

FCC Test Report

Report No.: RFBDGE-WTW-P21051150-1

FCC ID: M72-CCX505

Test Model: CCX 505

Received Date: Jun. 04, 2021

Test Date: Jun. 18 ~ Aug. 05, 2021

Issued Date: Aug. 09, 2021

Applicant: Polycom Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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**FCC Registration /
Designation Number:** 788550 / TW0003



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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.....	9
3.2.1 Test Mode Applicability and Tested Channel Detail.....	11
3.3 Duty Cycle of Test Signal.....	13
3.4 Description of Support Units.....	14
3.4.1 Configuration of System under Test.....	14
3.5 General Description of Applied Standards and References.....	14
4 Test Types and Results	15
4.1 Radiated Emission and Bandedge Measurement.....	15
4.1.1 Limits of Radiated Emission and Bandedge Measurement.....	15
4.1.2 Test Instruments.....	16
4.1.3 Test Procedures.....	17
4.1.4 Deviation from Test Standard.....	18
4.1.5 Test Set Up.....	18
4.1.6 EUT Operating Conditions.....	19
4.1.7 Test Results.....	20
4.2 Conducted Emission Measurement.....	64
4.2.1 Limits of Conducted Emission Measurement.....	64
4.2.2 Test Instruments.....	64
4.2.3 Test Procedures.....	65
4.2.4 Deviation from Test Standard.....	65
4.2.5 Test Setup.....	65
4.2.6 EUT Operating Conditions.....	65
4.2.7 Test Results.....	66
4.3 Transmit Power Measurement.....	68
4.3.1 Limits of Transmit Power Measurement.....	68
4.3.2 Test Setup.....	68
4.3.3 Test Instruments.....	69
4.3.4 Test Procedure.....	69
4.3.5 Deviation from Test Standard.....	69
4.3.6 EUT Operating Conditions.....	69
4.3.7 Test Result.....	70
4.4 Occupied Bandwidth Measurement.....	79
4.4.1 Test Setup.....	79
4.4.2 Test Instruments.....	79
4.4.3 Test Procedure.....	79
4.4.4 Test Result.....	80
4.5 Peak Power Spectral Density Measurement.....	84
4.5.1 Limits of Peak Power Spectral Density Measurement.....	84
4.5.2 Test Setup.....	84
4.5.3 Test Instruments.....	84
4.5.4 Test Procedures.....	85
4.5.5 Deviation from Test Standard.....	85
4.5.6 EUT Operating Conditions.....	85
4.5.7 Test Results.....	86
4.6 Frequency Stability.....	91
4.6.1 Limits of Frequency Stability Measurement.....	91

4.6.2	Test Setup.....	91
4.6.3	Test Instruments	91
4.6.4	Test Procedure	91
4.6.5	Deviation from Test Standard	92
4.6.6	EUT Operating Condition	92
4.6.7	Test Results	92
4.7	6dB Bandwidth Measurement.....	93
4.7.1	Limits of 6dB Bandwidth Measurement.....	93
4.7.2	Test Setup.....	93
4.7.3	Test Instruments	93
4.7.4	Test Procedure	93
4.7.5	Deviation from Test Standard	93
4.7.6	EUT Operating Condition	93
4.7.7	Test Results	94
5	Pictures of Test Arrangements.....	96
	Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band).....	97
	Annex B - Band Edge Measurement.....	100
	Appendix – Information of the Testing Laboratories	112

Release Control Record

Issue No.	Description	Date Issued
RFBGDGE-WTW-P21051150-1	Original release.	Aug. 09, 2021

1 Certificate of Conformity

Product: Business Media Phone

Brand: Poly

Test Model: CCX 505

Sample Status: Engineering sample

Applicant: Polycom Inc.

Test Date: Jun. 18 ~ Aug. 05, 2021

Standards: 47 CFR FCC Part 15, Subpart E (Section 15.407)
ANSI C63.10:2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : *Polly Chien* , **Date:** Aug. 09, 2021
Polly Chien / Specialist

Approved by : *Bruce Chen* , **Date:** Aug. 09, 2021
Bruce Chen / Senior Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(8)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -15.60dB at 0.19301MHz.
15.407(b)(1/2/3/4(i/ii)/8)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -0.2dB at 5350.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is IPEX NGFF connector not a standard connector.

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	150kHz ~ 30MHz	2.79 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.86 dB
	200MHz ~ 1000MHz	3.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Business Media Phone
Brand	Poly
Test Model	CCX 505
Sample Status	Engineering sample
Power Supply Rating	48Vdc (Adapter)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3Mbps
Operating Frequency	5180~5240MHz, 5260~5320MHz, 5500~5720MHz, 5745~5825MHz
Number of Channel	5180~5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5260~5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5500~5720MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 12 802.11n (HT40), 802.11ac (VHT40): 6 802.11ac (VHT80): 3 5745~5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	5180~5240MHz: 29.376mW 5260~5320MHz: 28.576mW 5500~5720MHz: 25.003mW 5745~5825MHz: 17.824mW
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	Refer to note
Cable Supplied	Refer to note

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. After pre-testing, 802.11ac (VHT20/VHT40) power is lower than 802.11n (HT20/HT40), therefore 802.11n (HT20/HT40) is the worst case to representative mode in test report. (Final test mode refer section 3.2.1)

2. The EUT uses the following devices.

Item	Brand	Model	Specification	Remark
Adapter 1	Polycom	FSP025-DINANS	I/P: 100-240Vac, 50-60Hz, 900mA O/P: 48Vdc, 0.52A Cable: 1.8m power cable with 2 cores	Accessory
Adapter 2	Polycom	FSP025-DINANS2	I/P: 100-240Vac, 50-60Hz, 900mA O/P: 48Vdc, 0.52A Cable: 1.8m power cable with 2 cores	Accessory
Network Cable (RJ45)	NA	NA	1.8m non-shielded RJ45 cable without core	Accessory

*After the pretesting adapter as above, adapter 1 is found to be the worst case test and chosen for final test.

3. The following antenna was provided to the EUT.

Ant. Type	PCB			
Connector	IPEX NGFF			
Antenna Gain(dBi)				
Antenna	2400~2500MHz	5150~5350MHz	5470~5720MHz	5725~5850MHz
AWAN (MAIN)	2.30	2.92	2.95	2.95
INPAQ (MAIN)	2.86	2.84	2.49	2.79

* The maximum antenna gain is chosen for final test.

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

4. 2.4GHz & 5GHz & BT technology cannot transmit at same time.

3.2 Description of Test Modes

5180~5240MHz:

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

5260~5320MHz:

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290MHz

5500~5720MHz:

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

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

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

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channels are provided for 802.11ac (VHT80):

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

5745~5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

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

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

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

Note:

- The EUT had been pre-tested on the positioned of each 2 axis (X & Z). The worst case was found when positioned on **Z-plane**.
- For radiated emission (below 1GHz) and power line conducted emission test items chosen the worst maximum fundamental emission level channel.

Radiated Emission Test (Above 1GHz):

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	13.5
	802.11ac (VHT40)		38 to 46	38, 46	OFDM	15.0
	802.11ac (VHT80)		42	42	OFDM	29.3
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	13.5
	802.11ac (VHT40)		54 to 62	54, 62	OFDM	15.0
	802.11ac (VHT80)		58	58	OFDM	29.3
-	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
	802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	13.5
	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
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	13.5
	802.11ac (VHT40)		151 to 159	151, 159	OFDM	15.0
	802.11ac (VHT80)		155	155	OFDM	29.3

Radiated Emission Test (Below 1GHz):

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36	OFDM	6.0
		5260-5320	52 to 64		OFDM	6.0
		5500-5720	100 to 144		OFDM	6.0
		5745-5825	149 to 165		OFDM	6.0

Power Line Conducted Emission Test:

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36	OFDM	6.0
		5260-5320	52 to 64		OFDM	6.0
		5500-5720	100 to 144		OFDM	6.0
		5745-5825	149 to 165		OFDM	6.0

Antenna Port Conducted Measurement:

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	13.5
	802.11ac (VHT40)		38 to 46	38, 46	OFDM	15.0
	802.11ac (VHT80)		42	42	OFDM	29.3
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	13.5
	802.11ac (VHT40)		54 to 62	54, 62	OFDM	15.0
	802.11ac (VHT80)		58	58	OFDM	29.3
-	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
	802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	13.5
	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
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	13.5
	802.11ac (VHT40)		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	23deg. C, 67%RH	48Vdc	Adair Peng, Titan Hsu
RE<1G	24deg. C, 66%RH	48Vdc	Edison Lee
PLC	23deg. C, 66%RH	48Vdc	Cookie Ku
APCM	25deg. C, 60%RH	48Vdc	Chris Lin

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is $\geq 98\%$, duty factor is not required.

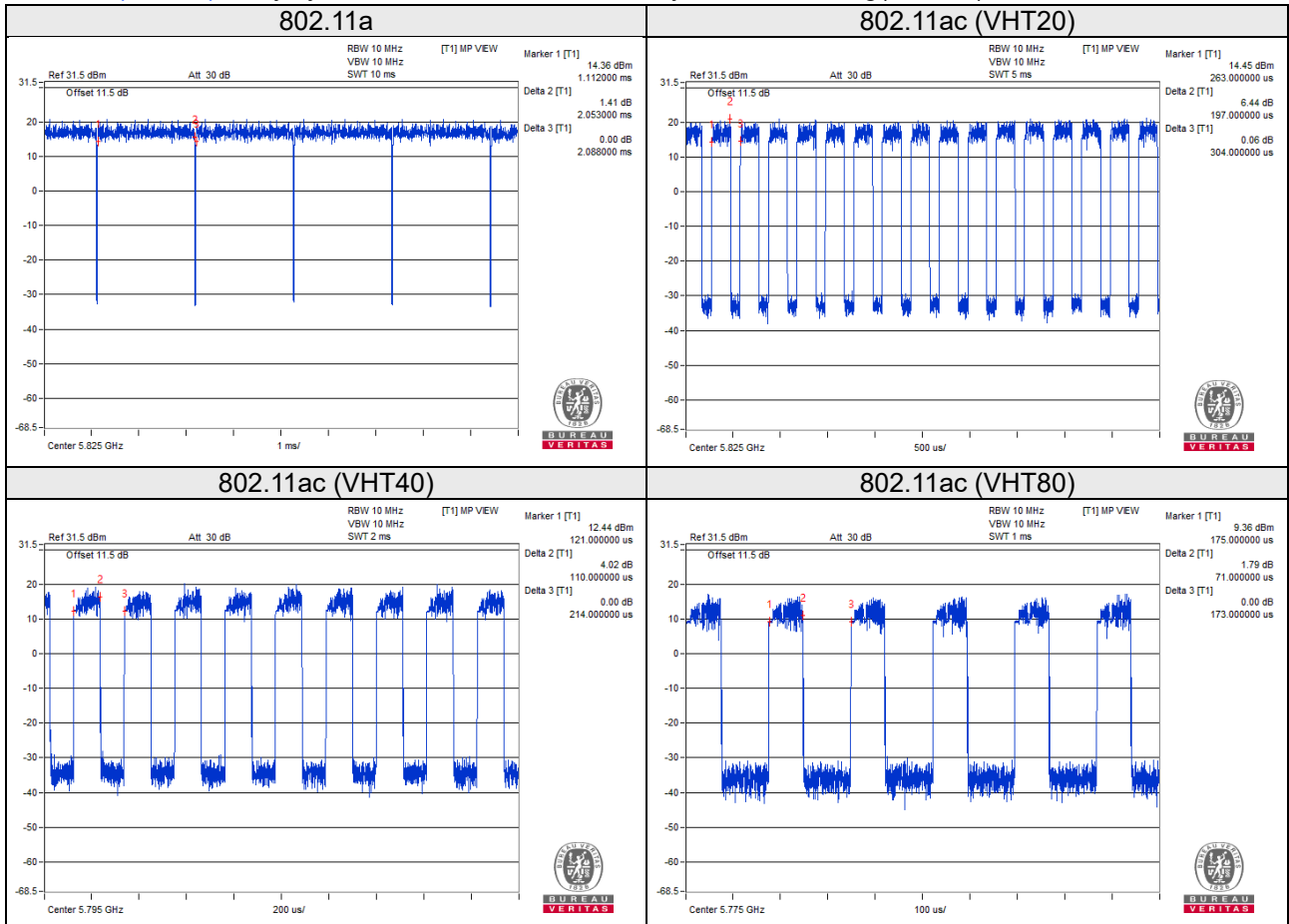
Duty cycle of test signal is $< 98\%$, duty factor is required

802.11a: Duty cycle = $2.053/2.088 = 0.983$

802.11ac (VHT20): Duty cycle = $0.197/0.340 = 0.648$, Duty factor = $10 * \log(1/0.648) = 1.88$

802.11ac (VHT40): Duty cycle = $0.110/0.214 = 0.514$, Duty factor = $10 * \log(1/0.514) = 2.89$

802.11ac (VHT80): Duty cycle = $0.071/0.173 = 0.410$, Duty factor = $10 * \log(1/0.410) = 3.87$



3.4 Description of Support Units

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

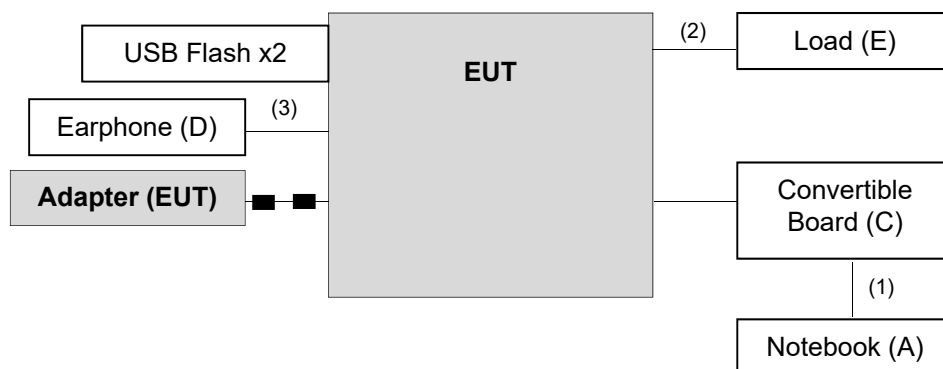
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	LENOVO	T480	PF1EZSA2	FCC DoC Approved	-
B.	USB Flash	SanDisk	SDDDC-032G	NA	NA	Type-C
	USB Flash	HP	v250W	05	NA	Type-A
C.	Convertible Board	NA	NA	NA	NA	Provided by client
D.	Earphone	Avaya	Avaya L119	18RX42400E5A	NA	Provided by client
E.	Load	NA	NA	NA	NA	-

Note:

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

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB cable	1	0.8	Y	0	-
2.	LAN cable	2	1.8	N	0	Provided by client
3.	Audio cable	1	0.14	N	0	Provided by client

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards and References

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

Test standard:

FCC Part 15, Subpart E (15.407)

ANSI C63.10:2013

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

References Test Guidance:

KDB 789033 D02 General UNII Test Procedure New Rules v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applicable To		Limit	
789033 D02 General UNII Test Procedure New Rules v02r01		Field Strength at 3m	
		PK: 74 (dBµV/m)	AV: 54 (dBµV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2(dBµV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	<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}
^{*1} beyond 75 MHz or more above of the band edge. ^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.		^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 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:

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESR3	102783	Dec. 21, 2020	Dec. 20, 2021
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 16, 2020	Sep. 15, 2021
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Nov. 04, 2020	Nov. 03, 2021
HORN Antenna SCHWARZBECK	9120D	209	Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 22, 2020	Nov. 21, 2021
Loop Antenna TESEQ	HLA 6121	45745	Jul. 06, 2020	Jul. 05, 2021
			Jul. 21, 2021	Jul. 20, 2022
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 16, 2020	Aug. 15, 2021
Preamplifier Agilent (Above 1GHz)	8449B	3008A02465	Mar. 22, 2021	Mar. 21, 2022
RF Coaxial Cable WOKEN With 5dB PAD	8D-FB	Cable-CH3-01	Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-SM- 8000	Cable-CH3-03 (309224+170907)	Aug. 16, 2020	Aug. 15, 2021
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190 004/MY55190007/MY55 210005	Jul. 13, 2020	Jul. 12, 2021
			Jul. 12, 2021	Jul. 11, 2022
Pre-amplifier (18GHz- 40GHz) EMC	EMC184045B	980175	Sep. 04, 2020	Sep. 03, 2021

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

4.1.3 Test Procedures

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

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

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

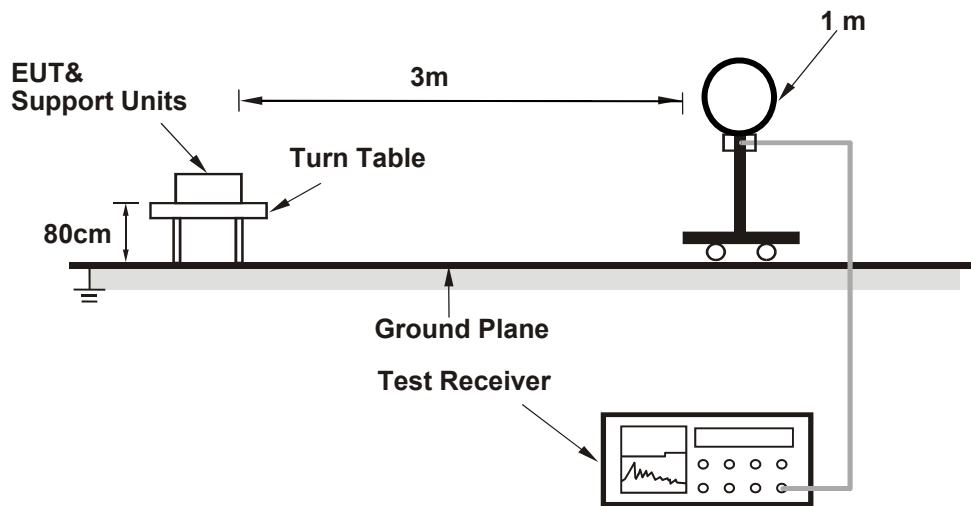
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz. (802.11a: RBW = 1MHz, VBW = 10Hz; 802.11ac (VHT20): RBW = 1MHz, VBW = 10kHz; 802.11ac (VHT40): RBW = 1MHz, VBW = 10kHz; 11ac (VHT80): RBW = 1MHz, VBW = 10kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

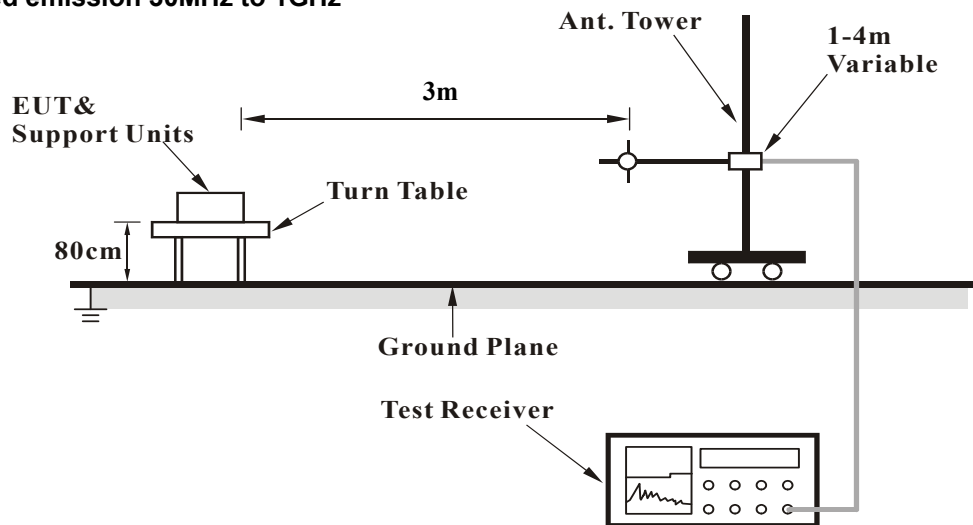
No deviation.

4.1.5 Test Set Up

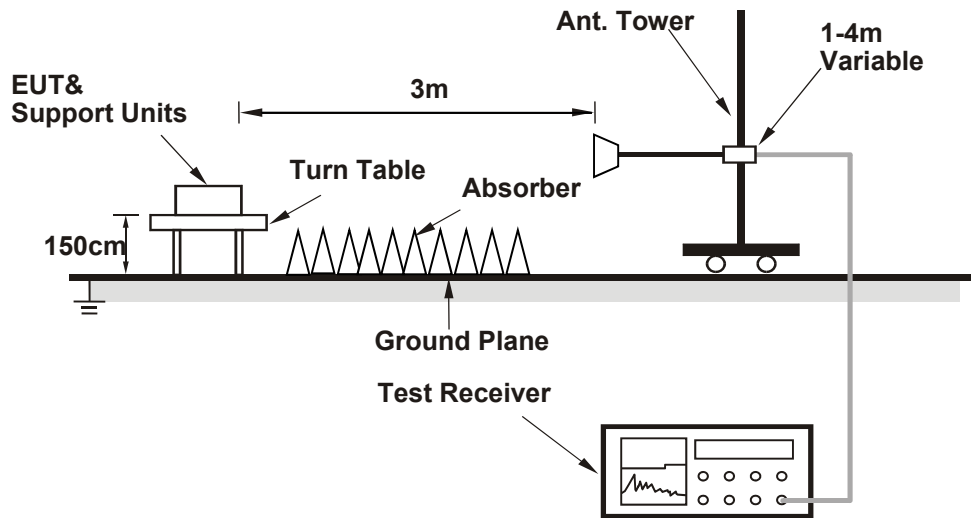
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

- a. Placed the EUT on the testing table.
- b. Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz data:

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	72.6 PK	74.0	-1.4	1.15 H	90	66.2	6.4
2	5150.00	52.0 AV	54.0	-2.0	1.15 H	90	45.6	6.4
3	*5180.00	110.1 PK			1.15 H	90	67.9	42.2
4	*5180.00	100.8 AV			1.15 H	90	58.6	42.2
5	#10360.00	58.2 PK	68.2	-10.0	1.78 H	16	41.7	16.5

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	72.8 PK	74.0	-1.2	2.84 V	255	66.4	6.4
2	5150.00	51.3 AV	54.0	-2.7	2.84 V	255	44.9	6.4
3	*5180.00	110.6 PK			2.84 V	255	68.4	42.2
4	*5180.00	101.0 AV			2.84 V	255	58.8	42.2
5	#10360.00	58.1 PK	68.2	-10.1	2.09 V	30	41.6	16.5

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 40 : 5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	110.0 PK			1.27 H	81	67.9	42.1
2	*5200.00	100.3 AV			1.27 H	81	58.2	42.1
3	#10400.00	58.1 PK	68.2	-10.1	1.81 H	20	41.6	16.5

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	110.0 PK			2.79 V	255	67.9	42.1
2	*5200.00	100.5 AV			2.79 V	255	58.4	42.1
3	#10400.00	58.2 PK	68.2	-10.0	2.11 V	32	41.7	16.5

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 48 : 5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.6 PK	74.0	-12.4	1.19 H	88	55.2	6.4
2	5150.00	48.4 AV	54.0	-5.6	1.19 H	88	42.0	6.4
3	*5240.00	109.6 PK			1.19 H	88	67.6	42.0
4	*5240.00	100.2 AV			1.19 H	88	58.2	42.0
5	#10480.00	59.8 PK	68.2	-8.4	1.80 H	22	41.7	18.1

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	62.4 PK	74.0	-11.6	2.75 V	256	56.0	6.4
2	5150.00	48.6 AV	54.0	-5.4	2.75 V	256	42.2	6.4
3	*5240.00	109.8 PK			2.75 V	256	67.8	42.0
4	*5240.00	100.2 AV			2.75 V	256	58.2	42.0
5	#10480.00	59.9 PK	68.2	-8.3	2.11 V	31	41.8	18.1

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 52 : 5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.4 PK	74.0	-12.6	1.13 H	91	55.0	6.4
2	5150.00	48.4 AV	54.0	-5.6	1.13 H	91	42.0	6.4
3	*5260.00	110.1 PK			1.13 H	91	68.2	41.9
4	*5260.00	100.9 AV			1.13 H	91	59.0	41.9
5	#10520.00	59.2 PK	68.2	-9.0	1.79 H	16	41.0	18.2

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.6 PK	74.0	-13.4	1.32 V	256	54.2	6.4
2	5150.00	48.5 AV	54.0	-5.5	1.32 V	256	42.1	6.4
3	*5260.00	111.7 PK			1.32 V	256	69.8	41.9
4	*5260.00	102.0 AV			1.32 V	256	60.1	41.9
5	#10520.00	59.4 PK	68.2	-8.8	2.10 V	36	41.2	18.2

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 60 : 5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	110.2 PK			1.11 H	63	68.3	41.9
2	*5300.00	101.7 AV			1.11 H	63	59.8	41.9
3	10600.00	58.8 PK	74.0	-15.2	1.80 H	19	41.2	17.6
4	10600.00	45.6 AV	54.0	-8.4	1.80 H	19	28.0	17.6

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	111.6 PK			2.22 V	253	69.7	41.9
2	*5300.00	102.1 AV			2.22 V	253	60.2	41.9
3	10600.00	58.0 PK	74.0	-16.0	2.09 V	30	40.4	17.6
4	10600.00	44.9 AV	54.0	-9.1	2.09 V	30	27.3	17.6

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	110.4 PK			2.39 H	55	68.4	42.0
2	*5320.00	101.4 AV			2.39 H	55	59.4	42.0
3	5350.00	68.2 PK	74.0	-5.8	2.39 H	55	61.9	6.3
4	5350.00	51.9 AV	54.0	-2.1	2.39 H	55	45.6	6.3
5	10640.00	58.8 PK	74.0	-15.2	1.86 H	20	41.3	17.5
6	10640.00	45.7 AV	54.0	-8.3	1.86 H	20	28.2	17.5

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	111.9 PK			2.27 V	255	69.9	42.0
2	*5320.00	102.3 AV			2.27 V	255	60.3	42.0
3	5350.00	69.4 PK	74.0	-4.6	2.27 V	255	63.1	6.3
4	5350.00	53.5 AV	54.0	-0.5	2.27 V	255	47.2	6.3
5	10640.00	59.0 PK	74.0	-15.0	2.12 V	40	41.5	17.5
6	10640.00	45.8 AV	54.0	-8.2	2.12 V	40	28.3	17.5

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 100 : 5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	61.5 PK	74.0	-12.5	1.72 H	345	55.2	6.3
2	5460.00	48.3 AV	54.0	-5.7	1.72 H	345	42.0	6.3
3	#5470.00	65.2 PK	68.2	-3.0	1.72 H	345	59.0	6.2
4	*5500.00	103.6 PK			1.72 H	345	61.5	42.1
5	*5500.00	94.3 AV			1.72 H	345	52.2	42.1
6	11000.00	58.0 PK	74.0	-16.0	1.82 H	22	39.9	18.1
7	11000.00	45.4 AV	54.0	-8.6	1.82 H	22	27.3	18.1

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	63.0 PK	74.0	-11.0	2.38 V	260	56.7	6.3
2	5460.00	49.1 AV	54.0	-4.9	2.38 V	260	42.8	6.3
3	#5470.00	67.9 PK	68.2	-0.3	2.38 V	260	61.7	6.2
4	*5500.00	107.4 PK			2.38 V	260	65.3	42.1
5	*5500.00	97.7 AV			2.38 V	260	55.6	42.1
6	11000.00	58.4 PK	74.0	-15.6	2.12 V	35	40.3	18.1
7	11000.00	45.1 AV	54.0	-8.9	2.12 V	35	27.0	18.1

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 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	106.1 PK			1.61 H	333	64.0	42.1
2	*5580.00	96.3 AV			1.61 H	333	54.2	42.1
3	11160.00	59.6 PK	74.0	-14.4	1.93 H	25	41.2	18.4
4	11160.00	46.2 AV	54.0	-7.8	1.93 H	25	27.8	18.4

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	105.0 PK			1.58 V	77	62.9	42.1
2	*5580.00	95.6 AV			1.58 V	77	53.5	42.1
3	11160.00	58.9 PK	74.0	-15.1	2.35 V	45	40.5	18.4
4	11160.00	46.1 AV	54.0	-7.9	2.35 V	45	27.7	18.4

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 140 : 5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	107.5 PK			1.21 H	323	65.2	42.3
2	*5700.00	98.0 AV			1.21 H	323	55.7	42.3
3	#5725.00	64.2 PK	68.2	-4.0	1.21 H	323	58.0	6.2
4	11400.00	58.7 PK	74.0	-15.3	1.92 H	38	40.8	17.9
5	11400.00	46.0 AV	54.0	-8.0	1.92 H	38	28.1	17.9

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	104.9 PK			1.56 V	77	62.6	42.3
2	*5700.00	95.3 AV			1.56 V	77	53.0	42.3
3	#5725.00	61.7 PK	68.2	-6.5	1.56 V	77	55.5	6.2
4	11400.00	57.2 PK	74.0	-16.8	2.19 V	35	39.3	17.9
5	11400.00	44.8 AV	54.0	-9.2	2.19 V	35	26.9	17.9

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 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	#5470.00	57.7 PK	68.2	-10.5	1.49 H	329	51.5	6.2
2	*5720.00	106.5 PK			1.49 H	329	64.3	42.2
3	*5720.00	96.9 AV			1.49 H	329	54.7	42.2
4	#5850.00	59.0 PK	68.2	-9.2	1.49 H	329	52.3	6.7
5	11440.00	59.2 PK	74.0	-14.8	2.09 H	29	41.0	18.2
6	11440.00	46.3 AV	54.0	-7.7	2.09 H	29	28.1	18.2

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.4 PK	68.2	-10.8	1.32 V	324	51.2	6.2
2	*5720.00	104.4 PK			1.32 V	324	62.2	42.2
3	*5720.00	94.9 AV			1.32 V	324	52.7	42.2
4	#5850.00	58.5 PK	68.2	-9.7	1.32 V	324	51.8	6.7
5	11440.00	59.1 PK	74.0	-14.9	2.01 V	58	40.9	18.2
6	11440.00	45.5 AV	54.0	-8.5	2.01 V	58	27.3	18.2

Remarks:

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

RF Mode	TX 802.11a	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	#5632.00	59.0 PK	68.2	-9.2	1.25 H	13	52.7	6.3
2	*5745.00	106.3 PK			1.25 H	13	64.1	42.2
3	*5745.00	96.3 AV			1.25 H	13	54.1	42.2
4	#5970.00	60.1 PK	68.2	-8.1	1.25 H	13	52.9	7.2
5	11490.00	57.3 PK	74.0	-16.7	1.80 H	15	38.7	18.6
6	11490.00	44.8 AV	54.0	-9.2	1.80 H	15	26.2	18.6

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5632.00	57.1 PK	68.2	-11.1	1.20 V	325	50.8	6.3
2	*5745.00	103.1 PK			1.20 V	325	60.9	42.2
3	*5745.00	93.4 AV			1.20 V	325	51.2	42.2
4	#5928.40	58.2 PK	68.2	-10.0	1.20 V	325	50.9	7.3
5	11490.00	59.9 PK	74.0	-14.1	2.41 V	58	41.3	18.6
6	11490.00	45.9 AV	54.0	-8.1	2.41 V	58	27.3	18.6

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 157 : 5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5620.00	57.4 PK	68.2	-10.8	1.08 H	10	51.2	6.2
2	*5785.00	104.5 PK			1.08 H	10	62.3	42.2
3	*5785.00	94.8 AV			1.08 H	10	52.6	42.2
4	#5966.80	58.8 PK	68.2	-9.4	1.08 H	10	51.6	7.2
5	11570.00	59.5 PK	74.0	-14.5	1.76 H	20	41.1	18.4
6	11570.00	46.2 AV	54.0	-7.8	1.76 H	20	27.8	18.4

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5628.40	56.6 PK	68.2	-11.6	1.26 V	322	50.4	6.2
2	*5785.00	102.4 PK			1.26 V	322	60.2	42.2
3	*5785.00	92.8 AV			1.26 V	322	50.6	42.2
4	#5951.60	57.9 PK	68.2	-10.3	1.26 V	322	50.6	7.3
5	11570.00	59.7 PK	74.0	-14.3	2.11 V	36	41.3	18.4
6	11570.00	45.5 AV	54.0	-8.5	2.11 V	36	27.1	18.4

Remarks:

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

RF Mode	TX 802.11a	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	#5635.20	58.0 PK	68.2	-10.2	1.35 H	14	51.7	6.3
2	*5825.00	104.8 PK			1.35 H	14	62.5	42.3
3	*5825.00	94.0 AV			1.35 H	14	51.7	42.3
4	#5990.00	59.2 PK	68.2	-9.0	1.35 H	14	52.1	7.1
5	11650.00	58.4 PK	74.0	-15.6	1.74 H	24	40.3	18.1
6	11650.00	46.1 AV	54.0	-7.9	1.74 H	24	28.0	18.1

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5636.00	56.4 PK	68.2	-11.8	1.42 V	323	50.1	6.3
2	*5825.00	101.8 PK			1.42 V	323	59.5	42.3
3	*5825.00	92.0 AV			1.42 V	323	49.7	42.3
4	#5962.00	59.3 PK	68.2	-8.9	1.42 V	323	52.0	7.3
5	11650.00	59.1 PK	74.0	-14.9	2.31 V	29	41.0	18.1
6	11650.00	45.2 AV	54.0	-8.8	2.31 V	29	27.1	18.1

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	65.8 PK	74.0	-8.2	1.10 H	70	59.4	6.4
2	5150.00	50.8 AV	54.0	-3.2	1.10 H	70	44.4	6.4
3	*5180.00	109.4 PK			1.10 H	70	67.2	42.2
4	*5180.00	100.0 AV			1.10 H	70	57.8	42.2
5	#10360.00	58.2 PK	68.2	-10.0	1.81 H	22	41.7	16.5

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	68.1 PK	74.0	-5.9	2.38 V	257	61.7	6.4
2	5150.00	52.9 AV	54.0	-1.1	2.38 V	257	46.5	6.4
3	*5180.00	111.1 PK			2.38 V	257	68.9	42.2
4	*5180.00	101.1 AV			2.38 V	257	58.9	42.2
5	#10360.00	58.3 PK	68.2	-9.9	2.11 V	31	41.8	16.5

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 40 : 5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	108.5 PK			1.27 H	80	66.4	42.1
2	*5200.00	99.4 AV			1.27 H	80	57.3	42.1
3	#10400.00	58.3 PK	68.2	-9.9	1.82 H	19	41.8	16.5

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	109.0 PK			2.79 V	256	66.9	42.1
2	*5200.00	100.2 AV			2.79 V	256	58.1	42.1
3	#10400.00	58.2 PK	68.2	-10.0	2.12 V	31	41.7	16.5

Remarks:

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

RF Mode	TX 802.11ac (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	5150.00	61.8 PK	74.0	-12.2	1.10 H	63	55.4	6.4
2	5150.00	48.6 AV	54.0	-5.4	1.10 H	63	42.2	6.4
3	*5240.00	110.1 PK			1.10 H	63	68.1	42.0
4	*5240.00	100.0 AV			1.10 H	63	58.0	42.0
5	#10480.00	59.7 PK	68.2	-8.5	1.79 H	15	41.6	18.1

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	61.3 PK	74.0	-12.7	2.85 V	254	54.9	6.4
2	5150.00	48.4 AV	54.0	-5.6	2.85 V	254	42.0	6.4
3	*5240.00	110.5 PK			2.85 V	254	68.5	42.0
4	*5240.00	100.1 AV			2.85 V	254	58.1	42.0
5	#10480.00	59.9 PK	68.2	-8.3	2.12 V	33	41.8	18.1

Remarks:

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

RF Mode	TX 802.11ac (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	61.3 PK	74.0	-12.7	1.12 H	70	54.9	6.4
2	5150.00	48.4 AV	54.0	-5.6	1.12 H	70	42.0	6.4
3	*5260.00	109.8 PK			1.12 H	70	67.9	41.9
4	*5260.00	100.1 AV			1.12 H	70	58.2	41.9
5	#10520.00	58.4 PK	68.2	-9.8	1.86 H	24	40.2	18.2

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.9 PK	74.0	-13.1	1.38 V	256	54.5	6.4
2	5150.00	48.4 AV	54.0	-5.6	1.38 V	256	42.0	6.4
3	*5260.00	111.1 PK			1.38 V	256	69.2	41.9
4	*5260.00	101.7 AV			1.38 V	256	59.8	41.9
5	#10520.00	60.2 PK	68.2	-8.0	2.32 V	46	42.0	18.2

Remarks:

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

RF Mode	TX 802.11ac (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	109.3 PK			2.54 H	56	67.4	41.9
2	*5300.00	100.0 AV			2.54 H	56	58.1	41.9
3	10600.00	57.4 PK	74.0	-16.6	1.84 H	29	39.8	17.6
4	10600.00	45.1 AV	54.0	-8.9	1.84 H	29	27.5	17.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	111.8 PK			1.41 V	257	69.9	41.9
2	*5300.00	101.7 AV			1.41 V	257	59.8	41.9
3	10600.00	59.0 PK	74.0	-15.0	2.15 V	50	41.4	17.6
4	10600.00	45.7 AV	54.0	-8.3	2.15 V	50	28.1	17.6

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 64 : 5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	110.1 PK			2.37 H	56	68.1	42.0
2	*5320.00	100.0 AV			2.37 H	56	58.0	42.0
3	5350.00	65.4 PK	74.0	-8.6	2.37 H	56	59.1	6.3
4	5350.00	50.9 AV	54.0	-3.1	2.37 H	56	44.6	6.3
5	10640.00	57.4 PK	74.0	-16.6	1.90 H	24	39.9	17.5
6	10640.00	45.1 AV	54.0	-8.9	1.90 H	24	27.6	17.5

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	111.7 PK			2.30 V	256	69.7	42.0
2	*5320.00	102.3 AV			2.30 V	256	60.3	42.0
3	5350.00	68.0 PK	74.0	-6.0	2.30 V	256	61.7	6.3
4	5350.00	52.4 AV	54.0	-1.6	2.30 V	256	46.1	6.3
5	10640.00	58.7 PK	74.0	-15.3	2.23 V	53	41.2	17.5
6	10640.00	45.7 AV	54.0	-8.3	2.23 V	53	28.2	17.5

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 100 : 5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.6 PK	74.0	-16.4	1.24 H	329	51.3	6.3
2	5460.00	44.4 AV	54.0	-9.6	1.24 H	329	38.1	6.3
3	#5470.00	60.2 PK	68.2	-8.0	1.24 H	329	54.0	6.2
4	*5500.00	105.3 PK			1.24 H	329	63.2	42.1
5	*5500.00	95.2 AV			1.24 H	329	53.1	42.1
6	11000.00	59.7 PK	74.0	-14.3	1.92 H	24	41.6	18.1
7	11000.00	45.2 AV	54.0	-8.8	1.92 H	24	27.1	18.1

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.1 PK	74.0	-16.9	1.36 V	72	50.8	6.3
2	5460.00	44.0 AV	54.0	-10.0	1.36 V	72	37.7	6.3
3	#5470.00	60.0 PK	68.2	-8.2	1.36 V	72	53.8	6.2
4	*5500.00	104.7 PK			1.36 V	72	62.6	42.1
5	*5500.00	95.4 AV			1.36 V	72	53.3	42.1
6	11000.00	58.3 PK	74.0	-15.7	2.15 V	36	40.2	18.1
7	11000.00	45.7 AV	54.0	-8.3	2.15 V	36	27.6	18.1

Remarks:

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

RF Mode	TX 802.11ac (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	105.7 PK			1.25 H	327	63.6	42.1
2	*5580.00	96.6 AV			1.25 H	327	54.5	42.1
3	11160.00	59.9 PK	74.0	-14.1	1.83 H	27	41.5	18.4
4	11160.00	46.0 AV	54.0	-8.0	1.83 H	27	27.6	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	105.4 PK			1.34 V	75	63.3	42.1
2	*5580.00	95.2 AV			1.34 V	75	53.1	42.1
3	11160.00	58.1 PK	74.0	-15.9	2.23 V	42	39.7	18.4
4	11160.00	46.0 AV	54.0	-8.0	2.23 V	42	27.6	18.4

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 140 : 5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	106.7 PK			1.56 H	324	64.4	42.3
2	*5700.00	96.9 AV			1.56 H	324	54.6	42.3
3	#5725.00	59.7 PK	68.2	-8.5	1.56 H	324	53.5	6.2
4	11400.00	59.1 PK	74.0	-14.9	1.89 H	31	41.2	17.9
5	11400.00	45.7 AV	54.0	-8.3	1.89 H	31	27.8	17.9

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	104.3 PK			1.54 V	77	62.0	42.3
2	*5700.00	94.8 AV			1.54 V	77	52.5	42.3
3	#5725.00	57.2 PK	68.2	-11.0	1.54 V	72	51.0	6.2
4	11400.00	58.1 PK	74.0	-15.9	2.14 V	30	40.2	17.9
5	11400.00	44.9 AV	54.0	-9.1	2.14 V	30	27.0	17.9

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	#5470.00	57.8 PK	68.2	-10.4	1.50 H	329	51.6	6.2
2	*5720.00	106.4 PK			1.50 H	329	64.2	42.2
3	*5720.00	96.8 AV			1.50 H	329	54.6	42.2
4	#5850.00	58.0 PK	68.2	-10.2	1.50 H	329	51.3	6.7
5	11440.00	59.8 PK	74.0	-14.2	1.77 H	18	41.6	18.2
6	11440.00	45.4 AV	54.0	-8.6	1.77 H	18	27.2	18.2

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.4 PK	68.2	-10.8	1.18 V	322	51.2	6.2
2	*5720.00	103.8 PK			1.18 V	322	61.6	42.2
3	*5720.00	94.3 AV			1.18 V	322	52.1	42.2
4	#5850.00	58.2 PK	68.2	-10.0	1.18 V	322	51.5	6.7
5	11440.00	59.0 PK	74.0	-15.0	2.16 V	35	40.8	18.2
6	11440.00	45.3 AV	54.0	-8.7	2.16 V	35	27.1	18.2

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	#5631.20	60.2 PK	68.2	-8.0	1.27 H	13	53.9	6.3
2	*5745.00	106.1 PK			1.27 H	13	63.9	42.2
3	*5745.00	96.5 AV			1.27 H	13	54.3	42.2
4	#5978.80	61.7 PK	68.2	-6.5	1.27 H	13	54.6	7.1
5	11490.00	59.6 PK	74.0	-14.4	1.79 H	22	41.0	18.6
6	11490.00	46.5 AV	54.0	-7.5	1.79 H	22	27.9	18.6

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5643.60	56.7 PK	68.2	-11.5	1.44 V	325	50.5	6.2
2	*5745.00	103.3 PK			1.44 V	325	61.1	42.2
3	*5745.00	93.5 AV			1.44 V	325	51.3	42.2
4	#5983.60	57.9 PK	68.2	-10.3	1.44 V	325	50.8	7.1
5	11490.00	59.2 PK	74.0	-14.8	2.12 V	58	40.6	18.6
6	11490.00	45.6 AV	54.0	-8.4	2.12 V	58	27.0	18.6

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 157 : 5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5622.00	59.8 PK	68.2	-8.4	1.50 H	34	53.6	6.2
2	*5785.00	104.8 PK			1.50 H	34	62.6	42.2
3	*5785.00	94.8 AV			1.50 H	34	52.6	42.2
4	#5954.00	60.5 PK	68.2	-7.7	1.50 H	34	53.2	7.3
5	11570.00	57.9 PK	74.0	-16.1	1.75 H	24	39.5	18.4
6	11570.00	46.1 AV	54.0	-7.9	1.75 H	24	27.7	18.4

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5640.40	56.3 PK	68.2	-11.9	1.48 V	324	50.1	6.2
2	*5785.00	103.0 PK			1.48 V	324	60.8	42.2
3	*5785.00	93.0 AV			1.48 V	324	50.8	42.2
4	#5955.60	58.1 PK	68.2	-10.1	1.48 V	324	50.8	7.3
5	11570.00	59.5 PK	74.0	-14.5	2.03 V	40	41.1	18.4
6	11570.00	45.7 AV	54.0	-8.3	2.03 V	40	27.3	18.4

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 165 : 5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5629.60	57.5 PK	68.2	-10.7	1.15 H	11	51.3	6.2
2	*5825.00	104.8 PK			1.15 H	11	62.5	42.3
3	*5825.00	95.4 AV			1.15 H	11	53.1	42.3
4	#5984.00	59.6 PK	68.2	-8.6	1.15 H	11	52.5	7.1
5	11650.00	57.1 PK	74.0	-16.9	1.79 H	22	39.0	18.1
6	11650.00	44.3 AV	54.0	-9.7	1.79 H	22	26.2	18.1

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5637.20	56.4 PK	68.2	-11.8	1.54 V	328	50.1	6.3
2	*5825.00	103.1 PK			1.54 V	328	60.8	42.3
3	*5825.00	92.5 AV			1.54 V	328	50.2	42.3
4	#5977.20	57.6 PK	68.2	-10.6	1.54 V	328	50.5	7.1
5	11650.00	59.3 PK	74.0	-14.7	1.99 V	36	41.2	18.1
6	11650.00	45.6 AV	54.0	-8.4	1.99 V	36	27.5	18.1

Remarks:

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

RF Mode	TX 802.11ac (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	69.7 PK	74.0	-4.3	1.05 H	71	63.3	6.4
2	5150.00	53.5 AV	54.0	-0.5	1.05 H	71	47.1	6.4
3	*5190.00	107.2 PK			1.05 H	71	65.1	42.1
4	*5190.00	97.2 AV			1.05 H	71	55.1	42.1
5	#10380.00	58.2 PK	68.2	-10.0	1.83 H	19	41.6	16.6

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	69.9 PK	74.0	-4.1	2.52 V	263	63.5	6.4
2	5150.00	53.2 AV	54.0	-0.8	2.52 V	263	46.8	6.4
3	*5190.00	107.8 PK			2.52 V	263	65.7	42.1
4	*5190.00	97.8 AV			2.52 V	263	55.7	42.1
5	#10380.00	58.5 PK	68.2	-9.7	2.15 V	35	41.9	16.6

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	63.1 PK	74.0	-10.9	1.03 H	72	56.7	6.4
2	5150.00	49.4 AV	54.0	-4.6	1.03 H	72	43.0	6.4
3	*5230.00	107.1 PK			1.03 H	72	65.1	42.0
4	*5230.00	96.8 AV			1.03 H	72	54.8	42.0
5	#10460.00	59.5 PK	68.2	-8.7	1.83 H	19	41.8	17.7

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	62.0 PK	74.0	-12.0	2.35 V	266	55.6	6.4
2	5150.00	49.3 AV	54.0	-4.7	2.35 V	266	42.9	6.4
3	*5230.00	108.0 PK			2.35 V	266	66.0	42.0
4	*5230.00	98.2 AV			2.35 V	266	56.2	42.0
5	#10460.00	59.3 PK	68.2	-8.9	2.15 V	35	41.6	17.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency.
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	60.4 PK	74.0	-13.6	2.54 H	53	54.0	6.4
2	5150.00	48.1 AV	54.0	-5.9	2.54 H	53	41.7	6.4
3	*5270.00	105.3 PK			2.54 H	53	63.4	41.9
4	*5270.00	96.1 AV			2.54 H	53	54.2	41.9
5	#10540.00	59.9 PK	68.2	-8.3	2.08 H	26	41.8	18.1

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.5 PK	74.0	-13.5	1.39 V	259	54.1	6.4
2	5150.00	48.2 AV	54.0	-5.8	1.39 V	259	41.8	6.4
3	*5270.00	107.7 PK			1.39 V	259	65.8	41.9
4	*5270.00	97.6 AV			1.39 V	259	55.7	41.9
5	#10540.00	59.5 PK	68.2	-8.7	2.00 V	45	41.4	18.1

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 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	106.4 PK			2.48 H	54	64.4	42.0
2	*5310.00	97.0 AV			2.48 H	54	55.0	42.0
3	5350.00	68.3 PK	74.0	-5.7	2.48 H	54	62.0	6.3
4	5350.00	53.5 AV	54.0	-0.5	2.48 H	54	47.2	6.3
5	10620.00	58.6 PK	74.0	-15.4	2.06 H	35	40.9	17.7
6	10620.00	46.5 AV	54.0	-7.5	2.06 H	35	28.8	17.7

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	109.0 PK			2.35 V	259	67.0	42.0
2	*5310.00	98.9 AV			2.35 V	259	56.9	42.0
3	5350.00	71.8 PK	74.0	-2.2	2.35 V	259	65.5	6.3
4	5350.00	53.8 AV	54.0	-0.2	2.35 V	259	47.5	6.3
5	10620.00	59.3 PK	74.0	-14.7	2.01 V	40	41.6	17.7
6	10620.00	45.8 AV	54.0	-8.2	2.01 V	40	28.1	17.7

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	58.7 PK	74.0	-15.3	1.36 H	325	52.4	6.3
2	5460.00	45.8 AV	54.0	-8.2	1.36 H	325	39.5	6.3
3	#5470.00	61.7 PK	68.2	-6.5	1.36 H	325	55.5	6.2
4	*5510.00	103.2 PK			1.36 H	325	61.1	42.1
5	*5510.00	93.8 AV			1.36 H	325	51.7	42.1
6	11020.00	59.0 PK	74.0	-15.0	1.61 H	33	40.9	18.1
7	11020.00	45.9 AV	54.0	-8.1	1.61 H	33	27.8	18.1

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.7 PK	74.0	-14.3	1.37 V	71	53.4	6.3
2	5460.00	45.8 AV	54.0	-8.2	1.37 V	71	39.5	6.3
3	#5470.00	63.4 PK	68.2	-4.8	1.37 V	71	57.2	6.2
4	*5510.00	102.8 PK			1.37 V	71	60.7	42.1
5	*5510.00	93.0 AV			1.37 V	71	50.9	42.1
6	11020.00	58.4 PK	74.0	-15.6	2.20 V	40	40.3	18.1
7	11020.00	45.5 AV	54.0	-8.5	2.20 V	40	27.4	18.1

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 110 : 5550 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	102.2 PK			1.69 H	332	60.1	42.1
2	*5550.00	91.6 AV			1.69 H	332	49.5	42.1
3	11100.00	59.4 PK	74.0	-14.6	1.93 H	26	41.2	18.2
4	11100.00	45.5 AV	54.0	-8.5	1.93 H	26	27.3	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	102.1 PK			1.42 V	74	60.0	42.1
2	*5550.00	91.7 AV			1.42 V	74	49.6	42.1
3	11100.00	58.2 PK	74.0	-15.8	2.11 V	33	40.0	18.2
4	11100.00	45.4 AV	54.0	-8.6	2.11 V	33	27.2	18.2

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	104.2 PK			1.24 H	327	62.0	42.2
2	*5670.00	94.4 AV			1.24 H	327	52.2	42.2
3	#5725.00	57.5 PK	68.2	-10.7	1.24 H	327	51.3	6.2
4	11340.00	59.8 PK	74.0	-14.2	1.88 H	38	41.5	18.3
5	11340.00	46.1 AV	54.0	-7.9	1.88 H	38	27.8	18.3

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	101.9 PK			1.38 V	75	59.7	42.2
2	*5670.00	91.9 AV			1.38 V	75	49.7	42.2
3	#5725.00	44.3 PK	68.2	-23.9	1.38 V	75	38.1	6.2
4	11340.00	58.4 PK	74.0	-15.6	2.13 V	34	40.1	18.3
5	11340.00	45.6 AV	54.0	-8.4	2.13 V	34	27.3	18.3

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 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	#5470.00	57.9 PK	68.2	-10.3	1.37 H	332	51.7	6.2
2	*5710.00	103.7 PK			1.37 H	332	61.4	42.3
3	*5710.00	94.5 AV			1.37 H	332	52.2	42.3
4	#5850.00	58.4 PK	68.2	-9.8	1.37 H	332	51.7	6.7
5	11420.00	59.5 PK	74.0	-14.5	1.89 H	28	41.5	18.0
6	11420.00	45.3 AV	54.0	-8.7	1.89 H	28	27.3	18.0

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	#5470.00	57.6 PK	68.2	-10.6	1.50 V	325	51.4	6.2
2	*5710.00	102.5 PK			1.50 V	325	60.2	42.3
3	*5710.00	92.7 AV			1.50 V	325	50.4	42.3
4	#5850.00	58.5 PK	68.2	-9.7	1.50 V	325	51.8	6.7
5	11420.00	59.0 PK	74.0	-15.0	2.15 V	29	41.0	18.0
6	11420.00	45.3 AV	54.0	-8.7	2.15 V	29	27.3	18.0

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 (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	#5610.00	59.4 PK	68.2	-8.8	1.12 H	12	53.2	6.2
2	*5755.00	103.7 PK			1.12 H	12	61.4	42.3
3	*5755.00	93.6 AV			1.12 H	12	51.3	42.3
4	#5942.80	60.0 PK	68.2	-8.2	1.12 H	12	52.7	7.3
5	11510.00	57.7 PK	74.0	-16.3	1.73 H	20	39.1	18.6
6	11510.00	45.9 AV	54.0	-8.1	1.73 H	20	27.3	18.6

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5625.60	57.4 PK	68.2	-10.8	1.51 V	325	51.2	6.2
2	*5755.00	101.2 PK			1.51 V	325	58.9	42.3
3	*5755.00	91.0 AV			1.51 V	325	48.7	42.3
4	#5938.40	57.6 PK	68.2	-10.6	1.51 V	325	50.3	7.3
5	11510.00	59.1 PK	74.0	-14.9	2.16 V	35	40.5	18.6
6	11510.00	46.1 AV	54.0	-7.9	2.16 V	35	27.5	18.6

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 159 : 5795 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5626.40	57.7 PK	68.2	-10.5	1.36 H	40	51.5	6.2
2	*5795.00	102.5 PK			1.36 H	40	60.3	42.2
3	*5795.00	92.7 AV			1.36 H	40	50.5	42.2
4	#5968.40	58.5 PK	68.2	-9.7	1.36 H	40	51.3	7.2
5	11590.00	57.8 PK	74.0	-16.2	1.82 H	23	39.6	18.2
6	11590.00	44.6 AV	54.0	-9.4	1.82 H	23	26.4	18.2

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5624.40	57.1 PK	68.2	-11.1	1.27 V	321	50.9	6.2
2	*5795.00	99.6 PK			1.27 V	321	57.4	42.2
3	*5795.00	89.8 AV			1.27 V	321	47.6	42.2
4	#5970.80	58.9 PK	68.2	-9.3	1.27 V	321	51.7	7.2
5	11590.00	59.0 PK	74.0	-15.0	2.00 V	28	40.8	18.2
6	11590.00	45.1 AV	54.0	-8.9	2.00 V	28	26.9	18.2

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	65.3 PK	74.0	-8.7	1.07 H	71	58.9	6.4
2	5150.00	53.3 AV	54.0	-0.7	1.07 H	71	46.9	6.4
3	*5210.00	104.4 PK			1.07 H	71	62.4	42.0
4	*5210.00	94.4 AV			1.07 H	71	52.4	42.0
5	5350.00	59.4 PK	74.0	-14.6	1.07 H	71	53.1	6.3
6	5350.00	46.5 AV	54.0	-7.5	1.07 H	71	40.2	6.3
7	#10420.00	58.6 PK	68.2	-9.6	1.76 H	17	41.6	17.0

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	67.6 PK	74.0	-6.4	2.95 V	258	61.2	6.4
2	5150.00	53.7 AV	54.0	-0.3	2.95 V	258	47.3	6.4
3	*5210.00	104.8 PK			2.95 V	258	62.8	42.0
4	*5210.00	94.3 AV			2.95 V	258	52.3	42.0
5	5350.00	58.5 PK	74.0	-15.5	2.95 V	258	52.2	6.3
6	5350.00	46.3 AV	54.0	-7.7	2.95 V	258	40.0	6.3
7	#10420.00	58.7 PK	68.2	-9.5	2.09 V	34	41.7	17.0

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.4 PK	74.0	-15.6	1.46 H	92	52.0	6.4
2	5150.00	45.8 AV	54.0	-8.2	1.46 H	92	39.4	6.4
3	*5290.00	101.8 PK			1.46 H	92	59.9	41.9
4	*5290.00	92.3 AV			1.46 H	92	50.4	41.9
5	5350.00	66.3 PK	74.0	-7.7	1.46 H	92	60.0	6.3
6	5350.00	53.5 AV	54.0	-0.5	1.46 H	92	47.2	6.3
7	#10580.00	59.2 PK	68.2	-9.0	2.12 H	25	41.4	17.8

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	57.2 PK	74.0	-16.8	1.49 V	258	50.8	6.4
2	5150.00	46.1 AV	54.0	-7.9	1.49 V	258	39.7	6.4
3	*5290.00	103.3 PK			1.49 V	258	61.4	41.9
4	*5290.00	93.6 AV			1.49 V	258	51.7	41.9
5	5350.00	68.8 PK	74.0	-5.2	1.49 V	258	62.5	6.3
6	5350.00	53.0 AV	54.0	-1.0	1.49 V	258	46.7	6.3
7	#10580.00	59.7 PK	68.2	-8.5	2.04 V	32	41.9	17.8

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 106 : 5530 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	62.5 PK	74.0	-11.5	1.21 H	327	56.2	6.3
2	5460.00	48.9 AV	54.0	-5.1	1.21 H	327	42.6	6.3
3	#5470.00	63.4 PK	68.2	-4.8	1.21 H	327	57.2	6.2
4	*5530.00	99.1 PK			1.21 H	327	57.0	42.1
5	*5530.00	88.6 AV			1.21 H	327	46.5	42.1
6	#5725.00	57.8 PK	68.2	-10.4	1.21 H	327	51.6	6.2
7	11060.00	59.3 PK	74.0	-14.7	1.99 H	35	41.2	18.1
8	11060.00	45.6 AV	54.0	-8.4	1.99 H	35	27.5	18.1

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	62.0 PK	74.0	-12.0	1.35 V	70	55.7	6.3
2	5460.00	50.0 AV	54.0	-4.0	1.35 V	70	43.7	6.3
3	#5470.00	65.0 PK	68.2	-3.2	1.35 V	70	58.8	6.2
4	*5530.00	99.0 PK			1.35 V	70	56.9	42.1
5	*5530.00	88.8 AV			1.35 V	70	46.7	42.1
6	#5725.00	57.9 PK	68.2	-10.3	1.35 V	70	51.7	6.2
7	11060.00	58.5 PK	74.0	-15.5	2.12 V	36	41.9	16.6
8	11060.00	44.8 AV	54.0	-9.2	2.12 V	36	28.2	16.6

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.6 PK	74.0	-16.4	1.55 H	328	51.3	6.3
2	5460.00	45.2 AV	54.0	-8.8	1.55 H	328	38.9	6.3
3	#5470.00	58.1 PK	68.2	-10.1	1.55 H	328	51.9	6.2
4	*5610.00	99.6 PK			1.55 H	328	57.5	42.1
5	*5610.00	89.8 AV			1.55 H	328	47.7	42.1
6	#5725.00	57.8 PK	68.2	-10.4	1.55 H	328	51.6	6.2
7	11220.00	59.8 PK	74.0	-14.2	1.95 H	36	41.3	18.5
8	11220.00	46.1 AV	54.0	-7.9	1.95 H	36	27.6	18.5

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	57.5 PK	74.0	-16.5	1.34 V	71	51.2	6.3
2	5460.00	45.3 AV	54.0	-8.7	1.34 V	71	39.0	6.3
3	#5470.00	57.4 PK	68.2	-10.8	1.34 V	71	51.2	6.2
4	*5610.00	99.3 PK			1.34 V	71	57.2	42.1
5	*5610.00	89.0 AV			1.34 V	71	46.9	42.1
6	#5725.00	57.8 PK	68.2	-10.4	1.34 V	71	51.6	6.2
7	11220.00	57.2 PK	74.0	-16.8	2.12 V	35	40.5	16.7
8	11220.00	44.9 AV	54.0	-9.1	2.12 V	35	28.2	16.7

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 138 : 5690 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.5 PK	68.2	-10.7	1.32 H	323	51.3	6.2
2	*5690.00	101.6 PK			1.32 H	323	59.3	42.3
3	*5690.00	91.5 AV			1.32 H	323	49.2	42.3
4	#5850.00	58.7 PK	68.2	-9.5	1.32 H	323	52.0	6.7
5	11380.00	58.8 PK	74.0	-15.2	1.93 H	23	40.9	17.9
6	11380.00	44.9 AV	54.0	-9.1	1.93 H	23	27.0	17.9

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5470.00	57.3 PK	68.2	-10.9	1.39 V	322	51.1	6.2
2	*5690.00	99.2 PK			1.39 V	322	56.9	42.3
3	*5690.00	89.6 AV			1.39 V	322	47.3	42.3
4	#5850.00	58.6 PK	68.2	-9.6	1.39 V	322	51.9	6.7
5	11380.00	58.4 PK	74.0	-15.6	2.08 V	32	40.5	17.9
6	11380.00	44.8 AV	54.0	-9.2	2.08 V	32	26.9	17.9

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 155 : 5775 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5644.80	59.6 PK	68.2	-8.6	1.21 H	10	53.4	6.2
2	#5650.00	57.9 PK	68.2	-10.3	1.21 H	10	51.7	6.2
3	*5775.00	101.3 PK			1.21 H	10	59.1	42.2
4	*5775.00	91.3 AV			1.21 H	10	49.1	42.2
5	#5925.00	59.9 PK	68.2	-8.3	1.21 H	10	52.6	7.3
6	#5935.60	60.2 PK	68.2	-8.0	1.21 H	10	52.9	7.3
7	11550.00	59.0 PK	74.0	-15.0	1.83 H	17	40.6	18.4
8	11550.00	45.7 AV	54.0	-8.3	1.83 H	17	27.3	18.4

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5645.60	57.2 PK	68.2	-11.0	1.49 V	322	51.0	6.2
2	#5650.00	57.8 PK	68.2	-10.4	1.49 V	322	51.6	6.2
3	*5775.00	98.2 PK			1.49 V	322	56.0	42.2
4	*5775.00	88.3 AV			1.49 V	322	46.1	42.2
5	#5925.00	58.7 PK	68.2	-9.5	1.49 V	322	51.4	7.3
6	#5943.60	57.9 PK	68.2	-10.3	1.49 V	322	50.6	7.3
7	11550.00	59.5 PK	74.0	-14.5	2.10 V	38	41.1	18.4
8	11550.00	45.5 AV	54.0	-8.5	2.10 V	38	27.1	18.4

Remarks:

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

Below 1GHz Worst-Case Data: 802.11a

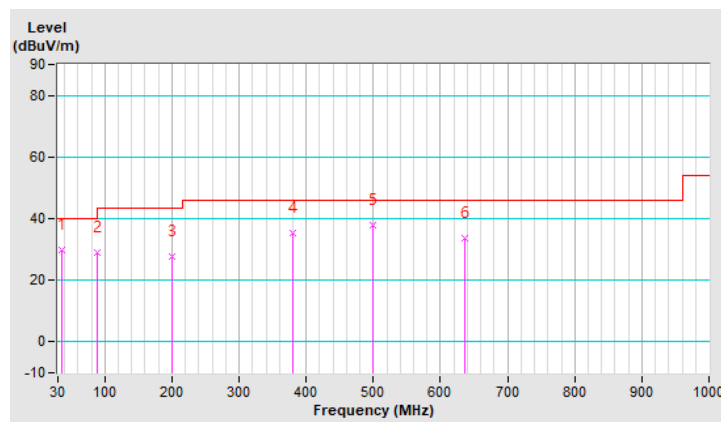
RF Mode	TX 802.11a	Channel	CH 36 : 5180 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	35.62	29.8 QP	40.0	-10.2	1.50 H	74	40.1	-10.3
2	89.04	29.0 QP	43.5	-14.5	1.00 H	167	43.3	-14.3
3	200.10	27.8 QP	43.5	-15.7	1.00 H	65	39.1	-11.3
4	380.04	35.5 QP	46.0	-10.5	2.00 H	160	40.5	-5.0
5	499.54	37.9 QP	46.0	-8.1	1.50 H	165	40.2	-2.3
6	635.90	33.6 QP	46.0	-12.4	1.00 H	251	32.6	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. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20dB below the permissible value to be report.

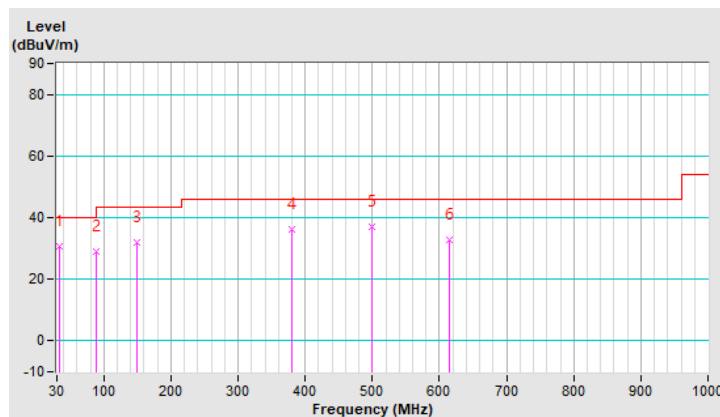


RF Mode	TX 802.11a	Channel	CH 36 : 5180 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	34.22	30.8 QP	40.0	-9.2	1.50 V	173	41.3	-10.5
2	89.04	29.1 QP	43.5	-14.4	1.00 V	179	43.4	-14.3
3	149.49	32.0 QP	43.5	-11.5	1.00 V	234	40.6	-8.6
4	380.04	36.3 QP	46.0	-9.7	2.00 V	166	41.3	-5.0
5	499.54	37.2 QP	46.0	-8.8	1.00 V	167	39.5	-2.3
6	614.81	32.9 QP	46.0	-13.1	1.50 V	192	32.1	0.8

Remarks:

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



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Tested date: Jun. 22, 2021

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

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

2. The test was performed in HwaYa Shielded Room 2 (Conduction 2).

3. The VCCI Site Registration No. is C-12047.

4.2.3 Test Procedures

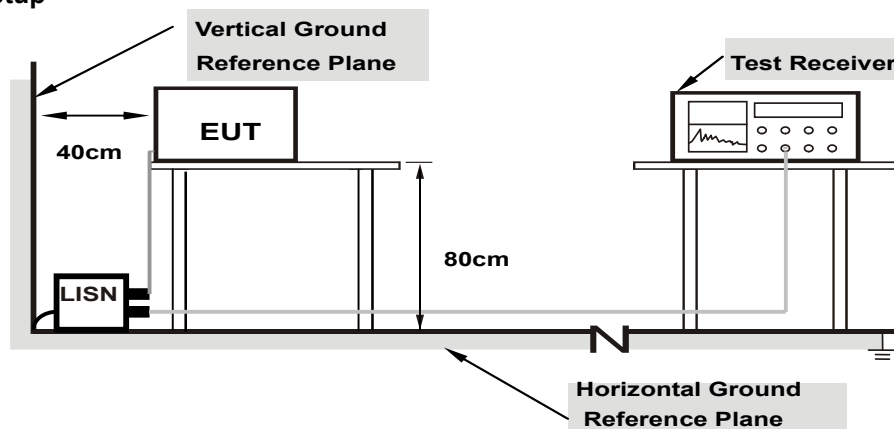
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

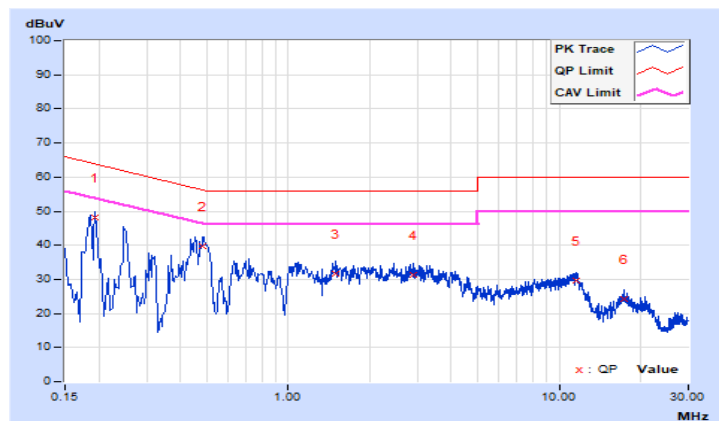
Worst-Case Data: 802.11a

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

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19301	10.08	38.23	22.27	48.31	32.35	63.91	53.91	-15.60	-21.56
2	0.48550	10.10	29.67	19.20	39.77	29.30	56.24	46.24	-16.47	-16.94
3	1.49113	10.15	21.38	14.53	31.53	24.68	56.00	46.00	-24.47	-21.32
4	2.89873	10.19	21.08	13.17	31.27	23.36	56.00	46.00	-24.73	-22.64
5	11.49682	10.34	19.25	9.57	29.59	19.91	60.00	50.00	-30.41	-30.09
6	17.47912	10.41	13.92	3.46	24.33	13.87	60.00	50.00	-35.67	-36.13

REMARKS:

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

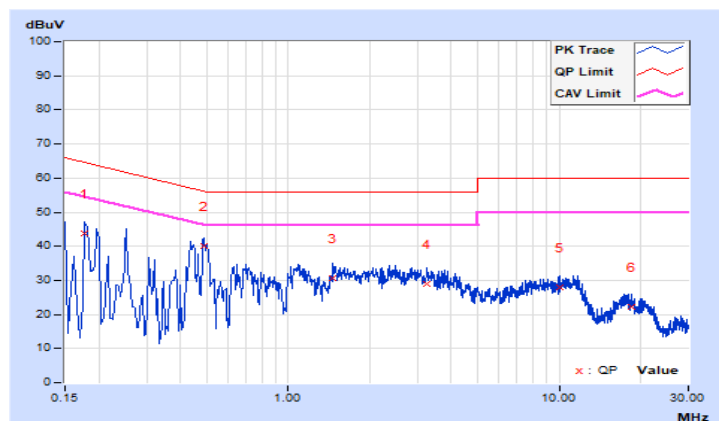


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.17737	10.08	33.70	13.88	43.78	23.96	64.61
2	0.48626	10.11	29.80	19.36	39.91	29.47	56.23	46.23	-16.32	-16.76
3	1.46376	10.16	20.41	12.75	30.57	22.91	56.00	46.00	-25.43	-23.09
4	3.25454	10.23	18.68	12.72	28.91	22.95	56.00	46.00	-27.09	-23.05
5	10.10486	10.41	17.56	8.10	27.97	18.51	60.00	50.00	-32.03	-31.49
6	18.44098	10.61	11.63	2.77	22.24	13.38	60.00	50.00	-37.76	-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.



4.3 Transmit Power Measurement

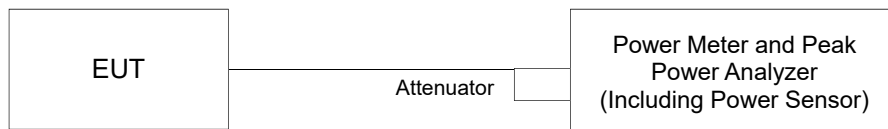
4.3.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p \leq 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A		√	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C		√	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3		√	1 Watt (30 dBm)

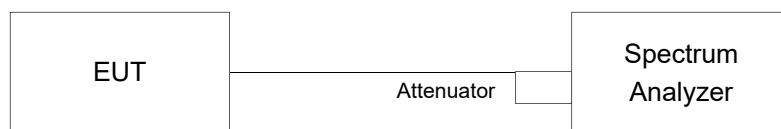
*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

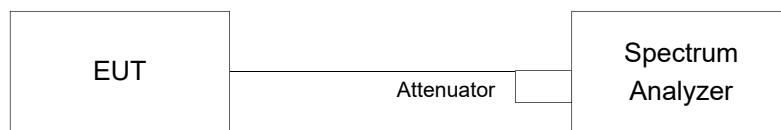
For 802.11a, 802.11ac (VHT20), 802.11ac (VHT40)



For 802.11ac (VHT80) and straddle channels



For 26dB Bandwidth



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 802.11a, 802.11ac (VHT20), 802.11ac (VHT40)

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

For 802.11ac (VHT80) and straddle channels

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

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%.
- f. For channel aggregation (channel 138, 142, 144) measurement refer to KDB 789033 D02 Section III. CHANNEL AGGREGATION.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

Power Output:

802.11a

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	29.376	14.68	24.00	Pass
40	5200	28.379	14.53	24.00	Pass
48	5240	28.249	14.51	24.00	Pass
52	5260	28.576	14.56	24.00	Pass
60	5300	28.379	14.53	24.00	Pass
64	5320	26.853	14.29	24.00	Pass
100	5500	23.823	13.77	24.00	Pass
116	5580	25.003	13.98	24.00	Pass
140	5700	22.336	13.49	24.00	Pass
144	5720 For U-NII-2C	17.539	12.44	23.01	Pass
144	5720 For U-NII-3	3.243	5.11	30.00	Pass
149	5745	17.824	12.51	30.00	Pass
157	5785	17.660	12.47	30.00	Pass
165	5825	16.827	12.26	30.00	Pass

Note:

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

1. $11\text{dBm} + 10\log(21.69) = 24.36 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.49) = 24.32 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.54) = 24.33 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.70) = 24.36 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.51) = 24.32 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.65) = 24.35 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.10) = 23.01 < 24\text{dBm}$

802.11ac (VHT20)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	26.424	14.22	24.00	Pass
40	5200	26.546	14.24	24.00	Pass
48	5240	26.303	14.20	24.00	Pass
52	5260	25.942	14.14	24.00	Pass
60	5300	24.66	13.92	24.00	Pass
64	5320	25.177	14.01	24.00	Pass
100	5500	21.528	13.33	24.00	Pass
116	5580	22.131	13.45	24.00	Pass
140	5700	18.113	12.58	24.00	Pass
144	5720 For U-NII-2C	15.849	12.00	22.96	Pass
144	5720 For U-NII-3	3.192	5.04	30.00	Pass
149	5745	16.406	12.15	30.00	Pass
157	5785	16.255	12.11	30.00	Pass
165	5825	16.181	12.09	30.00	Pass

Note:

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

1. $11\text{dBm} + 10\log(21.99) = 24.42 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(22.02) = 24.42 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(22.01) = 24.42 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.53) = 24.33 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.58) = 24.34 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.68) = 24.36 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.29) = 22.96 < 24\text{dBm}$

802.11ac (VHT40)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	27.102	14.33	24.00	Pass
46	5230	26.002	14.15	24.00	Pass
54	5270	26.122	14.17	24.00	Pass
62	5310	24.831	13.95	24.00	Pass
102	5510	20.230	13.06	24.00	Pass
110	5550	20.797	13.18	24.00	Pass
134	5670	19.099	12.81	24.00	Pass
142	5710 For U-NII-2C	16.331	12.13	24.00	Pass
142	5710 For U-NII-3	1.172	0.69	30.00	Pass
151	5755	17.100	12.33	30.00	Pass
159	5795	15.922	12.02	30.00	Pass

Note:

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

- $11\text{dBm} + 10\log(41.41) = 27.17 > 24\text{dBm}$
- $11\text{dBm} + 10\log(41.39) = 27.16 > 24\text{dBm}$
- $11\text{dBm} + 10\log(40.79) = 27.10 > 24\text{dBm}$
- $11\text{dBm} + 10\log(41.09) = 27.13 > 24\text{dBm}$
- $11\text{dBm} + 10\log(40.88) = 27.11 > 24\text{dBm}$
- $11\text{dBm} + 10\log(5725.00 - 5689.80) = 26.46 > 24\text{dBm}$

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	25.704	14.10	24.00	Pass
58	5290	25.763	14.11	24.00	Pass
106	5530	20.512	13.12	24.00	Pass
122	5610	20.559	13.13	24.00	Pass
138	5690 For U-NII-2C	16.069	12.06	24.00	Pass
138	5690 For U-NII-3	0.527	-2.78	30.00	Pass
155	5775	16.218	12.10	30.00	Pass

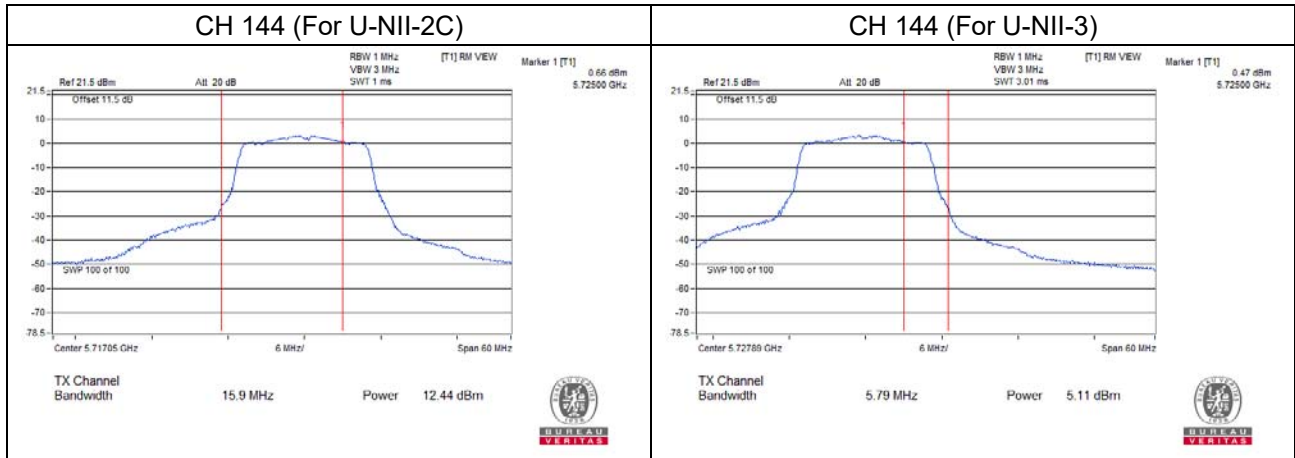
Note:

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

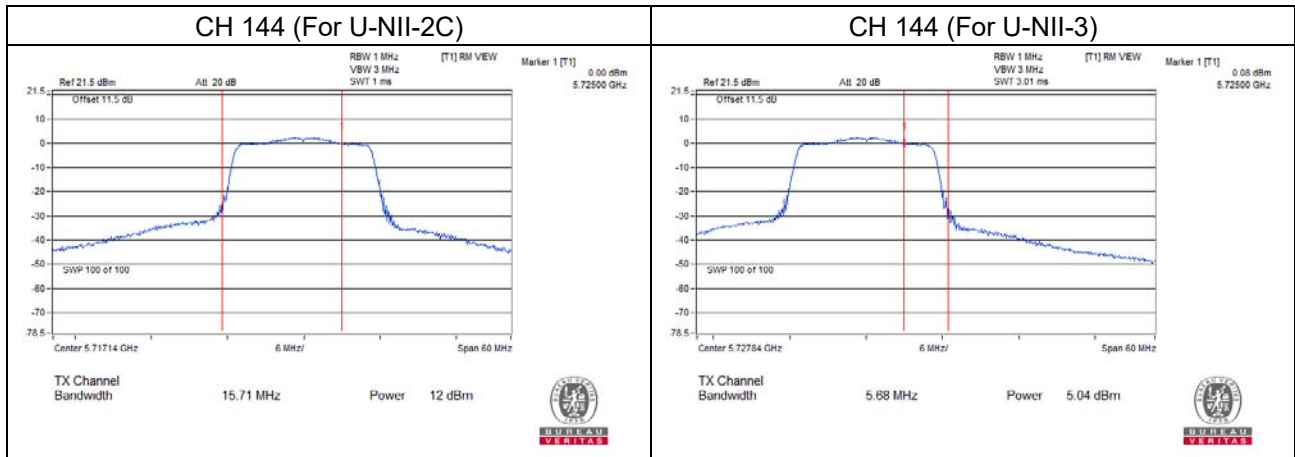
- $11\text{dBm} + 10\log(81.96) = 30.13 > 24\text{dBm}$
- $11\text{dBm} + 10\log(82.13) = 30.14 > 24\text{dBm}$
- $11\text{dBm} + 10\log(82.18) = 30.14 > 24\text{dBm}$
- $11\text{dBm} + 10\log(5725.00 - 5647.30) = 29.90 > 24\text{dBm}$

Straddle channel power plots:

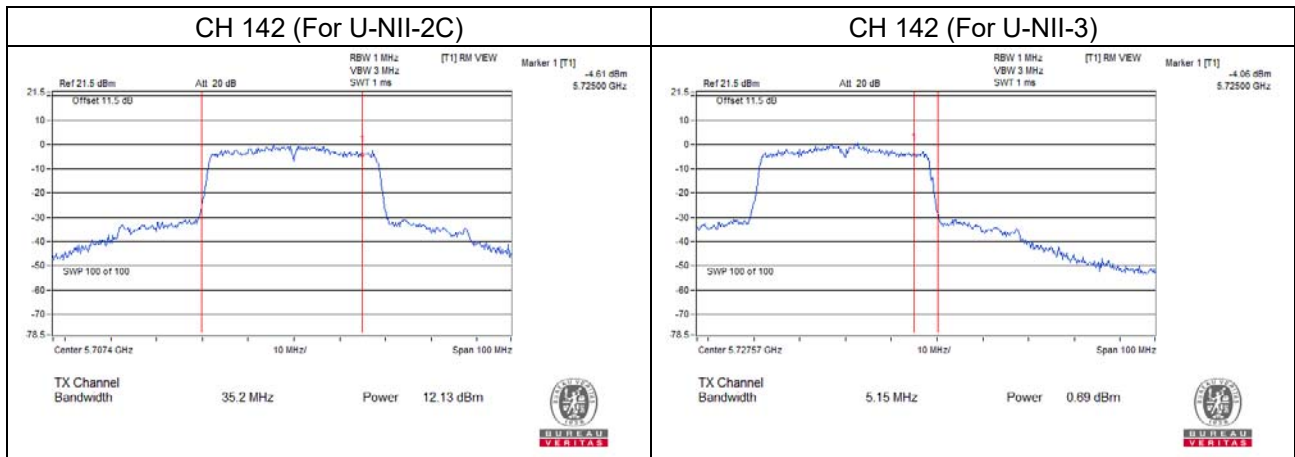
802.11a



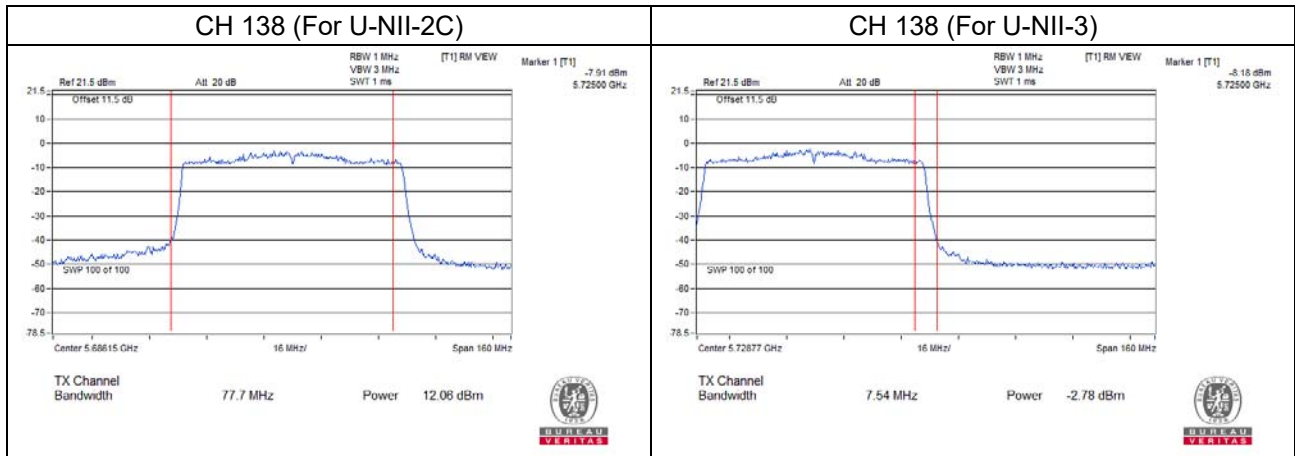
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



26dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	21.60
40	5200	21.60
48	5240	21.68
52	5260	21.69
60	5300	21.49
64	5320	21.54
100	5500	21.70
116	5580	21.51
140	5700	21.65
144	5720 For U-NII-2C	15.90

802.11ac (VHT20)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	21.81
40	5200	21.85
48	5240	21.91
52	5260	21.99
60	5300	22.02
64	5320	22.01
100	5500	21.53
116	5580	21.58
140	5700	21.68
144	5720 For U-NII-2C	15.71

802.11ac (VHT40)

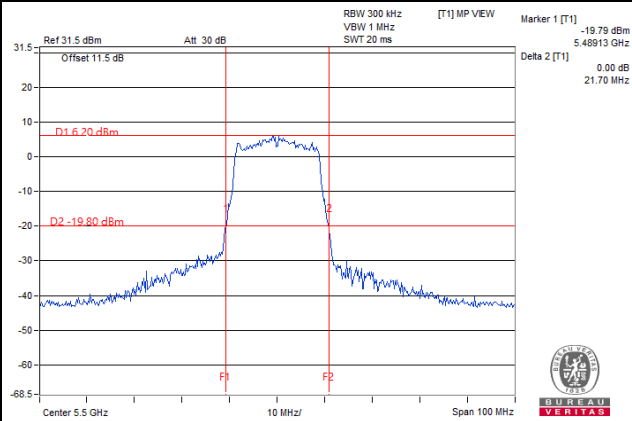
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
38	5190	41.43
46	5230	40.94
54	5270	41.41
62	5310	41.39
102	5510	40.79
110	5550	41.09
134	5670	40.88
142	5710 For U-NII-2C	35.20

802.11ac (VHT80)

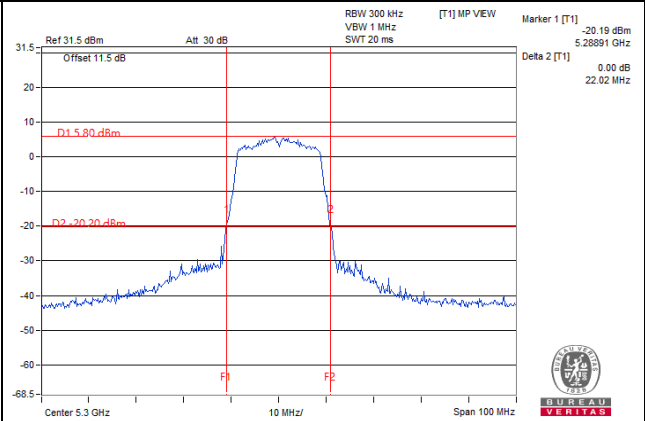
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
42	5210	82.14
58	5290	81.96
106	5530	82.13
122	5610	82.18
138	5690 For U-NII-2C	77.70

Spectrum Plot of Worst Value

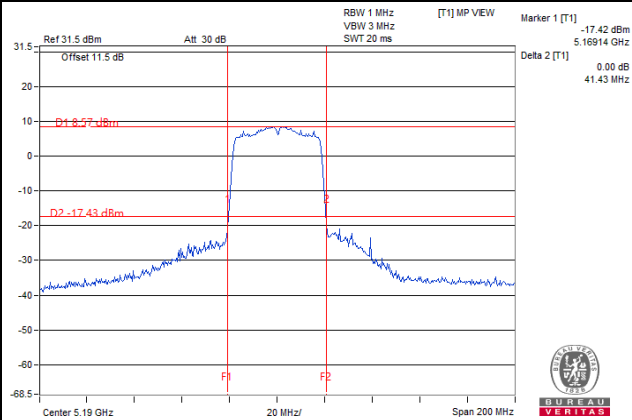
802.11a



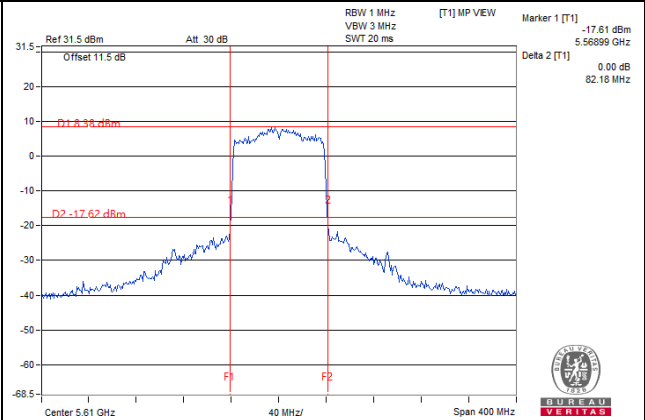
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



EUT Maximum Conducted Power

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	28.576	14.56
5470~5725	25.003	13.98

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	25.942	14.14
5470~5725	22.131	13.45

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	26.122	14.17
5470~5725	20.797	13.18

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

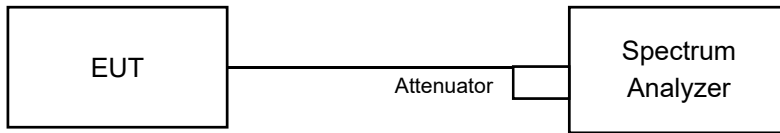
802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	25.763	14.11
5470~5725	20.559	13.13

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Result

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.88
40	5200	17.88
48	5240	17.88
52	5260	17.88
60	5300	17.88
64	5320	17.88
100	5500	17.88
116	5580	17.88
140	5700	16.80
144	5720 For U-NII-2C	13.52
144	5720 For U-NII-3	3.34
149	5745	16.98
157	5785	17.04
165	5825	16.92

802.11ac (VHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.00
40	5200	18.00
48	5240	18.12
52	5260	18.00
60	5300	18.00
64	5320	18.12
100	5500	17.88
116	5580	17.88
140	5700	17.88
144	5720 For U-NII-2C	14.12
144	5720 For U-NII-3	3.88
149	5745	18.00
157	5785	17.88
165	5825	17.88

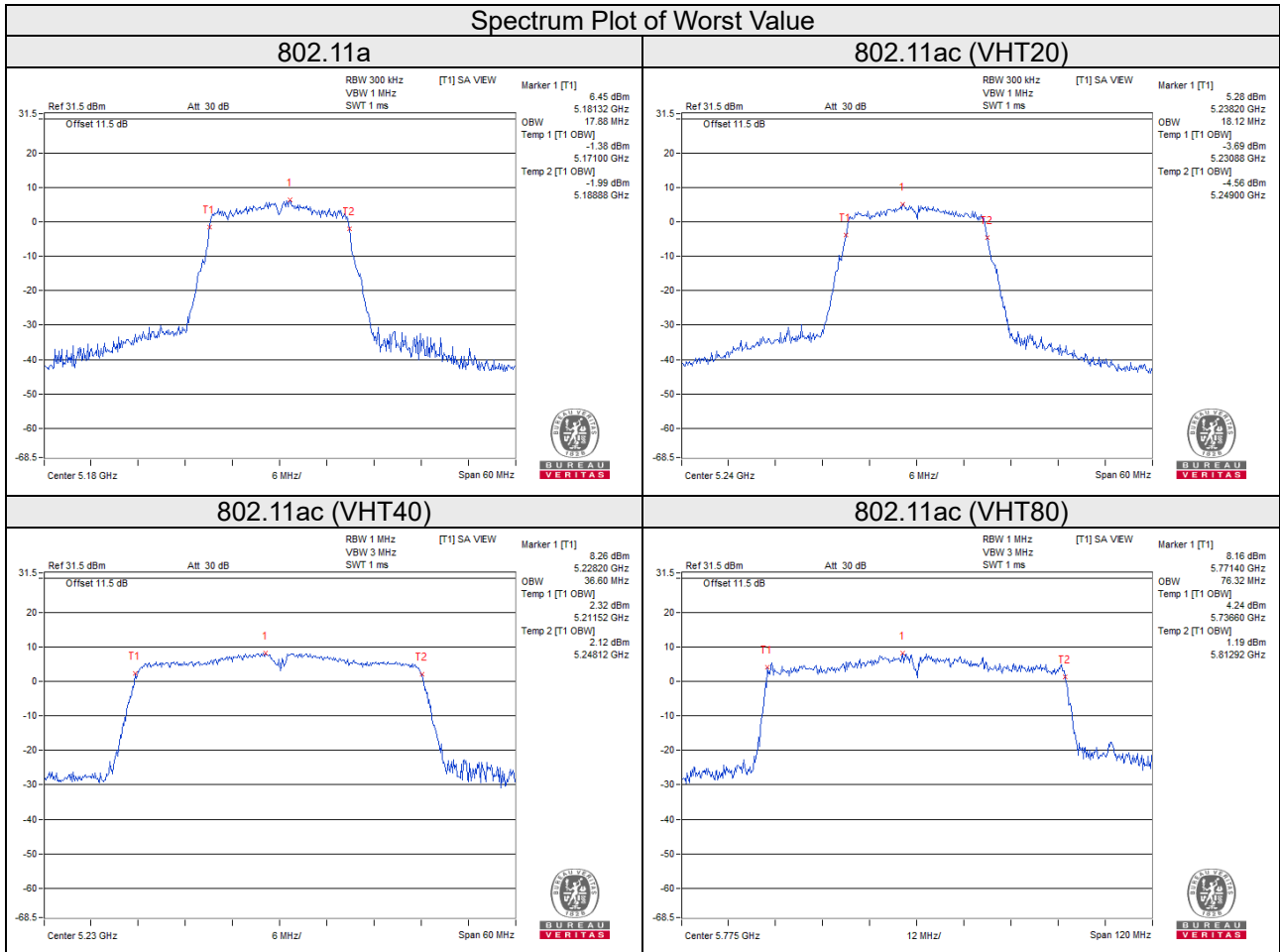
802.11ac (VHT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.48
46	5230	36.60
54	5270	36.48
62	5310	36.60
102	5510	36.60
110	5550	36.48
134	5670	36.48
142	5710 For U-NII-2C	33.48
142	5710 For U-NII-3	3.12
151	5755	36.54
159	5795	36.48

802.11ac (VHT80)

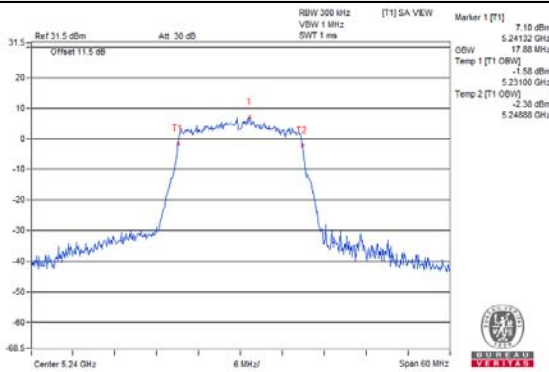
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.84
58	5290	75.84
106	5530	75.84
122	5610	75.60
138	5690 For U-NII-2C	73.16
138	5690 For U-NII-3	2.68
155	5775	76.32

Spectrum Plot of Worst Value

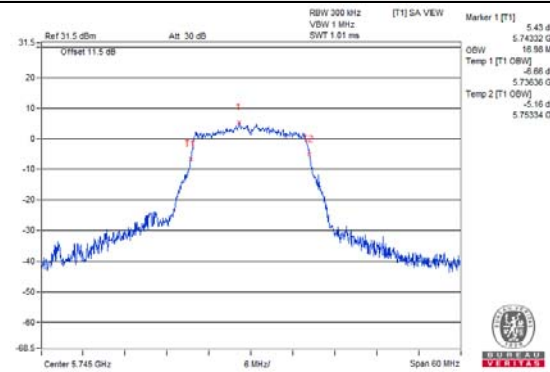


Spectrum Plot for near By DFS Band

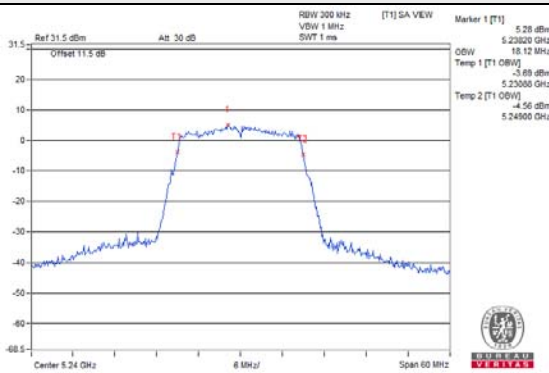
802.11a / CH 48



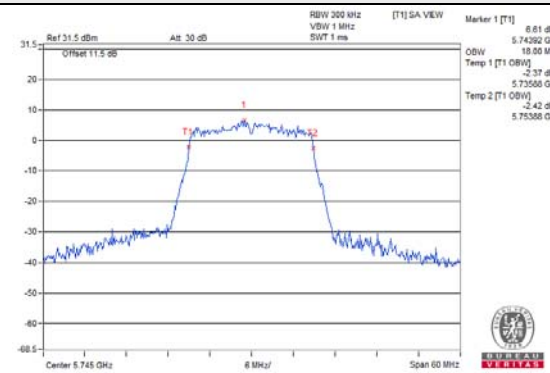
802.11a / CH 149



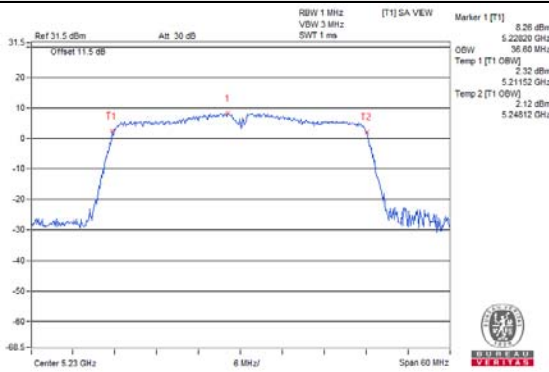
802.11ac (VHT20) / CH 48



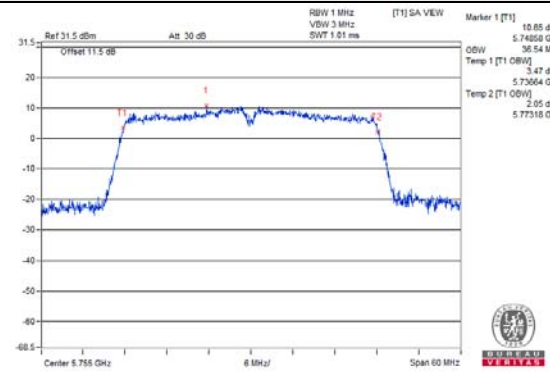
802.11ac (VHT20) / CH 149



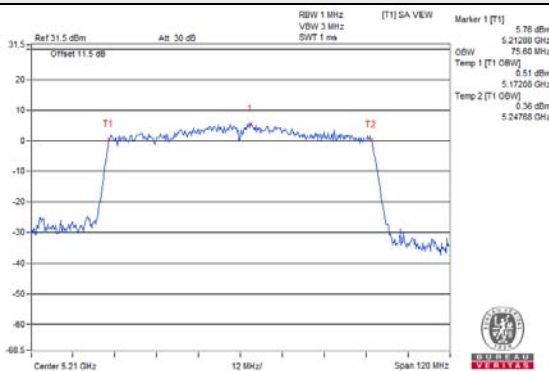
802.11ac (VHT40) / CH 46



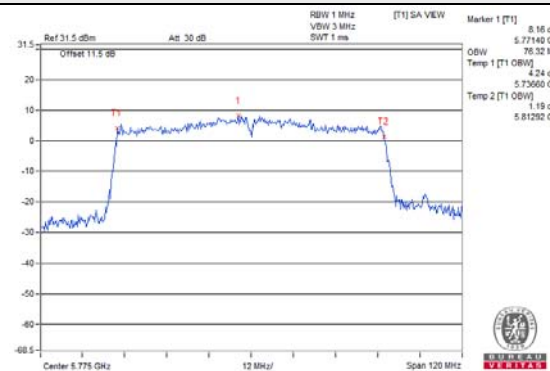
802.11ac (VHT40) / CH 151



802.11ac (VHT80) / CH 42



802.11ac (VHT80) / CH 155

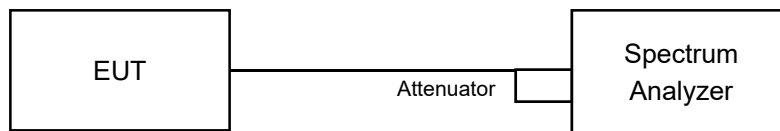


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

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

Duty cycle of test signal is $\geq 98\%$

Using method SA-1

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS.
- 3) Set Channel power measure = 1MHz.
- 4) Sweep time = auto, trigger set to "free run".
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value.

Duty cycle of test signal is $< 98\%$

Using method SA-2

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

For U-NII-3 band:

Duty cycle $\geq 98\%$

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 kHz, Set VBW ≥ 1 MHz, 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 (raising) the measured 1) 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.

Duty cycle $< 98\%$

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 kHz, Set VBW ≥ 1 MHz, 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 (raising) 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

Same as 4.3.6.

4.5.7 Test Results

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

802.11a

Chan.	Freq. (MHz)	PSD (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	2.04	11	Pass
40	5200	2.00	11	Pass
48	5240	1.93	11	Pass
52	5260	2.05	11	Pass
60	5300	1.97	11	Pass
64	5320	1.89	11	Pass
100	5500	0.93	11	Pass
116	5580	0.75	11	Pass
140	5700	0.31	11	Pass
144	5720 For U-NII-2C	-0.01	11	Pass

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	2.81	1.88	4.69	11	Pass
40	5200	3.00	1.88	4.88	11	Pass
48	5240	2.65	1.88	4.53	11	Pass
52	5260	2.85	1.88	4.73	11	Pass
60	5300	2.69	1.88	4.57	11	Pass
64	5320	2.77	1.88	4.65	11	Pass
100	5500	0.13	1.88	2.01	11	Pass
116	5580	0.26	1.88	2.14	11	Pass
140	5700	-0.44	1.88	1.44	11	Pass
144	5720 For U-NII-2C	-0.67	1.88	1.21	11	Pass

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

802.11ac (VHT40)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-0.37	2.89	2.52	11	Pass
46	5230	-0.45	2.89	2.44	11	Pass
54	5270	-0.63	2.89	2.26	11	Pass
62	5310	-0.64	2.89	2.25	11	Pass
102	5510	-3.39	2.89	-0.50	11	Pass
110	5550	-3.38	2.89	-0.49	11	Pass
134	5670	-3.74	2.89	-0.85	11	Pass
142	5710 For U-NII-2C	-3.31	2.89	-0.42	11	Pass

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

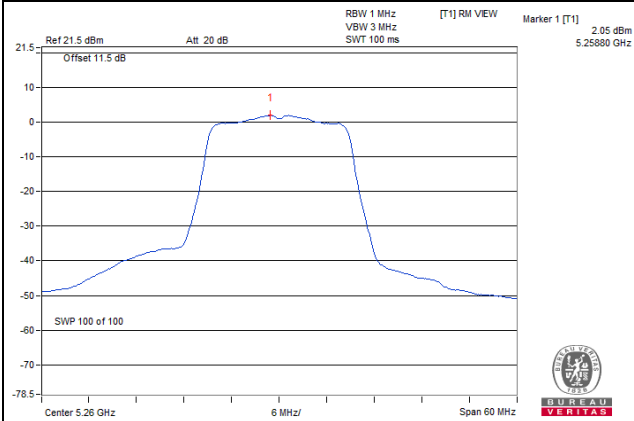
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-6.42	3.87	-2.55	11	Pass
58	5290	-6.54	3.87	-2.67	11	Pass
106	5530	-6.16	3.87	-2.29	11	Pass
122	5610	-6.27	3.87	-2.40	11	Pass
138	5690 For U-NII-2C	-6.88	3.87	-3.01	11	Pass

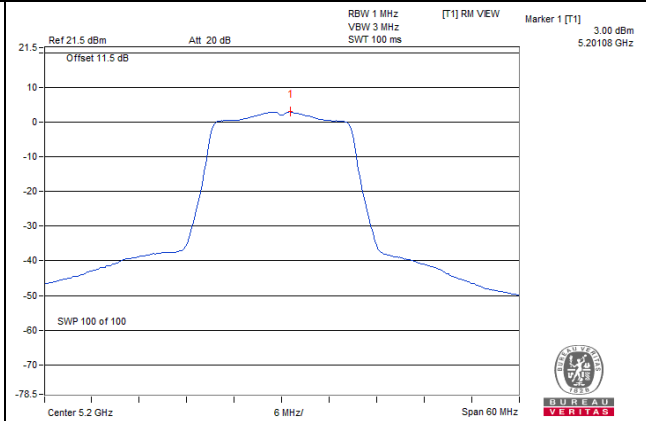
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

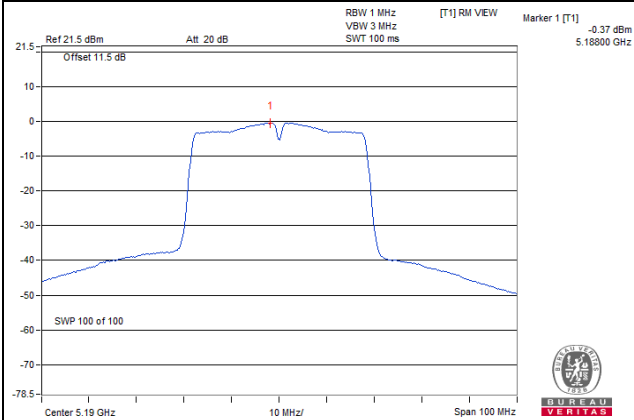
802.11a / CH 52



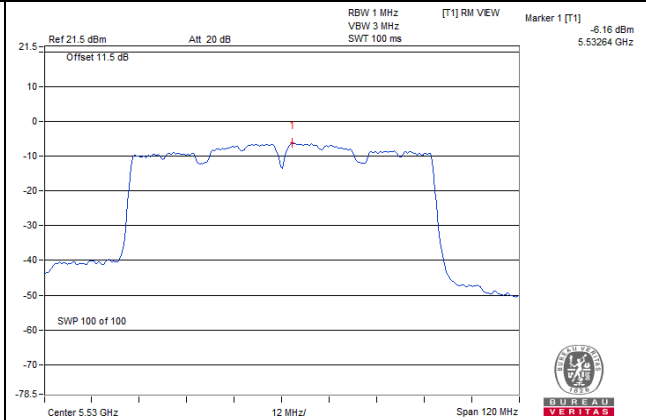
802.11ac (VHT20) / CH 40



802.11ac (VHT40) / CH 38



802.11ac (VHT80) / CH 106



For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD		Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)			
144	5720 For U-NII-3	-7.62	-5.40	-5.40	30	Pass
149	5745	-2.58	-0.36	-0.36	30	Pass
157	5785	-2.85	-0.63	-0.63	30	Pass
165	5825	-2.97	-0.75	-0.75	30	Pass

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
144	5720 For U-NII-3	-7.54	-5.32	1.88	-3.44	30	Pass
149	5745	-3.36	-1.14	1.88	0.74	30	Pass
157	5785	-3.63	-1.41	1.88	0.47	30	Pass
165	5825	-3.71	-1.49	1.88	0.39	30	Pass

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

802.11ac (VHT40)

Chan.	Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
142	5710 For U-NII-3	-9.81	-7.59	2.89	-4.70	30	Pass
151	5755	-5.61	-3.39	2.89	-0.50	30	Pass
159	5795	-5.74	-3.52	2.89	-0.63	30	Pass

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

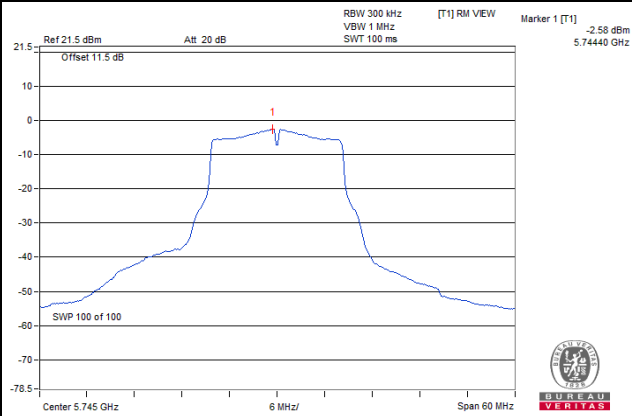
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD W/O Duty Factor		Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
138	5690 For U-NII-3	-13.71	-11.49	3.87	-7.62	30	Pass
155	5775	-8.37	-6.15	3.87	-2.28	30	Pass

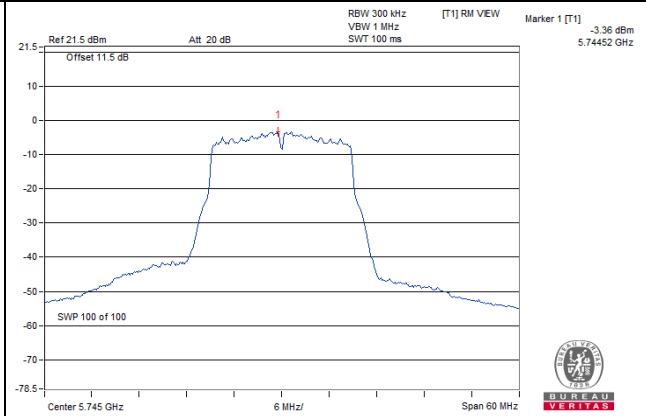
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

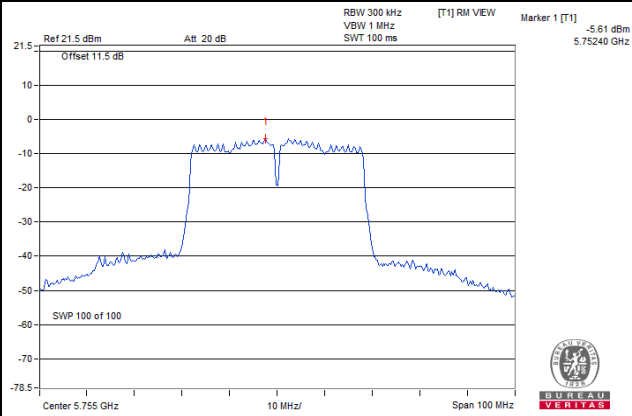
802.11a



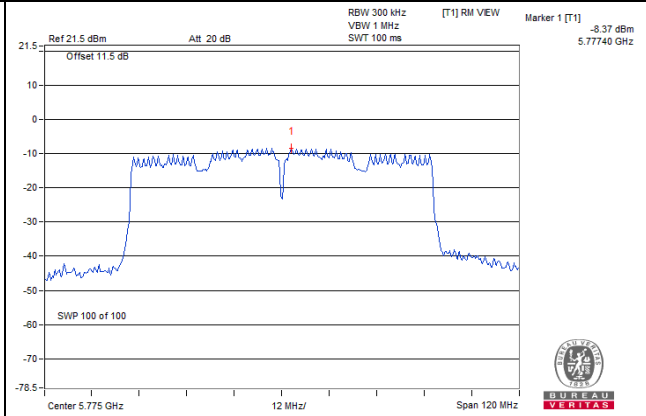
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)

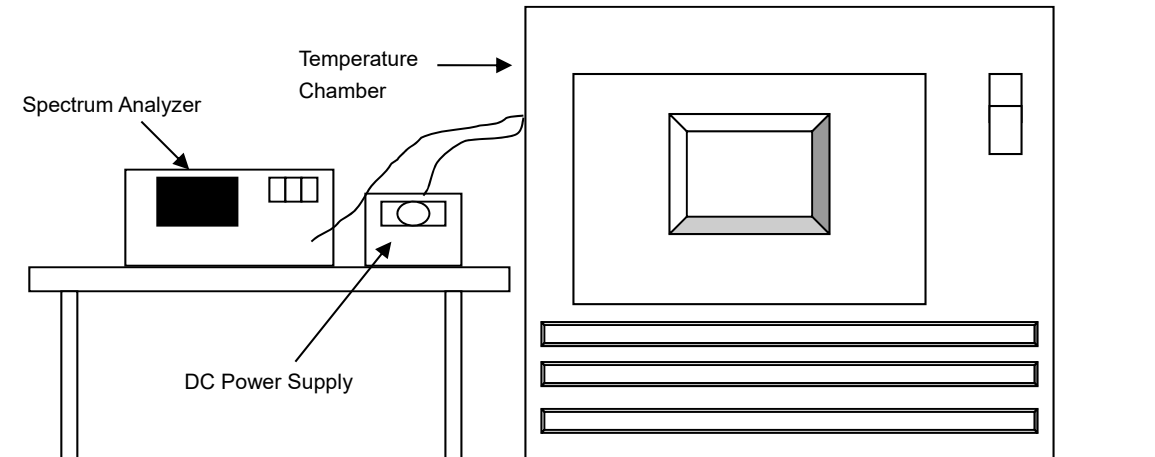


4.6 Frequency Stability

4.6.1 Limits of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Test Date: Aug. 05, 2021

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 16, 2020	Sep. 15, 2021
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 01, 2021	May 31, 2022
Three-phase coupling / decoupling network TESEQ	CDN 3063	4006	Mar. 10, 2021	Mar. 09, 2022
DC Power Supply Topward	6306A	727263	NA	NA

4.6.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal DC 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: 5180MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
40	48	5180.0151	PASS	5180.0132	PASS	5180.0141	PASS	5180.0136	PASS
30	48	5180.0027	PASS	5180.0051	PASS	5180.0058	PASS	5180.0053	PASS
20	48	5179.9934	PASS	5179.9936	PASS	5179.9958	PASS	5179.9924	PASS
10	48	5180.0106	PASS	5180.0066	PASS	5180.0067	PASS	5180.0083	PASS
0	48	5179.9835	PASS	5179.9864	PASS	5179.9863	PASS	5179.9855	PASS

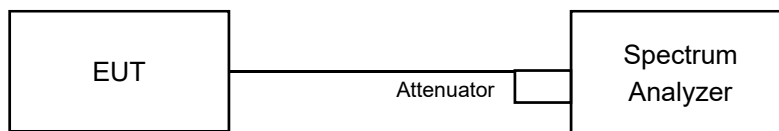
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	55.2	5179.9937	PASS	5179.9941	PASS	5179.9952	PASS	5179.9933	PASS
	48.0	5179.9934	PASS	5179.9936	PASS	5179.9958	PASS	5179.9924	PASS
	40.8	5179.9928	PASS	5179.9928	PASS	5179.9964	PASS	5179.9924	PASS

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

Measurement Procedure REF

- Set resolution bandwidth (RBW) = 100kHz
- 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)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 For U-NII-3	3.13	0.5	Pass
149	5745	16.36	0.5	Pass
157	5785	16.39	0.5	Pass
165	5825	16.40	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 For U-NII-3	3.80	0.5	Pass
149	5745	17.73	0.5	Pass
157	5785	17.72	0.5	Pass
165	5825	17.70	0.5	Pass

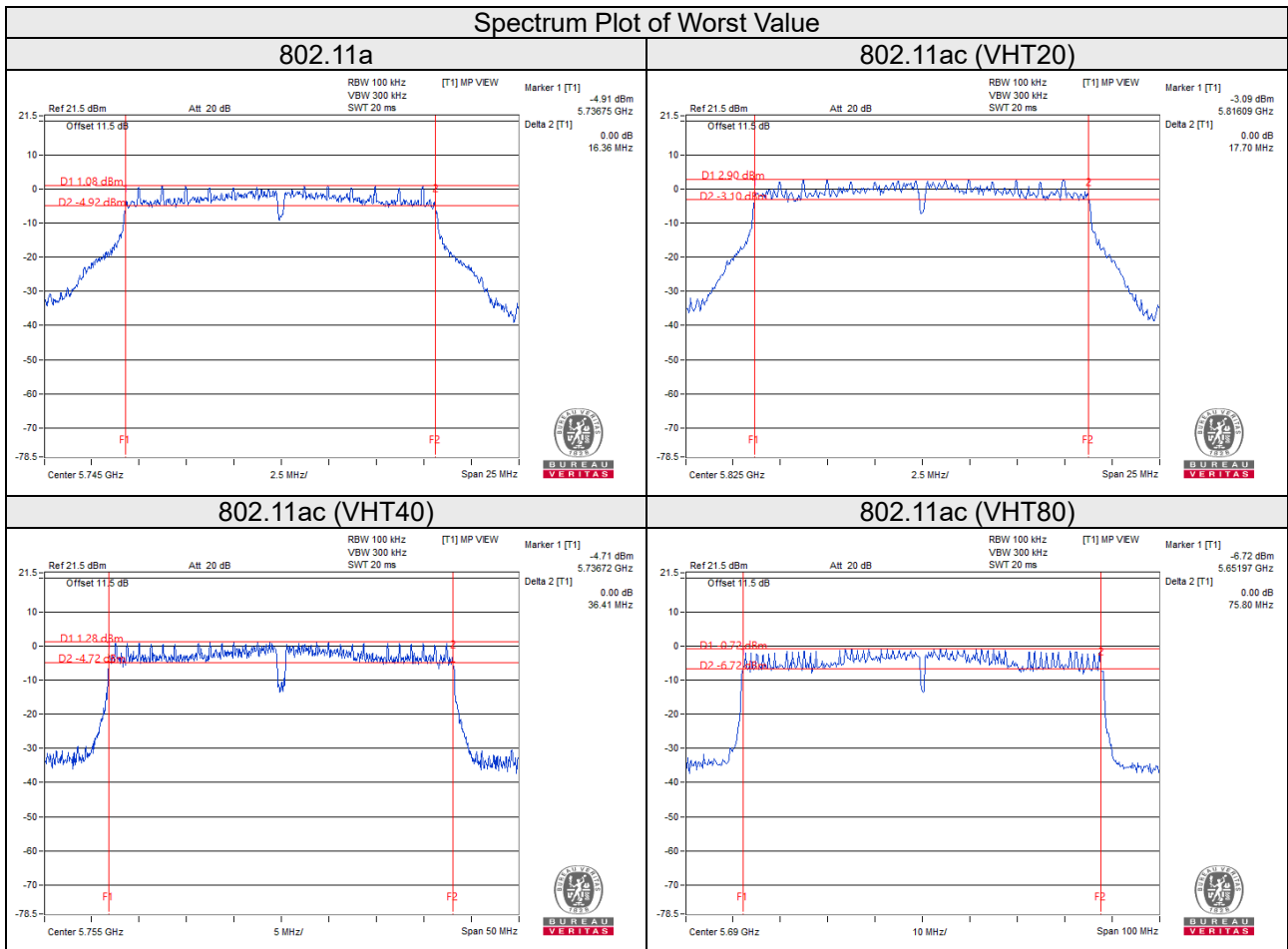
802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
142	5710 For U-NII-3	3.17	0.5	Pass
151	5755	36.41	0.5	Pass
159	5795	36.53	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
138	5690 For U-NII-3	2.77	0.5	Pass
155	5775	76.23	0.5	Pass

Spectrum Plot of Worst Value



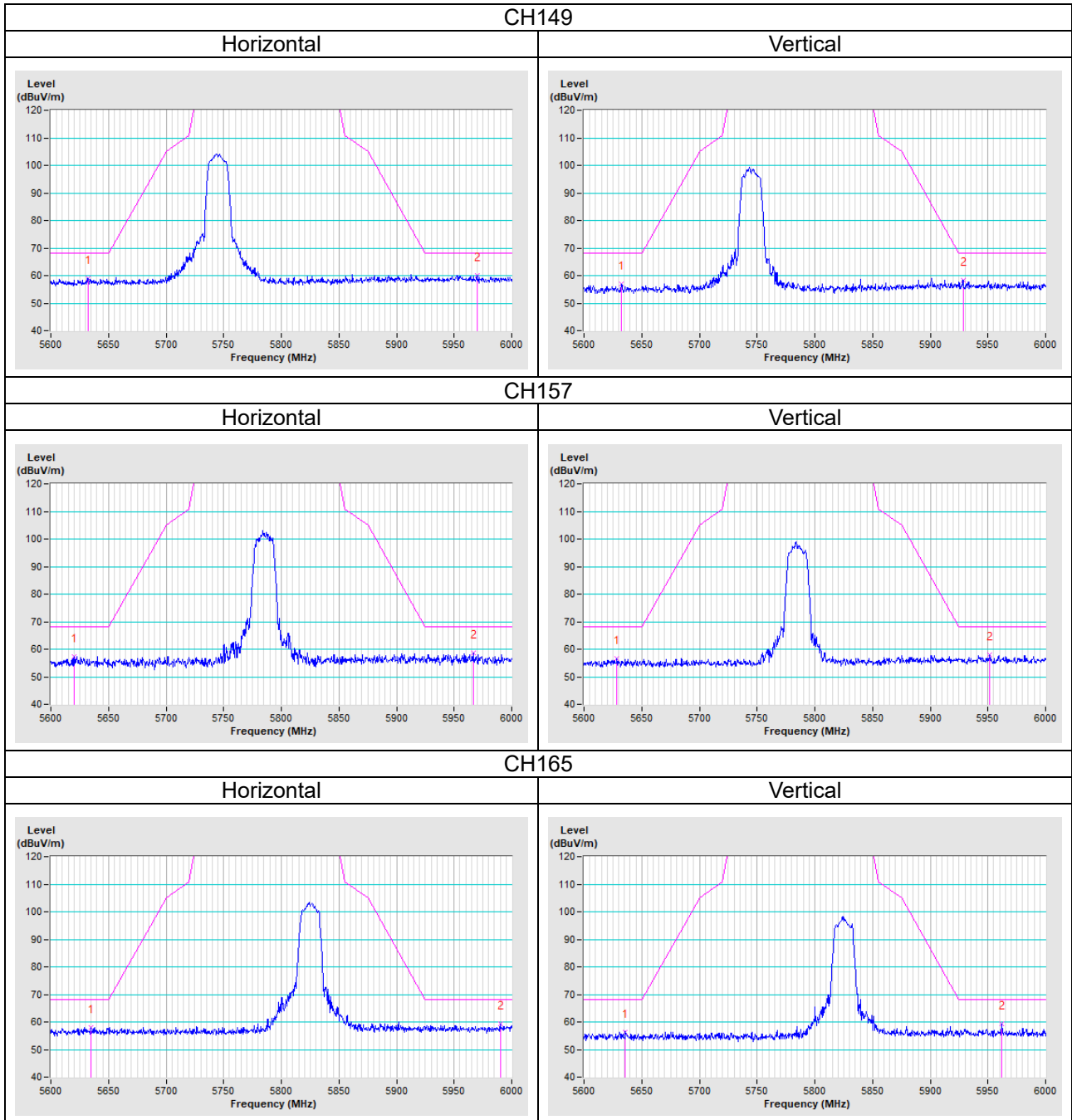
- *802.11a: Ch 144 (5720MHz for U-NII-3): 16.39-(5725-5711.74) = 3.13
- *802.11ac (VHT20): Ch 144 (5720MHz for U-NII-3): 17.71-(5725-5711.09) = 3.80
- *802.11ac (VHT40): Ch 142 (5710MHz for U-NII-3): 36.50-(5725-5691.67) = 3.17
- *802.11ac (VHT80): Ch 138 (5690MHz for U-NII-3): 75.85-(5725-5651.97) = 2.27

5 Pictures of Test Arrangements

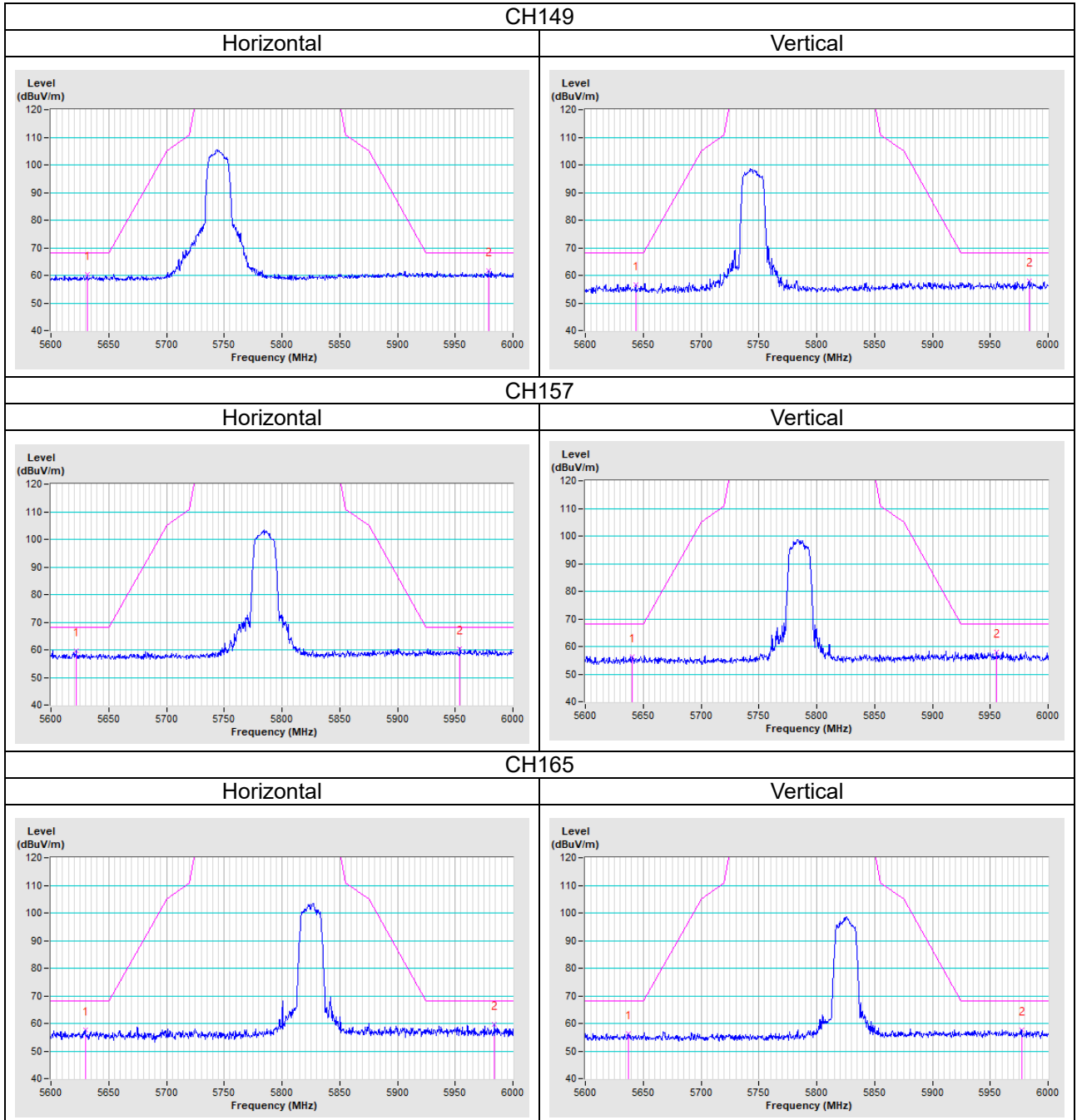
Please refer to the attached file (Test Setup Photo).

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

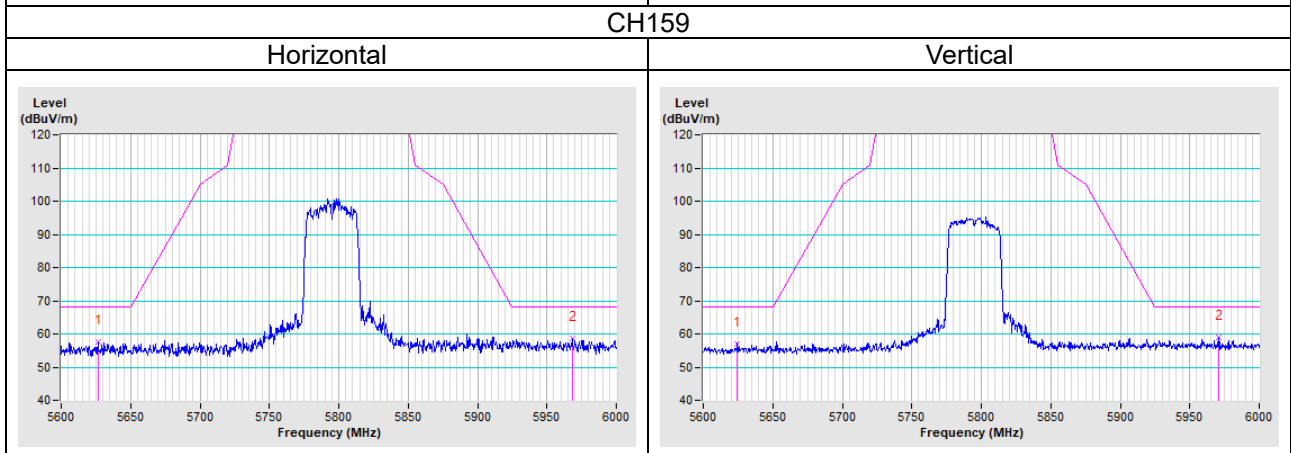
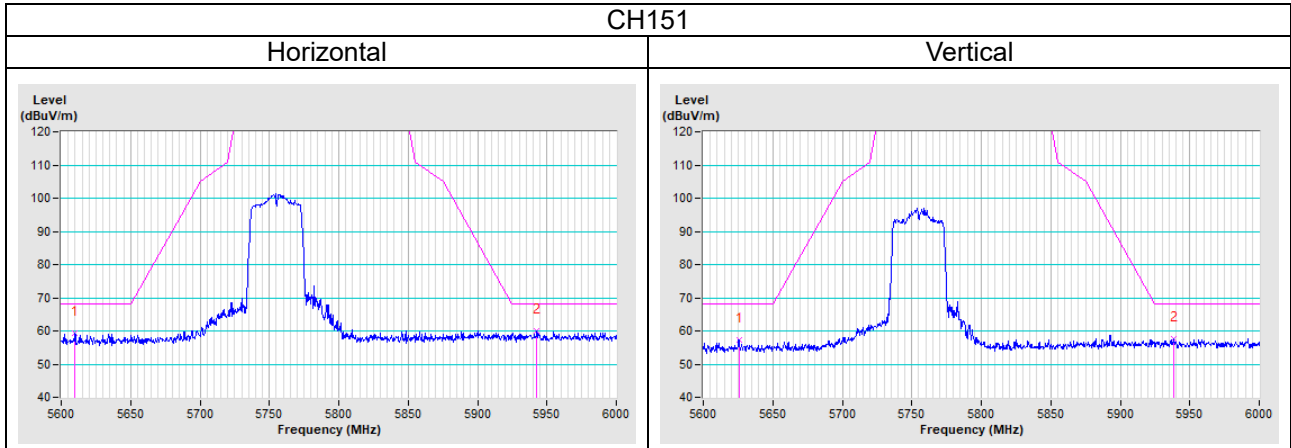
802.11a



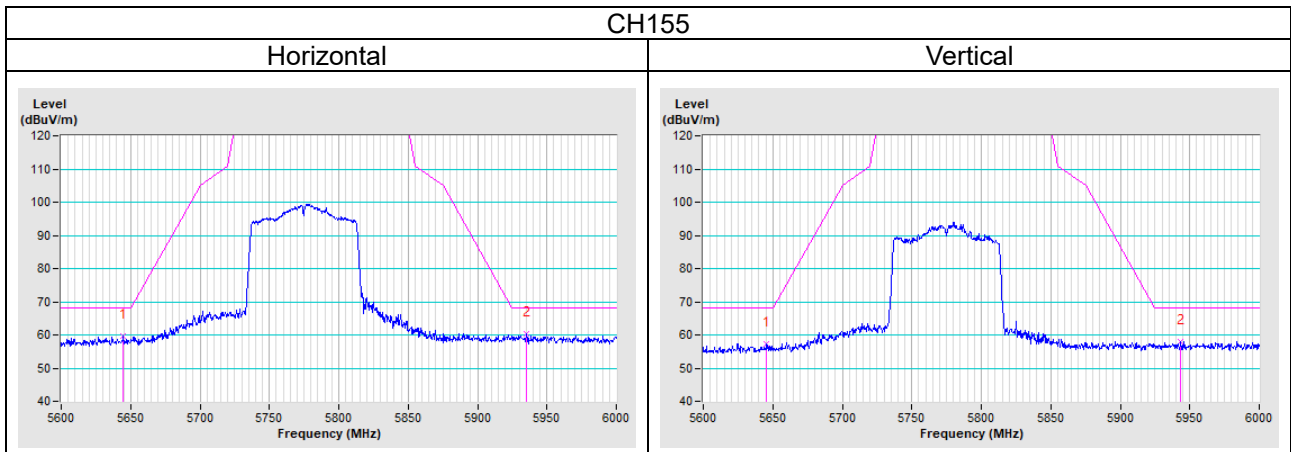
802.11ac (VHT20)



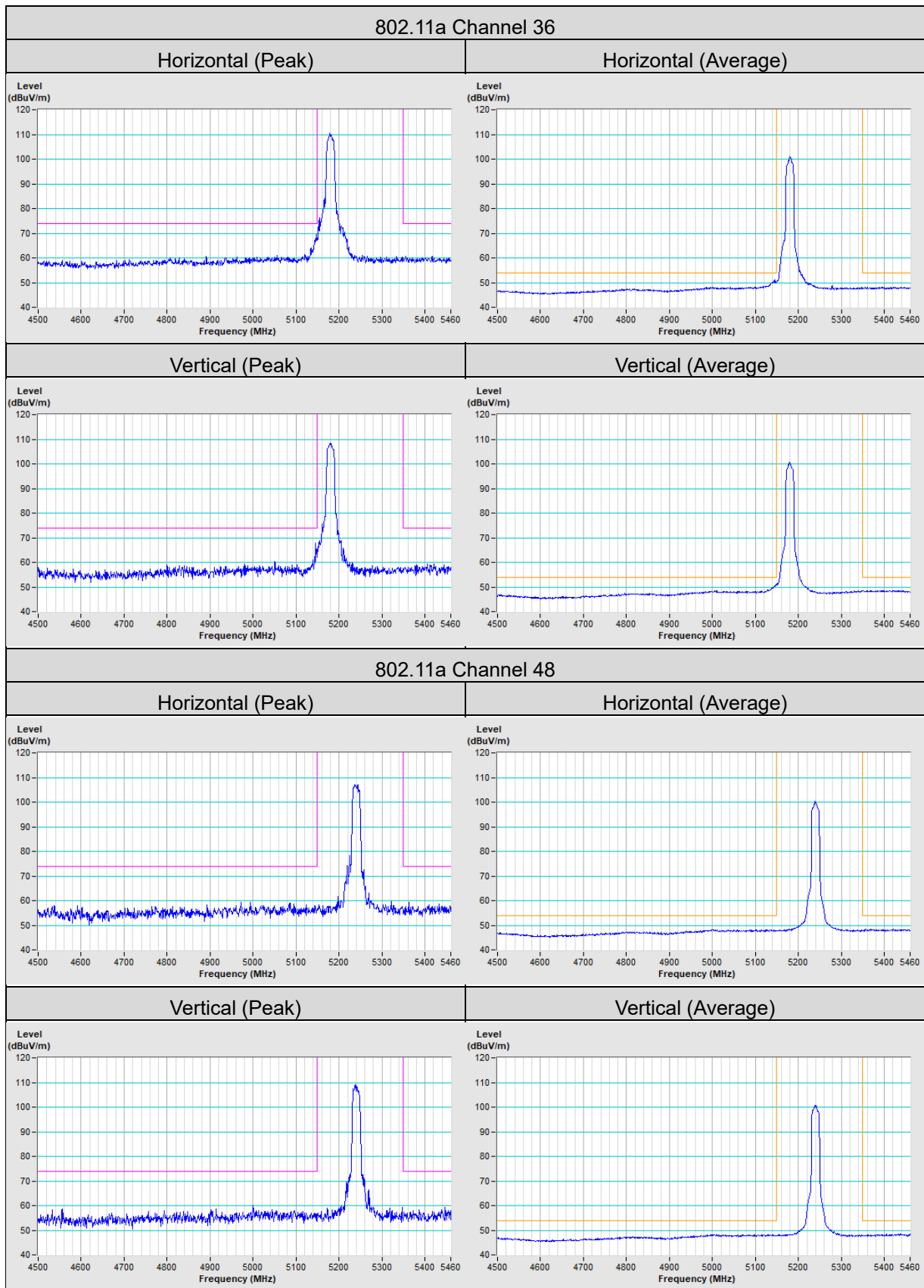
802.11ac (VHT40)



802.11ac (VHT80)

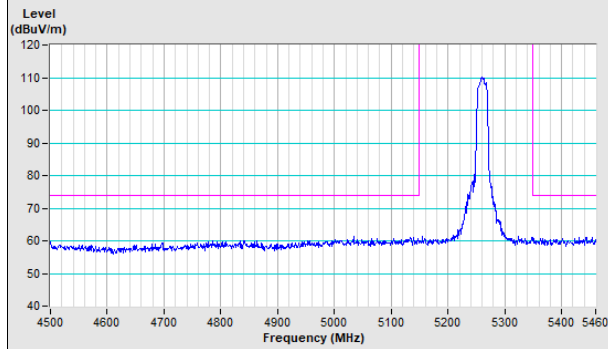


Annex B - Band Edge Measurement

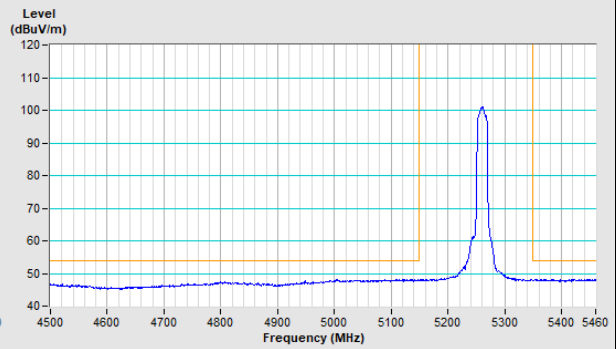


802.11a Channel 52

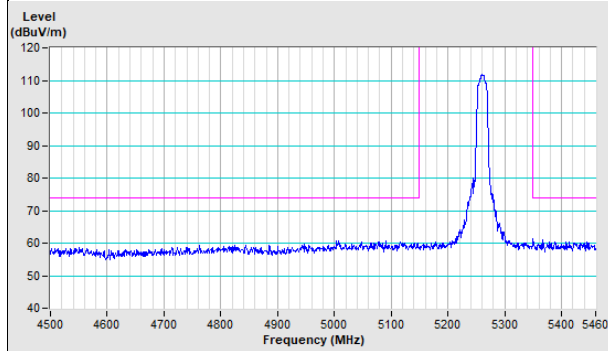
Horizontal (Peak)



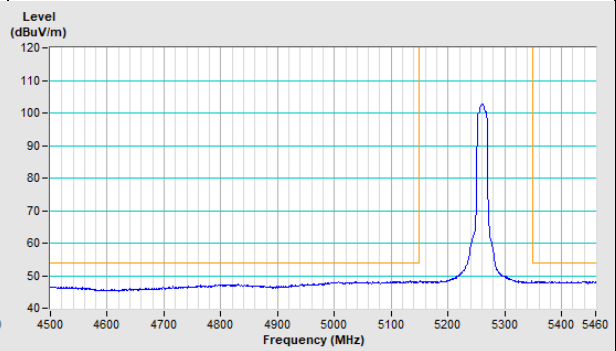
Horizontal (Average)



Vertical (Peak)

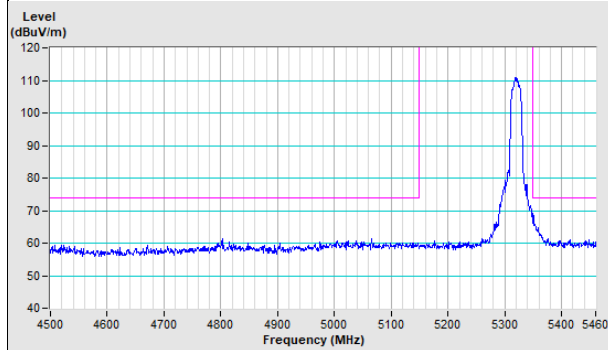


Vertical (Average)

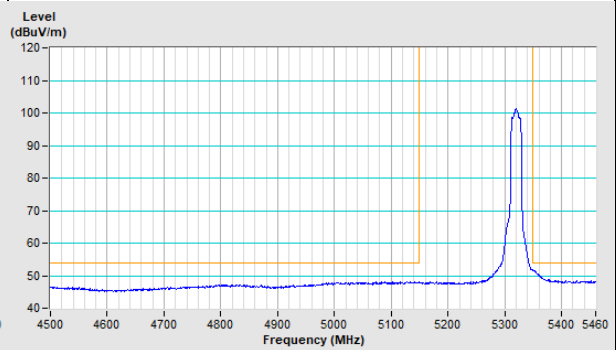


802.11a Channel 64

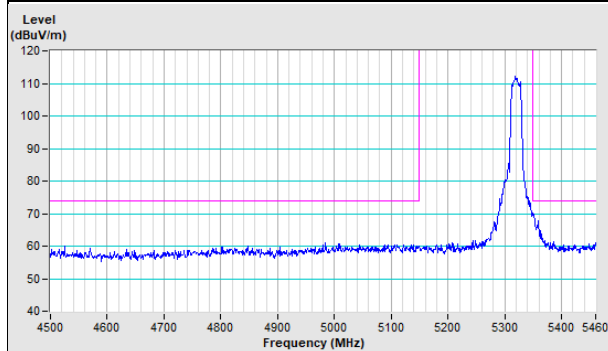
Horizontal (Peak)



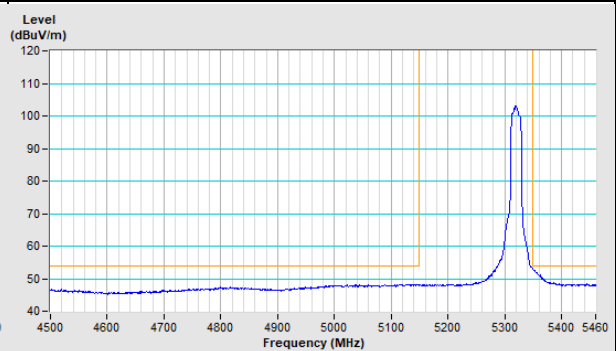
Horizontal (Average)



Vertical (Peak)

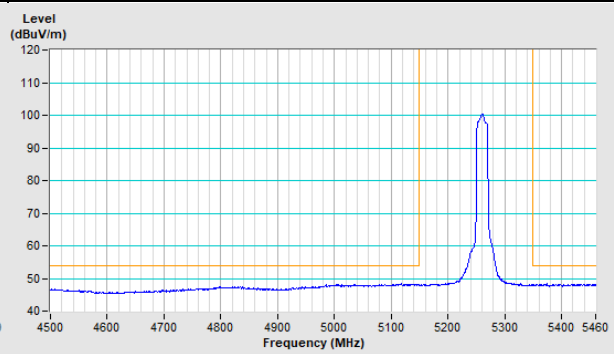
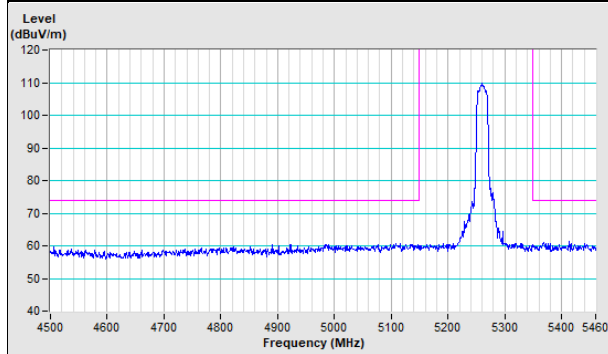


Vertical (Average)

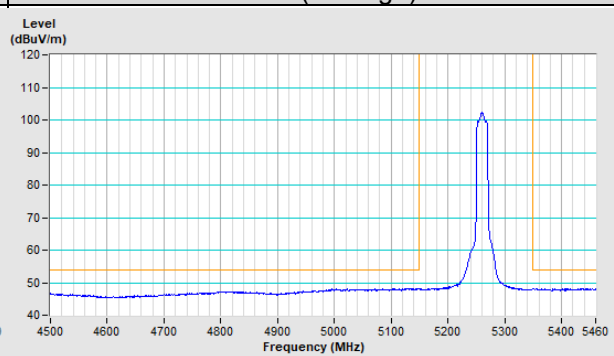
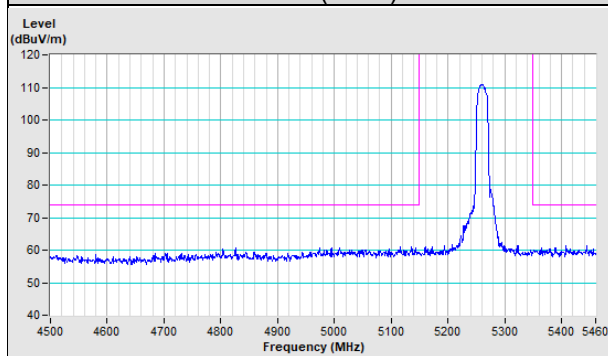


802.11ac (VHT20) Channel 52

Horizontal (Peak)	Horizontal (Average)
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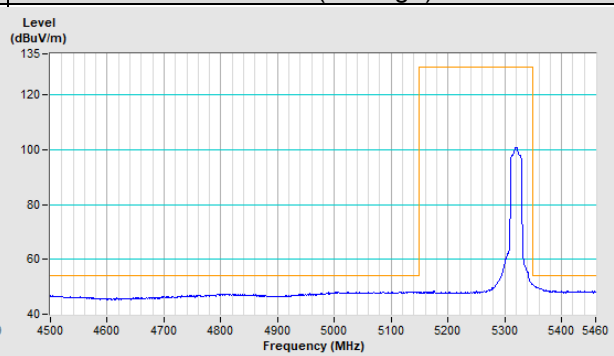
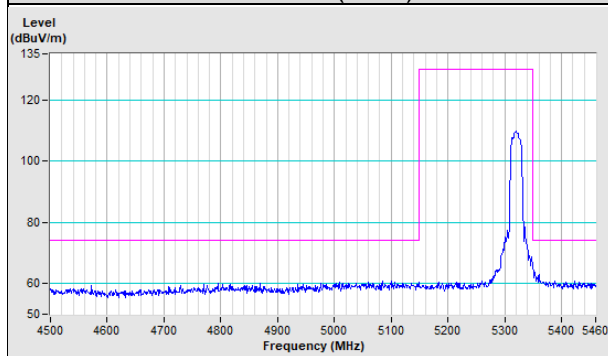


Vertical (Peak)	Vertical (Average)
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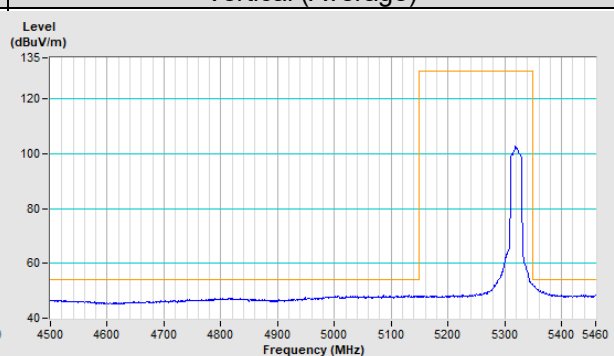
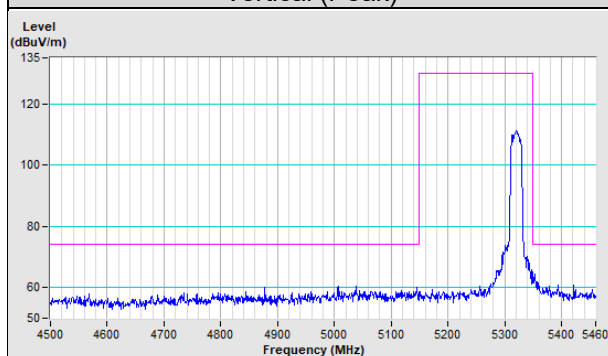


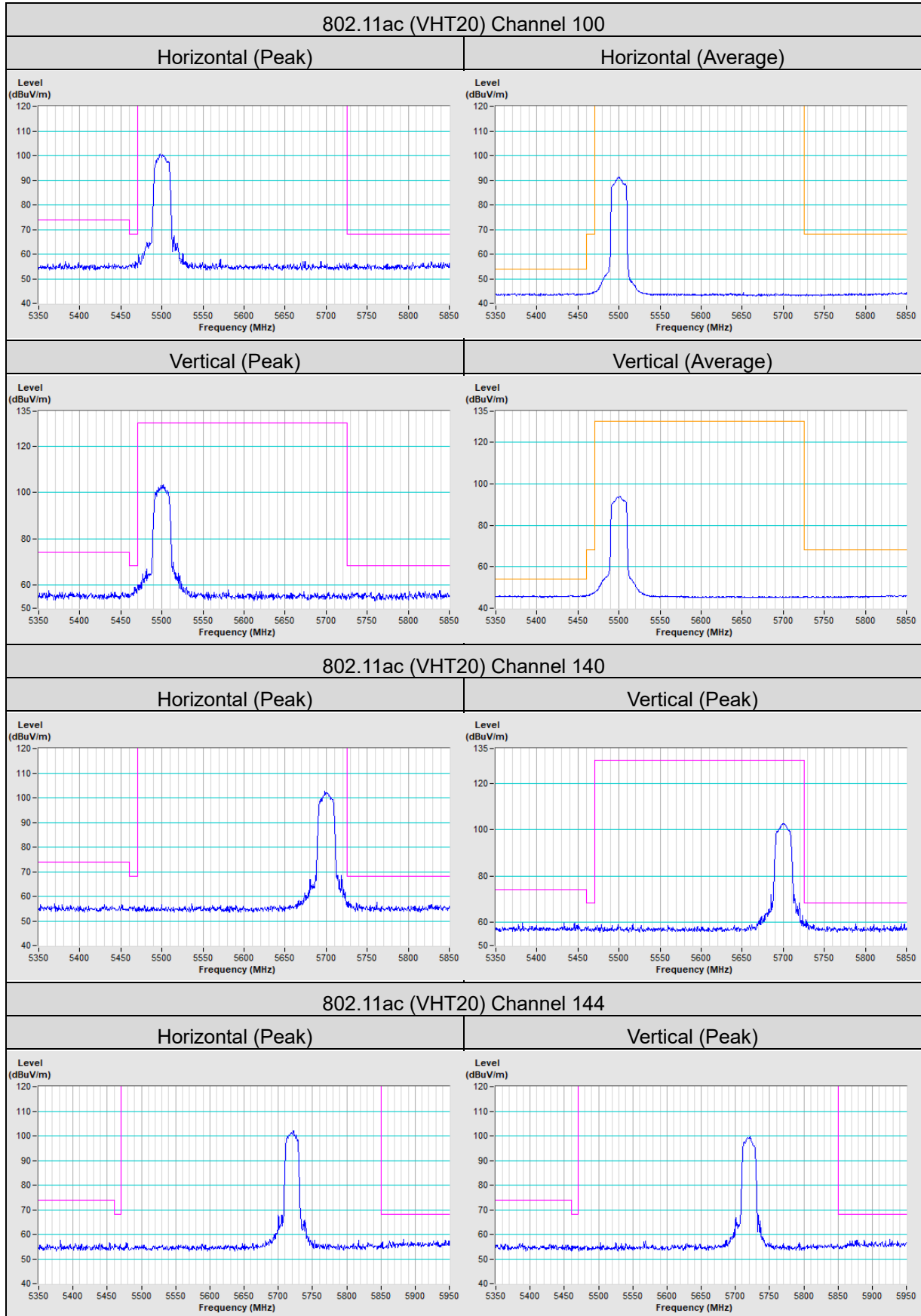
802.11ac (VHT20) Channel 64

Horizontal (Peak)	Horizontal (Average)
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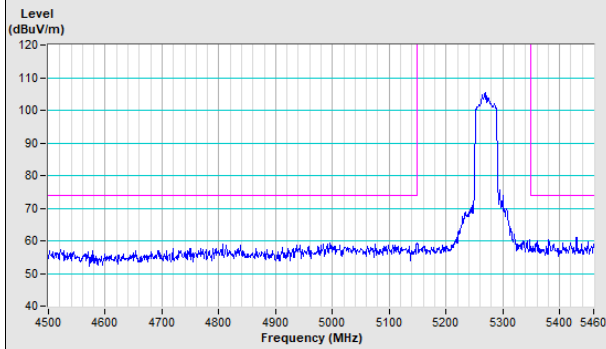
Vertical (Peak)	Vertical (Average)
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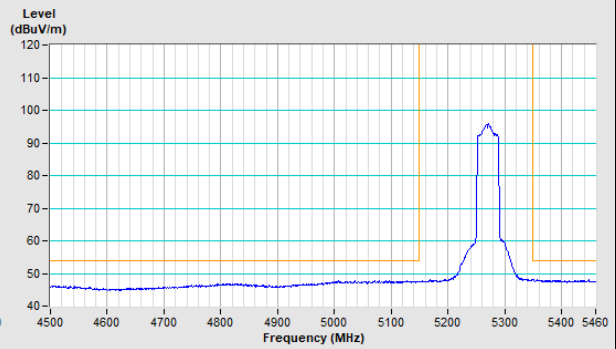


802.11ac (VHT40) Channel 54

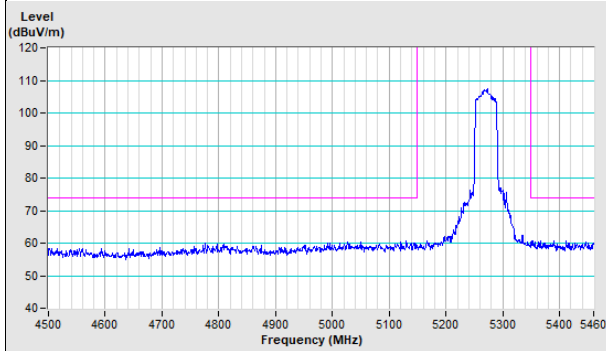
Horizontal (Peak)



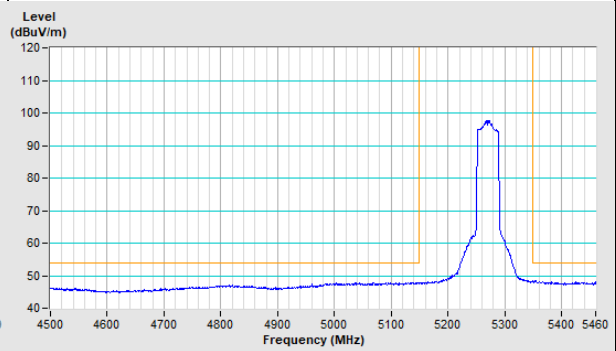
Horizontal (Average)



Vertical (Peak)

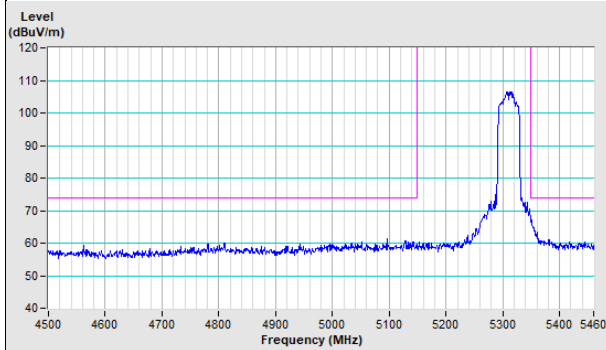


Vertical (Average)

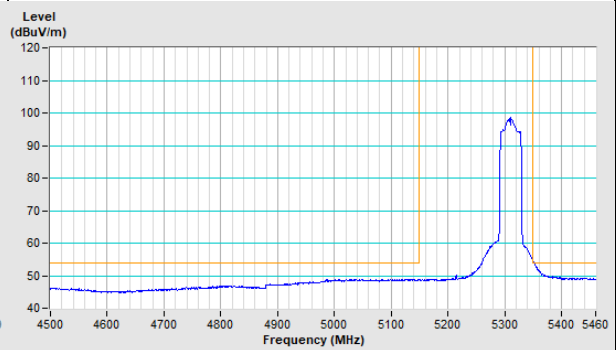


802.11ac (VHT40) Channel 62

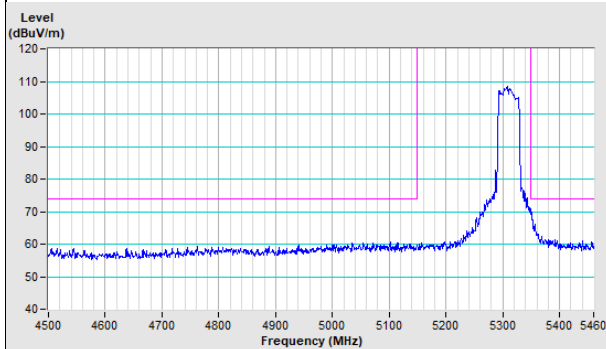
Horizontal (Peak)



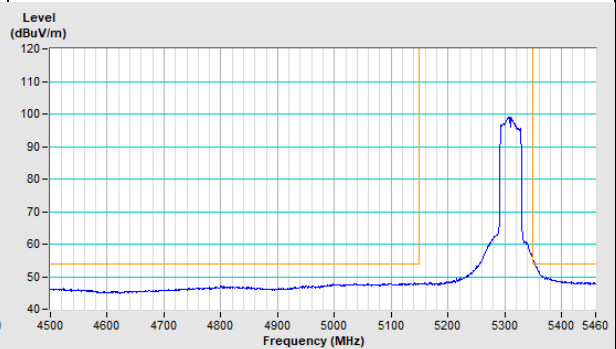
Horizontal (Average)

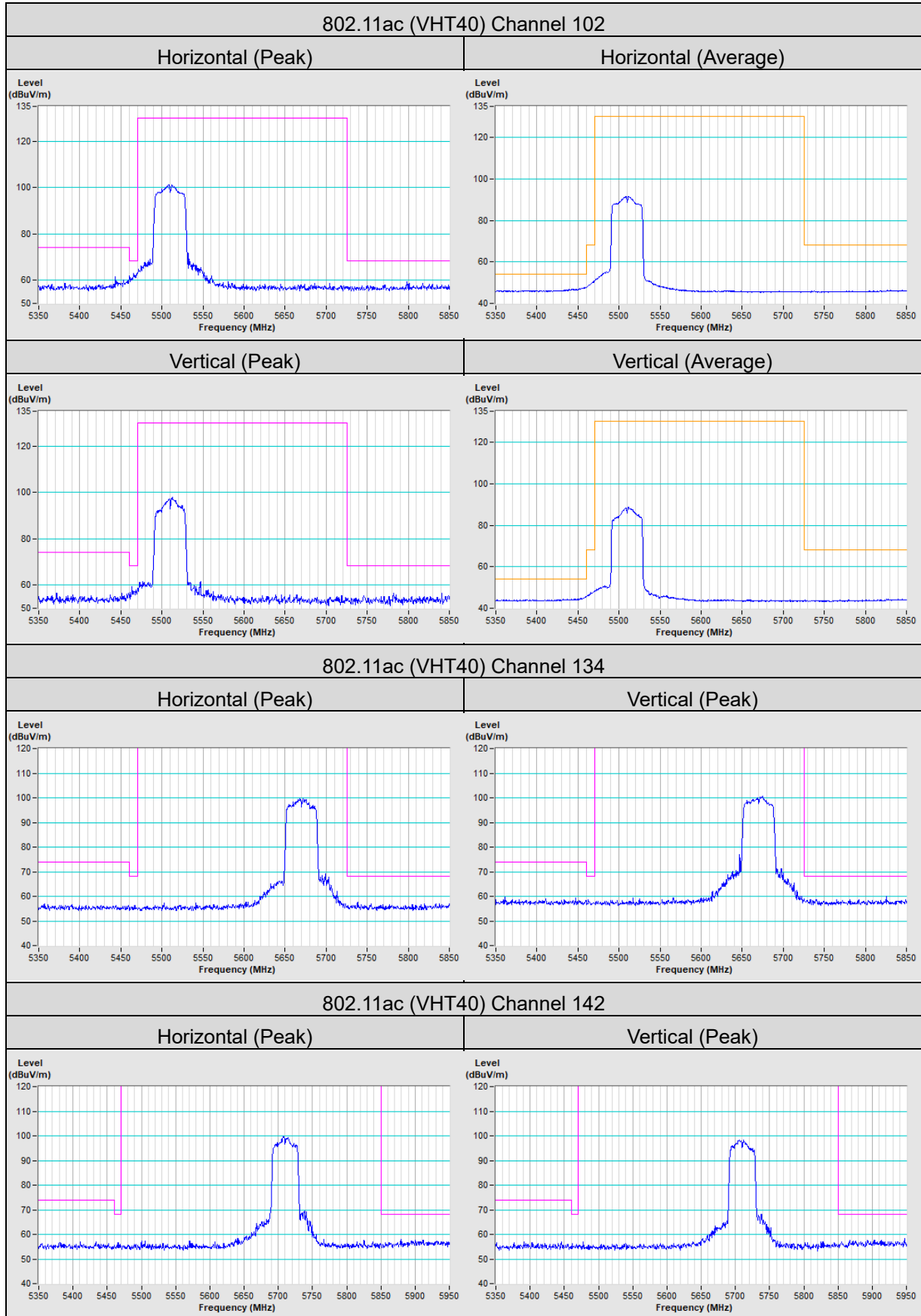


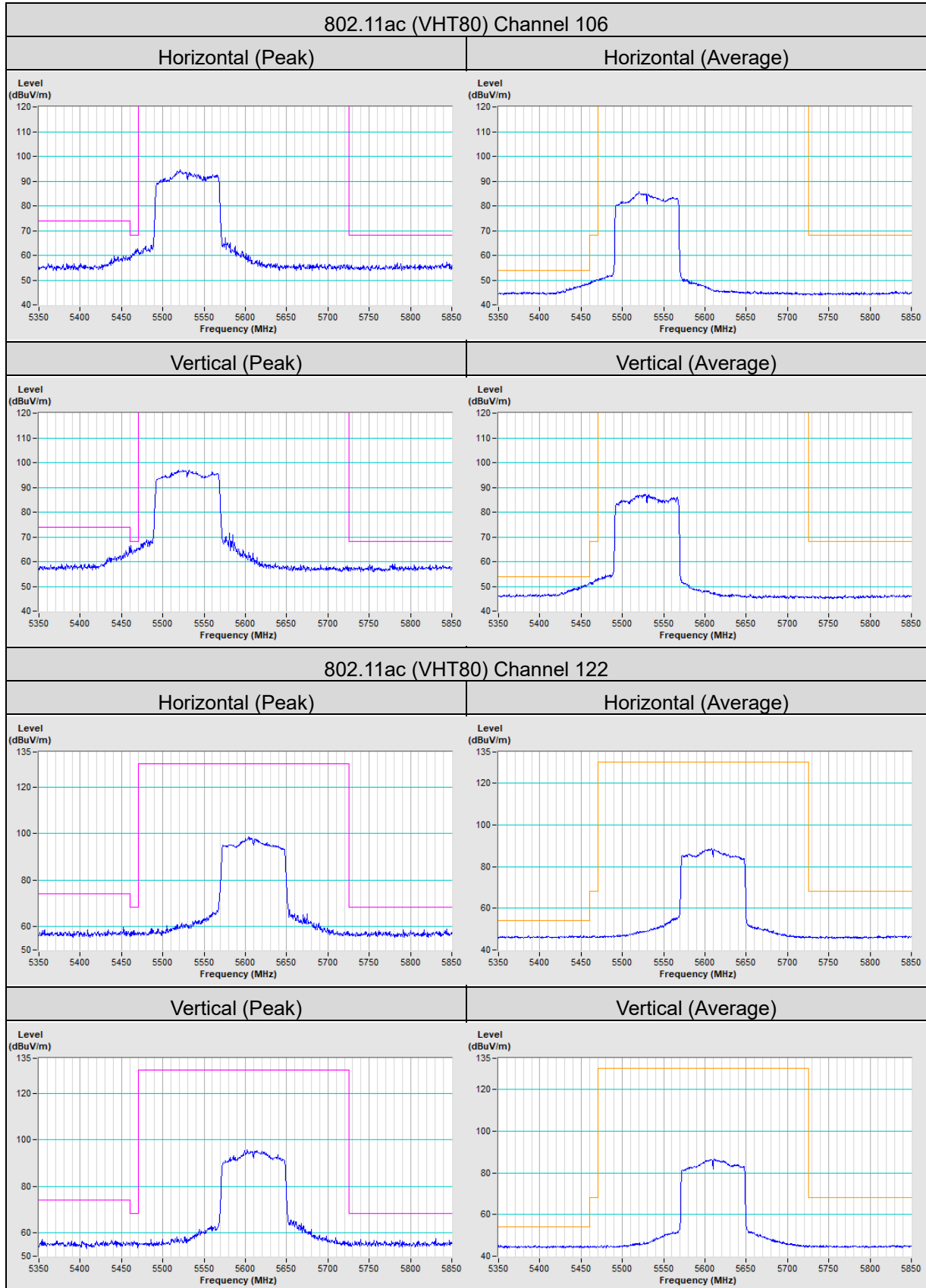
Vertical (Peak)



Vertical (Average)



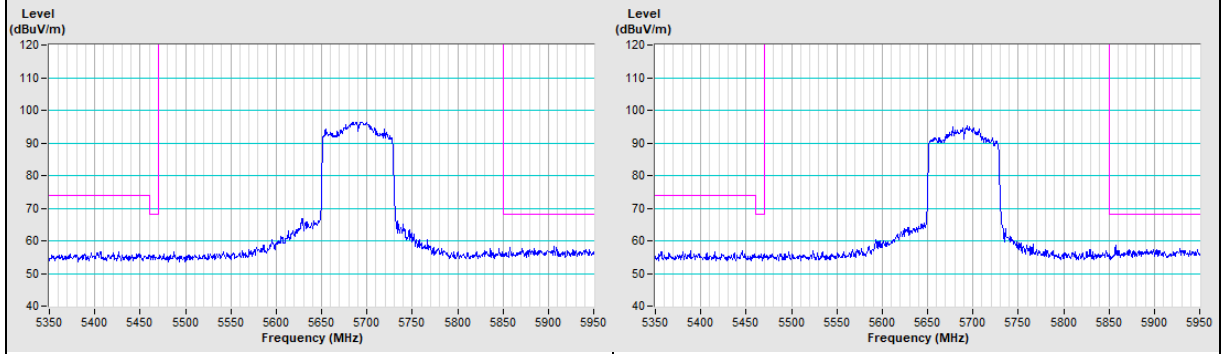




802.11ac (VHT80) Channel 138

Horizontal (Peak)

Vertical (Peak)



Appendix – Information of the Testing Laboratories

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

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

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Web Site: www.bureauveritas-adt.com

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

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