FCC Test Report

Report No.:	RFBHJS-WTW-P21030983-1
FCC ID:	PD5-LM-WESA04FR
Test Model:	LM-WESA0440A
Received Date:	Mar. 26, 2021
Test Date:	Apr. 13 ~ May 10, 2021
Issued Date:	May 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

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Release Control Record

Issue No.	Description	Date Issued
RFBHJS-WTW-P21030983-1	Original Release	May 21, 2021

1 Certificate of Conformity

Product:	802.11 b/g/n/ac WIFI AP
Test Model:	LM-WESA0440A
Sample Status:	Engineering Sample
Applicant:	Delta Electronics, Inc.
Test Date:	Apr. 13 ~ May 10, 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 :  , **Date:** May 21, 2021

Gina Liu / Specialist

Approved by :  , **Date:** May 21, 2021

Dylan Chiou / 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 -10.11 dB at 0.28906 MHz.
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 -0.6 dB at 5925.00 MHz.
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)	6 dB 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 I-PEX 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	150 kHz ~ 30 MHz	2.79 dB
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.04 dB
	30 MHz ~ 200 MHz	2.93 dB
	200 MHz ~ 1000 MHz	2.95 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 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
Status of EUT	Engineering Sample
Power Supply Rating	12Vdc from adapter 42.5Vdc-57Vdc from PoE
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0 Mbps 802.11n: up to 600.0 Mbps 802.11ac: up to 1300.0 Mbps
Operating Frequency	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5700 MHz, 5745 ~ 5825 MHz
Number of Channel	5180 ~ 5240 MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80), 802.11ac (VHT80+VHT80) 5260 ~ 5320 MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80), 802.11ac (VHT80+VHT80) 5500 ~ 5700 MHz: 11 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 5 for 802.11n (HT40), 802.11ac (VHT40) 3 for 802.11ac (VHT80), 802.11ac (VHT80+VHT80) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80), 802.11ac (VHT80+VHT80)
Output Power	CDD Mode: 917.031 mW for 5180 ~ 5240 MHz 239.761 mW for 5260 ~ 5320 MHz 227.041 mW for 5500 ~ 5700 MHz 885.378 mW for 5745 ~ 5825 MHz Beamforming Mode: 496.379 mW for 5180 ~ 5240 MHz 120.165 mW for 5260 ~ 5320 MHz 106.299 mW for 5500 ~ 5700 MHz 389.385 mW for 5745 ~ 5825 MHz
Antenna Type	Refer to Note as below
Antenna Connector	Refer to Note as below
Accessory Device	NA
Data Cable Supplied	NA

Note:

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

Band	Modulation Mode	Beamforming Mode	TX Function
2.4GHz	802.11b	Not Support	4TX
	802.11g	Not Support	4TX
	802.11n (HT20)	Support (CDD / Nss=1 / Nss=2)	4TX
	802.11n (HT40)	Support (CDD / Nss=1 / Nss=2)	4TX
5GHz	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 (VHT80)	Support (CDD / Nss=1 / Nss=2)	4TX
	802.11ac (VHT80+VHT80)	Support (CDD / Nss=1)	2TX+2TX

* For 802.11a/b/g, the EUT doesn't support Beamforming mode.
* The modulation and bandwidth are similar for 802.11n mode for 20MHz / 40MHz and 802.11ac mode for V20MHz / V40MHz, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)
* For 5GHz band 802.11n and 802.11ac, after pre-tested two modes (with beamforming mode Nss=1 / 2 and CDD mode) found CDD mode was the worst, therefore chosen for final test for radiated emission and power line conducted emission test and presented in the test report.

2. The EUT uses following antennas.

Antenna Type	PCB PIFA							
Antenna Connector	I-PEX							
Antenna Gain (dBi)								
	2400	2450	2500	5150	5320	5550	5700	5850
Ant. 1	3.22	3.62	3.56	3.17	3.32	3.47	3.39	3.77
Ant. 2	3.45	3.48	3.32	3.01	3.18	3.31	3.52	3.70
Ant. 3	3.15	3.38	3.08	2.97	2.91	3.36	3.55	3.68
Ant. 4	3.01	3.23	3.15	2.86	3.10	3.39	3.34	3.71

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

4. The EUT uses following adapter & PoE.

Adapter (Support unit)	
Brand	NETGEAR
Model	2ABL030F2 AU
Input Power	220-240Vac~50/60Hz 1.0A
Output Power	12.0Vdc / 2.5A
Power Line	1.8m DC cable without core attached on adapter

PoE (Support unit)	
Brand	PowerDsine
Model	PD-3501G/AC
Input Power	100-240Vac~,50/60Hz, 0.5A
Output Power	48Vdc, 0.35A

5. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

For 5180 ~ 5240 MHz

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

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

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

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

Channel	Frequency (MHz)
42	5210

For 5260 ~ 5320 MHz

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

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

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
54	5270	62	5310

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

Channel	Frequency (MHz)
58	5290

For 5500 ~ 5700 MHz

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

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

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

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

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

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

For 5745 ~ 5825 MHz:

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

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

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

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

Channel	Frequency (MHz)
155	5775

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Power from adapter
B	-	√	√	-	Power from PoE

Where **RE≥1G:** Radiated Emission above 1 GHz **RE<1G:** Radiated Emission below 1 GHz
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 **Z-plane**.
2. "-" means no effect.

Radiated Emission Test (Above 1 GHz):

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

Radiated Emission Test (Below 1 GHz):

☒ 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	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A, B	5745-5825	802.11ac (VHT80)	155	155	OFDM	BPSK	29.3

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	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A, B	5745-5825	802.11ac (VHT80)	155	155	OFDM	BPSK	29.3

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

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE≥1G	22 deg. C, 68 % RH	120 Vac, 60 Hz	Edison Lee
RE<1G	23 deg. C, 66 % RH	120 Vac, 60 Hz	Titan Hsu
PLC	24 deg. C, 69 % RH	120 Vac, 60 Hz	Edison Lee
APCM	25 deg. C, 60 % RH	120 Vac, 60 Hz	Ivan Tseng

3.3 Duty Cycle of Test Signal

MODULATION TYPE: BPSK

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

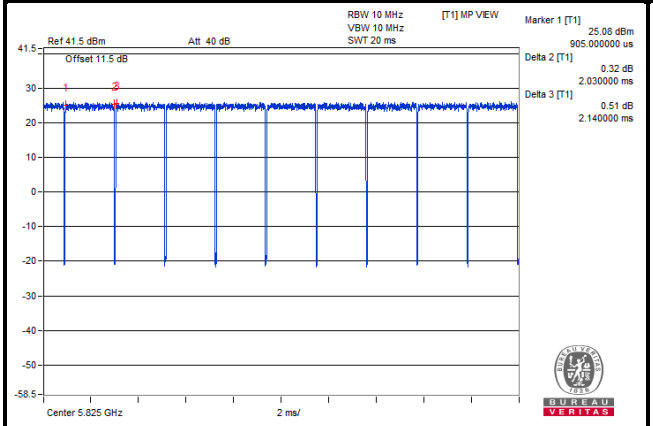
802.11a: Duty cycle = 2.03/2.14 = 0.949, Duty factor = 10 * log(1/0.949) = 0.23

802.11n (HT20): Duty cycle = 4.988/5.1 = 0.978, Duty factor = 10 * log(1/0.978) = 0.10

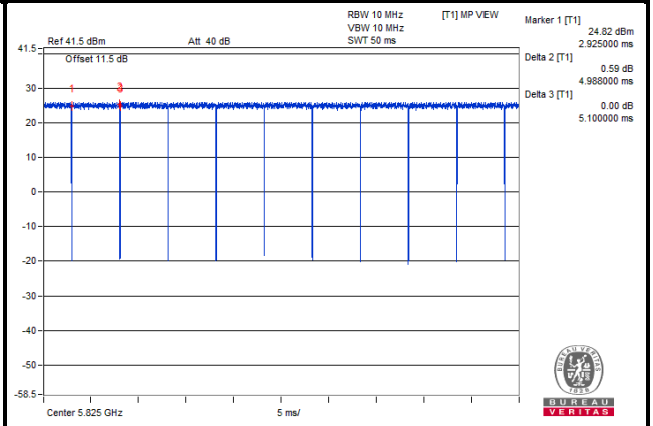
802.11n (HT40): Duty cycle = 2.43/2.51 = 0.968, Duty factor = 10 * log(1/0.968) = 0.14

802.11ac (VHT80): Duty cycle = 1.14/1.237 = 0.922, Duty factor = 10 * log(1/0.922) = 0.35

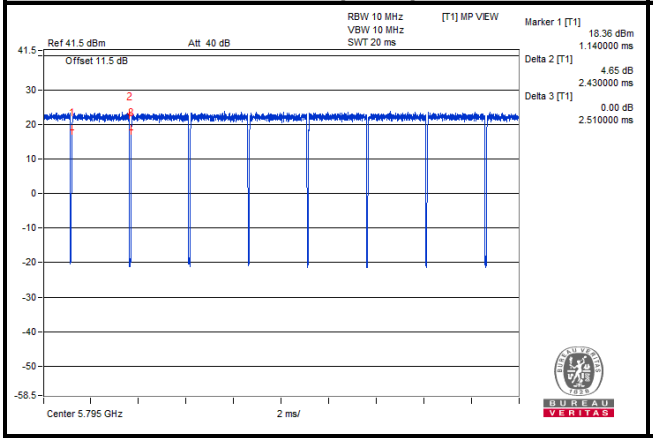
802.11a



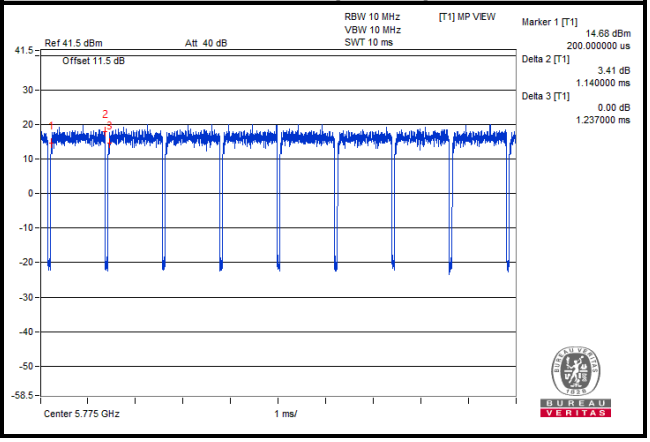
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



802.11ac (VHT80+VHT80):

5G CH42: Duty cycle = 5.43/5.72 = 0.949, Duty factor = 10 * log(1/0.949) = 0.23

5G CH58: Duty cycle = 5.435/5.76 = 0.944, Duty factor = 10 * log(1/0.944) = 0.25

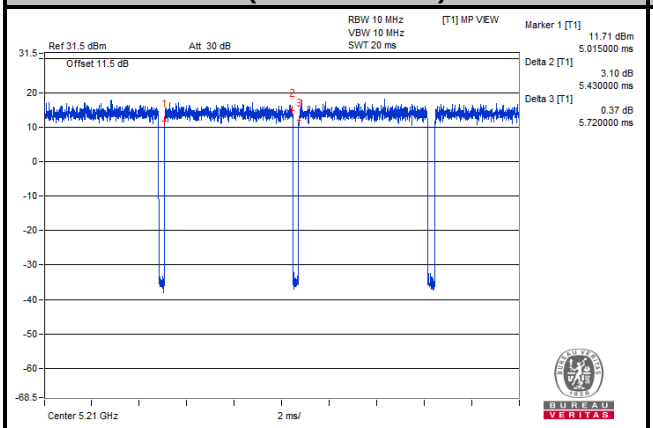
5G CH106: Duty cycle = 5.44/5.685 = 0.957, Duty factor = 10 * log(1/0.957) = 0.19

5G CH122: Duty cycle = 5.435/5.74 = 0.947, Duty factor = 10 * log(1/0.947) = 0.24

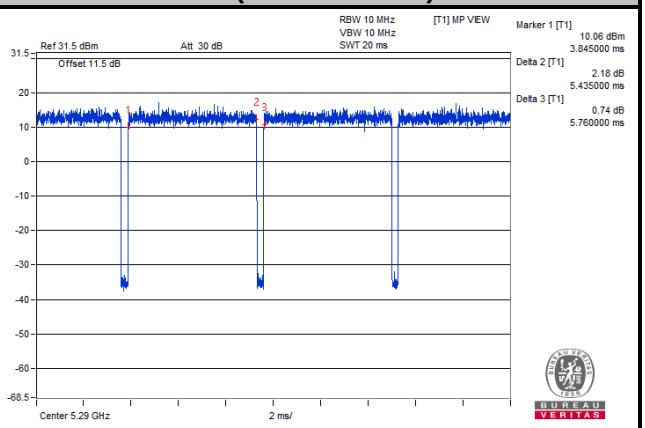
5G CH138: Duty cycle = 5.435/5.72 = 0.950, Duty factor = 10 * log(1/0.950) = 0.22

5G CH155: Duty cycle = 2.215/2.305 = 0.961, Duty factor = 10 * log(1/0.961) = 0.17

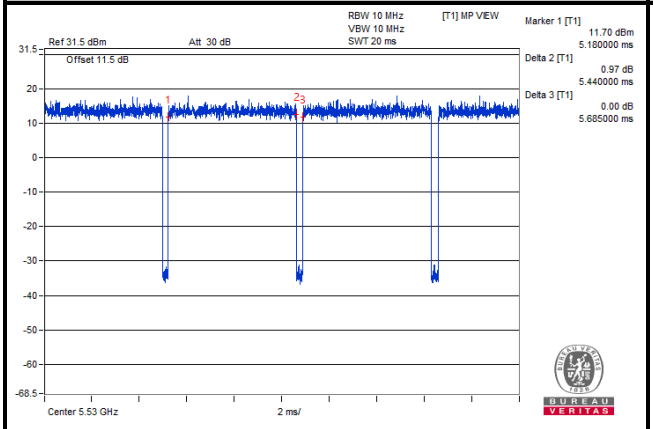
802.11ac (VHT80+VHT80) CH42



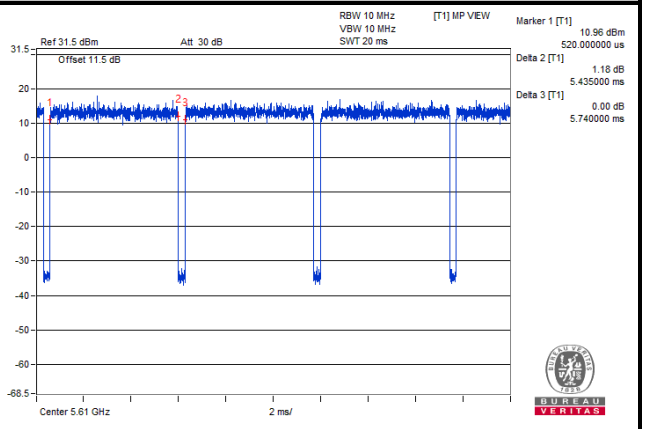
802.11ac (VHT80+VHT80) CH 58



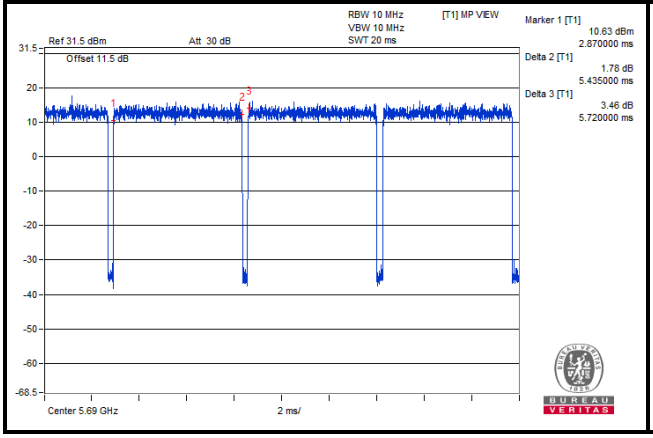
802.11ac (VHT80+VHT80) CH 106



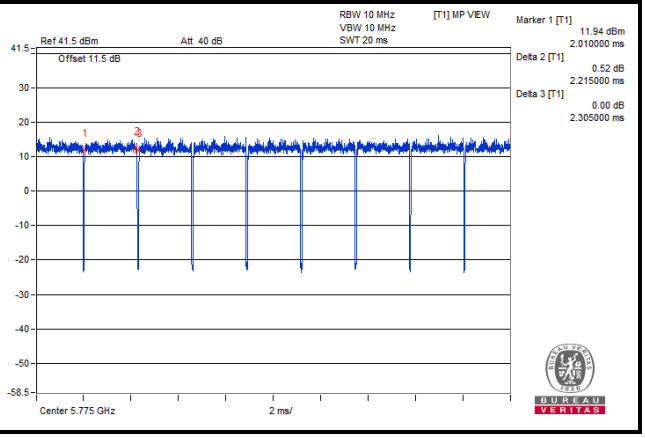
802.11ac (VHT80+VHT80) CH122



802.11ac (VHT80+VHT80) CH 138



802.11ac (VHT80+VHT80) CH155



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	6RP2YM1	FCC DoC Approved	-
B.	Load	N/A	N/A	N/A	N/A	-
C.	PoE	ZyXEL	PoE12-HP	N/A	N/A	Provided by client
D.	Adapter	DELTA	ADP-30HW B	N/A	N/A	Provided by client

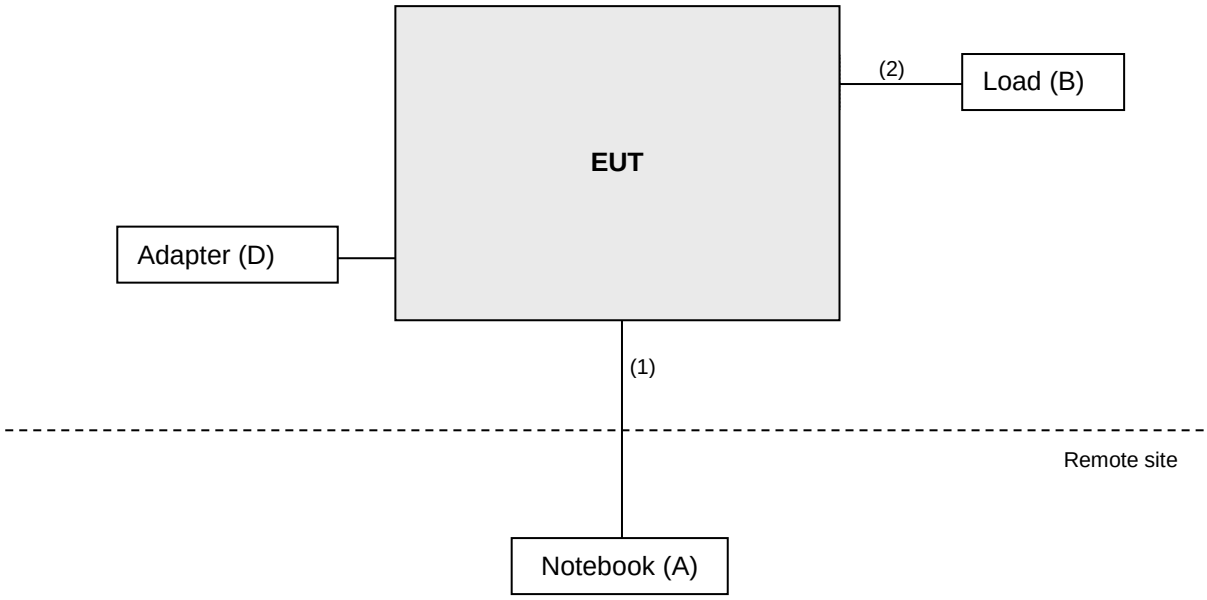
Note:

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

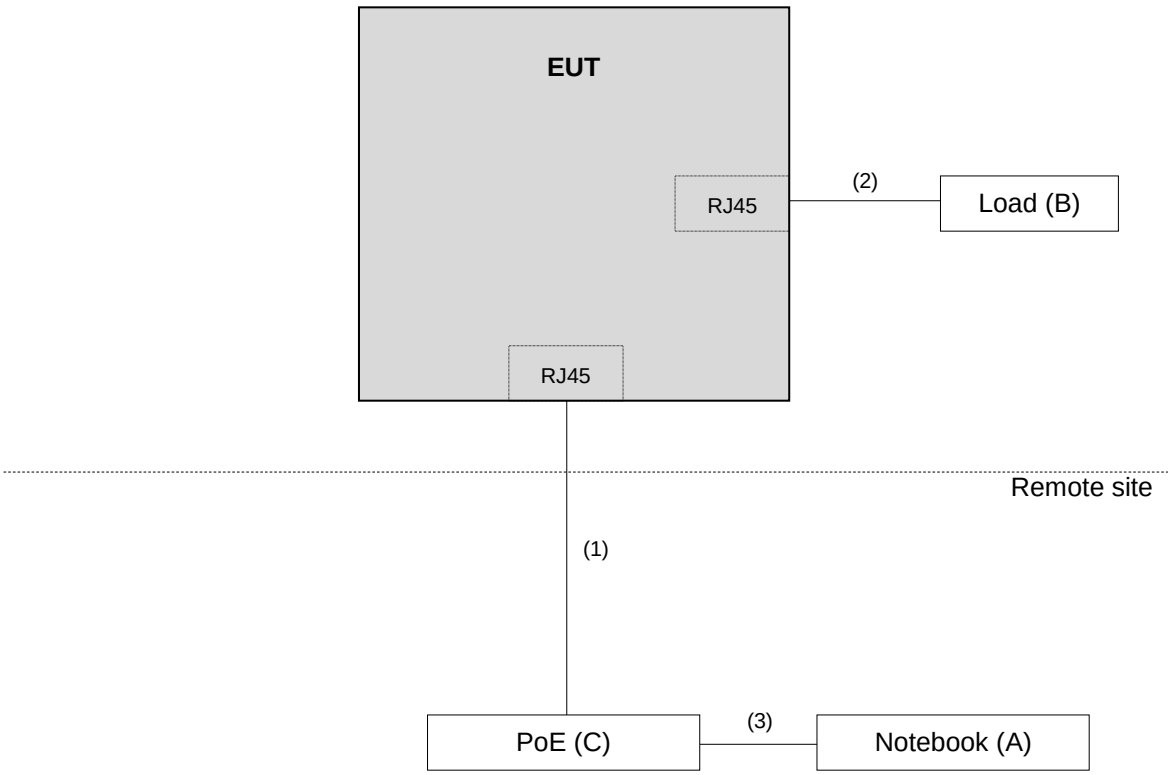
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45 cable	1	10	N	0	-
2.	RJ45 cable	4	1.5	N	0	-
3.	RJ45 cable	1	1.8	N	0	-

3.4.1 Configuration of System under Test

Test Mode A



Test Mode B



3.5 General Description of Applied Standards and References

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

Test Standard:

FCC Part 15, Subpart E (15.407)
ANSI C63.10-2013

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

References Test Guidance:

KDB 789033 D02 General UNII Test Procedures 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 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

Limits of Unwanted Emission Out of the Restricted Bands

Applicable To			Limit	
789033 D02 General UNII Test Procedures New Rules v02r01			Field Strength at 3 m	
			PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Frequency Band	**Applicable To**		**EIRP Limit**	**Equivalent Field Strength at 3 m**
5150~5250 MHz	15.407(b)(1)		PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
5250~5350 MHz	15.407(b)(2)			
5470~5725 MHz	15.407(b)(3)			
5725~5850 MHz	☒	15.407(b)(4)(i)	PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 68.2 (dBμV/m) *1 PK:105.2 (dBμV/m) *2 PK: 110.8 (dBμV/m) *3 PK:122.2 (dBμV/m) *4
	☐	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

*1 beyond 75 MHz or more above of the band edge.

*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESR3	102579	Jul. 07, 2020	Jul. 06, 2021
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jun. 09, 2020	Jun. 08, 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 EMCI	EM-6879	269	Sep. 17, 2020	Sep. 16, 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- SM-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/MY55 190004/MY551900 07/MY55210005	Jul. 13, 2020	Jul. 12, 2021

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

4.1.3 Test Procedures

For Radiated Emission below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 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 9 kHz at frequency below 30 MHz.

For Radiated Emission above 30 MHz

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

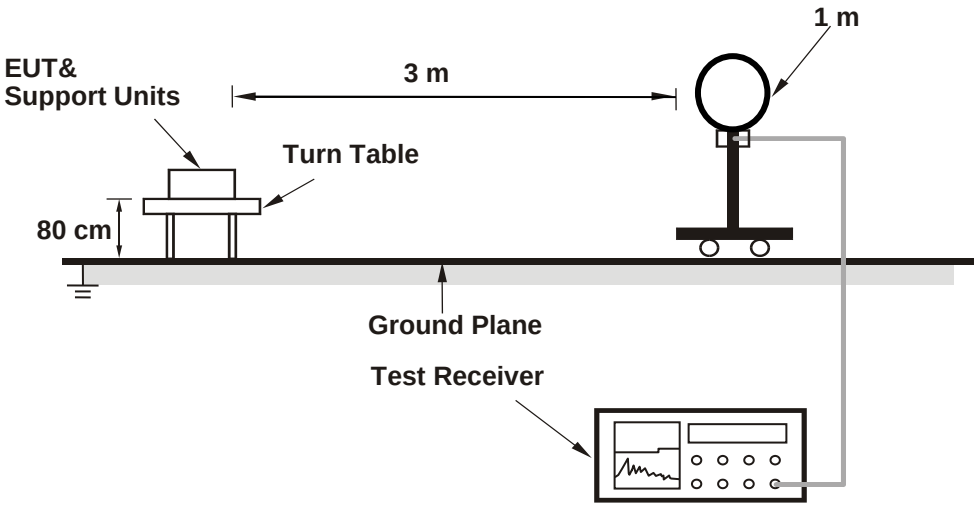
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98 %) or 10 Hz (Duty cycle ≥ 98 %) for Average detection (AV) at frequency above 1 GHz.
   (11a: RBW = 1 MHz, VBW = 1 kHz ; 11n (HT20): RBW = 1 MHz, VBW = 1 kHz ;
   11n (HT40): RBW = 1 MHz, VBW = 1 kHz ; 11ac (VHT80): RBW = 1 MHz, VBW = 1 kHz ;
   11ac (VHT80+VHT80): RBW = 1 MHz, VBW = 1 kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

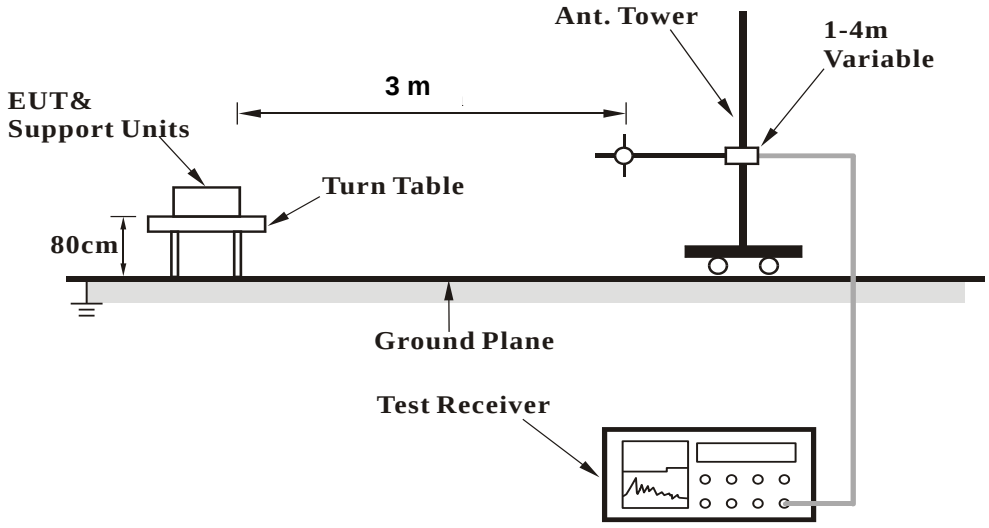
No deviation.

4.1.5 Test Setup

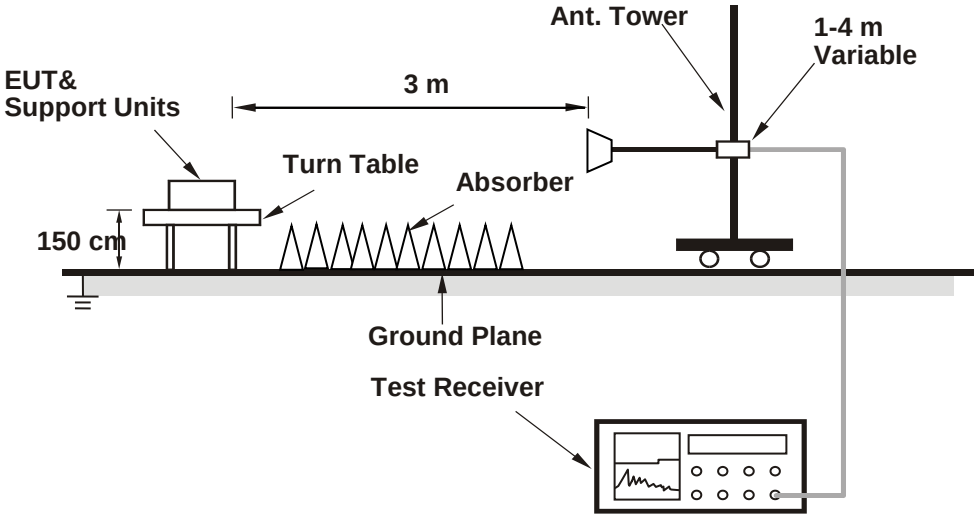
<Radiated Emission below 30 MHz>



<Radiated Emission 30 MHz to 1 GHz>



<Radiated Emission above 1 GHz>



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 a testing table.
b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1 GHz Data：

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	65.8 PK	74.0	-8.2	2.26 H	351	59.4	6.4
2	5150.00	51.6 AV	54.0	-2.4	2.26 H	351	45.2	6.4
3	*5180.00	121.4 PK			2.26 H	351	79.2	42.2
4	*5180.00	110.8 AV			2.26 H	351	68.6	42.2
5	#10360.00	57.2 PK	68.2	-11.0	2.03 H	277	40.7	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	63.6 PK	74.0	-10.4	1.92 V	326	57.2	6.4
2	5150.00	51.6 AV	54.0	-2.4	1.92 V	326	45.2	6.4
3	*5180.00	120.2 PK			1.92 V	326	78.0	42.2
4	*5180.00	110.3 AV			1.92 V	326	68.1	42.2
5	#10360.00	57.8 PK	68.2	-10.4	1.58 V	99	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 802.11a	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	121.8 PK			1.94 H	5	79.7	42.1
2	*5200.00	111.5 AV			1.94 H	5	69.4	42.1
3	#10400.00	57.4 PK	68.2	-10.8	2.00 H	269	40.9	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	121.1 PK			1.14 V	341	79.0	42.1
2	*5200.00	111.0 AV			1.14 V	341	68.9	42.1
3	#10400.00	57.5 PK	68.2	-10.7	1.69 V	97	41.0	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	121.8 PK			2.34 H	354	79.8	42.0
2	*5240.00	111.2 AV			2.34 H	354	69.2	42.0
3	5350.00	58.0 PK	74.0	-16.0	2.34 H	354	51.7	6.3
4	5350.00	44.7 AV	54.0	-9.3	2.34 H	354	38.4	6.3
5	#10480.00	59.1 PK	68.2	-9.1	2.10 H	275	41.0	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	*5240.00	121.0 PK			1.89 V	326	79.0	42.0
2	*5240.00	110.8 AV			1.89 V	326	68.8	42.0
3	5350.00	58.8 PK	74.0	-15.2	1.89 V	326	52.5	6.3
4	5350.00	45.3 AV	54.0	-8.7	1.89 V	326	39.0	6.3
5	#10480.00	59.1 PK	68.2	-9.1	1.59 V	87	41.0	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	57.2 PK	74.0	-16.8	2.79 H	8	50.8	6.4
2	5150.00	44.1 AV	54.0	-9.9	2.79 H	8	37.7	6.4
3	*5260.00	115.2 PK			2.79 H	8	73.3	41.9
4	*5260.00	104.2 AV			2.79 H	8	62.3	41.9
5	#10520.00	58.9 PK	68.2	-9.3	2.25 H	289	40.7	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	57.0 PK	74.0	-17.0	1.93 V	341	50.6	6.4
2	5150.00	44.5 AV	54.0	-9.5	1.93 V	341	38.1	6.4
3	*5260.00	114.3 PK			1.93 V	341	72.4	41.9
4	*5260.00	103.8 AV			1.93 V	341	61.9	41.9
5	#10520.00	59.2 PK	68.2	-9.0	1.75 V	108	41.0	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	114.5 PK			2.76 H	6	72.6	41.9
2	*5300.00	103.8 AV			2.76 H	6	61.9	41.9
3	10600.00	58.6 PK	74.0	-15.4	2.22 H	285	41.0	17.6
4	10600.00	45.4 AV	54.0	-8.6	2.22 H	285	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	115.0 PK			1.94 V	329	73.1	41.9
2	*5300.00	104.5 AV			1.94 V	329	62.6	41.9
3	10600.00	58.7 PK	74.0	-15.3	1.77 V	114	41.1	17.6
4	10600.00	45.5 AV	54.0	-8.5	1.77 V	114	27.9	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	113.1 PK			2.73 H	9	71.1	42.0
2	*5320.00	102.2 AV			2.73 H	9	60.2	42.0
3	5350.00	58.7 PK	74.0	-15.3	2.73 H	9	52.4	6.3
4	5350.00	46.5 AV	54.0	-7.5	2.73 H	9	40.2	6.3
5	10640.00	58.3 PK	74.0	-15.7	2.25 H	289	40.8	17.5
6	10640.00	45.2 AV	54.0	-8.8	2.25 H	289	27.7	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	113.2 PK			1.96 V	328	71.2	42.0
2	*5320.00	102.6 AV			1.96 V	328	60.6	42.0
3	5350.00	59.3 PK	74.0	-14.7	1.96 V	328	53.0	6.3
4	5350.00	47.0 AV	54.0	-7.0	1.96 V	328	40.7	6.3
5	10640.00	58.3 PK	74.0	-15.7	1.72 V	110	40.8	17.5
6	10640.00	45.2 AV	54.0	-8.8	1.72 V	110	27.7	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	57.1 PK	74.0	-16.9	2.19 H	6	50.8	6.3
2	5460.00	45.1 AV	54.0	-8.9	2.19 H	6	38.8	6.3
3	#5470.00	58.2 PK	68.2	-10.0	2.19 H	6	52.0	6.2
4	*5500.00	113.6 PK			2.19 H	6	71.5	42.1
5	*5500.00	103.8 AV			2.19 H	6	61.7	42.1
6	11000.00	60.0 PK	74.0	-14.0	2.19 H	277	41.9	18.1
7	11000.00	45.4 AV	54.0	-8.6	2.19 H	277	27.3	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	5460.00	57.7 PK	74.0	-16.3	2.29 V	328	51.4	6.3
2	5460.00	45.2 AV	54.0	-8.8	2.29 V	328	38.9	6.3
3	#5470.00	58.1 PK	68.2	-10.1	2.29 V	328	51.9	6.2
4	*5500.00	114.5 PK			2.29 V	328	72.4	42.1
5	*5500.00	104.3 AV			2.29 V	328	62.2	42.1
6	11000.00	60.4 PK	74.0	-13.6	1.66 V	114	42.3	18.1
7	11000.00	45.4 AV	54.0	-8.6	1.66 V	114	27.3	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	114.6 PK			2.11 H	5	72.5	42.1
2	*5580.00	104.4 AV			2.11 H	5	62.3	42.1
3	11160.00	59.4 PK	74.0	-14.6	2.08 H	269	41.0	18.4
4	11160.00	45.9 AV	54.0	-8.1	2.08 H	269	27.5	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	114.1 PK			2.21 V	326	72.0	42.1
2	*5580.00	104.4 AV			2.21 V	326	62.3	42.1
3	11160.00	60.2 PK	74.0	-13.8	1.70 V	100	41.8	18.4
4	11160.00	46.1 AV	54.0	-7.9	1.70 V	100	27.7	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	115.7 PK			2.16 H	6	73.4	42.3
2	*5700.00	105.1 AV			2.16 H	6	62.8	42.3
3	#5725.00	58.5 PK	68.2	-9.7	2.16 H	6	52.3	6.2
4	11400.00	59.1 PK	74.0	-14.9	2.03 H	271	41.2	17.9
5	11400.00	45.1 AV	54.0	-8.9	2.03 H	271	27.2	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	115.3 PK			2.23 V	349	73.0	42.3
2	*5700.00	104.7 AV			2.23 V	349	62.4	42.3
3	#5725.00	58.3 PK	68.2	-9.9	2.23 V	349	52.1	6.2
4	11400.00	59.1 PK	74.0	-14.9	1.78 V	122	41.2	17.9
5	11400.00	45.0 AV	54.0	-9.0	1.78 V	122	27.1	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 802.11a	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	*5745.00	123.9 PK			2.13 H	344	81.7	42.2
2	*5745.00	113.6 AV			2.13 H	344	71.4	42.2
3	11490.00	59.1 PK	74.0	-14.9	2.00 H	281	40.5	18.6
4	11490.00	45.8 AV	54.0	-8.2	2.00 H	281	27.2	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	*5745.00	122.3 PK			1.54 V	332	80.1	42.2
2	*5745.00	112.2 AV			1.54 V	332	70.0	42.2
3	11490.00	60.1 PK	74.0	-13.9	1.70 V	121	41.5	18.6
4	11490.00	46.7 AV	54.0	-7.3	1.70 V	121	28.1	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.

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	*5785.00	123.4 PK			2.18 H	349	81.2	42.2
2	*5785.00	76.9 AV			2.18 H	349	70.7	6.2
3	11570.00	58.7 PK	74.0	-15.3	2.12 H	269	40.3	18.4
4	11570.00	45.7 AV	54.0	-8.3	2.12 H	269	27.3	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	*5785.00	122.4 PK			2.34 V	355	80.2	42.2
2	*5785.00	112.5 AV			2.34 V	355	70.3	42.2
3	11570.00	59.7 PK	74.0	-14.3	1.55 V	111	41.3	18.4
4	11570.00	45.7 AV	54.0	-8.3	1.55 V	111	27.3	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.

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	*5825.00	123.1 PK			2.17 H	341	80.8	42.3
2	*5825.00	113.1 AV			2.17 H	341	70.8	42.3
3	11650.00	59.1 PK	74.0	-14.9	2.09 H	269	41.0	18.1
4	11650.00	45.4 AV	54.0	-8.6	2.09 H	269	27.3	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	*5825.00	122.4 PK			2.30 V	356	80.1	42.3
2	*5825.00	112.5 AV			2.30 V	356	70.2	42.3
3	11650.00	59.0 PK	74.0	-15.0	1.71 V	108	40.9	18.1
4	11650.00	45.3 AV	54.0	-8.7	1.71 V	108	27.2	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	62.2 PK	74.0	-11.8	2.28 H	352	55.8	6.4
2	5150.00	50.2 AV	54.0	-3.8	2.28 H	352	43.8	6.4
3	*5180.00	120.5 PK			2.28 H	352	78.3	42.2
4	*5180.00	109.4 AV			2.28 H	352	67.2	42.2
5	#10360.00	57.3 PK	68.2	-10.9	1.98 H	263	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	5150.00	63.4 PK	74.0	-10.6	2.05 V	327	57.0	6.4
2	5150.00	51.5 AV	54.0	-2.5	2.05 V	327	45.1	6.4
3	*5180.00	120.0 PK			2.05 V	327	77.8	42.2
4	*5180.00	108.8 AV			2.05 V	327	66.6	42.2
5	#10360.00	57.1 PK	68.2	-11.1	1.66 V	103	40.6	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 802.11ac (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	120.7 PK			2.27 H	355	78.6	42.1
2	*5200.00	110.3 AV			2.27 H	355	68.2	42.1
3	#10400.00	57.8 PK	68.2	-10.4	2.06 H	258	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	121.7 PK			1.88 V	327	79.6	42.1
2	*5200.00	111.1 AV			1.88 V	327	69.0	42.1
3	#10400.00	57.7 PK	68.2	-10.5	1.50 V	106	41.2	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	121.1 PK			2.35 H	353	79.1	42.0
2	*5240.00	110.6 AV			2.35 H	353	68.6	42.0
3	5350.00	58.1 PK	74.0	-15.9	2.35 H	353	51.8	6.3
4	5350.00	44.8 AV	54.0	-9.2	2.35 H	353	38.5	6.3
5	#10480.00	59.1 PK	68.2	-9.1	2.21 H	281	41.0	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	*5240.00	120.7 PK			1.83 V	328	78.7	42.0
2	*5240.00	110.6 AV			1.83 V	328	68.6	42.0
3	5350.00	58.2 PK	74.0	-15.8	1.83 V	328	51.9	6.3
4	5350.00	45.1 AV	54.0	-8.9	1.83 V	328	38.8	6.3
5	#10480.00	59.2 PK	68.2	-9.0	1.62 V	100	41.1	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 (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	57.4 PK	74.0	-16.6	2.83 H	6	51.0	6.4
2	5150.00	44.1 AV	54.0	-9.9	2.83 H	6	37.7	6.4
3	*5260.00	114.6 PK			2.83 H	6	72.7	41.9
4	*5260.00	103.6 AV			2.83 H	6	61.7	41.9
5	#10520.00	59.1 PK	68.2	-9.1	2.15 H	278	40.9	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	5150.00	57.5 PK	74.0	-16.5	1.95 V	340	51.1	6.4
2	5150.00	44.3 AV	54.0	-9.7	1.95 V	340	37.9	6.4
3	*5260.00	114.1 PK			1.95 V	340	72.2	41.9
4	*5260.00	103.8 AV			1.95 V	340	61.9	41.9
5	#10520.00	59.1 PK	68.2	-9.1	1.65 V	105	40.9	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 802.11ac (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	114.9 PK			2.76 H	7	73.0	41.9
2	*5300.00	104.0 AV			2.76 H	7	62.1	41.9
3	10600.00	58.6 PK	74.0	-15.4	2.25 H	284	41.0	17.6
4	10600.00	45.4 AV	54.0	-8.6	2.25 H	284	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	114.3 PK			2.02 V	354	72.4	41.9
2	*5300.00	103.5 AV			2.02 V	354	61.6	41.9
3	10600.00	58.8 PK	74.0	-15.2	1.72 V	112	41.2	17.6
4	10600.00	45.6 AV	54.0	-8.4	1.72 V	112	28.0	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	113.6 PK			2.73 H	6	71.6	42.0
2	*5320.00	102.5 AV			2.73 H	6	60.5	42.0
3	5350.00	59.7 PK	74.0	-14.3	2.73 H	6	53.4	6.3
4	5350.00	46.8 AV	54.0	-7.2	2.73 H	6	40.5	6.3
5	10640.00	58.5 PK	74.0	-15.5	2.22 H	284	41.0	17.5
6	10640.00	45.3 AV	54.0	-8.7	2.22 H	284	27.8	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	113.2 PK			2.01 V	337	71.2	42.0
2	*5320.00	102.8 AV			2.01 V	337	60.8	42.0
3	5350.00	59.1 PK	74.0	-14.9	2.01 V	337	52.8	6.3
4	5350.00	46.7 AV	54.0	-7.3	2.01 V	337	40.4	6.3
5	10640.00	58.6 PK	74.0	-15.4	1.69 V	108	41.1	17.5
6	10640.00	45.2 AV	54.0	-8.8	1.69 V	108	27.7	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	57.7 PK	74.0	-16.3	2.15 H	5	51.4	6.3
2	5460.00	45.2 AV	54.0	-8.8	2.15 H	5	38.9	6.3
3	#5470.00	58.3 PK	68.2	-9.9	2.15 H	5	52.1	6.2
4	*5500.00	115.6 PK			2.15 H	5	73.5	42.1
5	*5500.00	104.5 AV			2.15 H	5	62.4	42.1
6	11000.00	59.4 PK	74.0	-14.6	2.12 H	261	41.3	18.1
7	11000.00	45.2 AV	54.0	-8.8	2.12 H	261	27.1	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	5460.00	57.6 PK	74.0	-16.4	2.28 V	328	51.3	6.3
2	5460.00	45.5 AV	54.0	-8.5	2.28 V	328	39.2	6.3
3	#5470.00	59.2 PK	68.2	-9.0	2.28 V	328	53.0	6.2
4	*5500.00	115.6 PK			2.28 V	328	73.5	42.1
5	*5500.00	105.1 AV			2.28 V	328	63.0	42.1
6	11000.00	59.4 PK	74.0	-14.6	1.59 V	102	41.3	18.1
7	11000.00	46.2 AV	54.0	-7.8	1.59 V	102	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 (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	115.2 PK			2.13 H	7	73.1	42.1
2	*5580.00	104.1 AV			2.13 H	7	62.0	42.1
3	11160.00	59.6 PK	74.0	-14.4	2.11 H	276	41.2	18.4
4	11160.00	45.9 AV	54.0	-8.1	2.11 H	276	27.5	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	115.9 PK			2.31 V	326	73.8	42.1
2	*5580.00	105.2 AV			2.31 V	326	63.1	42.1
3	11160.00	59.7 PK	74.0	-14.3	1.73 V	112	41.3	18.4
4	11160.00	46.3 AV	54.0	-7.7	1.73 V	112	27.9	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	116.5 PK			2.84 H	343	74.2	42.3
2	*5700.00	106.0 AV			2.84 H	343	63.7	42.3
3	#5725.00	59.0 PK	68.2	-9.2	2.84 H	343	52.8	6.2
4	11400.00	59.4 PK	74.0	-14.6	2.08 H	268	41.5	17.9
5	11400.00	45.6 AV	54.0	-8.4	2.08 H	268	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	115.5 PK			2.38 V	326	73.2	42.3
2	*5700.00	105.5 AV			2.38 V	326	63.2	42.3
3	#5725.00	58.6 PK	68.2	-9.6	2.38 V	326	52.4	6.2
4	11400.00	59.1 PK	74.0	-14.9	1.66 V	98	41.2	17.9
5	11400.00	46.0 AV	54.0	-8.0	1.66 V	98	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 (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	*5745.00	123.0 PK			2.22 H	345	80.8	42.2
2	*5745.00	112.3 AV			2.22 H	345	70.1	42.2
3	11490.00	59.1 PK	74.0	-14.9	2.11 H	278	40.5	18.6
4	11490.00	45.9 AV	54.0	-8.1	2.11 H	278	27.3	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	*5745.00	122.3 PK			2.28 V	328	80.1	42.2
2	*5745.00	111.7 AV			2.28 V	328	69.5	42.2
3	11490.00	59.7 PK	74.0	-14.3	1.66 V	106	41.1	18.6
4	11490.00	46.7 AV	54.0	-7.3	1.66 V	106	28.1	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.

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	*5785.00	123.3 PK			2.20 H	344	81.1	42.2
2	*5785.00	112.4 AV			2.20 H	344	70.2	42.2
3	11570.00	59.3 PK	74.0	-14.7	2.11 H	265	40.9	18.4
4	11570.00	45.5 AV	54.0	-8.5	2.11 H	265	27.1	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	*5785.00	122.4 PK			2.30 V	356	80.2	42.2
2	*5785.00	112.2 AV			2.30 V	356	70.0	42.2
3	11570.00	59.5 PK	74.0	-14.5	1.63 V	98	41.1	18.4
4	11570.00	46.4 AV	54.0	-7.6	1.63 V	98	28.0	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 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	*5825.00	122.9 PK			2.18 H	346	80.6	42.3
2	*5825.00	112.1 AV			2.18 H	346	69.8	42.3
3	11650.00	59.3 PK	74.0	-14.7	2.17 H	279	41.2	18.1
4	11650.00	46.1 AV	54.0	-7.9	2.17 H	279	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	*5825.00	121.5 PK			2.24 V	348	79.2	42.3
2	*5825.00	111.8 AV			2.24 V	348	69.5	42.3
3	11650.00	59.2 PK	74.0	-14.8	1.66 V	121	41.1	18.1
4	11650.00	45.3 AV	54.0	-8.7	1.66 V	121	27.2	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.

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	67.6 PK	74.0	-6.4	2.69 H	7	61.2	6.4
2	5150.00	52.4 AV	54.0	-1.6	2.69 H	7	46.0	6.4
3	*5190.00	115.3 PK			2.69 H	7	73.2	42.1
4	*5190.00	105.4 AV			2.69 H	7	63.3	42.1
5	#10380.00	57.1 PK	68.2	-11.1	2.11 H	279	40.5	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	62.6 PK	74.0	-11.4	2.01 V	331	56.2	6.4
2	5150.00	50.6 AV	54.0	-3.4	2.01 V	331	44.2	6.4
3	*5190.00	114.7 PK			2.01 V	331	72.6	42.1
4	*5190.00	105.2 AV			2.01 V	331	63.1	42.1
5	#10380.00	57.7 PK	68.2	-10.5	1.68 V	104	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	5150.00	68.7 PK	74.0	-5.3	2.70 H	360	62.3	6.4
2	5150.00	52.6 AV	54.0	-1.4	2.70 H	360	46.2	6.4
3	*5230.00	118.3 PK			2.70 H	9	76.3	42.0
4	*5230.00	108.3 AV			2.70 H	9	66.3	42.0
5	#10460.00	58.5 PK	68.2	-9.7	2.21 H	281	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	5150.00	66.8 PK	74.0	-7.2	2.00 V	329	60.4	6.4
2	5150.00	51.6 AV	54.0	-2.4	2.00 V	329	45.2	6.4
3	*5230.00	118.5 PK			2.00 V	329	76.5	42.0
4	*5230.00	108.5 AV			2.00 V	329	66.5	42.0
5	#10460.00	58.7 PK	68.2	-9.5	1.65 V	105	41.0	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	57.7 PK	74.0	-16.3	2.73 H	340	51.3	6.4
2	5150.00	44.5 AV	54.0	-9.5	2.73 H	340	38.1	6.4
3	*5270.00	113.3 PK			2.73 H	340	71.4	41.9
4	*5270.00	103.2 AV			2.73 H	340	61.3	41.9
5	#10540.00	59.1 PK	68.2	-9.1	2.15 H	277	41.0	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	5150.00	57.6 PK	74.0	-16.4	1.98 V	335	51.2	6.4
2	5150.00	44.5 AV	54.0	-9.5	1.98 V	335	38.1	6.4
3	*5270.00	112.0 PK			1.98 V	335	70.1	41.9
4	*5270.00	102.4 AV			1.98 V	335	60.5	41.9
5	#10540.00	59.1 PK	68.2	-9.1	1.65 V	108	41.0	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	112.6 PK			2.55 H	7	70.6	42.0
2	*5310.00	102.6 AV			2.55 H	7	60.6	42.0
3	5350.00	60.5 PK	74.0	-13.5	2.55 H	7	54.2	6.3
4	5350.00	47.1 AV	54.0	-6.9	2.55 H	7	40.8	6.3
5	10620.00	58.8 PK	74.0	-15.2	2.26 H	287	41.1	17.7
6	10620.00	45.5 AV	54.0	-8.5	2.26 H	287	27.8	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	*5310.00	112.6 PK			1.93 V	330	70.6	42.0
2	*5310.00	103.2 AV			1.93 V	330	61.2	42.0
3	5350.00	59.1 PK	74.0	-14.9	1.93 V	330	52.8	6.3
4	5350.00	46.5 AV	54.0	-7.5	1.93 V	330	40.2	6.3
5	10620.00	58.7 PK	74.0	-15.3	1.72 V	105	41.0	17.7
6	10620.00	45.5 AV	54.0	-8.5	1.72 V	105	27.8	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	57.6 PK	74.0	-16.4	2.78 H	8	51.3	6.3
2	5460.00	44.8 AV	54.0	-9.2	2.78 H	8	38.5	6.3
3	#5470.00	58.3 PK	68.2	-9.9	2.78 H	8	52.1	6.2
4	*5510.00	112.7 PK			2.78 H	8	70.6	42.1
5	*5510.00	103.0 AV			2.78 H	8	60.9	42.1
6	11020.00	60.1 PK	74.0	-13.9	2.01 H	280	42.0	18.1
7	11020.00	46.1 AV	54.0	-7.9	2.01 H	280	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	58.3 PK	74.0	-15.7	2.36 V	349	52.0	6.3
2	5460.00	45.2 AV	54.0	-8.8	2.36 V	349	38.9	6.3
3	#5470.00	58.7 PK	68.2	-9.5	2.36 V	349	52.5	6.2
4	*5510.00	113.9 PK			2.36 V	349	71.8	42.1
5	*5510.00	104.4 AV			2.36 V	349	62.3	42.1
6	11020.00	59.9 PK	74.0	-14.1	1.69 V	118	41.8	18.1
7	11020.00	45.7 AV	54.0	-8.3	1.69 V	118	27.6	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 (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	112.9 PK			2.64 H	5	70.8	42.1
2	*5550.00	103.1 AV			2.64 H	5	61.0	42.1
3	11100.00	59.8 PK	74.0	-14.2	2.09 H	268	41.6	18.2
4	11100.00	46.1 AV	54.0	-7.9	2.09 H	268	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	*5550.00	112.3 PK			1.60 V	343	70.2	42.1
2	*5550.00	103.3 AV			1.60 V	343	61.2	42.1
3	11100.00	59.2 PK	74.0	-14.8	1.65 V	112	41.0	18.2
4	11100.00	45.8 AV	54.0	-8.2	1.65 V	112	27.6	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	114.0 PK			2.62 H	344	71.8	42.2
2	*5670.00	104.4 AV			2.62 H	344	62.2	42.2
3	#5725.00	59.2 PK	68.2	-9.0	2.62 H	344	53.0	6.2
4	11340.00	59.6 PK	74.0	-14.4	2.06 H	276	41.3	18.3
5	11340.00	45.9 AV	54.0	-8.1	2.06 H	276	27.6	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	113.4 PK			1.52 V	347	71.2	42.2
2	*5670.00	104.0 AV			1.52 V	347	61.8	42.2
3	#5725.00	58.5 PK	68.2	-9.7	1.52 V	347	52.3	6.2
4	11340.00	59.7 PK	74.0	-14.3	1.71 V	105	41.4	18.3
5	11340.00	46.5 AV	54.0	-7.5	1.71 V	105	28.2	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	*5755.00	120.2 PK			2.20 H	344	77.9	42.3
2	*5755.00	110.2 AV			2.20 H	344	67.9	42.3
3	11510.00	59.4 PK	74.0	-14.6	2.18 H	259	40.8	18.6
4	11510.00	45.9 AV	54.0	-8.1	2.18 H	259	27.3	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	*5755.00	118.9 PK			1.93 V	351	76.6	42.3
2	*5755.00	109.0 AV			1.93 V	351	66.7	42.3
3	11510.00	59.4 PK	74.0	-14.6	1.58 V	106	40.8	18.6
4	11510.00	45.5 AV	54.0	-8.5	1.58 V	106	26.9	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.

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	*5795.00	120.0 PK			2.18 H	346	77.8	42.2
2	*5795.00	109.9 AV			2.18 H	346	67.7	42.2
3	11590.00	59.5 PK	74.0	-14.5	2.05 H	277	41.3	18.2
4	11590.00	46.2 AV	54.0	-7.8	2.05 H	277	28.0	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	*5795.00	118.9 PK			2.29 V	344	76.7	42.2
2	*5795.00	109.3 AV			2.29 V	344	67.1	42.2
3	11590.00	58.6 PK	74.0	-15.4	1.71 V	100	40.4	18.2
4	11590.00	45.6 AV	54.0	-8.4	1.71 V	100	27.4	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 (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	64.6 PK	74.0	-9.4	2.72 H	7	58.2	6.4
2	5150.00	50.3 AV	54.0	-3.7	2.72 H	7	43.9	6.4
3	*5210.00	112.4 PK			2.72 H	7	70.4	42.0
4	*5210.00	101.9 AV			2.72 H	7	59.9	42.0
5	5350.00	60.9 PK	74.0	-13.1	2.72 H	7	54.6	6.3
6	5350.00	47.2 AV	54.0	-6.8	2.72 H	7	40.9	6.3
7	#10420.00	58.0 PK	68.2	-10.2	2.05 H	274	41.0	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	64.6 PK	74.0	-9.4	1.93 V	329	58.2	6.4
2	5150.00	50.5 AV	54.0	-3.5	1.93 V	329	44.1	6.4
3	*5210.00	110.8 PK			1.93 V	329	68.8	42.0
4	*5210.00	101.3 AV			1.93 V	329	59.3	42.0
5	5350.00	60.1 PK	74.0	-13.9	1.93 V	329	53.8	6.3
6	5350.00	46.6 AV	54.0	-7.4	1.93 V	329	40.3	6.3
7	#10420.00	58.3 PK	68.2	-9.9	1.66 V	110	41.3	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	58.3 PK	74.0	-15.7	2.59 H	8	51.9	6.4
2	5150.00	44.9 AV	54.0	-9.1	2.59 H	8	38.5	6.4
3	*5290.00	110.1 PK			2.59 H	8	68.2	41.9
4	*5290.00	99.7 AV			2.59 H	8	57.8	41.9
5	5350.00	63.4 PK	74.0	-10.6	2.59 H	8	57.1	6.3
6	5350.00	50.3 AV	54.0	-3.7	2.59 H	8	44.0	6.3
7	#10580.00	58.5 PK	68.2	-9.7	2.19 H	274	40.7	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	57.9 PK	74.0	-16.1	1.92 V	328	51.5	6.4
2	5150.00	45.0 AV	54.0	-9.0	1.92 V	328	38.6	6.4
3	*5290.00	109.7 PK			1.92 V	328	67.8	41.9
4	*5290.00	100.7 AV			1.92 V	328	58.8	41.9
5	5350.00	62.8 PK	74.0	-11.2	1.92 V	328	56.5	6.3
6	5350.00	49.0 AV	54.0	-5.0	1.92 V	328	42.7	6.3
7	#10580.00	58.7 PK	68.2	-9.5	1.69 V	110	40.9	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)	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	57.1 PK	74.0	-16.9	2.78 H	344	50.8	6.3
2	5460.00	44.8 AV	54.0	-9.2	2.78 H	344	38.5	6.3
3	#5470.00	59.8 PK	68.2	-8.4	2.78 H	344	53.6	6.2
4	*5530.00	109.5 PK			2.78 H	344	67.4	42.1
5	*5530.00	99.7 AV			2.78 H	344	57.6	42.1
6	#5725.00	58.4 PK	68.2	-9.8	2.78 H	344	52.2	6.2
7	11060.00	59.0 PK	74.0	-15.0	2.19 H	269	40.9	18.1
8	11060.00	45.2 AV	54.0	-8.8	2.19 H	269	27.1	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	5350.00	59.9 PK	74.0	-14.1	1.53 V	330	53.6	6.3
2	5350.00	46.1 AV	54.0	-7.9	1.53 V	330	39.8	6.3
3	#5470.00	60.4 PK	68.2	-7.8	1.53 V	330	54.2	6.2
4	*5530.00	110.2 PK			1.53 V	330	68.1	42.1
5	*5530.00	100.8 AV			1.53 V	330	58.7	42.1
6	#5725.00	58.0 PK	68.2	-10.2	1.53 V	330	51.8	6.2
7	11060.00	59.4 PK	74.0	-14.6	1.69 V	98	41.3	18.1
8	11060.00	45.3 AV	54.0	-8.7	1.69 V	98	27.2	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	57.9 PK	74.0	-16.1	2.79 H	344	51.6	6.3
2	5460.00	45.0 AV	54.0	-9.0	2.79 H	344	38.7	6.3
3	#5470.00	58.3 PK	68.2	-9.9	2.79 H	344	52.1	6.2
4	*5610.00	110.8 PK			2.79 H	344	68.7	42.1
5	*5610.00	100.2 AV			2.79 H	344	58.1	42.1
6	#5725.00	59.4 PK	68.2	-8.8	2.79 H	344	53.2	6.2
7	11220.00	59.1 PK	74.0	-14.9	2.18 H	271	40.6	18.5
8	11220.00	45.7 AV	54.0	-8.3	2.18 H	271	27.2	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	57.8 PK	74.0	-16.2	1.55 V	330	51.5	6.3
2	5460.00	44.8 AV	54.0	-9.2	1.55 V	330	38.5	6.3
3	#5470.00	57.8 PK	68.2	-10.4	1.55 V	330	51.6	6.2
4	*5610.00	110.4 PK			1.55 V	330	68.3	42.1
5	*5610.00	100.7 AV			1.55 V	330	58.6	42.1
6	#5725.00	59.6 PK	68.2	-8.6	1.55 V	330	53.4	6.2
7	11220.00	60.0 PK	74.0	-14.0	1.79 V	108	41.5	18.5
8	11220.00	45.6 AV	54.0	-8.4	1.79 V	108	27.1	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	58.1 PK	68.2	-10.1	2.10 H	342	51.9	6.2
2	*5690.00	112.3 PK			2.10 H	342	70.0	42.3
3	*5690.00	101.5 AV			2.10 H	342	59.2	42.3
4	#5850.00	58.5 PK	68.2	-9.7	2.10 H	342	51.8	6.7
5	11380.00	58.9 PK	74.0	-15.1	2.20 H	278	41.0	17.9
6	11380.00	45.4 AV	54.0	-8.6	2.20 H	278	27.5	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	57.9 PK	68.2	-10.3	1.58 V	335	51.7	6.2
2	*5690.00	111.8 PK			1.58 V	335	69.5	42.3
3	*5690.00	101.0 AV			1.58 V	335	58.7	42.3
4	#5850.00	58.3 PK	68.2	-9.9	1.58 V	335	51.6	6.7
5	11380.00	58.6 PK	74.0	-15.4	1.75 V	105	40.7	17.9
6	11380.00	45.5 AV	54.0	-8.5	1.75 V	105	27.6	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	66.9 PK	68.2	-1.3	2.16 H	347	60.7	6.2
2	*5775.00	113.0 PK			2.16 H	347	70.8	42.2
3	*5775.00	103.2 AV			2.16 H	347	61.0	42.2
4	#5925.00	67.6 PK	68.2	-0.6	2.16 H	347	60.3	7.3
5	11550.00	59.5 PK	74.0	-14.5	2.11 H	269	41.1	18.4
6	11550.00	45.5 AV	54.0	-8.5	2.11 H	269	27.1	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	#5650.00	67.0 PK	68.2	-1.2	2.27 V	345	60.8	6.2
2	*5775.00	111.7 PK			2.27 V	345	69.5	42.2
3	*5775.00	101.8 AV			2.27 V	345	59.6	42.2
4	#5925.00	67.5 PK	68.2	-0.7	2.27 V	345	60.2	7.3
5	11550.00	59.7 PK	74.0	-14.3	1.77 V	102	41.3	18.4
6	11550.00	45.4 AV	54.0	-8.6	1.77 V	102	27.0	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+80)	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	60.5 PK	74.0	-13.5	1.90 H	347	54.1	6.4
2	5150.00	46.5 AV	54.0	-7.5	1.90 H	347	40.1	6.4
3	5150.00	59.4 PK	74.0	-14.6	2.64 H	349	53.0	6.4
4	5150.00	46.2 AV	54.0	-7.8	2.64 H	349	39.8	6.4
5	*5210.00	106.5 PK			1.90 H	347	64.5	42.0
6	*5210.00	95.2 AV			1.90 H	347	53.2	42.0
7	*5290.00	106.1 PK			2.64 H	349	64.2	41.9
8	*5290.00	94.9 AV			2.64 H	349	53.0	41.9
9	5350.00	58.9 PK	74.0	-15.1	1.90 H	347	52.6	6.3
10	5350.00	46.9 AV	54.0	-7.1	1.90 H	347	40.6	6.3
11	5350.00	58.2 PK	74.0	-15.8	2.64 H	349	51.9	6.3
12	5350.00	46.5 AV	54.0	-7.5	2.64 H	349	40.2	6.3
13	#10420.00	57.9 PK	68.2	-10.3	2.11 H	282	40.9	17.0
14	#10580.00	58.6 PK	68.2	-9.6	2.11 H	274	40.8	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	60.1 PK	74.0	-13.9	1.78 V	338	53.7	6.4
2	5150.00	45.8 AV	54.0	-8.2	1.78 V	338	39.4	6.4
3	5150.00	58.5 PK	74.0	-15.5	1.76 V	333	52.1	6.4
4	5150.00	45.6 AV	54.0	-8.4	1.76 V	333	39.2	6.4
5	*5210.00	106.4 PK			1.78 V	338	64.4	42.0
6	*5210.00	95.2 AV			1.78 V	338	53.2	42.0
7	*5290.00	105.7 PK			1.76 V	333	63.8	41.9
8	*5290.00	94.8 AV			1.76 V	333	52.9	41.9
9	5350.00	60.2 PK	74.0	-13.8	1.78 V	338	53.9	6.3
10	5350.00	46.0 AV	54.0	-8.0	1.78 V	338	39.7	6.3
11	5350.00	60.1 PK	74.0	-13.9	1.76 V	333	53.8	6.3
12	5350.00	46.4 AV	54.0	-7.6	1.76 V	333	40.1	6.3
13	#10420.00	58.1 PK	68.2	-10.1	1.66 V	109	41.1	17.0
14	#10580.00	58.7 PK	68.2	-9.5	1.69 V	113	40.9	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+80)	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	58.5 PK	74.0	-15.5	1.63 H	2	52.2	6.3
2	5460.00	47.3 AV	54.0	-6.7	1.63 H	2	41.0	6.3
3	5460.00	59.1 PK	74.0	-14.9	2.58 H	358	52.8	6.3
4	5460.00	45.1 AV	54.0	-8.9	2.58 H	358	38.8	6.3
5	#5470.00	58.5 PK	68.2	-9.7	1.63 H	2	52.3	6.2
6	#5470.00	58.7 PK	68.2	-9.5	2.58 H	358	52.5	6.2
7	*5530.00	107.4 PK			1.63 H	2	65.3	42.1
8	*5530.00	96.3 AV			1.63 H	2	54.2	42.1
9	*5610.00	106.0 PK			2.58 H	358	63.9	42.1
10	*5610.00	94.7 AV			2.58 H	358	52.6	42.1
11	#5725.00	59.2 PK	68.2	-9.0	1.63 H	2	53.0	6.2
12	#5725.00	59.2 PK	68.2	-9.0	2.58 H	358	53.0	6.2
13	11060.00	59.1 PK	74.0	-14.9	2.11 H	275	41.0	18.1
14	11060.00	45.9 AV	54.0	-8.1	2.11 H	275	27.8	18.1
15	11220.00	59.5 PK	74.0	-14.5	2.05 H	275	41.0	18.5
16	11220.00	46.4 AV	54.0	-7.6	2.05 H	275	27.9	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	58.9 PK	74.0	-15.1	1.98 V	327	52.6	6.3
2	5460.00	45.5 AV	54.0	-8.5	1.98 V	327	39.2	6.3
3	5460.00	58.8 PK	74.0	-15.2	1.41 V	333	52.5	6.3
4	5460.00	44.8 AV	54.0	-9.2	1.41 V	333	38.5	6.3
5	#5470.00	58.6 PK	68.2	-9.6	1.98 V	327	52.4	6.2
6	#5470.00	58.9 PK	68.2	-9.3	1.41 V	333	52.7	6.2
7	*5530.00	107.1 PK			1.98 V	327	65.0	42.1
8	*5530.00	95.9 AV			1.98 V	327	53.8	42.1
9	*5610.00	105.8 PK			1.41 V	333	63.7	42.1
10	*5610.00	94.6 AV			1.41 V	333	52.5	42.1
11	#5725.00	58.3 PK	68.2	-9.9	1.98 V	327	52.1	6.2
12	#5725.00	58.3 PK	68.2	-9.9	1.41 V	333	52.1	6.2
13	11060.00	59.3 PK	74.0	-14.7	1.65 V	110	41.2	18.1
14	11060.00	46.2 AV	54.0	-7.8	1.65 V	110	28.1	18.1
15	11220.00	59.6 PK	74.0	-14.4	1.65 V	112	41.1	18.5
16	11220.00	46.5 AV	54.0	-7.5	1.65 V	112	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+80)	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	59.6 PK	74.0	-14.4	1.87 H	351	53.2	6.4
2	5150.00	46.1 AV	54.0	-7.9	1.87 H	351	39.7	6.4
3	*5210.00	106.8 PK			1.87 H	351	64.8	42.0
4	*5210.00	96.1 AV			1.87 H	351	54.1	42.0
5	5350.00	57.4 PK	74.0	-16.6	1.87 H	351	51.1	6.3
6	5350.00	44.4 AV	54.0	-9.6	1.87 H	351	38.1	6.3
7	#5650.00	58.0 PK	68.2	-10.2	2.66 H	353	51.8	6.2
8	*5775.00	108.5 PK			2.66 H	353	66.3	42.2
9	*5775.00	97.8 AV			2.66 H	353	55.6	42.2
10	#5925.00	59.6 PK	68.2	-8.6	2.66 H	353	52.3	7.3
11	#10420.00	58.0 PK	68.2	-10.2	2.01 H	277	41.0	17.0
12	11550.00	59.6 PK	74.0	-14.4	1.99 H	278	41.2	18.4
13	11550.00	46.4 AV	54.0	-7.6	1.99 H	278	28.0	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	59.2 PK	74.0	-14.8	2.53 V	4	52.8	6.4
2	5150.00	45.9 AV	54.0	-8.1	2.53 V	4	39.5	6.4
3	*5210.00	106.0 PK			2.53 V	4	64.0	42.0
4	*5210.00	95.5 AV			2.53 V	4	53.5	42.0
5	5350.00	58.1 PK	74.0	-15.9	2.53 V	4	51.8	6.3
6	5350.00	44.3 AV	54.0	-9.7	2.53 V	4	38.0	6.3
7	#5650.00	58.2 PK	68.2	-10.0	1.48 V	342	52.0	6.2
8	*5775.00	107.5 PK			1.48 V	342	65.3	42.2
9	*5775.00	96.2 AV			1.48 V	342	54.0	42.2
10	#5925.00	59.4 PK	68.2	-8.8	1.48 V	342	52.1	7.3
11	#10420.00	58.0 PK	68.2	-10.2	1.66 V	108	41.0	17.0
12	11550.00	59.5 PK	74.0	-14.5	1.65 V	108	41.1	18.4
13	11550.00	46.4 AV	54.0	-7.6	1.65 V	108	28.0	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+80)	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	58.1 PK	68.2	-10.1	2.37 H	1	51.9	6.2
2	*5690.00	108.3 PK			2.37 H	1	66.0	42.3
3	*5690.00	97.2 AV			2.37 H	1	54.9	42.3
4	*5775.00	106.3 PK			2.61 H	355	64.1	42.2
5	*5775.00	95.6 AV			2.61 H	355	53.4	42.2
6	#5850.00	58.4 PK	68.2	-9.8	2.37 H	1	51.7	6.7
7	#5925.00	59.8 PK	68.2	-8.4	2.61 H	355	52.5	7.3
8	11380.00	58.9 PK	74.0	-15.1	2.04 H	285	41.0	17.9
9	11380.00	45.7 AV	54.0	-8.3	2.04 H	285	27.8	17.9
10	11550.00	59.6 PK	74.0	-14.4	1.98 H	268	41.2	18.4
11	11550.00	46.4 AV	54.0	-7.6	1.98 H	268	28.0	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	58.1 PK	68.2	-10.1	1.49 V	330	51.9	6.2
2	*5690.00	107.1 PK			1.49 V	330	64.8	42.3
3	*5690.00	96.6 AV			1.49 V	330	54.3	42.3
4	*5775.00	105.6 PK			1.49 V	332	63.4	42.2
5	*5775.00	94.5 AV			1.49 V	332	52.3	42.2
6	#5850.00	58.5 PK	68.2	-9.7	1.49 V	330	51.8	6.7
7	#5925.00	59.2 PK	68.2	-9.0	1.49 V	332	51.9	7.3
8	11380.00	59.0 PK	74.0	-15.0	1.62 V	108	41.1	17.9
9	11380.00	45.9 AV	54.0	-8.1	1.62 V	108	28.0	17.9
10	11550.00	59.4 PK	74.0	-14.6	1.61 V	108	41.0	18.4
11	11550.00	46.2 AV	54.0	-7.8	1.61 V	108	27.8	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.

9 kHz ~ 1 GHz Worst-Case Data:

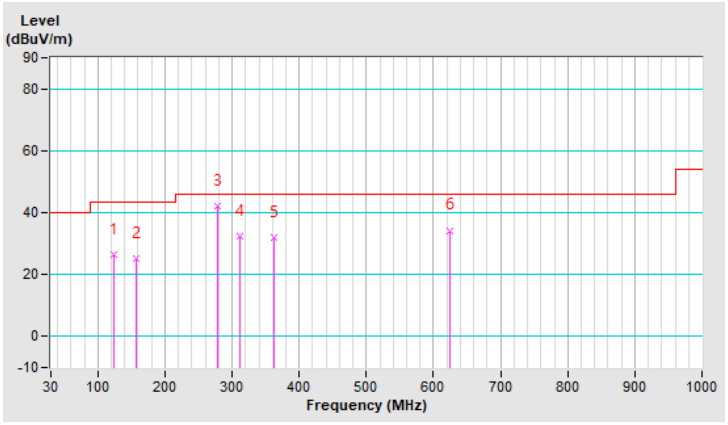
Mode A

RF Mode	TX 802.11ac (VHT80)	Channel	CH 155：5775 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	124.19	26.6 QP	43.5	-16.9	1.49 H	199	37.2	-10.6
2	156.52	25.3 QP	43.5	-18.2	1.49 H	3	33.7	-8.4
3	278.83	42.2 QP	46.0	-3.8	1.00 H	212	49.2	-7.0
4	311.16	32.2 QP	46.0	-13.8	1.00 H	138	38.5	-6.3
5	361.77	31.9 QP	46.0	-14.1	1.00 H	246	37.3	-5.4
6	624.65	34.3 QP	46.0	-11.7	1.00 H	181	33.5	0.8

Remarks:

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

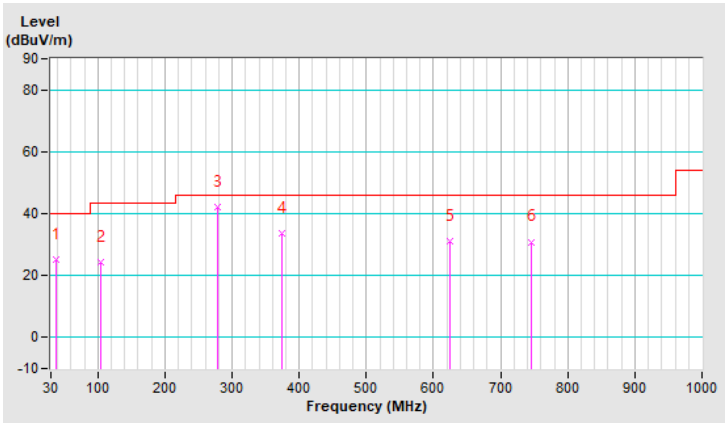


RF Mode	TX 802.11ac (VHT80)	Channel	CH 155：5775 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	38.43	25.3 QP	40.0	-14.7	1.00 V	200	35.1	-9.8
2	104.51	24.5 QP	43.5	-19.0	1.00 V	112	37.0	-12.5
3	278.83	42.2 QP	46.0	-3.8	1.49 V	158	49.2	-7.0
4	374.42	33.5 QP	46.0	-12.5	1.00 V	142	38.6	-5.1
5	624.65	31.1 QP	46.0	-14.9	1.49 V	171	30.3	0.8
6	745.55	30.9 QP	46.0	-15.1	1.00 V	14	27.7	3.2

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



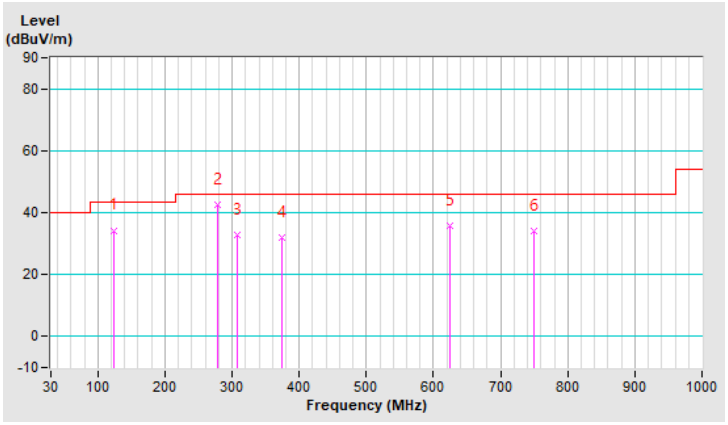
Mode B

RF Mode	TX 802.11ac (VHT80)	Channel	CH 155：5775 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	124.19	34.3 QP	43.5	-9.2	1.49 H	235	44.9	-10.6
2	278.83	42.5 QP	46.0	-3.5	1.00 H	202	49.5	-7.0
3	308.35	32.8 QP	46.0	-13.2	1.00 H	113	39.2	-6.4
4	374.42	31.8 QP	46.0	-14.2	1.00 H	198	36.9	-5.1
5	624.65	35.8 QP	46.0	-10.2	1.00 H	132	35.0	0.8
6	749.77	34.0 QP	46.0	-12.0	1.00 H	131	30.7	3.3

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

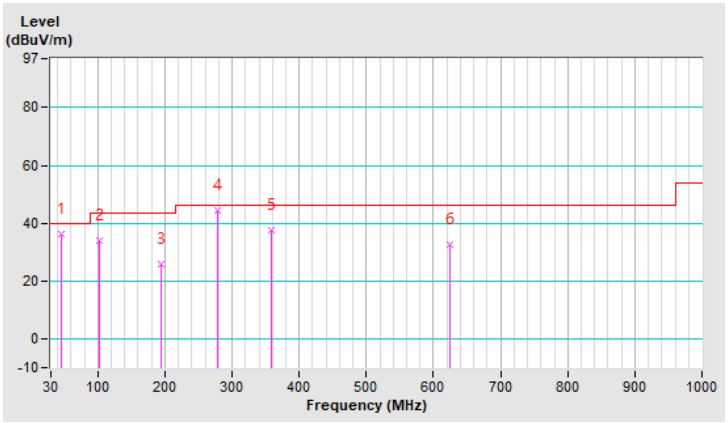


RF Mode	TX 802.11ac (VHT80)	Channel	CH 155：5775 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	45.46	36.4 QP	40.0	-3.6	1.00 V	6	45.5	-9.1
2	103.10	33.9 QP	43.5	-9.6	1.00 V	137	46.6	-12.7
3	194.48	25.7 QP	43.5	-17.8	1.00 V	26	36.9	-11.2
4	278.83	44.4 QP	46.0	-1.6	1.49 V	300	51.4	-7.0
5	358.96	37.7 QP	46.0	-8.3	1.49 V	322	43.1	-5.4
6	624.65	32.6 QP	46.0	-13.4	1.49 V	213	31.8	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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 04, 2020	Dec. 03, 2021
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Jan. 16, 2021	Jan. 15, 2022
LISN/AMN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 25, 2021	Feb. 24, 2022
LISN/AMN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 28, 2020	Aug. 27, 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 1 (Conduction 1).
3. The VCCI Site Registration No. is C-12040.

4.2.3 Test Procedures

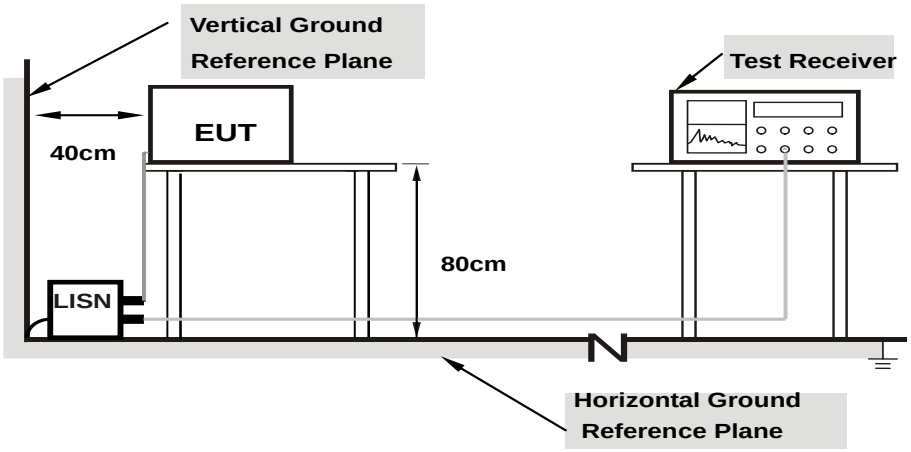
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling 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 150 kHz to 30 MHz was searched. Emission levels under (Limit -20 dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.2.6 EUT Operating Conditions

a. Placed the EUT on a testing table.
b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.2.7 Test Results

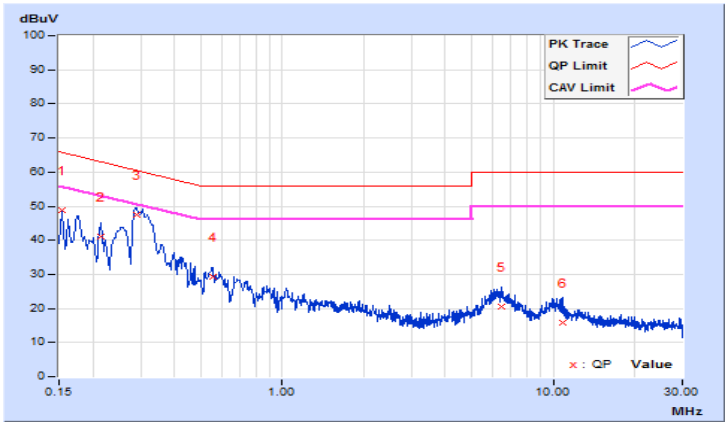
Mode A

Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	24℃, 69%RH
Tested by	Edison Lee		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15400	9.76	39.13	25.38	48.89	35.14	65.78	55.78	-16.89	-20.64
2	0.21400	9.77	31.28	19.75	41.05	29.52	63.05	53.05	-22.00	-23.53
3	**0.28906**	**9.80**	**37.63**	**30.64**	**47.43**	**40.44**	**60.55**	**50.55**	**-13.12**	**-10.11**
4	0.55400	9.85	19.53	14.11	29.38	23.96	56.00	46.00	-26.62	-22.04
5	6.41000	10.01	10.49	2.84	20.50	12.85	60.00	50.00	-39.50	-37.15
6	10.86600	10.06	5.64	0.42	15.70	10.48	60.00	50.00	-44.30	-39.52

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

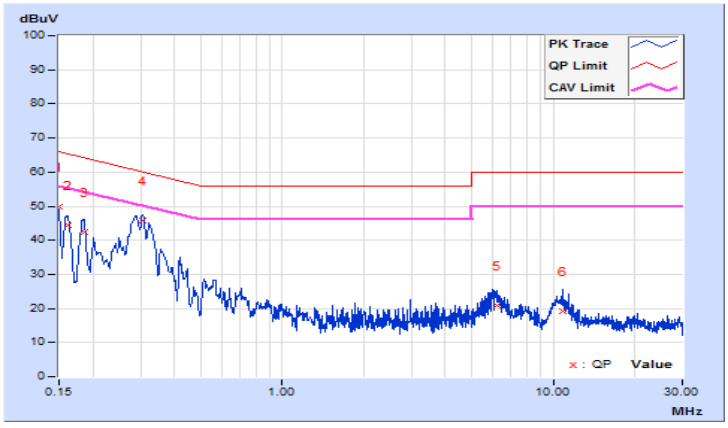


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	24℃, 69%RH
Tested by	Edison Lee		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.80	38.62	26.46	48.42	36.26	66.00	56.00	-17.58	-19.74
2	0.16105	9.81	34.64	18.79	44.45	28.60	65.41	55.41	-20.96	-26.81
3	0.18519	9.82	32.55	20.61	42.37	30.43	64.25	54.25	-21.88	-23.82
4	0.30550	9.87	36.05	28.65	45.92	38.52	60.09	50.09	-14.17	-11.57
5	6.19400	10.08	10.66	2.44	20.74	12.52	60.00	50.00	-39.26	-37.48
6	10.81800	10.15	9.06	4.34	19.21	14.49	60.00	50.00	-40.79	-35.51

Remarks:

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



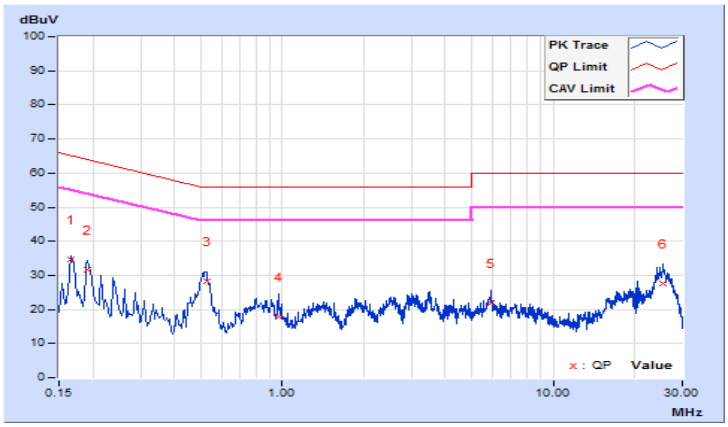
Mode B

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	24℃, 69%RH
Tested by	Edison Lee		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16600	9.71	25.10	11.67	34.81	21.38	65.16	55.16	-30.35	-33.78
2	0.19000	9.71	21.91	9.37	31.62	19.08	64.04	54.04	-32.42	-34.96
3	0.52567	9.74	18.65	13.39	28.39	23.13	56.00	46.00	-27.61	-22.87
4	0.97000	9.76	7.96	2.10	17.72	11.86	56.00	46.00	-38.28	-34.14
5	5.87400	9.81	12.05	5.47	21.86	15.28	60.00	50.00	-38.14	-34.72
6	25.57000	9.80	17.81	9.47	27.61	19.27	60.00	50.00	-32.39	-30.73

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

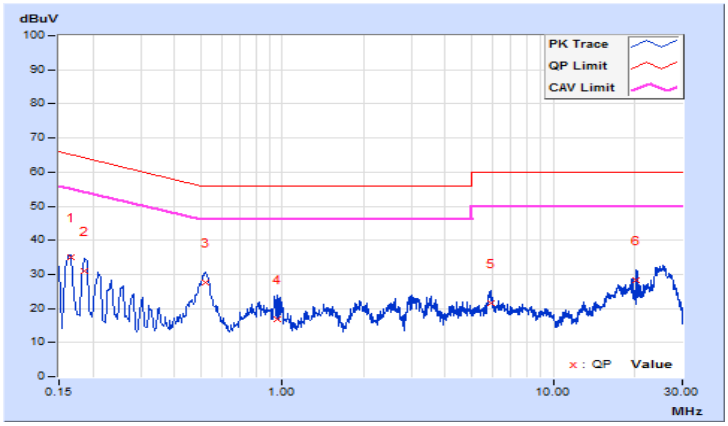


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	24℃, 69%RH
Tested by	Edison Lee		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.16535	9.77	25.32	11.08	35.09	20.85	65.19	55.19	-30.10	-34.34
2	0.18568	9.77	21.14	7.36	30.91	17.13	64.23	54.23	-33.32	-37.10
3	0.52153	9.80	17.73	12.07	27.53	21.87	56.00	46.00	-28.47	-24.13
4	0.95800	9.82	7.13	0.34	16.95	10.16	56.00	46.00	-39.05	-35.84
5	5.87800	9.88	11.52	4.95	21.40	14.83	60.00	50.00	-38.60	-35.17
6	20.25800	9.99	18.35	15.59	28.34	25.58	60.00	50.00	-31.66	-24.42

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 ≦ 125 mW (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	250 mW (24 dBm)
U-NII-2A	√		250 mW (24 dBm) or 11 dBm + 10 log B*
U-NII-2C	√		250 mW (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 $N_{ANT} \leq 4$;

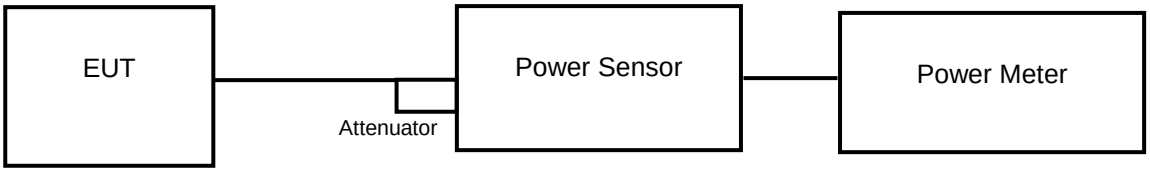
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};

Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20 MHz channel widths with $N_{ANT} \geq 5$.

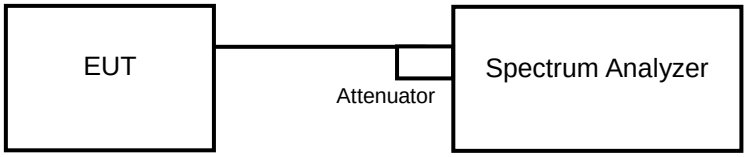
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

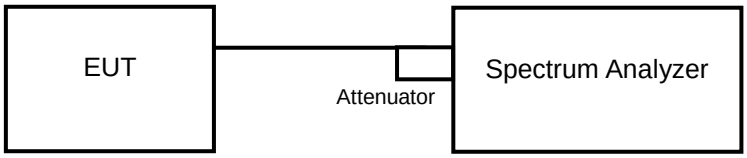
<Power Output Measurement>



or



<26 dB Bandwidth>



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

Average Power Measurement

<802.11a, 802.11n (HT20), 802.11n (HT40)>

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

<802.11ac (VHT80), 802.11ac (VHT80+VHT80)>

a. Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99 % occupied bandwidth) of the signal.
b. Set sweep trigger to “free run”.
c. Set RBW = 1 MHz.
d. Set VBW ≥ 3 MHz
e. Number of points in sweep ≥ 2 Span / RBW.
f. Sweep time ≤ (number of points in sweep) * T
g. Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
h. Detector = RMS.
i. Trace mode = max hold.
j. Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
k. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum

26 dB Bandwidth

a. Set RBW = approximately 1 % of the emission bandwidth.
b. Set the VBW ≥ 3 x 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 Results

Power Output:

CDD Mode

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	21.58	21.47	21.67	21.74	580.333	27.64	30	Pass
40	5200	23.71	23.31	23.62	23.72	914.901	29.61	30	Pass
48	5240	23.64	23.32	23.77	23.67	917.031	29.62	30	Pass
52	5260	15.76	15.58	15.92	16.05	153.167	21.85	23.97	Pass
60	5300	15.69	15.54	15.91	15.87	150.509	21.78	23.97	Pass
64	5320	15.73	15.45	15.89	15.67	148.199	21.71	23.98	Pass
100	5500	14.47	14.01	14.54	14.36	108.901	20.37	23.96	Pass
116	5580	14.52	14.06	14.62	14.37	110.108	20.42	23.95	Pass
140	5700	14.38	14.41	14.33	14.58	110.831	20.45	23.98	Pass
149	5745	23.38	23.31	23.73	23.37	885.378	29.47	30	Pass
157	5785	23.43	23.08	23.71	23.52	883.397	29.46	30	Pass
165	5825	23.35	23.42	23.55	23.12	867.638	29.38	30	Pass

Note:

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

Chain 0

1. 11dBm + 10log (19.89) = 23.98 < 24dBm
2. 11dBm + 10log (19.99) = 24.00 < 24dBm
3. 11dBm + 10log (19.96) = 24.00 < 24dBm
4. 11dBm + 10log (19.84) = 23.97 < 24dBm
5. 11dBm + 10log (19.74) = 23.95 < 24dBm
6. 11dBm + 10log (20.23) = 24.05 > 24dBm

Chain 1

1. 11dBm + 10log (19.84) = 23.97 < 24dBm
2. 11dBm + 10log (19.86) = 23.97 < 24dBm
3. 11dBm + 10log (19.88) = 23.98 < 24dBm
4. 11dBm + 10log (19.83) = 23.97 < 24dBm
5. 11dBm + 10log (19.87) = 23.98 < 24dBm
6. 11dBm + 10log (19.90) = 23.98 < 24dBm

Chain 2

1. 11dBm + 10log (19.88) = 23.98 < 24dBm
2. 11dBm + 10log (19.84) = 23.97 < 24dBm
3. 11dBm + 10log (19.88) = 23.98 < 24dBm
4. 11dBm + 10log (19.86) = 23.97 < 24dBm
5. 11dBm + 10log (19.84) = 23.97 < 24dBm
6. 11dBm + 10log (19.94) = 23.99 < 24dBm

Chain 3

1. 11dBm + 10log (19.91) = 23.99 < 24dBm
2. 11dBm + 10log (19.89) = 23.98 < 24dBm
3. 11dBm + 10log (19.93) = 23.99 < 24dBm
4. 11dBm + 10log (19.81) = 23.96 < 24dBm
5. 11dBm + 10log (19.84) = 23.97 < 24dBm
6. 11dBm + 10log (19.97) = 24.00 < 24dBm

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	21.48	21.41	21.72	21.69	575.126	27.60	30	Pass
40	5200	23.45	23.08	23.45	23.61	875.47	29.42	30	Pass
48	5240	23.44	23.09	23.41	23.63	874.46	29.42	30	Pass
52	5260	16.08	15.72	16.21	16.22	161.538	22.08	24	Pass
60	5300	16.09	15.79	16.19	16.23	162.143	22.10	24	Pass
64	5320	16.01	15.71	16.22	16.15	160.231	22.05	24	Pass
100	5500	15.17	14.58	15.62	15.42	132.902	21.24	24	Pass
116	5580	15.23	14.67	15.58	15.37	133.228	21.25	24	Pass
140	5700	15.33	14.78	15.44	15.48	134.493	21.29	24	Pass
149	5745	23.41	23.31	23.27	23.44	866.694	29.38	30	Pass
157	5785	23.27	23.28	23.44	23.52	870.844	29.40	30	Pass
165	5825	23.37	23.14	23.52	23.39	866.512	29.38	30	Pass

Note:

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

Chain 0

1. 11dBm + 10log (20.64) = 24.14 > 24dBm
2. 11dBm + 10log (20.63) = 24.14 > 24dBm
3. 11dBm + 10log (20.71) = 24.16 > 24dBm
4. 11dBm + 10log (20.64) = 24.14 > 24dBm
5. 11dBm + 10log (20.62) = 24.14 > 24dBm
6. 11dBm + 10log (20.64) = 24.14 > 24dBm

Chain 1

1. 11dBm + 10log (20.75) = 24.17 > 24dBm
2. 11dBm + 10log (20.76) = 24.17 > 24dBm
3. 11dBm + 10log (20.77) = 24.17 > 24dBm
4. 11dBm + 10log (20.72) = 24.16 > 24dBm
5. 11dBm + 10log (20.60) = 24.13 > 24dBm
6. 11dBm + 10log (20.70) = 24.15 > 24dBm

Chain 2

1. 11dBm + 10log (20.62) = 24.14 > 24dBm
2. 11dBm + 10log (20.61) = 24.14 > 24dBm
3. 11dBm + 10log (20.64) = 24.14 > 24dBm
4. 11dBm + 10log (20.66) = 24.15 > 24dBm
5. 11dBm + 10log (20.61) = 24.14 > 24dBm
6. 11dBm + 10log (20.76) = 24.17 > 24dBm

Chain 3

1. 11dBm + 10log (20.55) = 24.12 > 24dBm
2. 11dBm + 10log (20.69) = 24.15 > 24dBm
3. 11dBm + 10log (20.80) = 24.18 > 24dBm
4. 11dBm + 10log (20.64) = 24.14 > 24dBm
5. 11dBm + 10log (20.61) = 24.14 > 24dBm
6. 11dBm + 10log (20.74) = 24.16 > 24dBm

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	21.08	20.57	21.07	21.01	496.379	26.96	30	Pass
46	5230	23.14	22.92	23.52	23.17	834.344	29.21	30	Pass
54	5270	17.62	17.54	17.81	17.62	232.769	23.67	24	Pass
62	5310	17.68	17.51	17.94	17.58	234.487	23.70	24	Pass
102	5510	17.42	16.58	17.66	17.29	212.631	23.28	24	Pass
110	5550	17.47	16.67	17.68	17.32	214.863	23.32	24	Pass
134	5670	17.42	16.55	17.51	17.35	211.082	23.24	24	Pass
151	5755	23.26	23.21	23.34	23.55	863.486	29.36	30	Pass
159	5795	23.36	23.27	23.42	23.48	871.724	29.40	30	Pass

Note:

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

Chain 0

1. 11dBm + 10log (40.91) = 27.11 > 24dBm
2. 11dBm + 10log (40.78) = 27.10 > 24dBm
3. 11dBm + 10log (40.95) = 27.12 > 24dBm
4. 11dBm + 10log (41.14) = 27.14 > 24dBm
5. 11dBm + 10log (40.96) = 27.12 > 24dBm

Chain 1

1. 11dBm + 10log (40.96) = 27.12 > 24dBm
2. 11dBm + 10log (40.86) = 27.11 > 24dBm
3. 11dBm + 10log (40.92) = 27.11 > 24dBm
4. 11dBm + 10log (40.95) = 27.12 > 24dBm
5. 11dBm + 10log (41.03) = 27.13 > 24dBm

Chain 2

1. 11dBm + 10log (40.64) = 27.08 > 24dBm
2. 11dBm + 10log (40.83) = 27.10 > 24dBm
3. 11dBm + 10log (40.95) = 27.12 > 24dBm
4. 11dBm + 10log (41.12) = 27.14 > 24dBm
5. 11dBm + 10log (40.94) = 27.12 > 24dBm

Chain 3

1. 11dBm + 10log (40.99) = 27.12 > 24dBm
2. 11dBm + 10log (40.73) = 27.09 > 24dBm
3. 11dBm + 10log (40.85) = 27.11 > 24dBm
4. 11dBm + 10log (41.00) = 27.12 > 24dBm
5. 11dBm + 10log (40.98) = 27.12 > 24dBm

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	19.48	18.95	19.68	19.71	353.676	25.49	30	Pass
58	5290	17.72	17.49	18.05	17.83	239.761	23.80	24	Pass
106	5530	17.45	17.32	17.67	17.71	227.041	23.56	24	Pass
122	5610	17.51	17.23	17.81	17.52	226.097	23.54	24	Pass
155	5775	20.33	20.45	20.46	19.85	426.566	26.30	30	Pass

Note:

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

Chain 0

1. 11dBm + 10log (83.56) = 30.21 > 24dBm
2. 11dBm + 10log (83.51) = 30.21 > 24dBm
3. 11dBm + 10log (83.81) = 30.23 > 24dBm

Chain 1

1. 11dBm + 10log (83.33) = 30.20 > 24dBm
2. 11dBm + 10log (83.56) = 30.21 > 24dBm
3. 11dBm + 10log (83.96) = 30.24 > 24dBm

Chain 2

1. 11dBm + 10log (83.41) = 30.21 > 24dBm
2. 11dBm + 10log (83.63) = 30.22 > 24dBm
3. 11dBm + 10log (83.75) = 30.22 > 24dBm

Chain 3

1. 11dBm + 10log (83.61) = 30.22 > 24dBm
2. 11dBm + 10log (83.75) = 30.22 > 24dBm
3. 11dBm + 10log (83.75) = 30.22 > 24dBm

802.11ac (VHT80+VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	18.01	17.17	-	-	115.361	20.62	30	Pass
58	5290	-	-	17.62	17.41	112.89	20.53	24	Pass
106	5530	17.61	16.79	-	-	105.43	20.23	24	Pass
122	5610	-	-	17.26	17.25	106.299	20.27	24	Pass
138	5690 (U-NII-2C)	17.27	16.99	-	-	103.337	20.14	24	Pass
138	5690 (U-NII-3)	3.29	3.03	-	-	4.142	6.17	30	Pass
155	5775	-	-	16.99	17.06	100.819	20.04	30	Pass

Note:

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

Chain 0

1. 11dBm + 10log (84.60) = 30.27 > 24dBm for CH 106
2. 11dBm + 10log (5725.00 - 5639.29) = 30.33 > 24dBm for CH 138

Chain 1

1. 11dBm + 10log (83.96) = 30.24 > 24dBm for CH 106
2. 11dBm + 10log (5725.00 - 5639.28) = 30.33 > 24dBm for CH 138

Chain 2

1. 11dBm + 10log (86.04) = 30.34 > 24dBm for CH 58
2. 11dBm + 10log (84.34) = 30.26 > 24dBm for CH 122

Chain 3

1. 11dBm + 10log (86.34) = 30.36 > 24dBm for CH 58
2. 11dBm + 10log (83.87) = 30.23 > 24dBm for CH 122

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	19.48	19.33	-	-	174.419	22.42	30	Pass
155	5775	-	-	19.12	19.24	165.604	22.19	30	Pass

Beamforming Mode

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	20.48	20.41	20.72	20.69	456.839	26.60	26.98	Pass
40	5200	20.95	20.58	20.95	21.11	492.313	26.92	26.98	Pass
48	5240	20.94	20.59	20.91	21.13	491.745	26.92	26.98	Pass
52	5260	14.58	14.22	14.71	14.72	114.36	20.58	20.85	Pass
60	5300	14.59	14.29	14.69	14.73	114.788	20.60	20.85	Pass
64	5320	14.51	14.21	14.72	14.65	113.435	20.55	20.85	Pass
100	5500	14.17	13.58	14.62	14.42	105.568	20.24	20.50	Pass
116	5580	14.23	13.67	14.58	14.37	105.826	20.25	20.50	Pass
140	5700	14.33	13.78	14.44	14.48	106.831	20.29	20.50	Pass
149	5745	19.91	19.81	19.77	19.94	387.138	25.88	26.26	Pass
157	5785	19.77	19.78	19.94	20.02	388.992	25.90	26.26	Pass
165	5825	19.87	19.64	20.02	19.89	387.056	25.88	26.26	Pass

Note:

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

Chain 0

1. 11dBm + 10log (20.64) = 24.14 > 24dBm
2. 11dBm + 10log (20.63) = 24.14 > 24dBm
3. 11dBm + 10log (20.71) = 24.16 > 24dBm
4. 11dBm + 10log (20.64) = 24.14 > 24dBm
5. 11dBm + 10log (20.62) = 24.14 > 24dBm
6. 11dBm + 10log (20.64) = 24.14 > 24dBm

Chain 1

1. 11dBm + 10log (20.75) = 24.17 > 24dBm
2. 11dBm + 10log (20.76) = 24.17 > 24dBm
3. 11dBm + 10log (20.77) = 24.17 > 24dBm
4. 11dBm + 10log (20.72) = 24.16 > 24dBm
5. 11dBm + 10log (20.60) = 24.13 > 24dBm
6. 11dBm + 10log (20.70) = 24.15 > 24dBm

Chain 2

1. 11dBm + 10log (20.62) = 24.14 > 24dBm
2. 11dBm + 10log (20.61) = 24.14 > 24dBm
3. 11dBm + 10log (20.64) = 24.14 > 24dBm
4. 11dBm + 10log (20.66) = 24.15 > 24dBm
5. 11dBm + 10log (20.61) = 24.14 > 24dBm
6. 11dBm + 10log (20.76) = 24.17 > 24dBm

Chain 3

1. 11dBm + 10log (20.55) = 24.12 > 24dBm
2. 11dBm + 10log (20.69) = 24.15 > 24dBm
3. 11dBm + 10log (20.80) = 24.18 > 24dBm
4. 11dBm + 10log (20.64) = 24.14 > 24dBm
5. 11dBm + 10log (20.61) = 24.14 > 24dBm
6. 11dBm + 10log (20.74) = 24.16 > 24dBm

For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 9.02dBi > 6dBi, so the limit shall be reduced to 30-(9.02-6) = 26.98dBm.
For U-NII-2A: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 9.15dBi > 6dBi, so the limit shall be reduced to 24-(9.15-6) = 20.85dBm.
For U-NII-2C: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 9.5dBi > 6dBi, so the limit shall be reduced to 24-(9.5-6) = 20.50dBm.
For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 9.74dBi > 6dBi, so the limit shall be reduced to 30-(9.74-6) = 26.26dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	21.08	20.57	21.07	21.01	496.379	26.96	26.98	Pass
46	5230	20.64	20.42	21.02	20.67	469.186	26.71	26.98	Pass
54	5270	14.62	14.54	14.81	14.62	116.661	20.67	20.85	Pass
62	5310	14.68	14.51	14.94	14.58	117.522	20.70	20.85	Pass
102	5510	14.42	13.58	14.66	14.29	106.568	20.28	20.50	Pass
110	5550	14.47	13.67	14.68	14.32	107.687	20.32	20.50	Pass
134	5670	14.42	13.55	14.51	14.35	105.792	20.24	20.50	Pass
151	5755	19.76	19.71	19.84	20.05	385.705	25.86	26.26	Pass
159	5795	19.86	19.77	19.92	19.98	389.385	25.90	26.26	Pass

Note:

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

Chain 0

1. 11dBm + 10log (40.91) = 27.11 > 24dBm
2. 11dBm + 10log (40.78) = 27.10 > 24dBm
3. 11dBm + 10log (40.95) = 27.12 > 24dBm
4. 11dBm + 10log (41.14) = 27.14 > 24dBm
5. 11dBm + 10log (40.96) = 27.12 > 24dBm

Chain 1

1. 11dBm + 10log (40.96) = 27.12 > 24dBm
2. 11dBm + 10log (40.86) = 27.11 > 24dBm
3. 11dBm + 10log (40.92) = 27.11 > 24dBm
4. 11dBm + 10log (40.95) = 27.12 > 24dBm
5. 11dBm + 10log (41.03) = 27.13 > 24dBm

Chain 2

1. 11dBm + 10log (40.64) = 27.08 > 24dBm
2. 11dBm + 10log (40.83) = 27.10 > 24dBm
3. 11dBm + 10log (40.95) = 27.12 > 24dBm
4. 11dBm + 10log (41.12) = 27.14 > 24dBm
5. 11dBm + 10log (40.94) = 27.12 > 24dBm

Chain 3

1. 11dBm + 10log (40.99) = 27.12 > 24dBm
2. 11dBm + 10log (40.73) = 27.09 > 24dBm
3. 11dBm + 10log (40.85) = 27.11 > 24dBm
4. 11dBm + 10log (41.00) = 27.12 > 24dBm
5. 11dBm + 10log (40.98) = 27.12 > 24dBm

For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 9.02dBi > 6dBi, so the limit shall be reduced to 30-(9.02-6) = 26.98dBm.
For U-NII-2A: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 9.15dBi > 6dBi, so the limit shall be reduced to 24-(9.15-6) = 20.85dBm.
For U-NII-2C: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 9.5dBi > 6dBi, so the limit shall be reduced to 24-(9.5-6) = 20.50dBm.
For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 9.74dBi > 6dBi, so the limit shall be reduced to 30-(9.74-6) = 26.26dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	19.48	18.95	19.68	19.71	353.676	25.49	26.98	Pass
58	5290	14.72	14.49	15.05	14.83	120.165	20.80	20.85	Pass
106	5530	13.95	13.82	14.17	14.21	101.415	20.06	20.50	Pass
122	5610	14.01	13.73	14.31	14.02	100.994	20.04	20.50	Pass
155	5775	19.83	19.95	19.96	19.35	380.177	25.80	26.26	Pass

Note:

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

Chain 0

1. 11dBm + 10log (83.56) = 30.21 > 24dBm
2. 11dBm + 10log (83.51) = 30.21 > 24dBm
3. 11dBm + 10log (83.81) = 30.23 > 24dBm

Chain 1

1. 11dBm + 10log (83.33) = 30.20 > 24dBm
2. 11dBm + 10log (83.56) = 30.21 > 24dBm
3. 11dBm + 10log (83.96) = 30.24 > 24dBm

Chain 2

1. 11dBm + 10log (83.41) = 30.21 > 24dBm
2. 11dBm + 10log (83.63) = 30.22 > 24dBm
3. 11dBm + 10log (83.75) = 30.22 > 24dBm

Chain 3

1. 11dBm + 10log (83.61) = 30.22 > 24dBm
2. 11dBm + 10log (83.75) = 30.22 > 24dBm
3. 11dBm + 10log (83.75) = 30.22 > 24dBm

For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 9.02dBi > 6dBi, so the limit shall be reduced to 30-(9.02-6) = 26.98dBm.
For U-NII-2A: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 9.15dBi > 6dBi, so the limit shall be reduced to 24-(9.15-6) = 20.85dBm.
For U-NII-2C: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 9.5dBi > 6dBi, so the limit shall be reduced to 24-(9.5-6) = 20.50dBm.
For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 9.74dBi > 6dBi, so the limit shall be reduced to 30-(9.74-6) = 26.26dBm.

802.11ac (VHT80+VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	18.01	17.17	-	-	115.361	20.62	29.90	Pass
58	5290	-	-	17.62	17.41	112.89	20.53	23.98	Pass
106	5530	17.61	16.79	-	-	105.43	20.23	23.49	Pass
122	5610	-	-	17.26	17.25	106.299	20.27	23.49	Pass
138	5690 (U-NII-2C)	17.27	16.99	-	-	103.337	20.14	23.49	Pass
138	5690 (U-NII-3)	3.29	3.03	-	-	4.142	6.17	29.25	Pass
155	5775	-	-	16.99	17.06	100.819	20.04	29.29	Pass

Note:

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

Chain 0

1. 11dBm + 10log (84.60) = 30.27 > 24dBm for CH 106
2. 11dBm + 10log (5725.00 - 5639.29) = 30.33 > 24dBm for CH 138

Chain 1

1. 11dBm + 10log (83.96) = 30.24 > 24dBm for CH 106
2. 11dBm + 10log (5725.00 - 5639.28) = 30.33 > 24dBm for CH 138

Chain 2

1. 11dBm + 10log (86.04) = 30.34 > 24dBm for CH 58
2. 11dBm + 10log (84.34) = 30.26 > 24dBm for CH 122

Chain 3

1. 11dBm + 10log (86.34) = 30.36 > 24dBm for CH 58
2. 11dBm + 10log (83.87) = 30.23 > 24dBm for CH 122

For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/2$]= 6.10dBi > 6dBi, so the limit shall be reduced to 30-(6.10-6) = 29.90dBm.
For U-NII-2A: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/2$]= 6.02dBi > 6dBi, so the limit shall be reduced to 24-(6.02-6) = 23.98dBm.
For U-NII-2C: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/2$]= 6.51dBi > 6dBi, so the limit shall be reduced to 24-(6.51-6) = 23.49dBm.

For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/2$]= 6.75dBi > 6dBi, so the limit shall be reduced to 30-(6.75-6) = 29.25dBm.
Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/2$]= 6.71dBi > 6dBi, so the limit shall be reduced to 30-(6.71-6) = 29.29dBm.

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	19.48	19.33	-	-	174.419	22.42	29.90	Pass
155	5775	-	-	19.12	19.24	165.604	22.19	29.29	Pass

Note:
For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/2$]= 6.10dBi > 6dBi, so the limit shall be reduced to 30-(6.10-6) = 29.90dBm.
For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/2$]= 6.71dBi > 6dBi, so the limit shall be reduced to 30-(6.71-6) = 29.29dBm.

26 dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	19.73	19.90	20.05	19.91
40	5200	20.59	20.28	20.85	20.52
48	5240	20.48	19.94	20.58	20.62
52	5260	19.89	19.84	19.88	19.91
60	5300	19.99	19.86	19.84	19.89
64	5320	19.96	19.88	19.88	19.93
100	5500	19.84	19.83	19.86	19.81
116	5580	19.74	19.87	19.84	19.84
140	5700	20.23	19.90	19.94	19.97

802.11n (HT20)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	20.69	20.64	20.68	20.82
40	5200	21.06	20.67	21.05	21.07
48	5240	20.93	20.87	20.85	20.94
52	5260	20.64	20.75	20.62	20.55
60	5300	20.63	20.76	20.61	20.69
64	5320	20.71	20.77	20.64	20.80
100	5500	20.64	20.72	20.66	20.64
116	5580	20.62	20.60	20.61	20.61
140	5700	20.64	20.70	20.76	20.74

802.11n (HT40)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	40.89	40.70	40.89	41.00
46	5230	40.86	40.95	41.07	40.81
54	5270	40.91	40.96	40.64	40.99
62	5310	40.78	40.86	40.83	40.73
102	5510	40.95	40.92	40.95	40.85
110	5550	41.14	40.95	41.12	41.00
134	5670	40.96	41.03	40.94	40.98

802.11ac (VHT80)

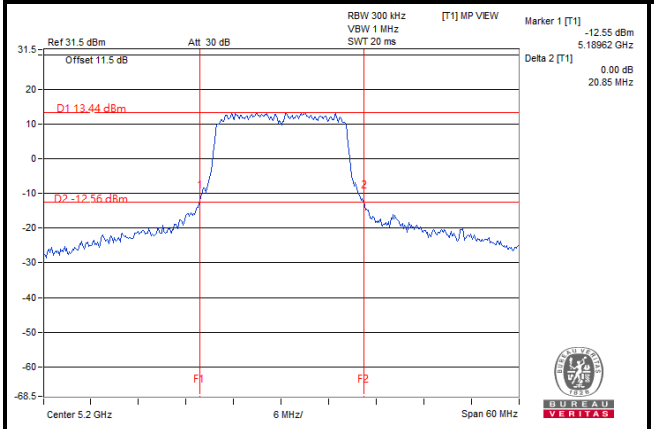
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	83.75	84.05	84.01	83.99
58	5290	83.56	83.33	83.41	83.61
106	5530	83.51	83.56	83.63	83.75
122	5610	83.81	83.96	83.75	83.75

802.11ac (VHT80+VHT80)

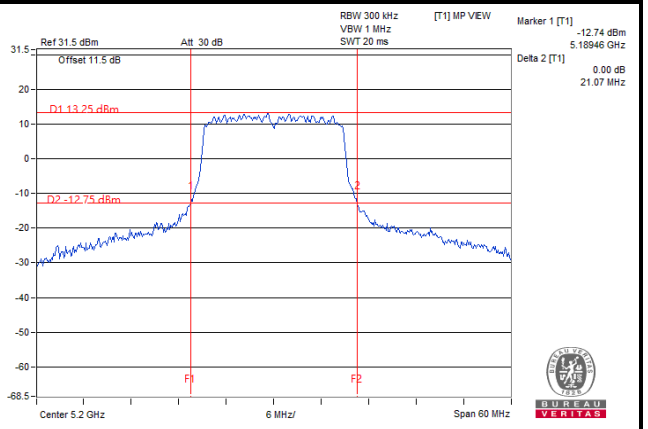
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	83.97	83.42	-	-
58	5290	-	-	86.04	86.34
106	5530	84.60	83.96	-	-
122	5610	-	-	84.34	83.87
138	5690 (U-NII-2C)	85.71	85.72	-	-

Spectrum Plot of Worst Value

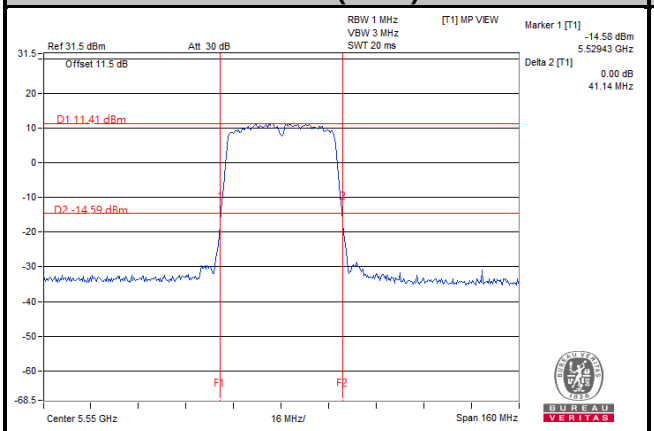
802.11a



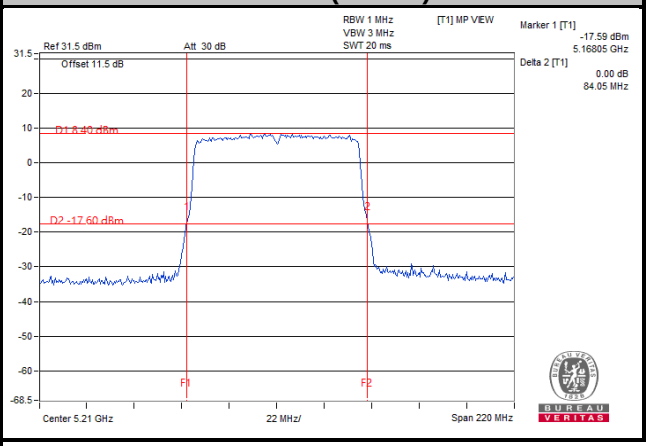
802.11n (HT20)



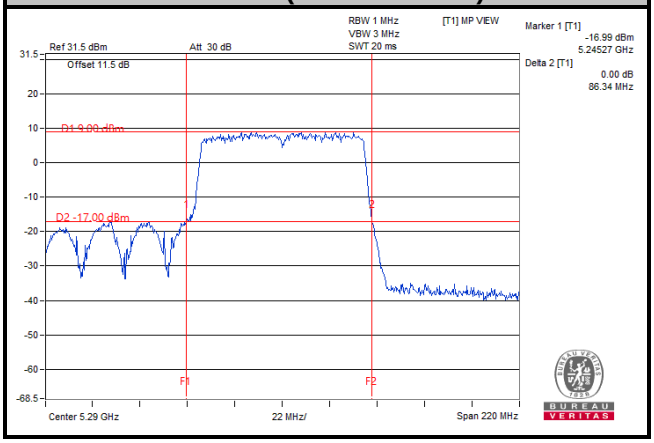
802.11n (HT40)



802.11ac (VHT80)

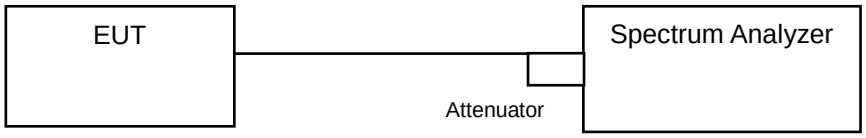


802.11ac (VHT80+VHT80)



4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	16.44	16.44	16.44	16.44
40	5200	16.44	16.44	16.56	16.44
48	5240	16.44	16.44	16.44	16.44
52	5260	16.44	16.44	16.44	16.44
60	5300	16.44	16.44	16.44	16.44
64	5320	16.44	16.44	16.44	16.44
100	5500	16.44	16.44	16.44	16.44
116	5580	16.44	16.44	16.44	16.44
140	5700	16.44	16.44	16.44	16.44
149	5745	16.44	16.44	16.68	16.56
157	5785	16.68	16.68	16.68	16.68
165	5825	16.68	16.68	16.68	16.68

802.11n (HT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	17.64	17.64	17.64	17.64
40	5200	17.64	17.64	17.64	17.64
48	5240	17.64	17.64	17.64	17.64
52	5260	17.64	17.64	17.64	17.64
60	5300	17.64	17.64	17.64	17.64
64	5320	17.64	17.64	17.64	17.64
100	5500	17.64	17.64	17.64	17.64
116	5580	17.64	17.64	17.64	17.64
140	5700	17.64	17.64	17.64	17.64
149	5745	17.64	17.64	17.64	17.64
157	5785	17.64	17.64	17.64	17.64
165	5825	17.76	17.76	17.76	17.76

802.11n (HT40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	36.12	36.12	36.12	36.12
46	5230	36.12	36.12	36.12	36.12
54	5270	36.00	36.00	36.00	36.00
62	5310	36.12	36.00	36.12	36.00
102	5510	36.00	36.12	36.12	36.12
110	5550	36.00	36.12	36.12	36.12
134	5670	36.12	36.12	36.12	36.12
151	5755	36.24	36.24	36.24	36.24
159	5795	36.24	36.12	36.24	36.24

802.11ac (VHT80)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	75.84	75.84	75.84	75.84
58	5290	75.84	75.84	75.84	75.84
106	5530	75.84	75.84	75.84	75.84
122	5610	76.08	76.08	76.08	76.08
155	5775	75.84	75.84	75.84	75.84

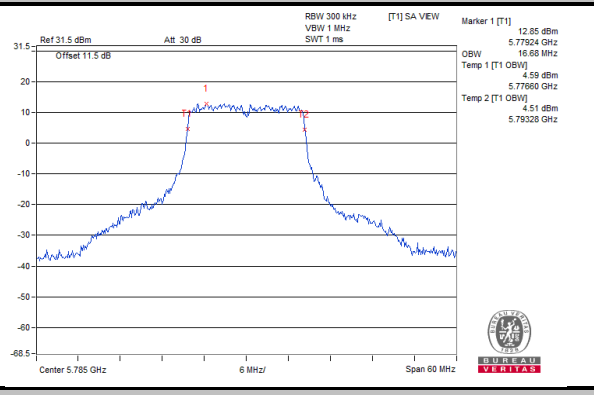
802.11ac (VHT80+VHT80)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	75.77	75.96	-	-
58	5290	-	-	75.77	75.96
106	5530	76.32	76.08	-	-
122	5610	-	-	76.08	75.84
138	5690 (U-NII-2C)	73.16	73.16	-	-
138	5690 (U-NII-3)	2.44	2.44	-	-
155	5775	-	-	75.96	75.96

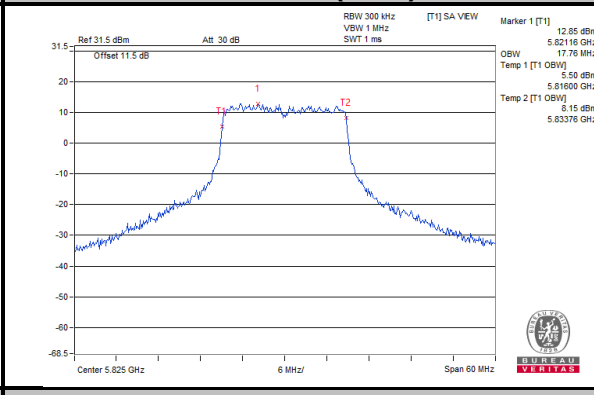
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	75.96	75.96	-	-
155	5775	-	-	76.15	75.96

Spectrum Plot of Worst Value

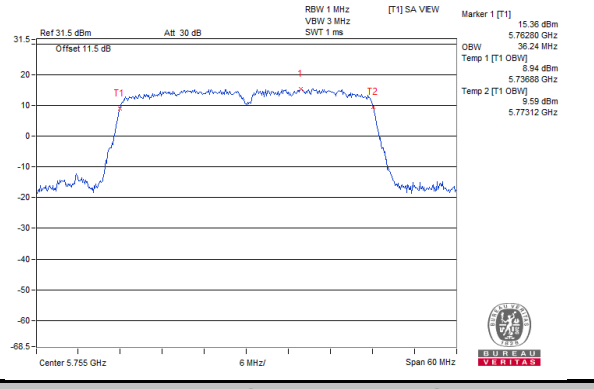
802.11a



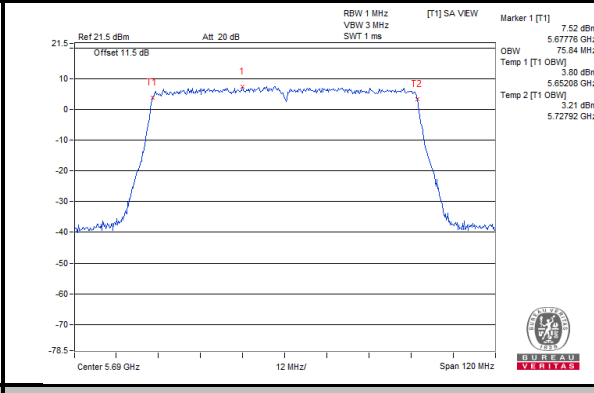
802.11n (HT20)



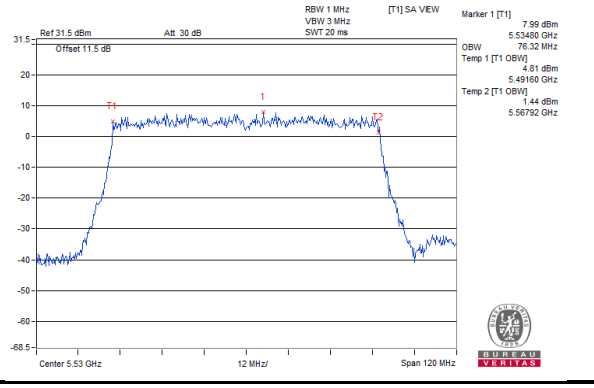
802.11n (HT40)



802.11ac (VHT80)



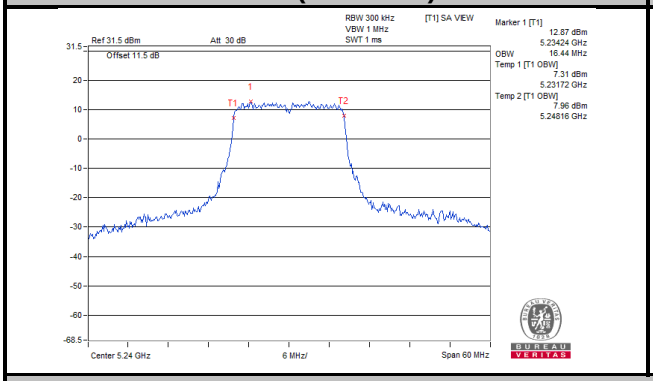
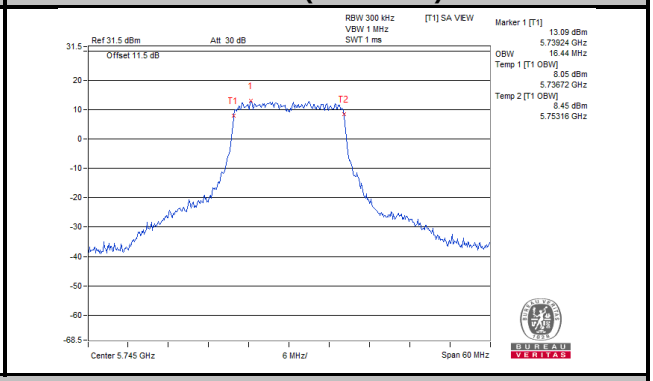
802.11ac (VHT80+VHT80)



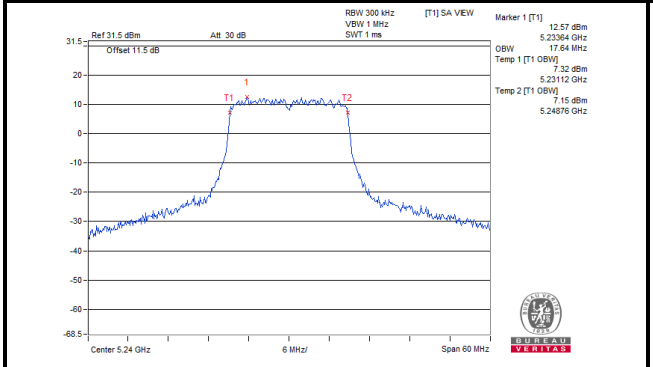
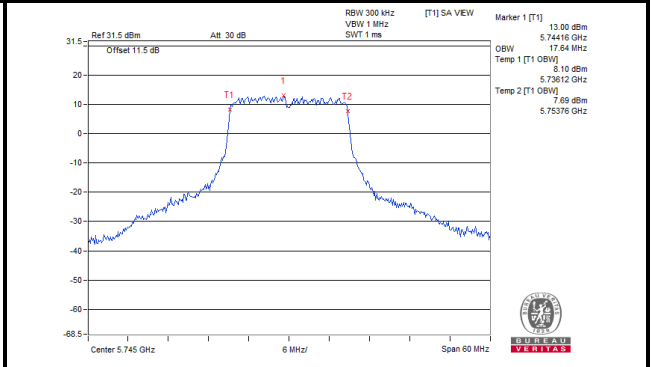
Chain 0

Spectrum Plot for Nearby DFS Band

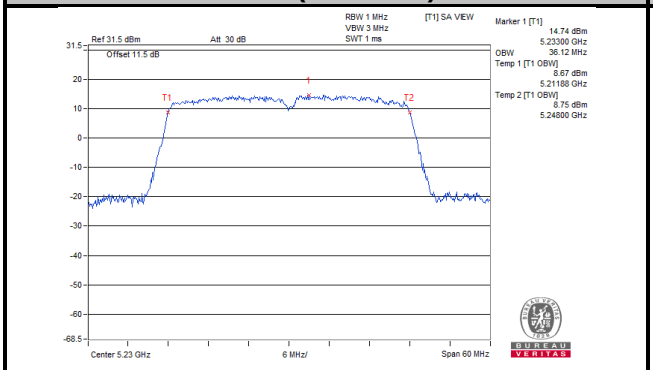
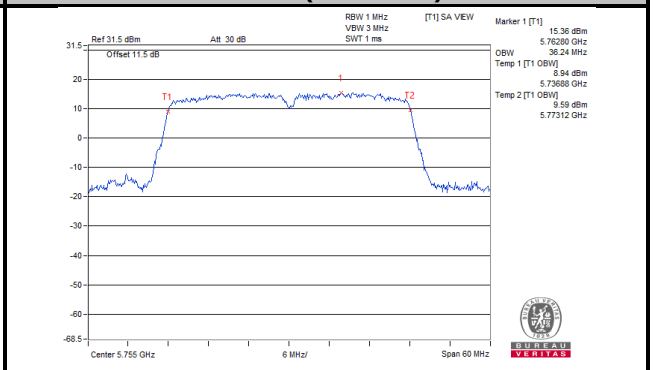
802.11a

Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	

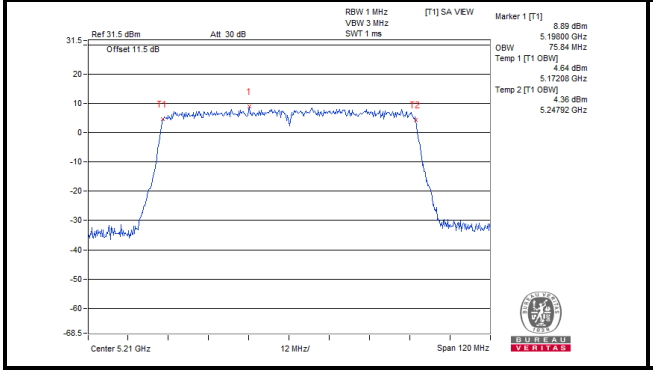
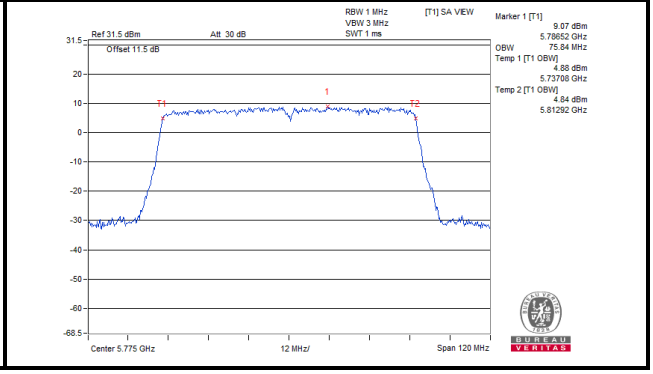
802.11n (HT20)

Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	

802.11n (HT40)

Ch 46 (5230 MHz)	Ch 151 (5755 MHz)
	

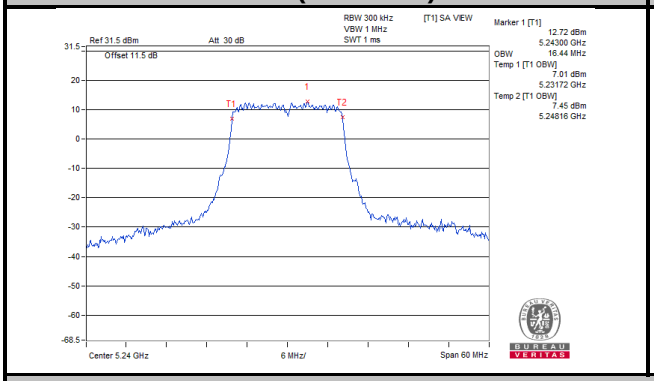
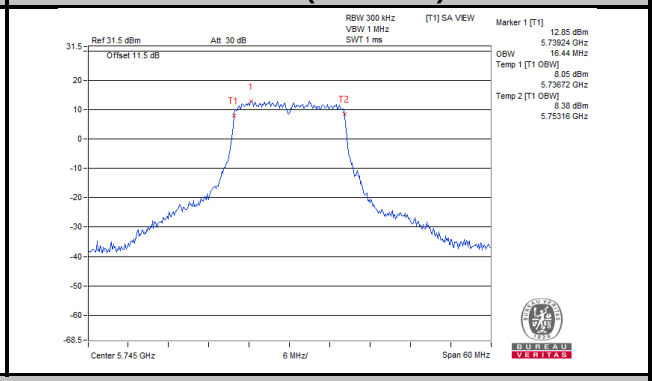
802.11ac (VHT80)

Ch 42 (5210 MHz)	Ch 155 (5775 MHz)
	

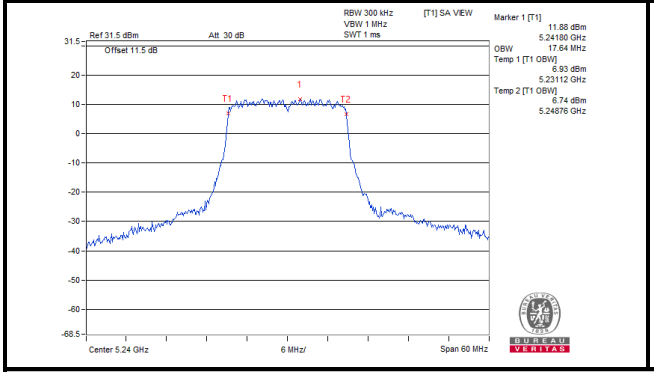
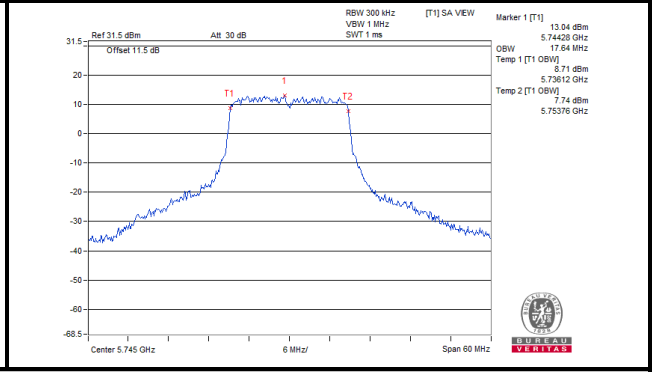
Chain 1

Spectrum Plot for Nearby DFS Band

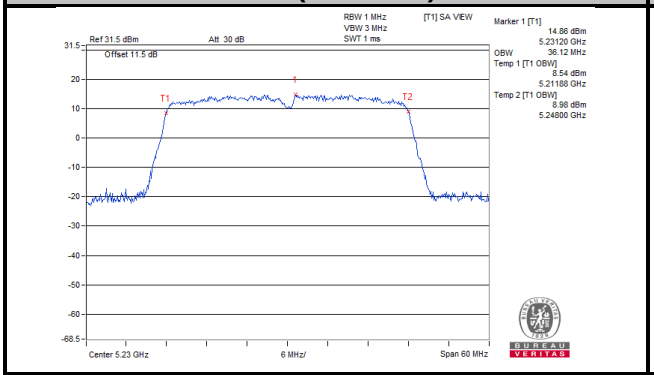
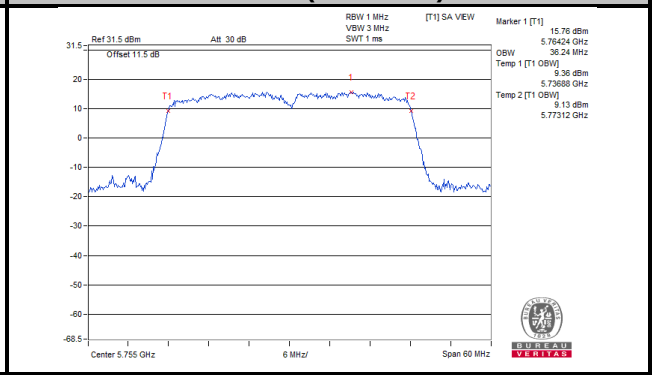
802.11a

Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	

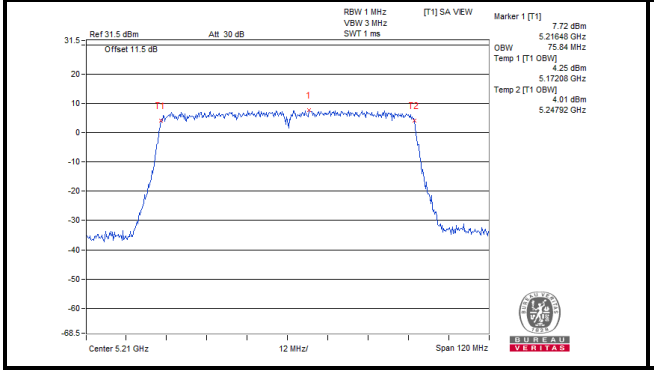
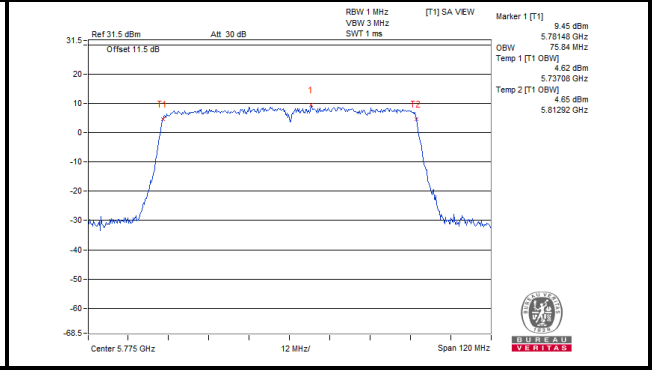
802.11n (HT20)

Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	

802.11n (HT40)

Ch 46 (5230 MHz)	Ch 151 (5755 MHz)
	

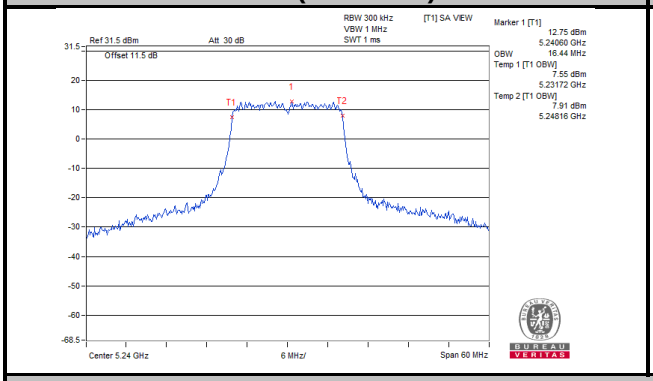
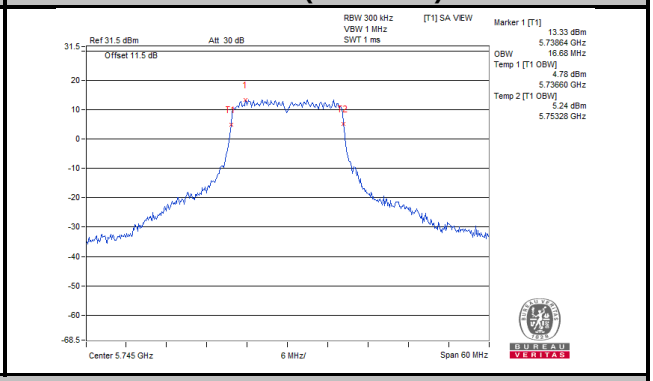
802.11ac (VHT80)

Ch 42 (5210 MHz)	Ch 155 (5775 MHz)
	

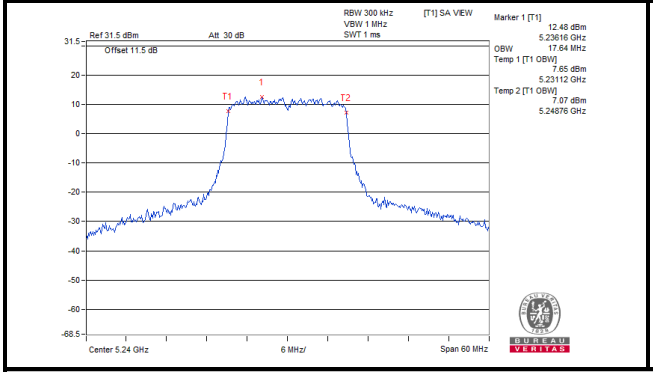
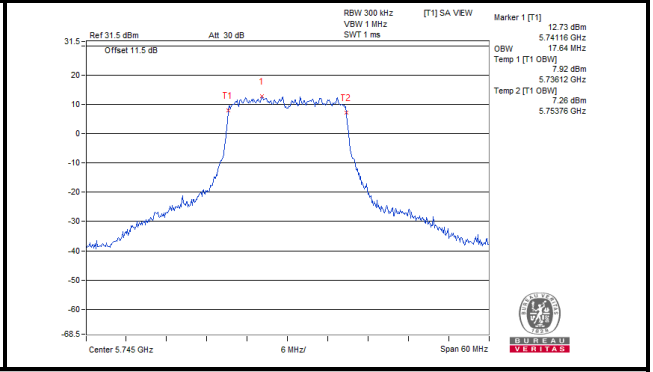
Chain 2

Spectrum Plot for Nearby DFS Band

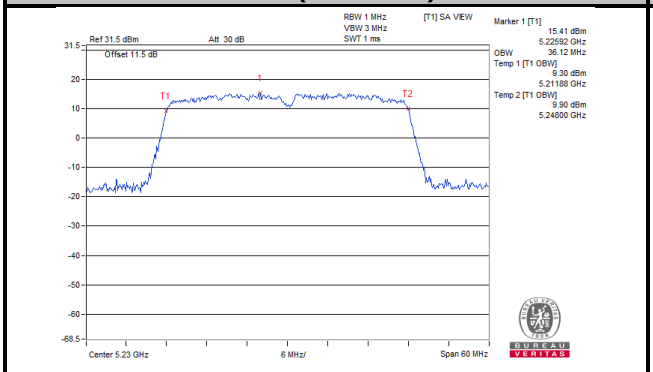
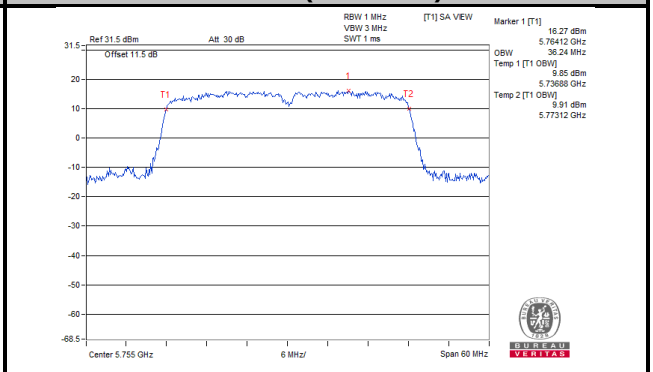
802.11a

Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	

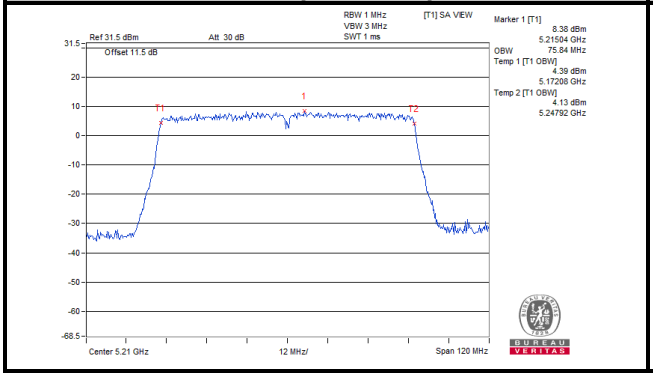
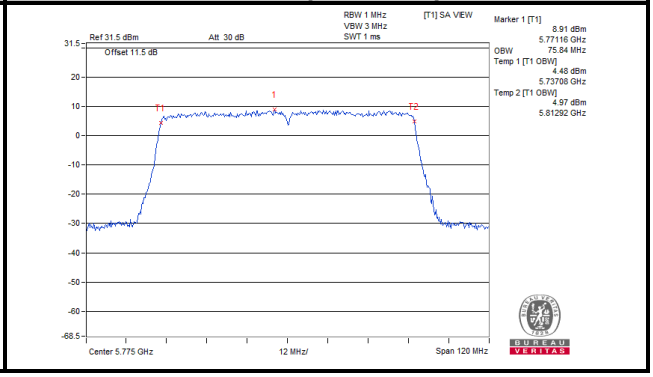
802.11n (HT20)

Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	

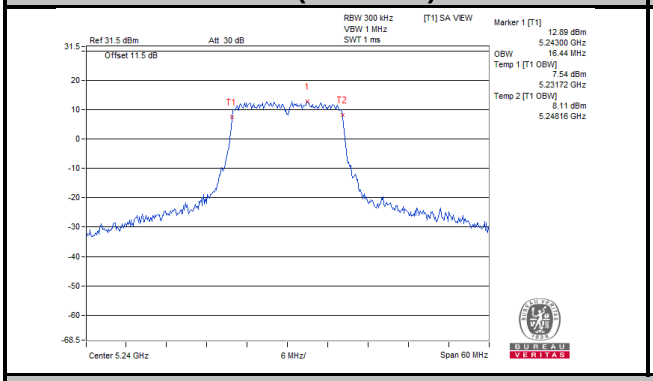
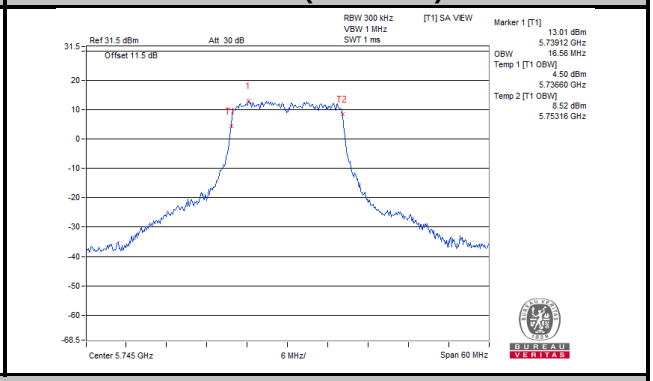
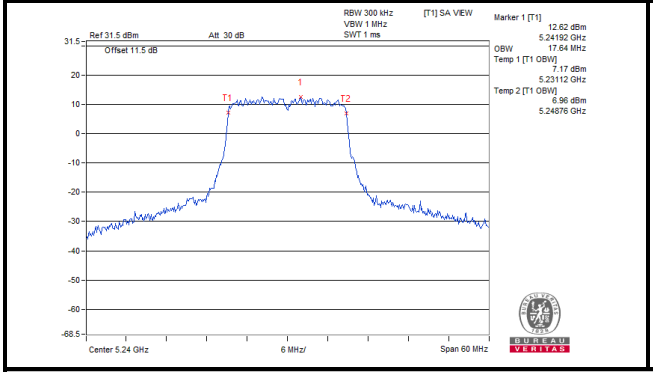
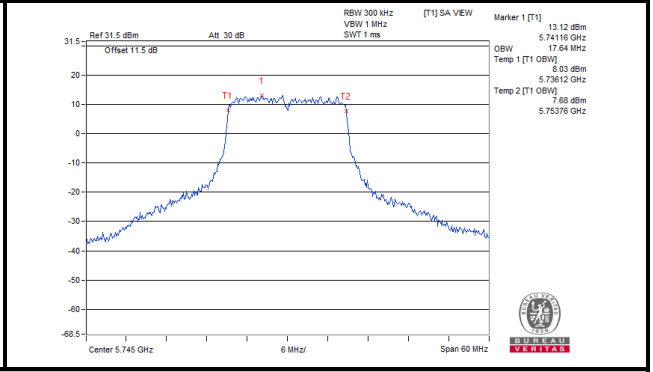
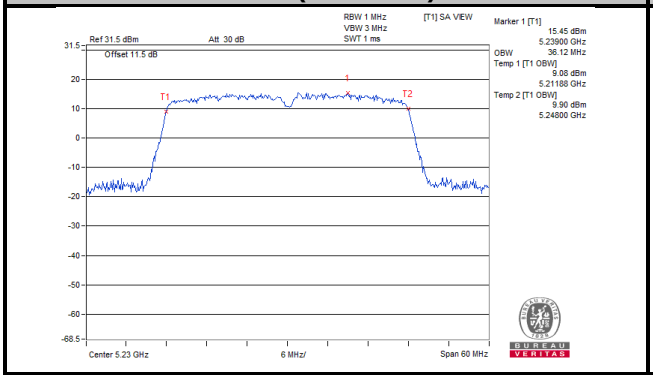
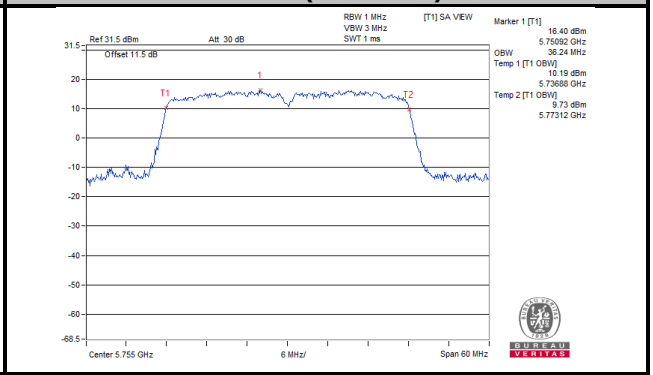
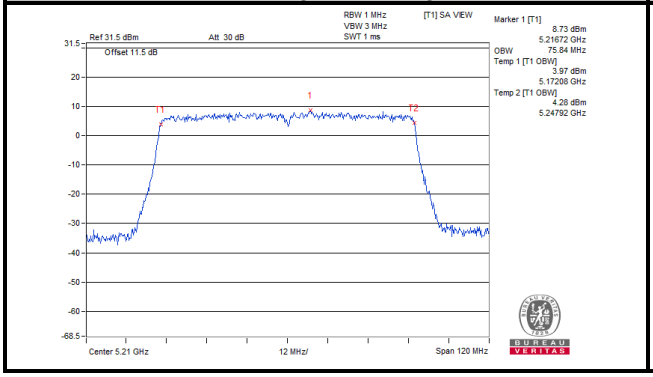
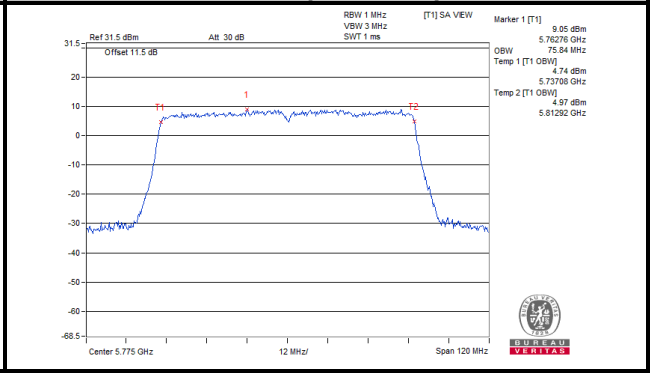
802.11n (HT40)

Ch 46 (5230 MHz)	Ch 151 (5755 MHz)
	

802.11ac (VHT80)

Ch 42 (5210 MHz)	Ch 155 (5775 MHz)
	

Chain 3

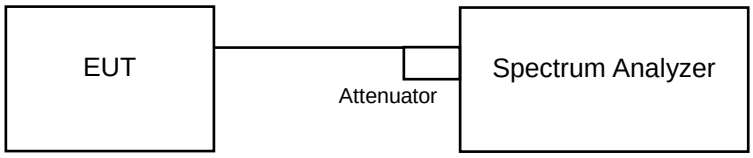
Spectrum Plot for Nearby DFS Band	
802.11a	
Ch 48 (5240 MHz)	**Ch 149 (5745 MHz)**
	
802.11n (HT20)	
Ch 48 (5240 MHz)	**Ch 149 (5745 MHz)**
	
802.11n (HT40)	
Ch 46 (5230 MHz)	**Ch 151 (5755 MHz)**
	
802.11ac (VHT80)	
Ch 42 (5210 MHz)	**Ch 155 (5775 MHz)**
	

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	17 dBm/MHz
		Fixed point-to-point Access Point	
	√	Indoor Access Point	
		Mobile and Portable client device	11 dBm/MHz
U-NII-2A	√		11 dBm/MHz
U-NII-2C	√		11 dBm/MHz
U-NII-3	√		30 dBm/500 kHz

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

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

Using method SA-2 Duty cycle <98%

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW ≥ 3 RBW, Detector = RMS
3. Sweep time = auto, trigger set to “free run”.
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value and add 10 log (1/duty cycle)

※**For U-NII-3:** with duty cycle & Duty cycle <98 %

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 1 RBW, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. 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).
5. Sweep time = auto, trigger set to “free run”.
6. Trace average at least 100 traces in power averaging mode.
7. 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

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

4.5.7 Test Results

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

802.11a

Channel	Frequency (MHz)	PSD (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	5.12	5.11	5.59	5.62	0.23	11.62	13.98	Pass
40	5200	7.79	7.09	7.83	7.77	0.23	13.88	13.98	Pass
48	5240	7.61	7.02	7.59	7.57	0.23	13.70	13.98	Pass
52	5260	1.48	0.97	1.58	1.52	0.23	7.64	7.85	Pass
60	5300	1.51	1.08	1.64	1.70	0.23	7.74	7.85	Pass
64	5320	1.47	0.92	1.58	1.54	0.23	7.64	7.85	Pass
100	5500	1.11	0.57	1.02	1.08	0.23	7.20	7.50	Pass
116	5580	1.26	1.07	1.39	1.14	0.23	7.47	7.50	Pass
140	5700	1.16	0.98	1.12	1.35	0.23	7.40	7.50	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. **For U-NII-1 Band:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / 4] = 9.02$ dBi > 6 dBi, so the power density limit shall be reduced to 17-(9.02-6) = 13.98 dBm.
   For U-NII-2A Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / 4] = 9.15$ dBi > 6 dBi, so the power density limit shall be reduced to 11-(9.15-6) = 7.85 dBm.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / 4] = 9.50$ dBi > 6 dBi, so the power density limit shall be reduced to 11-(9.50-6) = 7.50 dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Channel	Frequency (MHz)	PSD (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	4.66	4.52	5.02	5.67	0.10	11.11	13.98	Pass
40	5200	7.86	7.35	7.91	7.90	0.10	13.88	13.98	Pass
48	5240	7.76	7.48	7.84	7.83	0.10	13.85	13.98	Pass
52	5260	1.48	1.00	1.55	1.58	0.10	7.53	7.85	Pass
60	5300	1.49	0.98	1.61	1.61	0.10	7.55	7.85	Pass
64	5320	1.47	1.00	1.48	1.45	0.10	7.47	7.85	Pass
100	5500	1.08	1.03	1.65	1.53	0.10	7.45	7.50	Pass
116	5580	1.31	1.18	1.58	1.37	0.10	7.48	7.50	Pass
140	5700	1.21	1.14	1.58	1.53	0.10	7.49	7.50	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. **For U-NII-1 Band:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / 4] = 9.02$ dBi > 6 dBi, so the power density limit shall be reduced to 17-(9.02-6) = 13.98 dBm.
   For U-NII-2A Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / 4] = 9.15$ dBi > 6 dBi, so the power density limit shall be reduced to 11-(9.15-6) = 7.85 dBm.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / 4] = 9.50$ dBi > 6 dBi, so the power density limit shall be reduced to 11-(9.50-6) = 7.50 dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Channel	Frequency (MHz)	PSD (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	2.87	3.06	2.98	2.93	0.14	9.12	13.98	Pass
46	5230	4.46	4.49	4.99	5.00	0.14	10.90	13.98	Pass
54	5270	0.86	0.32	0.91	1.00	0.14	6.94	7.85	Pass
62	5310	0.85	0.99	1.03	0.96	0.14	7.12	7.85	Pass
102	5510	0.87	0.54	0.91	0.98	0.14	6.99	7.50	Pass
110	5550	0.84	0.69	1.15	1.20	0.14	7.14	7.50	Pass
134	5670	0.94	0.45	0.97	1.03	0.14	7.01	7.50	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. **For U-NII-1 Band:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / 4] = 9.02$ dBi > 6 dBi, so the power density limit shall be reduced to 17-(9.02-6) = 13.98 dBm.
   For U-NII-2A Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / 4] = 9.15$ dBi > 6 dBi, so the power density limit shall be reduced to 11-(9.15-6) = 7.85 dBm.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / 4] = 9.50$ dBi > 6 dBi, so the power density limit shall be reduced to 11-(9.50-6) = 7.50 dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Channel	Frequency (MHz)	PSD (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	0.35	-0.11	0.37	0.40	0.35	6.63	13.98	Pass
58	5290	-2.38	-2.83	-2.29	-2.31	0.35	3.93	7.85	Pass
106	5530	-2.47	-2.85	-2.49	-2.45	0.35	3.81	7.50	Pass
122	5610	-2.57	-2.94	-2.55	-2.53	0.35	3.73	7.50	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. **For U-NII-1 Band:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / 4] = 9.02$ dBi > 6 dBi, so the power density limit shall be reduced to 17-(9.02-6) = 13.98 dBm.
   For U-NII-2A Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / 4] = 9.15$ dBi > 6 dBi, so the power density limit shall be reduced to 11-(9.15-6) = 7.85 dBm.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / 4] = 9.50$ dBi > 6 dBi, so the power density limit shall be reduced to 11-(9.50-6) = 7.50 dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80+VHT80)

Channel	Frequency (MHz)	PSD (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	-1.36	-2.30	-	-	0.23	1.43	16.90	Pass
58	5290	-	-	-2.59	-2.52	0.25	0.71	10.98	Pass
106	5530	-2.55	-2.69	-	-	0.19	0.58	10.49	Pass
122	5610	-	-	-2.25	-2.34	0.24	0.95	10.52	Pass
138	5690 (U-NII-2C)	-2.12	-3.07	-	-	0.22	0.66	10.49	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. **For U-NII-1 Band:**
   Directional gain = 10 log[(10$^{G1/20}$ + 10$^{G2/20}$ + ... + 10$^{GN/20}$)^2/2]= 6.10dBi > 6dBi, so the limit shall be reduced to 17-(6.10-6) = 16.90dBm.
   For U-NII-2A Band:
   Directional gain = 10log[(10$^{G1/20}$ + 10$^{G2/20}$ + …. + 10$^{GN/20}$)^2 /2] = 6.02 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.02-6) = 10.98 dBm.
   For U-NII-2C Band:
   Directional gain = 10log[(10$^{G1/20}$ + 10$^{G2/20}$ + …. + 10$^{GN/20}$)^2 /2] = 6.51 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.51-6) = 10.49 dBm.
   Directional gain = 10log[(10$^{G1/20}$ + 10$^{G2/20}$ + …. + 10$^{GN/20}$)^2 /2] = 6.48 dBi > 6 dBi, so the power density limit shall be reduced to 11-(6.48-6) = 10.52 dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

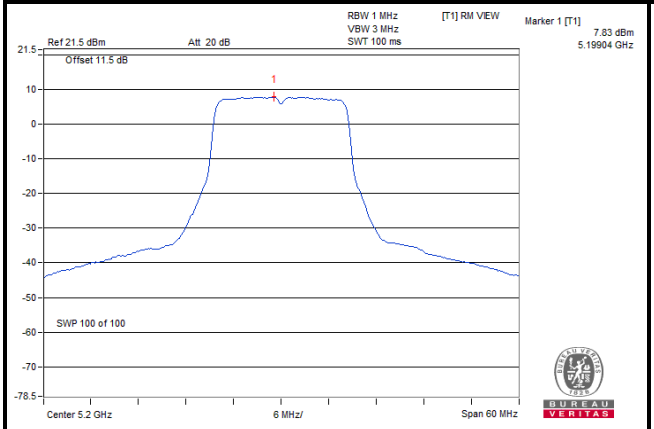
Channel	Frequency (MHz)	PSD (dBm/MHz)				Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-0.23	-0.36	-	-	0.23	2.94	16.90	Pass

Note:

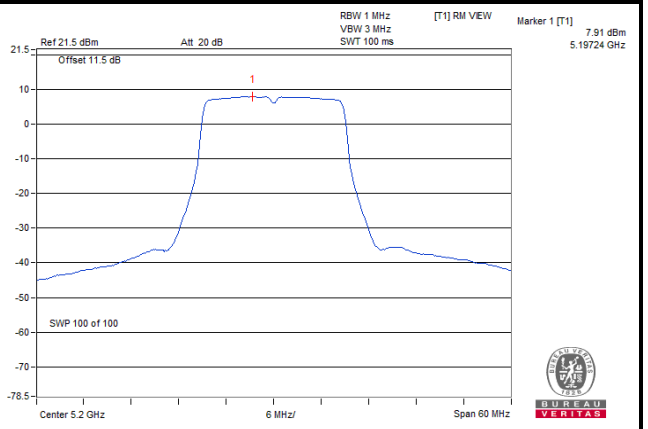
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band:**
   Directional gain = 10 log[(10$^{G1/20}$ + 10$^{G2/20}$ + ... + 10$^{GN/20}$)^2/2]= 6.10dBi > 6dBi, so the limit shall be reduced to 17-(6.10-6) = 16.90dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

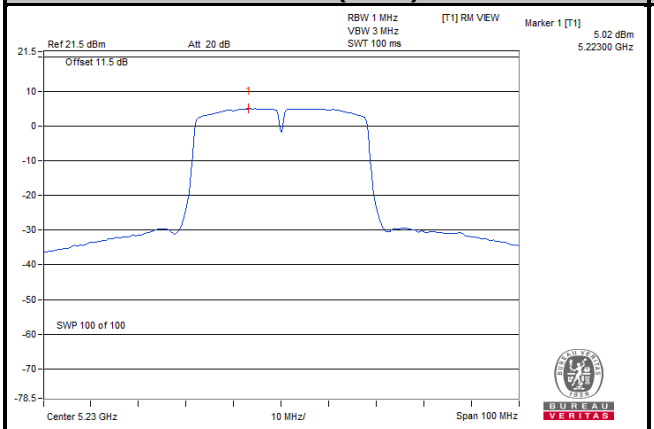
802.11a



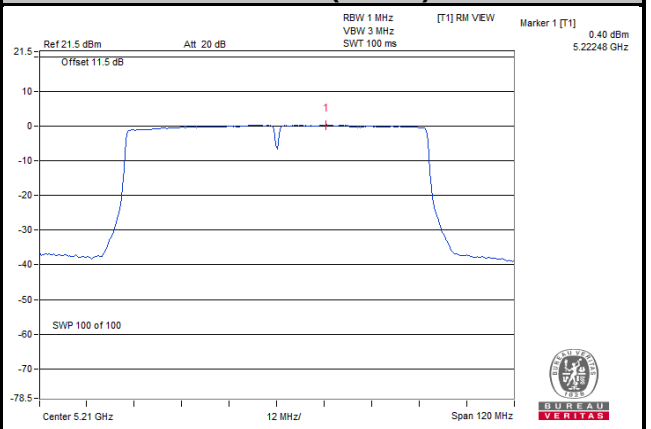
802.11n (HT20)



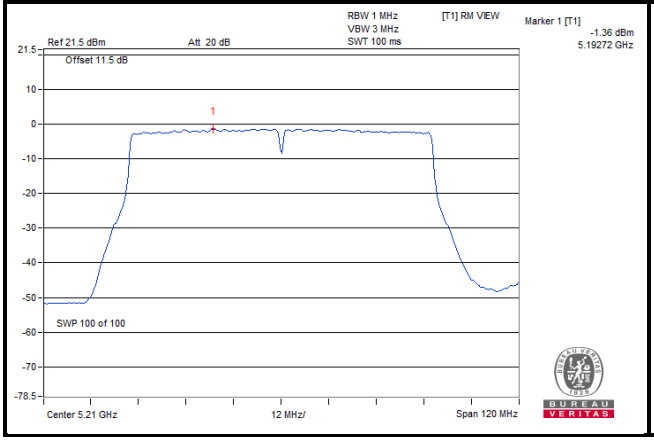
802.11n (HT40)



802.11ac (VHT80)



802.11ac (VHT80+ VHT80)



For U-NII-3 Band

802.11a

TX Chain	Channel	Frequency (MHz)	PSD w/o Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	149	5745	0.27	2.49	6.02	0.23	8.74	26.26	Pass
	157	5785	0.42	2.64	6.02	0.23	8.89	26.26	Pass
	165	5825	0.94	3.16	6.02	0.23	9.41	26.26	Pass
1	149	5745	0.26	2.48	6.02	0.23	8.73	26.26	Pass
	157	5785	0.41	2.63	6.02	0.23	8.88	26.26	Pass
	165	5825	0.95	3.17	6.02	0.23	9.42	26.26	Pass
2	149	5745	0.71	2.93	6.02	0.23	9.18	26.26	Pass
	157	5785	0.99	3.21	6.02	0.23	9.46	26.26	Pass
	165	5825	0.92	3.14	6.02	0.23	9.39	26.26	Pass
3	149	5745	0.27	2.49	6.02	0.23	8.74	26.26	Pass
	157	5785	0.95	3.17	6.02	0.23	9.42	26.26	Pass
	165	5825	0.88	3.1	6.02	0.23	9.35	26.26	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$ + ... + $10^{GN/20}$)^2 /4]= 9.74 > 6 dBi, so the power density limit shall be reduced to 30-(9.74-6) = 26.26 dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX Chain	Channel	Frequency (MHz)	PSD		10 log (N=4) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	149	5745	0.37	2.59	6.02	0.1	8.71	26.26	Pass
	157	5785	0.45	2.67	6.02	0.1	8.79	26.26	Pass
	165	5825	0.46	2.68	6.02	0.1	8.8	26.26	Pass
1	149	5745	0.48	2.7	6.02	0.1	8.82	26.26	Pass
	157	5785	0	2.22	6.02	0.1	8.34	26.26	Pass
	165	5825	-0.01	2.21	6.02	0.1	8.33	26.26	Pass
2	149	5745	0.06	2.28	6.02	0.1	8.4	26.26	Pass
	157	5785	0.54	2.76	6.02	0.1	8.88	26.26	Pass
	165	5825	0.53	2.75	6.02	0.1	8.87	26.26	Pass
3	149	5745	0.44	2.66	6.02	0.1	8.78	26.26	Pass
	157	5785	0.48	2.7	6.02	0.1	8.82	26.26	Pass
	165	5825	0.44	2.66	6.02	0.1	8.78	26.26	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2$ /4]= 9.74 > 6 dBi, so the power density limit shall be reduced to 30-(9.74-6) = 26.26 dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

TX Chain	Channel	Frequency (MHz)	PSD		10 log (N=4) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	151	5755	-3.38	-1.16	6.02	0.14	5	26.26	Pass
	159	5795	-2.68	-0.46	6.02	0.14	5.7	26.26	Pass
1	151	5755	-3.36	-1.14	6.02	0.14	5.02	26.26	Pass
	159	5795	-3.18	-0.96	6.02	0.14	5.2	26.26	Pass
2	151	5755	-2.7	-0.48	6.02	0.14	5.68	26.26	Pass
	159	5795	-2.55	-0.33	6.02	0.14	5.83	26.26	Pass
3	151	5755	-2.74	-0.52	6.02	0.14	5.64	26.26	Pass
	159	5795	-2.65	-0.43	6.02	0.14	5.73	26.26	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2$ /4]= 9.74 > 6 dBi, so the power density limit shall be reduced to 30-(9.74-6) = 26.26 dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

TX Chain	Channel	Frequency (MHz)	PSD		10 log (N=4) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	155	5775	-10.08	-7.86	6.02	0.35	-1.49	26.26	Pass
1	155	5775	-10.2	-7.98	6.02	0.35	-1.61	26.26	Pass
2	155	5775	-10.2	-7.98	6.02	0.35	-1.61	26.26	Pass
3	155	5775	-10.14	-7.92	6.02	0.35	-1.55	26.26	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2$ /4]= 9.74 > 6 dBi, so the power density limit shall be reduced to 30-(9.74-6) = 26.26 dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80+VHT80)

TX Chain	Channel	Frequency (MHz)	PSD		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	138	5690 (U-NII-2C)	-8.19	-5.97	3.01	0.22	-2.74	29.25	Pass
1	138	5690 (U-NII-3)	-9.06	-6.84	3.01	0.22	-3.61	29.25	Pass
2	155	5775	-8.49	-6.27	3.01	0.17	-3.09	29.29	Pass
3	155	5775	-8.39	-6.17	3.01	0.17	-2.99	29.29	Pass

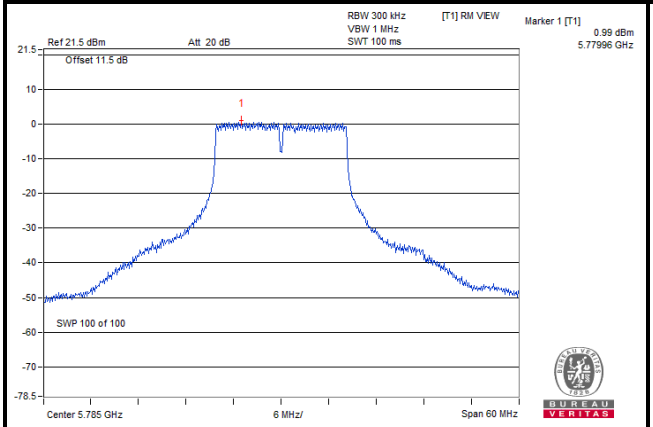
Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2$ /2]= 6.75 > 6 dBi, so the power density limit shall be reduced to 30-(6.75-6) = 29.25 dBm.
   Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2$ /2]= 6.71 > 6 dBi, so the power density limit shall be reduced to 30-(6.71-6) = 29.29 dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

TX Chain	Channel	Frequency (MHz)	PSD		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
2	155	5775	-8.35	-6.13	3.01	0.17	-2.95	29.29	Pass
3	155	5775	-8.42	-6.2	3.01	0.17	-3.02	29.29	Pass

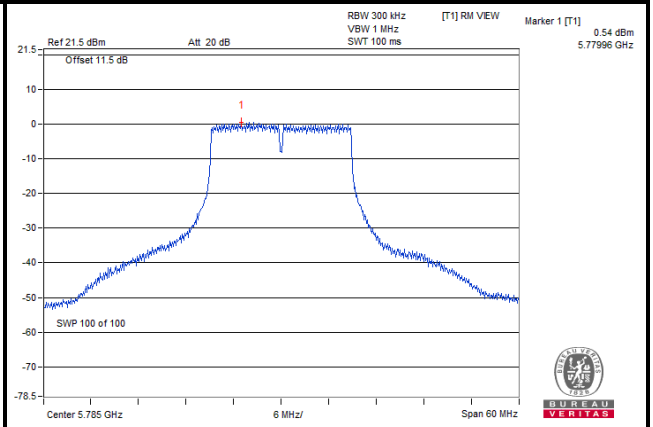
Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2$ /2]= 6.71 > 6 dBi, so the power density limit shall be reduced to 30-(6.71-6) = 29.29 dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

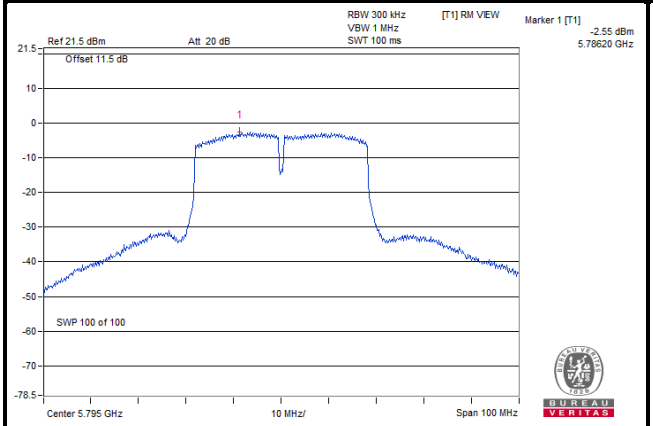
802.11a



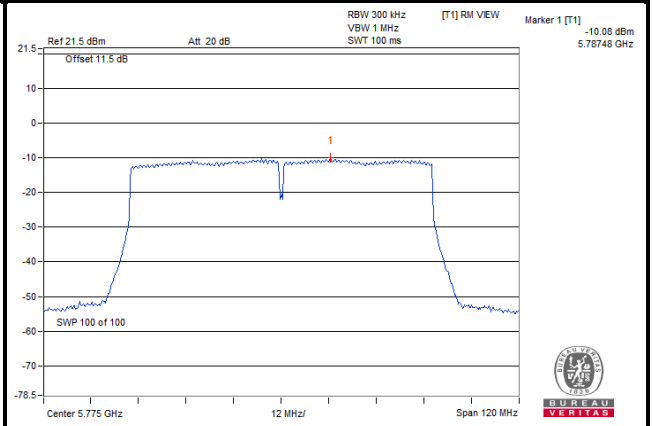
802.11n (HT20)



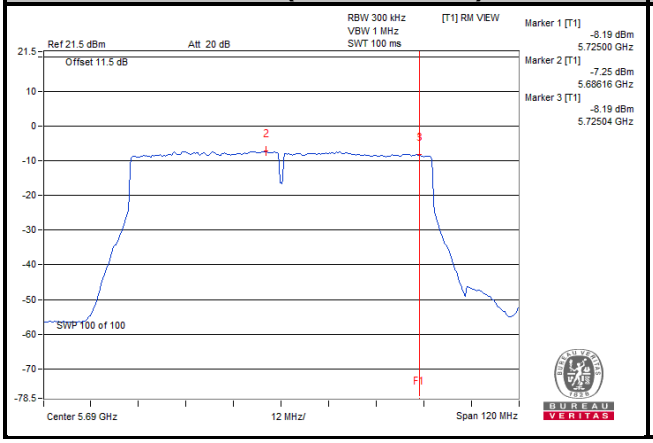
802.11n (HT40)



802.11ac (VHT80)



802.11ac (VHT80+VHT80)

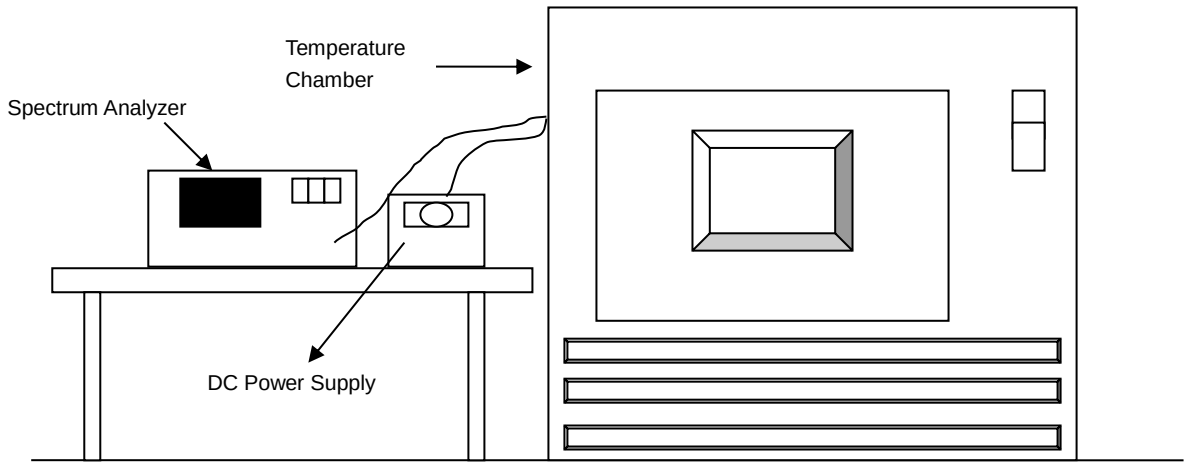


4.6 Frequency Stability

4.6.1 Limit 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

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

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

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: 5180 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Reading (MHz)	Result	Reading (MHz)	Result	Reading (MHz)	Result	Reading (MHz)	Result
40	120	5180.0128	PASS	5180.0124	PASS	5180.0143	PASS	5180.015	PASS
30	120	5180.0035	PASS	5180.001	PASS	5179.9999	PASS	5180.0026	PASS
20	120	5180.0142	PASS	5180.0122	PASS	5180.0135	PASS	5180.0145	PASS
10	120	5180.0009	PASS	5180.0006	PASS	5180.0014	PASS	5180.001	PASS
0	120	5180.0183	PASS	5180.0191	PASS	5180.0204	PASS	5180.0195	PASS

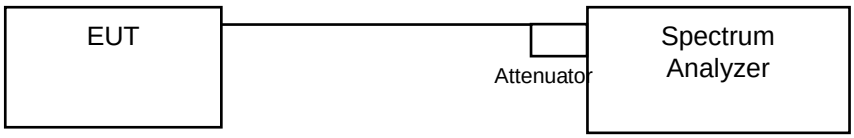
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Reading (MHz)	Result	Reading (MHz)	Result	Reading (MHz)	Result	Reading (MHz)	Result
20	138	5180.0139	PASS	5180.0126	PASS	5180.0139	PASS	5180.0149	PASS
	120	5180.0142	PASS	5180.0122	PASS	5180.0135	PASS	5180.0145	PASS
	102	5180.0139	PASS	5180.0122	PASS	5180.0129	PASS	5180.0155	PASS

4.7 6 dB Bandwidth Measurement

4.7.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

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

MEASUREMENT PROCEDURE REF

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

802.11a

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

802.11n (HT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	17.60	17.57	17.58	17.54	0.5	Pass
157	5785	17.58	17.60	17.58	17.59	0.5	Pass
165	5825	17.58	17.59	17.59	17.57	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
151	5755	35.15	35.19	35.15	35.19	0.5	Pass
159	5795	35.18	35.20	35.20	35.13	0.5	Pass

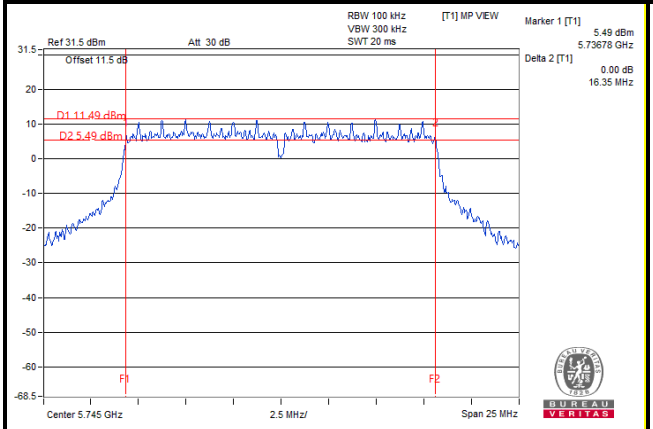
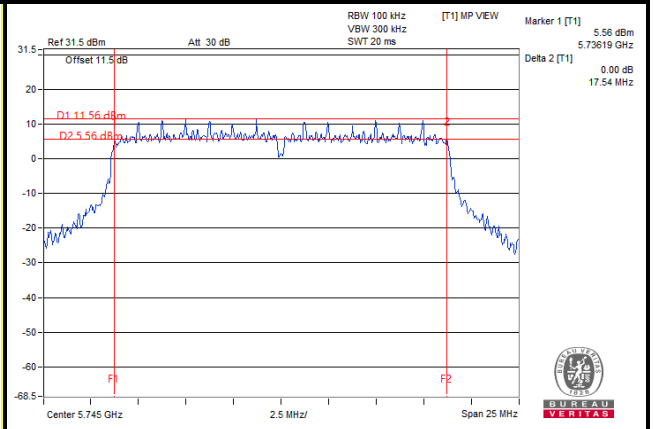
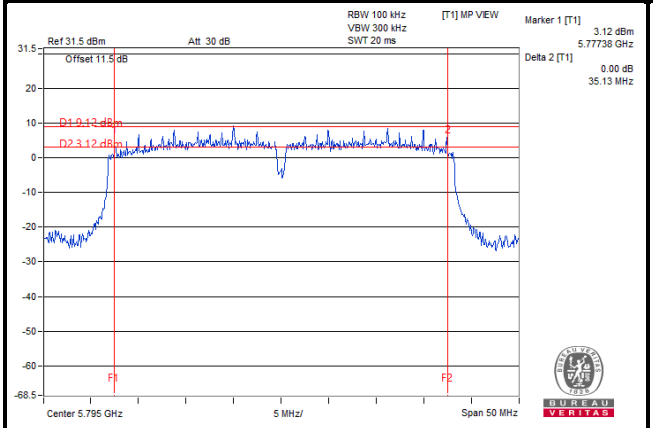
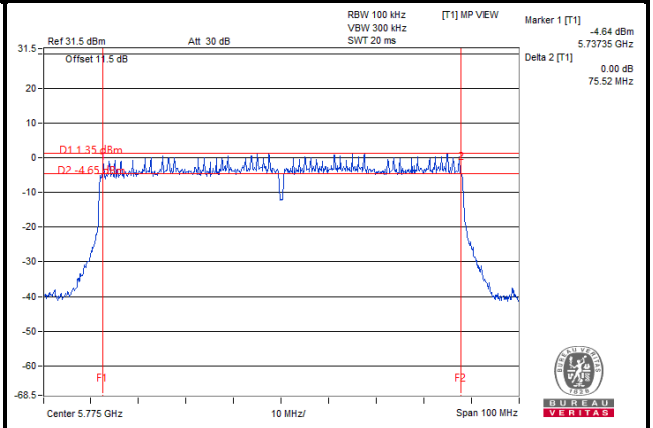
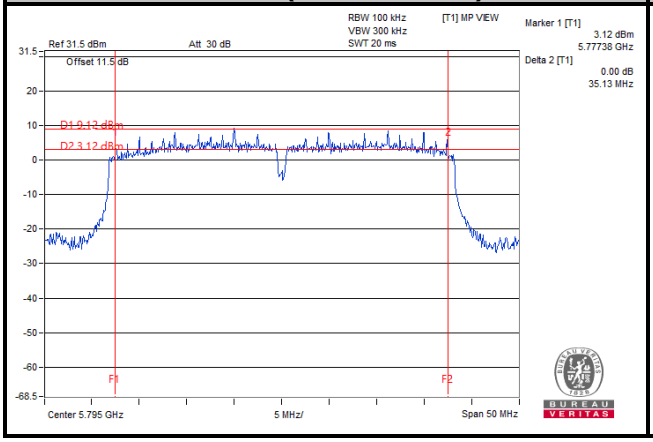
802.11ac (VHT80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	75.71	75.69	75.69	75.52	0.5	Pass

802.11ac (VHT80+VHT80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
138	5690 (U-NII-3)	2.77	2.79	-	-	0.5	Pass
155	5775	-	-	76.13	76.33	0.5	Pass

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	-	-	76.04	76.10	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	
802.11ac (VHT80+VHT80)	
	

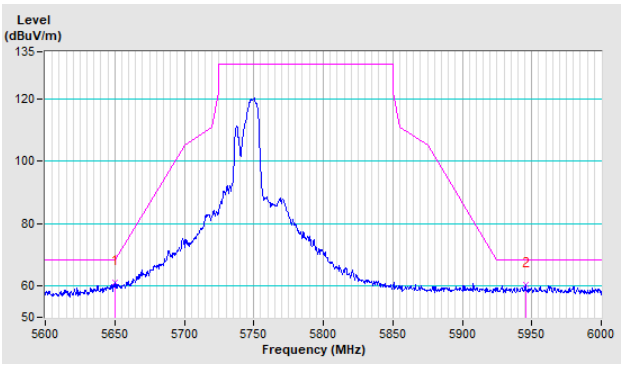
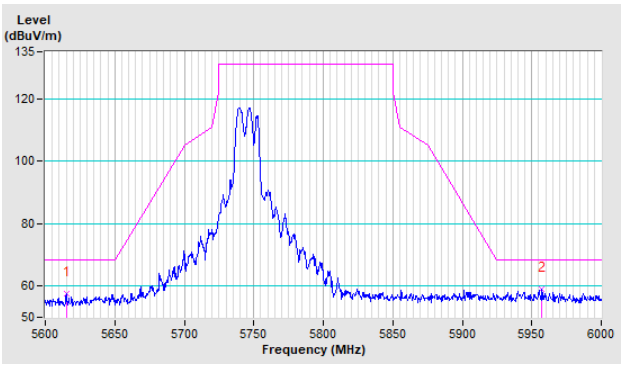
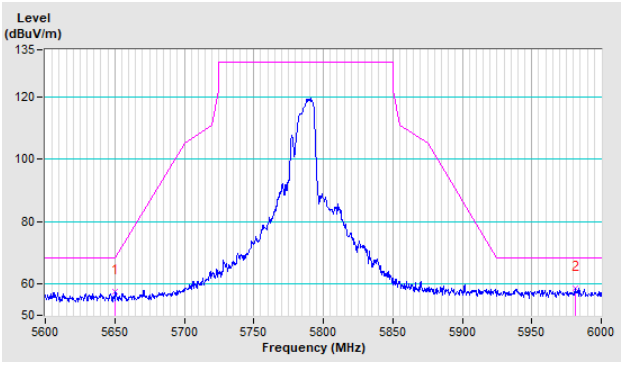
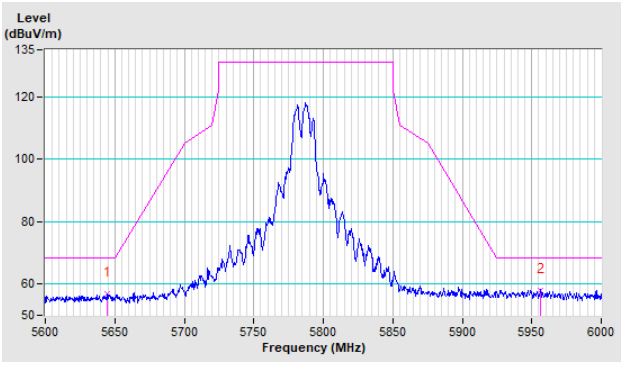
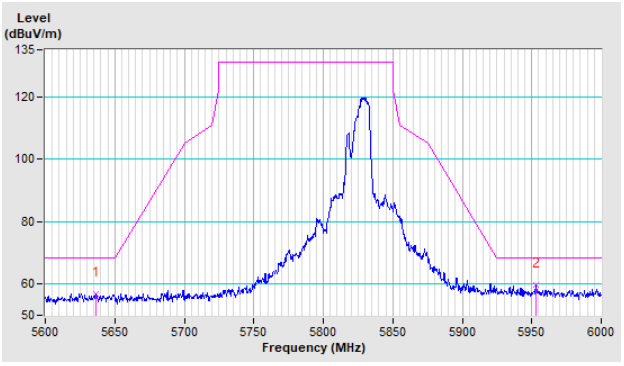
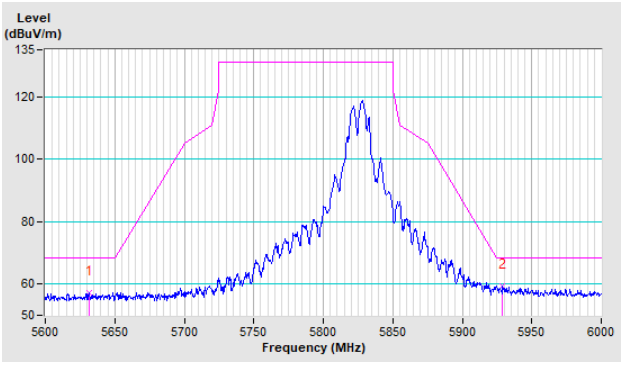
Note:
For Ch138 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

5 Pictures of Test Arrangements

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

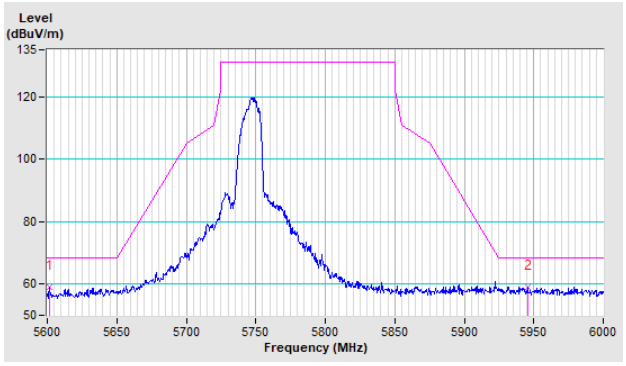
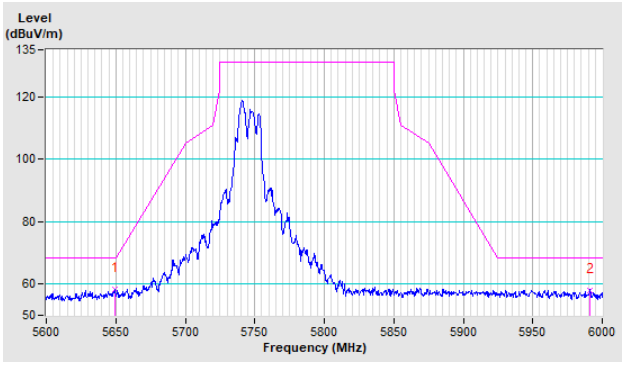
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a

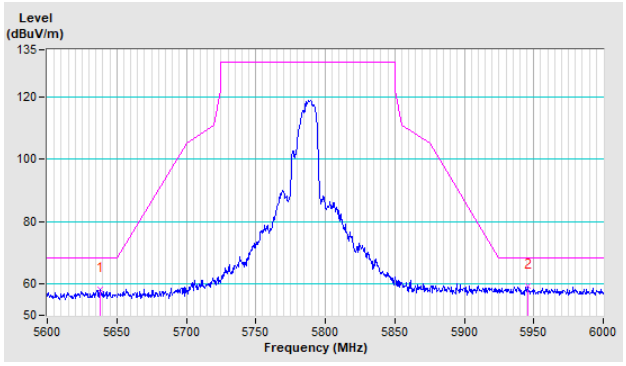
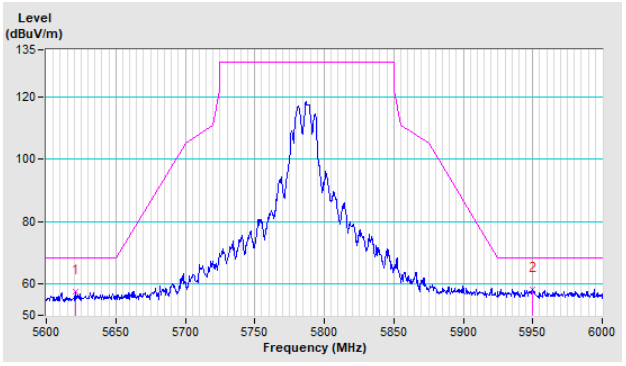
CH 149 5745 MHz	
Horizontal	**Vertical**
	
CH 157 5785 MHz	
Horizontal	**Vertical**
	
CH 165 5825 MHz	
Horizontal	**Vertical**
	

802.11n (HT20)

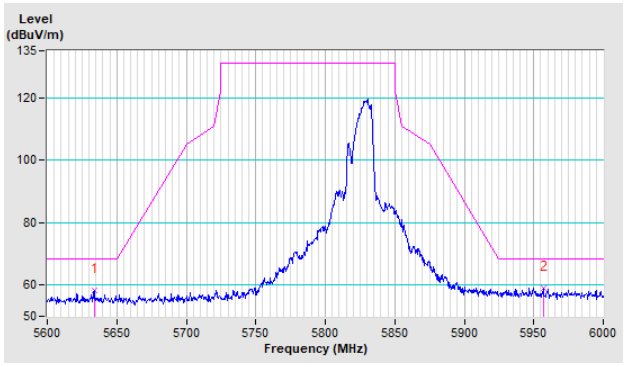
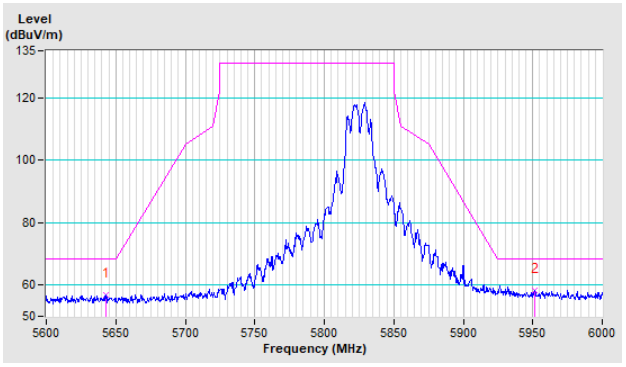
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

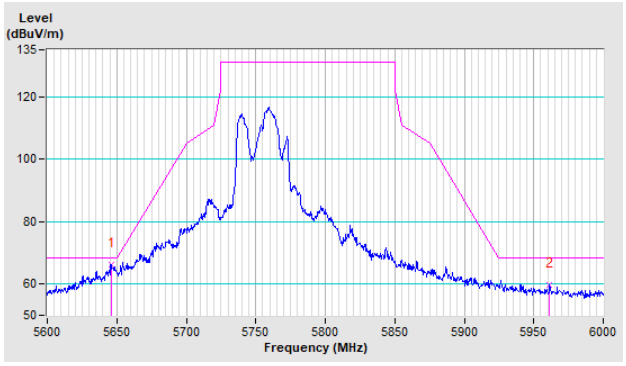
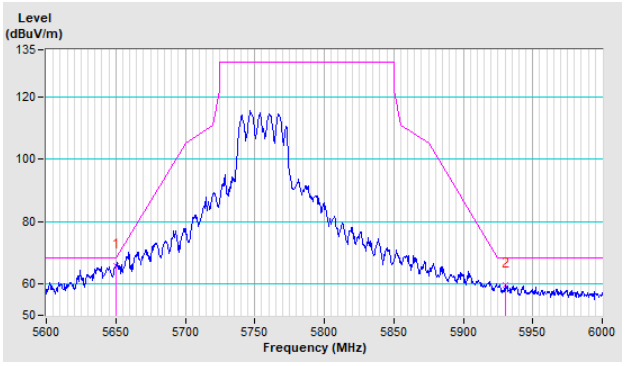
Horizontal	Vertical
	

CH 165 5825 MHz

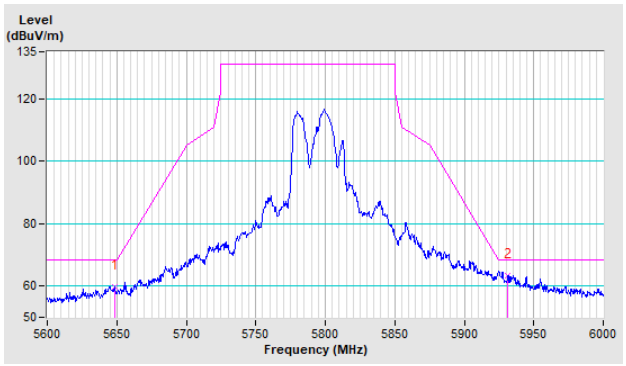
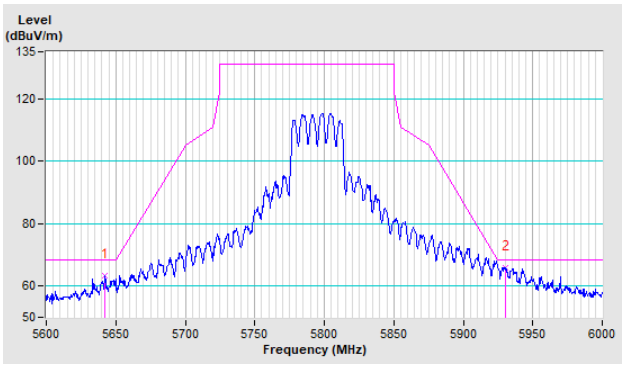
Horizontal	Vertical
	

802.11n (HT40)

CH 151 5755 MHz

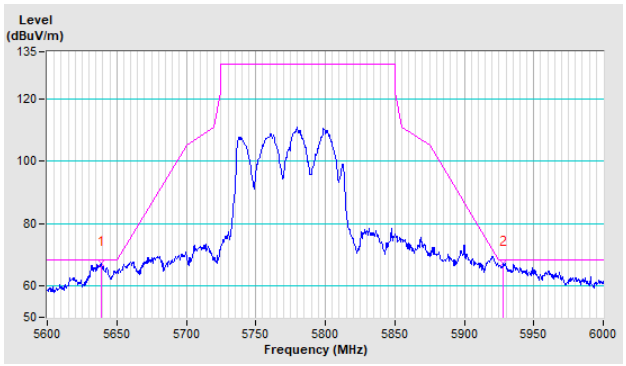
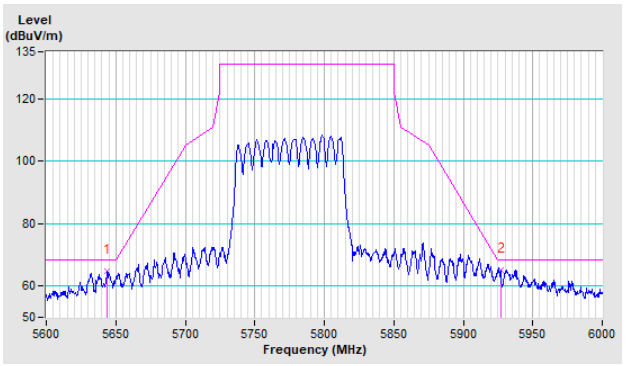
Horizontal	Vertical
	

CH 159 5795 MHz

Horizontal	Vertical
	

802.11ac (VHT80)

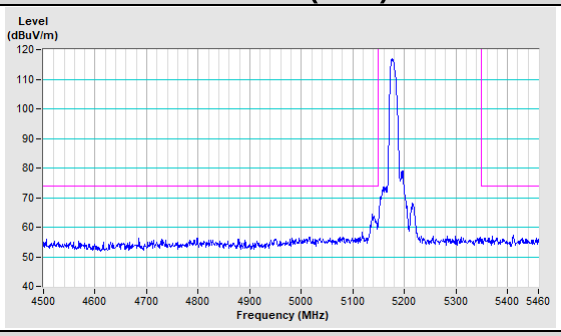
CH 155 5775 MHz

Horizontal	Vertical
	

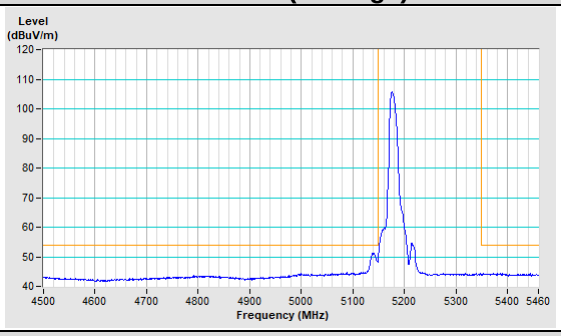
Annex B-Band Edge Measurement

802.11a Channel 36

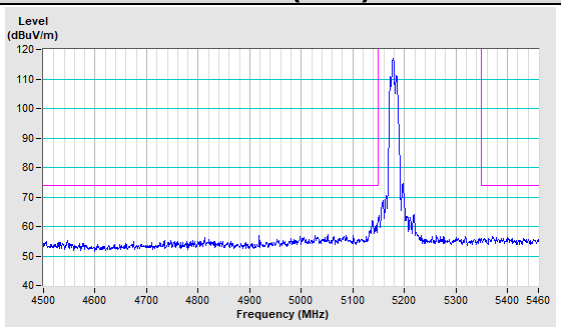
Horizontal (Peak)



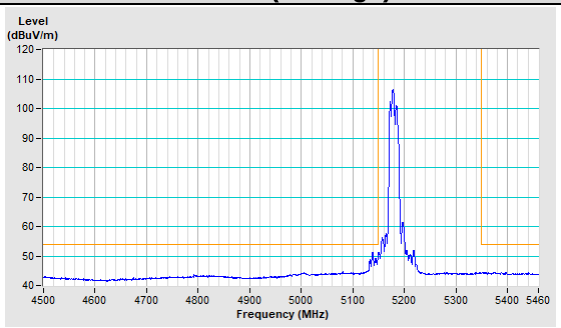
Horizontal (Average)



Vertical (Peak)

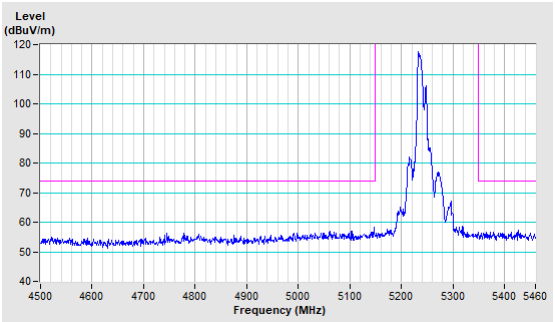


Vertical (Average)

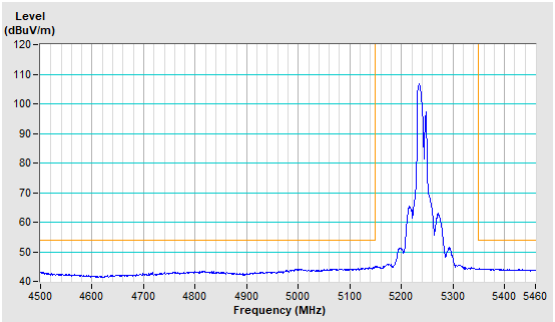


802.11a Channel 48

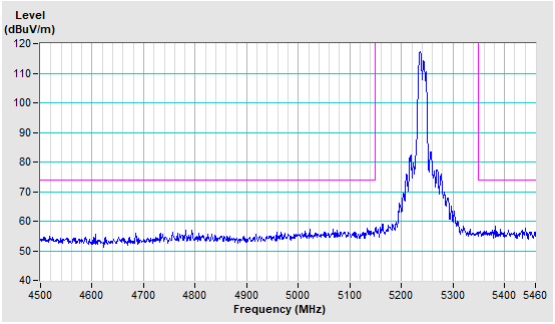
Horizontal (Peak)



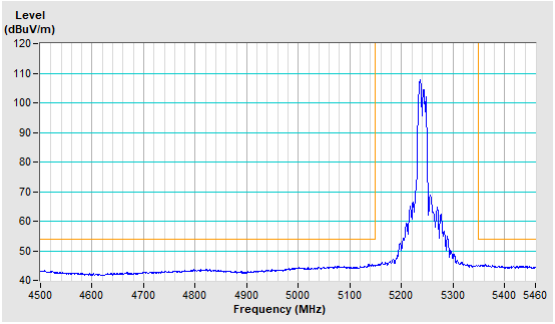
Horizontal (Average)

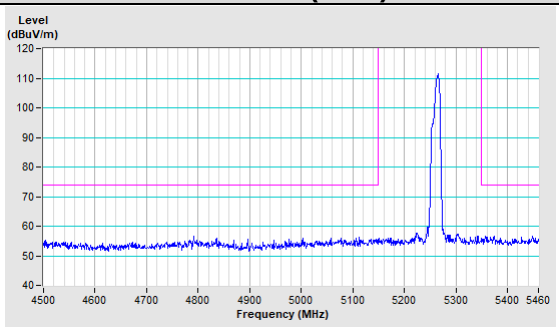
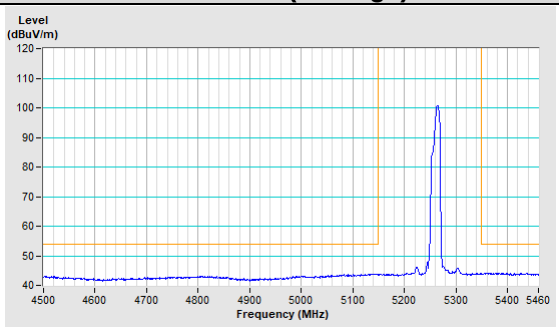
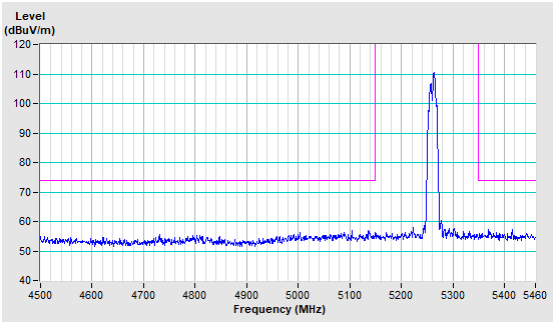
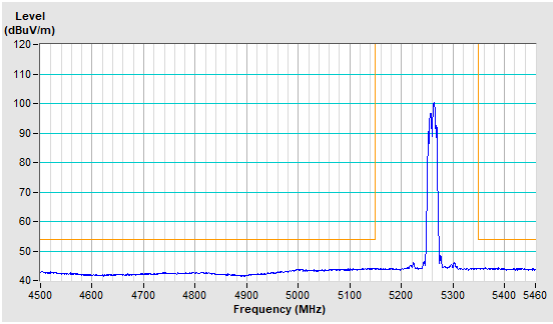
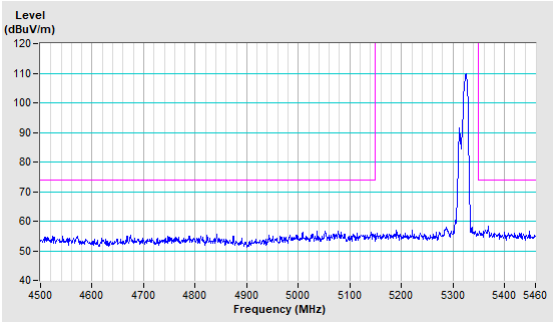
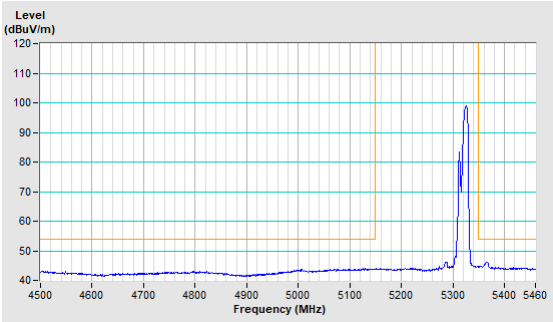
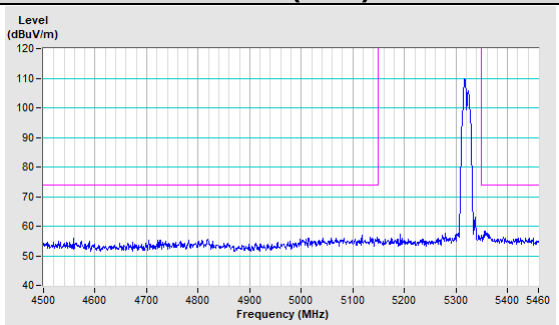
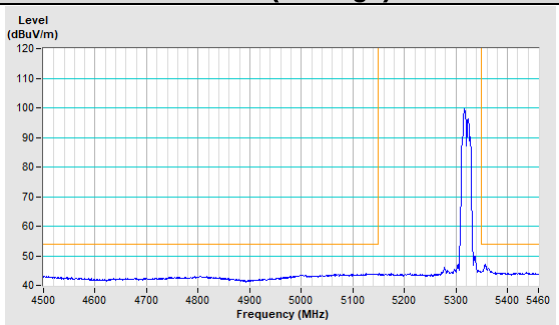


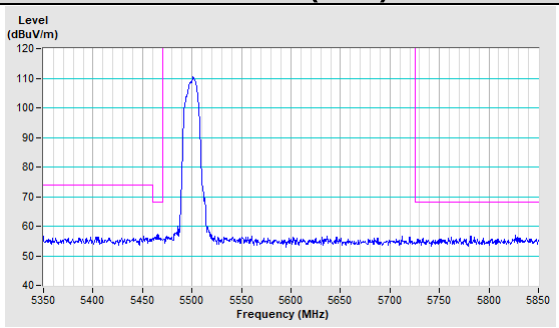
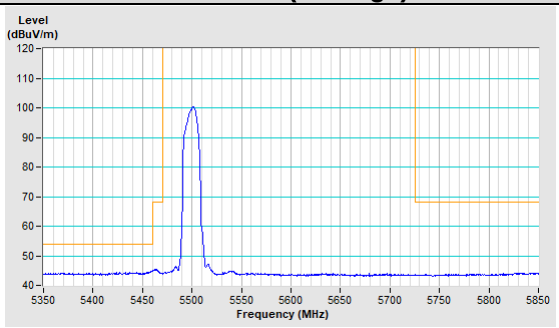
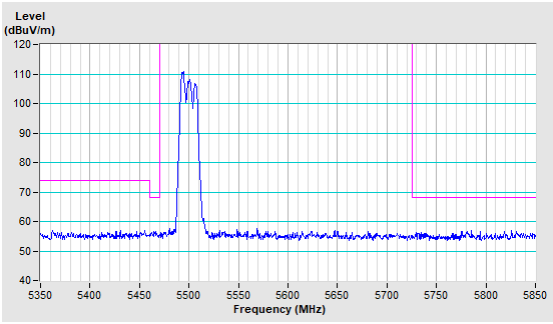
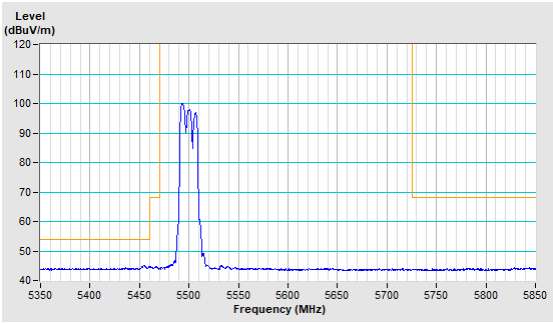
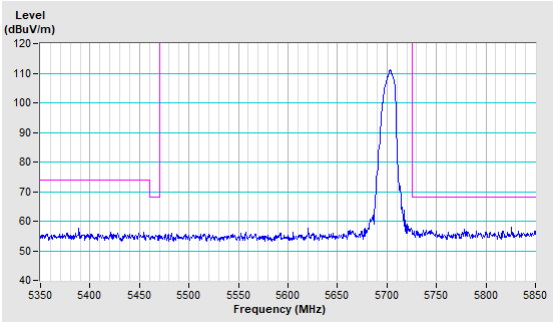
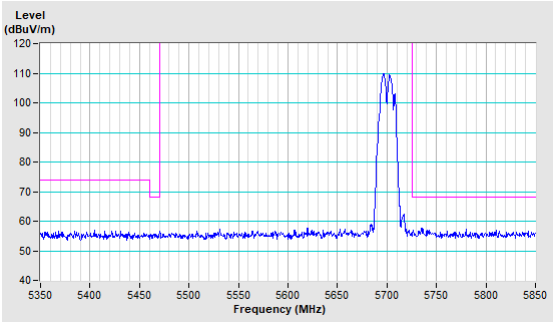
Vertical (Peak)

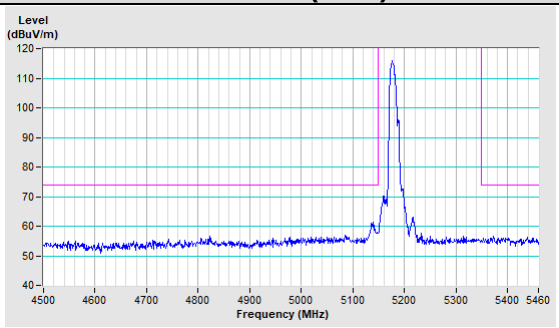
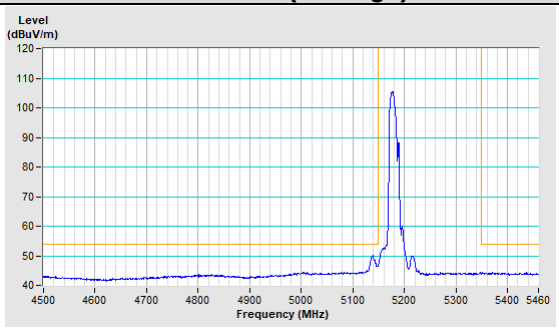
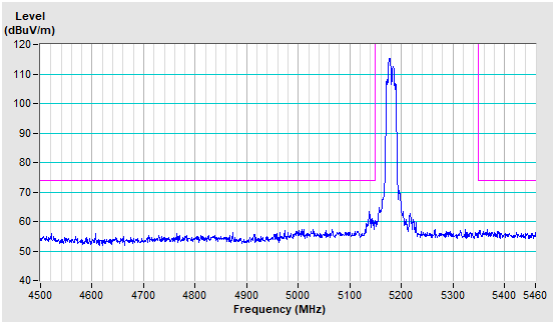
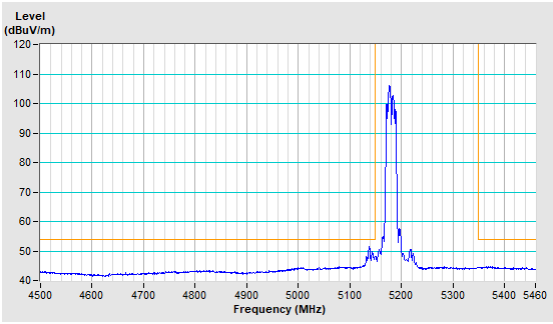
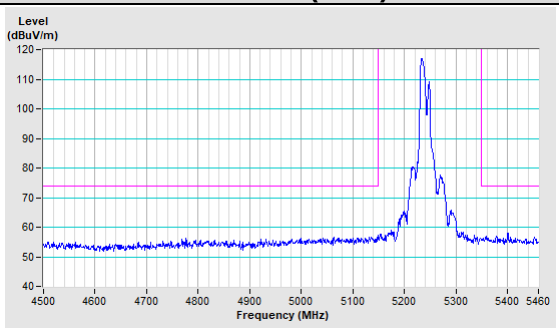
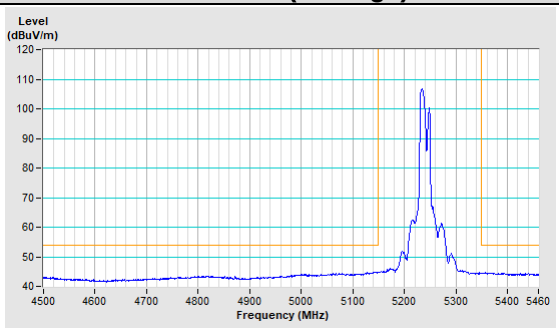
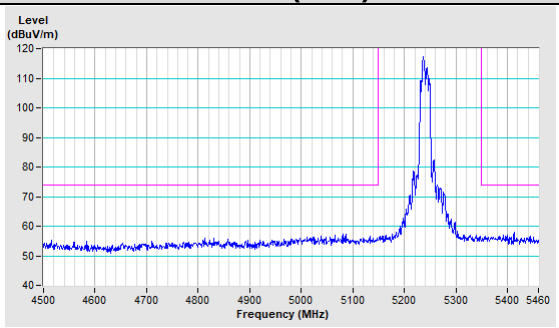
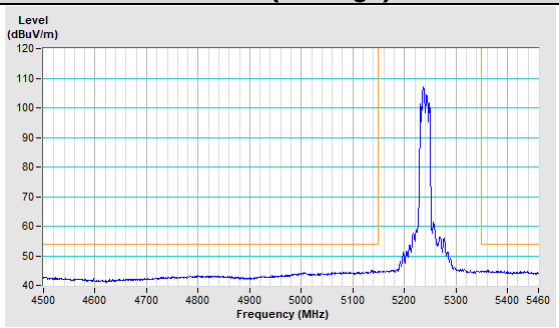


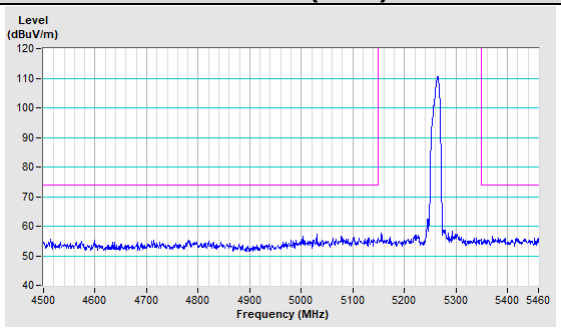
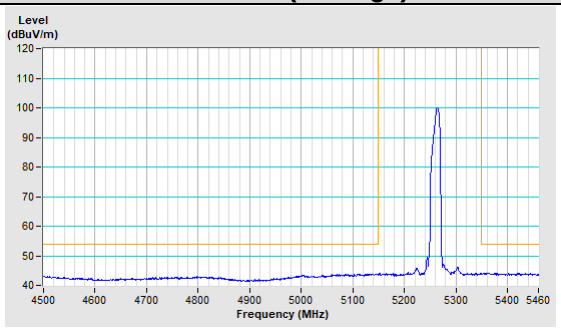
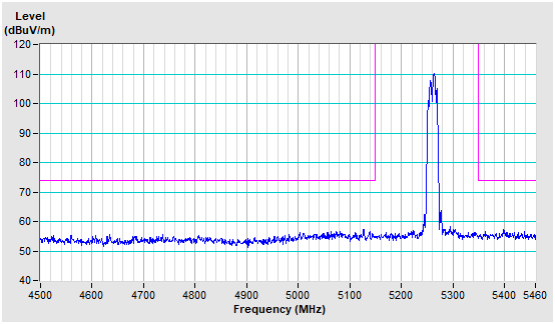
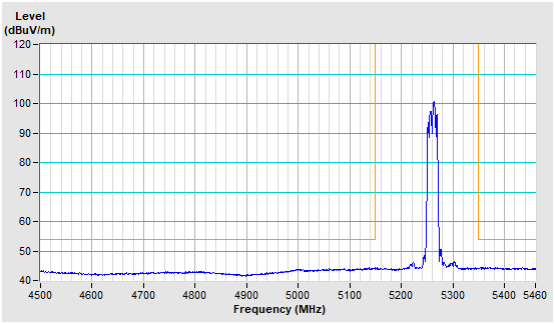
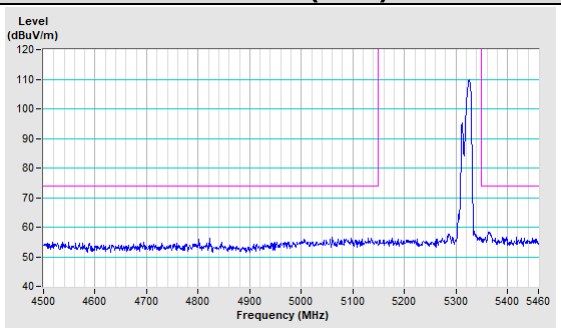
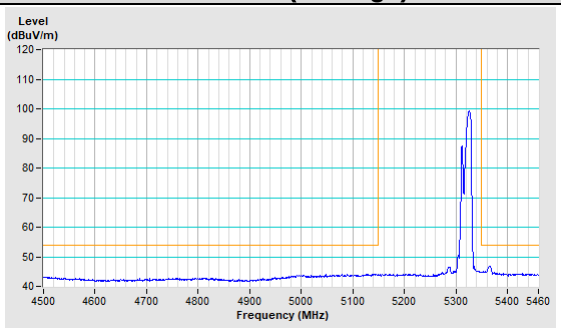
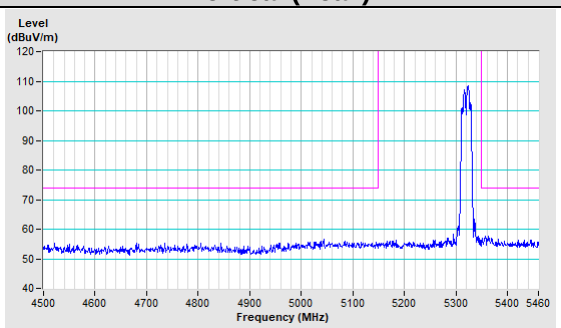
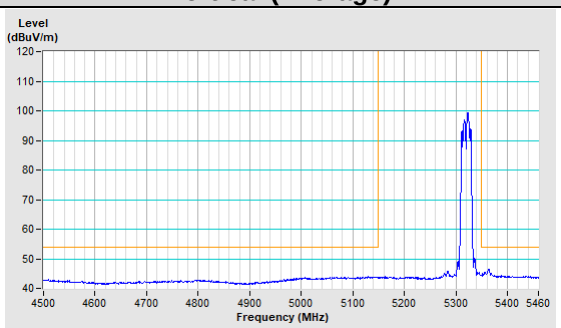
Vertical (Average)

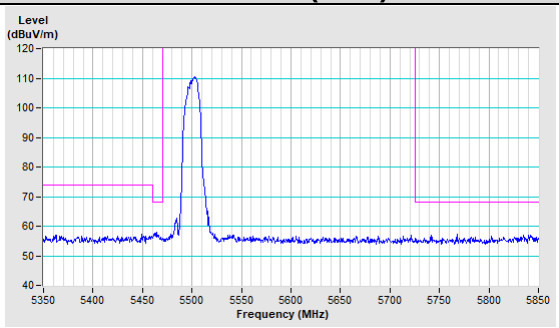
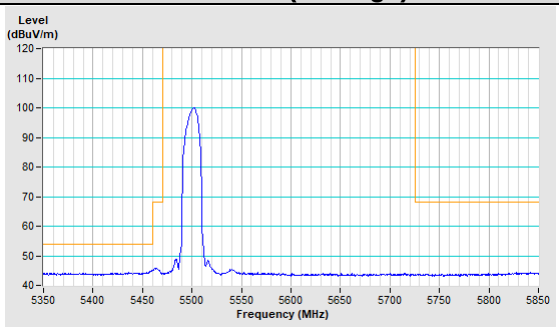
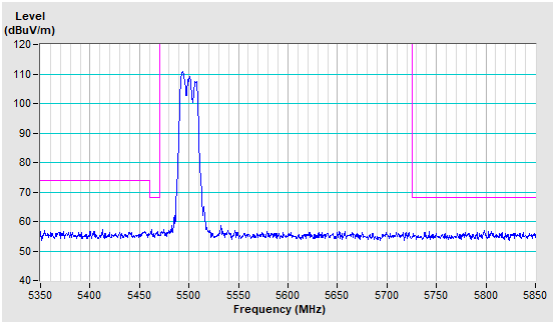
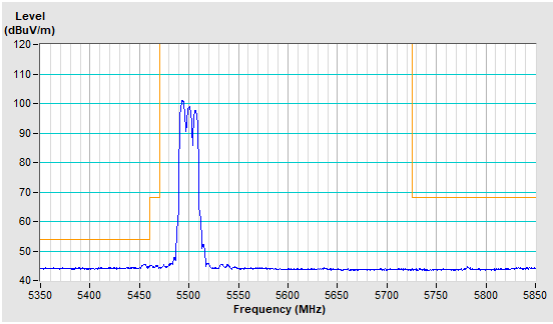
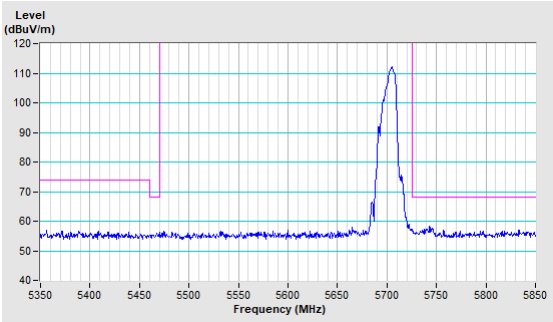
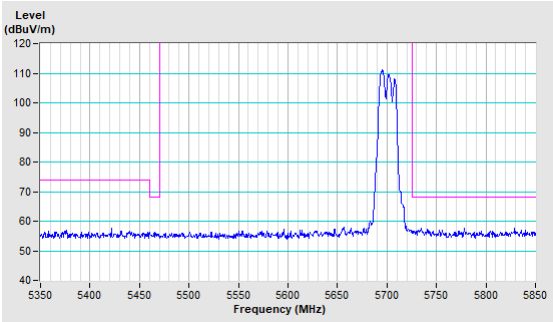


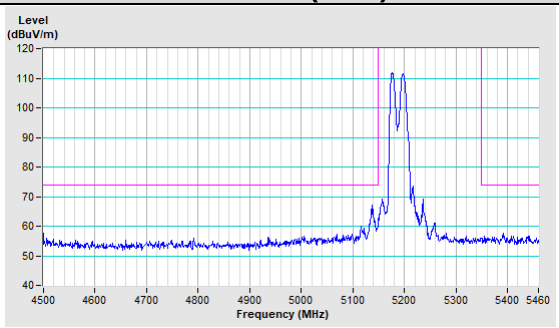
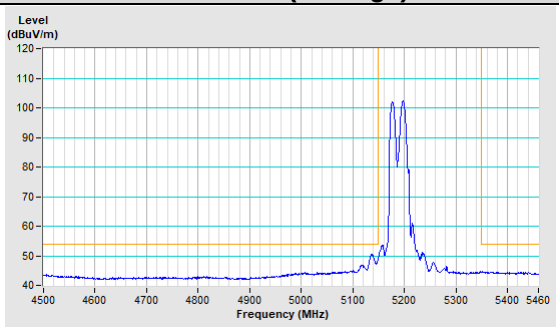
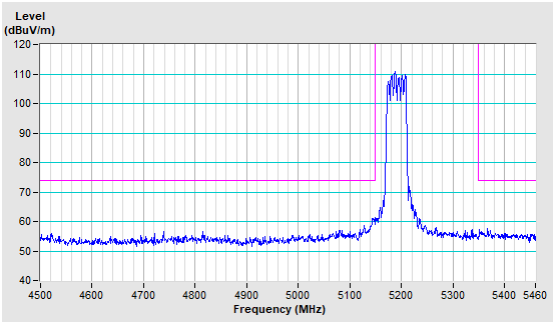
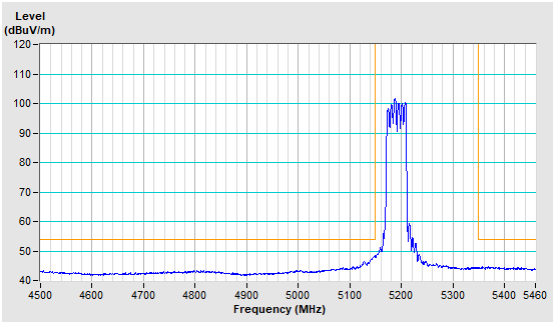
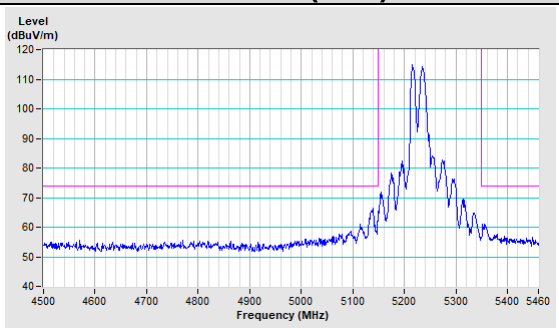
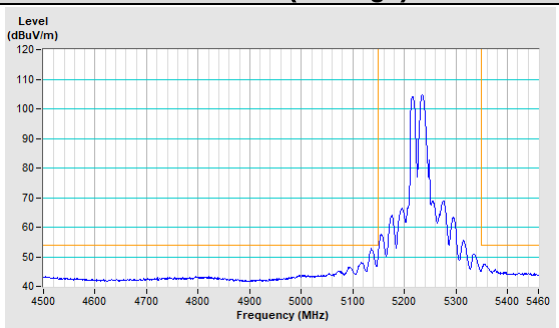
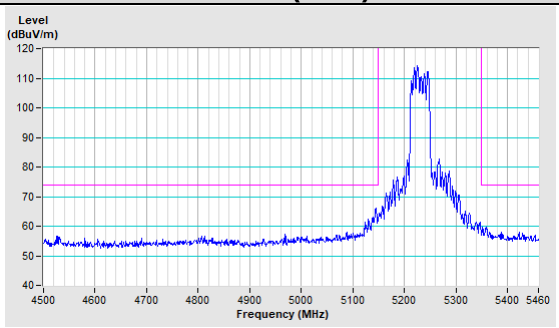
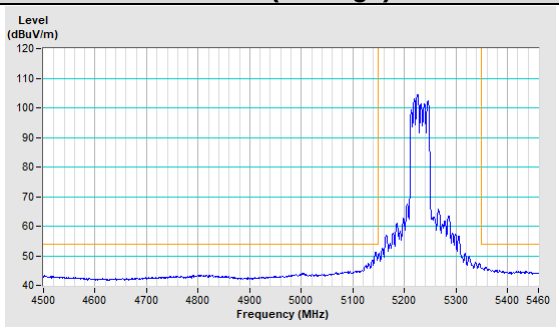
802.11a Channel 52	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11a Channel 64	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

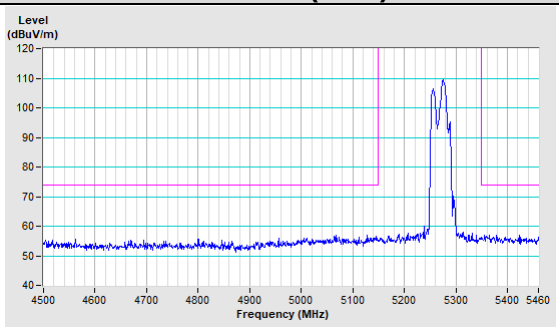
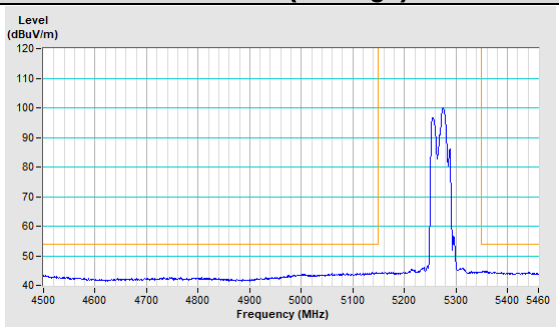
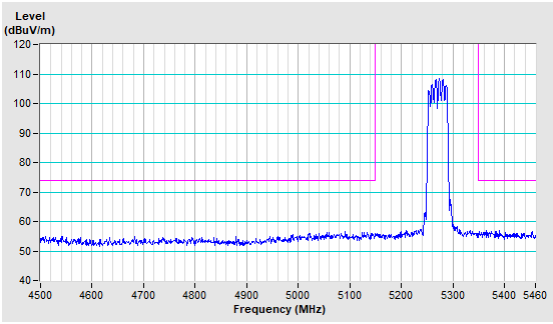
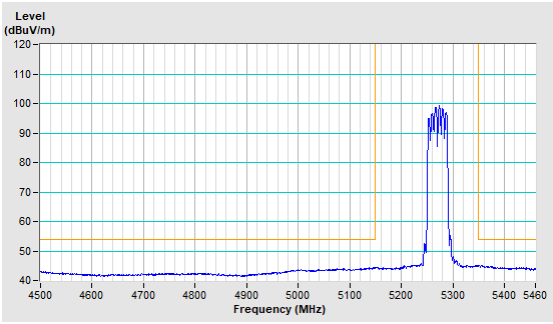
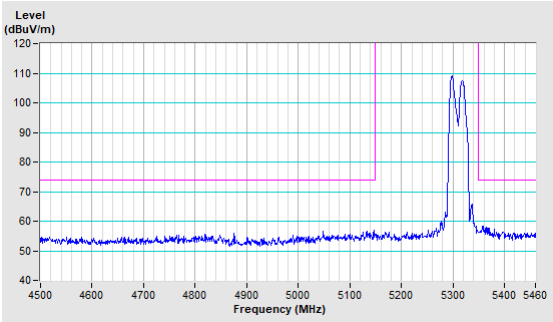
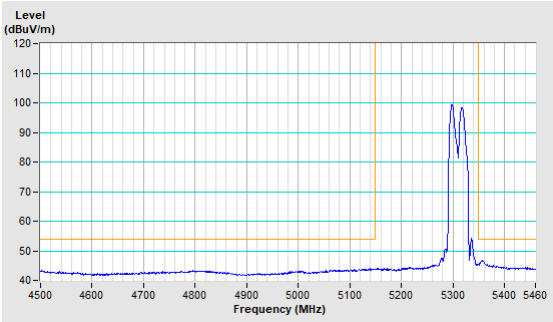
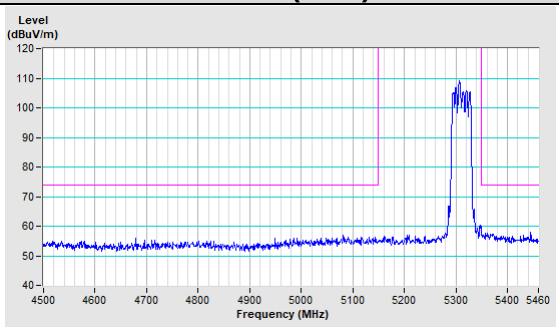
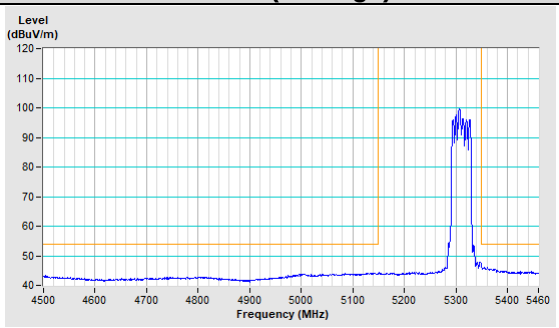
802.11a Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11a Channel 140	
Horizontal (Peak)	Vertical (Peak)
	

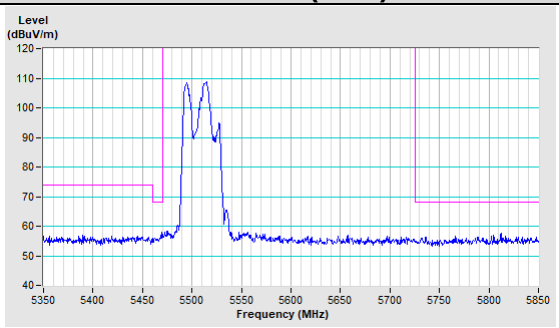
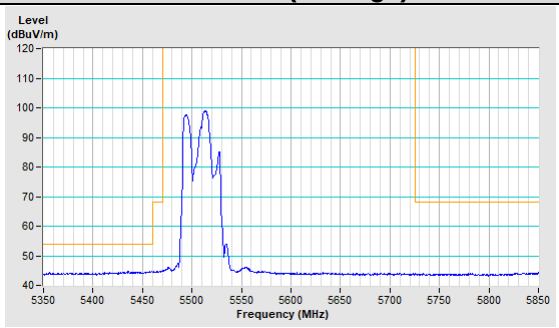
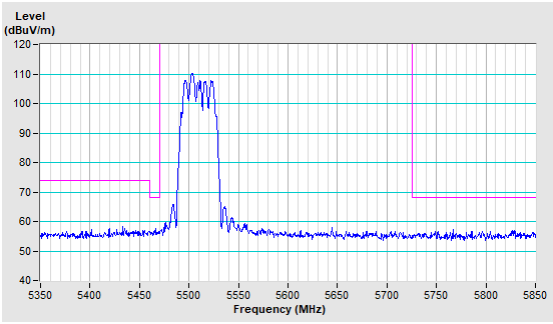
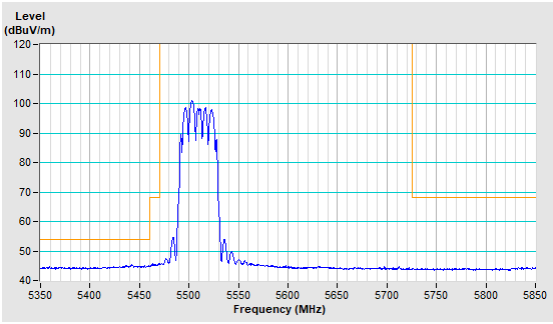
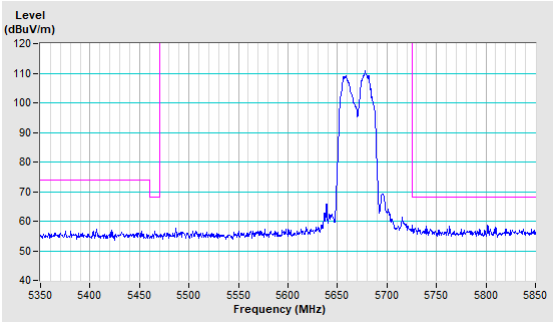
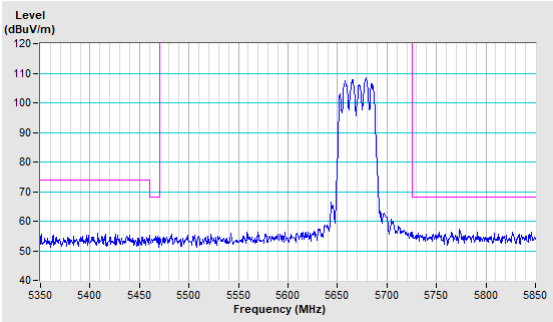
802.11n (HT20) Channel 36	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11n (HT20) Channel 48	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

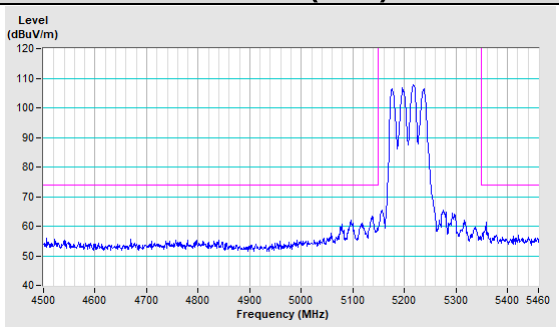
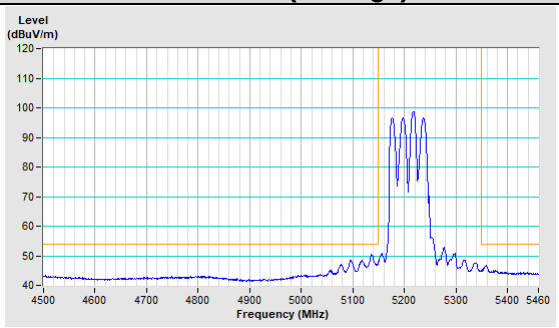
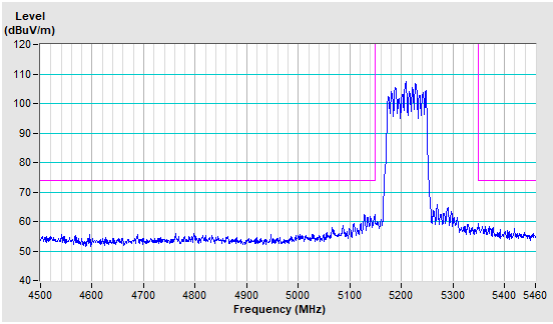
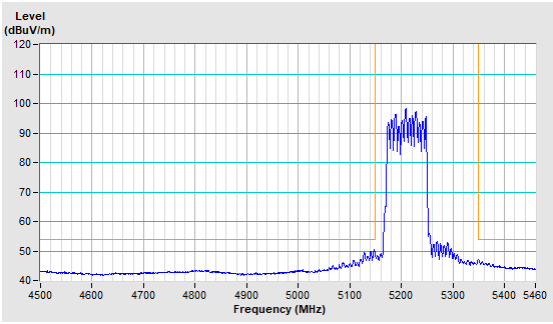
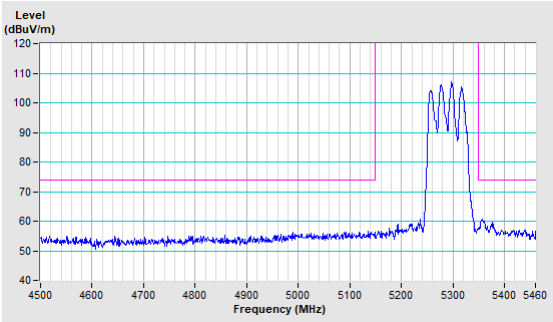
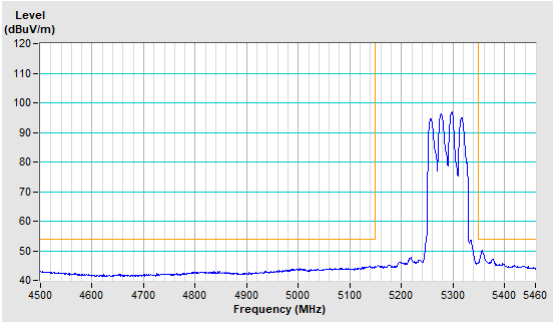
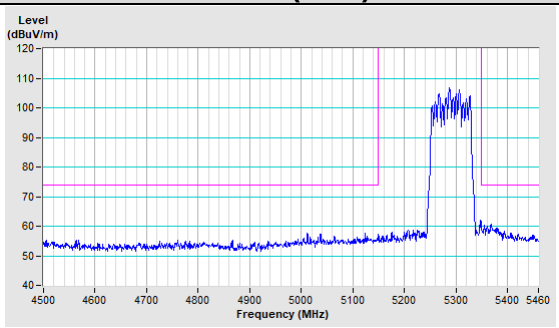
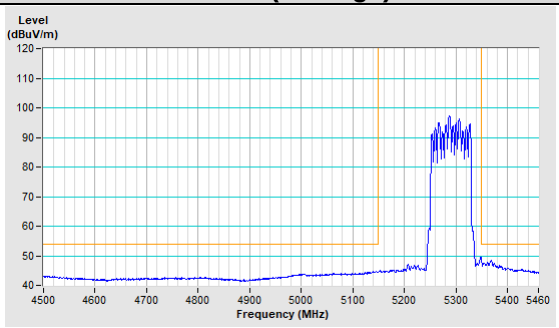
802.11n (HT20) Channel 52	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11n (HT20) Channel 64	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

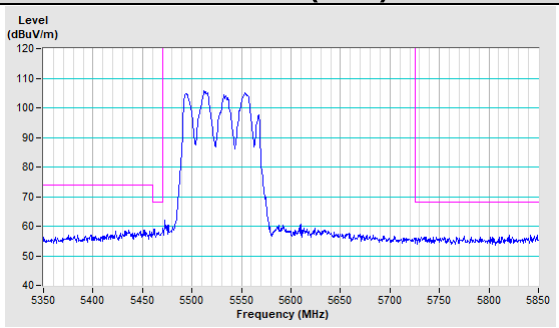
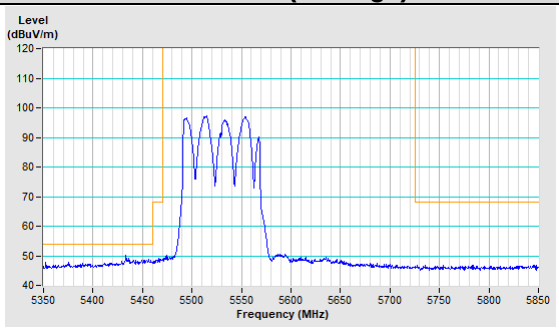
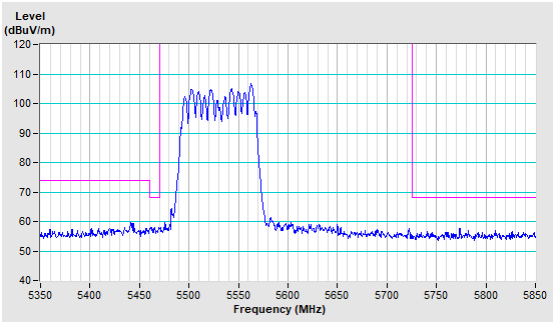
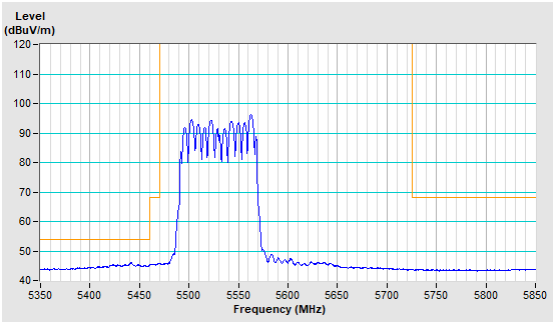
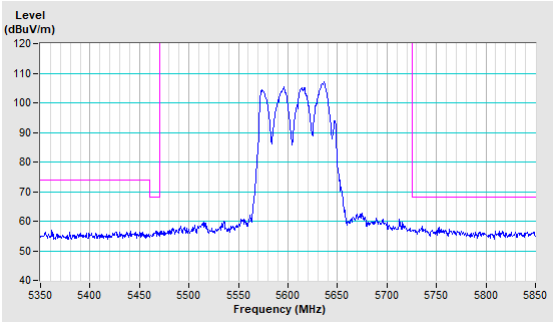
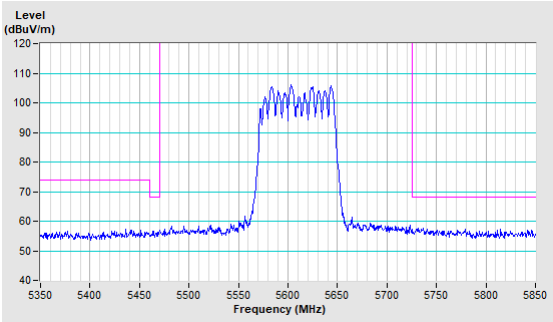
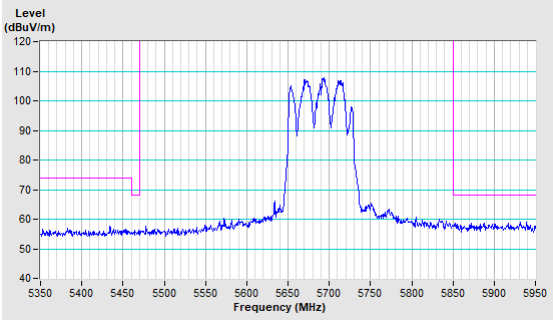
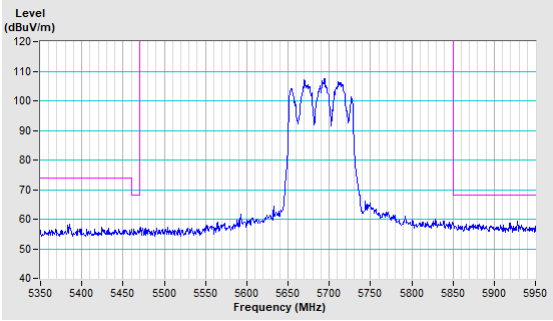
802.11n (HT20) Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11n (HT20) Channel 140	
Horizontal (Peak)	Vertical (Peak)
	

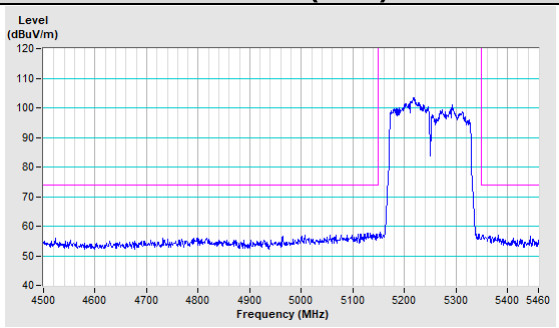
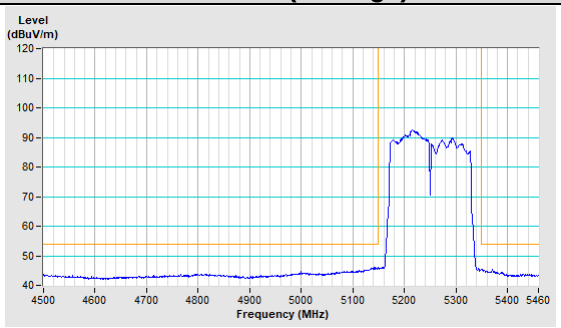
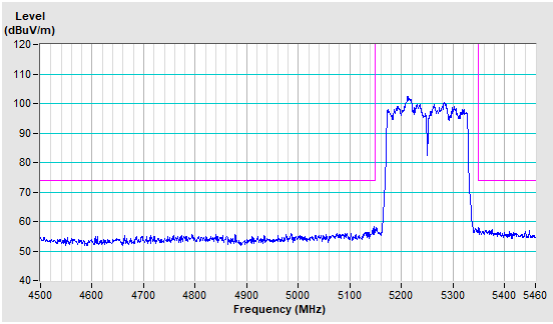
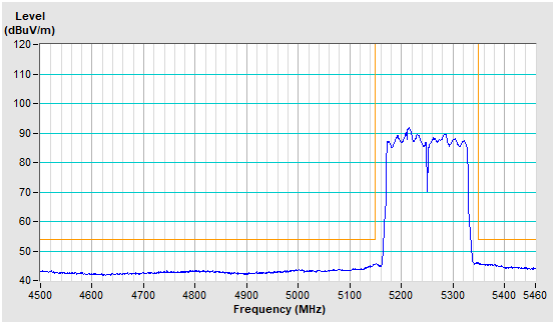
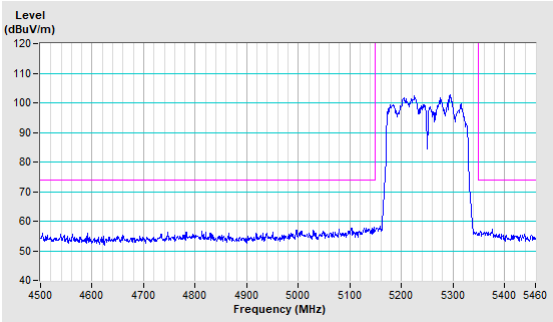
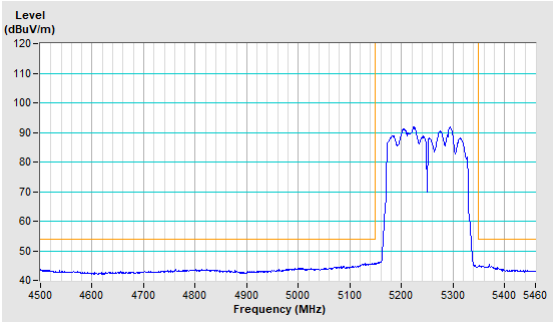
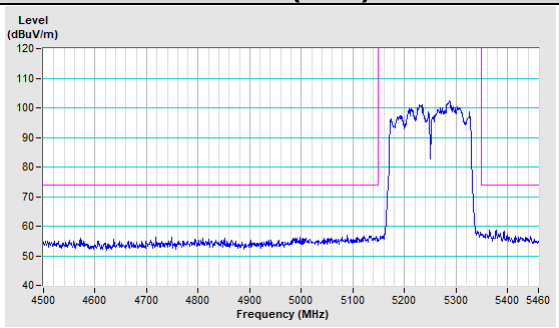
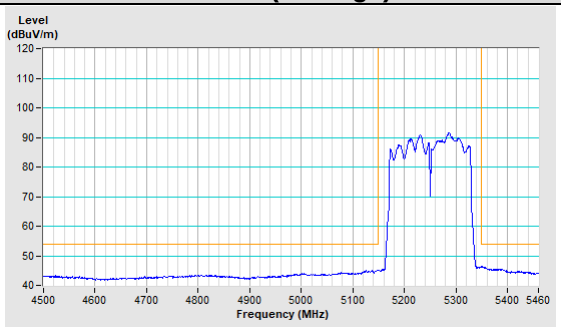
802.11n (HT40) Channel 38	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11n (HT40) Channel 46	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

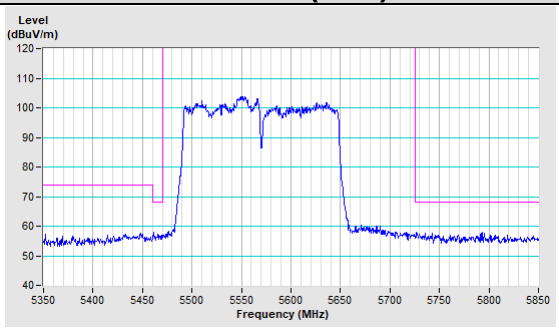
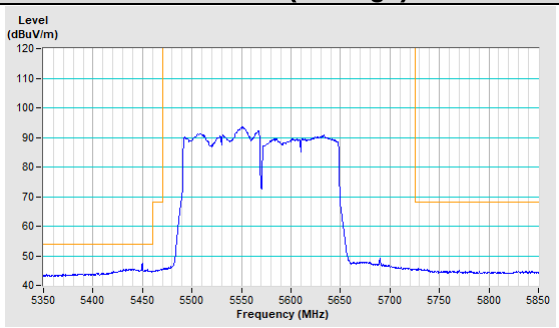
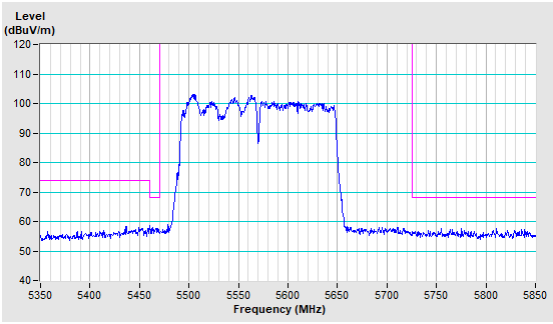
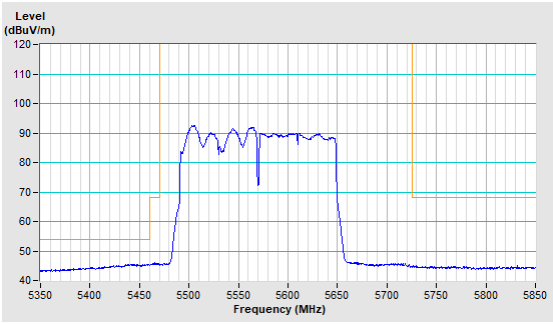
802.11n (HT40) Channel 54	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11n (HT40) Channel 62	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

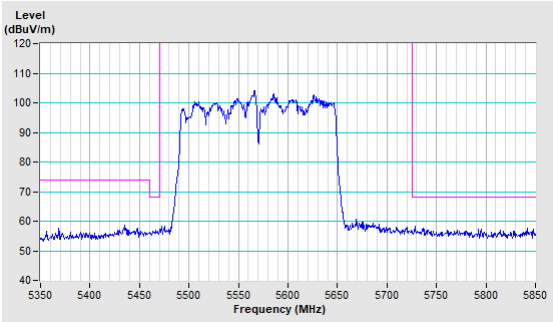
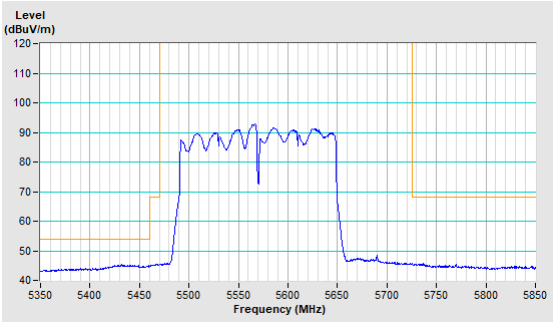
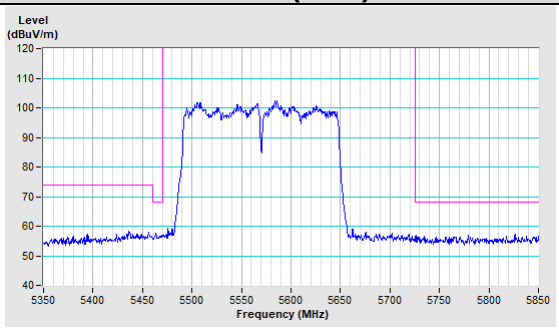
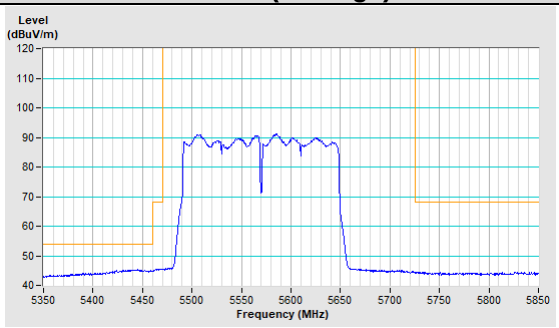
802.11n (HT40) Channel 102	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11n (HT40) Channel 134	
Horizontal (Peak)	Vertical (Peak)
	

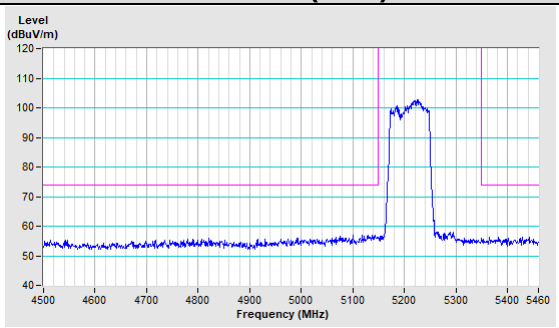
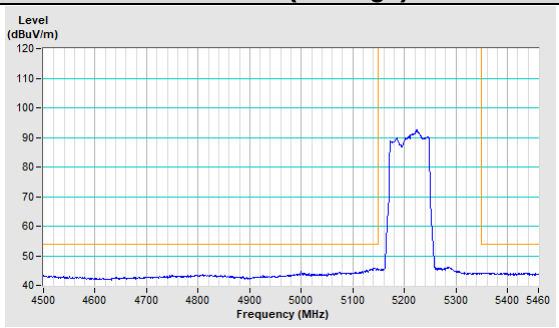
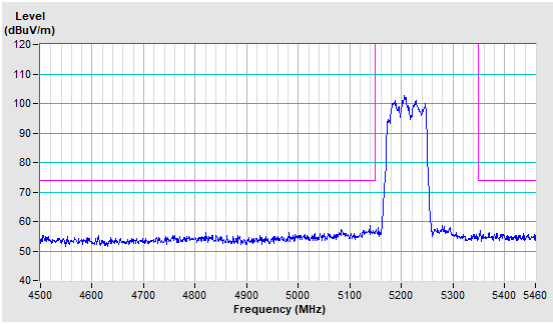
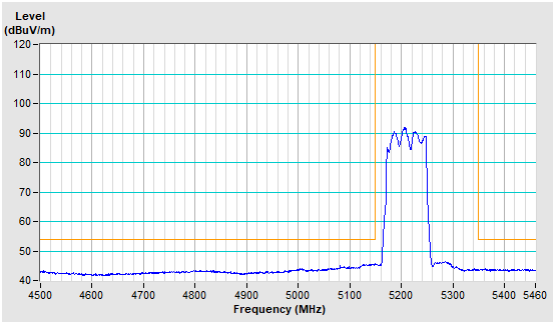
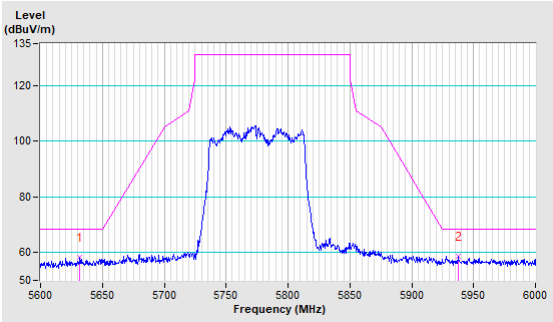
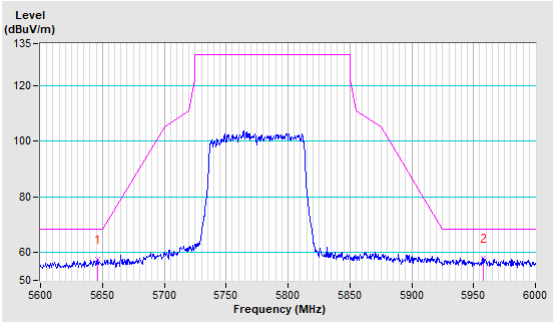
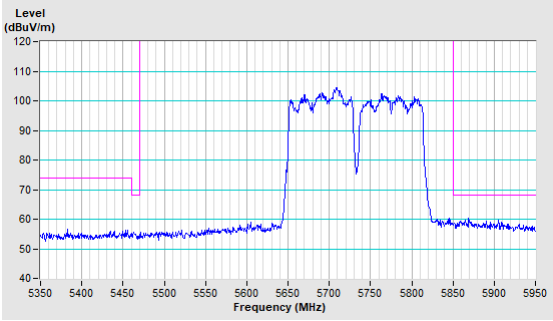
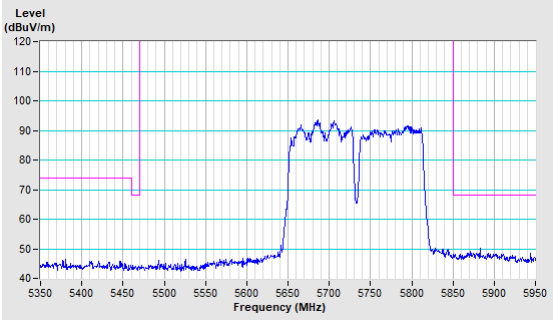
802.11ac (VHT80) Channel 42	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT80) Channel 58	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT80) Channel 106	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT80) Channel 122	
Horizontal (Peak)	Vertical (Peak)
	
802.11ac (VHT80) Channel 138	
Horizontal (Peak)	Vertical (Peak)
	

802.11ac (VHT80+80) Channel 42+58	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT80+80) Channel 42+58	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT80+80) Channel 106+122	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT80+80) Channel 106+122	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT80+80) Channel 42+155	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
802.11ac (VHT80+80) Channel 42+155	
Horizontal (Peak)	Vertical (Peak)
	
802.11ac (VHT80+80) Channel 138+155	
Horizontal (Peak)	Vertical (Peak)
	

Appendix – Information of the Testing Laboratories

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

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

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Web Site: www.bureauveritas-adt.com

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

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