FCC Test Report

Report No.: RFBCIB-WTW-P21050220-1

FCC ID: 2AA3N-PT01

Test Model: PT01

Received Date: May 6, 2021

Test Date: May 21 to Jun. 2, 2021

Issued Date: Oct. 12, 2021

Applicant: Peloton Interactive Inc.

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FCC Registration / Designation Number: 198487 / TW2021

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Release Control Record

Issue No.	Description	Date Issued
RFBCIB-WTW-P21050220-1	Original release	Oct. 12, 2021

1 Certificate of Conformity

Product: Peloton Guide (Set Top Box)

Brand: Peloton

Test Model: PT01

Sample Status: Engineering sample

Applicant: Peloton Interactive Inc.

Test Date: May 21 to Jun. 2, 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:** Oct. 12, 2021

Annie Chang / Senior Specialist

Approved by : Rex. Lai, **Date:** Oct. 12, 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 -5.20dB at 0.54662MHz.
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 -5.04dB at 11650.00MHz.
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 MHF1 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	2.94 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	Peloton Guide (Set Top Box)
Brand	Peloton
Test Model	PT01
Power Supply Rating	5Vdc from adapter
Modulation Type	256QAM,64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	OFDM
Transfer Rate	802.11a: up to 54Mbps 802.11n up to 300Mbps 802.11ac: up to 866.7Mbps
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): 8 802.11n (HT40), 802.11ac (VHT40): 3 802.11ac (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: 63.973mW 5260~5320MHz: 65.908mW 5500~5700MHz: 67.593mW 5745~5825MHz: 64.811mW
Antenna Type	Ant 0: PIFA antenna with 2.88dBi gain Ant 1: PIFA antenna with 3.18dBi gain
Antenna Connector	IPEX MHF1
Accessory Device	Adapter
Cable Supplied	Shielded HDMI cable (1.5m)

Note:

1. The EUT provides 2 completed transmitters and 2 receivers.

Modulation Mode	TX Function	RX Function
802.11a	2TX	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX

* 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. WLAN & Bluetooth technologies cannot transmit at same time.

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

4. The EUT uses following adapter.

Adapter 1	
Brand	TenPao
Model	S015BGU0500300
Input Power	100-240Vac, 0.5A, 50-60Hz
Output Power	5Vdc, 3A
Power Line	AC 2 Pin, Shielded USB Type C cable (1.8m)
Adapter 2	
Brand	Chicony
Model	W20-015N1A
Input Power	100-240Vac, 0.5A, 50-60Hz
Output Power	5Vdc, 3A
Power Line	AC 2 Pin, Shielded USB Type C cable (1.8m)

The above two adapters were pre-test and **Adapter 1** was the worst case for final test.

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:

8 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	132	5660 MHz
108	5540 MHz	136	5680 MHz
112	5560 MHz	140	5700 MHz

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

Channel	Frequency	Channel	Frequency
102	5510 MHz	110	5550 MHz
134	5670 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	
A	-	√	√	-	Operating Mode (EUT + Adapter)
B	√	√	√	√	Operating Mode (EUT + Notebook)

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

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)
B	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
B	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
B	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 134	102, 110, 134,	OFDM	MCS0
	802.11ac (VHT80)		106	106	OFDM	MCS0
B	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)
A & B	802.11ac (VHT20)	5180-5240	36 to 48	149	OFDM	MCS0
A & B	802.11ac (VHT20)	5260-5320	52 to 64		OFDM	MCS0
A & B	802.11ac (VHT20)	5500-5700	100 to 140		OFDM	MCS0
A & B	802.11ac (VHT20)	5745-5825	149 to 165		OFDM	MCS0

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)
A & B	802.11ac (VHT20)	5180-5240	36 to 48	149	OFDM	MCS0
A & B	802.11ac (VHT20)	5260-5320	52 to 64		OFDM	MCS0
A & B	802.11ac (VHT20)	5500-5700	100 to 140		OFDM	MCS0
A & B	802.11ac (VHT20)	5745-5825	149 to 165		OFDM	MCS0

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)
B	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
B	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
B	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 134	102, 110, 134,	OFDM	MCS0
	802.11ac (VHT80)		106	106	OFDM	MCS0
B	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

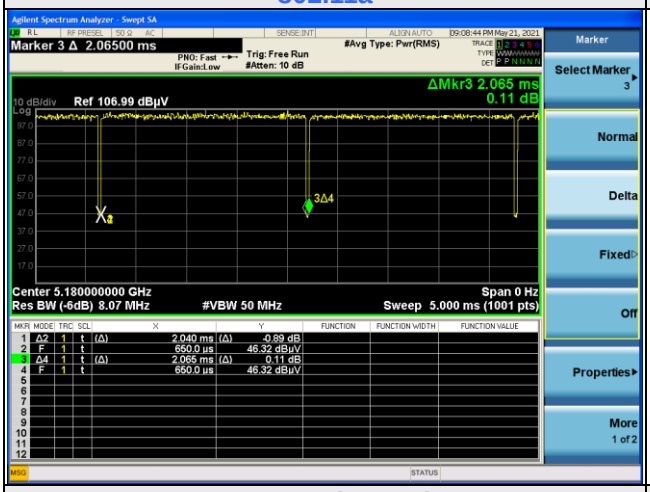
Test Condition:

Applicable To	EUT Configure Mode	Environmental Conditions	Input Power	Tested By
RE≥1G	B	24deg. C, 63%RH	120Vac, 60Hz (System)	Jed Wu
RE<1G	A	24deg. C, 72%RH	120Vac, 60Hz (Adapter)	Ian Chang
	B	24deg. C, 62%RH	120Vac, 60Hz (System)	Ian Chang
PLC	A	25deg. C, 75%RH	120Vac, 60Hz (Adapter)	Ian Chang
	B	25deg. C, 75%RH	120Vac, 60Hz (System)	Ian Chang
APCM	B	25deg. C, 76%RH	120Vac, 60Hz (System)	Pirar Hsieh

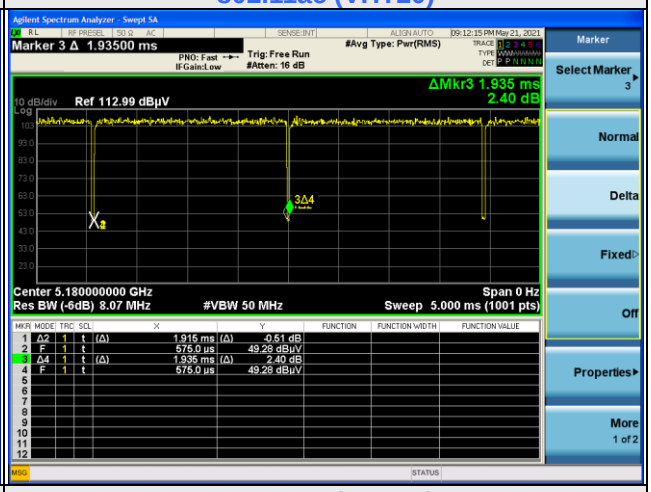
3.3 Duty Cycle of Test Signal

If duty cycle of test signal is ≥ 98 %, duty factor is not required.
If duty cycle of test signal is < 98%, duty factor shall be considered.
802.11a: Duty cycle = 2.04/2.065 = 0.988
802.11ac (VHT20): Duty cycle = 1.915/1.935 = 0.990
802.11ac (VHT40): Duty cycle = 0.945/0.972 = 0.972, Duty factor = 10 * log(1/0.972) = 0.12
802.11ac (VHT80): Duty cycle = 0.46/0.492 = 0.935, Duty factor = 10 * log(1/0.935) = 0.29

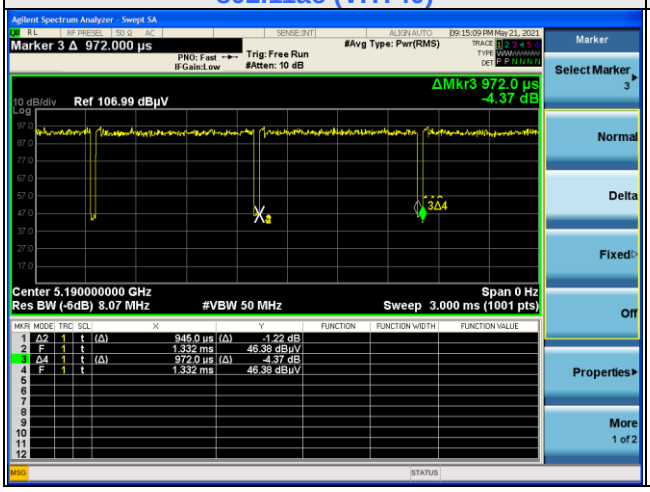
802.11a



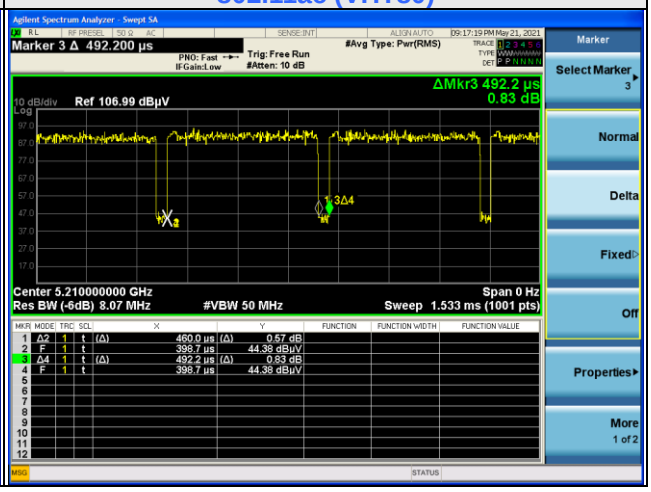
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



3.4 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	LCD MONITOR	ASUS	MX27U	JBLMRS007843	NA	Provided by Lab
B.	Notebook PC	Lenovo	81LG	PF1NF9V2	NA	Provided by Lab

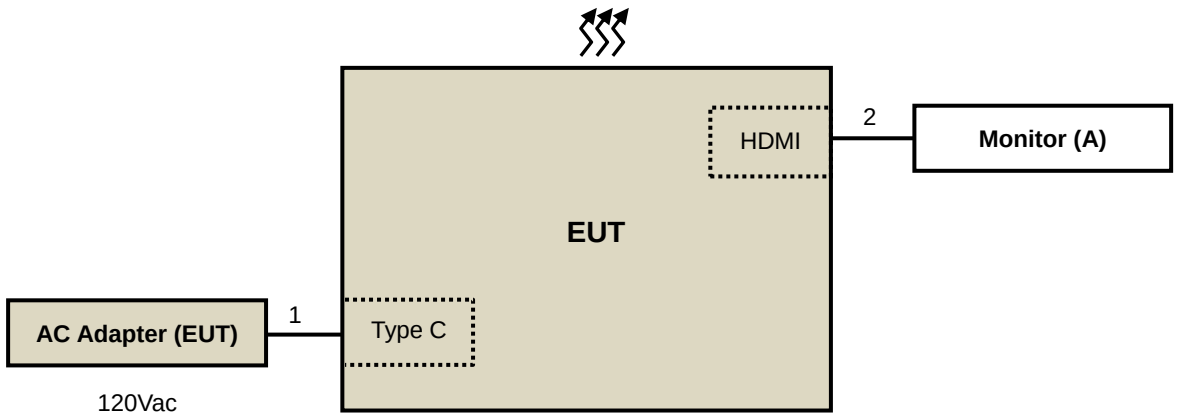
Note: All power cords of the above support units are non-shielded (1.8m).

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Type C cable	1	1.8	Y	0	Supplied by client
2.	HDMI cable	1	1.5	Y	0	Supplied by client

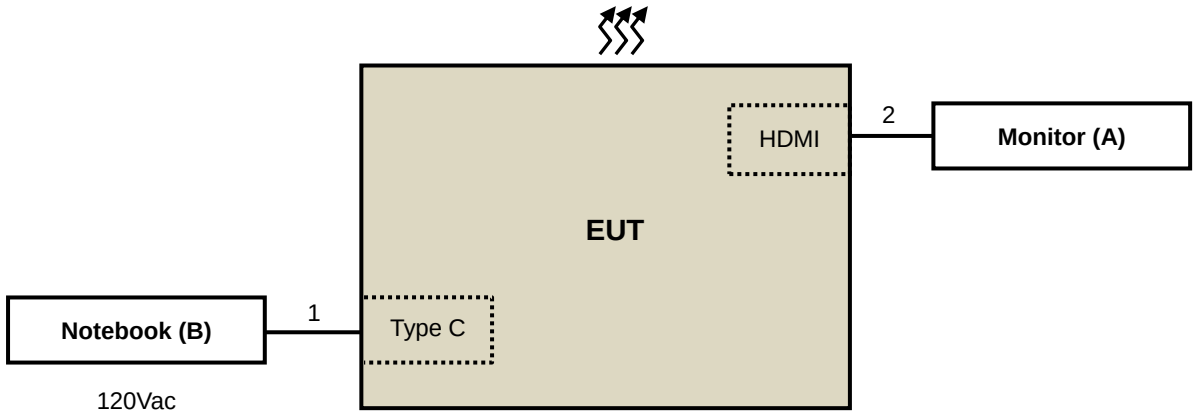
Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test

Mode A:



Mode B:



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

KDB 662911 D01 Multiple Transmitter Output 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

*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. 18, 2021	Feb. 17, 2022
HP Preamplifier	8449B	3008A01201	Feb. 19, 2021	Feb. 18, 2022
MITEQ Preamplifier	AMF-6F-260400-33-8P	892164	Feb. 18, 2021	Feb. 17, 2022
Agilent TEST RECEIVER	N9038A	MY51210129	Mar. 12, 2021	Mar. 11, 2022
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
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 8, 2020	Sep. 7, 2021
Anritsu Power Sensor	MA2411B	0738404	Apr. 15, 2021	Apr. 14, 2022
Anritsu Power Meter	ML2495A	0842014	Apr. 14, 2021	Apr. 13, 2022

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. Tested Date: May 21 to Jun. 2, 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:

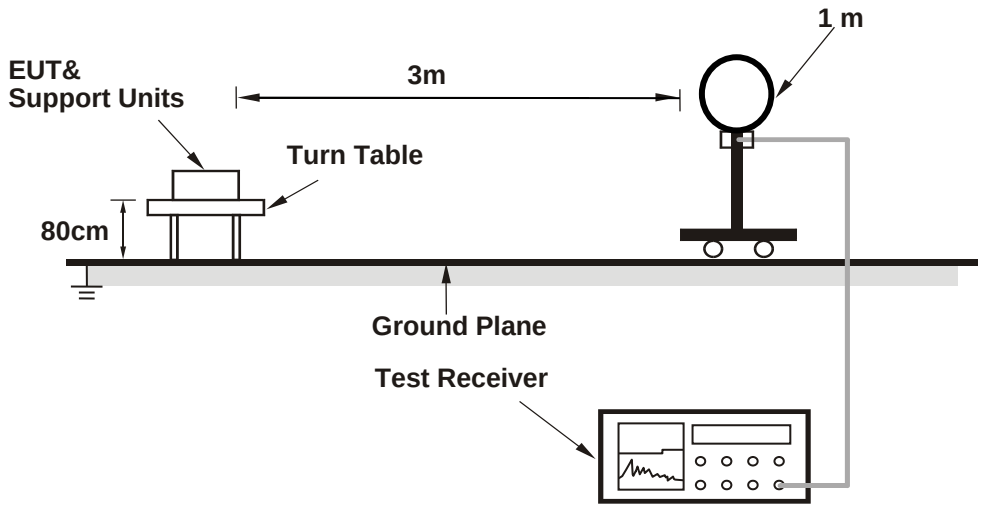
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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 = 10Hz; 802.11ac (VHT20): RBW = 1MHz, VBW = 10Hz; 802.11ac (VHT40): RBW = 1MHz, VBW = 1.1kHz; 802.11ac (VHT80): RBW = 1MHz, VBW = 2.2kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

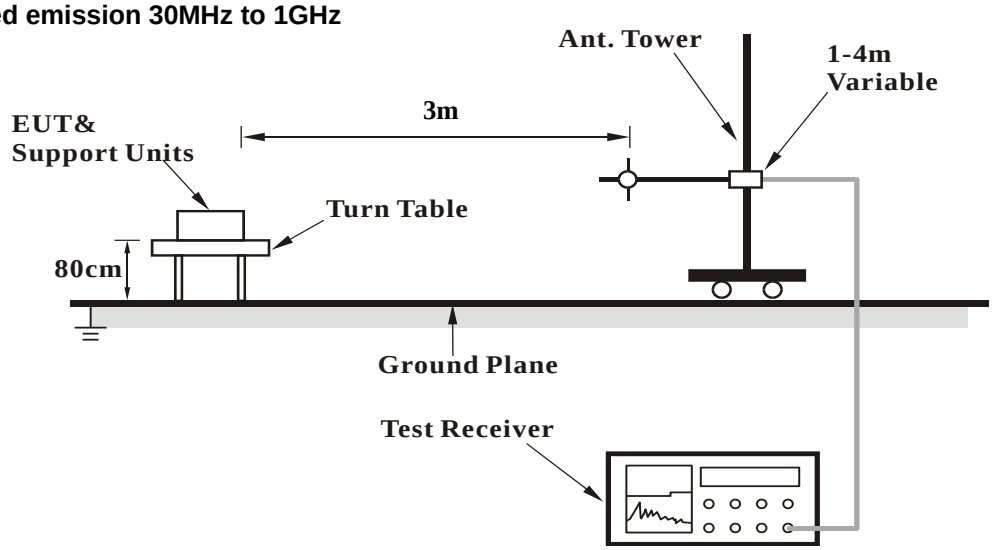
No deviation.

4.1.5 Test Setup

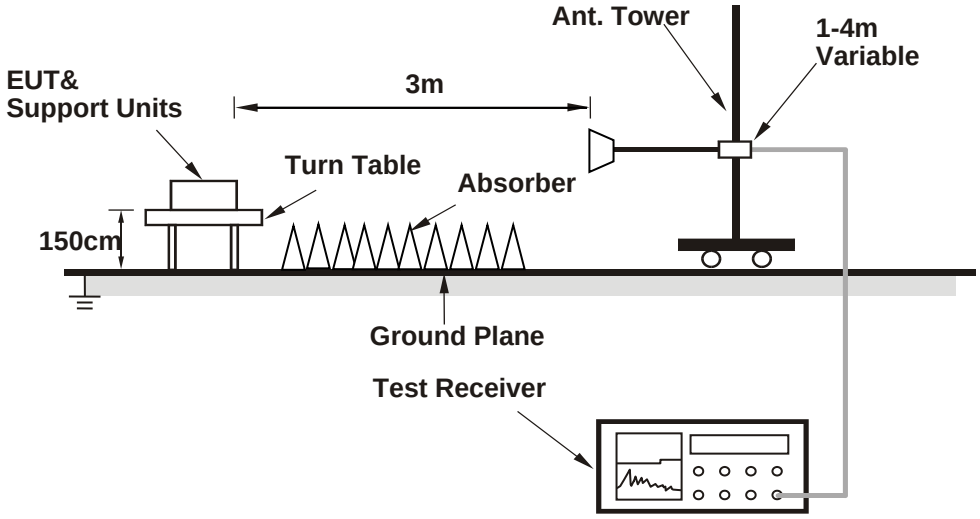
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

a. Connected the EUT to Adapter or Notebook.

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

4.1.7 Test Results

ABOVE 1GHz DATA

Mode B

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	56.91 PK	74.00	-17.09	3.68 H	131	45.86	11.05
2	5150.00	43.45 AV	54.00	-10.55	3.68 H	131	32.40	11.05
3	*5180.00	111.09 PK			3.68 H	131	99.91	11.18
4	*5180.00	102.57 AV			3.68 H	131	91.39	11.18
5	#10360.00	57.42 PK	68.20	-10.78	1.45 H	264	39.63	17.79
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	54.97 PK	74.00	-19.03	3.50 V	225	43.92	11.05
2	5150.00	43.00 AV	54.00	-11.00	3.50 V	225	31.95	11.05
3	*5180.00	108.58 PK			3.50 V	225	97.40	11.18
4	*5180.00	100.95 AV			3.50 V	225	89.77	11.18
5	#10360.00	56.13 PK	68.20	-12.07	1.64 V	235	38.34	17.79

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	110.94 PK			3.62 H	128	99.68	11.26
2	*5200.00	102.54 AV			3.62 H	128	91.28	11.26
3	#10400.00	57.19 PK	68.20	-11.01	1.84 H	124	39.22	17.97
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	108.90 PK			3.49 V	233	97.64	11.26
2	*5200.00	100.93 AV			3.49 V	233	89.67	11.26
3	#10400.00	56.61 PK	68.20	-11.59	1.28 V	115	38.64	17.97

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	109.61 PK			3.78 H	132	98.17	11.44
2	*5240.00	102.15 AV			3.78 H	132	90.71	11.44
3	5350.00	53.38 PK	74.00	-20.62	3.78 H	132	41.28	12.10
4	5350.00	42.35 AV	54.00	-11.65	3.78 H	132	30.25	12.10
5	#10480.00	57.80 PK	68.20	-10.40	1.87 H	145	39.61	18.19
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	*5240.00	108.28 PK			3.46 V	219	96.84	11.44
2	*5240.00	100.05 AV			3.46 V	219	88.61	11.44
3	5350.00	52.32 PK	74.00	-21.68	3.46 V	219	40.22	12.10
4	5350.00	41.78 AV	54.00	-12.22	3.46 V	219	29.68	12.10
5	#10480.00	56.53 PK	68.20	-11.67	1.17 V	129	38.34	18.19

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 802.11a	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	52.37 PK	74.00	-21.63	3.42 H	127	41.32	11.05
2	5150.00	41.13 AV	54.00	-12.87	3.42 H	127	30.08	11.05
3	*5260.00	109.87 PK			3.42 H	127	98.32	11.55
4	*5260.00	101.67 AV			3.42 H	127	90.12	11.55
5	#10520.00	57.60 PK	68.20	-10.60	1.64 H	238	39.34	18.26
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	51.34 PK	74.00	-22.66	3.51 V	228	40.29	11.05
2	5150.00	40.94 AV	54.00	-13.06	3.51 V	228	29.89	11.05
3	*5260.00	108.07 PK			3.51 V	228	96.52	11.55
4	*5260.00	100.22 AV			3.51 V	228	88.67	11.55
5	#10520.00	56.40 PK	68.20	-11.80	1.74 V	152	38.14	18.26

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	110.19 PK			3.39 H	135	98.34	11.85
2	*5300.00	102.41 AV			3.39 H	135	90.56	11.85
3	10600.00	57.58 PK	74.00	-16.42	1.87 H	155	39.26	18.32
4	10600.00	46.68 AV	54.00	-7.32	1.87 H	155	28.36	18.32
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	108.19 PK			3.52 V	221	96.34	11.85
2	*5300.00	100.10 AV			3.52 V	221	88.25	11.85
3	10600.00	56.56 PK	74.00	-17.44	1.42 V	314	38.24	18.32
4	10600.00	45.95 AV	54.00	-8.05	1.42 V	314	27.63	18.32

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	109.83 PK			3.69 H	129	97.88	11.95
2	*5320.00	101.69 AV			3.69 H	129	89.74	11.95
3	5350.00	54.63 PK	74.00	-19.37	3.69 H	129	42.53	12.10
4	5350.00	44.33 AV	54.00	-9.67	3.69 H	129	32.23	12.10
5	10640.00	57.66 PK	74.00	-16.34	1.58 H	252	39.35	18.31
6	10640.00	46.65 AV	54.00	-7.35	1.58 H	252	28.34	18.31
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	107.59 PK			3.49 V	226	95.64	11.95
2	*5320.00	99.84 AV			3.49 V	226	87.89	11.95
3	5350.00	53.36 PK	74.00	-20.64	3.49 V	226	41.26	12.10
4	5350.00	43.44 AV	54.00	-10.56	3.49 V	226	31.34	12.10
5	10640.00	56.55 PK	74.00	-17.45	1.96 V	39	38.24	18.31
6	10640.00	45.45 AV	54.00	-8.55	1.96 V	39	27.14	18.31

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	55.19 PK	74.00	-18.81	2.06 H	113	42.72	12.47
2	5460.00	43.58 AV	54.00	-10.42	2.06 H	113	31.11	12.47
3	#5470.00	55.50 PK	68.20	-12.70	2.06 H	113	43.00	12.50
4	*5500.00	109.27 PK			2.06 H	113	96.67	12.60
5	*5500.00	100.70 AV			2.06 H	113	88.10	12.60
6	11000.00	58.59 PK	74.00	-15.41	1.87 H	144	39.62	18.97
7	11000.00	47.62 AV	54.00	-6.38	1.87 H	144	28.65	18.97
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	53.71 PK	74.00	-20.29	3.49 V	224	41.24	12.47
2	5460.00	42.73 AV	54.00	-11.27	3.49 V	224	30.26	12.47
3	#5470.00	54.58 PK	68.20	-13.62	1.49 V	298	42.08	12.50
4	*5500.00	106.86 PK			3.49 V	224	94.26	12.60
5	*5500.00	99.12 AV			3.49 V	224	86.52	12.60
6	11000.00	57.43 PK	74.00	-16.57	2.13 V	269	38.46	18.97
7	11000.00	46.41 AV	54.00	-7.59	2.13 V	269	27.44	18.97

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	109.02 PK			1.98 H	122	97.03	11.99
2	*5580.00	100.68 AV			1.98 H	122	88.69	11.99
3	11160.00	59.12 PK	74.00	-14.88	1.87 H	159	39.36	19.76
4	11160.00	48.17 AV	54.00	-5.83	1.87 H	159	28.41	19.76
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	107.86 PK			3.53 V	226	95.87	11.99
2	*5580.00	98.41 AV			3.53 V	226	86.42	11.99
3	11160.00	58.01 PK	74.00	-15.99	2.87 V	187	38.25	19.76
4	11160.00	46.95 AV	54.00	-7.05	2.87 V	187	27.19	19.76

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	108.00 PK			1.88 H	116	96.31	11.69
2	*5700.00	99.84 AV			1.88 H	116	88.15	11.69
3	#5725.00	54.42 PK	68.20	-13.78	1.88 H	116	42.70	11.72
4	11400.00	58.86 PK	74.00	-15.14	1.77 H	149	39.23	19.63
5	11400.00	47.79 AV	54.00	-6.21	1.77 H	149	28.16	19.63
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	106.27 PK			3.43 V	232	94.58	11.69
2	*5700.00	98.48 AV			3.43 V	232	86.79	11.69
3	#5725.00	52.81 PK	68.20	-15.39	3.43 V	232	41.09	11.72
4	11400.00	57.77 PK	74.00	-16.23	2.58 V	196	38.14	19.63
5	11400.00	46.84 AV	54.00	-7.16	2.58 V	196	27.21	19.63

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	#5626.83	51.75 PK	68.20	-16.45	2.72 H	169	39.97	11.78
2	*5745.00	111.25 PK			2.72 H	169	99.49	11.76
3	*5745.00	102.83 AV			2.72 H	169	91.07	11.76
4	#5934.13	53.51 PK	68.20	-14.69	2.72 H	169	41.60	11.91
5	11490.00	59.40 PK	74.00	-14.60	1.63 H	239	39.36	20.04
6	11490.00	48.46 AV	54.00	-5.54	1.63 H	239	28.42	20.04
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	#5610.82	52.74 PK	68.20	-15.46	3.48 V	218	40.93	11.81
2	*5745.00	109.02 PK			3.48 V	218	97.26	11.76
3	*5745.00	101.34 AV			3.48 V	218	89.58	11.76
4	#5952.25	53.30 PK	68.20	-14.90	3.48 V	218	41.24	12.06
5	11490.00	58.21 PK	74.00	-15.79	2.22 V	146	38.17	20.04
6	11490.00	47.43 AV	54.00	-6.57	2.22 V	146	27.39	20.04

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.
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	#5638.24	52.94 PK	68.20	-15.26	2.68 H	175	41.18	11.76
2	*5785.00	111.36 PK			2.68 H	175	99.54	11.82
3	*5785.00	103.14 AV			2.68 H	175	91.32	11.82
4	#5926.86	54.00 PK	68.20	-14.20	2.68 H	175	42.14	11.86
5	11570.00	59.84 PK	74.00	-14.16	2.14 H	154	39.47	20.37
6	11570.00	48.58 AV	54.00	-5.42	2.14 H	154	28.21	20.37
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	#5613.27	51.88 PK	68.20	-16.32	3.53 V	233	40.08	11.80
2	*5785.00	109.33 PK			3.53 V	233	97.51	11.82
3	*5785.00	101.21 AV			3.53 V	233	89.39	11.82
4	#5959.58	53.63 PK	68.20	-14.57	3.53 V	233	41.52	12.11
5	11570.00	58.59 PK	74.00	-15.41	2.35 V	167	38.22	20.37
6	11570.00	47.98 AV	54.00	-6.02	2.35 V	167	27.61	20.37

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	#5634.48	52.10 PK	68.20	-16.10	2.75 H	169	40.33	11.77
2	*5825.00	110.82 PK			2.75 H	169	99.03	11.79
3	*5825.00	102.91 AV			2.75 H	169	91.12	11.79
4	#5947.42	54.36 PK	68.20	-13.84	2.75 H	169	42.34	12.02
5	11650.00	60.38 PK	74.00	-13.62	2.61 H	258	39.84	20.54
6	11650.00	48.62 AV	54.00	-5.38	2.61 H	258	28.08	20.54
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5631.44	53.10 PK	68.20	-15.10	3.52 V	212	41.33	11.77
2	*5825.00	108.95 PK			3.52 V	212	97.16	11.79
3	*5825.00	100.88 AV			3.52 V	212	89.09	11.79
4	#5930.02	53.73 PK	68.20	-14.47	3.52 V	212	41.86	11.87
5	11650.00	58.91 PK	74.00	-15.09	2.84 V	175	38.37	20.54
6	11650.00	47.83 AV	54.00	-6.17	2.84 V	175	27.29	20.54

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	55.74 PK	74.00	-18.26	3.31 H	123	44.69	11.05
2	5150.00	44.17 AV	54.00	-9.83	3.31 H	123	33.12	11.05
3	*5180.00	110.91 PK			3.31 H	123	99.73	11.18
4	*5180.00	102.26 AV			3.31 H	123	91.08	11.18
5	#10360.00	57.15 PK	68.20	-11.05	1.69 H	284	39.36	17.79
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	55.06 PK	74.00	-18.94	3.47 V	221	44.01	11.05
2	5150.00	43.89 AV	54.00	-10.11	3.47 V	221	32.84	11.05
3	*5180.00	108.64 PK			3.47 V	221	97.46	11.18
4	*5180.00	100.54 AV			3.47 V	221	89.36	11.18
5	#10360.00	56.20 PK	68.20	-12.00	1.47 V	159	38.41	17.79

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	110.51 PK			3.39 H	128	99.25	11.26
2	*5200.00	102.62 AV			3.39 H	128	91.36	11.26
3	#10400.00	57.31 PK	68.20	-10.89	1.42 H	284	39.34	17.97
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	108.72 PK			3.48 V	222	97.46	11.26
2	*5200.00	100.51 AV			3.48 V	222	89.25	11.26
3	#10400.00	56.40 PK	68.20	-11.80	2.18 V	341	38.43	17.97

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	110.80 PK			3.61 H	128	99.36	11.44
2	*5240.00	102.83 AV			3.61 H	128	91.39	11.44
3	5350.00	54.04 PK	74.00	-19.96	3.61 H	128	41.94	12.10
4	5350.00	42.50 AV	54.00	-11.50	3.61 H	128	30.40	12.10
5	#10480.00	57.53 PK	68.20	-10.67	1.19 H	287	39.34	18.19
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	*5240.00	108.96 PK			3.48 V	231	97.52	11.44
2	*5240.00	100.78 AV			3.48 V	231	89.34	11.44
3	5350.00	52.35 PK	74.00	-21.65	3.48 V	231	40.25	12.10
4	5350.00	41.56 AV	54.00	-12.44	3.48 V	231	29.46	12.10
5	#10480.00	56.53 PK	68.20	-11.67	1.19 V	298	38.34	18.19

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 (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	52.30 PK	74.00	-21.70	3.41 H	130	41.25	11.05
2	5150.00	41.40 AV	54.00	-12.60	3.41 H	130	30.35	11.05
3	*5260.00	110.83 PK			3.41 H	130	99.28	11.55
4	*5260.00	103.11 AV			3.41 H	130	91.56	11.55
5	#10520.00	57.72 PK	68.20	-10.48	1.45 H	222	39.46	18.26
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	51.69 PK	74.00	-22.31	3.56 V	219	40.64	11.05
2	5150.00	40.72 AV	54.00	-13.28	3.56 V	219	29.67	11.05
3	*5260.00	109.01 PK			3.56 V	219	97.46	11.55
4	*5260.00	101.22 AV			3.56 V	219	89.67	11.55
5	#10520.00	56.41 PK	68.20	-11.79	1.89 V	277	38.15	18.26

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	111.49 PK			3.39 H	135	99.64	11.85
2	*5300.00	103.11 AV			3.39 H	135	91.26	11.85
3	10600.00	57.66 PK	74.00	-16.34	2.15 H	209	39.34	18.32
4	10600.00	46.52 AV	54.00	-7.48	2.15 H	209	28.20	18.32
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	109.31 PK			3.49 V	230	97.46	11.85
2	*5300.00	101.50 AV			3.49 V	230	89.65	11.85
3	10600.00	56.47 PK	74.00	-17.53	2.88 V	145	38.15	18.32
4	10600.00	45.54 AV	54.00	-8.46	2.88 V	145	27.22	18.32

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	110.51 PK			3.35 H	128	98.56	11.95
2	*5320.00	102.77 AV			3.35 H	128	90.82	11.95
3	5350.00	55.38 PK	74.00	-18.62	3.35 H	128	43.28	12.10
4	5350.00	44.17 AV	54.00	-9.83	3.35 H	128	32.07	12.10
5	10640.00	57.76 PK	74.00	-16.24	1.87 H	46	39.45	18.31
6	10640.00	46.57 AV	54.00	-7.43	1.87 H	46	28.26	18.31
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	108.82 PK			3.47 V	231	96.87	11.95
2	*5320.00	100.19 AV			3.47 V	231	88.24	11.95
3	5350.00	54.25 PK	74.00	-19.75	3.47 V	231	42.15	12.10
4	5350.00	43.32 AV	54.00	-10.68	3.47 V	231	31.22	12.10
5	10640.00	56.45 PK	74.00	-17.55	2.22 V	231	38.14	18.31
6	10640.00	45.40 AV	54.00	-8.60	2.22 V	231	27.09	18.31

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	1.57 H	110	42.44	12.47
2	5460.00	44.07 AV	54.00	-9.93	1.57 H	110	31.60	12.47
3	#5470.00	55.80 PK	68.20	-12.40	1.57 H	110	43.30	12.50
4	*5500.00	108.29 PK			1.57 H	110	95.69	12.60
5	*5500.00	100.09 AV			1.57 H	110	87.49	12.60
6	11000.00	58.23 PK	74.00	-15.77	2.39 H	336	39.26	18.97
7	11000.00	47.40 AV	54.00	-6.60	2.39 H	336	28.43	18.97
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	53.72 PK	74.00	-20.28	3.44 V	225	41.25	12.47
2	5460.00	42.83 AV	54.00	-11.17	3.44 V	225	30.36	12.47
3	#5470.00	54.57 PK	68.20	-13.63	3.44 V	225	42.07	12.50
4	*5500.00	106.16 PK			3.44 V	225	93.56	12.60
5	*5500.00	98.48 AV			3.44 V	225	85.88	12.60
6	11000.00	57.12 PK	74.00	-16.88	1.78 V	145	38.15	18.97
7	11000.00	46.25 AV	54.00	-7.75	1.78 V	145	27.28	18.97

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	107.88 PK			1.69 H	128	95.89	11.99
2	*5580.00	99.68 AV			1.69 H	128	87.69	11.99
3	11160.00	59.02 PK	74.00	-14.98	2.41 H	162	39.26	19.76
4	11160.00	48.19 AV	54.00	-5.81	2.41 H	162	28.43	19.76
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	105.44 PK			3.52 V	229	93.45	11.99
2	*5580.00	97.83 AV			3.52 V	229	85.84	11.99
3	11160.00	57.87 PK	74.00	-16.13	2.14 V	174	38.11	19.76
4	11160.00	47.19 AV	54.00	-6.81	2.14 V	174	27.43	19.76

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	110.53 PK			2.82 H	118	98.84	11.69
2	*5700.00	102.42 AV			2.82 H	118	90.73	11.69
3	#5725.00	56.10 PK	68.20	-12.10	2.82 H	118	44.38	11.72
4	11400.00	58.98 PK	74.00	-15.02	1.22 H	169	39.35	19.63
5	11400.00	48.11 AV	54.00	-5.89	1.22 H	169	28.48	19.63
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	108.24 PK			3.41 V	238	96.55	11.69
2	*5700.00	100.15 AV			3.41 V	238	88.46	11.69
3	#5725.00	54.30 PK	68.20	-13.90	3.41 V	238	42.58	11.72
4	11400.00	57.91 PK	74.00	-16.09	2.15 V	187	38.28	19.63
5	11400.00	47.31 AV	54.00	-6.69	2.15 V	187	27.68	19.63

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	#5647.77	53.16 PK	68.20	-15.04	2.81 H	173	41.42	11.74
2	*5745.00	112.10 PK			2.81 H	173	100.34	11.76
3	*5745.00	103.95 AV			2.81 H	173	92.19	11.76
4	#5932.90	53.98 PK	68.20	-14.22	2.81 H	173	42.09	11.89
5	11490.00	59.11 PK	74.00	-14.89	2.04 H	101	39.07	20.04
6	11490.00	48.21 AV	54.00	-5.79	2.04 H	101	28.17	20.04
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	#5644.24	53.07 PK	68.20	-15.13	3.44 V	213	41.32	11.75
2	*5745.00	110.41 PK			3.44 V	213	98.65	11.76
3	*5745.00	102.04 AV			3.44 V	213	90.28	11.76
4	#5930.39	54.49 PK	68.20	-13.71	3.44 V	213	42.61	11.88
5	11490.00	58.31 PK	74.00	-15.69	2.65 V	154	38.27	20.04
6	11490.00	47.35 AV	54.00	-6.65	2.65 V	154	27.31	20.04

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.
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	#5644.39	52.43 PK	68.20	-15.77	2.79 H	178	40.68	11.75
2	*5785.00	111.94 PK			2.79 H	178	100.12	11.82
3	*5785.00	104.13 AV			2.79 H	178	92.31	11.82
4	#5930.69	55.41 PK	68.20	-12.79	2.79 H	178	43.53	11.88
5	11570.00	59.46 PK	74.00	-14.54	2.10 H	100	39.09	20.37
6	11570.00	48.54 AV	54.00	-5.46	2.10 H	100	28.17	20.37
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	#5605.40	52.67 PK	68.20	-15.53	3.50 V	220	40.86	11.81
2	*5785.00	110.06 PK			3.50 V	220	98.24	11.82
3	*5785.00	102.00 AV			3.50 V	220	90.18	11.82
4	#5930.58	54.76 PK	68.20	-13.44	3.50 V	220	42.88	11.88
5	11570.00	58.46 PK	74.00	-15.54	1.45 V	128	38.09	20.37
6	11570.00	47.70 AV	54.00	-6.30	1.45 V	128	27.33	20.37

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	#5641.05	51.76 PK	68.20	-16.44	2.56 H	169	40.00	11.76
2	*5825.00	112.02 PK			2.56 H	169	100.23	11.79
3	*5825.00	104.06 AV			2.56 H	169	92.27	11.79
4	#5945.53	54.62 PK	68.20	-13.58	2.56 H	169	42.61	12.01
5	11650.00	60.11 PK	74.00	-13.89	1.85 H	274	39.57	20.54
6	**11650.00**	**48.96 AV**	**54.00**	**-5.04**	**1.85 H**	**274**	**28.42**	**20.54**
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	#5630.45	51.85 PK	68.20	-16.35	3.55 V	236	40.08	11.77
2	*5825.00	110.01 PK			3.55 V	236	98.22	11.79
3	*5825.00	102.05 AV			3.55 V	236	90.26	11.79
4	#5940.33	52.90 PK	68.20	-15.30	3.55 V	236	40.94	11.96
5	11650.00	58.69 PK	74.00	-15.31	2.03 V	332	38.15	20.54
6	11650.00	47.89 AV	54.00	-6.11	2.03 V	332	27.35	20.54

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	55.03 PK	74.00	-18.97	3.36 H	130	43.98	11.05
2	5150.00	44.26 AV	54.00	-9.74	3.36 H	130	33.21	11.05
3	*5190.00	106.79 PK			3.36 H	130	95.56	11.23
4	*5190.00	98.60 AV			3.36 H	130	87.37	11.23
5	#10380.00	57.22 PK	68.20	-10.98	1.25 H	285	39.34	17.88
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	53.63 PK	74.00	-20.37	3.50 V	221	42.58	11.05
2	5150.00	43.72 AV	54.00	-10.28	3.50 V	221	32.67	11.05
3	*5190.00	104.49 PK			3.50 V	221	93.26	11.23
4	*5190.00	96.72 AV			3.50 V	221	85.49	11.23
5	#10380.00	56.29 PK	68.20	-11.91	2.36 V	298	38.41	17.88

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	106.21 PK			3.61 H	129	94.82	11.39
2	*5230.00	97.61 AV			3.61 H	129	86.22	11.39
3	5350.00	53.49 PK	74.00	-20.51	3.61 H	129	41.39	12.10
4	5350.00	43.32 AV	54.00	-10.68	3.61 H	129	31.22	12.10
5	#10460.00	57.60 PK	68.20	-10.60	1.89 H	287	39.46	18.14
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	*5230.00	104.08 PK			3.54 V	236	92.69	11.39
2	*5230.00	96.18 AV			3.54 V	236	84.79	11.39
3	5350.00	52.32 PK	74.00	-21.68	3.54 V	236	40.22	12.10
4	5350.00	42.46 AV	54.00	-11.54	3.54 V	236	30.36	12.10
5	#10460.00	56.78 PK	68.20	-11.42	2.65 V	297	38.64	18.14

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	52.26 PK	74.00	-21.74	3.37 H	123	41.21	11.05
2	5150.00	41.90 AV	54.00	-12.10	3.37 H	123	30.85	11.05
3	*5270.00	105.35 PK			3.37 H	123	93.72	11.63
4	*5270.00	97.26 AV			3.37 H	123	85.63	11.63
5	#10540.00	57.62 PK	68.20	-10.58	1.74 H	125	39.34	18.28
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	51.30 PK	74.00	-22.70	3.56 V	232	40.25	11.05
2	5150.00	40.63 AV	54.00	-13.37	3.56 V	232	29.58	11.05
3	*5270.00	102.89 PK			3.56 V	232	91.26	11.63
4	*5270.00	95.21 AV			3.56 V	232	83.58	11.63
5	#10540.00	56.80 PK	68.20	-11.40	1.88 V	269	38.52	18.28

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	105.99 PK			3.48 H	132	94.09	11.90
2	*5310.00	97.40 AV			3.48 H	132	85.50	11.90
3	5350.00	56.20 PK	74.00	-17.80	3.48 H	132	44.10	12.10
4	5350.00	46.01 AV	54.00	-7.99	3.48 H	132	33.91	12.10
5	10620.00	57.88 PK	74.00	-16.12	1.89 H	56	39.56	18.32
6	10620.00	46.88 AV	54.00	-7.12	1.89 H	56	28.56	18.32
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	104.46 PK			3.57 V	236	92.56	11.90
2	*5310.00	95.46 AV			3.57 V	236	83.56	11.90
3	5350.00	54.64 PK	74.00	-19.36	3.57 V	236	42.54	12.10
4	5350.00	44.23 AV	54.00	-9.77	3.57 V	236	32.13	12.10
5	10620.00	56.82 PK	74.00	-17.18	2.87 V	143	38.50	18.32
6	10620.00	45.51 AV	54.00	-8.49	2.87 V	143	27.19	18.32

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	54.42 PK	74.00	-19.58	2.66 H	175	41.95	12.47
2	5460.00	44.67 AV	54.00	-9.33	2.66 H	175	32.20	12.47
3	#5470.00	55.58 PK	68.20	-12.62	2.66 H	175	43.08	12.50
4	*5510.00	106.70 PK			2.66 H	175	94.18	12.52
5	*5510.00	97.89 AV			2.66 H	175	85.37	12.52
6	11020.00	58.62 PK	74.00	-15.38	1.18 H	297	39.57	19.05
7	11020.00	47.82 AV	54.00	-6.18	1.18 H	297	28.77	19.05
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	5460.00	52.69 PK	74.00	-21.31	3.43 V	258	40.22	12.47
2	5460.00	43.10 AV	54.00	-10.90	3.43 V	258	30.63	12.47
3	#5470.00	54.58 PK	68.20	-13.62	3.43 V	258	42.08	12.50
4	*5510.00	104.76 PK			3.43 V	258	92.24	12.52
5	*5510.00	96.16 AV			3.43 V	258	83.64	12.52
6	11020.00	57.49 PK	74.00	-16.51	1.89 V	167	38.44	19.05
7	11020.00	46.67 AV	54.00	-7.33	1.89 V	167	27.62	19.05

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 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	106.48 PK			2.58 H	169	94.25	12.23
2	*5550.00	97.59 AV			2.58 H	169	85.36	12.23
3	11100.00	58.94 PK	74.00	-15.06	1.88 H	156	39.55	19.39
4	11100.00	47.88 AV	54.00	-6.12	1.88 H	156	28.49	19.39
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	104.70 PK			3.51 V	261	92.47	12.23
2	*5550.00	95.51 AV			3.51 V	261	83.28	12.23
3	11100.00	57.77 PK	74.00	-16.23	2.20 V	236	38.38	19.39
4	11100.00	46.91 AV	54.00	-7.09	2.20 V	236	27.52	19.39

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	106.56 PK			2.76 H	177	94.84	11.72
2	*5670.00	98.77 AV			2.76 H	177	87.05	11.72
3	#5725.00	56.69 PK	68.20	-11.51	2.76 H	177	44.97	11.72
4	11340.00	59.10 PK	74.00	-14.90	1.87 H	199	39.41	19.69
5	11340.00	48.38 AV	54.00	-5.62	1.87 H	199	28.69	19.69
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	104.35 PK			3.42 V	223	92.63	11.72
2	*5670.00	95.58 AV			3.42 V	223	83.86	11.72
3	#5725.00	54.37 PK	68.20	-13.83	3.42 V	223	42.65	11.72
4	11340.00	58.05 PK	74.00	-15.95	2.03 V	265	38.36	19.69
5	11340.00	46.99 AV	54.00	-7.01	2.03 V	265	27.30	19.69

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5646.67	53.06 PK	68.20	-15.14	2.81 H	175	41.32	11.74
2	*5755.00	107.42 PK			2.81 H	175	95.66	11.76
3	*5755.00	99.62 AV			2.81 H	175	87.86	11.76
4	#5977.23	56.47 PK	68.20	-11.73	2.81 H	175	44.24	12.23
5	11510.00	59.34 PK	74.00	-14.66	2.60 H	169	39.21	20.13
6	11510.00	48.15 AV	54.00	-5.85	2.60 H	169	28.02	20.13
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	#5616.82	52.68 PK	68.20	-15.52	3.44 V	218	40.89	11.79
2	*5755.00	105.00 PK			3.44 V	218	93.24	11.76
3	*5755.00	96.98 AV			3.44 V	218	85.22	11.76
4	#5983.06	56.51 PK	68.20	-11.69	3.44 V	218	44.25	12.26
5	11510.00	58.82 PK	74.00	-15.18	1.24 V	215	38.69	20.13
6	11510.00	47.43 AV	54.00	-6.57	1.24 V	215	27.30	20.13

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	#5635.33	53.94 PK	68.20	-14.26	2.77 H	177	42.18	11.76
2	*5795.00	107.10 PK			2.77 H	177	95.27	11.83
3	*5795.00	99.35 AV			2.77 H	177	87.52	11.83
4	#6017.39	56.42 PK	68.20	-11.78	2.77 H	177	44.08	12.34
5	11590.00	59.65 PK	74.00	-14.35	2.08 H	180	39.21	20.44
6	11590.00	48.52 AV	54.00	-5.48	2.08 H	180	28.08	20.44
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5641.10	52.15 PK	68.20	-16.05	3.53 V	223	40.39	11.76
2	*5795.00	105.21 PK			3.53 V	223	93.38	11.83
3	*5795.00	97.31 AV			3.53 V	223	85.48	11.83
4	#5925.70	54.17 PK	68.20	-14.03	3.53 V	223	42.33	11.84
5	11590.00	58.47 PK	74.00	-15.53	2.03 V	221	38.03	20.44
6	11590.00	48.13 AV	54.00	-5.87	2.03 V	221	27.69	20.44

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	55.26 PK	74.00	-18.74	3.63 H	128	44.21	11.05
2	5150.00	44.29 AV	54.00	-9.71	3.63 H	128	33.24	11.05
3	*5210.00	103.50 PK			3.63 H	128	92.20	11.30
4	*5210.00	95.29 AV			3.63 H	128	83.99	11.30
5	5350.00	53.27 PK	74.00	-20.73	3.63 H	128	41.17	12.10
6	5350.00	43.23 AV	54.00	-10.77	3.63 H	128	31.13	12.10
7	#10420.00	57.37 PK	68.20	-10.83	1.57 H	146	39.34	18.03
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	54.21 PK	74.00	-19.79	3.52 V	229	43.16	11.05
2	5150.00	43.26 AV	54.00	-10.74	3.52 V	229	32.21	11.05
3	*5210.00	101.84 PK			3.52 V	229	90.54	11.30
4	*5210.00	93.15 AV			3.52 V	229	81.85	11.30
5	5350.00	52.35 PK	74.00	-21.65	3.52 V	229	40.25	12.10
6	5350.00	42.45 AV	54.00	-11.55	3.52 V	229	30.35	12.10
7	#10420.00	56.45 PK	68.20	-11.75	1.89 V	299	38.42	18.03

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	5150.00	52.53 PK	74.00	-21.47	3.92 H	129	41.48	11.05
2	5150.00	42.44 AV	54.00	-11.56	3.92 H	129	31.39	11.05
3	*5290.00	102.47 PK			3.92 H	129	90.69	11.78
4	*5290.00	94.36 AV			3.92 H	129	82.58	11.78
5	5350.00	57.89 PK	74.00	-16.11	3.92 H	129	45.79	12.10
6	5350.00	48.31 AV	54.00	-5.69	3.92 H	129	36.21	12.10
7	#10580.00	57.60 PK	68.20	-10.60	1.88 H	259	39.29	18.31
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	51.31 PK	74.00	-22.69	3.44 V	216	40.26	11.05
2	5150.00	41.56 AV	54.00	-12.44	3.44 V	216	30.51	11.05
3	*5290.00	100.47 PK			3.44 V	216	88.69	11.78
4	*5290.00	92.04 AV			3.44 V	216	80.26	11.78
5	5350.00	56.26 PK	74.00	-17.74	3.44 V	216	44.16	12.10
6	5350.00	47.19 AV	54.00	-6.81	3.44 V	216	35.09	12.10
7	#10580.00	56.48 PK	68.20	-11.72	3.12 V	169	38.17	18.31

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	55.70 PK	74.00	-18.30	2.76 H	176	43.23	12.47
2	5460.00	44.75 AV	54.00	-9.25	2.76 H	176	32.28	12.47
3	#5470.00	55.59 PK	68.20	-12.61	2.76 H	176	43.09	12.50
4	*5530.00	103.35 PK			2.76 H	176	90.98	12.37
5	*5530.00	95.57 AV			2.76 H	176	83.20	12.37
6	11060.00	59.00 PK	74.00	-15.00	2.85 H	197	39.78	19.22
7	11060.00	47.55 AV	54.00	-6.45	2.85 H	197	28.33	19.22
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	55.02 PK	74.00	-18.98	3.41 V	219	42.55	12.47
2	5460.00	43.79 AV	54.00	-10.21	3.41 V	219	31.32	12.47
3	#5470.00	54.86 PK	68.20	-13.34	3.41 V	219	42.36	12.50
4	*5530.00	101.16 PK			3.41 V	219	88.79	12.37
5	*5530.00	93.63 AV			3.41 V	219	81.26	12.37
6	11060.00	57.49 PK	74.00	-16.51	1.32 V	334	38.27	19.22
7	11060.00	46.41 AV	54.00	-7.59	1.32 V	334	27.19	19.22

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	#5642.41	52.22 PK	68.20	-15.98	2.78 H	170	40.47	11.75
2	*5775.00	104.11 PK			2.78 H	170	92.31	11.80
3	*5775.00	96.27 AV			2.78 H	170	84.47	11.80
4	#5936.15	53.90 PK	68.20	-14.30	2.78 H	170	41.97	11.93
5	11550.00	59.74 PK	74.00	-14.26	2.77 H	189	39.46	20.28
6	11550.00	48.78 AV	54.00	-5.22	2.77 H	189	28.50	20.28
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	#5645.10	52.01 PK	68.20	-16.19	3.39 V	217	40.27	11.74
2	*5775.00	102.26 PK			3.39 V	217	90.46	11.80
3	*5775.00	94.35 AV			3.39 V	217	82.55	11.80
4	#5927.01	53.31 PK	68.20	-14.89	3.39 V	217	41.45	11.86
5	11550.00	58.34 PK	74.00	-15.66	1.27 V	228	38.06	20.28
6	11550.00	47.85 AV	54.00	-6.15	1.27 V	228	27.57	20.28

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

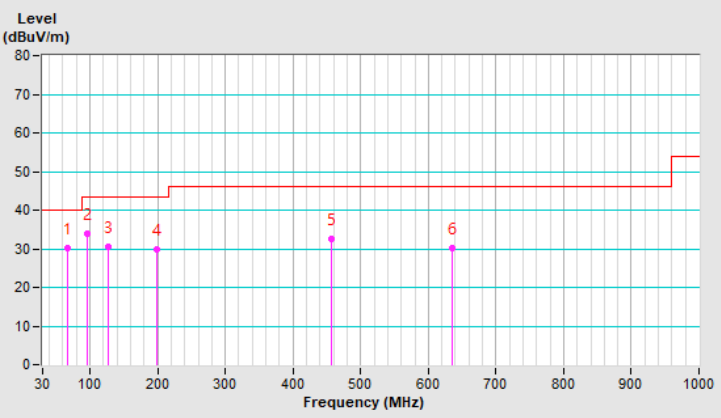
Mode A

RF Mode	TX 802.11ac (VHT20)	Channel	CH 149：5745 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	65.89	30.16 QP	40.00	-9.84	2.13 H	145	38.58	-8.42
2	95.96	33.92 QP	43.50	-9.58	2.32 H	127	45.74	-11.82
3	126.03	30.47 QP	43.50	-13.03	2.47 H	111	38.75	-8.28
4	198.78	29.99 QP	43.50	-13.51	2.73 H	86	38.99	-9.00
5	456.80	32.56 QP	46.00	-13.44	3.02 H	57	33.08	-0.52
6	635.28	30.11 QP	46.00	-15.89	3.30 H	30	26.85	3.26

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.

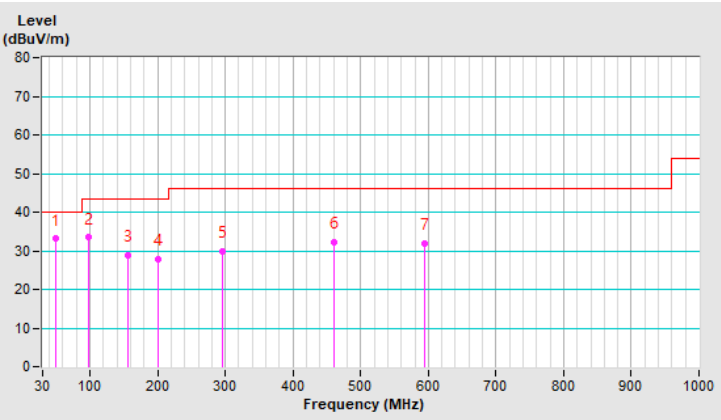


RF Mode	TX 802.11ac (VHT20)	Channel	CH 149：5745 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	48.43	33.06 QP	40.00	-6.94	1.38 V	326	40.03	-6.97
2	96.93	33.46 QP	43.50	-10.04	1.56 V	309	45.15	-11.69
3	155.13	28.97 QP	43.50	-14.53	1.86 V	278	35.35	-6.38
4	199.75	27.85 QP	43.50	-15.65	2.04 V	261	36.81	-8.96
5	294.81	29.85 QP	46.00	-16.15	2.61 V	205	34.39	-4.54
6	460.68	32.30 QP	46.00	-13.70	2.85 V	181	32.74	-0.44
7	595.51	31.87 QP	46.00	-14.13	3.12 V	154	29.60	2.27

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.



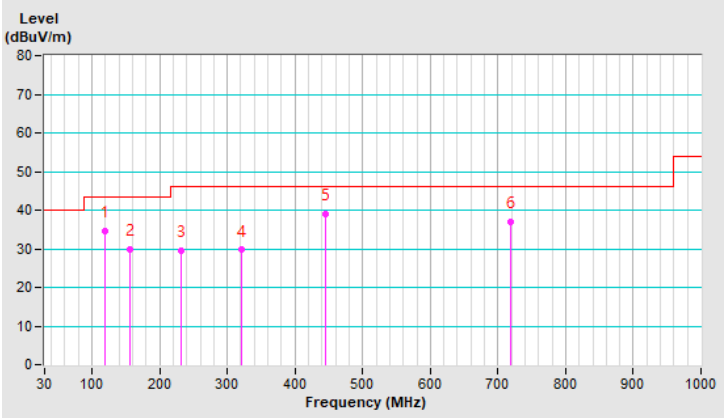
Mode B

RF Mode	TX 802.11ac (VHT20)	Channel	CH 149：5745 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	119.82	34.67 QP	43.50	-8.83	1.16 H	322	43.55	-8.88
2	156.73	29.88 QP	43.50	-13.62	1.34 H	129	36.06	-6.18
3	232.10	29.66 QP	46.00	-16.34	2.43 H	127	37.57	-7.91
4	321.78	29.68 QP	46.00	-16.32	1.52 H	42	33.14	-3.46
5	445.50	38.92 QP	46.00	-7.08	2.07 H	325	39.83	-0.91
6	718.31	37.10 QP	46.00	-8.90	1.63 H	196	32.78	4.32

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.

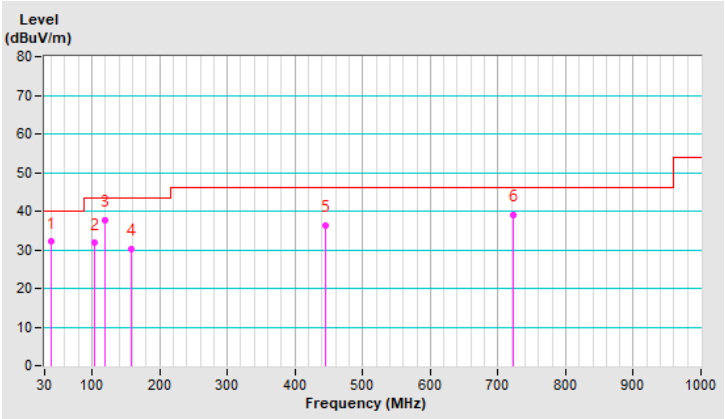


RF Mode	TX 802.11ac (VHT20)	Channel	CH 149：5745 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	39.26	32.09 QP	40.00	-7.91	1.85 V	136	39.84	-7.75
2	103.58	31.76 QP	43.50	-11.74	2.16 V	273	42.21	-10.45
3	119.82	37.75 QP	43.50	-5.75	1.22 V	187	46.63	-8.88
4	157.36	30.23 QP	43.50	-13.27	2.81 V	338	36.40	-6.17
5	445.50	36.20 QP	46.00	-9.80	1.09 V	197	37.11	-0.91
6	722.19	38.91 QP	46.00	-7.09	2.14 V	99	34.50	4.41

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
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ENV216	101197	Jun. 10, 2020	Jun. 9, 2021
LISN With Adapter (for EUT)	101197	NA	Jun. 10, 2020	Jun. 9, 2021
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100218	Dec. 2, 2020	Dec. 1, 2021
SCHWARZBECK Artificial Mains Network (For EUT)	NNLK8129	8129229	May 20, 2021	May 19, 2022
SCHWARZBECK Artificial Mains Network (For EUT)	NNLK 8121	8121-808	Apr. 18, 2021	Apr. 17, 2022
Software	Cond_V7.3.7.4	NA	NA	NA
RF cable (JYEBAO) With 10dB PAD	5D-FB	Cable-C10.01	Feb. 10, 2021	Feb. 9, 2022
LYNICS Terminator (For ROHDE & SCHWARZ LISN)	0900510	E1-011484	May 25, 2021	May 24, 2022

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. 10. (Conduction 10)
3. The VCCI Site Registration No. C-11852.
4. Tested Date: May 26 to 27, 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.

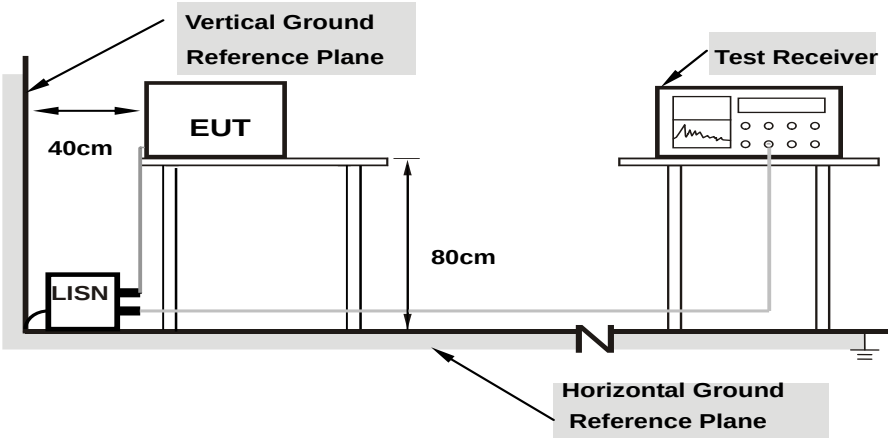
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

a. Connected the EUT to Adapter or Notebook.

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

4.2.7 Test Results

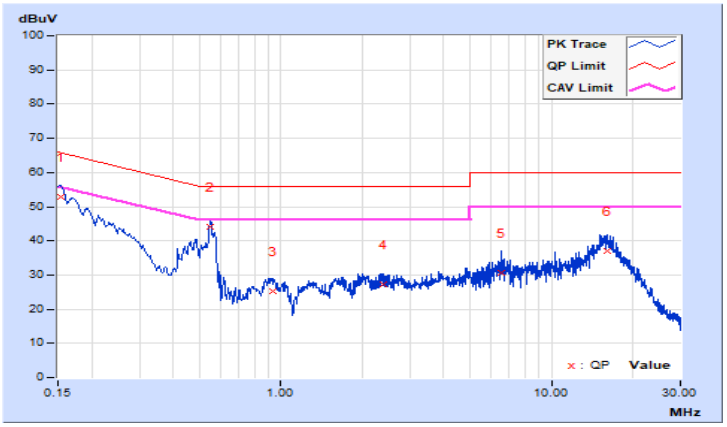
Mode A

RF Mode	TX 802.11ac (VHT20)	Channel	CH 149：5745 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	0.15391	9.82	43.01	30.19	52.83	40.01	65.79	55.79	-12.96	-15.78
2	**0.54662**	**9.88**	**34.34**	**30.92**	**44.22**	**40.80**	**56.00**	**46.00**	**-11.78**	**-5.20**
3	0.93322	9.94	15.43	9.09	25.37	19.03	56.00	46.00	-30.63	-26.97
4	2.40075	10.08	17.11	11.64	27.19	21.72	56.00	46.00	-28.81	-24.28
5	6.50965	10.23	20.40	14.74	30.63	24.97	60.00	50.00	-29.37	-25.03
6	16.04075	10.42	26.52	19.35	36.94	29.77	60.00	50.00	-23.06	-20.23

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

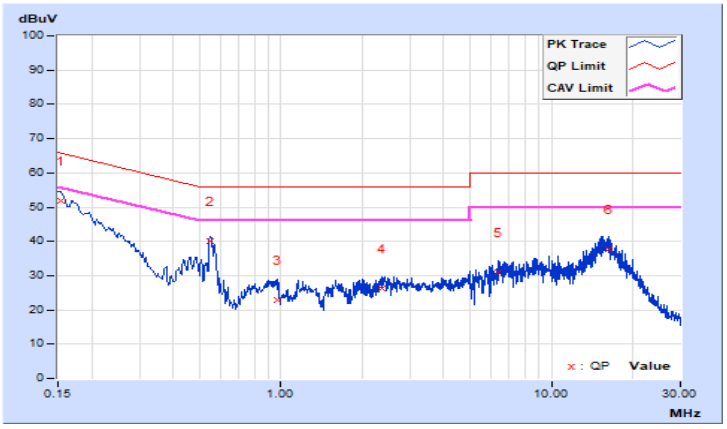


RF Mode	TX 802.11ac (VHT20)	Channel	CH 149：5745 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

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	0.15391	9.82	42.04	28.68	51.86	38.50	65.79	55.79	-13.93	-17.29
2	0.55084	9.87	30.20	27.29	40.07	37.16	56.00	46.00	-15.93	-8.84
3	0.97323	9.95	13.09	7.08	23.04	17.03	56.00	46.00	-32.96	-28.97
4	2.36164	10.09	16.28	11.10	26.37	21.19	56.00	46.00	-29.63	-24.81
5	6.36103	10.23	20.75	14.41	30.98	24.64	60.00	50.00	-29.02	-25.36
6	16.25586	10.46	27.37	19.98	37.83	30.44	60.00	50.00	-22.17	-19.56

Remarks:

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



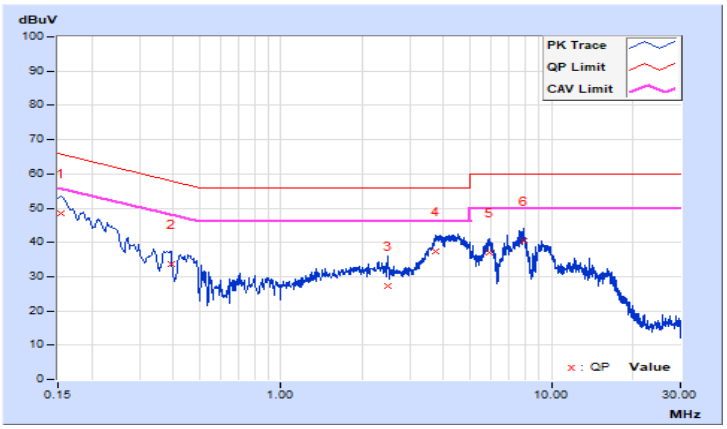
Mode B

RF Mode	TX 802.11ac (VHT20)	Channel	CH 149：5745 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	0.15391	9.82	38.83	22.30	48.65	32.12	65.79	55.79	-17.14	-23.67
2	0.39220	9.86	23.82	16.13	33.68	25.99	58.02	48.02	-24.34	-22.03
3	2.48288	10.08	17.31	9.53	27.39	19.61	56.00	46.00	-28.61	-26.39
4	3.72266	10.15	27.15	18.42	37.30	28.57	56.00	46.00	-18.70	-17.43
5	5.86433	10.21	26.88	20.72	37.09	30.93	60.00	50.00	-22.91	-19.07
6	7.87458	10.26	30.03	23.55	40.29	33.81	60.00	50.00	-19.71	-16.19

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

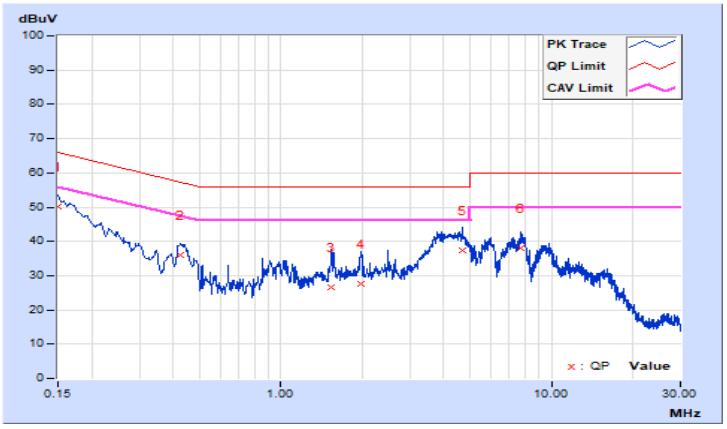


RF Mode	TX 802.11ac (VHT20)	Channel	CH 149：5745 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

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	9.83	40.36	25.32	50.19	35.15	66.00	56.00	-15.81	-20.85
2	0.42768	9.85	26.22	18.76	36.07	28.61	57.30	47.30	-21.23	-18.69
3	1.53642	10.01	16.69	8.96	26.70	18.97	56.00	46.00	-29.30	-27.03
4	1.98227	10.07	17.53	9.19	27.60	19.26	56.00	46.00	-28.40	-26.74
5	4.66913	10.19	27.33	19.61	37.52	29.80	56.00	46.00	-18.48	-16.20
6	7.68686	10.27	27.78	21.64	38.05	31.91	60.00	50.00	-21.95	-18.09

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)

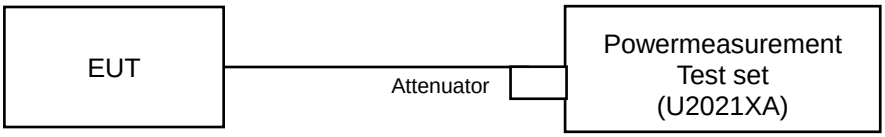
*B is the 26 dB emission bandwidth in megahertz
Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

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

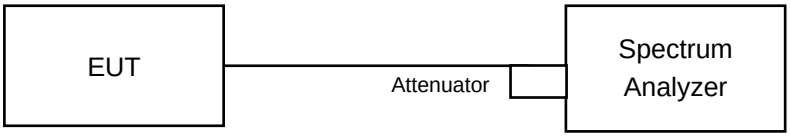
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

For Power Output Measurement



For 26dB Bandwidth Measurement



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

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

For 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

Mode B

Power Output:

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	14.54	13.33	49.972	16.99	24.00	Pass
40	5200	14.50	13.41	50.112	17.00	24.00	Pass
48	5240	14.36	13.18	48.087	16.82	24.00	Pass
52	5260	14.52	13.21	49.255	16.92	24.00	Pass
60	5300	14.47	13.43	50.019	16.99	24.00	Pass
64	5320	14.49	13.13	48.678	16.87	24.00	Pass
100	5500	14.28	13.26	47.975	16.81	24.00	Pass
116	5580	14.22	13.22	47.413	16.76	24.00	Pass
140	5700	14.33	13.27	48.334	16.84	24.00	Pass
149	5745	14.43	13.17	48.482	16.86	30.00	Pass
157	5785	14.39	13.26	48.663	16.87	30.00	Pass
165	5825	14.37	13.19	48.198	16.83	30.00	Pass

NOTE:

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

Chain 0

1. 11dBm + 10log(23.40) = 24.69 dBm > 24dBm.
2. 11dBm + 10log(23.17) = 24.65 dBm > 24dBm.
3. 11dBm + 10log(23.13) = 24.64 dBm > 24dBm.
4. 11dBm + 10log(23.04) = 24.62 dBm > 24dBm.
5. 11dBm + 10log(23.36) = 24.68 dBm > 24dBm.
6. 11dBm + 10log(23.59) = 24.73 dBm > 24dBm.

Chain 1

1. 11dBm + 10log(23.25) = 24.66 dBm > 24dBm.
2. 11dBm + 10log(23.27) = 24.67 dBm > 24dBm.
3. 11dBm + 10log(23.91) = 24.79 dBm > 24dBm.
4. 11dBm + 10log(23.53) = 24.72 dBm > 24dBm.
5. 11dBm + 10log(22.89) = 24.60 dBm > 24dBm.
6. 11dBm + 10log(23.07) = 24.63 dBm > 24dBm.

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	15.33	14.75	**63.973**	18.06	24.00	Pass
40	5200	15.34	14.50	62.382	17.95	24.00	Pass
48	5240	15.33	14.24	60.665	17.83	24.00	Pass
52	5260	15.40	14.42	62.343	17.95	24.00	Pass
60	5300	15.44	14.74	64.780	18.11	24.00	Pass
64	5320	15.69	14.60	**65.908**	18.19	24.00	Pass
100	5500	15.45	15.06	67.138	18.27	24.00	Pass
116	5580	15.48	14.88	66.079	18.20	24.00	Pass
140	5700	15.76	14.76	**67.593**	18.30	24.00	Pass
149	5745	15.59	14.20	62.527	17.96	30.00	Pass
157	5785	15.80	14.28	**64.811**	18.12	30.00	Pass
165	5825	15.65	14.15	62.730	17.97	30.00	Pass

NOTE:

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

Chain 0

1. 11dBm + 10log(24.94) = 24.97 dBm > 24dBm.
2. 11dBm + 10log(24.09) = 24.82 dBm > 24dBm.
3. 11dBm + 10log(23.89) = 24.78 dBm > 24dBm.
4. 11dBm + 10log(23.97) = 24.80 dBm > 24dBm.
5. 11dBm + 10log(24.61) = 24.91 dBm > 24dBm.
6. 11dBm + 10log(24.46) = 24.88 dBm > 24dBm.

Chain 1

1. 11dBm + 10log(24.51) = 24.89 dBm > 24dBm.
2. 11dBm + 10log(25.04) = 24.99 dBm > 24dBm.
3. 11dBm + 10log(24.43) = 24.88 dBm > 24dBm.
4. 11dBm + 10log(24.05) = 24.81 dBm > 24dBm.
5. 11dBm + 10log(24.09) = 24.82 dBm > 24dBm.
6. 11dBm + 10log(24.55) = 24.90 dBm > 24dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	13.24	12.25	37.874	15.78	24.00	Pass
46	5230	13.21	12.50	38.724	15.88	24.00	Pass
54	5270	13.55	12.50	40.429	16.07	24.00	Pass
62	5310	13.07	12.20	36.873	15.67	24.00	Pass
102	5510	13.33	12.68	40.063	16.03	24.00	Pass
110	5550	13.72	12.28	40.455	16.07	24.00	Pass
134	5670	13.90	12.57	42.619	16.30	24.00	Pass
151	5755	13.39	12.26	38.654	15.87	30.00	Pass
159	5795	13.05	12.25	36.972	15.68	30.00	Pass

NOTE:

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

Chain 0

1. 11dBm + 10log(41.89) = 27.22 dBm > 24dBm.
2. 11dBm + 10log(42.13) = 27.25 dBm > 24dBm.
3. 11dBm + 10log(41.53) = 27.18 dBm > 24dBm.
4. 11dBm + 10log(41.84) = 27.22 dBm > 24dBm.
5. 11dBm + 10log(41.62) = 27.19 dBm > 24dBm.

Chain 1

1. 11dBm + 10log(41.77) = 27.21 dBm > 24dBm.
2. 11dBm + 10log(41.79) = 27.21 dBm > 24dBm.
3. 11dBm + 10log(41.66) = 27.20 dBm > 24dBm.
4. 11dBm + 10log(41.37) = 27.17 dBm > 24dBm.
5. 11dBm + 10log(41.75) = 27.21 dBm > 24dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	12.82	12.64	37.508	15.74	24.00	Pass
58	5290	12.86	12.82	38.462	15.85	24.00	Pass
106	5530	12.63	12.52	36.188	15.59	24.00	Pass
155	5775	12.74	12.16	35.237	15.47	30.00	Pass

NOTE:

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

Chain 0

1. 11dBm + 10log(84.19) = 30.25 dBm > 24dBm.
2. 11dBm + 10log(84.51) = 30.27 dBm > 24dBm.

Chain 1

1. 11dBm + 10log(83.39) = 30.21 dBm > 24dBm.
2. 11dBm + 10log(83.98) = 30.24 dBm > 24dBm.

26dB Bandwidth:

802.11a

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	23.17	23.79
40	5200	23.03	23.00
48	5240	23.32	22.73
52	5260	23.40	23.25
60	5300	23.17	23.27
64	5320	23.13	23.91
100	5500	23.04	23.53
116	5580	23.36	22.89
140	5700	23.59	23.07

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	23.93	24.42
40	5200	24.88	24.05
48	5240	24.04	24.46
52	5260	24.94	24.51
60	5300	24.09	25.04
64	5320	23.89	24.43
100	5500	23.97	24.05
116	5580	24.61	24.09
140	5700	24.46	24.55

802.11ac (VHT40)

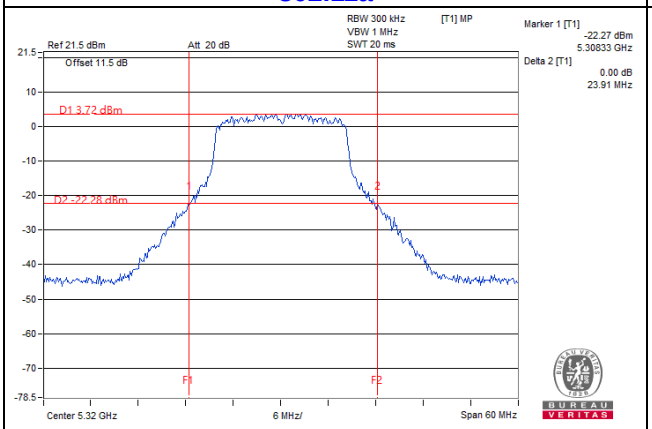
Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	41.53	41.68
46	5230	41.74	41.72
54	5270	41.89	41.77
62	5310	42.13	41.79
102	5510	41.53	41.66
110	5550	41.84	41.37
134	5670	41.62	41.75

802.11ac (VHT80)

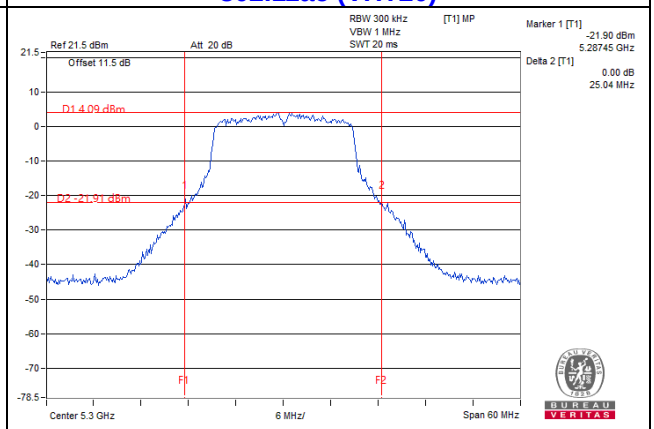
Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	84.74	82.87
58	5290	84.19	83.39
106	5530	84.51	83.98

Spectrum Plot of Worst Value

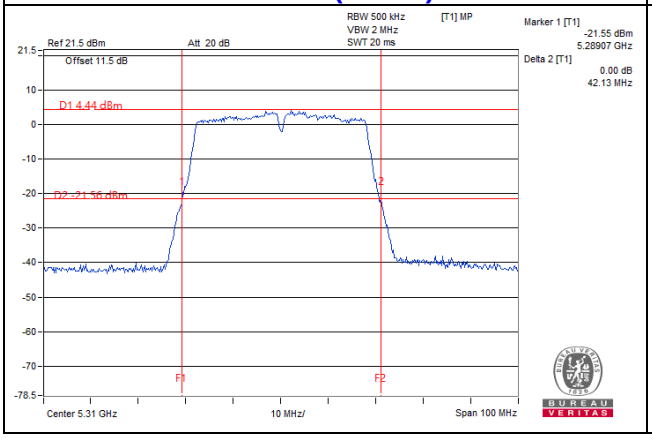
802.11a



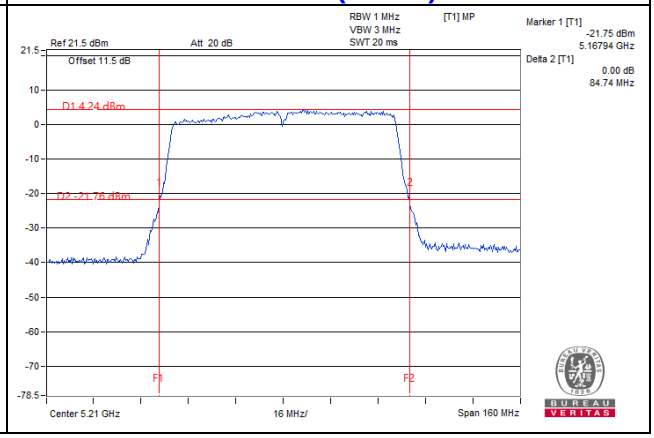
802.11ac (VHT20)



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	50.019	16.99
5470~5725	48.334	16.84

802.11ac VHT20

Frequency Band (MHz)	MAX. Power	
	Output Power(mW)	Output Power(dBm)
5250~5350	65.908	18.19
5470~5725	67.593	18.30

802.11ac VHT40

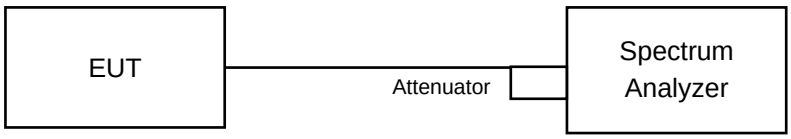
Frequency Band (MHz)	MAX. Power	
	Output Power(mW)	Output Power(dBm)
5250~5350	40.429	16.07
5470~5725	42.619	16.30

802.11ac VHT80

Frequency Band (MHz)	MAX. Power	
	Output Power(mW)	Output Power(dBm)
5250~5350	38.462	15.85
5470~5725	36.188	15.59

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to 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

Mode B

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.80	16.68
40	5200	16.68	16.68
48	5240	16.68	16.68
52	5260	16.80	16.68
60	5300	16.80	16.68
64	5320	16.80	16.68
100	5500	16.80	16.68
116	5580	16.80	16.68
140	5700	16.80	16.68
149	5745	16.78	16.70
157	5785	16.80	16.70
165	5825	16.70	16.70

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.88	17.88
40	5200	17.76	17.88
48	5240	17.88	17.88
52	5260	17.88	17.88
60	5300	17.76	17.88
64	5320	18.00	17.88
100	5500	18.00	17.76
116	5580	18.00	17.76
140	5700	18.00	17.88
149	5745	18.00	17.92
157	5785	18.00	17.80
165	5825	17.90	17.80

802.11ac (VHT40)

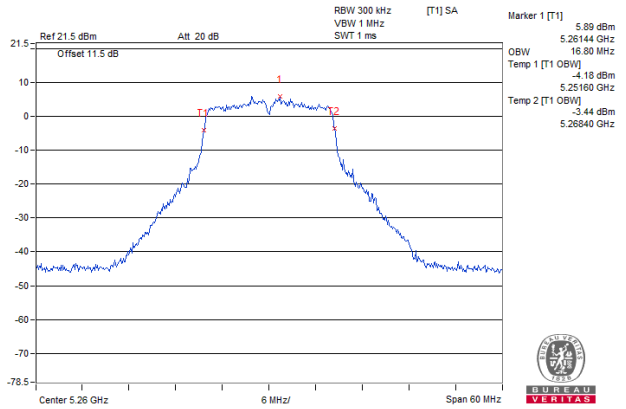
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.20	36.40
46	5230	36.20	36.20
54	5270	36.20	36.40
62	5310	36.40	36.20
102	5510	36.40	36.40
110	5550	36.40	36.40
134	5670	36.40	36.40
151	5755	36.24	36.38
159	5795	36.34	36.34

802.11ac (VHT80)

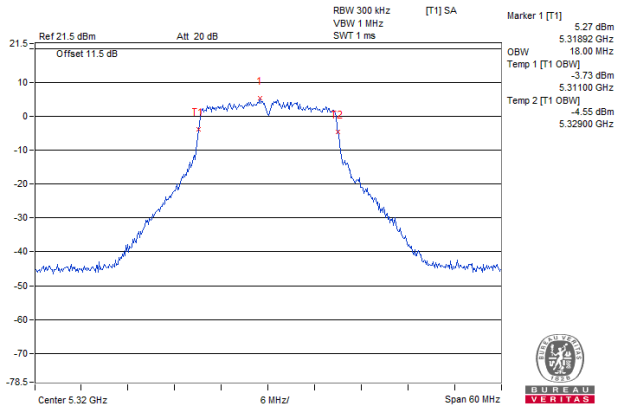
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.84	75.84
58	5290	75.84	75.84
106	5530	75.84	75.84
155	5775	75.88	75.88

Spectrum Plot of Worst Value

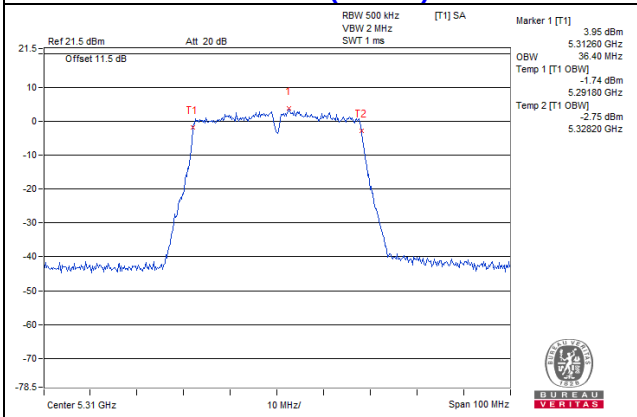
802.11a



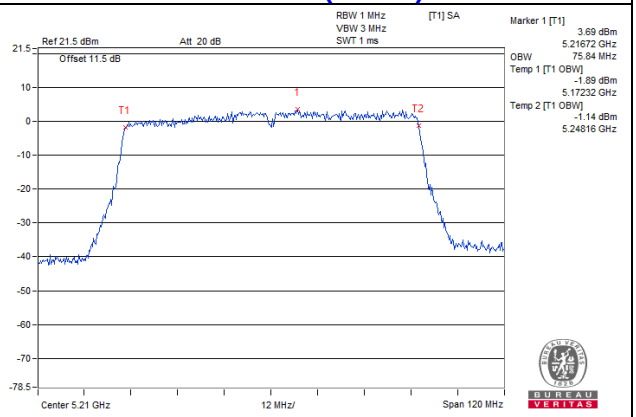
802.11ac (VHT20)

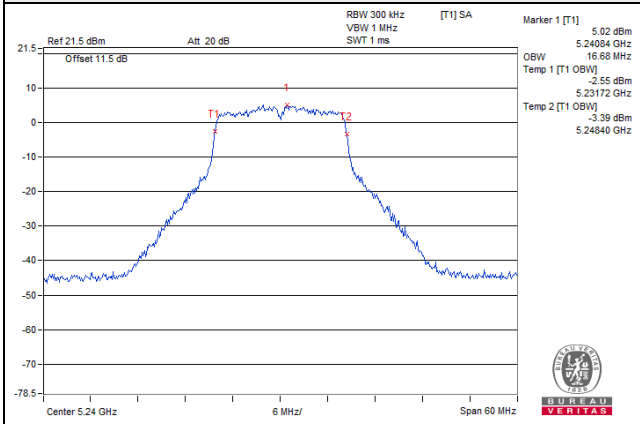
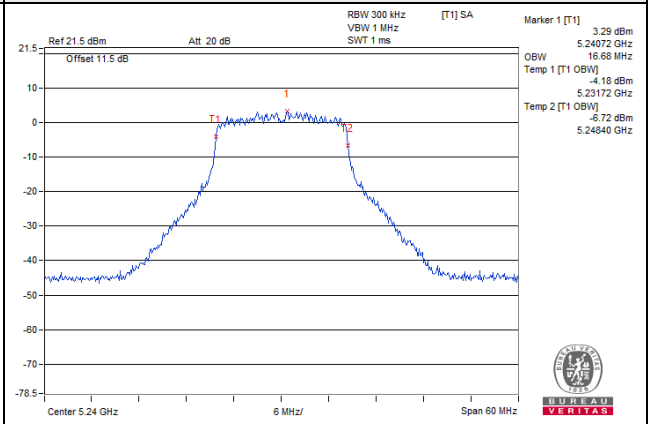


802.11ac (VHT40)



802.11ac (VHT80)



Spectrum Plot for near By DFS Band	
802.11a_Chain 0 / CH 48	802.11a_Chain 1 / CH 48
	
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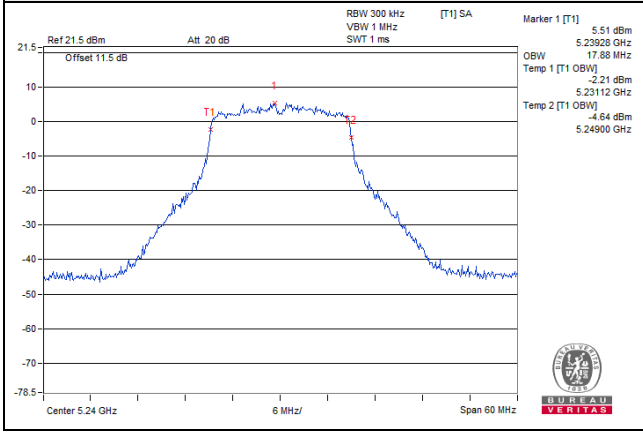	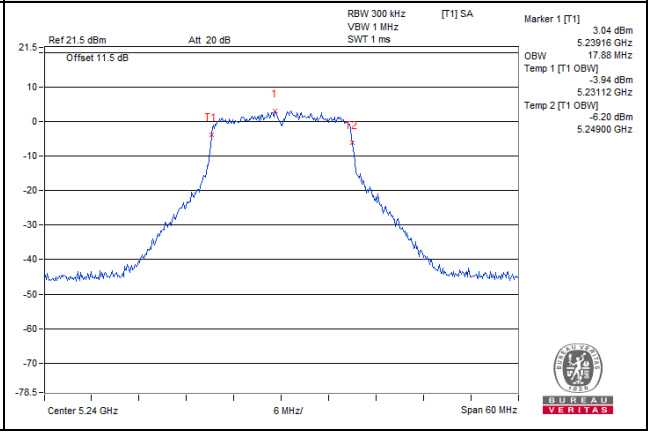

Spectrum Plot for near By DFS Band	
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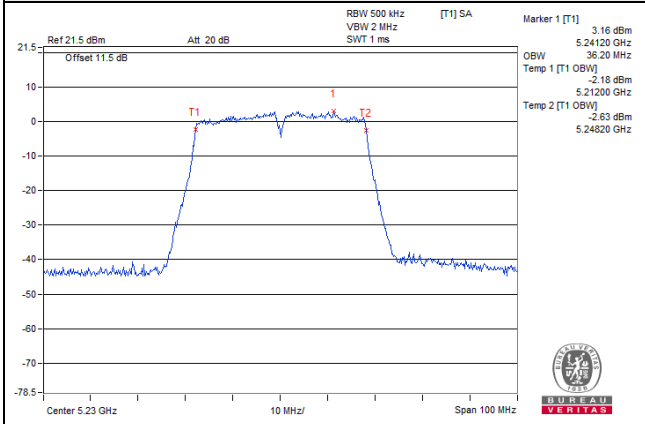	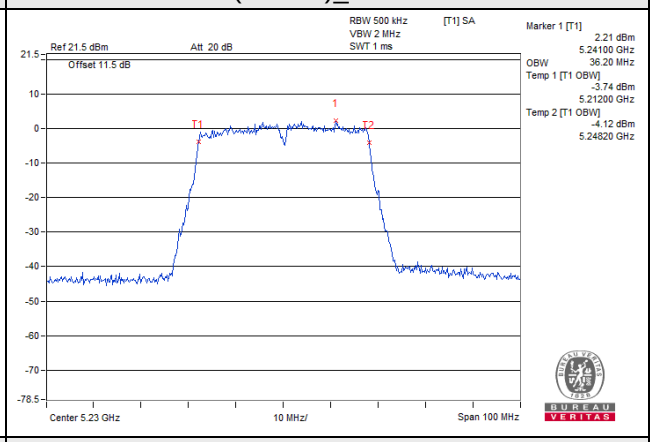
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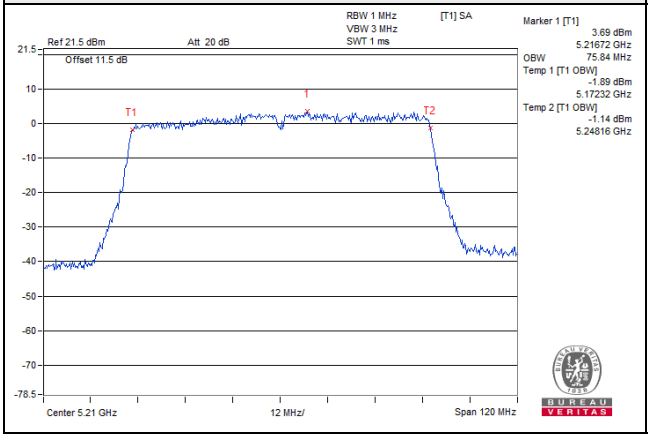	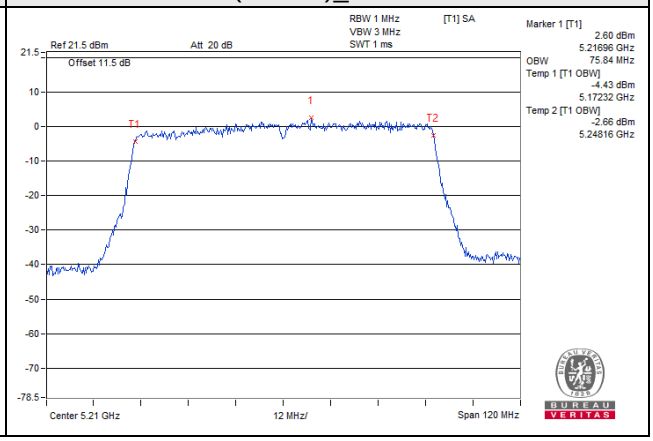

Spectrum Plot for near By DFS Band	
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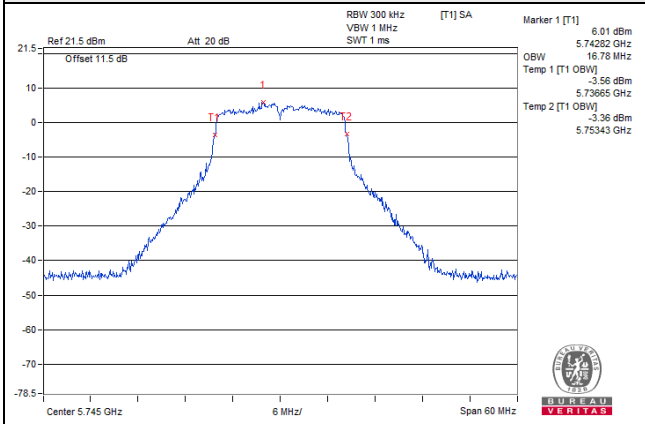	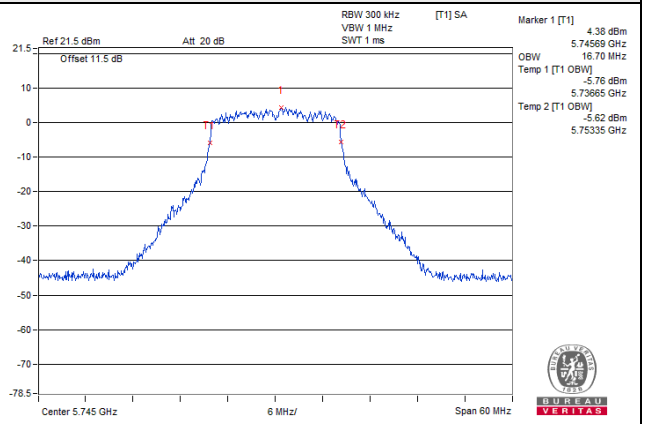
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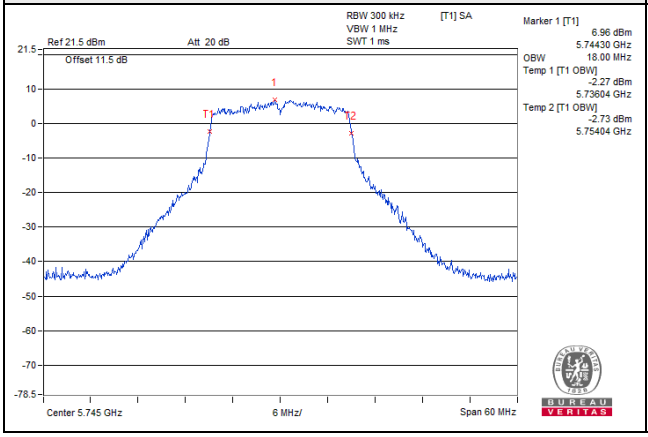
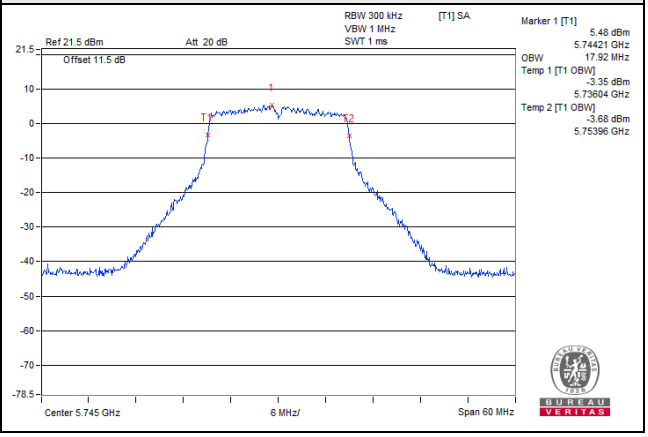
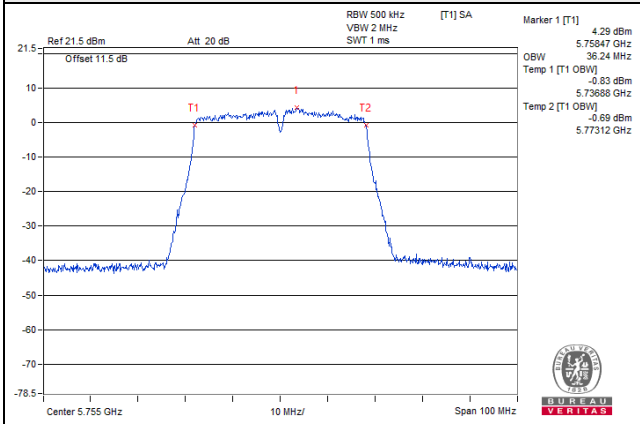
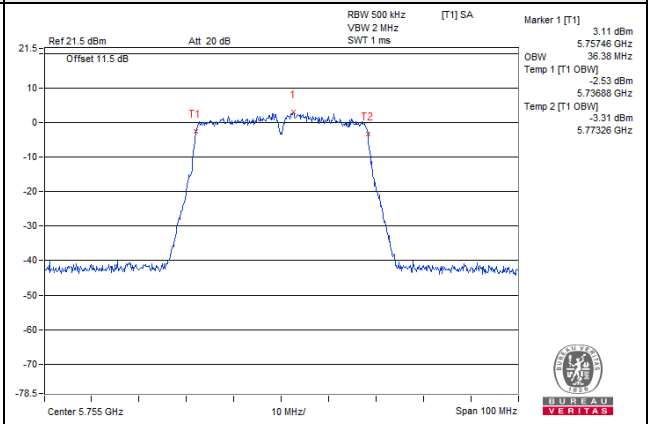
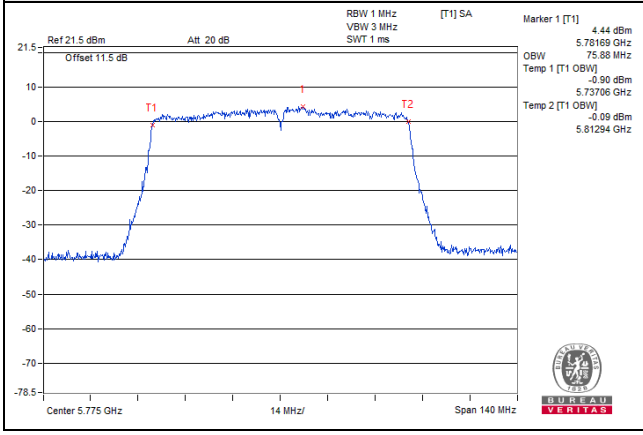
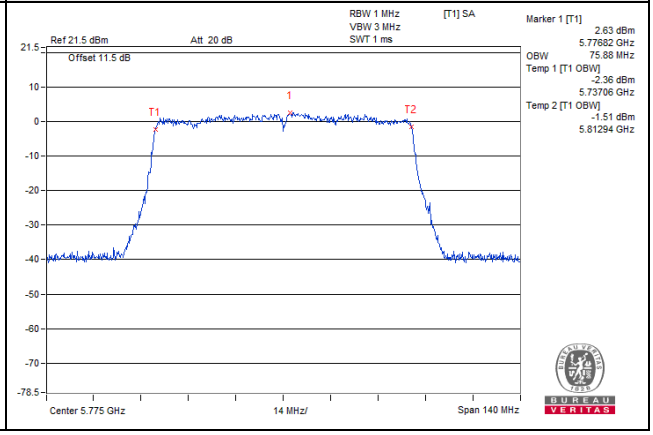
	

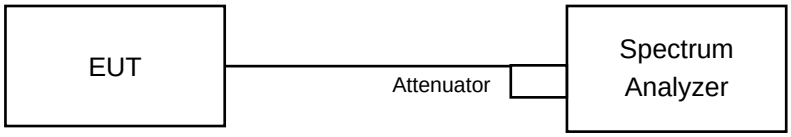
Spectrum Plot for near By DFS Band	
802.11ac (VHT40)_Chain 0 / CH 151	802.11ac (VHT40)_Chain 1 / CH 151
	
802.11ac (VHT80)_Chain 0 / CH 155	802.11ac (VHT80)_Chain 1 / CH 155
	

4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

For U-NII-1, U-NII-2A, U-NII-2C Band:

Duty cycle of test signal is ≥ 98 %

Using method SA-1

1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1MHz, Set VBW ≥ 3 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.

Duty cycle of test signal is < 98%

Using method SA-2

1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1MHz, Set VBW ≥ 3 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:

Duty cycle of test signal is ≥ 98 %

1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 500 kHz, Set VBW ≥ 2 MHz, Detector = RMS.
3) Use the peak marker function to determine the maximum power level in any 500 kHz band segment within the fundamental EBW.
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.

Duty cycle of test signal is < 98%

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

Mode B

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

802.11a

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
36	5180	0.69	-1.07	2.91	10.96	Pass
40	5200	0.72	-0.99	2.96	10.96	Pass
48	5240	0.44	-1.17	2.72	10.96	Pass
52	5260	0.85	-0.98	3.04	10.96	Pass
60	5300	0.73	-0.53	3.16	10.96	Pass
64	5320	1.18	-0.58	3.40	10.96	Pass
100	5500	0.80	-0.66	3.14	10.96	Pass
116	5580	0.70	-0.73	3.05	10.96	Pass
140	5700	0.79	-0.64	3.14	10.96	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2/2$] = 6.04dBi > 6dBi , so the power density limit shall be reduced to 11-(6.04-6) = 10.96dBm.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
36	5180	1.14	-0.97	3.22	10.96	Pass
40	5200	1.18	-0.98	3.24	10.96	Pass
48	5240	1.00	-1.18	3.06	10.96	Pass
52	5260	0.48	-0.92	2.85	10.96	Pass
60	5300	1.11	-0.46	3.41	10.96	Pass
64	5320	0.68	-0.41	3.18	10.96	Pass
100	5500	1.40	0.10	3.81	10.96	Pass
116	5580	0.85	0.02	3.47	10.96	Pass
140	5700	0.95	-0.24	3.41	10.96	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2/2$] = 6.04dBi > 6dBi , so the power density limit shall be reduced to 11-(6.04-6) = 10.96dBm.

802.11ac (VHT40)

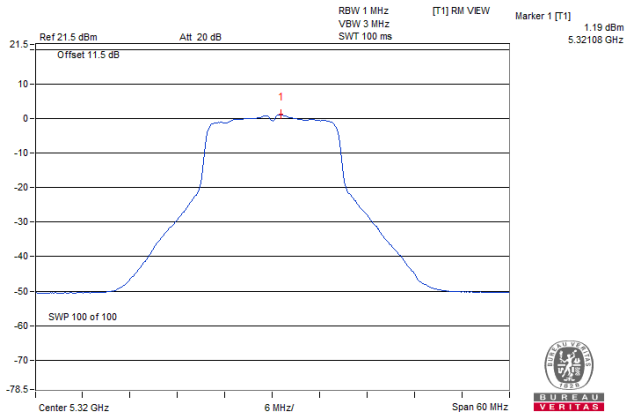
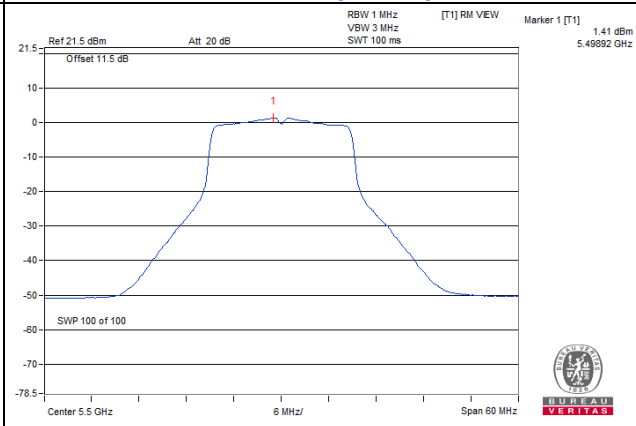
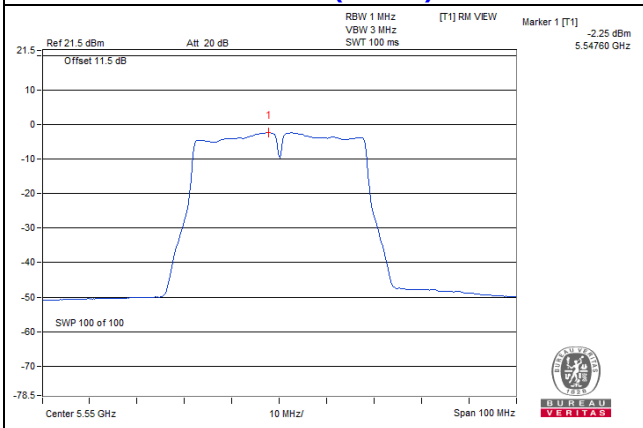
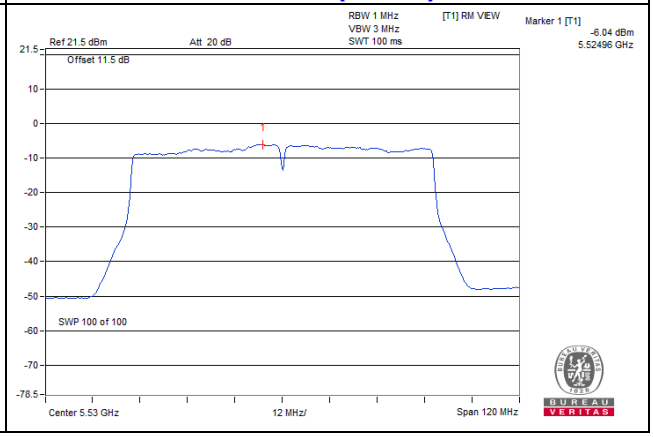
Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm)		Duty Factor (dB)	Total PSD With Duty Factor (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-3.05	-4.71	0.12	-0.67	10.96	Pass
46	5230	-3.15	-4.57	0.12	-0.67	10.96	Pass
54	5270	-3.32	-4.64	0.12	-0.80	10.96	Pass
62	5310	-2.69	-4.38	0.12	-0.32	10.96	Pass
102	5510	-2.28	-3.97	0.12	0.09	10.96	Pass
110	5550	-2.26	-3.97	0.12	0.10	10.96	Pass
134	5670	-2.27	-3.91	0.12	0.12	10.96	Pass

Note:
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2/2$] = 6.04dBi > 6dBi , so the power density limit shall be reduced to 11-(6.04-6) = 10.96dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm)		Duty Factor (dB)	Total PSD With Duty Factor (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-6.35	-8.13	0.29	-3.85	10.96	Pass
58	5290	-6.47	-7.93	0.29	-3.84	10.96	Pass
106	5530	-6.05	-7.57	0.29	-3.44	10.96	Pass

Note:
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2/2$] = 6.04dBi > 6dBi , so the power density limit shall be reduced to 11-(6.04-6) = 10.96dBm.
3. 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

TX chain	Channel	Freq. (MHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	-6.72	3.01	-3.71	29.96	Pass
	157	5785	-6.78	3.01	-3.77	29.96	Pass
	165	5825	-7.28	3.01	-4.27	29.96	Pass
1	149	5745	-8.09	3.01	-5.08	29.96	Pass
	157	5785	-8.53	3.01	-5.52	29.96	Pass
	165	5825	-9.00	3.01	-5.99	29.96	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2/2$] = 6.04dBi > 6dBi , so the power density limit shall be reduced to 30-(6.04-6) = 29.96dBm.

802.11ac (VHT20)

TX chain	Channel	Freq. (MHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	149	5745	-5.86	3.01	-2.85	29.96	Pass
	157	5785	-6.09	3.01	-3.08	29.96	Pass
	165	5825	-6.49	3.01	-3.48	29.96	Pass
1	149	5745	-7.59	3.01	-4.58	29.96	Pass
	157	5785	-7.18	3.01	-4.17	29.96	Pass
	165	5825	-7.35	3.01	-4.34	29.96	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2/2$] = 6.04dBi > 6dBi , so the power density limit shall be reduced to 30-(6.04-6) = 29.96dBm.

802.11ac (VHT40)

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/500kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	151	5755	-10.94	3.01	0.12	-7.81	29.96	Pass
	159	5795	-11.36	3.01	0.12	-8.23	29.96	Pass
1	151	5755	-12.32	3.01	0.12	-9.19	29.96	Pass
	159	5795	-12.30	3.01	0.12	-9.17	29.96	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2/2$] = 6.04dBi > 6dBi , so the power density limit shall be reduced to 30-(6.04-6) = 29.96dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

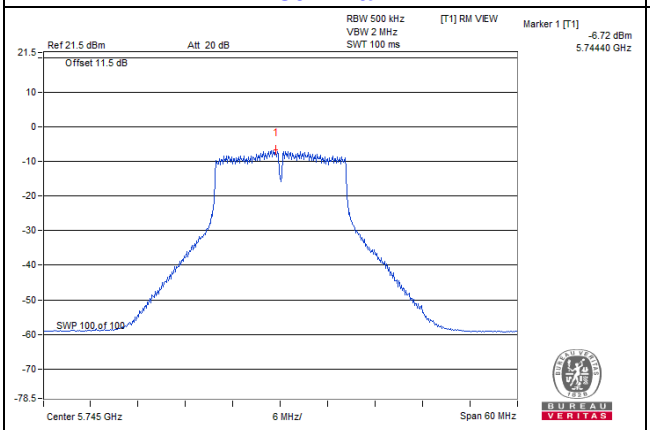
TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/500kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
0	155	5775	-14.53	3.01	0.29	-11.23	29.96	Pass
1	155	5775	-16.18	3.01	0.29	-12.88	29.96	Pass

Note:

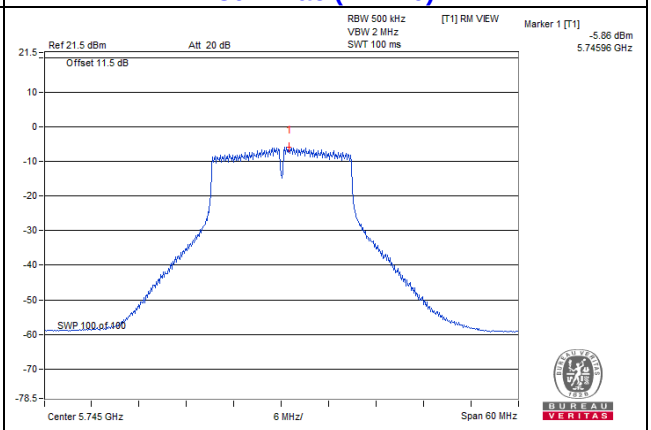
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2/2$] = 6.04dBi > 6dBi , so the power density limit shall be reduced to 30-(6.04-6) = 29.96dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

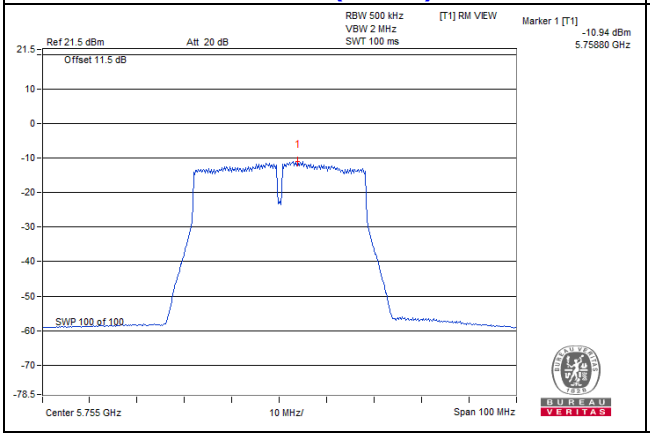
802.11a



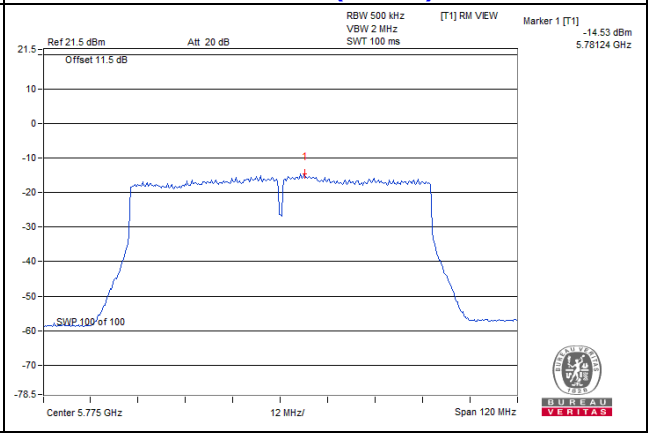
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)

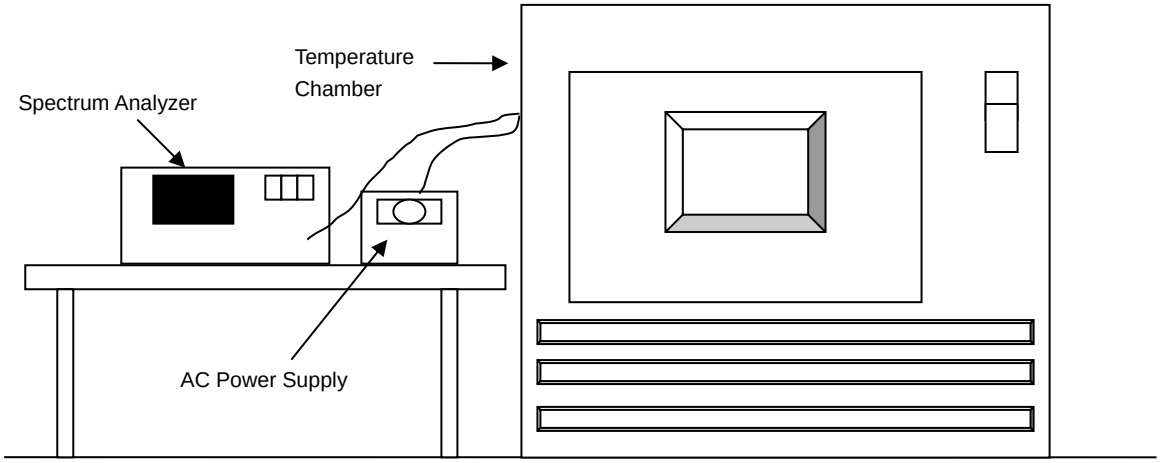


4.6 Frequency Stability

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	GTH-120-40-CP-AR	MAA1306-019	Sep. 9, 2020	Sep. 8, 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: Jun. 2, 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

Mode B

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	5179.9764	PASS	5179.974	PASS	5179.9739	PASS	5179.9735	PASS
40	120	5180.0035	PASS	5180.0018	PASS	5180.002	PASS	5180.0055	PASS
30	120	5180.0028	PASS	5180.0013	PASS	5180.0007	PASS	5180.0033	PASS
20	120	5179.9809	PASS	5179.9795	PASS	5179.9795	PASS	5179.9788	PASS
10	120	5180.0215	PASS	5180.0228	PASS	5180.0196	PASS	5180.0201	PASS
0	120	5179.9918	PASS	5179.9927	PASS	5179.9921	PASS	5179.9921	PASS
-10	120	5180.0035	PASS	5180.0047	PASS	5180.0034	PASS	5180.0067	PASS
-20	120	5180.0067	PASS	5180.0037	PASS	5180.0068	PASS	5180.0071	PASS
-30	120	5179.9745	PASS	5179.9762	PASS	5179.9771	PASS	5179.976	PASS

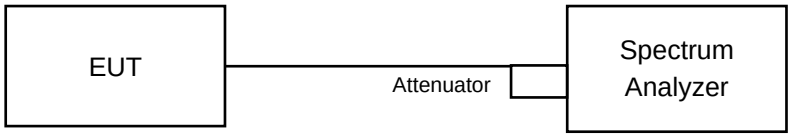
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5179.9802	PASS	5179.9791	PASS	5179.9804	PASS	5179.9785	PASS
	120	5179.9809	PASS	5179.9795	PASS	5179.9795	PASS	5179.9788	PASS
	102	5179.9815	PASS	5179.9785	PASS	5179.9795	PASS	5179.9791	PASS

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

Mode B

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	15.92	15.34	0.5	Pass
157	5785	15.65	15.77	0.5	Pass
165	5825	15.83	16.34	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	15.98	16.54	0.5	Pass
157	5785	16.82	15.47	0.5	Pass
165	5825	15.99	16.56	0.5	Pass

802.11ac (VHT40)

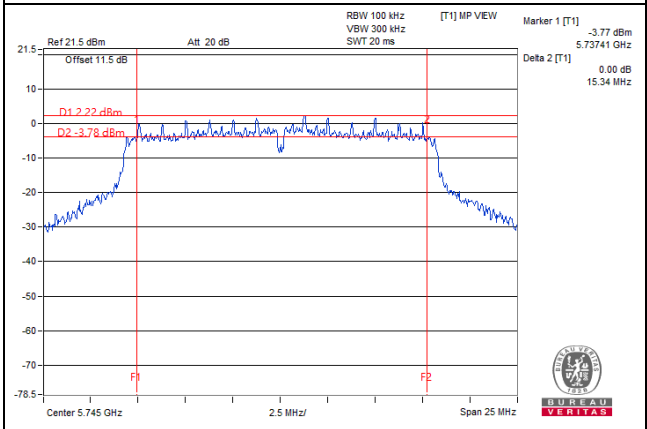
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.56	35.51	0.5	Pass
159	5795	35.81	35.41	0.5	Pass

802.11ac (VHT80)

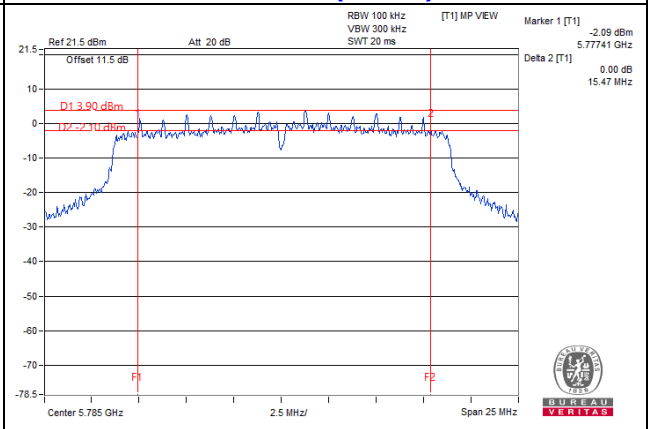
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	75.41	75.34	0.5	Pass

Spectrum Plot of Worst Value

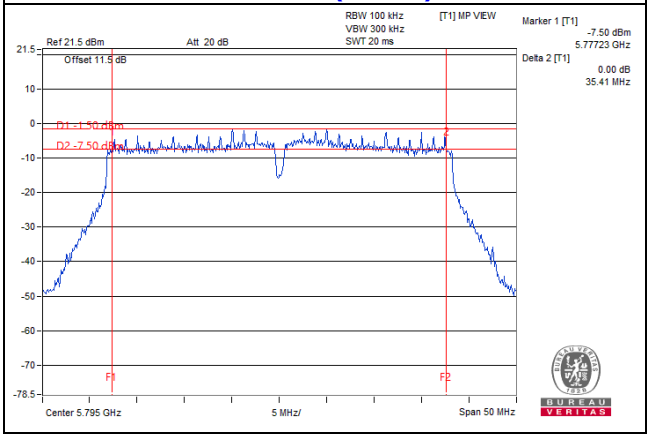
802.11a



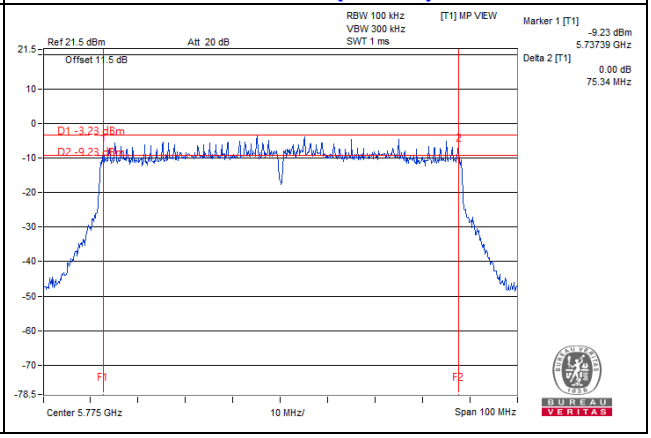
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



5 Pictures of Test Arrangements

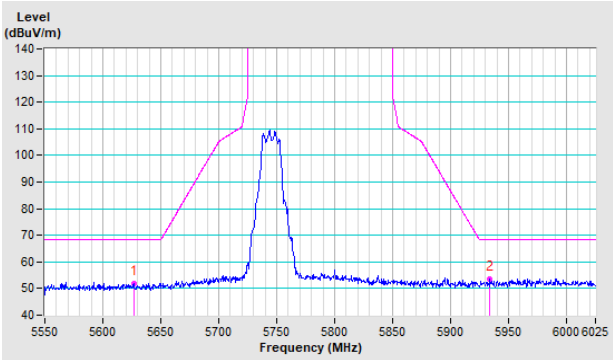
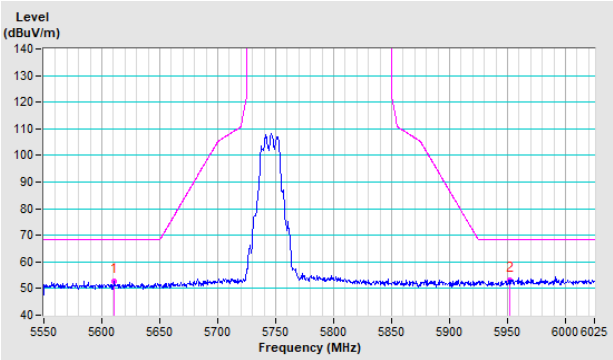
Please refer to the attached file (Test Setup Photo).

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

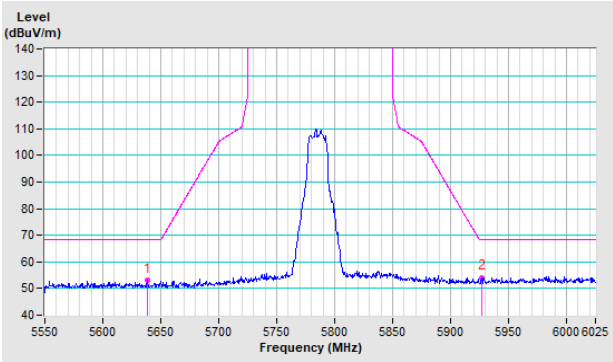
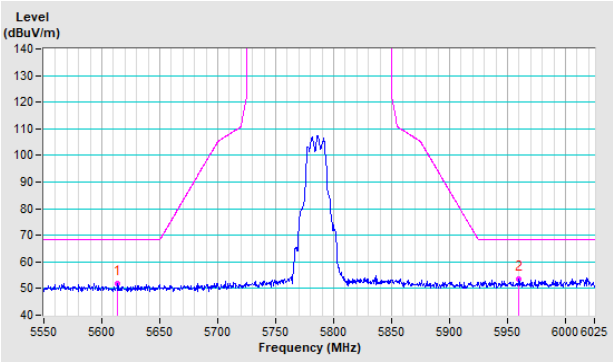
Mode B

802.11a

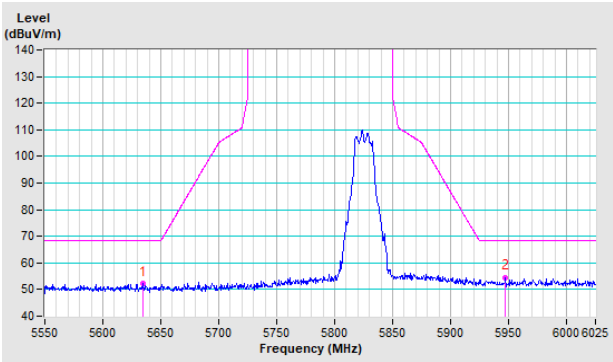
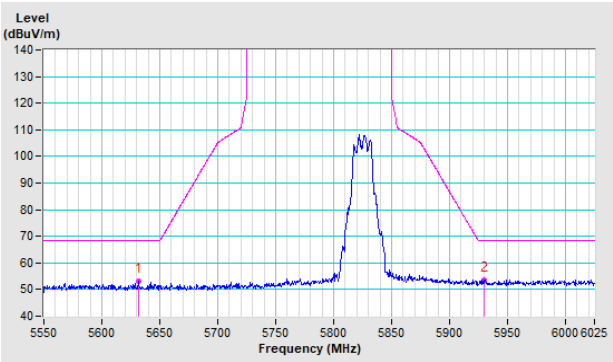
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

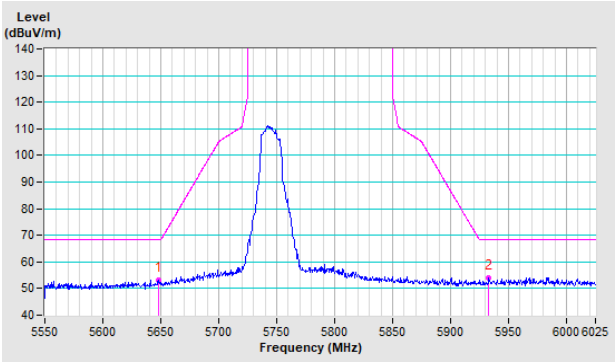
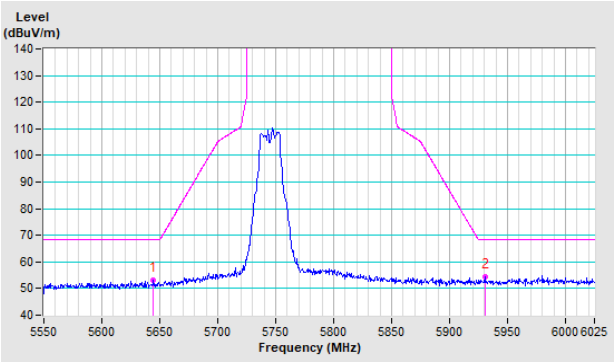
Horizontal	Vertical
	

CH 165 5825 MHz

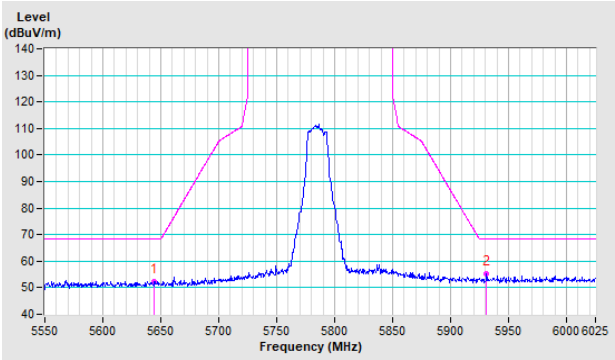
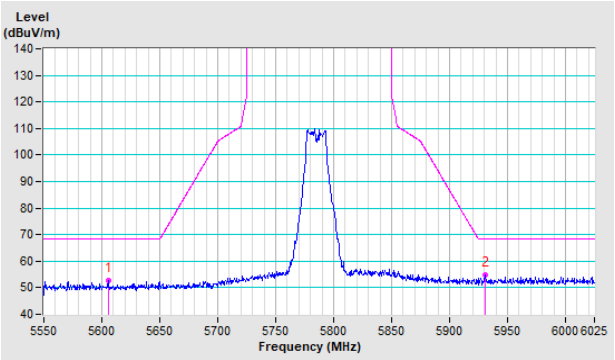
Horizontal	Vertical
	

802.11ac (VHT20)

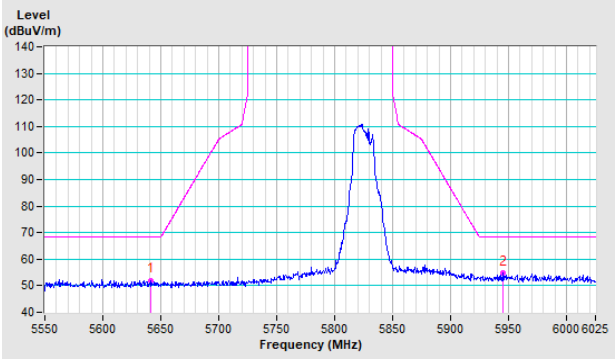
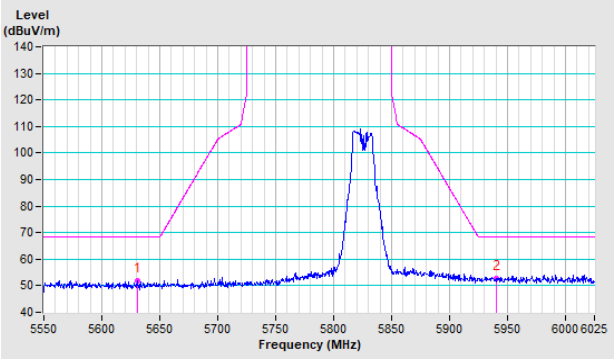
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

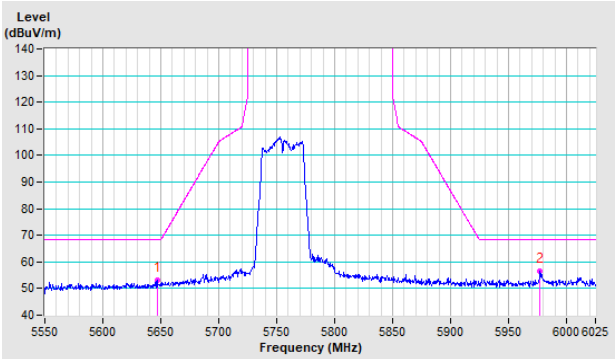
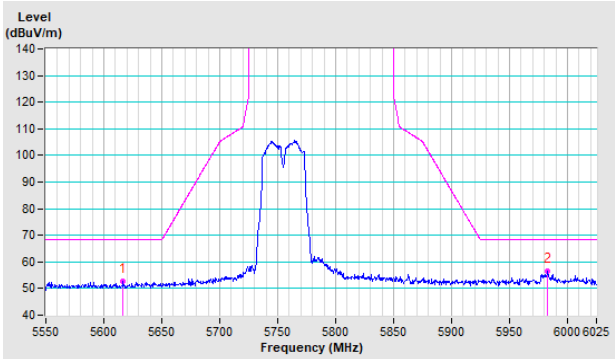
Horizontal	Vertical
	

CH 165 5825 MHz

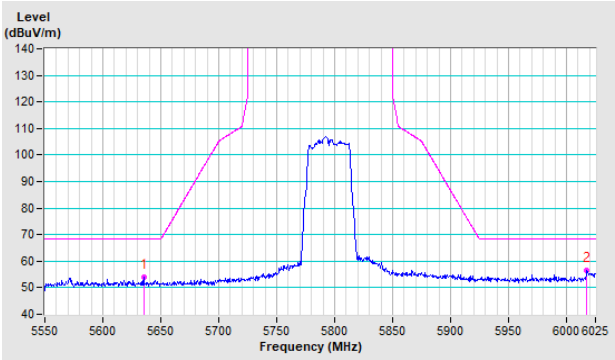
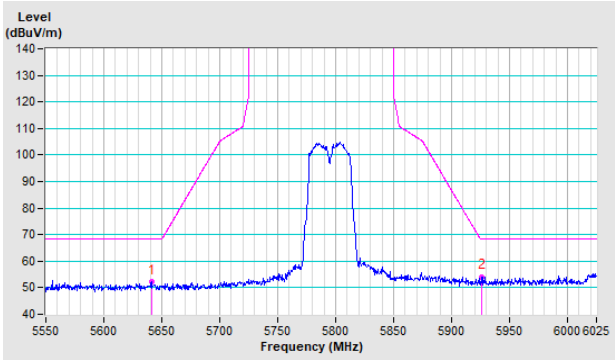
Horizontal	Vertical
	

802.11ac (VHT40)

CH 151 5755 MHz

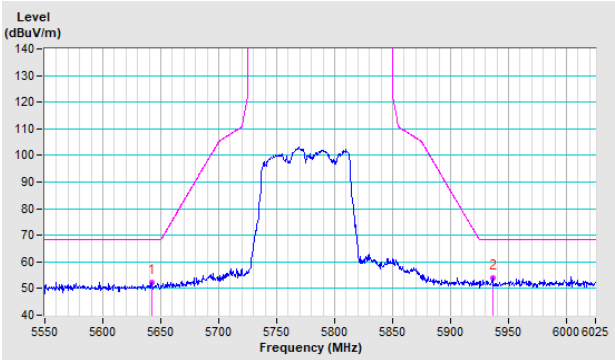
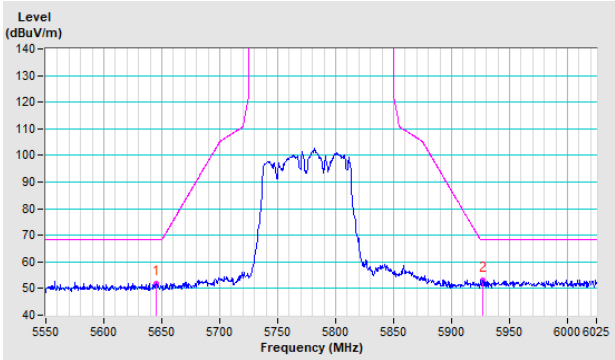
Horizontal	Vertical
	

CH 159 5795 MHz

Horizontal	Vertical
	

802.11ac (VHT80)

CH 155 5775 MHz

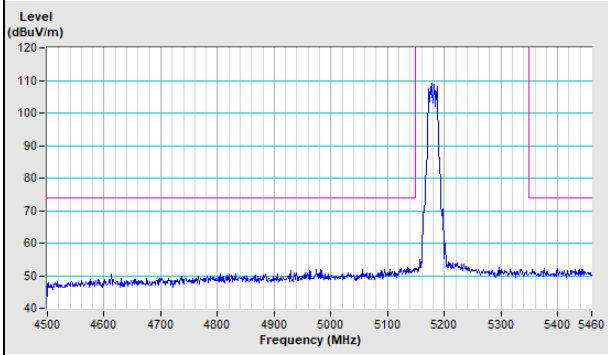
Horizontal	Vertical
	

Annex B- Band Edge Measurement

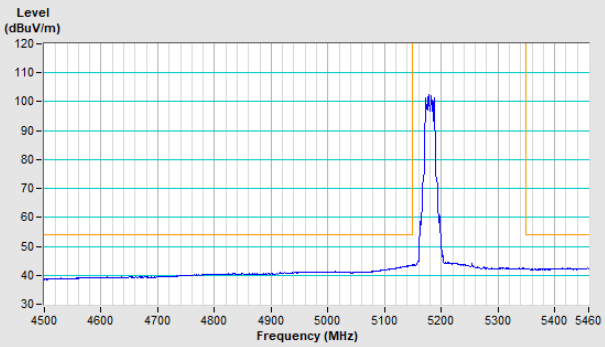
Mode B

802.11a Channel 36

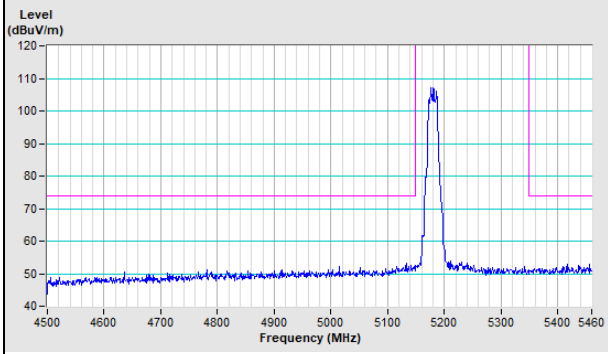
Horizontal (Peak)



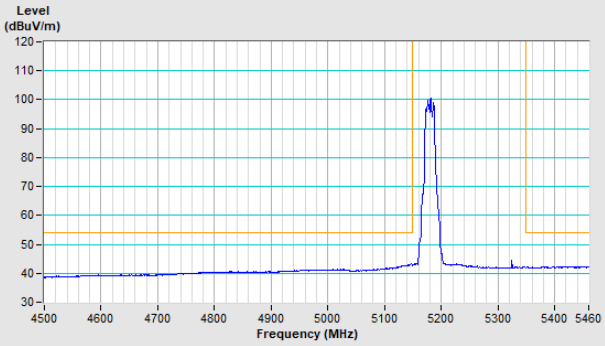
Horizontal (Average)



Vertical (Peak)

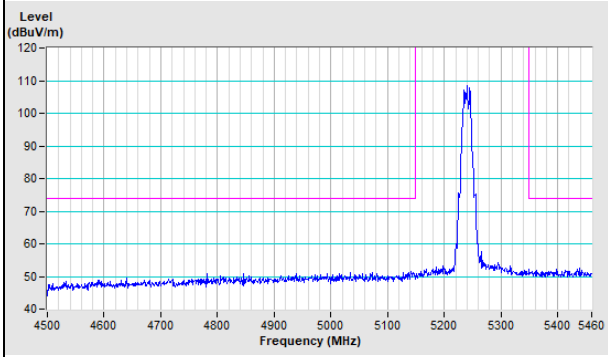


Vertical (Average)

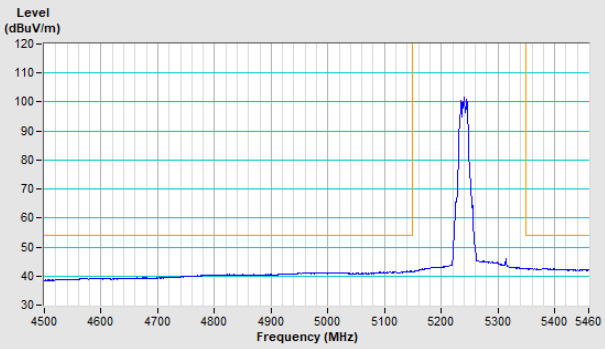


802.11a Channel 48

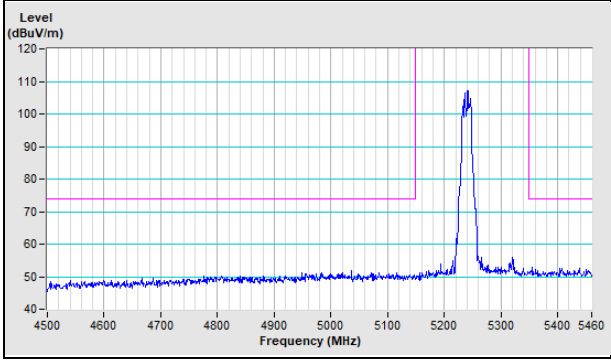
Horizontal (Peak)



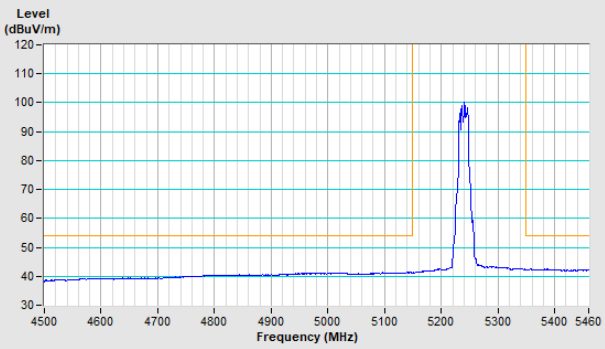
Horizontal (Average)



Vertical (Peak)

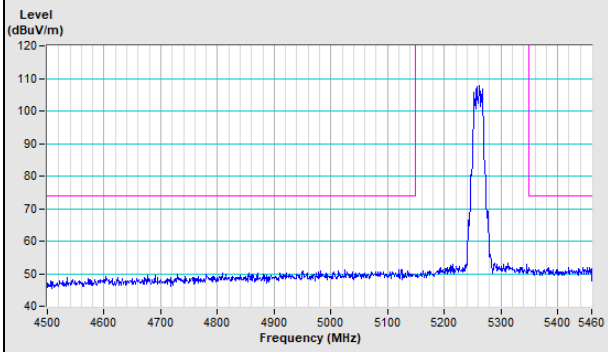


Vertical (Average)

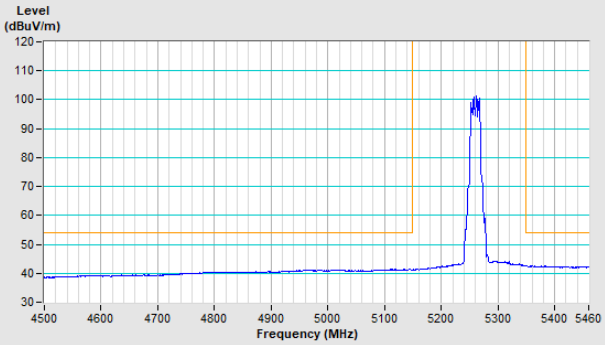


802.11a Channel 52

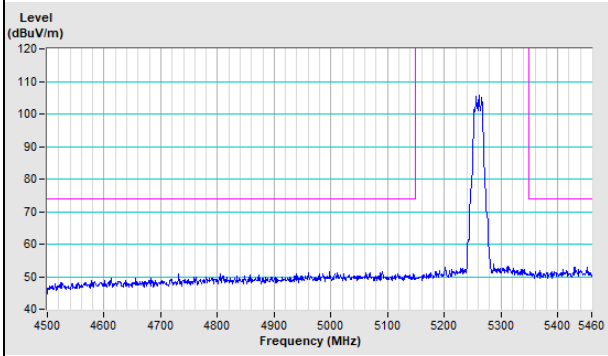
Horizontal (Peak)



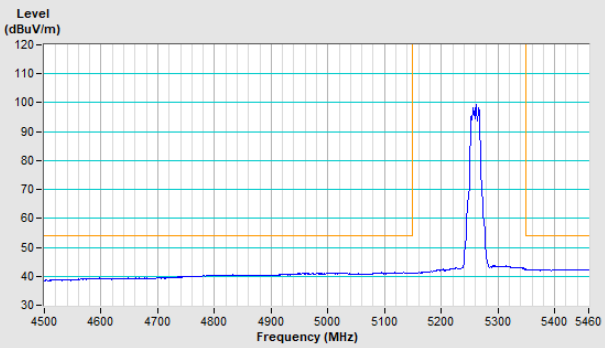
Horizontal (Average)



Vertical (Peak)

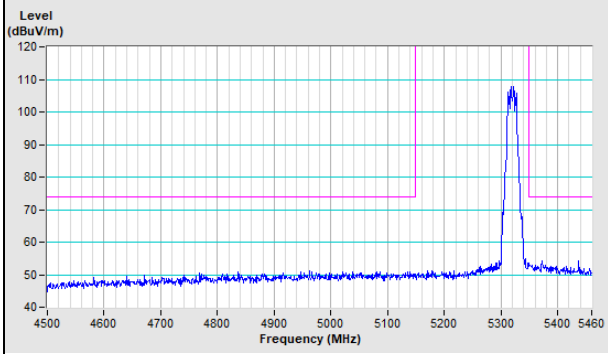


Vertical (Average)

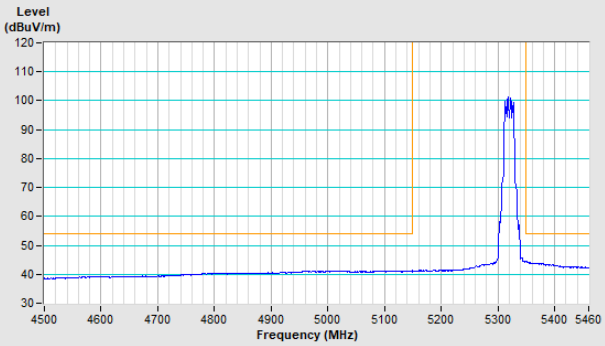


802.11a Channel 64

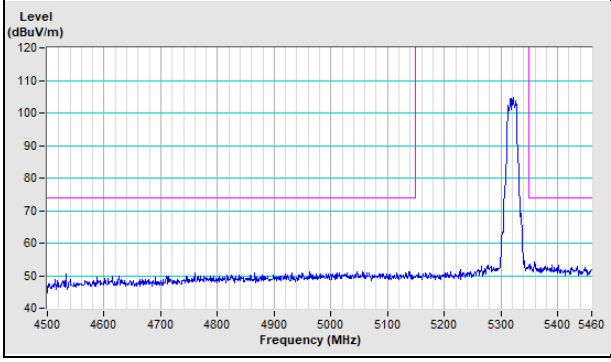
Horizontal (Peak)



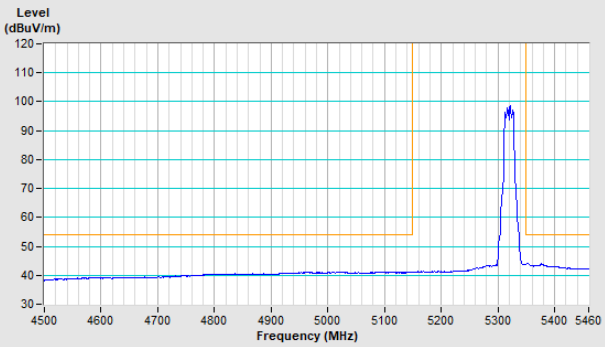
Horizontal (Average)



Vertical (Peak)

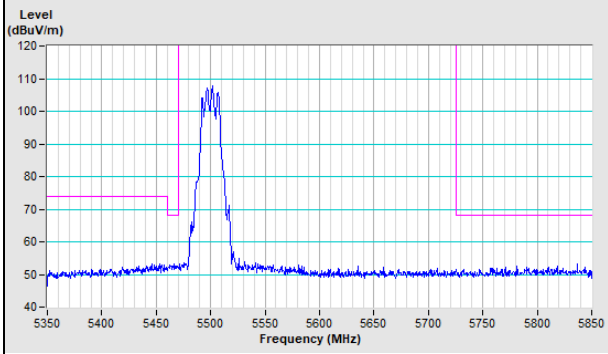


Vertical (Average)

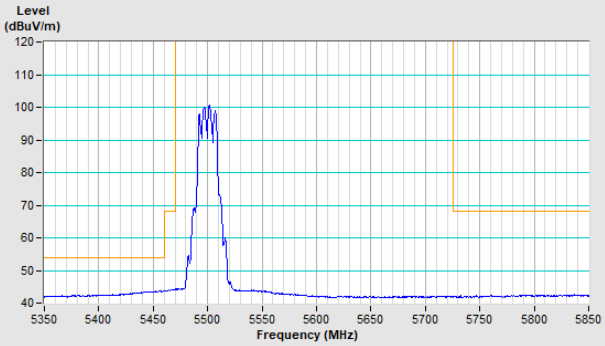


802.11a Channel 100

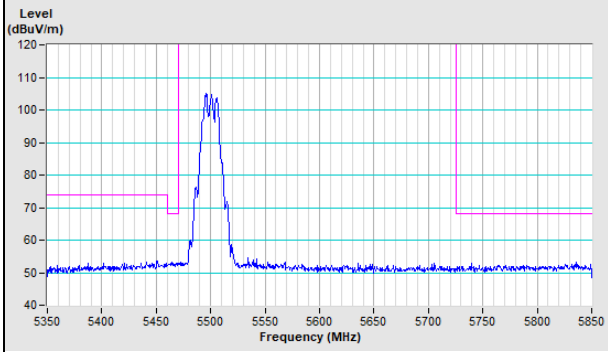
Horizontal (Peak)



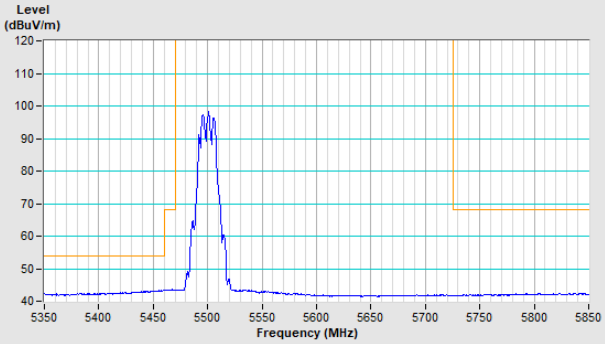
Horizontal (Average)



Vertical (Peak)

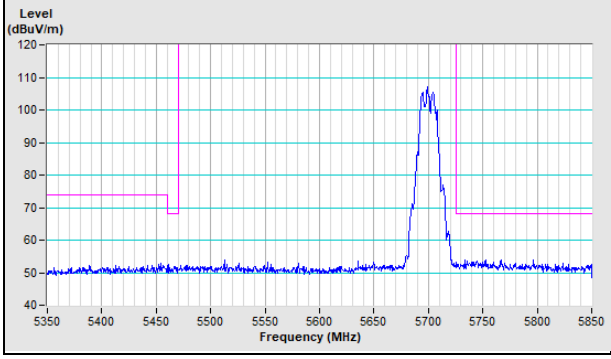


Vertical (Average)

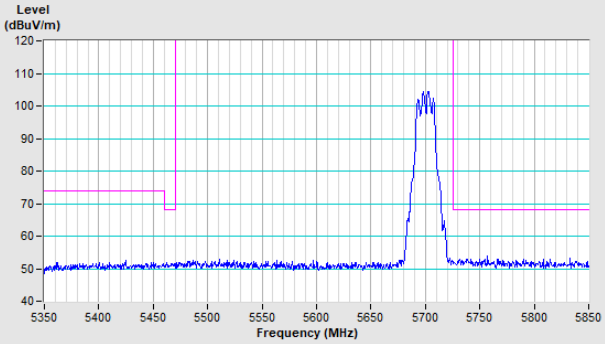


802.11a Channel 140

Horizontal (Peak)

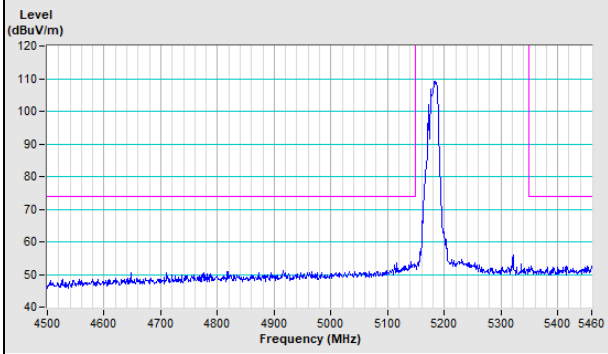


Vertical (Peak)

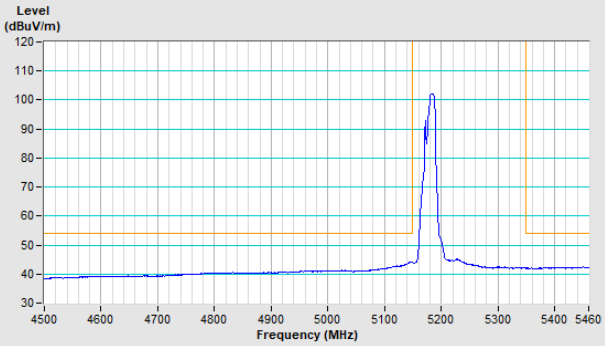


802.11ac (VHT20) Channel 36

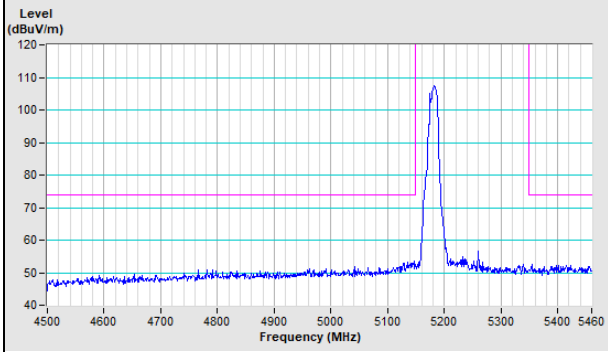
Horizontal (Peak)



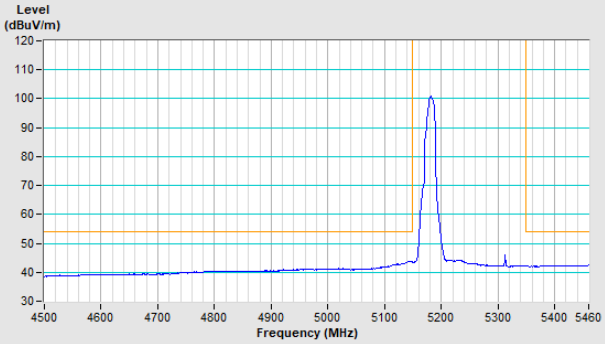
Horizontal (Average)



Vertical (Peak)

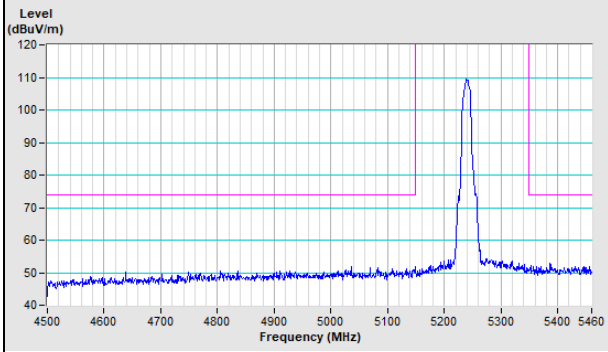


Vertical (Average)

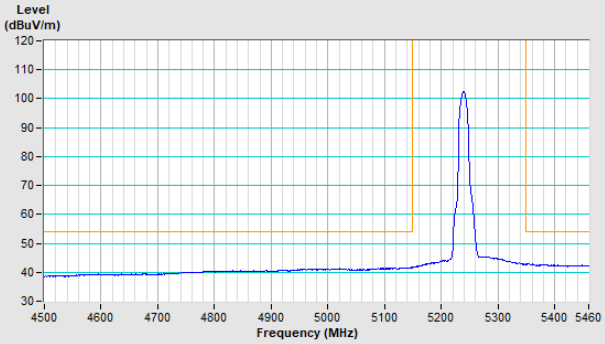


802.11ac (VHT20) Channel 48

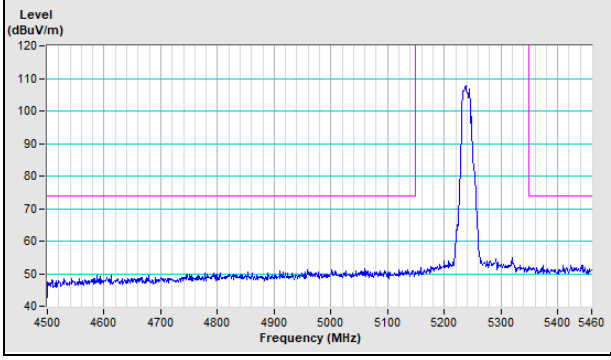
Horizontal (Peak)



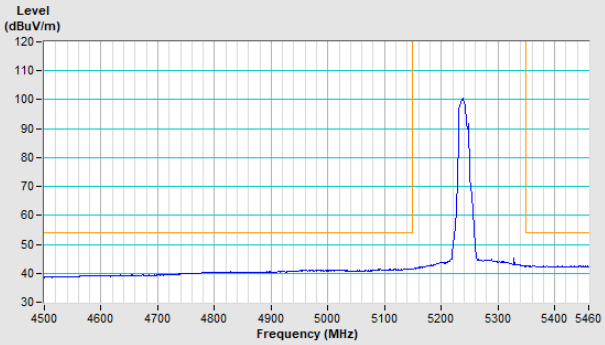
Horizontal (Average)



Vertical (Peak)

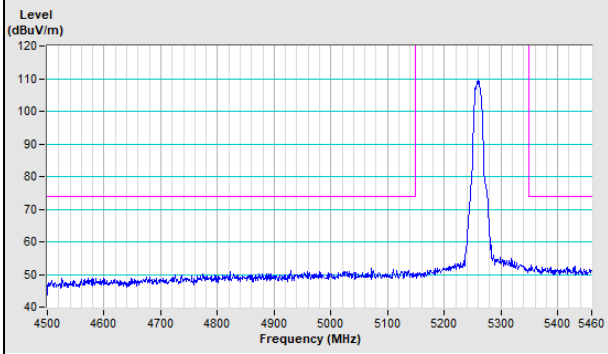


Vertical (Average)

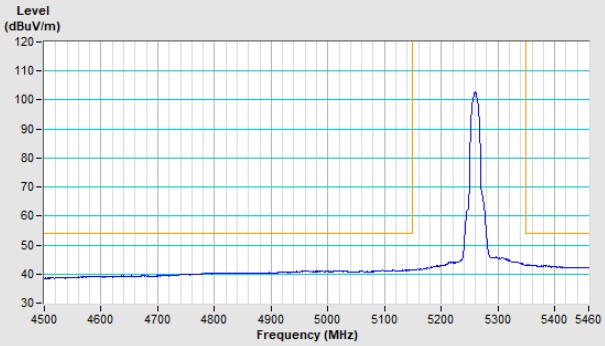


802.11ac (VHT20) Channel 52

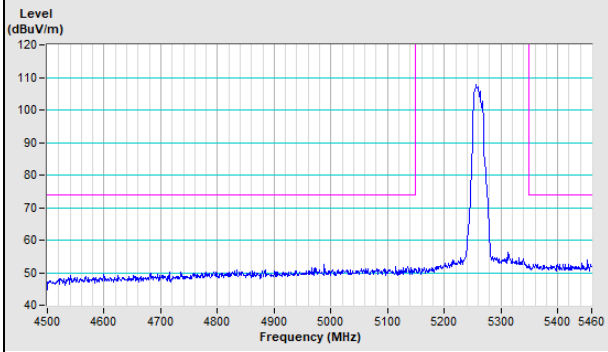
Horizontal (Peak)



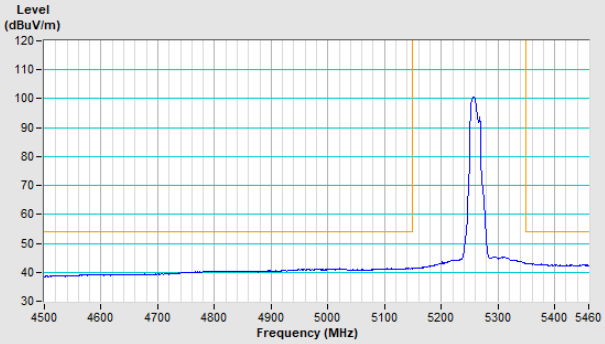
Horizontal (Average)



Vertical (Peak)

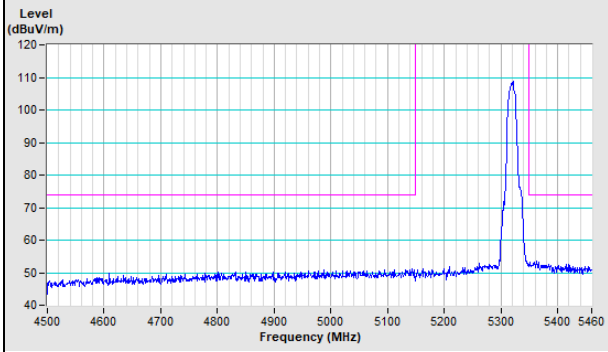


Vertical (Average)

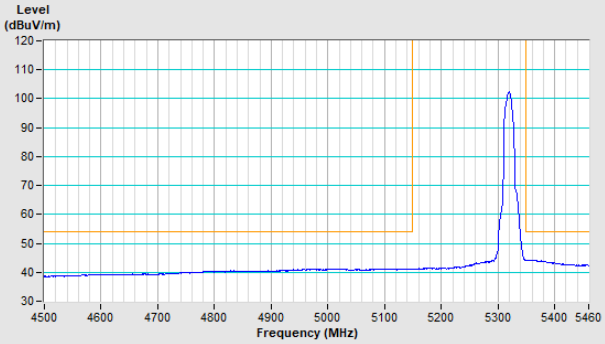


802.11ac (VHT20) Channel 64

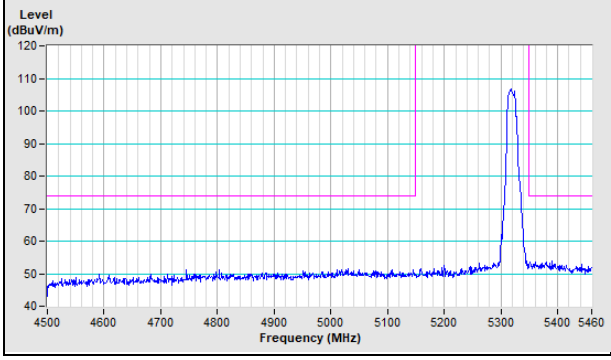
Horizontal (Peak)



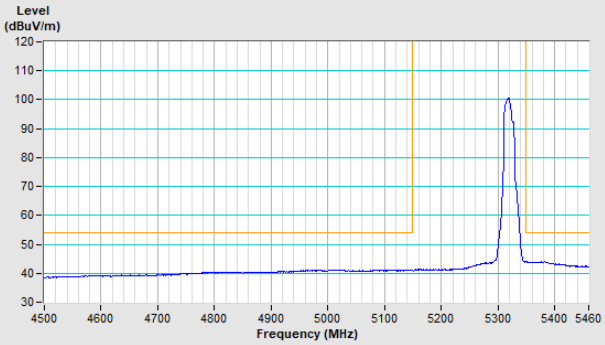
Horizontal (Average)



Vertical (Peak)

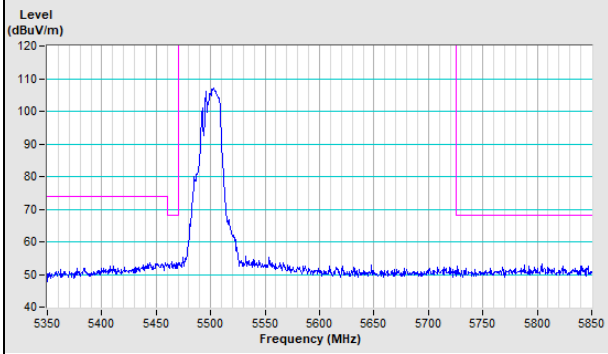


Vertical (Average)

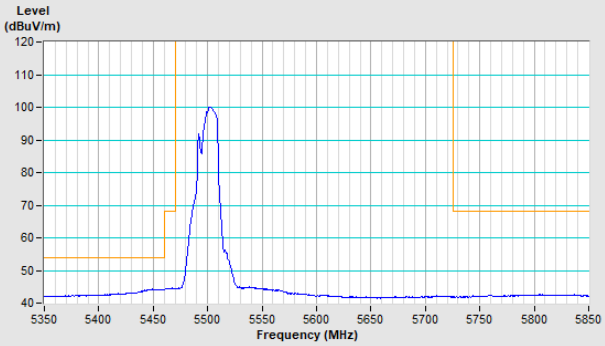


802.11ac (VHT20) Channel 100

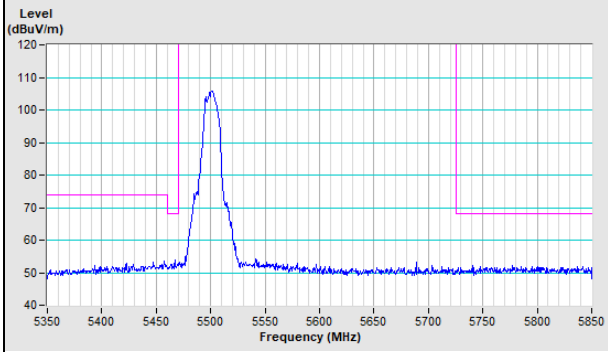
Horizontal (Peak)



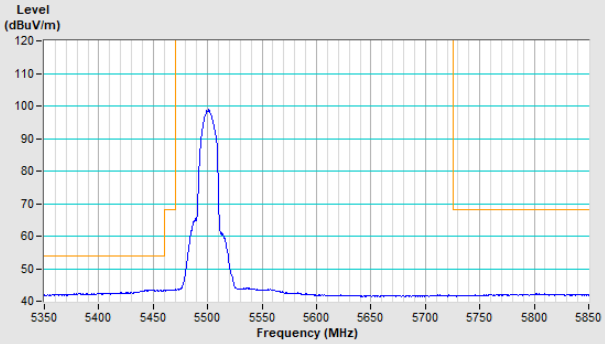
Horizontal (Average)



Vertical (Peak)

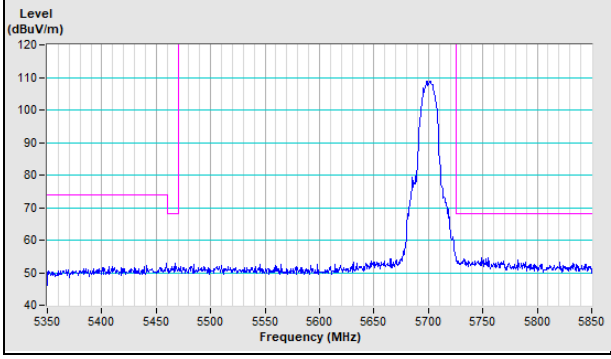


Vertical (Average)

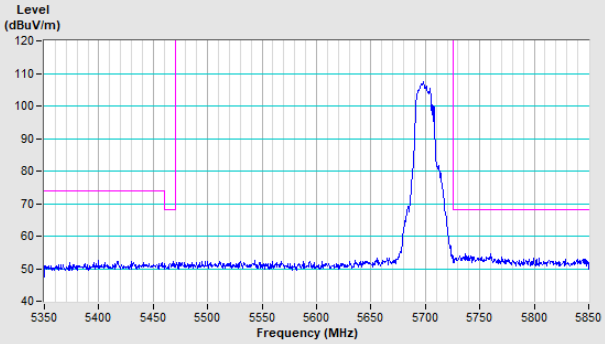


802.11ac (VHT20) Channel 140

Horizontal (Peak)

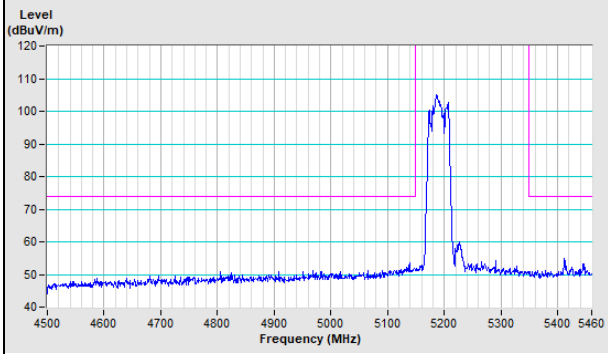


Vertical (Peak)

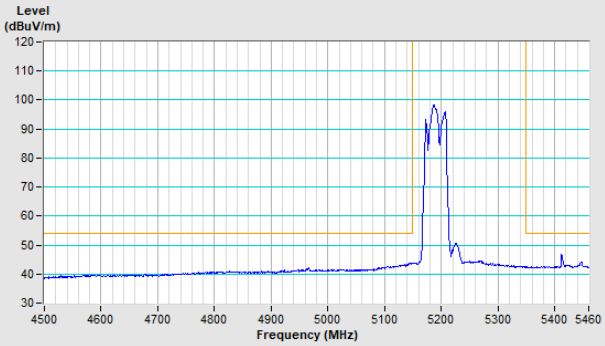


802.11ac (VHT40) Channel 38

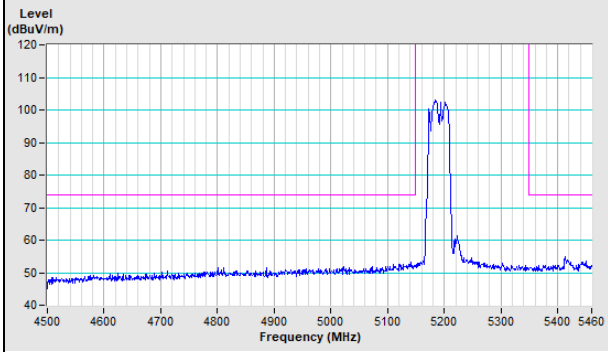
Horizontal (Peak)



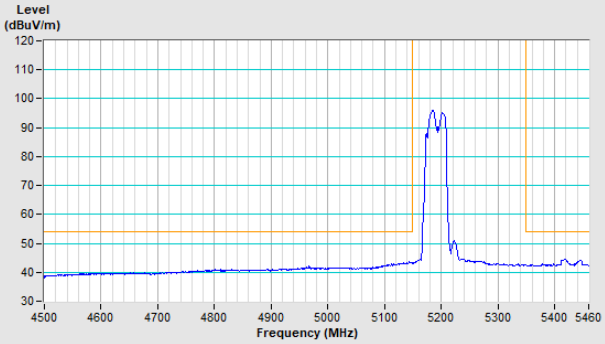
Horizontal (Average)



Vertical (Peak)

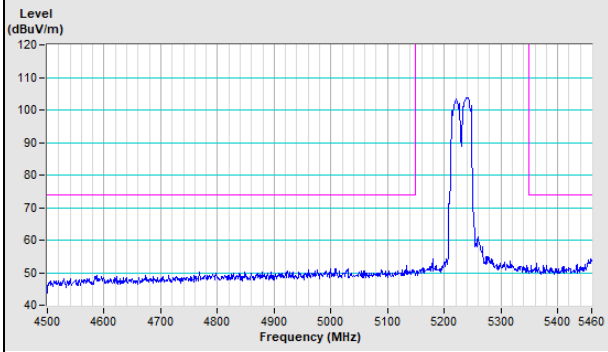


Vertical (Average)

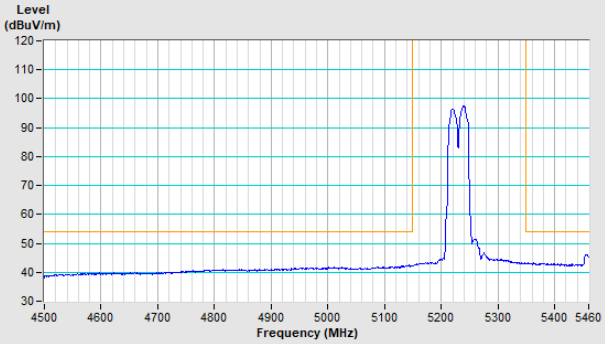


802.11ac (VHT40) Channel 46

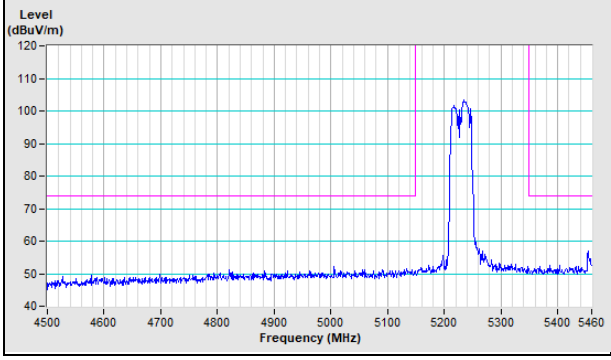
Horizontal (Peak)



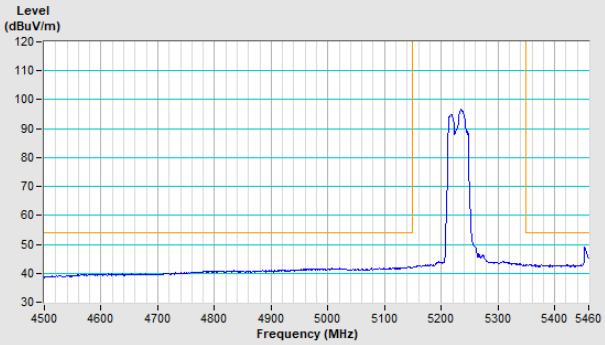
Horizontal (Average)



Vertical (Peak)

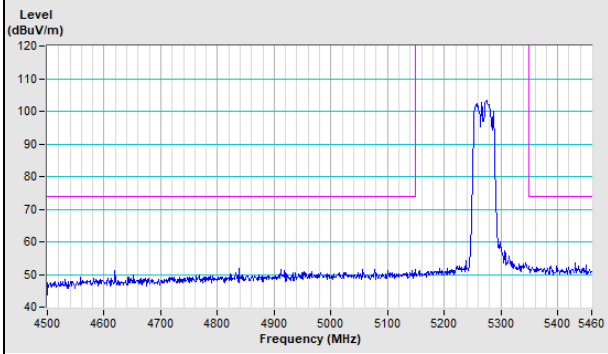


Vertical (Average)

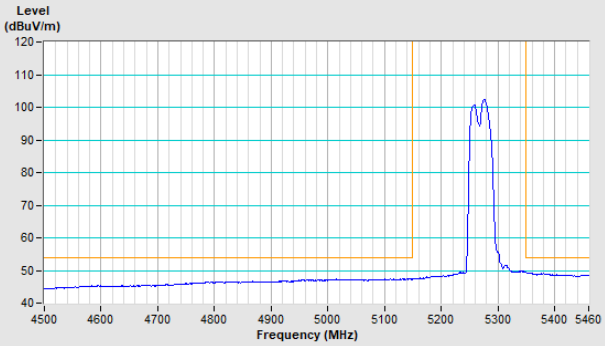


802.11ac (VHT40) Channel 54

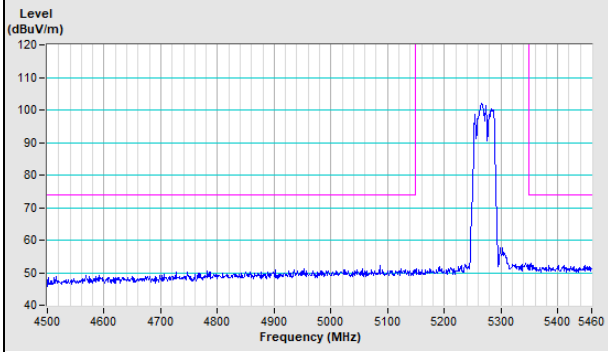
Horizontal (Peak)



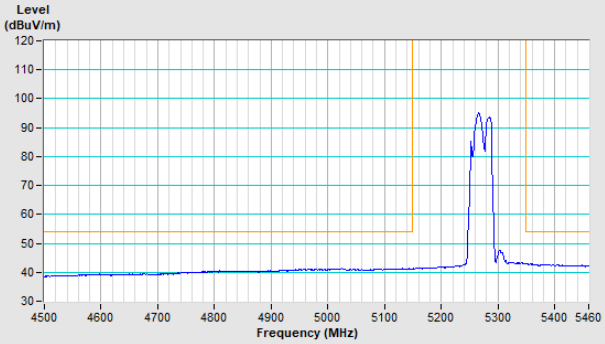
Horizontal (Average)



Vertical (Peak)

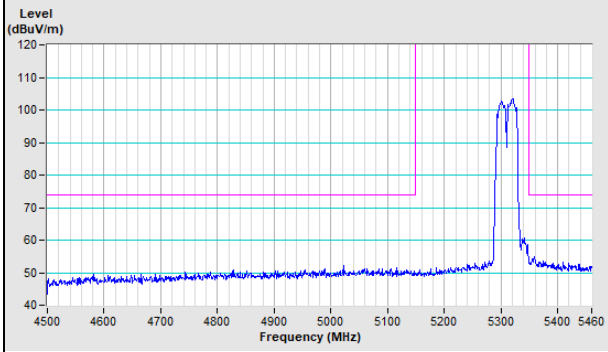


Vertical (Average)

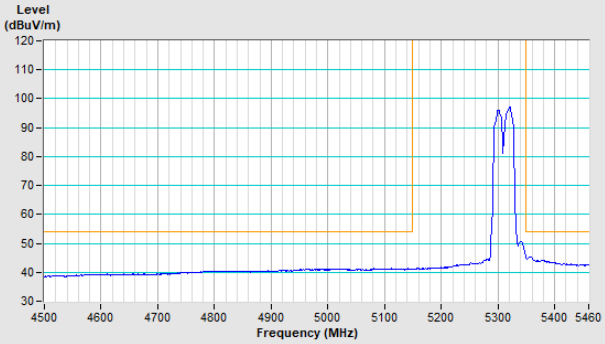


802.11ac (VHT40) Channel 62

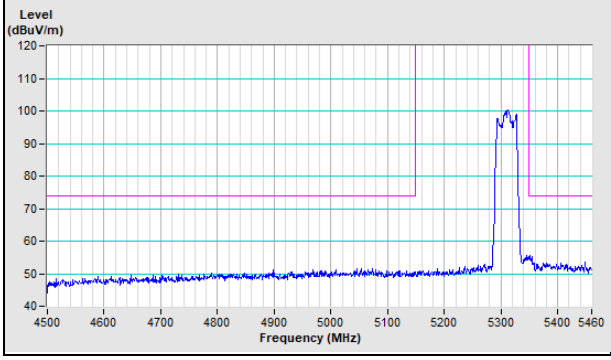
Horizontal (Peak)



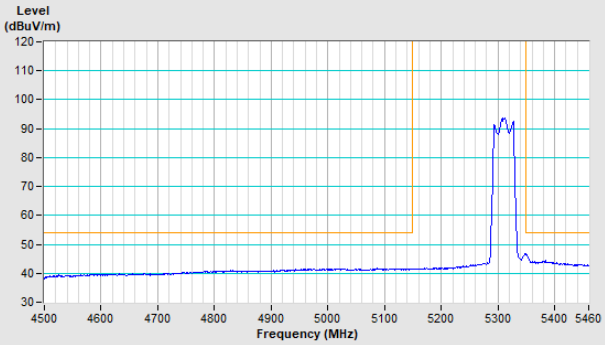
Horizontal (Average)



Vertical (Peak)

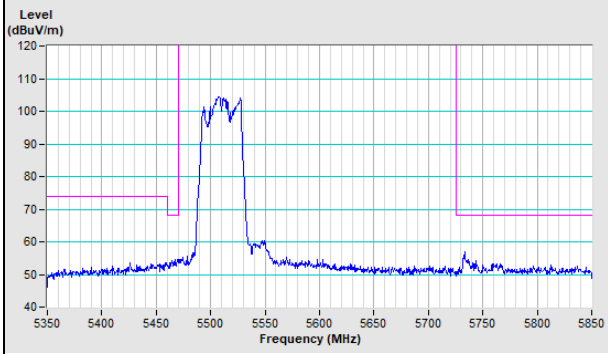


Vertical (Average)

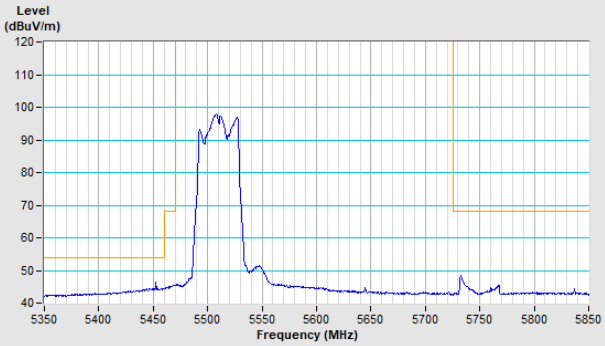


802.11ac (VHT40) Channel 102

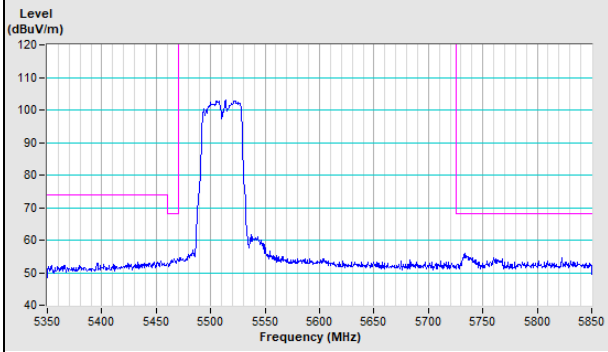
Horizontal (Peak)



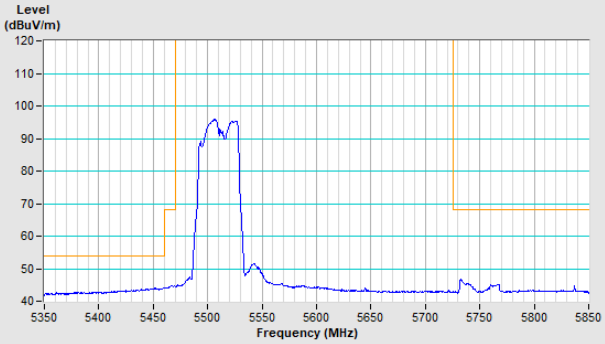
Horizontal (Average)



Vertical (Peak)

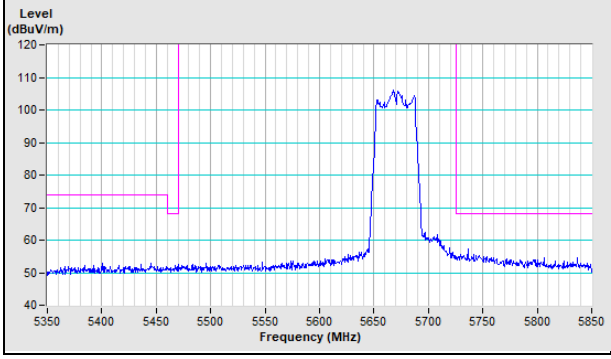


Vertical (Average)

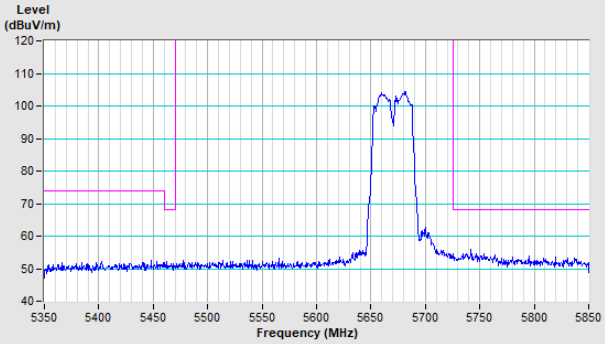


802.11ac (VHT40) Channel 134

Horizontal (Peak)

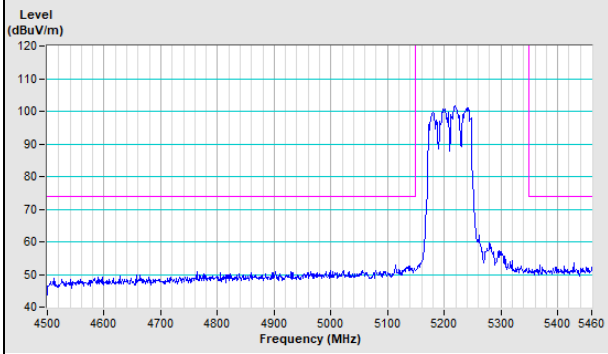


Vertical (Peak)

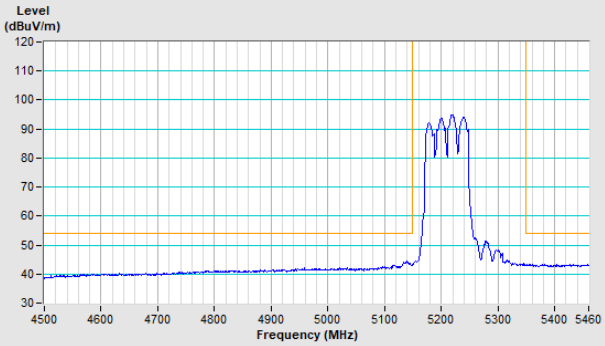


802.11ac (VHT80) Channel 42

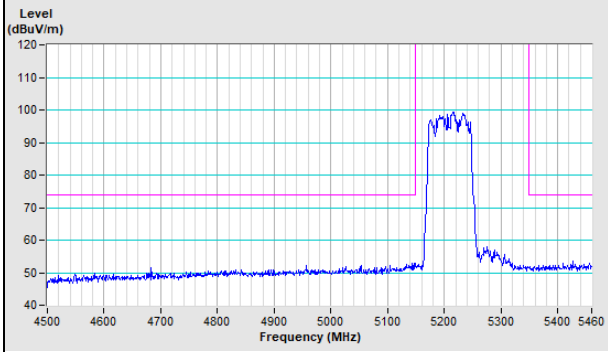
Horizontal (Peak)



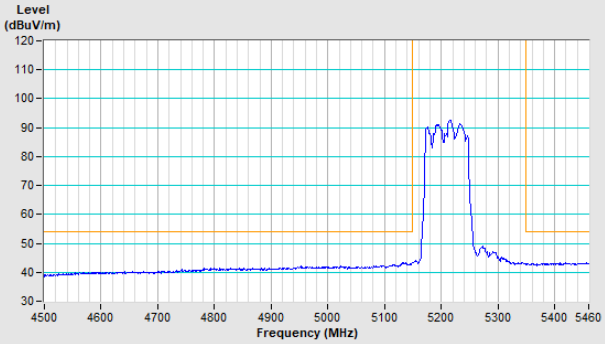
Horizontal (Average)



Vertical (Peak)

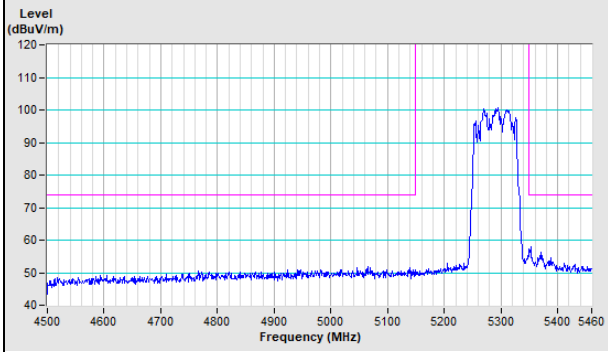


Vertical (Average)

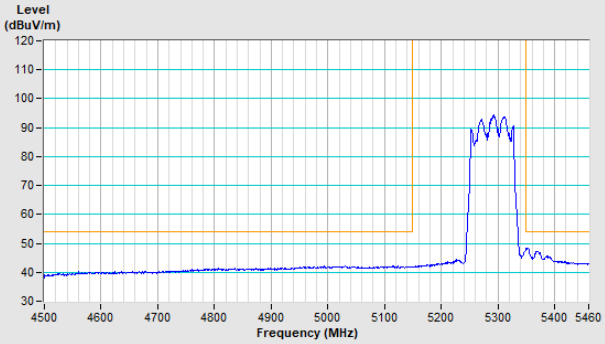


802.11ac (VHT80) Channel 58

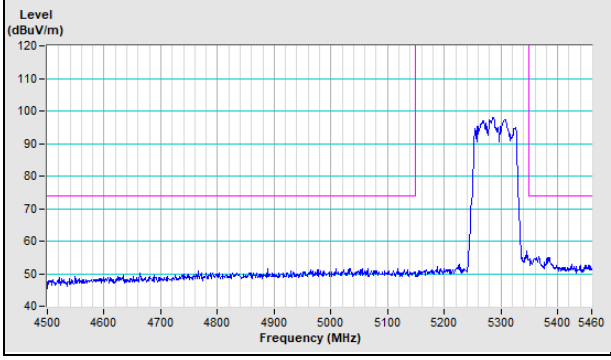
Horizontal (Peak)



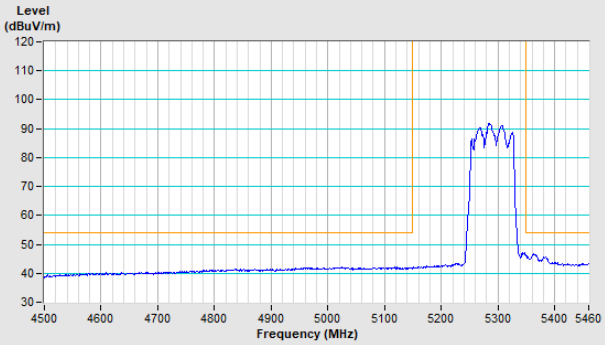
Horizontal (Average)

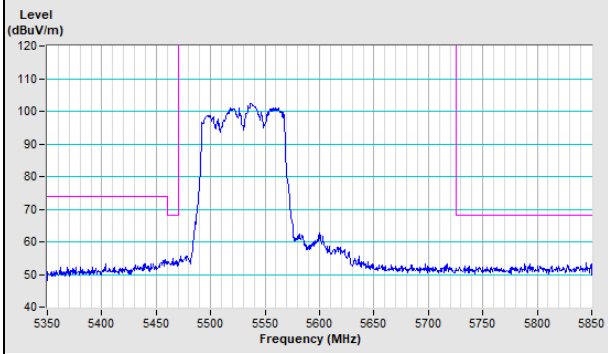
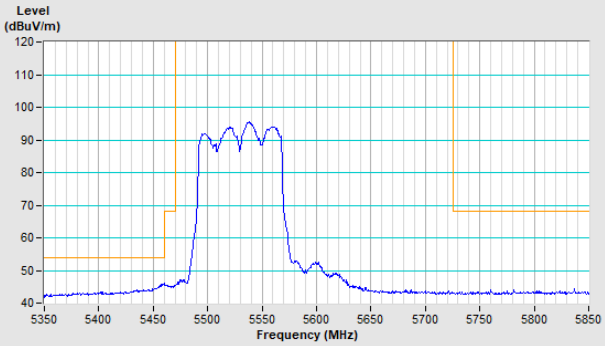
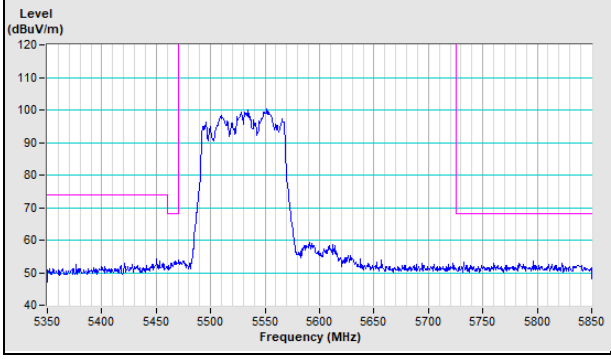
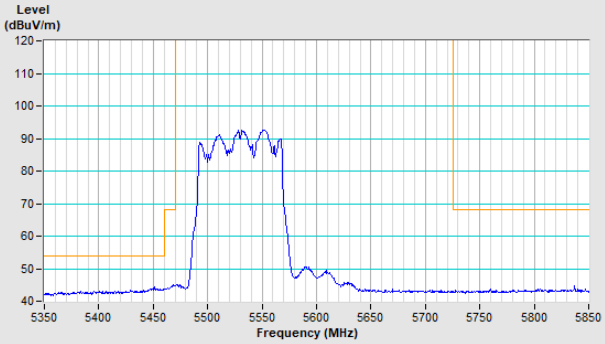


Vertical (Peak)



Vertical (Average)



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

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

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