.7 PK	74.0	-14.3	2.71 V	180	47.2	12.5
2	5150.00	46.3 AV	54.0	-7.7	2.71 V	180	33.8	12.5
3	*5180.00	114.0 PK			2.71 V	180	71.4	42.6
4	*5180.00	104.9 AV			2.71 V	180	62.3	42.6
5	#10360.00	61.9 PK	68.2	-6.3	1.65 V	142	39.5	22.4

Remarks:

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

RF Mode	802.11a	Channel	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

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	108.8 PK			2.58 H	206	66.3	42.5
2	*5200.00	99.9 AV			2.58 H	206	57.4	42.5
3	#10400.00	62.1 PK	68.2	-6.1	2.37 H	133	39.4	22.7
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	*5200.00	114.0 PK			2.80 V	182	71.5	42.5
2	*5200.00	105.1 AV			2.80 V	182	62.6	42.5
3	#10400.00	62.5 PK	68.2	-5.7	1.69 V	142	39.8	22.7

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 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	24°C, 68% RH
Tested By	Titan Hsu		

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	109.9 PK			2.55 H	206	67.5	42.4
2	*5240.00	99.8 AV			2.55 H	206	57.4	42.4
3	5350.00	59.3 PK	74.0	-14.7	2.55 H	206	47.0	12.3
4	5350.00	45.8 AV	54.0	-8.2	2.55 H	206	33.5	12.3
5	#10480.00	61.8 PK	68.2	-6.4	2.38 H	136	39.1	22.7
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	*5240.00	115.1 PK			2.84 V	198	72.7	42.4
2	*5240.00	105.1 AV			2.84 V	198	62.7	42.4
3	5350.00	59.5 PK	74.0	-14.5	2.84 V	198	47.2	12.3
4	5350.00	46.0 AV	54.0	-8.0	2.84 V	198	33.7	12.3
5	#10480.00	62.2 PK	68.2	-6.0	1.68 V	144	39.5	22.7

Remarks:

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

RF Mode	802.11a	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

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	#5604.80	60.0 PK	68.2	-8.2	2.63 H	168	47.5	12.5
2	*5745.00	119.6 PK			2.63 H	168	76.2	43.4
3	*5745.00	109.7 AV			2.63 H	168	66.3	43.4
4	#5938.00	61.4 PK	68.2	-6.8	2.63 H	168	47.7	13.7
5	11490.00	64.1 PK	74.0	-9.9	2.46 H	155	40.1	24.0
6	11490.00	50.7 AV	54.0	-3.3	2.46 H	155	26.7	24.0
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	#5641.20	60.1 PK	68.2	-8.1	2.82 V	196	47.4	12.7
2	*5745.00	121.1 PK			2.82 V	196	77.7	43.4
3	*5745.00	112.4 AV			2.82 V	196	69.0	43.4
4	#5994.80	60.9 PK	68.2	-7.3	2.82 V	196	47.3	13.6
5	11490.00	64.6 PK	74.0	-9.4	1.92 V	163	40.6	24.0
6	11490.00	51.3 AV	54.0	-2.7	1.92 V	163	27.3	24.0

Remarks:

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

RF Mode	802.11a	Channel	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

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	#5618.40	60.2 PK	68.2	-8.0	2.71 H	167	47.7	12.5
2	*5785.00	120.0 PK			2.71 H	167	76.4	43.6
3	*5785.00	109.9 AV			2.71 H	167	66.3	43.6
4	#5976.80	60.8 PK	68.2	-7.4	2.71 H	167	47.1	13.7
5	11570.00	64.1 PK	74.0	-9.9	2.48 H	158	40.2	23.9
6	11570.00	50.7 AV	54.0	-3.3	2.48 H	158	26.8	23.9
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	#5648.00	59.8 PK	68.2	-8.4	2.82 V	189	47.1	12.7
2	*5785.00	122.3 PK			2.82 V	189	78.7	43.6
3	*5785.00	113.0 AV			2.82 V	189	69.4	43.6
4	#5973.20	60.9 PK	68.2	-7.3	2.82 V	189	47.2	13.7
5	11570.00	64.4 PK	74.0	-9.6	1.95 V	166	40.5	23.9
6	11570.00	51.1 AV	54.0	-2.9	1.95 V	166	27.2	23.9

Remarks:

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

RF Mode	802.11a	Channel	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

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	#5633.60	59.7 PK	68.2	-8.5	2.75 H	171	47.0	12.7
2	*5825.00	118.0 PK			2.75 H	171	74.2	43.8
3	*5825.00	109.0 AV			2.75 H	171	65.2	43.8
4	#5937.60	61.4 PK	68.2	-6.8	2.75 H	171	47.7	13.7
5	11650.00	63.3 PK	74.0	-10.7	2.57 H	148	40.0	23.3
6	11650.00	50.2 AV	54.0	-3.8	2.57 H	148	26.9	23.3
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	#5630.40	60.9 PK	68.2	-7.3	2.82 V	187	48.2	12.7
2	*5825.00	122.1 PK			2.82 V	187	78.3	43.8
3	*5825.00	112.7 AV			2.82 V	187	68.9	43.8
4	#5972.00	61.8 PK	68.2	-6.4	2.82 V	187	48.1	13.7
5	11650.00	63.6 PK	74.0	-10.4	1.99 V	165	40.3	23.3
6	11650.00	50.5 AV	54.0	-3.5	1.99 V	165	27.2	23.3

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	802.11ax (HE20)	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	24°C, 68% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.6 PK	74.0	-15.4	2.55 H	206	46.1	12.5
2	5150.00	45.9 AV	54.0	-8.1	2.55 H	206	33.4	12.5
3	*5180.00	113.4 PK			2.55 H	206	70.8	42.6
4	*5180.00	101.5 AV			2.55 H	206	58.9	42.6
5	#10360.00	61.7 PK	68.2	-6.5	2.38 H	136	39.3	22.4
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	58.9 PK	74.0	-15.1	2.74 V	175	46.4	12.5
2	5150.00	46.1 AV	54.0	-7.9	2.74 V	175	33.6	12.5
3	*5180.00	118.3 PK			2.74 V	175	75.7	42.6
4	*5180.00	105.0 AV			2.74 V	175	62.4	42.6
5	#10360.00	62.2 PK	68.2	-6.0	1.69 V	138	39.8	22.4

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	802.11ax (HE20)	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	24°C, 68% RH
Tested By	Titan Hsu		

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	113.6 PK			2.49 H	210	71.1	42.5
2	*5200.00	100.1 AV			2.49 H	210	57.6	42.5
3	#10400.00	62.1 PK	68.2	-6.1	2.38 H	127	39.4	22.7
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	*5200.00	118.5 PK			2.89 V	178	76.0	42.5
2	*5200.00	105.3 AV			2.89 V	178	62.8	42.5
3	#10400.00	62.4 PK	68.2	-5.8	1.65 V	132	39.7	22.7

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	802.11ax (HE20)	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	24°C, 68% RH
Tested By	Titan Hsu		

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	112.6 PK			2.46 H	205	70.2	42.4
2	*5240.00	99.8 AV			2.46 H	205	57.4	42.4
3	5350.00	58.7 PK	74.0	-15.3	2.46 H	205	46.4	12.3
4	5350.00	45.8 AV	54.0	-8.2	2.46 H	205	33.5	12.3
5	#10480.00	62.0 PK	68.2	-6.2	2.33 H	128	39.3	22.7
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	*5240.00	117.7 PK			2.75 V	177	75.3	42.4
2	*5240.00	105.1 AV			2.75 V	177	62.7	42.4
3	5350.00	58.8 PK	74.0	-15.2	2.75 V	177	46.5	12.3
4	5350.00	45.9 AV	54.0	-8.1	2.75 V	177	33.6	12.3
5	#10480.00	62.3 PK	68.2	-5.9	1.74 V	135	39.6	22.7

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	802.11ax (HE20)	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	24°C, 68% RH
Tested By	Titan Hsu		

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	#5642.80	59.2 PK	68.2	-9.0	2.78 H	167	46.5	12.7
2	*5745.00	121.6 PK			2.78 H	167	78.2	43.4
3	*5745.00	109.2 AV			2.78 H	167	65.8	43.4
4	#5952.80	60.5 PK	68.2	-7.7	2.78 H	167	46.8	13.7
5	11490.00	64.2 PK	74.0	-9.8	2.47 H	145	40.2	24.0
6	11490.00	51.0 AV	54.0	-3.0	2.47 H	145	27.0	24.0
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	#5646.80	61.0 PK	68.2	-7.2	2.80 V	191	48.3	12.7
2	*5745.00	126.0 PK			2.80 V	191	82.6	43.4
3	*5745.00	113.1 AV			2.80 V	191	69.7	43.4
4	#5998.00	62.0 PK	68.2	-6.2	2.80 V	191	48.4	13.6
5	11490.00	64.5 PK	74.0	-9.5	1.93 V	161	40.5	24.0
6	11490.00	51.2 AV	54.0	-2.8	1.93 V	161	27.2	24.0

Remarks:

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

RF Mode	802.11ax (HE20)	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	24°C, 68% RH
Tested By	Titan Hsu		

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	#5616.40	59.0 PK	68.2	-9.2	2.65 H	166	46.5	12.5
2	*5785.00	121.3 PK			2.65 H	166	77.7	43.6
3	*5785.00	108.9 AV			2.65 H	166	65.3	43.6
4	#5981.20	61.0 PK	68.2	-7.2	2.65 H	166	47.4	13.6
5	11570.00	64.1 PK	74.0	-9.9	2.46 H	147	40.2	23.9
6	11570.00	50.8 AV	54.0	-3.2	2.46 H	147	26.9	23.9
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	#5636.40	60.7 PK	68.2	-7.5	2.82 V	191	48.0	12.7
2	*5785.00	125.6 PK			2.82 V	191	82.0	43.6
3	*5785.00	113.4 AV			2.82 V	191	69.8	43.6
4	#5984.00	61.6 PK	68.2	-6.6	2.82 V	191	48.0	13.6
5	11570.00	64.4 PK	74.0	-9.6	1.95 V	163	40.5	23.9
6	11570.00	51.2 AV	54.0	-2.8	1.95 V	163	27.3	23.9

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	802.11ax (HE20)	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	24°C, 68% RH
Tested By	Titan Hsu		

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	60.8 PK	68.2	-7.4	2.52 H	166	48.1	12.7
2	*5825.00	121.1 PK			2.52 H	166	77.3	43.8
3	*5825.00	109.1 AV			2.52 H	166	65.3	43.8
4	#5992.00	61.8 PK	68.2	-6.4	2.52 H	166	48.2	13.6
5	11650.00	63.3 PK	74.0	-10.7	2.49 H	152	40.0	23.3
6	11650.00	50.0 AV	54.0	-4.0	2.49 H	152	26.7	23.3
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	#5628.80	61.0 PK	68.2	-7.2	2.88 V	192	48.4	12.6
2	*5825.00	125.3 PK			2.88 V	192	81.5	43.8
3	*5825.00	112.9 AV			2.88 V	192	69.1	43.8
4	#5971.20	60.7 PK	68.2	-7.5	2.88 V	192	47.0	13.7
5	11650.00	63.6 PK	74.0	-10.4	1.96 V	168	40.3	23.3
6	11650.00	50.4 AV	54.0	-3.6	1.96 V	168	27.1	23.3

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	802.11ax (HE40)	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 = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.3 PK	74.0	-14.7	2.46 H	203	46.8	12.5
2	5150.00	46.2 AV	54.0	-7.8	2.46 H	203	33.7	12.5
3	*5190.00	109.1 PK			2.46 H	203	66.5	42.6
4	*5190.00	95.8 AV			2.46 H	203	53.2	42.6
5	#10380.00	61.8 PK	68.2	-6.4	2.33 H	125	39.3	22.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.4 PK	74.0	-14.6	2.72 V	179	46.9	12.5
2	5150.00	46.3 AV	54.0	-7.7	2.72 V	179	33.8	12.5
3	*5190.00	114.3 PK			2.72 V	179	71.7	42.6
4	*5190.00	101.9 AV			2.72 V	179	59.3	42.6
5	#10380.00	62.3 PK	68.2	-5.9	1.72 V	136	39.8	22.5

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	802.11ax (HE40)	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 = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.1 PK	74.0	-14.9	2.50 H	203	46.6	12.5
2	5150.00	45.9 AV	54.0	-8.1	2.50 H	203	33.4	12.5
3	*5230.00	108.5 PK			2.50 H	203	66.1	42.4
4	*5230.00	95.9 AV			2.50 H	203	53.5	42.4
5	#10460.00	62.0 PK	68.2	-6.2	2.33 H	128	39.3	22.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.4 PK	74.0	-14.6	2.92 V	179	46.9	12.5
2	5150.00	46.1 AV	54.0	-7.9	2.92 V	179	33.6	12.5
3	*5230.00	113.6 PK			2.92 V	179	71.2	42.4
4	*5230.00	102.1 AV			2.92 V	179	59.7	42.4
5	#10460.00	62.4 PK	68.2	-5.8	1.77 V	135	39.7	22.7

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	802.11ax (HE40)	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 = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

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	#5647.20	59.8 PK	68.2	-8.4	2.33 H	170	47.1	12.7
2	*5755.00	118.6 PK			2.33 H	170	75.2	43.4
3	*5755.00	106.1 AV			2.33 H	170	62.7	43.4
4	#5943.60	62.0 PK	68.2	-6.2	2.33 H	170	48.3	13.7
5	11510.00	63.4 PK	74.0	-10.6	2.49 H	153	39.5	23.9
6	11510.00	50.1 AV	54.0	-3.9	2.49 H	153	26.2	23.9
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	#5631.20	60.5 PK	68.2	-7.7	2.91 V	193	47.8	12.7
2	*5755.00	123.0 PK			2.91 V	193	79.6	43.4
3	*5755.00	109.9 AV			2.91 V	193	66.5	43.4
4	#5959.20	61.7 PK	68.2	-6.5	2.91 V	193	48.0	13.7
5	11510.00	63.7 PK	74.0	-10.3	1.95 V	159	39.8	23.9
6	11510.00	50.5 AV	54.0	-3.5	1.95 V	159	26.6	23.9

Remarks:

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

RF Mode	802.11ax (HE40)	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 = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

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	60.3 PK	68.2	-7.9	2.30 H	204	47.8	12.5
2	*5795.00	119.4 PK			2.30 H	204	75.7	43.7
3	*5795.00	105.7 AV			2.30 H	204	62.0	43.7
4	#5961.60	61.0 PK	68.2	-7.2	2.30 H	204	47.3	13.7
5	11590.00	63.4 PK	74.0	-10.6	2.57 H	149	39.5	23.9
6	11590.00	50.1 AV	54.0	-3.9	2.57 H	149	26.2	23.9
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	#5644.00	60.5 PK	68.2	-7.7	2.82 V	191	47.8	12.7
2	*5795.00	123.0 PK			2.82 V	191	79.3	43.7
3	*5795.00	110.0 AV			2.82 V	191	66.3	43.7
4	#5930.80	61.4 PK	68.2	-6.8	2.82 V	191	47.7	13.7
5	11590.00	63.5 PK	74.0	-10.5	1.98 V	155	39.6	23.9
6	11590.00	50.4 AV	54.0	-3.6	1.98 V	155	26.5	23.9

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	802.11ax (HE80)	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 = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

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	58.8 PK	74.0	-15.2	2.53 H	201	46.3	12.5
2	5150.00	46.3 AV	54.0	-7.7	2.53 H	201	33.8	12.5
3	*5210.00	106.5 PK			2.53 H	201	64.0	42.5
4	*5210.00	94.6 AV			2.53 H	201	52.1	42.5
5	5350.00	58.8 PK	74.0	-15.2	2.53 H	201	46.5	12.3
6	5350.00	45.7 AV	54.0	-8.3	2.53 H	201	33.4	12.3
7	#10420.00	61.9 PK	68.2	-6.3	2.33 H	120	39.3	22.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.4 PK	74.0	-14.6	2.76 V	181	46.9	12.5
2	5150.00	46.7 AV	54.0	-7.3	2.76 V	181	34.2	12.5
3	*5210.00	111.6 PK			2.76 V	181	69.1	42.5
4	*5210.00	98.7 AV			2.76 V	181	56.2	42.5
5	5350.00	59.1 PK	74.0	-14.9	2.76 V	181	46.8	12.3
6	5350.00	46.1 AV	54.0	-7.9	2.76 V	181	33.8	12.3
7	#10420.00	62.4 PK	68.2	-5.8	1.72 V	134	39.8	22.6

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	802.11ax (HE80)	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 = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5644.40	62.4 PK	68.2	-5.8	2.22 H	204	49.7	12.7
2	*5775.00	114.5 PK			2.22 H	204	70.9	43.6
3	*5775.00	103.0 AV			2.22 H	204	59.4	43.6
4	#5936.80	61.9 PK	68.2	-6.3	2.22 H	204	48.2	13.7
5	11550.00	63.1 PK	74.0	-10.9	2.51 H	151	39.2	23.9
6	11550.00	49.9 AV	54.0	-4.1	2.51 H	151	26.0	23.9
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	65.7 PK	68.2	-2.5	2.84 V	193	53.0	12.7
2	*5775.00	119.5 PK			2.84 V	193	75.9	43.6
3	*5775.00	107.1 AV			2.84 V	193	63.5	43.6
4	**#5927.20**	**66.8 PK**	**68.2**	**-1.4**	**2.84 V**	**193**	**53.2**	**13.6**
5	11550.00	63.4 PK	74.0	-10.6	1.99 V	157	39.5	23.9
6	11550.00	50.1 AV	54.0	-3.9	1.99 V	157	26.2	23.9

Remarks:

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

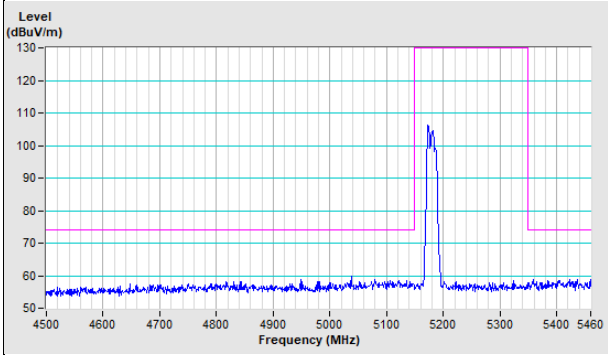
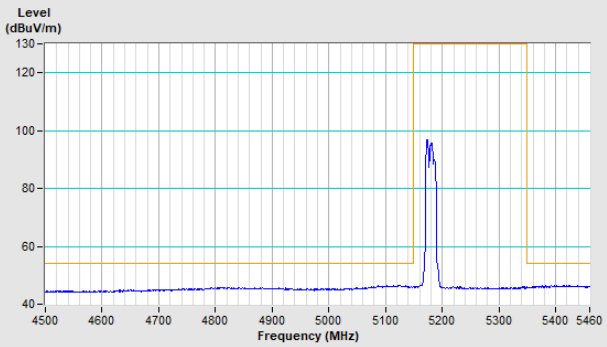
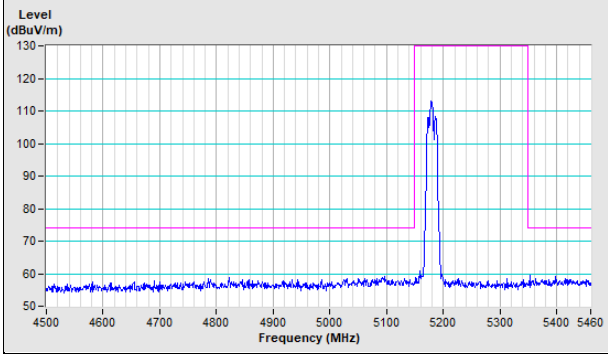
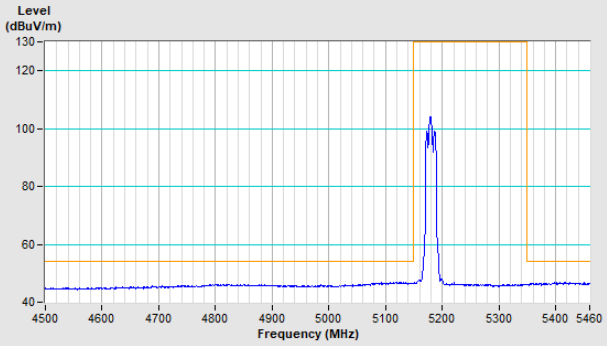
RF Mode	802.11ax (HE80+80)	Channel	CH 42+155：5210+5775 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

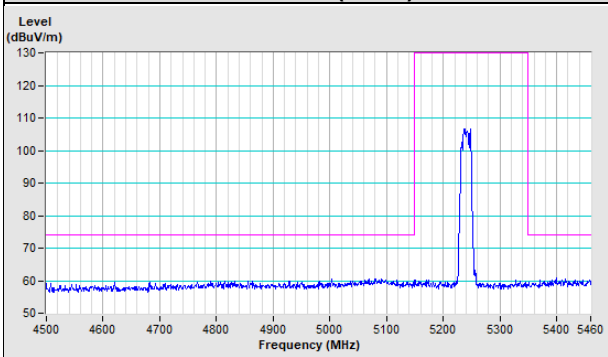
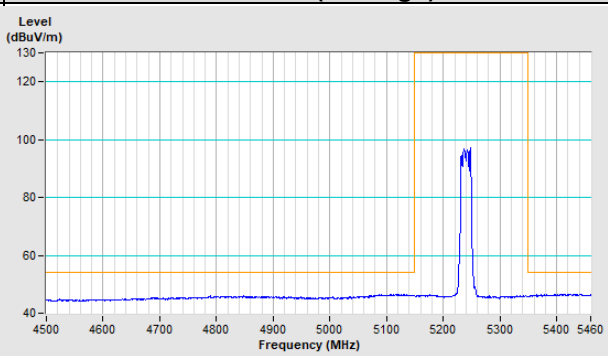
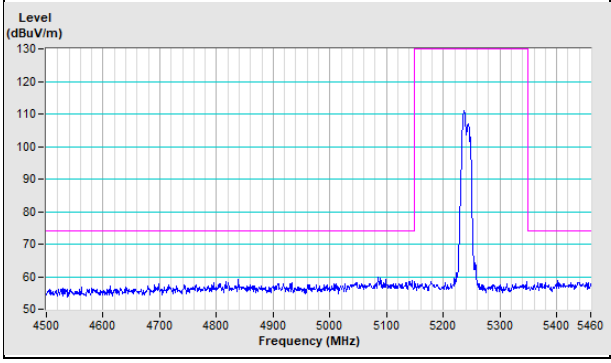
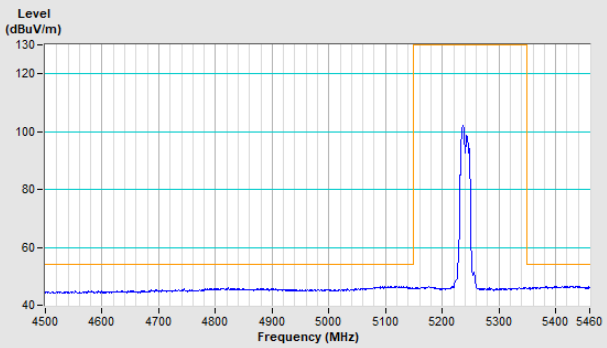
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.5 PK	74.0	-13.5	2.45 H	133	48.0	12.5
2	5150.00	47.6 AV	54.0	-6.4	2.45 H	133	35.1	12.5
3	*5210.00	106.2 PK			2.45 H	133	63.7	42.5
4	*5210.00	93.1 AV			2.45 H	133	50.6	42.5
5	5350.00	60.1 PK	74.0	-13.9	2.45 H	133	47.8	12.3
6	5350.00	46.5 AV	54.0	-7.5	2.45 H	133	34.2	12.3
7	*5775.00	106.6 PK			2.47 H	169	63.0	43.6
8	*5775.00	93.8 AV			2.47 H	169	50.2	43.6
9	#10420.00	61.6 PK	68.2	-6.6	2.45 H	145	39.0	22.6
10	11550.00	63.3 PK	74.0	-10.7	2.46 H	148	39.4	23.9
11	11550.00	49.7 AV	54.0	-4.3	2.46 H	148	25.8	23.9
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	61.8 PK	74.0	-12.2	3.16 V	176	49.3	12.5
2	5150.00	48.0 AV	54.0	-6.0	3.16 V	176	35.5	12.5
3	*5210.00	110.9 PK			3.16 V	176	68.4	42.5
4	*5210.00	97.9 AV			3.16 V	176	55.4	42.5
5	5350.00	59.7 PK	74.0	-14.3	3.16 V	176	47.4	12.3
6	5350.00	46.7 AV	54.0	-7.3	3.16 V	176	34.4	12.3
7	*5775.00	111.7 PK			2.66 V	114	68.1	43.6
8	*5775.00	99.1 AV			2.66 V	114	55.5	43.6
9	#10420.00	62.4 PK	68.2	-5.8	1.95 V	162	39.8	22.6
10	11550.00	63.2 PK	74.0	-10.8	2.02 V	163	39.3	23.9
11	11550.00	50.0 AV	54.0	-4.0	2.02 V	163	26.1	23.9

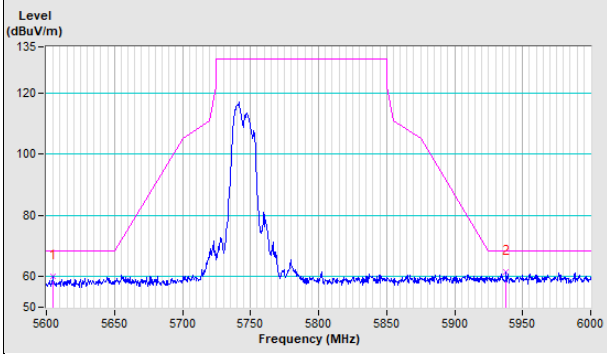
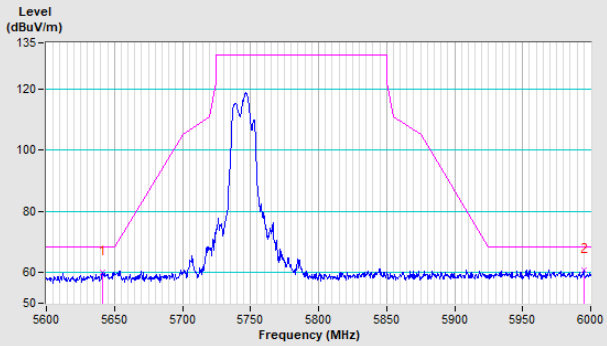
Remarks:

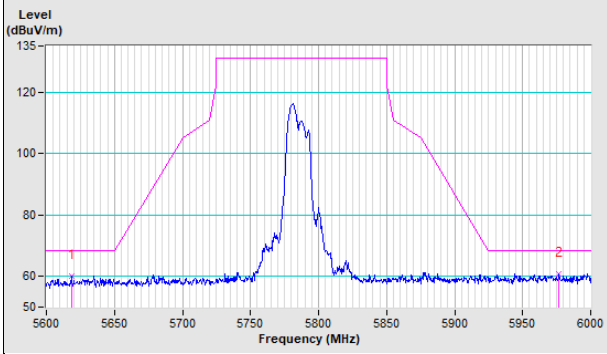
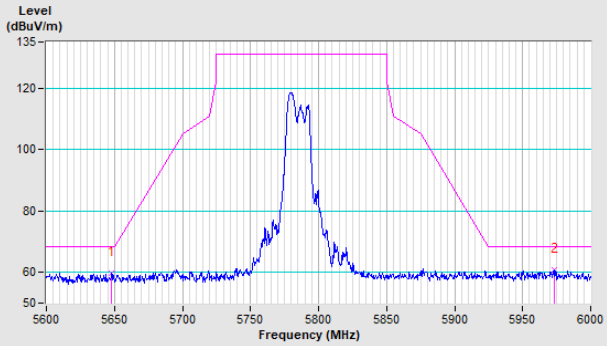
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

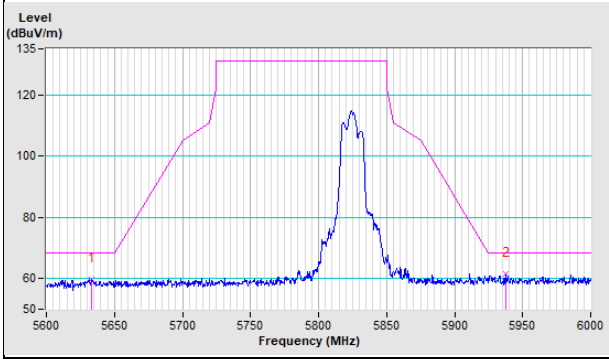
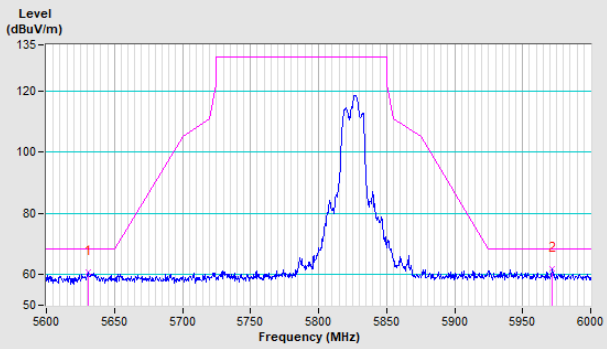
Band Edge

802.11a Channel 36	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11a Channel 48	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

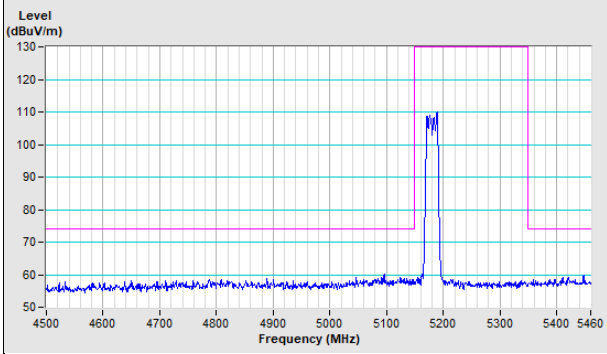
802.11a Channel 149	
Horizontal (Peak)	Vertical (Peak)
	

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

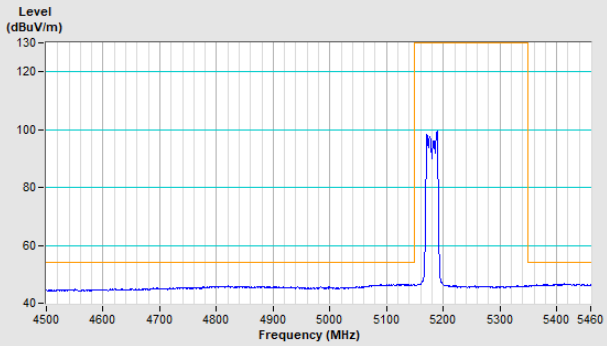
802.11a Channel 165	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE20) Channel 36

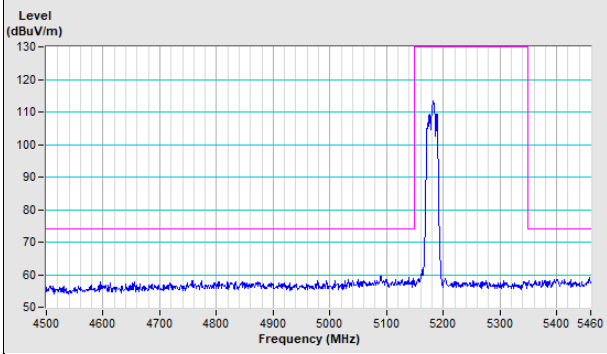
Horizontal (Peak)



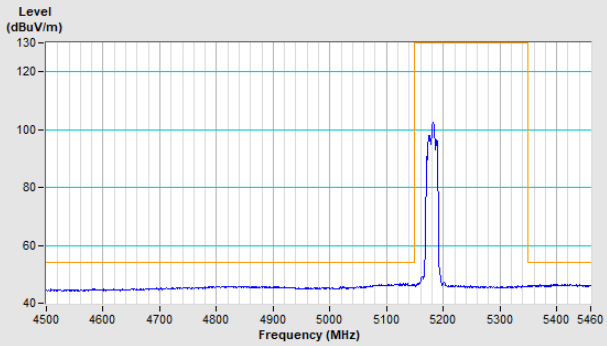
Horizontal (Average)



Vertical (Peak)

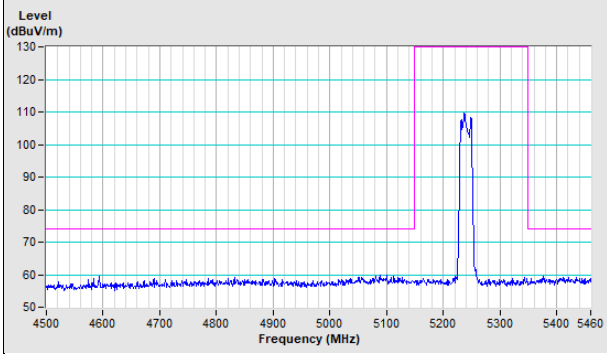


Vertical (Average)

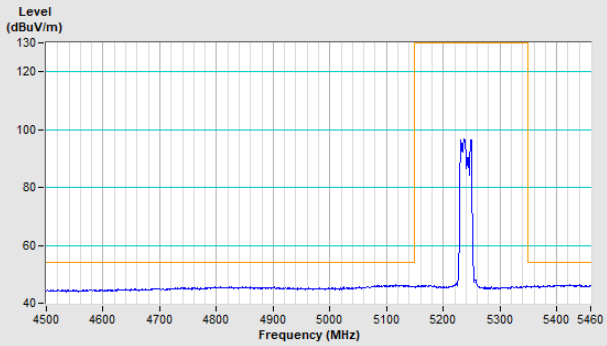


802.11ax (HE20) Channel 48

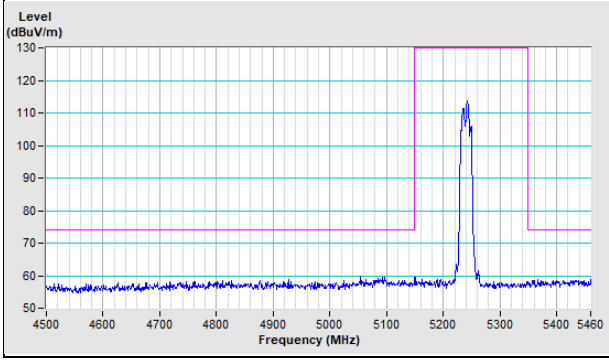
Horizontal (Peak)



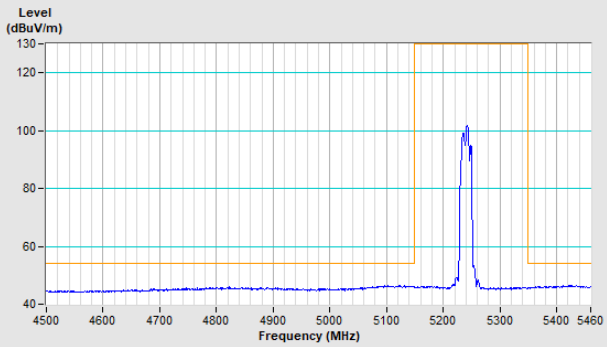
Horizontal (Average)

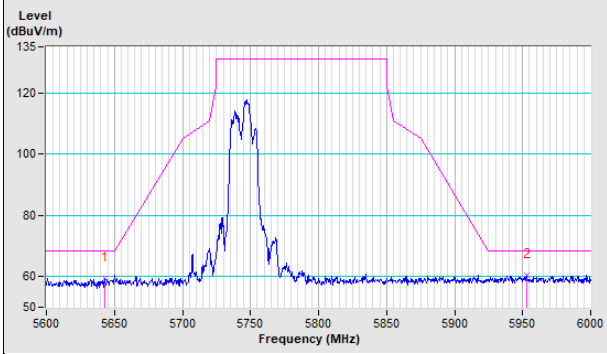
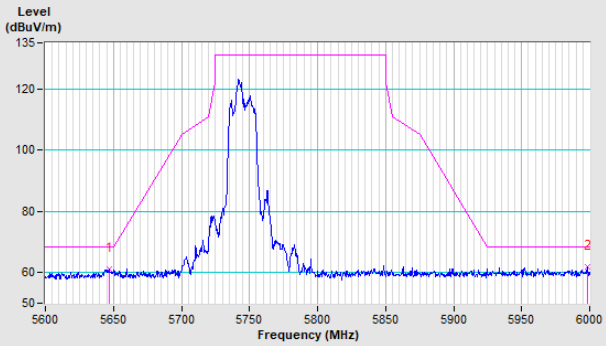


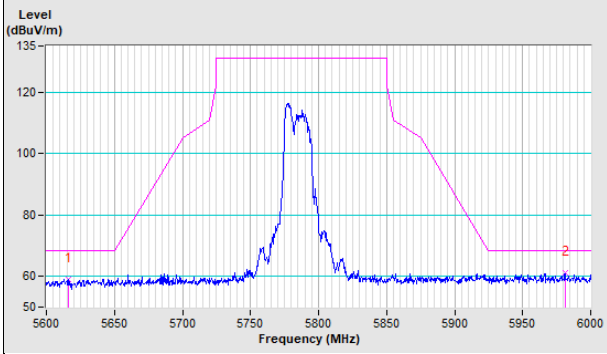
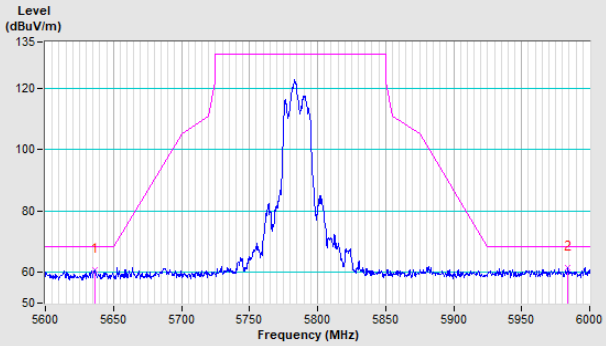
Vertical (Peak)

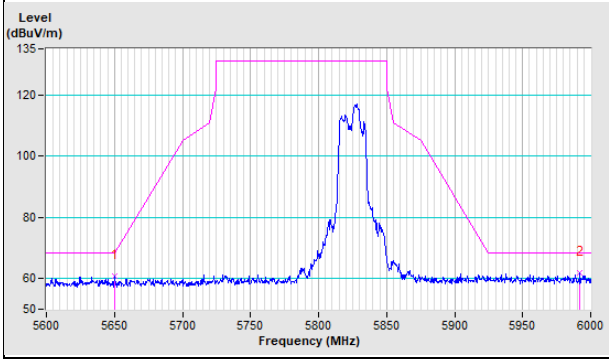
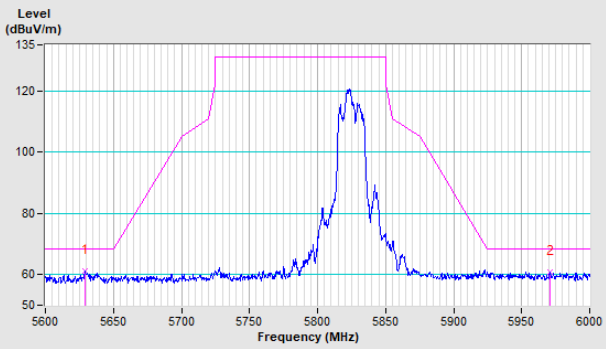


Vertical (Average)



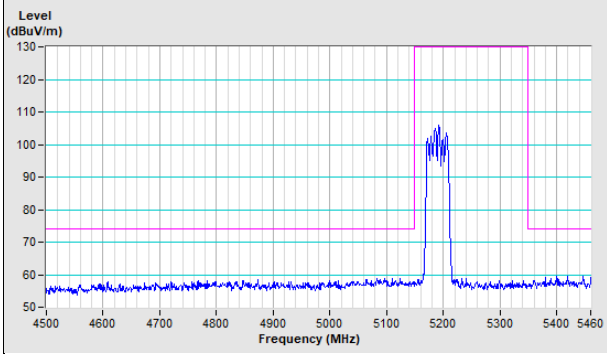
802.11ax (HE20) Channel 149	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE20) Channel 157	
Horizontal (Peak)	Vertical (Peak)
	

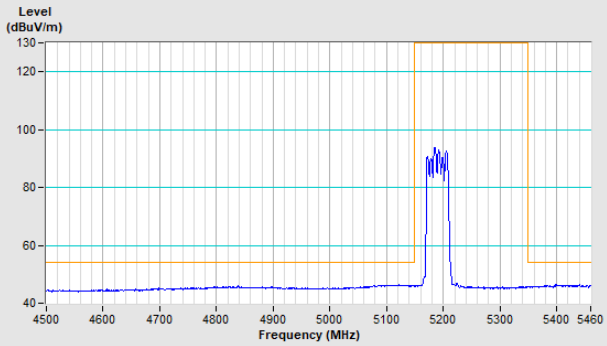
802.11ax (HE20) Channel 165	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE40) Channel 38

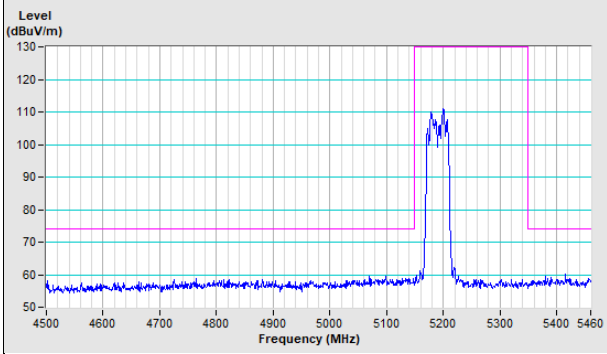
Horizontal (Peak)



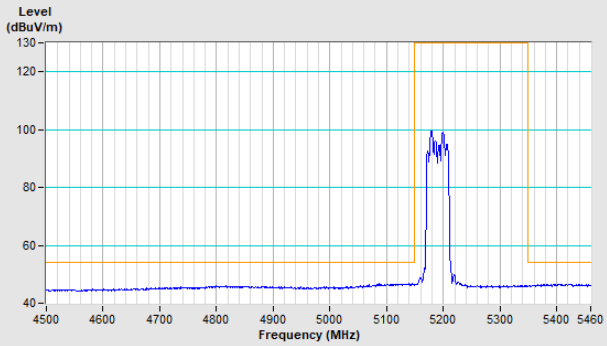
Horizontal (Average)



Vertical (Peak)

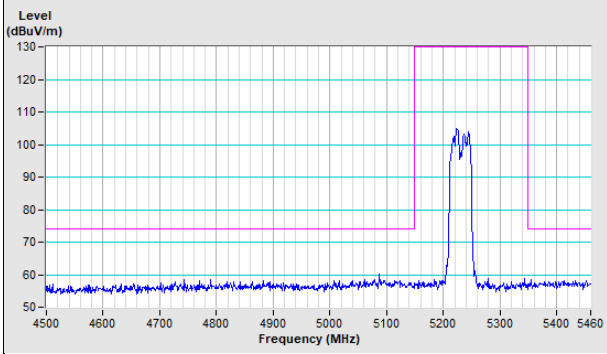


Vertical (Average)

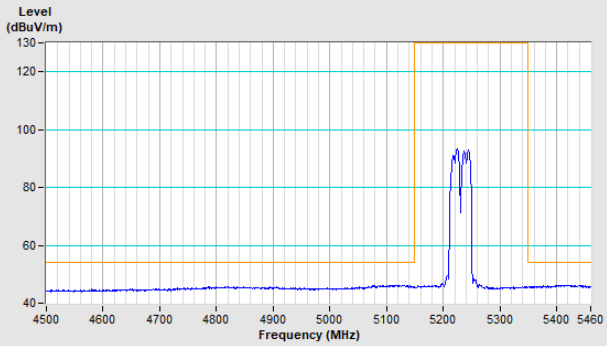


802.11ax (HE40) Channel 46

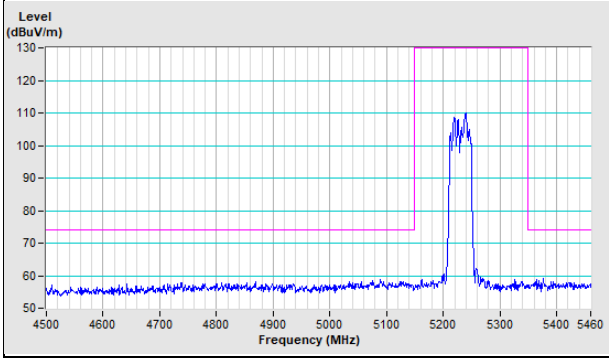
Horizontal (Peak)



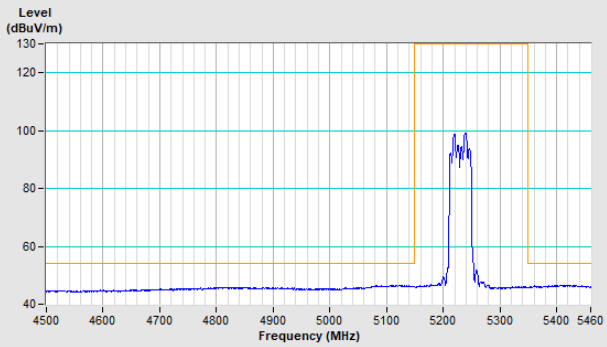
Horizontal (Average)

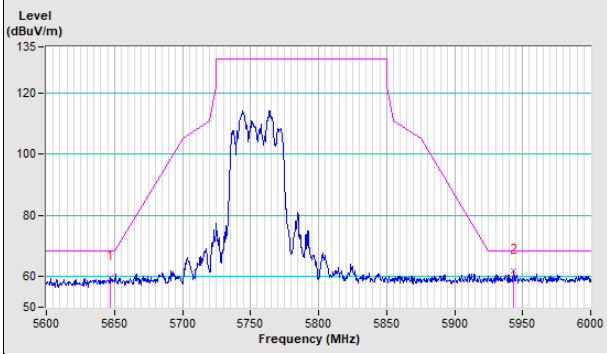
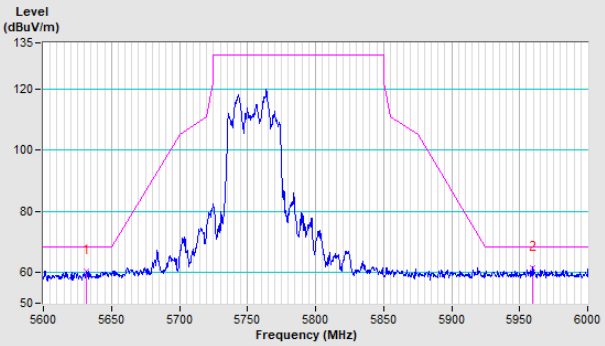
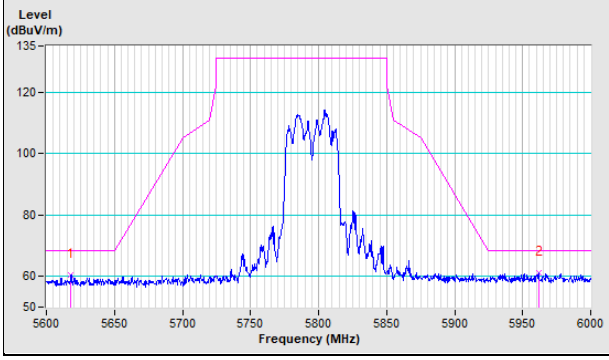
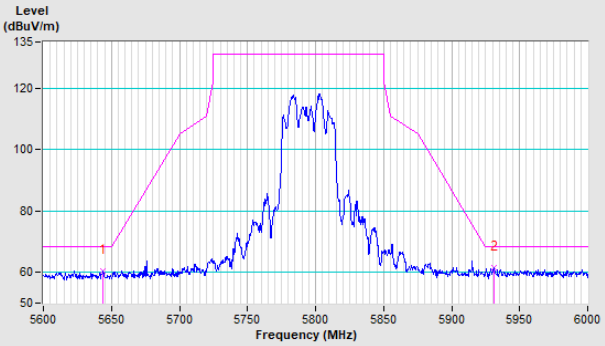


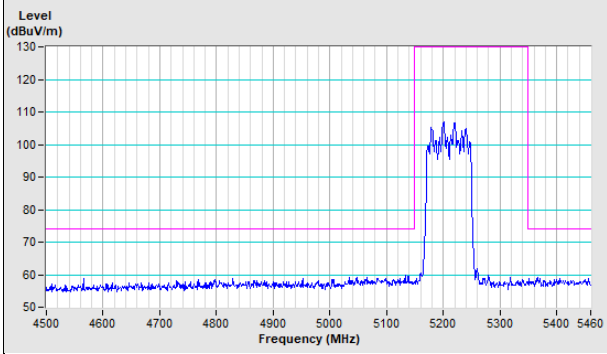
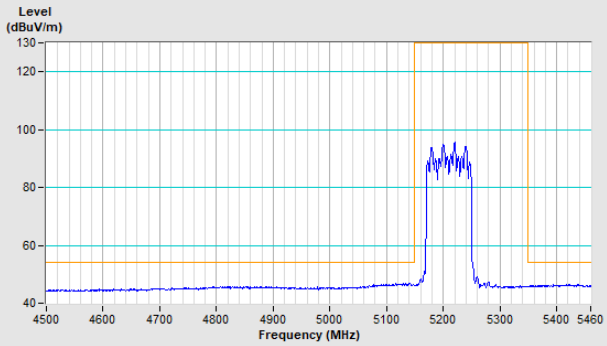
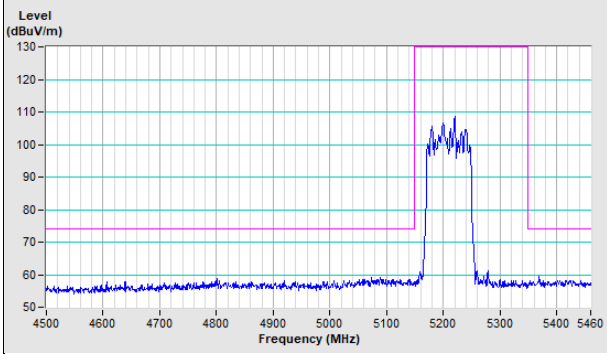
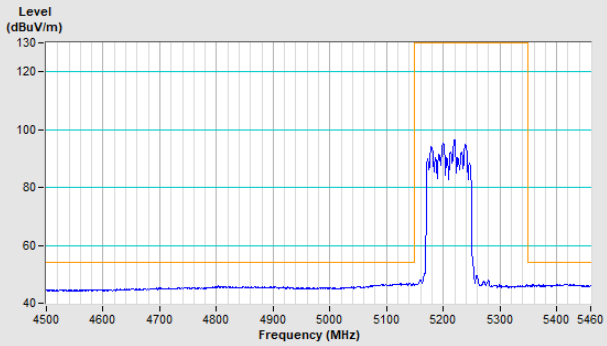
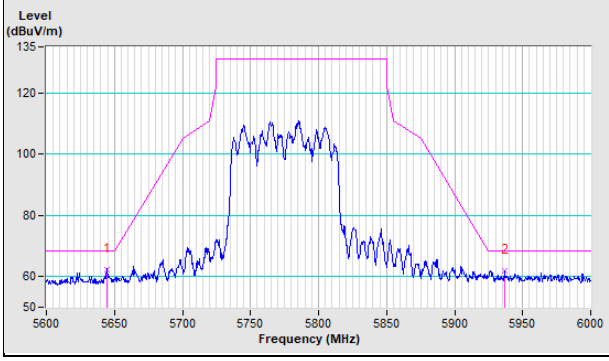
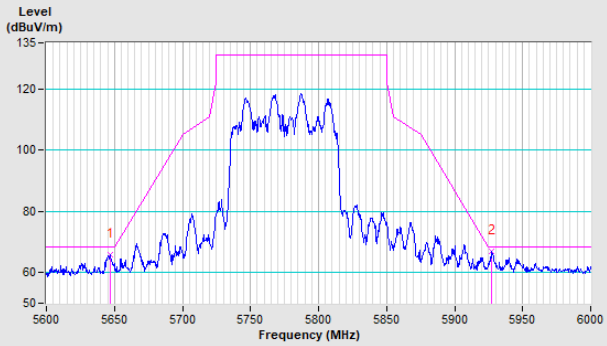
Vertical (Peak)

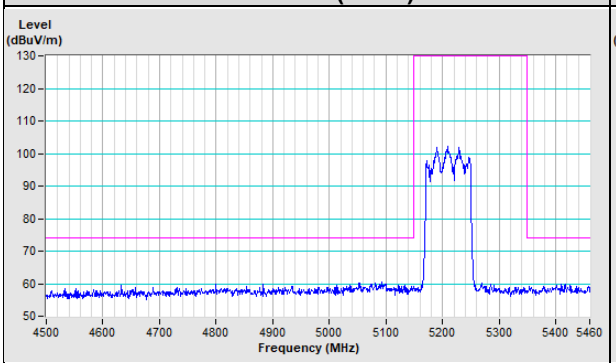
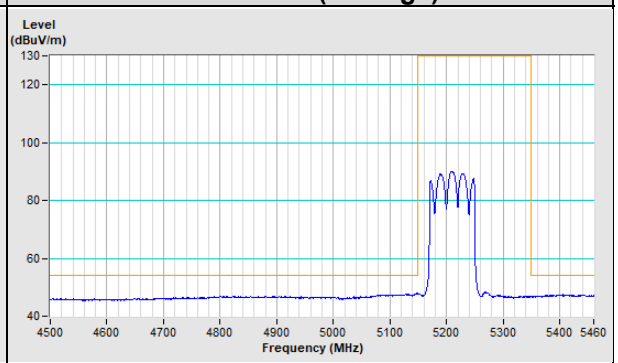
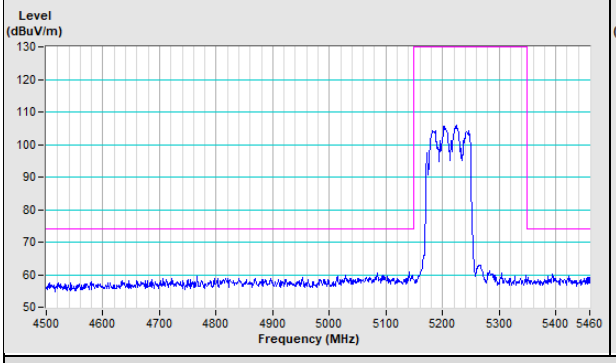
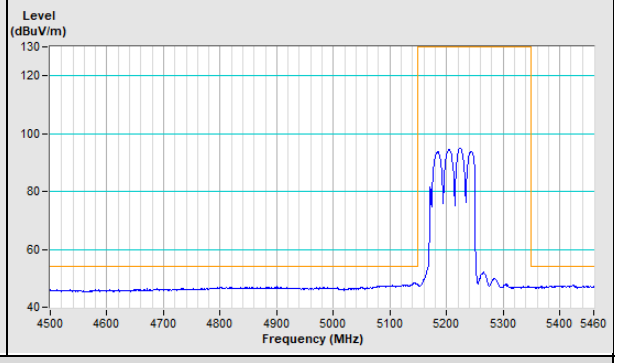
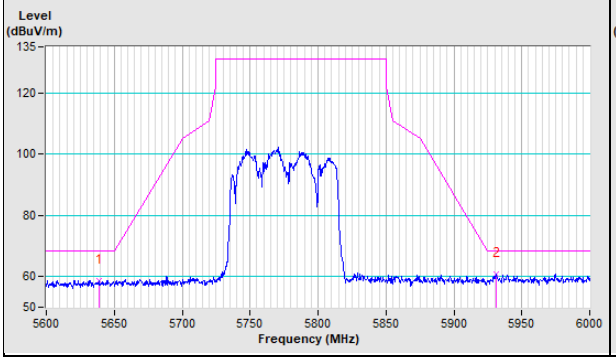
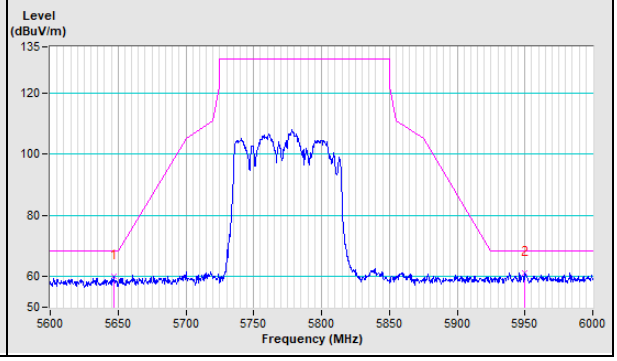


Vertical (Average)



802.11ax (HE40) Channel 151	
Horizontal (Peak)	Vertical (Peak)
	
802.11ax (HE40) Channel 159	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE80) Channel 42	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ax (HE80) Channel 155	
Horizontal (Peak)	Vertical (Peak)
	

802.11ax (HE80+80) Channel 42+155	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ax (HE80+80) Channel 42+155	
Horizontal (Peak)	Vertical (Peak)
	

Mode B: Scan Radio 3: QCA-9889 Module

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	24°C, 68% RH
Tested By	Titan Hsu		

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	67.5 PK	74.0	-6.5	1.61 H	22	55.0	12.5
2	5150.00	53.4 AV	54.0	-0.6	1.61 H	22	40.9	12.5
3	*5180.00	112.5 PK			1.61 H	22	69.9	42.6
4	*5180.00	102.4 AV			1.61 H	22	59.8	42.6
5	#10360.00	62.9 PK	68.2	-5.3	2.15 H	163	40.5	22.4
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	64.3 PK	74.0	-9.7	1.01 V	1	51.8	12.5
2	5150.00	50.1 AV	54.0	-3.9	1.01 V	1	37.6	12.5
3	*5180.00	109.8 PK			1.01 V	1	67.2	42.6
4	*5180.00	99.9 AV			1.01 V	1	57.3	42.6
5	#10360.00	62.6 PK	68.2	-5.6	1.35 V	244	40.2	22.4

Remarks:

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

RF Mode	802.11a	Channel	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

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	114.4 PK			1.69 H	19	71.9	42.5
2	*5200.00	104.0 AV			1.69 H	19	61.5	42.5
3	#10400.00	63.5 PK	68.2	-4.7	2.18 H	169	40.8	22.7
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	*5200.00	111.1 PK			1.05 V	2	68.6	42.5
2	*5200.00	100.9 AV			1.05 V	2	58.4	42.5
3	#10400.00	63.0 PK	68.2	-5.2	1.32 V	239	40.3	22.7

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 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	24°C, 68% RH
Tested By	Titan Hsu		

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	113.4 PK			1.69 H	20	71.0	42.4
2	*5240.00	102.9 AV			1.69 H	20	60.5	42.4
3	5350.00	59.4 PK	74.0	-14.6	1.69 H	20	47.1	12.3
4	5350.00	46.2 AV	54.0	-7.8	1.69 H	20	33.9	12.3
5	#10480.00	63.3 PK	68.2	-4.9	2.12 H	168	40.6	22.7
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	*5240.00	110.6 PK			1.00 V	0	68.2	42.4
2	*5240.00	110.0 AV			1.00 V	0	67.6	42.4
3	5350.00	59.0 PK	74.0	-15.0	1.00 V	0	46.7	12.3
4	5350.00	45.8 AV	54.0	-8.2	1.00 V	0	33.5	12.3
5	#10480.00	63.0 PK	68.2	-5.2	1.33 V	246	40.3	22.7

Remarks:

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

RF Mode	802.11a	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	#5612.00	59.8 PK	68.2	-8.4	1.34 H	354	47.3	12.5
2	*5745.00	109.6 PK			1.34 H	354	66.2	43.4
3	*5745.00	99.7 AV			1.34 H	354	56.3	43.4
4	#5998.00	60.7 PK	68.2	-7.5	1.34 H	354	47.1	13.6
5	11490.00	64.2 PK	74.0	-9.8	2.12 H	169	40.2	24.0
6	11490.00	51.2 AV	54.0	-2.8	2.12 H	169	27.2	24.0
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	#5619.20	60.0 PK	68.2	-8.2	1.65 V	359	47.5	12.5
2	*5745.00	105.9 PK			1.65 V	359	62.5	43.4
3	*5745.00	96.5 AV			1.65 V	359	53.1	43.4
4	#5989.60	60.3 PK	68.2	-7.9	1.65 V	359	46.7	13.6
5	11490.00	63.7 PK	74.0	-10.3	1.38 V	245	39.7	24.0
6	11490.00	50.5 AV	54.0	-3.5	1.38 V	245	26.5	24.0

Remarks:

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

RF Mode	802.11a	Channel	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	#5640.00	59.7 PK	68.2	-8.5	1.31 H	355	47.0	12.7
2	*5785.00	109.5 PK			1.31 H	355	65.9	43.6
3	*5785.00	99.6 AV			1.31 H	355	56.0	43.6
4	#5965.20	60.7 PK	68.2	-7.5	1.31 H	355	47.0	13.7
5	11570.00	64.2 PK	74.0	-9.8	2.15 H	175	40.3	23.9
6	11570.00	51.2 AV	54.0	-2.8	2.15 H	175	27.3	23.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5600.00	59.1 PK	68.2	-9.1	1.75 V	1	46.8	12.3
2	*5785.00	106.1 PK			1.75 V	1	62.5	43.6
3	*5785.00	96.2 AV			1.75 V	1	52.6	43.6
4	#5982.00	60.9 PK	68.2	-7.3	1.75 V	1	47.3	13.6
5	11570.00	63.9 PK	74.0	-10.1	1.39 V	244	40.0	23.9
6	11570.00	50.5 AV	54.0	-3.5	1.39 V	244	26.6	23.9

Remarks:

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

RF Mode	802.11a	Channel	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.40	60.2 PK	68.2	-8.0	1.32 H	353	47.5	12.7
2	*5825.00	111.4 PK			1.32 H	353	67.6	43.8
3	*5825.00	101.0 AV			1.32 H	353	57.2	43.8
4	#5959.20	61.3 PK	68.2	-6.9	1.32 H	353	47.6	13.7
5	11650.00	63.3 PK	74.0	-10.7	2.08 H	175	40.0	23.3
6	11650.00	50.3 AV	54.0	-3.7	2.08 H	175	27.0	23.3
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	#5631.20	59.9 PK	68.2	-8.3	1.73 V	360	47.2	12.7
2	*5825.00	106.2 PK			1.73 V	360	62.4	43.8
3	*5825.00	96.4 AV			1.73 V	360	52.6	43.8
4	#5939.20	60.2 PK	68.2	-8.0	1.73 V	360	46.5	13.7
5	11650.00	63.0 PK	74.0	-11.0	1.42 V	248	39.7	23.3
6	11650.00	49.8 AV	54.0	-4.2	1.42 V	248	26.5	23.3

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

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	67.2 PK	74.0	-6.8	1.63 H	21	54.7	12.5
2	5150.00	53.3 AV	54.0	-0.7	1.63 H	21	40.8	12.5
3	*5180.00	111.2 PK			1.63 H	21	68.6	42.6
4	*5180.00	101.3 AV			1.63 H	21	58.7	42.6
5	#10360.00	63.0 PK	68.2	-5.2	2.17 H	160	40.6	22.4
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	64.8 PK	74.0	-9.2	1.00 V	1	52.3	12.5
2	5150.00	50.7 AV	54.0	-3.3	1.00 V	1	38.2	12.5
3	*5180.00	109.3 PK			1.00 V	1	66.7	42.6
4	*5180.00	99.2 AV			1.00 V	1	56.6	42.6
5	#10360.00	62.6 PK	68.2	-5.6	1.39 V	248	40.2	22.4

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

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	114.6 PK			1.74 H	20	72.1	42.5
2	*5200.00	104.4 AV			1.74 H	20	61.9	42.5
3	#10400.00	63.5 PK	68.2	-4.7	2.16 H	169	40.8	22.7
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	*5200.00	154.3 PK			1.01 V	359	111.8	42.5
2	*5200.00	144.1 AV			1.01 V	359	101.6	42.5
3	#10400.00	62.9 PK	68.2	-5.3	1.33 V	241	40.2	22.7

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 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	24°C, 68% RH
Tested By	Titan Hsu		

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	113.2 PK			1.61 H	21	70.8	42.4
2	*5240.00	103.4 AV			1.61 H	21	61.0	42.4
3	5350.00	59.2 PK	74.0	-14.8	1.61 H	21	46.9	12.3
4	5350.00	46.4 AV	54.0	-7.6	1.61 H	21	34.1	12.3
5	#10480.00	63.3 PK	68.2	-4.9	2.18 H	159	40.6	22.7
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	*5240.00	110.8 PK			1.00 V	0	68.4	42.4
2	*5240.00	100.4 AV			1.00 V	0	58.0	42.4
3	5350.00	59.1 PK	74.0	-14.9	1.00 V	0	46.8	12.3
4	5350.00	46.3 AV	54.0	-7.7	1.00 V	0	34.0	12.3
5	#10480.00	63.0 PK	68.2	-5.2	1.40 V	251	40.3	22.7

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5610.80	59.7 PK	68.2	-8.5	1.46 H	356	47.2	12.5
2	*5745.00	108.6 PK			1.46 H	356	65.2	43.4
3	*5745.00	98.9 AV			1.46 H	356	55.5	43.4
4	#5989.60	60.9 PK	68.2	-7.3	1.46 H	356	47.3	13.6
5	11490.00	64.0 PK	74.0	-10.0	2.08 H	177	40.0	24.0
6	11490.00	50.9 AV	54.0	-3.1	2.08 H	177	26.9	24.0
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	#5639.20	59.5 PK	68.2	-8.7	1.74 V	2	46.8	12.7
2	*5745.00	105.8 PK			1.74 V	2	62.4	43.4
3	*5745.00	95.6 AV			1.74 V	2	52.2	43.4
4	#5957.20	60.9 PK	68.2	-7.3	1.74 V	2	47.2	13.7
5	11490.00	63.6 PK	74.0	-10.4	1.39 V	249	39.6	24.0
6	11490.00	50.4 AV	54.0	-3.6	1.39 V	249	26.4	24.0

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5636.00	60.2 PK	68.2	-8.0	1.30 H	354	47.5	12.7
2	*5785.00	109.5 PK			1.30 H	354	65.9	43.6
3	*5785.00	99.3 AV			1.30 H	354	55.7	43.6
4	#5926.40	61.0 PK	68.2	-7.2	1.30 H	354	47.4	13.6
5	11570.00	63.9 PK	74.0	-10.1	2.13 H	168	40.0	23.9
6	11570.00	50.9 AV	54.0	-3.1	2.13 H	168	27.0	23.9
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	#5621.60	59.6 PK	68.2	-8.6	1.67 V	360	47.1	12.5
2	*5785.00	105.0 PK			1.67 V	360	61.4	43.6
3	*5785.00	95.4 AV			1.67 V	360	51.8	43.6
4	#5998.00	60.6 PK	68.2	-7.6	1.67 V	360	47.0	13.6
5	11570.00	63.6 PK	74.0	-10.4	1.39 V	245	39.7	23.9
6	11570.00	50.2 AV	54.0	-3.8	1.39 V	245	26.3	23.9

Remarks:

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

RF Mode	802.11ac (VHT20)	Channel	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	59.4 PK	68.2	-8.8	1.49 H	356	46.9	12.5
2	*5825.00	110.5 PK			1.49 H	356	66.7	43.8
3	*5825.00	100.3 AV			1.49 H	356	56.5	43.8
4	#5975.20	61.0 PK	68.2	-7.2	1.49 H	356	47.3	13.7
5	11650.00	63.6 PK	74.0	-10.4	2.08 H	167	40.3	23.3
6	11650.00	50.5 AV	54.0	-3.5	2.08 H	167	27.2	23.3
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	#5636.40	59.7 PK	68.2	-8.5	1.72 V	359	47.0	12.7
2	*5825.00	106.0 PK			1.72 V	359	62.2	43.8
3	*5825.00	96.1 AV			1.72 V	359	52.3	43.8
4	#5957.20	60.7 PK	68.2	-7.5	1.72 V	359	47.0	13.7
5	11650.00	63.3 PK	74.0	-10.7	1.36 V	247	40.0	23.3
6	11650.00	50.1 AV	54.0	-3.9	1.36 V	247	26.8	23.3

Remarks:

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

RF Mode	802.11ac (VHT40)	Channel	CH 38：5190 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

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	66.0 PK	74.0	-8.0	1.72 H	18	53.5	12.5
2	5150.00	53.7 AV	54.0	-0.3	1.72 H	18	41.2	12.5
3	*5190.00	105.1 PK			1.72 H	18	62.5	42.6
4	*5190.00	95.3 AV			1.72 H	18	52.7	42.6
5	#10380.00	63.0 PK	68.2	-5.2	2.17 H	167	40.5	22.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	63.3 PK	74.0	-10.7	1.00 V	359	50.8	12.5
2	5150.00	50.9 AV	54.0	-3.1	1.00 V	359	38.4	12.5
3	*5190.00	102.2 PK			1.00 V	359	59.6	42.6
4	*5190.00	92.7 AV			1.00 V	359	50.1	42.6
5	#10380.00	62.9 PK	68.2	-5.3	1.39 V	237	40.4	22.5

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 46：5230 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 68% RH
Tested By	Titan Hsu		

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	65.0 PK	74.0	-9.0	1.68 H	19	52.5	12.5
2	5150.00	52.7 AV	54.0	-1.3	1.68 H	19	40.2	12.5
3	*5230.00	110.7 PK			1.68 H	19	68.3	42.4
4	*5230.00	100.3 AV			1.68 H	19	57.9	42.4
5	5350.00	59.8 PK	74.0	-14.2	1.68 H	19	47.5	12.3
6	5350.00	46.4 AV	54.0	-7.6	1.68 H	19	34.1	12.3
7	#10460.00	63.6 PK	68.2	-4.6	2.17 H	165	40.9	22.7
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	63.1 PK	74.0	-10.9	1.00 V	358	50.6	12.5
2	5150.00	50.3 AV	54.0	-3.7	1.00 V	358	37.8	12.5
3	*5230.00	108.6 PK			1.00 V	358	66.2	42.4
4	*5230.00	98.6 AV			1.00 V	358	56.2	42.4
5	5350.00	59.9 PK	74.0	-14.1	1.00 V	358	47.6	12.3
6	5350.00	46.5 AV	54.0	-7.5	1.00 V	358	34.2	12.3
7	#10460.00	62.9 PK	68.2	-5.3	1.42 V	248	40.2	22.7

Remarks:

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

RF Mode	802.11ac (VHT40)	Channel	CH 151：5755 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5636.00	59.9 PK	68.2	-8.3	1.35 H	355	47.2	12.7
2	*5755.00	107.2 PK			1.35 H	355	63.8	43.4
3	*5755.00	97.4 AV			1.35 H	355	54.0	43.4
4	#5988.80	60.3 PK	68.2	-7.9	1.35 H	355	46.7	13.6
5	11510.00	63.4 PK	74.0	-10.6	2.05 H	163	39.5	23.9
6	11510.00	50.4 AV	54.0	-3.6	2.05 H	163	26.5	23.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5610.00	59.0 PK	68.2	-9.2	1.74 V	359	46.5	12.5
2	*5755.00	103.6 PK			1.74 V	359	60.2	43.4
3	*5755.00	93.7 AV			1.74 V	359	50.3	43.4
4	#5951.20	60.8 PK	68.2	-7.4	1.74 V	359	47.1	13.7
5	11510.00	62.9 PK	74.0	-11.1	1.31 V	249	39.0	23.9
6	11510.00	50.0 AV	54.0	-4.0	1.31 V	249	26.1	23.9

Remarks:

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

RF Mode	802.11ac (VHT40)	Channel	CH 159：5795 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 2 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

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	#5649.60	59.7 PK	68.2	-8.5	1.46 H	354	47.0	12.7
2	*5795.00	107.1 PK			1.46 H	354	63.4	43.7
3	*5795.00	97.6 AV			1.46 H	354	53.9	43.7
4	#5941.20	60.8 PK	68.2	-7.4	1.46 H	354	47.1	13.7
5	11590.00	63.5 PK	74.0	-10.5	2.07 H	164	39.6	23.9
6	11590.00	50.4 AV	54.0	-3.6	2.07 H	164	26.5	23.9
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	#5641.20	59.3 PK	68.2	-8.9	1.73 V	360	46.6	12.7
2	*5795.00	103.6 PK			1.73 V	360	59.9	43.7
3	*5795.00	93.5 AV			1.73 V	360	49.8	43.7
4	#5984.80	60.6 PK	68.2	-7.6	1.73 V	360	47.0	13.6
5	11590.00	63.1 PK	74.0	-10.9	1.35 V	254	39.2	23.9
6	11590.00	50.0 AV	54.0	-4.0	1.35 V	254	26.1	23.9

Remarks:

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

RF Mode	802.11ac (VHT80)	Channel	CH 42：5210 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	24°C, 68% RH
Tested By	Titan Hsu		

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	1.69 H	19	52.4	12.5
2	**5150.00**	**53.8 AV**	**54.0**	**-0.2**	**1.69 H**	**19**	**41.3**	**12.5**
3	*5210.00	100.0 PK			1.69 H	19	57.5	42.5
4	*5210.00	89.6 AV			1.69 H	19	47.1	42.5
5	5350.00	58.8 PK	74.0	-15.2	1.69 H	19	46.5	12.3
6	5350.00	46.3 AV	54.0	-7.7	1.69 H	19	34.0	12.3
7	#10420.00	63.2 PK	68.2	-5.0	2.12 H	169	40.6	22.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	63.1 PK	74.0	-10.9	1.00 V	359	50.6	12.5
2	5150.00	51.0 AV	54.0	-3.0	1.00 V	359	38.5	12.5
3	*5210.00	98.2 PK			1.00 V	359	55.7	42.5
4	*5210.00	87.6 AV			1.00 V	359	45.1	42.5
5	5350.00	59.2 PK	74.0	-14.8	1.00 V	359	46.9	12.3
6	5350.00	46.1 AV	54.0	-7.9	1.00 V	359	33.8	12.3
7	#10420.00	62.8 PK	68.2	-5.4	1.36 V	248	40.2	22.6

Remarks:

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

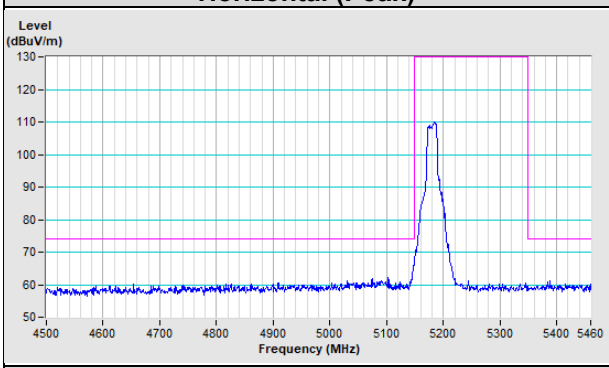
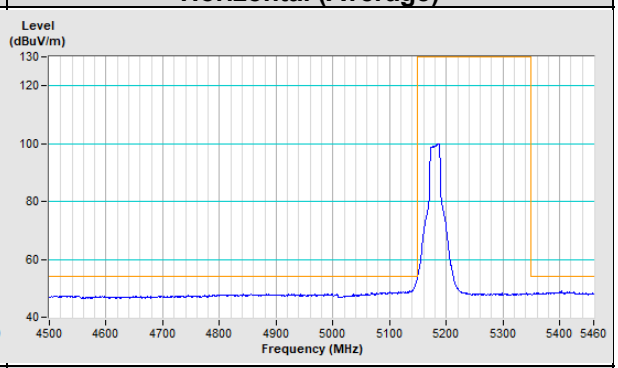
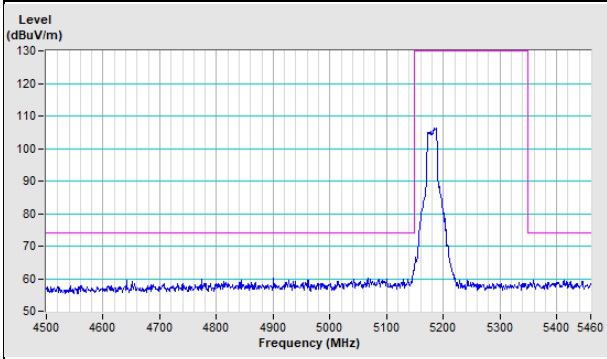
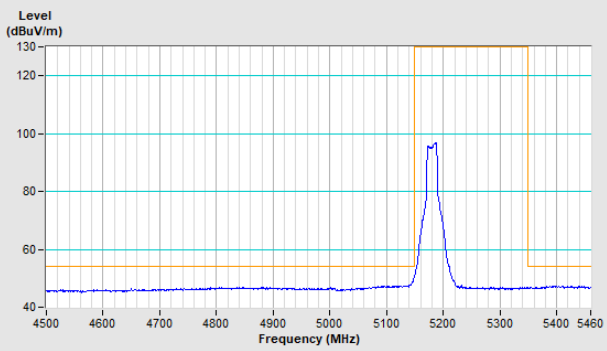
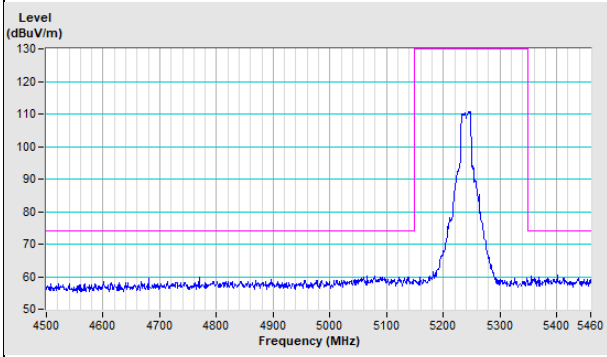
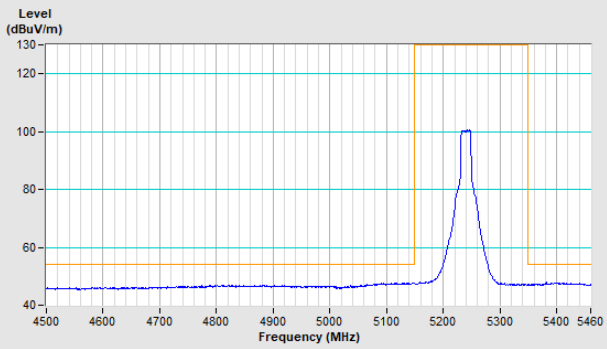
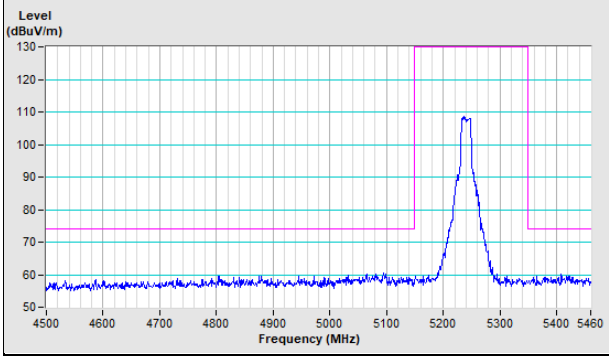
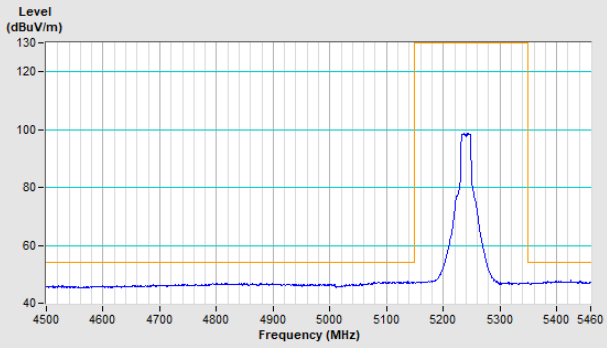
RF Mode	802.11ac (VHT80)	Channel	CH 155：5775 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 66% RH
Tested By	Titan Hsu		

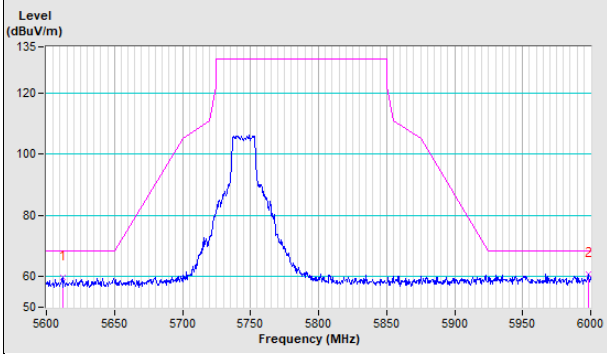
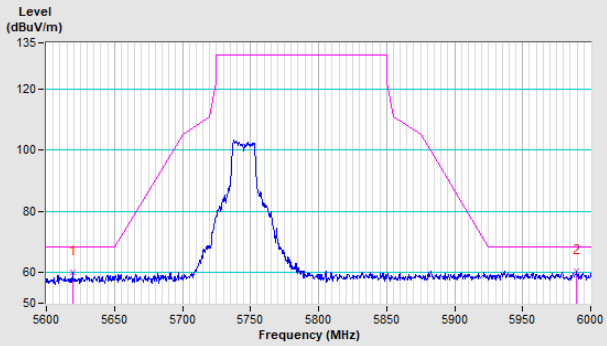
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5646.40	65.7 PK	68.2	-2.5	1.39 H	354	53.0	12.7
2	*5775.00	106.4 PK			1.39 H	354	62.8	43.6
3	*5775.00	95.4 AV			1.39 H	354	51.8	43.6
4	#5932.40	62.1 PK	68.2	-6.1	1.39 H	354	48.4	13.7
5	11550.00	63.1 PK	74.0	-10.9	2.11 H	169	39.2	23.9
6	11550.00	50.0 AV	54.0	-4.0	2.11 H	169	26.1	23.9
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	#5647.60	64.1 PK	68.2	-4.1	1.73 V	3	51.4	12.7
2	*5775.00	101.9 PK			1.73 V	3	58.3	43.6
3	*5775.00	91.5 AV			1.73 V	3	47.9	43.6
4	#5974.40	61.1 PK	68.2	-7.1	1.73 V	3	47.4	13.7
5	11550.00	62.9 PK	74.0	-11.1	1.32 V	252	39.0	23.9
6	11550.00	49.8 AV	54.0	-4.2	1.32 V	252	25.9	23.9

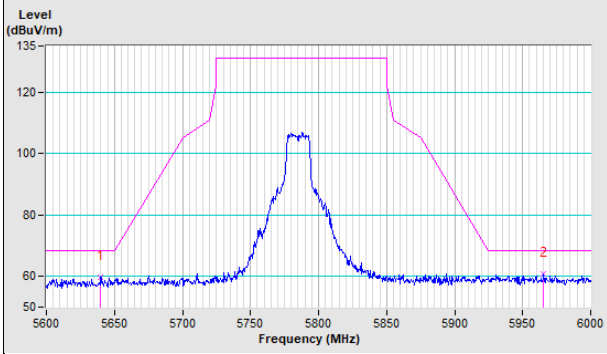
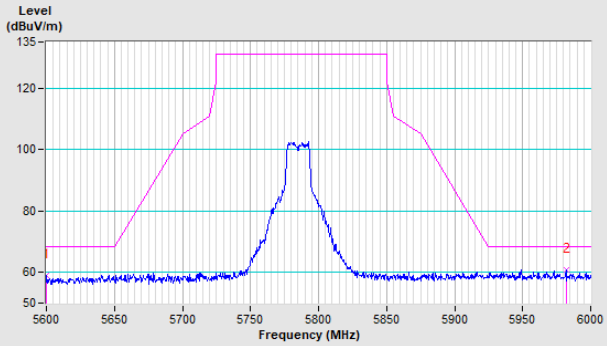
Remarks:

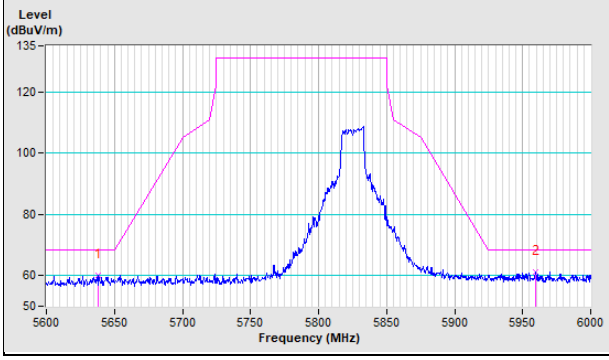
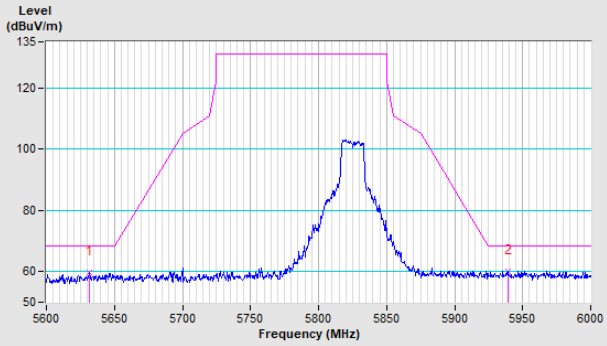
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency,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

Mode B: Scan Radio 3: QCA-9889 Module _Plot of Band Edge

802.11a Channel 36	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11a Channel 48	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

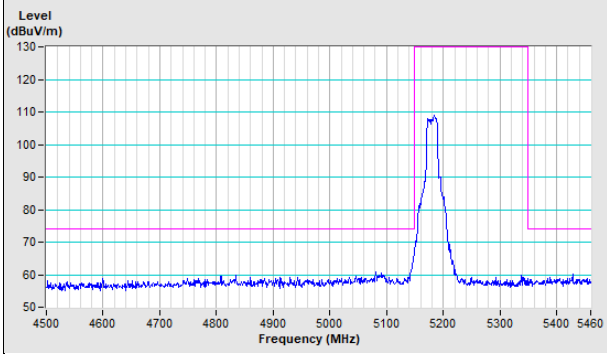
802.11a Channel 149	
Horizontal (Peak)	Vertical (Peak)
	

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

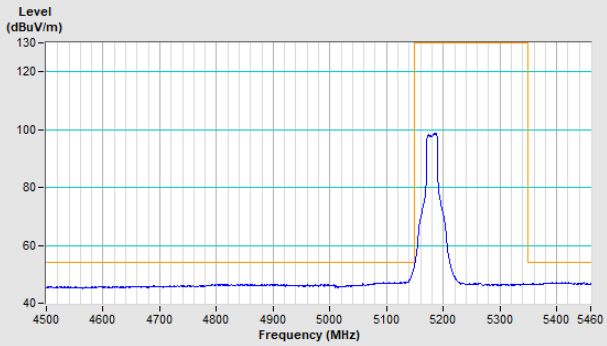
802.11a Channel 165	
Horizontal (Peak)	Vertical (Peak)
	

802.11ac (VHT20) Channel 36

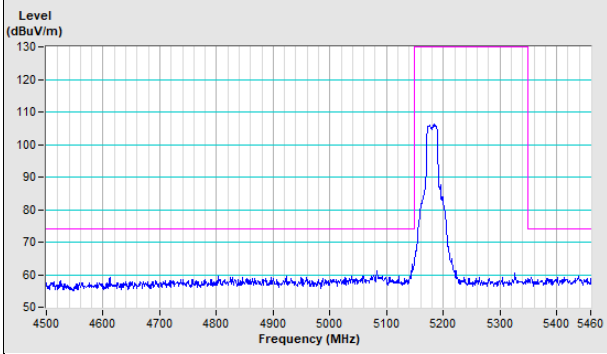
Horizontal (Peak)



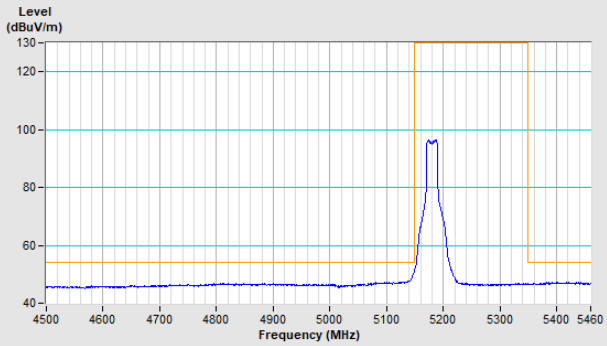
Horizontal (Average)



Vertical (Peak)

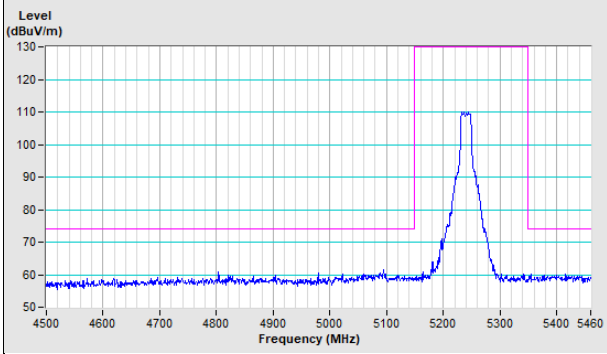


Vertical (Average)

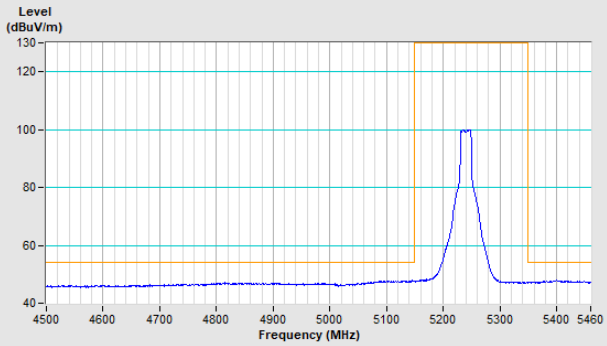


802.11ac (VHT20) Channel 48

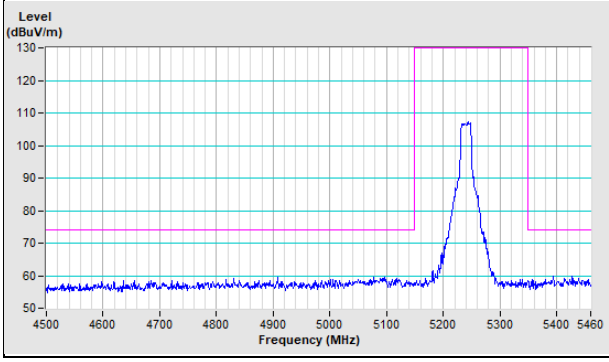
Horizontal (Peak)



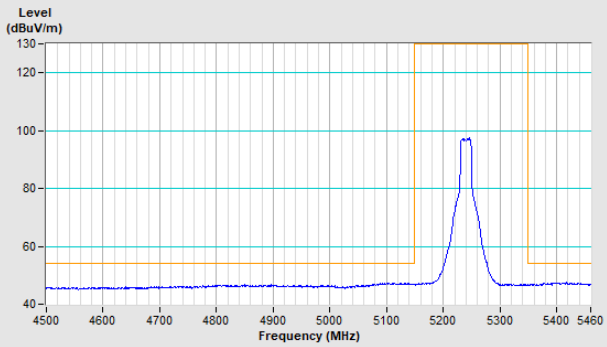
Horizontal (Average)

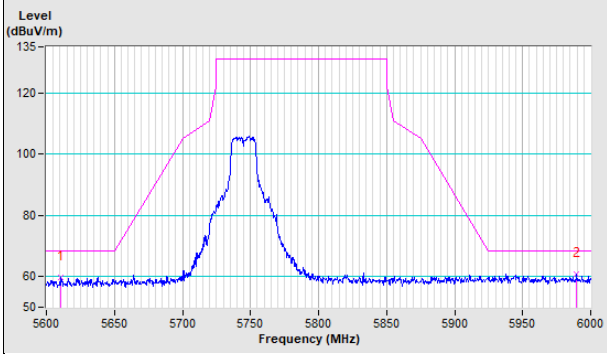
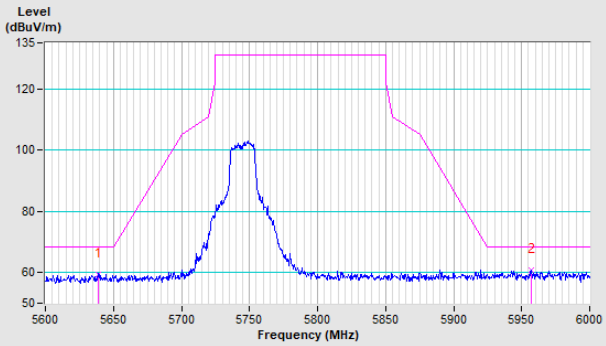


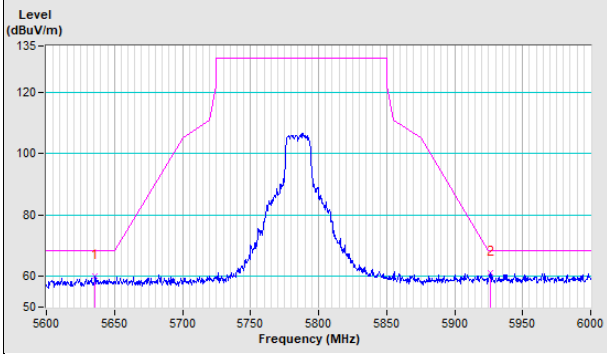
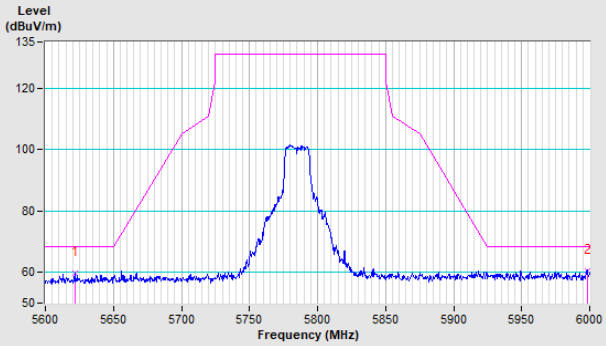
Vertical (Peak)

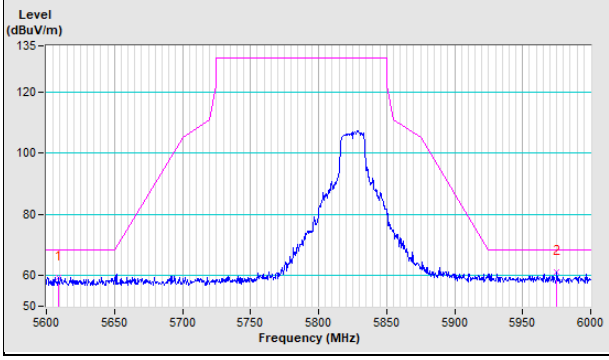
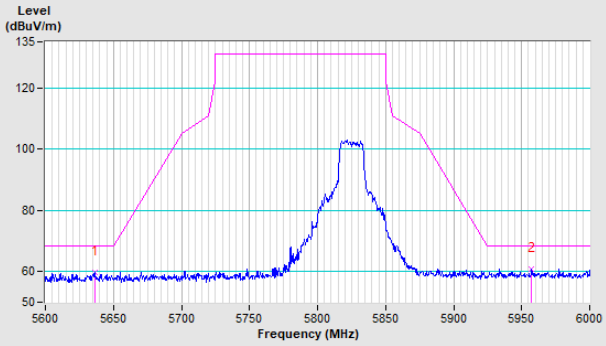


Vertical (Average)



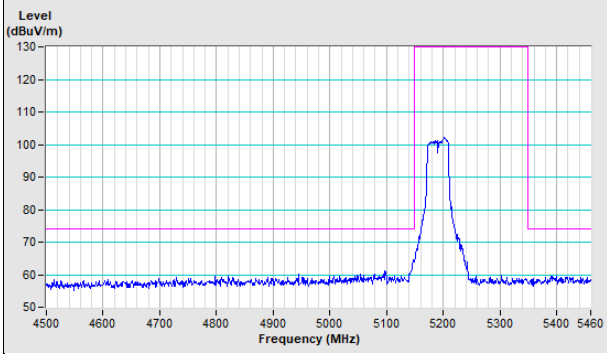
802.11ac (VHT20) Channel 149	
Horizontal (Peak)	Vertical (Peak)
	

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

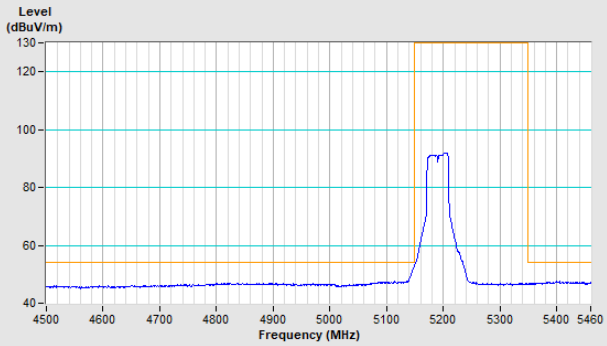
802.11ac (VHT20) Channel 165	
Horizontal (Peak)	Vertical (Peak)
	

802.11ac (VHT40) Channel 38

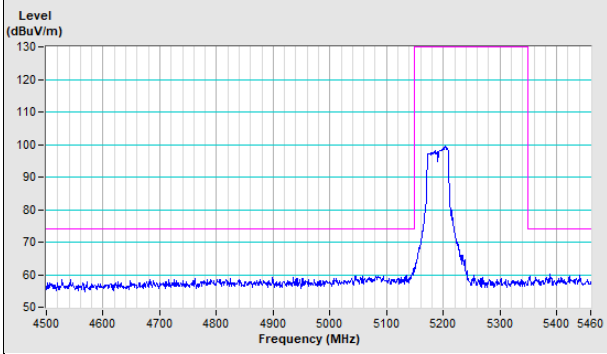
Horizontal (Peak)



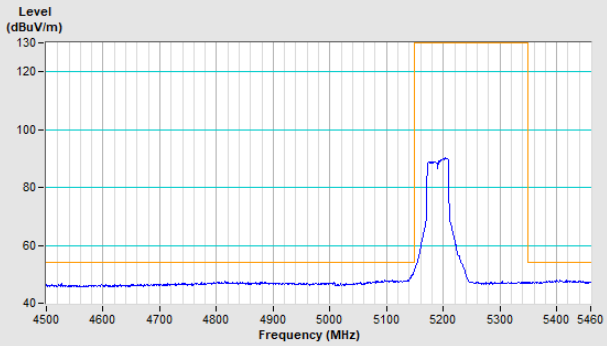
Horizontal (Average)



Vertical (Peak)

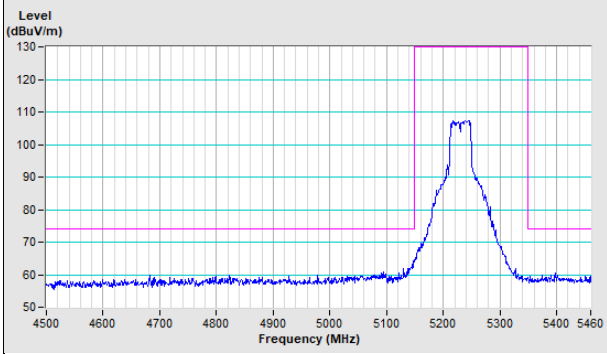


Vertical (Average)

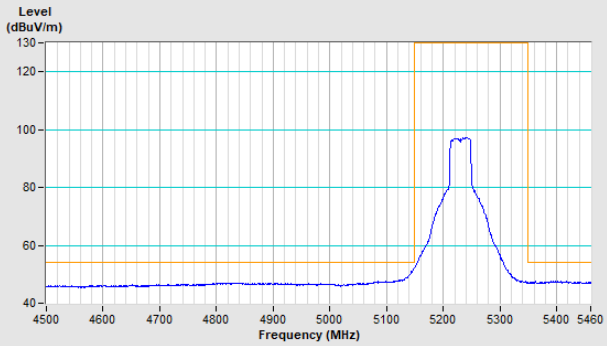


802.11ac (VHT40) Channel 46

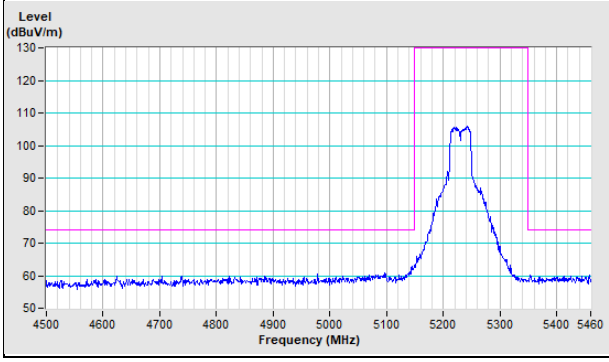
Horizontal (Peak)



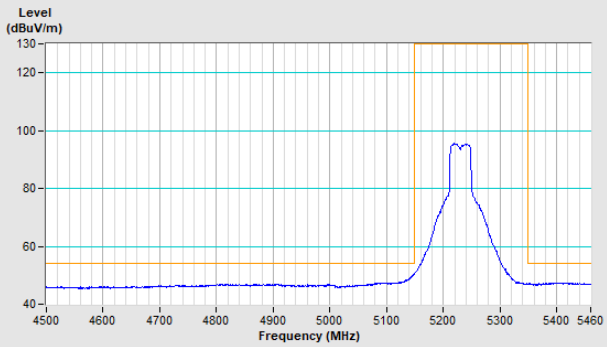
Horizontal (Average)

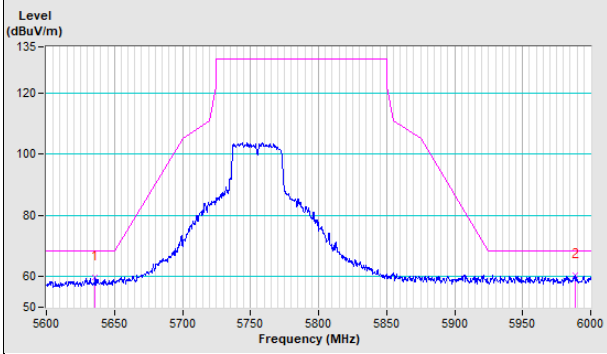
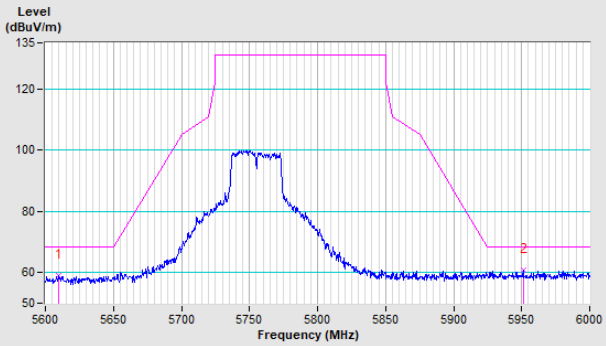
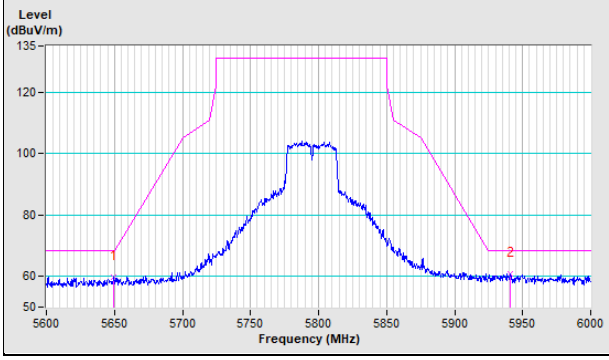
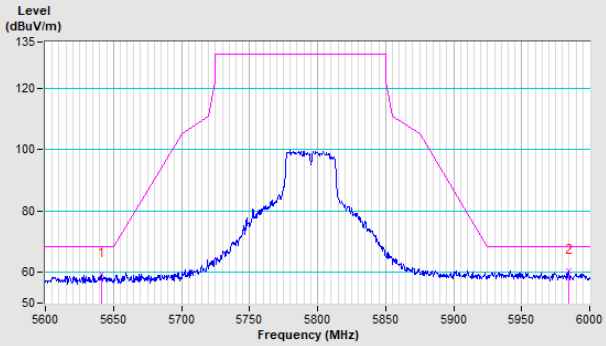


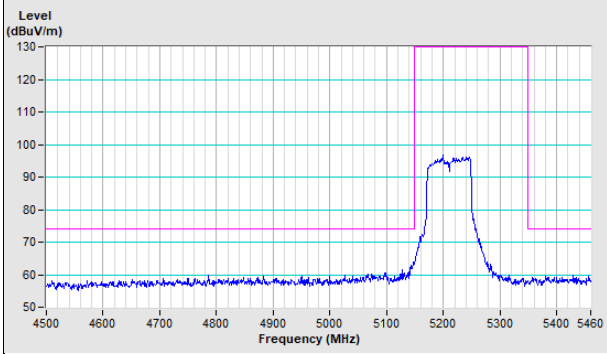
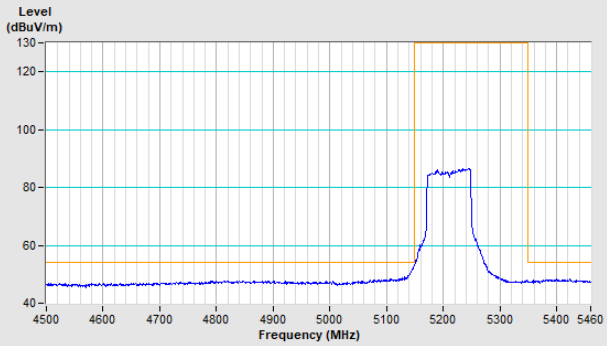
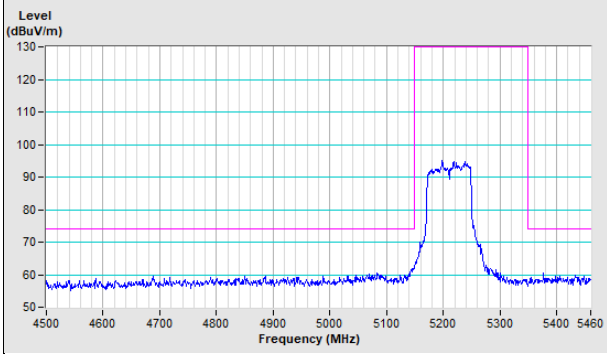
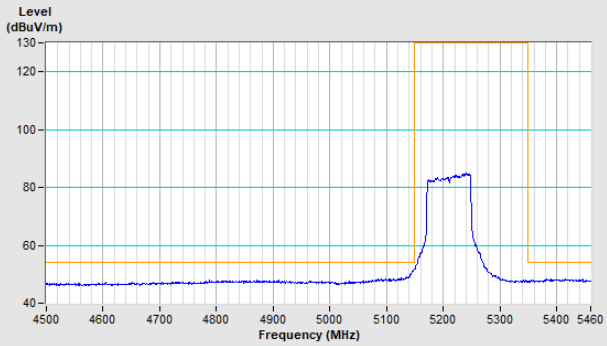
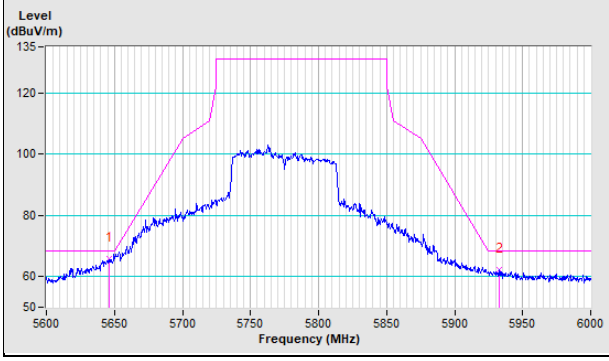
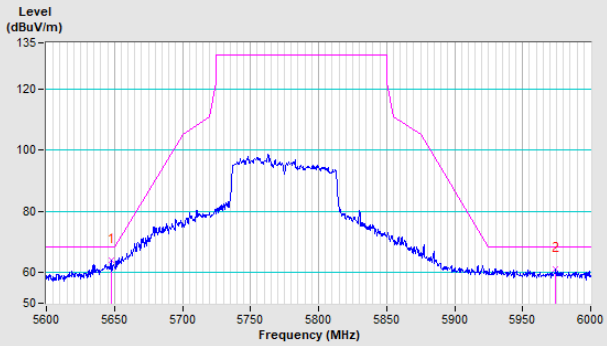
Vertical (Peak)



Vertical (Average)



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

802.11ac (VHT80) Channel 42	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT80) Channel 155	
Horizontal (Peak)	Vertical (Peak)
	

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

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

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

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 ---