FCC Test Report

Report No.: RFBEMN-WTW-P21010197-1 R1

FCC ID: NJC-FLY5M02

Test Model: FL-Y5M02

Received Date: Jan. 7, 2021

Test Date: Feb. 2 to Apr. 14, 2021

Issued Date: Aug. 4, 2021

Applicant: Foxlink Image Technology Co., Ltd.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories

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FCC Registration / Designation Number: 198487 / TW2021

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Release Control Record

Issue No.	Description	Date Issued
RFBEMN-WTW-P21010197-1	Original release	May 3, 2021
RFBEMN-WTW-P21010197-1 R1	Modify applicant.	Aug. 4, 2021

1 Certificate of Conformity

Product: RF module

Brand: brother

Test Model: FL-Y5M02

Sample Status: Engineering sample

Applicant: Foxlink Image Technology Co., Ltd.

Test Date: Feb. 2 to Apr. 14, 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 : Annie Chang, **Date:** Aug. 4, 2021

Annie Chang / Senior Specialist

Approved by : Rex. Lai, **Date:** Aug. 4, 2021

Rex Lai / Associate Technical Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(8)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -14.65dB at 0.52891MHz.
15.407(b)(1/2/3/4(i/ii)/8)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.04dB at 11550.00MHz.
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	Antenna connector is IPEX not a standard connector.

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. Test Procedures refer to report 4.1.3.
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	3.00 dB
Conducted Emissions	9kHz ~ 40GHz	2.63 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	2.61 dB
	30MHz ~ 1GHz	5.43 dB
Radiated Emissions above 1 GHz	Above 1GHz	5.42 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	RF module
Brand	brother
Test Model	FL-Y5M02
Test software Version	MP_Kit_RTL11n_8188EUS_USB
Sample Status	Engineering sample
Power Supply Rating	5Vdc from host equipment
Modulation Type	256QAM,64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	OFDM
Transfer Rate	802.11a: up to 54Mbps 802.11n up to 150Mbps 802.11ac: up to 433.3Mbps
Operating Frequency	5180~5240MHz, 5260~5320MHz, 5500~5700MHz, 5745~5825MHz
Number of Channel	5180~5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5260~5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5500~5700MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 7 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5745~5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	5180~5240MHz: 64.417mW 5260~5320MHz: 64.417mW 5500~5700MHz: 63.387mW 5745~5825MHz: 64.269mW
Antenna Type	PIFA antenna with 3.3dBi gain
Antenna Connector	IPEX
Accessory Device	N/A
Cable Supplied	N/A

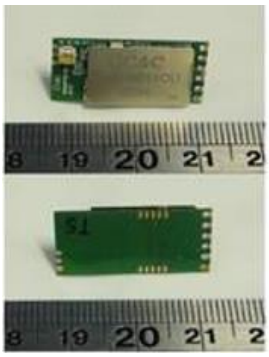
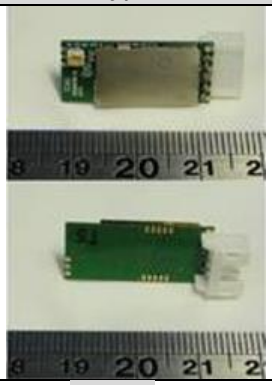
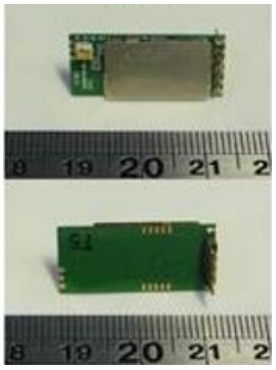
Note:

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

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

* 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 has three types of interface and their were pre-tested:

Interface		
Type 1	Type 2	Type 3
		

The worst emission level was found tested under **Type 1** therefore, only its test data was recorded in this report.

3. WLAN 2.4GHz + WLAN 5GHz technologies can not transmit at same time.

4. 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.

5. 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 ~ 5240MHz:

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

5260~5320MHz:

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

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290MHz

5500~5700MHz:

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

Channel	Frequency	Channel	Frequency
100	5500 MHz	116	5580 MHz
104	5520 MHz	136	5680 MHz
108	5540 MHz	140	5700 MHz
112	5560 MHz		

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

Channel	Frequency	Channel	Frequency
102	5510 MHz	110	5550 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
106	5530 MHz

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: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.

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	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	MCS0
	802.11ac (VHT40)		38 to 46	38, 46	OFDM	MCS0
	802.11ac (VHT80)		42	42	OFDM	MCS0
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	MCS0
	802.11ac (VHT40)		54 to 62	54, 62	OFDM	MCS0
	802.11ac (VHT80)		58	58	OFDM	MCS0
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
	802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	MCS0
	802.11ac (VHT40)		102 to 110	102, 110	OFDM	MCS0
	802.11ac (VHT80)		106	106	OFDM	MCS0
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	MCS0
	802.11ac (VHT40)		151 to 159	151, 159	OFDM	MCS0
	802.11ac (VHT80)		155	155	OFDM	MCS0

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)
-	802.11a	5180-5240	36 to 48	157	OFDM	6.0
-	802.11a	5260-5320	52 to 64		OFDM	6.0
-	802.11a	5500-5700	100 to 140		OFDM	6.0
-	802.11a	5745-5825	149 to 165		OFDM	6.0

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)
-	802.11a	5180-5240	36 to 48	157	OFDM	6.0
-	802.11a	5260-5320	52 to 64		OFDM	6.0
-	802.11a	5500-5700	100 to 140		OFDM	6.0
-	802.11a	5745-5825	149 to 165		OFDM	6.0

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	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	MCS0
	802.11ac (VHT40)		38 to 46	38, 46	OFDM	MCS0
	802.11ac (VHT80)		42	42	OFDM	MCS0
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	MCS0
	802.11ac (VHT40)		54 to 62	54, 62	OFDM	MCS0
	802.11ac (VHT80)		58	58	OFDM	MCS0
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
	802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	MCS0
	802.11ac (VHT40)		102 to 110	102, 110	OFDM	MCS0
	802.11ac (VHT80)		106	106	OFDM	MCS0
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	MCS0
	802.11ac (VHT40)		151 to 159	151, 159	OFDM	MCS0
	802.11ac (VHT80)		155	155	OFDM	MCS0

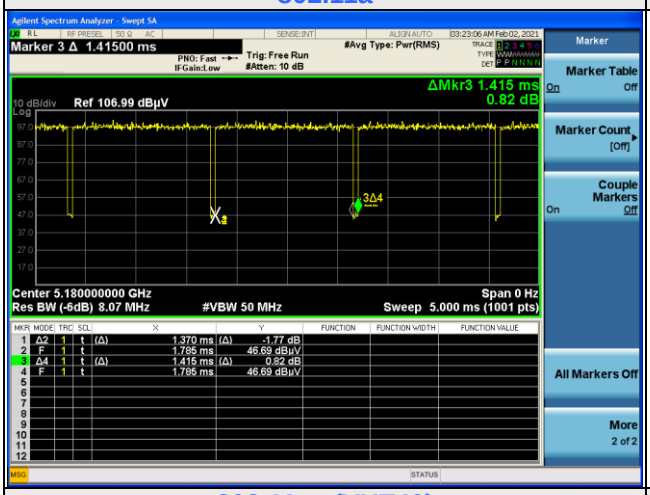
Test Condition:

Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	16deg. C, 65%RH	120Vac, 60Hz (System)	Dalen Dai
RE<1G	17deg. C, 67%RH	120Vac, 60Hz (System)	Dalen Dai
PLC	25deg. C, 75%RH	120Vac, 60Hz (System)	Dalen Dai
APCM	25deg. C, 76%RH	120Vac, 60Hz (System)	Starltaly Wu

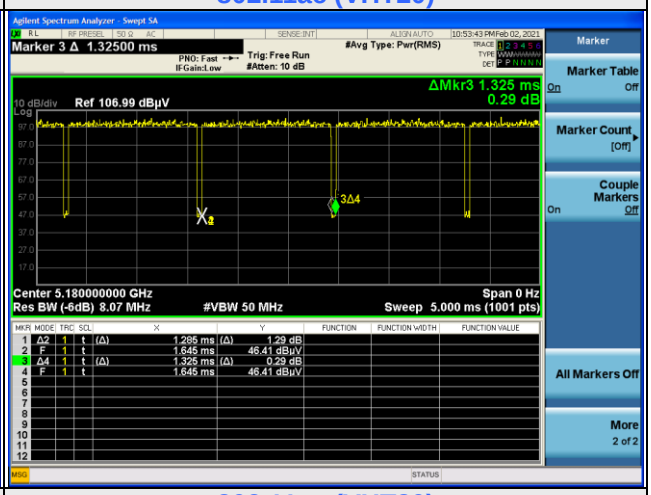
3.3 Duty Cycle of Test Signal

Duty cycle of test signal is < 98%, duty factor shall be considered.
802.11a: Duty cycle = 1.37/1.41 = 0.972, Duty factor = 10 * log(1/0.972) = 0.12
802.11ac (VHT20): Duty cycle = 1.285/1.325 = 0.970, Duty factor = 10 * log(1/0.970) = 0.13
802.11ac (VHT40): Duty cycle = 0.64/0.68 = 0.941, Duty factor = 10 * log(1/0.941) = 0.26
802.11ac (VHT80): Duty cycle = 0.33/0.38 = 0.868, Duty factor = 10 * log(1/0.868) = 0.61

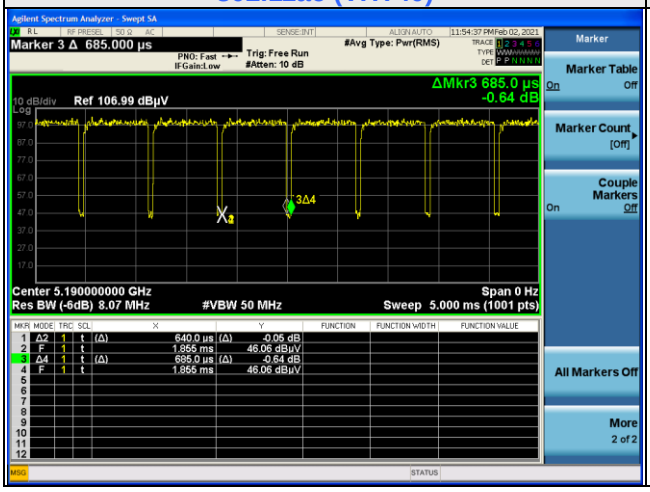
802.11a



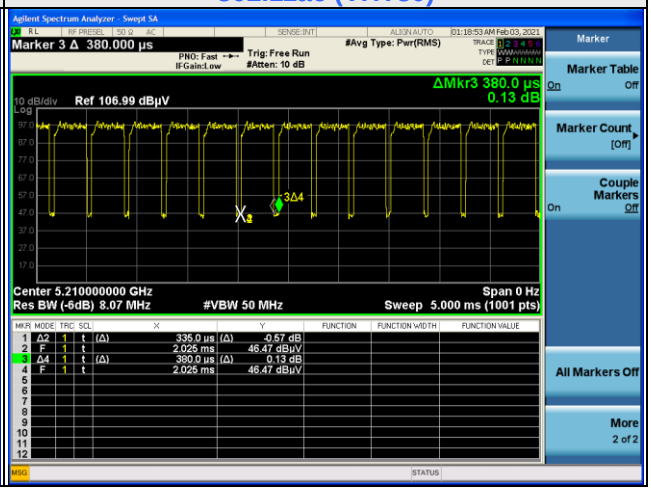
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



3.4 Description of Support Units

The ET 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.

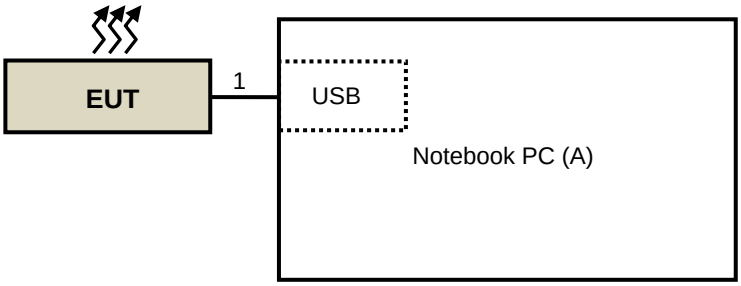
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook PC	Dell	E6230	1QGPNX1	N/A	Provided by Lab

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

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Cable	1	1	Y	0	Provided by Lab

Note: The core(s) is(are) originally attached to the cable(s).

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:

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

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	Feb. 19, 2020	Feb. 18, 2021
HP Preamplifier	8449B	3008A01201	Feb. 20, 2020	Feb. 19, 2021
MITEQ Preamplifier	AMF-6F-260400-33-8P	892164	Feb. 19, 2020	Feb. 18, 2021
Agilent TEST RECEIVER	N9038A	MY51210129	Mar. 18, 2020	Mar. 17, 2021
Schwarzbeck Antenna	VULB 9168	139	Nov. 6, 2020	Nov. 5, 2021
Schwarzbeck Antenna	VHBA 9123	480	Jun. 3, 2019	Jun. 2, 2021
Schwarzbeck Horn Antenna	BBHA-9170	212	Nov. 22, 2020	Nov. 21, 2021
EMCO Horn Antenna	3115	00027024	Nov. 22, 2020	Nov.21, 2021
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	Radiated_V7.6.15.9.5	NA	NA	NA
SUHNER RF cable With 4dB PAD	SF102	Cable-CH6-01	Jul. 9, 2020	Jul. 8, 2021
EMEC RF cable With 3/4dB PAD	EM102-KMKM	01	Aug. 21, 2020	Aug. 20, 2021
KEYSIGHT MIMO Powermeasurement Test set	U2021XA	U2021XA-001	Jun. 16, 2020	Jun. 15, 2021
KEYSIGHT Spectrum Analyzer	N9030A	MY54490260	Jul. 22, 2020	Jul. 21, 2021
Loop Antenna EMCI	LPA600	270	Aug. 23, 2019	Aug. 22, 2021
EMCO Horn Antenna	3115	00028257	Nov. 22, 2020	Nov. 21, 2021
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	NA	NA

NOTE:
1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.
4. Test date: Feb. 2 to 4, 2021

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:

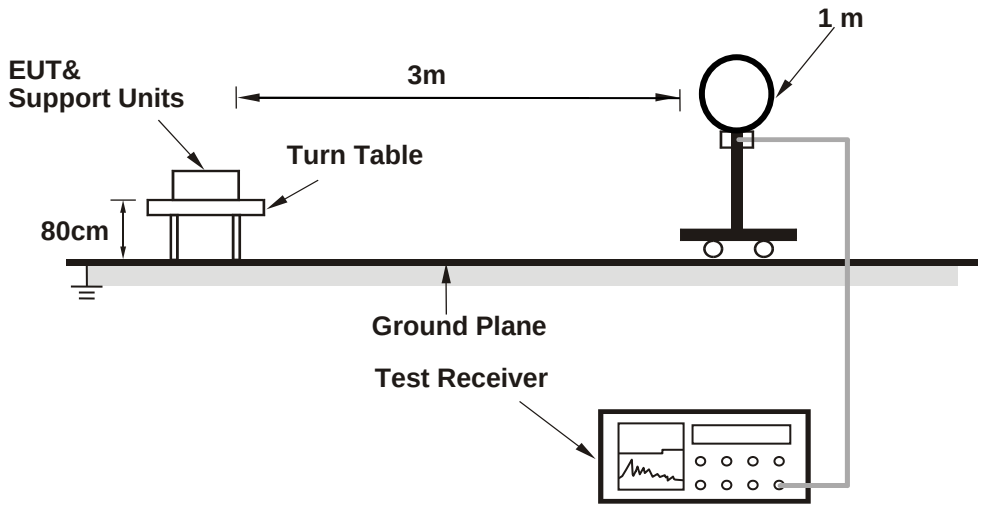
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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 = 750Hz; 802.11ac (VHT20): RBW = 1MHz, VBW = 820Hz; 802.11ac (VHT40): RBW = 1MHz, VBW = 1.6kHz; 802.11ac (VHT80): RBW = 1MHz, VBW = 3kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

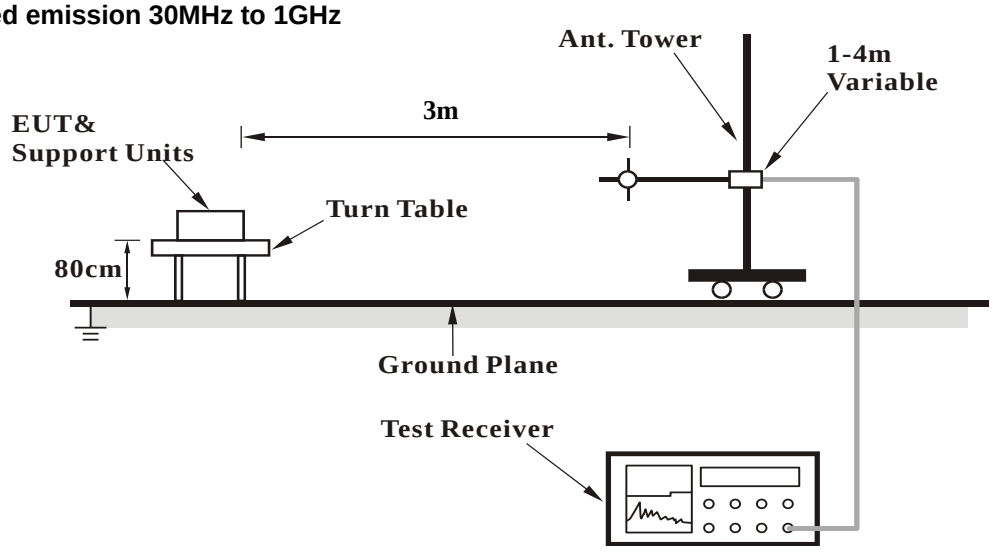
No deviation.

4.1.5 Test Setup

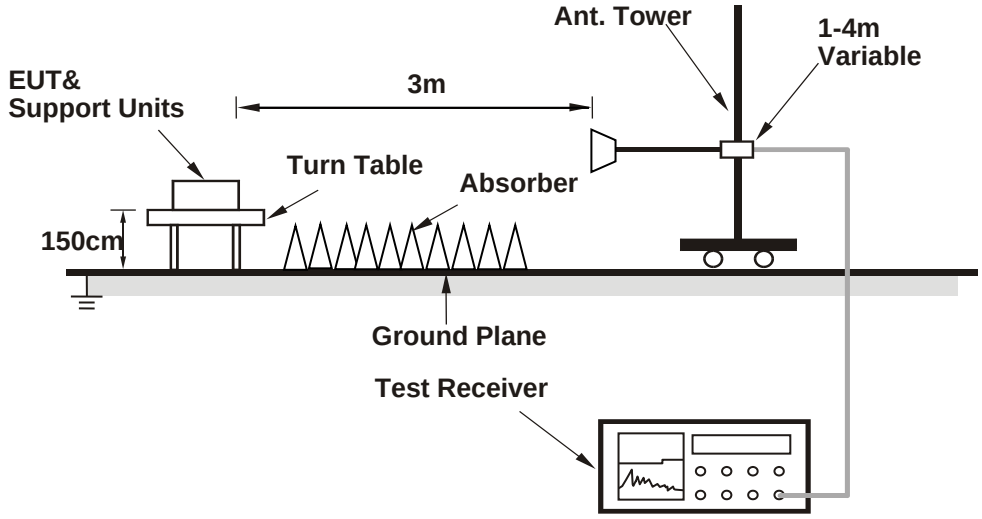
For Radiated emission below 30MHz



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

Set the EUT under transmission condition continuously at specific channel frequency continuously.

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	62.35 PK	74.00	-11.65	1.05 H	159	52.34	10.01
2	5150.00	46.62 AV	54.00	-7.38	1.05 H	159	36.61	10.01
3	*5180.00	105.42 PK			1.05 H	159	95.35	10.07
4	*5180.00	97.08 AV			1.05 H	159	87.01	10.07
5	#10360.00	58.54 PK	68.20	-9.66	1.16 H	295	42.36	16.18
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.04 PK	74.00	-13.96	3.92 V	257	50.03	10.01
2	5150.00	44.88 AV	54.00	-9.12	3.92 V	257	34.87	10.01
3	*5180.00	101.53 PK			3.92 V	257	91.46	10.07
4	*5180.00	94.16 AV			3.92 V	257	84.09	10.07
5	#10360.00	62.24 PK	68.20	-5.96	2.90 V	308	46.06	16.18

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	106.89 PK			1.07 H	155	96.79	10.10
2	*5200.00	98.34 AV			1.07 H	155	88.24	10.10
3	#10400.00	59.19 PK	68.20	-9.01	1.23 H	298	42.99	16.20
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	103.09 PK			3.86 V	244	92.99	10.10
2	*5200.00	94.87 AV			3.86 V	244	84.77	10.10
3	#10400.00	62.67 PK	68.20	-5.53	2.79 V	306	46.47	16.20

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	106.94 PK			2.92 H	7	96.67	10.27
2	*5240.00	98.96 AV			2.92 H	7	88.69	10.27
3	5350.00	53.17 PK	74.00	-20.83	2.92 H	7	42.18	10.99
4	5350.00	41.93 AV	54.00	-12.07	2.92 H	7	30.94	10.99
5	#10480.00	58.86 PK	68.20	-9.34	1.19 H	293	42.72	16.14
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	102.87 PK			3.91 V	249	92.60	10.27
2	*5240.00	95.03 AV			3.91 V	249	84.76	10.27
3	5350.00	52.84 PK	74.00	-21.16	3.91 V	249	41.85	10.99
4	5350.00	41.66 AV	54.00	-12.34	3.91 V	249	30.67	10.99
5	#10480.00	61.97 PK	68.20	-6.23	2.77 V	309	45.83	16.14

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	52.94 PK	74.00	-21.06	3.11 H	354	42.93	10.01
2	5150.00	41.82 AV	54.00	-12.18	3.11 H	354	31.81	10.01
3	*5260.00	107.57 PK			3.11 H	354	97.19	10.38
4	*5260.00	99.27 AV			3.11 H	354	88.89	10.38
5	#10520.00	58.61 PK	68.20	-9.59	1.13 H	291	42.52	16.09
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	52.70 PK	74.00	-21.30	3.11 V	290	42.69	10.01
2	5150.00	41.56 AV	54.00	-12.44	3.11 V	290	31.55	10.01
3	*5260.00	101.42 PK			3.11 V	290	91.04	10.38
4	*5260.00	93.15 AV			3.11 V	290	82.77	10.38
5	#10520.00	61.62 PK	68.20	-6.58	2.90 V	323	45.53	16.09

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	107.89 PK			3.13 H	356	97.22	10.67
2	*5300.00	99.51 AV			3.13 H	356	88.84	10.67
3	10600.00	58.72 PK	74.00	-15.28	1.11 H	289	42.77	15.95
4	10600.00	48.50 AV	54.00	-5.50	1.11 H	289	32.55	15.95
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	101.89 PK			3.07 V	294	91.22	10.67
2	*5300.00	93.46 AV			3.07 V	294	82.79	10.67
3	10600.00	61.95 PK	74.00	-12.05	2.91 V	316	46.00	15.95
4	10600.00	51.14 AV	54.00	-2.86	2.91 V	316	35.19	15.95

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	108.17 PK			3.21 H	354	97.37	10.80
2	*5320.00	99.49 AV			3.21 H	354	88.69	10.80
3	5350.00	60.42 PK	74.00	-13.58	3.21 H	354	49.43	10.99
4	5350.00	45.75 AV	54.00	-8.25	3.21 H	354	34.76	10.99
5	10640.00	58.70 PK	74.00	-15.30	1.05 H	292	42.56	16.14
6	10640.00	48.53 AV	54.00	-5.47	1.05 H	292	32.39	16.14
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	102.23 PK			3.09 V	288	91.43	10.80
2	*5320.00	93.58 AV			3.09 V	288	82.78	10.80
3	5350.00	54.55 PK	74.00	-19.45	3.09 V	288	43.56	10.99
4	5350.00	42.17 AV	54.00	-11.83	3.09 V	288	31.18	10.99
5	10640.00	61.78 PK	74.00	-12.22	2.92 V	321	45.64	16.14
6	10640.00	50.96 AV	54.00	-3.04	2.92 V	321	34.82	16.14

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	56.86 PK	74.00	-17.14	3.04 H	341	45.26	11.60
2	5460.00	42.41 AV	54.00	-11.59	3.04 H	341	30.81	11.60
3	#5470.00	64.32 PK	68.20	-3.88	3.04 H	341	52.65	11.67
4	*5500.00	108.53 PK			3.04 H	341	96.69	11.84
5	*5500.00	100.25 AV			3.04 H	341	88.41	11.84
6	11000.00	58.85 PK	74.00	-15.15	1.12 H	292	41.87	16.98
7	11000.00	48.71 AV	54.00	-5.29	1.12 H	292	31.73	16.98
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	54.62 PK	74.00	-19.38	2.44 V	267	43.02	11.60
2	5460.00	41.73 AV	54.00	-12.27	2.44 V	267	30.13	11.60
3	#5470.00	57.91 PK	68.20	-10.29	2.44 V	267	46.24	11.67
4	*5500.00	102.59 PK			2.44 V	267	90.75	11.84
5	*5500.00	94.67 AV			2.44 V	267	82.83	11.84
6	11000.00	61.70 PK	74.00	-12.30	2.93 V	321	44.72	16.98
7	11000.00	50.34 AV	54.00	-3.66	2.93 V	321	33.36	16.98

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	107.26 PK			3.06 H	343	96.12	11.14
2	*5580.00	98.94 AV			3.06 H	343	87.80	11.14
3	11160.00	61.61 PK	74.00	-12.39	1.15 H	289	43.79	17.82
4	11160.00	50.52 AV	54.00	-3.48	1.15 H	289	32.70	17.82
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	101.34 PK			2.49 V	278	90.20	11.14
2	*5580.00	93.48 AV			2.49 V	278	82.34	11.14
3	11160.00	64.13 PK	74.00	-9.87	3.25 V	331	46.31	17.82
4	11160.00	52.57 AV	54.00	-1.43	3.25 V	331	34.75	17.82

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	107.15 PK			2.98 H	334	96.40	10.75
2	*5700.00	98.93 AV			2.98 H	334	88.18	10.75
3	#5725.00	61.82 PK	68.20	-6.38	2.98 H	334	51.11	10.71
4	11400.00	60.92 PK	74.00	-13.08	1.10 H	296	42.97	17.95
5	11400.00	50.83 AV	54.00	-3.17	1.10 H	296	32.88	17.95
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	102.61 PK			3.25 V	272	91.86	10.75
2	*5700.00	94.96 AV			3.25 V	272	84.21	10.75
3	#5725.00	58.78 PK	68.20	-9.42	3.25 V	272	48.07	10.71
4	11400.00	64.75 PK	74.00	-9.25	3.03 V	317	46.80	17.95
5	11400.00	52.77 AV	54.00	-1.23	3.03 V	317	34.82	17.95

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	#5621.25	53.96 PK	68.20	-14.24	2.68 H	3	43.06	10.90
2	*5745.00	109.61 PK			2.68 H	3	98.92	10.69
3	*5745.00	101.36 AV			2.68 H	3	90.67	10.69
4	#6011.70	53.02 PK	68.20	-15.18	2.68 H	3	42.06	10.96
5	11490.00	61.10 PK	74.00	-12.90	1.13 H	298	42.58	18.52
6	11490.00	50.64 AV	54.00	-3.36	1.13 H	298	32.12	18.52
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	#5616.50	52.99 PK	68.20	-15.21	2.54 V	266	42.08	10.91
2	*5745.00	103.50 PK			2.54 V	266	92.81	10.69
3	*5745.00	94.96 AV			2.54 V	266	84.27	10.69
4	#5934.75	53.29 PK	68.20	-14.91	2.54 V	266	42.60	10.69
5	11490.00	64.12 PK	74.00	-9.88	3.29 V	321	45.60	18.52
6	11490.00	52.93 AV	54.00	-1.07	3.29 V	321	34.41	18.52

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	#5616.50	52.37 PK	68.20	-15.83	2.76 H	1	41.46	10.91
2	*5785.00	109.69 PK			2.76 H	1	99.06	10.63
3	*5785.00	101.47 AV			2.76 H	1	90.84	10.63
4	#5936.18	53.01 PK	68.20	-15.19	2.76 H	1	42.31	10.70
5	11570.00	61.14 PK	74.00	-12.86	1.12 H	293	42.34	18.80
6	11570.00	50.80 AV	54.00	-3.20	1.12 H	293	32.00	18.80
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	#5634.07	52.40 PK	68.20	-15.80	3.23 V	268	41.54	10.86
2	*5785.00	102.46 PK			3.23 V	268	91.83	10.63
3	*5785.00	94.34 AV			3.23 V	268	83.71	10.63
4	#5959.45	53.10 PK	68.20	-15.10	3.23 V	268	42.28	10.82
5	11570.00	64.15 PK	74.00	-9.85	3.28 V	325	45.35	18.80
6	11570.00	52.94 AV	54.00	-1.06	3.28 V	325	34.14	18.80

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	#5569.48	51.76 PK	68.20	-16.44	2.93 H	358	40.54	11.22
2	*5825.00	109.36 PK			2.93 H	358	98.78	10.58
3	*5825.00	101.57 AV			2.93 H	358	90.99	10.58
4	#5925.25	53.73 PK	68.20	-14.47	2.93 H	358	43.09	10.64
5	11650.00	61.26 PK	74.00	-12.74	1.09 H	341	42.67	18.59
6	11650.00	50.74 AV	54.00	-3.26	1.09 H	341	32.15	18.59
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	#5578.02	51.77 PK	68.20	-16.43	3.07 V	281	40.62	11.15
2	*5825.00	102.68 PK			3.07 V	281	92.10	10.58
3	*5825.00	94.66 AV			3.07 V	281	84.08	10.58
4	#6006.95	53.12 PK	68.20	-15.08	3.07 V	281	42.15	10.97
5	11650.00	64.23 PK	74.00	-9.77	3.26 V	323	45.64	18.59
6	11650.00	52.90 AV	54.00	-1.10	3.26 V	323	34.31	18.59

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	62.51 PK	74.00	-11.49	1.01 H	336	52.50	10.01
2	5150.00	46.29 AV	54.00	-7.71	1.01 H	336	36.28	10.01
3	*5180.00	104.86 PK			1.01 H	336	94.79	10.07
4	*5180.00	97.14 AV			1.01 H	336	87.07	10.07
5	#10360.00	58.63 PK	68.20	-9.57	1.18 H	292	42.45	16.18
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	53.71 PK	74.00	-20.29	2.88 V	61	43.70	10.01
2	5150.00	42.49 AV	54.00	-11.51	2.88 V	61	32.48	10.01
3	*5180.00	100.19 PK			2.88 V	61	90.12	10.07
4	*5180.00	92.77 AV			2.88 V	61	82.70	10.07
5	#10360.00	62.25 PK	68.20	-5.95	1.08 V	325	46.07	16.18

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	104.93 PK			1.51 H	357	94.83	10.10
2	*5200.00	97.17 AV			1.51 H	357	87.07	10.10
3	#10400.00	58.54 PK	68.20	-9.66	1.14 H	289	42.34	16.20
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	101.24 PK			2.93 V	58	91.14	10.10
2	*5200.00	93.83 AV			2.93 V	58	83.73	10.10
3	#10400.00	62.31 PK	68.20	-5.89	1.09 V	327	46.11	16.20

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	104.91 PK			1.19 H	355	94.64	10.27
2	*5240.00	97.29 AV			1.19 H	355	87.02	10.27
3	5350.00	53.08 PK	74.00	-20.92	1.19 H	355	42.09	10.99
4	5350.00	41.88 AV	54.00	-12.12	1.19 H	355	30.89	10.99
5	#10480.00	58.78 PK	68.20	-9.42	1.12 H	294	42.64	16.14
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	100.91 PK			2.90 V	63	90.64	10.27
2	*5240.00	93.04 AV			2.90 V	63	82.77	10.27
3	5350.00	52.79 PK	74.00	-21.21	2.90 V	63	41.80	10.99
4	5350.00	41.62 AV	54.00	-12.38	2.90 V	63	30.63	10.99
5	#10480.00	62.04 PK	68.20	-6.16	1.07 V	326	45.90	16.14

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	52.96 PK	74.00	-21.04	3.42 H	318	42.95	10.01
2	5150.00	41.88 AV	54.00	-12.12	3.42 H	318	31.87	10.01
3	*5260.00	105.35 PK			3.42 H	318	94.97	10.38
4	*5260.00	97.83 AV			3.42 H	318	87.45	10.38
5	#10520.00	58.49 PK	68.20	-9.71	1.14 H	295	42.40	16.09
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	52.64 PK	74.00	-21.36	3.06 V	291	42.63	10.01
2	5150.00	41.50 AV	54.00	-12.50	3.06 V	291	31.49	10.01
3	*5260.00	99.60 PK			3.06 V	291	89.22	10.38
4	*5260.00	92.14 AV			3.06 V	291	81.76	10.38
5	#10520.00	61.75 PK	68.20	-6.45	2.89 V	320	45.66	16.09

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	105.80 PK			3.38 H	323	95.13	10.67
2	*5300.00	98.13 AV			3.38 H	323	87.46	10.67
3	10600.00	58.89 PK	74.00	-15.11	1.17 H	284	42.94	15.95
4	10600.00	48.67 AV	54.00	-5.33	1.17 H	284	32.72	15.95
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	100.07 PK			3.08 V	295	89.40	10.67
2	*5300.00	92.53 AV			3.08 V	295	81.86	10.67
3	10600.00	61.89 PK	74.00	-12.11	2.91 V	324	45.94	15.95
4	10600.00	50.91 AV	54.00	-3.09	2.91 V	324	34.96	15.95

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	108.01 PK			3.57 H	334	97.21	10.80
2	*5320.00	99.99 AV			3.57 H	334	89.19	10.80
3	5350.00	60.08 PK	74.00	-13.92	3.57 H	334	49.09	10.99
4	5350.00	47.24 AV	54.00	-6.76	3.57 H	334	36.25	10.99
5	10640.00	58.93 PK	74.00	-15.07	1.15 H	290	42.79	16.14
6	10640.00	48.71 AV	54.00	-5.29	1.15 H	290	32.57	16.14
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	100.85 PK			3.03 V	78	90.05	10.80
2	*5320.00	93.01 AV			3.03 V	78	82.21	10.80
3	5350.00	55.77 PK	74.00	-18.23	3.03 V	78	44.78	10.99
4	5350.00	43.22 AV	54.00	-10.78	3.03 V	78	32.23	10.99
5	10640.00	61.75 PK	74.00	-12.25	3.13 V	331	45.61	16.14
6	10640.00	50.76 AV	54.00	-3.24	3.13 V	331	34.62	16.14

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	54.91 PK	74.00	-19.09	3.13 H	349	43.31	11.60
2	5460.00	42.58 AV	54.00	-11.42	3.13 H	349	30.98	11.60
3	#5470.00	62.37 PK	68.20	-5.83	3.13 H	349	50.70	11.67
4	*5500.00	108.03 PK			3.13 H	349	96.19	11.84
5	*5500.00	100.27 AV			3.13 H	349	88.43	11.84
6	11000.00	58.70 PK	74.00	-15.30	1.14 H	286	41.72	16.98
7	11000.00	48.63 AV	54.00	-5.37	1.14 H	286	31.65	16.98
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	54.23 PK	74.00	-19.77	4.00 V	103	42.63	11.60
2	5460.00	42.24 AV	54.00	-11.76	4.00 V	103	30.64	11.60
3	#5470.00	59.72 PK	68.20	-8.48	4.00 V	103	48.05	11.67
4	*5500.00	104.26 PK			4.00 V	103	92.42	11.84
5	*5500.00	96.53 AV			4.00 V	103	84.69	11.84
6	11000.00	61.84 PK	74.00	-12.16	3.26 V	330	44.86	16.98
7	11000.00	50.22 AV	54.00	-3.78	3.26 V	330	33.24	16.98

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	107.25 PK			3.09 H	344	96.11	11.14
2	*5580.00	99.37 AV			3.09 H	344	88.23	11.14
3	11160.00	60.36 PK	74.00	-13.64	1.12 H	292	42.54	17.82
4	11160.00	50.29 AV	54.00	-3.71	1.12 H	292	32.47	17.82
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	103.58 PK			3.93 V	102	92.44	11.14
2	*5580.00	95.77 AV			3.93 V	102	84.63	11.14
3	11160.00	63.81 PK	74.00	-10.19	3.24 V	329	45.99	17.82
4	11160.00	52.94 AV	54.00	-1.06	3.24 V	329	35.12	17.82

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	108.69 PK			3.08 H	341	97.94	10.75
2	*5700.00	100.73 AV			3.08 H	341	89.98	10.75
3	#5725.00	63.29 PK	68.20	-4.91	3.08 H	341	52.58	10.71
4	11400.00	60.67 PK	74.00	-13.33	1.13 H	294	42.72	17.95
5	11400.00	50.59 AV	54.00	-3.41	1.13 H	294	32.64	17.95
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	101.94 PK			2.50 V	272	91.19	10.75
2	*5700.00	94.28 AV			2.50 V	272	83.53	10.75
3	#5725.00	53.01 PK	68.20	-15.19	2.50 V	272	42.30	10.71
4	11400.00	64.17 PK	74.00	-9.83	3.50 V	331	46.22	17.95
5	11400.00	52.91 AV	54.00	-1.09	3.50 V	331	34.96	17.95

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	#5634.07	53.07 PK	68.20	-15.13	2.67 H	2	42.21	10.86
2	*5745.00	107.82 PK			2.67 H	2	97.13	10.69
3	*5745.00	100.42 AV			2.67 H	2	89.73	10.69
4	#5946.62	52.92 PK	68.20	-15.28	2.67 H	2	42.15	10.77
5	11490.00	60.93 PK	74.00	-13.07	1.08 H	343	42.41	18.52
6	11490.00	50.52 AV	54.00	-3.48	1.08 H	343	32.00	18.52
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	#5613.65	51.78 PK	68.20	-16.42	2.52 V	269	40.86	10.92
2	*5745.00	101.44 PK			2.52 V	269	90.75	10.69
3	*5745.00	94.15 AV			2.52 V	269	83.46	10.69
4	#5970.85	53.26 PK	68.20	-14.94	2.52 V	269	42.39	10.87
5	11490.00	64.23 PK	74.00	-9.77	2.76 V	320	45.71	18.52
6	11490.00	52.88 AV	54.00	-1.12	2.76 V	320	34.36	18.52

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	#5649.27	52.89 PK	68.20	-15.31	2.65 H	352	42.06	10.83
2	*5785.00	108.31 PK			2.65 H	352	97.68	10.63
3	*5785.00	101.05 AV			2.65 H	352	90.42	10.63
4	#6006.48	52.74 PK	68.20	-15.46	2.65 H	352	41.77	10.97
5	11570.00	61.08 PK	74.00	-12.92	1.06 H	341	42.28	18.80
6	11570.00	50.77 AV	54.00	-3.23	1.06 H	341	31.97	18.80
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5628.85	51.97 PK	68.20	-16.23	3.19 V	267	41.09	10.88
2	*5785.00	102.21 PK			3.19 V	267	91.58	10.63
3	*5785.00	94.66 AV			3.19 V	267	84.03	10.63
4	#6001.73	52.93 PK	68.20	-15.27	3.19 V	267	41.94	10.99
5	11570.00	64.19 PK	74.00	-9.81	2.93 V	327	45.39	18.80
6	11570.00	52.92 AV	54.00	-1.08	2.93 V	327	34.12	18.80

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	#5610.80	52.11 PK	68.20	-16.09	2.73 H	351	41.19	10.92
2	*5825.00	108.86 PK			2.73 H	351	98.28	10.58
3	*5825.00	101.38 AV			2.73 H	351	90.80	10.58
4	#5939.98	53.44 PK	68.20	-14.76	2.73 H	351	42.71	10.73
5	11650.00	61.23 PK	74.00	-12.77	1.03 H	342	42.64	18.59
6	11650.00	50.94 AV	54.00	-3.06	1.03 H	342	32.35	18.59
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	#5619.35	52.18 PK	68.20	-16.02	3.03 V	274	41.28	10.90
2	*5825.00	102.91 PK			3.03 V	274	92.33	10.58
3	*5825.00	95.29 AV			3.03 V	274	84.71	10.58
4	#5961.35	53.19 PK	68.20	-15.01	3.03 V	274	42.36	10.83
5	11650.00	64.07 PK	74.00	-9.93	3.27 V	320	45.48	18.59
6	11650.00	52.85 AV	54.00	-1.15	3.27 V	320	34.26	18.59

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	65.29 PK	74.00	-8.71	4.00 H	354	55.28	10.01
2	5150.00	52.52 AV	54.00	-1.48	4.00 H	354	42.51	10.01
3	*5190.00	102.27 PK			4.00 H	354	92.18	10.09
4	*5190.00	94.52 AV			4.00 H	354	84.43	10.09
5	#10380.00	56.74 PK	68.20	-11.46	1.14 H	285	40.55	16.19
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	62.86 PK	74.00	-11.14	2.81 V	56	52.85	10.01
2	5150.00	49.98 AV	54.00	-4.02	2.81 V	56	39.97	10.01
3	*5190.00	98.84 PK			2.81 V	56	88.75	10.09
4	*5190.00	90.31 AV			2.81 V	56	80.22	10.09
5	#10380.00	60.16 PK	68.20	-8.04	1.05 V	319	43.97	16.19

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	103.78 PK			3.14 H	357	93.55	10.23
2	*5230.00	96.27 AV			3.14 H	357	86.04	10.23
3	5350.00	52.94 PK	74.00	-21.06	3.14 H	357	41.95	10.99
4	5350.00	41.99 AV	54.00	-12.01	3.14 H	357	31.00	10.99
5	#10460.00	57.19 PK	68.20	-11.01	1.19 H	281	41.03	16.16
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	99.92 PK			2.83 V	63	89.69	10.23
2	*5230.00	91.89 AV			2.83 V	63	81.66	10.23
3	5350.00	52.73 PK	74.00	-21.27	2.83 V	63	41.74	10.99
4	5350.00	41.75 AV	54.00	-12.25	2.83 V	63	30.76	10.99
5	#10480.00	60.52 PK	68.20	-7.68	1.04 V	323	44.38	16.14

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	52.89 PK	74.00	-21.11	3.11 H	353	42.88	10.01
2	5150.00	42.06 AV	54.00	-11.94	3.11 H	353	32.05	10.01
3	*5270.00	103.84 PK			3.11 H	353	93.39	10.45
4	*5270.00	95.65 AV			3.11 H	353	85.20	10.45
5	#10540.00	58.30 PK	68.20	-9.90	1.16 H	291	42.25	16.05
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	52.62 PK	74.00	-21.38	3.42 V	79	42.61	10.01
2	5150.00	41.84 AV	54.00	-12.16	3.42 V	79	31.83	10.01
3	*5270.00	98.84 PK			3.42 V	79	88.39	10.45
4	*5270.00	90.67 AV			3.42 V	79	80.22	10.45
5	#10540.00	61.43 PK	68.20	-6.77	2.90 V	322	45.38	16.05

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	102.02 PK			3.36 H	353	91.28	10.74
2	*5310.00	94.98 AV			3.36 H	353	84.24	10.74
3	5350.00	63.23 PK	74.00	-10.77	3.36 H	353	52.24	10.99
4	5350.00	52.43 AV	54.00	-1.57	3.36 H	353	41.44	10.99
5	10620.00	56.63 PK	74.00	-17.37	1.13 H	295	40.59	16.04
6	10620.00	47.15 AV	54.00	-6.85	1.13 H	295	31.11	16.04
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	96.79 PK			3.43 V	76	86.05	10.74
2	*5310.00	89.75 AV			3.43 V	76	79.01	10.74
3	5350.00	58.94 PK	74.00	-15.06	3.43 V	76	47.95	10.99
4	5350.00	47.96 AV	54.00	-6.04	3.43 V	76	36.97	10.99
5	10620.00	56.92 PK	74.00	-17.08	2.93 V	324	40.88	16.04
6	10620.00	47.33 AV	54.00	-6.67	2.93 V	324	31.29	16.04

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	62.94 PK	74.00	-11.06	3.01 H	347	51.34	11.60
2	5460.00	50.05 AV	54.00	-3.95	3.01 H	347	38.45	11.60
3	#5470.00	66.66 PK	68.20	-1.54	3.01 H	347	54.99	11.67
4	*5510.00	105.06 PK			3.01 H	347	93.31	11.75
5	*5510.00	97.17 AV			3.01 H	347	85.42	11.75
6	11020.00	56.63 PK	74.00	-17.37	1.11 H	289	39.55	17.08
7	11020.00	47.18 AV	54.00	-6.82	1.11 H	289	30.10	17.08
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	58.56 PK	74.00	-15.44	2.48 V	271	46.96	11.60
2	5460.00	45.43 AV	54.00	-8.57	2.48 V	271	33.83	11.60
3	#5470.00	60.71 PK	68.20	-7.49	2.48 V	271	49.04	11.67
4	*5510.00	100.16 PK			2.48 V	271	88.41	11.75
5	*5510.00	92.18 AV			2.48 V	271	80.43	11.75
6	11020.00	57.28 PK	74.00	-16.72	3.46 V	329	40.20	17.08
7	11020.00	47.56 AV	54.00	-6.44	3.46 V	329	30.48	17.08

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	108.34 PK			3.06 H	349	96.93	11.41
2	*5550.00	100.07 AV			3.06 H	349	88.66	11.41
3	11100.00	56.89 PK	74.00	-17.11	1.13 H	291	39.39	17.50
4	11100.00	47.27 AV	54.00	-6.73	1.13 H	291	29.77	17.50
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	103.81 PK			2.51 V	273	92.40	11.41
2	*5550.00	95.76 AV			2.51 V	273	84.35	11.41
3	11100.00	61.01 PK	74.00	-12.99	3.28 V	323	43.51	17.50
4	11100.00	50.18 AV	54.00	-3.82	3.28 V	323	32.68	17.50

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 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	#5573.75	52.96 PK	68.20	-15.24	2.68 H	3	41.76	11.20
2	*5755.00	107.49 PK			2.68 H	3	96.83	10.66
3	*5755.00	99.55 AV			2.68 H	3	88.89	10.66
4	#5940.45	52.73 PK	68.20	-15.47	2.68 H	3	42.00	10.73
5	11510.00	60.71 PK	74.00	-13.29	1.03 H	345	42.10	18.61
6	11510.00	50.29 AV	54.00	-3.71	1.03 H	345	31.68	18.61
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5635.02	52.53 PK	68.20	-15.67	3.44 V	268	41.67	10.86
2	*5755.00	101.11 PK			3.44 V	268	90.45	10.66
3	*5755.00	93.14 AV			3.44 V	268	82.48	10.66
4	#5957.07	53.22 PK	68.20	-14.98	3.44 V	268	42.41	10.81
5	11510.00	64.33 PK	74.00	-9.67	3.28 V	325	45.72	18.61
6	11510.00	52.73 AV	54.00	-1.27	3.28 V	325	34.12	18.61

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	#5620.30	52.58 PK	68.20	-15.62	2.76 H	353	41.68	10.90
2	*5795.00	108.14 PK			2.76 H	353	97.53	10.61
3	*5795.00	101.11 AV			2.76 H	353	90.50	10.61
4	#5927.62	53.61 PK	68.20	-14.59	2.76 H	353	42.96	10.65
5	11590.00	60.82 PK	74.00	-13.18	1.02 H	340	41.96	18.86
6	11590.00	50.41 AV	54.00	-3.59	1.02 H	340	31.55	18.86
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	#5559.50	52.73 PK	68.20	-15.47	3.41 V	269	41.41	11.32
2	*5795.00	101.41 PK			3.41 V	269	90.80	10.61
3	*5795.00	94.38 AV			3.41 V	269	83.77	10.61
4	#5973.70	53.99 PK	68.20	-14.21	3.41 V	269	43.11	10.88
5	11590.00	64.29 PK	74.00	-9.71	3.27 V	323	45.43	18.86
6	11590.00	52.69 AV	54.00	-1.31	3.27 V	323	33.83	18.86

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	65.96 PK	74.00	-8.04	3.15 H	331	55.95	10.01
2	5150.00	52.77 AV	54.00	-1.23	3.15 H	331	42.76	10.01
3	*5210.00	100.13 PK			3.15 H	331	89.99	10.14
4	*5210.00	93.33 AV			3.15 H	331	83.19	10.14
5	#10420.00	56.69 PK	68.20	-11.51	1.19 H	278	40.51	16.18
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.05 PK	74.00	-13.95	3.16 V	276	50.04	10.01
2	5150.00	48.48 AV	54.00	-5.52	3.16 V	276	38.47	10.01
3	*5210.00	96.18 PK			3.16 V	276	86.04	10.14
4	*5210.00	89.15 AV			3.16 V	276	79.01	10.14
5	#10420.00	56.92 PK	68.20	-11.28	1.07 V	317	40.74	16.18

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	99.28 PK			3.22 H	330	88.68	10.60
2	*5290.00	92.43 AV			3.22 H	330	81.83	10.60
3	5350.00	63.81 PK	74.00	-10.19	3.22 H	330	52.82	10.99
4	5350.00	52.38 AV	54.00	-1.62	3.22 H	330	41.39	10.99
5	#10580.00	56.53 PK	68.20	-11.67	1.19 H	290	40.55	15.98
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	95.17 PK			3.40 V	81	84.57	10.60
2	*5290.00	87.31 AV			3.40 V	81	76.71	10.60
3	5350.00	58.33 PK	74.00	-15.67	3.40 V	81	47.34	10.99
4	5350.00	46.58 AV	54.00	-7.42	3.40 V	81	35.59	10.99
5	#10580.00	56.94 PK	68.20	-11.26	2.88 V	327	40.96	15.98

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	62.67 PK	74.00	-11.33	3.12 H	348	51.07	11.60
2	5460.00	52.64 AV	54.00	-1.36	3.12 H	348	41.04	11.60
3	#5470.00	63.17 PK	68.20	-5.03	3.12 H	348	51.50	11.67
4	*5530.00	102.41 PK			3.12 H	348	90.83	11.58
5	*5530.00	94.98 AV			3.12 H	348	83.40	11.58
6	11060.00	56.53 PK	74.00	-17.47	1.13 H	297	39.24	17.29
7	11060.00	46.91 AV	54.00	-7.09	1.13 H	297	29.62	17.29
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	57.79 PK	74.00	-16.21	2.51 V	271	46.19	11.60
2	5460.00	47.81 AV	54.00	-6.19	2.51 V	271	36.21	11.60
3	#5470.00	58.60 PK	68.20	-9.60	2.51 V	271	46.93	11.67
4	*5530.00	97.15 PK			2.51 V	271	85.57	11.58
5	*5530.00	90.28 AV			2.51 V	271	78.70	11.58
6	11060.00	56.94 PK	74.00	-17.06	3.28 V	331	39.65	17.29
7	11060.00	47.15 AV	54.00	-6.85	3.28 V	331	29.86	17.29

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	#5626.00	57.39 PK	68.20	-10.81	2.67 H	2	46.50	10.89
2	*5775.00	106.42 PK			2.67 H	2	95.78	10.64
3	*5775.00	98.84 AV			2.67 H	2	88.20	10.64
4	#5926.68	54.48 PK	68.20	-13.72	2.67 H	2	43.84	10.64
5	11550.00	60.28 PK	74.00	-13.72	1.02 H	342	41.55	18.73
6	11550.00	49.81 AV	54.00	-4.19	1.02 H	342	31.08	18.73
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	#5604.15	52.44 PK	68.20	-15.76	3.45 V	268	41.50	10.94
2	*5775.00	100.47 PK			3.45 V	268	89.83	10.64
3	*5775.00	93.55 AV			3.45 V	268	82.91	10.64
4	#5925.73	59.53 PK	68.20	-8.67	3.45 V	268	48.89	10.64
5	11550.00	63.31 PK	74.00	-10.69	3.28 V	321	44.58	18.73
6	**11550.00**	**52.96 AV**	**54.00**	**-1.04**	**3.28 V**	**321**	**34.23**	**18.73**

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.

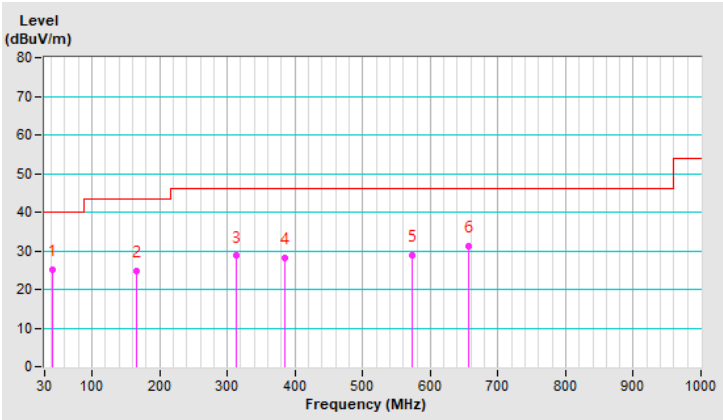
Below 1GHz Worst-Case Data:

RF Mode	TX 802.11a	Channel	CH 157：5785 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	41.74	25.09 QP	40.00	-14.91	1.48 H	103	32.70	-7.61
2	166.28	24.80 QP	43.50	-18.70	1.62 H	113	31.39	-6.59
3	313.43	28.70 QP	46.00	-17.30	1.19 H	339	32.64	-3.94
4	384.15	28.25 QP	46.00	-17.75	1.53 H	274	30.76	-2.51
5	573.35	28.87 QP	46.00	-17.13	1.00 H	245	27.32	1.55
6	657.54	31.14 QP	46.00	-14.86	1.71 H	34	28.03	3.11

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
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.

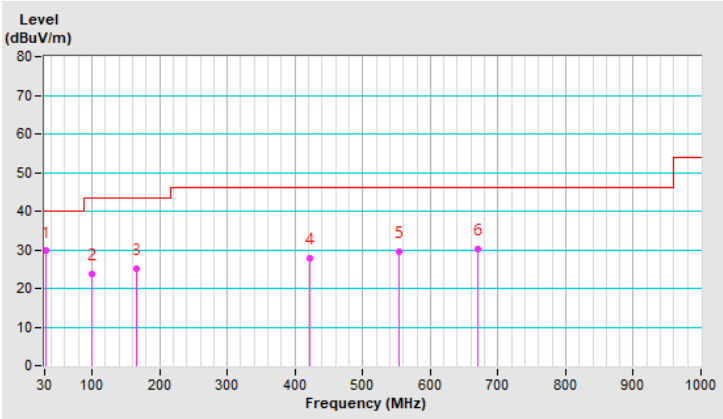


RF Mode	TX 802.11a	Channel	CH 157：5785 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	31.31	29.73 QP	40.00	-10.27	1.94 V	64	38.81	-9.08
2	99.65	23.82 QP	43.50	-19.68	1.46 V	91	35.25	-11.43
3	165.99	25.05 QP	43.50	-18.45	1.77 V	157	31.64	-6.59
4	422.27	27.82 QP	46.00	-18.18	1.23 V	354	29.39	-1.57
5	554.09	29.52 QP	46.00	-16.48	1.85 V	173	28.64	0.88
6	670.88	30.32 QP	46.00	-15.68	1.76 V	182	26.97	3.35

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
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
ROHDE & SCHWARZ TEST RECEIVER	ESR3	102412	Jan. 29, 2021	Jan. 28, 2022
SCHWARZBECK Artificial Mains Network (for EUT)	NSLK 8128	8128-244	Nov. 19, 2020	Nov. 18, 2021
LISN With Adapter (for EUT)	AD10	C05Ada-001	Nov. 19, 2020	Nov. 18, 2021
R&S Artificial Mains Network (for peripheral)	ESH3-Z5	100220	Dec. 1, 2020	Nov. 30, 2021
Software	Cond_V7.3.7.4	NA	NA	NA
RF cable (JYEBAO) With 10dB PAD	5D-FB	Cable-C05.01	Jan. 29, 2021	Jan. 28, 2022
LYNICS Terminator (For R&S LISN)	0900510	E1-01-305	Feb. 17, 2020	Feb. 16, 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 Shielded Room No. 5. (Conduction 5)
3. The VCCI Site Registration No. C-11093.
4. Test date: Feb. 4, 2021

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.

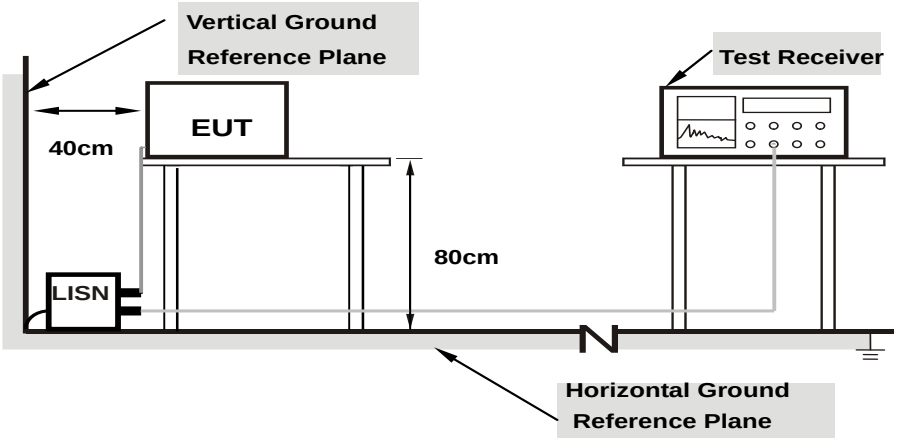
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

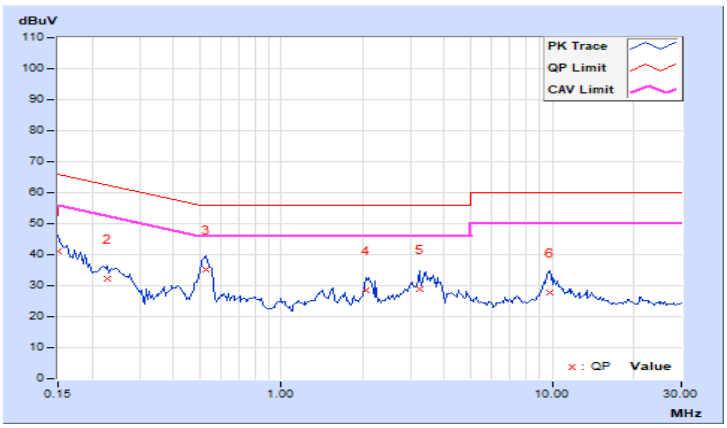
4.2.7 Test Results

RF Mode	TX 802.11a	Channel	CH 157：5785 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.89	31.22	20.09	41.11	29.98	66.00	56.00	-24.89	-26.02
2	0.22812	9.89	22.41	14.01	32.30	23.90	62.52	52.52	-30.22	-28.62
3	0.52500	9.92	25.23	20.05	35.15	29.97	56.00	46.00	-20.85	-16.03
4	2.06250	9.96	18.61	7.17	28.57	17.13	56.00	46.00	-27.43	-28.87
5	3.23828	10.00	18.79	9.39	28.79	19.39	56.00	46.00	-27.21	-26.61
6	9.75781	10.15	17.74	11.95	27.89	22.10	60.00	50.00	-32.11	-27.90

Remarks:

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

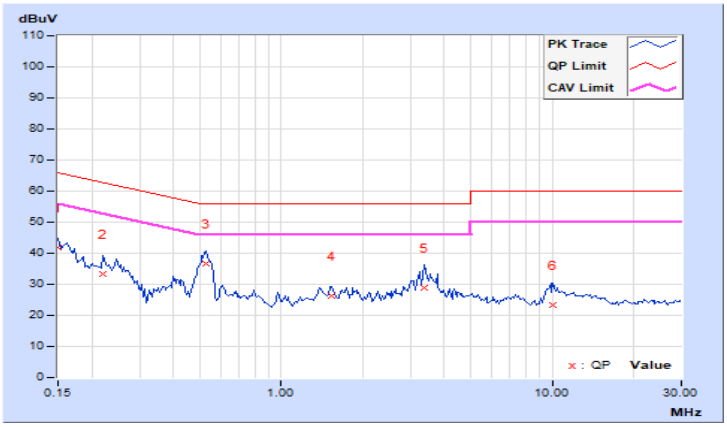


RF Mode	TX 802.11a	Channel	CH 157：5785 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.90	31.79	20.31	41.69	30.21	66.00	56.00	-24.31	-25.79
2	0.22031	9.90	23.53	14.64	33.43	24.54	62.81	52.81	-29.38	-28.27
3	**0.52891**	**9.93**	**26.85**	**21.42**	**36.78**	**31.35**	**56.00**	**46.00**	**-19.22**	**-14.65**
4	1.52734	9.97	16.31	11.01	26.28	20.98	56.00	46.00	-29.72	-25.02
5	3.35547	10.01	18.86	8.06	28.87	18.07	56.00	46.00	-27.13	-27.93
6	10.01563	10.17	13.09	7.47	23.26	17.64	60.00	50.00	-36.74	-32.36

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

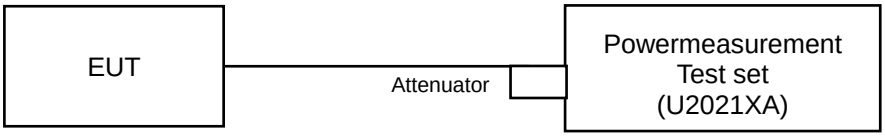
4.3.1 Limits of Transmit Power Measurement

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)

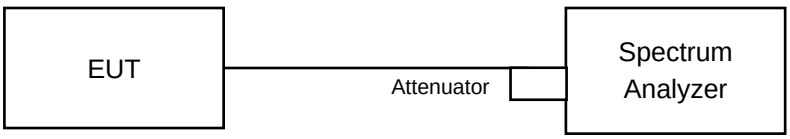
*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

For Power Output Measurement



For 26dB Bandwidth Measurement



4.3.3 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 8, 2020	Sep. 7, 2021
KEYSIGHT MIMO Powermeasurement Test set	U2021XA	U2021XA-001	Jun. 16, 2020	Jun. 15, 2021
KEYSIGHT Spectrum Analyzer	N9030A	MY54490260	Jul. 22, 2020	Jul. 21, 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. Tested Date: Apr. 14, 2021

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 26dB Bandwidth Measurement

1. Set RBW = approximately 1% to 5% of the emission bandwidth.
2. Set the VBW $\geqq$ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. 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

Channel	Channel Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	62.806	17.98	24	Pass
40	5200	63.387	18.02	24	Pass
48	5240	63.680	18.04	24	Pass
52	5260	63.826	18.05	24	Pass
60	5300	62.517	17.96	24	Pass
64	5320	62.230	17.94	24	Pass
100	5500	62.087	17.93	24	Pass
116	5580	20.512	13.12	24	Pass
140	5700	26.062	14.16	24	Pass
149	5745	20.559	13.13	30	Pass
157	5785	19.409	12.88	30	Pass
165	5825	18.365	12.64	30	Pass

NOTE:

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

1. 11dBm + 10log(34.99) = 26.43 dBm > 24dBm.
2. 11dBm + 10log(29.77) = 25.73 dBm > 24dBm.
3. 11dBm + 10log(29.21) = 25.65 dBm > 24dBm.
4. 11dBm + 10log(24.82) = 24.94 dBm > 24dBm.
5. 11dBm + 10log(21.82) = 24.38 dBm > 24dBm.
6. 11dBm + 10log(21.87) = 24.39 dBm > 24dBm.

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	62.087	17.93	24	Pass
40	5200	63.096	18.00	24	Pass
48	5240	64.269	18.08	24	Pass
52	5260	63.387	18.02	24	Pass
60	5300	61.944	17.92	24	Pass
64	5320	61.518	17.89	24	Pass
100	5500	61.944	17.92	24	Pass
116	5580	22.131	13.45	24	Pass
140	5700	21.086	13.24	24	Pass
149	5745	14.757	11.69	30	Pass
157	5785	14.555	11.63	30	Pass
165	5825	14.093	11.49	30	Pass

NOTE:

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

1. 11dBm + 10log(34.53) = 26.38 dBm > 24dBm.
2. 11dBm + 10log(33.59) = 26.26 dBm > 24dBm.
3. 11dBm + 10log(33.60) = 26.26 dBm > 24dBm.
4. 11dBm + 10log(26.96) = 25.30 dBm > 24dBm.
5. 11dBm + 10log(23.45) = 24.70 dBm > 24dBm.
6. 11dBm + 10log(23.36) = 24.68 dBm > 24dBm.

802.11ac (VHT40)

Channel	Channel Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	31.405	14.97	24	Pass
46	5230	**64.417**	**18.09**	24	Pass
54	5270	**64.417**	**18.09**	24	Pass
62	5310	28.774	14.59	24	Pass
102	5510	16.788	12.25	24	Pass
110	5550	**63.387**	18.02	24	Pass
151	5755	27.227	14.35	30	Pass
159	5795	26.182	14.18	30	Pass

NOTE:

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

1. 11dBm + 10log(71.51) = 29.54 dBm > 24dBm.
2. 11dBm + 10log(47.00) = 27.72 dBm > 24dBm.
3. 11dBm + 10log(44.68) = 27.50 dBm > 24dBm.
4. 11dBm + 10log(59.33) = 28.73 dBm > 24dBm.

802.11ac (VHT80)

Channel	Channel Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	33.42	15.24	24	Pass
58	5290	23.496	13.71	24	Pass
106	5530	12.218	10.87	24	Pass
155	5775	**64.269**	**18.08**	30	Pass

NOTE:

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

1. 11dBm + 10log(82.73) = 30.17 dBm > 24dBm.
2. 11dBm + 10log(83.79) = 30.23 dBm > 24dBm.
3. 11dBm + 10log(115.17) = 31.61 dBm > 24dBm.

26dB Bandwidth:

802.11a

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	29.37
40	5200	35.06
48	5240	35.12
52	5260	34.99
60	5300	29.77
64	5320	29.21
100	5500	24.82
116	5580	21.82
140	5700	21.87

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	33.89
40	5200	33.85
48	5240	35.80
52	5260	34.53
60	5300	33.59
64	5320	33.60
100	5500	26.96
116	5580	23.45
140	5700	23.36

802.11ac (VHT40)

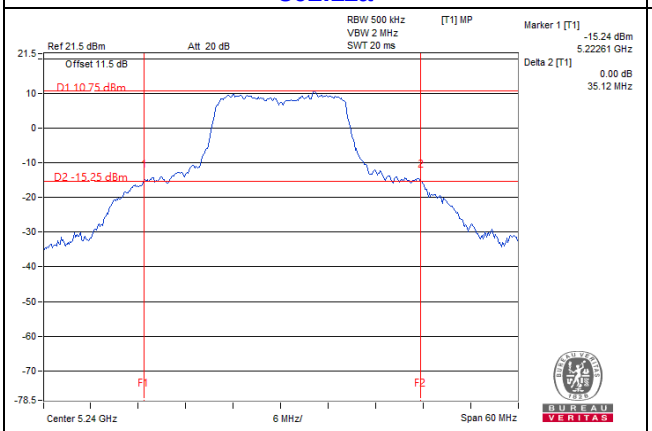
Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)
38	5190	44.82
46	5230	74.48
54	5270	71.51
62	5310	47.00
102	5510	44.68
110	5550	59.33

802.11ac (VHT80)

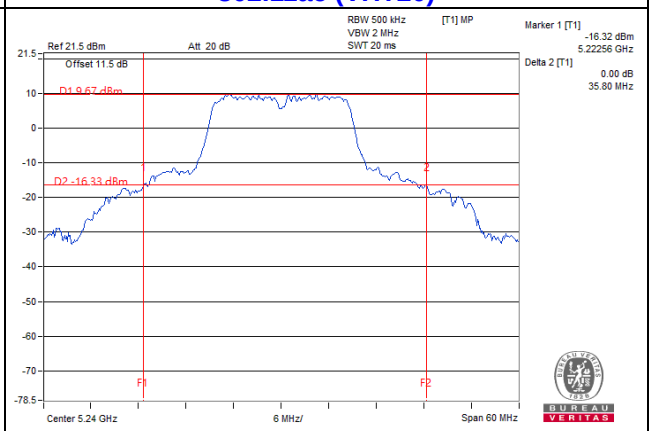
Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)
42	5210	92.50
58	5290	82.73
106	5530	83.79

Spectrum Plot of Worst Value

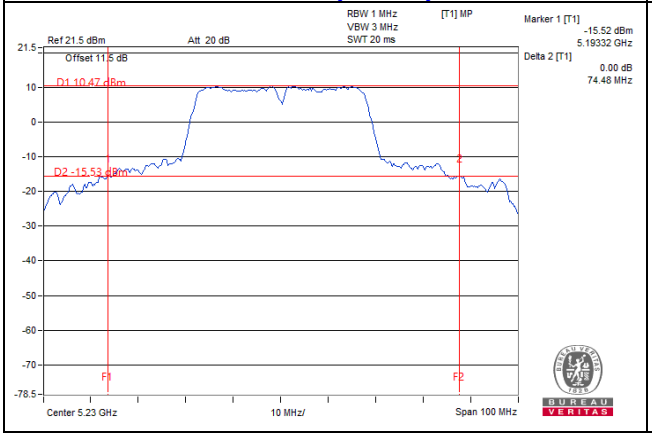
802.11a



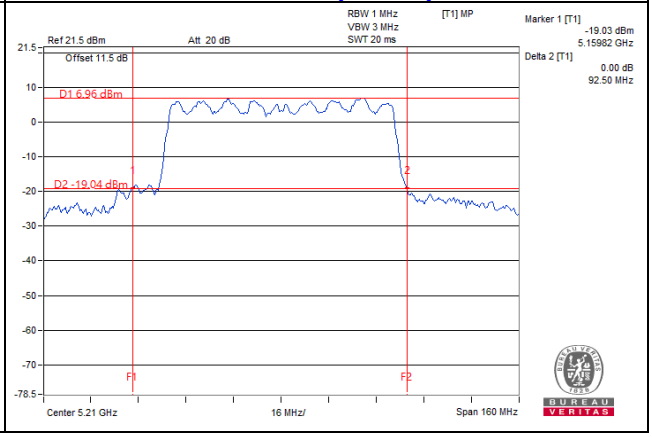
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



EUT Maximum Conducted Power

802.11a

Frequency Band (MHz)	MAX. Power	
	Output Power(mW)	Output Power(dBm)
5250~5350	63.826	18.05
5470~5725	62.087	17.93

802.11ac (VHT20)

Frequency Band (MHz)	MAX. Power	
	Output Power(mW)	Output Power(dBm)
5250~5350	63.387	18.02
5470~5725	61.944	17.92

802.11ac (VHT40)

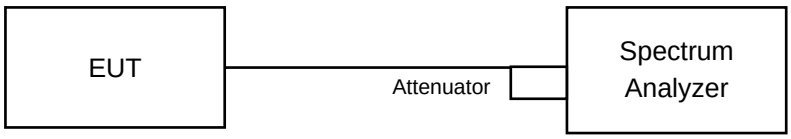
Frequency Band (MHz)	MAX. Power	
	Output Power(mW)	Output Power(dBm)
5250~5350	64.417	18.09
5470~5725	63.387	18.02

802.11ac (VHT80)

Frequency Band (MHz)	MAX. Power	
	Output Power(mW)	Output Power(dBm)
5250~5350	23.496	13.71
5470~5725	12.218	10.87

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 8, 2020	Sep. 7, 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. Tested Date: Apr. 14, 2021

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 SAMPLE. 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	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.16
40	5200	17.16
48	5240	17.28
52	5260	17.28
60	5300	17.28
64	5320	17.16
100	5500	16.92
116	5580	16.92
140	5700	16.92
149	5745	16.95
157	5785	16.90
165	5825	16.90

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.24
40	5200	18.12
48	5240	18.36
52	5260	18.24
60	5300	18.12
64	5320	18.12
100	5500	18.00
116	5580	18.00
140	5700	17.88
149	5745	17.80
157	5785	17.80
165	5825	17.80

802.11ac (VHT40)

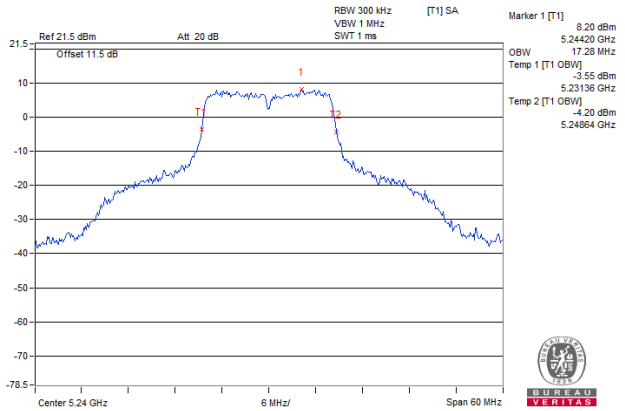
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.80
46	5230	37.40
54	5270	37.20
62	5310	36.60
102	5510	36.60
110	5550	37.20
151	5755	37.00
159	5795	37.00

802.11ac (VHT80)

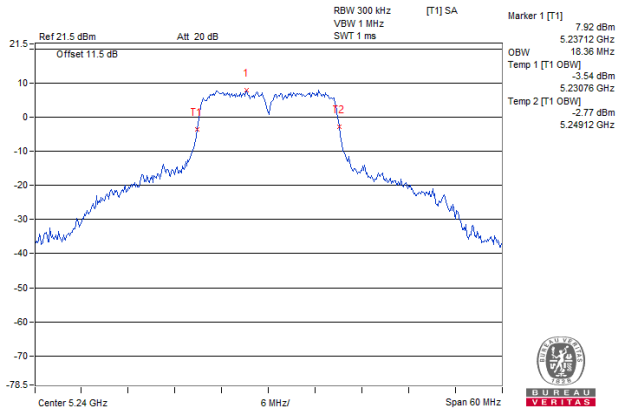
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.84
58	5290	75.60
106	5530	75.84
155	5775	76.30

Spectrum Plot of Worst Value

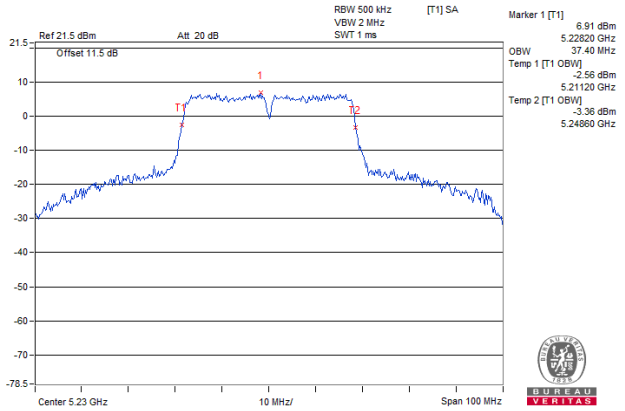
802.11a



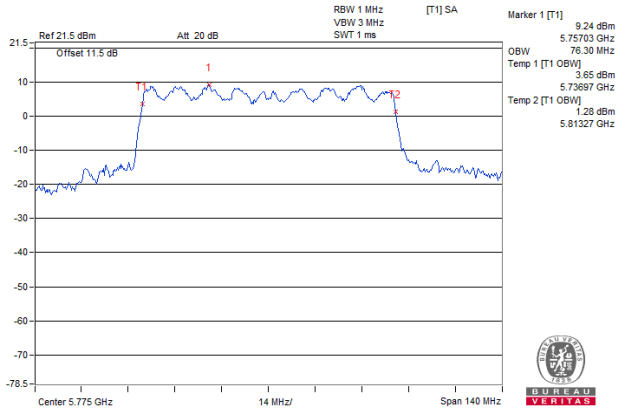
802.11ac (VHT20)



802.11ac (VHT40)

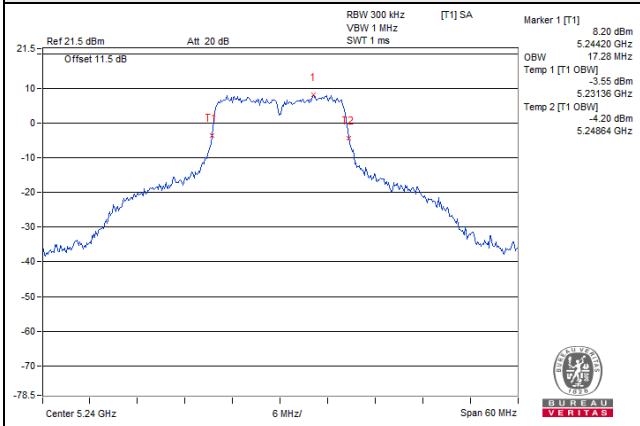


802.11ac (VHT80)

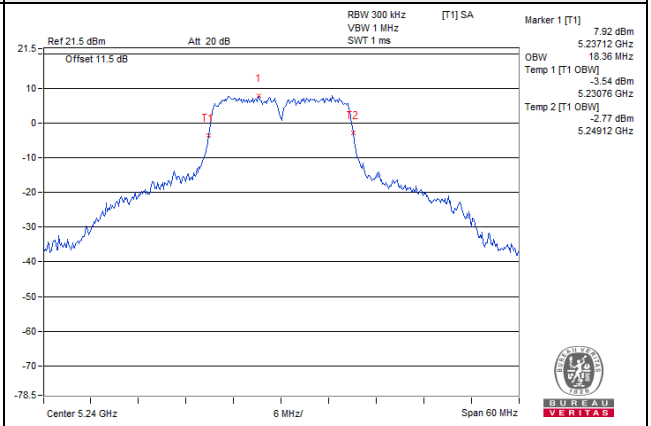


Spectrum Plot for near By DFS Band

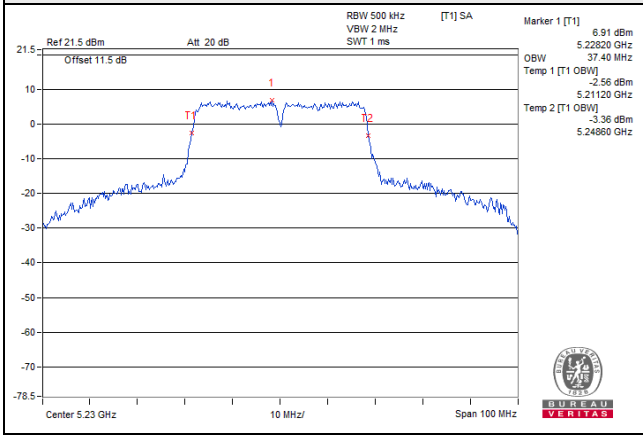
802.11a / CH 48



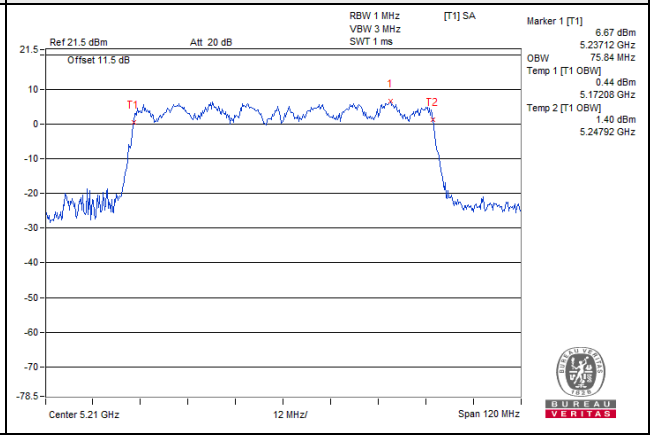
802.11ac (VHT20) / CH 48



802.11ac (VHT40) / CH 46

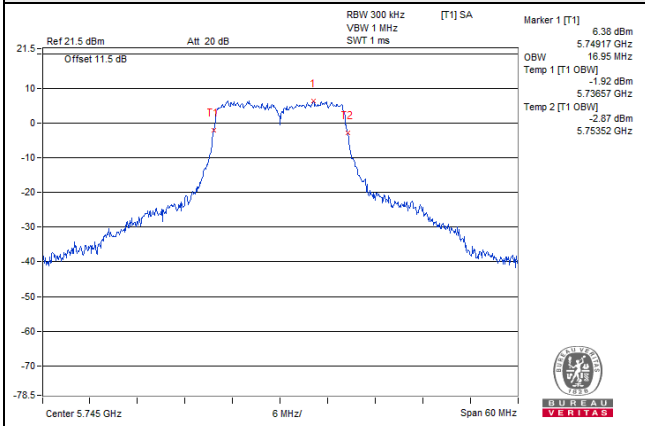


802.11ac (VHT80) / CH 42

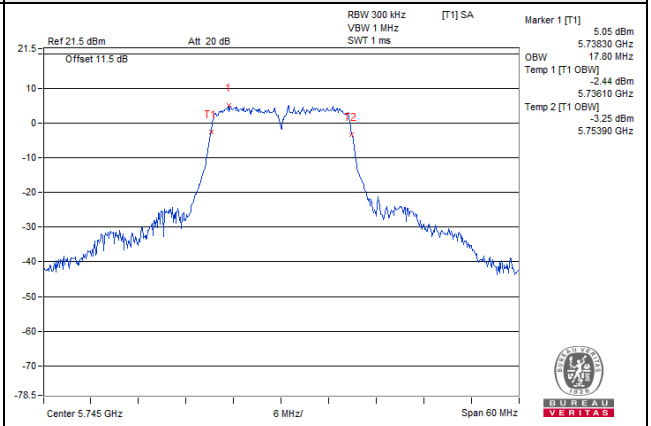


Spectrum Plot for near By DFS Band

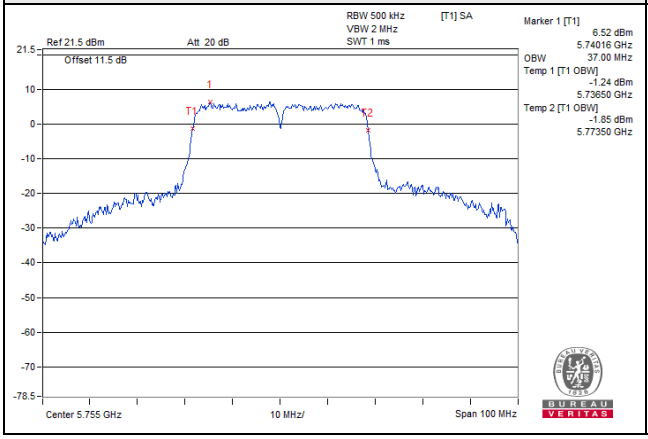
802.11a / CH 149



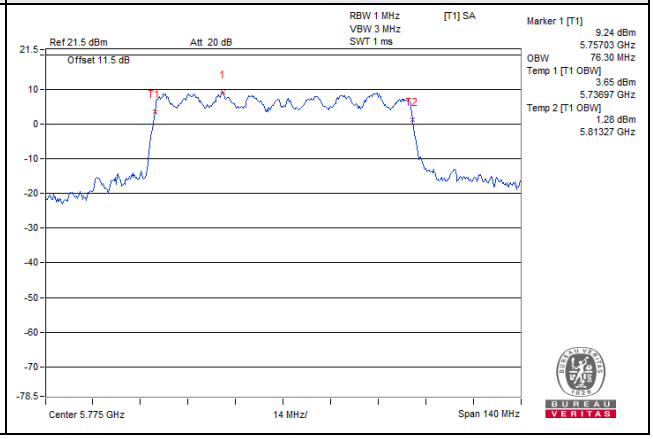
802.11ac (VHT20) / CH 149



802.11ac (VHT40) / CH 151



802.11ac (VHT80) / CH 155

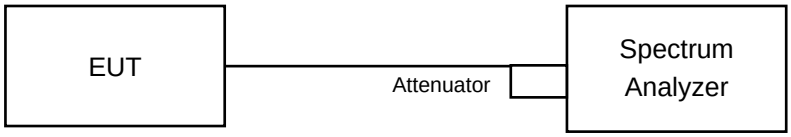


4.5 Peak Power Spectral Density Measurement

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

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 8, 2020	Sep. 7, 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. Tested Date: Apr. 14, 2021

4.5.4 Test Procedures

For U-NII-1, U-NII-2A, U-NII-2C Band:
Using method SA-2
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 30 kHz, Set VBW ≥ 1 MHz, Detector = RMS
3) Set Channel power measure = 1MHz
4) Sweep time = auto, trigger set to “free run”.
5) Trace average at least 100 traces in power averaging mode.
6) Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band:
1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 500 kHz, Set VBW ≥ 3 RBW, Detector = RMS
3) Sweep time = auto, trigger set to “free run”.
4) Trace average at least 100 traces in power averaging mode.
5) 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, U-NII-2C:

802.11a

Channel	Channel Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
36	5180	4.22	0.12	4.35	11	Pass
40	5200	4.43	0.12	4.55	11	Pass
48	5240	4.16	0.12	4.28	11	Pass
52	5260	4.17	0.12	4.29	11	Pass
60	5300	3.92	0.12	4.04	11	Pass
64	5320	3.75	0.12	3.88	11	Pass
100	5500	4.05	0.12	4.17	11	Pass
116	5580	2.56	0.12	2.69	11	Pass
140	5700	2.86	0.12	2.98	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
36	5180	4.14	0.13	4.27	11	Pass
40	5200	3.93	0.13	4.06	11	Pass
48	5240	3.98	0.13	4.11	11	Pass
52	5260	3.96	0.13	4.09	11	Pass
60	5300	3.77	0.13	3.90	11	Pass
64	5320	3.49	0.13	3.62	11	Pass
100	5500	3.91	0.13	4.04	11	Pass
116	5580	3.06	0.13	3.19	11	Pass
140	5700	1.96	0.13	2.09	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

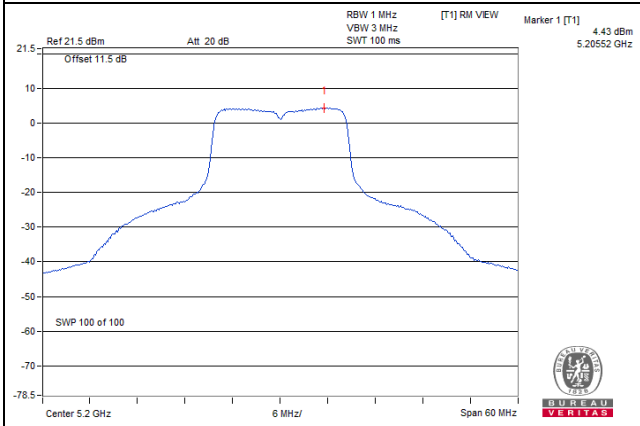
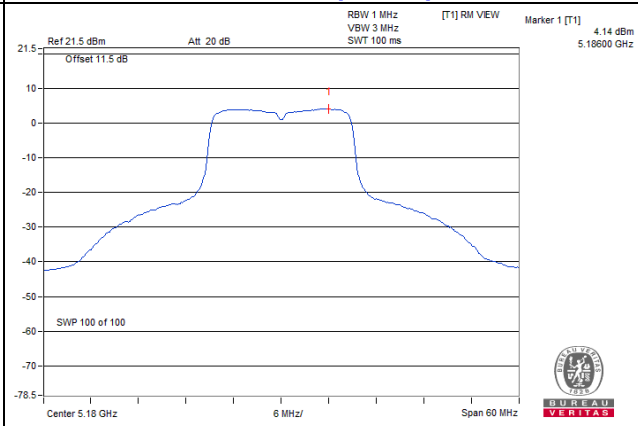
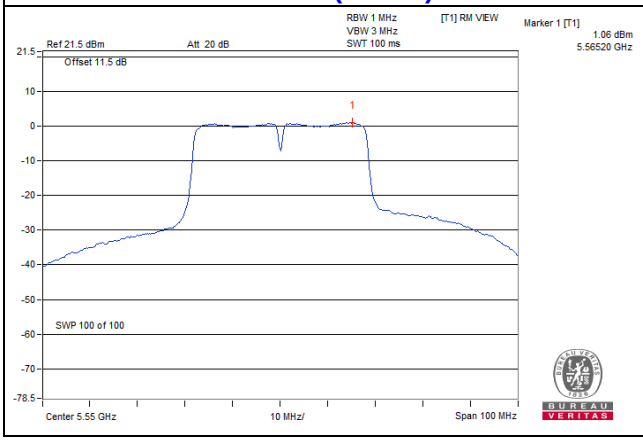
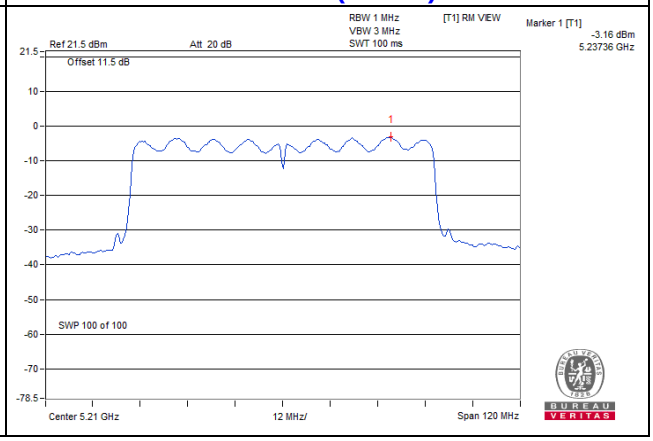
Channel	Channel Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
38	5190	-1.47	0.26	-1.21	11	Pass
46	5230	0.96	0.26	1.22	11	Pass
54	5270	0.75	0.26	1.01	11	Pass
62	5310	-1.21	0.26	-0.95	11	Pass
102	5510	-1.12	0.26	-0.86	11	Pass
110	5550	1.06	0.26	1.32	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Channel	Channel Frequency (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
42	5210	-3.16	0.61	-2.55	11	Pass
58	5290	-4.22	0.61	-3.61	11	Pass
106	5530	-4.33	0.61	-3.72	11	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

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

For U-NII-3 band:

802.11a

Channel	Channel Frequency (MHz)	PSD W/O Duty Factor (dBm/500kHz)	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
149	5745	-6.20	0.12	-6.07	30	Pass
157	5785	-6.44	0.12	-6.32	30	Pass
165	5825	-6.61	0.12	-6.49	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	PSD W/O Duty Factor (dBm/500kHz)	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
149	5745	-7.07	0.13	-6.94	30	Pass
157	5785	-7.15	0.13	-7.02	30	Pass
165	5825	-7.34	0.13	-7.21	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

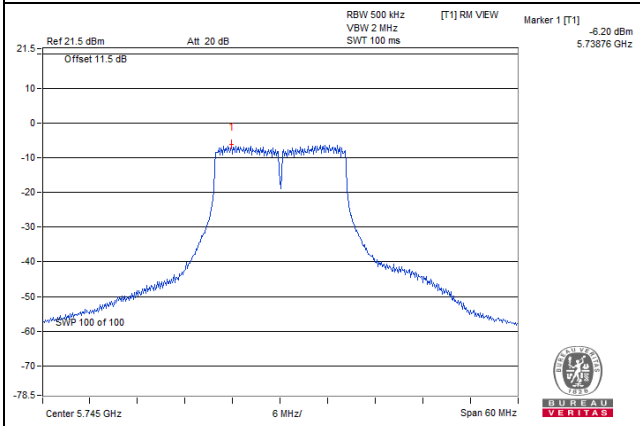
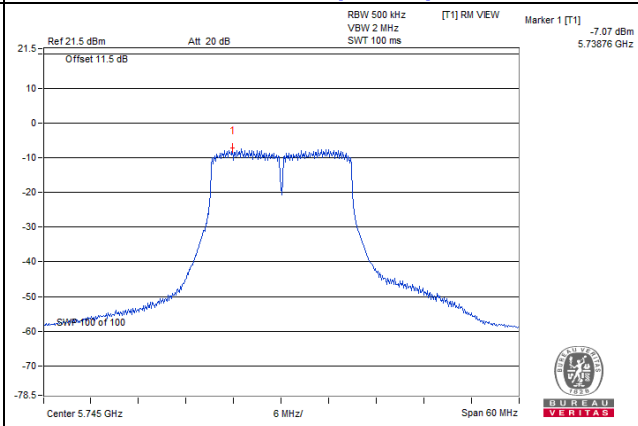
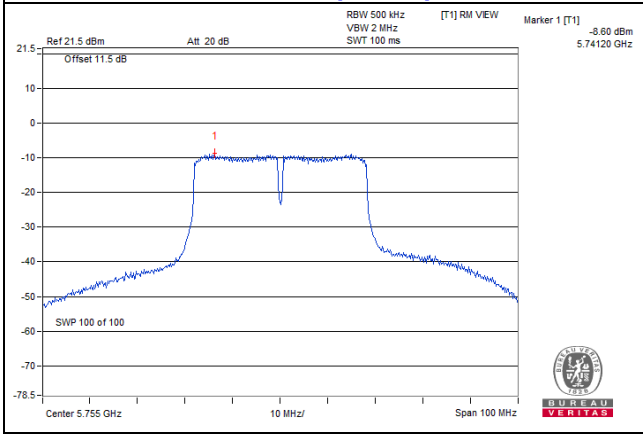
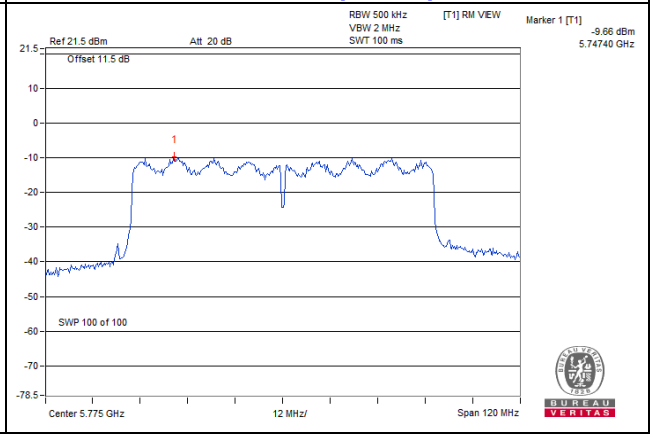
Channel	Channel Frequency (MHz)	PSD W/O Duty Factor (dBm/500kHz)	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
151	5755	-8.60	0.26	-8.34	30	Pass
159	5795	-8.75	0.26	-8.49	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Channel	Channel Frequency (MHz)	PSD W/O Duty Factor (dBm/500kHz)	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
155	5775	-9.66	0.61	-9.05	30	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

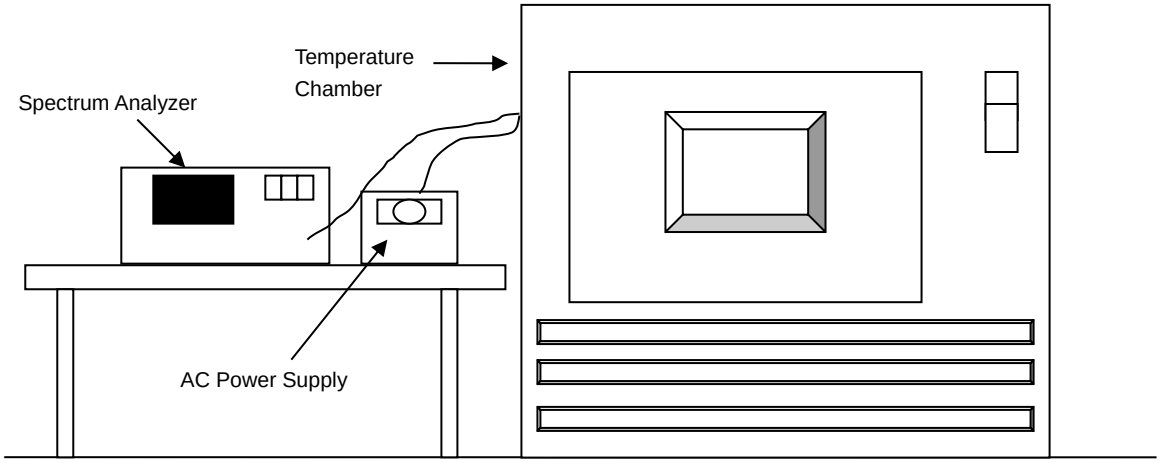
Spectrum Plot of Worst Value	
802.11a	**802.11ac (VHT20)**
	
802.11ac (VHT40)	**802.11ac (VHT80)**
	

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
ROHDE & SCHWARZ Spectrum Analyzer	FSV 40	101042	Sep. 8, 2020	Sep. 7, 2021
Temperature & Humidity Chamber	MHU-225AU	920409	May 22, 2020	May 21, 2021
DIGITAL POWER METER IDRC	CP-240	240515	Sep. 10, 2020	Sep. 9, 2021
AC Power Source ExTech	CFW-105	E000603	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. Tested Date: Apr. 14, 2021

4.6.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
e. Repeat step d with the temperature chamber set to the next desired temperature.
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 (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
50	120	5179.9797	Pass	5179.9777	Pass	5179.978	Pass	5179.9784	Pass
40	120	5180.0202	Pass	5180.0203	Pass	5180.0203	Pass	5180.0204	Pass
30	120	5180.0124	Pass	5180.0142	Pass	5180.0164	Pass	5180.0155	Pass
20	120	5180.0051	Pass	5180.0040	Pass	5180.0045	Pass	5180.0049	Pass
10	120	5179.9790	Pass	5179.9795	Pass	5179.9798	Pass	5179.9782	Pass
0	120	5180.0127	Pass	5180.0143	Pass	5180.016	Pass	5180.0128	Pass
-10	120	5179.9886	Pass	5179.9895	Pass	5179.9905	Pass	5179.9894	Pass
-20	120	5180.0170	Pass	5180.0153	Pass	5180.0138	Pass	5180.0156	Pass
-30	120	5180.0154	Pass	5180.0178	Pass	5180.0173	Pass	5180.0139	Pass

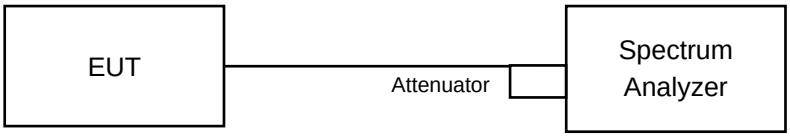
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5180.0042	Pass	5180.0031	Pass	5180.0055	Pass	5180.0042	Pass
	120	5180.0051	Pass	5180.004	Pass	5180.0045	Pass	5180.0049	Pass
	102	5180.0050	Pass	5180.0050	Pass	5180.0037	Pass	5180.0049	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

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 8, 2020	Sep. 7, 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. Tested Date: Apr. 14, 2021

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
149	5745	16.38	0.5	Pass
157	5785	16.39	0.5	Pass
165	5825	16.37	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.12	0.5	Pass
157	5785	17.07	0.5	Pass
165	5825	16.99	0.5	Pass

802.11ac (VHT40)

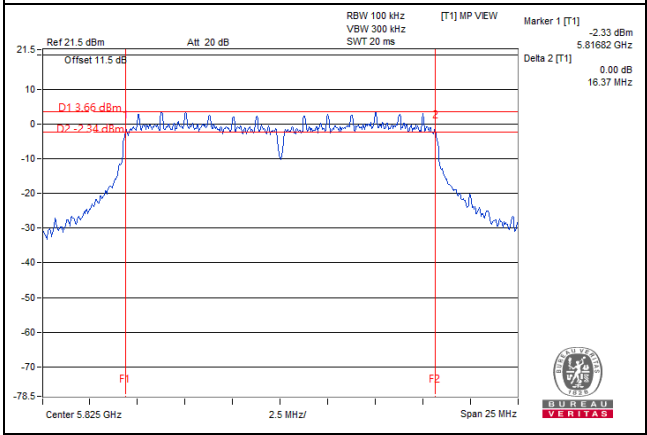
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	35.85	0.5	Pass
159	5795	35.84	0.5	Pass

802.11ac (VHT80)

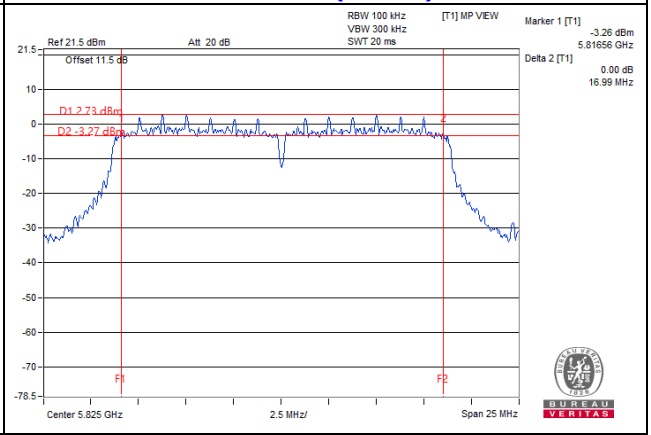
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.50	0.5	Pass

Spectrum Plot of Worst Value

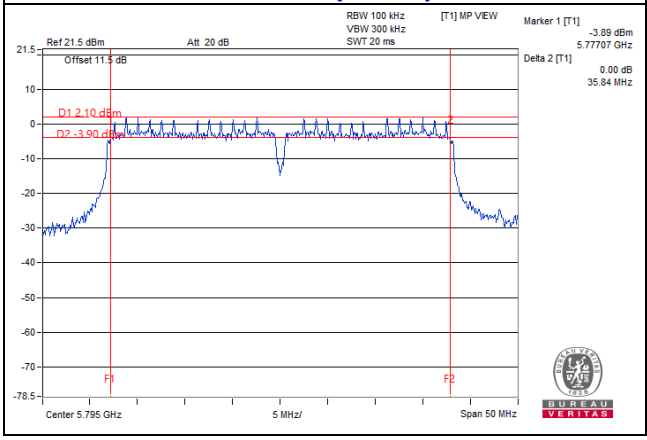
802.11a



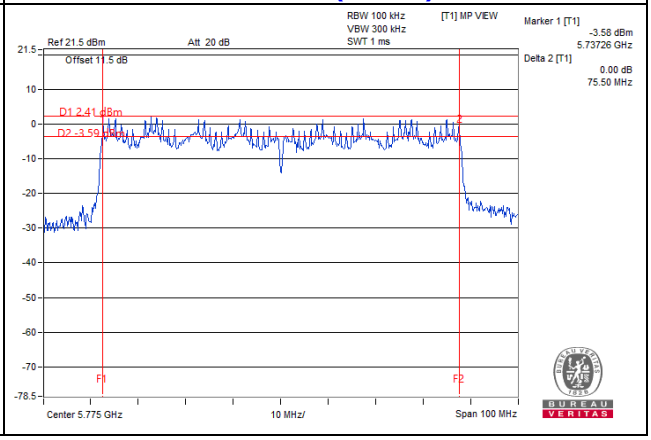
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



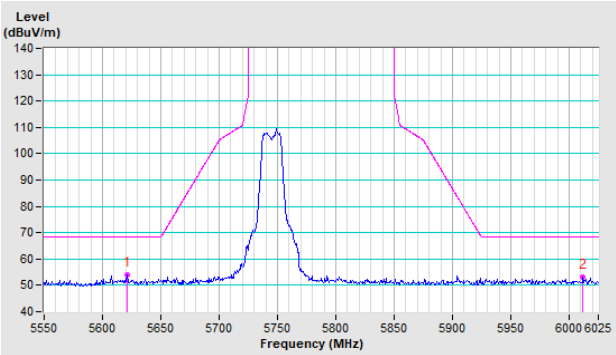
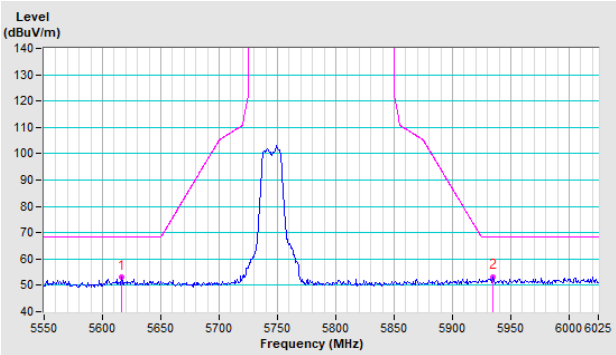
5 Pictures of Test Arrangements

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

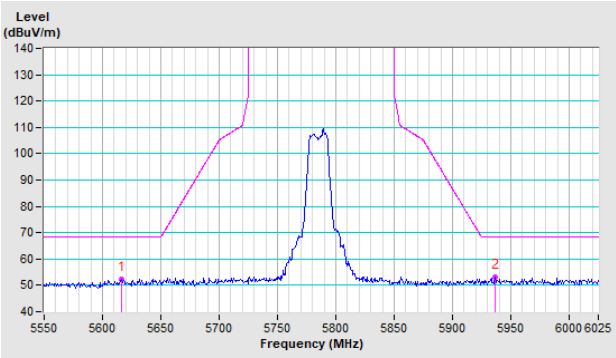
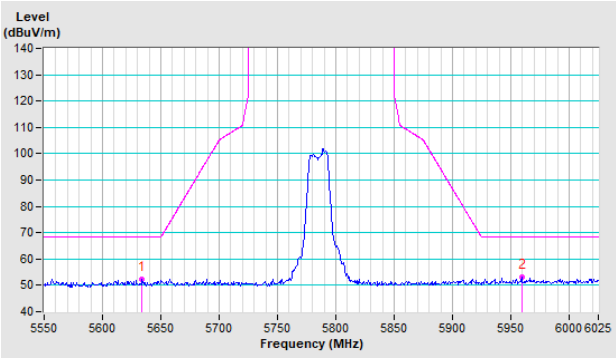
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a

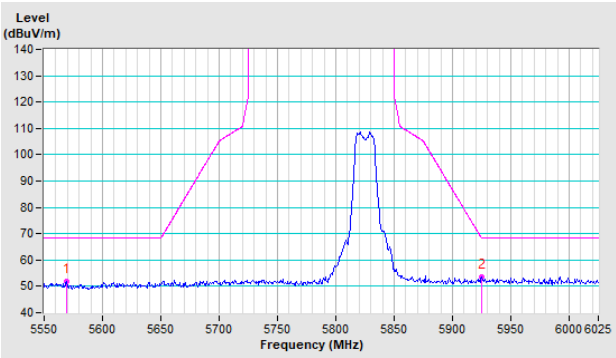
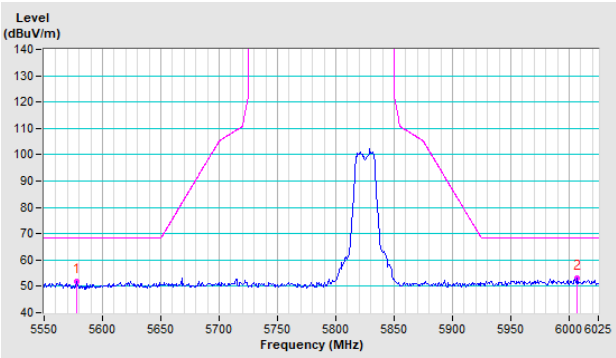
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

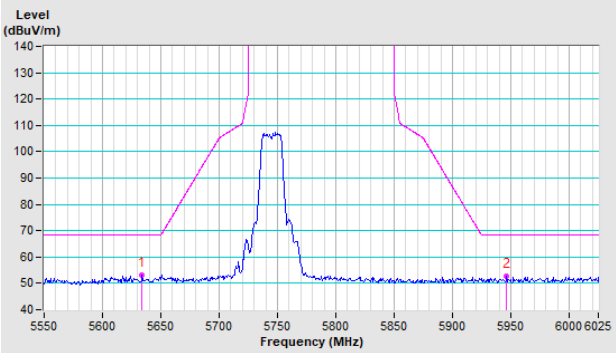
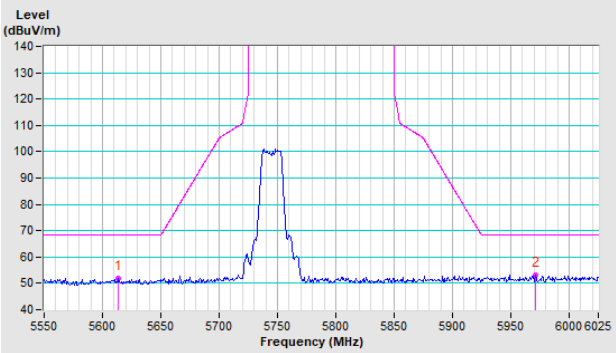
Horizontal	Vertical
	

CH 165 5825 MHz

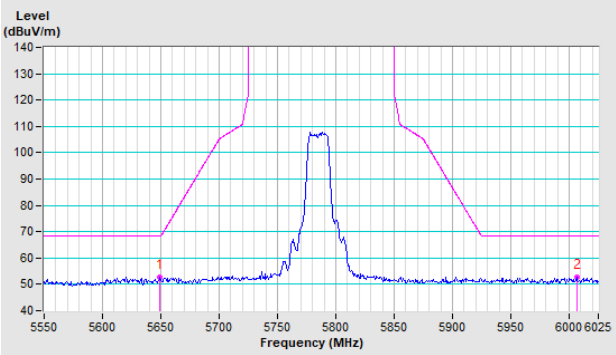
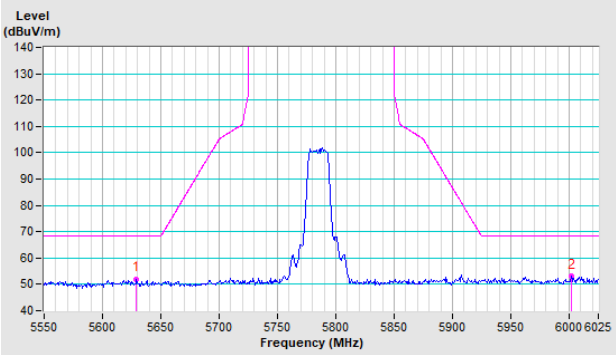
Horizontal	Vertical
	

802.11ac (VHT20)

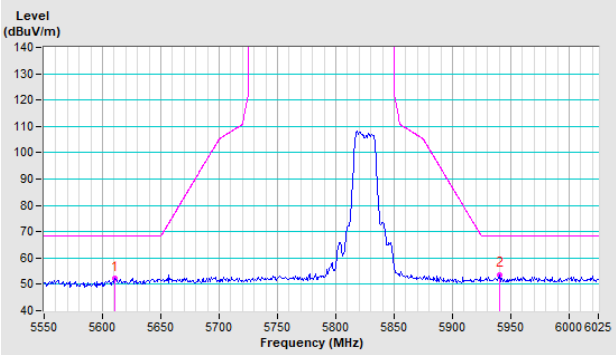
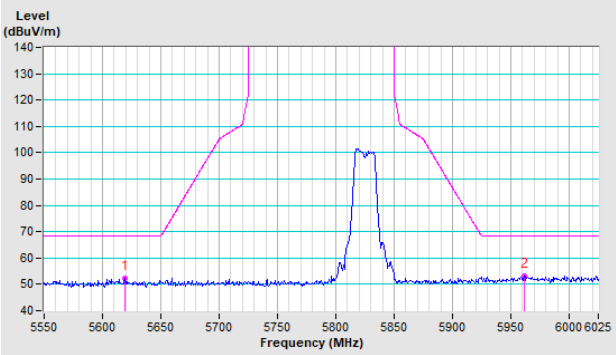
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

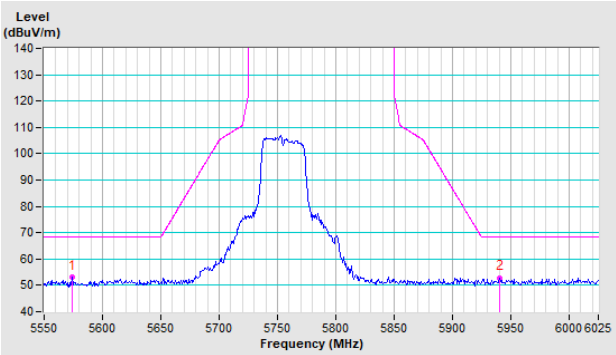
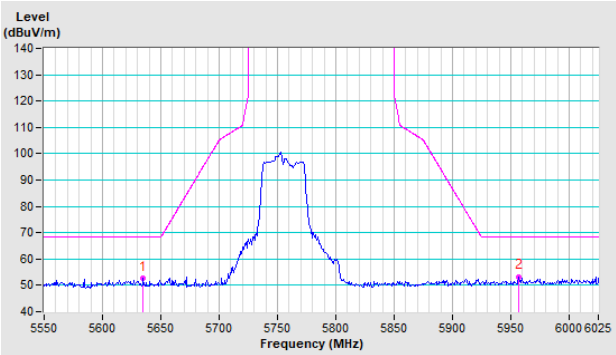
Horizontal	Vertical
	

CH 165 5825 MHz

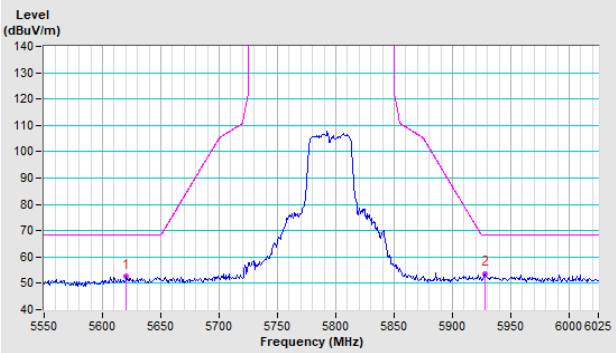
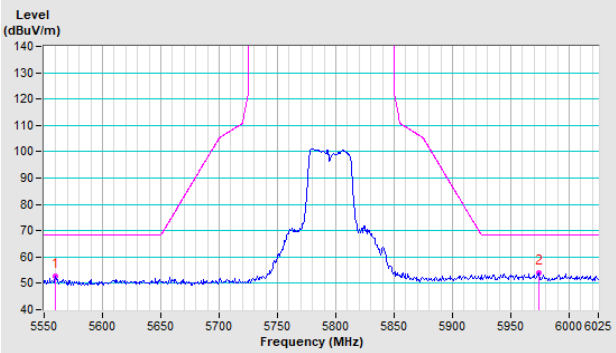
Horizontal	Vertical
	

802.11ac (VHT40)

CH 151 5755 MHz

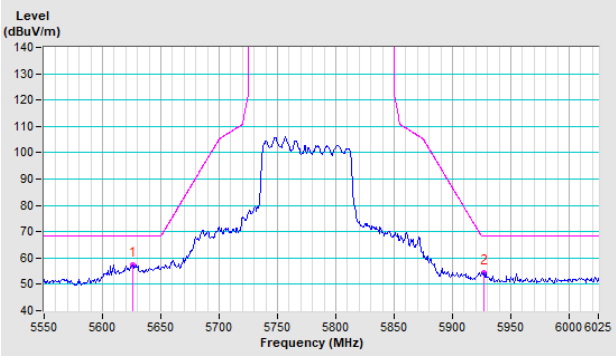
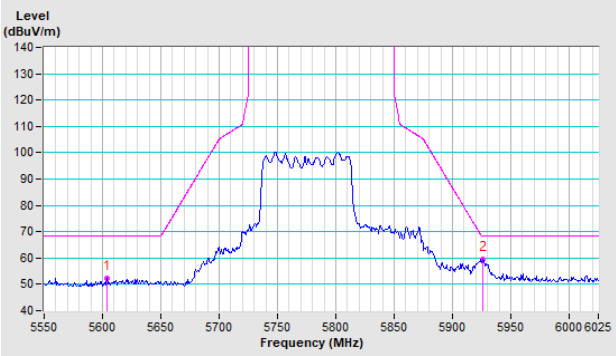
Horizontal	Vertical
	

CH 159 5795 MHz

Horizontal	Vertical
	

802.11ac (VHT80)

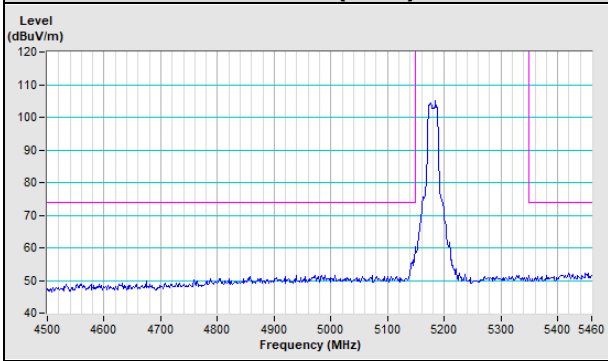
CH 155 5775 MHz

Horizontal	Vertical
	

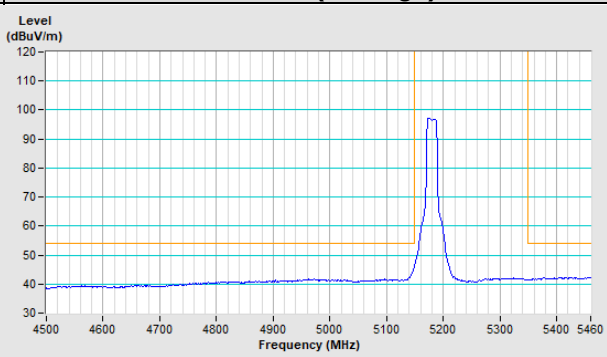
Annex B- Band Edge Measurement

802.11a Channel 36

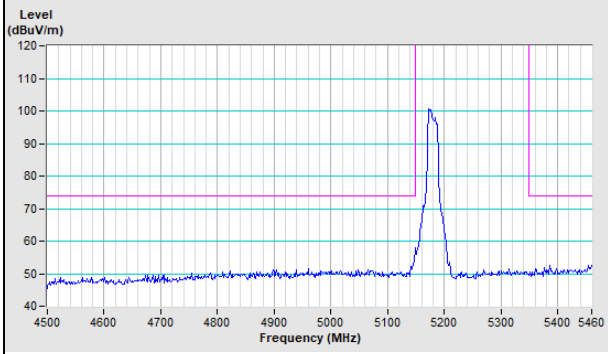
Horizontal (Peak)



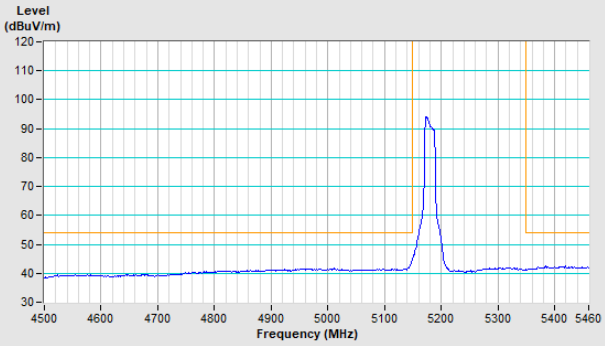
Horizontal (Average)



Vertical (Peak)

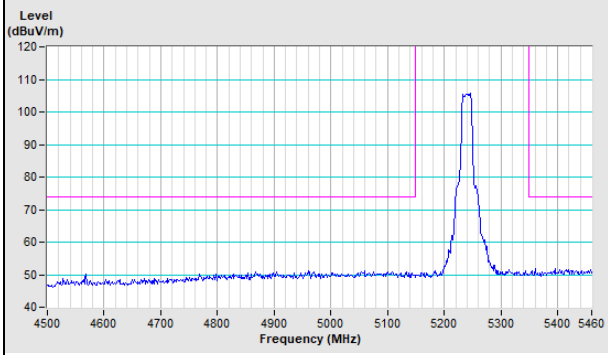


Vertical (Average)

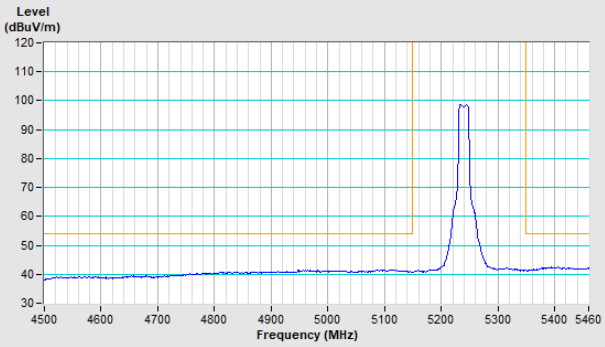


802.11a Channel 48

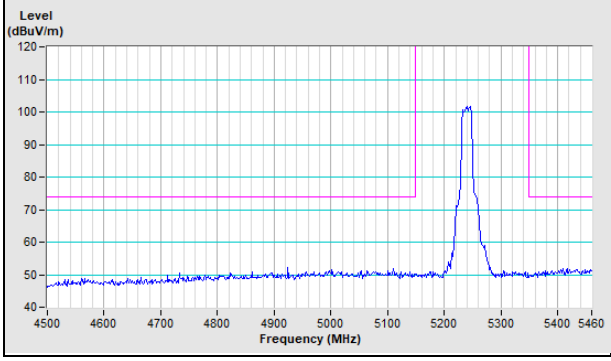
Horizontal (Peak)



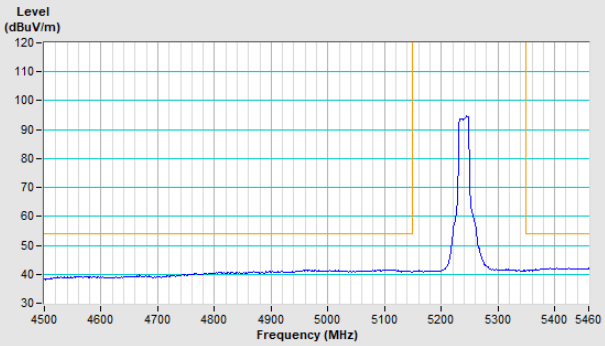
Horizontal (Average)



Vertical (Peak)

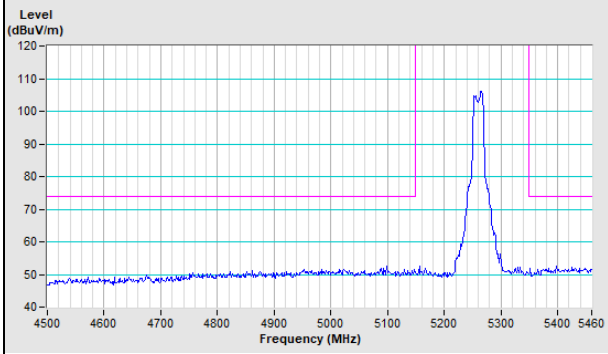


Vertical (Average)

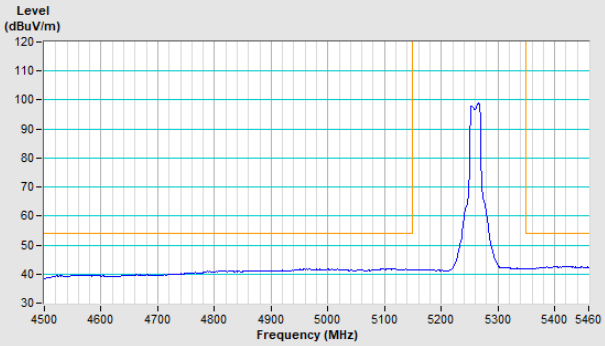


802.11a Channel 52

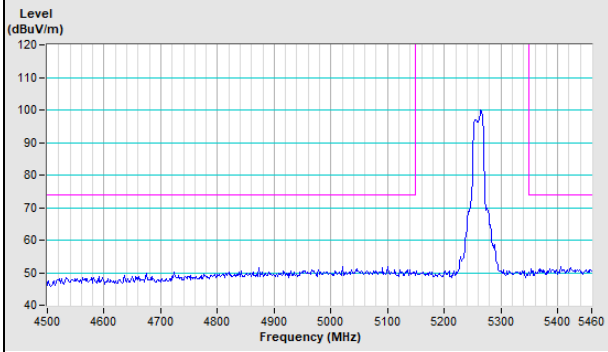
Horizontal (Peak)



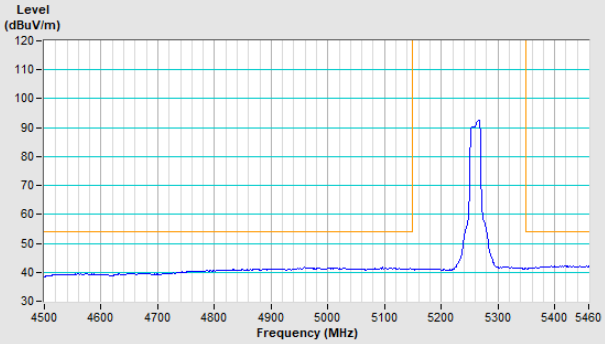
Horizontal (Average)



Vertical (Peak)

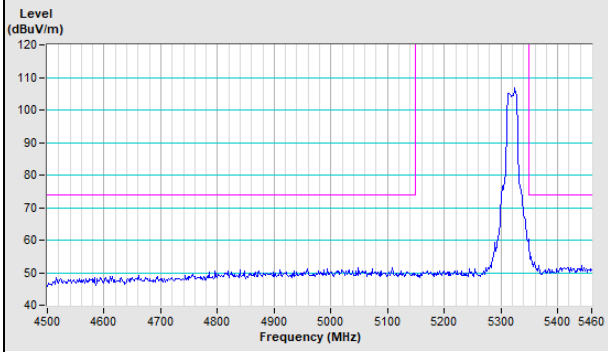


Vertical (Average)

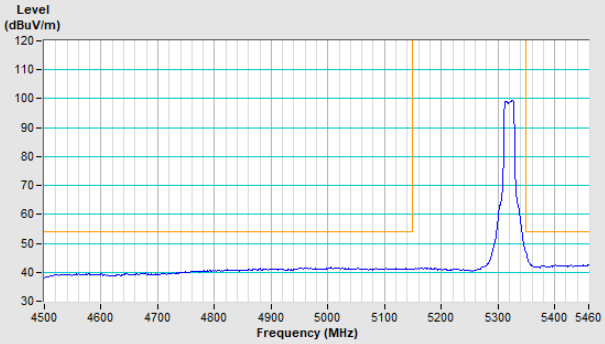


802.11a Channel 64

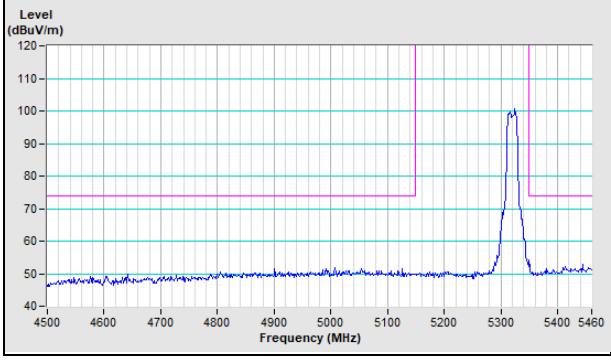
Horizontal (Peak)



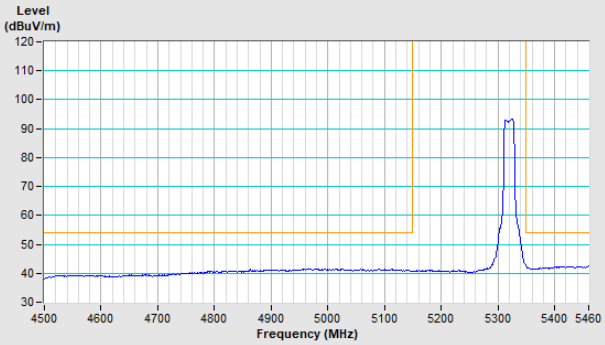
Horizontal (Average)



Vertical (Peak)

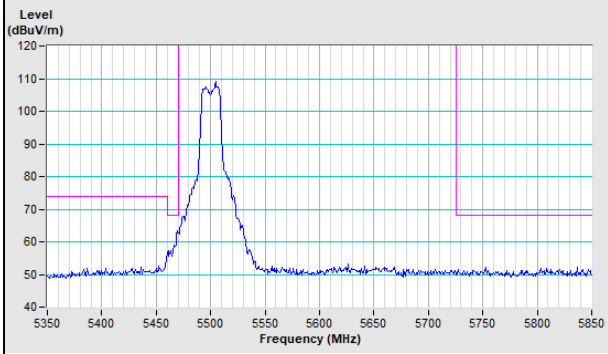


Vertical (Average)

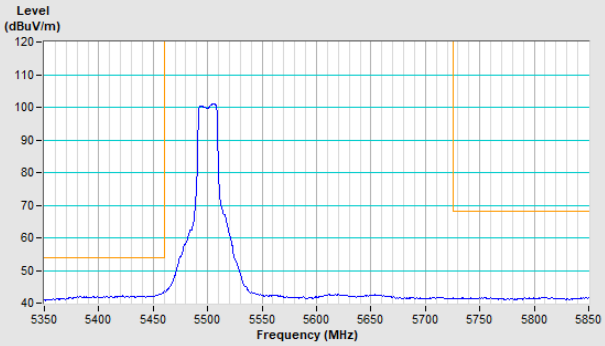


802.11a Channel 100

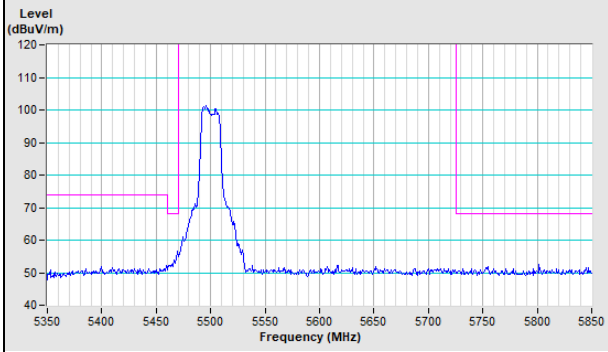
Horizontal (Peak)



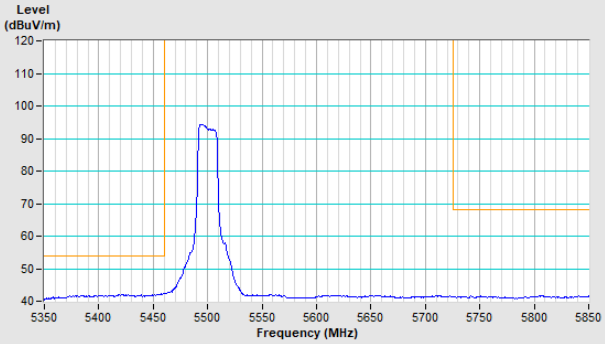
Horizontal (Average)



Vertical (Peak)

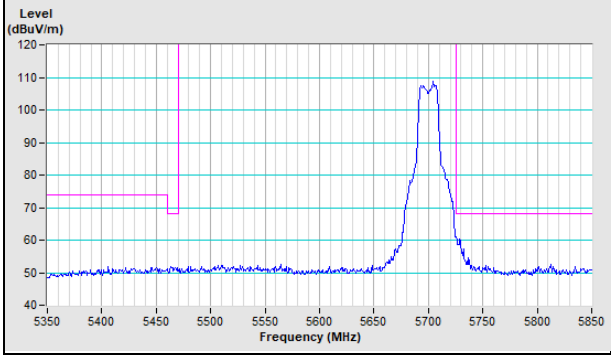


Vertical (Average)

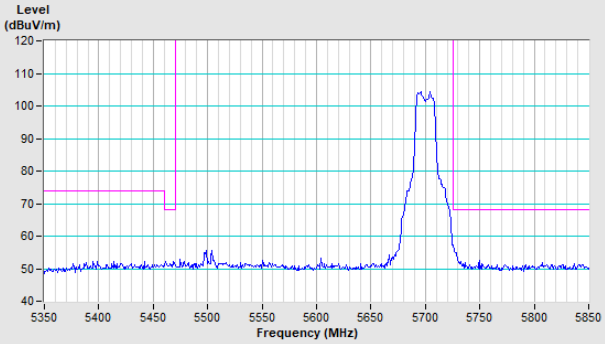


802.11a Channel 140

Horizontal (Peak)

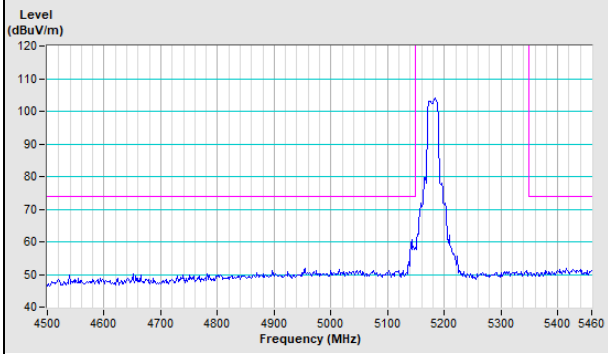


Vertical (Peak)

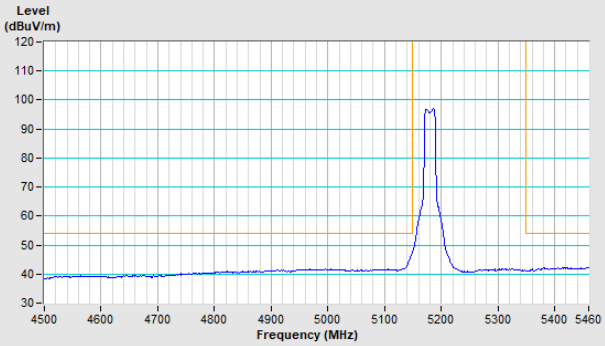


802.11ac (VHT20) Channel 36

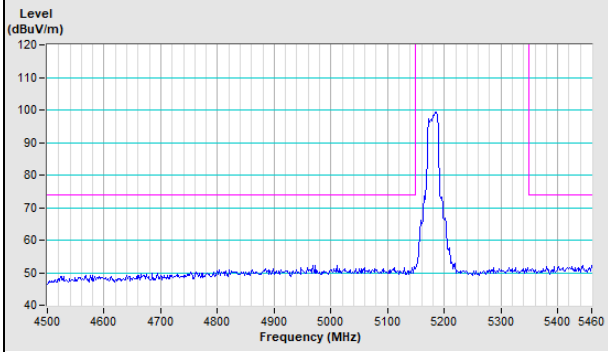
Horizontal (Peak)



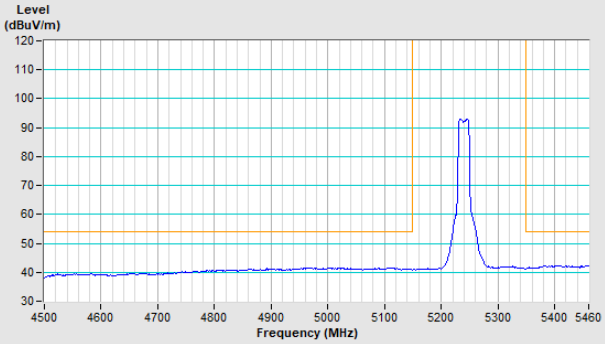
Horizontal (Average)



Vertical (Peak)

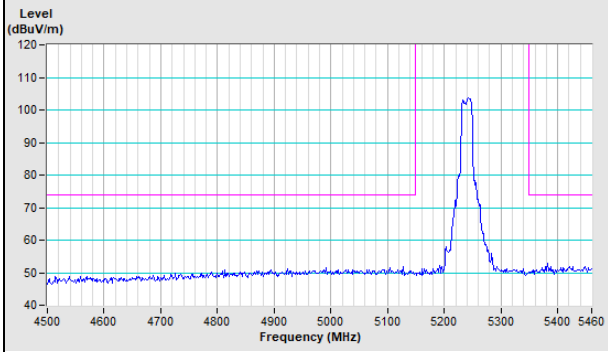


Vertical (Average)

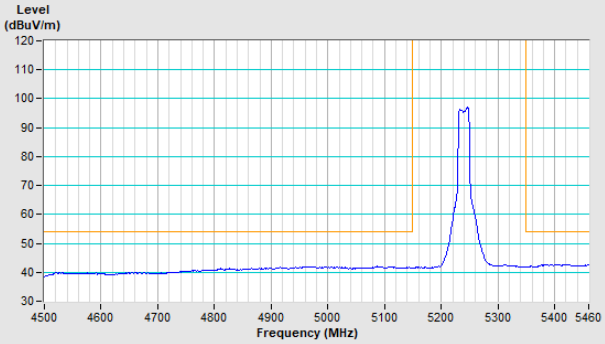


802.11ac (VHT20) Channel 48

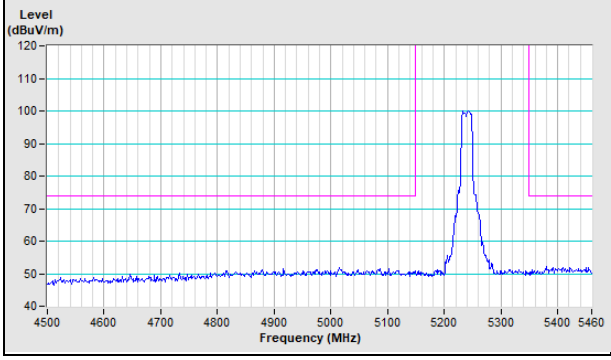
Horizontal (Peak)



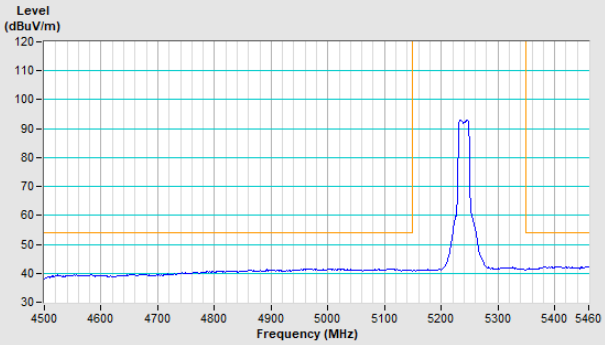
Horizontal (Average)



Vertical (Peak)

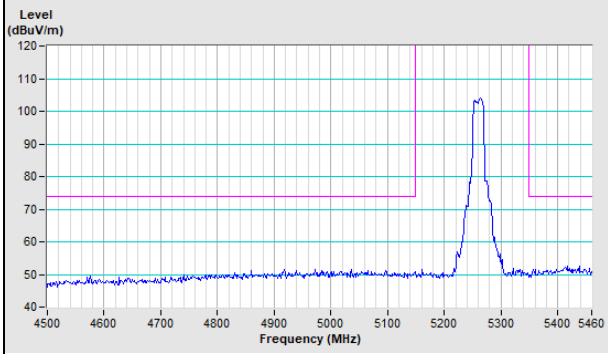


Vertical (Average)

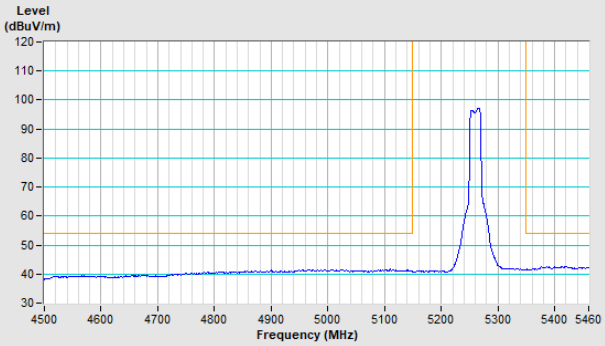


802.11ac (VHT20) Channel 52

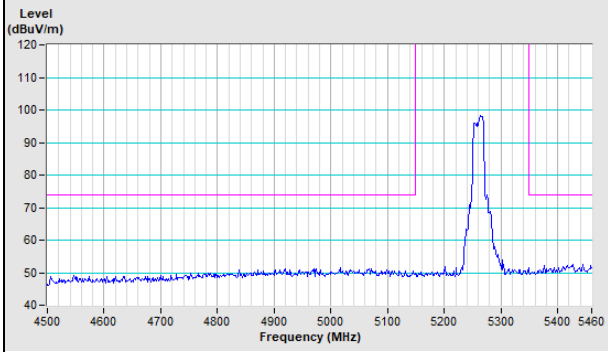
Horizontal (Peak)



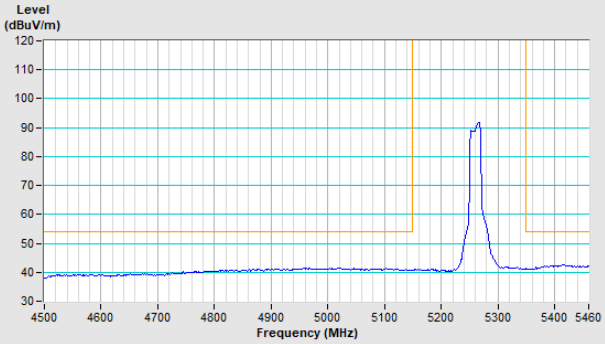
Horizontal (Average)



Vertical (Peak)

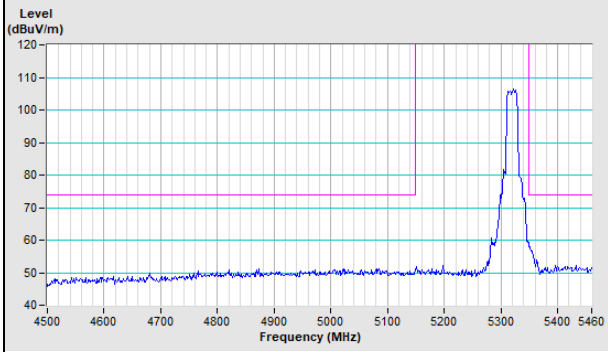


Vertical (Average)

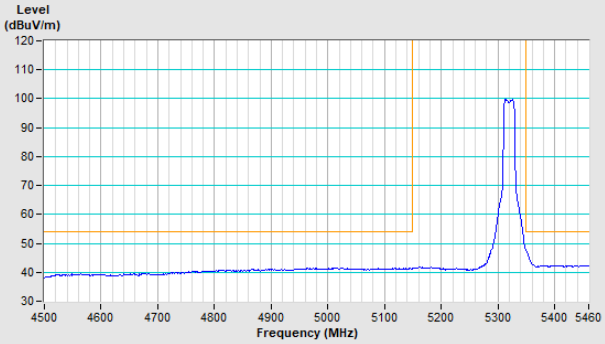


802.11ac (VHT20) Channel 64

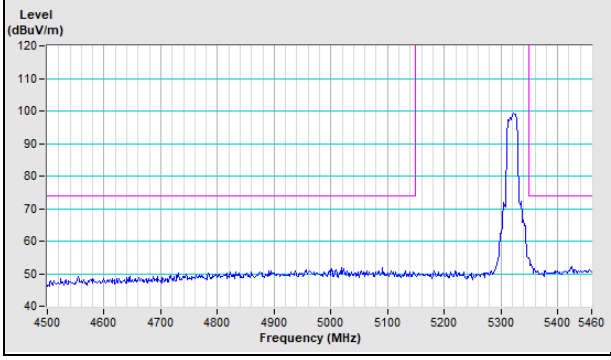
Horizontal (Peak)



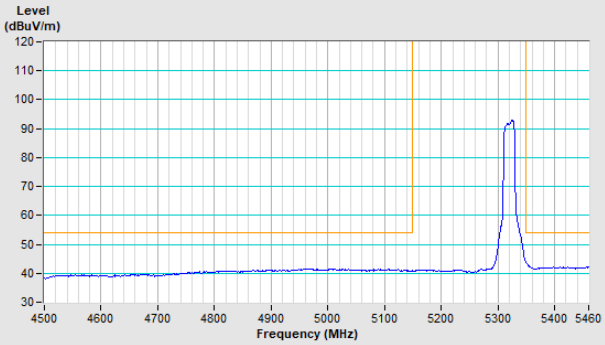
Horizontal (Average)



Vertical (Peak)

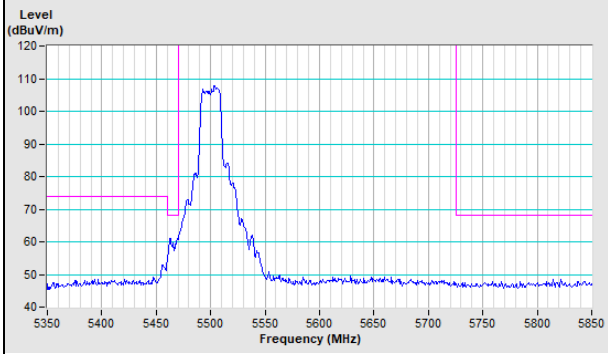


Vertical (Average)

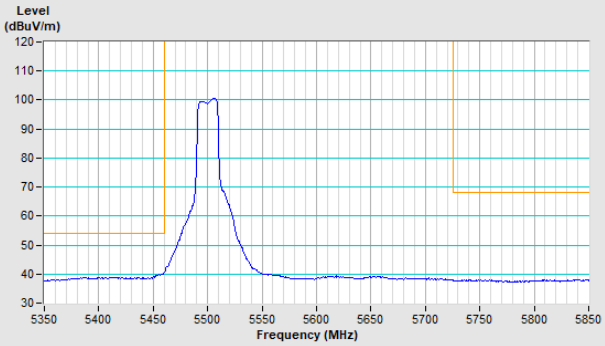


802.11ac (VHT20) Channel 100

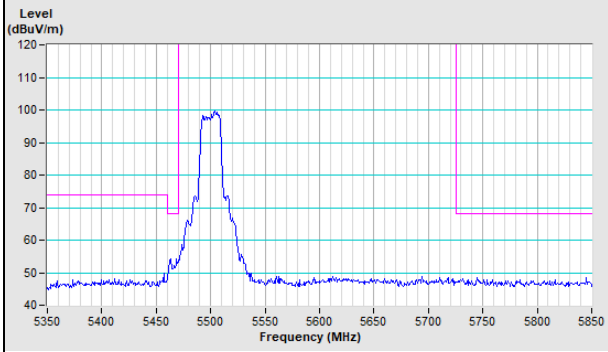
Horizontal (Peak)



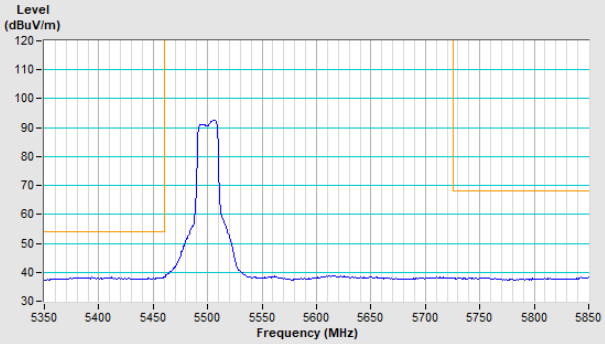
Horizontal (Average)



Vertical (Peak)

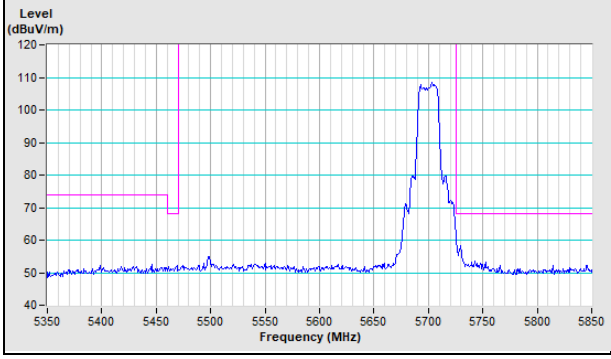


Vertical (Average)

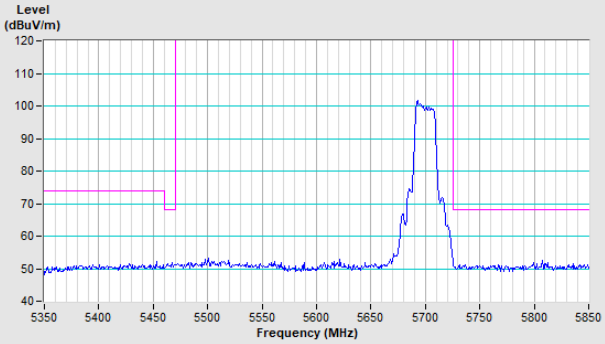


802.11ac (VHT20) Channel 140

Horizontal (Peak)

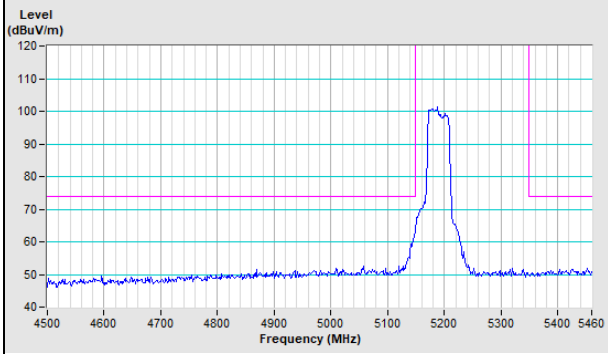


Vertical (Peak)

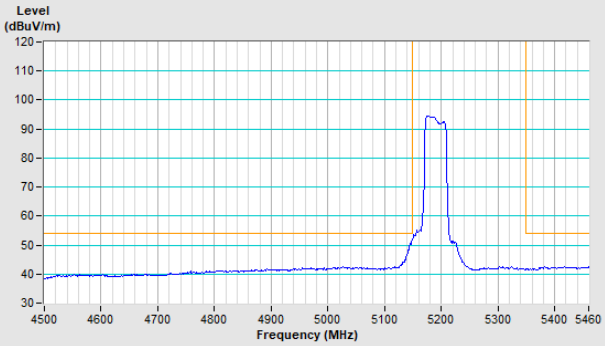


802.11ac (VHT40) Channel 38

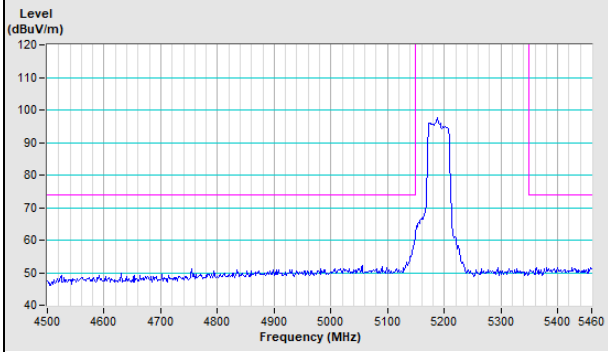
Horizontal (Peak)



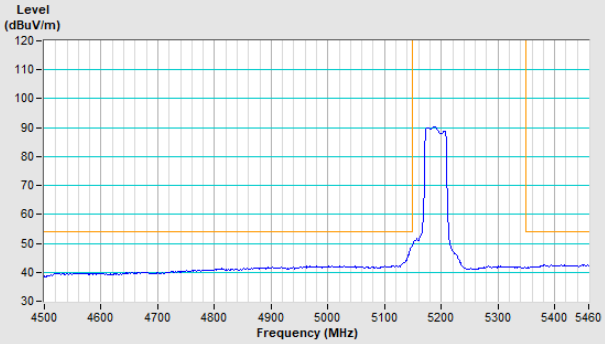
Horizontal (Average)



Vertical (Peak)

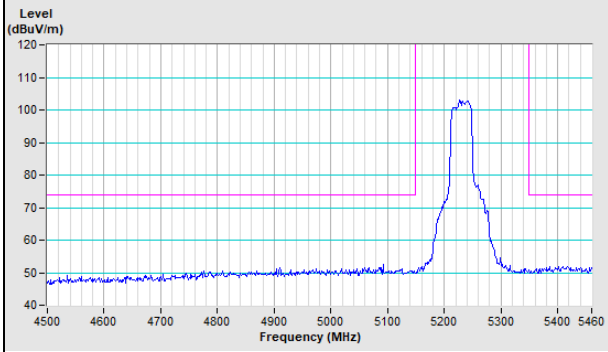


Vertical (Average)

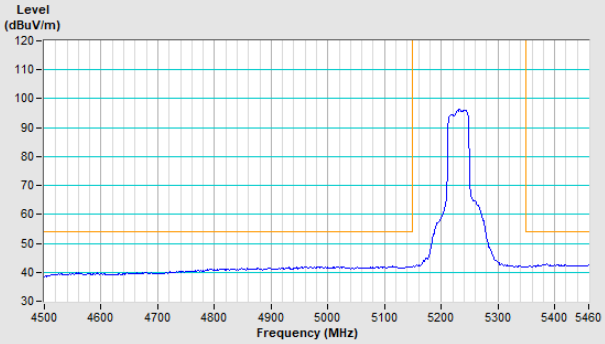


802.11ac (VHT40) Channel 46

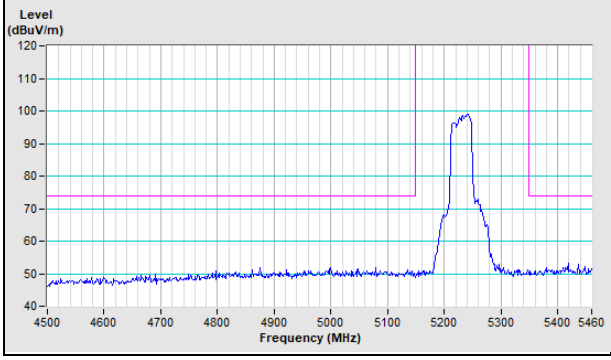
Horizontal (Peak)



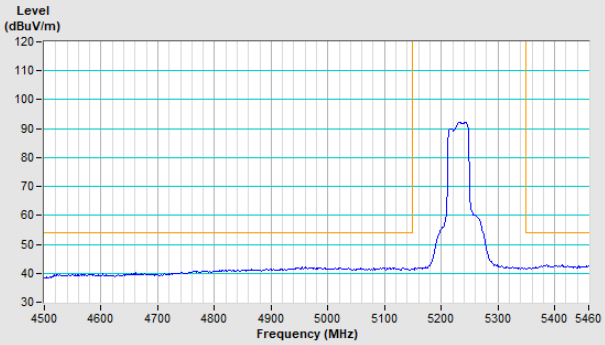
Horizontal (Average)



Vertical (Peak)

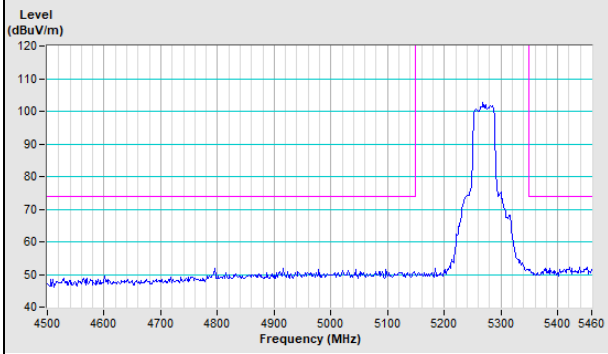


Vertical (Average)

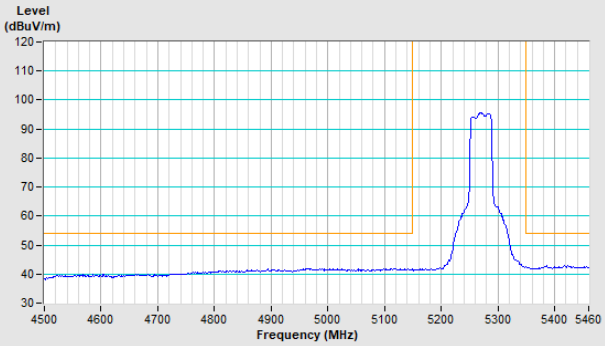


802.11ac (VHT40) Channel 54

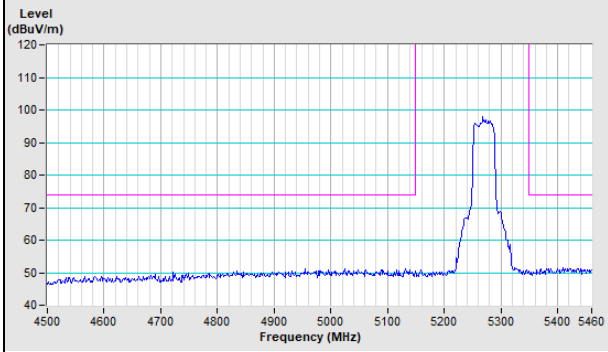
Horizontal (Peak)



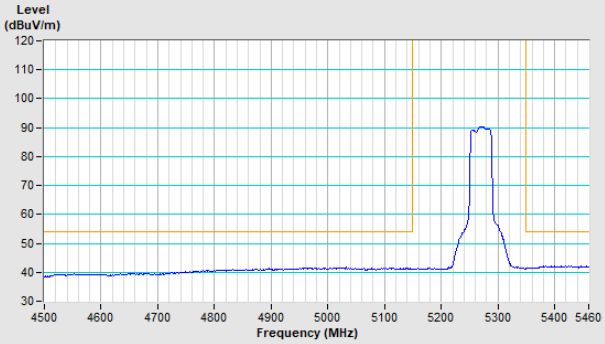
Horizontal (Average)



Vertical (Peak)

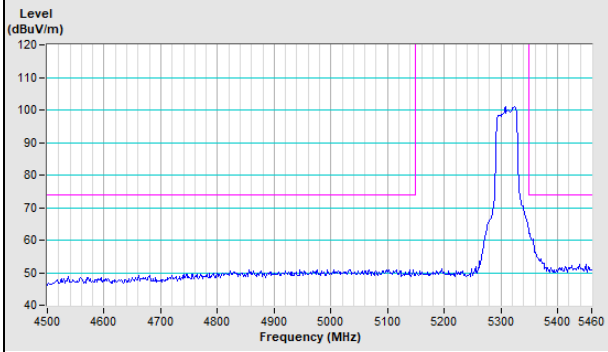


Vertical (Average)

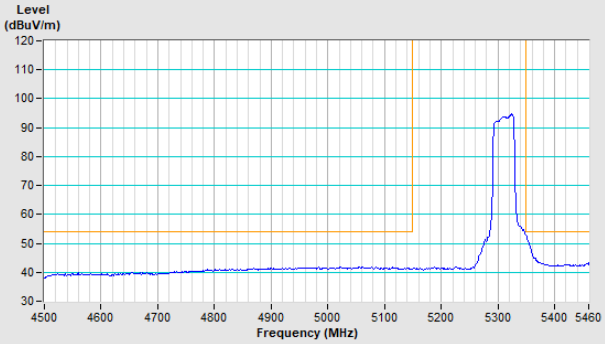


802.11ac (VHT40) Channel 62

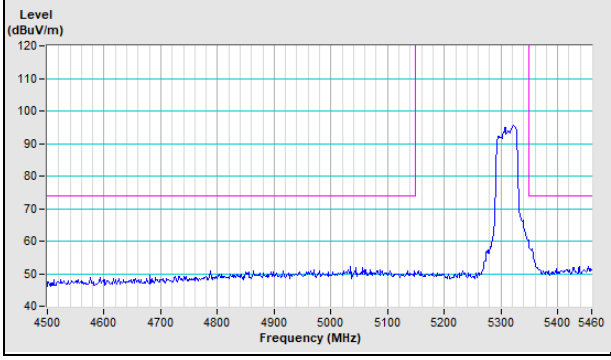
Horizontal (Peak)



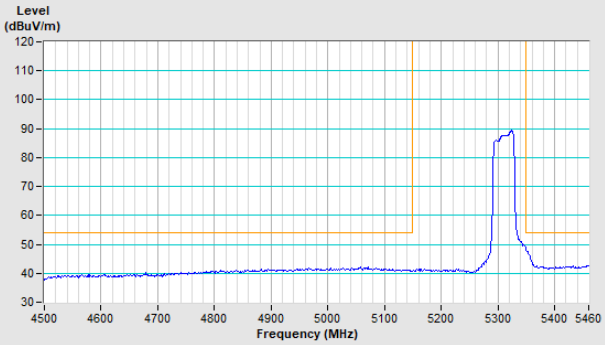
Horizontal (Average)



Vertical (Peak)

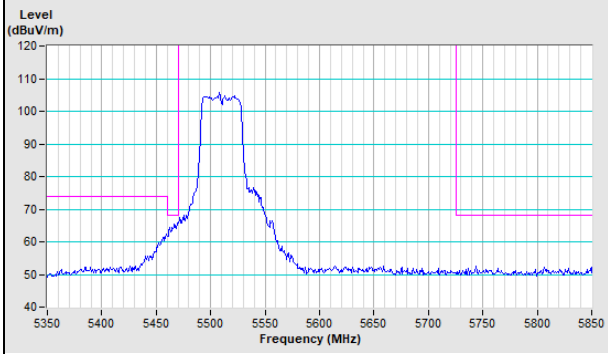


Vertical (Average)

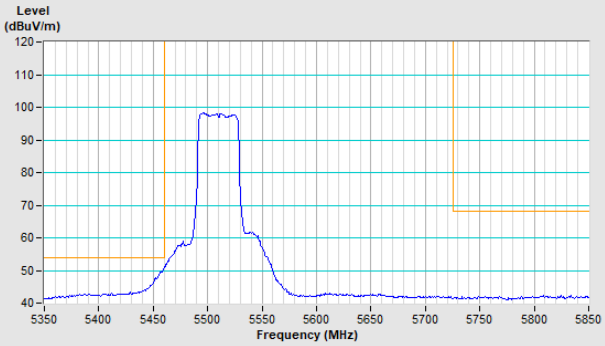


802.11ac (VHT40) Channel 102

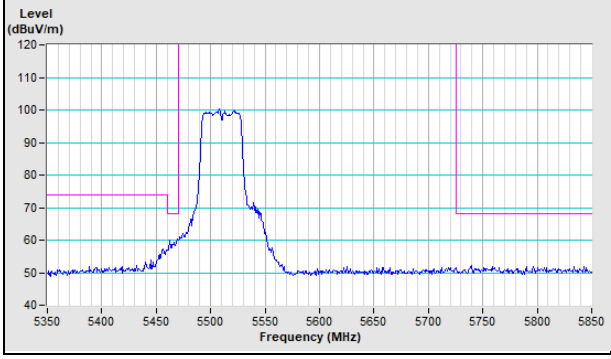
Horizontal (Peak)



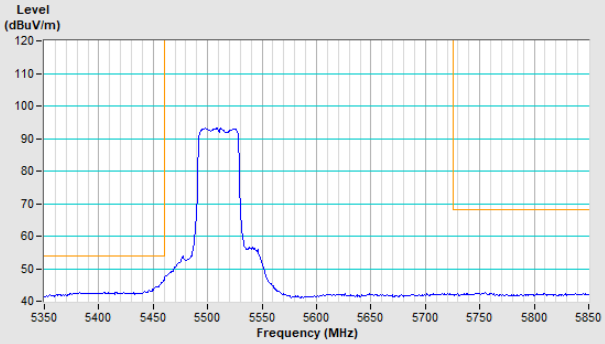
Horizontal (Average)



Vertical (Peak)

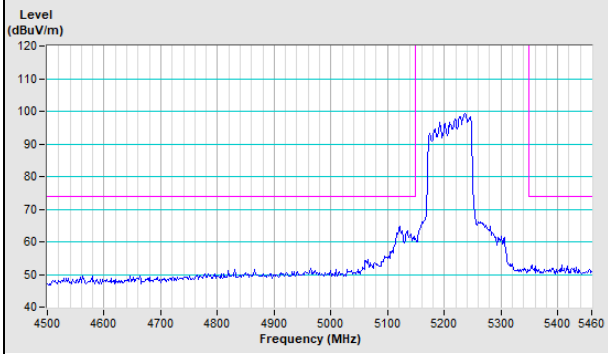


Vertical (Average)

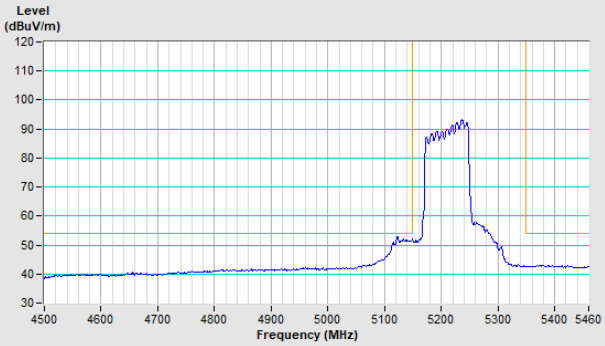


802.11ac (VHT80) Channel 42

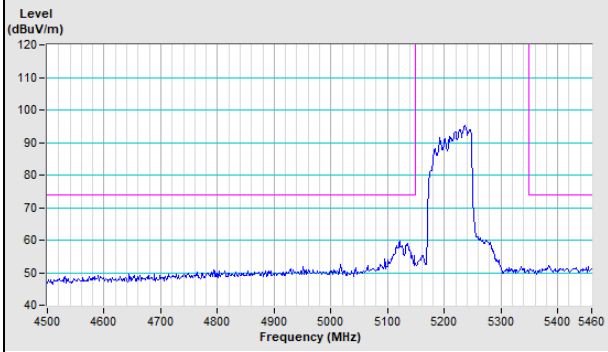
Horizontal (Peak)



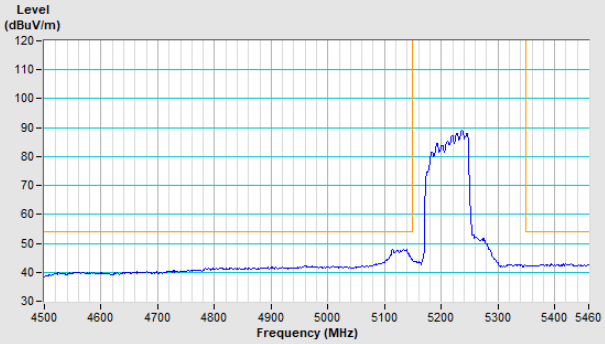
Horizontal (Average)



Vertical (Peak)

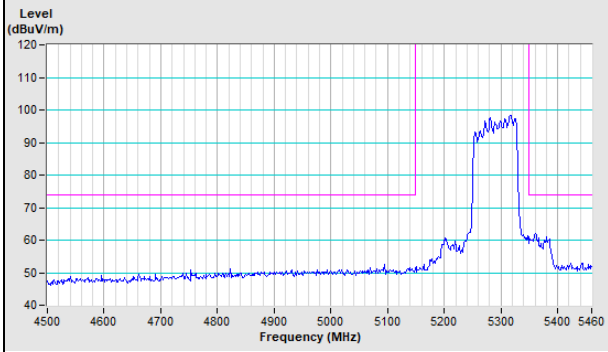


Vertical (Average)

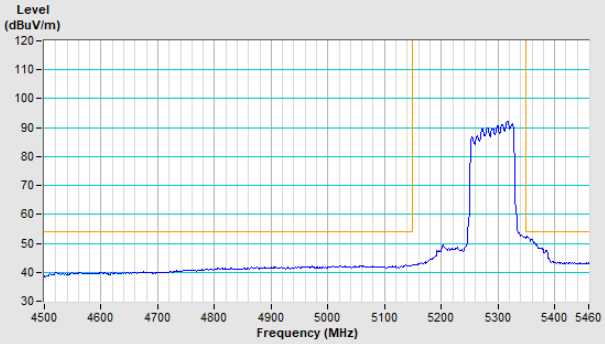


802.11ac (VHT80) Channel 58

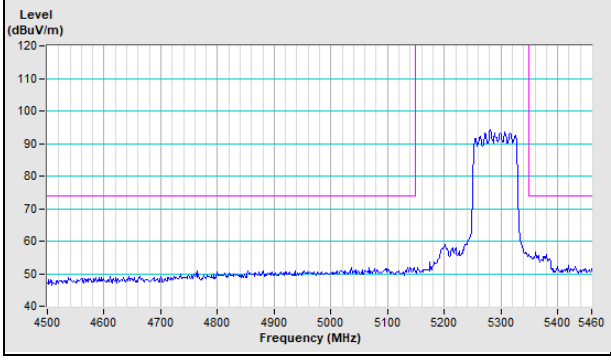
Horizontal (Peak)



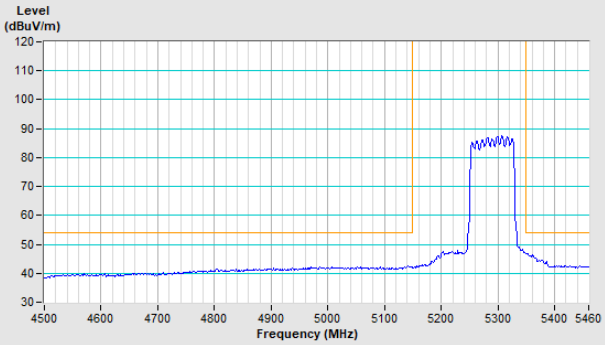
Horizontal (Average)

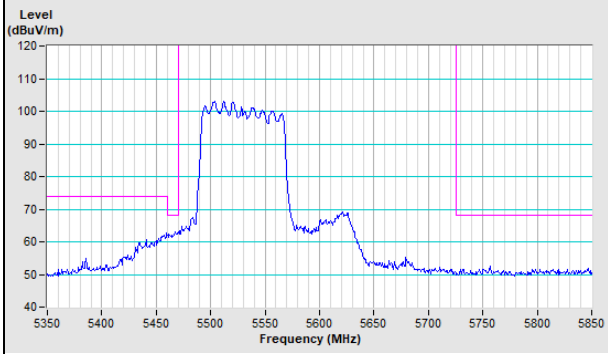
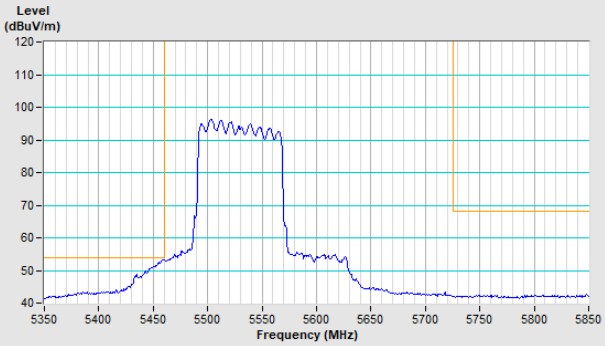
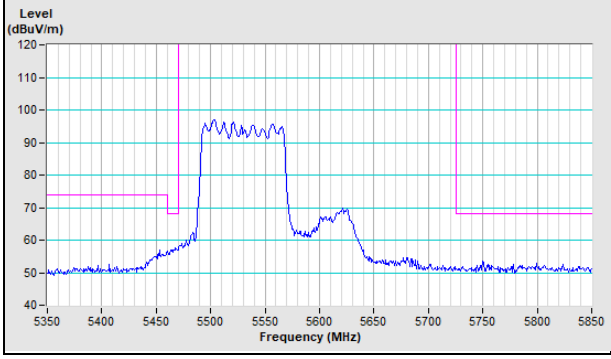
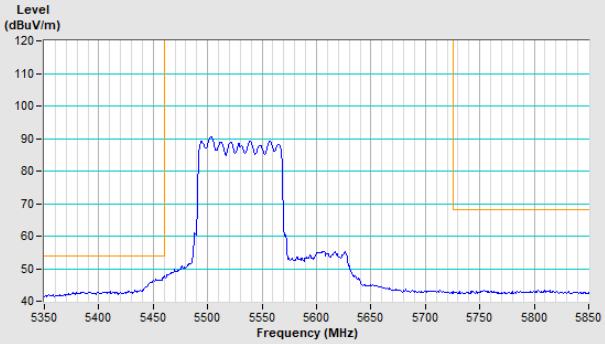


Vertical (Peak)



Vertical (Average)



802.11ac (VHT80) Channel 106	
Horizontal (Peak)	**Horizontal (Average)**
	
Vertical (Peak)	**Vertical (Average)**
	

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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