FCC Test Report (WLAN 5GHz Band)

Report No.: RFBFJZ-WTW-P21050403-6

FCC ID: V65C6930

Test Model: C6930

Received Date: May 18, 2021

Test Date: Jun. 15 ~ Jun. 29, 2021

Issued Date: Jul. 19, 2021

Applicant: Kyocera Corporation c/o Kyocera International, Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / Designation Number: 788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
RFBFJZ-WTW-P21050403-6	Original release.	Jul. 19, 2021

1 Certificate of Conformity

Product: SmartPhone

Brand: Kyocera

Test Model: C6930

Sample Status: Engineering sample

Applicant: Kyocera Corporation c/o Kyocera International, Inc.

Test Date: Jun. 15 ~ Jun. 29, 2021

Standards: 47 CFR FCC Part 15, Subpart E (Section 15.407)
ANSI C63.10:2013

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.

Prepared by : Pettie Chen , **Date:** Jul. 19, 2021

Pettie Chen / Senior Specialist

Approved by : Bruce Chen , **Date:** Jul. 19, 2021

Bruce Chen / Senior Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -18.38dB at 0.20083MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -5.3dB at 5150.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	No antenna connector is used.

Note:

1. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.
2. For U-NII-1, U-NII-2A, U-NII-2C band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex B. Test Procedures refer to report 4.1.3.
3. 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	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.79 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.59 dB
	200MHz ~1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	SmartPhone
Brand	Kyocera
Test Model	C6930
Sample Status	Engineering sample
Power Supply Rating	3.87Vdc from battery 5Vdc / 9Vdc / 12Vdc from adapter
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3Mbps
Operating Frequency	5180 ~ 5320MHz, 5500 ~ 5720MHz, 5745 ~ 5825MHz
Number of Channel	5180 ~ 5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 8 802.11n (HT40), 802.11ac (VHT40): 4 802.11ac (VHT80): 2 5500 ~ 5700MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 12 802.11n (HT40), 802.11ac (VHT40): 6 802.11ac (VHT80): 3 5745 ~ 5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	5180 ~ 5240MHz: 27.925mW 5260 ~ 5320MHz: 27.040mW 5500 ~ 5720MHz: 27.416mW 5745 ~ 5825MHz: 27.040mW
Antenna Type	Monopole antenna with 0.3dBi gain
Antenna Connector	NA
Accessory Device	Refer to Note
Cable Supplied	Refer to Note

Note:

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

Modulation Mode	TX Function
802.11a	1TX
802.11n (HT20)	1TX
802.11n (HT40)	1TX
802.11ac (VHT20)	1TX
802.11ac (VHT40)	1TX
802.11ac (VHT80)	1TX

* The bandwidth and modulation are similar for HT20/HT40 on 802.11n mode and VHT20/VHT40 on 802.11ac mode. Therefore the investigated worst case is the representative mode in test report. (Final test mode refer section 3.2.1)

2. The EUT contains following accessory devices.

Battery	
Brand	KYOCERA
Model	SCP-75LBPS
Rating	3.87 V typ / 4500 mAh/17.5 Wh typ

Adapter	
Brand	KYOCERA Corporation
Model	SCP-49ADT
Input Power	AC 100-240V, 50/60Hz 0.4A
Output Power	DC 5.0V, 1.8A / 9.0V, 1.8A / 12.0V, 1.2A

USB Cable	
Brand	KYOCERA Corporation
Model	SCP-24SDC
Signal Line	1m shielded Type A to Type C USB cable

3. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.
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 Description of Test Modes

For 5180 ~ 5320MHz:

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

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz
54	5270 MHz	62	5310 MHz

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
42	5210MHz	58	5290MHz

For 5500 ~ 5700MHz:

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

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

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

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	122	5610 MHz
138	5690 MHz		

For 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to				Description
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where RE≥1G: Radiated Emission above 1GHz & Bandedge Measurement RE<1G: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission APCM: Antenna Port Conducted Measurement

Note:
1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane**.
2. Radiated emission test (below 1GHz) and power line conducted emission test items chosen the worst maximum power.

Radiated Emission Test (Above 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5250	36 to 48	36, 40, 48	OFDM	6.0
	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11ac (VHT40)		38 to 46	38, 46	OFDM	13.5
	802.11ac (VHT80)		42	42	OFDM	29.3
-	802.11a	5250-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	6.5
	802.11ac (VHT40)		54 to 62	54, 62	OFDM	13.5
	802.11ac (VHT80)		58	58	OFDM	29.3
-	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
	802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	6.5
	802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	13.5
	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	29.3
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11ac (VHT40)		151 to 159	151, 159	OFDM	13.5
	802.11ac (VHT80)		155	155	OFDM	29.3

Radiated Emission Test (Below 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11ac (VHT40)	5180-5240	38 to 46	38	OFDM	13.5
	802.11ac (VHT40)	5260-5320	54 to 62		OFDM	13.5
	802.11ac (VHT40)	5500-5720	102 to 142		OFDM	13.5
	802.11ac (VHT40)	5745-5825	151 to 159		OFDM	13.5

Power Line Conducted Emission Test:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11ac (VHT40)	5180-5240	38 to 46	38	OFDM	13.5
	802.11ac (VHT40)	5260-5320	54 to 62		OFDM	13.5
	802.11ac (VHT40)	5500-5720	102 to 142		OFDM	13.5
	802.11ac (VHT40)	5745-5825	151 to 159		OFDM	13.5

Antenna Port Conducted Measurement

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5250	36 to 48	36, 40, 48	OFDM	6.0
	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11ac (VHT40)		38 to 46	38, 46	OFDM	13.5
	802.11ac (VHT80)		42	42	OFDM	29.3
-	802.11a	5250-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	6.5
	802.11ac (VHT40)		54 to 62	54, 62	OFDM	13.5
	802.11ac (VHT80)		58	58	OFDM	29.3
-	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
	802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	6.5
	802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	13.5
	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	29.3
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11ac (VHT40)		151 to 159	151, 159	OFDM	13.5
	802.11ac (VHT80)		155	155	OFDM	29.3

Test Condition:

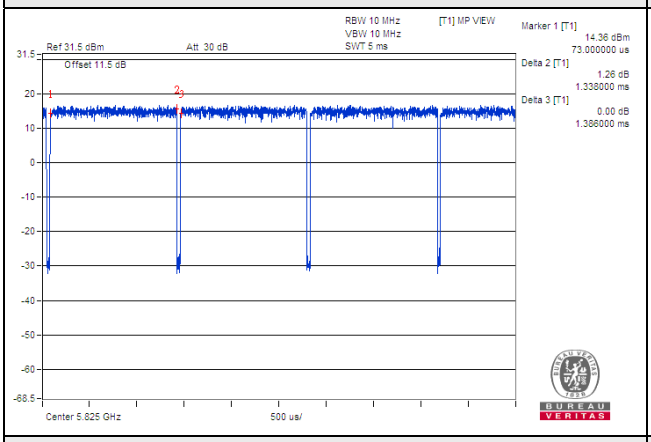
Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	22 deg. C, 66% RH	120Vac, 60Hz	Rex Wang
RE<1G	22 deg. C, 66% RH	120Vac, 60Hz	Rex Wang
PLC	22 deg. C, 66% RH	120Vac, 60Hz	Han Wu
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Jisyong Wang

3.3 Duty Cycle of Test Signal

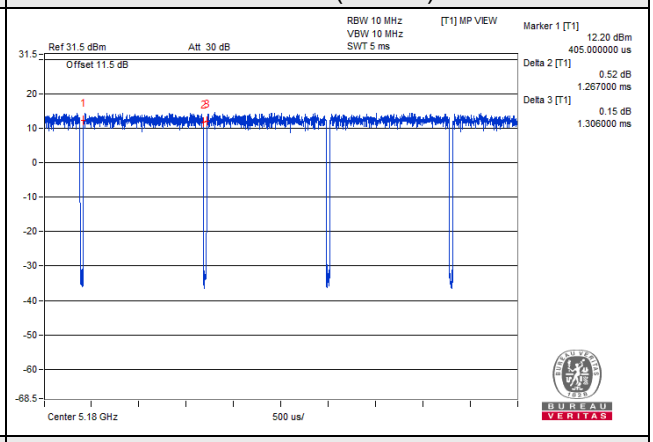
Duty cycle of test signal is < 98%, duty factor is required.

802.11a: Duty cycle = 1.338/1.386 = 0.965, Duty factor = 10 * log (1/0.965) = 0.15
802.11ac (VHT20): Duty cycle = 1.267/1.306 = 0.970, Duty factor = 10 * log (1/0.970) = 0.13
802.11ac (VHT40): Duty cycle = 0.625/0.666 = 0.938, Duty factor = 10 * log (1/0.938) = 0.28
802.11ac (VHT80): Duty cycle = 0.315/0.352 = 0.895, Duty factor = 10 * log (1/0.895) = 0.48

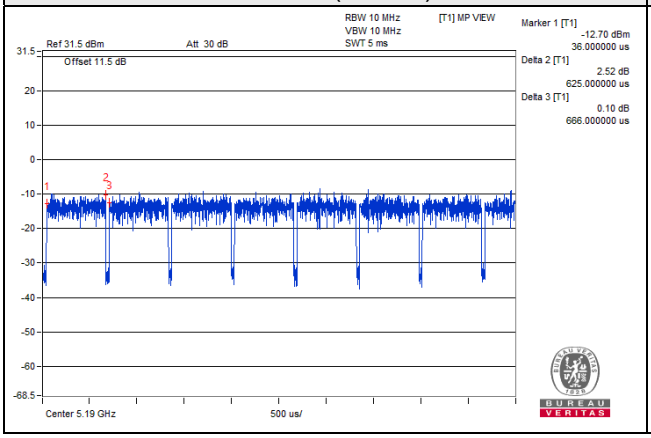
802.11a



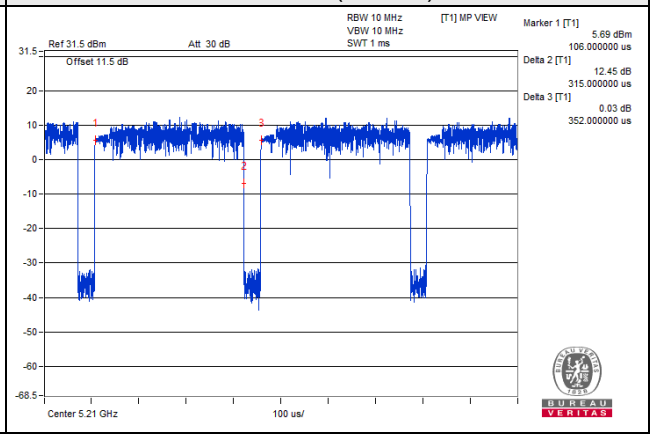
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

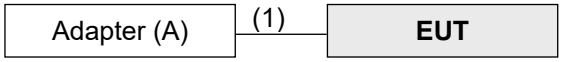
No.	Product	Brand	Model No.	Serial No.	FCC ID	Remark
A.	Adapter	KYOCERA	SCP-49ADT	NA	NA	Accessory

Note:

1. All power cords of the above support units are non-shielded (1.8m).

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Type A to Type C USB cable	1	1	Y	0	Accessory

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test standard:

FCC Part 15, Subpart E (15.407)

ANSI C63.10:2013

All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 789033 D02 General UNII Test Procedure New Rules v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

Note:

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 1000MHz, 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 20dB 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 3m	
			PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Frequency Band	Applicable To		EIRP Limit	Equivalent Field Strength at 3m
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
	☐	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

*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:

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 09, 2021	Apr. 08, 2022
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jun. 10, 2021	Jun. 09, 2022
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Nov. 06, 2020	Nov. 05, 2021
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 22, 2020	Nov. 21, 2021
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Jun. 05, 2021	Jun. 04, 2022
Preamplifier Agilent (Above 1GHz)	8449B	3008A02367	Feb. 17, 2021	Feb. 16, 2022
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	Jan. 16, 2021	Jan. 15, 2022
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795 /4)	Jan. 16, 2021	Jan. 15, 2022
RF signal cable Woken	8D-FB	Cable-CH9-01	Jun. 05, 2021	Jun. 04, 2022
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Pre-amplifier (18GHz-40GHz) EMC	EMC184045B	980175	Sep. 04, 2020	Sep. 03, 2021
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY551 90004/MY55190007/ MY55210005	Jul. 13, 2020	Jul. 12, 2021

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 9.

4.1.3 Test Procedures

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) 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.

f. The test-receiver system was set to peak and average detect 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.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.

2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.

3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz. (802.11a: RBW = 1MHz, VBW = 1kHz; 802.11ac (VHT20): RBW = 1MHz, VBW = 1kHz; 802.11ac (VHT40): RBW = 1MHz, VBW = 3kHz; 802.11ac (VHT80): RBW = 1MHz, VBW = 10kHz;)

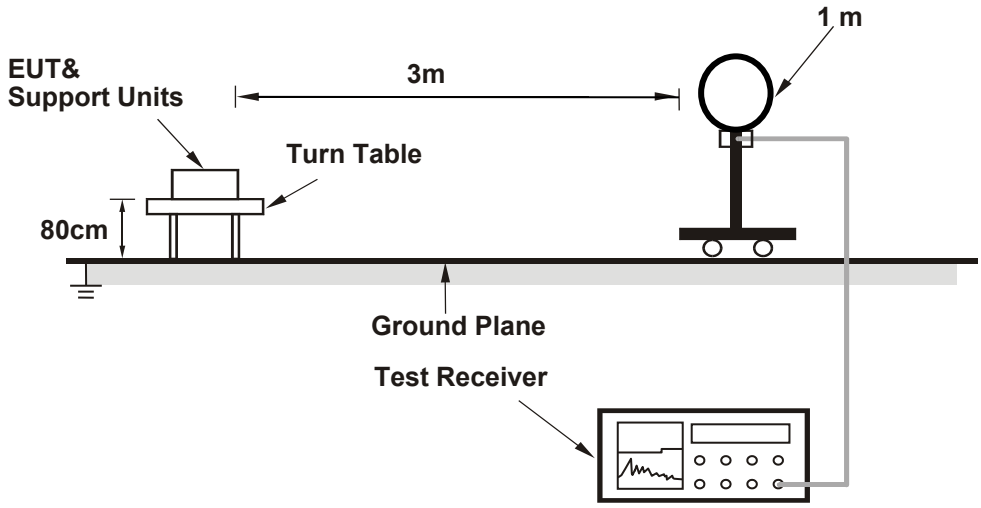
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

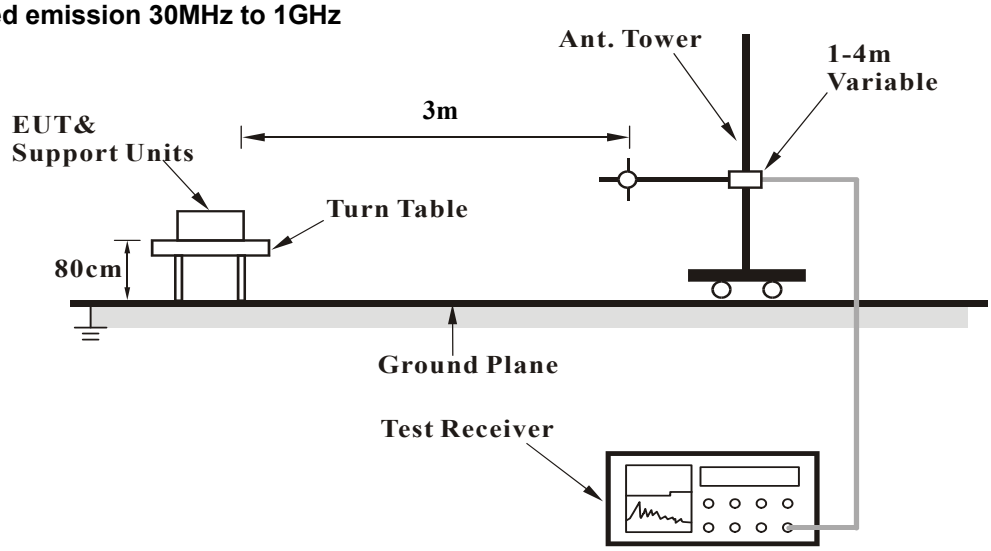
No deviation.

4.1.5 Test Setup

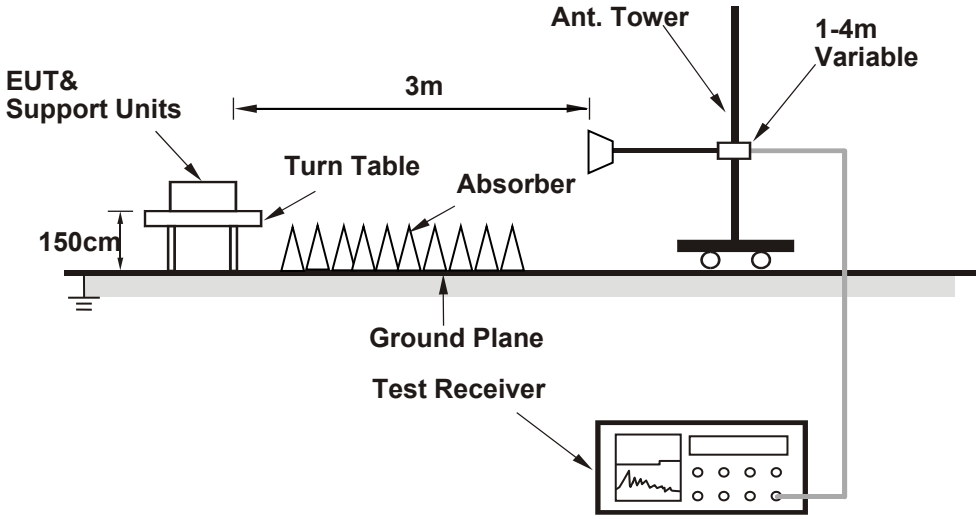
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

a. Placed the EUT on the testing table.

b. The EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz data:

RF Mode	TX 802.11a	Channel	CH 36：5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.8 PK	74.0	-17.2	2.42 H	188	49.5	7.3
2	5150.00	44.7 AV	54.0	-9.3	2.42 H	188	37.4	7.3
3	*5180.00	108.8 PK			2.42 H	188	67.2	41.6
4	*5180.00	98.5 AV			2.42 H	188	56.9	41.6
5	#10360.00	59.7 PK	68.2	-8.5	1.00 H	136	40.7	19.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.5 PK	74.0	-17.5	3.21 V	205	49.2	7.3
2	5150.00	44.1 AV	54.0	-9.9	3.21 V	205	36.8	7.3
3	*5180.00	98.7 PK			3.21 V	205	57.1	41.6
4	*5180.00	88.8 AV			3.21 V	205	47.2	41.6
5	#10360.00	59.3 PK	68.2	-8.9	1.96 V	233	40.3	19.0

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 40：5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	108.5 PK			2.04 H	186	67.0	41.5
2	*5200.00	98.8 AV			2.04 H	186	57.3	41.5
3	#10400.00	59.3 PK	68.2	-8.9	1.04 H	135	40.2	19.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	98.6 PK			2.94 V	201	57.1	41.5
2	*5200.00	88.8 AV			2.94 V	201	47.3	41.5
3	#10400.00	59.4 PK	68.2	-8.8	1.99 V	237	40.3	19.1

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 48：5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	108.6 PK			2.11 H	190	67.2	41.4
2	*5240.00	98.8 AV			2.11 H	190	57.4	41.4
3	5350.00	56.7 PK	74.0	-17.3	2.11 H	190	49.7	7.0
4	5350.00	43.5 AV	54.0	-10.5	2.11 H	190	36.5	7.0
5	#10480.00	60.1 PK	68.2	-8.1	1.13 H	145	41.1	19.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	98.5 PK			3.05 V	194	57.1	41.4
2	*5240.00	88.7 AV			3.05 V	194	47.3	41.4
3	5350.00	56.5 PK	74.0	-17.5	3.05 V	194	49.5	7.0
4	5350.00	43.4 AV	54.0	-10.6	3.05 V	194	36.4	7.0
5	#10480.00	59.8 PK	68.2	-8.4	1.84 V	227	40.8	19.0

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 52：5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	57.9 PK	74.0	-16.1	2.25 H	185	50.6	7.3
2	5150.00	44.5 AV	54.0	-9.5	2.25 H	185	37.2	7.3
3	*5260.00	108.2 PK			2.25 H	185	66.9	41.3
4	*5260.00	98.8 AV			2.25 H	185	57.5	41.3
5	#10520.00	60.4 PK	68.2	-7.8	1.06 H	137	41.3	19.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.5 PK	74.0	-17.5	2.58 V	210	49.2	7.3
2	5150.00	43.9 AV	54.0	-10.1	2.58 V	210	36.6	7.3
3	*5260.00	97.1 PK			2.58 V	210	55.8	41.3
4	*5260.00	87.4 AV			2.58 V	210	46.1	41.3
5	#10520.00	59.7 PK	68.2	-8.5	1.93 V	221	40.6	19.1

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 60：5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	107.9 PK			2.18 H	186	66.8	41.1
2	*5300.00	97.5 AV			2.18 H	186	56.4	41.1
3	10600.00	60.8 PK	74.0	-13.2	1.03 H	128	41.1	19.7
4	10600.00	47.4 AV	54.0	-6.6	1.03 H	128	27.7	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	97.3 PK			2.66 V	205	56.2	41.1
2	*5300.00	87.4 AV			2.66 V	205	46.3	41.1
3	10600.00	60.5 PK	74.0	-13.5	1.94 V	220	40.8	19.7
4	10600.00	47.3 AV	54.0	-6.7	1.94 V	220	27.6	19.7

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 64：5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	109.0 PK			2.19 H	190	67.8	41.2
2	*5320.00	98.3 AV			2.19 H	190	57.1	41.2
3	5350.00	57.4 PK	74.0	-16.6	2.19 H	190	50.4	7.0
4	5350.00	43.6 AV	54.0	-10.4	2.19 H	190	36.6	7.0
5	10640.00	60.9 PK	74.0	-13.1	1.00 H	134	41.2	19.7
6	10640.00	47.0 AV	54.0	-7.0	1.00 H	134	27.3	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	97.6 PK			2.77 V	210	56.4	41.2
2	*5320.00	88.0 AV			2.77 V	210	46.8	41.2
3	5350.00	56.3 PK	74.0	-17.7	2.77 V	210	49.3	7.0
4	5350.00	43.4 AV	54.0	-10.6	2.77 V	210	36.4	7.0
5	10640.00	60.4 PK	74.0	-13.6	1.95 V	223	40.7	19.7
6	10640.00	46.9 AV	54.0	-7.1	1.95 V	223	27.2	19.7

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 100：5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.0 PK	74.0	-17.0	2.06 H	170	49.5	7.5
2	5460.00	43.6 AV	54.0	-10.4	2.06 H	170	36.1	7.5
3	#5470.00	57.6 PK	68.2	-10.6	2.06 H	170	50.1	7.5
4	*5500.00	106.6 PK			2.06 H	170	64.8	41.8
5	*5500.00	96.2 AV			2.06 H	170	54.4	41.8
6	11000.00	58.5 PK	74.0	-15.5	1.00 H	128	38.2	20.3
7	11000.00	46.4 AV	54.0	-7.6	1.00 H	128	26.1	20.3
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	5460.00	56.5 PK	74.0	-17.5	1.57 V	164	49.0	7.5
2	5460.00	43.6 AV	54.0	-10.4	1.57 V	164	36.1	7.5
3	#5470.00	57.3 PK	68.2	-10.9	1.57 V	164	49.8	7.5
4	*5500.00	98.0 PK			1.57 V	164	56.2	41.8
5	*5500.00	87.5 AV			1.57 V	164	45.7	41.8
6	11000.00	57.5 PK	74.0	-16.5	1.97 V	214	37.2	20.3
7	11000.00	46.1 AV	54.0	-7.9	1.97 V	214	25.8	20.3

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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 116：5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	106.4 PK			2.11 H	181	64.5	41.9
2	*5580.00	96.6 AV			2.11 H	181	54.7	41.9
3	11160.00	58.1 PK	74.0	-15.9	1.14 H	139	38.4	19.7
4	11160.00	45.9 AV	54.0	-8.1	1.14 H	139	26.2	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	98.3 PK			1.58 V	166	56.4	41.9
2	*5580.00	86.8 AV			1.58 V	166	44.9	41.9
3	11160.00	57.0 PK	74.0	-17.0	2.00 V	228	37.3	19.7
4	11160.00	45.6 AV	54.0	-8.4	2.00 V	228	25.9	19.7

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 140：5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	103.5 PK			1.99 H	165	61.6	41.9
2	*5700.00	93.7 AV			1.99 H	165	51.8	41.9
3	#5725.00	58.5 PK	68.2	-9.7	1.99 H	165	50.8	7.7
4	11400.00	59.0 PK	74.0	-15.0	1.05 H	142	38.6	20.4
5	11400.00	46.7 AV	54.0	-7.3	1.05 H	142	26.3	20.4
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	*5700.00	93.4 PK			1.56 V	162	51.5	41.9
2	*5700.00	84.2 AV			1.56 V	162	42.3	41.9
3	#5725.00	57.2 PK	68.2	-11.0	1.56 V	162	49.5	7.7
4	11400.00	58.8 PK	74.0	-15.2	1.04 V	124	38.4	20.4
5	11400.00	46.5 AV	54.0	-7.5	1.04 V	124	26.1	20.4

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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11a	Channel	CH 144：5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*5720.00	102.8 PK			1.98 H	167	60.8	42.0
2	*5720.00	93.3 AV			1.98 H	167	51.3	42.0
3	#5850.00	57.3 PK	68.2	-10.9	1.98 H	167	49.0	8.3
4	11440.00	59.5 PK	74.0	-14.5	1.10 H	129	39.3	20.2
5	11440.00	47.0 AV	54.0	-7.0	1.10 H	129	26.8	20.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5720.00	92.5 PK			1.89 V	172	50.5	42.0
2	*5720.00	83.3 AV			1.89 V	172	41.3	42.0
3	#5850.00	57.0 PK	68.2	-11.2	1.89 V	172	48.7	8.3
4	11440.00	58.8 PK	74.0	-15.2	1.88 V	232	38.6	20.2
5	11440.00	46.6 AV	54.0	-7.4	1.88 V	232	26.4	20.2

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 149：5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	#5630.00	56.1 PK	68.2	-12.1	1.41 H	164	48.5	7.6
2	*5745.00	104.6 PK			1.41 H	164	62.6	42.0
3	*5745.00	94.8 AV			1.41 H	164	52.8	42.0
4	#5939.60	56.7 PK	68.2	-11.5	1.41 H	164	48.3	8.4
5	11490.00	61.2 PK	74.0	-12.8	1.08 H	134	41.2	20.0
6	11490.00	47.5 AV	54.0	-6.5	1.08 H	134	27.5	20.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5619.60	55.4 PK	68.2	-12.8	1.77 V	157	47.8	7.6
2	*5745.00	95.4 PK			1.77 V	157	53.4	42.0
3	*5745.00	85.7 AV			1.77 V	157	43.7	42.0
4	#5953.20	56.4 PK	68.2	-11.8	1.77 V	157	48.0	8.4
5	11490.00	60.2 PK	74.0	-13.8	1.98 V	232	40.2	20.0
6	11490.00	46.6 AV	54.0	-7.4	1.98 V	232	26.6	20.0

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 157：5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	56.9 PK	68.2	-11.3	1.60 H	163	49.3	7.6
2	*5785.00	103.7 PK			1.60 H	163	61.6	42.1
3	*5785.00	93.7 AV			1.60 H	163	51.6	42.1
4	#5976.00	57.4 PK	68.2	-10.8	1.60 H	163	49.1	8.3
5	11570.00	58.6 PK	74.0	-15.4	1.00 H	198	38.8	19.8
6	11570.00	45.4 AV	54.0	-8.6	1.00 H	198	25.6	19.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5631.60	54.9 PK	68.2	-13.3	1.78 V	155	47.3	7.6
2	*5785.00	94.9 PK			1.78 V	155	52.8	42.1
3	*5785.00	84.9 AV			1.78 V	155	42.8	42.1
4	#5926.80	55.6 PK	68.2	-12.6	1.78 V	155	47.3	8.3
5	11570.00	58.4 PK	74.0	-15.6	2.01 V	228	38.6	19.8
6	11570.00	45.4 AV	54.0	-8.6	2.01 V	228	25.6	19.8

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 165：5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	#5629.60	56.8 PK	68.2	-11.4	1.65 H	167	49.2	7.6
2	*5825.00	102.6 PK			1.65 H	167	60.2	42.4
3	*5825.00	92.9 AV			1.65 H	167	50.5	42.4
4	#5988.40	56.9 PK	68.2	-11.3	1.65 H	167	48.6	8.3
5	11650.00	58.3 PK	74.0	-15.7	1.06 H	133	38.6	19.7
6	11650.00	45.4 AV	54.0	-8.6	1.06 H	133	25.7	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5603.60	55.4 PK	68.2	-12.8	1.81 V	162	47.7	7.7
2	*5825.00	94.2 PK			1.81 V	162	51.8	42.4
3	*5825.00	83.7 AV			1.81 V	162	41.3	42.4
4	#5954.80	56.2 PK	68.2	-12.0	1.81 V	162	47.8	8.4
5	11650.00	57.9 PK	74.0	-16.1	1.89 V	230	38.2	19.7
6	11650.00	45.1 AV	54.0	-8.9	1.89 V	230	25.4	19.7

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 36：5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.8 PK	74.0	-17.2	2.41 H	187	49.5	7.3
2	5150.00	44.4 AV	54.0	-9.6	2.41 H	187	37.1	7.3
3	*5180.00	107.9 PK			2.41 H	187	66.3	41.6
4	*5180.00	97.9 AV			2.41 H	187	56.3	41.6
5	#10360.00	60.4 PK	68.2	-7.8	1.01 H	133	41.4	19.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.7 PK	74.0	-17.3	2.86 V	203	49.4	7.3
2	5150.00	44.1 AV	54.0	-9.9	2.86 V	203	36.8	7.3
3	*5180.00	97.8 PK			2.86 V	203	56.2	41.6
4	*5180.00	88.3 AV			2.86 V	203	46.7	41.6
5	#10360.00	59.7 PK	68.2	-8.5	1.94 V	232	40.7	19.0

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 40：5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	108.0 PK			2.37 H	184	66.5	41.5
2	*5200.00	98.9 AV			2.37 H	184	57.4	41.5
3	#10400.00	60.2 PK	68.2	-8.0	1.03 H	144	41.1	19.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	97.9 PK			3.04 V	198	56.4	41.5
2	*5200.00	88.8 AV			3.04 V	198	47.3	41.5
3	#10400.00	59.9 PK	68.2	-8.3	1.91 V	226	40.8	19.1

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 48：5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	108.0 PK			2.35 H	184	66.6	41.4
2	*5240.00	98.4 AV			2.35 H	184	57.0	41.4
3	5350.00	56.6 PK	74.0	-17.4	2.35 H	184	49.6	7.0
4	5350.00	43.4 AV	54.0	-10.6	2.35 H	184	36.4	7.0
5	#10480.00	60.1 PK	68.2	-8.1	2.01 H	236	41.1	19.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	98.8 PK			2.85 V	203	57.4	41.4
2	*5240.00	89.6 AV			2.85 V	203	48.2	41.4
3	5350.00	56.4 PK	74.0	-17.6	2.85 V	203	49.4	7.0
4	5350.00	43.1 AV	54.0	-10.9	2.85 V	203	36.1	7.0
5	#10480.00	59.8 PK	68.2	-8.4	1.88 V	241	40.8	19.0

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 52：5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.8 PK	74.0	-17.2	2.21 H	182	49.5	7.3
2	5150.00	44.1 AV	54.0	-9.9	2.21 H	182	36.8	7.3
3	*5260.00	107.3 PK			2.21 H	182	66.0	41.3
4	*5260.00	97.4 AV			2.21 H	182	56.1	41.3
5	#10520.00	59.8 PK	68.2	-8.4	1.04 H	136	40.7	19.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.6 PK	74.0	-17.4	2.62 V	204	49.3	7.3
2	5150.00	43.8 AV	54.0	-10.2	2.62 V	204	36.5	7.3
3	*5260.00	96.7 PK			2.62 V	204	55.4	41.3
4	*5260.00	86.9 AV			2.62 V	204	45.6	41.3
5	#10520.00	59.5 PK	68.2	-8.7	1.99 V	221	40.4	19.1

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 60：5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	107.9 PK			2.24 H	185	66.8	41.1
2	*5300.00	98.1 AV			2.24 H	185	57.0	41.1
3	10600.00	60.9 PK	74.0	-13.1	1.06 H	145	41.2	19.7
4	10600.00	47.3 AV	54.0	-6.7	1.06 H	145	27.6	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	97.2 PK			2.59 V	207	56.1	41.1
2	*5300.00	87.3 AV			2.59 V	207	46.2	41.1
3	10600.00	60.2 PK	74.0	-13.8	1.93 V	217	40.5	19.7
4	10600.00	47.1 AV	54.0	-6.9	1.93 V	217	27.4	19.7

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 64：5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	107.8 PK			2.20 H	187	66.6	41.2
2	*5320.00	97.6 AV			2.20 H	187	56.4	41.2
3	5350.00	56.5 PK	74.0	-17.5	2.20 H	187	49.5	7.0
4	5350.00	44.1 AV	54.0	-9.9	2.20 H	187	37.1	7.0
5	10640.00	60.5 PK	74.0	-13.5	2.17 H	187	40.8	19.7
6	10640.00	47.1 AV	54.0	-6.9	2.17 H	187	27.4	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	98.9 PK			2.68 V	205	57.7	41.2
2	*5320.00	88.6 AV			2.68 V	205	47.4	41.2
3	5350.00	56.4 PK	74.0	-17.6	2.68 V	205	49.4	7.0
4	5350.00	43.9 AV	54.0	-10.1	2.68 V	205	36.9	7.0
5	10640.00	60.4 PK	74.0	-13.6	1.98 V	221	40.7	19.7
6	10640.00	47.0 AV	54.0	-7.0	1.98 V	221	27.3	19.7

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 100：5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.8 PK	74.0	-17.2	2.13 H	167	49.3	7.5
2	5460.00	43.4 AV	54.0	-10.6	2.13 H	167	35.9	7.5
3	#5470.00	58.3 PK	68.2	-9.9	2.13 H	167	50.8	7.5
4	*5500.00	104.5 PK			2.13 H	167	62.7	41.8
5	*5500.00	94.6 AV			2.13 H	167	52.8	41.8
6	11000.00	58.0 PK	74.0	-16.0	1.11 H	133	37.7	20.3
7	11000.00	46.1 AV	54.0	-7.9	1.11 H	133	25.8	20.3
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	5460.00	56.3 PK	74.0	-17.7	1.69 V	155	48.8	7.5
2	5460.00	43.2 AV	54.0	-10.8	1.69 V	155	35.7	7.5
3	#5470.00	57.9 PK	68.2	-10.3	1.69 V	155	50.4	7.5
4	*5500.00	96.1 PK			1.69 V	155	54.3	41.8
5	*5500.00	86.6 AV			1.69 V	155	44.8	41.8
6	11000.00	57.9 PK	74.0	-16.1	1.91 V	233	37.6	20.3
7	11000.00	45.9 AV	54.0	-8.1	1.91 V	233	25.6	20.3

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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT20)	Channel	CH 116：5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	104.1 PK			1.96 H	173	62.2	41.9
2	*5580.00	93.7 AV			1.96 H	173	51.8	41.9
3	11160.00	58.3 PK	74.0	-15.7	1.25 H	138	38.6	19.7
4	11160.00	46.0 AV	54.0	-8.0	1.25 H	138	26.3	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	95.9 PK			1.74 V	166	54.0	41.9
2	*5580.00	85.7 AV			1.74 V	166	43.8	41.9
3	11160.00	58.1 PK	74.0	-15.9	1.99 V	221	38.4	19.7
4	11160.00	45.7 AV	54.0	-8.3	1.99 V	221	26.0	19.7

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 140：5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	103.7 PK			1.57 H	163	61.8	41.9
2	*5700.00	93.9 AV			1.57 H	163	52.0	41.9
3	#5725.00	59.2 PK	68.2	-9.0	1.57 H	163	51.5	7.7
4	11400.00	59.0 PK	74.0	-15.0	1.05 H	131	38.6	20.4
5	11400.00	47.0 AV	54.0	-7.0	1.05 H	131	26.6	20.4
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	*5700.00	96.5 PK			1.66 V	164	54.6	41.9
2	*5700.00	86.7 AV			1.66 V	164	44.8	41.9
3	#5725.00	58.5 PK	68.2	-9.7	1.66 V	164	50.8	7.7
4	11400.00	58.8 PK	74.0	-15.2	1.94 V	227	38.4	20.4
5	11400.00	46.9 AV	54.0	-7.1	1.94 V	227	26.5	20.4

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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT20)	Channel	CH 144：5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*5720.00	103.4 PK			1.81 H	163	61.4	42.0
2	*5720.00	93.4 AV			1.81 H	163	51.4	42.0
3	#5850.00	57.5 PK	68.2	-10.7	1.81 H	163	49.2	8.3
4	11440.00	58.8 PK	74.0	-15.2	1.08 H	122	38.6	20.2
5	11440.00	47.1 AV	54.0	-6.9	1.08 H	122	26.9	20.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5720.00	97.1 PK			1.62 V	156	55.1	42.0
2	*5720.00	87.4 AV			1.62 V	156	45.4	42.0
3	#5850.00	57.4 PK	68.2	-10.8	1.62 V	156	49.1	8.3
4	11440.00	58.6 PK	74.0	-15.4	1.95 V	223	38.4	20.2
5	11440.00	46.7 AV	54.0	-7.3	1.95 V	223	26.5	20.2

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 149：5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5610.00	55.7 PK	68.2	-12.5	1.40 H	165	48.0	7.7
2	*5745.00	104.3 PK			1.40 H	165	62.3	42.0
3	*5745.00	94.2 AV			1.40 H	165	52.2	42.0
4	#5933.20	56.8 PK	68.2	-11.4	1.40 H	165	48.5	8.3
5	11490.00	59.3 PK	74.0	-14.7	1.02 H	138	39.3	20.0
6	11490.00	45.9 AV	54.0	-8.1	1.02 H	138	25.9	20.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5615.60	56.4 PK	68.2	-11.8	1.71 V	158	48.8	7.6
2	*5745.00	95.1 PK			1.71 V	158	53.1	42.0
3	*5745.00	85.4 AV			1.71 V	158	43.4	42.0
4	#5992.00	56.2 PK	68.2	-12.0	1.71 V	158	47.9	8.3
5	11490.00	58.3 PK	74.0	-15.7	1.99 V	236	38.3	20.0
6	11490.00	45.4 AV	54.0	-8.6	1.99 V	236	25.4	20.0

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 157：5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	55.1 PK	68.2	-13.1	1.58 H	165	47.4	7.7
2	*5785.00	102.9 PK			1.58 H	165	60.8	42.1
3	*5785.00	93.4 AV			1.58 H	165	51.3	42.1
4	#5934.00	56.4 PK	68.2	-11.8	1.58 H	165	48.0	8.4
5	11570.00	59.1 PK	74.0	-14.9	1.13 H	144	39.3	19.8
6	11570.00	45.9 AV	54.0	-8.1	1.13 H	144	26.1	19.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5606.40	55.8 PK	68.2	-12.4	1.79 V	151	48.1	7.7
2	*5785.00	93.6 PK			1.79 V	151	51.5	42.1
3	*5785.00	84.4 AV			1.79 V	151	42.3	42.1
4	#5990.00	57.5 PK	68.2	-10.7	1.79 V	151	49.2	8.3
5	11570.00	58.1 PK	74.0	-15.9	1.92 V	228	38.3	19.8
6	11570.00	45.3 AV	54.0	-8.7	1.92 V	228	25.5	19.8

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 165：5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	#5614.00	55.9 PK	68.2	-12.3	1.64 H	167	48.2	7.7
2	*5825.00	102.6 PK			1.64 H	167	60.2	42.4
3	*5825.00	93.0 AV			1.64 H	167	50.6	42.4
4	#5966.80	56.2 PK	68.2	-12.0	1.64 H	167	47.9	8.3
5	11650.00	58.0 PK	74.0	-16.0	1.01 H	135	38.3	19.7
6	11650.00	45.4 AV	54.0	-8.6	1.01 H	135	25.7	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5619.60	55.4 PK	68.2	-12.8	1.69 V	154	47.8	7.6
2	*5825.00	93.6 PK			1.69 V	154	51.2	42.4
3	*5825.00	83.7 AV			1.69 V	154	41.3	42.4
4	#5946.40	56.2 PK	68.2	-12.0	1.69 V	154	47.8	8.4
5	11650.00	57.5 PK	74.0	-16.5	1.87 V	228	37.8	19.7
6	11650.00	44.9 AV	54.0	-9.1	1.87 V	228	25.2	19.7

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 38：5190 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	2.11 H	187	53.2	7.3
2	5150.00	48.6 AV	54.0	-5.4	2.11 H	187	41.3	7.3
3	*5190.00	105.9 PK			2.11 H	187	64.3	41.6
4	*5190.00	95.8 AV			2.11 H	187	54.2	41.6
5	#10380.00	59.7 PK	68.2	-8.5	1.16 H	145	40.6	19.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.8 PK	74.0	-17.2	2.88 V	207	49.5	7.3
2	5150.00	44.7 AV	54.0	-9.3	2.88 V	207	37.4	7.3
3	*5190.00	95.8 PK			2.88 V	207	54.2	41.6
4	*5190.00	86.4 AV			2.88 V	207	44.8	41.6
5	#10380.00	59.6 PK	68.2	-8.6	1.87 V	238	40.5	19.1

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 46：5230 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	105.8 PK			2.10 H	185	64.4	41.4
2	*5230.00	96.2 AV			2.10 H	185	54.8	41.4
3	5350.00	56.4 PK	74.0	-17.6	2.10 H	185	49.4	7.0
4	5350.00	43.9 AV	54.0	-10.1	2.10 H	185	36.9	7.0
5	#10460.00	60.4 PK	68.2	-7.8	1.07 H	139	41.4	19.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	95.7 PK			2.96 V	197	54.3	41.4
2	*5230.00	86.0 AV			2.96 V	197	44.6	41.4
3	5350.00	56.3 PK	74.0	-17.7	2.96 V	197	49.3	7.0
4	5350.00	43.6 AV	54.0	-10.4	2.96 V	197	36.6	7.0
5	#10460.00	59.6 PK	68.2	-8.6	2.04 V	233	40.6	19.0

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 54：5270 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	57.4 PK	74.0	-16.6	2.20 H	189	50.1	7.3
2	5150.00	44.8 AV	54.0	-9.2	2.20 H	189	37.5	7.3
3	*5270.00	105.5 PK			2.20 H	189	64.2	41.3
4	*5270.00	95.7 AV			2.20 H	189	54.4	41.3
5	#10540.00	60.4 PK	68.2	-7.8	1.07 H	140	41.2	19.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.9 PK	74.0	-17.1	2.67 V	208	49.6	7.3
2	5150.00	44.2 AV	54.0	-9.8	2.67 V	208	36.9	7.3
3	*5270.00	95.1 PK			2.67 V	208	53.8	41.3
4	*5270.00	85.2 AV			2.67 V	208	43.9	41.3
5	#10540.00	60.0 PK	68.2	-8.2	1.97 V	216	40.8	19.2

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 62：5310 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	104.6 PK			2.18 H	182	63.4	41.2
2	*5310.00	95.2 AV			2.18 H	182	54.0	41.2
3	5350.00	58.2 PK	74.0	-15.8	2.18 H	182	51.2	7.0
4	5350.00	46.2 AV	54.0	-7.8	2.18 H	182	39.2	7.0
5	10620.00	60.5 PK	74.0	-13.5	1.01 H	134	40.8	19.7
6	10620.00	46.8 AV	54.0	-7.2	1.01 H	134	27.1	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	94.4 PK			2.60 V	209	53.2	41.2
2	*5310.00	84.8 AV			2.60 V	209	43.6	41.2
3	5350.00	56.6 PK	74.0	-17.4	2.60 V	209	49.6	7.0
4	5350.00	44.8 AV	54.0	-9.2	2.60 V	209	37.8	7.0
5	10620.00	60.3 PK	74.0	-13.7	1.98 V	216	40.6	19.7
6	10620.00	46.5 AV	54.0	-7.5	1.98 V	216	26.8	19.7

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 102：5510 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.3 PK	74.0	-16.7	1.77 H	158	49.8	7.5
2	5460.00	44.8 AV	54.0	-9.2	1.77 H	158	37.3	7.5
3	#5470.00	58.3 PK	68.2	-9.9	1.77 H	158	50.8	7.5
4	*5510.00	102.8 PK			1.77 H	158	61.0	41.8
5	*5510.00	93.4 AV			1.77 H	158	51.6	41.8
6	11020.00	59.7 PK	74.0	-14.3	1.04 H	136	39.5	20.2
7	11020.00	47.0 AV	54.0	-7.0	1.04 H	136	26.8	20.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.7 PK	74.0	-17.3	1.46 V	159	49.2	7.5
2	5460.00	44.1 AV	54.0	-9.9	1.46 V	159	36.6	7.5
3	#5470.00	57.7 PK	68.2	-10.5	1.46 V	159	50.2	7.5
4	*5510.00	94.6 PK			1.46 V	159	52.8	41.8
5	*5510.00	85.3 AV			1.46 V	159	43.5	41.8
6	11020.00	58.9 PK	74.0	-15.1	1.86 V	222	38.7	20.2
7	11020.00	46.6 AV	54.0	-7.4	1.86 V	222	26.4	20.2

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 110：5550 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	103.1 PK			1.79 H	161	61.2	41.9
2	*5550.00	93.4 AV			1.79 H	161	51.5	41.9
3	11100.00	58.4 PK	74.0	-15.6	1.13 H	130	38.9	19.5
4	11100.00	46.3 AV	54.0	-7.7	1.13 H	130	26.8	19.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	94.4 PK			1.47 V	158	52.5	41.9
2	*5550.00	85.5 AV			1.47 V	158	43.6	41.9
3	11100.00	58.0 PK	74.0	-16.0	1.93 V	221	38.5	19.5
4	11100.00	45.8 AV	54.0	-8.2	1.93 V	221	26.3	19.5

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 134：5670 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	102.0 PK			1.31 H	159	60.1	41.9
2	*5670.00	93.1 AV			1.31 H	159	51.2	41.9
3	#5725.00	57.5 PK	68.2	-10.7	1.31 H	159	49.8	7.7
4	11340.00	59.2 PK	74.0	-14.8	1.07 H	135	38.9	20.3
5	11340.00	47.0 AV	54.0	-7.0	1.07 H	135	26.7	20.3
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	*5670.00	94.0 PK			1.71 V	163	52.1	41.9
2	*5670.00	85.0 AV			1.71 V	163	43.1	41.9
3	#5725.00	57.2 PK	68.2	-11.0	1.71 V	163	49.5	7.7
4	11340.00	58.1 PK	74.0	-15.9	1.93 V	225	37.8	20.3
5	11340.00	46.7 AV	54.0	-7.3	1.93 V	225	26.4	20.3

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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT40)	Channel	CH 142：5710 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*5710.00	100.9 PK			1.70 H	161	59.0	41.9
2	*5710.00	92.1 AV			1.70 H	161	50.2	41.9
3	#5850.00	58.5 PK	68.2	-9.7	1.70 H	161	50.2	8.3
4	11420.00	59.0 PK	74.0	-15.0	1.22 H	128	38.7	20.3
5	11420.00	46.8 AV	54.0	-7.2	1.22 H	128	26.5	20.3
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	*5710.00	93.2 PK			1.36 V	155	51.3	41.9
2	*5710.00	84.5 AV			1.36 V	155	42.6	41.9
3	#5850.00	58.1 PK	68.2	-10.1	1.36 V	155	49.8	8.3
4	11420.00	58.7 PK	74.0	-15.3	1.94 V	227	38.4	20.3
5	11420.00	46.7 AV	54.0	-7.3	1.94 V	227	26.4	20.3

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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT40)	Channel	CH 151：5755 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	54.5 PK	68.2	-13.7	1.59 H	163	46.9	7.6
2	*5755.00	101.3 PK			1.59 H	163	59.3	42.0
3	*5755.00	91.3 AV			1.59 H	163	49.3	42.0
4	#5939.20	56.6 PK	68.2	-11.6	1.59 H	163	48.2	8.4
5	11510.00	59.4 PK	74.0	-14.6	1.09 H	135	39.5	19.9
6	11510.00	45.7 AV	54.0	-8.3	1.09 H	135	25.8	19.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5600.40	55.5 PK	68.2	-12.7	1.86 V	158	47.8	7.7
2	*5755.00	92.5 PK			1.86 V	158	50.5	42.0
3	*5755.00	82.6 AV			1.86 V	158	40.6	42.0
4	#5987.60	56.6 PK	68.2	-11.6	1.86 V	158	48.3	8.3
5	11510.00	58.7 PK	74.0	-15.3	1.97 V	229	38.8	19.9
6	11510.00	45.6 AV	54.0	-8.4	1.97 V	229	25.7	19.9

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 159：5795 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	56.5 PK	68.2	-11.7	1.59 H	164	48.9	7.6
2	*5795.00	100.9 PK			1.59 H	164	58.7	42.2
3	*5795.00	91.2 AV			1.59 H	164	49.0	42.2
4	#5943.60	58.1 PK	68.2	-10.1	1.59 H	164	49.7	8.4
5	11590.00	58.6 PK	74.0	-15.4	1.03 H	137	38.8	19.8
6	11590.00	45.3 AV	54.0	-8.7	1.03 H	137	25.5	19.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5611.60	55.2 PK	68.2	-13.0	1.75 V	157	47.5	7.7
2	*5795.00	92.6 PK			1.75 V	157	50.4	42.2
3	*5795.00	84.0 AV			1.75 V	157	41.8	42.2
4	#5976.40	56.3 PK	68.2	-11.9	1.75 V	157	48.0	8.3
5	11590.00	58.2 PK	74.0	-15.8	2.01 V	223	38.4	19.8
6	11590.00	45.2 AV	54.0	-8.8	2.01 V	223	25.4	19.8

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 42：5210 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	59.9 PK	74.0	-14.1	2.11 H	190	52.6	7.3
2	**5150.00**	**48.7 AV**	**54.0**	**-5.3**	**2.11 H**	**190**	**41.4**	**7.3**
3	*5210.00	102.6 PK			2.11 H	190	61.1	41.5
4	*5210.00	93.1 AV			2.11 H	190	51.6	41.5
5	5350.00	56.5 PK	74.0	-17.5	2.11 H	190	49.5	7.0
6	5350.00	44.6 AV	54.0	-9.4	2.11 H	190	37.6	7.0
7	#10420.00	59.7 PK	68.2	-8.5	1.00 H	130	40.7	19.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.9 PK	74.0	-17.1	3.22 V	203	49.6	7.3
2	5150.00	44.8 AV	54.0	-9.2	3.22 V	203	37.5	7.3
3	*5210.00	92.7 PK			3.22 V	203	51.2	41.5
4	*5210.00	83.8 AV			3.22 V	203	42.3	41.5
5	5350.00	56.6 PK	74.0	-17.4	3.22 V	203	49.6	7.0
6	5350.00	44.6 AV	54.0	-9.4	3.22 V	203	37.6	7.0
7	#10420.00	60.3 PK	68.2	-7.9	1.96 V	228	41.3	19.0

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 58：5290 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*5290.00	101.6 PK			2.00 H	187	60.4	41.2
2	*5290.00	92.3 AV			2.00 H	187	51.1	41.2
3	5350.00	59.9 PK	74.0	-14.1	2.00 H	187	52.9	7.0
4	5350.00	47.9 AV	54.0	-6.1	2.00 H	187	40.9	7.0
5	#10580.00	60.0 PK	68.2	-8.2	1.02 H	133	40.5	19.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5290.00	91.3 PK			2.63 V	210	50.1	41.2
2	*5290.00	82.2 AV			2.63 V	210	41.0	41.2
3	5350.00	56.5 PK	74.0	-17.5	2.63 V	210	49.5	7.0
4	5350.00	45.2 AV	54.0	-8.8	2.63 V	210	38.2	7.0
5	#10580.00	60.1 PK	68.2	-8.1	1.98 V	220	40.6	19.5

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 106：5530 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.7 PK	74.0	-14.3	1.77 H	173	52.2	7.5
2	5460.00	48.1 AV	54.0	-5.9	1.77 H	173	40.6	7.5
3	#5470.00	62.2 PK	68.2	-6.0	1.77 H	173	54.7	7.5
4	*5530.00	99.6 PK			1.77 H	173	57.8	41.8
5	*5530.00	90.6 AV			1.77 H	173	48.8	41.8
6	#5725.00	58.9 PK	68.2	-9.3	1.77 H	173	51.2	7.7
7	11060.00	60.1 PK	74.0	-13.9	1.05 H	139	40.3	19.8
8	11060.00	46.9 AV	54.0	-7.1	1.05 H	139	27.1	19.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.5 PK	74.0	-16.5	1.00 V	163	50.0	7.5
2	5460.00	45.1 AV	54.0	-8.9	1.00 V	163	37.6	7.5
3	#5470.00	58.4 PK	68.2	-9.8	1.00 V	163	50.9	7.5
4	*5530.00	90.9 PK			1.00 V	163	49.1	41.8
5	*5530.00	81.5 AV			1.00 V	163	39.7	41.8
6	#5725.00	59.3 PK	68.2	-8.9	1.00 V	163	51.6	7.7
7	11060.00	59.9 PK	74.0	-14.1	1.95 V	219	40.1	19.8
8	11060.00	46.6 AV	54.0	-7.4	1.95 V	219	26.8	19.8

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 122：5610 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.3 PK	74.0	-16.7	1.49 H	160	49.8	7.5
2	5460.00	44.9 AV	54.0	-9.1	1.49 H	160	37.4	7.5
3	#5470.00	57.5 PK	68.2	-10.7	1.49 H	160	50.0	7.5
4	*5610.00	99.6 PK			1.49 H	160	57.7	41.9
5	*5610.00	90.0 AV			1.49 H	160	48.1	41.9
6	#5725.00	59.3 PK	68.2	-8.9	1.49 H	160	51.6	7.7
7	11220.00	59.5 PK	74.0	-14.5	1.06 H	131	39.8	19.7
8	11220.00	47.1 AV	54.0	-6.9	1.06 H	131	27.4	19.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.2 PK	74.0	-16.8	1.04 V	166	49.7	7.5
2	5460.00	44.4 AV	54.0	-9.6	1.04 V	166	36.9	7.5
3	#5470.00	57.3 PK	68.2	-10.9	1.04 V	166	49.8	7.5
4	*5610.00	91.1 PK			1.04 V	166	49.2	41.9
5	*5610.00	81.6 AV			1.04 V	166	39.7	41.9
6	#5725.00	58.5 PK	68.2	-9.7	1.04 V	166	50.8	7.7
7	11220.00	58.3 PK	74.0	-15.7	1.98 V	224	38.6	19.7
8	11220.00	46.6 AV	54.0	-7.4	1.98 V	224	26.9	19.7

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 138：5690 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	*5690.00	99.1 PK			1.29 H	160	57.2	41.9
2	*5690.00	89.8 AV			1.29 H	160	47.9	41.9
3	#5850.00	57.6 PK	68.2	-10.6	1.29 H	160	49.3	8.3
4	11380.00	60.6 PK	74.0	-13.4	1.07 H	138	40.2	20.4
5	11380.00	47.9 AV	54.0	-6.1	1.07 H	138	27.5	20.4
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	*5690.00	90.8 PK			1.12 V	168	48.9	41.9
2	*5690.00	81.5 AV			1.12 V	168	39.6	41.9
3	#5850.00	57.8 PK	68.2	-10.4	1.12 V	168	49.5	8.3
4	11380.00	60.1 PK	74.0	-13.9	1.85 V	214	39.7	20.4
5	11380.00	47.6 AV	54.0	-6.4	1.85 V	214	27.2	20.4

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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT80)	Channel	CH 155：5775 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

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	#5636.80	50.5 PK	68.2	-17.7	1.68 H	165	47.8	2.7
2	*5775.00	97.8 PK			1.68 H	165	55.7	42.1
3	*5775.00	88.2 AV			1.68 H	165	46.1	42.1
4	#5943.20	52.6 PK	68.2	-15.6	1.68 H	165	49.1	3.5
5	11550.00	59.2 PK	74.0	-14.8	1.05 H	137	39.3	19.9
6	11550.00	46.1 AV	54.0	-7.9	1.05 H	137	26.2	19.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5620.80	56.8 PK	68.2	-11.4	1.40 V	154	49.2	7.6
2	*5775.00	89.9 PK			1.40 V	154	47.8	42.1
3	*5775.00	80.8 AV			1.40 V	154	38.7	42.1
4	#5966.80	58.0 PK	68.2	-10.2	1.40 V	154	49.7	8.3
5	11550.00	58.1 PK	74.0	-15.9	1.94 V	232	38.2	19.9
6	11550.00	46.0 AV	54.0	-8.0	1.94 V	232	26.1	19.9

Remarks:

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

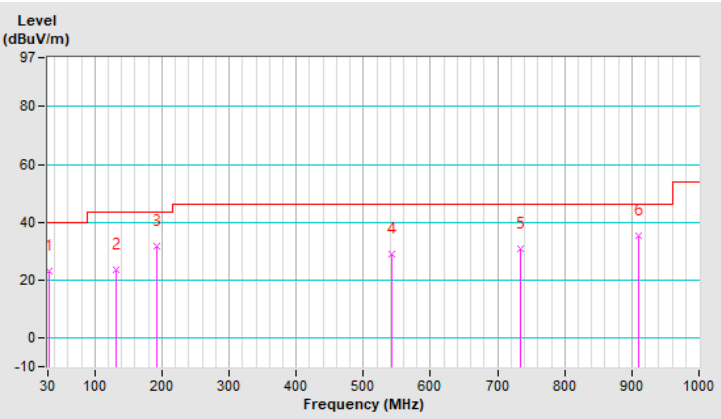
Below 1GHz Worst-Case Data:

RF Mode	TX 802.11ac (VHT40)	Channel	CH 38：5190 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	31.94	23.0 QP	40.0	-17.0	1.25 H	268	33.2	-10.2
2	131.85	23.6 QP	43.5	-19.9	1.00 H	50	33.5	-9.9
3	191.99	31.6 QP	43.5	-11.9	1.50 H	309	43.0	-11.4
4	543.13	29.1 QP	46.0	-16.9	1.00 H	177	30.6	-1.5
5	734.22	31.0 QP	46.0	-15.0	1.00 H	159	29.1	1.9
6	910.76	35.5 QP	46.0	-10.5	1.50 H	241	29.5	6.0

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. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

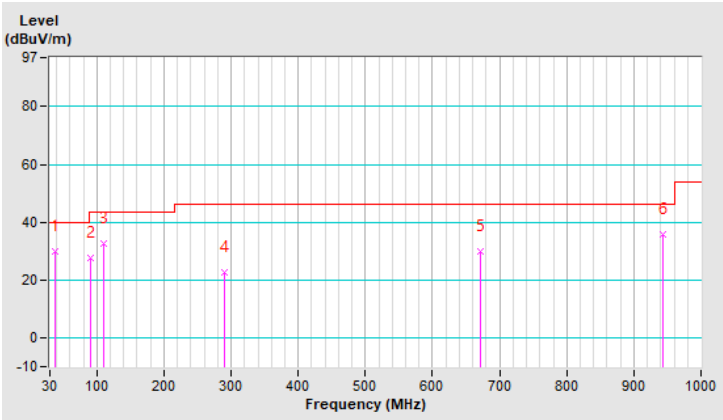


RF Mode	TX 802.11ac (VHT40)	Channel	CH 38：5190 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	37.76	30.0 QP	40.0	-10.0	1.00 V	347	39.9	-9.9
2	90.14	27.5 QP	43.5	-16.0	1.00 V	230	42.2	-14.7
3	110.51	32.6 QP	43.5	-10.9	1.50 V	253	44.5	-11.9
4	289.96	22.7 QP	46.0	-23.3	1.25 V	159	29.7	-7.0
5	671.17	29.7 QP	46.0	-16.3	1.50 V	32	28.8	0.9
6	942.77	35.7 QP	46.0	-10.3	1.00 V	72	29.3	6.4

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. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

Note: 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 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver R&S	ESCS 30	847124/029	Oct. 20, 2020	Oct. 19, 2021
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 27, 2020	Oct. 26, 2021
Line-Impedance Stabilization Network (for Peripheral) R&S	ESH3-Z5	835239/001	Mar. 26, 2021	Mar. 25, 2022
50 ohms Terminator	50	3	Oct. 26, 2020	Oct. 25, 2021
RF Cable	5D-FB	COCCAB-001	Sep. 26, 2020	Sep. 25, 2021
Fixed attenuator EMCI	STI02-2200-10	005	Aug. 29, 2020	Aug. 28, 2021
Software BVADT	BVADT_Cond_ V7.3.7.4	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Hsinchu Conduction 1. (TAF No.: 2022)

4.2.3 Test Procedures

a. The EUT was 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/ 50uH of coupling impedance for the measuring instrument.

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

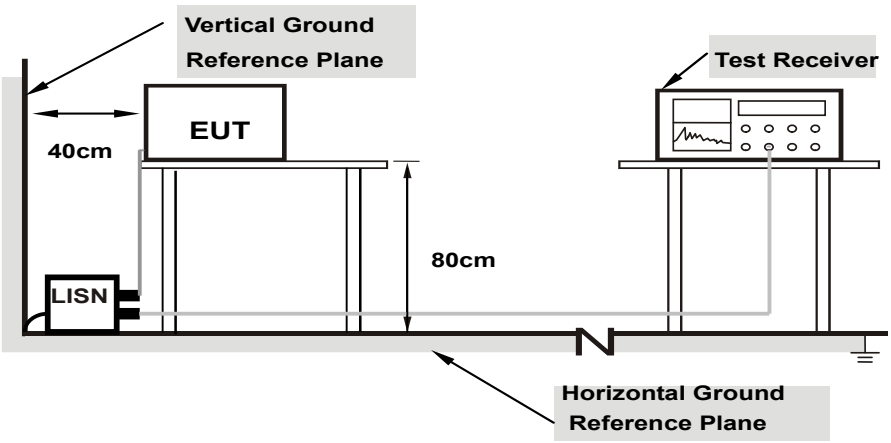
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 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).

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

Worst-case data:

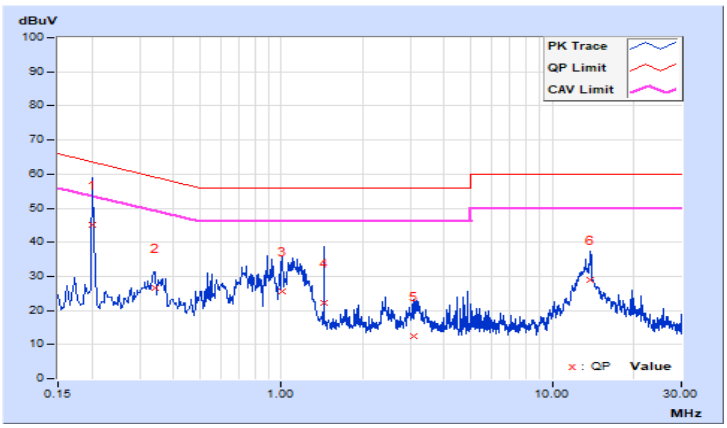
802.11ac (VHT40)

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.20083**	**9.71**	**35.49**	**10.60**	**45.20**	**20.31**	**63.58**	**53.58**	**-18.38**	**-33.27**
2	0.34108	9.72	16.96	7.91	26.68	17.63	59.18	49.18	-32.50	-31.55
3	1.00629	9.76	15.84	8.00	25.60	17.76	56.00	46.00	-30.40	-28.24
4	1.44030	9.76	12.51	0.50	22.27	10.26	56.00	46.00	-33.73	-35.74
5	3.10205	9.78	2.69	0.42	12.47	10.20	56.00	46.00	-43.53	-35.80
6	13.80763	9.84	19.10	10.62	28.94	20.46	60.00	50.00	-31.06	-29.54

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.

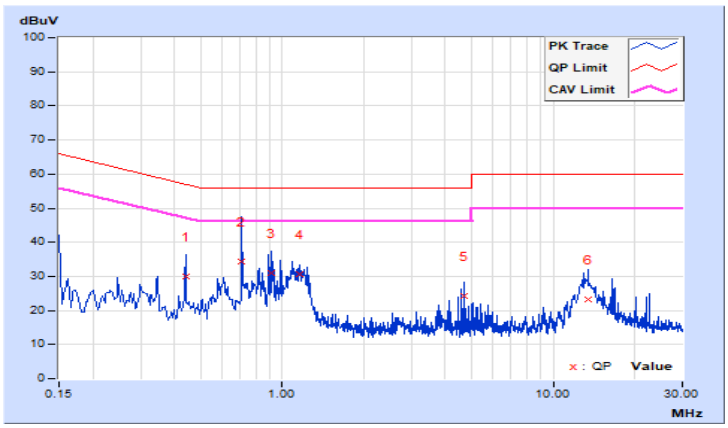


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.43934	9.79	20.07	2.91	29.86	12.70	57.07	47.07	-27.21	-34.37
2	0.70913	9.81	24.37	6.49	34.18	16.30	56.00	46.00	-21.82	-29.70
3	0.91636	9.82	21.26	8.13	31.08	17.95	56.00	46.00	-24.92	-28.05
4	1.15878	9.82	20.73	12.04	30.55	21.86	56.00	46.00	-25.45	-24.14
5	4.66605	9.86	14.43	0.87	24.29	10.73	56.00	46.00	-31.71	-35.27
6	13.53002	9.94	13.41	8.32	23.35	18.26	60.00	50.00	-36.65	-31.74

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.



4.3 Transmit Power Measurement

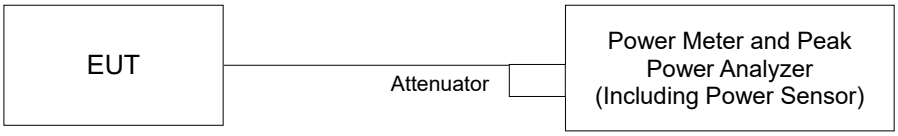
4.3.1 Limits of Transmit Power Measurement

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

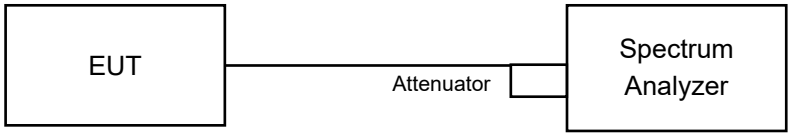
*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

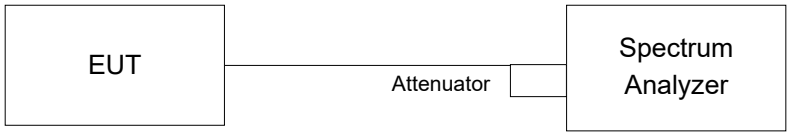
For Power Output
For 802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20), 802.11ac (VHT40)



For 802.11ac (VHT80) and straddle channels



For 26dB Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

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

For 802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20), 802.11ac (VHT40)

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. Duty factor is not added to measured value.

For 802.11ac (VHT80) and straddle channels

Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep):

a. Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
b. Set RBW = 1 MHz.
c. Set VBW ≥ 3 MHz.
d. Number of points in sweep ≥ 2 × span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
e. Sweep time = auto.
f. Detector = power averaging (rms), if available. Otherwise, use sample detector mode.
g. If transmit duty cycle < 98%, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98%, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run.”
h. Trace average at least 100 traces in power averaging (rms) mode.
i. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

For 26dB Bandwidth

a. Set RBW = approximately 1% of the emission bandwidth.
b. Set the VBW > RBW.
c. Detector = Peak.
d. Trace mode = max hold.
e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 Test Result

Power Output:

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	26.424	14.22	24.00	Pass
40	5200	27.040	14.32	24.00	Pass
48	5240	25.704	14.10	24.00	Pass
52	5260	25.763	14.11	24.00	Pass
60	5300	25.586	14.08	24.00	Pass
64	5320	25.527	14.07	24.00	Pass
100	5500	25.763	14.11	24.00	Pass
116	5580	25.882	14.13	24.00	Pass
140	5700	26.424	14.22	24.00	Pass
144	5720 (For U-NII-2C)	22.387	13.50	23.30	Pass
144	5720 (For U-NII-3)	7.079	8.50	30.00	Pass
149	5745	26.853	14.29	30.00	Pass
157	5785	26.002	14.15	30.00	Pass
165	5825	26.182	14.18	30.00	Pass

Note:

For U-NII-2A, U-NII-2C Band:

1. 11dBm + 10log (23.87) = 24.77 > 24dBm
2. 11dBm + 10log (24.13) = 24.82 > 24dBm
3. 11dBm + 10log (24.21) = 24.83 > 24dBm
4. 11dBm + 10log (24.24) = 24.84 > 24dBm
5. 11dBm + 10log (24.62) = 24.91 > 24dBm
6. 11dBm + 10log (24.65) = 24.91 > 24dBm
7. 11dBm + 10log (5725.00 - 5708.01) = 23.30 < 24dBm

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	25.586	14.08	24.00	Pass
40	5200	25.410	14.05	24.00	Pass
48	5240	25.468	14.06	24.00	Pass
52	5260	25.351	14.04	24.00	Pass
60	5300	25.293	14.03	24.00	Pass
64	5320	25.410	14.05	24.00	Pass
100	5500	25.235	14.02	24.00	Pass
116	5580	25.763	14.11	24.00	Pass
140	5700	25.351	14.04	24.00	Pass
144	5720 (For U-NII-2C)	21.627	13.35	23.25	Pass
144	5720 (For U-NII-3)	7.096	8.51	30.00	Pass
149	5745	25.293	14.03	30.00	Pass
157	5785	25.293	14.03	30.00	Pass
165	5825	25.351	14.04	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:

1. 11dBm + 10log (23.07) = 24.63 > 24dBm
2. 11dBm + 10log (23.34) = 24.68 > 24dBm
3. 11dBm + 10log (22.94) = 24.60 > 24dBm
4. 11dBm + 10log (23.17) = 24.64 > 24dBm
5. 11dBm + 10log (23.50) = 24.71 > 24dBm
6. 11dBm + 10log (22.57) = 24.53 > 24dBm
7. 11dBm + 10log (5725.00 - 5708.21) = 23.25 < 24dBm

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	27.164	14.34	24.00	Pass
46	5230	27.227	14.35	24.00	Pass
54	5270	25.586	14.08	24.00	Pass
62	5310	26.485	14.23	24.00	Pass
102	5510	26.730	14.27	24.00	Pass
110	5550	26.002	14.15	24.00	Pass
134	5670	26.669	14.26	24.00	Pass
142	5710 (For U-NII-2C)	23.988	13.80	24.00	Pass
142	5710 (For U-NII-3)	7.112	8.52	30.00	Pass
151	5755	26.546	14.24	30.00	Pass
159	5795	26.607	14.25	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:

1. 11dBm + 10log (47.44) = 27.76 > 24dBm
2. 11dBm + 10log (48.40) = 27.84 > 24dBm
3. 11dBm + 10log (47.04) = 27.72 > 24dBm
4. 11dBm + 10log (47.11) = 27.73 > 24dBm
5. 11dBm + 10log (47.86) = 27.79 > 24dBm
6. 11dBm + 10log (5725.00 - 5686.89) = 26.81 > 24dBm

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	25.823	14.12	24.00	Pass
40	5200	25.586	14.08	24.00	Pass
48	5240	25.763	14.11	24.00	Pass
52	5260	25.586	14.08	24.00	Pass
60	5300	25.468	14.06	24.00	Pass
64	5320	25.882	14.13	24.00	Pass
100	5500	25.527	14.07	24.00	Pass
116	5580	25.942	14.14	24.00	Pass
140	5700	25.468	14.06	24.00	Pass
144	5720 (For U-NII-2C)	21.878	13.40	23.25	Pass
144	5720 (For U-NII-3)	7.161	8.55	30.00	Pass
149	5745	25.410	14.05	30.00	Pass
157	5785	25.410	14.05	30.00	Pass
165	5825	25.468	14.06	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:

1. 11dBm + 10log (23.07) = 24.63 > 24dBm
2. 11dBm + 10log (23.34) = 24.68 > 24dBm
3. 11dBm + 10log (22.94) = 24.60 > 24dBm
4. 11dBm + 10log (23.17) = 24.64 > 24dBm
5. 11dBm + 10log (23.50) = 24.71 > 24dBm
6. 11dBm + 10log (22.57) = 24.53 > 24dBm
7. 11dBm + 10log (5725.00 - 5708.21) = 23.25 < 24dBm

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	27.925	14.46	24.00	Pass
46	5230	27.606	14.41	24.00	Pass
54	5270	25.823	14.12	24.00	Pass
62	5310	27.040	14.32	24.00	Pass
102	5510	27.102	14.33	24.00	Pass
110	5550	26.485	14.23	24.00	Pass
134	5670	27.416	14.38	24.00	Pass
142	5710 (For U-NII-2C)	24.266	13.85	24.00	Pass
142	5710 (For U-NII-3)	7.194	8.57	30.00	Pass
151	5755	26.730	14.27	30.00	Pass
159	5795	27.040	14.32	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:

1. 11dBm + 10log (47.44) = 27.76 > 24dBm
2. 11dBm + 10log (48.40) = 27.84 > 24dBm
3. 11dBm + 10log (47.04) = 27.72 > 24dBm
4. 11dBm + 10log (47.11) = 27.73 > 24dBm
5. 11dBm + 10log (47.86) = 27.79 > 24dBm
6. 11dBm + 10log (5725.00 - 5686.89) = 26.81 > 24dBm

802.11ac (VHT80)

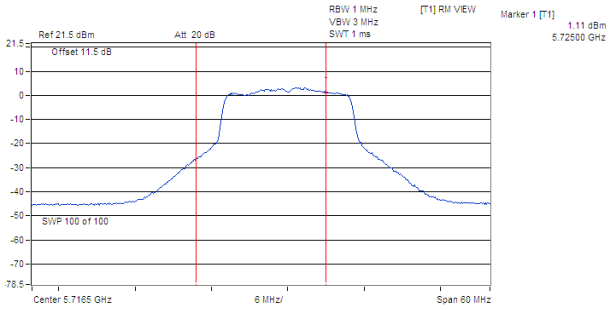
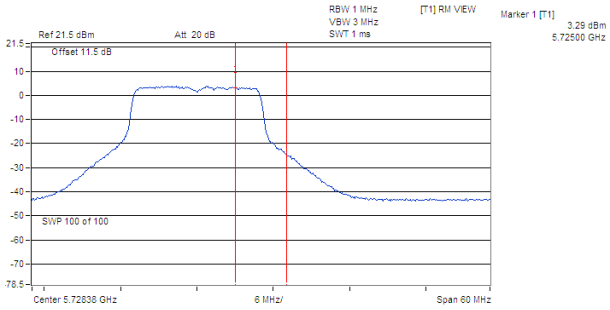
Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	26.730	14.27	24.00	Pass
58	5290	26.792	14.28	24.00	Pass
106	5530	27.102	14.33	24.00	Pass
122	5610	26.002	14.15	24.00	Pass
138	5690 (For U-NII-2C)	25.704	14.10	24.00	Pass
138	5690 (For U-NII-3)	6.902	8.39	30.00	Pass
155	5775	25.942	14.14	30.00	Pass

Note:
For U-NII-2A Band:

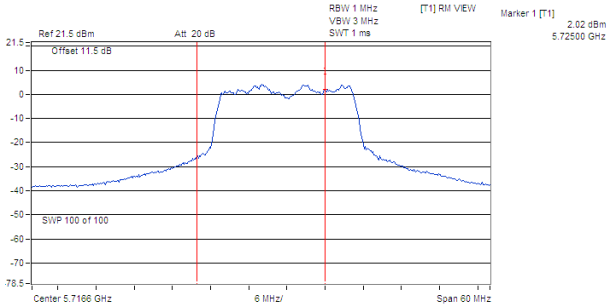
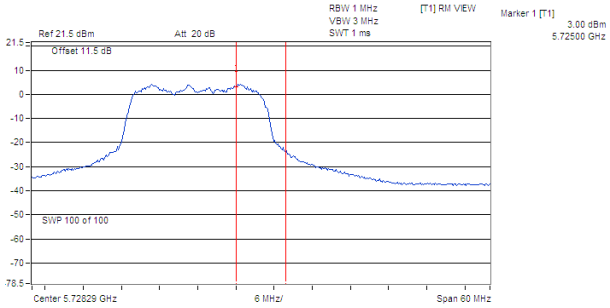
1. 11dBm + 10log (92.80) = 30.67 > 24dBm
2. 11dBm + 10log (92.50) = 30.66 > 24dBm
3. 11dBm + 10log (92.94) = 30.68 > 24dBm
4. 11dBm + 10log (5725.00 - 5644.61) = 30.05 > 24dBm

Straddle channel power plots:

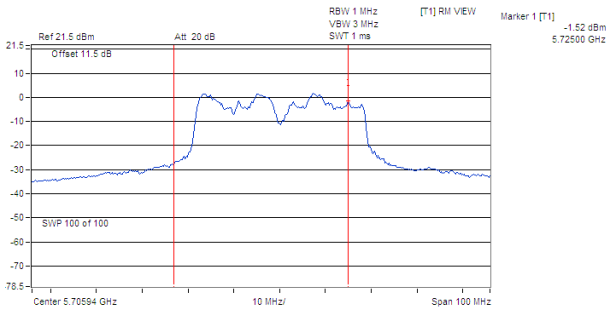
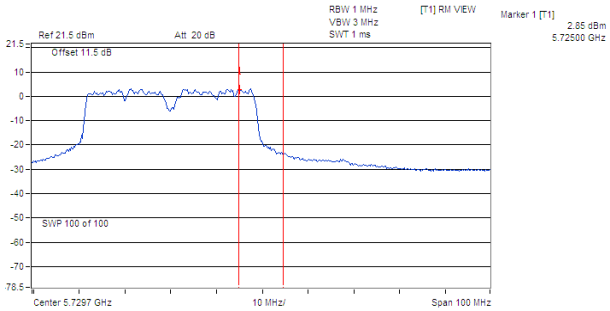
802.11a

CH 144 (For U-NII-2C)	CH 144 (For U-NII-3)
	
TX Channel Bandwidth 16.79 MHz Power 13.50 dBm	TX Channel Bandwidth 6.76 MHz Power 8.50 dBm

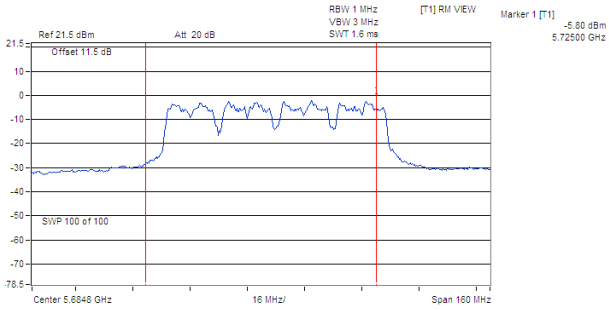
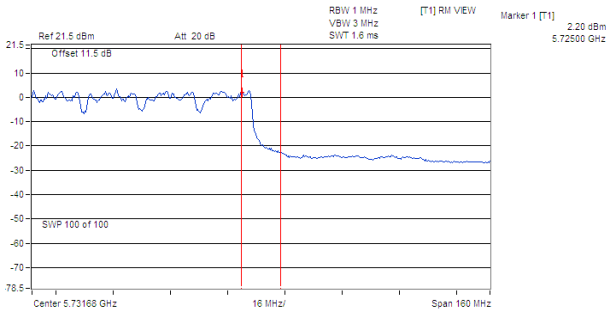
802.11ac (VHT20)

CH 144 (For U-NII-2C)	CH 144 (For U-NII-3)
	
TX Channel Bandwidth 16.79 MHz Power 13.40 dBm	TX Channel Bandwidth 6.59 MHz Power 8.55 dBm

802.11ac (VHT40)

CH 142 (For U-NII-2C)	CH 142 (For U-NII-3)
	
TX Channel Bandwidth 38.11 MHz Power 13.85 dBm	TX Channel Bandwidth 9.4 MHz Power 8.57 dBm

802.11ac (VHT80)

CH 138 (For U-NII-2C)	CH 138 (For U-NII-3)
	
TX Channel Bandwidth 80.39 MHz Power 14.10 dBm	TX Channel Bandwidth 13.36 MHz Power 8.39 dBm

26dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
52	5260	23.87
60	5300	24.13
64	5320	24.21
100	5500	24.24
116	5580	24.62
140	5700	24.65
144	5720 (For U-NII-2C)	16.99
144	5720 (For U-NII-3)	6.76

802.11ac (VHT20)

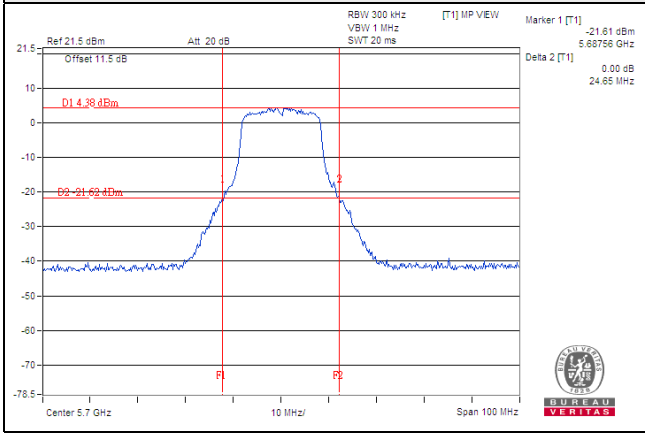
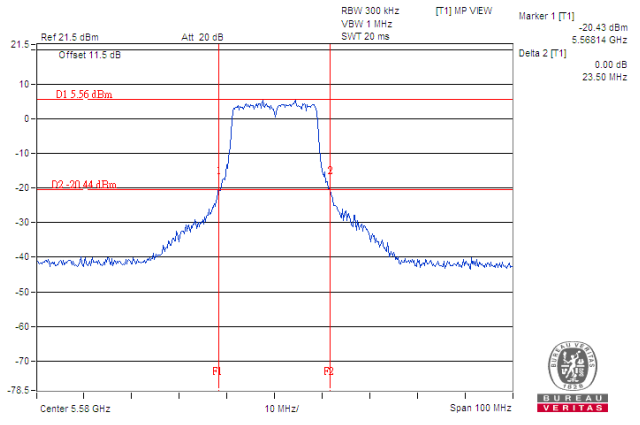
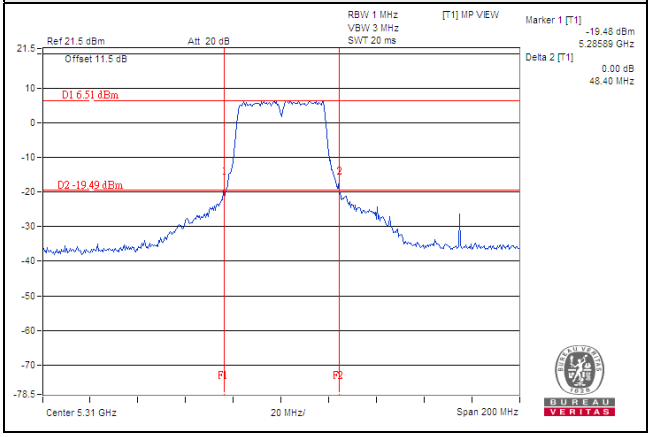
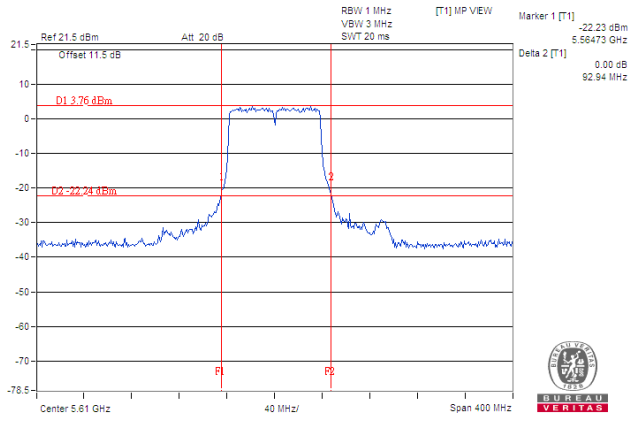
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
52	5260	23.07
60	5300	23.34
64	5320	22.94
100	5500	23.17
116	5580	23.50
140	5700	22.57
144	5720 (For U-NII-2C)	16.79
144	5720 (For U-NII-3)	6.59

802.11ac (VHT40)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
54	5270	47.44
62	5310	48.40
102	5510	47.04
110	5550	47.11
134	5670	47.86
142	5710 (For U-NII-2C)	38.11
142	5710 (For U-NII-3)	9.40

802.11ac (VHT80)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
58	5290	92.80
106	5530	92.50
122	5610	92.94
138	5690 (For U-NII-2C)	80.39
138	5690 (For U-NII-3)	13.36

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

EUT Average Power

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	25.763	14.11
5470~5725	26.424	14.22

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	25.410	14.05
5470~5725	25.763	14.11

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	26.485	14.23
5470~5725	26.730	14.27

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	25.882	14.13
5470~5725	25.942	14.14

802.11ac (VHT40)

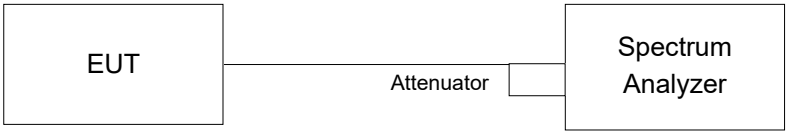
Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	27.040	14.32
5470~5725	27.416	14.38

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	26.792	14.28
5470~5725	27.102	14.33

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 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.

4.4.4 Test Result

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.80
40	5200	16.80
48	5240	16.80
52	5260	16.80
60	5300	16.80
64	5320	16.80
100	5500	16.80
116	5580	16.92
140	5700	16.92
144	5720 (For U-NII-2C)	13.40
144	5720 (For U-NII-3)	3.40
149	5745	16.92
157	5785	16.92
165	5825	16.80

802.11ac (VHT20)

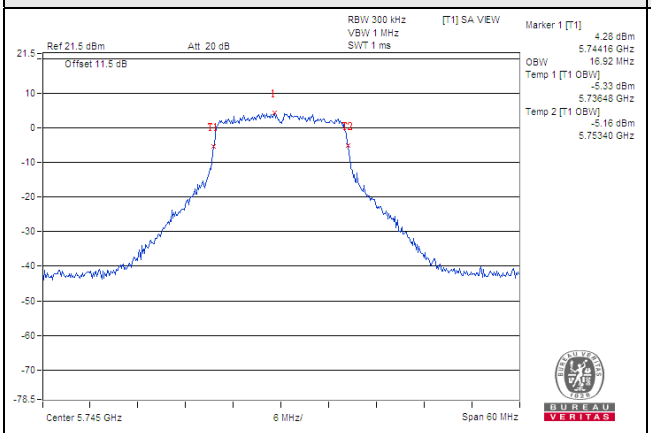
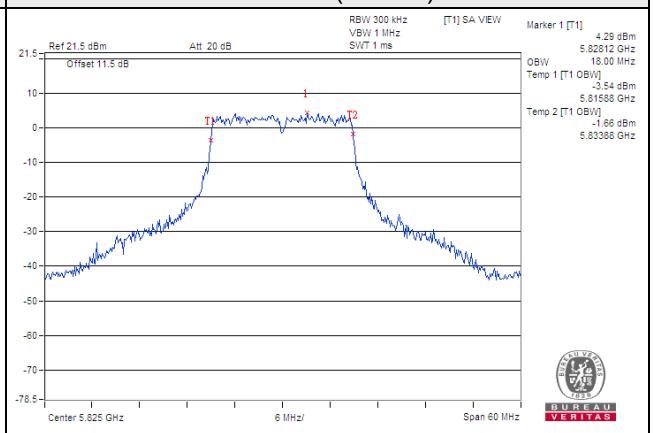
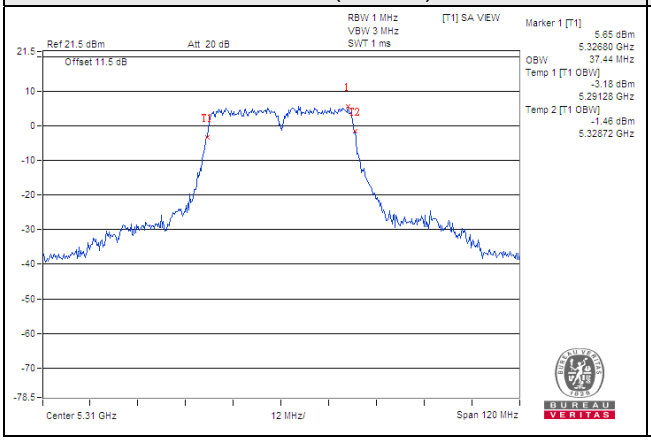
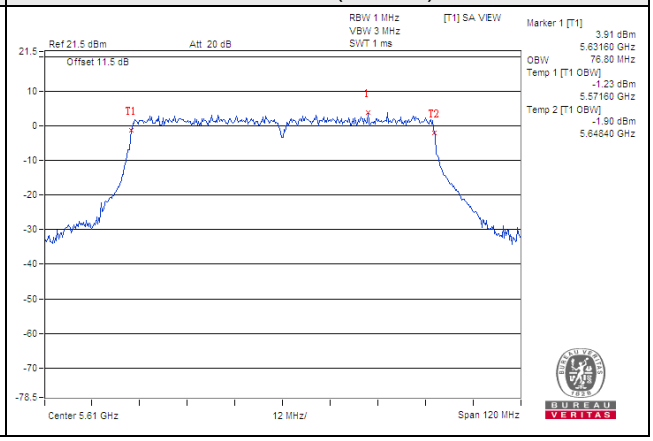
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.00
40	5200	17.88
48	5240	18.00
52	5260	18.00
60	5300	18.00
64	5320	17.88
100	5500	17.88
116	5580	17.88
140	5700	17.88
144	5720 (For U-NII-2C)	14.00
144	5720 (For U-NII-3)	3.88
149	5745	17.88
157	5785	18.00
165	5825	18.00

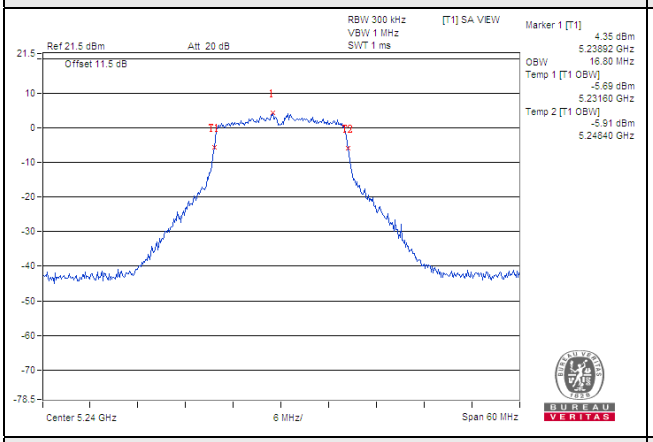
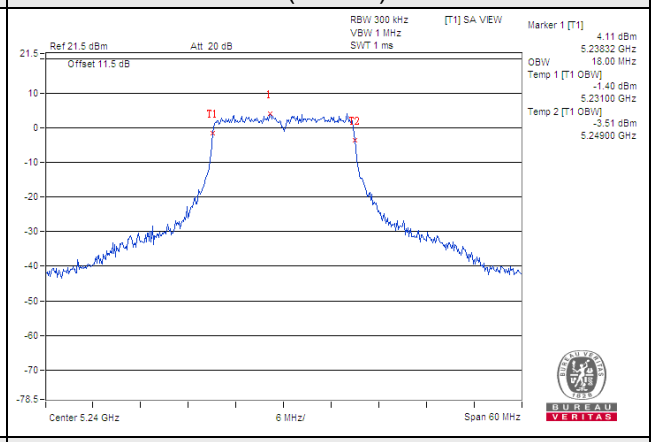
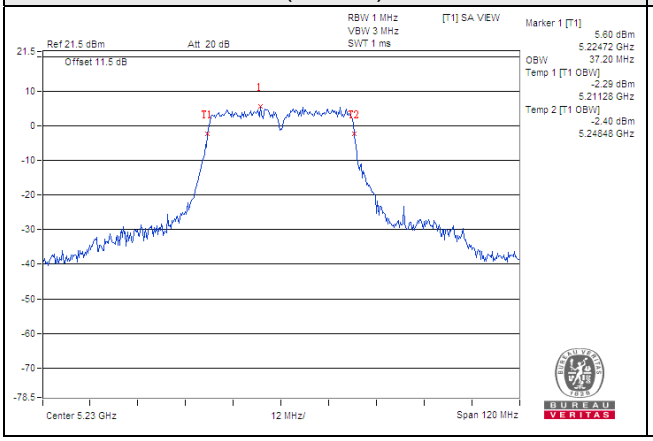
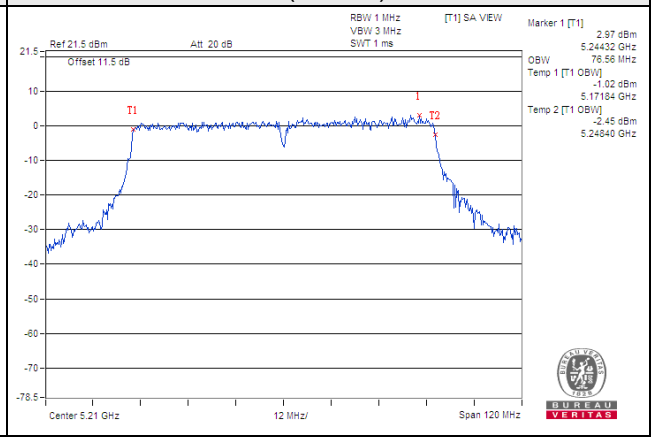
802.11ac (VHT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	37.20
46	5230	37.20
54	5270	37.20
62	5310	37.44
102	5510	37.20
110	5550	37.20
134	5670	37.20
142	5710 (For U-NII-2C)	33.72
142	5710 (For U-NII-3)	3.60
151	5755	37.20
159	5795	37.20

802.11ac (VHT80)

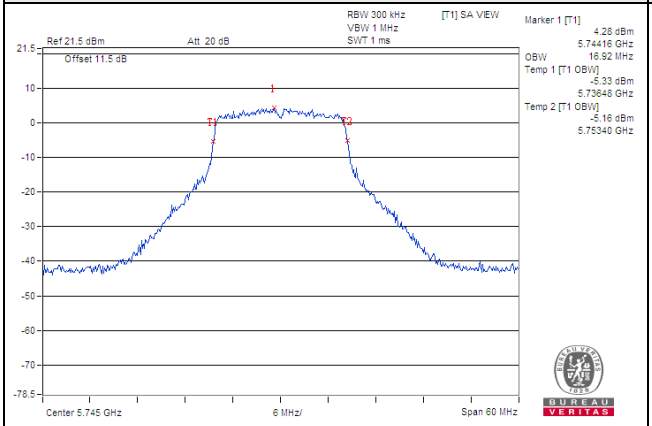
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	76.56
58	5290	76.56
106	5530	76.56
122	5610	76.80
138	5690 (For U-NII-2C)	73.16
138	5690 (For U-NII-3)	3.16
155	5775	76.56

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

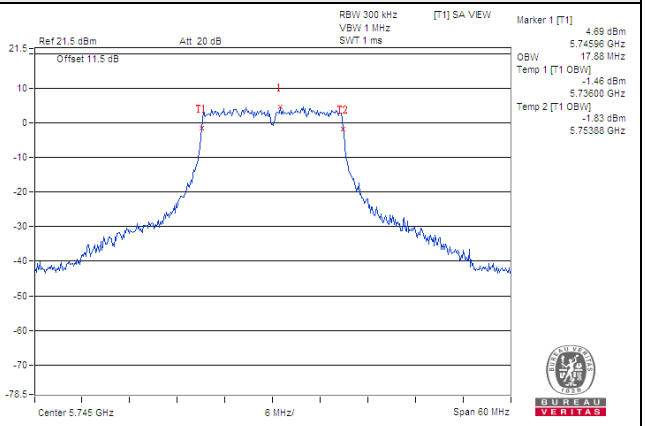
Spectrum Plot for near By DFS Band	
802.11a / CH 48	802.11ac (VHT20) / CH 48
	
802.11ac (VHT40) / CH 46	802.11ac (VHT80) / CH 42
	

Spectrum Plot for near By DFS Band

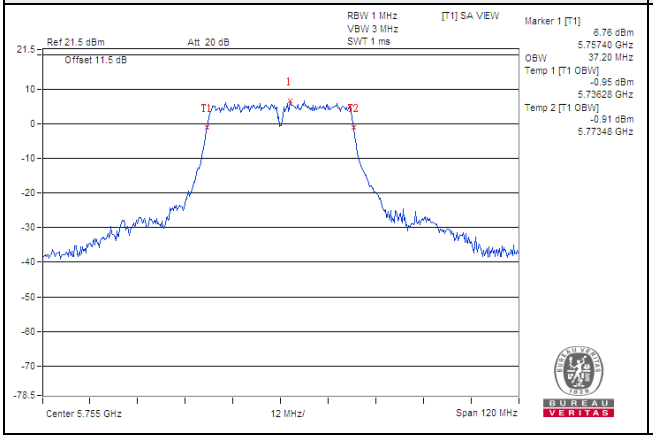
802.11a / CH 149



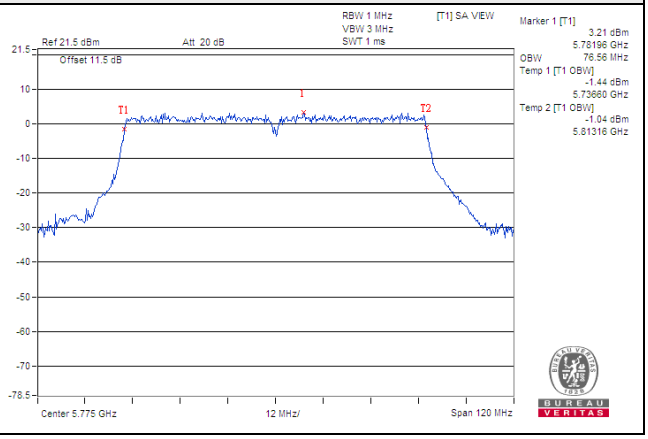
802.11ac (VHT20) / CH 149



802.11ac (VHT40) / CH 151



802.11ac (VHT80) / CH 155

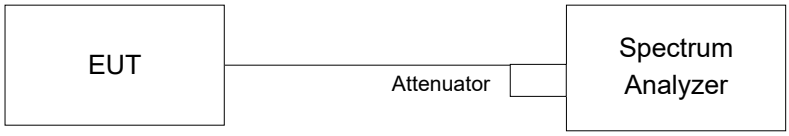


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

For U-NII-1, U-NII-2A and U-NII-2C band:

Duty cycle of test signal is < 98%

Using method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.

b. Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS

c. Set Channel power measure = 1MHz

d. Sweep time = auto, trigger set to “free run”.

e. Trace average at least 100 traces in power averaging mode.

f. Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band:

Duty cycle of test signal is < 98%

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. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.

d. 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)

e. Sweep time = auto, trigger set to “free run”.

f. Trace average at least 100 traces in power averaging mode.

g. Record the max value and add 10 log (1/duty cycle)

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

Same as 4.3.6.

4.5.7 Test Results

For U-NII-1, U-NII-2A and U-NII-2C band:

802.11a

Chan.	Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	0.39	0.15	0.54	11.00	Pass
40	5200	0.45	0.15	0.60	11.00	Pass
48	5240	0.26	0.15	0.41	11.00	Pass
52	5260	0.18	0.15	0.33	11.00	Pass
60	5300	0.62	0.15	0.77	11.00	Pass
64	5320	-0.02	0.15	0.13	11.00	Pass
100	5500	0.70	0.15	0.85	11.00	Pass
116	5580	0.80	0.15	0.95	11.00	Pass
140	5700	0.65	0.15	0.80	11.00	Pass
144	5720 (For U-NII-2C)	0.11	0.15	0.26	11.00	Pass

802.11ac (VHT20)

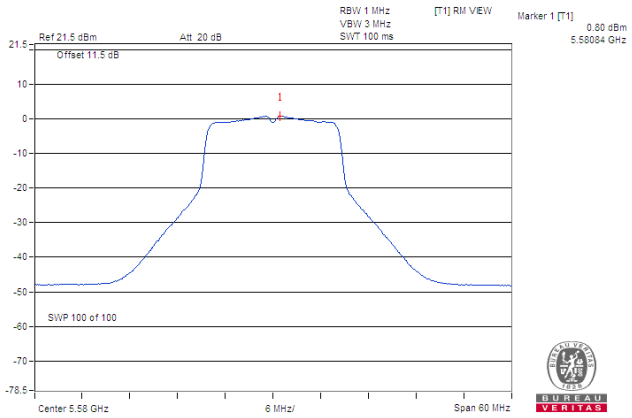
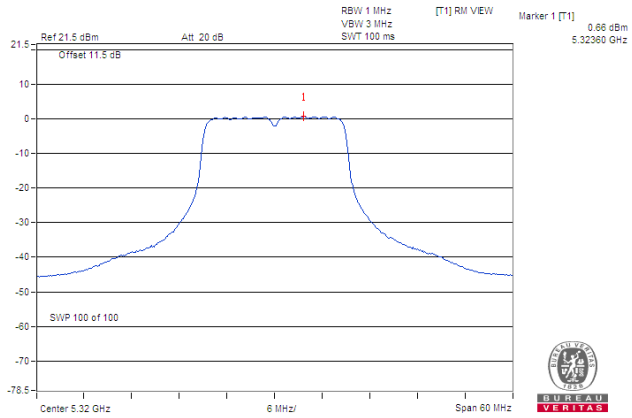
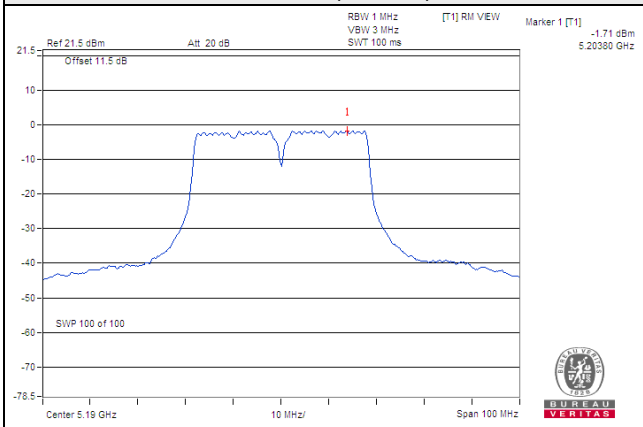
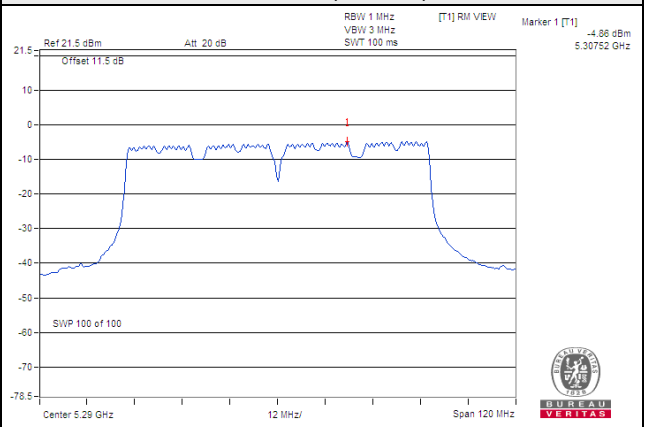
Chan.	Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	0.23	0.13	0.36	11.00	Pass
40	5200	0.24	0.13	0.37	11.00	Pass
48	5240	0.14	0.13	0.27	11.00	Pass
52	5260	0.32	0.13	0.45	11.00	Pass
60	5300	0.28	0.13	0.41	11.00	Pass
64	5320	0.66	0.13	0.79	11.00	Pass
100	5500	0.52	0.13	0.65	11.00	Pass
116	5580	0.50	0.13	0.63	11.00	Pass
140	5700	0.36	0.13	0.49	11.00	Pass
144	5720 (For U-NII-2C)	0.34	0.13	0.47	11.00	Pass

802.11ac (VHT40)

Chan.	Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-1.71	0.28	-1.43	11.00	Pass
46	5230	-1.85	0.28	-1.57	11.00	Pass
54	5270	-2.17	0.28	-1.89	11.00	Pass
62	5310	-1.78	0.28	-1.50	11.00	Pass
102	5510	-2.03	0.28	-1.75	11.00	Pass
110	5550	-2.24	0.28	-1.96	11.00	Pass
134	5670	-2.05	0.28	-1.77	11.00	Pass
142	5710 (For U-NII-2C)	-2.13	0.28	-1.85	11.00	Pass

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-5.12	0.48	-4.64	11.00	Pass
58	5290	-4.86	0.48	-4.38	11.00	Pass
106	5530	-5.18	0.48	-4.70	11.00	Pass
122	5610	-5.05	0.48	-4.57	11.00	Pass
138	5690 (For U-NII-2C)	-5.09	0.48	-4.61	11.00	Pass

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
144	5720 (For U-NII-3)	-9.93	-7.71	0.15	-7.56	30	Pass
149	5745	-8.03	-5.81	0.15	-5.66	30	Pass
157	5785	-7.98	-5.76	0.15	-5.61	30	Pass
165	5825	-7.99	-5.77	0.15	-5.62	30	Pass

802.11ac (VHT20)

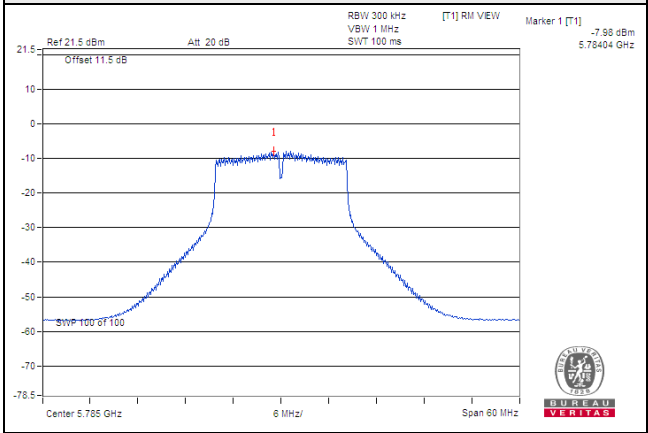
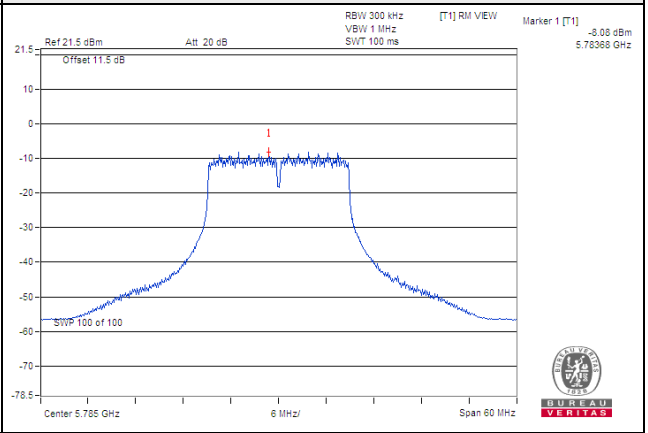
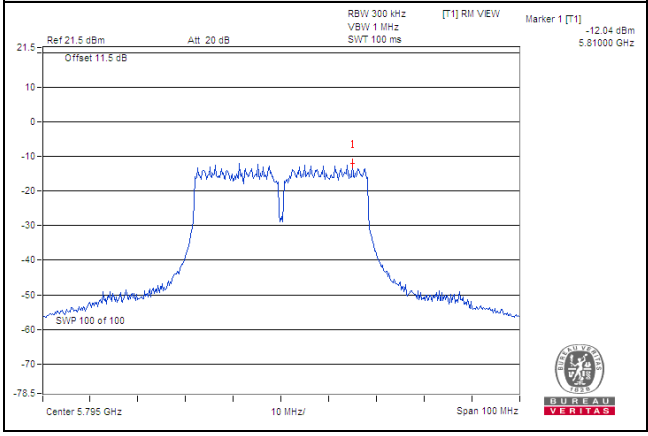
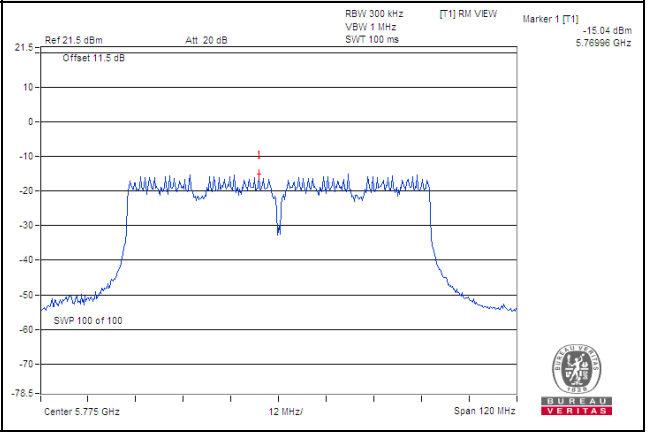
Chan.	Freq. (MHz)	PSD		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
144	5720 (For U-NII-3)	-8.70	-6.48	0.13	-6.35	30	Pass
149	5745	-8.22	-6.00	0.13	-5.87	30	Pass
157	5785	-8.08	-5.86	0.13	-5.73	30	Pass
165	5825	-8.15	-5.93	0.13	-5.80	30	Pass

802.11ac (VHT40)

Chan.	Freq. (MHz)	PSD		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
142	5710 (For U-NII-3)	-12.28	-10.06	0.28	-9.78	30	Pass
151	5755	-12.07	-9.85	0.28	-9.57	30	Pass
159	5795	-12.04	-9.82	0.28	-9.54	30	Pass

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
138	5690 (For U-NII-3)	-15.14	-12.92	0.48	-12.44	30	Pass
155	5775	-15.04	-12.82	0.48	-12.34	30	Pass

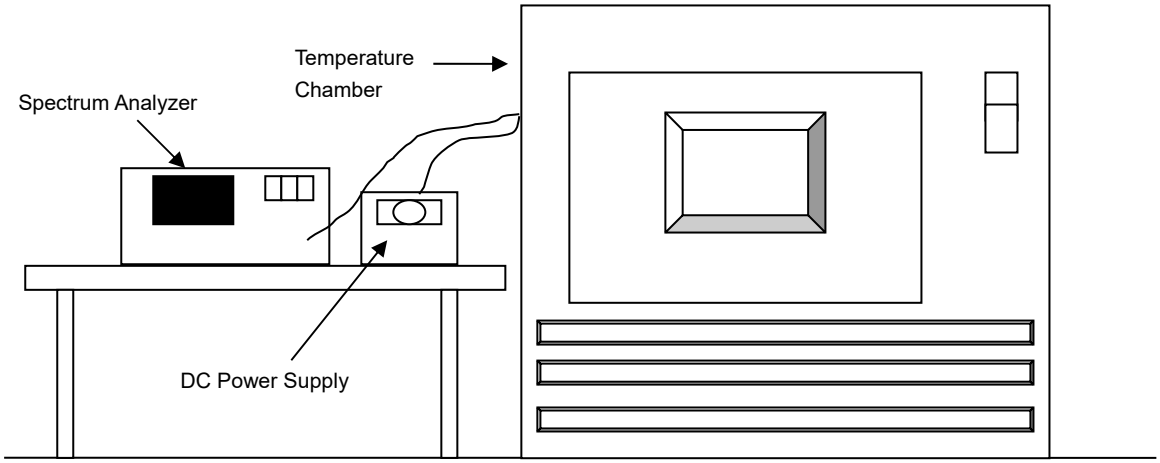
Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

4.6 Frequency Stability

4.6.1 Limits of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 16, 2020	Sep. 15, 2021
Standard Temperature And Humidity Chamber GIANT FORCE	GTH-120-40-CP-AR	MAA1306-019	Sep. 09, 2020	Sep. 08, 2021
Digital Multimeter Fluke	87-III	70360742	Jun. 24, 2021	Jun. 23, 2022
DC Power Supply Topward	6306A	727263	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.6.4 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 every 10 degrees reduction until the lowest temperature achieved.

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.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
60	3.87	5180.005	PASS	5180.0032	PASS	5180.0039	PASS	5180.0039	PASS
50	3.87	5179.9974	PASS	5179.9979	PASS	5179.9992	PASS	5180.002	PASS
40	3.87	5180.0024	PASS	5180.006	PASS	5180.0032	PASS	5180.0043	PASS
30	3.87	5180.0064	PASS	5180.0074	PASS	5180.0081	PASS	5180.0077	PASS
20	3.87	5180.0107	PASS	5180.0132	PASS	5180.0143	PASS	5180.0148	PASS
10	3.87	5179.9836	PASS	5179.9885	PASS	5179.9839	PASS	5179.9879	PASS
0	3.87	5179.9945	PASS	5179.9964	PASS	5179.9956	PASS	5179.9946	PASS
-10	3.87	5180.0011	PASS	5180.0011	PASS	5180.0029	PASS	5179.9993	PASS
-20	3.87	5180.0229	PASS	5180.0242	PASS	5180.0234	PASS	5180.0251	PASS

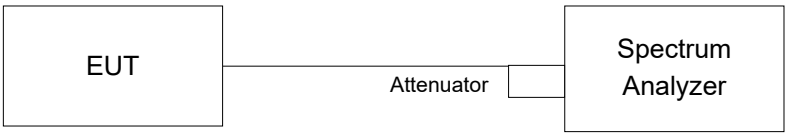
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	4.4505	5180.0103	PASS	5180.0131	PASS	5180.0147	PASS	5180.0143	PASS
	3.87	5180.0107	PASS	5180.0132	PASS	5180.0143	PASS	5180.0148	PASS
	3.2895	5180.0111	PASS	5180.0123	PASS	5180.0143	PASS	5180.0147	PASS

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

a. Set resolution bandwidth (RBW) = 100kHz
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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.7.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 (For U-NII-3)	2.75	0.5	Pass
149	5745	16.01	0.5	Pass
157	5785	16.05	0.5	Pass
165	5825	15.72	0.5	Pass

802.11ac (VHT20)

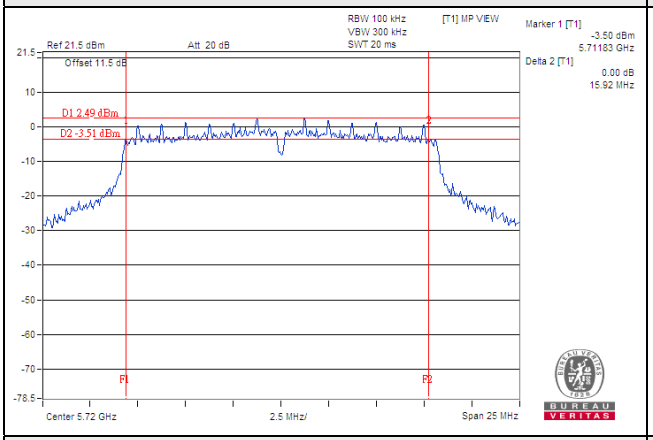
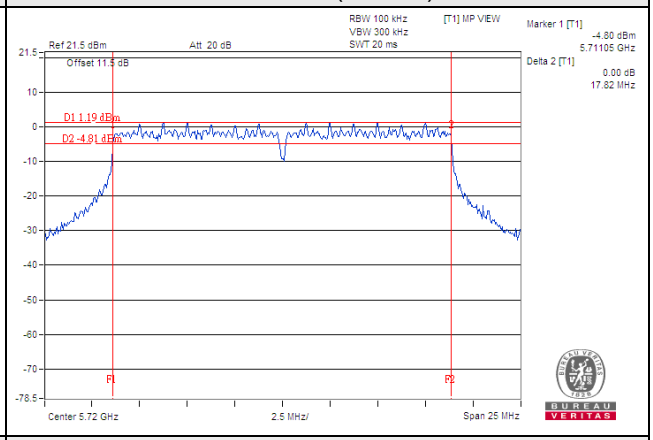
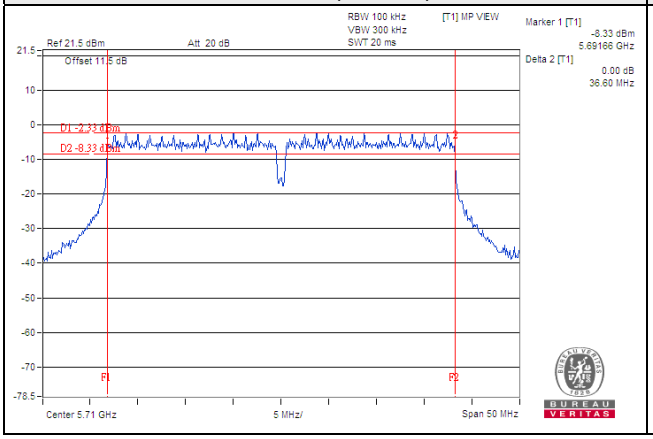
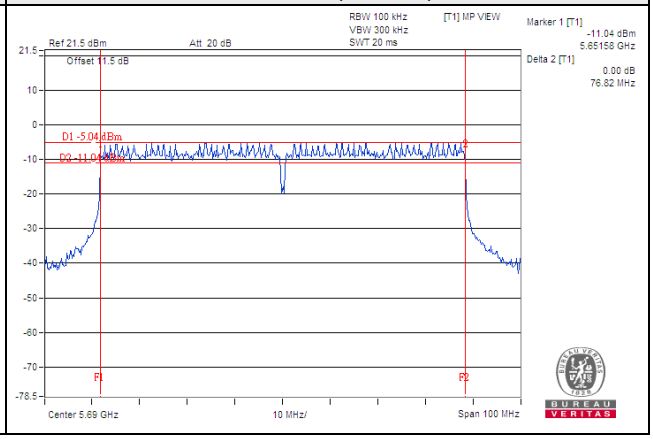
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 (For U-NII-3)	3.87	0.5	Pass
149	5745	17.81	0.5	Pass
157	5785	17.80	0.5	Pass
165	5825	17.81	0.5	Pass

802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
142	5710 (For U-NII-3)	3.26	0.5	Pass
151	5755	36.60	0.5	Pass
159	5795	36.62	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
138	5690 (For U-NII-3)	3.40	0.5	Pass
155	5775	76.75	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

Note:

For CH144 (UNII-3 Band): The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

For CH142 (UNII-3 Band): The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

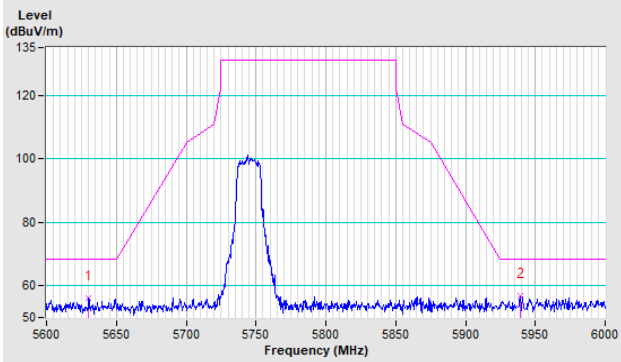
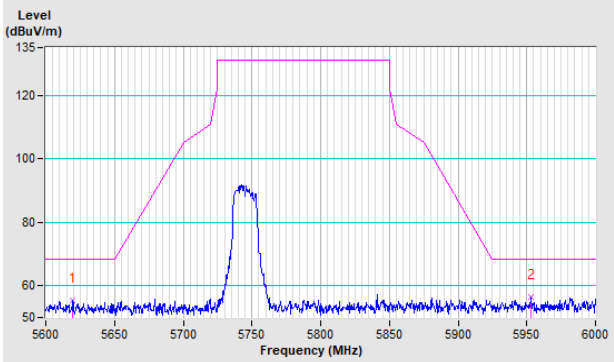
For CH138 (UNII-3 Band): The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

5 Pictures of Test Arrangements

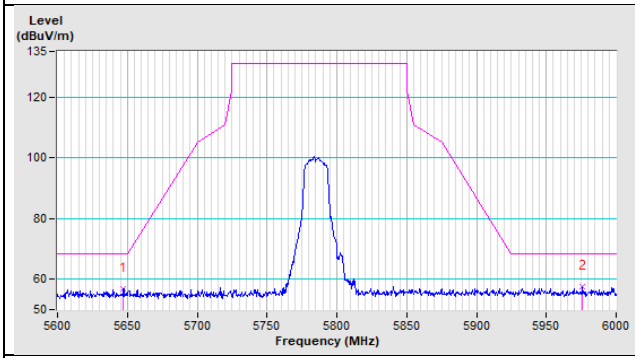
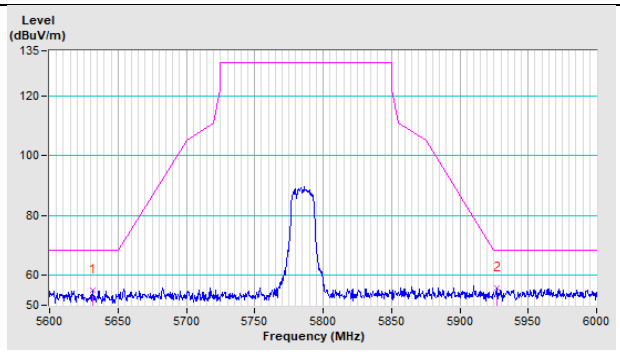
Please refer to the attached file (Test Setup Photo).

Annex A - Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

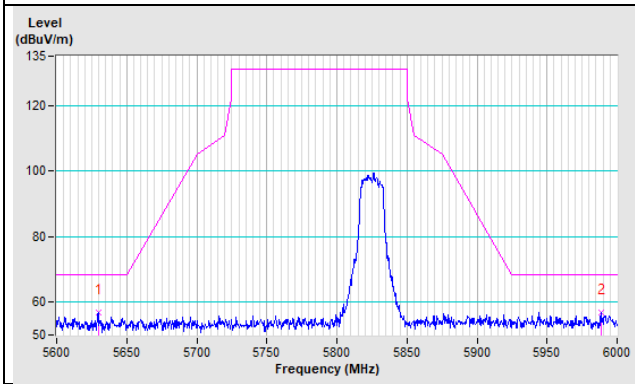
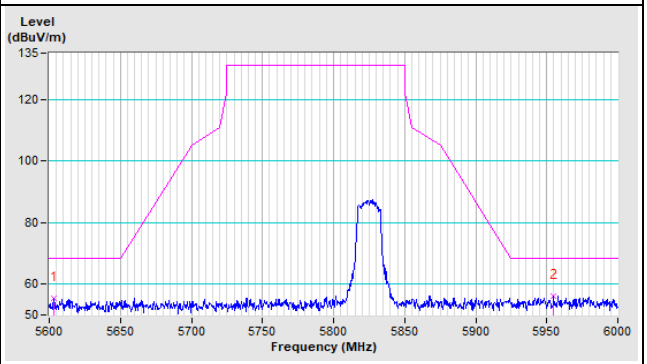
802.11a CH 149：5745 MHz

Horizontal	Vertical
	

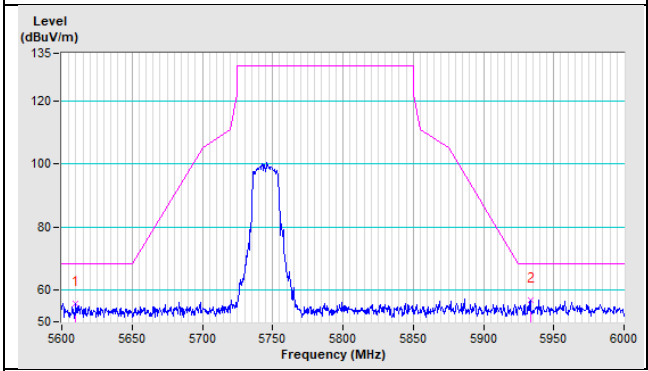
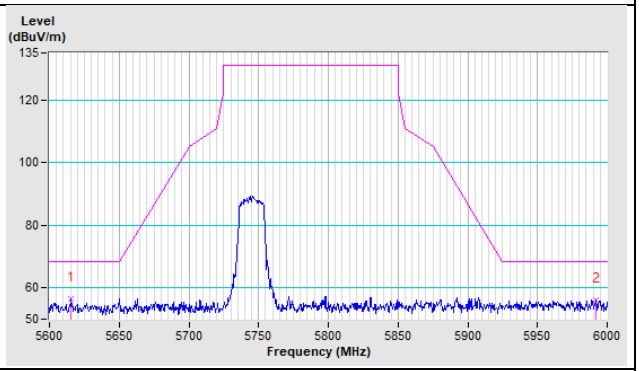
802.11a CH 157：5785 MHz

Horizontal	Vertical
	

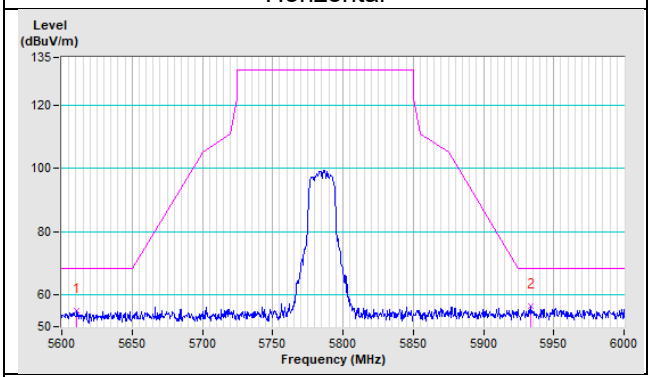
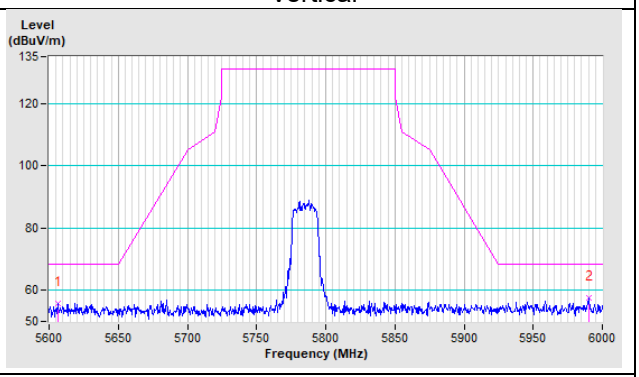
802.11a CH 165：5825 MHz

Horizontal	Vertical
	

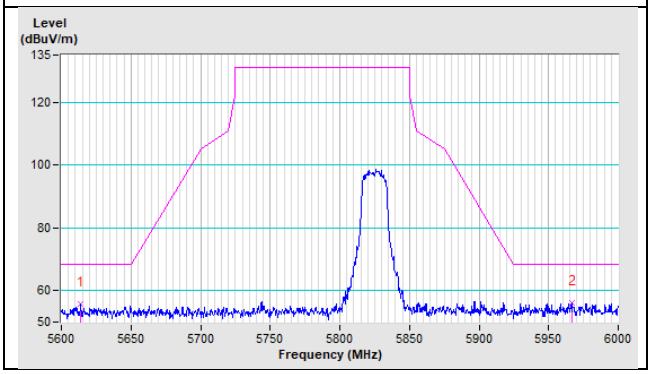
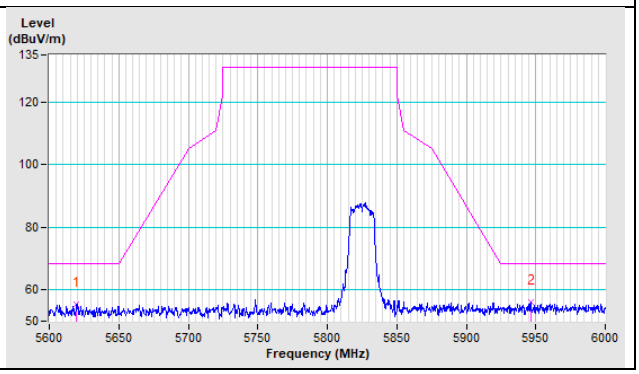
802.11ac (VHT20) CH 149：5745 MHz

Horizontal	Vertical
	

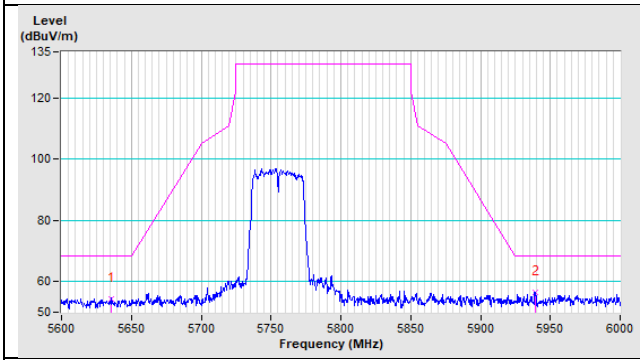
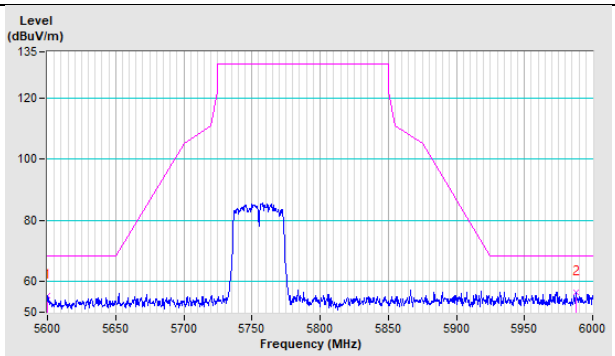
802.11ac (VHT20) CH 157：5785 MHz

Horizontal	Vertical
	

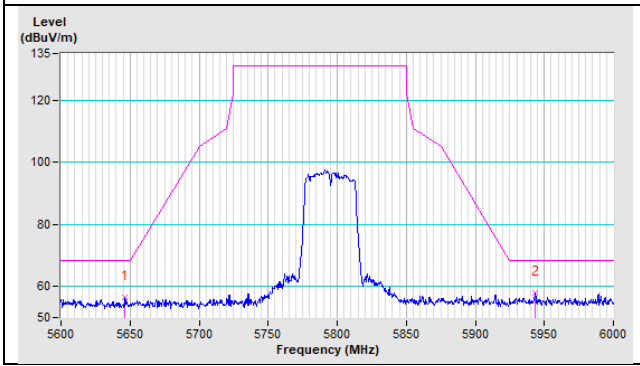
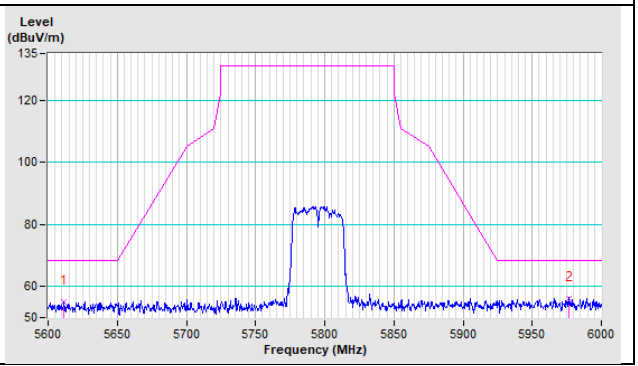
802.11ac (VHT20) CH 165：5825 MHz

Horizontal	Vertical
	

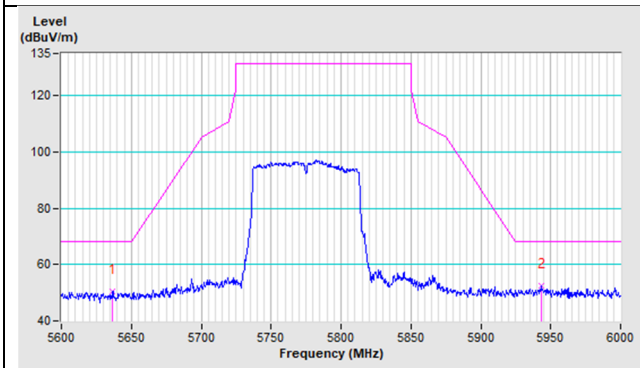
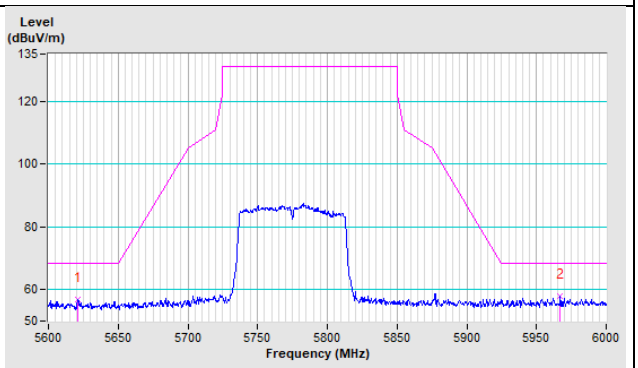
802.11ac (VHT40) CH 151：5755 MHz

Horizontal	Vertical
	

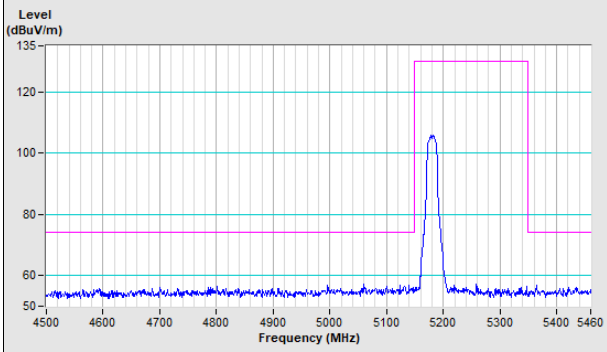
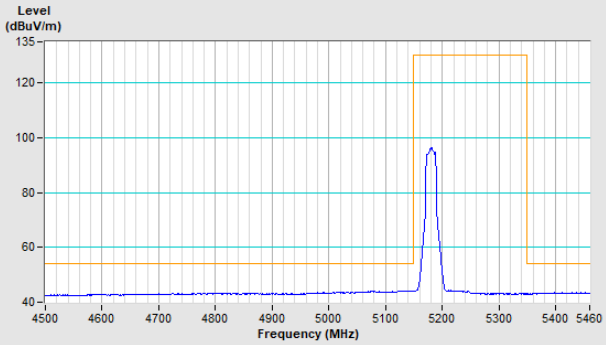
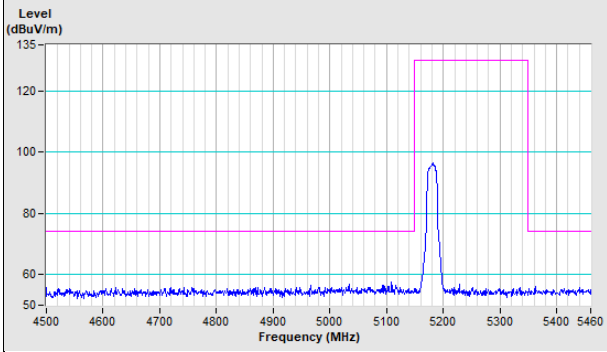
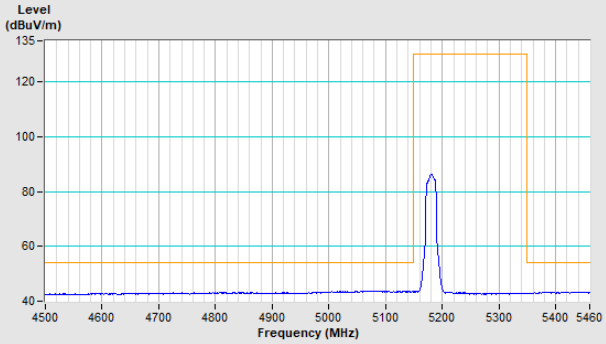
802.11ac (VHT40) CH 159：5795 MHz

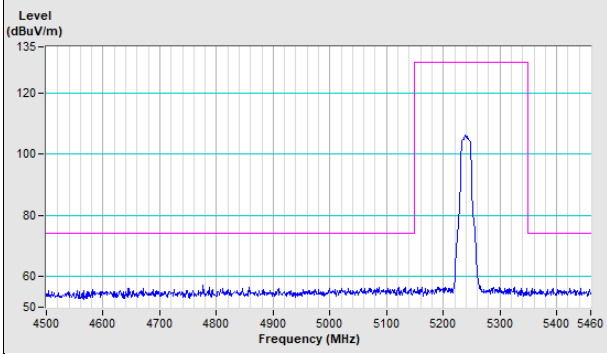
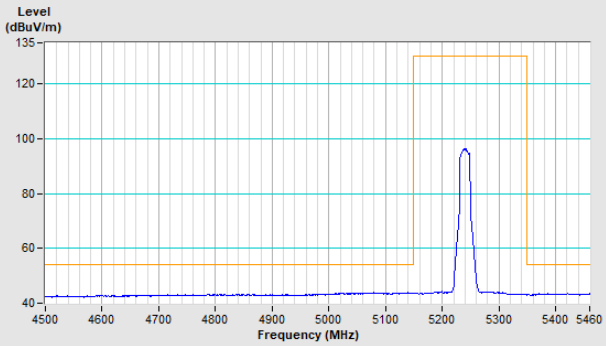
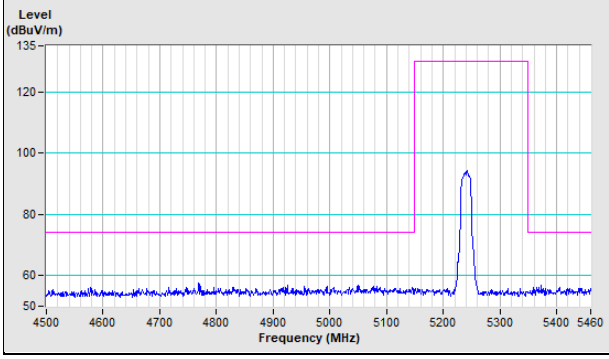
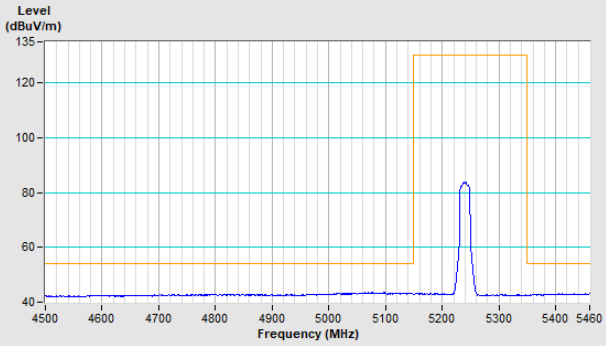
Horizontal	Vertical
	

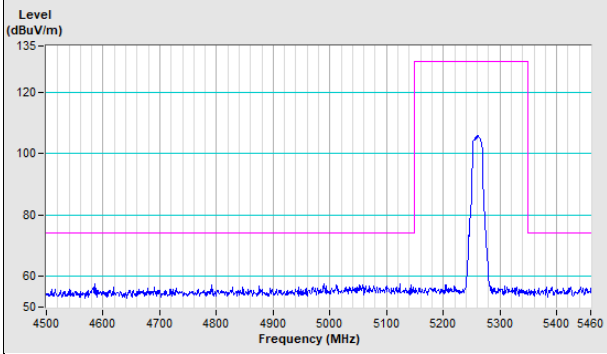
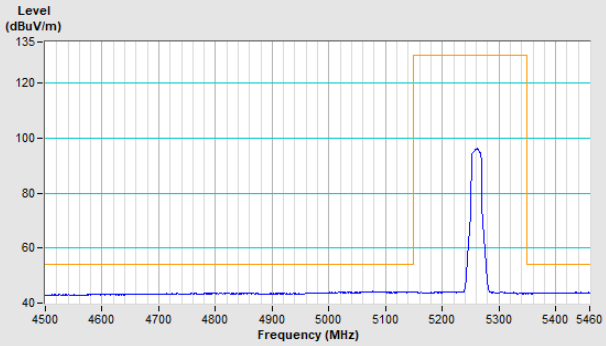
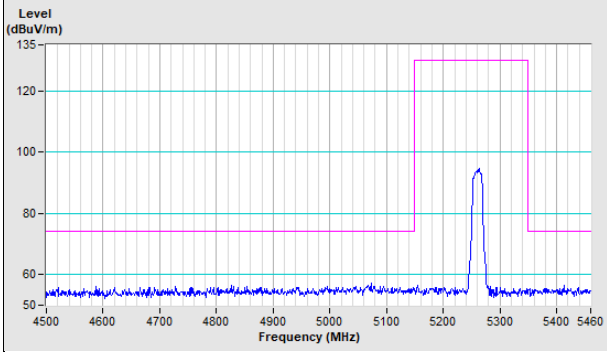
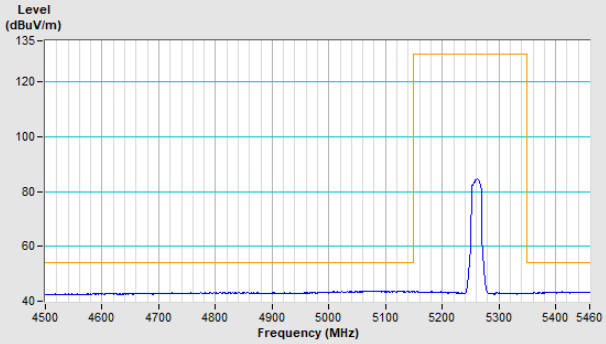
802.11ac (VHT80) CH 155：5775 MHz

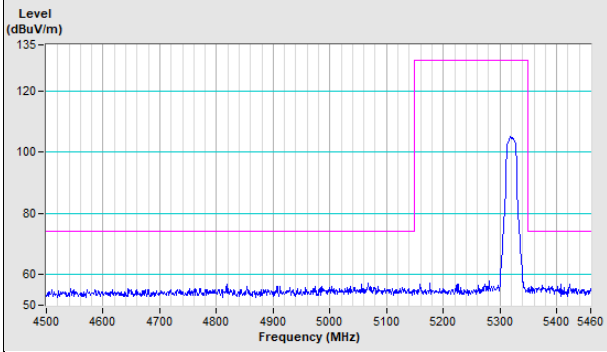
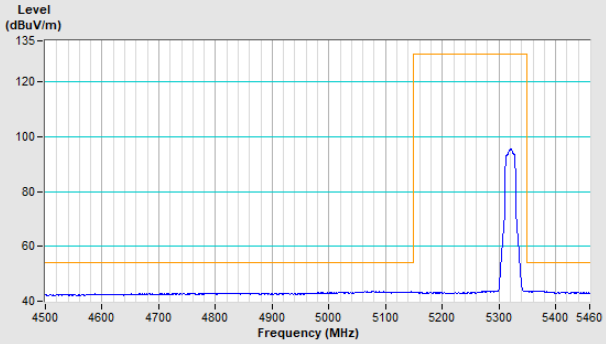
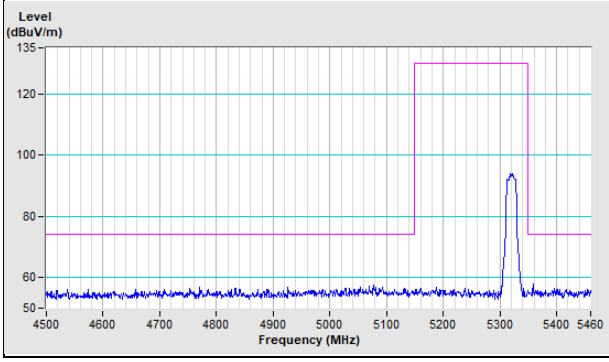
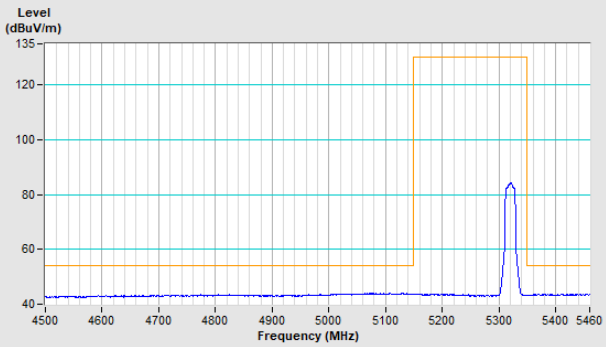
Horizontal	Vertical
	

Annex B - Band Edge Measurement

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

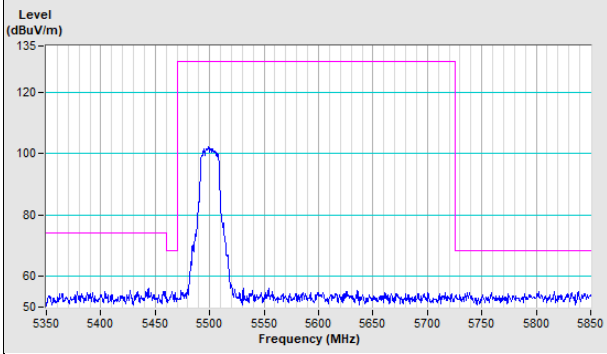
802.11a Channel 48	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11a Channel 52	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

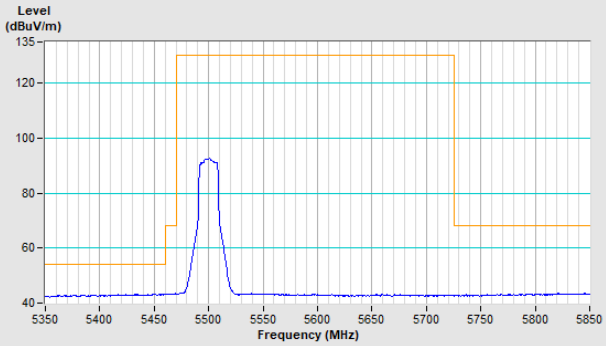
802.11a Channel 64	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11a Channel 100

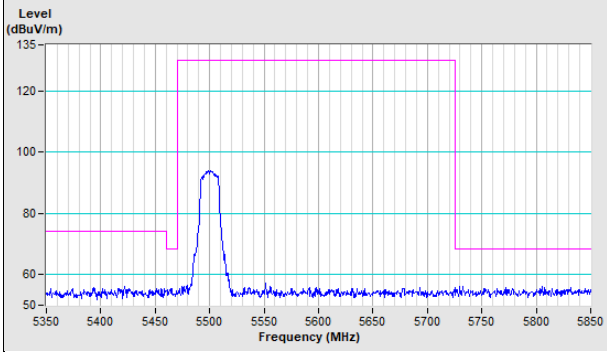
Horizontal (Peak)



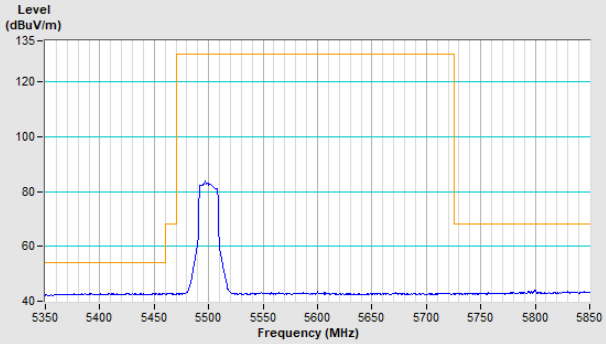
Horizontal (Average)



Vertical (Peak)

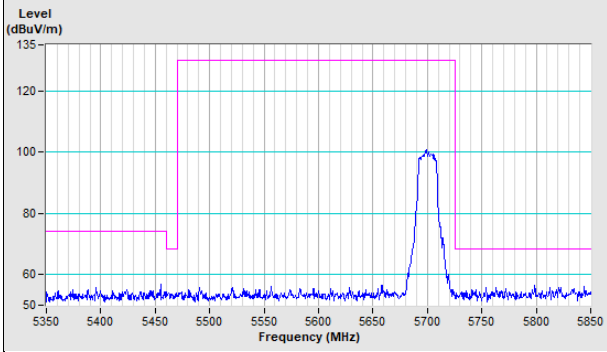


Vertical (Average)

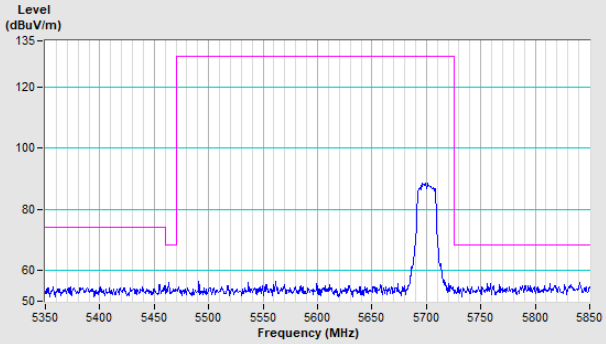


802.11a Channel 140

Horizontal (Peak)

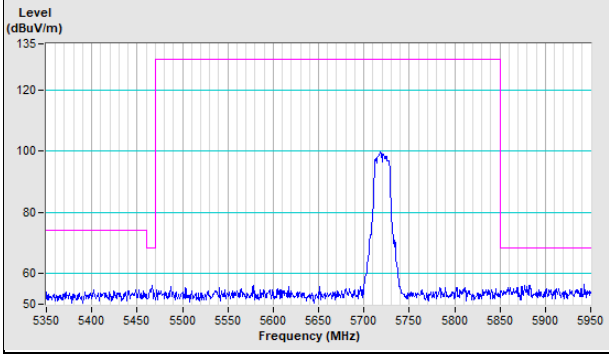


Vertical (Peak)

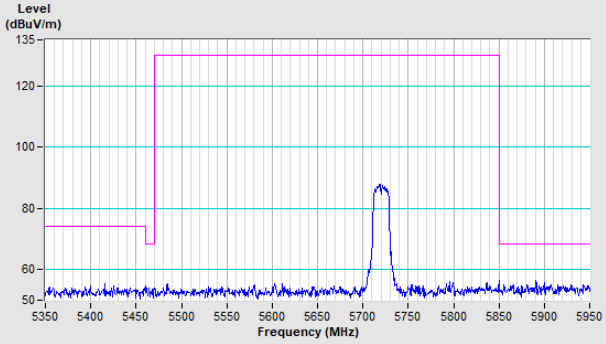


802.11a Channel 144

Horizontal (Peak)

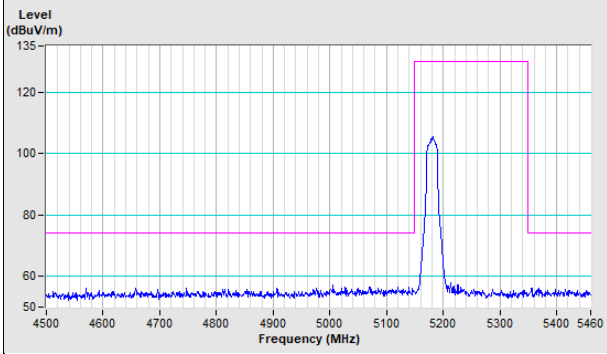


Vertical (Peak)

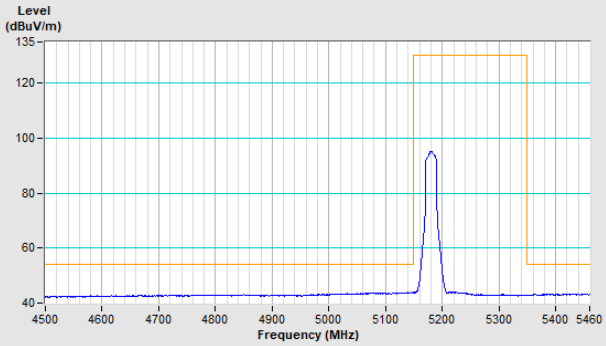


802.11ac (VHT20) Channel 36

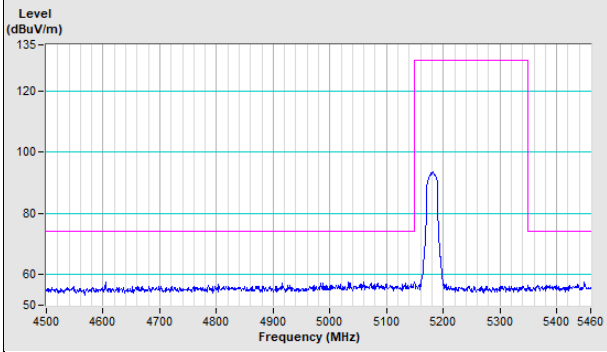
Horizontal (Peak)



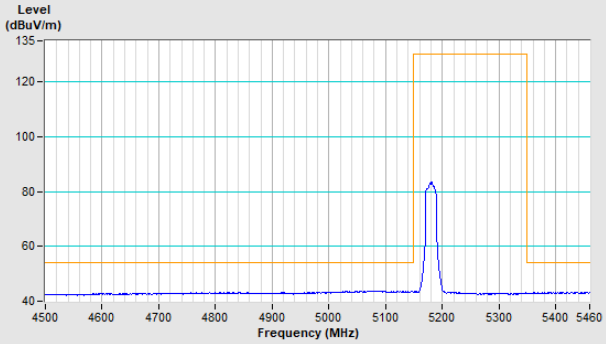
Horizontal (Average)



Vertical (Peak)

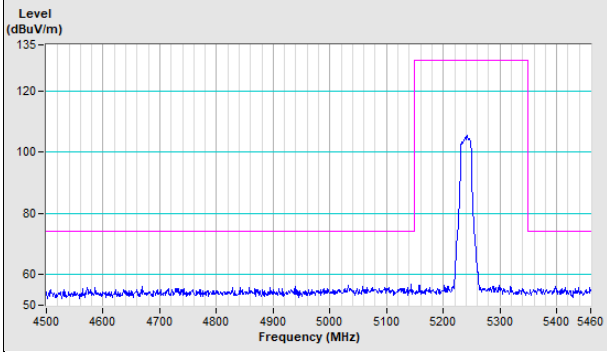


Vertical (Average)

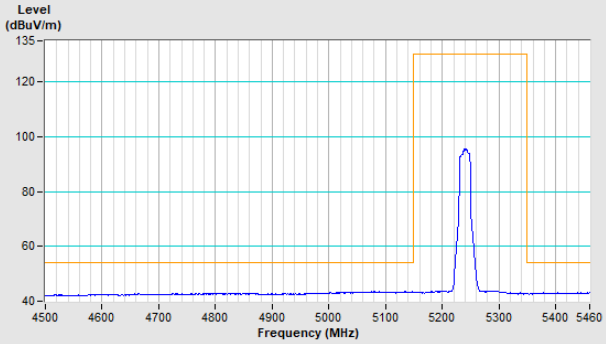


802.11ac (VHT20) Channel 48

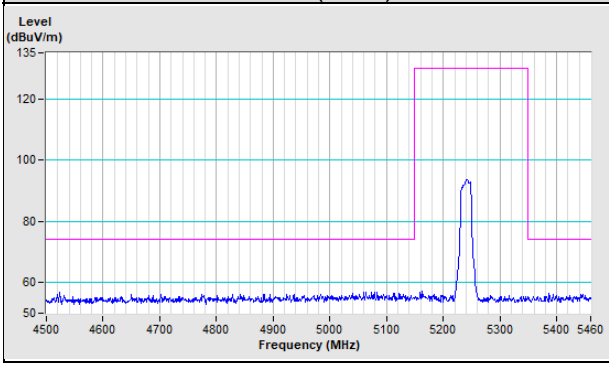
Horizontal (Peak)



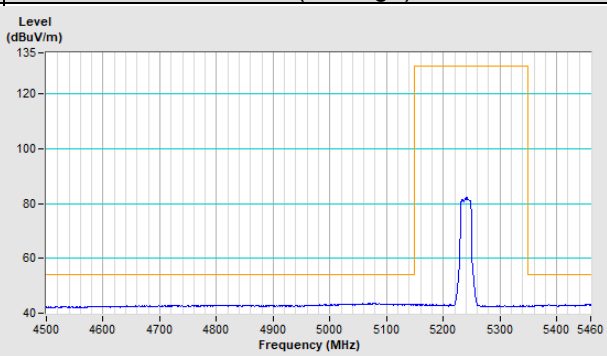
Horizontal (Average)

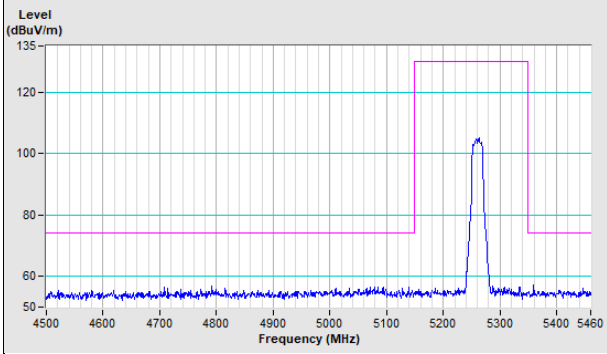
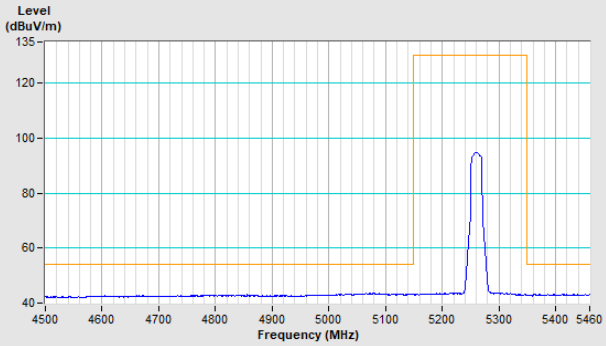
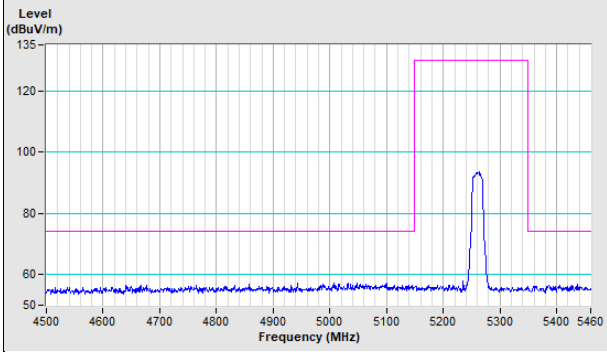
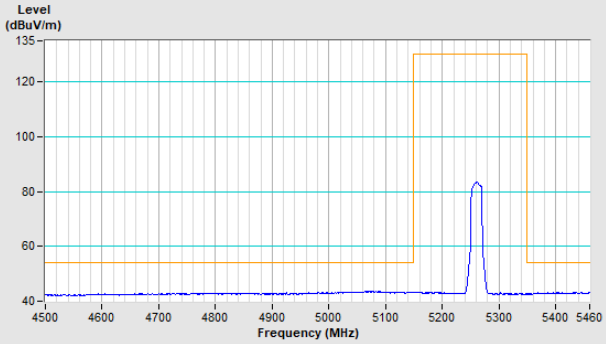


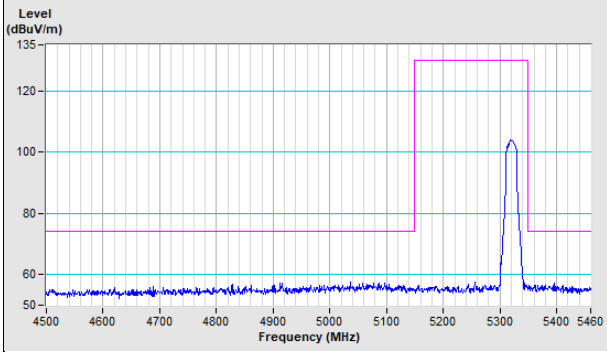
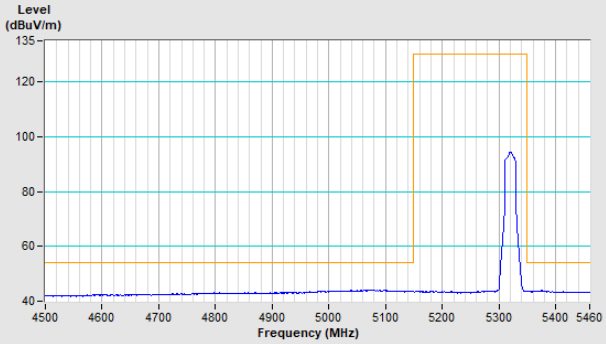
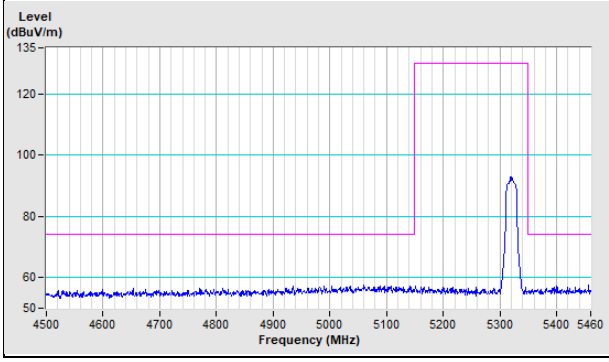
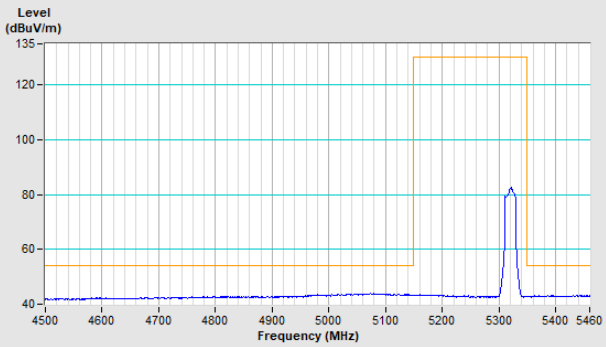
Vertical (Peak)



Vertical (Average)

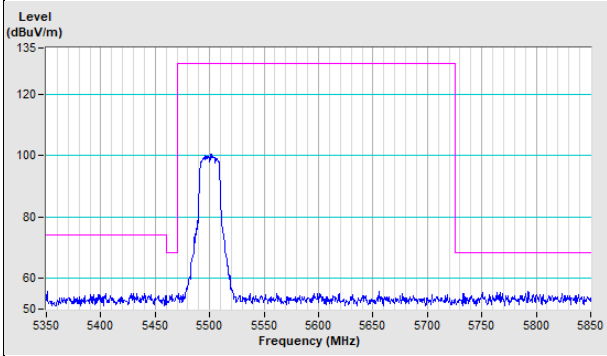


802.11ac (VHT20) Channel 52	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

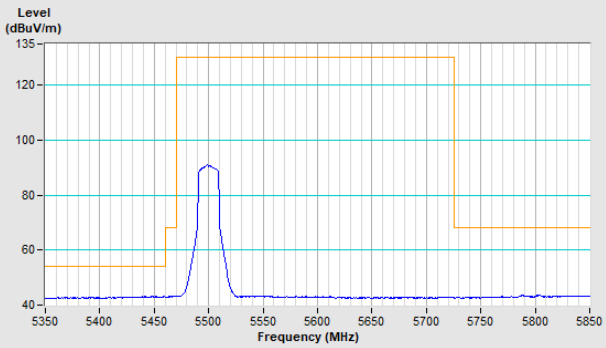
802.11ac (VHT20) Channel 64	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT20) Channel 100

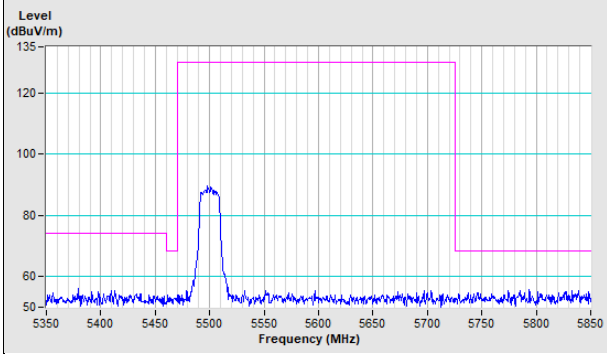
Horizontal (Peak)



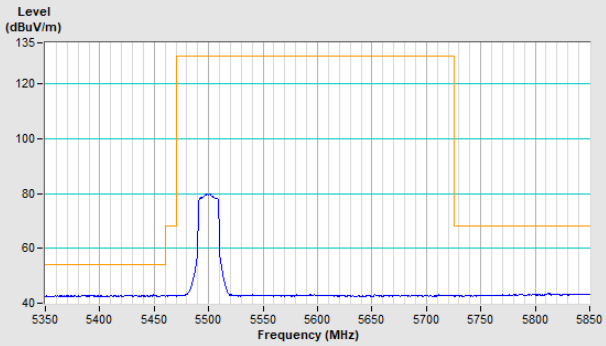
Horizontal (Average)



Vertical (Peak)

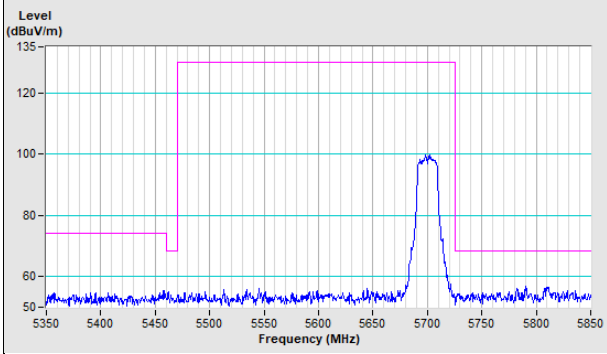


Vertical (Average)

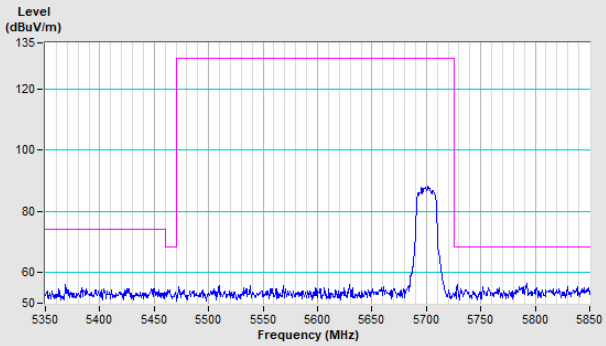


802.11ac (VHT20) Channel 140

Horizontal (Peak)

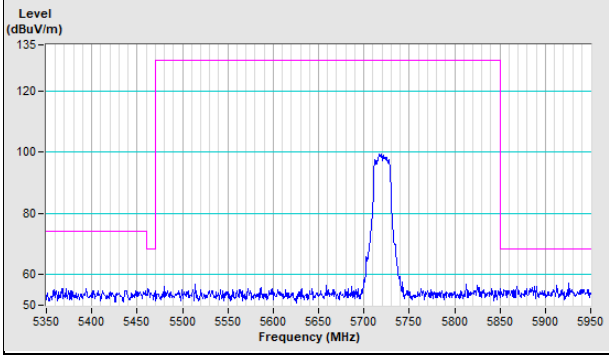


Vertical (Peak)

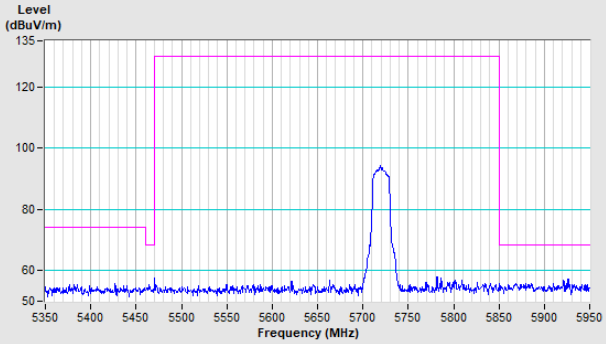


802.11ac (VHT20) Channel 144

Horizontal (Peak)

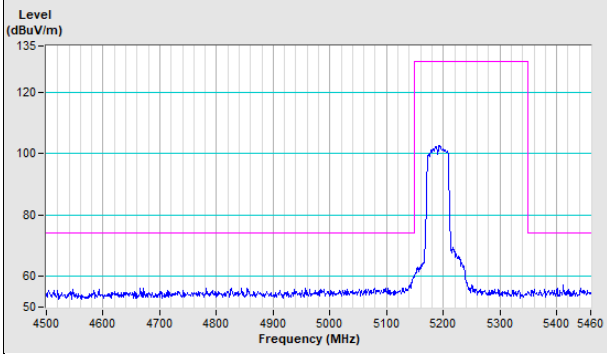


Vertical (Peak)

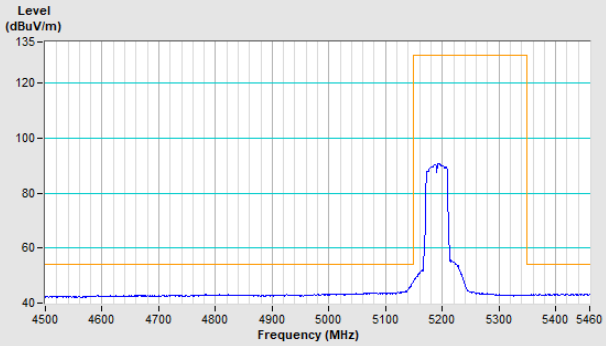


802.11ac (VHT40) Channel 38

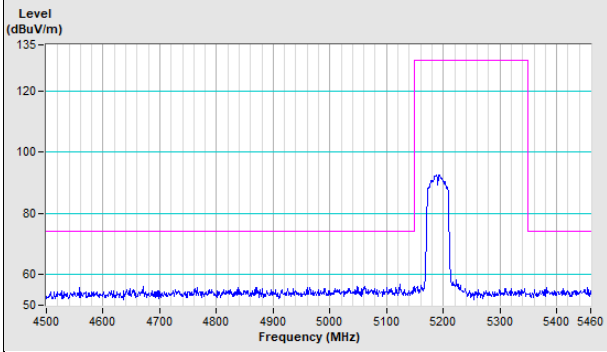
Horizontal (Peak)



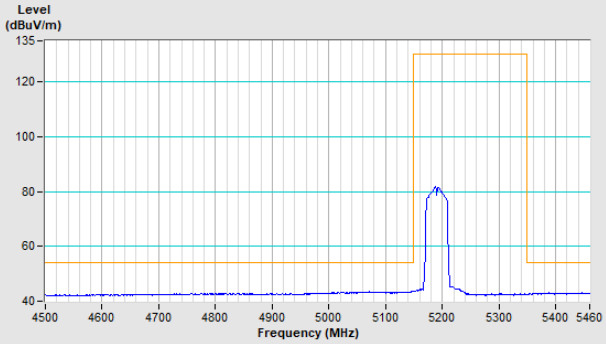
Horizontal (Average)



Vertical (Peak)

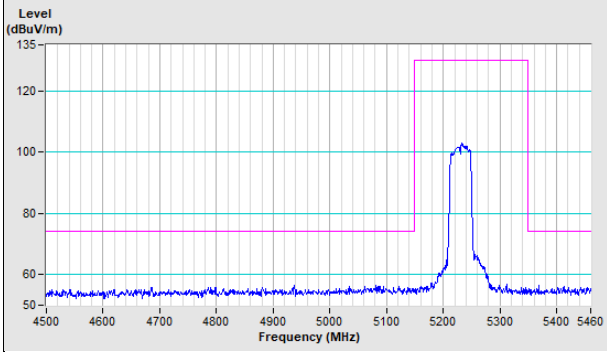


Vertical (Average)

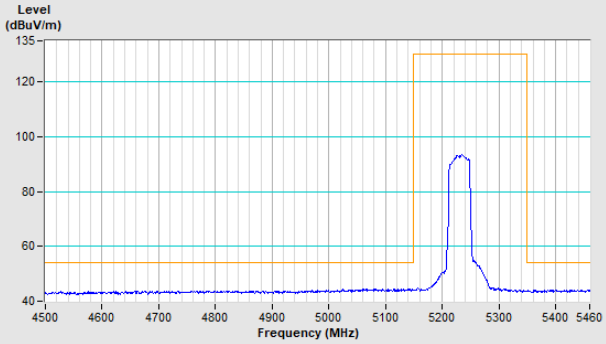


802.11ac (VHT40) Channel 46

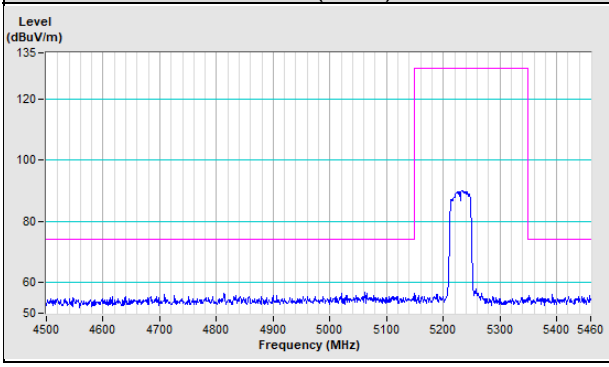
Horizontal (Peak)



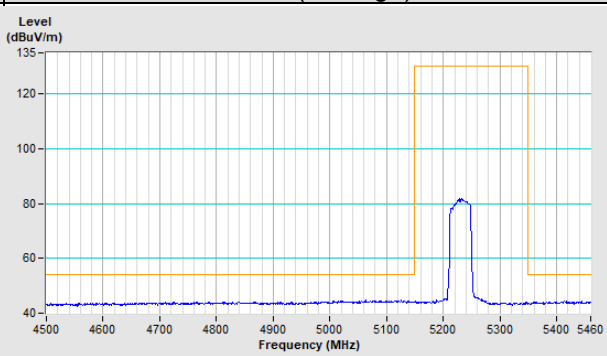
Horizontal (Average)



Vertical (Peak)

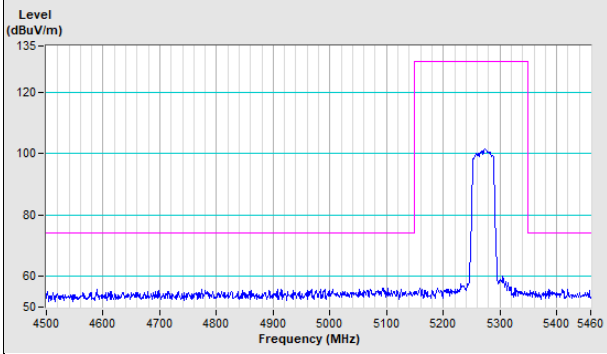


Vertical (Average)

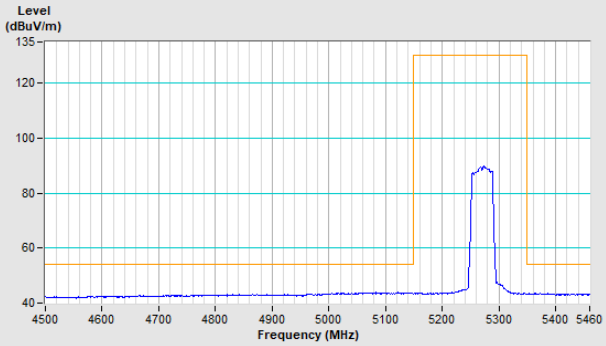


802.11ac (VHT40) Channel 54

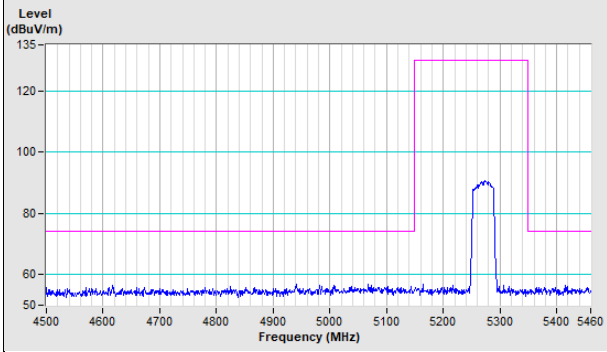
Horizontal (Peak)



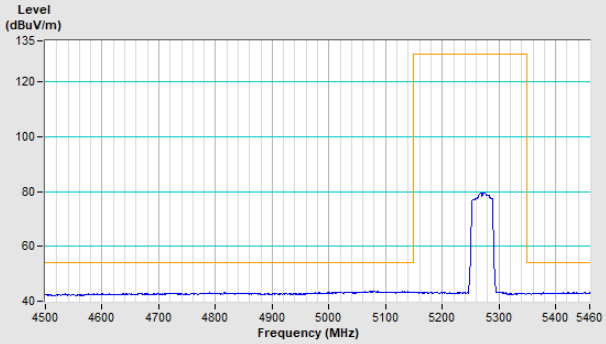
Horizontal (Average)



Vertical (Peak)

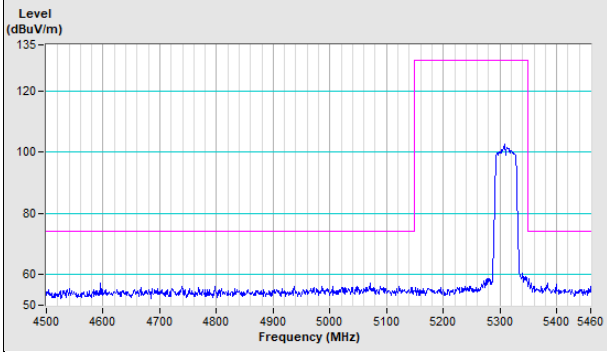


Vertical (Average)

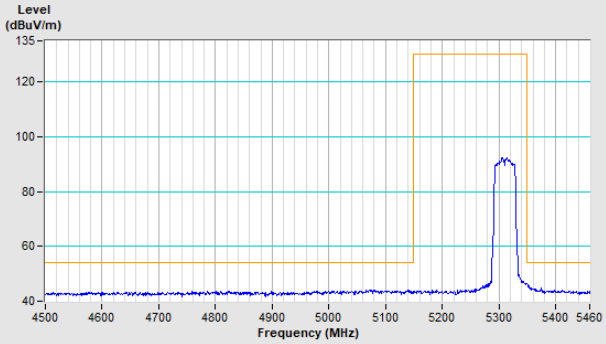


802.11ac (VHT40) Channel 62

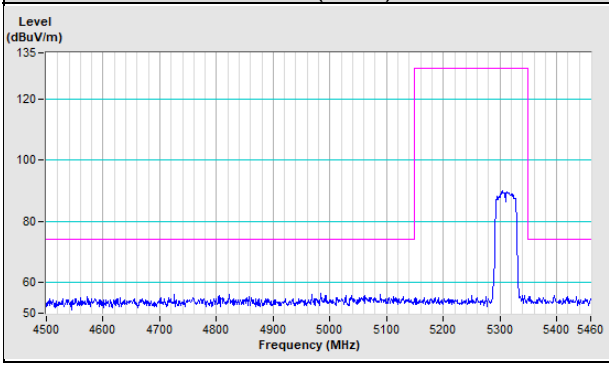
Horizontal (Peak)



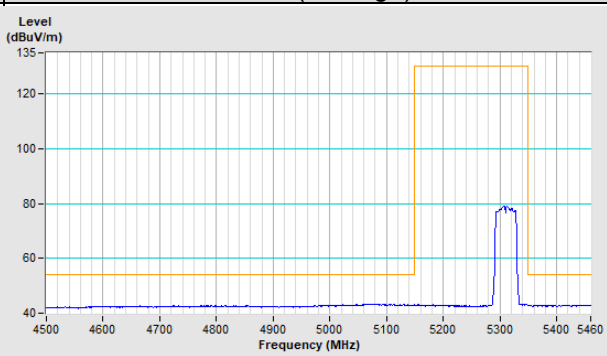
Horizontal (Average)



Vertical (Peak)

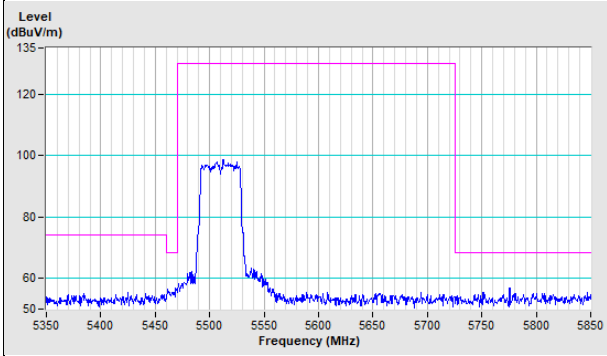


Vertical (Average)

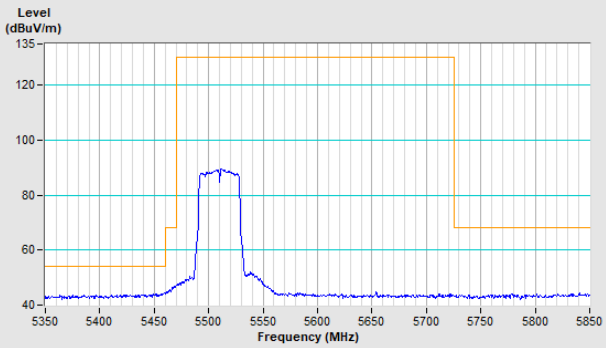


802.11ac (VHT40) Channel 102

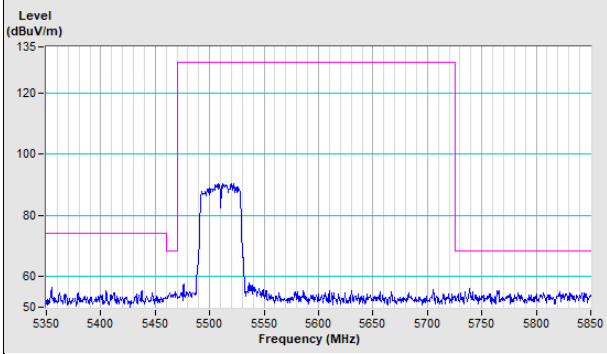
Horizontal (Peak)



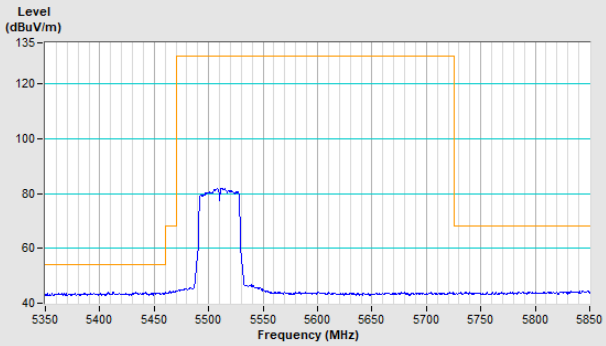
Horizontal (Average)



Vertical (Peak)

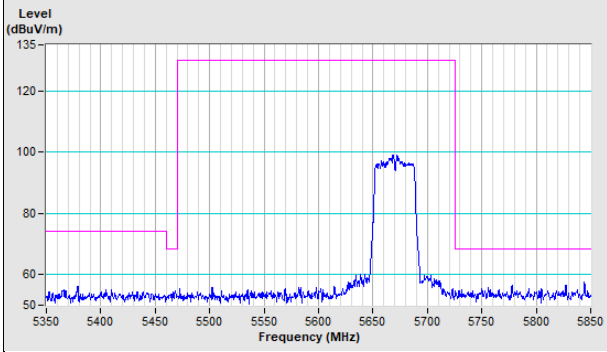


Vertical (Average)

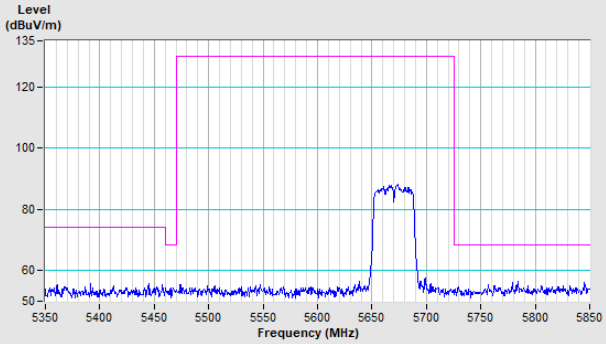


802.11ac (VHT40) Channel 134

Horizontal (Peak)

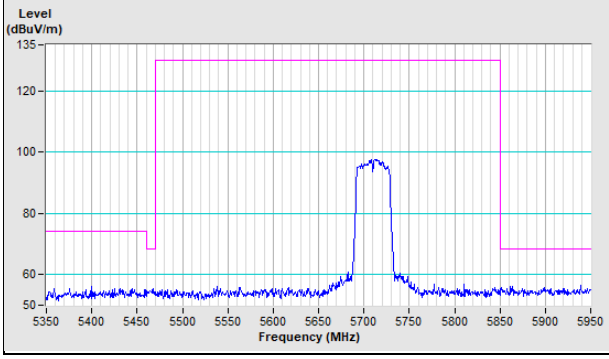


Vertical (Peak)

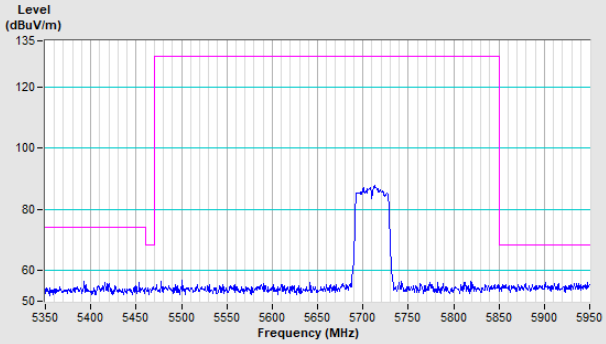


802.11ac (VHT40) Channel 142

Horizontal (Peak)

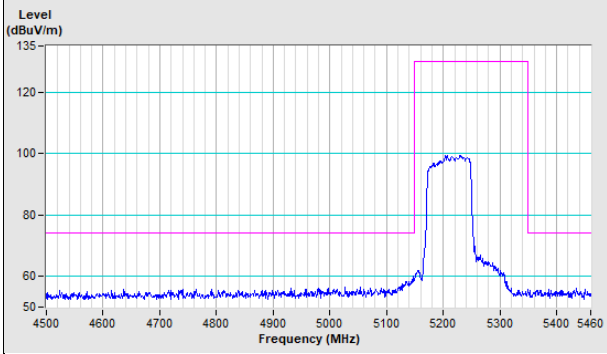


Vertical (Peak)

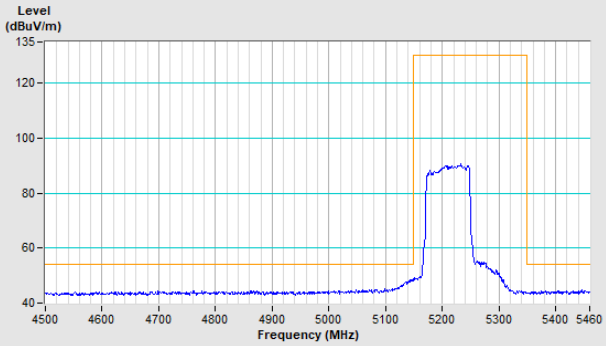


802.11ac (VHT80) Channel 42

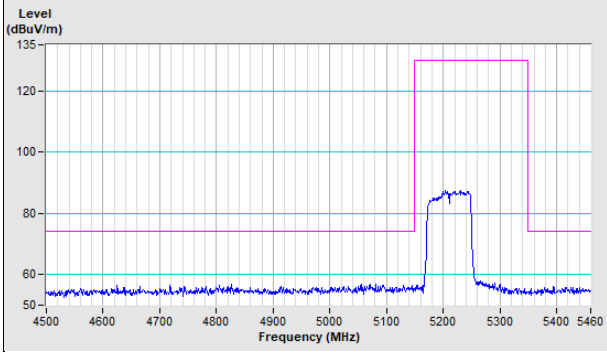
Horizontal (Peak)



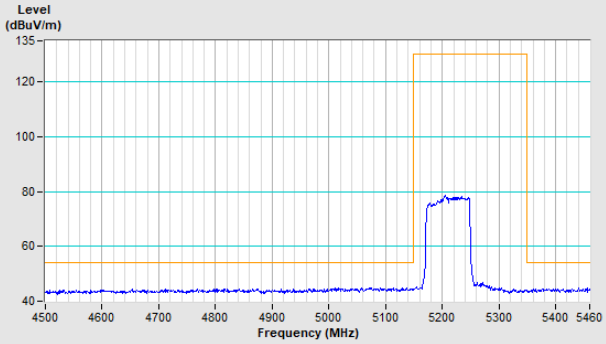
Horizontal (Average)



Vertical (Peak)

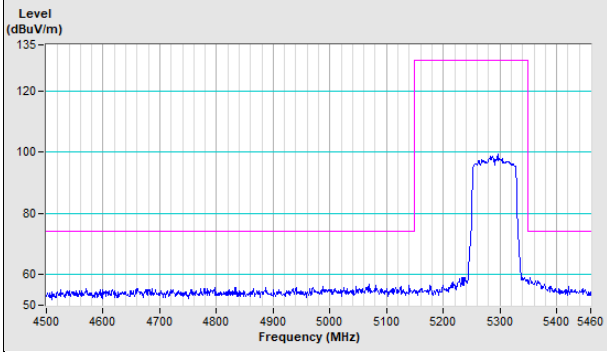


Vertical (Average)

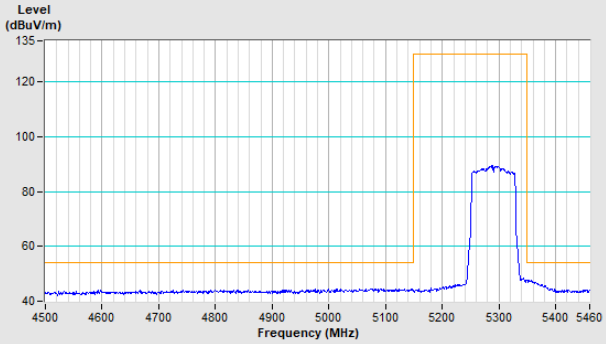


802.11ac (VHT80) Channel 58

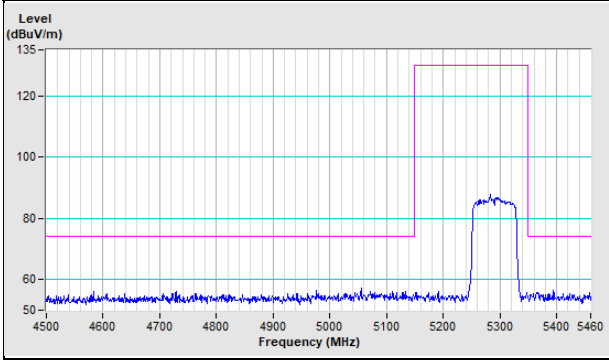
Horizontal (Peak)



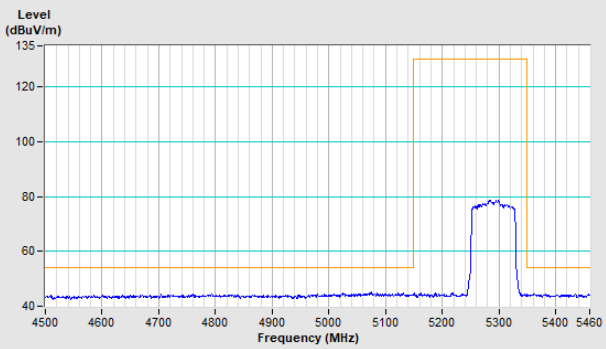
Horizontal (Average)



Vertical (Peak)

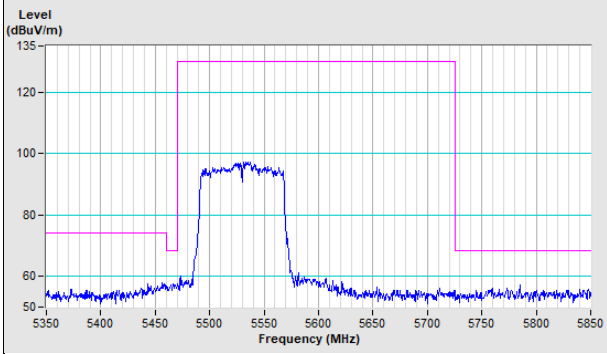


Vertical (Average)

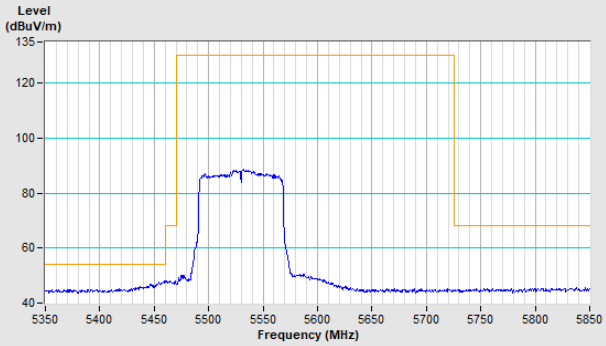


802.11ac (VHT80) Channel 106

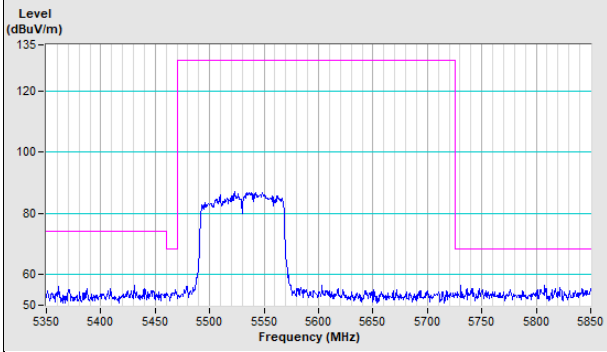
Horizontal (Peak)



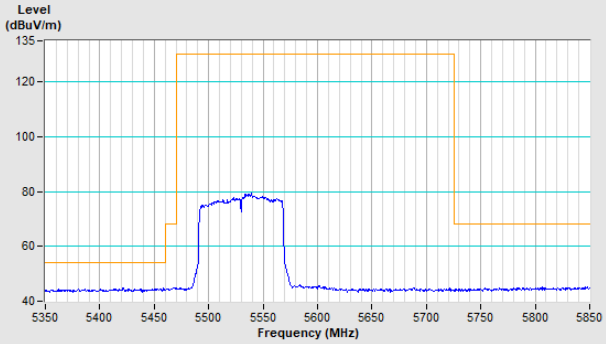
Horizontal (Average)



Vertical (Peak)

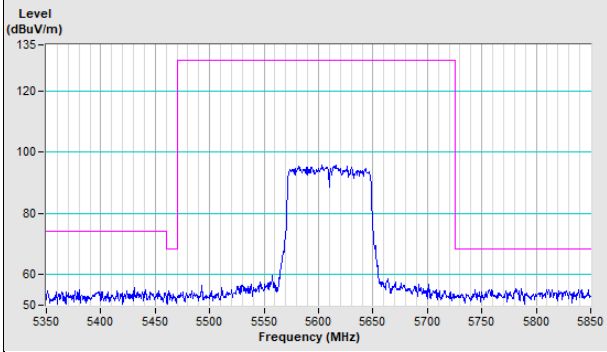


Vertical (Average)

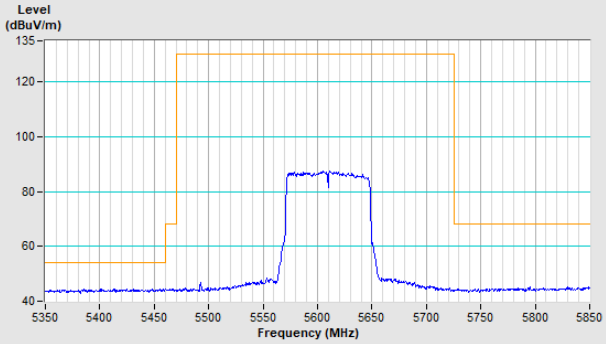


802.11ac (VHT80) Channel 122

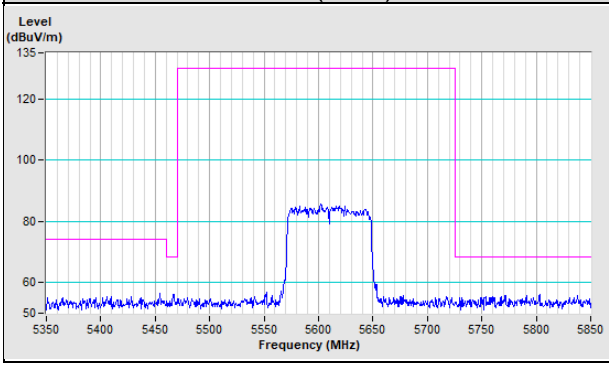
Horizontal (Peak)



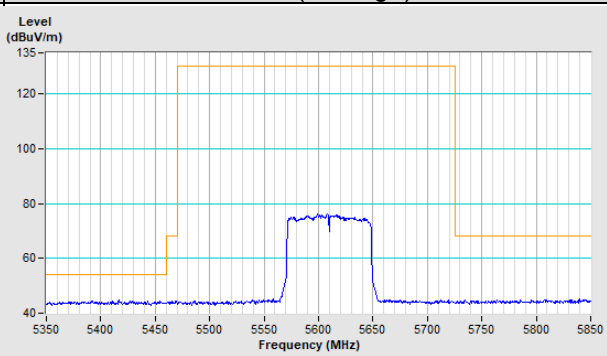
Horizontal (Average)

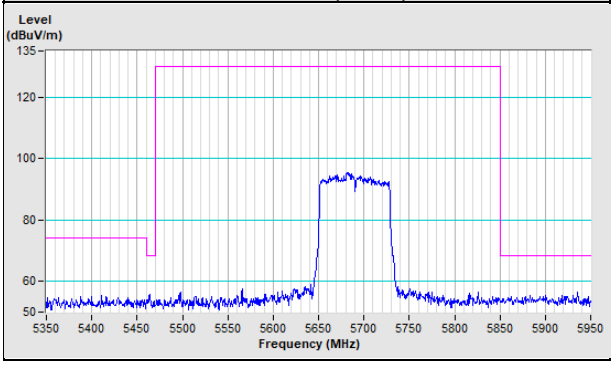
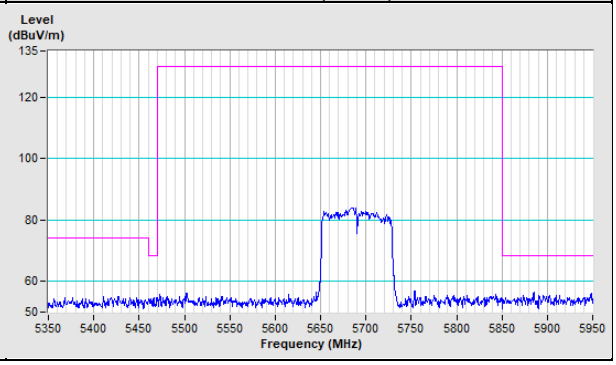


Vertical (Peak)



Vertical (Average)



802.11ac (VHT80) Channel 138	
Horizontal (Peak)	Vertical (Peak)
	

Appendix – 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 and approved according to ISO/IEC 17025.

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Web Site: www.bureauveritas-adt.com

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

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