

FCC Test Report

Report No.: RFBGQZ-WTW-P21031056-3

FCC ID: M72-EDGEE550

Test Model: POLY EDGE E550

Received Date: Mar. 30, 2021

Test Date: Apr. 16, 2022 ~ Apr. 19, 2022

Issued Date: May 27, 2022

Applicant: Polycom Inc.

Address: 6001 America Center Drive, San Jose, California 95002, United States

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



This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification.

Table of Contents

Release Control Record	4
1 Certificate of Conformity	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Modification Record	6
3 General Information	7
3.1 General Description of EUT	7
3.2 Description of Test Modes	10
3.2.1 Test Mode Applicability and Tested Channel Detail	12
3.3 Duty Cycle of Test Signal	14
3.4 Description of Support Units	15
3.4.1 Configuration of System under Test	15
3.5 General Description of Applied Standards and References	15
4 Test Types and Results	17
4.1 Radiated Emission and Bandedge Measurement	17
4.1.1 Limits of Radiated Emission and Bandedge Measurement	17
4.1.2 Test Instruments	19
4.1.3 Test Procedures	20
4.1.4 Deviation from Test Standard	21
4.1.5 Test Setup	21
4.1.6 EUT Operating Conditions	22
4.1.7 Test Results	23
4.2 Conducted Emission Measurement	69
4.2.1 Limits of Conducted Emission Measurement	69
4.2.2 Test Instruments	69
4.2.3 Test Procedures	70
4.2.4 Deviation from Test Standard	70
4.2.5 Test Setup	70
4.2.6 EUT Operating Conditions	70
4.2.7 Test Results	71
4.3 Transmit Power Measurement	75
4.3.1 Limits of Transmit Power Measurement	75
4.3.2 Test Setup	75
4.3.3 Test Instruments	76
4.3.4 Test Procedure	76
4.3.5 Deviation from Test Standard	76
4.3.6 EUT Operating Conditions	76
4.3.7 Test Results	77
4.4 Occupied Bandwidth Measurement	84
4.4.1 Test Setup	84
4.4.2 Test Instruments	84
4.4.3 Test Procedure	84
4.4.4 Test Results	85
4.5 Peak Power Spectral Density Measurement	90
4.5.1 Limits of Peak Power Spectral Density Measurement	90
4.5.2 Test Setup	90
4.5.3 Test Instruments	90
4.5.4 Test Procedures	90
4.5.5 Deviation from Test Standard	91
4.5.6 EUT Operating Conditions	91
4.5.7 Test Results	92
4.6 Frequency Stability	97
4.6.1 Limit of Frequency Stability Measurement	97

4.6.2	Test Setup	97
4.6.3	Test Instruments	97
4.6.4	Test Procedure	97
4.6.5	Deviation from Test Standard	97
4.6.6	EUT Operating Condition	97
4.6.7	Test Results	98
4.7	6 dB Bandwidth Measurement.....	99
4.7.1	Limits of 6 dB Bandwidth Measurement.....	99
4.7.2	Test Setup.....	99
4.7.3	Test Instruments	99
4.7.4	Test Procedure	99
4.7.5	Deviation from Test Standard	99
4.7.6	EUT Operating Condition	99
4.7.7	Test Results	100
5	Pictures of Test Arrangements.....	102
	Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)	103
	Annex B- Band Edge Measurement.....	106
	Appendix – Information of the Testing Laboratories	117

Release Control Record

Issue No.	Description	Date Issued
RFBGQZ-WTW-P21031056-3	Original Release	May 27, 2022

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(9)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -16.36 dB at 0.48200 MHz.
15.407(b) (1/2/3/4(i/ii)/ 9)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -4.4 dB at 5150.00 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	No antenna connector is used.

Note:

- For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.
- 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.
- 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) (\pm)
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	IP Phone
Brand	POLY
Test Model	POLY EDGE E550
Status of EUT	Engineering Sample
Power Supply Rating	48 Vdc (from adapter or 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 150 Mbps 802.11ac: up to 433.3 Mbps
Operating Frequency	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5720 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) 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) 5500 ~ 5720 MHz: 12 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 6 for 802.11n (HT40), 802.11ac (VHT40) 3 for 802.11ac (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)
Output Power	19.724 mW for 5180 ~ 5240 MHz 19.815 mW for 5260 ~ 5320 MHz 19.77 mW for 5500 ~ 5720 MHz 19.679 mW for 5745 ~ 5825 MHz
SW Version (FVIN)	MFG 1.0.16
Antenna Type	PCB antenna with 2.73 dBi gain (5180 ~ 5240 MHz) PCB antenna with 2.02 dBi gain (5260 ~ 5320 MHz) PCB antenna with 2.91 dBi gain (5500 ~ 5720 MHz) PCB antenna with 2.97 dBi gain (5745 ~ 5825 MHz)
Antenna Connector	N/A
Accessory Device	Refer to Note as below
Data Cable Supplied	Refer to Note as below

Note:

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

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

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

2. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter	FSP	FSP025-DINANS2	I/P: 100-240 Vac, 50/60 Hz, 0.9 A O/P: 48 Vdc, 0.52 A 1.8m non-shielded DC cable with 1 core 1.8m non-shielded AC cable w/o core
Coil cable	EXCELTEK	PE00003	570mm
LAN Cable	EXCELTEK	PO02008	1.524m

3. The EUT uses following support unit.

Product	Brand	Model	Description
POE	CERIO	POE-S48G2	--
Adapter for POE	L.T.E	LTE36ES-S5-1	I/P: 100-240 Vac, 50/60 Hz, 0.75 A O/P: 48 Vdc, 0.75 A 1.8m non-shielded DC cable w/o core

4. Power setting is as below:

802.11a		802.11ac (VHT20)		802.11ac (VHT40)		802.11ac (VHT80)	
Channel	Power Setting	Channel	Power Setting	Channel	Power Setting	Channel	Power Setting
36	12	36	12	38	13	42	10
40	12	40	12	46	13	58	10
48	12	48	12	54	13	106	10
52	12	52	12	62	13	122	10
60	12	60	12	102	13	138 (U-NII-2C)	10
64	12	64	12	110	13	138 (U-NII-3)	10
100	12	100	12	134	13	155	10
116	12	116	12	142 (U-NII-2C)	13		
140	12	140	13	142 (U-NII-3)	13		
144 (U-NII-2C)	12	144 (U-NII-2C)	13	151	13		
144 (U-NII-3)	12	144 (U-NII-3)	13	159	13		
149	12	149	13				
157	12	157	13				
165	12	165	13				

5. 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.

6. 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):

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):

Channel	Frequency (MHz)
58	5290

For 5500 ~ 5720 MHz

12 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	144	5720

6 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	142	5710

3 channels are provided for 802.11ac (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):

Channel	Frequency (MHz)
155	5775

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE \geq 1G	RE $<$ 1G	PLC	APCM	
A	√	√	√	√	Power from Adapter
B	-	√	√	-	Power from POE

Where **RE \geq 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. For radiated emission (below 1GHz) and power line conducted emission test items chosen the worst maximum power.
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	Data Rate (Mbps)
A	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	6.0
		802.11ac (VHT20)	36 to 48	36, 40, 48	OFDM	7.2
		802.11ac (VHT40)	38 to 46	38, 46	OFDM	15.0
		802.11ac (VHT80)	42	42	OFDM	29.3
	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	6.0
		802.11ac (VHT20)	52 to 64	52, 60, 64	OFDM	7.2
		802.11ac (VHT40)	54 to 62	54, 62	OFDM	15.0
		802.11ac (VHT80)	58	58	OFDM	29.3
	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	6.0
		802.11ac (VHT20)	100 to 144	100, 116, 140, 144	OFDM	7.2
		802.11ac (VHT40)	102 to 142	102, 110, 134, 142	OFDM	15.0
		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	29.3
	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	6.0
		802.11ac (VHT20)	149 to 165	149, 157, 165	OFDM	7.2
		802.11ac (VHT40)	151 to 159	151, 159	OFDM	15.0
		802.11ac (VHT80)	155	155	OFDM	29.3

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	Data Rate (Mbps)
A, B	5260-5320	802.11a	52 to 64	52	OFDM	6.0

Power Line Conducted Emission Test:

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A, B	5260-5320	802.11a	52 to 64	52	OFDM	6.0

Antenna Port Conducted Measurement:

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	6.0
		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	7.2
		802.11n (HT40)	38 to 46	38, 46	OFDM	15.0
		802.11ac (VHT80)	42	42	OFDM	29.3
	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	6.0
		802.11n (HT20)	52 to 64	52, 60, 64	OFDM	7.2
		802.11n (HT40)	54 to 62	54, 62	OFDM	15.0
		802.11ac (VHT80)	58	58	OFDM	29.3
	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	6.0
		802.11n (HT20)	100 to 144	100, 116, 140, 144	OFDM	7.2
		802.11n (HT40)	102 to 142	102, 110, 134, 142	OFDM	15.0
		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	29.3
	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	6.0
		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	7.2
		802.11n (HT40)	151 to 159	151, 159	OFDM	15.0
		802.11ac (VHT80)	155	155	OFDM	29.3

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE \geq 1G	22 deg. C, 61 % RH	120 Vac, 60 Hz	Thomas Cheng
RE $<$ 1G	22 deg. C, 64 % RH	120 Vac, 60 Hz	Vincent Chen
PLC	23 deg. C, 67 % RH	120 Vac, 60 Hz	Thomas Cheng
APCM	25 deg. C, 60 % RH	120 Vac, 60 Hz	Frank FI Liu

3.3 Duty Cycle of Test Signal

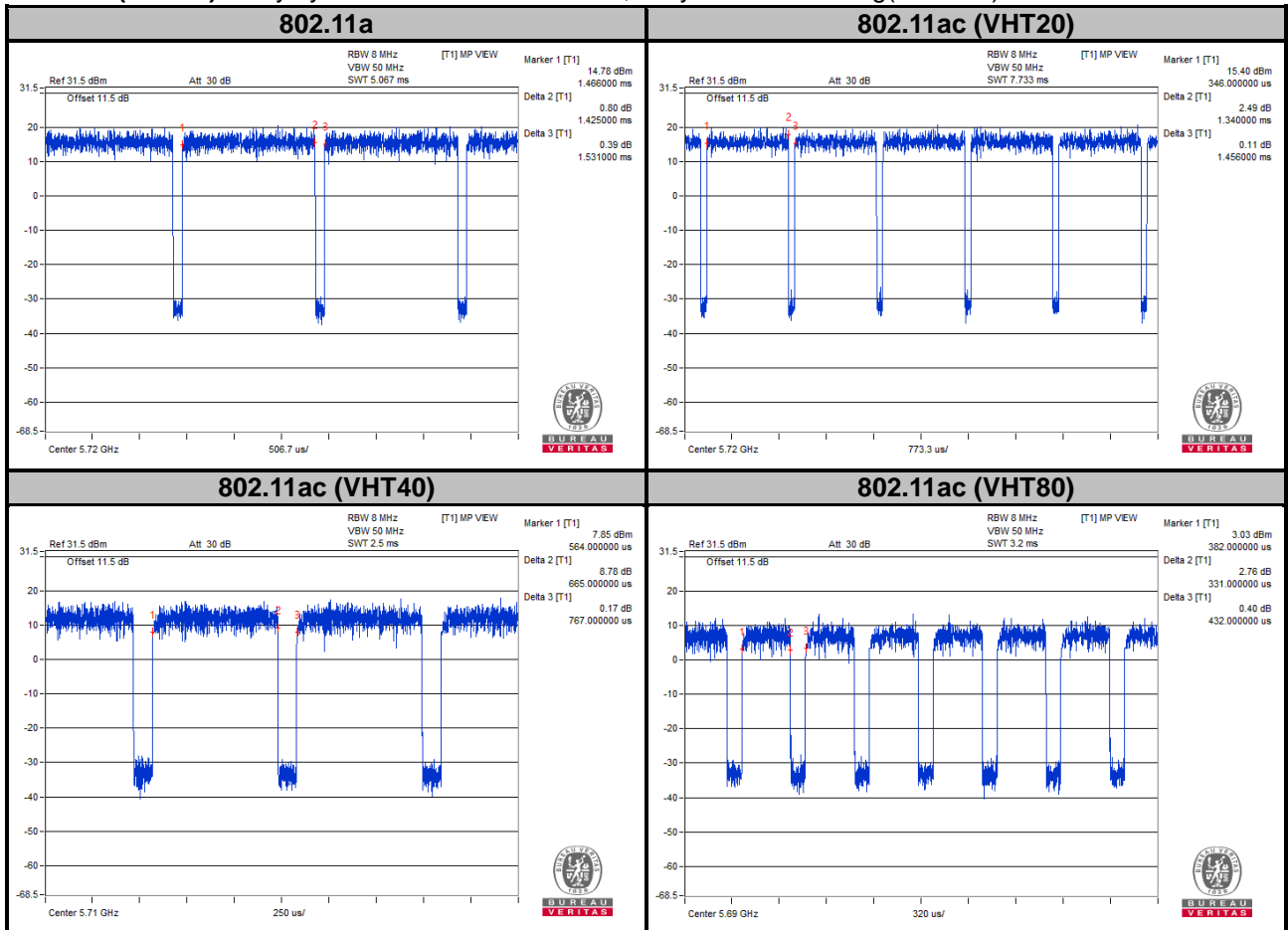
Duty cycle of test signal is < 98 %, duty factor is required.

802.11a: Duty cycle = 1.425/1.531 = 0.931, Duty factor = $10 * \log(1/0.931) = 0.31$

802.11ac (VHT20): Duty cycle = 1.34/1.456 = 0.92, Duty factor = $10 * \log(1/0.92) = 0.36$

802.11ac (VHT40): Duty cycle = 0.665/0.767 = 0.867, Duty factor = $10 * \log(1/0.867) = 0.62$

802.11ac (VHT80): Duty cycle = 0.331/0.432 = 0.766, Duty factor = $10 * \log(1/0.766) = 1.16$



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
1.	Load	NA	NA	NA	NA	-
2.	USB Flash	SanDisk	SDDDC3-032G	NA	NA	-
3.	POE	CERIO	POE-S48G2	NA	NA	Provided by client
4.	Adapter	L.T.E	LTE36ES-S5-1	NA	NA	Provided by client
5.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-

Note:

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

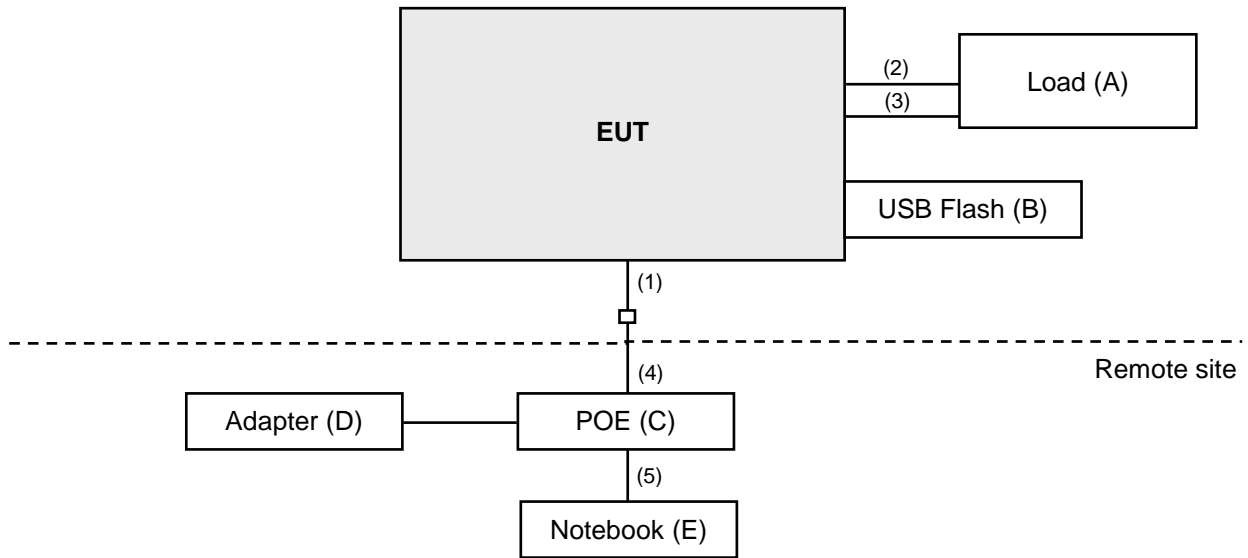
ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	LAN	1	1.524	N	0	RJ45, Cat5e Accessory of EUT
2.	LAN	1	1.5	N	0	RJ45, Cat5e
3.	RJ9	1	1	N	0	-
4.	LAN	1	1.5	N	0	RJ45, Cat5e
5.	LAN	1	10	N	0	RJ45, Cat5e

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

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	<input checked="" type="checkbox"/> 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}
	<input type="checkbox"/> 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:

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Spectrum Analyzer Agilent	N9038A	MY51210203	Sep. 22, 2021	Sep. 21, 2022
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 12, 2021	Apr. 11, 2022
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Nov. 14, 2021	Nov. 13, 2022
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Nov. 14, 2021	Nov. 13, 2022
BILOG Antenna SCHWARZBECK	VULB 9168	9168-472	Oct. 28, 2021	Oct. 27, 2022
Fixed Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	Apr. 13, 2021	Apr. 12, 2022
Loop Antenna	EM-6879	269	Sep. 16, 2021	Sep. 15, 2022
Preamplifier EMCI	EMC001340	980201	Sep. 15, 2021	Sep. 14, 2022
Preamplifier EMCI	EMC 012645	980115	Oct. 05, 2021	Oct. 04, 2022
Preamplifier EMCI	EMC 330H	980112	Oct. 05, 2021	Oct. 04, 2022
Preamplifier EMCI	EMC 184045	980116	Oct. 05, 2021	Oct. 04, 2022
RF Coaxial Cable EMCI	EMC104-SM-SM- 8000	171005	Oct. 05, 2021	Oct. 04, 2022
RF Coaxial Cable HUBER+SUHNNER	SUCOFLEX 104	EMC104-SM-SM- 1000(140807)	Oct. 05, 2021	Oct. 04, 2022
RF Coaxial Cable WOKEN	8D-FB	Cable-Ch10-01	Oct. 05, 2021	Oct. 04, 2022
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA
Peak Power Analyzer KEYSIGHT	8990B	MY51000485	Jan. 18, 2022	Jan. 17, 2023
Wideband Power Sensor KEYSIGHT	N1923A	MY58020002	Jan. 17, 2022	Jan. 16, 2023
Spectrum Analyzer ROHDE & SCHWARZ	FSV40	100979	Mar. 25, 2022	Mar. 24, 2023

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 10.

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:

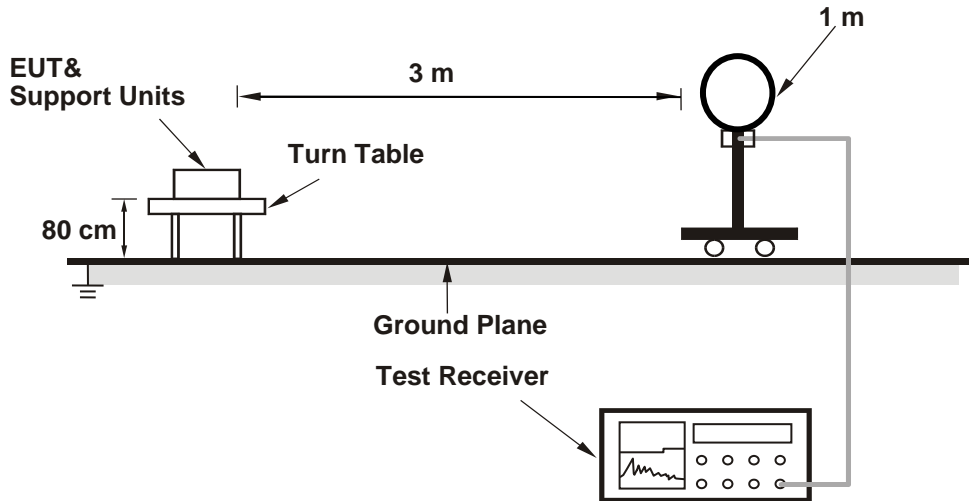
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (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 ; 11ac (VHT20): RBW = 1 MHz, VBW = 1 kHz ;
11ac (VHT40): RBW = 1 MHz, VBW = 3 kHz ; 11ac (VHT80): RBW = 1 MHz, VBW = 10 kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

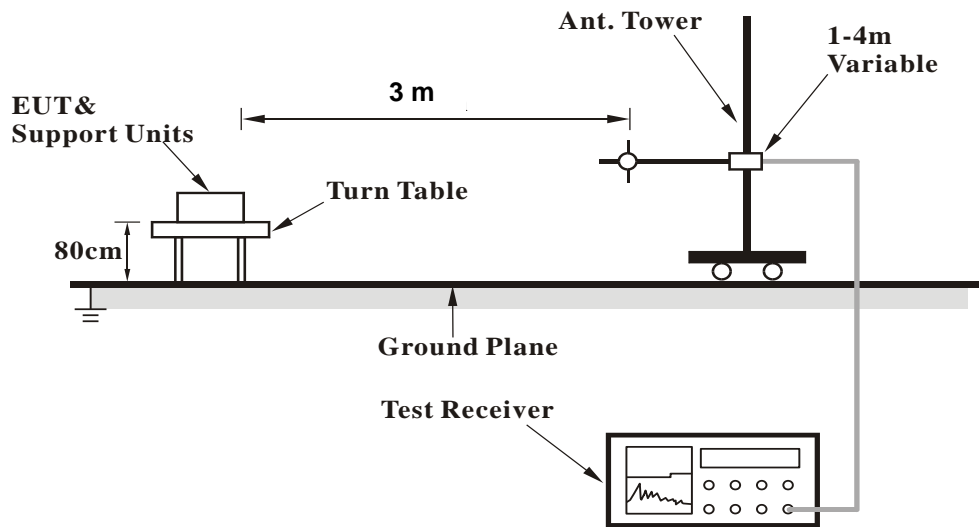
No deviation.

4.1.5 Test Setup

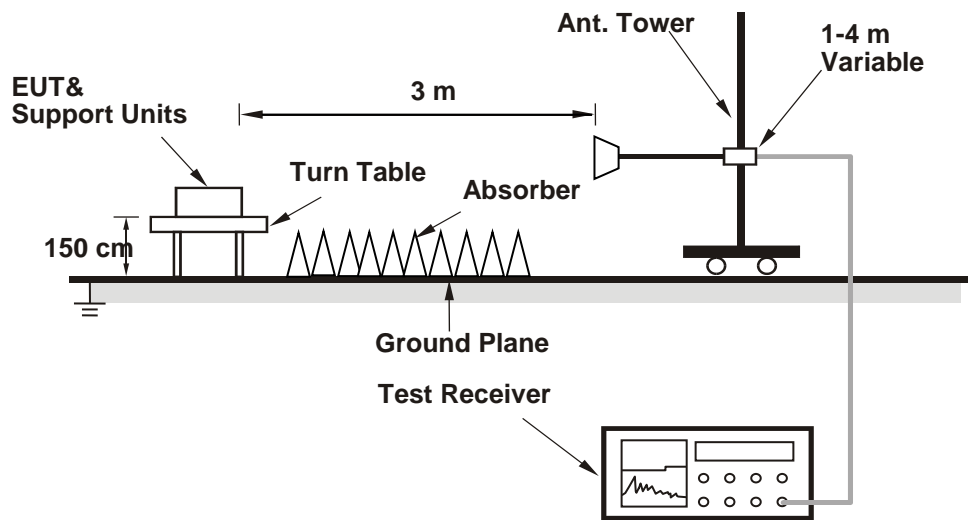
<Radiated Emission below 30 MHz>



<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 :

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	51.5 PK	74.0	-22.5	2.26 H	213	68.2	-16.7
2	5150.00	40.8 AV	54.0	-13.2	2.26 H	213	57.5	-16.7
3	*5180.00	98.5 PK			2.26 H	213	62.2	36.3
4	*5180.00	91.1 AV			2.26 H	213	54.8	36.3
5	#10360.00	54.4 PK	68.2	-13.8	3.79 H	340	58.6	-4.2

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	52.2 PK	74.0	-21.8	1.89 V	46	68.9	-16.7
2	5150.00	40.9 AV	54.0	-13.1	1.89 V	46	57.6	-16.7
3	*5180.00	99.3 PK			1.89 V	46	63.0	36.3
4	*5180.00	91.9 AV			1.89 V	46	55.6	36.3
5	#10360.00	54.7 PK	68.2	-13.5	1.75 V	39	58.9	-4.2

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 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	98.4 PK			2.27 H	215	62.1	36.3
2	*5200.00	91.1 AV			2.27 H	215	54.8	36.3
3	#10400.00	54.7 PK	68.2	-13.5	1.71 H	26	58.6	-3.9
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	*5200.00	99.0 PK			1.86 V	47	62.7	36.3
2	*5200.00	91.5 AV			1.86 V	47	55.2	36.3
3	#10400.00	54.8 PK	68.2	-13.4	1.56 V	220	58.7	-3.9

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 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	98.5 PK			2.44 H	213	62.2	36.3
2	*5240.00	91.1 AV			2.44 H	213	54.8	36.3
3	5350.00	50.6 PK	74.0	-23.4	2.44 H	213	67.1	-16.5
4	5350.00	40.0 AV	54.0	-14.0	2.44 H	213	56.5	-16.5
5	#10480.00	55.6 PK	68.2	-12.6	2.82 H	133	59.5	-3.9
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	*5240.00	99.3 PK			2.01 V	55	63.0	36.3
2	*5240.00	91.9 AV			2.01 V	55	55.6	36.3
3	5350.00	50.7 PK	74.0	-23.3	2.01 V	55	67.2	-16.5
4	5350.00	40.1 AV	54.0	-13.9	2.01 V	55	56.6	-16.5
5	#10480.00	56.4 PK	68.2	-11.8	2.60 V	18	60.3	-3.9

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 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	50.5 PK	74.0	-23.5	2.33 H	210	67.2	-16.7
2	5150.00	40.8 AV	54.0	-13.2	2.33 H	210	57.5	-16.7
3	*5260.00	99.1 PK			2.33 H	210	62.9	36.2
4	*5260.00	92.0 AV			2.33 H	210	55.8	36.2
5	#10520.00	54.7 PK	68.2	-13.5	2.52 H	6	58.6	-3.9
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	5150.00	50.7 PK	74.0	-23.3	1.98 V	54	67.4	-16.7
2	5150.00	41.1 AV	54.0	-12.9	1.98 V	54	57.8	-16.7
3	*5260.00	100.0 PK			1.98 V	54	63.8	36.2
4	*5260.00	93.0 AV			1.98 V	54	56.8	36.2
5	#10520.00	54.9 PK	68.2	-13.3	2.86 V	316	58.8	-3.9

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 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	99.3 PK			2.32 H	212	63.2	36.1
2	*5300.00	92.2 AV			2.32 H	212	56.1	36.1
3	10600.00	54.9 PK	74.0	-19.1	1.48 H	151	58.6	-3.7
4	10600.00	44.5 AV	54.0	-9.5	1.48 H	151	48.2	-3.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	100.0 PK			1.93 V	53	63.9	36.1
2	*5300.00	92.8 AV			1.93 V	53	56.7	36.1
3	10600.00	55.2 PK	74.0	-18.8	2.28 V	91	58.9	-3.7
4	10600.00	44.7 AV	54.0	-9.3	2.28 V	91	48.4	-3.7

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	99.6 PK			2.15 H	208	63.5	36.1
2	*5320.00	92.2 AV			2.15 H	208	56.1	36.1
3	5350.00	52.6 PK	74.0	-21.4	2.15 H	208	69.1	-16.5
4	5350.00	41.1 AV	54.0	-12.9	2.15 H	208	57.6	-16.5
5	10640.00	55.0 PK	74.0	-19.0	3.20 H	251	58.6	-3.6
6	10640.00	44.9 AV	54.0	-9.1	3.20 H	251	48.5	-3.6
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	*5320.00	100.3 PK			2.01 V	54	64.2	36.1
2	*5320.00	92.9 AV			2.01 V	54	56.8	36.1
3	5350.00	53.8 PK	74.0	-20.2	2.01 V	54	70.3	-16.5
4	5350.00	41.6 AV	54.0	-12.4	2.01 V	54	58.1	-16.5
5	10640.00	55.3 PK	74.0	-18.7	1.80 V	160	58.9	-3.6
6	10640.00	45.2 AV	54.0	-8.8	1.80 V	160	48.8	-3.6

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 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	51.2 PK	74.0	-22.8	2.09 H	235	67.3	-16.1
2	5460.00	41.1 AV	54.0	-12.9	2.09 H	235	57.2	-16.1
3	#5470.00	53.7 PK	68.2	-14.5	2.09 H	235	69.8	-16.1
4	*5500.00	99.2 PK			2.09 H	235	62.7	36.5
5	*5500.00	91.7 AV			2.09 H	235	55.2	36.5
6	11000.00	54.8 PK	74.0	-19.2	2.10 H	133	58.5	-3.7
7	11000.00	44.5 AV	54.0	-9.5	2.10 H	133	48.2	-3.7

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	51.6 PK	74.0	-22.4	2.01 V	51	67.7	-16.1
2	5460.00	41.6 AV	54.0	-12.4	2.01 V	51	57.7	-16.1
3	#5470.00	54.3 PK	68.2	-13.9	2.01 V	51	70.4	-16.1
4	*5500.00	100.2 PK			2.01 V	51	63.7	36.5
5	*5500.00	93.0 AV			2.01 V	51	56.5	36.5
6	11000.00	54.9 PK	74.0	-19.1	1.19 V	85	58.6	-3.7
7	11000.00	44.8 AV	54.0	-9.2	1.19 V	85	48.5	-3.7

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 802.11a	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	99.2 PK			2.06 H	230	62.5	36.7
2	*5580.00	91.9 AV			2.06 H	230	55.2	36.7
3	11160.00	54.6 PK	74.0	-19.4	2.39 H	60	58.1	-3.5
4	11160.00	44.7 AV	54.0	-9.3	2.39 H	60	48.2	-3.5
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	*5580.00	100.6 PK			2.05 V	50	63.9	36.7
2	*5580.00	93.3 AV			2.05 V	50	56.6	36.7
3	11160.00	54.9 PK	74.0	-19.1	3.79 V	122	58.4	-3.5
4	11160.00	45.1 AV	54.0	-8.9	3.79 V	122	48.6	-3.5

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 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	99.4 PK			2.82 H	234	62.3	37.1
2	*5700.00	92.3 AV			2.82 H	234	55.2	37.1
3	#5725.00	57.6 PK	68.2	-10.6	2.82 H	234	73.3	-15.7
4	11400.00	56.1 PK	74.0	-17.9	1.56 H	89	58.6	-2.5
5	11400.00	45.9 AV	54.0	-8.1	1.56 H	89	48.4	-2.5
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	*5700.00	100.3 PK			2.10 V	48	63.2	37.1
2	*5700.00	93.2 AV			2.10 V	48	56.1	37.1
3	#5725.00	58.6 PK	68.2	-9.6	2.10 V	48	74.3	-15.7
4	11400.00	56.3 PK	74.0	-17.7	3.08 V	44	58.8	-2.5
5	11400.00	46.2 AV	54.0	-7.8	3.08 V	44	48.7	-2.5

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 144 : 5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5720.00	98.5 PK			2.97 H	233	61.5	37.0
2	*5720.00	91.1 AV			2.97 H	233	54.1	37.0
3	#5850.00	51.8 PK	68.2	-16.4	2.97 H	233	67.2	-15.4
4	11440.00	56.4 PK	74.0	-17.6	2.59 H	233	58.9	-2.5
5	11440.00	46.0 AV	54.0	-8.0	2.59 H	233	48.5	-2.5
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	*5720.00	99.9 PK			2.07 V	51	62.9	37.0
2	*5720.00	92.9 AV			2.07 V	51	55.9	37.0
3	#5850.00	52.0 PK	68.2	-16.2	2.07 V	51	67.4	-15.4
4	11440.00	56.5 PK	74.0	-17.5	2.10 V	185	59.0	-2.5
5	11440.00	46.2 AV	54.0	-7.8	2.10 V	185	48.7	-2.5

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 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	98.6 PK			2.80 H	232	61.6	37.0
2	*5745.00	91.2 AV			2.80 H	232	54.2	37.0
3	11490.00	55.9 PK	74.0	-18.1	2.72 H	64	58.4	-2.5
4	11490.00	46.2 AV	54.0	-7.8	2.72 H	64	48.7	-2.5
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	*5745.00	99.9 PK			2.05 V	54	62.9	37.0
2	*5745.00	92.9 AV			2.05 V	54	55.9	37.0
3	11490.00	56.3 PK	74.0	-17.7	3.07 V	23	58.8	-2.5
4	11490.00	46.4 AV	54.0	-7.6	3.07 V	23	48.9	-2.5

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 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	98.8 PK			2.75 H	234	61.8	37.0
2	*5785.00	91.6 AV			2.75 H	234	54.6	37.0
3	11570.00	55.7 PK	74.0	-18.3	1.50 H	138	58.5	-2.8
4	11570.00	45.3 AV	54.0	-8.7	1.50 H	138	48.1	-2.8
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	*5785.00	99.8 PK			2.02 V	52	62.8	37.0
2	*5785.00	92.8 AV			2.02 V	52	55.8	37.0
3	11570.00	56.2 PK	74.0	-17.8	3.22 V	265	59.0	-2.8
4	11570.00	45.4 AV	54.0	-8.6	3.22 V	265	48.2	-2.8

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.

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	98.7 PK			2.84 H	234	61.5	37.2
2	*5825.00	91.3 AV			2.84 H	234	54.1	37.2
3	11650.00	55.3 PK	74.0	-18.7	2.84 H	234	58.5	-3.2
4	11650.00	45.3 AV	54.0	-8.7	2.84 H	234	48.5	-3.2
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	*5825.00	99.7 PK			2.00 V	52	62.5	37.2
2	*5825.00	92.5 AV			2.00 V	52	55.3	37.2
3	11650.00	55.5 PK	74.0	-18.5	2.78 V	264	58.7	-3.2
4	11650.00	46.4 AV	54.0	-7.6	2.78 V	264	49.6	-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.
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	51.4 PK	74.0	-22.6	2.81 H	151	68.1	-16.7
2	5150.00	40.7 AV	54.0	-13.3	2.81 H	151	57.4	-16.7
3	*5180.00	98.0 PK			2.81 H	151	61.7	36.3
4	*5180.00	90.8 AV			2.81 H	151	54.5	36.3
5	#10360.00	54.4 PK	68.2	-13.8	1.10 H	344	58.6	-4.2

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	51.6 PK	74.0	-22.4	2.01 V	55	68.3	-16.7
2	5150.00	40.8 AV	54.0	-13.2	2.01 V	55	57.5	-16.7
3	*5180.00	98.6 PK			2.01 V	55	62.3	36.3
4	*5180.00	91.2 AV			2.01 V	55	54.9	36.3
5	#10360.00	54.9 PK	68.2	-13.3	3.92 V	275	59.1	-4.2

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 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	97.9 PK			2.80 H	151	61.6	36.3
2	*5200.00	90.9 AV			2.80 H	151	54.6	36.3
3	#10400.00	54.4 PK	68.2	-13.8	3.24 H	339	58.3	-3.9
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	*5200.00	98.5 PK			1.98 V	55	62.2	36.3
2	*5200.00	90.9 AV			1.98 V	55	54.6	36.3
3	#10400.00	54.6 PK	68.2	-13.6	1.78 V	269	58.5	-3.9

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 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	98.3 PK			2.78 H	146	62.0	36.3
2	*5240.00	91.2 AV			2.78 H	146	54.9	36.3
3	5350.00	50.7 PK	74.0	-23.3	2.78 H	146	67.2	-16.5
4	5350.00	39.9 AV	54.0	-14.1	2.78 H	146	56.4	-16.5
5	#10480.00	54.5 PK	68.2	-13.7	1.08 H	43	58.4	-3.9
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	*5240.00	98.9 PK			2.06 V	52	62.6	36.3
2	*5240.00	91.5 AV			2.06 V	52	55.2	36.3
3	5350.00	50.9 PK	74.0	-23.1	2.06 V	52	67.4	-16.5
4	5350.00	40.0 AV	54.0	-14.0	2.06 V	52	56.5	-16.5
5	#10480.00	54.7 PK	68.2	-13.5	2.98 V	351	58.6	-3.9

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 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	50.7 PK	74.0	-23.3	2.82 H	149	67.4	-16.7
2	5150.00	40.6 AV	54.0	-13.4	2.82 H	149	57.3	-16.7
3	*5260.00	98.9 PK			2.82 H	149	62.7	36.2
4	*5260.00	91.8 AV			2.82 H	149	55.6	36.2
5	#10520.00	54.7 PK	68.2	-13.5	1.26 H	192	58.6	-3.9
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	5150.00	50.8 PK	74.0	-23.2	2.07 V	53	67.5	-16.7
2	5150.00	40.7 AV	54.0	-13.3	2.07 V	53	57.4	-16.7
3	*5260.00	99.8 PK			2.07 V	53	63.6	36.2
4	*5260.00	92.3 AV			2.07 V	53	56.1	36.2
5	#10520.00	55.1 PK	68.2	-13.1	1.80 V	210	59.0	-3.9

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 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	98.8 PK			2.86 H	148	62.7	36.1
2	*5300.00	91.7 AV			2.86 H	148	55.6	36.1
3	10600.00	54.7 PK	74.0	-19.3	3.12 H	230	58.5	-3.8
4	10600.00	44.4 AV	54.0	-9.6	3.12 H	230	48.2	-3.8
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	*5300.00	99.4 PK			2.07 V	53	63.3	36.1
2	*5300.00	91.8 AV			2.07 V	53	55.7	36.1
3	10600.00	55.0 PK	74.0	-19.0	2.94 V	324	58.8	-3.8
4	10600.00	44.9 AV	54.0	-9.1	2.94 V	324	48.7	-3.8

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.

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	98.6 PK			2.70 H	148	62.5	36.1
2	*5320.00	90.9 AV			2.70 H	148	54.8	36.1
3	5350.00	50.9 PK	74.0	-23.1	2.70 H	148	67.4	-16.5
4	5350.00	41.0 AV	54.0	-13.0	2.70 H	148	57.5	-16.5
5	10640.00	54.7 PK	74.0	-19.3	1.74 H	111	58.3	-3.6
6	10640.00	44.6 AV	54.0	-9.4	1.74 H	111	48.2	-3.6
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	*5320.00	99.4 PK			2.05 V	52	63.3	36.1
2	*5320.00	91.6 AV			2.05 V	52	55.5	36.1
3	5350.00	51.1 PK	74.0	-22.9	2.05 V	52	67.6	-16.5
4	5350.00	41.1 AV	54.0	-12.9	2.05 V	52	57.6	-16.5
5	10640.00	55.0 PK	74.0	-19.0	2.30 V	178	58.6	-3.6
6	10640.00	44.8 AV	54.0	-9.2	2.30 V	178	48.4	-3.6

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 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	51.0 PK	74.0	-23.0	3.06 H	148	67.1	-16.1
2	5460.00	41.3 AV	54.0	-12.7	3.06 H	148	57.4	-16.1
3	#5470.00	53.1 PK	68.2	-15.1	3.06 H	148	69.2	-16.1
4	*5500.00	99.0 PK			3.06 H	148	62.5	36.5
5	*5500.00	91.3 AV			3.06 H	148	54.8	36.5
6	11000.00	54.8 PK	74.0	-19.2	1.97 H	59	58.5	-3.7
7	11000.00	44.5 AV	54.0	-9.5	1.97 H	59	48.2	-3.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	51.6 PK	74.0	-22.4	2.03 V	53	67.7	-16.1
2	5460.00	41.5 AV	54.0	-12.5	2.03 V	53	57.6	-16.1
3	#5470.00	53.3 PK	68.2	-14.9	2.03 V	53	69.4	-16.1
4	*5500.00	100.1 PK			2.03 V	53	63.6	36.5
5	*5500.00	92.8 AV			2.03 V	53	56.3	36.5
6	11000.00	55.0 PK	74.0	-19.0	3.40 V	265	58.7	-3.7
7	11000.00	44.7 AV	54.0	-9.3	3.40 V	265	48.4	-3.7

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	99.6 PK			2.85 H	149	62.9	36.7
2	*5580.00	91.5 AV			2.85 H	149	54.8	36.7
3	11160.00	54.8 PK	74.0	-19.2	2.59 H	323	58.3	-3.5
4	11160.00	44.9 AV	54.0	-9.1	2.59 H	323	48.4	-3.5
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	*5580.00	100.8 PK			2.15 V	52	64.1	36.7
2	*5580.00	93.0 AV			2.15 V	52	56.3	36.7
3	11160.00	55.2 PK	74.0	-18.8	3.23 V	83	58.7	-3.5
4	11160.00	45.2 AV	54.0	-8.8	3.23 V	83	48.7	-3.5

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 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	100.4 PK			3.00 H	148	63.3	37.1
2	*5700.00	92.3 AV			3.00 H	148	55.2	37.1
3	#5725.00	59.8 PK	68.2	-8.4	3.00 H	148	75.5	-15.7
4	11400.00	56.1 PK	74.0	-17.9	1.10 H	228	58.6	-2.5
5	11400.00	46.2 AV	54.0	-7.8	1.10 H	228	48.7	-2.5
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	*5700.00	101.5 PK			2.08 V	49	64.4	37.1
2	*5700.00	94.1 AV			2.08 V	49	57.0	37.1
3	#5725.00	61.0 PK	68.2	-7.2	2.08 V	49	76.7	-15.7
4	11400.00	56.2 PK	74.0	-17.8	2.81 V	103	58.7	-2.5
5	11400.00	46.5 AV	54.0	-7.5	2.81 V	103	49.0	-2.5

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 144 : 5720 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5720.00	100.1 PK			2.85 H	145	63.1	37.0
2	*5720.00	92.3 AV			2.85 H	145	55.3	37.0
3	#5850.00	51.7 PK	68.2	-16.5	2.85 H	145	67.1	-15.4
4	11440.00	55.8 PK	74.0	-18.2	3.57 H	84	58.3	-2.5
5	11440.00	46.7 AV	54.0	-7.3	3.57 H	84	49.2	-2.5

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	*5720.00	101.1 PK			2.19 V	50	64.1	37.0
2	*5720.00	93.5 AV			2.19 V	50	56.5	37.0
3	#5850.00	51.8 PK	68.2	-16.4	2.19 V	50	67.2	-15.4
4	11440.00	56.3 PK	74.0	-17.7	2.14 V	243	58.8	-2.5
5	11440.00	46.9 AV	54.0	-7.1	2.14 V	243	49.4	-2.5

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 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	100.3 PK			2.80 H	144	63.3	37.0
2	*5745.00	92.5 AV			2.80 H	144	55.5	37.0
3	11490.00	55.9 PK	74.0	-18.1	3.47 H	68	58.4	-2.5
4	11490.00	46.3 AV	54.0	-7.7	3.47 H	68	48.8	-2.5
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	*5745.00	101.3 PK			2.06 V	50	64.3	37.0
2	*5745.00	93.6 AV			2.06 V	50	56.6	37.0
3	11490.00	56.3 PK	74.0	-17.7	3.25 V	310	58.8	-2.5
4	11490.00	46.7 AV	54.0	-7.3	3.25 V	310	49.2	-2.5

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 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	99.5 PK			2.80 H	143	62.5	37.0
2	*5785.00	92.0 AV			2.80 H	143	55.0	37.0
3	11570.00	55.8 PK	74.0	-18.2	1.49 H	97	58.6	-2.8
4	11570.00	45.3 AV	54.0	-8.7	1.49 H	97	48.1	-2.8
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	*5785.00	100.5 PK			2.11 V	49	63.5	37.0
2	*5785.00	92.8 AV			2.11 V	49	55.8	37.0
3	11570.00	55.9 PK	74.0	-18.1	3.02 V	272	58.7	-2.8
4	11570.00	45.6 AV	54.0	-8.4	3.02 V	272	48.4	-2.8

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.

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	99.5 PK			2.82 H	145	62.3	37.2
2	*5825.00	91.4 AV			2.82 H	145	54.2	37.2
3	11650.00	55.6 PK	74.0	-18.4	2.83 H	141	58.8	-3.2
4	11650.00	45.3 AV	54.0	-8.7	2.83 H	141	48.5	-3.2
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	*5825.00	100.6 PK			2.02 V	52	63.4	37.2
2	*5825.00	93.0 AV			2.02 V	52	55.8	37.2
3	11650.00	55.9 PK	74.0	-18.1	1.80 V	173	59.1	-3.2
4	11650.00	45.7 AV	54.0	-8.3	1.80 V	173	48.9	-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.
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	60.1 PK	74.0	-13.9	2.78 H	149	76.8	-16.7
2	5150.00	48.1 AV	54.0	-5.9	2.78 H	149	64.8	-16.7
3	*5190.00	98.5 PK			2.78 H	149	62.2	36.3
4	*5190.00	90.4 AV			2.78 H	149	54.1	36.3
5	#10380.00	54.4 PK	68.2	-13.8	2.74 H	239	58.5	-4.1

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.4 PK	74.0	-14.6	2.20 V	153	76.1	-16.7
2	5150.00	49.6 AV	54.0	-4.4	2.20 V	153	66.3	-16.7
3	*5190.00	99.8 PK			2.20 V	153	63.5	36.3
4	*5190.00	91.9 AV			2.20 V	153	55.6	36.3
5	#10380.00	54.7 PK	68.2	-13.5	3.17 V	258	58.8	-4.1

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	98.8 PK			2.86 H	147	62.5	36.3
2	*5230.00	90.7 AV			2.86 H	147	54.4	36.3
3	5350.00	51.7 PK	74.0	-22.3	2.86 H	147	68.2	-16.5
4	5350.00	41.2 AV	54.0	-12.8	2.86 H	147	57.7	-16.5
5	#10460.00	54.4 PK	68.2	-13.8	2.40 H	187	58.3	-3.9
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	*5230.00	99.7 PK			2.29 V	152	63.4	36.3
2	*5230.00	91.5 AV			2.29 V	152	55.2	36.3
3	5350.00	51.8 PK	74.0	-22.2	2.29 V	152	68.3	-16.5
4	5350.00	41.3 AV	54.0	-12.7	2.29 V	152	57.8	-16.5
5	#10460.00	54.8 PK	68.2	-13.4	2.18 V	139	58.7	-3.9

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	52.0 PK	74.0	-22.0	3.09 H	149	68.7	-16.7
2	5150.00	41.4 AV	54.0	-12.6	3.09 H	149	58.1	-16.7
3	*5270.00	98.9 PK			3.09 H	149	62.7	36.2
4	*5270.00	91.1 AV			3.09 H	149	54.9	36.2
5	#10540.00	54.5 PK	68.2	-13.7	2.97 H	227	58.4	-3.9

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	5150.00	52.1 PK	74.0	-21.9	2.24 V	153	68.8	-16.7
2	5150.00	41.5 AV	54.0	-12.5	2.24 V	153	58.2	-16.7
3	*5270.00	99.7 PK			2.24 V	153	63.5	36.2
4	*5270.00	91.7 AV			2.24 V	153	55.5	36.2
5	#10540.00	54.7 PK	68.2	-13.5	3.36 V	233	58.6	-3.9

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 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	98.5 PK			2.96 H	144	62.4	36.1
2	*5310.00	91.0 AV			2.96 H	144	54.9	36.1
3	5350.00	58.2 PK	74.0	-15.8	2.96 H	144	74.7	-16.5
4	5350.00	47.8 AV	54.0	-6.2	2.96 H	144	64.3	-16.5
5	10620.00	54.9 PK	74.0	-19.1	2.55 H	126	58.6	-3.7
6	10620.00	44.5 AV	54.0	-9.5	2.55 H	126	48.2	-3.7
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	99.2 PK			2.20 V	53	63.1	36.1
2	*5310.00	90.9 AV			2.20 V	53	54.8	36.1
3	5350.00	60.0 PK	74.0	-14.0	2.20 V	53	76.5	-16.5
4	5350.00	48.6 AV	54.0	-5.4	2.20 V	53	65.1	-16.5
5	10620.00	55.2 PK	74.0	-18.8	1.59 V	66	58.9	-3.7
6	10620.00	44.8 AV	54.0	-9.2	1.59 V	66	48.5	-3.7

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	55.6 PK	74.0	-18.4	2.87 H	146	71.7	-16.1
2	5460.00	46.2 AV	54.0	-7.8	2.87 H	146	62.3	-16.1
3	#5470.00	59.7 PK	68.2	-8.5	2.87 H	146	75.8	-16.1
4	*5510.00	99.2 PK			2.87 H	146	62.7	36.5
5	*5510.00	91.6 AV			2.87 H	146	55.1	36.5
6	11020.00	54.9 PK	74.0	-19.1	3.50 H	352	58.6	-3.7
7	11020.00	44.7 AV	54.0	-9.3	3.50 H	352	48.4	-3.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.8 PK	74.0	-17.2	2.21 V	50	72.9	-16.1
2	5460.00	46.6 AV	54.0	-7.4	2.21 V	50	62.7	-16.1
3	#5470.00	61.3 PK	68.2	-6.9	2.21 V	50	77.4	-16.1
4	*5510.00	99.9 PK			2.21 V	50	63.4	36.5
5	*5510.00	92.1 AV			2.21 V	50	55.6	36.5
6	11020.00	55.1 PK	74.0	-18.9	2.98 V	296	58.8	-3.7
7	11020.00	45.3 AV	54.0	-8.7	2.98 V	296	49.0	-3.7

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 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	99.2 PK			2.85 H	142	62.5	36.7
2	*5550.00	91.0 AV			2.85 H	142	54.3	36.7
3	11100.00	54.8 PK	74.0	-19.2	2.64 H	282	58.3	-3.5
4	11100.00	44.7 AV	54.0	-9.3	2.64 H	282	48.2	-3.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	100.0 PK			2.07 V	51	63.3	36.7
2	*5550.00	92.0 AV			2.07 V	51	55.3	36.7
3	11100.00	55.3 PK	74.0	-18.7	3.58 V	116	58.8	-3.5
4	11100.00	45.1 AV	54.0	-8.9	3.58 V	116	48.6	-3.5

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	99.8 PK			2.97 H	144	62.8	37.0
2	*5670.00	91.9 AV			2.97 H	144	54.9	37.0
3	#5725.00	56.4 PK	68.2	-11.8	2.97 H	144	72.1	-15.7
4	11340.00	55.6 PK	74.0	-18.4	1.91 H	83	58.5	-2.9
5	11340.00	45.4 AV	54.0	-8.6	1.91 H	83	48.3	-2.9
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	*5670.00	100.5 PK			2.21 V	50	63.5	37.0
2	*5670.00	92.5 AV			2.21 V	50	55.5	37.0
3	#5725.00	56.5 PK	68.2	-11.7	2.21 V	50	72.2	-15.7
4	11340.00	55.7 PK	74.0	-18.3	2.66 V	129	58.6	-2.9
5	11340.00	45.8 AV	54.0	-8.2	2.66 V	129	48.7	-2.9

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5710.00	99.4 PK			2.86 H	141	62.4	37.0
2	*5710.00	91.2 AV			2.86 H	141	54.2	37.0
3	#5850.00	53.2 PK	68.2	-15.0	2.86 H	141	68.6	-15.4
4	11420.00	55.8 PK	74.0	-18.2	3.87 H	30	58.3	-2.5
5	11420.00	45.7 AV	54.0	-8.3	3.87 H	30	48.2	-2.5

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	*5710.00	100.2 PK			2.17 V	50	63.2	37.0
2	*5710.00	91.5 AV			2.17 V	50	54.5	37.0
3	#5850.00	53.4 PK	68.2	-14.8	2.17 V	50	68.8	-15.4
4	11420.00	56.0 PK	74.0	-18.0	2.85 V	182	58.5	-2.5
5	11420.00	45.9 AV	54.0	-8.1	2.85 V	182	48.4	-2.5

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 (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	98.6 PK			2.94 H	142	61.6	37.0
2	*5755.00	90.5 AV			2.94 H	142	53.5	37.0
3	11510.00	56.0 PK	74.0	-18.0	2.21 H	290	58.7	-2.7
4	11510.00	45.6 AV	54.0	-8.4	2.21 H	290	48.3	-2.7
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	*5755.00	99.5 PK			2.15 V	49	62.5	37.0
2	*5755.00	90.9 AV			2.15 V	49	53.9	37.0
3	11510.00	56.2 PK	74.0	-17.8	1.36 V	326	58.9	-2.7
4	11510.00	45.7 AV	54.0	-8.3	1.36 V	326	48.4	-2.7

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 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	98.5 PK			2.86 H	139	61.5	37.0
2	*5795.00	90.2 AV			2.86 H	139	53.2	37.0
3	11590.00	55.2 PK	74.0	-18.8	1.60 H	12	58.2	-3.0
4	11590.00	45.4 AV	54.0	-8.6	1.60 H	12	48.4	-3.0
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	*5795.00	99.3 PK			2.10 V	50	62.3	37.0
2	*5795.00	90.4 AV			2.10 V	50	53.4	37.0
3	11590.00	55.6 PK	74.0	-18.4	3.22 V	127	58.6	-3.0
4	11590.00	45.5 AV	54.0	-8.5	3.22 V	127	48.5	-3.0

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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	55.7 PK	74.0	-18.3	3.03 H	149	72.4	-16.7
2	5150.00	46.5 AV	54.0	-7.5	3.03 H	149	63.2	-16.7
3	*5210.00	93.5 PK			3.03 H	149	57.2	36.3
4	*5210.00	85.6 AV			3.03 H	149	49.3	36.3
5	#10420.00	54.2 PK	68.2	-14.0	3.98 H	332	58.2	-4.0

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	57.8 PK	74.0	-16.2	2.36 V	149	74.5	-16.7
2	5150.00	47.7 AV	54.0	-6.3	2.36 V	149	64.4	-16.7
3	*5210.00	94.2 PK			2.36 V	149	57.9	36.3
4	*5210.00	86.0 AV			2.36 V	149	49.7	36.3
5	#10420.00	54.4 PK	68.2	-13.8	1.51 V	280	58.4	-4.0

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5290.00	93.2 PK			2.86 H	146	57.1	36.1
2	*5290.00	85.7 AV			2.86 H	146	49.6	36.1
3	5350.00	54.9 PK	74.0	-19.1	2.86 H	146	71.4	-16.5
4	5350.00	44.9 AV	54.0	-9.1	2.86 H	146	61.4	-16.5
5	#10580.00	54.5 PK	68.2	-13.7	1.17 H	92	58.3	-3.8
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	*5290.00	93.9 PK			2.34 V	152	57.8	36.1
2	*5290.00	85.8 AV			2.34 V	152	49.7	36.1
3	5350.00	55.1 PK	74.0	-18.9	2.34 V	152	71.6	-16.5
4	5350.00	45.0 AV	54.0	-9.0	2.34 V	152	61.5	-16.5
5	#10580.00	54.8 PK	68.2	-13.4	3.32 V	219	58.6	-3.8

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	57.4 PK	74.0	-16.6	2.86 H	146	73.5	-16.1
2	5460.00	46.4 AV	54.0	-7.6	2.86 H	146	62.5	-16.1
3	#5470.00	57.7 PK	68.2	-10.5	2.86 H	146	73.8	-16.1
4	*5530.00	93.6 PK			2.86 H	146	57.0	36.6
5	*5530.00	86.0 AV			2.86 H	146	49.4	36.6
6	11060.00	55.0 PK	74.0	-19.0	3.30 H	173	58.6	-3.6
7	11060.00	44.7 AV	54.0	-9.3	3.30 H	173	48.3	-3.6

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	5460.00	57.9 PK	74.0	-16.1	2.17 V	51	74.0	-16.1
2	5460.00	47.5 AV	54.0	-6.5	2.17 V	51	63.6	-16.1
3	#5470.00	58.8 PK	68.2	-9.4	2.17 V	51	74.9	-16.1
4	*5530.00	94.5 PK			2.17 V	51	57.9	36.6
5	*5530.00	86.5 AV			2.17 V	51	49.9	36.6
6	11060.00	55.1 PK	74.0	-18.9	3.55 V	297	58.7	-3.6
7	11060.00	45.2 AV	54.0	-8.8	3.55 V	297	48.8	-3.6

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 (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	*5610.00	93.8 PK			2.79 H	143	57.1	36.7
2	*5610.00	86.4 AV			2.79 H	143	49.7	36.7
3	#5725.00	53.6 PK	68.2	-14.6	2.79 H	143	69.3	-15.7
4	11220.00	54.9 PK	74.0	-19.1	1.33 H	227	58.3	-3.4
5	11220.00	45.1 AV	54.0	-8.9	1.33 H	227	48.5	-3.4
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	*5610.00	94.6 PK			2.10 V	50	57.9	36.7
2	*5610.00	86.7 AV			2.10 V	50	50.0	36.7
3	#5725.00	53.9 PK	68.2	-14.3	2.10 V	50	69.6	-15.7
4	11220.00	55.2 PK	74.0	-18.8	2.79 V	216	58.6	-3.4
5	11220.00	45.3 AV	54.0	-8.7	2.79 V	216	48.7	-3.4

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5690.00	93.9 PK			2.79 H	143	56.9	37.0
2	*5690.00	85.5 AV			2.79 H	143	48.5	37.0
3	#5850.00	53.2 PK	68.2	-15.0	2.79 H	143	68.6	-15.4
4	11380.00	55.7 PK	74.0	-18.3	3.94 H	304	58.4	-2.7
5	11380.00	45.6 AV	54.0	-8.4	3.94 H	304	48.3	-2.7
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	*5690.00	94.5 PK			2.15 V	50	57.5	37.0
2	*5690.00	85.9 AV			2.15 V	50	48.9	37.0
3	#5850.00	53.3 PK	68.2	-14.9	2.15 V	50	68.7	-15.4
4	11380.00	55.9 PK	74.0	-18.1	1.08 V	356	58.6	-2.7
5	11380.00	46.2 AV	54.0	-7.8	1.08 V	356	48.9	-2.7

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 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	*5775.00	93.8 PK			2.81 H	140	56.8	37.0
2	*5775.00	85.6 AV			2.81 H	140	48.6	37.0
3	11550.00	55.3 PK	74.0	-18.7	3.88 H	70	58.1	-2.8
4	11550.00	45.4 AV	54.0	-8.6	3.88 H	70	48.2	-2.8
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	*5775.00	94.4 PK			2.23 V	49	57.4	37.0
2	*5775.00	85.8 AV			2.23 V	49	48.8	37.0
3	11550.00	55.6 PK	74.0	-18.4	2.33 V	152	58.4	-2.8
4	11550.00	45.5 AV	54.0	-8.5	2.33 V	152	48.3	-2.8

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.

Below 1 GHz Worst-Case Data:

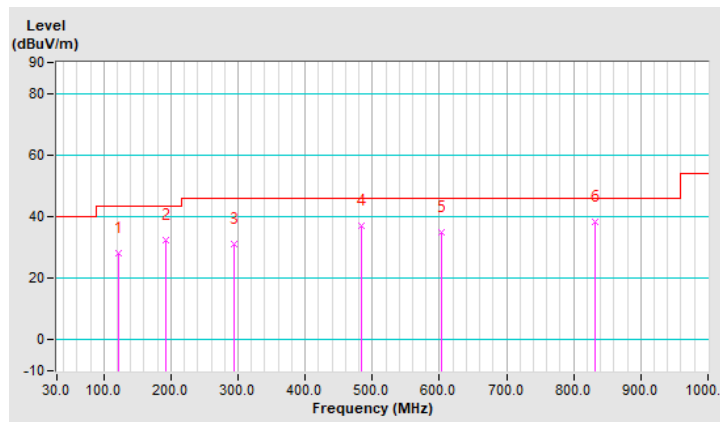
Mode A

RF Mode	TX 802.11a	Channel	CH 52 : 5260 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	121.19	28.3 QP	43.5	-15.2	1.63 H	328	42.5	-14.2
2	192.98	32.2 QP	43.5	-11.3	2.24 H	304	48.1	-15.9
3	293.87	31.1 QP	46.0	-14.9	1.86 H	2	43.5	-12.4
4	483.04	37.0 QP	46.0	-9.0	1.69 H	192	43.6	-6.6
5	603.33	34.8 QP	46.0	-11.2	2.32 H	186	38.2	-3.4
6	831.30	38.4 QP	46.0	-7.6	1.07 H	0	37.4	1.0

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

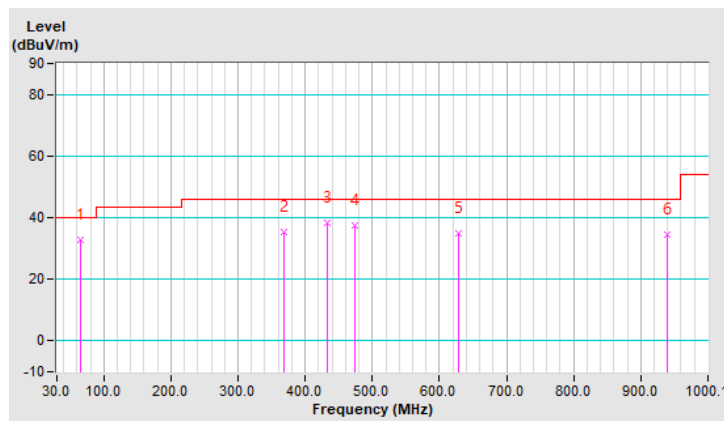


RF Mode	TX 802.11a	Channel	CH 52 : 5260 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	65.89	32.9 QP	40.0	-7.1	1.26 V	18	47.2	-14.3
2	368.56	35.3 QP	46.0	-10.7	2.04 V	256	45.2	-9.9
3	432.59	38.2 QP	46.0	-7.8	1.86 V	187	46.1	-7.9
4	474.31	37.6 QP	46.0	-8.4	1.63 V	170	44.5	-6.9
5	628.55	34.8 QP	46.0	-11.2	1.42 V	227	37.6	-2.8
6	938.98	34.7 QP	46.0	-11.3	1.08 V	73	32.3	2.4

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 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.



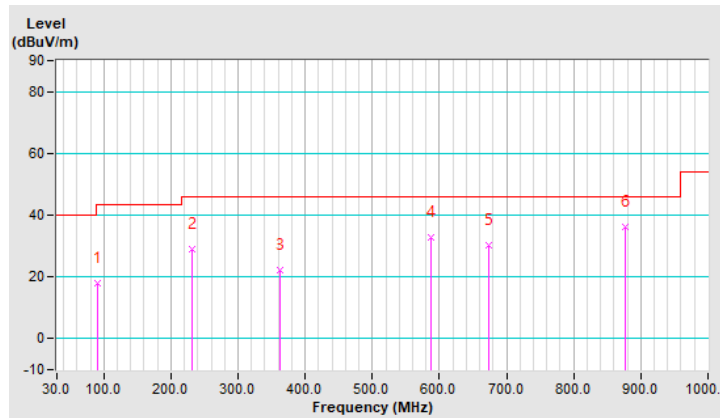
Mode B

RF Mode	TX 802.11a	Channel	CH 52 : 5260 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	91.12	17.9 QP	43.5	-25.6	1.69 H	283	36.1	-18.2
2	231.78	29.1 QP	46.0	-16.9	3.23 H	285	44.6	-15.5
3	361.77	22.0 QP	46.0	-24.0	1.78 H	86	32.1	-10.1
4	586.84	32.8 QP	46.0	-13.2	2.25 H	20	36.7	-3.9
5	674.15	30.2 QP	46.0	-15.8	1.04 H	2	32.3	-2.1
6	875.93	36.2 QP	46.0	-9.8	2.96 H	333	34.7	1.5

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

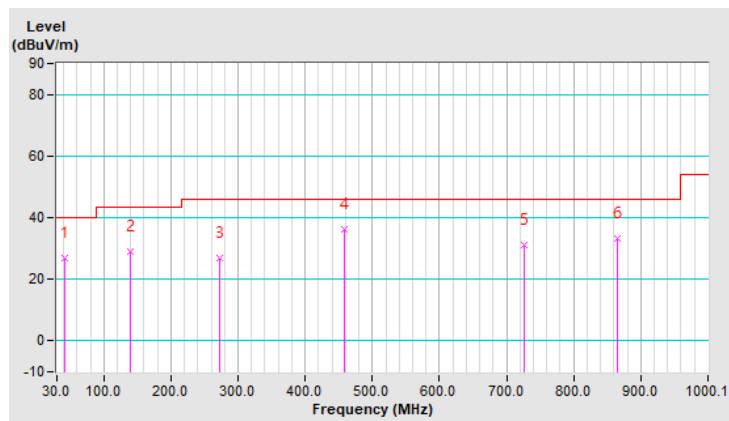


RF Mode	TX 802.11a	Channel	CH 52 : 5260 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	41.64	26.7 QP	40.0	-13.3	1.23 V	195	39.8	-13.1
2	138.65	28.9 QP	43.5	-14.6	1.45 V	39	41.5	-12.6
3	272.52	26.8 QP	46.0	-19.2	2.06 V	265	40.2	-13.4
4	457.81	36.2 QP	46.0	-9.8	1.98 V	208	43.3	-7.1
5	726.53	31.1 QP	46.0	-14.9	2.25 V	358	32.4	-1.3
6	864.29	33.4 QP	46.0	-12.6	1.04 V	295	32.2	1.2

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.



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	ESR3	102783	Dec. 20, 2021	Dec. 19, 2022
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 04, 2021	Sep. 03, 2022
LISN/AMN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Feb. 17, 2022	Feb. 16, 2023
LISN/AMN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Sep. 17, 2021	Sep. 16, 2022
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

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

4.2.3 Test Procedures

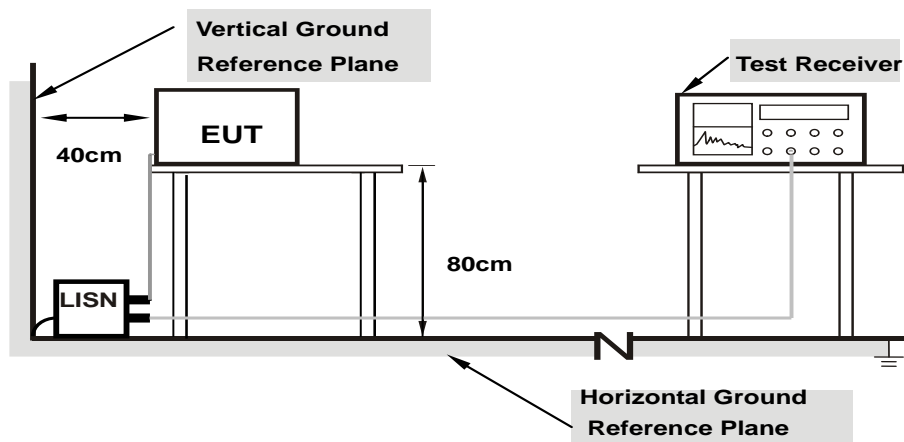
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

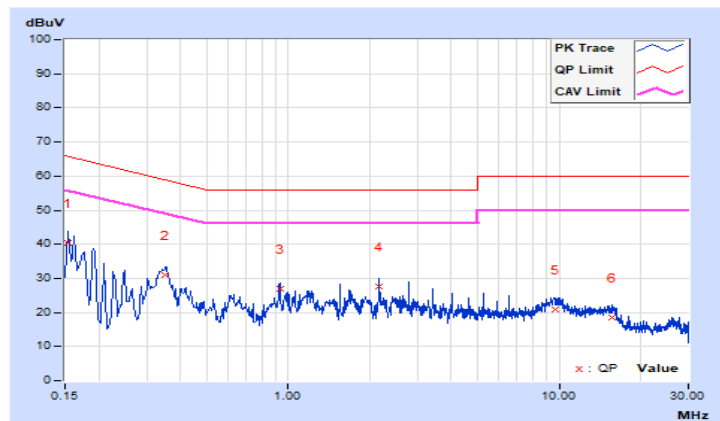
Mode A

Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested by	Thomas Cheng		

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	10.13	30.28	18.49	40.41	28.62	65.78	55.78	-25.37	-27.16
2	0.35313	10.16	20.71	14.73	30.87	24.89	58.89	48.89	-28.02	-24.00
3	0.93000	10.19	16.88	13.70	27.07	23.89	56.00	46.00	-28.93	-22.11
4	2.17000	10.22	17.51	14.56	27.73	24.78	56.00	46.00	-28.27	-21.22
5	9.62200	10.29	10.63	3.19	20.92	13.48	60.00	50.00	-39.08	-36.52
6	15.66600	10.34	8.15	3.04	18.49	13.38	60.00	50.00	-41.51	-36.62

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

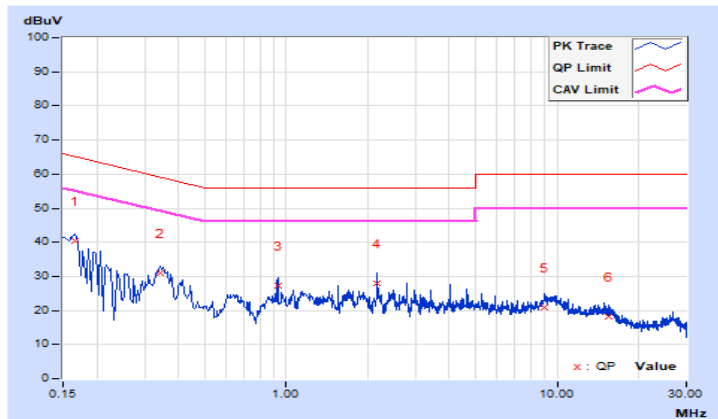


Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested by	Thomas Cheng		

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	10.14	30.18	17.95	40.32	28.09	65.19	55.19	-24.87	-27.10
2	0.34200	10.16	20.74	14.25	30.90	24.41	59.15	49.15	-28.25	-24.74
3	0.93000	10.20	16.93	13.71	27.13	23.91	56.00	46.00	-28.87	-22.09
4	2.17000	10.23	17.78	14.69	28.01	24.92	56.00	46.00	-27.99	-21.08
5	8.99400	10.34	10.51	3.97	20.85	14.31	60.00	50.00	-39.15	-35.69
6	15.52600	10.45	7.80	2.92	18.25	13.37	60.00	50.00	-41.75	-36.63

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



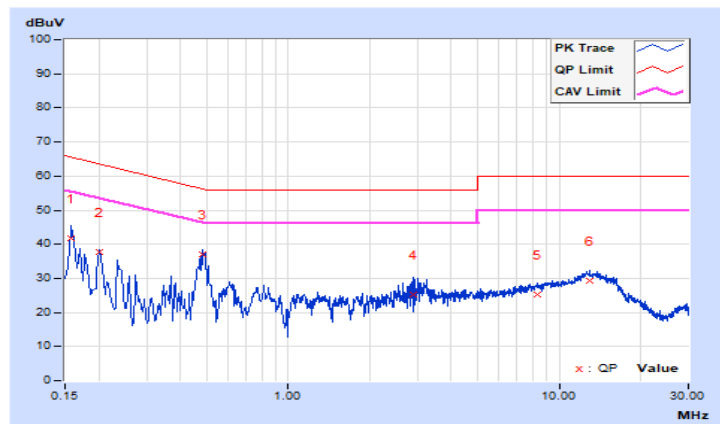
Mode B

Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested by	Thomas Cheng		

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	0.15800	10.13	31.59	14.78	41.72	24.91	65.57	55.57	-23.85	-30.66
2	0.20200	10.14	27.58	11.75	37.72	21.89	63.53	53.53	-25.81	-31.64
3	0.48200	10.16	26.98	19.78	37.14	29.94	56.30	46.30	-19.16	-16.36
4	2.88200	10.23	14.98	4.58	25.21	14.81	56.00	46.00	-30.79	-31.19
5	8.33400	10.28	14.95	7.85	25.23	18.13	60.00	50.00	-34.77	-31.87
6	12.93800	10.31	18.86	12.88	29.17	23.19	60.00	50.00	-30.83	-26.81

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

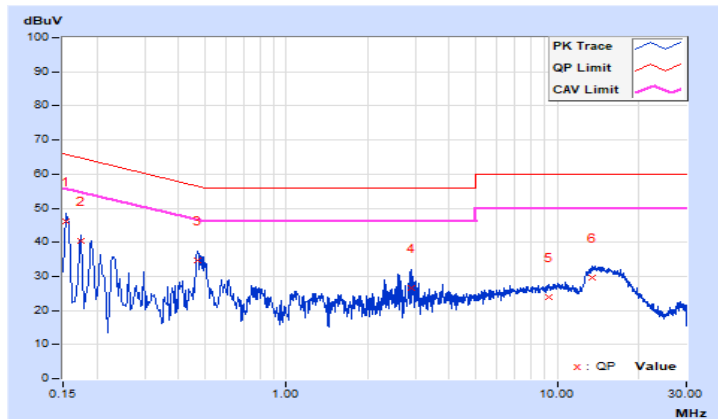


Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested by	Thomas Cheng		

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	0.15400	10.14	35.84	19.77	45.98	29.91	65.78	55.78	-19.80	-25.87
2	0.17400	10.14	30.15	15.54	40.29	25.68	64.77	54.77	-24.48	-29.09
3	0.47000	10.17	24.41	15.77	34.58	25.94	56.51	46.51	-21.93	-20.57
4	2.89400	10.25	16.25	1.52	26.50	11.77	56.00	46.00	-29.50	-34.23
5	9.29400	10.34	13.57	6.53	23.91	16.87	60.00	50.00	-36.09	-33.13
6	13.42600	10.41	19.36	13.23	29.77	23.64	60.00	50.00	-30.23	-26.36

Remarks:

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



4.3 Transmit Power Measurement

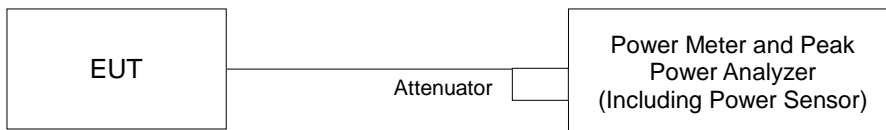
4.3.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p \leq 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)

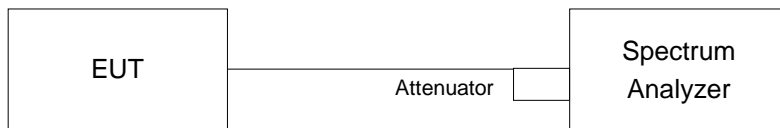
*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

For Power Output



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



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

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

For transmission above 5.725 GHz where the EBW crosses 5.725 GHz

For channel aggregation (channel 138, 142, 144) measurement refer to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II E 2 e) method SA-2A.

For 26dB Bandwidth

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Results

Power Output:

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	18.967	12.78	24	Pass
40	5200	18.836	12.75	24	Pass
48	5240	19.275	12.85	24	Pass
52	5260	19.815	12.97	24	Pass
60	5300	19.543	12.91	24	Pass
64	5320	18.323	12.63	24	Pass
100	5500	19.231	12.84	24	Pass
116	5580	19.454	12.89	24	Pass
140	5700	18.923	12.77	24	Pass
144	5720 (U-NII-2C)	17.185	12.35	22.93	Pass
144	5720 (U-NII-3)	3.063	4.86	30	Pass
149	5745	18.239	12.61	30	Pass
157	5785	18.197	12.60	30	Pass
165	5825	18.113	12.58	30	Pass

Note:

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

1. $11 \text{ dBm} + 10\log (21.33) = 24.29 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (21.47) = 24.32 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.40) = 24.30 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.49) = 24.32 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (21.41) = 24.31 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.41) = 24.31 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.62) = 22.93 \text{ dBm} < 24 \text{ dBm}$.

802.11ac (VHT20)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	18.408	12.65	24	Pass
40	5200	17.865	12.52	24	Pass
48	5240	17.783	12.50	24	Pass
52	5260	19.409	12.88	24	Pass
60	5300	19.77	12.96	24	Pass
64	5320	19.275	12.85	24	Pass
100	5500	18.323	12.63	24	Pass
116	5580	18.113	12.58	24	Pass
140	5700	19.77	12.96	24	Pass
144	5720 (U-NII-2C)	16.295	12.12	22.94	Pass
144	5720 (U-NII-3)	3.312	5.20	30	Pass
149	5745	19.588	12.92	30	Pass
157	5785	19.679	12.94	30	Pass
165	5825	19.454	12.89	30	Pass

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

1. $11 \text{ dBm} + 10\log (21.53) = 24.33 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (21.48) = 24.32 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.60) = 24.34 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.65) = 24.35 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (21.53) = 24.33 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.66) = 24.36 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.65) = 22.94 \text{ dBm} < 24 \text{ dBm}$.

802.11ac (VHT40)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	19.498	12.90	24	Pass
46	5230	19.724	12.95	24	Pass
54	5270	19.634	12.93	24	Pass
62	5310	19.77	12.96	24	Pass
102	5510	19.543	12.91	24	Pass
110	5550	19.588	12.92	24	Pass
134	5670	19.498	12.90	24	Pass
142	5710 (U-NII-2C)	19.23	12.84	24	Pass
142	5710 (U-NII-3)	1.38	1.40	30	Pass
151	5755	19.364	12.87	30	Pass
159	5795	19.187	12.83	30	Pass

Note:

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

- $11 \text{ dBm} + 10\log (45.01) = 27.53 \text{ dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log (44.87) = 27.52 \text{ dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log (40.55) = 27.08 \text{ dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log (40.97) = 27.12 \text{ dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log (40.74) = 27.10 \text{ dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log (35.09) = 26.45 \text{ dBm} > 24 \text{ dBm}.$

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	9.84	9.93	24	Pass
58	5290	9.954	9.98	24	Pass
106	5530	9.795	9.91	24	Pass
122	5610	9.863	9.94	24	Pass
138	5690 (U-NII-2C)	9.092	9.59	24	Pass
138	5690 (U-NII-3)	0.2646	-5.77	30	Pass
155	5775	9.772	9.90	30	Pass

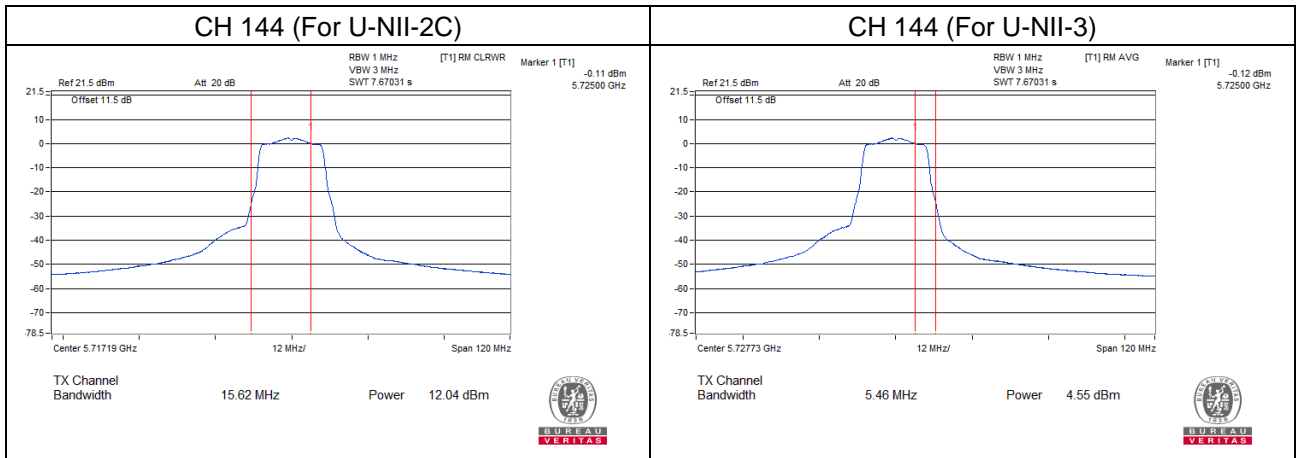
Note:

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

- $11 \text{ dBm} + 10\log (81.50) = 30.11 \text{ dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log (81.88) = 30.13 \text{ dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log (81.70) = 30.12 \text{ dBm} > 24 \text{ dBm}.$
- $11 \text{ dBm} + 10\log (76.17) = 29.82 \text{ dBm} > 24 \text{ dBm}.$

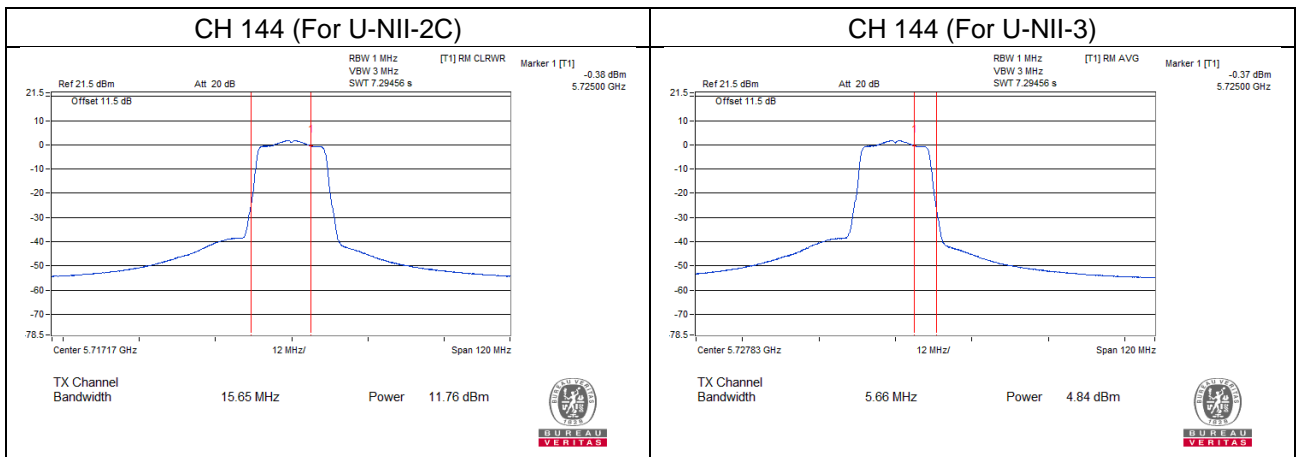
Straddle channel power plots:

802.11a



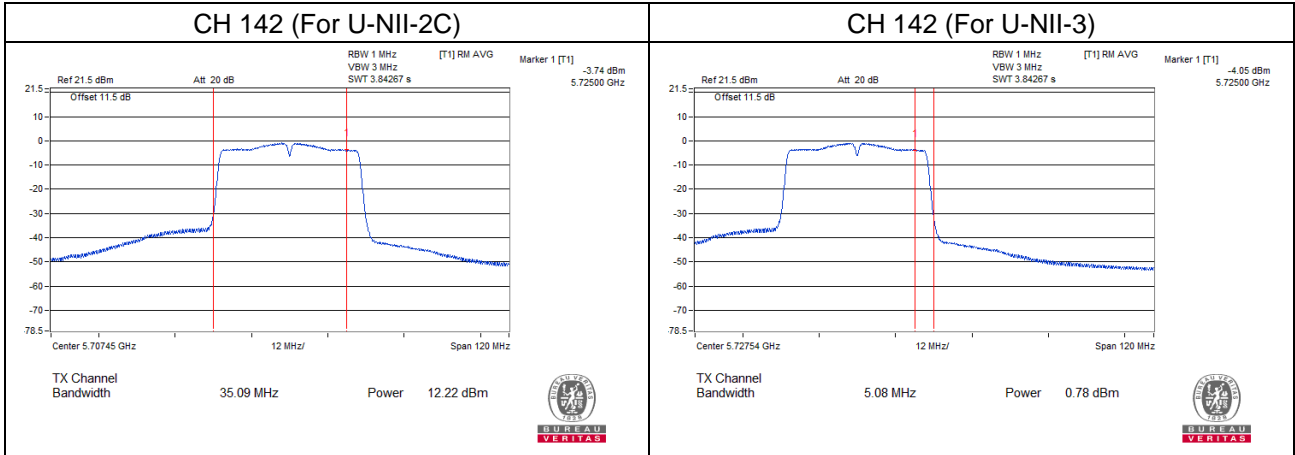
* Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test, the duty factor was included in the total power.

802.11ac (VHT20)



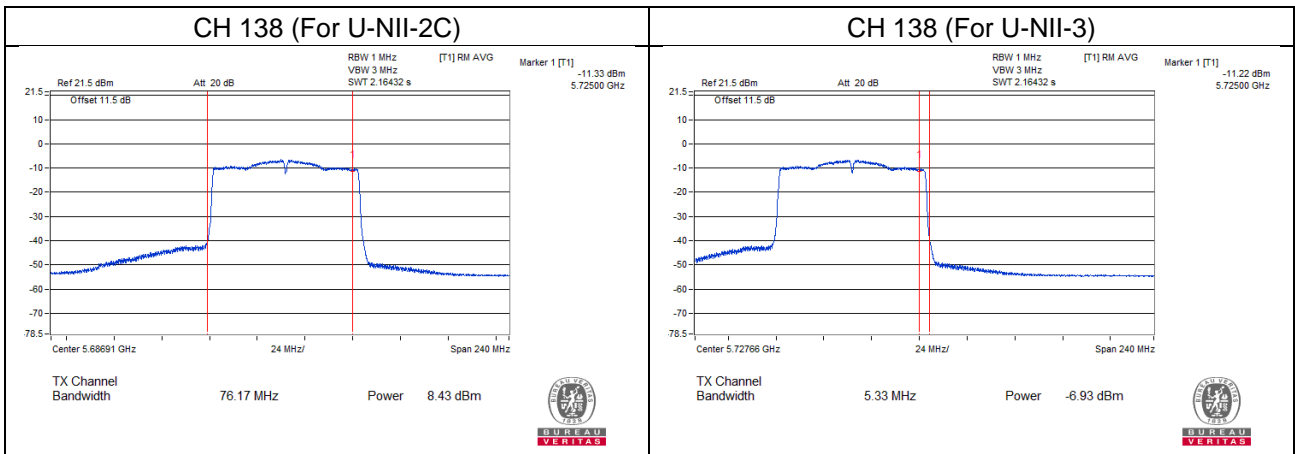
* Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test, the duty factor was included in the total power.

802.11ac (VHT40)



* Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test, the duty factor was included in the total power.

802.11ac (VHT80)



* Test was performed in accordance with measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test, the duty factor was included in the total power.

26 dB Bandwidth:
802.11a

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
52	5260	21.33
60	5300	21.47
64	5320	21.40
100	5500	21.49
116	5580	21.41
140	5700	21.41
144	5720 (U-NII-2C)	15.62

802.11ac (VHT20)

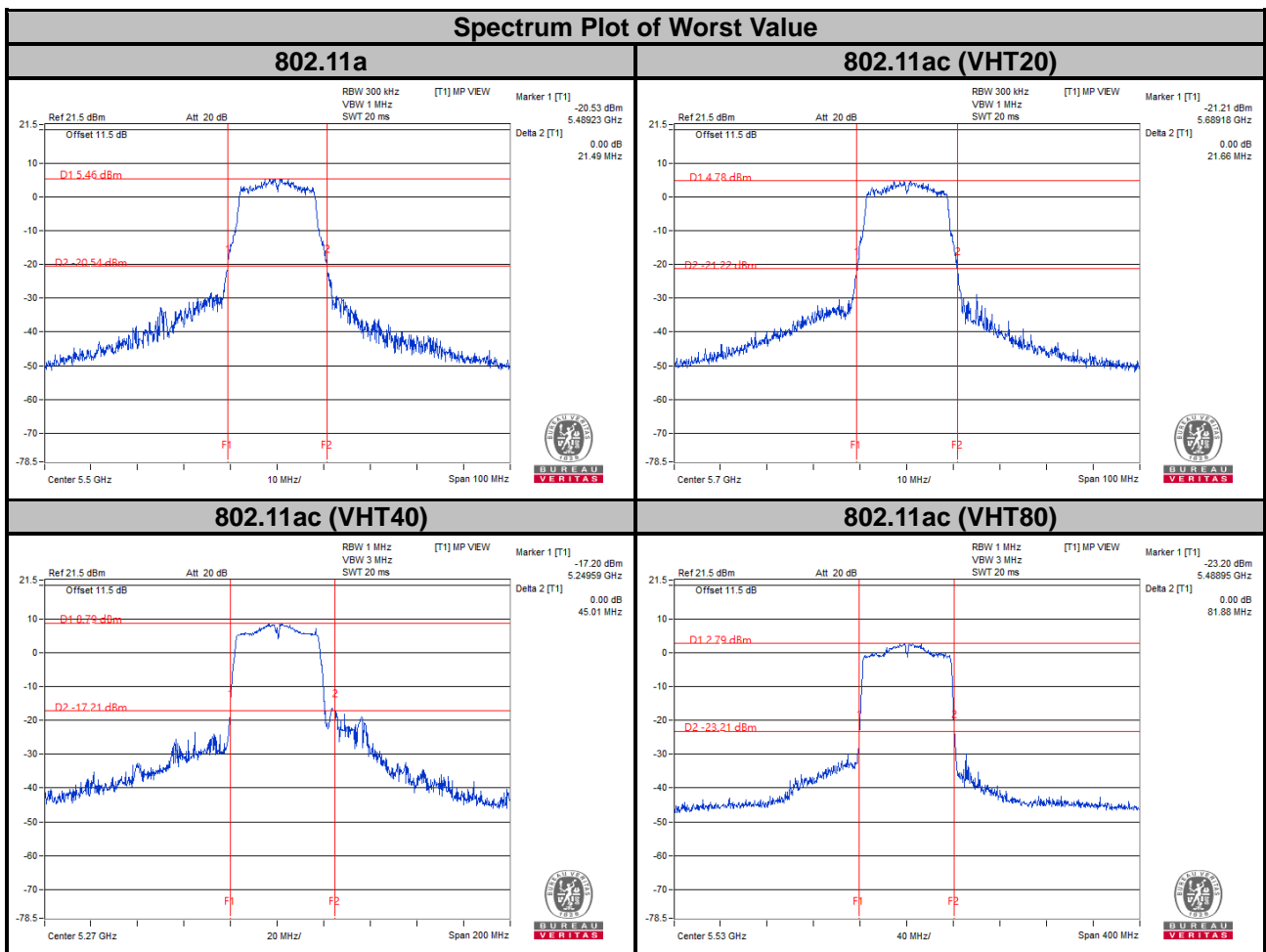
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
52	5260	21.53
60	5300	21.48
64	5320	21.60
100	5500	21.65
116	5580	21.53
140	5700	21.66
144	5720 (U-NII-2C)	15.65

802.11ac (VHT40)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
54	5270	45.01
62	5310	44.87
102	5510	40.55
110	5550	40.97
134	5670	40.74
142	5710 (U-NII-2C)	35.09

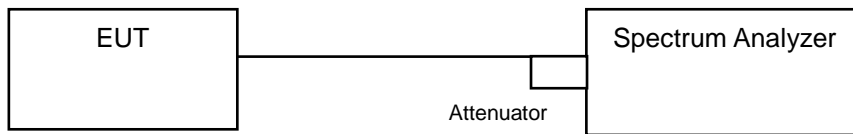
802.11ac (VHT80)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
58	5290	81.50
106	5530	81.88
122	5610	81.70
138	5690 (U-NII-2C)	76.17



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)
36	5180	16.74
40	5200	16.68
48	5240	16.68
52	5260	16.68
60	5300	16.68
64	5320	16.62
100	5500	16.74
116	5580	16.80
140	5700	16.80
144	5720 (U-NII-2C)	13.40
144	5720 (U-NII-3)	3.40
149	5745	16.74
157	5785	16.80
165	5825	16.74

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.82
40	5200	17.76
48	5240	17.82
52	5260	17.82
60	5300	17.82
64	5320	17.82
100	5500	17.82
116	5580	17.76
140	5700	17.88
144	5720 (U-NII-2C)	13.88
144	5720 (U-NII-3)	3.88
149	5745	17.76
157	5785	18.00
165	5825	17.76

802.11ac (VHT40)

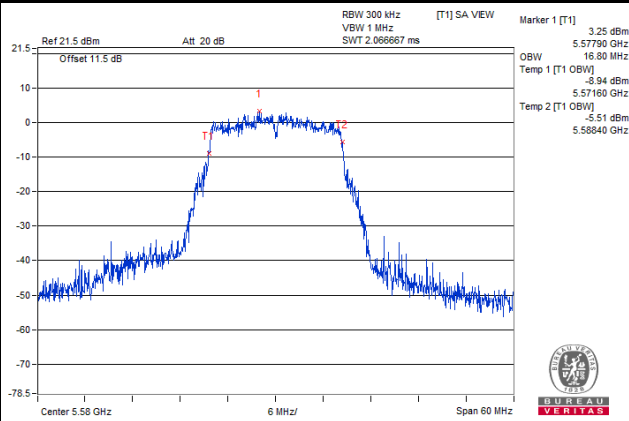
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.36
46	5230	36.36
54	5270	36.36
62	5310	36.36
102	5510	36.42
110	5550	36.36
134	5670	36.48
142	5710 (U-NII-2C)	33.18
142	5710 (U-NII-3)	3.12
151	5755	36.48
159	5795	36.36

802.11ac (VHT80)

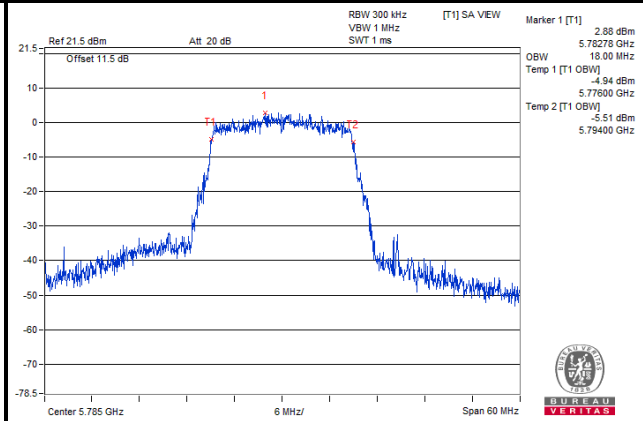
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.36
58	5290	75.60
106	5530	75.36
122	5610	75.48
138	5690 (U-NII-2C)	72.80
138	5690 (U-NII-3)	2.56
155	5775	75.60

Spectrum Plot of Worst Value

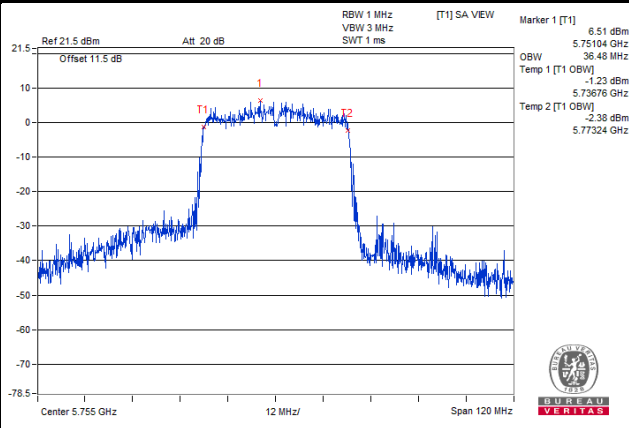
802.11a



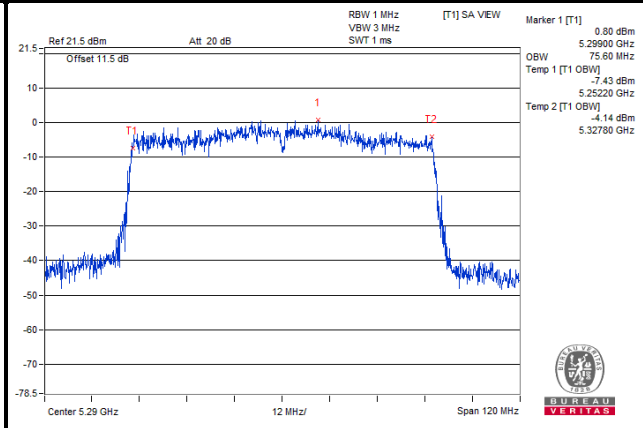
802.11ac (VHT20)



802.11ac (VHT40)



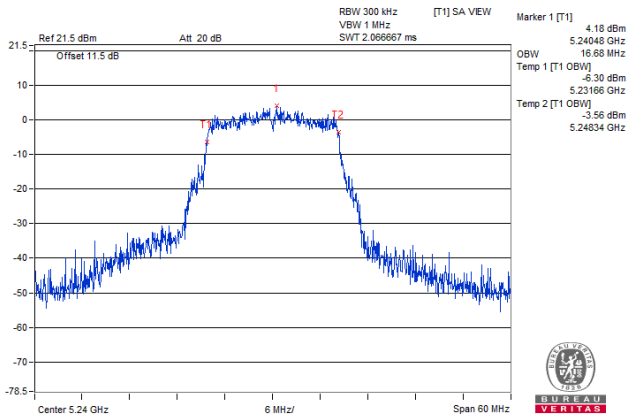
802.11ac (VHT80)



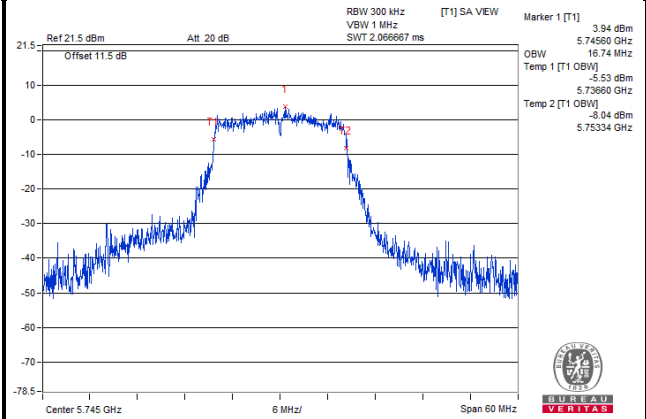
Spectrum Plot for Nearby DFS Band

802.11a

Ch 48 (5240 MHz)

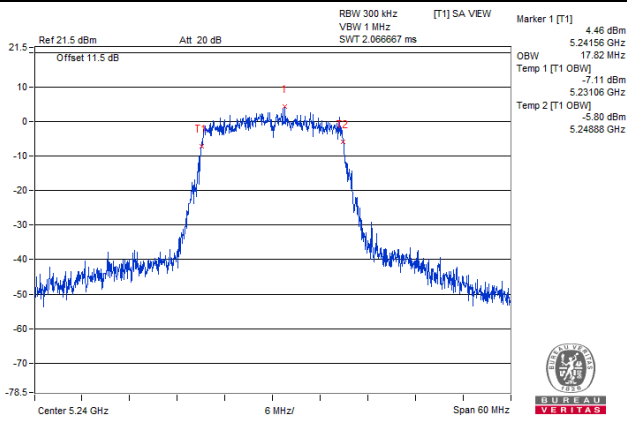


Ch 149 (5745 MHz)

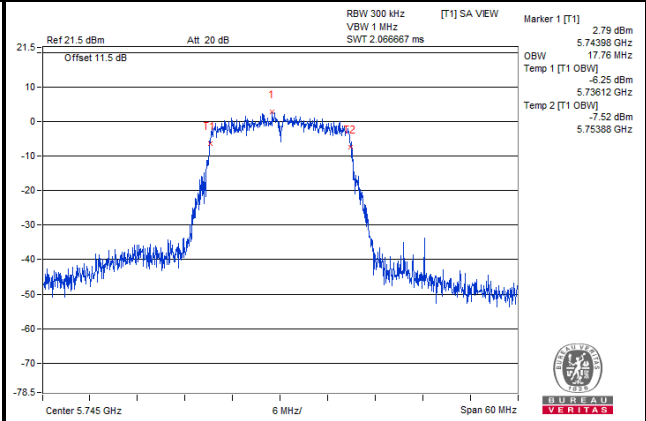


802.11ac (VHT20)

Ch 48 (5240 MHz)

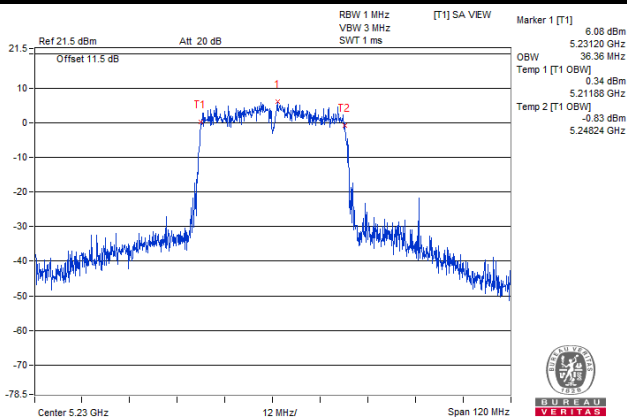


Ch 149 (5745 MHz)

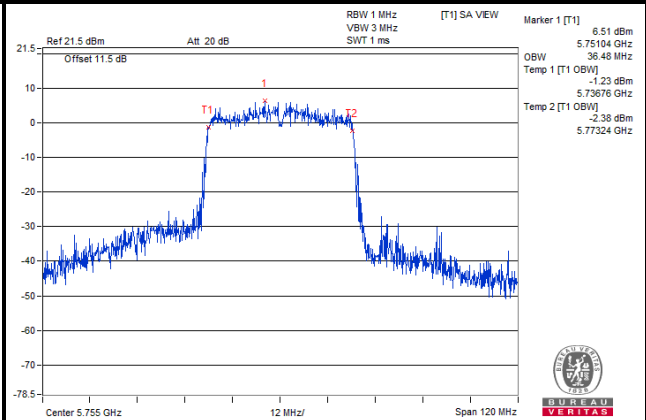


802.11ac (VHT40)

Ch 46 (5230 MHz)

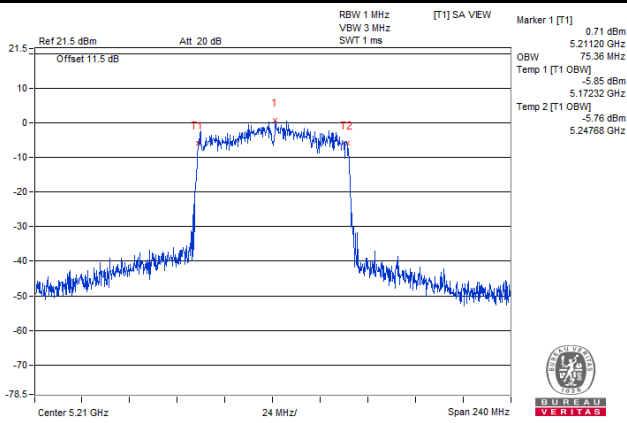


Ch 151 (5755 MHz)

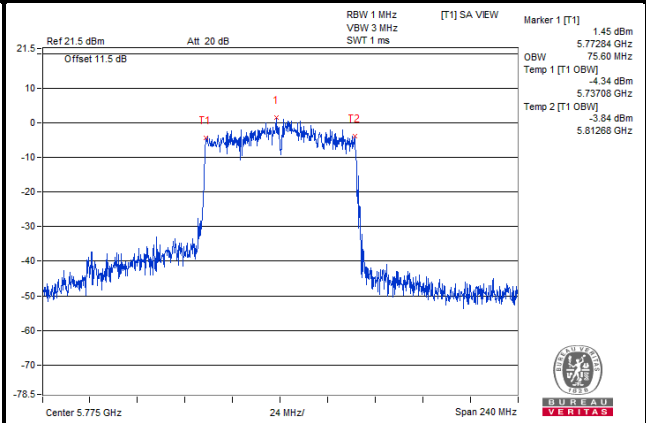


802.11ac (VHT80)

Ch 42 (5210 MHz)



Ch 155 (5775 MHz)

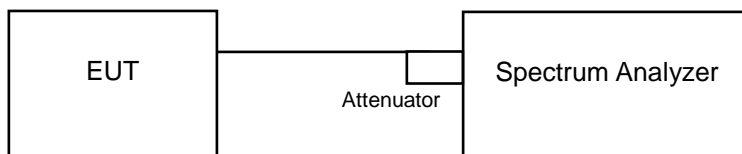


4.5 Peak Power Spectral Density Measurement

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

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW \geq 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 $10 \log(1/\text{duty cycle})$

※ **For U-NII-3:**

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW \geq 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 $BWCF = 10\log(500 \text{ kHz} / 300 \text{ kHz})$.
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 $10 \log (1/\text{duty cycle})$

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 w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
36	5180	1.60	0.31	1.91	11	Pass
40	5200	1.51	0.31	1.82	11	Pass
48	5240	1.72	0.31	2.03	11	Pass
52	5260	1.49	0.31	1.80	11	Pass
60	5300	1.47	0.31	1.78	11	Pass
64	5320	1.35	0.31	1.66	11	Pass
100	5500	1.79	0.31	2.10	11	Pass
116	5580	1.53	0.31	1.84	11	Pass
140	5700	1.34	0.31	1.65	11	Pass
144	5720 (U-NII-2C)	1.18	0.31	1.49	11	Pass

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

802.11ac (VHT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
36	5180	1.11	0.36	1.47	11	Pass
40	5200	0.98	0.36	1.34	11	Pass
48	5240	1.01	0.36	1.37	11	Pass
52	5260	1.22	0.36	1.58	11	Pass
60	5300	0.69	0.36	1.05	11	Pass
64	5320	0.73	0.36	1.09	11	Pass
100	5500	1.23	0.36	1.59	11	Pass
116	5580	1.22	0.36	1.58	11	Pass
140	5700	1.02	0.36	1.38	11	Pass
144	5720 (U-NII-2C)	0.88	0.36	1.24	11	Pass

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

802.11ac (VHT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
38	5190	-2.09	0.62	-1.47	11	Pass
46	5230	-2.11	0.62	-1.49	11	Pass
54	5270	-1.87	0.62	-1.25	11	Pass
62	5310	-1.84	0.62	-1.22	11	Pass
102	5510	-2.16	0.62	-1.54	11	Pass
110	5550	-1.73	0.62	-1.11	11	Pass
134	5670	-2.16	0.62	-1.54	11	Pass
142	5710 (U-NII-2C)	-2.03	0.62	-1.41	11	Pass

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

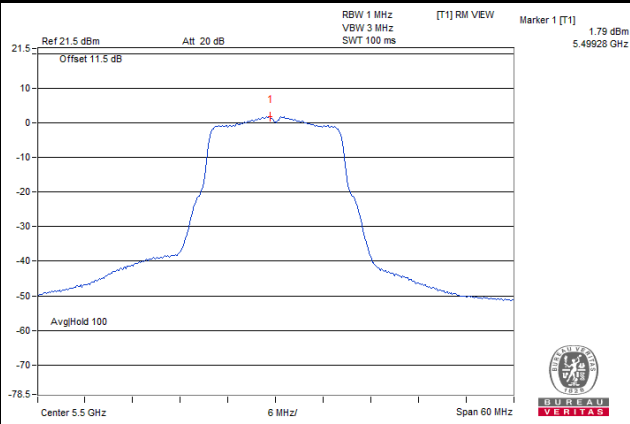
802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
42	5210	-8.09	1.16	-6.93	11	Pass
58	5290	-8.06	1.16	-6.90	11	Pass
106	5530	-7.91	1.16	-6.75	11	Pass
122	5610	-7.83	1.16	-6.67	11	Pass
138	5690 (U-NII-2C)	-8.01	1.16	-6.85	11	Pass

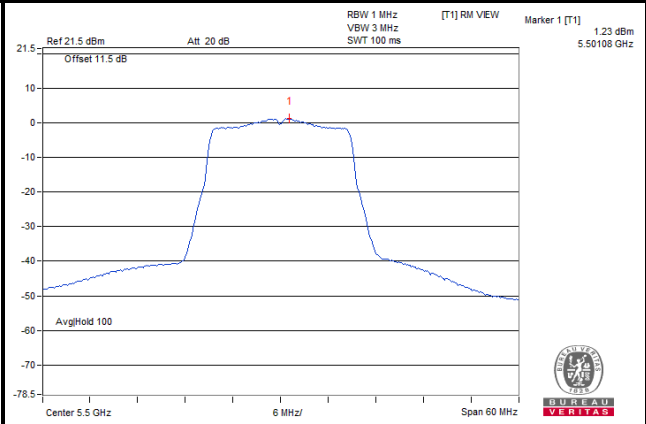
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

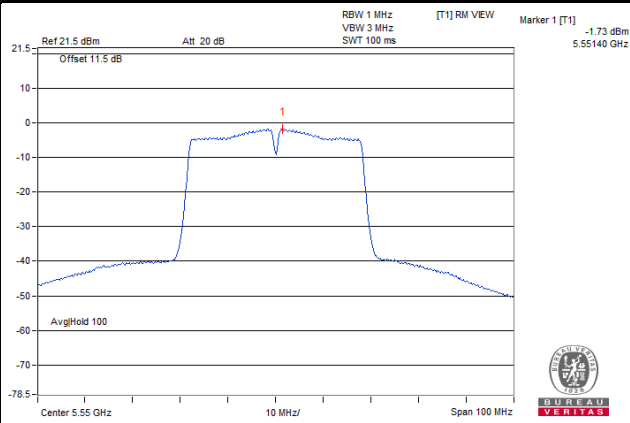
802.11a



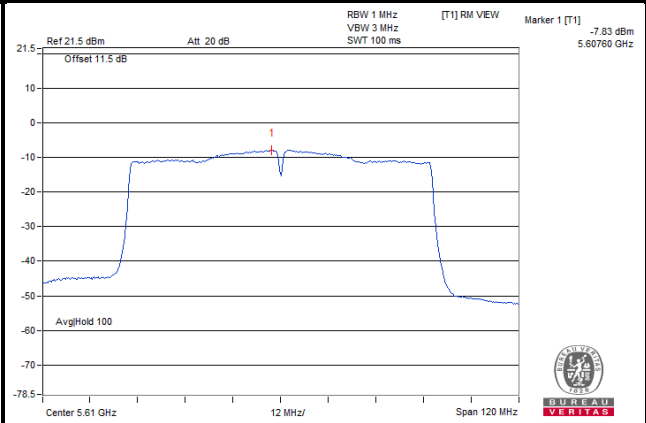
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



For U-NII-3 Band

802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
144	5720 (U-NII-3)	-6.29	-4.07	0.31	-3.76	30	Pass
149	5745	-3.23	-1.01	0.31	-0.7	30	Pass
157	5785	-3.61	-1.39	0.31	-1.08	30	Pass
165	5825	-3.81	-1.59	0.31	-1.28	30	Pass

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

802.11ac (VHT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
144	5720 (U-NII-3)	-6.73	-4.51	0.36	-4.15	30	Pass
149	5745	-3.96	-1.74	0.36	-1.38	30	Pass
157	5785	-4.3	-2.08	0.36	-1.72	30	Pass
165	5825	-3.72	-1.5	0.36	-1.14	30	Pass

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

802.11ac (VHT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
142	5710 (U-NII-3)	-9.99	-7.77	0.62	-7.15	30	Pass
151	5755	-7.51	-5.29	0.62	-4.67	30	Pass
159	5795	-6.72	-4.5	0.62	-3.88	30	Pass

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

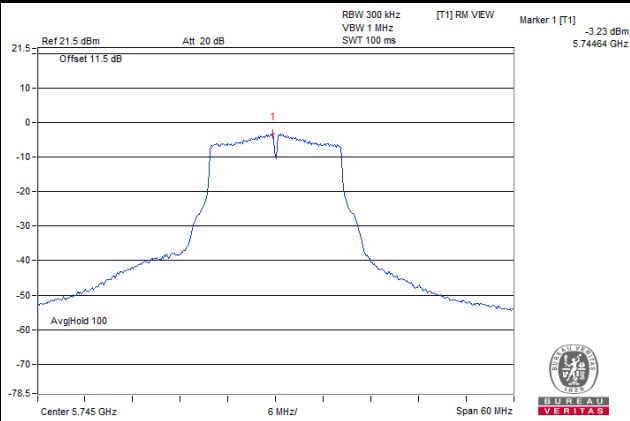
802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
138	5690 (U-NII-3)	-16.54	-14.32	1.16	-13.16	30	Pass
155	5775	-13.51	-11.29	1.16	-10.13	30	Pass

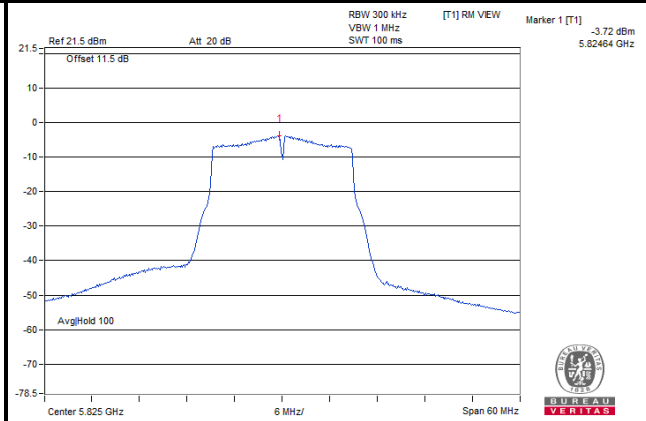
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

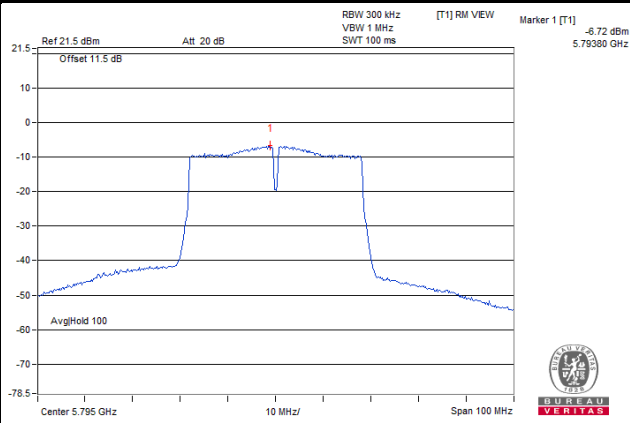
802.11a



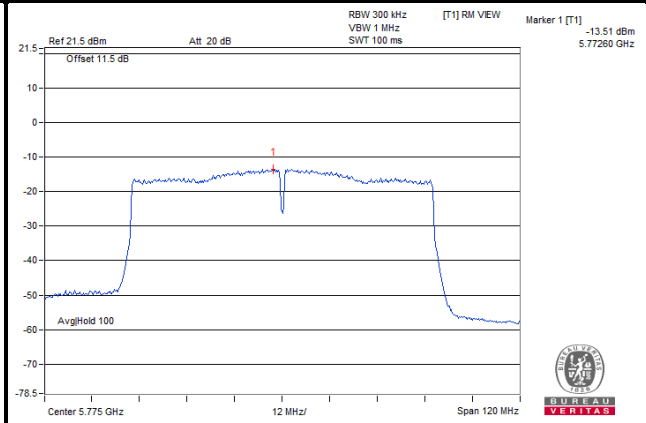
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)

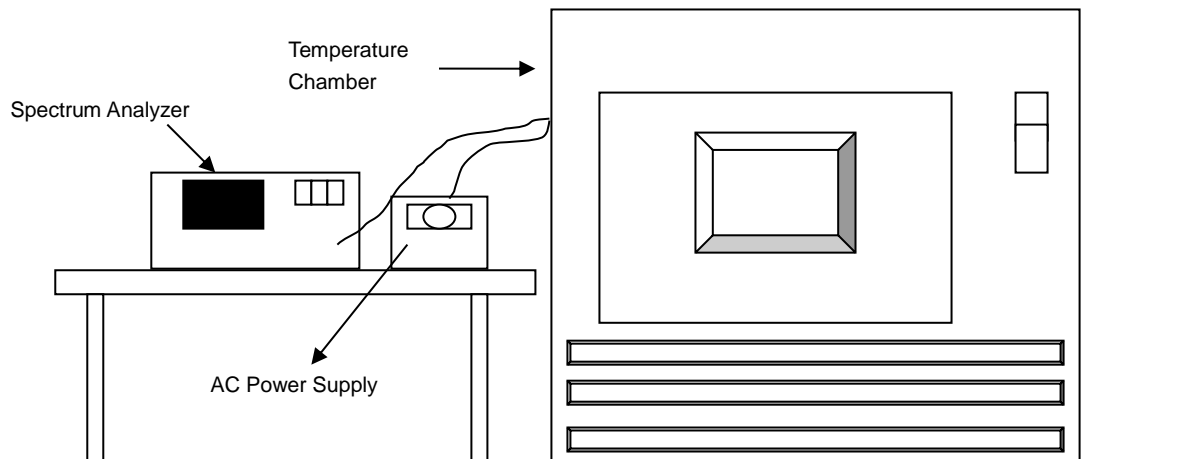


4.6 Frequency Stability

4.6.1 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

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- 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.
- Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
- 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. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
40	120	5179.9829	Pass	5179.9855	Pass	5179.9808	Pass	5179.9838	Pass
30	120	5179.9779	Pass	5179.9802	Pass	5179.9787	Pass	5179.9823	Pass
20	120	5180.0046	Pass	5180.0052	Pass	5180.0036	Pass	5180.0038	Pass
10	120	5179.9998	Pass	5179.9952	Pass	5179.9998	Pass	5179.9955	Pass
0	120	5180.0139	Pass	5180.0153	Pass	5180.0171	Pass	5180.0129	Pass

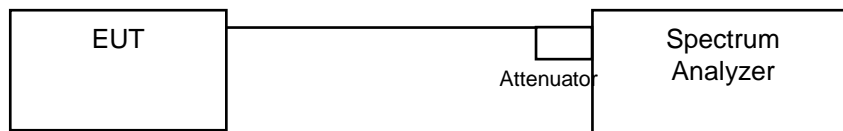
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5180.0087	Pass	5180.0065	Pass	5180.0101	Pass	5180.0076	Pass
	120	5180.0046	Pass	5180.0052	Pass	5180.0036	Pass	5180.0038	Pass
	102	5179.9925	Pass	5179.9953	Pass	5179.9943	Pass	5179.9967	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

- Set resolution bandwidth (RBW) = 100 kHz
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- 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
144	5720 (U-NII-3)	3.13	0.5	Pass
149	5745	16.30	0.5	Pass
157	5785	16.31	0.5	Pass
165	5825	16.33	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 (U-NII-3)	3.73	0.5	Pass
149	5745	17.54	0.5	Pass
157	5785	17.25	0.5	Pass
165	5825	17.05	0.5	Pass

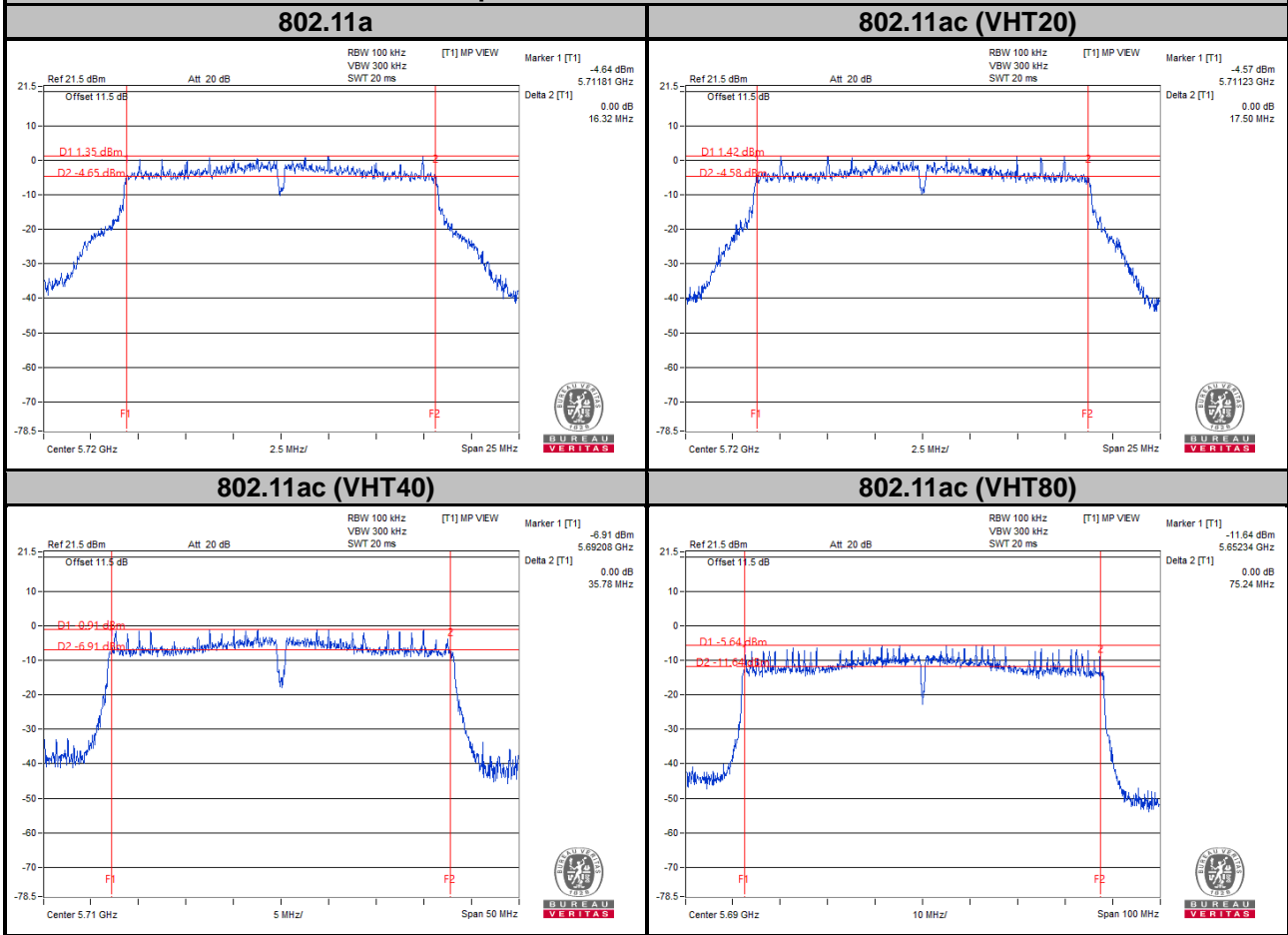
802.11ac (VHT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
142	5710 (U-NII-3)	2.86	0.5	Pass
151	5755	35.49	0.5	Pass
159	5795	35.41	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
138	5690 (U-NII-3)	2.58	0.5	Pass
155	5775	75.25	0.5	Pass

Spectrum Plot of Worst Value



Note:

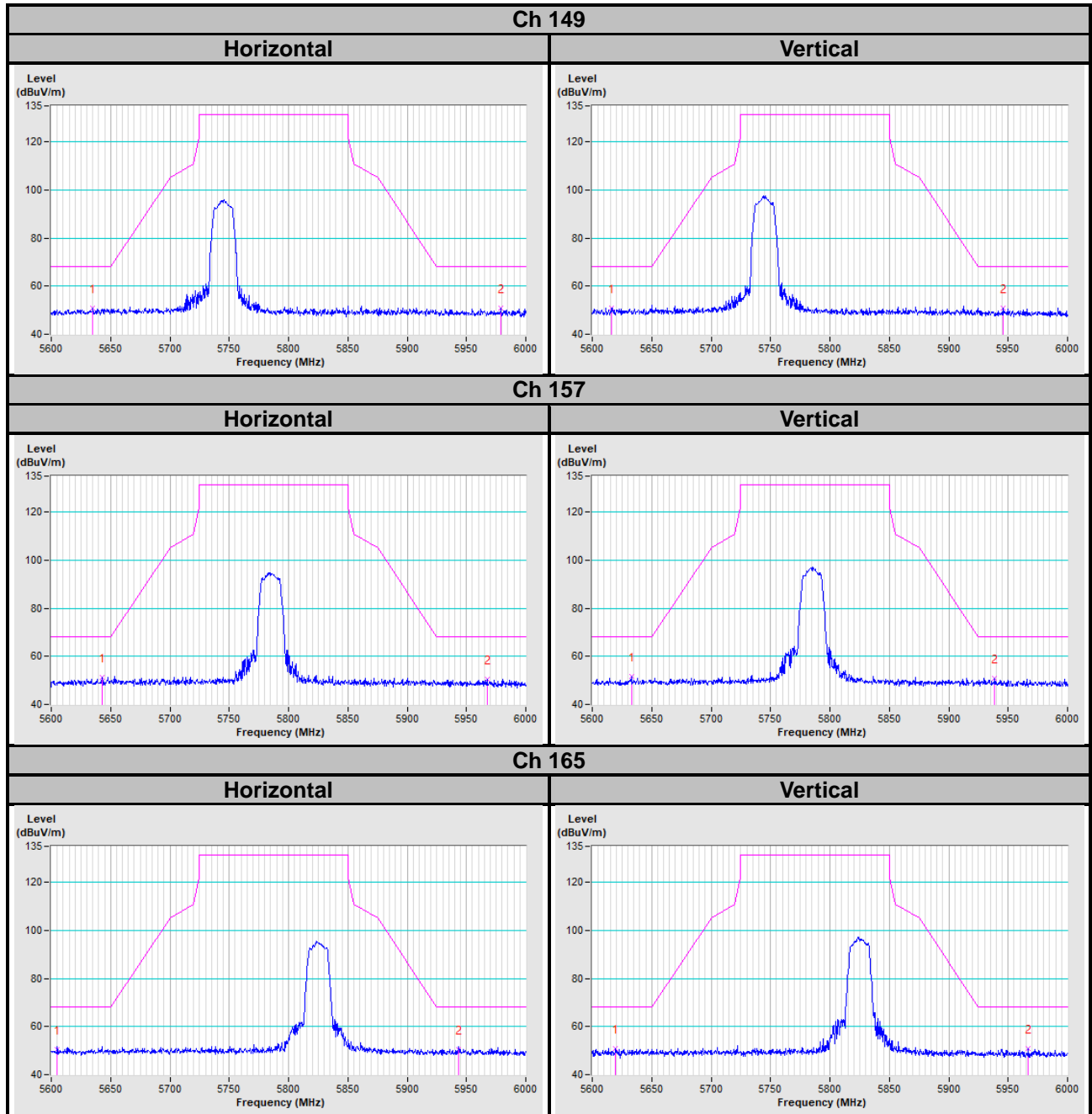
- For Ch144 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
- For Ch142 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
- For Ch138 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

5 Pictures of Test Arrangements

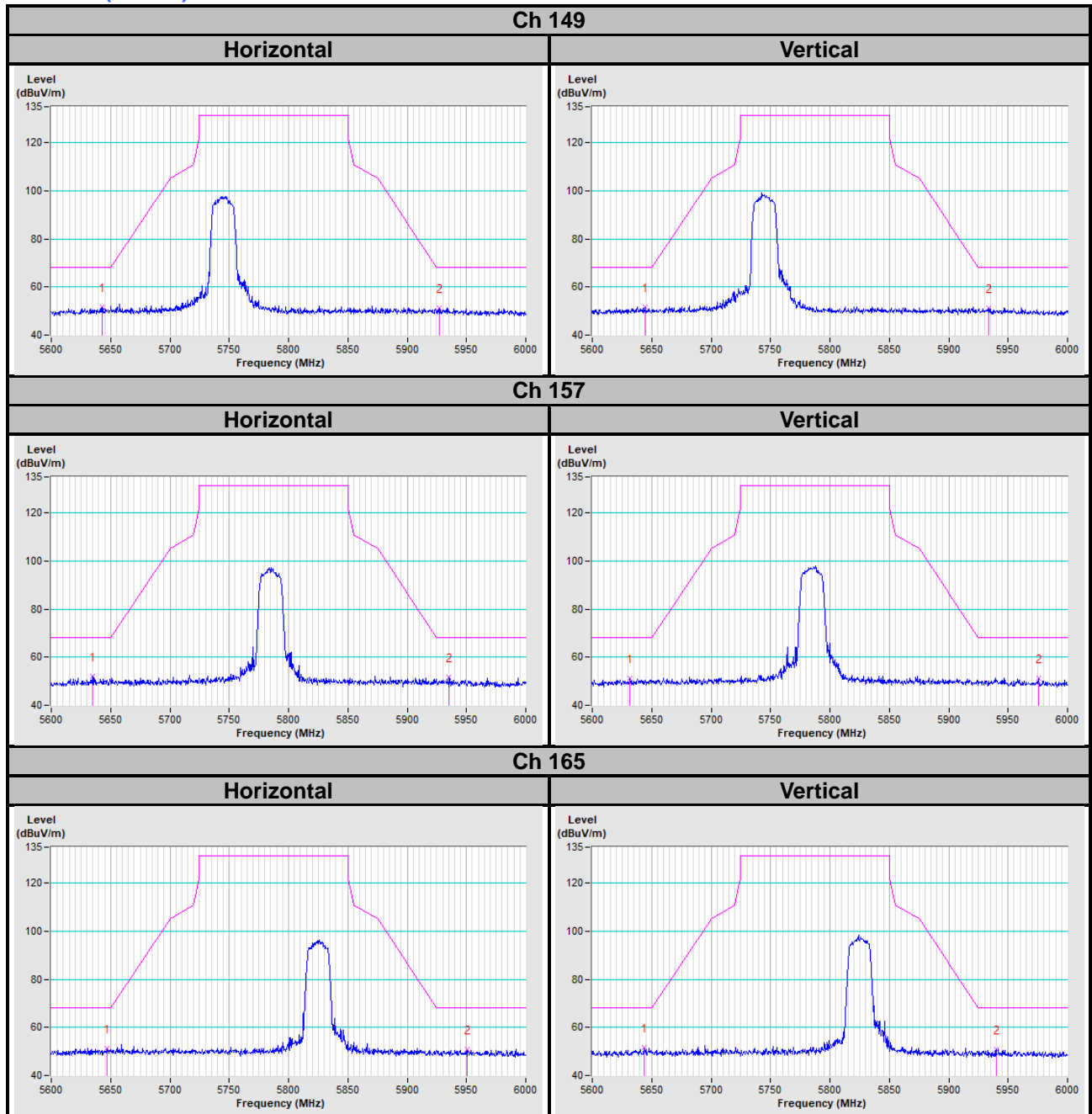
Please refer to the attached file (Test Setup Photo).

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

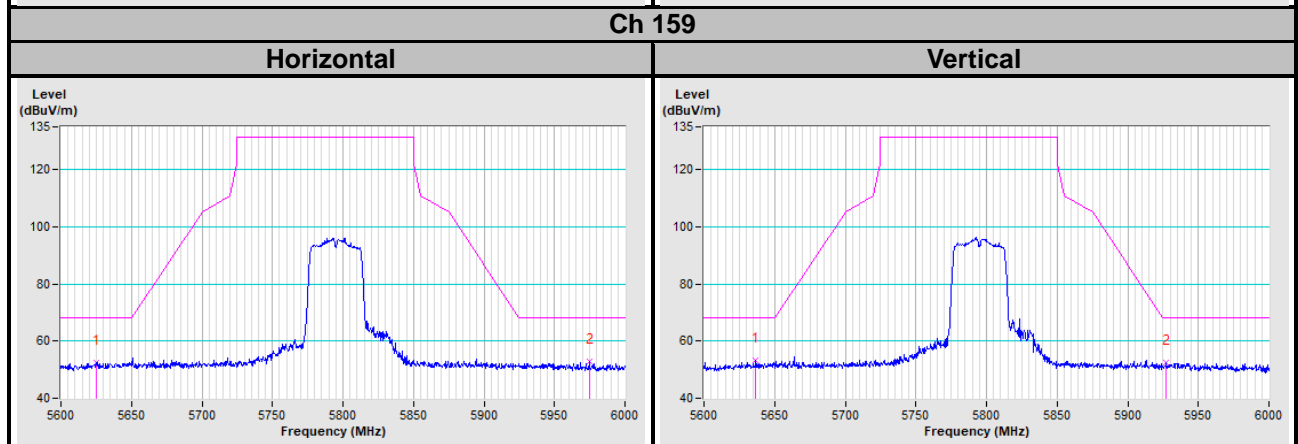
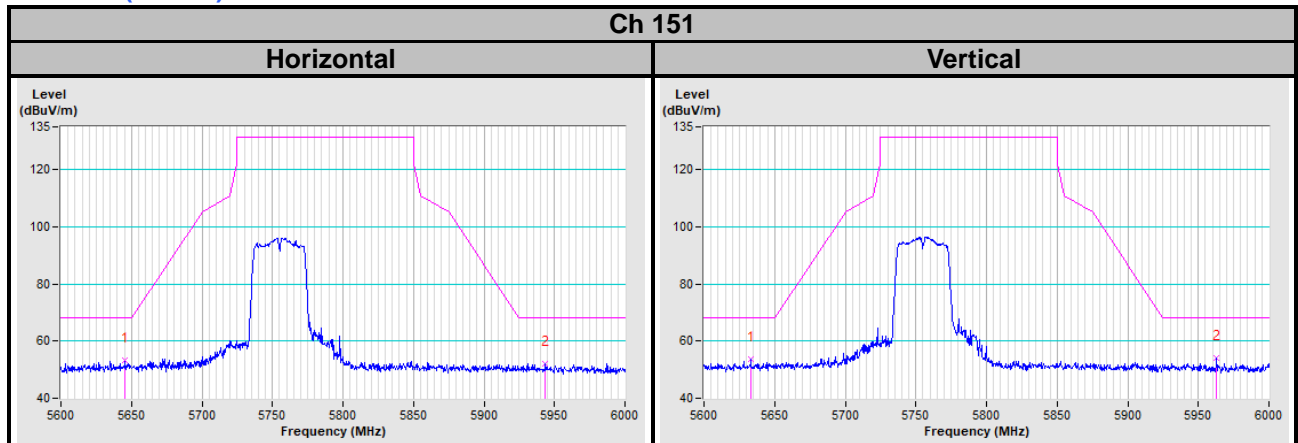
802.11a



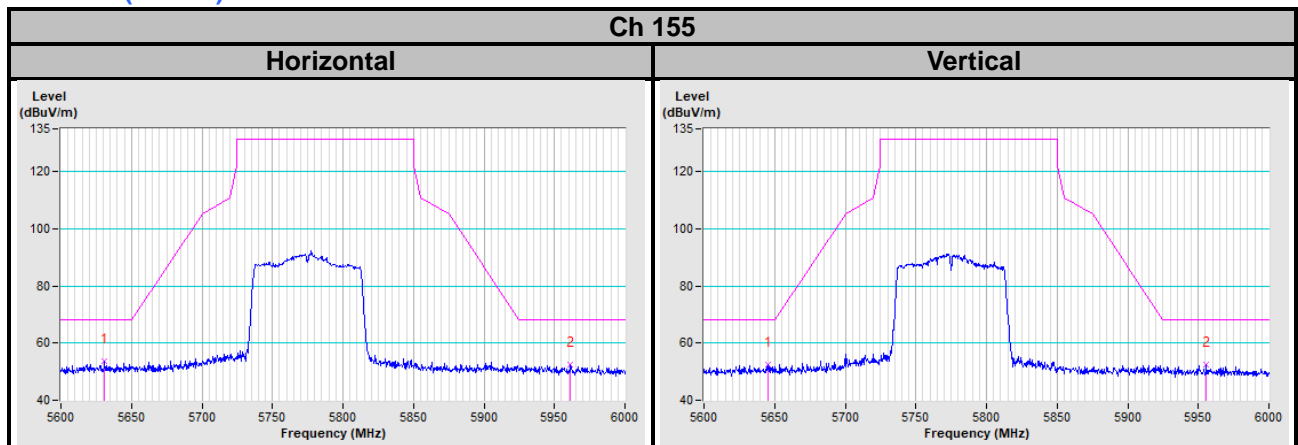
802.11ac (VHT20)



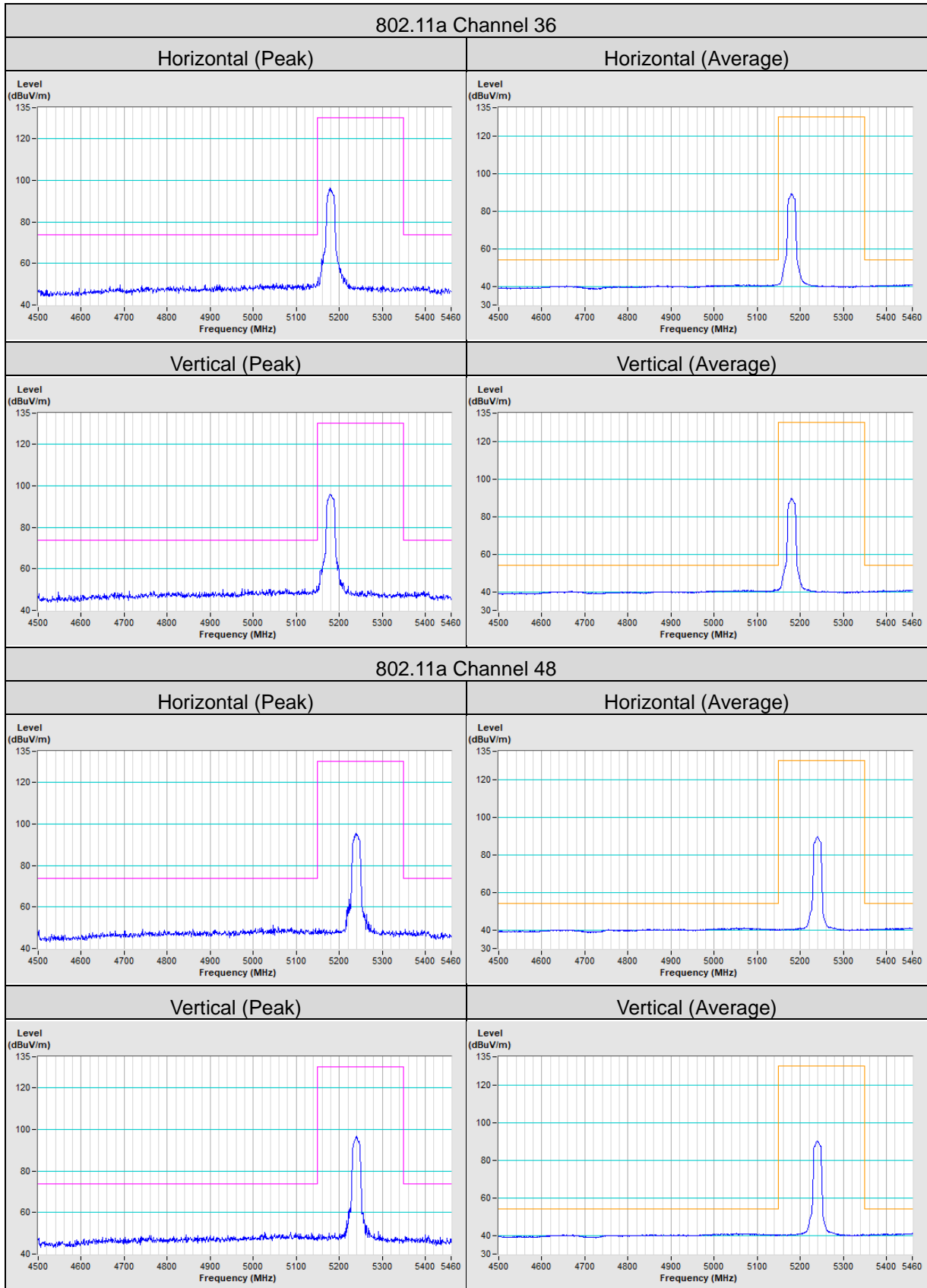
802.11ac (VHT40)



802.11ac (VHT80)

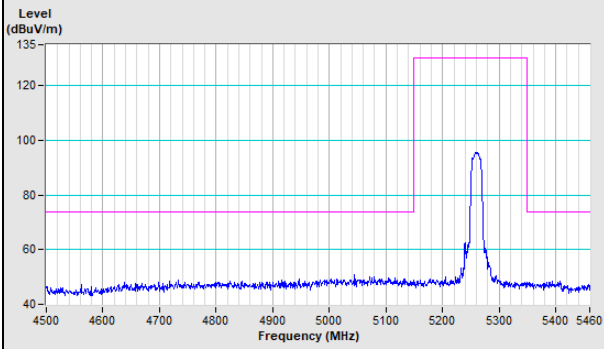


Annex B- Band Edge Measurement

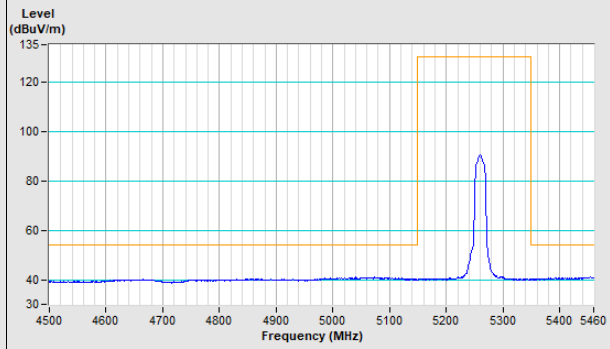


802.11a Channel 52

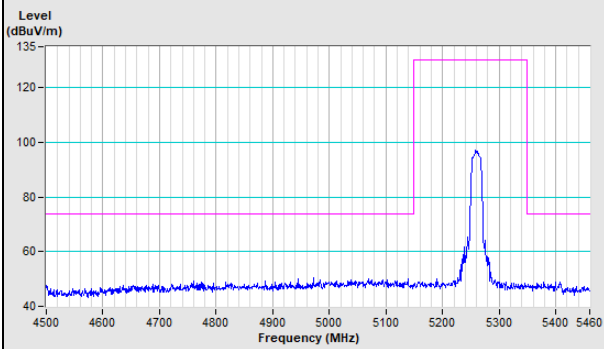
Horizontal (Peak)



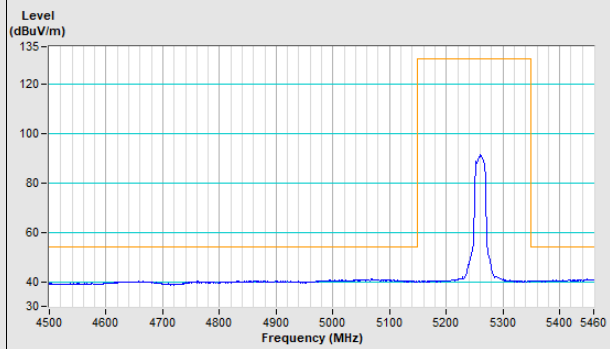
Horizontal (Average)



Vertical (Peak)

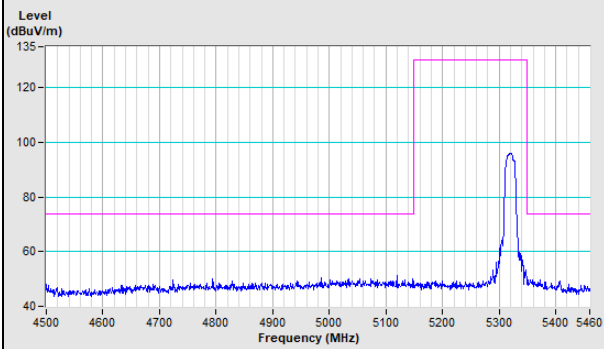


Vertical (Average)

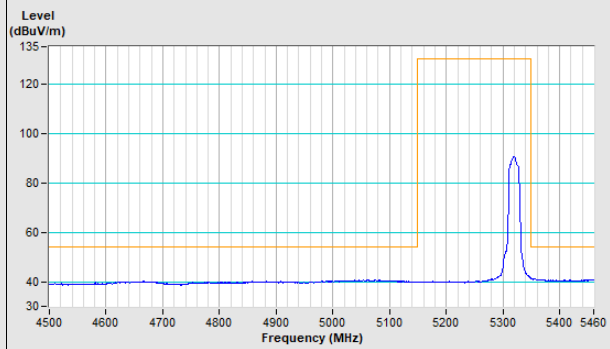


802.11a Channel 64

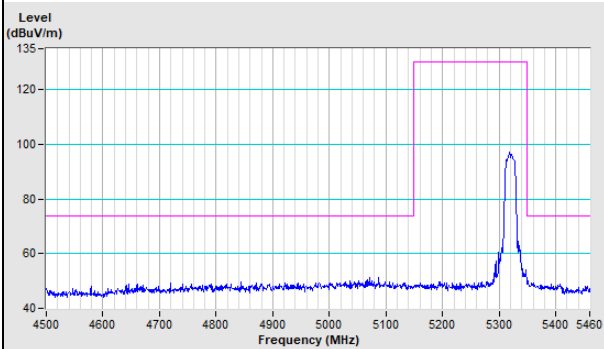
Horizontal (Peak)



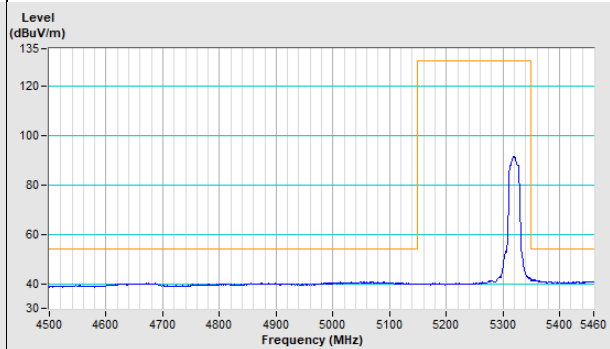
Horizontal (Average)

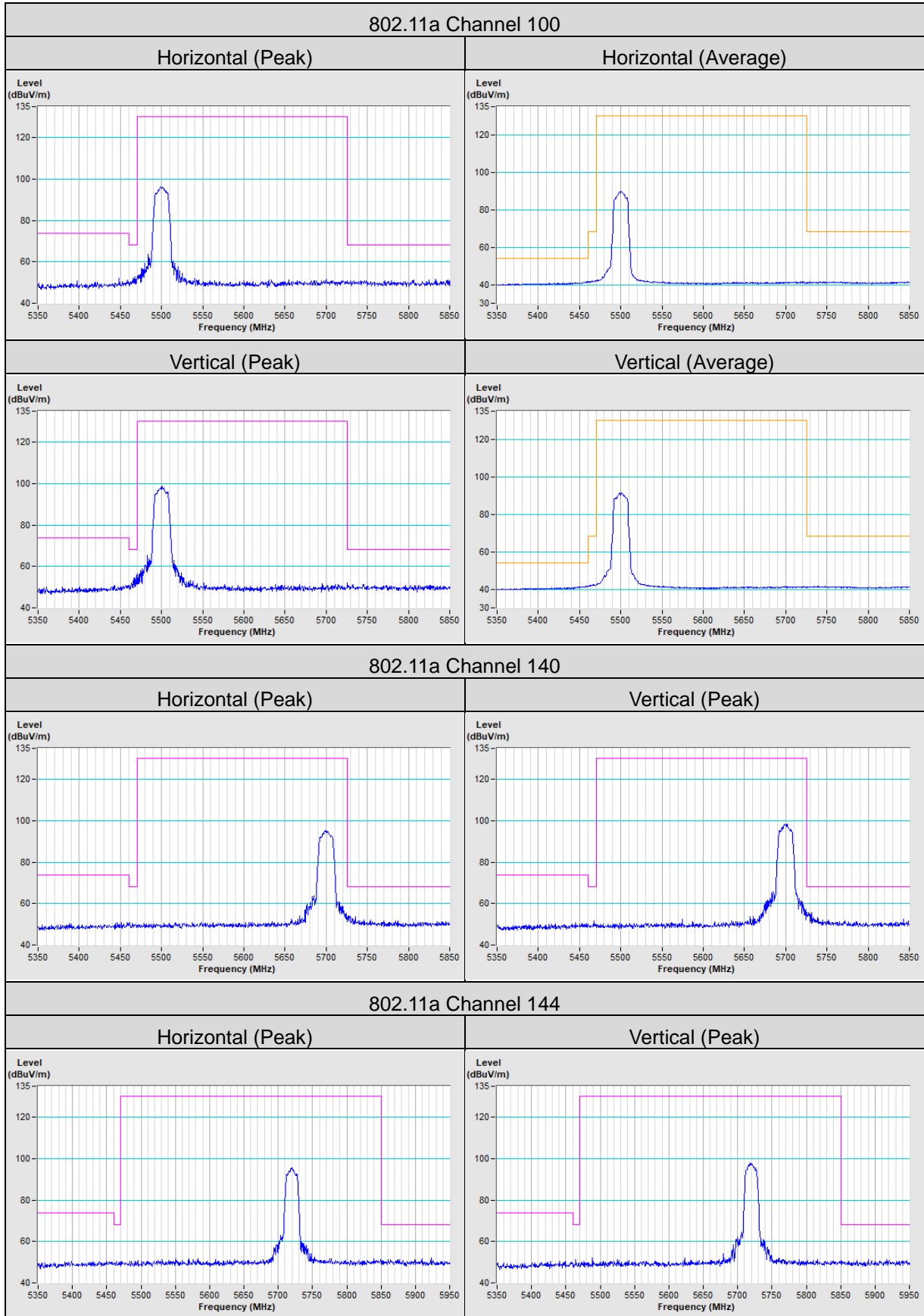


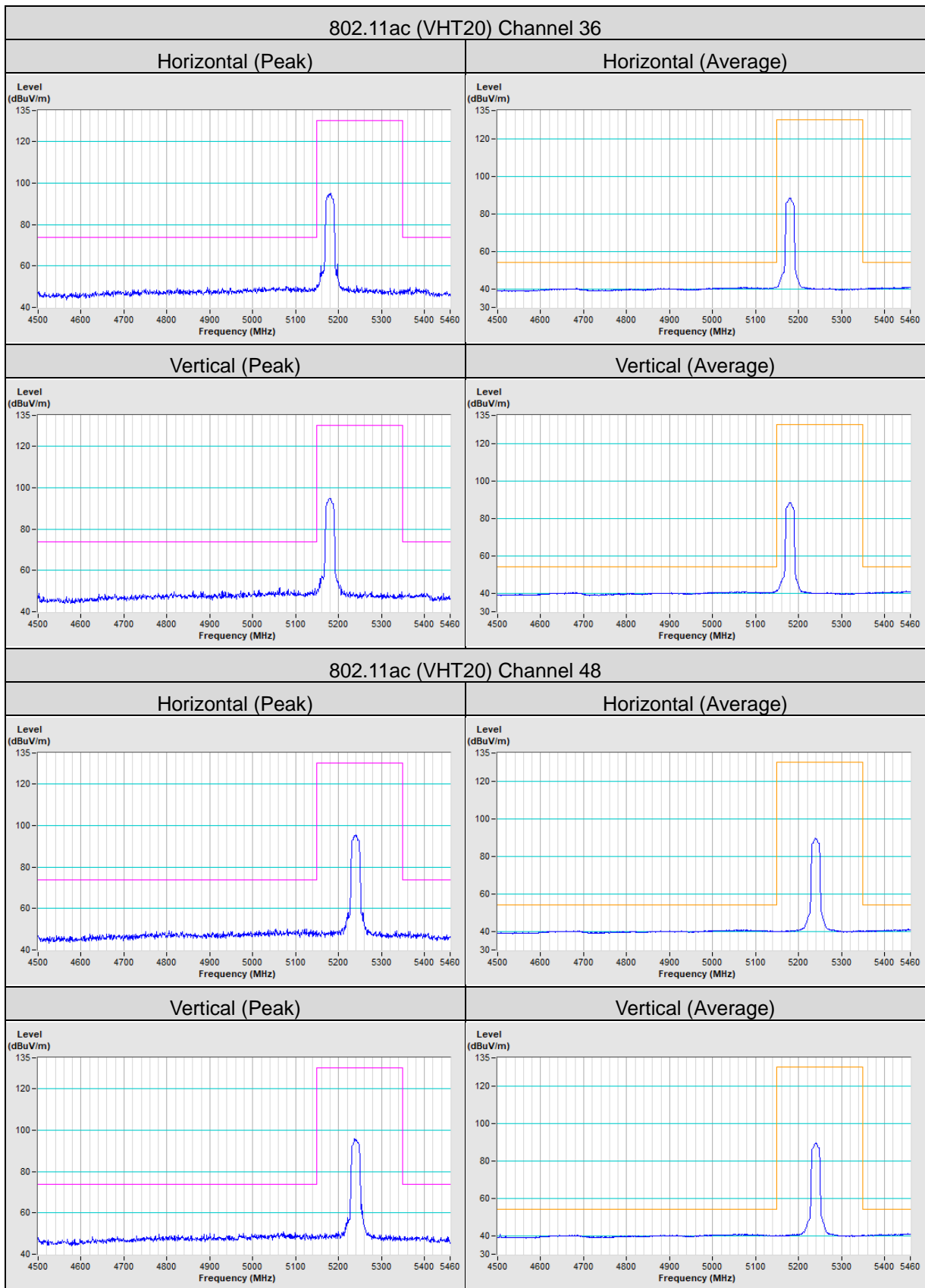
Vertical (Peak)

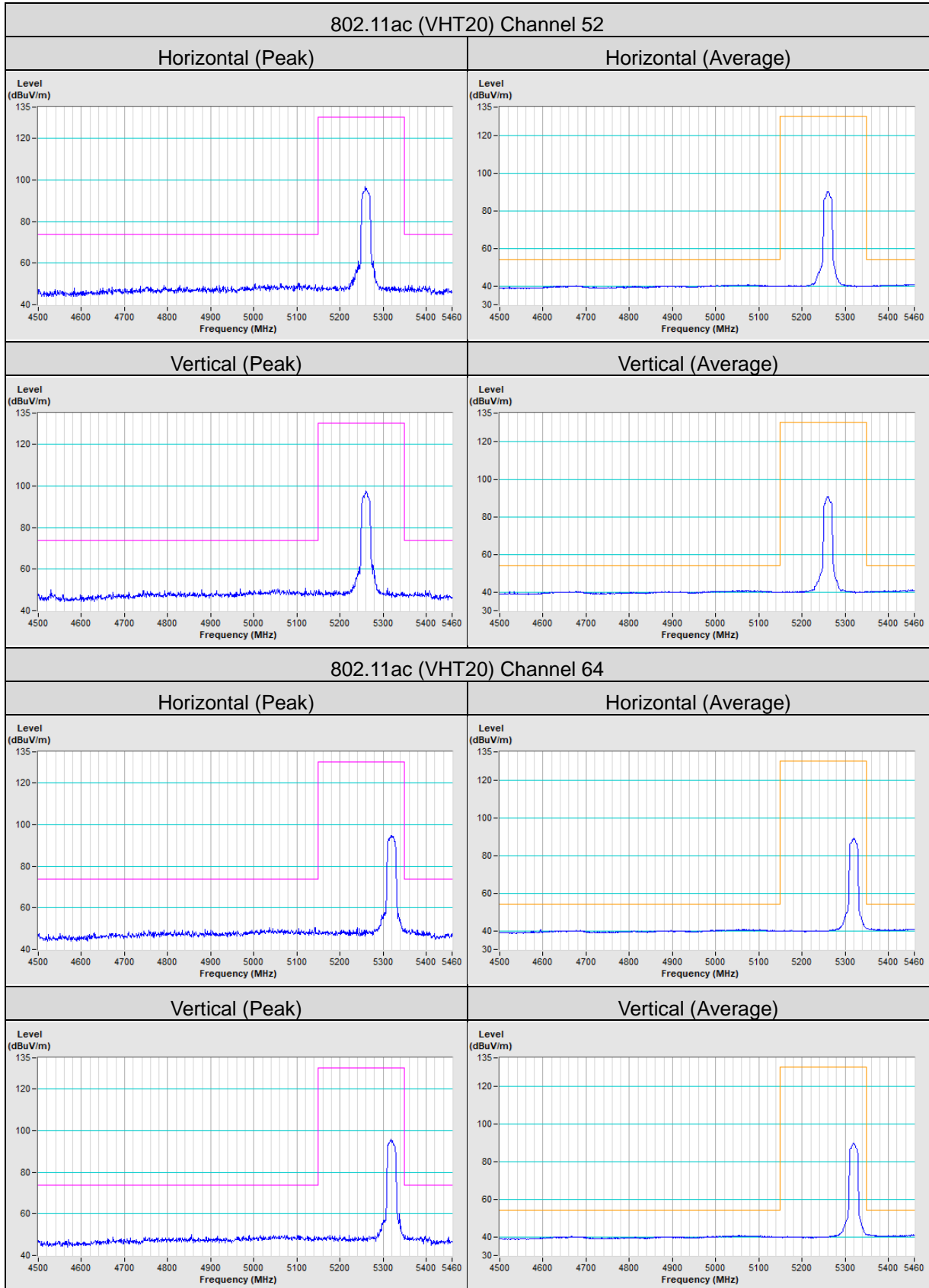


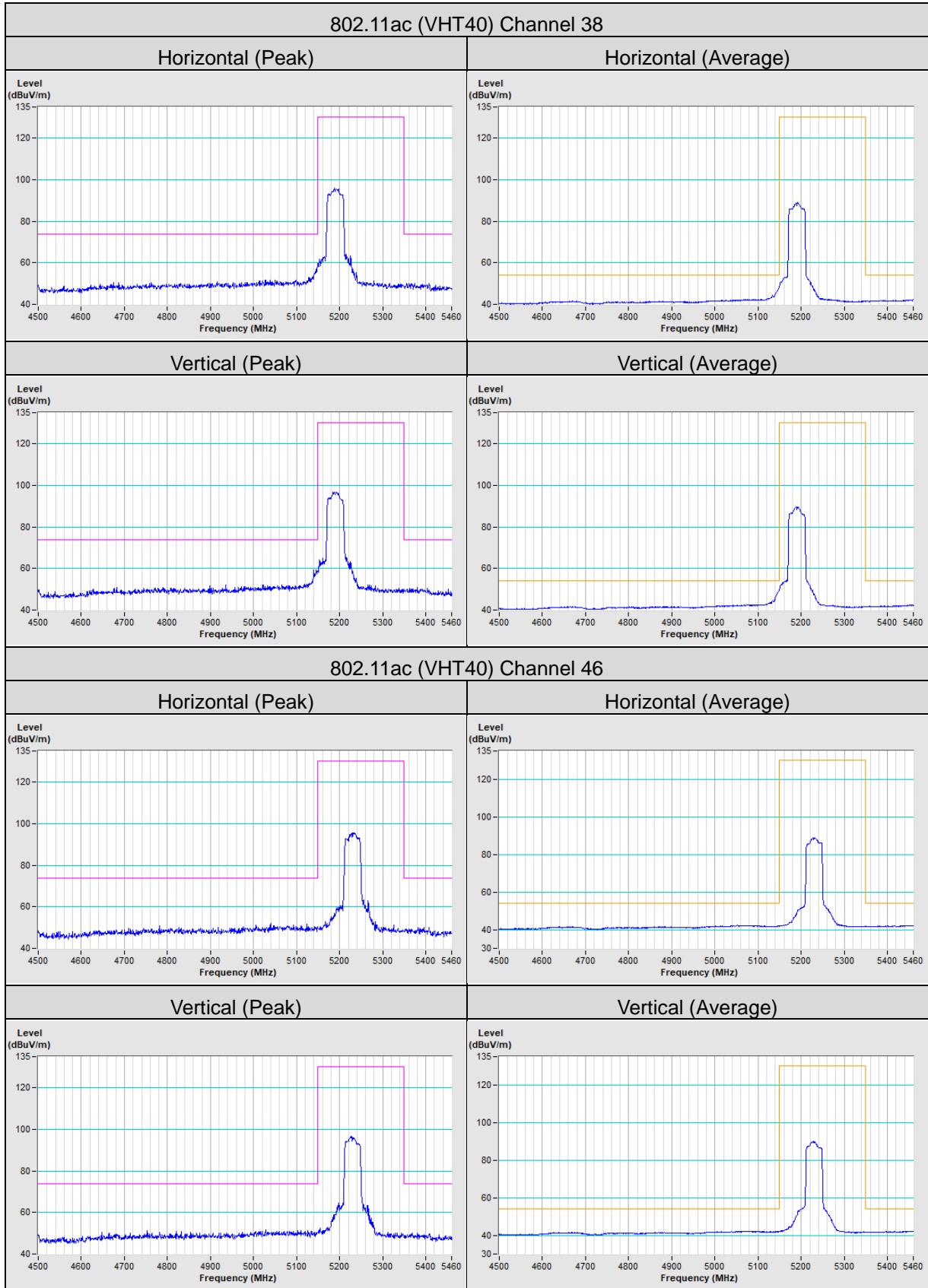
Vertical (Average)





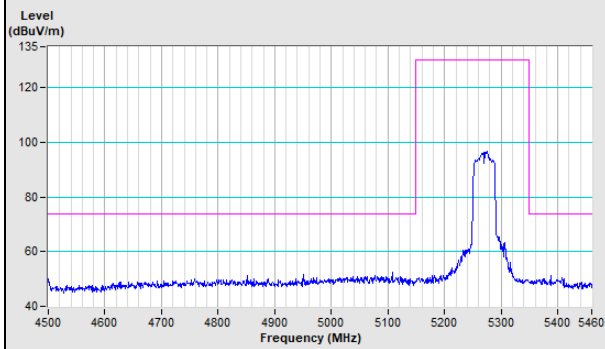




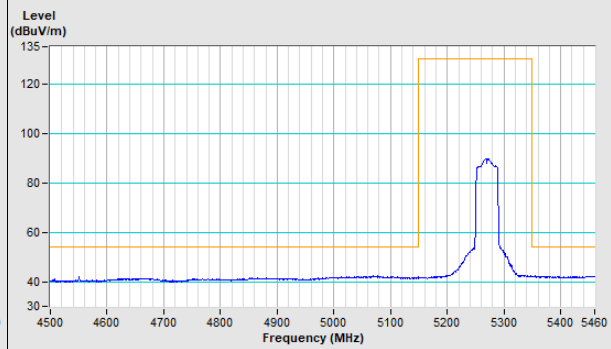


802.11ac (VHT40) Channel 54

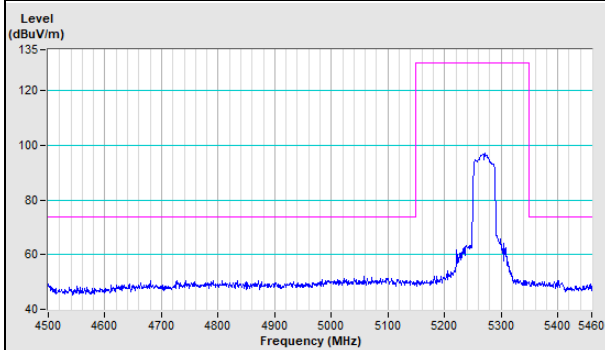
Horizontal (Peak)



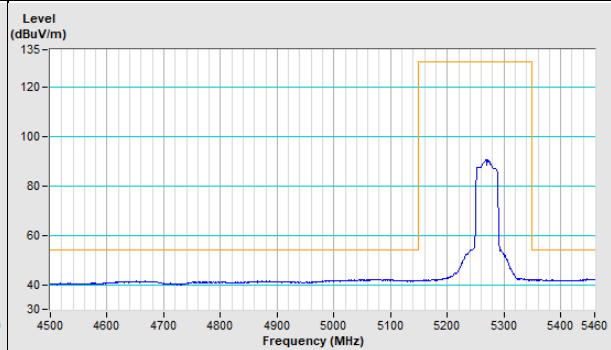
Horizontal (Average)



Vertical (Peak)

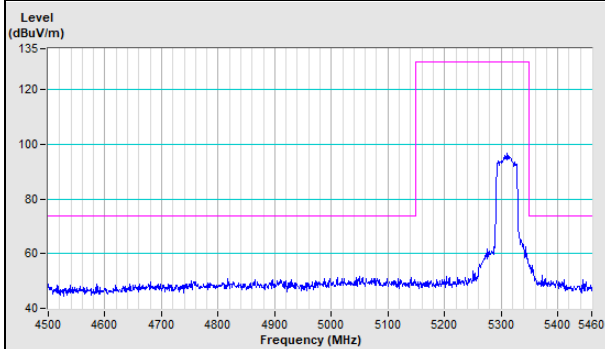


Vertical (Average)

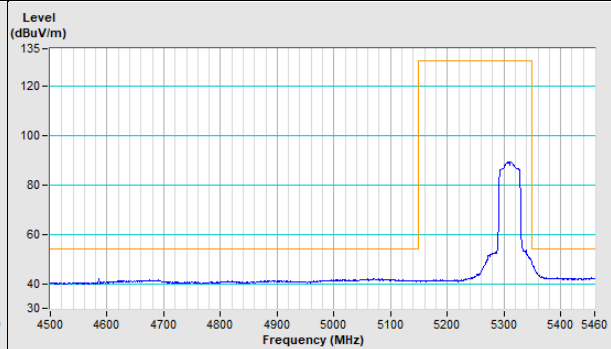


802.11ac (VHT40) Channel 62

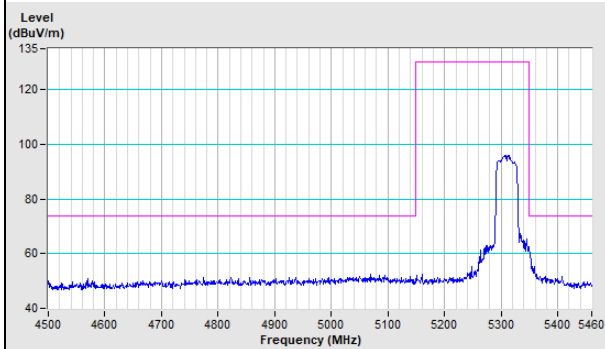
Horizontal (Peak)



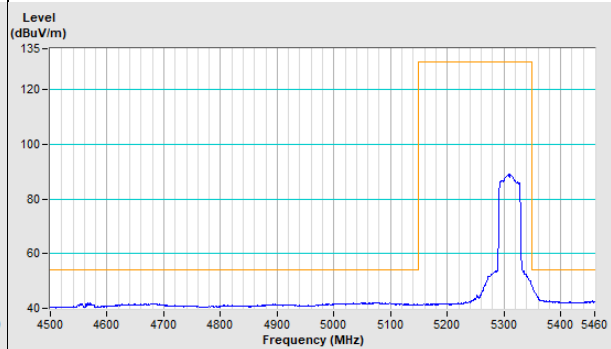
Horizontal (Average)



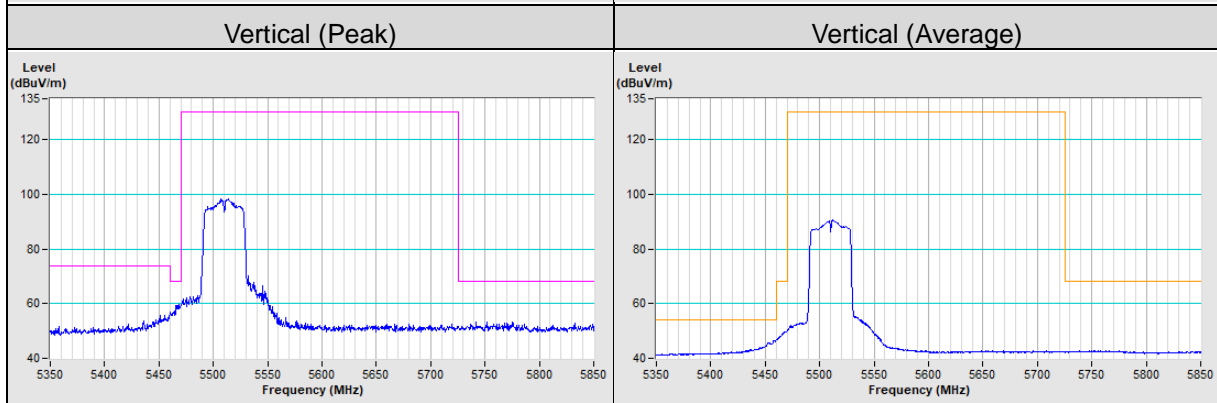
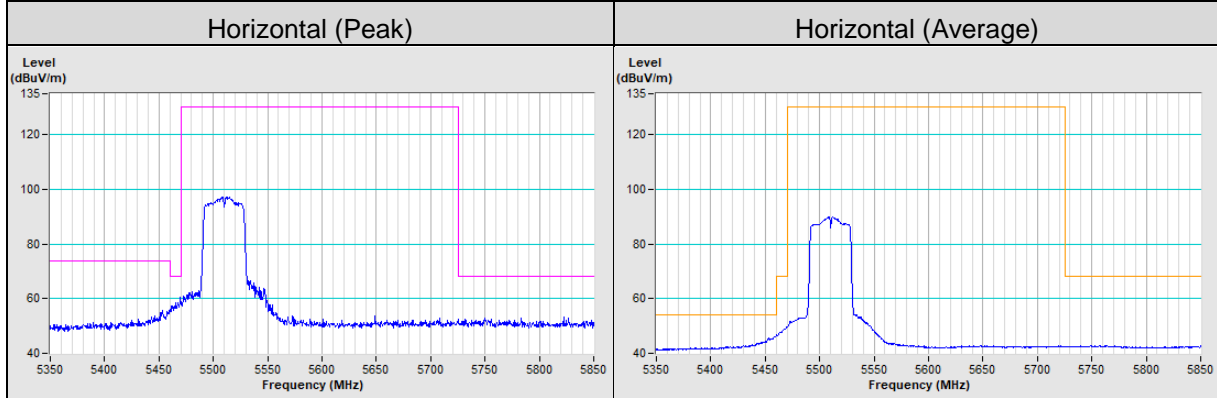
Vertical (Peak)



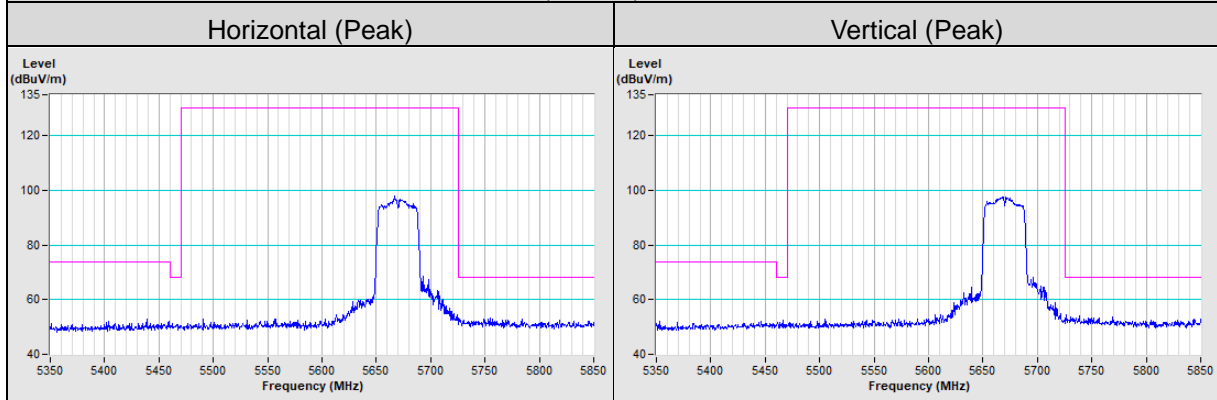
Vertical (Average)



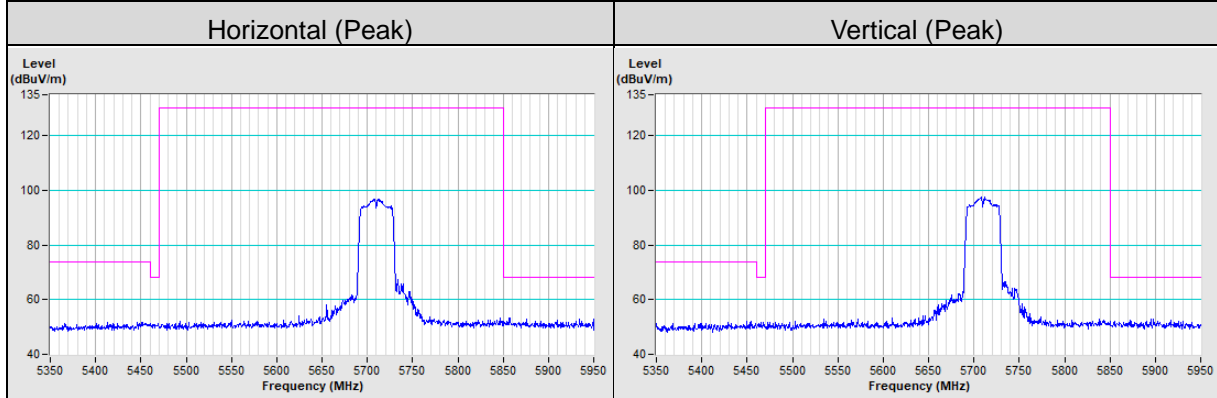
802.11ac (VHT40) Channel 102

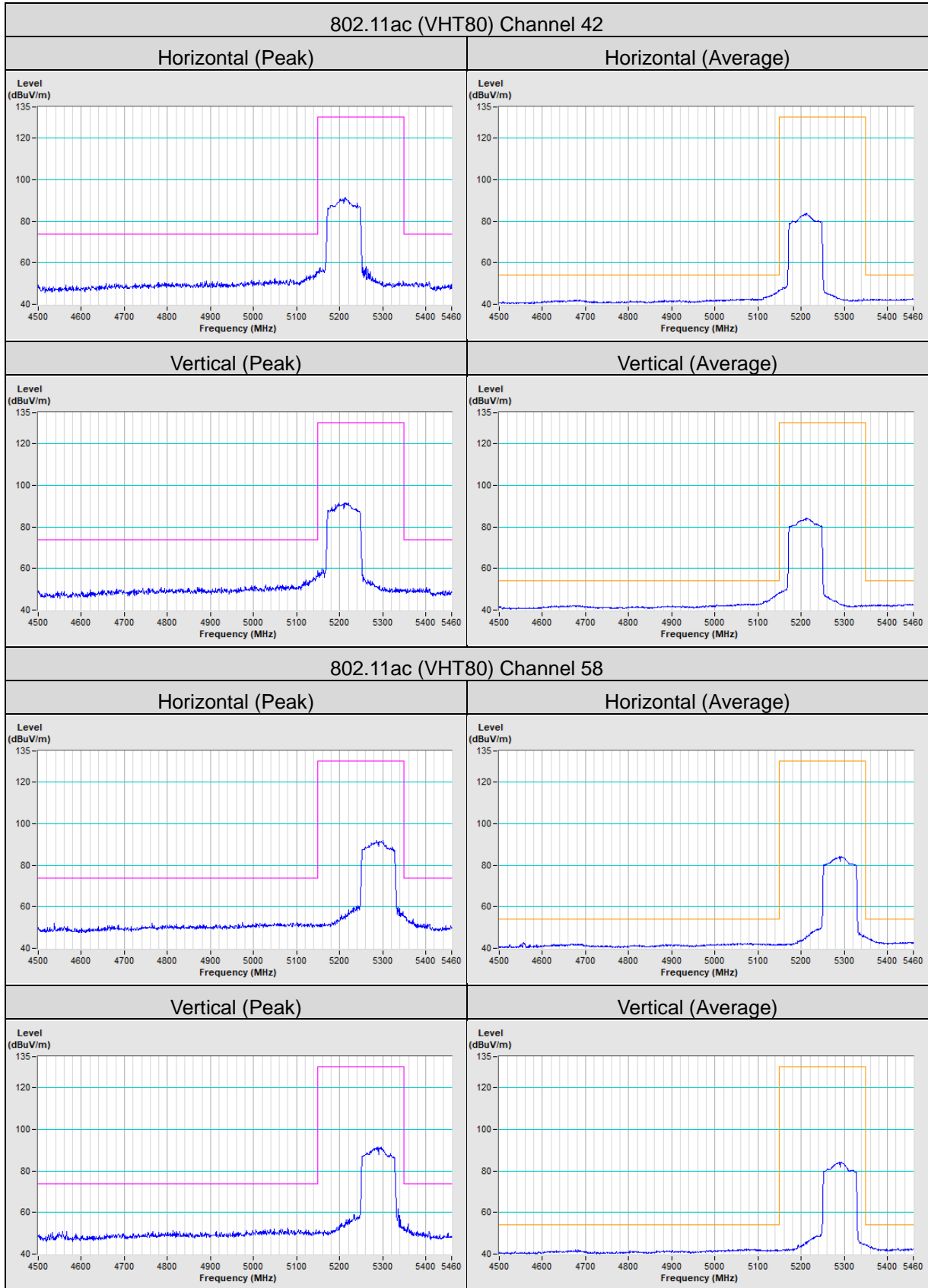


802.11ac (VHT40) Channel 134



802.11ac (VHT40) Channel 142





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:

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

--- END ---