FCC Test Report

Report No.:	RFBHJS-WTW-P21050503-1
FCC ID:	PD5-LM-WESA04OR
Test Model:	LM-WESA0440A-OR
Received Date:	May 13. 2021
Test Date:	May 25 ~ Jun. 01, 2021
Issued Date:	Jun. 21, 2021
Applicant:	Delta Electronics, Inc.
Address:	31-1 Shien Pan Rd., Kuei San Industrial Zone, Taoyuan City, 333 Taiwan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RFBHJS-WTW-P21050503-1	Original release	Jun. 21, 2021

1 Certificate of Conformity

Product:	802.11 b/g/n/ac WIFI AP
Test Model:	LM-WESA0440A-OR
Sample Status:	Engineering sample
Applicant:	Delta Electronics, Inc.
Test Date:	May 25 ~ Jun. 01, 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 : Celine Chou , **Date:** Jun. 21, 2021

Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Jun. 21, 2021

Bruce Chen / Senior Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(8)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -17.31dB at 2.53901MHz.
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 -0.6dB at 5350.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is IPEX not a standard connector.

Note:

1. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.
2. For U-NII-1, U-NII-2A, U-NII-2C band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex B. Test Procedures refer to report 4.1.3.
3. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.79 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.86 dB
	200MHz ~1000MHz	3.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	802.11 b/g/n/ac WIFI AP
Test Model	LM-WESA0440A-OR
Sample Status	Engineering sample
Power Supply Rating	55Vdc from POE
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 600Mbps 802.11ac: up to 1300Mbps
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), 802.11ac (VHT80+VHT80): 1 5260 ~ 5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80), 802.11ac (VHT80+VHT80): 1 5500 ~ 5700MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 11 802.11n (HT40), 802.11ac (VHT40): 5 802.11ac (VHT80), 802.11ac (VHT80+VHT80): 3 5745 ~ 5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80), 802.11ac (VHT80+VHT80): 1
Output Power	CDD Mode: 5180 ~ 5240MHz: 55.219mW 5260 ~ 5320MHz: 190.088mW 5500 ~ 5700MHz: 250.167mW 5745 ~ 5825MHz: 891.549mW Beamforming Mode: 5180 ~ 5240MHz: 24.024mW 5260 ~ 5320MHz: 106.894mW 5500 ~ 5700MHz: 118.301mW 5745 ~ 5825MHz: 397.306mW
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	NA
Cable Supplied	NA

Note:

1. The EUT incorporates a MIMO function. Physically, the EUT provides 4 completed transmitters and 4 receivers.

Modulation Mode	Beamforming Mode	TX Function
802.11a	Not Support	4TX
802.11n (HT20)	Support (CDD / Nss=1 / NSS=2)	4TX
802.11n (HT40)	Support (CDD / Nss=1 / NSS=2)	4TX
802.11ac (VHT20)	Support (CDD / Nss=1 / NSS=2)	4TX
802.11ac (VHT40)	Support (CDD / Nss=1 / NSS=2)	4TX
802.11ac (VHT80)	Support (CDD / Nss=1 / NSS=2)	4TX
802.11ac (VHT80+VHT80)	Support (CDD / Nss=1)	2TX+2TX

* 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)

* For 802.11n and 802.11ac, after pre-tested two modes (with beamforming mode Nss=1 / 2 and CDDmode) found CDD mode was the worst and chosen for final test, Beamforming mode only presented in power output test item.

2. The EUT consumes power from the following POE. (for support unit only)

POE	
Brand	YAMAHA
Model	YPS-POE-AT
Input Power	100-240Vac, 50/60Hz, 0.6A
Output Power	55Vdc, 30W for LAN+POE port

3. The following antennas were provided to the EUT.

Antenna Type		PCB PIFA				
Antenna Connector		I-PEX				
Ant. No	2400MHz	2450MHz	2500MHz	5150MHz	5550MHz	5850MHz
1	-0.03	1.36	1.41	3.45	3.11	3.44
2	0.11	1.32	1.47	3.55	3.16	3.64
3	0.43	1.16	1.65	3.35	3.26	3.43
4	0.26	1.15	1.54	3.45	3.42	3.45

* 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. 2.4GHz & 5GHz technology can transmit at same time.

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), 802.11ac (VHT80+VHT80):

Channel	Frequency
42	5210MHz

For 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), 802.11ac (VHT80+VHT80):

Channel	Frequency
58	5290MHz

For 5500 ~ 5700MHz:

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

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

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

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

3 channels are provided for 802.11ac (VHT80), 802.11ac (VHT80+VHT80):

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

For 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

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

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

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

Where RE≥1G: Radiated Emission above 1GHz & Bandedge Measurement RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission APCM: Antenna Port Conducted Measurement

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

Radiated Emission Test (Above 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11ac (VHT40)		38 to 46	38, 46	OFDM	13.5
	802.11ac (VHT80)		42	42	OFDM	29.3
	802.11ac (VHT80+VHT80)		42	42	OFDM	117.0
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	6.5
	802.11ac (VHT40)		54 to 62	54, 62	OFDM	13.5
	802.11ac (VHT80)		58	58	OFDM	29.3
	802.11ac (VHT80+VHT80)		58	58	OFDM	117.0
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
	802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	6.5
	802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	13.5
	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	29.3
	802.11ac (VHT80+VHT80)		106 to 138	106, 122, 138	OFDM	117.0
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11ac (VHT40)		151 to 159	151, 159	OFDM	13.5
	802.11ac (VHT80)		155	155	OFDM	29.3
	802.11ac (VHT80+VHT80)		155	155	OFDM	117.0

Radiated Emission Test (Below 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	149	OFDM	6.0
-	802.11a	5260-5320	52 to 64		OFDM	6.0
-	802.11a	5500-5700	100 to 140		OFDM	6.0
-	802.11a	5745-5825	149 to 165		OFDM	6.0

Power Line Conducted Emission Test:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	149	OFDM	6.0
-	802.11a	5260-5320	52 to 64		OFDM	6.0
-	802.11a	5500-5700	100 to 140		OFDM	6.0
-	802.11a	5745-5825	149 to 165		OFDM	6.0

Antenna Port Conducted Measurement:

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11ac (VHT40)		38 to 46	38, 46	OFDM	13.5
	802.11ac (VHT80)		42	42	OFDM	29.3
	802.11ac (VHT80+VHT80)		42	42	OFDM	117.0
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	6.5
	802.11ac (VHT40)		54 to 62	54, 62	OFDM	13.5
	802.11ac (VHT80)		58	58	OFDM	29.3
	802.11ac (VHT80+VHT80)		58	58	OFDM	117.0
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
	802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	6.5
	802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	13.5
	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	29.3
	802.11ac (VHT80+VHT80)		106 to 138	106, 122, 138	OFDM	117.0
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11ac (VHT40)		151 to 159	151, 159	OFDM	13.5
	802.11ac (VHT80)		155	155	OFDM	29.3
	802.11ac (VHT80+VHT80)		155	155	OFDM	117.0

Test Condition:

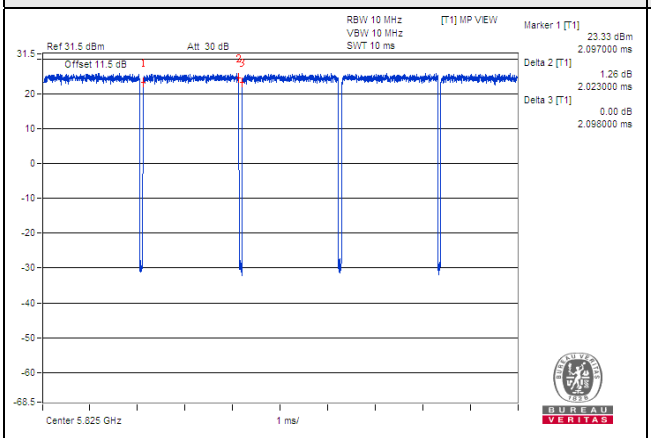
Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	24 deg. C, 66% RH	55Vdc	Edison Lee
RE<1G	24 deg. C, 66% RH	55Vdc	Adair Peng
PLC	23 deg. C, 67% RH	55Vdc	Adair Peng
APCM	25 deg. C, 60% RH	55Vdc	Jisyong Wang

3.3 Duty Cycle of Test Signal

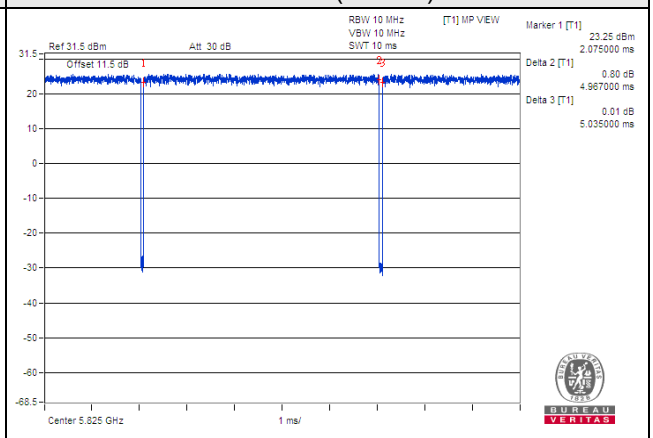
802.11n (VHT20): Duty cycle of test signal ≥ 98%, duty factor is not required.
802.11a, 802.11ac (VHT40), 802.11ac (VHT80), 802.11ac (VHT80+VHT80): Duty cycle of test signal is < 98%, duty factor is required.

802.11a: Duty cycle = 2.023/2.098 = 0.964, Duty factor = 10 * log (1/0.964) = 0.16
802.11ac (VHT20): Duty cycle = 4.967/5.035 = 0.986
802.11ac (VHT40): Duty cycle = 2.413/2.488 = 0.970, Duty factor = 10 * log (1/0.970) = 0.13
802.11ac (VHT80): Duty cycle = 1.134/1.199 = 0.946, Duty factor = 10 * log (1/0.946) = 0.24
802.11ac (VHT80+VHT80) - CH 42: Duty cycle = 3.320/3.855 = 0.861, Duty factor = 10 * log (1/0.861) = 0.65
802.11ac (VHT80+VHT80) - CH 58: Duty cycle = 3.315/3.860 = 0.859, Duty factor = 10 * log (1/0.859) = 0.66
802.11ac (VHT80+VHT80) - CH 106: Duty cycle = 3.315/3.855 = 0.860, Duty factor = 10 * log (1/0.860) = 0.66
802.11ac (VHT80+VHT80) - CH 122: Duty cycle = 3.315/3.860 = 0.859, Duty factor = 10 * log (1/0.859) = 0.66
802.11ac (VHT80+VHT80) - CH 138: Duty cycle = 3.315/3.855 = 0.860, Duty factor = 10 * log (1/0.860) = 0.66
802.11ac (VHT80+VHT80) - CH 155: Duty cycle = 1.132/1.209 = 0.936, Duty factor = 10 * log (1/0.936) = 0.29

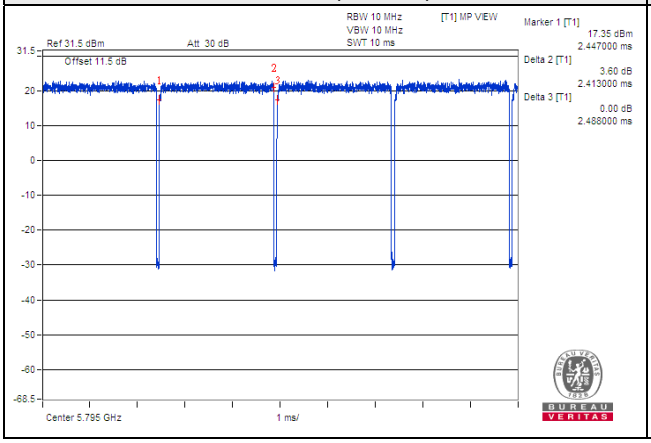
802.11a



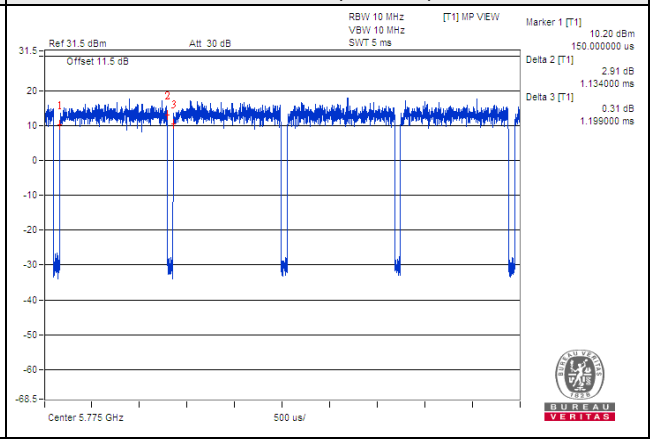
802.11ac (VHT20)



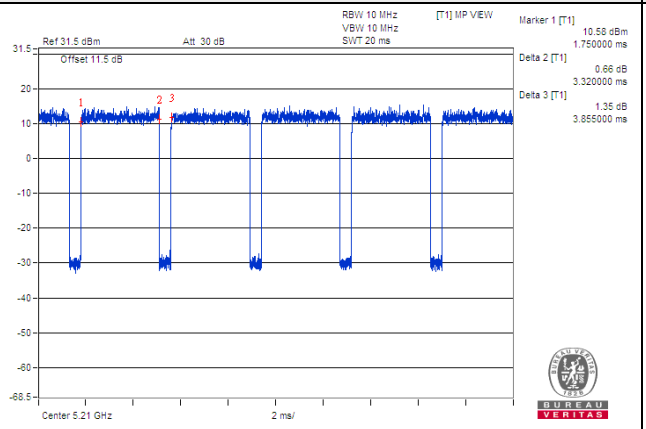
802.11ac (VHT40)



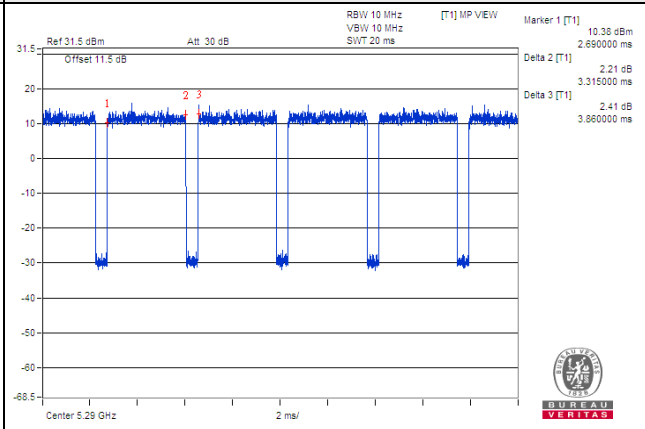
802.11ac (VHT80)



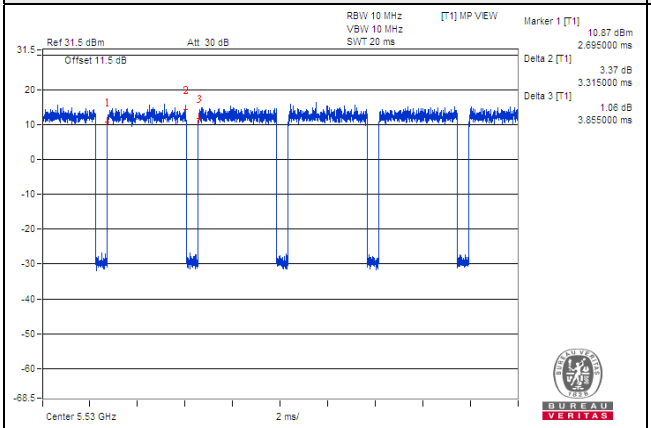
802.11ac (VHT80+VHT80) CH 42



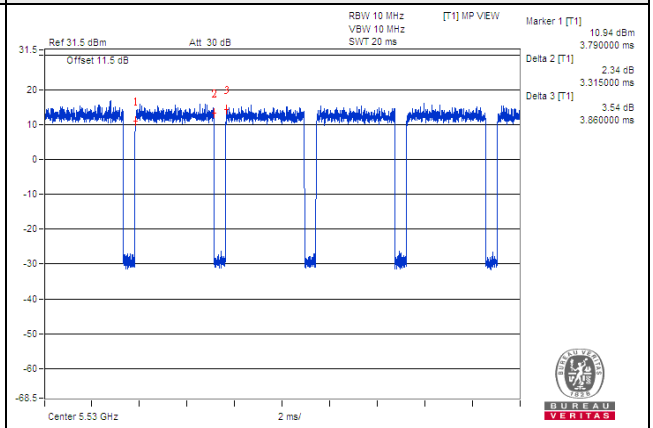
802.11ac (VHT80+VHT80) CH 58



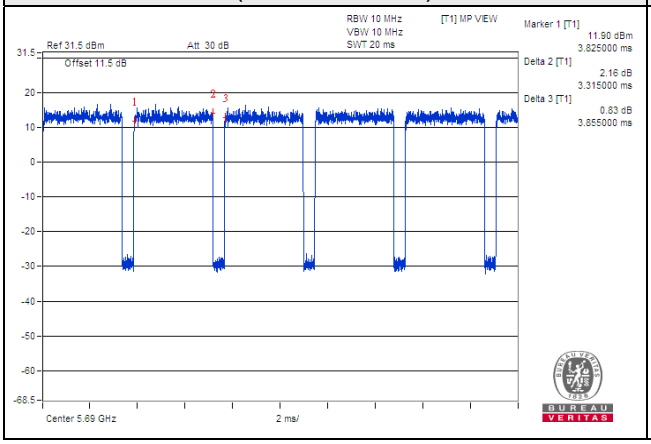
802.11ac (VHT80+VHT80) CH 106



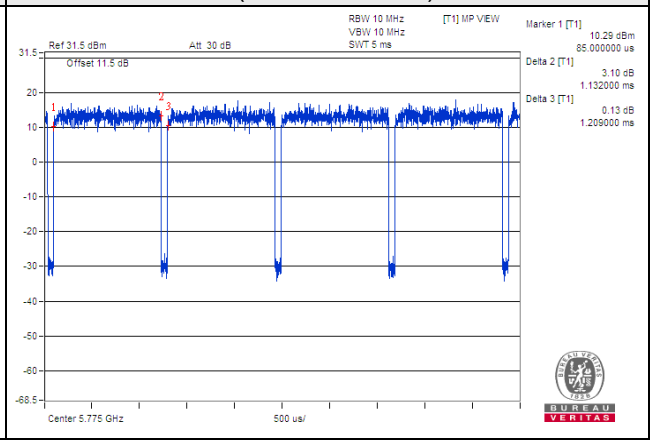
802.11ac (VHT80+VHT80) CH 122



802.11ac (VHT80+VHT80) CH 138



802.11ac (VHT80+VHT80) CH 155



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.

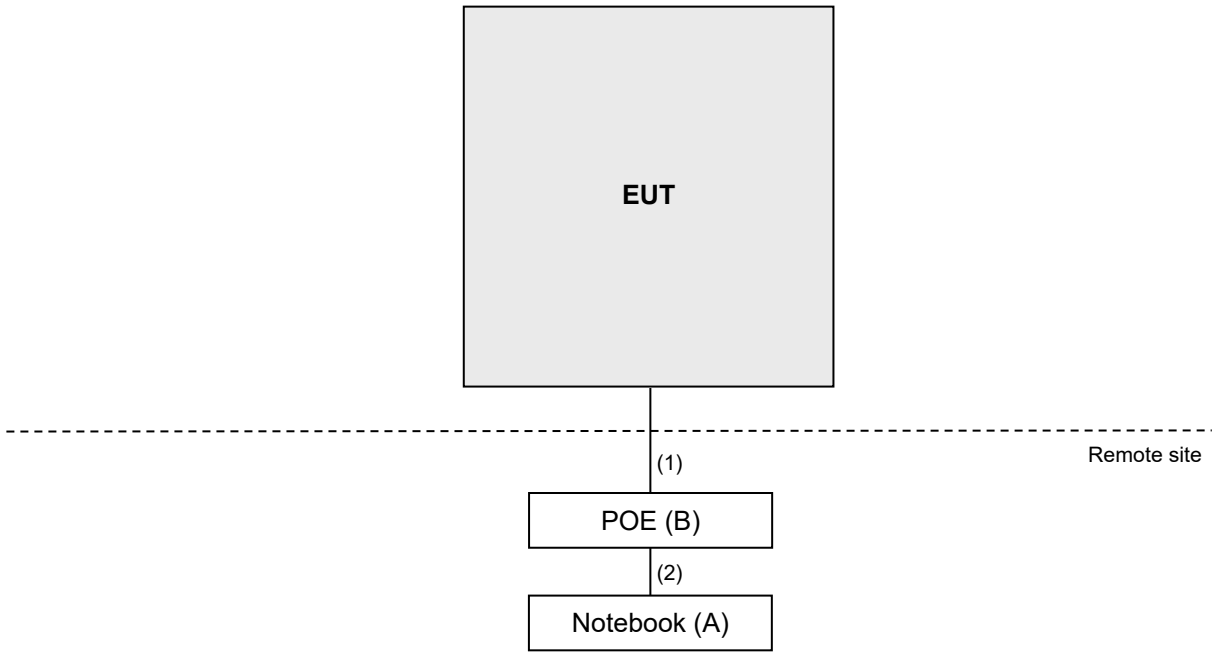
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	POE	YAMAHA	YPS-POE-AT	NA	NA	Provided by manufacturer

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Items A acted as communication partner to transfer data.

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	LAN	1	6.0	N	0	RJ45, Cat5e
2.	LAN	3	1.5	N	0	RJ45, Cat5e

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards and References

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

Test standard:
FCC Part 15, Subpart E (15.407)
ANSI C63.10:2013

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

References Test Guidance:
KDB 789033 D02 General UNII Test Procedure New Rules v02r01
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.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESR3	102579	Jul. 07, 2020	Jul. 06, 2021
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Nov. 04, 2020	Nov. 03, 2021
HORN Antenna SCHWARZBECK	9120D	209	Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 22, 2020	Nov. 21, 2021
Loop Antenna TESEQ	HLA 6121	45745	Jul. 06, 2020	Jul. 05, 2021
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 16, 2020	Aug. 15, 2021
Preamplifier Agilent (Above 1GHz)	8449B	3008A02465	Mar. 22, 2021	Mar. 21, 2022
RF Coaxial Cable WOKEN With 5dB PAD	8D-FB	Cable-CH3-01	Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-S M-8000	Cable-CH3-03 (309224+170907)	Aug. 16, 2020	Aug. 15, 2021
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Pre-amplifier (18GHz-40GHz) EMC	EMC184045B	980175	Sep. 04, 2020	Sep. 03, 2021
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY5519 0004/MY55190007/MY 55210005	Jul. 13, 2020	Jul. 12, 2021

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.

4.1.3 Test Procedures

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

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

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

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

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

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

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

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

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

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

Note:

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

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

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

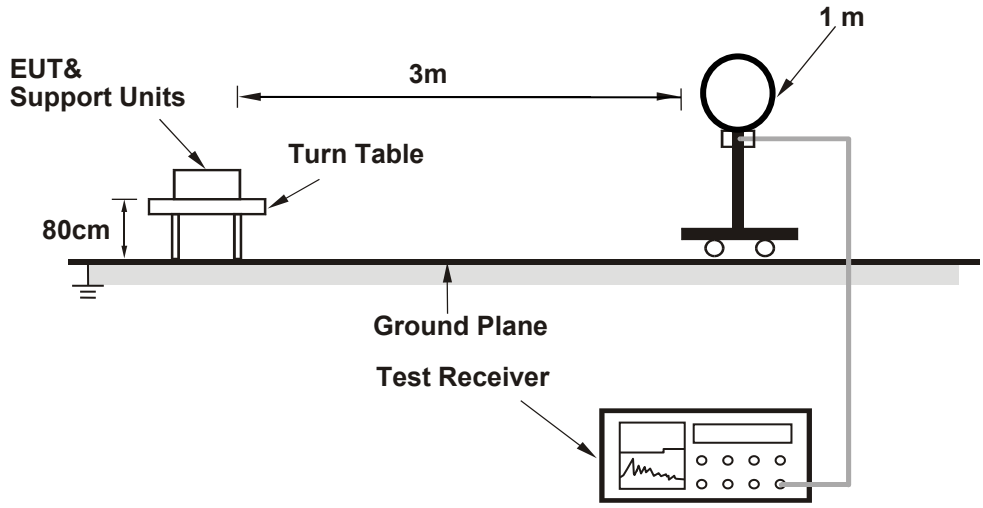
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

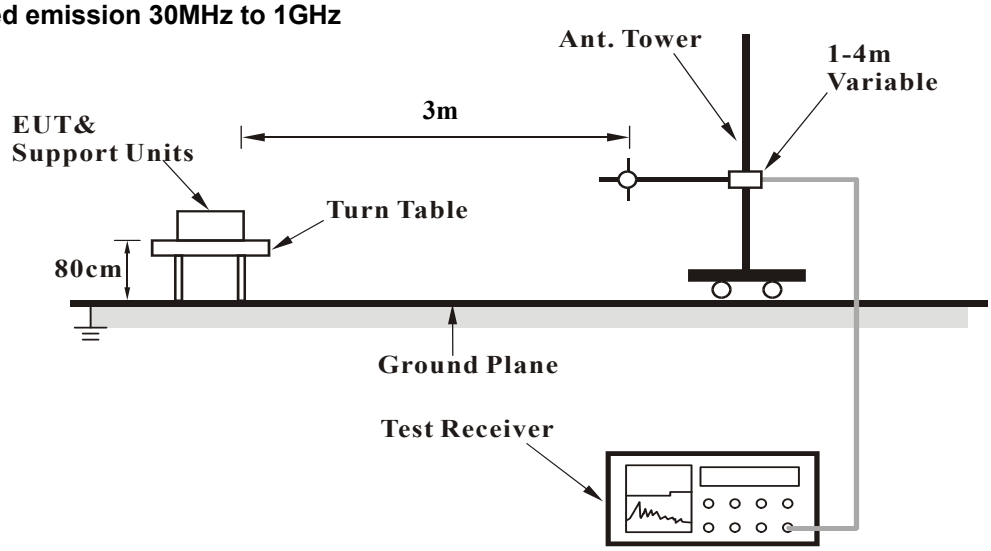
No deviation.

4.1.5 Test Setup

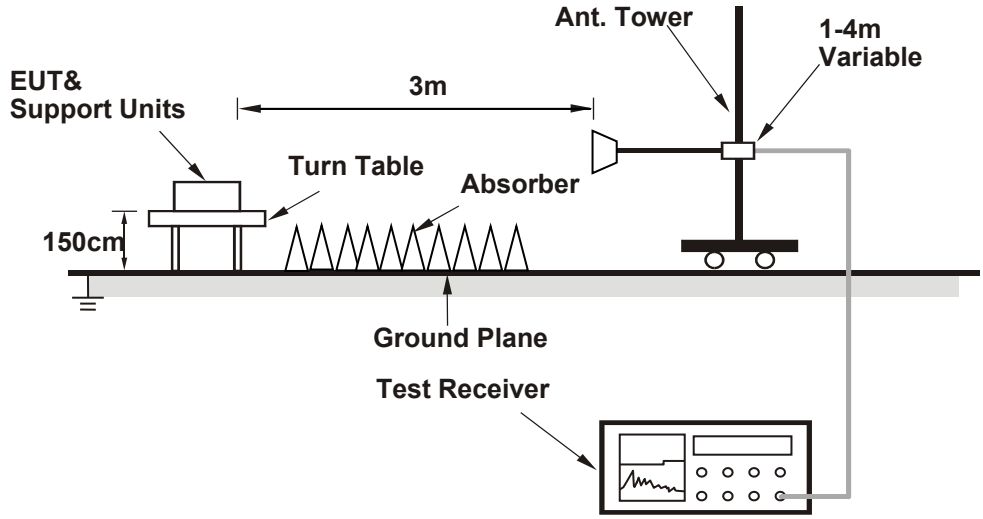
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

a. Placed the EUT on the testing table.
b. Prepared a notebook to act as a communication partner and placed it outside of testing area.
c. The communication partner connected with EUT via a RJ45 cable and ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
d. The communication partner sent data to EUT by command.

4.1.7 Test Results

Above 1GHz data:

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.1 PK	74.0	-13.9	1.51 H	2	53.7	6.4
2	5150.00	48.2 AV	54.0	-5.8	1.51 H	2	41.8	6.4
3	*5180.00	116.0 PK			1.51 H	2	73.8	42.2
4	*5180.00	106.3 AV			1.51 H	2	64.1	42.2
5	#10360.00	58.5 PK	68.2	-9.7	1.23 H	59	42.0	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.4 PK	74.0	-12.6	1.65 V	339	55.0	6.4
2	5150.00	49.5 AV	54.0	-4.5	1.65 V	339	43.1	6.4
3	*5180.00	118.1 PK			1.65 V	339	75.9	42.2
4	*5180.00	108.2 AV			1.65 V	339	66.0	42.2
5	#10360.00	58.1 PK	68.2	-10.1	2.05 V	352	41.6	16.5

Remarks:

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

RF Mode	TX 802.11a	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	115.0 PK			1.47 H	6	72.9	42.1
2	*5200.00	105.2 AV			1.47 H	6	63.1	42.1
3	#10400.00	57.8 PK	68.2	-10.4	1.48 H	62	41.3	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	117.4 PK			1.65 V	8	75.3	42.1
2	*5200.00	107.6 AV			1.65 V	8	65.5	42.1
3	#10400.00	58.2 PK	68.2	-10.0	2.07 V	343	41.7	16.5

Remarks:

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

RF Mode	TX 802.11a	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	115.7 PK			1.40 H	359	73.7	42.0
2	*5240.00	105.7 AV			1.40 H	359	63.7	42.0
3	5350.00	59.1 PK	74.0	-14.9	1.40 H	359	52.8	6.3
4	5350.00	46.4 AV	54.0	-7.6	1.40 H	359	40.1	6.3
5	#10480.00	59.2 PK	68.2	-9.0	1.23 H	77	41.1	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	116.8 PK			1.80 V	349	74.8	42.0
2	*5240.00	107.2 AV			1.80 V	349	65.2	42.0
3	5350.00	59.8 PK	74.0	-14.2	1.80 V	349	53.5	6.3
4	5350.00	46.5 AV	54.0	-7.5	1.80 V	349	40.2	6.3
5	#10480.00	59.9 PK	68.2	-8.3	2.11 V	347	41.8	18.1

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 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	59.5 PK	74.0	-14.5	1.04 H	360	53.1	6.4
2	5150.00	46.6 AV	54.0	-7.4	1.04 H	360	40.2	6.4
3	*5260.00	120.6 PK			1.04 H	360	78.7	41.9
4	*5260.00	110.3 AV			1.04 H	360	68.4	41.9
5	#10520.00	59.3 PK	68.2	-8.9	1.37 H	62	41.1	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.7 PK	74.0	-14.3	1.59 V	344	53.3	6.4
2	5150.00	47.0 AV	54.0	-7.0	1.59 V	344	40.6	6.4
3	*5260.00	121.6 PK			1.59 V	344	79.7	41.9
4	*5260.00	111.4 AV			1.59 V	344	69.5	41.9
5	#10520.00	60.1 PK	68.2	-8.1	2.11 V	345	41.9	18.2

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 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	120.6 PK			1.01 H	340	78.7	41.9
2	*5300.00	110.9 AV			1.01 H	340	69.0	41.9
3	10600.00	58.6 PK	74.0	-15.4	1.44 H	59	41.0	17.6
4	10600.00	45.4 AV	54.0	-8.6	1.44 H	59	27.8	17.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	122.0 PK			1.64 V	336	80.1	41.9
2	*5300.00	112.3 AV			1.64 V	336	70.4	41.9
3	10600.00	59.5 PK	74.0	-14.5	2.08 V	335	41.9	17.6
4	10600.00	46.9 AV	54.0	-7.1	2.08 V	335	29.3	17.6

Remarks:

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

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	119.4 PK			1.05 H	356	77.4	42.0
2	*5320.00	109.6 AV			1.05 H	356	67.6	42.0
3	5350.00	62.2 PK	74.0	-11.8	1.05 H	356	55.9	6.3
4	5350.00	50.7 AV	54.0	-3.3	1.05 H	356	44.4	6.3
5	10640.00	58.3 PK	74.0	-15.7	1.48 H	69	40.8	17.5
6	10640.00	45.7 AV	54.0	-8.3	1.48 H	69	28.2	17.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	120.4 PK			1.58 V	338	78.4	42.0
2	*5320.00	110.7 AV			1.58 V	338	68.7	42.0
3	5350.00	62.8 PK	74.0	-11.2	1.58 V	358	56.5	6.3
4	5350.00	50.9 AV	54.0	-3.1	1.58 V	358	44.6	6.3
5	10640.00	59.4 PK	74.0	-14.6	2.01 V	333	41.9	17.5
6	10640.00	46.4 AV	54.0	-7.6	2.01 V	333	28.9	17.5

Remarks:

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

RF Mode	TX 802.11a	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	59.8 PK	74.0	-14.2	1.45 H	342	53.5	6.3
2	5460.00	48.5 AV	54.0	-5.5	1.45 H	342	42.2	6.3
3	#5470.00	61.2 PK	68.2	-7.0	1.45 H	342	55.0	6.2
4	*5500.00	118.5 PK			1.45 H	342	76.4	42.1
5	*5500.00	108.9 AV			1.45 H	342	66.8	42.1
6	11000.00	58.4 PK	74.0	-15.6	1.52 H	49	40.3	18.1
7	11000.00	45.3 AV	54.0	-8.7	1.52 H	49	27.2	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.5 PK	74.0	-13.5	1.55 V	5	54.2	6.3
2	5460.00	48.7 AV	54.0	-5.3	1.55 V	5	42.4	6.3
3	#5470.00	61.0 PK	68.2	-7.2	1.55 V	5	54.8	6.2
4	*5500.00	120.2 PK			1.55 V	5	78.1	42.1
5	*5500.00	110.1 AV			1.55 V	5	68.0	42.1
6	11000.00	59.6 PK	74.0	-14.4	2.23 V	35	41.5	18.1
7	11000.00	47.0 AV	54.0	-7.0	2.23 V	35	28.9	18.1

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 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	119.7 PK			1.84 H	351	77.6	42.1
2	*5580.00	109.5 AV			1.84 H	351	67.4	42.1
3	11160.00	59.7 PK	74.0	-14.3	1.32 H	50	41.3	18.4
4	11160.00	46.1 AV	54.0	-7.9	1.32 H	50	27.7	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	118.6 PK			1.45 V	355	76.5	42.1
2	*5580.00	109.3 AV			1.45 V	355	67.2	42.1
3	11160.00	59.8 PK	74.0	-14.2	2.08 V	335	41.4	18.4
4	11160.00	47.2 AV	54.0	-6.8	2.08 V	335	28.8	18.4

Remarks:

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

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	120.5 PK			1.84 H	347	78.2	42.3
2	*5700.00	110.5 AV			1.84 H	347	68.2	42.3
3	#5725.00	62.2 PK	68.2	-6.0	1.84 H	347	56.0	6.2
4	11400.00	58.5 PK	74.0	-15.5	1.33 H	47	40.6	17.9
5	11400.00	45.6 AV	54.0	-8.4	1.33 H	47	27.7	17.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	119.1 PK			1.46 V	345	76.8	42.3
2	*5700.00	109.3 AV			1.46 V	345	67.0	42.3
3	#5725.00	61.1 PK	68.2	-7.1	1.46 V	345	54.9	6.2
4	11400.00	59.5 PK	74.0	-14.5	2.28 V	317	41.6	17.9
5	11400.00	46.4 AV	54.0	-7.6	2.28 V	317	28.5	17.9

Remarks:

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

RF Mode	TX 802.11a	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	#5648.40	58.5 PK	68.2	-9.7	1.12 H	352	52.3	6.2
2	*5745.00	127.4 PK			1.12 H	352	85.2	42.2
3	*5745.00	118.3 AV			1.12 H	352	76.1	42.2
4	#5946.40	59.3 PK	68.2	-8.9	1.12 H	352	52.0	7.3
5	11490.00	59.5 PK	74.0	-14.5	1.49 H	50	40.9	18.6
6	11490.00	46.5 AV	54.0	-7.5	1.49 H	50	27.9	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5649.60	61.9 PK	68.2	-6.3	2.04 V	26	55.7	6.2
2	*5745.00	128.0 PK			2.04 V	26	85.8	42.2
3	*5745.00	118.5 AV			2.04 V	26	76.3	42.2
4	#5959.20	60.1 PK	68.2	-8.1	2.04 V	26	52.8	7.3
5	11490.00	60.4 PK	74.0	-13.6	2.31 V	349	41.8	18.6
6	11490.00	47.3 AV	54.0	-6.7	2.31 V	349	28.7	18.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
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	#5604.40	58.2 PK	68.2	-10.0	1.14 H	349	52.0	6.2
2	*5785.00	127.9 PK			1.14 H	349	85.7	42.2
3	*5785.00	118.2 AV			1.14 H	349	76.0	42.2
4	#5992.40	58.7 PK	68.2	-9.5	1.14 H	349	51.6	7.1
5	11570.00	59.5 PK	74.0	-14.5	1.44 H	61	41.1	18.4
6	11570.00	46.5 AV	54.0	-7.5	1.44 H	61	28.1	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5626.80	58.5 PK	68.2	-9.7	2.08 V	23	52.3	6.2
2	*5785.00	128.1 PK			2.08 V	23	85.9	42.2
3	*5785.00	118.4 AV			2.08 V	23	76.2	42.2
4	#5946.00	58.9 PK	68.2	-9.3	2.08 V	23	51.6	7.3
5	11570.00	60.2 PK	74.0	-13.8	2.22 V	317	41.8	18.4
6	11570.00	47.0 AV	54.0	-7.0	2.22 V	317	28.6	18.4

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 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	#5608.40	57.9 PK	68.2	-10.3	1.08 H	351	51.7	6.2
2	*5825.00	128.5 PK			1.08 H	351	86.2	42.3
3	*5825.00	118.9 AV			1.08 H	351	76.6	42.3
4	#5964.40	60.3 PK	68.2	-7.9	1.08 H	351	53.0	7.3
5	11650.00	59.3 PK	74.0	-14.7	1.42 H	68	41.2	18.1
6	11650.00	46.4 AV	54.0	-7.6	1.42 H	68	28.3	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5641.60	56.8 PK	68.2	-11.4	1.88 V	22	50.6	6.2
2	*5825.00	128.4 PK			1.88 V	22	86.1	42.3
3	*5825.00	118.6 AV			1.88 V	22	76.3	42.3
4	#5943.20	61.7 PK	68.2	-6.5	1.88 V	22	54.4	7.3
5	11650.00	59.9 PK	74.0	-14.1	2.18 V	357	41.8	18.1
6	11650.00	46.7 AV	54.0	-7.3	2.18 V	357	28.6	18.1

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	60.1 PK	74.0	-13.9	1.51 H	1	53.7	6.4
2	5150.00	47.9 AV	54.0	-6.1	1.51 H	1	41.5	6.4
3	*5180.00	115.9 PK			1.51 H	1	73.7	42.2
4	*5180.00	105.8 AV			1.51 H	1	63.6	42.2
5	#10360.00	57.7 PK	68.2	-10.5	1.39 H	69	41.2	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.6 PK	74.0	-13.4	1.78 V	339	54.2	6.4
2	5150.00	48.3 AV	54.0	-5.7	1.78 V	339	41.9	6.4
3	*5180.00	116.6 PK			1.78 V	339	74.4	42.2
4	*5180.00	106.4 AV			1.78 V	339	64.2	42.2
5	#10360.00	57.6 PK	68.2	-10.6	1.99 V	341	41.1	16.5

Remarks:

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

RF Mode	TX 802.11ac (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	115.5 PK			1.47 H	1	73.4	42.1
2	*5200.00	105.4 AV			1.47 H	1	63.3	42.1
3	#10400.00	57.3 PK	68.2	-10.9	1.37 H	55	40.8	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	118.5 PK			1.89 V	349	76.4	42.1
2	*5200.00	108.2 AV			1.89 V	349	66.1	42.1
3	#10400.00	57.8 PK	68.2	-10.4	2.18 V	350	41.3	16.5

Remarks:

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

RF Mode	TX 802.11ac (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	115.4 PK			1.43 H	2	73.4	42.0
2	*5240.00	105.3 AV			1.43 H	2	63.3	42.0
3	5350.00	59.4 PK	74.0	-14.6	1.43 H	2	53.1	6.3
4	5350.00	36.4 AV	54.0	-17.6	1.43 H	2	30.1	6.3
5	#10480.00	59.2 PK	68.2	-9.0	1.36 H	71	41.1	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	117.6 PK			1.87 V	349	75.6	42.0
2	*5240.00	107.4 AV			1.87 V	349	65.4	42.0
3	5350.00	58.5 PK	74.0	-15.5	1.87 V	349	52.2	6.3
4	5350.00	46.1 AV	54.0	-7.9	1.87 V	349	39.8	6.3
5	#10480.00	59.6 PK	68.2	-8.6	2.09 V	342	41.5	18.1

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	59.5 PK	74.0	-14.5	1.07 H	342	53.1	6.4
2	5150.00	46.4 AV	54.0	-7.6	1.07 H	342	40.0	6.4
3	*5260.00	120.5 PK			1.07 H	342	78.6	41.9
4	*5260.00	110.1 AV			1.07 H	342	68.2	41.9
5	#10520.00	59.5 PK	68.2	-8.7	1.52 H	85	41.3	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.6 PK	74.0	-14.4	1.92 V	351	53.2	6.4
2	5150.00	47.0 AV	54.0	-7.0	1.92 V	351	40.6	6.4
3	*5260.00	122.4 PK			1.92 V	351	80.5	41.9
4	*5260.00	112.1 AV			1.92 V	351	70.2	41.9
5	#10520.00	60.0 PK	68.2	-8.2	1.99 V	342	41.8	18.2

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	121.4 PK			1.04 H	358	79.5	41.9
2	*5300.00	111.1 AV			1.04 H	358	69.2	41.9
3	10600.00	58.8 PK	74.0	-15.2	1.33 H	68	41.2	17.6
4	10600.00	45.7 AV	54.0	-8.3	1.33 H	68	28.1	17.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	122.3 PK			1.89 V	353	80.4	41.9
2	*5300.00	112.5 AV			1.89 V	353	70.6	41.9
3	10600.00	59.4 PK	74.0	-14.6	2.13 V	348	41.8	17.6
4	10600.00	46.9 AV	54.0	-7.1	2.13 V	348	29.3	17.6

Remarks:

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

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	120.1 PK			1.00 H	358	78.1	42.0
2	*5320.00	109.5 AV			1.00 H	358	67.5	42.0
3	5350.00	63.4 PK	74.0	-10.6	1.00 H	358	57.1	6.3
4	5350.00	50.8 AV	54.0	-3.2	1.00 H	358	44.5	6.3
5	10640.00	58.3 PK	74.0	-15.7	1.42 H	77	40.8	17.5
6	10640.00	45.7 AV	54.0	-8.3	1.42 H	77	28.2	17.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	120.8 PK			1.89 V	7	78.8	42.0
2	*5320.00	110.9 AV			1.89 V	7	68.9	42.0
3	5350.00	63.6 PK	74.0	-10.4	1.89 V	7	57.3	6.3
4	5350.00	51.8 AV	54.0	-2.2	1.89 V	7	45.5	6.3
5	10640.00	59.1 PK	74.0	-14.9	2.13 V	351	41.6	17.5
6	10640.00	46.4 AV	54.0	-7.6	2.13 V	351	28.9	17.5

Remarks:

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

RF Mode	TX 802.11ac (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	60.1 PK	74.0	-13.9	1.79 H	336	53.8	6.3
2	5460.00	47.3 AV	54.0	-6.7	1.79 H	336	41.0	6.3
3	#5470.00	61.9 PK	68.2	-6.3	1.79 H	336	55.7	6.2
4	*5500.00	120.7 PK			1.79 H	336	78.6	42.1
5	*5500.00	110.1 AV			1.79 H	336	68.0	42.1
6	11000.00	59.3 PK	74.0	-14.7	1.44 H	59	41.2	18.1
7	11000.00	46.1 AV	54.0	-7.9	1.44 H	59	28.0	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.6 PK	74.0	-13.4	1.49 V	8	54.3	6.3
2	5460.00	48.9 AV	54.0	-5.1	1.49 V	8	42.6	6.3
3	#5470.00	61.6 PK	68.2	-6.6	1.49 V	8	55.4	6.2
4	*5500.00	121.1 PK			1.49 V	8	79.0	42.1
5	*5500.00	110.3 AV			1.49 V	8	68.2	42.1
6	11000.00	59.6 PK	74.0	-14.4	2.17 V	341	41.5	18.1
7	11000.00	46.7 AV	54.0	-7.3	2.17 V	341	28.6	18.1

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	120.6 PK			1.81 H	349	78.5	42.1
2	*5580.00	110.3 AV			1.81 H	349	68.2	42.1
3	11060.00	59.3 PK	74.0	-14.7	1.57 H	64	41.2	18.1
4	11060.00	46.0 AV	54.0	-8.0	1.57 H	64	27.9	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	119.7 PK			1.48 V	353	77.6	42.1
2	*5580.00	109.3 AV			1.48 V	353	67.2	42.1
3	11160.00	59.8 PK	74.0	-14.2	2.28 V	338	41.4	18.4
4	11160.00	47.0 AV	54.0	-7.0	2.28 V	338	28.6	18.4

Remarks:

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

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	117.6 PK			1.80 H	349	75.3	42.3
2	*5700.00	107.7 AV			1.80 H	349	65.4	42.3
3	#5725.00	65.0 PK	68.2	-3.2	1.80 H	349	58.8	6.2
4	11400.00	59.1 PK	74.0	-14.9	1.38 H	63	41.2	17.9
5	11400.00	45.9 AV	54.0	-8.1	1.38 H	63	28.0	17.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	120.6 PK			1.51 V	345	78.3	42.3
2	*5700.00	109.8 AV			1.51 V	345	67.5	42.3
3	#5725.00	64.9 PK	68.2	-3.3	1.51 V	345	58.7	6.2
4	11400.00	59.4 PK	74.0	-14.6	2.36 V	327	41.5	17.9
5	11400.00	46.1 AV	54.0	-7.9	2.36 V	327	28.2	17.9

Remarks:

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

RF Mode	TX 802.11ac (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	#5645.60	60.0 PK	68.2	-8.2	1.07 H	352	53.8	6.2
2	*5745.00	129.1 PK			1.07 H	352	86.9	42.2
3	*5745.00	118.5 AV			1.07 H	352	76.3	42.2
4	#5934.40	58.5 PK	68.2	-9.7	1.07 H	352	51.2	7.3
5	11490.00	59.4 PK	74.0	-14.6	1.51 H	48	40.8	18.6
6	11490.00	46.6 AV	54.0	-7.4	1.51 H	48	28.0	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5647.60	59.9 PK	68.2	-8.3	1.81 V	24	53.7	6.2
2	*5745.00	128.9 PK			1.81 V	24	86.7	42.2
3	*5745.00	118.4 AV			1.81 V	24	76.2	42.2
4	#5992.40	59.5 PK	68.2	-8.7	1.81 V	24	52.4	7.1
5	11490.00	60.3 PK	74.0	-13.7	1.99 V	342	41.7	18.6
6	11490.00	47.1 AV	54.0	-6.9	1.99 V	342	28.5	18.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
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	#5646.00	57.8 PK	68.2	-10.4	1.05 H	350	51.6	6.2
2	*5785.00	129.1 PK			1.05 H	350	86.9	42.2
3	*5785.00	119.2 AV			1.05 H	350	77.0	42.2
4	#5942.00	59.5 PK	68.2	-8.7	1.05 H	350	52.2	7.3
5	11570.00	59.8 PK	74.0	-14.2	1.38 H	60	41.4	18.4
6	11570.00	46.7 AV	54.0	-7.3	1.38 H	60	28.3	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5625.60	58.3 PK	68.2	-9.9	1.79 V	24	52.1	6.2
2	*5785.00	128.6 PK			1.79 V	24	86.4	42.2
3	*5785.00	118.2 AV			1.79 V	24	76.0	42.2
4	#5932.00	59.6 PK	68.2	-8.6	1.79 V	24	52.3	7.3
5	11570.00	60.3 PK	74.0	-13.7	2.06 V	355	41.9	18.4
6	11570.00	47.2 AV	54.0	-6.8	2.06 V	355	28.8	18.4

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	#5632.40	57.9 PK	68.2	-10.3	1.03 H	349	51.6	6.3
2	*5825.00	128.5 PK			1.03 H	349	86.2	42.3
3	*5825.00	118.6 AV			1.03 H	349	76.3	42.3
4	#5930.00	60.2 PK	68.2	-8.0	1.03 H	349	52.9	7.3
5	11650.00	59.3 PK	74.0	-14.7	1.33 H	71	41.2	18.1
6	11650.00	46.1 AV	54.0	-7.9	1.33 H	71	28.0	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5637.20	56.4 PK	68.2	-11.8	1.77 V	24	50.1	6.3
2	*5825.00	128.7 PK			1.77 V	24	86.4	42.3
3	*5825.00	118.3 AV			1.77 V	24	76.0	42.3
4	#5925.20	61.9 PK	68.2	-6.3	1.77 V	24	54.6	7.3
5	11650.00	59.9 PK	74.0	-14.1	2.12 V	344	41.8	18.1
6	11650.00	47.0 AV	54.0	-7.0	2.12 V	344	28.9	18.1

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.0 PK	74.0	-14.0	1.37 H	1	53.6	6.4
2	5150.00	47.3 AV	54.0	-6.7	1.37 H	1	40.9	6.4
3	*5190.00	113.0 PK			1.37 H	1	70.9	42.1
4	*5190.00	103.1 AV			1.37 H	1	61.0	42.1
5	#10380.00	57.6 PK	68.2	-10.6	1.41 H	65	41.0	16.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.2 PK	74.0	-13.8	1.82 V	353	53.8	6.4
2	5150.00	48.1 AV	54.0	-5.9	1.82 V	353	41.7	6.4
3	*5190.00	114.6 PK			1.82 V	353	72.5	42.1
4	*5190.00	104.6 AV			1.82 V	353	62.5	42.1
5	#10380.00	57.7 PK	68.2	-10.5	2.04 V	338	41.1	16.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
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	113.5 PK			1.42 H	360	71.5	42.0
2	*5230.00	103.7 AV			1.42 H	360	61.7	42.0
3	5350.00	59.2 PK	74.0	-14.8	1.42 H	360	52.9	6.3
4	5350.00	46.3 AV	54.0	-7.7	1.42 H	360	40.0	6.3
5	#10460.00	58.5 PK	68.2	-9.7	1.38 H	48	40.8	17.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	115.2 PK			1.78 V	350	73.2	42.0
2	*5230.00	104.9 AV			1.78 V	350	62.9	42.0
3	5350.00	59.3 PK	74.0	-14.7	1.78 V	350	53.0	6.3
4	5350.00	46.2 AV	54.0	-7.8	1.78 V	350	39.9	6.3
5	#10460.00	59.0 PK	68.2	-9.2	2.11 V	349	41.3	17.7

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 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	59.3 PK	74.0	-14.7	1.50 H	360	52.9	6.4
2	5150.00	46.6 AV	54.0	-7.4	1.50 H	360	40.2	6.4
3	*5270.00	119.5 PK			1.50 H	360	77.6	41.9
4	*5270.00	109.9 AV			1.50 H	360	68.0	41.9
5	5350.00	59.9 PK	74.0	-14.1	1.50 H	360	53.6	6.3
6	5350.00	48.0 AV	54.0	-6.0	1.50 H	360	41.7	6.3
7	#10540.00	59.3 PK	68.2	-8.9	1.40 H	72	41.2	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.8 PK	74.0	-14.2	1.93 V	351	53.4	6.4
2	5150.00	47.9 AV	54.0	-6.1	1.93 V	351	41.5	6.4
3	*5270.00	121.8 PK			1.93 V	351	79.9	41.9
4	*5270.00	111.5 AV			1.93 V	351	69.6	41.9
5	5350.00	61.0 PK	74.0	-13.0	1.93 V	151	54.7	6.3
6	5350.00	48.8 AV	54.0	-5.2	1.93 V	151	42.5	6.3
7	#10540.00	59.8 PK	68.2	-8.4	2.13 V	338	41.7	18.1

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 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	120.2 PK			1.47 H	357	78.2	42.0
2	*5310.00	110.3 AV			1.47 H	357	68.3	42.0
3	5350.00	62.1 PK	74.0	-11.9	1.47 H	357	55.8	6.3
4	5350.00	50.3 AV	54.0	-3.7	1.47 H	357	44.0	6.3
5	10620.00	58.5 PK	74.0	-15.5	1.33 H	58	40.8	17.7
6	10620.00	45.6 AV	54.0	-8.4	1.33 H	58	27.9	17.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	120.3 PK			1.91 V	7	78.3	42.0
2	*5310.00	110.4 AV			1.91 V	7	68.4	42.0
3	5350.00	66.0 PK	74.0	-8.0	1.91 V	7	59.7	6.3
4	5350.00	52.5 AV	54.0	-1.5	1.91 V	7	46.2	6.3
5	10620.00	59.4 PK	74.0	-14.6	1.92 V	331	41.7	17.7
6	10620.00	46.3 AV	54.0	-7.7	1.92 V	331	28.6	17.7

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.1 PK	74.0	-12.9	1.81 H	337	54.8	6.3
2	5460.00	48.9 AV	54.0	-5.1	1.81 H	337	42.6	6.3
3	#5470.00	63.0 PK	68.2	-5.2	1.81 H	337	56.8	6.2
4	*5510.00	118.7 PK			1.81 H	337	76.6	42.1
5	*5510.00	108.3 AV			1.81 H	337	66.2	42.1
6	11020.00	58.9 PK	74.0	-15.1	1.47 H	69	40.8	18.1
7	11020.00	46.0 AV	54.0	-8.0	1.47 H	69	27.9	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	64.4 PK	74.0	-9.6	1.74 V	8	58.1	6.3
2	5460.00	51.8 AV	54.0	-2.2	1.74 V	8	45.5	6.3
3	#5470.00	66.2 PK	68.2	-2.0	1.74 V	8	60.0	6.2
4	*5510.00	122.7 PK			1.74 V	8	80.6	42.1
5	*5510.00	112.0 AV			1.74 V	8	69.9	42.1
6	11020.00	59.7 PK	74.0	-14.3	2.17 V	332	41.6	18.1
7	11020.00	46.5 AV	54.0	-7.5	2.17 V	332	28.4	18.1

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 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	120.3 PK			1.80 H	351	78.2	42.1
2	*5550.00	110.0 AV			1.80 H	351	67.9	42.1
3	11100.00	59.1 PK	74.0	-14.9	1.50 H	58	40.9	18.2
4	11100.00	45.5 AV	54.0	-8.5	1.50 H	58	27.3	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	123.5 PK			1.73 V	355	81.4	42.1
2	*5550.00	111.6 AV			1.73 V	355	69.5	42.1
3	11100.00	60.0 PK	74.0	-14.0	2.18 V	325	41.8	18.2
4	11100.00	46.8 AV	54.0	-7.2	2.18 V	325	28.6	18.2

Remarks:

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

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	120.4 PK			1.83 H	350	78.2	42.2
2	*5670.00	110.2 AV			1.83 H	350	68.0	42.2
3	#5725.00	62.3 PK	68.2	-5.9	1.83 H	350	56.1	6.2
4	11340.00	59.3 PK	74.0	-14.7	1.44 H	47	41.0	18.3
5	11340.00	46.0 AV	54.0	-8.0	1.44 H	47	27.7	18.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	121.6 PK			2.04 V	13	79.4	42.2
2	*5670.00	111.4 AV			2.04 V	13	69.2	42.2
3	#5725.00	64.6 PK	68.2	-3.6	2.04 V	13	58.4	6.2
4	11340.00	59.6 PK	74.0	-14.4	2.30 V	336	41.3	18.3
5	11340.00	46.7 AV	54.0	-7.3	2.30 V	336	28.4	18.3

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5641.20	63.3 PK	68.2	-4.9	1.00 H	348	57.1	6.2
2	*5755.00	124.9 PK			1.00 H	348	82.6	42.3
3	*5755.00	114.8 AV			1.00 H	348	72.5	42.3
4	#5943.60	58.5 PK	68.2	-9.7	1.00 H	348	51.2	7.3
5	11510.00	59.7 PK	74.0	-14.3	1.63 H	55	41.1	18.6
6	11510.00	46.8 AV	54.0	-7.2	1.63 H	55	28.2	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5650.00	67.1 PK	68.2	-1.1	1.84 V	22	60.9	6.2
2	*5755.00	126.4 PK			1.84 V	22	84.1	42.3
3	*5755.00	114.9 AV			1.84 V	22	72.6	42.3
4	#5930.80	59.2 PK	68.2	-9.0	1.84 V	22	51.9	7.3
5	11510.00	60.4 PK	74.0	-13.6	2.22 V	326	41.8	18.6
6	11510.00	47.1 AV	54.0	-6.9	2.22 V	326	28.5	18.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. Margin value = Emission Level – Limit value.
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
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	#5617.60	57.1 PK	68.2	-11.1	1.00 H	348	50.9	6.2
2	*5795.00	125.4 PK			1.00 H	348	83.2	42.2
3	*5795.00	115.4 AV			1.00 H	348	73.2	42.2
4	#5962.40	59.3 PK	68.2	-8.9	1.00 H	348	52.0	7.3
5	11590.00	59.5 PK	74.0	-14.5	1.33 H	61	41.3	18.2
6	11590.00	46.1 AV	54.0	-7.9	1.33 H	61	27.9	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5643.60	60.6 PK	68.2	-7.6	1.88 V	25	54.4	6.2
2	*5795.00	125.3 PK			1.88 V	25	83.1	42.2
3	*5795.00	115.2 AV			1.88 V	25	73.0	42.2
4	#5925.60	66.9 PK	68.2	-1.3	1.88 V	25	59.6	7.3
5	11590.00	59.4 PK	74.0	-14.6	2.06 V	326	41.2	18.2
6	11590.00	46.5 AV	54.0	-7.5	2.06 V	326	28.3	18.2

Remarks:

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

RF Mode	TX 802.11ac (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	60.8 PK	74.0	-13.2	1.44 H	1	54.4	6.4
2	5150.00	48.2 AV	54.0	-5.8	1.44 H	1	41.8	6.4
3	*5210.00	110.8 PK			1.44 H	1	68.8	42.0
4	*5210.00	100.8 AV			1.44 H	1	58.8	42.0
5	5350.00	59.9 PK	74.0	-14.1	1.44 H	1	53.6	6.3
6	5350.00	47.4 AV	54.0	-6.6	1.44 H	1	41.1	6.3
7	#10420.00	57.9 PK	68.2	-10.3	1.33 H	68	40.9	17.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.7 PK	74.0	-12.3	1.78 V	354	55.3	6.4
2	5150.00	49.6 AV	54.0	-4.4	1.78 V	354	43.2	6.4
3	*5210.00	111.7 PK			1.78 V	354	69.7	42.0
4	*5210.00	102.1 AV			1.78 V	354	60.1	42.0
5	5350.00	60.4 PK	74.0	-13.6	1.78 V	354	54.1	6.3
6	5350.00	47.6 AV	54.0	-6.4	1.78 V	354	41.3	6.3
7	#10420.00	58.1 PK	68.2	-10.1	1.98 V	324	41.1	17.0

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.5 PK	74.0	-13.5	1.49 H	355	54.1	6.4
2	5150.00	48.2 AV	54.0	-5.8	1.49 H	355	41.8	6.4
3	*5290.00	116.1 PK			1.49 H	355	74.2	41.9
4	*5290.00	106.0 AV			1.49 H	355	64.1	41.9
5	5350.00	66.7 PK	74.0	-7.3	1.49 H	355	60.4	6.3
6	**5350.00**	**53.4 AV**	**54.0**	**-0.6**	**1.49 H**	**355**	**47.1**	**6.3**
7	#10580.00	58.9 PK	68.2	-9.3	1.41 H	69	41.1	17.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.9 PK	74.0	-12.1	1.93 V	354	55.5	6.4
2	5150.00	49.3 AV	54.0	-4.7	1.93 V	354	42.9	6.4
3	*5290.00	116.1 PK			1.93 V	354	74.2	41.9
4	*5290.00	107.0 AV			1.93 V	354	65.1	41.9
5	5350.00	66.1 PK	74.0	-7.9	1.93 V	354	59.8	6.3
6	**5350.00**	**53.4 AV**	**54.0**	**-0.6**	**1.93 V**	**354**	**47.1**	**6.3**
7	#10580.00	59.6 PK	68.2	-8.6	1.97 V	322	41.8	17.8

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 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	63.2 PK	74.0	-10.8	1.39 H	350	56.9	6.3
2	5460.00	50.4 AV	54.0	-3.6	1.39 H	350	44.1	6.3
3	#5470.00	64.5 PK	68.2	-3.7	1.39 H	350	58.3	6.2
4	*5530.00	114.0 PK			1.39 H	350	71.9	42.1
5	*5530.00	104.1 AV			1.39 H	350	62.0	42.1
6	#5725.00	60.1 PK	68.2	-8.1	1.39 H	350	53.9	6.2
7	11060.00	58.9 PK	74.0	-15.1	1.47 H	36	40.8	18.1
8	11060.00	46.0 AV	54.0	-8.0	1.47 H	36	27.9	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	66.3 PK	74.0	-7.7	1.82 V	343	60.0	6.3
2	5460.00	52.8 AV	54.0	-1.2	1.82 V	343	46.5	6.3
3	#5470.00	67.2 PK	68.2	-1.0	1.82 V	343	61.0	6.2
4	*5530.00	117.3 PK			1.82 V	343	75.2	42.1
5	*5530.00	105.6 AV			1.82 V	343	63.5	42.1
6	#5725.00	63.1 PK	68.2	-5.1	1.82 V	343	56.9	6.2
7	11060.00	59.3 PK	74.0	-14.7	2.04 V	328	41.2	18.1
8	11060.00	46.2 AV	54.0	-7.8	2.04 V	328	28.1	18.1

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.4 PK	74.0	-14.6	1.40 H	340	53.1	6.3
2	5460.00	47.7 AV	54.0	-6.3	1.40 H	340	41.4	6.3
3	#5470.00	61.3 PK	68.2	-6.9	1.40 H	340	55.1	6.2
4	*5610.00	116.0 PK			1.40 H	340	73.9	42.1
5	*5610.00	105.8 AV			1.40 H	340	63.7	42.1
6	#5725.00	65.1 PK	68.2	-3.1	1.40 H	340	58.9	6.2
7	11220.00	59.5 PK	74.0	-14.5	1.57 H	39	41.0	18.5
8	11220.00	46.0 AV	54.0	-8.0	1.57 H	39	27.5	18.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.9 PK	74.0	-13.1	1.83 V	6	54.6	6.3
2	5460.00	48.2 AV	54.0	-5.8	1.83 V	6	41.9	6.3
3	#5470.00	62.0 PK	68.2	-6.2	1.83 V	6	55.8	6.2
4	*5610.00	115.5 PK			1.83 V	6	73.4	42.1
5	*5610.00	105.2 AV			1.83 V	6	63.1	42.1
6	#5725.00	66.3 PK	68.2	-1.9	1.83 V	6	60.1	6.2
7	11220.00	59.8 PK	74.0	-14.2	2.30 V	316	41.3	18.5
8	11220.00	46.5 AV	54.0	-7.5	2.30 V	316	28.0	18.5

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	59.1 PK	68.2	-9.1	1.48 H	339	52.9	6.2
2	*5690.00	116.7 PK			1.48 H	339	74.4	42.3
3	*5690.00	106.7 AV			1.48 H	339	64.4	42.3
4	#5850.00	62.7 PK	68.2	-5.5	1.48 H	339	56.0	6.7
5	11380.00	58.7 PK	74.0	-15.3	1.34 H	58	40.8	17.9
6	11380.00	45.2 AV	54.0	-8.8	1.34 H	58	27.3	17.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	59.0 PK	68.2	-9.2	1.83 V	6	52.8	6.2
2	*5690.00	116.5 PK			1.83 V	6	74.2	42.3
3	*5690.00	106.8 AV			1.83 V	6	64.5	42.3
4	#5850.00	61.1 PK	68.2	-7.1	1.83 V	6	54.4	6.7
5	11380.00	59.2 PK	74.0	-14.8	2.19 V	325	41.3	17.9
6	11380.00	46.0 AV	54.0	-8.0	2.19 V	325	28.1	17.9

Remarks:

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

RF Mode	TX 802.11ac (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	#5650.00	63.6 PK	68.2	-4.6	1.04 H	351	57.4	6.2
2	#5650.00	60.8 PK	68.2	-7.4	1.04 H	351	54.6	6.2
3	*5775.00	117.8 PK			1.04 H	351	75.6	42.2
4	*5775.00	107.6 AV			1.04 H	351	65.4	42.2
5	#5924.80	60.4 PK	68.3	-7.9	1.04 H	351	53.1	7.3
6	#5925.00	63.4 PK	68.2	-4.8	1.04 H	351	56.1	7.3
7	11550.00	59.2 PK	74.0	-14.8	1.37 H	55	40.8	18.4
8	11550.00	46.3 AV	54.0	-7.7	1.37 H	55	27.9	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5646.40	62.9 PK	68.2	-5.3	1.87 V	22	56.7	6.2
2	#5650.00	66.9 PK	68.2	-1.3	1.87 V	22	60.7	6.2
3	*5775.00	119.1 PK			1.87 V	22	76.9	42.2
4	*5775.00	109.6 AV			1.87 V	22	67.4	42.2
5	#5925.00	66.6 PK	68.2	-1.6	1.87 V	22	59.3	7.3
6	#5927.20	61.5 PK	68.2	-6.7	1.87 V	22	54.2	7.3
7	11550.00	59.5 PK	74.0	-14.5	2.30 V	344	41.1	18.4
8	11550.00	46.5 AV	54.0	-7.5	2.30 V	344	28.1	18.4

Remarks:

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

RF Mode	TX 802.11ac (VHT80+VHT80)	Channel	CH 42+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	60.8 PK	74.0	-13.2	1.09 H	308	54.4	6.4
2	5150.00	47.6 AV	54.0	-6.4	1.09 H	308	41.2	6.4
3	*5210.00	105.3 PK			1.09 H	308	63.3	42.0
4	*5210.00	95.2 AV			1.09 H	308	53.2	42.0
5	*5290.00	106.5 PK			1.09 H	343	64.6	41.9
6	*5290.00	96.3 AV			1.09 H	343	54.4	41.9
7	5350.00	61.7 PK	74.0	-12.3	1.09 H	343	55.4	6.3
8	5350.00	48.0 AV	54.0	-6.0	1.09 H	343	41.7	6.3
9	#10420.00	59.5 PK	68.2	-8.7	1.63 H	107	42.5	17.0
10	#10580.00	60.4 PK	68.2	-7.8	1.57 H	117	42.6	17.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.6 PK	74.0	-12.4	1.78 V	352	55.2	6.4
2	5150.00	49.1 AV	54.0	-4.9	1.78 V	352	42.7	6.4
3	*5210.00	107.7 PK			1.78 V	352	65.7	42.0
4	*5210.00	97.0 AV			1.78 V	352	55.0	42.0
5	*5290.00	106.6 PK			1.78 V	352	64.7	41.9
6	*5290.00	96.5 AV			1.78 V	352	54.6	41.9
7	5350.00	60.2 PK	74.0	-13.8	1.78 V	352	53.9	6.3
8	5350.00	47.6 AV	54.0	-6.4	1.78 V	352	41.3	6.3
9	#10420.00	59.7 PK	68.2	-8.5	2.15 V	339	42.7	17.0
10	#10580.00	60.7 PK	68.2	-7.5	1.97 V	325	42.9	17.8

Remarks:

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

RF Mode	TX 802.11ac (VHT80+VHT80)	Channel	CH 106+122：5610 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.5 PK	74.0	-13.5	1.81 H	347	54.2	6.3
2	5460.00	47.9 AV	54.0	-6.1	1.81 H	347	41.6	6.3
3	#5470.00	61.2 PK	68.2	-7.0	1.81 H	347	55.0	6.2
4	*5530.00	109.5 PK			1.81 H	347	67.4	42.1
5	*5530.00	98.4 AV			1.81 H	347	56.3	42.1
6	*5610.00	111.6 PK			1.23 H	342	69.5	42.1
7	*5610.00	100.7 AV			1.23 H	342	58.6	42.1
8	#5725.00	60.7 PK	68.2	-7.5	1.23 H	342	54.5	6.2
9	11060.00	59.4 PK	74.0	-14.6	1.57 H	109	41.3	18.1
10	11060.00	46.2 AV	54.0	-7.8	1.57 H	109	28.1	18.1
11	11220.00	59.5 PK	74.0	-14.5	1.50 H	100	41.0	18.5
12	11220.00	46.6 AV	54.0	-7.4	1.50 H	100	28.1	18.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.1 PK	74.0	-12.9	1.82 V	23	54.8	6.3
2	5460.00	48.3 AV	54.0	-5.7	1.82 V	23	42.0	6.3
3	#5470.00	61.8 PK	68.2	-6.4	1.82 V	23	55.6	6.2
4	*5530.00	111.2 PK			1.82 V	23	69.1	42.1
5	*5530.00	99.8 AV			1.82 V	23	57.7	42.1
6	*5610.00	108.9 PK			1.82 V	23	66.8	42.1
7	*5610.00	98.7 AV			1.82 V	23	56.6	42.1
8	#5725.00	60.1 PK	68.2	-8.1	1.82 V	23	53.9	6.2
9	11060.00	59.6 PK	74.0	-14.4	2.15 V	333	41.5	18.1
10	11060.00	46.4 AV	54.0	-7.6	2.15 V	333	28.3	18.1
11	11220.00	59.9 PK	74.0	-14.1	2.05 V	309	41.4	18.5
12	11220.00	46.9 AV	54.0	-7.1	2.05 V	309	28.4	18.5

Remarks:

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

RF Mode	TX 802.11ac (VHT80+VHT80)	Channel	CH 138+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	#5470.00	59.4 PK	68.2	-8.8	1.30 H	342	53.2	6.2
2	*5690.00	110.6 PK			1.30 H	342	68.3	42.3
3	*5690.00	99.6 AV			1.30 H	342	57.3	42.3
4	*5775.00	113.6 PK			1.30 H	342	71.4	42.2
5	*5775.00	103.0 AV			1.30 H	342	60.8	42.2
6	#5850.00	67.2 PK	68.2	-1.0	1.30 H	342	60.5	6.7
7	#5925.00	62.7 PK	68.2	-5.5	1.30 H	342	55.4	7.3
8	11380.00	59.2 PK	74.0	-14.8	1.59 H	101	41.3	17.9
9	11380.00	46.0 AV	54.0	-8.0	1.59 H	101	28.1	17.9
10	11550.00	59.5 PK	74.0	-14.5	1.60 H	109	41.1	18.4
11	11550.00	46.1 AV	54.0	-7.9	1.60 H	109	27.7	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	59.3 PK	68.2	-8.9	1.82 V	25	53.1	6.2
2	*5690.00	111.5 PK			1.82 V	25	69.2	42.3
3	*5690.00	100.8 AV			1.82 V	25	58.5	42.3
4	*5775.00	109.7 PK			1.82 V	25	67.5	42.2
5	*5775.00	98.7 AV			1.82 V	25	56.5	42.2
6	#5850.00	63.8 PK	68.2	-4.4	1.82 V	25	57.1	6.7
7	#5925.00	61.7 PK	68.2	-6.5	1.82 V	25	54.4	7.3
8	11380.00	59.5 PK	74.0	-14.5	2.20 V	344	41.6	17.9
9	11380.00	46.3 AV	54.0	-7.7	2.20 V	344	28.4	17.9
10	11550.00	59.8 PK	74.0	-14.2	2.28 V	309	41.4	18.4
11	11550.00	46.7 AV	54.0	-7.3	2.28 V	309	28.3	18.4

Remarks:

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

RF Mode	TX 802.11ac (VHT80+VHT80)	Channel	CH 42+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	5150.00	60.7 PK	74.0	-13.3	1.12 H	0	54.3	6.4
2	5150.00	47.9 AV	54.0	-6.1	1.12 H	0	41.5	6.4
3	*5210.00	104.0 PK			1.12 H	0	62.0	42.0
4	*5210.00	93.6 AV			1.12 H	0	51.6	42.0
5	5350.00	59.6 PK	74.0	-14.4	1.12 H	0	53.3	6.3
6	5350.00	46.8 AV	54.0	-7.2	1.12 H	0	40.5	6.3
7	#5619.60	59.3 PK	68.2	-8.9	1.31 H	345	53.1	6.2
8	#5650.00	59.9 PK	68.2	-8.3	1.31 H	345	53.7	6.2
9	*5775.00	106.8 PK			1.31 H	345	64.6	42.2
10	*5775.00	96.7 AV			1.31 H	345	54.5	42.2
11	#5925.00	50.6 PK	68.2	-17.6	1.31 H	345	43.3	7.3
12	#5931.60	59.5 PK	68.2	-8.7	1.31 H	345	52.2	7.3
13	#10420.00	59.3 PK	68.2	-8.9	1.61 H	105	42.3	17.0
14	11550.00	59.4 PK	74.0	-14.6	1.58 H	111	41.0	18.4
15	11550.00	46.2 AV	54.0	-7.8	1.58 H	111	27.8	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.9 PK	74.0	-13.1	1.73 V	352	54.5	6.4
2	5150.00	48.1 AV	54.0	-5.9	1.73 V	352	41.7	6.4
3	*5210.00	107.2 PK			1.73 V	352	65.2	42.0
4	*5210.00	96.9 AV			1.73 V	352	54.9	42.0
5	5350.00	60.0 PK	74.0	-14.0	1.73 V	352	53.7	6.3
6	5350.00	47.1 AV	54.0	-6.9	1.73 V	352	40.8	6.3
7	#5649.60	59.0 PK	68.2	-9.2	1.98 V	23	52.8	6.2
8	#5650.00	59.9 PK	68.2	-8.3	1.98 V	23	53.7	6.2
9	*5775.00	104.5 PK			1.98 V	23	62.3	42.2
10	*5775.00	94.4 AV			1.98 V	23	52.2	42.2
11	#5925.00	60.1 PK	68.2	-8.1	1.98 V	23	52.8	7.3
12	#5926.00	60.4 PK	68.2	-7.8	1.98 V	23	53.1	7.3
13	#10420.00	59.6 PK	68.2	-8.6	2.19 V	341	42.6	17.0
14	11550.00	59.7 PK	74.0	-14.3	2.22 V	315	41.3	18.4
15	11550.00	46.5 AV	54.0	-7.5	2.22 V	315	28.1	18.4

Remarks:

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

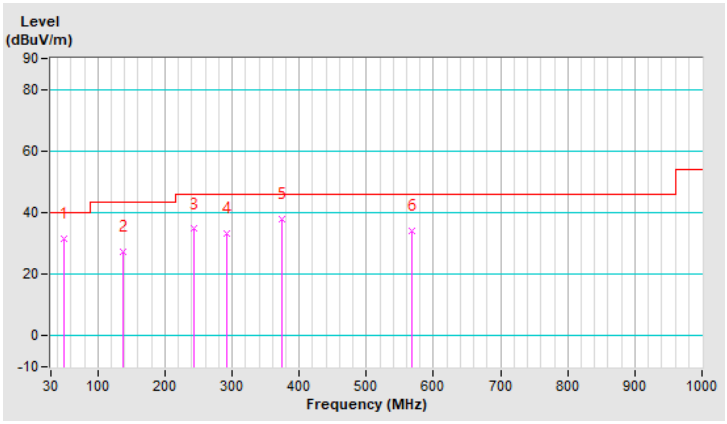
Below 1GHz Worst-Case Data:

RF Mode	TX 802.11a	Channel	CH 149：5745 MHz
Frequency Range	30MHz ~ 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	49.68	31.7 QP	40.0	-8.3	1.50 H	111	40.8	-9.1
2	138.25	27.3 QP	43.5	-16.2	1.99 H	275	36.4	-9.1
3	242.28	34.7 QP	46.0	-11.3	1.00 H	254	43.7	-9.0
4	291.48	33.3 QP	46.0	-12.7	1.00 H	113	40.0	-6.7
5	374.42	38.0 QP	46.0	-8.0	1.99 H	7	43.1	-5.1
6	568.42	34.0 QP	46.0	-12.0	1.50 H	15	34.8	-0.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

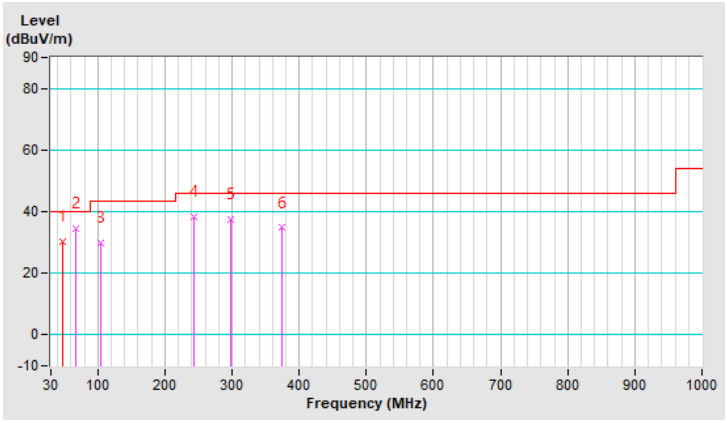


RF Mode	TX 802.11a	Channel	CH 149：5745 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	47.52	30.4 QP	40.0	-9.6	1.00 V	12	39.6	-9.2
2	67.96	34.4 QP	40.0	-5.6	1.00 V	337	44.9	-10.5
3	104.51	30.0 QP	43.5	-13.5	1.00 V	110	42.5	-12.5
4	242.28	38.4 QP	46.0	-7.6	1.99 V	4	47.4	-9.0
5	298.51	37.3 QP	46.0	-8.7	1.50 V	16	43.9	-6.6
6	374.42	34.7 QP	46.0	-11.3	1.00 V	320	39.8	-5.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m).
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB).
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz.
4. Margin value = Emission Level – Limit value.
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESR3	102412	Jan. 29, 2021	Jan. 28, 2022
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 04, 2020	Sep. 03, 2021
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Jan. 28, 2021	Jan. 27, 2022
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 18, 2020	Aug. 17, 2021
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 2 (Conduction 2).
3. The VCCI Site Registration No. is C-12047.

4.2.3 Test Procedures

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

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

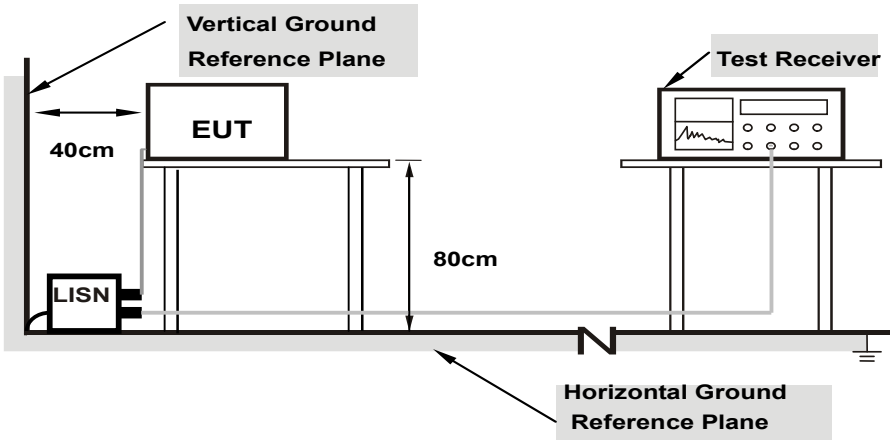
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

Worst-case data:

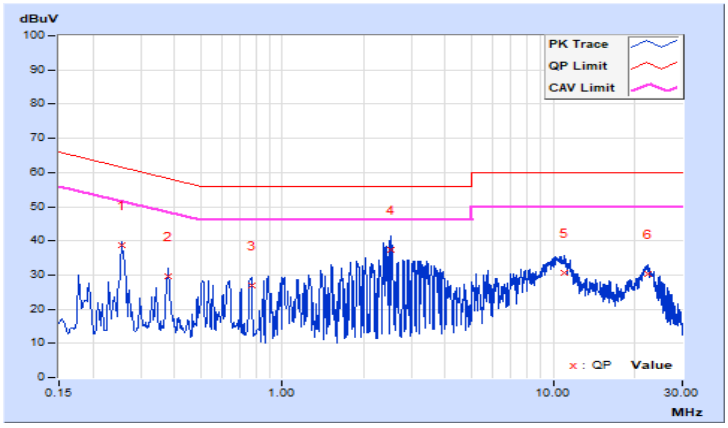
802.11a

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

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.25557	10.08	28.49	20.33	38.57	30.41	61.57	51.57	-23.00	-21.16
2	0.38069	10.09	19.61	14.23	29.70	24.32	58.26	48.26	-28.56	-23.94
3	0.76778	10.12	16.79	9.79	26.91	19.91	56.00	46.00	-29.09	-26.09
4	2.53119	10.18	27.20	13.16	37.38	23.34	56.00	46.00	-18.62	-22.66
5	10.96506	10.33	20.26	8.75	30.59	19.08	60.00	50.00	-29.41	-30.92
6	22.26496	10.39	19.83	14.33	30.22	24.72	60.00	50.00	-29.78	-25.28

Remarks:

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

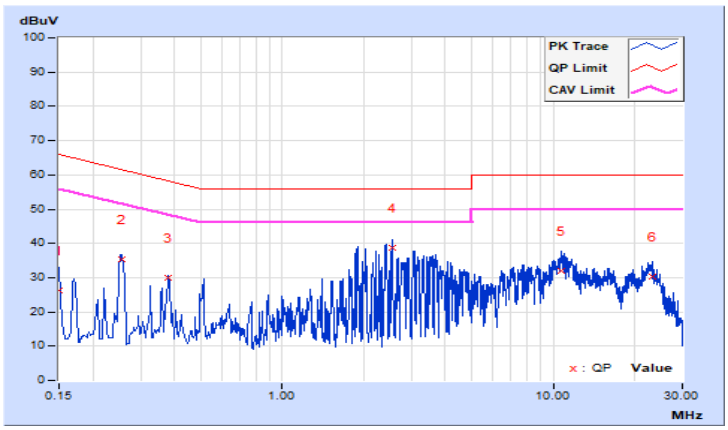


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.08	16.27	1.79	26.35	11.87	66.00	56.00	-39.65	-44.13
2	0.25458	10.09	25.33	23.05	35.42	33.14	61.61	51.61	-26.19	-18.47
3	0.38069	10.10	19.77	17.01	29.87	27.11	58.26	48.26	-28.39	-21.15
4	**2.53901**	**10.19**	**28.50**	**14.94**	**38.69**	**25.13**	**56.00**	**46.00**	**-17.31**	**-20.87**
5	10.74219	10.43	21.63	8.34	32.06	18.77	60.00	50.00	-27.94	-31.23
6	23.22291	10.56	19.81	14.99	30.37	25.55	60.00	50.00	-29.63	-24.45

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

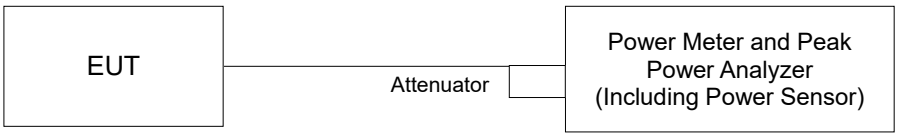
Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

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 $N_{ANT} \geq 5$.

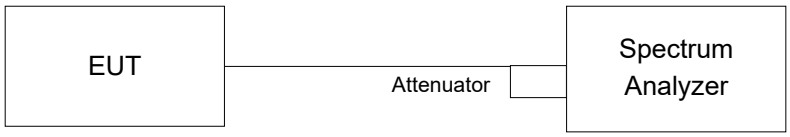
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

For Power Output



For 26dB Bandwidth and power output of ransmission above 5.725 GHz where the EBW crosses 5.725 GHz



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 transmission above 5.725 GHz where the EBW crosses 5.725 GHz
For channel aggregation (channel 138) measurement refer to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II E 2 b) method SA-1.

For 26dB Bandwidth

a. Set RBW = approximately 1% of the emission bandwidth.

b. Set the VBW > RBW.

c. Detector = Peak.

d. Trace mode = max hold.

e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

Power Output:

For U-NII-1 band (Outdoor Access Point):

CDD Mode

802.11a

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Ant. Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
36	5180	11.07	11.12	11.33	10.48	50.488	17.03	30.00	3.55	20.58	21.00	Pass
40	5200	11.06	11.20	11.33	10.48	50.699	17.05	30.00	3.55	20.60	21.00	Pass
48	5240	11.53	11.70	11.68	10.60	**55.219**	17.42	30.00	3.55	20.97	21.00	Pass

Note:
1. Antenna gain = 3.55dBi.
2. The maximum peak gain is used in the above 30-degree eirp calculation. The calculation result above represents the worst case possible for all elevation angle.
3. EIRP = average power + antenna gain + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT20)

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Ant. Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
36	5180	10.95	10.97	11.25	10.90	50.586	17.04	30.00	3.55	20.59	21.00	Pass
40	5200	11.50	11.54	11.64	10.62	54.504	17.36	30.00	3.55	20.91	21.00	Pass
48	5240	11.33	11.52	11.46	10.21	52.265	17.18	30.00	3.55	20.73	21.00	Pass

Note:
1. Antenna gain = 3.55dBi.
2. The maximum peak gain is used in the above 30-degree eirp calculation. The calculation result above represents the worst case possible for all elevation angle.
3. EIRP = average power + antenna gain + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT40)

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Ant. Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
38	5190	11.53	11.60	11.69	10.70	55.184	17.42	30.00	3.55	20.97	21.00	Pass
46	5230	11.53	11.67	11.52	10.50	54.323	17.35	30.00	3.55	20.90	21.00	Pass

Note:
1. Antenna gain = 3.55dBi.
2. The maximum peak gain is used in the above 30-degree eirp calculation. The calculation result above represents the worst case possible for all elevation angle.
3. EIRP = average power + antenna gain + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Ant. Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
42	5210	11.17	11.59	11.52	10.72	53.507	17.28	30.00	3.55	20.83	21.00	Pass

Note:
1. Antenna gain = 3.55dBi.
2. The maximum peak gain is used in the above 30-degree eirp calculation. The calculation result above represents the worst case possible for all elevation angle.
3. EIRP = average power + antenna gain + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT80+VHT80)

CH 42 + 58

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Ant. Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
42	5210	10.56	11.02	-	-	24.024	13.81	30.00	3.55	17.36	21.00	Pass

Note:
1. Antenna gain = 3.55dBi.
2. The maximum peak gain is used in the above 30-degree eirp calculation. The calculation result above represents the worst case possible for all elevation angle.
3. EIRP = average power + antenna gain + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

CH 42 + 155

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Ant. Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
42	5210	10.09	10.45	-	-	21.301	13.28	30.00	3.55	16.83	21.00	Pass

Note:
1. Antenna gain = 3.55dBi.
2. The maximum peak gain is used in the above 30-degree eirp calculation. The calculation result above represents the worst case possible for all elevation angle.
3. EIRP = average power + antenna gain + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

Beamforming Mode

802.11ac (VHT20)

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
36	5180	4.95	4.97	5.25	4.90	12.707	11.04	26.53	9.47	20.51	21.00	Pass
40	5200	5.50	5.54	5.64	4.62	13.691	11.36	26.53	9.47	20.83	21.00	Pass
48	5240	5.33	5.52	5.46	4.21	13.128	11.18	26.53	9.47	20.65	21.00	Pass

Note:
1. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power limit shall be reduced to 30 - (9.47 - 6) = 26.53dBm.
2. The maximum peak gain is used in the above 30-degree eirp calculation. The calculation result above represents the worst case possible for all elevation angle.
3. EIRP = average power + directional gain.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
38	5190	5.53	5.60	5.69	4.70	13.862	11.42	26.53	9.47	20.89	21.00	Pass
46	5230	5.53	5.67	5.52	4.50	13.645	11.35	26.53	9.47	20.82	21.00	Pass

Note:
1. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power limit shall be reduced to 30 - (9.47 - 6) = 26.53dBm.
2. The maximum peak gain is used in the above 30-degree eirp calculation. The calculation result above represents the worst case possible for all elevation angle.
3. EIRP = average power + directional gain.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
42	5210	5.17	5.59	5.52	4.72	13.440	11.28	26.53	9.47	20.75	21.00	Pass

Note:
1. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power limit shall be reduced to 30 - (9.47 - 6) = 26.53dBm.
2. The maximum peak gain is used in the above 30-degree eirp calculation. The calculation result above represents the worst case possible for all elevation angle.
3. EIRP = average power + directional gain.

802.11ac (VHT80+VHT80)

CH 42 + 58

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
42	5210	10.56	11.02	-	-	**24.024**	13.81	29.49	6.51	20.32	21.00	Pass

Note:
1. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power limit shall be reduced to 30 - (9.47 - 6) = 26.53dBm.
2. The maximum peak gain is used in the above 30-degree eirp calculation. The calculation result above represents the worst case possible for all elevation angle.
3. EIRP = average power + directional gain.

CH 42 + 155

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3							
42	5210	10.09	10.45	-	-	21.301	13.28	29.49	6.51	19.79	21.00	Pass

Note:
1. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power limit shall be reduced to 30 - (9.47 - 6) = 26.53dBm.
2. The maximum peak gain is used in the above 30-degree eirp calculation. The calculation result above represents the worst case possible for all elevation angle.
3. EIRP = average power + directional gain.

For U-NII-2A, U-NII-2C and U-NII-3 band:

CDD Mode

802.11a

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	13.98	13.90	13.85	13.41	95.745	19.81	24.00	Pass
60	5300	13.78	14.15	13.88	13.52	96.805	19.86	24.00	Pass
64	5320	13.85	14.01	13.87	13.01	93.820	19.72	24.00	Pass
100	5500	13.68	14.00	13.96	13.05	93.526	19.71	23.95	Pass
116	5580	13.88	14.21	13.97	13.44	97.824	19.90	23.95	Pass
140	5700	13.86	13.85	14.01	13.95	98.596	19.94	23.98	Pass
149	5745	23.23	23.71	23.51	23.46	**891.549**	29.50	30.00	Pass
157	5785	23.13	23.74	23.62	23.23	882.703	29.46	30.00	Pass
165	5825	23.17	23.62	23.52	23.49	885.898	29.47	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
Chain 0
1. 11dBm + 10log (20.72) = 24.16 > 24dBm
2. 11dBm + 10log (20.80) = 24.18 > 24dBm
3. 11dBm + 10log (19.98) = 24.00 < 24dBm
4. 11dBm + 10log (19.75) = 23.95 < 24dBm
5. 11dBm + 10log (19.84) = 23.97 < 24dBm
6. 11dBm + 10log (19.92) = 23.99 < 24dBm
Chain 1
1. 11dBm + 10log (20.68) = 24.15 > 24dBm
2. 11dBm + 10log (20.85) = 24.19 > 24dBm
3. 11dBm + 10log (20.01) = 24.01 > 24dBm
4. 11dBm + 10log (19.84) = 23.97 < 24dBm
5. 11dBm + 10log (19.78) = 23.96 < 24dBm
6. 11dBm + 10log (19.93) = 23.99 < 24dBm
Chain 2
1. 11dBm + 10log (20.77) = 24.17 > 24dBm
2. 11dBm + 10log (20.76) = 24.17 > 24dBm
3. 11dBm + 10log (20.16) = 24.04 > 24dBm
4. 11dBm + 10log (19.82) = 23.97 < 24dBm
5. 11dBm + 10log (19.85) = 23.97 < 24dBm
6. 11dBm + 10log (19.88) = 23.98 < 24dBm
Chain 3
1. 11dBm + 10log (20.69) = 24.15 > 24dBm
2. 11dBm + 10log (20.73) = 24.16 > 24dBm
3. 11dBm + 10log (20.29) = 24.07 > 24dBm
4. 11dBm + 10log (19.83) = 23.97 < 24dBm
5. 11dBm + 10log (19.76) = 23.95 < 24dBm
6. 11dBm + 10log (20.33) = 24.08 > 24dBm

802.11ac (VHT20)

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	14.32	14.50	14.11	13.45	103.118	20.13	24.00	Pass
60	5300	14.23	14.42	14.20	13.56	103.156	20.13	24.00	Pass
64	5320	14.01	14.45	14.15	13.49	101.375	20.06	24.00	Pass
100	5500	14.45	14.56	14.56	13.85	109.279	20.39	24.00	Pass
116	5580	14.30	14.44	14.23	13.86	105.520	20.23	24.00	Pass
140	5700	14.02	14.35	14.35	14.45	107.550	20.32	24.00	Pass
149	5745	23.16	23.61	23.31	23.52	875.824	29.42	30.00	Pass
157	5785	23.07	23.77	23.37	23.28	871.084	29.40	30.00	Pass
165	5825	23.04	23.52	23.32	23.21	850.472	29.30	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
Chain 0
1. 11dBm + 10log (20.77) = 24.17 > 24dBm
2. 11dBm + 10log (20.91) = 24.20 > 24dBm
3. 11dBm + 10log (20.85) = 24.19 > 24dBm
4. 11dBm + 10log (20.52) = 24.12 > 24dBm
5. 11dBm + 10log (20.58) = 24.13 > 24dBm
6. 11dBm + 10log (20.68) = 24.15 > 24dBm
Chain 1
1. 11dBm + 10log (20.82) = 24.18 > 24dBm
2. 11dBm + 10log (20.80) = 24.18 > 24dBm
3. 11dBm + 10log (20.77) = 24.17 > 24dBm
4. 11dBm + 10log (20.53) = 24.12 > 24dBm
5. 11dBm + 10log (20.67) = 24.15 > 24dBm
6. 11dBm + 10log (20.78) = 24.17 > 24dBm
Chain 2
1. 11dBm + 10log (20.95) = 24.21 > 24dBm
2. 11dBm + 10log (20.74) = 24.16 > 24dBm
3. 11dBm + 10log (20.80) = 24.18 > 24dBm
4. 11dBm + 10log (20.60) = 24.13 > 24dBm
5. 11dBm + 10log (20.54) = 24.12 > 24dBm
6. 11dBm + 10log (20.72) = 24.16 > 24dBm
Chain 3
1. 11dBm + 10log (20.97) = 24.21 > 24dBm
2. 11dBm + 10log (20.94) = 24.20 > 24dBm
3. 11dBm + 10log (20.88) = 24.19 > 24dBm
4. 11dBm + 10log (20.58) = 24.13 > 24dBm
5. 11dBm + 10log (20.71) = 24.16 > 24dBm
6. 11dBm + 10log (20.67) = 24.15 > 24dBm

802.11ac (VHT40)

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	16.82	16.90	16.85	16.16	186.784	22.71	24.00	Pass
62	5310	16.70	17.02	16.52	16.40	185.650	22.69	24.00	Pass
102	5510	16.98	16.95	17.01	16.35	192.820	22.85	24.00	Pass
110	5550	16.83	16.96	16.97	16.55	192.813	22.85	24.00	Pass
134	5670	17.48	17.42	17.15	17.36	217.514	23.37	24.00	Pass
151	5755	21.19	21.60	21.32	21.75	561.209	27.49	30.00	Pass
159	5795	21.24	21.54	21.42	21.41	552.638	27.42	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
Chain 0
1. 11dBm + 10log (40.86) = 27.11 > 24dBm
2. 11dBm + 10log (40.71) = 27.09 > 24dBm
3. 11dBm + 10log (40.73) = 27.09 > 24dBm
4. 11dBm + 10log (41.07) = 27.13 > 24dBm
5. 11dBm + 10log (41.13) = 27.14 > 24dBm

Chain 1
1. 11dBm + 10log (40.87) = 27.11 > 24dBm
2. 11dBm + 10log (40.86) = 27.11 > 24dBm
3. 11dBm + 10log (40.84) = 27.11 > 24dBm
4. 11dBm + 10log (40.97) = 27.12 > 24dBm
5. 11dBm + 10log (41.08) = 27.13 > 24dBm

Chain 2
1. 11dBm + 10log (40.89) = 27.11 > 24dBm
2. 11dBm + 10log (40.86) = 27.11 > 24dBm
3. 11dBm + 10log (40.80) = 27.10 > 24dBm
4. 11dBm + 10log (40.90) = 27.11 > 24dBm
5. 11dBm + 10log (41.06) = 27.13 > 24dBm

Chain 3
1. 11dBm + 10log (40.93) = 27.12 > 24dBm
2. 11dBm + 10log (40.66) = 27.09 > 24dBm
3. 11dBm + 10log (40.74) = 27.10 > 24dBm
4. 11dBm + 10log (40.97) = 27.12 > 24dBm
5. 11dBm + 10log (41.14) = 27.14 > 24dBm

802.11ac (VHT80)

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	16.86	17.15	16.75	16.27	**190.088**	22.79	24.00	Pass
106	5530	15.03	15.52	15.12	14.51	128.245	21.08	24.00	Pass
122	5610	17.58	18.01	17.88	17.15	233.777	23.69	24.00	Pass
138	5690 (For U-NII-2C)	17.76	17.71	17.51	17.89	**250.167**	23.98	24.00	Pass
138	5690 (For U-NII-3)	11.28	11.33	11.47	11.47	58.223	17.65	30.00	Pass
155	5775	16.76	17.23	17.05	17.34	205.168	23.12	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
Chain 0
1. 11dBm + 10log (83.79) = 30.23 > 24dBm
2. 11dBm + 10log (84.41) = 30.26 > 24dBm
3. 11dBm + 10log (84.27) = 30.25 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.21) = 29.85 > 24dBm
Chain 1
1. 11dBm + 10log (84.02) = 30.24 > 24dBm
2. 11dBm + 10log (84.29) = 30.25 > 24dBm
3. 11dBm + 10log (84.19) = 30.25 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.30) = 29.85 > 24dBm
Chain 2
1. 11dBm + 10log (83.90) = 30.23 > 24dBm
2. 11dBm + 10log (84.32) = 30.25 > 24dBm
3. 11dBm + 10log (84.19) = 30.25 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.21) = 29.85 > 24dBm
Chain 3
1. 11dBm + 10log (83.77) = 30.23 > 24dBm
2. 11dBm + 10log (84.16) = 30.25 > 24dBm
3. 11dBm + 10log (84.28) = 30.25 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.04) = 29.86 > 24dBm

802.11ac (VHT80+VHT80)

CH 42 + 58

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	-	-	11.23	10.16	23.649	13.74	24.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
Chain 2
1. 11dBm + 10log (83.00) = 30.19 > 24dBm
Chain 3
1. 11dBm + 10log (83.23) = 30.20 > 24dBm

CH 106 + 122

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
106	5530	14.74	14.71	-	-	59.365	17.74	24.00	Pass
122	5610	-	-	15.17	14.25	59.492	17.74	24.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
Chain 0
1. 11dBm + 10log (84.97) = 30.29 > 24dBm
Chain 1
1. 11dBm + 10log (85.37) = 30.31 > 24dBm
Chain 2
1. 11dBm + 10log (85.15) = 30.30 > 24dBm
Chain 3
1. 11dBm + 10log (85.25) = 30.30 > 24dBm

CH 138 + 155

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
138	5690 (For U-NII-2C)	16.96	16.99	-	-	99.663	19.99	24.00	Pass
138	5690 (For U-NII-3)	11.30	11.57	-	-	27.845	14.45	30.00	Pass
155	5775	-	-	16.91	17.03	99.557	19.98	30.00	Pass

Note:
For U-NII-2A, U-NII-2C Band:
Chain 0
1. 11dBm + 10log (5725.00 - 5647.78) = 29.88 > 24dBm
Chain 1
1. 11dBm + 10log (5725.00 - 5647.92) = 29.87 > 24dBm

CH 42 + 155

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	-	-	11.17	10.47	24.235	13.84	24.00	Pass

Beamforming Mode

802.11ac (VHT20)

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	14.32	14.50	14.11	13.45	103.118	20.13	20.53	Pass
60	5300	14.23	14.42	14.20	13.56	103.156	20.13	20.53	Pass
64	5320	14.01	14.45	14.15	13.49	101.375	20.06	20.53	Pass
100	5500	13.95	14.06	14.06	13.35	97.395	19.89	20.74	Pass
116	5580	13.80	13.94	13.73	13.36	94.044	19.73	20.74	Pass
140	5700	13.52	13.85	13.85	13.95	95.854	19.82	20.74	Pass
149	5745	19.66	20.11	19.81	20.02	391.216	25.92	26.49	Pass
157	5785	19.57	20.27	19.87	19.78	389.099	25.90	26.49	Pass
165	5825	19.54	20.02	19.82	19.71	379.892	25.80	26.49	Pass

Note:

1. 5260-5320MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power limit shall be reduced to 24 - (9.47 - 6) = 20.53dBm.
2. 5500-5700MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.26dBi > 6dBi, so the power limit shall be reduced to 24 - (9.26 - 6) = 20.74dBm.
3. 5745-5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.51dBi > 6dBi, so the power limit shall be reduced to 30 - (9.51 - 6) = 26.49dBm.

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

Chain 0

1. 11dBm + 10log (20.77) = 24.17 > 24dBm
2. 11dBm + 10log (20.91) = 24.20 > 24dBm
3. 11dBm + 10log (20.85) = 24.19 > 24dBm
4. 11dBm + 10log (20.52) = 24.12 > 24dBm
5. 11dBm + 10log (20.58) = 24.13 > 24dBm
6. 11dBm + 10log (20.68) = 24.15 > 24dBm

Chain 1

1. 11dBm + 10log (20.82) = 24.18 > 24dBm
2. 11dBm + 10log (20.80) = 24.18 > 24dBm
3. 11dBm + 10log (20.77) = 24.17 > 24dBm
4. 11dBm + 10log (20.53) = 24.12 > 24dBm
5. 11dBm + 10log (20.67) = 24.15 > 24dBm
6. 11dBm + 10log (20.78) = 24.17 > 24dBm

Chain 2

1. 11dBm + 10log (20.95) = 24.21 > 24dBm
2. 11dBm + 10log (20.74) = 24.16 > 24dBm
3. 11dBm + 10log (20.80) = 24.18 > 24dBm
4. 11dBm + 10log (20.60) = 24.13 > 24dBm
5. 11dBm + 10log (20.54) = 24.12 > 24dBm
6. 11dBm + 10log (20.72) = 24.16 > 24dBm

Chain 3

1. 11dBm + 10log (20.97) = 24.21 > 24dBm
2. 11dBm + 10log (20.94) = 24.20 > 24dBm
3. 11dBm + 10log (20.88) = 24.19 > 24dBm
4. 11dBm + 10log (20.58) = 24.13 > 24dBm
5. 11dBm + 10log (20.71) = 24.16 > 24dBm
6. 11dBm + 10log (20.67) = 24.15 > 24dBm

802.11ac (VHT40)

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	14.32	14.40	14.35	13.66	105.036	20.21	20.53	Pass
62	5310	14.20	14.52	14.02	13.90	104.398	20.19	20.53	Pass
102	5510	14.48	14.45	14.51	13.85	108.430	20.35	20.74	Pass
110	5550	14.33	14.46	14.47	14.05	108.427	20.35	20.74	Pass
134	5670	14.48	14.42	14.15	14.36	109.015	20.37	20.74	Pass
151	5755	19.69	20.10	19.82	20.25	**397.306**	25.99	26.49	Pass
159	5795	19.74	20.04	19.92	19.91	391.238	25.92	26.49	Pass

Note:
1. 5260-5320MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power limit shall be reduced to 24 - (9.47 - 6) = 20.53dBm.
2. 5500-5700MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.26dBi > 6dBi, so the power limit shall be reduced to 24 - (9.26 - 6) = 20.74dBm.
3. 5745-5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.51dBi > 6dBi, so the power limit shall be reduced to 30 - (9.51 - 6) = 26.49dBm.

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

Chain 0

1. 11dBm + 10log (40.86) = 27.11 > 24dBm
2. 11dBm + 10log (40.71) = 27.09 > 24dBm
3. 11dBm + 10log (40.73) = 27.09 > 24dBm
4. 11dBm + 10log (41.07) = 27.13 > 24dBm
5. 11dBm + 10log (41.13) = 27.14 > 24dBm

Chain 1

1. 11dBm + 10log (40.87) = 27.11 > 24dBm
2. 11dBm + 10log (40.86) = 27.11 > 24dBm
3. 11dBm + 10log (40.84) = 27.11 > 24dBm
4. 11dBm + 10log (40.97) = 27.12 > 24dBm
5. 11dBm + 10log (41.08) = 27.13 > 24dBm

Chain 2

1. 11dBm + 10log (40.89) = 27.11 > 24dBm
2. 11dBm + 10log (40.86) = 27.11 > 24dBm
3. 11dBm + 10log (40.80) = 27.10 > 24dBm
4. 11dBm + 10log (40.90) = 27.11 > 24dBm
5. 11dBm + 10log (41.06) = 27.13 > 24dBm

Chain 3

1. 11dBm + 10log (40.93) = 27.12 > 24dBm
2. 11dBm + 10log (40.66) = 27.09 > 24dBm
3. 11dBm + 10log (40.74) = 27.10 > 24dBm
4. 11dBm + 10log (40.97) = 27.12 > 24dBm
5. 11dBm + 10log (41.14) = 27.14 > 24dBm

802.11ac (VHT80)

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	14.36	14.65	14.25	13.77	**106.894**	20.29	20.53	Pass
106	5530	14.53	15.02	14.62	14.01	114.298	20.58	20.74	Pass
122	5610	14.58	15.01	14.88	14.15	117.166	20.69	20.74	Pass
138	5690 (For U-NII-2C)	14.76	14.71	14.51	14.85	**118.301**	20.73	20.74	Pass
138	5690 (For U-NII-3)	8.28	8.33	8.47	8.47	27.599	14.41	26.49	Pass
155	5775	16.76	17.23	17.05	17.34	205.168	23.12	26.49	Pass

Note:

1. 5260-5320MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power limit shall be reduced to 24 - (9.47 - 6) = 20.53dBm.
2. 5500-5700MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.26dBi > 6dBi, so the power limit shall be reduced to 24 - (9.26 - 6) = 20.74dBm.
3. 5745-5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.51dBi > 6dBi, so the power limit shall be reduced to 30 - (9.51 - 6) = 26.49dBm.

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

Chain 0

1. 11dBm + 10log (83.79) = 30.23 > 24dBm
2. 11dBm + 10log (84.41) = 30.26 > 24dBm
3. 11dBm + 10log (84.27) = 30.25 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.21) = 29.85 > 24dBm

Chain 1

1. 11dBm + 10log (84.02) = 30.24 > 24dBm
2. 11dBm + 10log (84.29) = 30.25 > 24dBm
3. 11dBm + 10log (84.19) = 30.25 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.30) = 29.85 > 24dBm

Chain 2

1. 11dBm + 10log (83.90) = 30.23 > 24dBm
2. 11dBm + 10log (84.32) = 30.25 > 24dBm
3. 11dBm + 10log (84.19) = 30.25 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.21) = 29.85 > 24dBm

Chain 3

1. 11dBm + 10log (83.77) = 30.23 > 24dBm
2. 11dBm + 10log (84.16) = 30.25 > 24dBm
3. 11dBm + 10log (84.28) = 30.25 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.04) = 29.86 > 24dBm

802.11ac (VHT80+VHT80)

CH 42 + 58

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	-	-	11.23	10.16	23.649	13.74	23.59	Pass

Note:
1. 5290MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.41dBi > 6dBi, so the power limit shall be reduced to 24 - (6.41 - 6) = 23.59dBm.

For U-NII-2A, U-NII-2C Band:
Chain 2
1. 11dBm + 10log (83.00) = 30.19 > 24dBm
Chain 3
1. 11dBm + 10log (83.23) = 30.20 > 24dBm

CH 106 + 122

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
106	5530	14.74	14.71	-	-	59.365	17.74	23.85	Pass
122	5610	-	-	15.17	14.25	59.492	17.74	23.65	Pass

Note:
1. 5530MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.15dBi > 6dBi, so the power limit shall be reduced to 24 - (6.15 - 6) = 23.85dBm.
2. 5610MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.35dBi > 6dBi, so the power limit shall be reduced to 24 - (6.35 - 6) = 23.65dBm.

For U-NII-2A, U-NII-2C Band:
Chain 0
1. 11dBm + 10log (84.97) = 30.29 > 24dBm
Chain 1
1. 11dBm + 10log (85.37) = 30.31 > 24dBm
Chain 2
1. 11dBm + 10log (85.15) = 30.30 > 24dBm
Chain 3
1. 11dBm + 10log (85.25) = 30.30 > 24dBm

CH 138 + 155

Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
138	5690 (For U-NII-2C)	16.96	16.99	-	-	99.663	19.99	23.85	Pass
138	5690 (For U-NII-3)	11.30	11.57	-	-	27.845	14.45	29.55	Pass
155	5775	-	-	16.91	17.03	99.557	19.98	29.55	Pass

Note:
1. 5690MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.15dBi > 6dBi, so the power limit shall be reduced to 24 - (6.15 - 6) = 23.85dBm.
2. 5775MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.45dBi > 6dBi, so the power limit shall be reduced to 30 - (6.45 - 6) = 29.55dBm.

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

Chain 0

1. 11dBm + 10log (5725.00 - 5647.78) = 29.88 > 24dBm

Chain 1

1. 11dBm + 10log (5725.00 - 5647.92) = 29.87 > 24dBm

CH 42 + 155

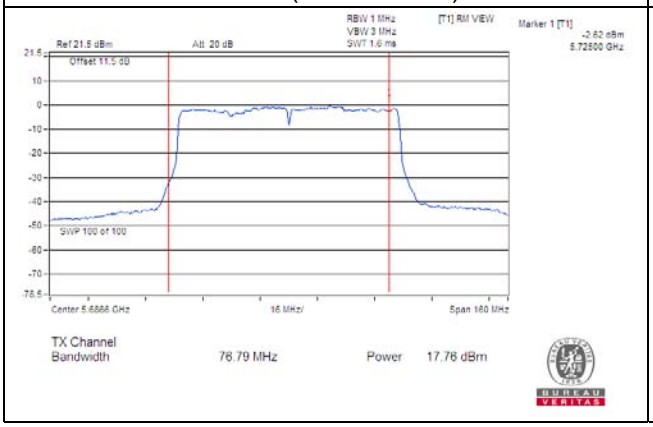
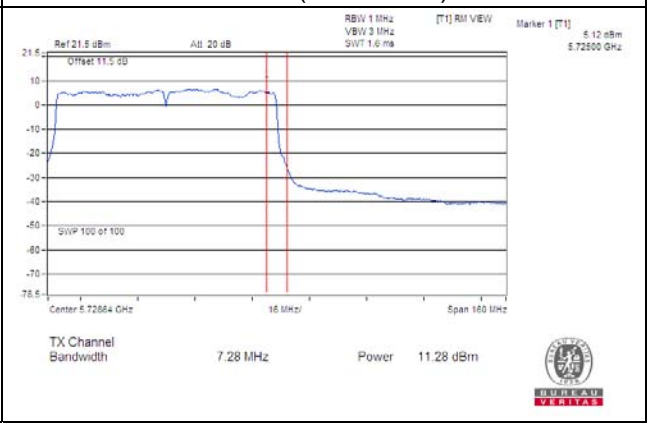
Chan.	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	-	-	11.17	10.47	24.235	13.84	29.55	Pass

Note:
1. 5775MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.45dBi > 6dBi, so the power limit shall be reduced to 30 - (6.45 - 6) = 29.55dBm.

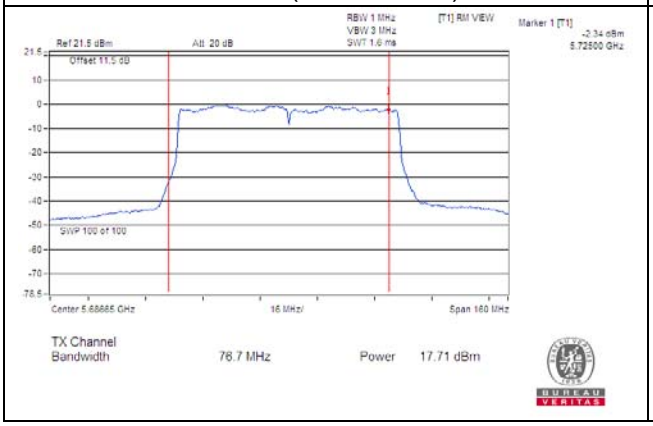
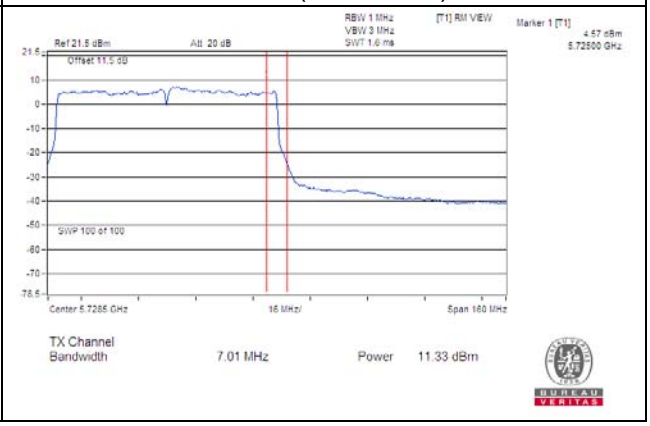
Straddle channel power plots:

802.11ac (VHT80)

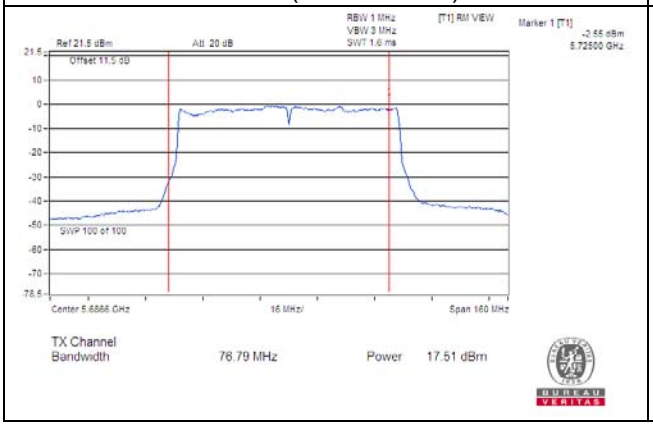
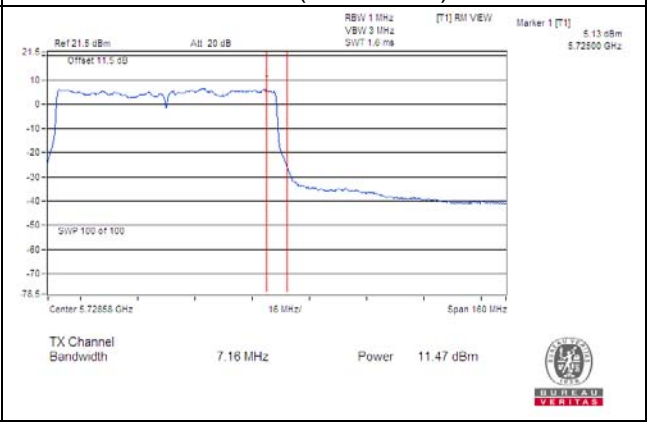
Chain 0

CH 138 (For U-NII-2C)	CH 138 (For U-NII-3)
	

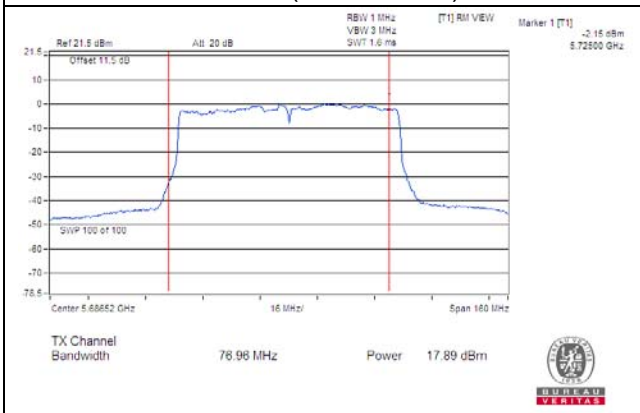
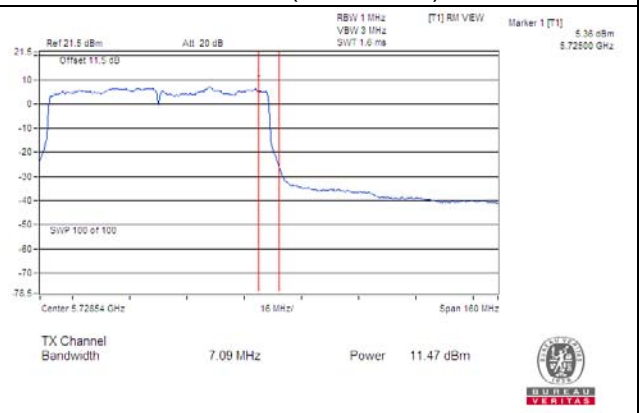
Chain 1

CH 138 (For U-NII-2C)	CH 138 (For U-NII-3)
	

Chain 2

CH 138 (For U-NII-2C)	CH 138 (For U-NII-3)
	

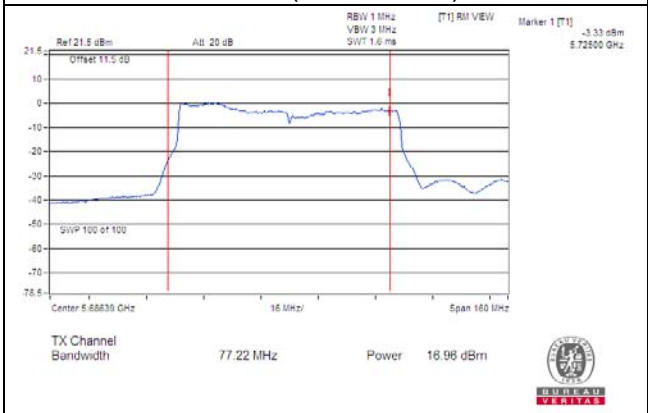
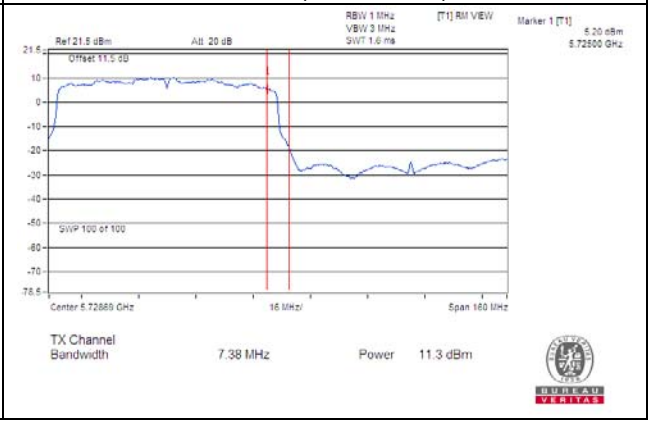
Chain 3

CH 138 (For U-NII-2C)	CH 138 (For U-NII-3)
	

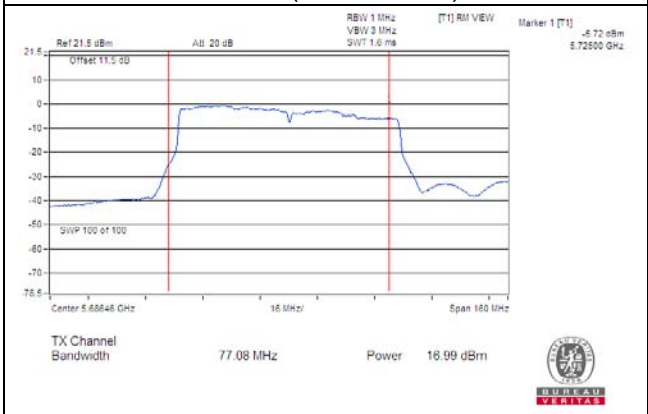
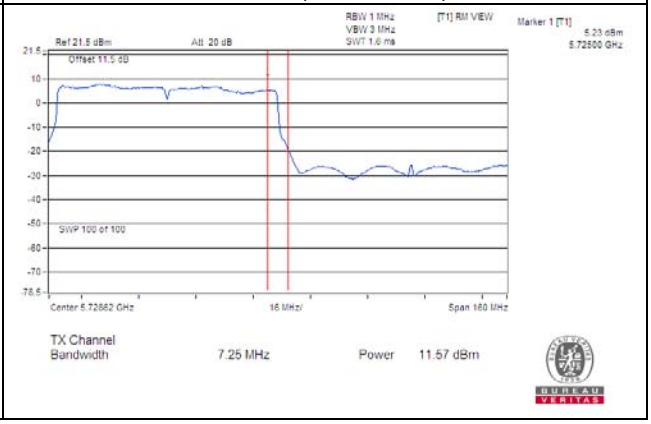
802.11ac (VHT80+VHT80)

CH 138 + 155

Chain 0

CH 138 (For U-NII-2C)	CH 138 (For U-NII-3)
	

Chain 1

CH 138 (For U-NII-2C)	CH 138 (For U-NII-3)
	

26dB Bandwidth:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	20.72	20.68	20.77	20.69
60	5300	20.80	20.85	20.76	20.73
64	5320	19.98	20.01	20.16	20.29
100	5500	19.75	19.84	19.82	19.83
116	5580	19.84	19.78	19.85	19.76
140	5700	19.92	19.93	19.88	20.33

802.11ac (VHT20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
52	5260	20.77	20.82	20.95	20.97
60	5300	20.91	20.80	20.74	20.94
64	5320	20.85	20.77	20.80	20.88
100	5500	20.52	20.53	20.60	20.58
116	5580	20.58	20.67	20.54	20.71
140	5700	20.68	20.78	20.72	20.67

802.11ac (VHT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
54	5270	40.86	40.87	40.89	40.93
62	5310	40.71	40.86	40.86	40.66
102	5510	40.73	40.84	40.80	40.74
110	5550	41.07	40.97	40.90	40.97
134	5670	41.13	41.08	41.06	41.14

802.11ac (VHT80)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	83.79	84.02	83.90	83.77
106	5530	84.41	84.29	84.32	84.16
122	5610	84.27	84.19	84.19	84.28
138	5690 (For U-NII-2C)	76.79	76.70	76.79	76.96
138	5690 (For U-NII-3)	7.28	7.01	7.16	7.09

For CH138 (U-NII-2C Band): The 26dBc bandwidth below 5725MHz = 5725MHz - Marker 1

For CH138 (UNII-3 Band): The 26dBc bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

802.11ac (VHT80+VHT80)

CH 42 + 58

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
58	5290	-	-	83.00	83.23

CH 106 + 122

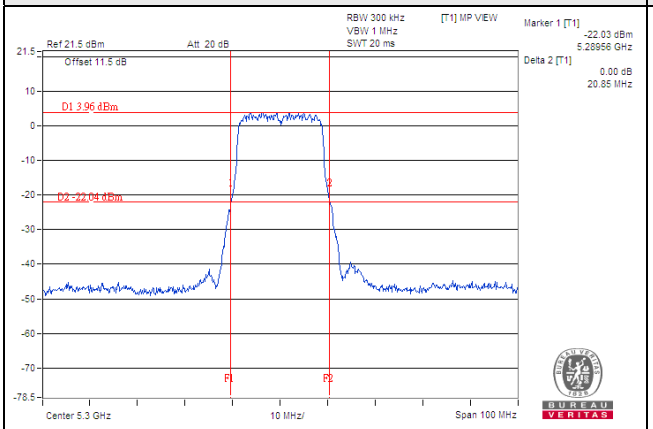
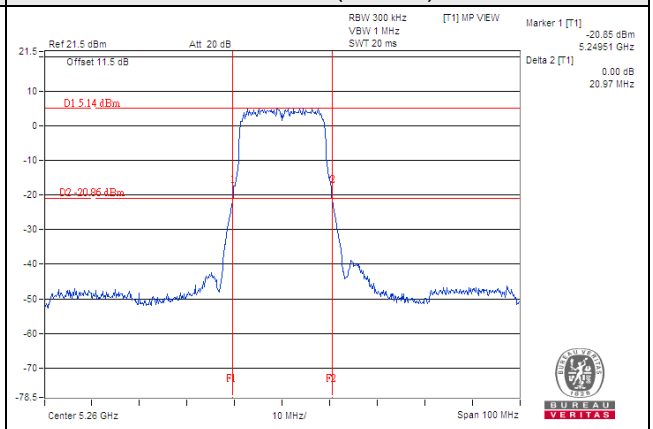
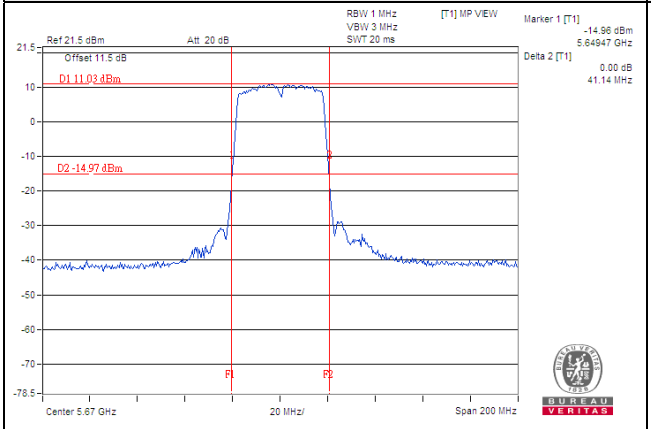
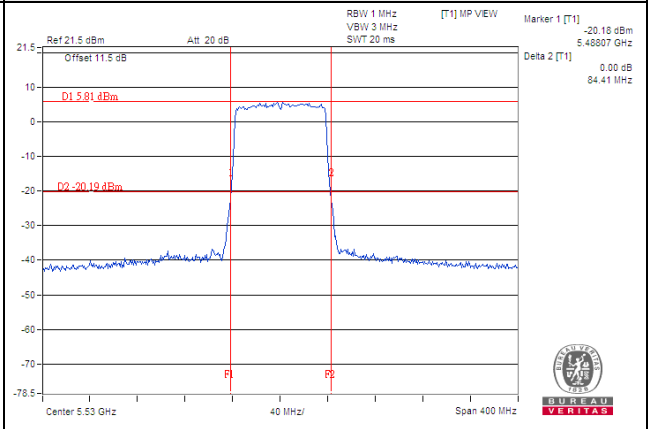
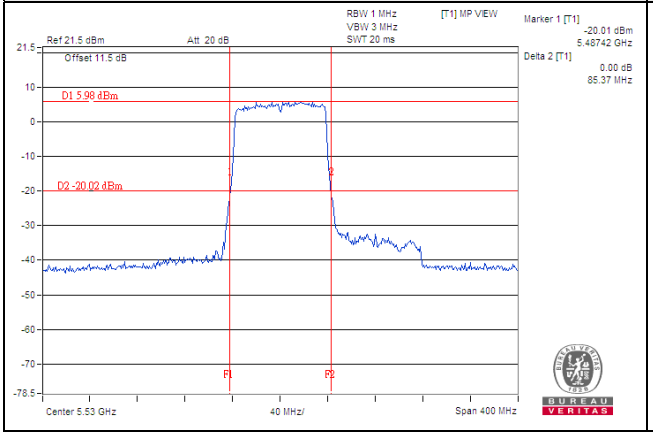
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	84.97	85.37	-	-
122	5610	-	-	85.15	85.25

CH 138 + 155

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
138	5690 (For U-NII-2C)	77.22	77.08	-	-
138	5690 (For U-NII-3)	7.38	7.25	-	-

For CH138 (U-NII-2C Band): The 26dBc bandwidth below 5725MHz = 5725MHz - Marker 1

For CH138 (UNII-3 Band): The 26dBc bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

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

EUT Average Power

CDD Mode

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (dBm)	Output Power (mW)
5250~5350	19.86	96.805
5470~5725	19.94	98.596

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (dBm)	Output Power (mW)
5250~5350	20.13	103.156
5470~5725	20.39	109.279

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (dBm)	Output Power (mW)
5250~5350	22.71	186.784
5470~5725	23.37	217.514

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (dBm)	Output Power (mW)
5250~5350	22.79	190.088
5470~5725	23.98	250.167

802.11ac (VHT80+VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (dBm)	Output Power (mW)
5250~5350	13.74	23.649
5470~5725	19.99	99.663

Beamforming Mode

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (dBm)	Output Power (mW)
5250~5350	20.13	103.156
5470~5725	19.89	97.395

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (dBm)	Output Power (mW)
5250~5350	20.21	105.036
5470~5725	20.37	109.015

802.11ac (VHT80)

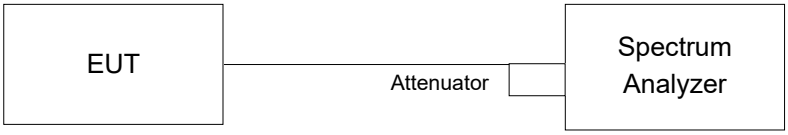
Frequency Band (MHz)	Max. Power	
	Output Power (dBm)	Output Power (mW)
5250~5350	20.29	106.894
5470~5725	20.73	118.301

802.11ac (VHT80+VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (dBm)	Output Power (mW)
5250~5350	13.74	23.649
5470~5725	19.99	99.663

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

4.4.4 Test Result

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	16.52	16.52	16.52	16.52
40	5200	16.52	16.52	16.52	16.52
48	5240	16.52	16.52	16.52	16.52
52	5260	17.65	17.65	17.65	17.65
60	5300	17.65	17.65	17.65	17.65
64	5320	16.52	16.52	16.52	16.52
100	5500	16.34	16.52	16.52	16.52
116	5580	16.44	16.44	16.44	16.44
140	5700	16.43	16.43	16.43	16.52
149	5745	16.70	16.70	16.70	16.70
157	5785	16.92	16.80	16.80	16.92
165	5825	17.04	16.92	16.92	17.04

802.11ac (VHT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	17.65	17.56	17.56	17.56
40	5200	17.65	17.65	17.65	17.65
48	5240	17.56	17.56	17.65	17.65
52	5260	17.69	17.79	17.79	17.79
60	5300	17.79	17.79	17.79	17.79
64	5320	17.65	17.65	17.65	17.65
100	5500	17.56	17.65	17.65	17.56
116	5580	17.64	17.64	17.64	17.64
140	5700	17.65	17.65	17.65	17.65
149	5745	17.65	17.83	17.74	17.83
157	5785	17.88	17.76	17.88	17.88
165	5825	17.88	18.00	18.00	17.88

802.11ac (VHT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	36.86	36.86	36.86	36.86
46	5230	36.86	36.86	36.86	36.86
54	5270	36.86	36.86	36.86	36.86
62	5310	36.86	36.86	36.69	36.86
102	5510	36.86	36.86	36.86	36.86
110	5550	36.96	36.96	36.96	36.96
134	5670	36.00	36.00	36.00	36.00
151	5755	36.18	36.18	36.18	36.35
159	5795	36.00	36.24	36.24	36.00

802.11ac (VHT80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	76.17	76.35	76.17	76.17
58	5290	76.18	76.18	76.18	76.18
106	5530	75.84	75.84	75.84	75.84
122	5610	76.32	76.32	76.32	76.32
138	5690 (For U-NII-2C)	72.92	72.92	72.92	72.92
138	5690 (For U-NII-3)	2.92	2.92	2.92	2.92
155	5775	75.65	75.83	75.65	75.82

For CH138 (U-NII-2C Band): The Occupied bandwidth below 5725MHz = 5725MHz - Marker 1

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

802.11ac (VHT80+VHT80)

CH 42 + 58

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	76.52	76.52	-	-
58	5290	-	-	75.48	76.00

CH 106 + 122

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
106	5530	76.08	75.84	-	-
122	5610	-	-	76.56	76.56

CH 138 + 155

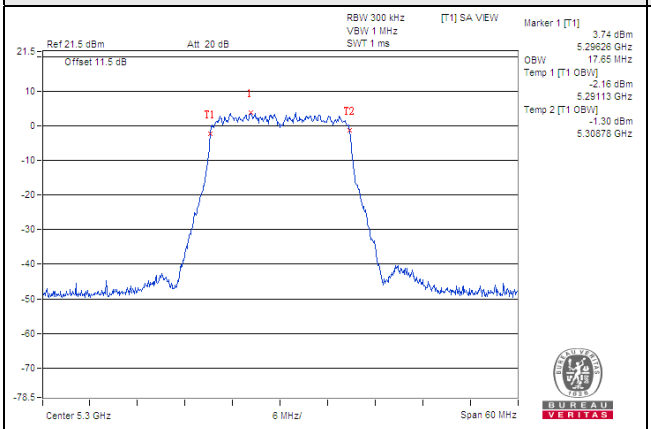
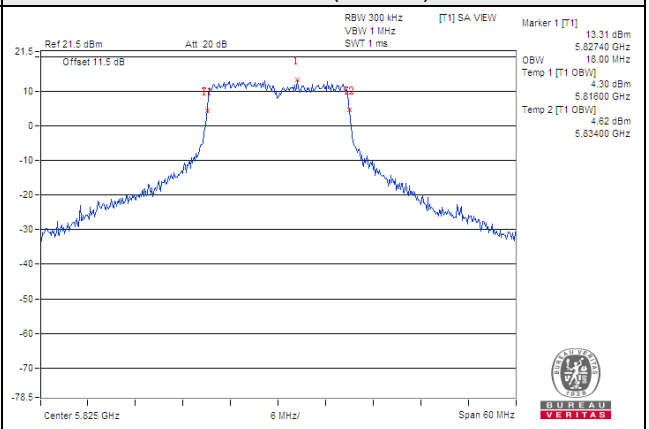
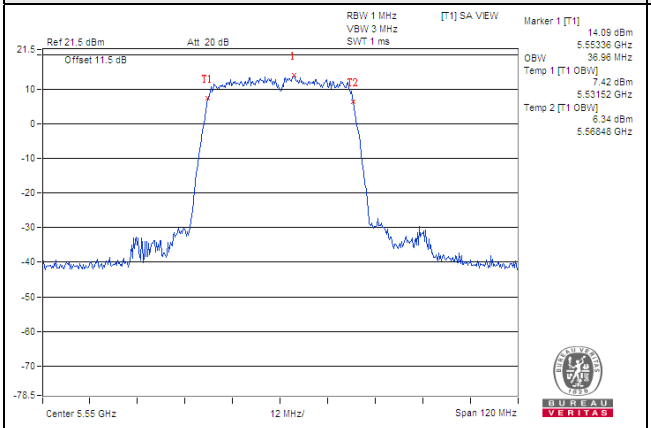
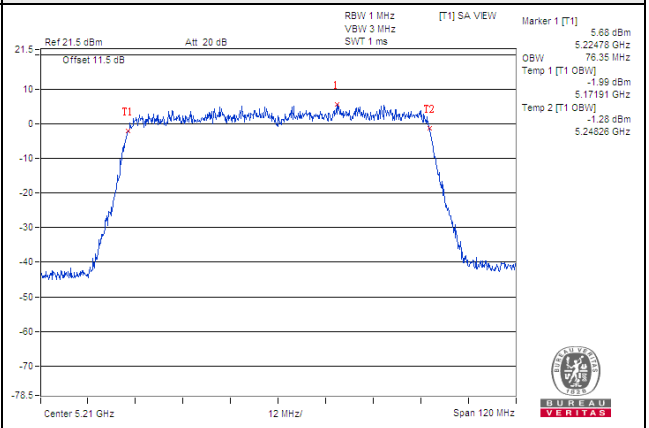
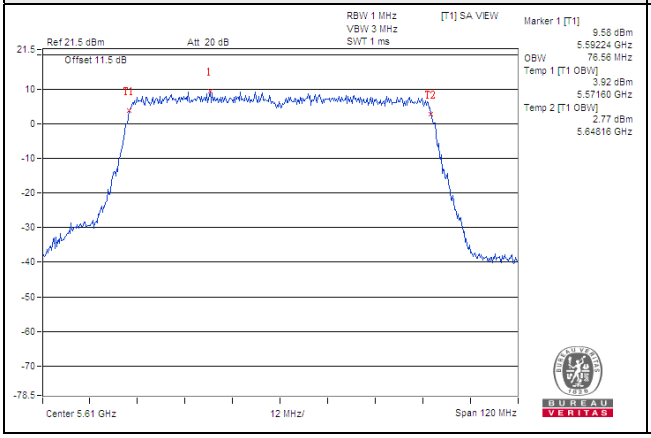
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
138	5690 (For U-NII-2C)	72.92	72.92	-	-
138	5690 (For U-NII-3)	2.92	3.16	-	-
155	5775	-	-	76.00	76.00

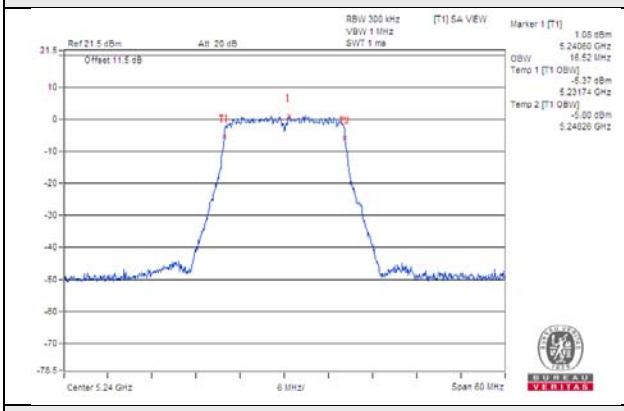
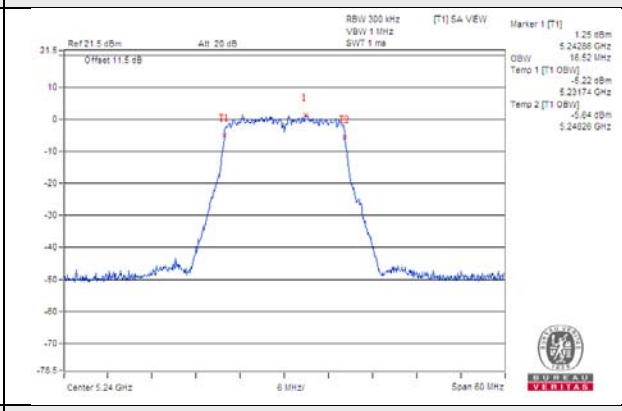
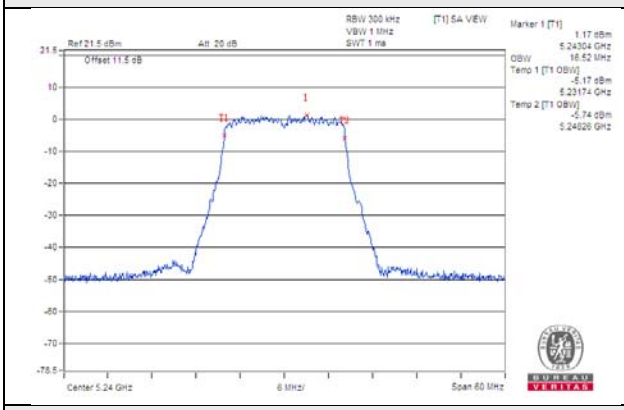
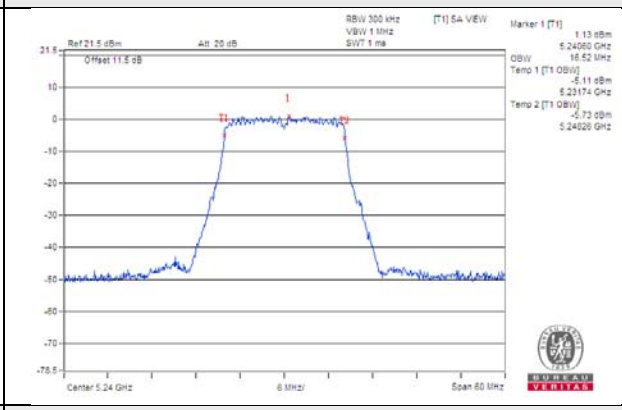
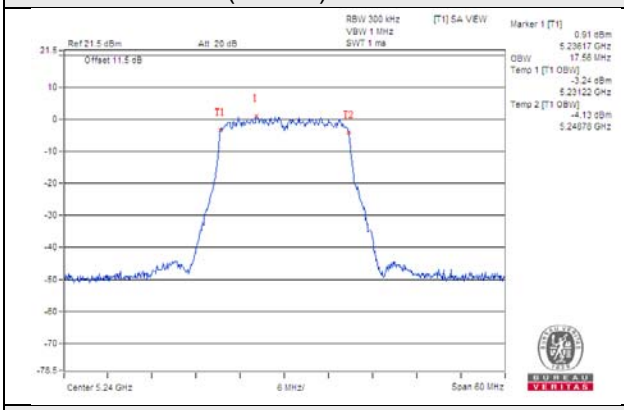
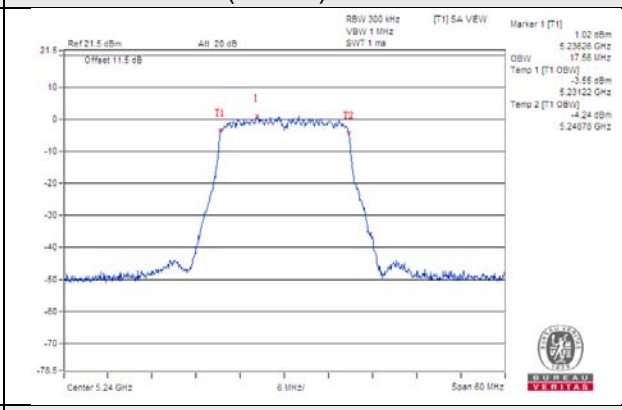
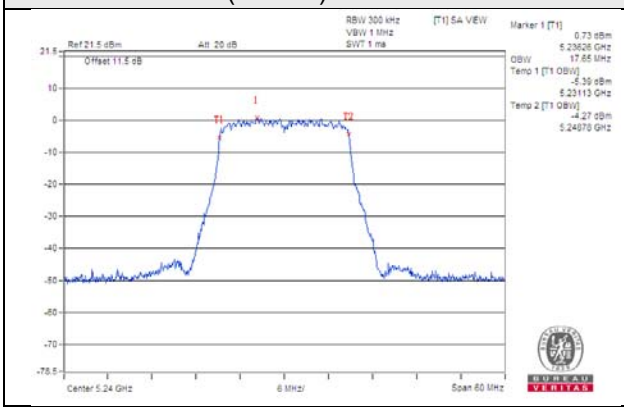
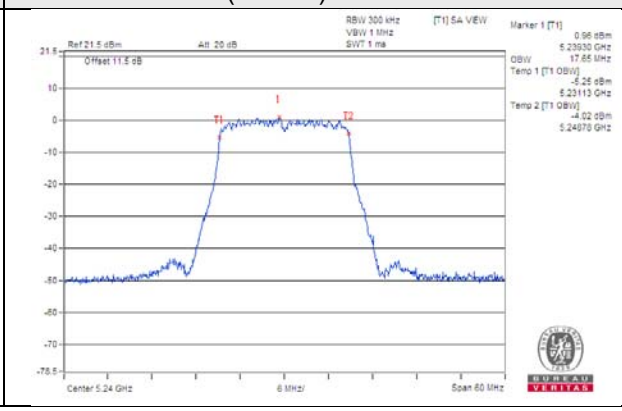
For CH138 (U-NII-2C Band): The Occupied bandwidth below 5725MHz = 5725MHz - Marker 1

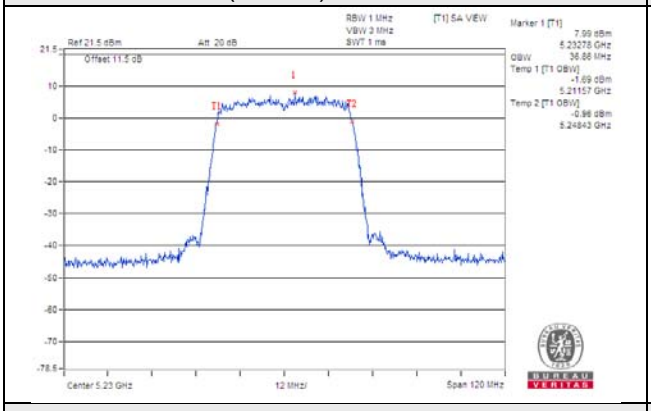
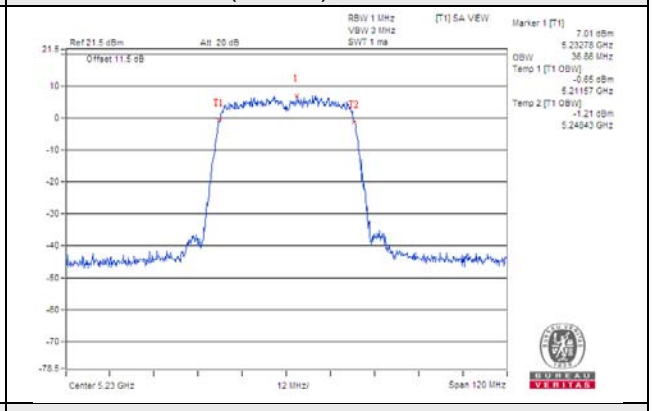
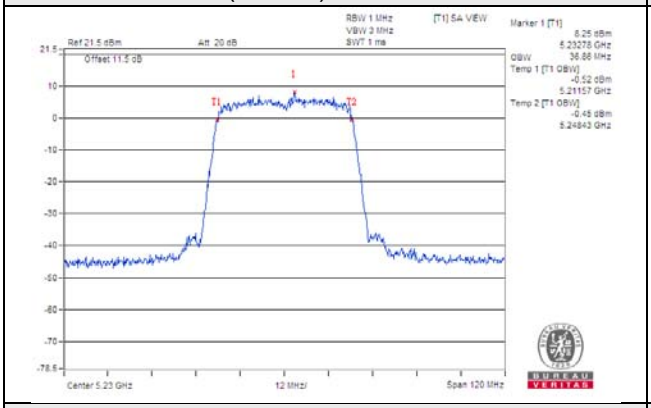
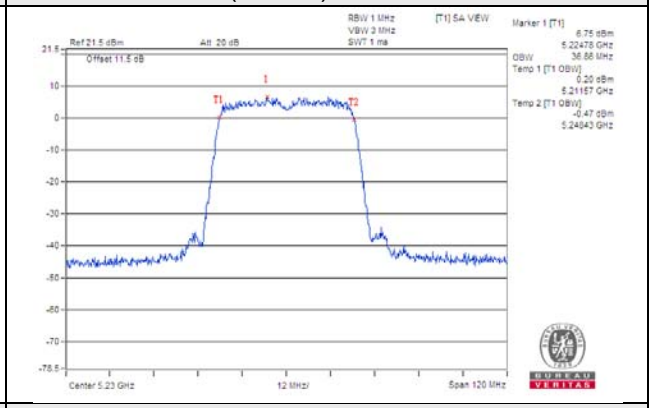
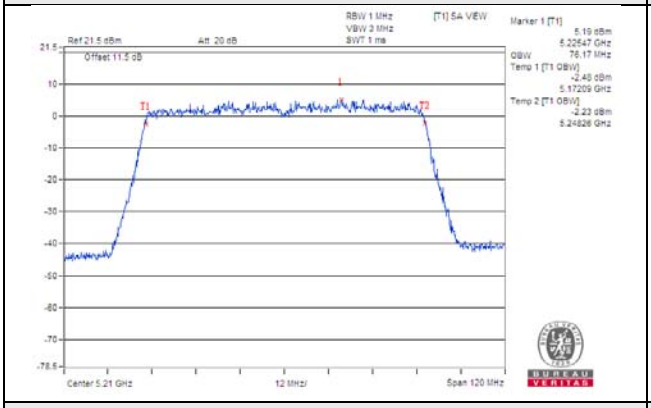
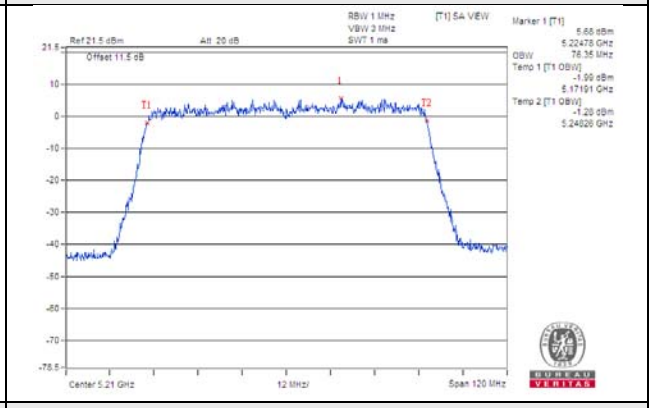
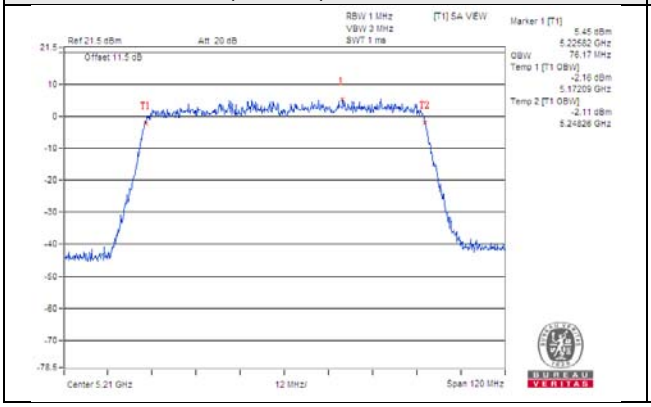
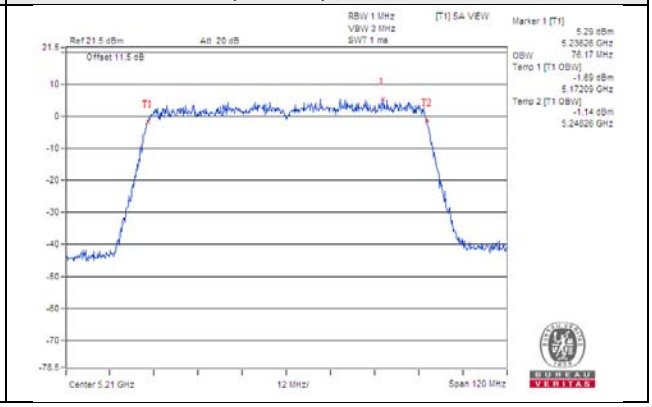
For CH138 (UNII-3 Band): The Occupied bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

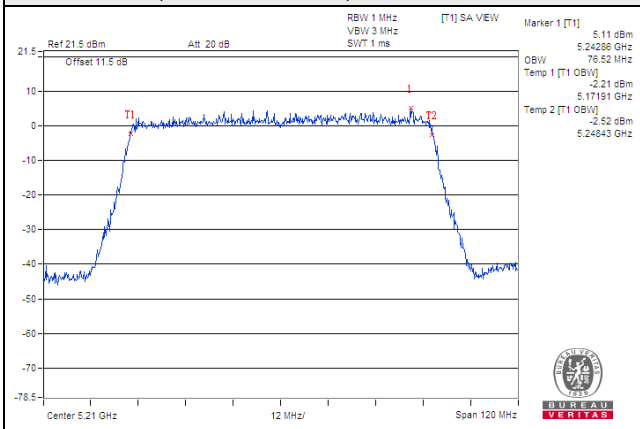
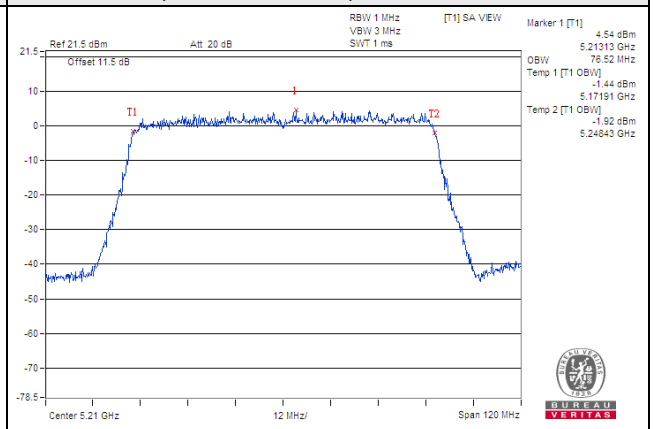
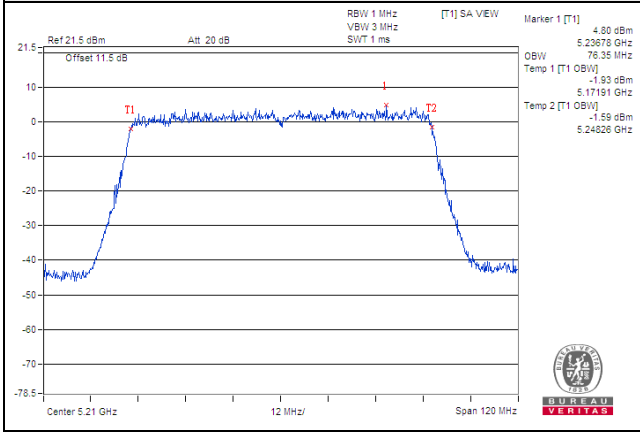
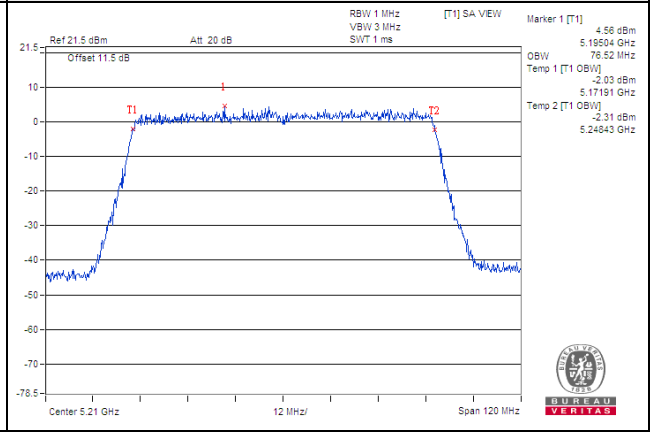
CH 42 + 155

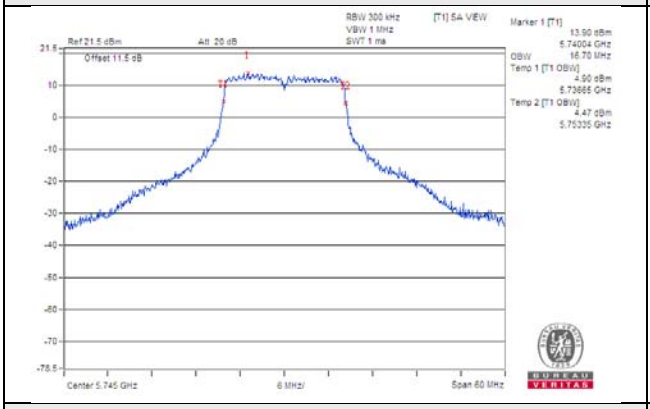
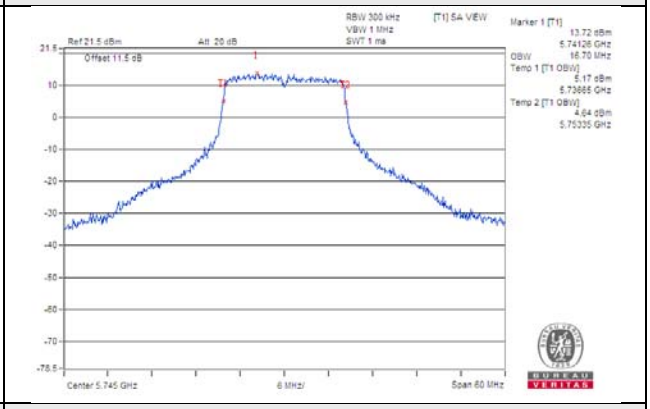
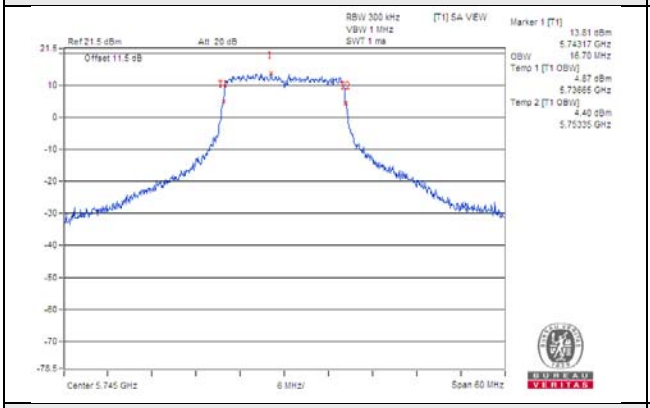
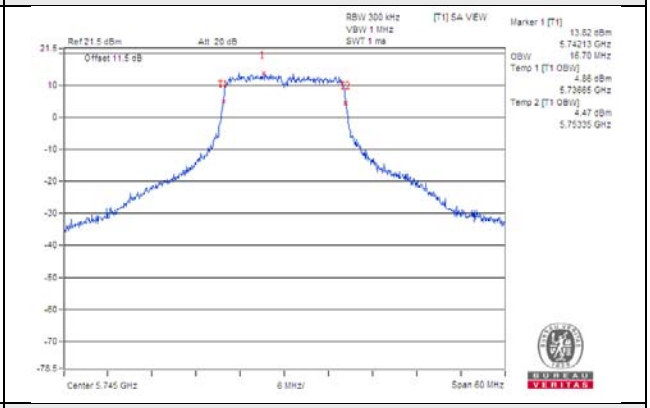
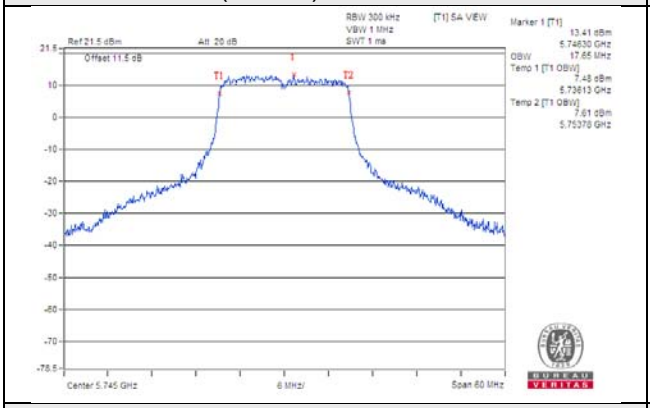
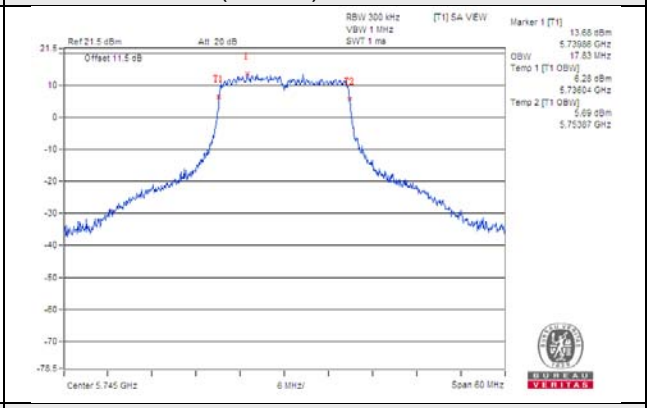
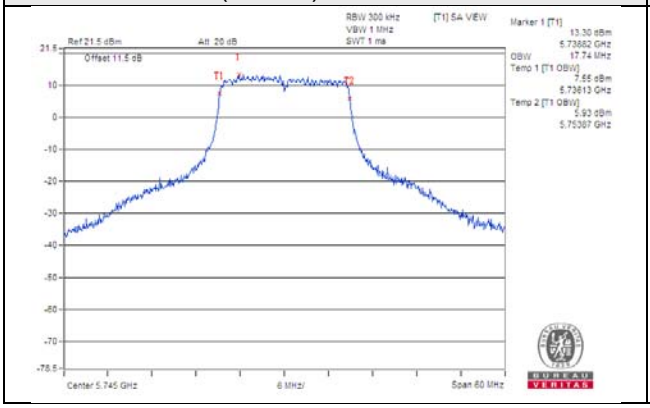
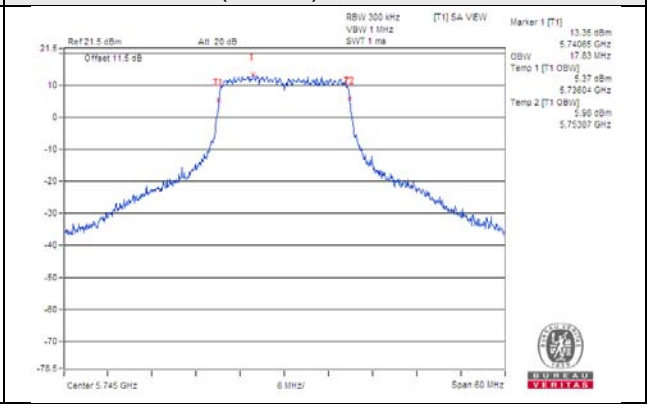
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	76.35	76.52	-	-
155	5775	-	-	75.48	75.48

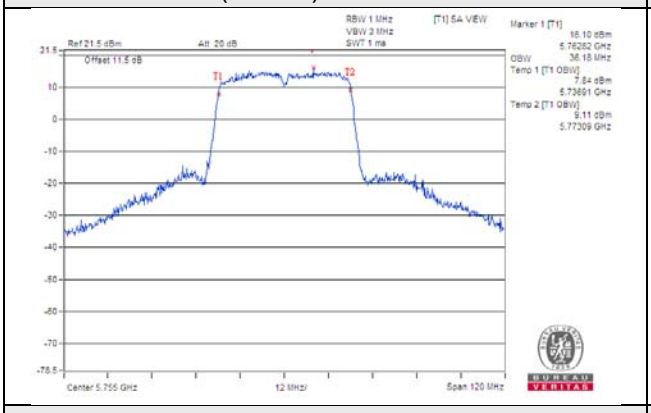
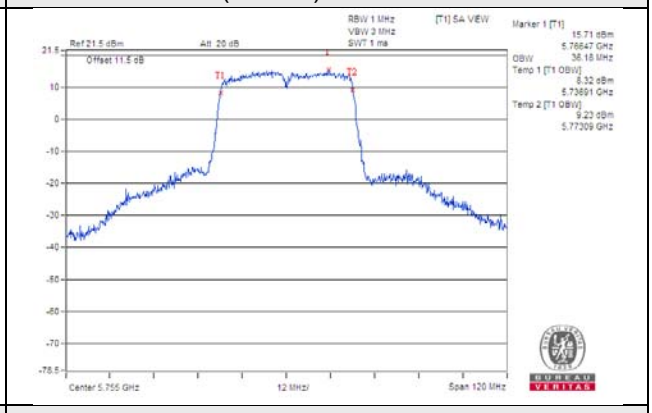
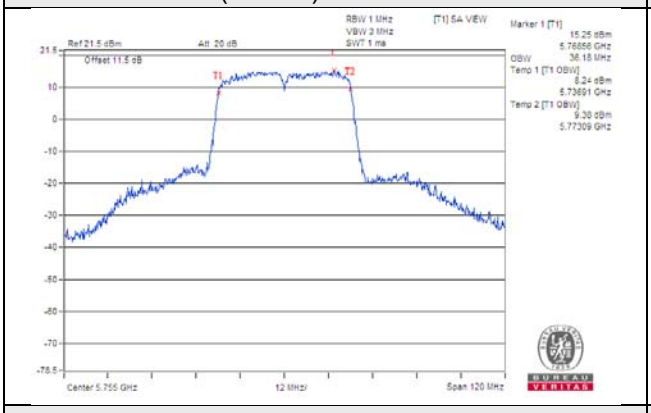
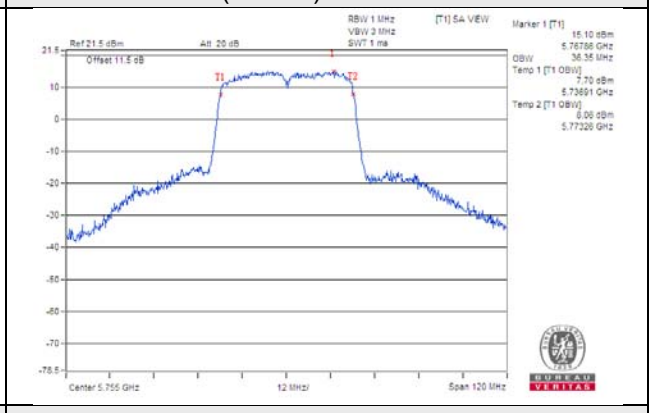
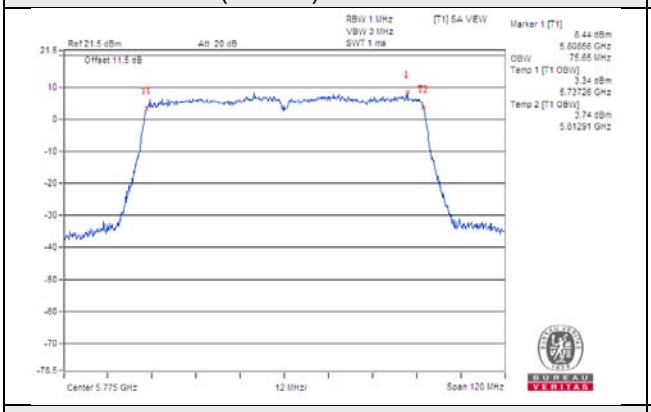
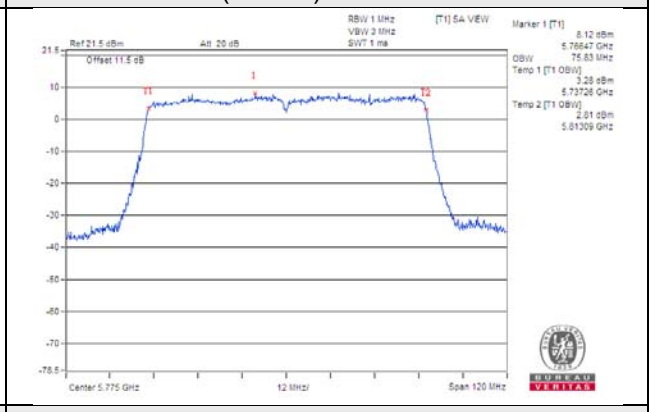
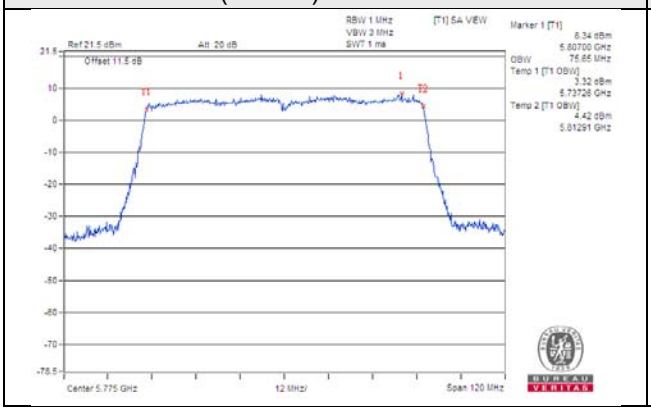
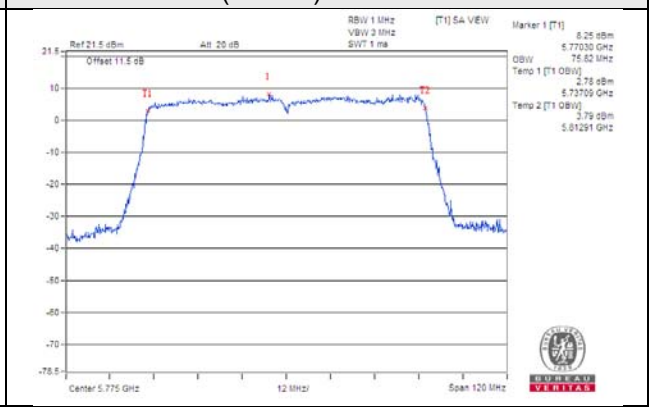
Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	
802.11ac (VHT80+VHT80)	
	

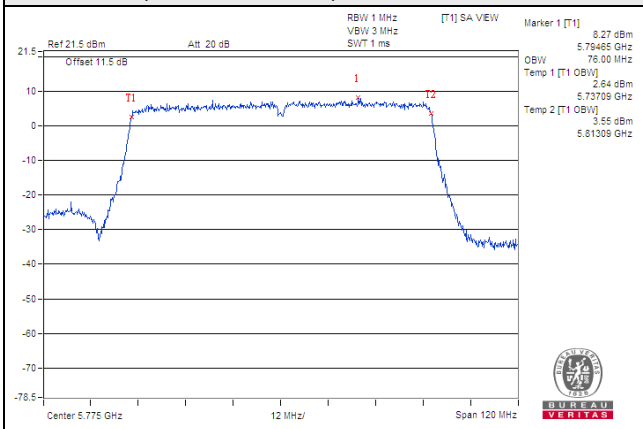
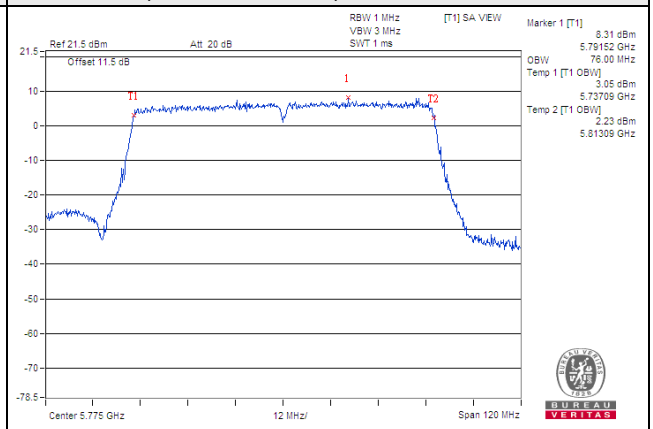
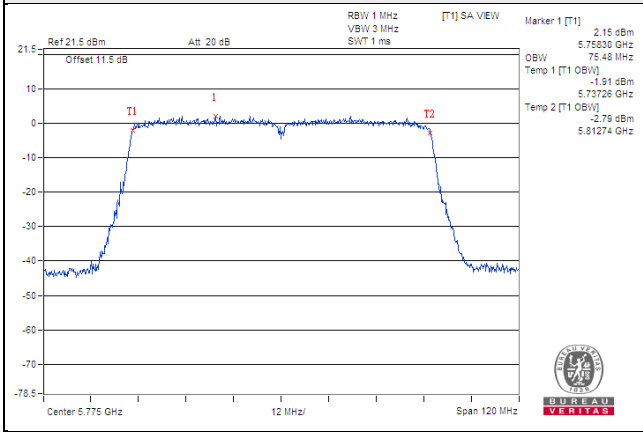
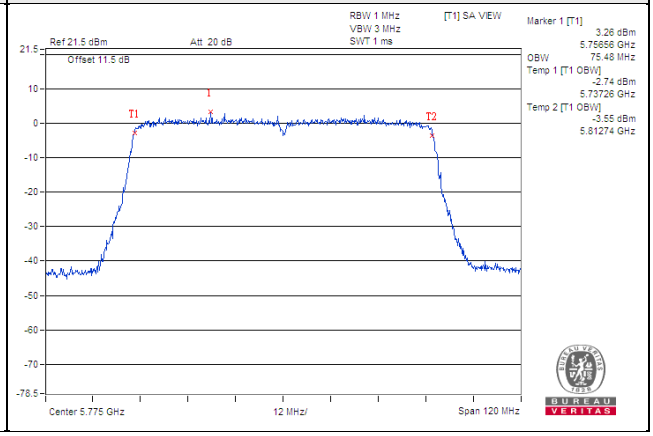
Spectrum Plot for near By DFS Band	
802.11a / Chain 0 / CH 48	802.11a / Chain 1 / CH 48
	
802.11a / Chain 2 / CH 48	802.11a / Chain 3 / CH 48
	
802.11ac (VHT20) / Chain 0 / CH 48	802.11ac (VHT20) / Chain 1 / CH 48
	
802.11ac (VHT20) / Chain 2 / CH 48	802.11ac (VHT20) / Chain 3 / CH 48
	

Spectrum Plot for near By DFS Band	
802.11ac (VHT40) / Chain 0 / CH 46	802.11ac (VHT40) / Chain 1 / CH 46
	
802.11ac (VHT40) / Chain 2 / CH 46	802.11ac (VHT40) / Chain 3 / CH 46
	
802.11ac (VHT80) / Chain 0 / CH 42	802.11ac (VHT80) / Chain 1 / CH 42
	
802.11ac (VHT80) / Chain 2 / CH 42	802.11ac (VHT80) / Chain 3 / CH 42
	

Spectrum Plot for near By DFS Band	
802.11ac (VHT80+VHT80) / Chain 0 / CH 42+58	802.11ac (VHT80+VHT80) / Chain 1 / CH 42+58
	
802.11ac (VHT80+VHT80) / Chain 0 / CH 42+155	802.11ac (VHT80+VHT80) / Chain 1 / CH 42+155
	

Spectrum Plot for near By DFS Band	
802.11a / Chain 0 / CH 149	802.11a / Chain 1 / CH 149
	
802.11a / Chain 2 / CH 149	802.11a / Chain 3 / CH 149
	
802.11ac (VHT20) / Chain 0 / CH 149	802.11ac (VHT20) / Chain 1 / CH 149
	
802.11ac (VHT20) / Chain 2 / CH 149	802.11ac (VHT20) / Chain 3 / CH 149
	

Spectrum Plot for near By DFS Band	
802.11ac (VHT40) / Chain 0 / CH 151	802.11ac (VHT40) / Chain 1 / CH 151
	
802.11ac (VHT40) / Chain 2 / CH 151	802.11ac (VHT40) / Chain 3 / CH 151
	
802.11ac (VHT80) / Chain 0 / CH 155	802.11ac (VHT80) / Chain 1 / CH 155
	
802.11ac (VHT80) / Chain 2 / CH 155	802.11ac (VHT80) / Chain 3 / CH 155
	

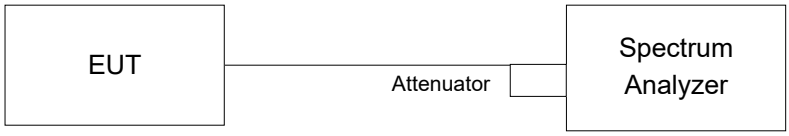
Spectrum Plot for near By DFS Band	
802.11ac (VHT80+VHT80) / Chain 2 / CH 138+155	802.11ac (VHT80+VHT80) / Chain 3 / CH 138+155
	
802.11ac (VHT80+VHT80) / Chain 2 / CH 42+155	802.11ac (VHT80+VHT80) / Chain 3 / CH 42+155
	

4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

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

Duty cycle of test signal is > 98%

Using method SA-1

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

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

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

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

e. Record the max value

Duty cycle of test signal is < 98%

Using method SA-2

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

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

c. Set Channel power measure = 1MHz

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

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

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

For U-NII-3 band:

Duty cycle of test signal is > 98%

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

b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS

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

d. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300kHz)

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

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

g. Record the max value

Duty cycle of test signal is < 98%

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

b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS

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

d. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz / 300 kHz)

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

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

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

Same as 4.3.6.

4.5.7 Test Results

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

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	-2.01	-1.98	-2.01	-1.91	0.16	4.20	13.53	Pass
40	5200	-2.07	-1.96	-2.23	-2.01	0.16	4.11	13.53	Pass
48	5240	-1.90	-1.99	-1.89	-1.95	0.16	4.25	13.53	Pass
52	5260	1.18	1.09	1.17	1.07	0.16	7.31	7.53	Pass
60	5300	1.08	0.97	1.06	1.17	0.16	7.25	7.53	Pass
64	5320	0.90	1.06	1.06	1.12	0.16	7.21	7.53	Pass
100	5500	1.24	1.27	1.25	1.31	0.16	7.45	7.74	Pass
116	5580	1.21	1.21	1.14	1.33	0.16	7.40	7.74	Pass
140	5700	1.29	1.30	1.33	1.36	0.16	7.50	7.74	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. 5180-5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power density limit shall be reduced to 17 - (9.47 - 6) = 13.53dBm.
3. 5260-5320MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power density limit shall be reduced to 11 - (9.47 - 6) = 7.53dBm.
4. 5500-5700MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.26dBi > 6dBi, so the power density limit shall be reduced to 11 - (9.26 - 6) = 7.74dBm.
5. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
36	5180	-2.03	-1.99	-1.93	-2.04	4.02	13.53	Pass
40	5200	-1.64	-1.56	-1.57	-1.52	4.45	13.53	Pass
48	5240	-1.52	-1.51	-1.52	-1.49	4.51	13.53	Pass
52	5260	1.30	1.30	1.35	1.29	7.33	7.53	Pass
60	5300	1.30	1.41	1.34	1.29	7.36	7.53	Pass
64	5320	1.33	1.24	1.22	1.27	7.29	7.53	Pass
100	5500	1.67	1.62	1.64	1.61	7.66	7.74	Pass
116	5580	1.51	1.54	1.54	1.60	7.57	7.74	Pass
140	5700	1.56	1.59	1.56	1.61	7.60	7.74	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. 5180-5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power density limit shall be reduced to 17 - (9.47 - 6) = 13.53dBm.
3. 5260-5320MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power density limit shall be reduced to 11 - (9.47 - 6) = 7.53dBm.
4. 5500-5700MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.26dBi > 6dBi, so the power density limit shall be reduced to 11 - (9.26 - 6) = 7.74dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	-4.80	-4.72	-4.76	-4.70	0.13	1.41	13.53	Pass
46	5230	-4.94	-4.99	-4.85	-4.77	0.13	1.27	13.53	Pass
54	5270	1.13	1.16	1.20	1.10	0.13	7.30	7.53	Pass
62	5310	1.24	1.16	1.14	1.06	0.13	7.30	7.53	Pass
102	5510	1.37	1.27	1.29	1.33	0.13	7.47	7.74	Pass
110	5550	1.33	1.37	1.32	1.39	0.13	7.51	7.74	Pass
134	5670	1.39	1.34	1.36	1.36	0.13	7.52	7.74	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. 5180-5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power density limit shall be reduced to 17 - (9.47 - 6) = 13.53dBm.
3. 5260-5320MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power density limit shall be reduced to 11 - (9.47 - 6) = 7.53dBm.
4. 5500-5700MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.26dBi > 6dBi, so the power density limit shall be reduced to 11 - (9.26 - 6) = 7.74dBm.
5. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-7.98	-7.92	-7.95	-7.96	0.24	-1.69	13.53	Pass
58	5290	-1.99	-1.97	-1.95	-1.90	0.24	4.31	7.53	Pass
106	5530	-3.83	-3.82	-3.78	-3.84	0.24	2.45	7.74	Pass
122	5610	-1.40	-1.22	-1.26	-1.28	0.24	4.97	7.74	Pass
138	5690 (For U-NII-2C)	-2.18	-2.26	-2.18	-2.21	0.24	4.06	7.74	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. 5180-5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power density limit shall be reduced to 17 - (9.47 - 6) = 13.53dBm.
3. 5260-5320MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.47dBi > 6dBi, so the power density limit shall be reduced to 11 - (9.47 - 6) = 7.53dBm.
4. 5500-5700MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.26dBi > 6dBi, so the power density limit shall be reduced to 11 - (9.26 - 6) = 7.74dBm.
5. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80+VHT80)

CH 42 + 58

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-8.00	-10.77	-	-	0.65	-5.51	16.49	Pass
58	5290	-	-	-7.91	-7.82	0.66	-4.19	10.59	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. 5210MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.51dBi > 6dBi, so the power density limit shall be reduced to 17 - (6.51 - 6) = 16.49dBm.
3. 5290MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.41dBi > 6dBi, so the power density limit shall be reduced to 11 - (6.41 - 6) = 10.59dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

CH 106 + 122

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
106	5530	-6.56	-5.01	-	-	0.66	-2.05	10.85	Pass
122	5610	-	-	-6.75	-4.45	0.66	-1.78	10.65	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. 5530MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.15dBi > 6dBi, so the power density limit shall be reduced to 11 - (6.15 - 6) = 10.85dBm.
3. 5610MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.35dBi > 6dBi, so the power density limit shall be reduced to 11 - (6.35 - 6) = 10.65dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

CH 138 + 155

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
138	5690 (For U-NII-2C)	-2.61	-2.92	-	-	0.66	0.90	10.85	Pass

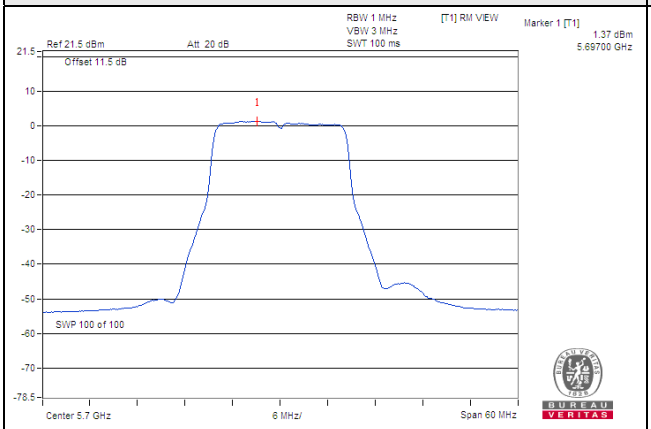
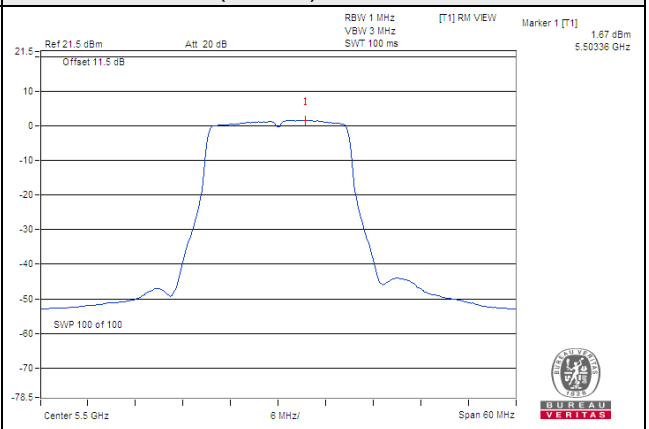
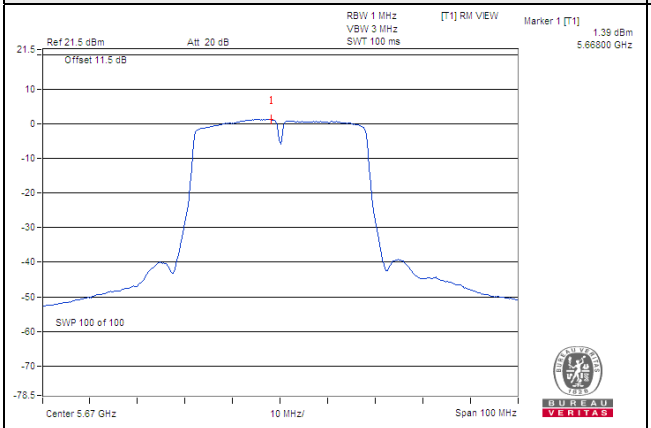
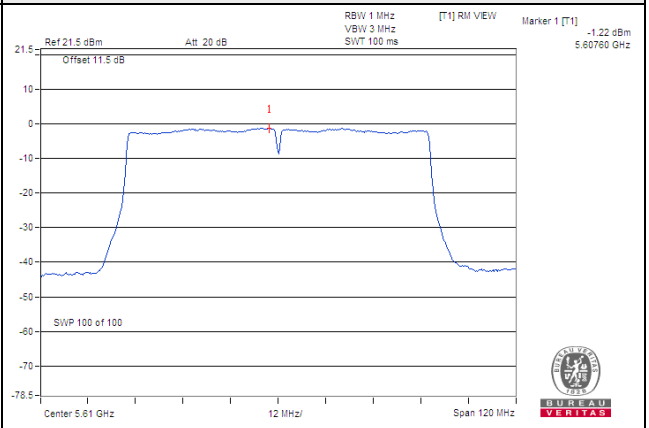
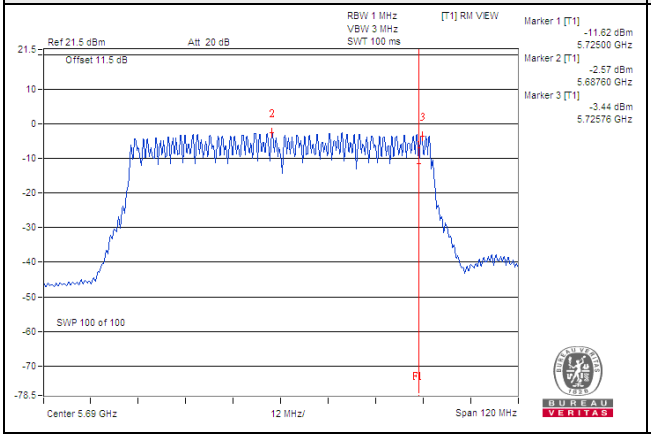
Note:
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. 5690MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.15dBi > 6dBi, so the power density limit shall be reduced to 11 - (6.15 - 6) = 10.85dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

CH 42 + 155

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-8.55	-8.13	-	-	0.65	-4.68	16.49	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. 5210MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.51dBi > 6dBi, so the power density limit shall be reduced to 17 - (6.51 - 6) = 16.49dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a / Chain 3 / CH 140	802.11ac (VHT20) / Chain 0 / CH 100
	
802.11ac (VHT40) / Chain 0 / CH 134	802.11ac (VHT80) / Chain 1 / CH 122
	
802.11ac (VHT80+VHT80) / Chain 0 / CH 138	
	

For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	0.84	3.06	6.02	0.16	9.24	26.49	Pass
	157	5785	0.91	3.13	6.02	0.16	9.31	26.49	Pass
	165	5825	0.91	3.13	6.02	0.16	9.31	26.49	Pass
1	149	5745	0.68	2.90	6.02	0.16	9.08	26.49	Pass
	157	5785	0.98	3.20	6.02	0.16	9.38	26.49	Pass
	165	5825	0.97	3.19	6.02	0.16	9.37	26.49	Pass
2	149	5745	0.79	3.01	6.02	0.16	9.19	26.49	Pass
	157	5785	0.80	3.02	6.02	0.16	9.20	26.49	Pass
	165	5825	0.90	3.12	6.02	0.16	9.30	26.49	Pass
3	149	5745	0.72	2.94	6.02	0.16	9.12	26.49	Pass
	157	5785	0.92	3.14	6.02	0.16	9.32	26.49	Pass
	165	5825	0.86	3.08	6.02	0.16	9.26	26.49	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add 10 log (N_{ANT}) dB.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.51dBi > 6dBi, so the power density limit shall be reduced to 30 - (9.51 - 6) = 26.49dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT20)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=4) dB	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	149	5745	0.20	2.42	6.02	8.44	26.49	Pass
	157	5785	0.56	2.78	6.02	8.80	26.49	Pass
	165	5825	0.48	2.70	6.02	8.72	26.49	Pass
1	149	5745	0.26	2.48	6.02	8.50	26.49	Pass
	157	5785	0.35	2.57	6.02	8.59	26.49	Pass
	165	5825	0.39	2.61	6.02	8.63	26.49	Pass
2	149	5745	0.24	2.46	6.02	8.48	26.49	Pass
	157	5785	0.39	2.61	6.02	8.63	26.49	Pass
	165	5825	0.36	2.58	6.02	8.60	26.49	Pass
3	149	5745	0.18	2.40	6.02	8.42	26.49	Pass
	157	5785	0.35	2.57	6.02	8.59	26.49	Pass
	165	5825	0.47	2.69	6.02	8.71	26.49	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add 10 log (N_{ANT}) dB.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.51dBi > 6dBi, so the power density limit shall be reduced to 30 - (9.51 - 6) = 26.49dBm.

802.11ac (VHT40)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-3.76	-1.54	6.02	0.13	4.61	26.49	Pass
	159	5795	-3.42	-1.20	6.02	0.13	4.95	26.49	Pass
1	151	5755	-3.84	-1.62	6.02	0.13	4.53	26.49	Pass
	159	5795	-3.67	-1.45	6.02	0.13	4.70	26.49	Pass
2	151	5755	-3.75	-1.53	6.02	0.13	4.62	26.49	Pass
	159	5795	-3.53	-1.31	6.02	0.13	4.84	26.49	Pass
3	151	5755	-3.79	-1.57	6.02	0.13	4.58	26.49	Pass
	159	5795	-3.57	-1.35	6.02	0.13	4.80	26.49	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add 10 log (N_{ANT}) dB.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.51dBi > 6dBi, so the power density limit shall be reduced to 30 - (9.51 - 6) = 26.49dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	138	5690 (For U-NII-3)	-11.66	-9.44	6.02	0.24	-3.18	26.49	Pass
	155	5775	-11.52	-9.30	6.02	0.24	-3.04	26.49	Pass
1	138	5690 (For U-NII-3)	-11.64	-9.42	6.02	0.24	-3.16	26.49	Pass
	155	5775	-11.49	-9.27	6.02	0.24	-3.01	26.49	Pass
2	138	5690 (For U-NII-3)	-11.71	-9.49	6.02	0.24	-3.23	26.49	Pass
	155	5775	-11.39	-9.17	6.02	0.24	-2.91	26.49	Pass
3	138	5690 (For U-NII-3)	-11.64	-9.42	6.02	0.24	-3.16	26.49	Pass
	155	5775	-11.40	-9.18	6.02	0.24	-2.92	26.49	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add 10 log (N_{ANT}) dB.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/4$] = 9.51dBi > 6dBi, so the power density limit shall be reduced to 30 - (9.51 - 6) = 26.49dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80+VHT80)

CH 138 + 155

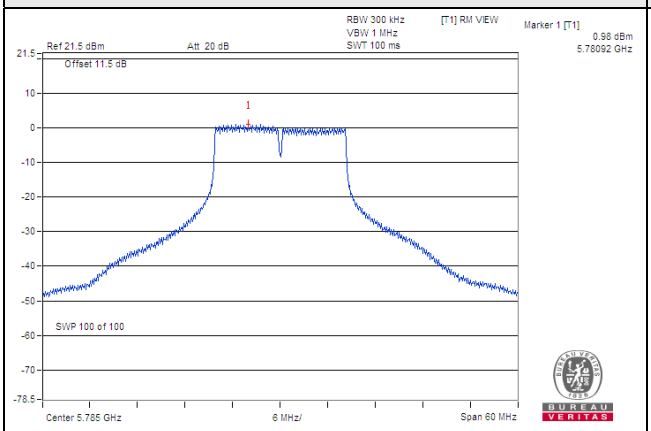
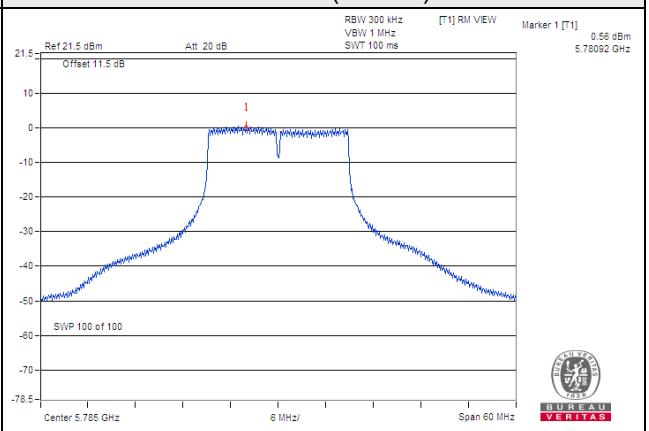
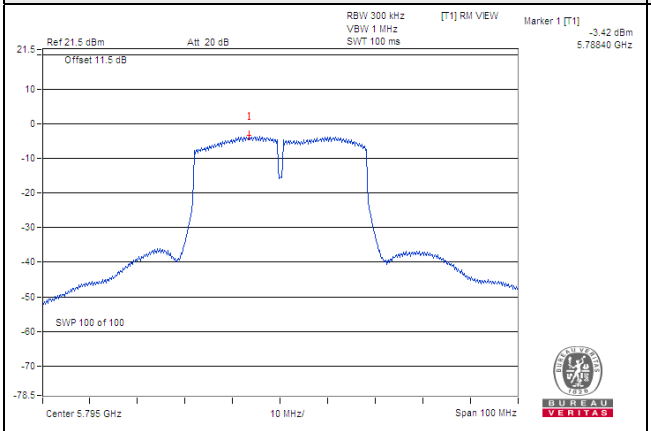
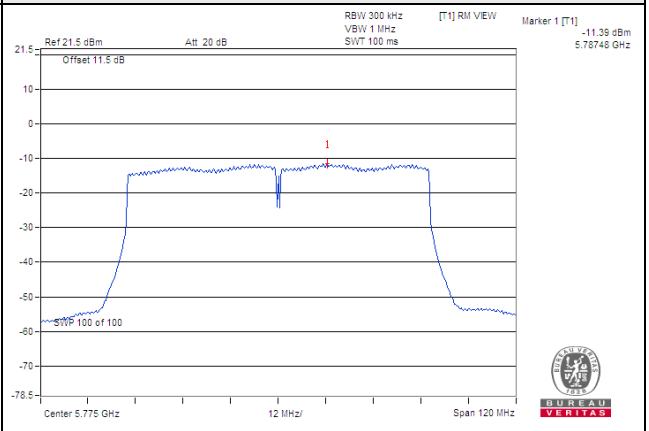
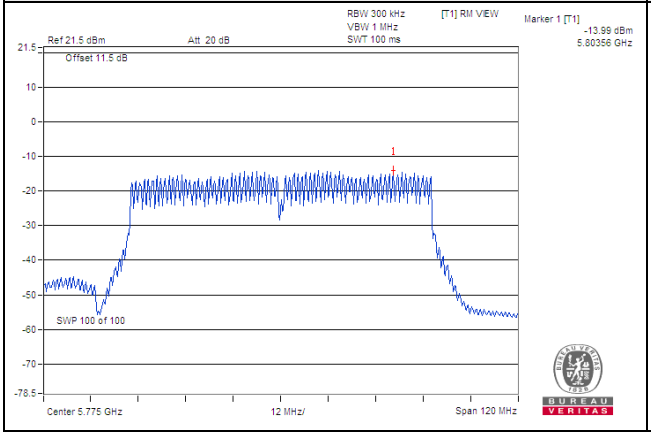
TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	138	5690 (For U-NII-3)	-16.49	-14.27	3.01	0.66	-10.60	29.45	Pass
1	138	5690 (For U-NII-3)	-16.59	-14.37	3.01	0.66	-10.70	29.45	Pass
2	155	5775	-16.50	-14.28	3.01	0.29	-10.98	29.55	Pass
3	155	5775	-13.99	-11.77	3.01	0.29	-8.47	29.55	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add 10 log (N_{ANT}) dB.
2. 5690MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.55dBi > 6dBi, so the power density limit shall be reduced to 30 - (6.55 - 6) = 29.45dBm.
3. 5775MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.45dBi > 6dBi, so the power density limit shall be reduced to 30 - (6.45 - 6) = 29.55dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

CH 42 + 155

TX chain	Chan.	Freq. (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
2	155	5775	-22.21	-19.99	3.01	0.29	-16.69	29.55	Pass
3	155	5775	-20.91	-18.69	3.01	0.29	-15.39	29.55	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add 10 log (N_{ANT}) dB.
2. 5775MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 6.45dBi > 6dBi, so the power density limit shall be reduced to 30 - (6.45 - 6) = 29.55dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

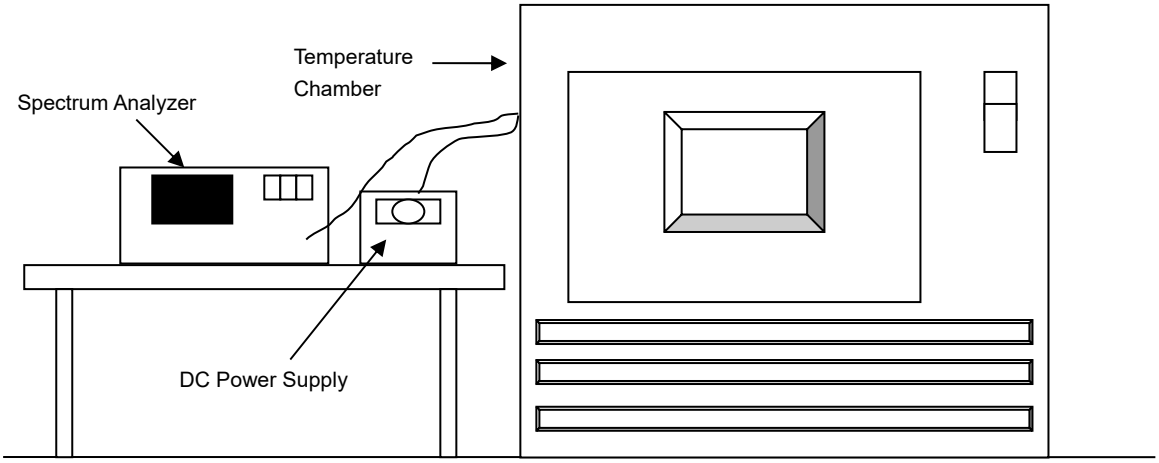
Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	
802.11ac (VHT80+VHT80)	
	

4.6 Frequency Stability

4.6.1 Limits of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 16, 2020	Sep. 15, 2021
Temperature & Humidity Chamber TERCHY	HRM-120RF	931022	Dec. 24, 2020	Dec. 23, 2021
Digital Multimeter Fluke	87-III	70360742	Jun. 23, 2020	Jun. 22, 2021
DC Power Supply TOPWARD	6306A	727263	NA	NA

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

4.6.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal 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 every 10 degrees reduction until the lowest temperature achieved.

f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
50	55.00	5179.9837	Pass	5179.9806	Pass	5179.9818	Pass	5179.9848	Pass
40	55.00	5179.9878	Pass	5179.9864	Pass	5179.9876	Pass	5179.9877	Pass
30	55.00	5180.0123	Pass	5180.013	Pass	5180.0105	Pass	5180.0102	Pass
20	55.00	5179.9897	Pass	5179.9897	Pass	5179.9875	Pass	5179.9874	Pass
10	55.00	5180.0226	Pass	5180.0249	Pass	5180.0233	Pass	5180.021	Pass
0	55.00	5180.0051	Pass	5180.0041	Pass	5180.0063	Pass	5180.0073	Pass
-10	55.00	5180.0155	Pass	5180.0162	Pass	5180.0158	Pass	5180.0129	Pass
-20	55.00	5180.0076	Pass	5180.0048	Pass	5180.0041	Pass	5180.0047	Pass

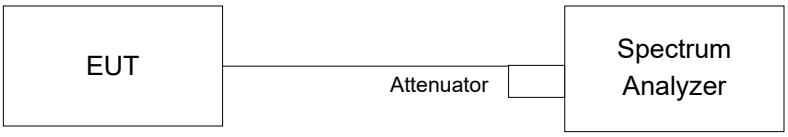
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	63.25	5179.9899	Pass	5179.9889	Pass	5179.9885	Pass	5179.9865	Pass
	55.00	5179.9897	Pass	5179.9897	Pass	5179.9875	Pass	5179.9874	Pass
	46.75	5179.9888	Pass	5179.9907	Pass	5179.9881	Pass	5179.9876	Pass

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

802.11a

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	16.37	16.37	16.35	16.36	0.50	Pass
157	5785	16.39	16.38	16.40	16.41	0.50	Pass
165	5825	16.40	16.40	16.41	16.41	0.50	Pass

802.11ac (VHT20)

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	17.58	17.59	17.59	17.57	0.50	Pass
157	5785	17.63	17.64	17.64	17.64	0.50	Pass
165	5825	17.64	17.63	17.64	17.62	0.50	Pass

802.11ac (VHT40)

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
151	5755	35.11	35.18	35.18	35.33	0.50	Pass
159	5795	35.17	35.18	35.13	35.15	0.50	Pass

802.11ac (VHT80)

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
138	5690 (For U-NII-3)	3.20	3.14	3.06	3.04	0.50	Pass
155	5775	75.92	75.74	75.88	75.83	0.50	Pass

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

802.11ac (VHT80+VHT80)

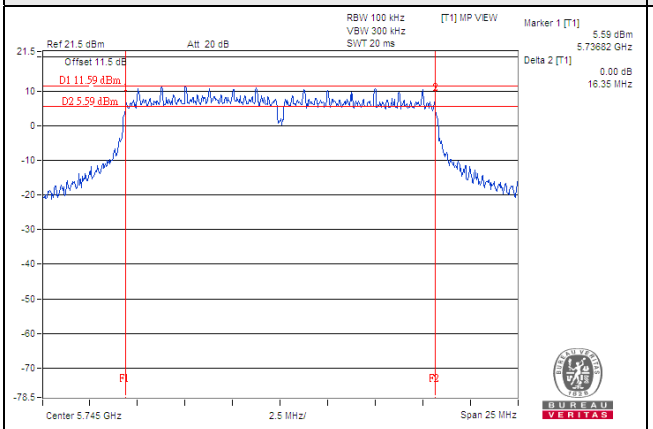
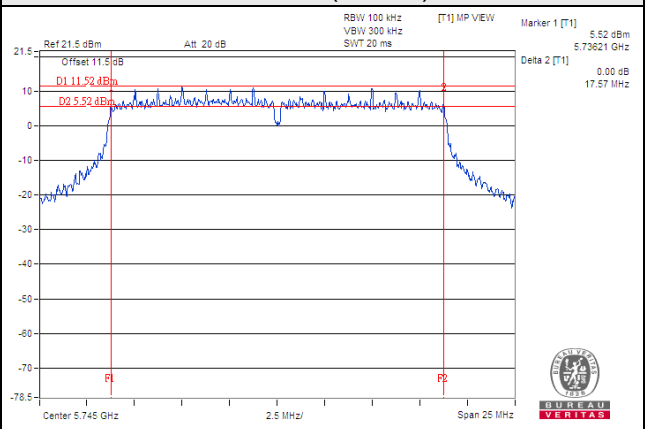
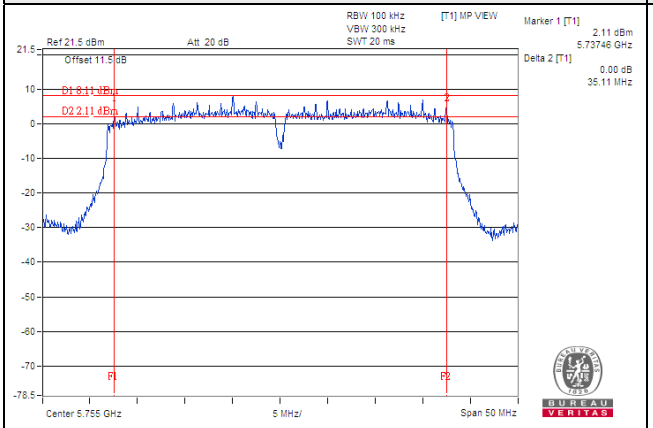
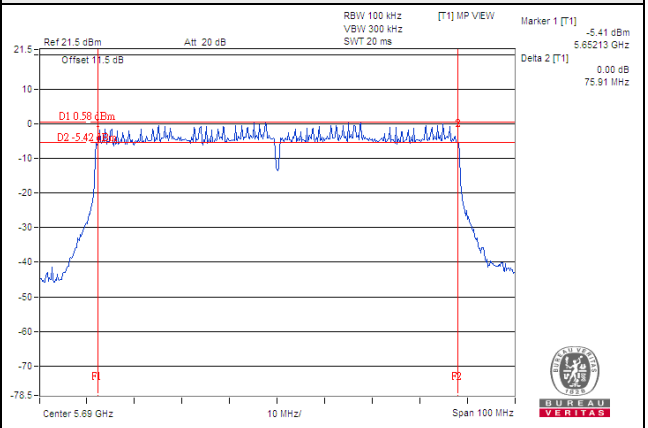
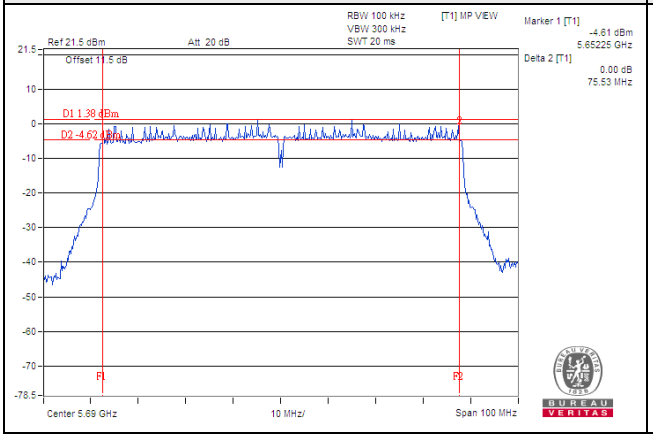
CH 138 + 155

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
138	5690 (For U-NII-3)	2.78	3.23	-	-	0.50	Pass
155	5775	-	-	75.90	75.94	0.50	Pass

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

CH 42 + 155

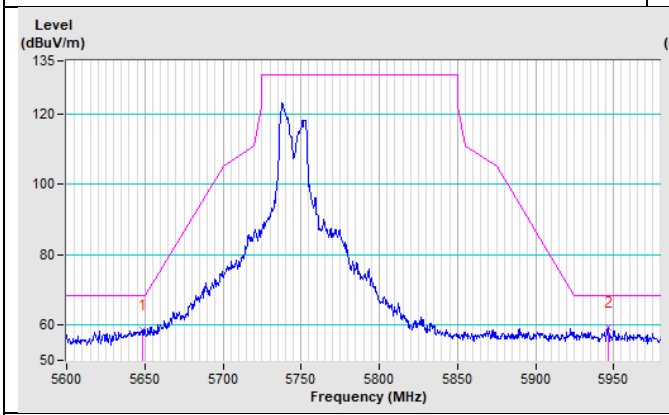
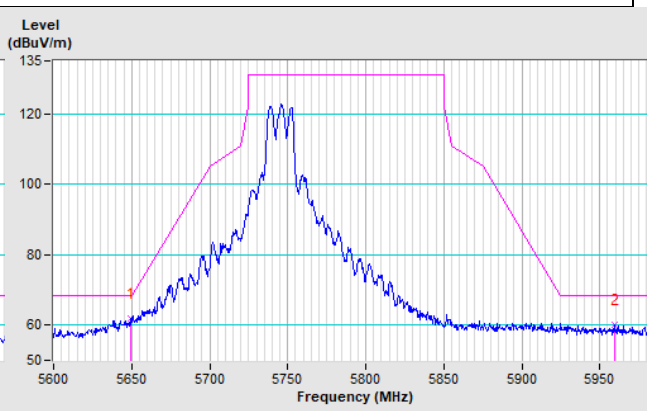
Chan.	Freq. (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	-	-	75.34	75.31	0.50	Pass

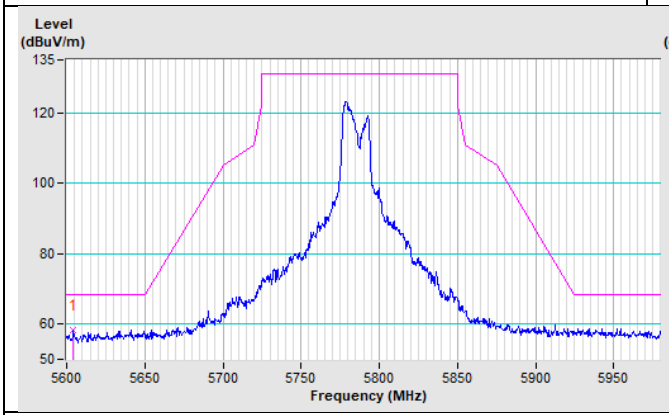
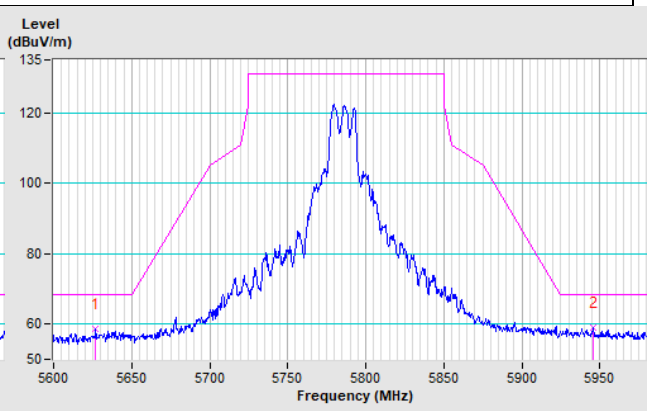
Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	
802.11ac (VHT80+VHT80)	
	

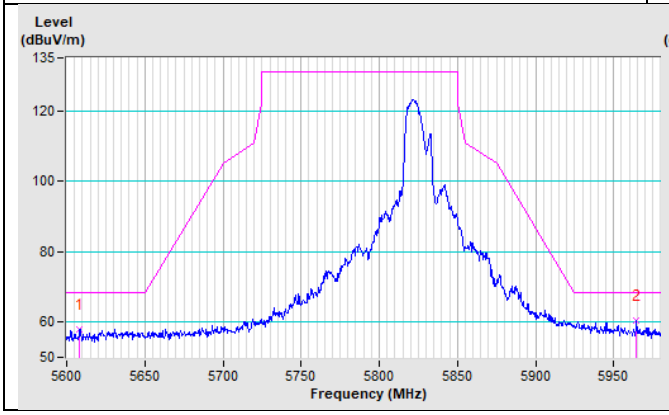
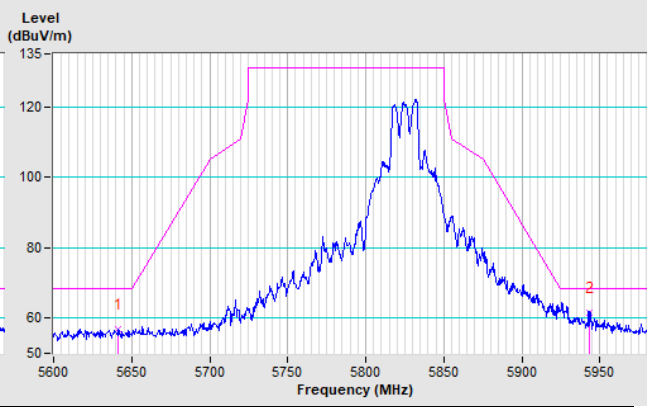
5 Pictures of Test Arrangements

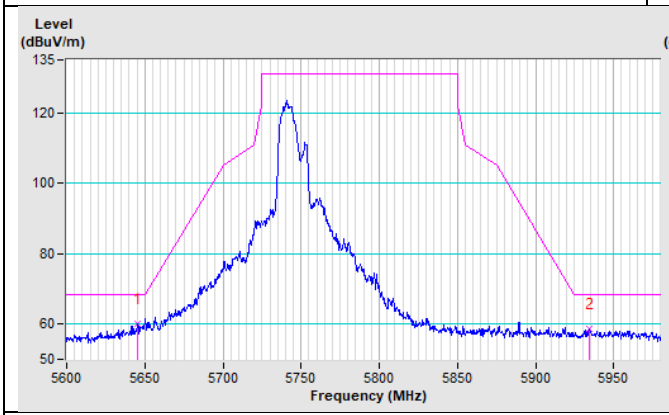
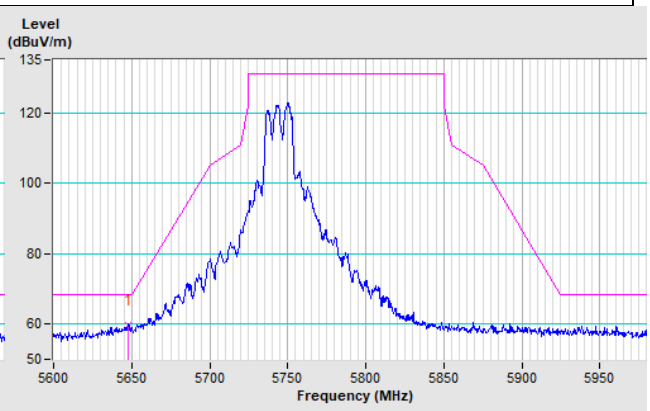
Please refer to the attached file (Test Setup Photo).

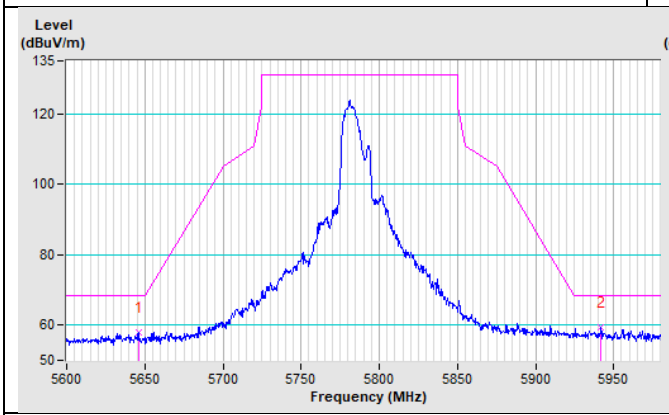
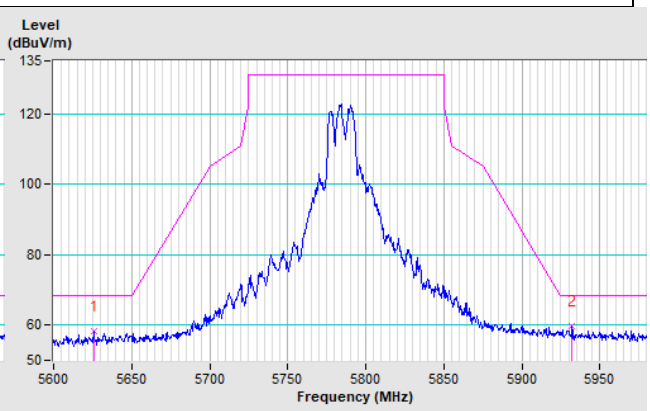
Annex A - Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

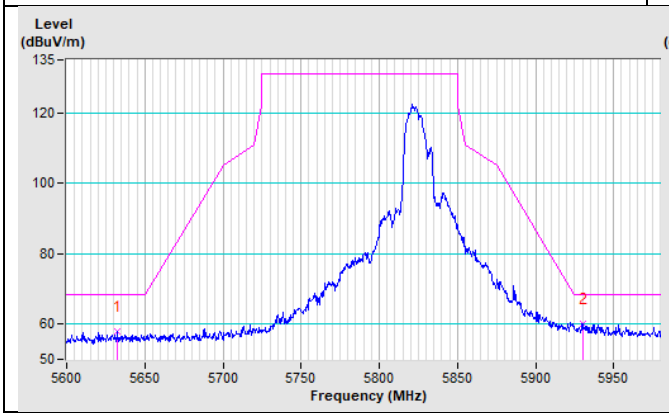
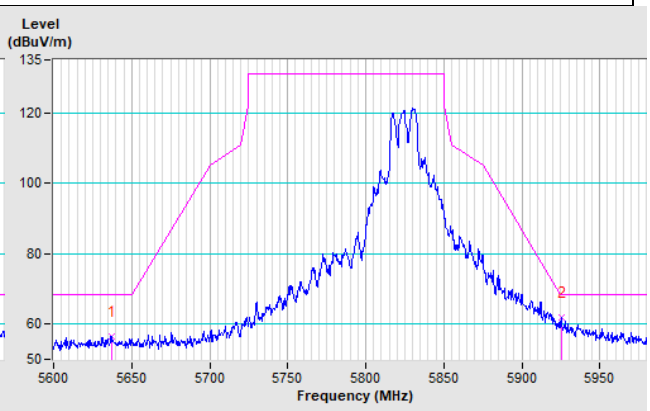
802.11a CH 149：5745 MHz	
Horizontal	Vertical
	

802.11a CH 157：5785 MHz	
Horizontal	Vertical
	

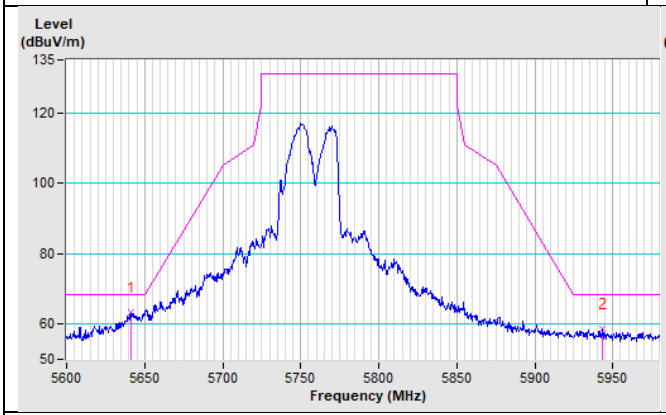
802.11a CH 165：5825 MHz	
Horizontal	Vertical
	

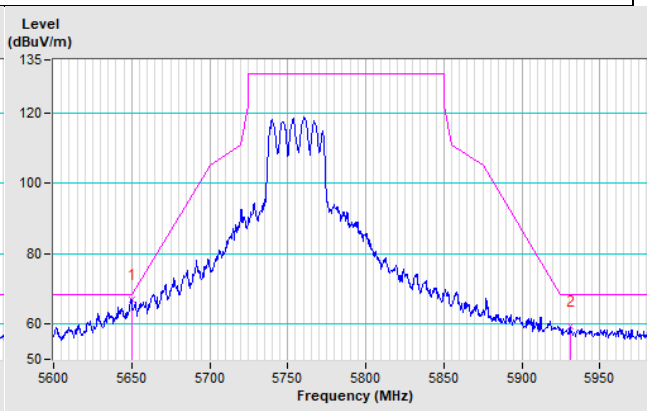
802.11ac (VHT20) CH 149：5745 MHz	
Horizontal	Vertical
	

802.11ac (VHT20) CH 157：5785 MHz	
Horizontal	Vertical
	

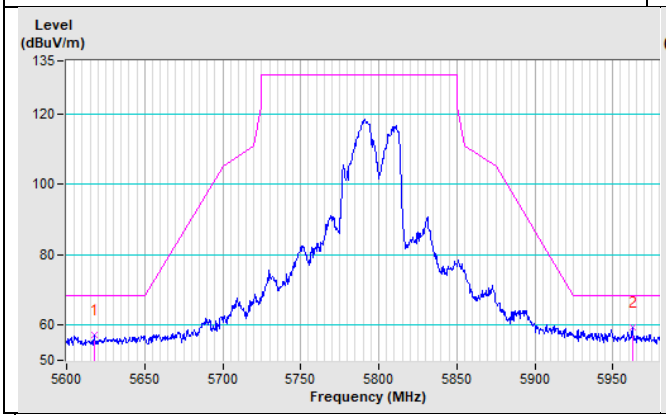
802.11ac (VHT20) CH 165：5825 MHz	
Horizontal	Vertical
	

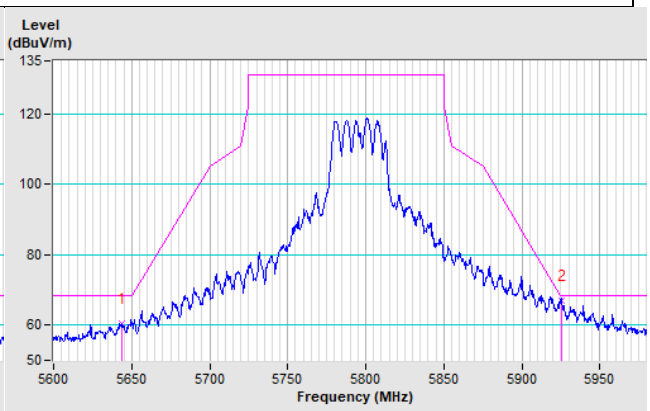
802.11ac (VHT40) CH 151：5755 MHz	
Horizontal	Vertical



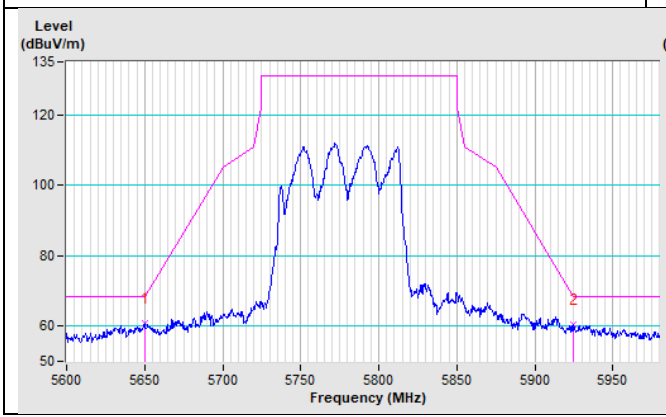


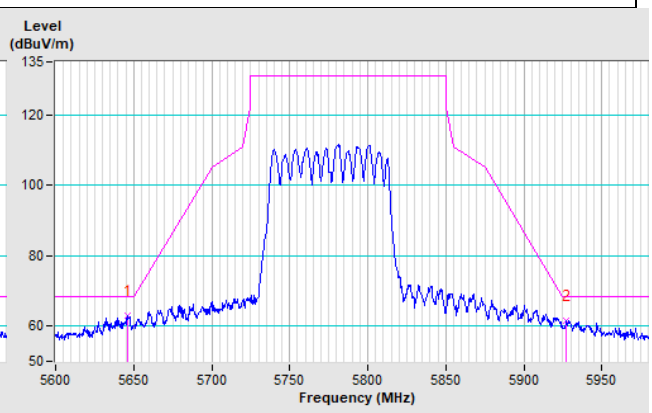
802.11ac (VHT40) CH 159：5795 MHz	
Horizontal	Vertical

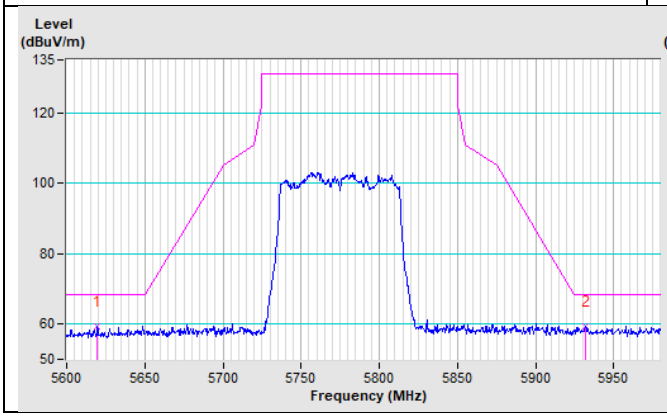
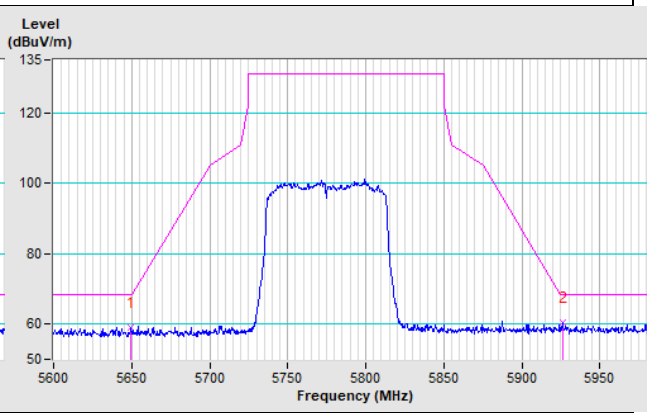




802.11ac (VHT80) CH 155：5775 MHz	
Horizontal	Vertical



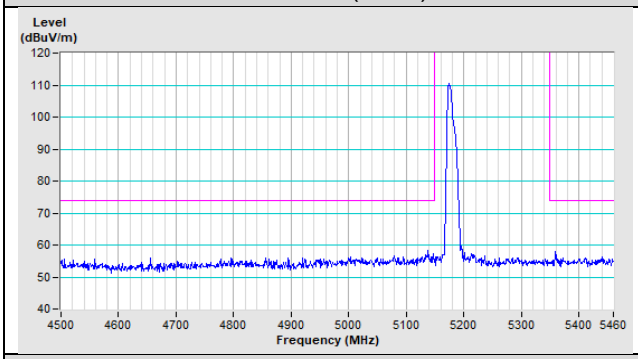


802.11ac (VHT80+VHT80) CH 42+155：5775 MHz	
Horizontal	Vertical
	

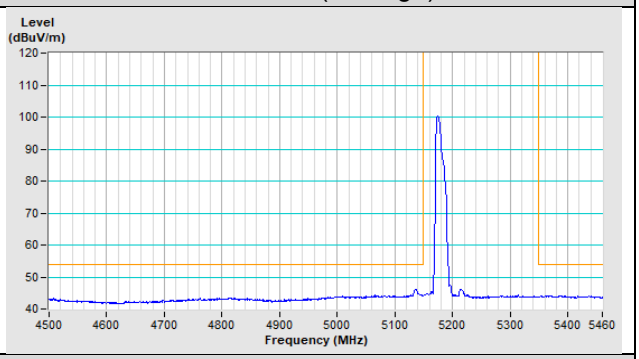
Annex B - Band Edge Measurement

802.11a Channel 36

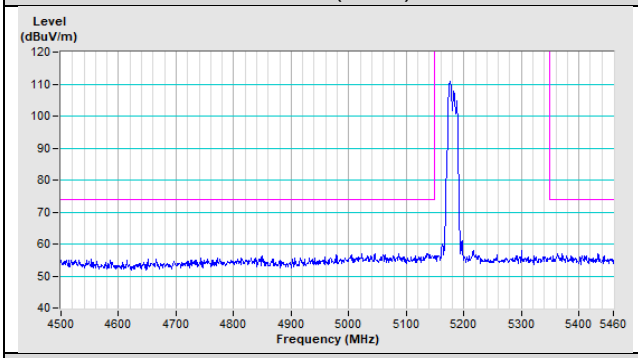
Horizontal (Peak)



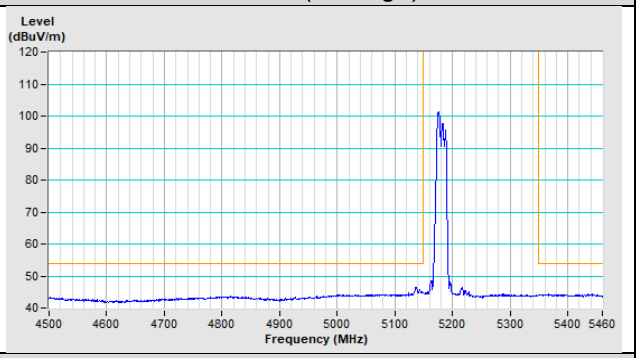
Horizontal (Average)



Vertical (Peak)

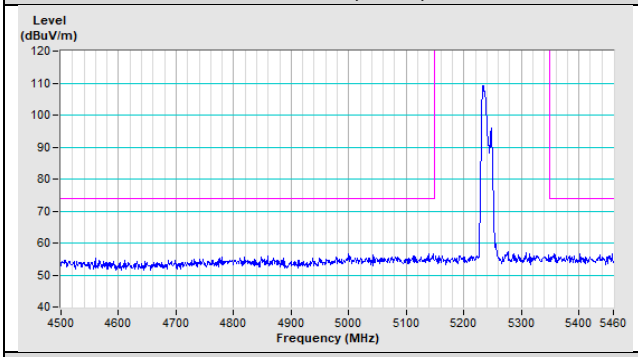


Vertical (Average)

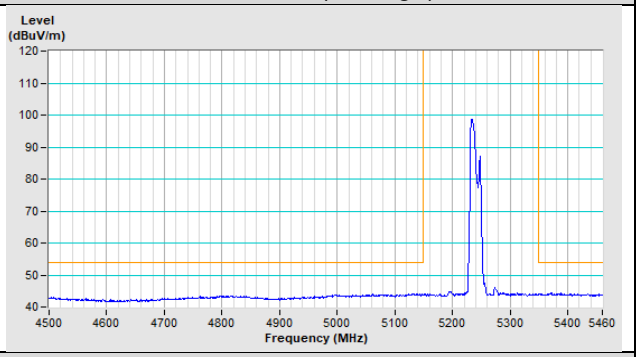


802.11a Channel 48

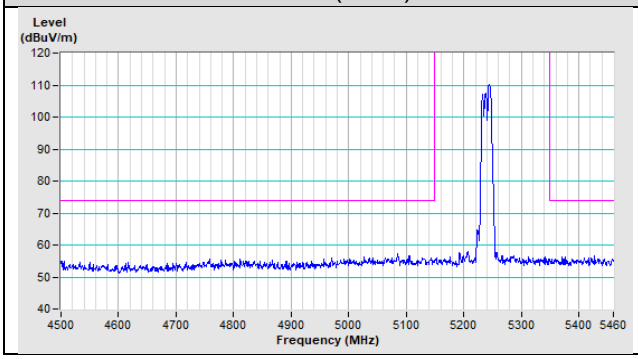
Horizontal (Peak)



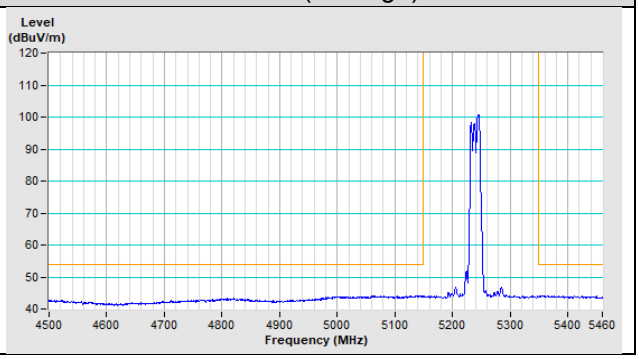
Horizontal (Average)

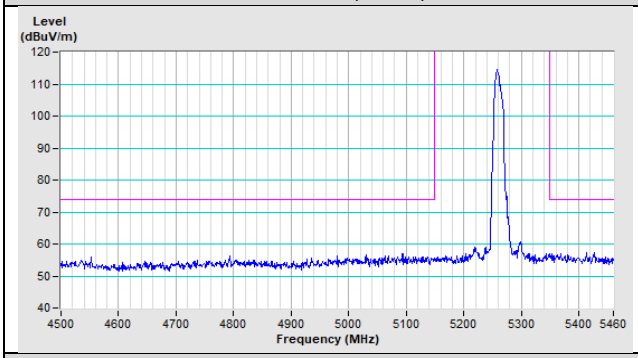
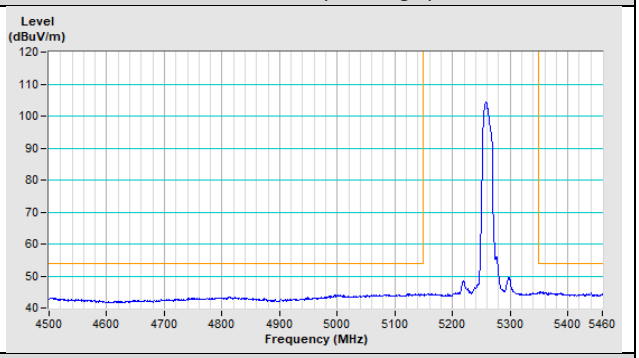
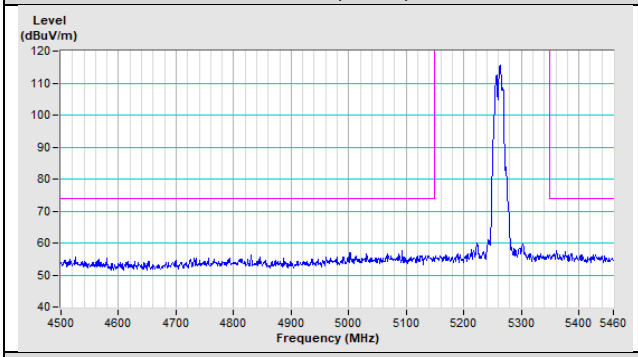
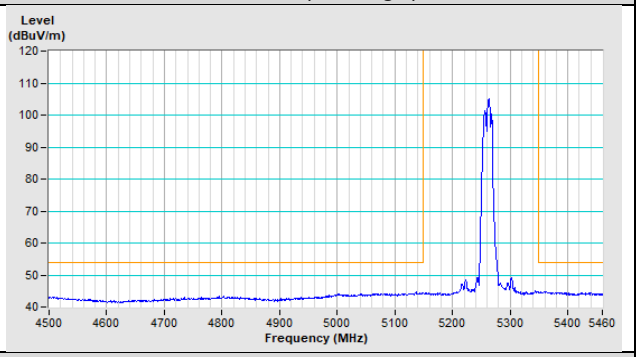
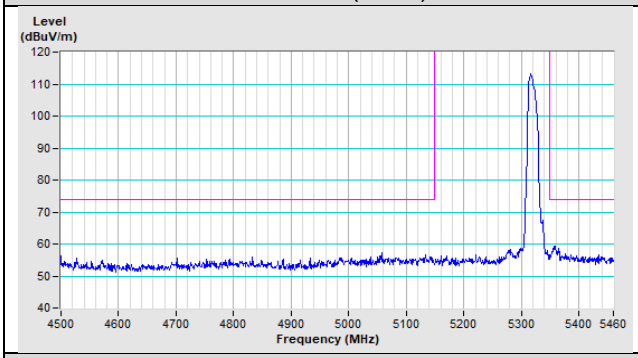
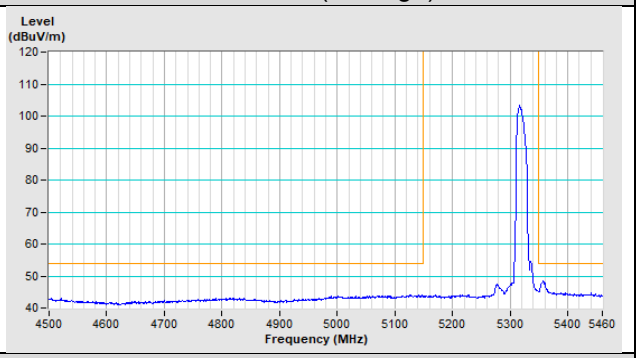
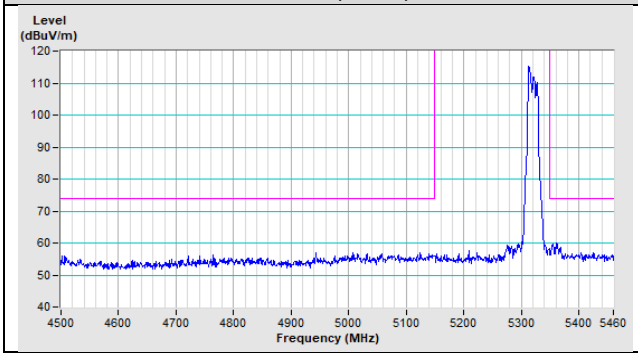
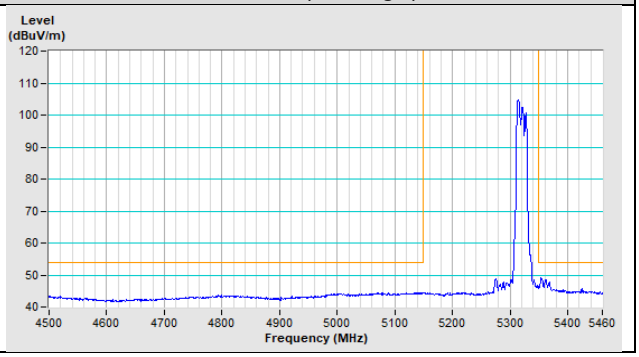


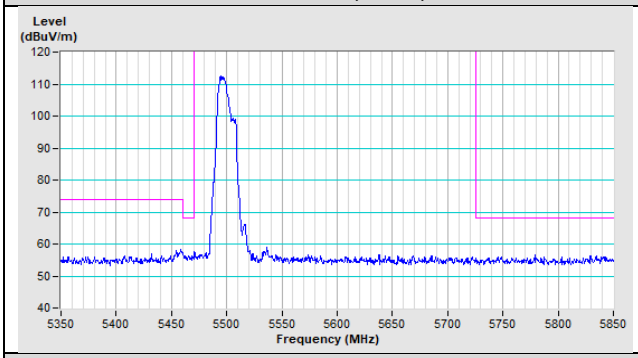
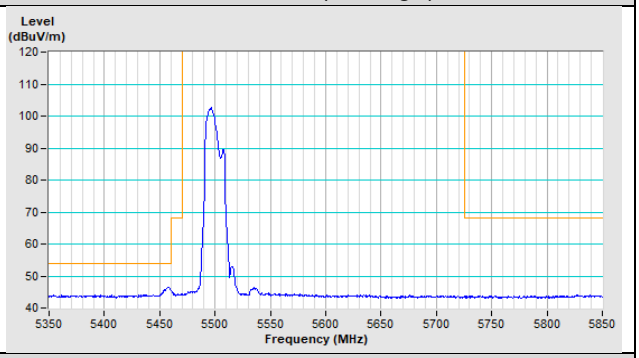
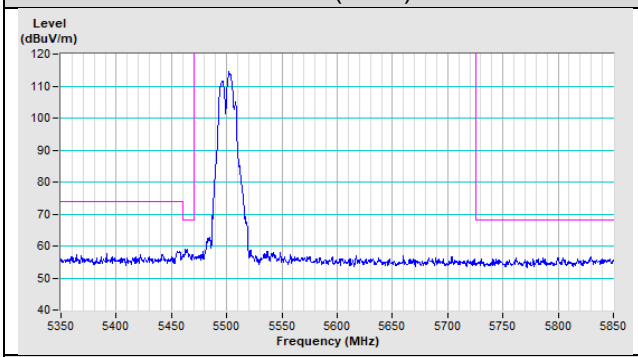
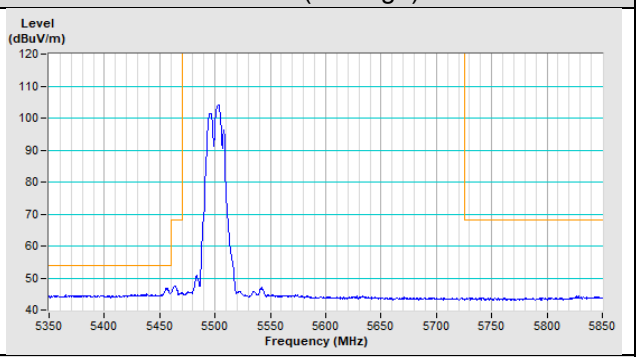
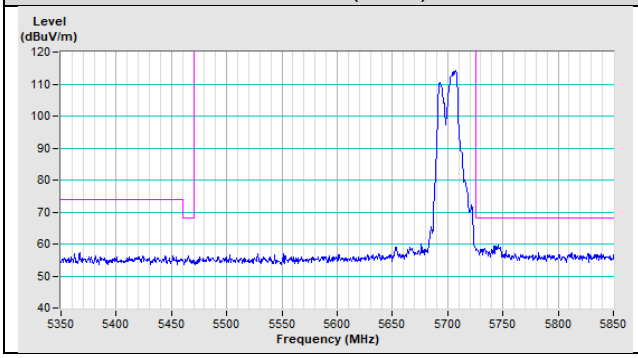
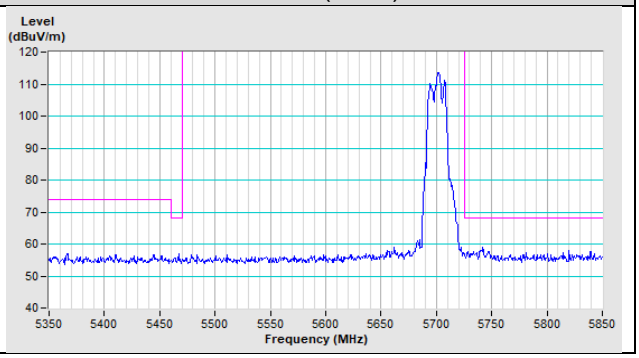
Vertical (Peak)

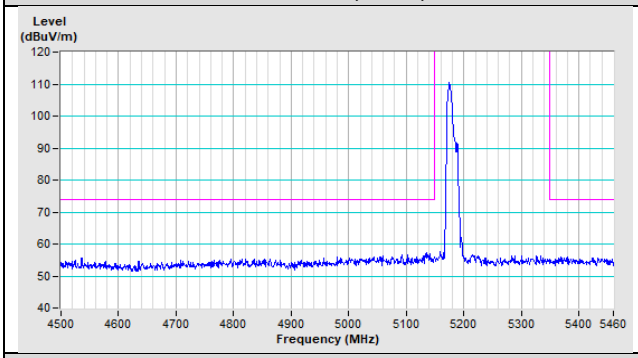
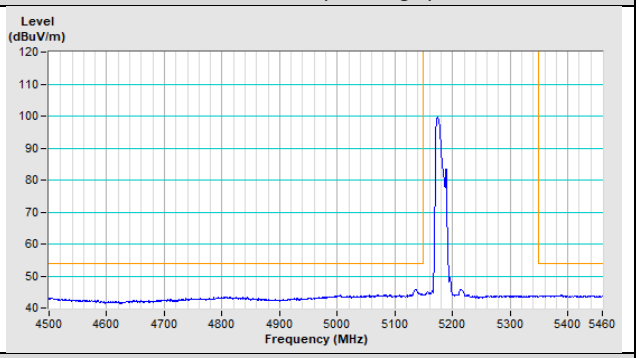
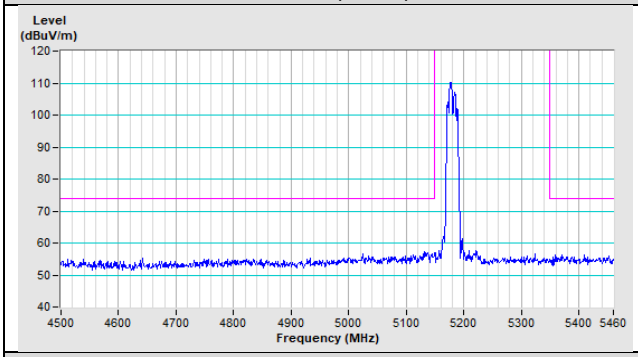
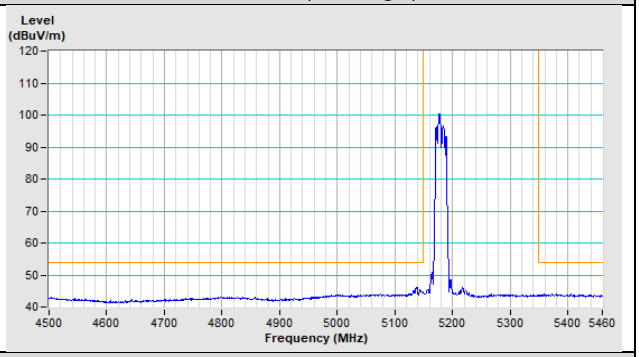
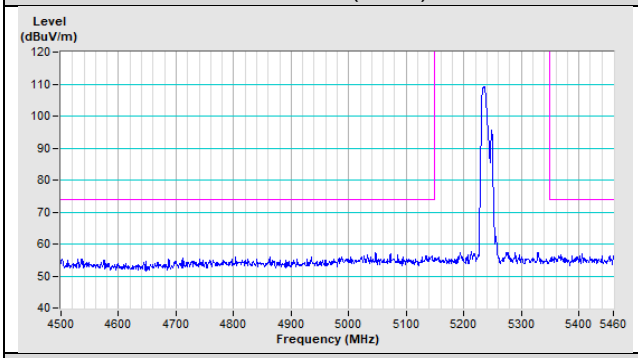
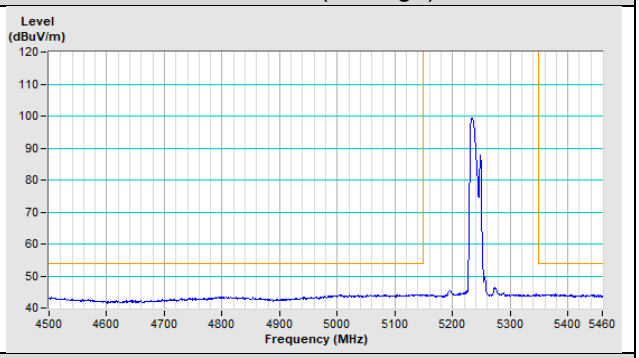
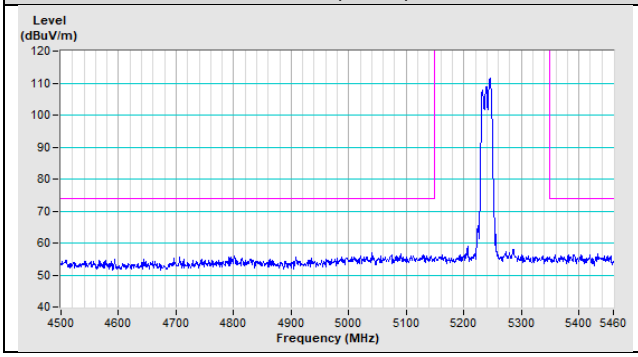
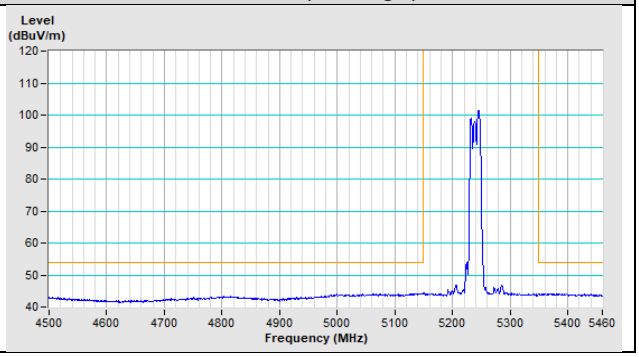


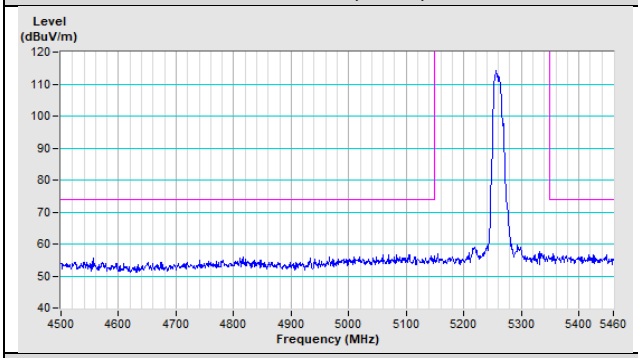
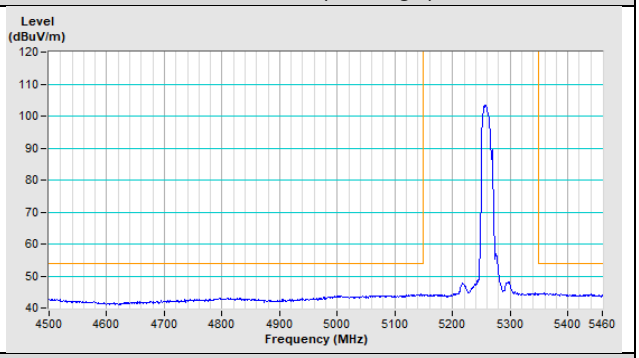
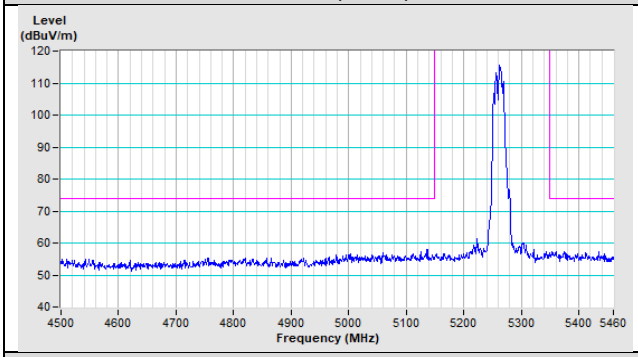
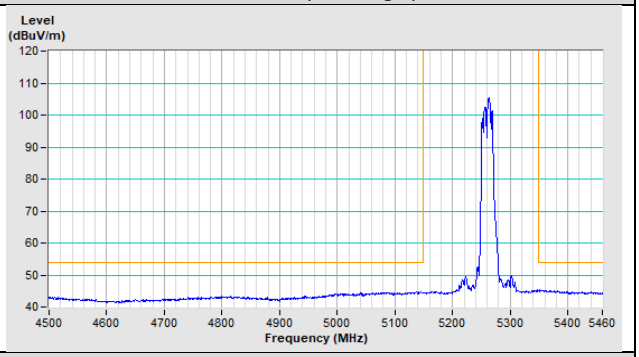
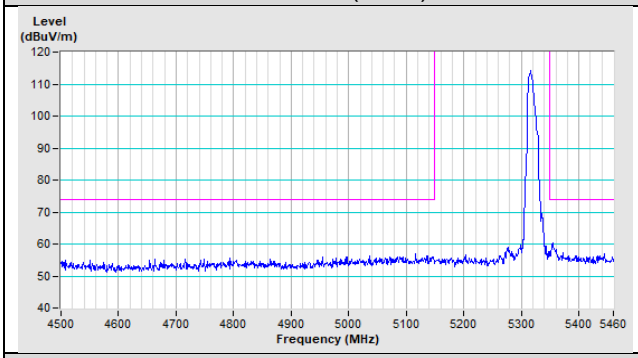
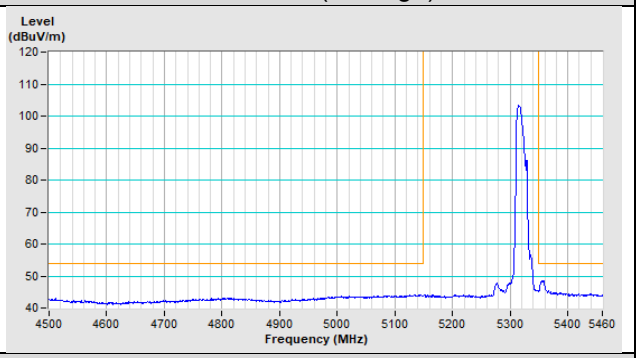
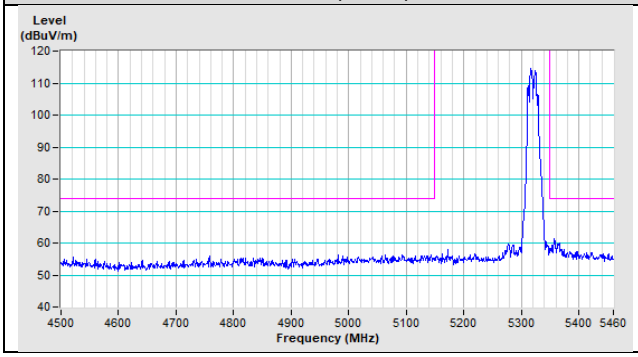
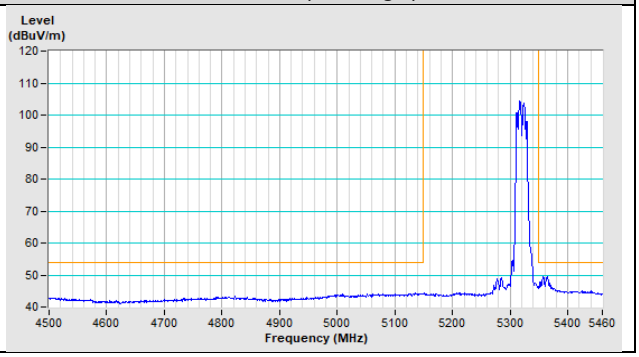
Vertical (Average)

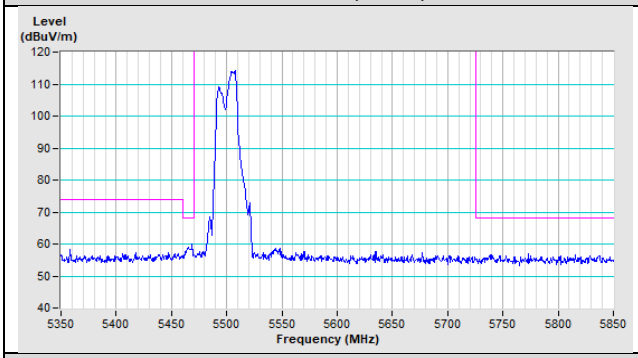
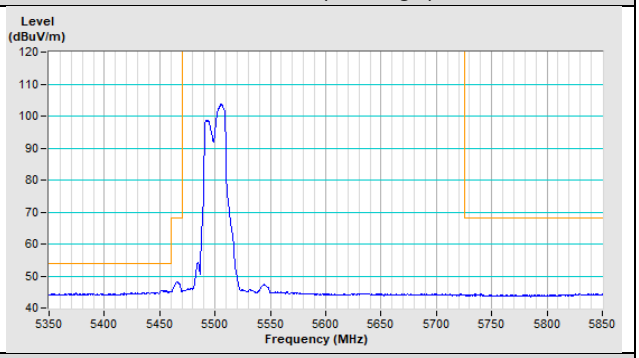
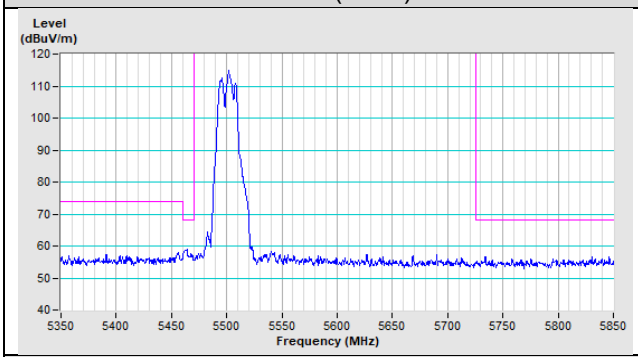
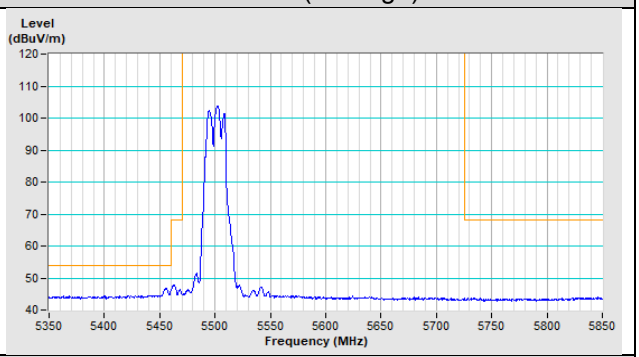
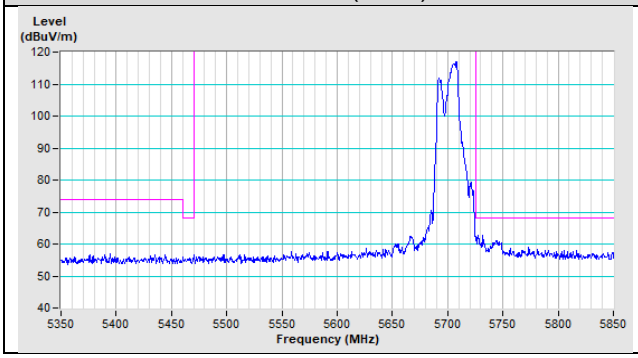
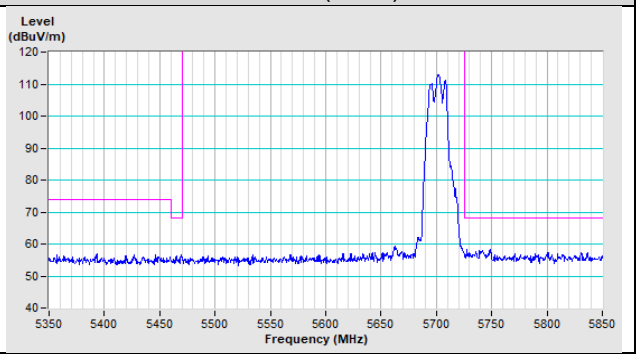


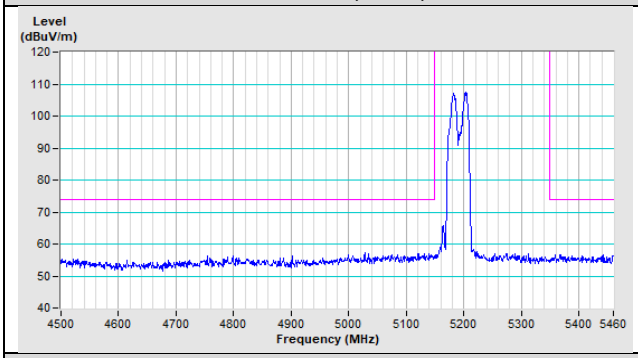
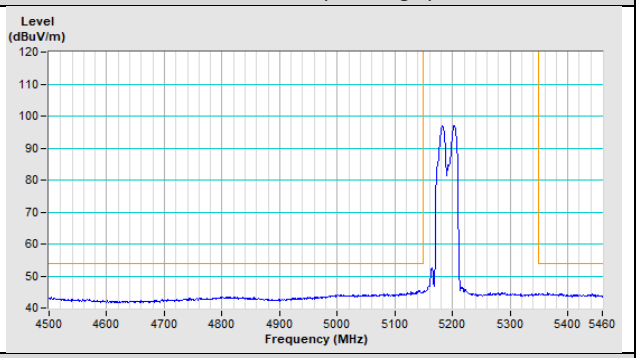
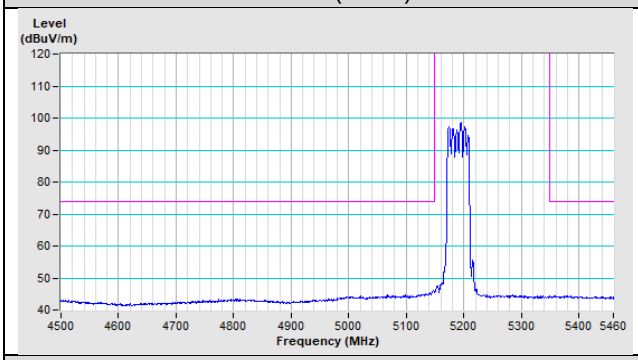
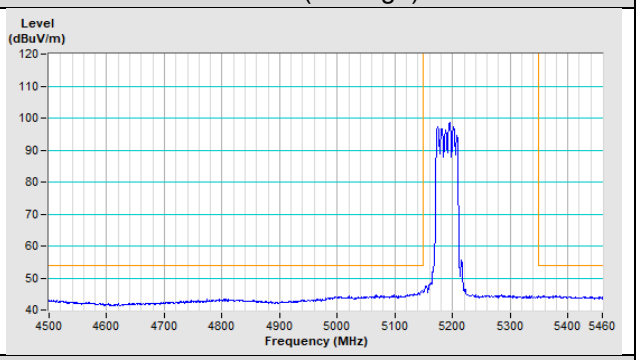
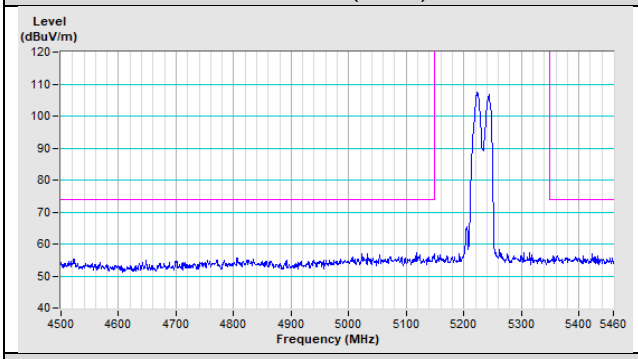
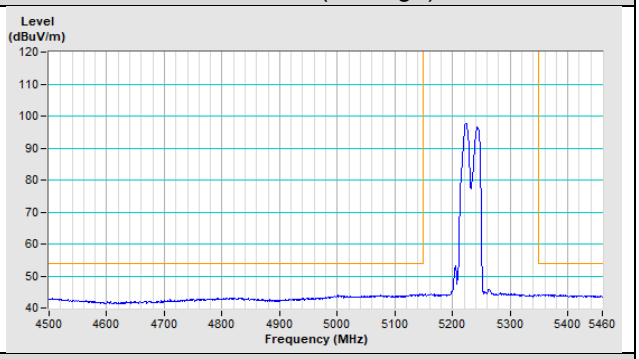
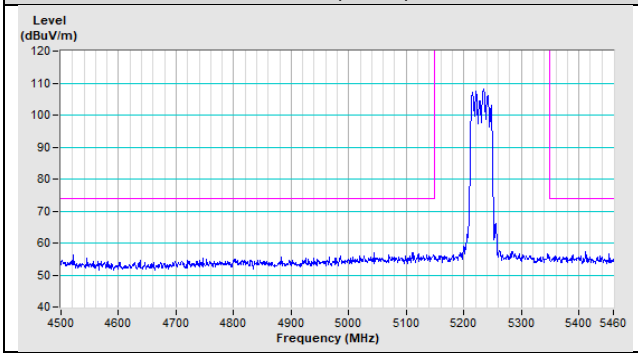
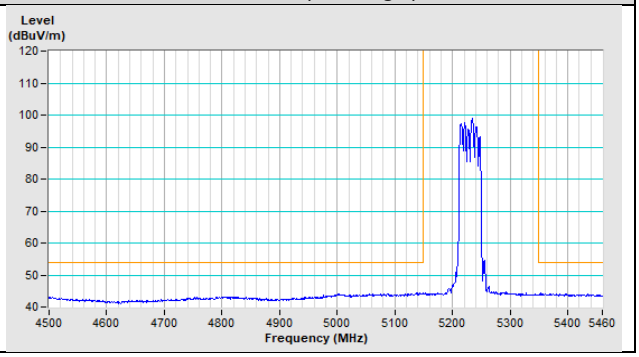
802.11a Channel 52	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11a Channel 64	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

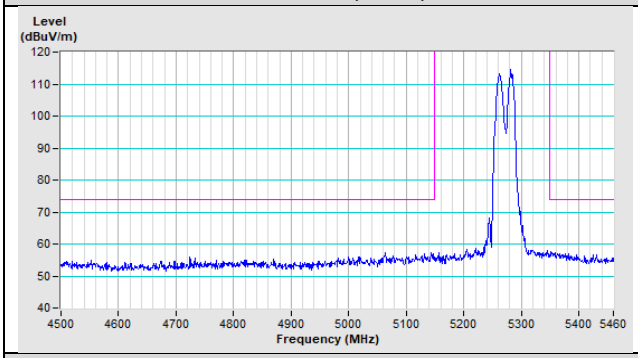
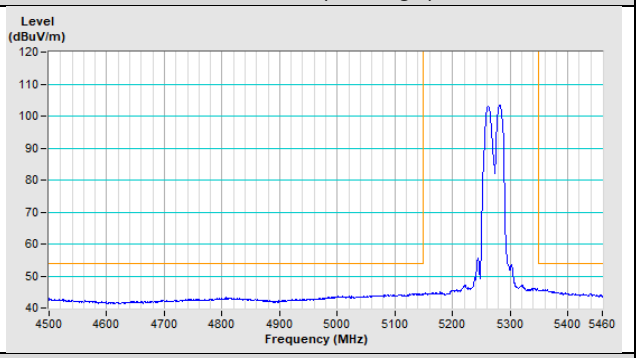
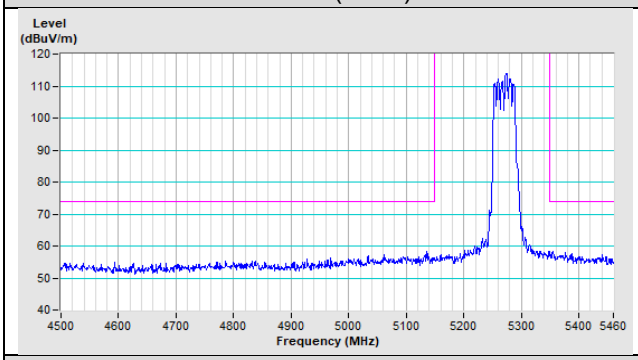
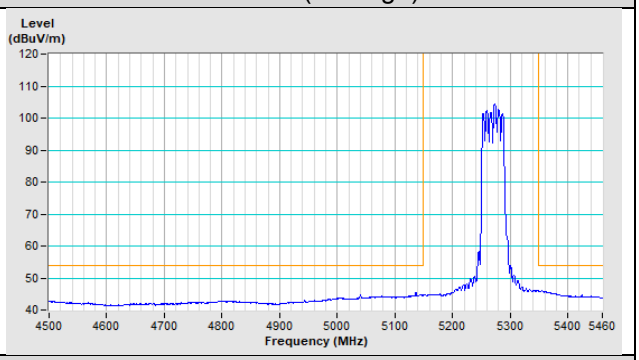
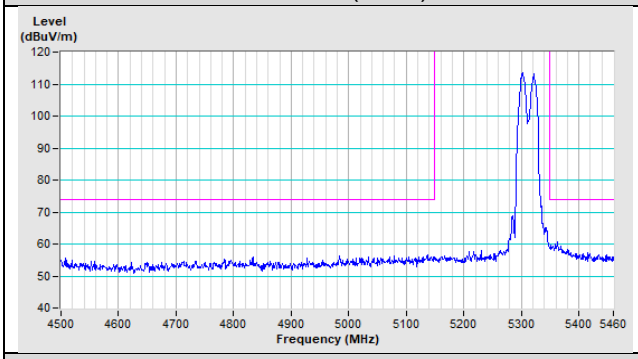
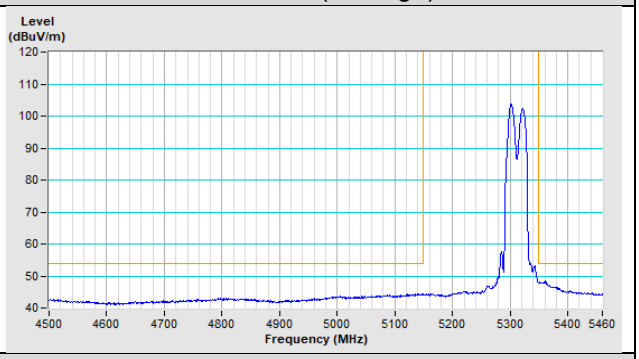
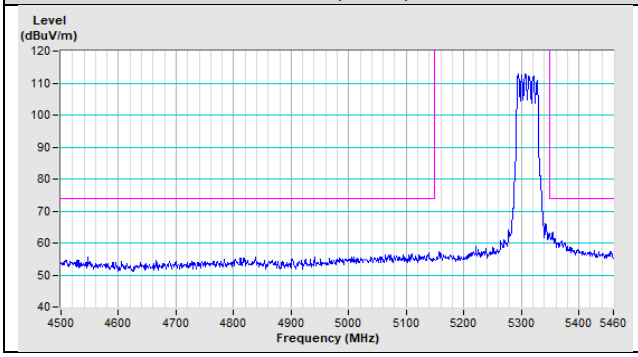
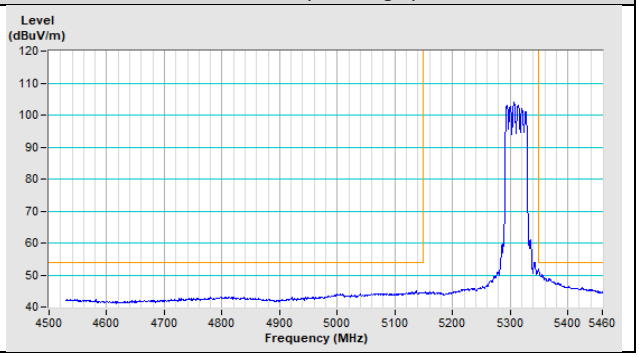
802.11a Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11a Channel 140	
Horizontal (Peak)	Vertical (Peak)
	

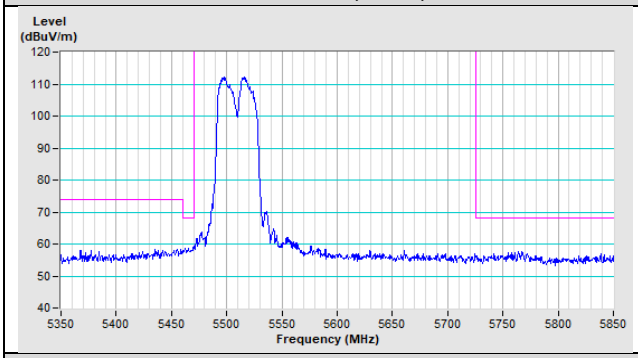
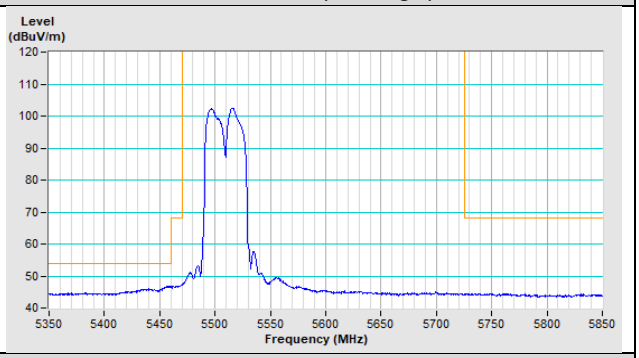
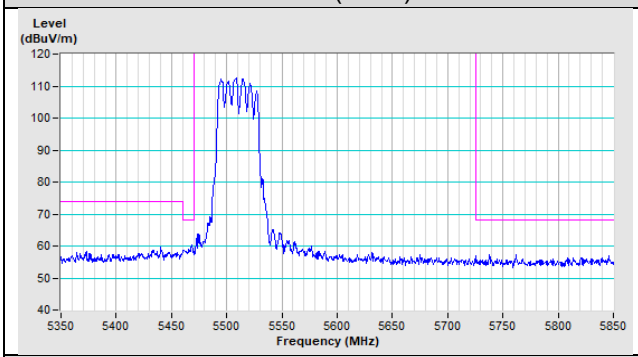
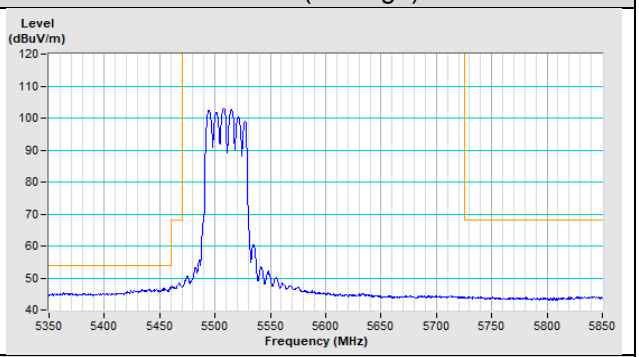
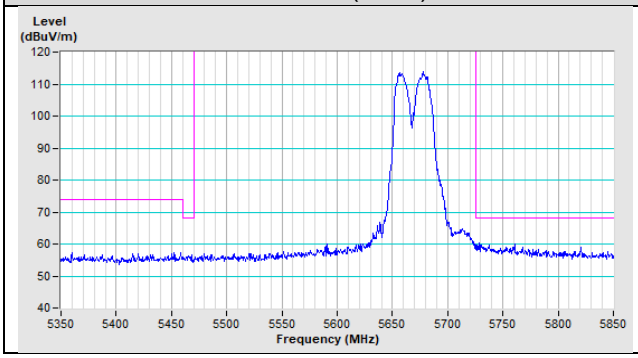
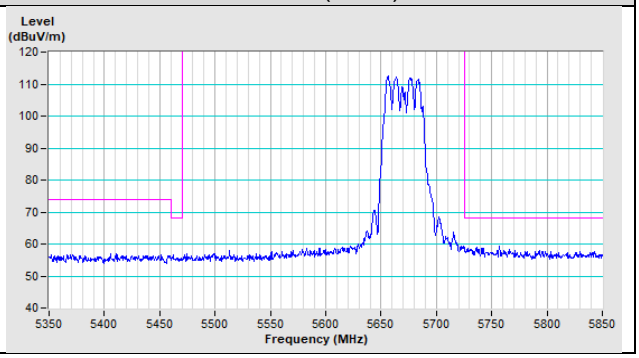
802.11ac (VHT20) Channel 36	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT20) Channel 48	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

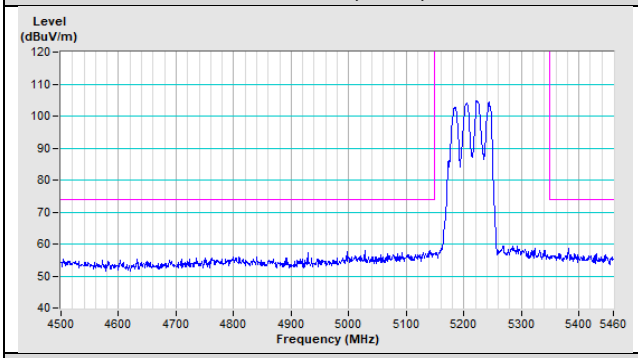
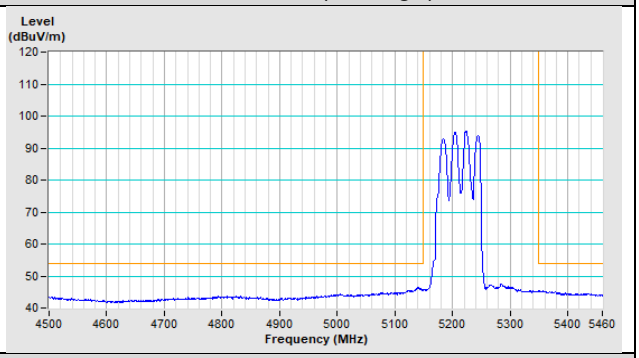
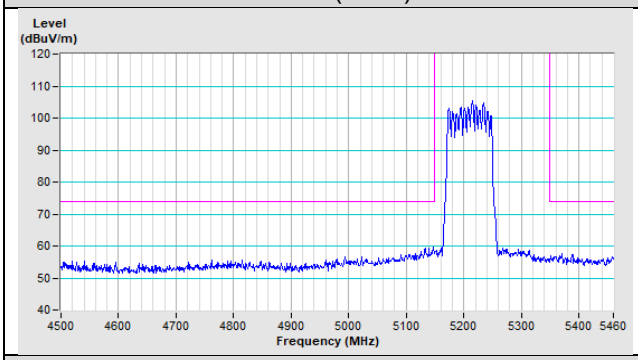
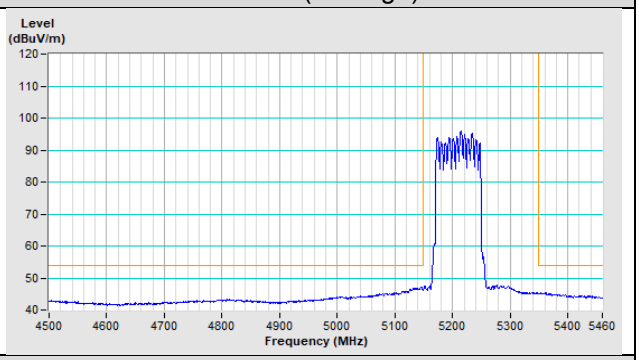
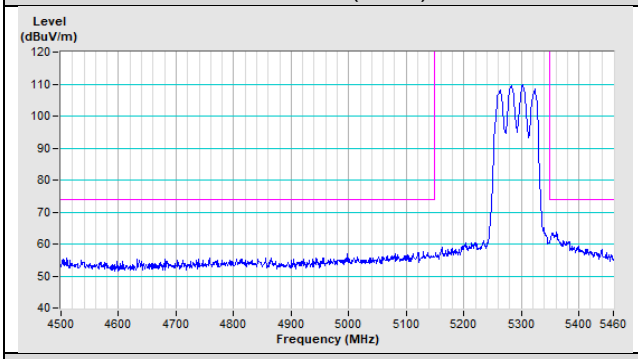
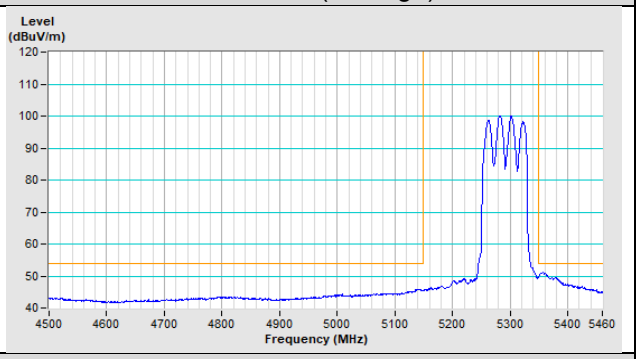
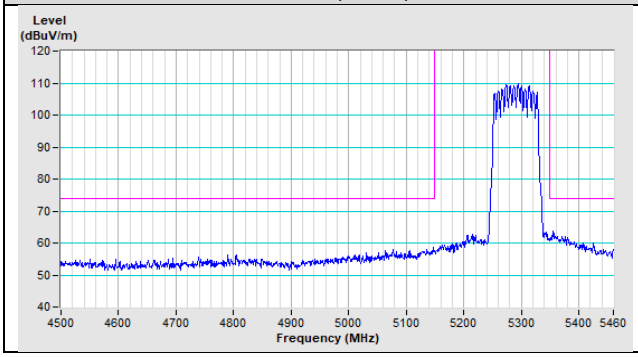
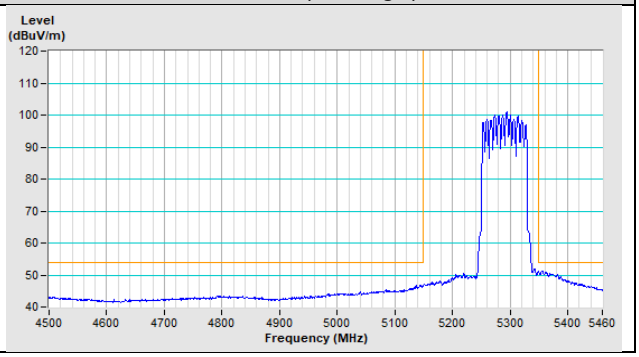
802.11ac (VHT20) Channel 52	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT20) Channel 64	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

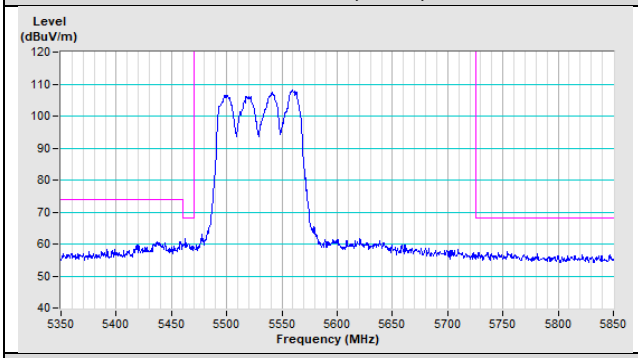
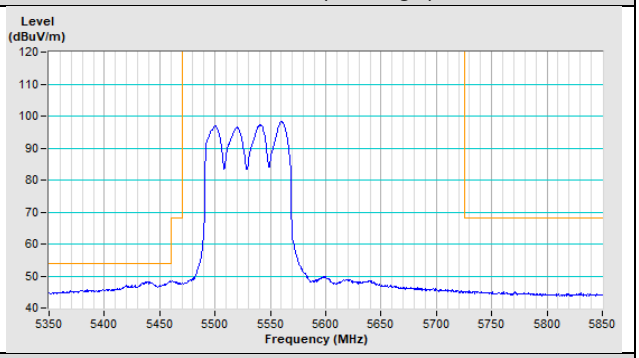
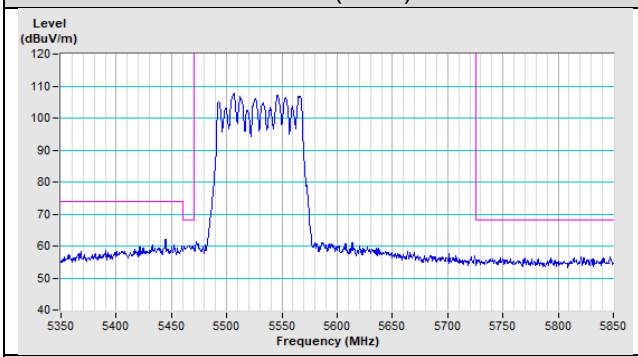
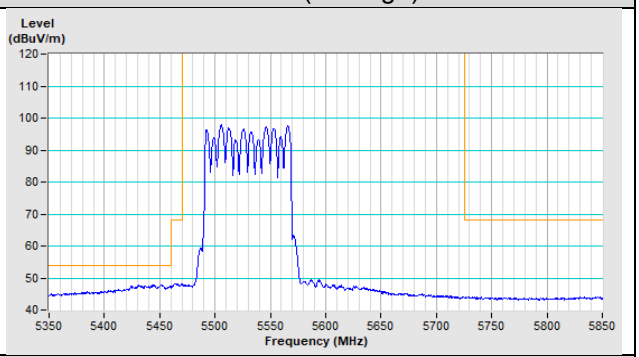
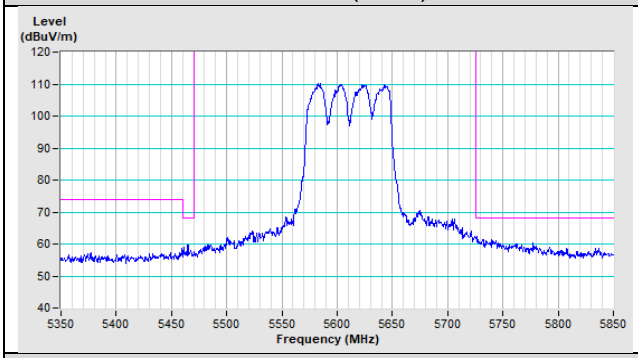
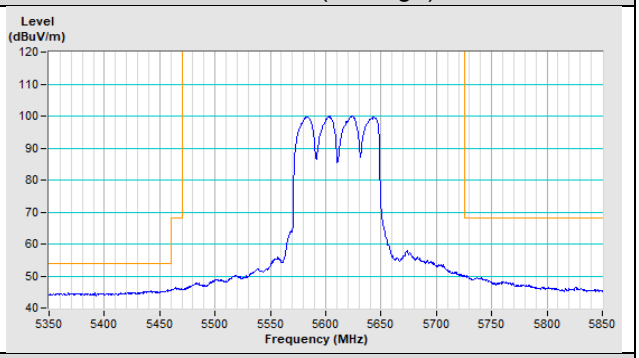
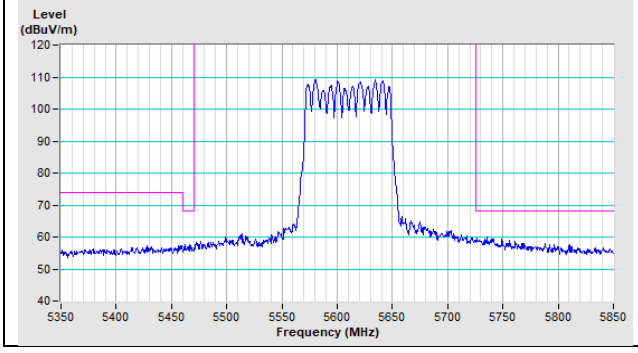
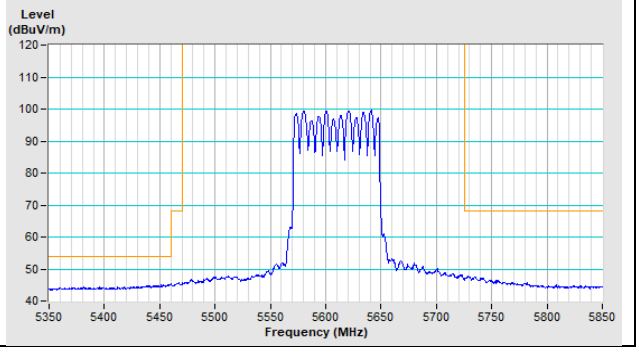
802.11ac (VHT20) Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT20) Channel 140	
Horizontal (Peak)	Vertical (Peak)
	

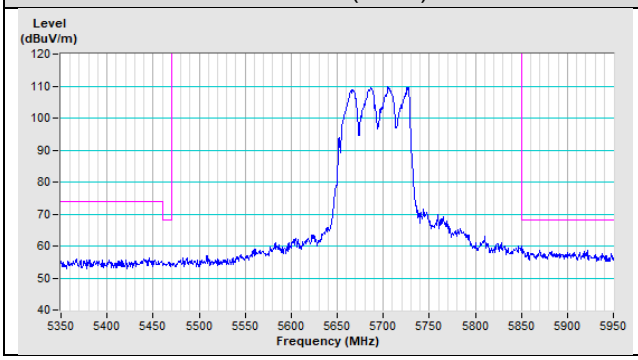
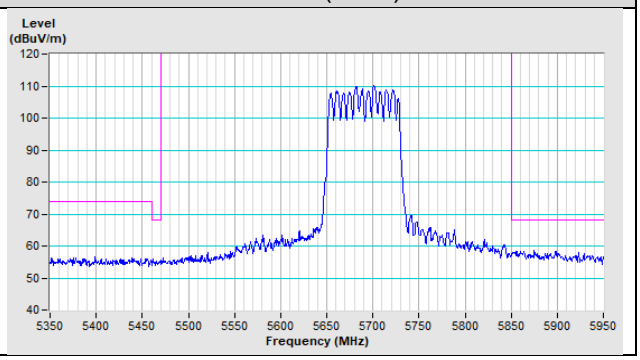
802.11ac (VHT40) Channel 38	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT40) Channel 46	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

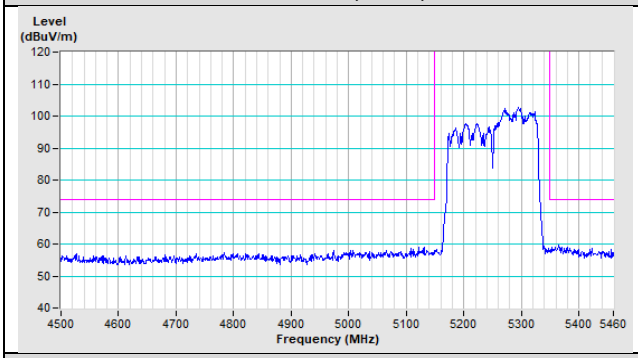
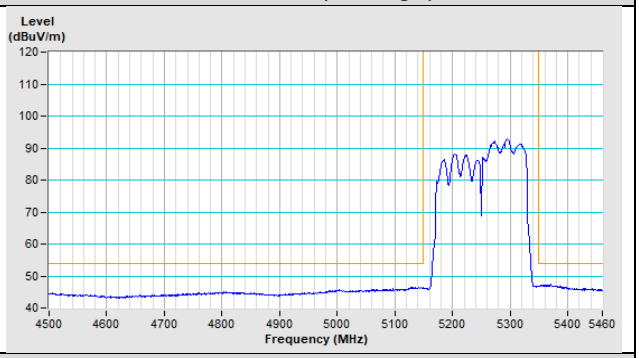
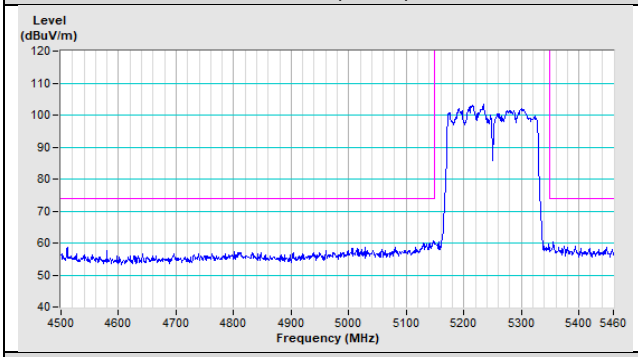
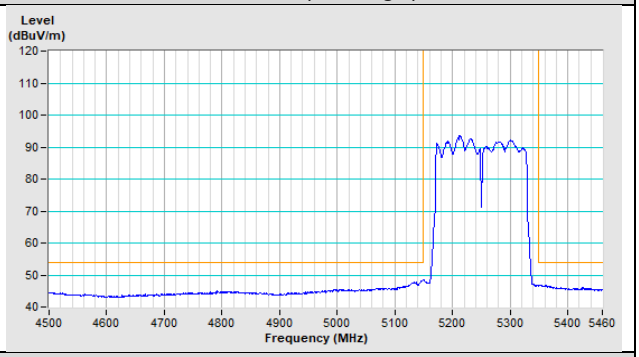
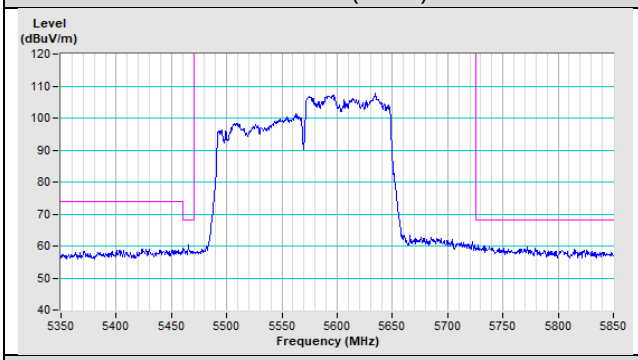
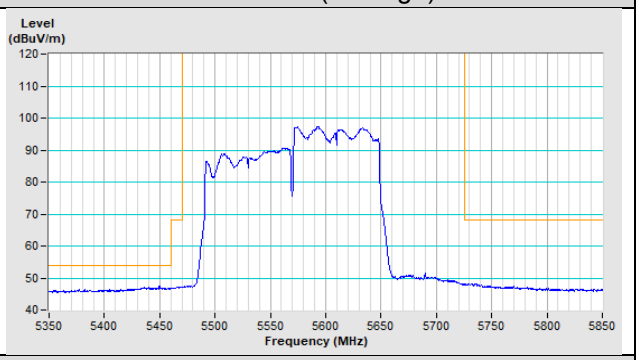
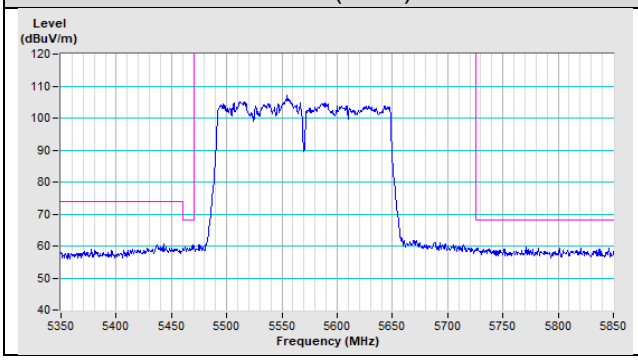
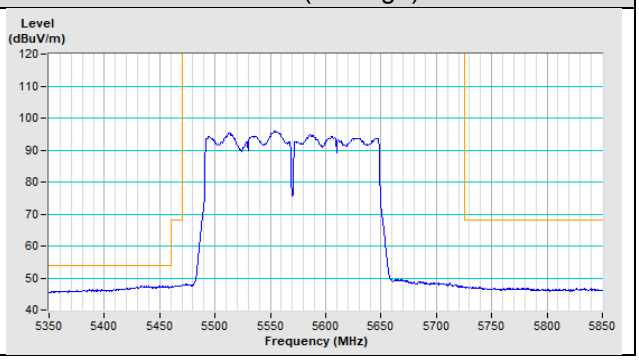
802.11ac (VHT40) Channel 54	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT40) Channel 62	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

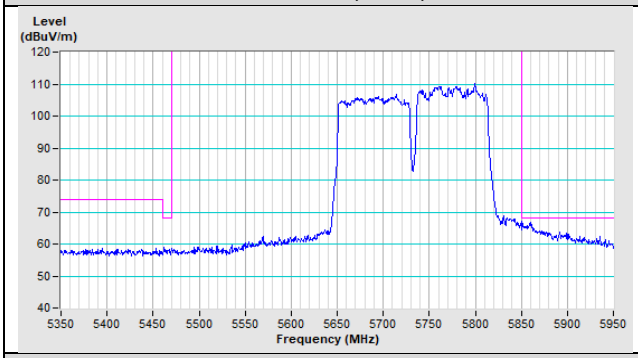
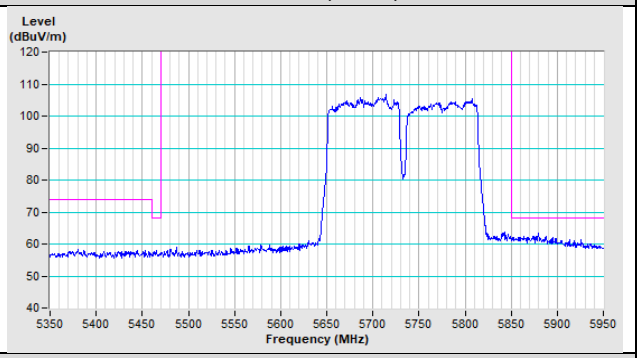
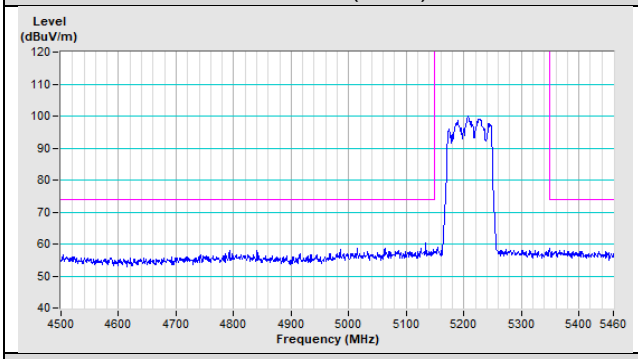
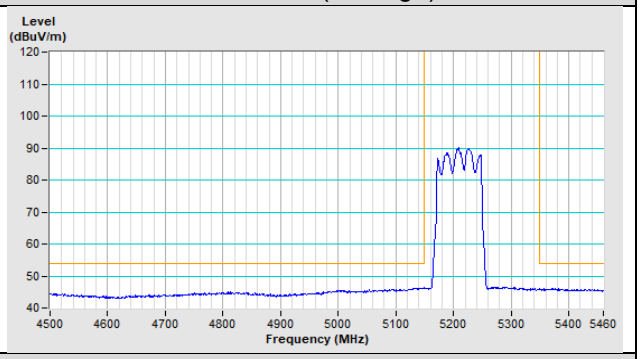
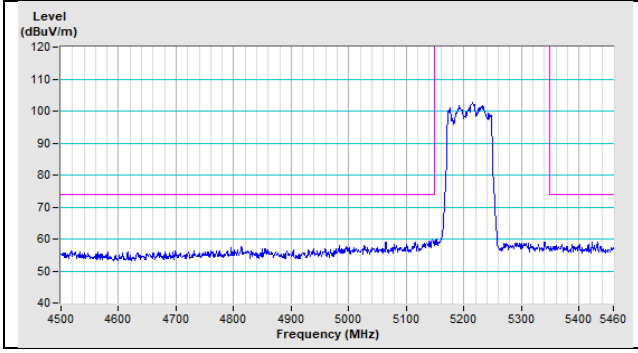
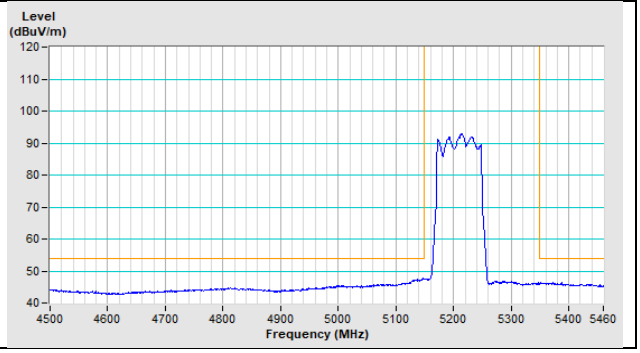
802.11ac (VHT40) Channel 102	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT40) Channel 134	
Horizontal (Peak)	Vertical (Peak)
	

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)
	
802.11ac (VHT80) Channel 122	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

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

802.11ac (VHT80+VHT80) Channel 42+58	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT80+VHT80) Channel 106+122	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT80+VHT80) Channel 138+155	
Horizontal (Peak)	Vertical (Peak)
	
802.11ac (VHT80+VHT80) Channel 42+155	
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.

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

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

--- END ---