

FCC Test Report

Report No.: RFBHQC-WTW-P20110170-1

FCC ID: B3QT99H209

Test Model: T99H209

Received Date: Nov. 12, 2020

Test Date: Nov. 29 to Dec. 14, 2020

Issued Date: Jan. 11, 2021

Applicant: BROTHER INDUSTRIES, LTD.

Address: 15-1, Naeshiro-cho, Mizuho-ku, Nagoya, Aichi, Japan

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan

**FCC Registration /
Designation Number:** 723255 / TW2022



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

Table of Contents

Release Control Record	4
1 Certificate of Conformity.....	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Modification Record	6
3 General Information.....	7
3.1 General Description of EUT	7
3.2 Description of Test Modes	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 Standard and References	15
4 Test Types and Results	16
4.1 Radiated Emission and Bandedge Measurement.....	16
4.1.1 Limits of Radiated Emission and Bandedge Measurement	16
4.1.2 Test Instruments	17
4.1.3 Test Procedure	19
4.1.4 Deviation from Test Standard	20
4.1.5 Test Setup.....	20
4.1.6 EUT Operating Condition	21
4.1.7 Test Results	22
4.2 Conducted Emission Measurement	66
4.2.1 Limits of Conducted Emission Measurement	66
4.2.2 Test Instruments	66
4.2.3 Test Procedure	67
4.2.4 Deviation from Test Standard	67
4.2.5 Test Setup.....	67
4.2.6 EUT Operating Condition	67
4.2.7 Test Results	68
4.3 Transmit Power Measurement	70
4.3.1 Limits of Transmit Power Measurement	70
4.3.2 Test Setup.....	70
4.3.3 Test Instruments	71
4.3.4 Test Procedure	71
4.3.5 Deviation from Test Standard	71
4.3.6 EUT Operating Condition	71
4.3.7 Test Results	72
4.4 Occupied Bandwidth Measurement	82
4.4.1 Test Setup.....	82
4.4.2 Test Instruments	82
4.4.3 Test Procedure	82
4.4.4 Test Results	83
4.5 Peak Power Spectral Density Measurement	87
4.5.1 Limits of Peak Power Spectral Density Measurement	87
4.5.2 Test Setup.....	87
4.5.3 Test Instruments	87
4.5.4 Test Procedure	87
4.5.5 Deviation from Test Standard	88
4.5.6 EUT Operating Condition	88
4.5.7 Test Results	89

4.6	Frequency Stability Measurement.....	94
4.6.1	Limits of Frequency Stability Measurement	94
4.6.2	Test Setup.....	94
4.6.3	Test Instruments	94
4.6.4	Test Procedure	94
4.6.5	Deviation from Test Standard	94
4.6.6	EUT Operating Condition	94
4.6.7	Test Results	95
4.7	6dB Bandwidth Measurement.....	96
4.7.1	Limits of 6dB Bandwidth Measurement.....	96
4.7.2	Test Setup.....	96
4.7.3	Test Instruments	96
4.7.4	Test Procedure	96
4.7.5	Deviation from Test Standard	96
4.7.6	EUT Operating Condition	96
4.7.7	Test Results	97
5	Pictures of Test Arrangements.....	99
	Annex A - Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)	100
	Annex B - Band-Edge Measurement (For U-NII-1, U-NII-2A, U-NII-2C band)	103
	Appendix – Information of the Testing Laboratories	111

Release Control Record

Issue No.	Description	Date Issued
RFBHQC-WTW-P20110170-1	Original release.	Jan. 11, 2021

1 Certificate of Conformity

Product: IEEE802.11a/b/g/n/ac (1x1)+BT 5.0 Combo Module

Brand: Brother

Test Model: T99H209

Sample Status: Engineering sample

Applicant: BROTHER INDUSTRIES, LTD.

Test Date: Nov. 29 to Dec. 14, 2020

Standard: 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 EMC characteristics under the conditions specified in this report.

Prepared by : Joyce Kuo , **Date:** Jan. 11, 2021
Joyce Kuo / Specialist

Approved by : Clark Lin , **Date:** Jan. 11, 2021
Clark Lin / Technical Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -15.97dB at 0.16172 MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	PASS	Meet the requirement of limit. Minimum passing margin is -0.1 dB at 11570.00 MHz, 11650.00 MHz, 5150.00 MHz, 5459.99 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	PASS	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(e)	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	No antenna connector is used.

Note:

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

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.9 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.1 dB
	30MHz ~ 1GHz	5.4 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.0 dB
	18GHz ~ 40GHz	5.3 dB

specified in CISPR 16-4-2:

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	IEEE802.11a/b/g/n/ac (1x1)+BT 5.0 Combo Module
Brand	Brother
Test Model	T99H209
Status of EUT	Engineering sample
Power Supply Rating	3.3Vdc from host equipment
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11 Mbps 802.11a/g: up to 54 Mbps 802.11n: up to 150 Mbps 802.11ac: up to 433.3 Mbps
Operating Frequency	2.4GHz: 2.412 ~ 2.462GHz 5GHz: 5.18 ~ 5.32GHz, 5.50 ~ 5.72GHz, 5.745 ~ 5.825GHz
Number of Channel	2.4GHz: 802.11b, 802.11g, 802.11n (HT20): 11 802.11n (HT40): 7 5GHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 25 802.11n (HT40), 802.11ac (VHT40): 12 802.11ac (VHT80): 6
Output Power	2.412 ~ 2.462 GHz: 380.189 mW 5.18 ~ 5.24 GHz: 123.88 mW 5.26 ~ 5.32GHz: 121.339 mW 5.50 ~ 5.72: 118.577 mW 5.745 ~ 5.825 GHz: 118.032 mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. The EUT has two type interface, which are identical to each other in all aspects except for the following:

Type No.	Description
Type 1	16 pin
Type 2	8 pin

From the above pre-test types, the worse radiated emission was found in **Type 1**. Therefore only the test data of the mode was recorded in this report.

2. Simultaneously transmission condition.

Condition	Technology
1	WLAN 5GHz + Bluetooth

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

3. The antenna provided to the EUT, please refer to the following table:

Antenna No.	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
1	3.65	2.4~2.4835	PCB	None
	3.98	5.15~5.85		

4. The EUT incorporates a SISO function:

2.4GHz Band		
MODULATION MODE	TX & RX CONFIGURATION	
802.11b	1TX	1RX
802.11g	1TX	1RX
802.11n (HT20)	1TX	1RX
802.11n (HT40)	1TX	1RX
5GHz Band		
MODULATION MODE	TX & RX CONFIGURATION	
802.11a	1TX	1RX
802.11n (HT20)	1TX	1RX
802.11n (HT40)	1TX	1RX
802.11ac (VHT20)	1TX	1RX
802.11ac (VHT40)	1TX	1RX
802.11ac (VHT80)	1TX	1RX

Note: The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report.

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

3.2 Description of Test Modes

FOR 5180 ~ 5320MHz

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

Channel	Frequency	Channel	Frequency
36	5180 MHz	52	5260 MHz
40	5200 MHz	56	5280 MHz
44	5220 MHz	60	5300 MHz
48	5240 MHz	64	5320 MHz

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	54	5270 MHz
46	5230 MHz	62	5310 MHz

2 channel is provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz

FOR 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	138	5690 MHz
122	5610 MHz		

FOR 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775 MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

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

Where **RE≥1G**: Radiated Emission above 1GHz
PLC: Power Line Conducted Emission

RE<1G: Radiated Emission below 1GHz
APCM: Antenna Port Conducted Measurement

Note: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane**.

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.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11ac (VHT80)		42	42	OFDM	BPSK	29.3
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11ac (VHT80)		58	58	OFDM	BPSK	29.3
802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6
802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	BPSK	29.3
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	13.5
802.11ac (VHT80)		155	155	OFDM	BPSK	29.3

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.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT20)	5180-5320, 5500-5720, 5745-5825	36 to 64, 100 to 144, 149 to 165	46	OFDM	BPSK	6.5

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.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT20)	5180-5320, 5500-5720, 5745-5825	36 to 64, 100 to 144, 149 to 165	46	OFDM	BPSK	6.5

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.

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11ac (VHT80)		42	42	OFDM	BPSK	29.3
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11ac (VHT40)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11ac (VHT80)		58	58	OFDM	BPSK	29.3
802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	BPSK	6
802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	BPSK	29.3
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	13.5
802.11ac (VHT80)		155	155	OFDM	BPSK	29.3

Test Condition:

Applicable To	Environmental Conditions	Input Power (System)	Tested By
RE _≥ 1G	24deg. C, 69%RH	120Vac, 60Hz	Benson Chao
RE _{<} 1G	22deg. C, 70%RH	120Vac, 60Hz	Benson Chao
PLC	25deg. C, 75%RH	120Vac, 60Hz	Sampson Chen
APCM	25deg. C, 60%RH	120Vac, 60Hz	Kevin Lo

3.3 Duty Cycle of Test Signal

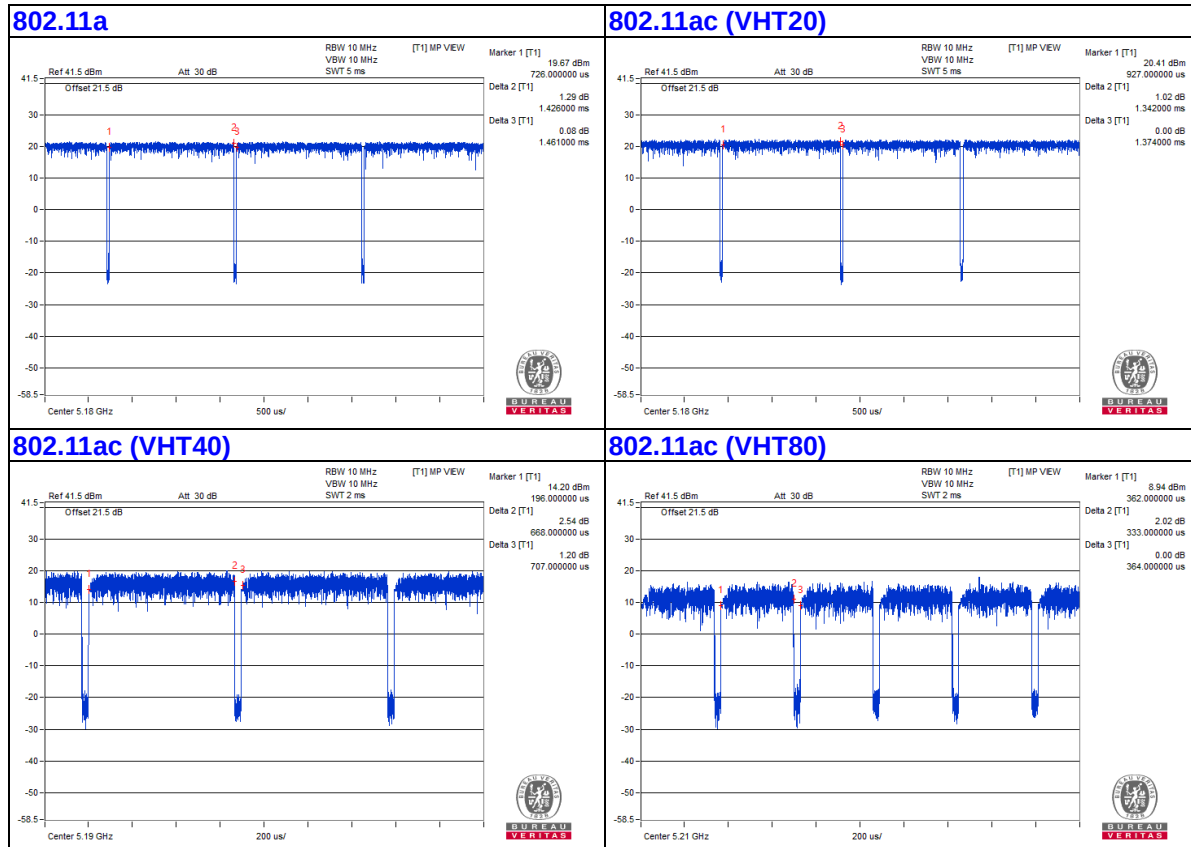
If duty cycle of test signal is < 98%, duty factor shall be considered.

802.11a: Duty cycle = 1.426 ms /1.461 ms=0.976

802.11ac (VHT20): Duty cycle = 1.342 ms /1.374 ms=0.977

802.11ac (VHT40): Duty cycle = 0.668 ms /0.707 ms=0.945

802.11ac (VHT80): Duty cycle = 0.333 ms /0.364 ms=0.915



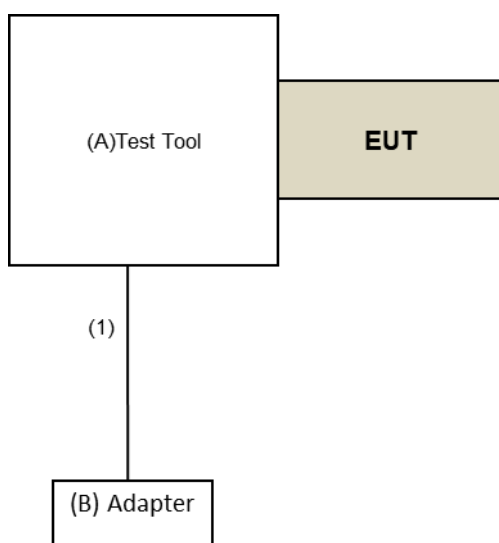
3.4 Description of Support Units

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.	Test Tool	soliton technologies	NA	NA	NA	Supplied by client (for RF Setup)
B.	Adapter	ASUS	EXA1205UA	NA	NA	Provided by Lab

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Micro USB to USB Cable	1	1.4	Yes	0	Provided by Lab

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standard 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 (dBuV/m)	AV:54 (dBuV/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(dBuV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	15.407(b)(4)(i)	PK:-27 (dBm/MHz) ^{*1} PK:10 (dBm/MHz) ^{*2} PK:15.6 (dBm/MHz) ^{*3} PK:27 (dBm/MHz) ^{*4}	PK: 68.2(dBuV/m) ^{*1} PK:105.2 (dBuV/m) ^{*2} PK: 110.8(dBuV/m) ^{*3} PK:122.2 (dBuV/m) ^{*4}
^{*1} beyond 75 MHz or more above of the band edge. ^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. ^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. ^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.			

Note:

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

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

4.1.2 Test Instruments

For Radiated Emission & OOB & BandEdge test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESR7	102026	Apr. 22, 2020	Apr. 21, 2021
Spectrum Analyzer Keysight	N9030B	MY57141948	May 22, 2020	May 21, 2021
Pre-Amplifier EMCi	EMC001340	980142	May 25, 2020	May 24, 2021
Loop Antenna Electro-Metrics	EM-6879	264	Feb. 18, 2020	Feb. 17, 2021
RF Cable	NA	LOOPCAB-001	Jan. 08, 2020	Jan. 07, 2021
RF Cable	NA	LOOPCAB-002	Jan. 08, 2020	Jan. 07, 2021
Pre-Amplifier EMCi	EMC330N	980538	Apr. 28, 2020	Apr. 27, 2021
Trilog Broadband Antenna SCHWARZBECK	VULB9168	9168-0842	Nov. 03, 2020	Nov. 02, 2021
RF Cable	8D	966-5-1	Apr. 29, 2020	Apr. 28, 2021
RF Cable	8D	966-5-2	Apr. 29, 2020	Apr. 28, 2021
RF Cable	8D	966-5-3	Apr. 29, 2020	Apr. 28, 2021
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-02	Jan. 14, 2020	Jan. 13, 2021
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-1819	Nov. 22, 2020	Nov. 21, 2021
Pre-Amplifier EMCi	EMC12630SE	980509	Apr. 29, 2020	Apr. 28, 2021
RF Cable EMCi	EMC104-SM-SM-1500	180503	Apr. 29, 2020	Apr. 28, 2021
RF Cable EMCi	EMC104-SM-SM-2000	180501	Apr. 29, 2020	Apr. 28, 2021
RF Cable EMCi	EMC104-SM-SM-6000	180506	Apr. 29, 2020	Apr. 28, 2021
Pre-Amplifier EMCi	EMC184045SE	980387	Jan. 15, 2020	Jan. 14, 2021
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 22, 2020	Nov. 21, 2021
RF Cable	EMC102-KM-KM-1200	160924	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC-KM-KM-4000	200214	Mar. 11, 2020	Mar. 10, 2021
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	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 966 Chamber No. 5.
3. Tested Date: Nov. 29 to Dec. 12, 2020

For other test items:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	May 29, 2020	May 28, 2021
Power meter Anritsu	ML2495A	1529002	July 22, 2020	July 21, 2021
Power sensor Anritsu	MA2411B	1339443	July 22, 2020	July 21, 2021
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
DC Power Supply Topward	6603D	795558	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 16, 2020	Jan. 15, 2021
True RMS Clamp Meter FLUKE	325	31130711WS	June 06, 2020	June 05, 2021
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: Dec. 03 to 04, 2020

4.1.3 Test Procedure

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 detects 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:

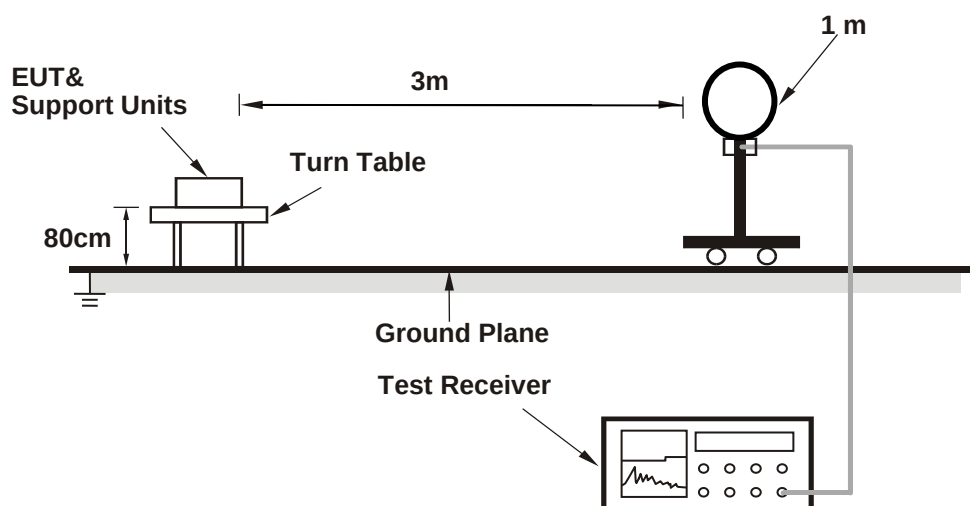
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

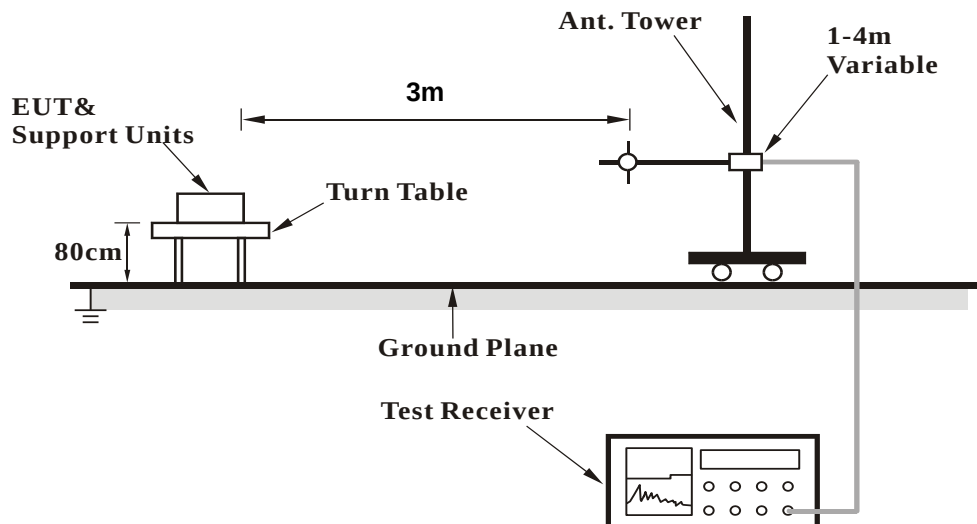
No deviation.

4.1.5 Test Setup

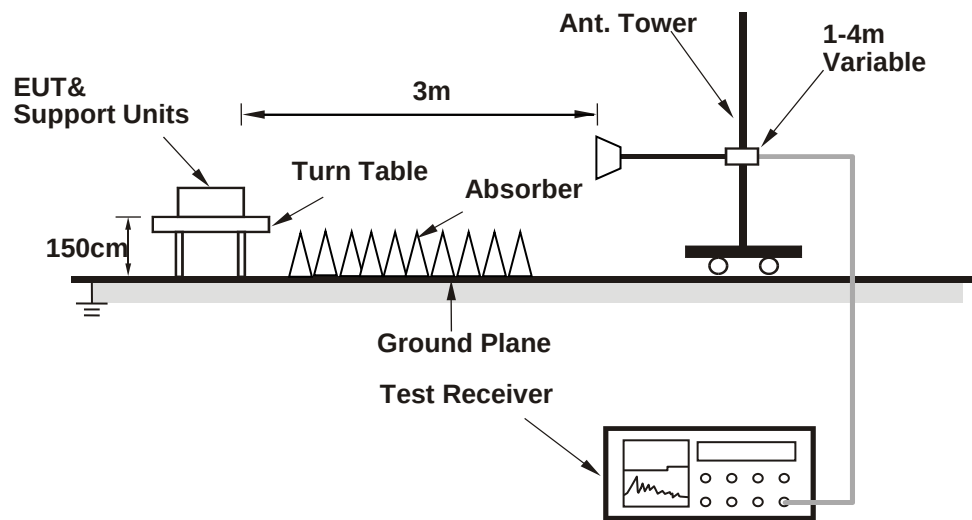
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Condition

- Placed the EUT on the testing table.
- Controlling software (Terminal paste "TXRX script command") has been activated to set the EUT under transmission condition continuously.

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	5149.89	70.7 PK	74.0	-3.3	1.43 H	311	68.7	2.0
2	5149.89	53.4 AV	54.0	-0.6	1.43 H	311	51.4	2.0
3	*5180.00	109.5 PK			1.43 H	311	107.7	1.8
4	*5180.00	97.2 AV			1.43 H	311	95.4	1.8
5	#10360.00	48.9 PK	68.2	-19.3	2.18 H	330	37.5	11.4
6	15540.00	48.5 PK	74.0	-25.5	2.71 H	331	36.6	11.9
7	15540.00	35.6 AV	54.0	-18.4	2.71 H	331	23.7	11.9
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	5149.20	70.8 PK	74.0	-3.2	1.46 V	352	68.8	2.0
2	5149.20	53.5 AV	54.0	-0.5	1.46 V	352	51.5	2.0
3	*5180.00	110.6 PK			1.46 V	352	108.8	1.8
4	*5180.00	91.3 AV			1.46 V	352	89.5	1.8
5	#10360.00	37.3 PK	68.2	-30.9	1.76 V	348	25.9	11.4
6	15540.00	48.2 PK	74.0	-25.8	1.89 V	241	36.3	11.9
7	15540.00	35.1 AV	54.0	-18.9	1.89 V	241	23.2	11.9

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 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	5150.00	55.7 PK	74.0	-18.3	1.61 H	306	53.7	2.0
2	5150.00	43.5 AV	54.0	-10.5	1.61 H	306	41.5	2.0
3	*5200.00	111.3 PK			1.61 H	306	109.6	1.7
4	*5200.00	99.0 AV			1.61 H	306	97.3	1.7
5	5350.00	52.5 PK	74.0	-21.5	1.61 H	306	50.9	1.6
6	5350.00	40.7 AV	54.0	-13.3	1.61 H	306	39.1	1.6
7	#10400.00	51.5 PK	68.2	-16.7	2.08 H	311	39.9	11.6
8	15600.00	48.7 PK	74.0	-25.3	2.69 H	264	37.1	11.6
9	15600.00	35.7 AV	54.0	-18.3	2.69 H	264	24.1	11.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	60.6 PK	74.0	-13.4	1.39 V	337	58.6	2.0
2	5150.00	46.2 AV	54.0	-7.8	1.39 V	337	44.2	2.0
3	*5200.00	112.3 PK			1.39 V	337	110.6	1.7
4	*5200.00	100.0 AV			1.39 V	337	98.3	1.7
5	5350.00	54.1 PK	74.0	-19.9	1.39 V	337	52.5	1.6
6	5350.00	42.5 AV	54.0	-11.5	1.39 V	337	40.9	1.6
7	#10400.00	51.7 PK	68.2	-16.5	1.55 V	303	40.1	11.6
8	15600.00	47.6 PK	74.0	-26.4	1.99 V	298	36.0	11.6
9	15600.00	35.5 AV	54.0	-18.5	1.99 V	298	23.9	11.6

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 48 : 5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	112.5 PK			1.50 H	314	111.0	1.5
2	*5240.00	100.8 AV			1.50 H	314	99.3	1.5
3	5388.70	53.7 PK	74.0	-20.3	1.50 H	314	52.1	1.6
4	5388.70	43.5 AV	54.0	-10.5	1.50 H	314	41.9	1.6
5	#10480.00	52.5 PK	68.2	-15.7	2.34 H	319	40.9	11.6
6	15720.00	48.6 PK	74.0	-25.4	2.20 H	316	37.3	11.3
7	15720.00	36.4 AV	54.0	-17.6	2.20 H	316	25.1	11.3
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	*5240.00	111.6 PK			1.43 V	353	110.1	1.5
2	*5240.00	100.4 AV			1.43 V	353	98.9	1.5
3	5388.62	52.6 PK	74.0	-21.4	1.43 V	353	51.0	1.6
4	5388.62	43.3 AV	54.0	-10.7	1.43 V	353	41.7	1.6
5	#10480.00	51.7 PK	68.2	-16.5	1.85 V	194	40.1	11.6
6	15720.00	48.4 PK	74.0	-25.6	1.59 V	247	37.1	11.3
7	15720.00	35.9 AV	54.0	-18.1	1.59 V	247	24.6	11.3

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 802.11a	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	5109.53	54.4 PK	74.0	-19.6	1.44 H	314	52.3	2.1
2	5109.53	44.3 AV	54.0	-9.7	1.44 H	314	42.2	2.1
3	*5260.00	111.2 PK			1.44 H	314	109.6	1.6
4	*5260.00	99.7 AV			1.44 H	314	98.1	1.6
5	#10520.00	51.8 PK	68.2	-16.4	3.19 H	353	40.2	11.6
6	15780.00	47.0 PK	74.0	-27.0	2.69 H	184	36.2	10.8
7	15780.00	35.0 AV	54.0	-19.0	2.69 H	184	24.2	10.8
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	5111.21	54.3 PK	74.0	-19.7	1.43 V	352	52.2	2.1
2	5111.21	44.2 AV	54.0	-9.8	1.43 V	352	42.1	2.1
3	*5260.00	112.3 PK			1.43 V	352	110.7	1.6
4	*5260.00	100.7 AV			1.43 V	352	99.1	1.6
5	#10520.00	51.6 PK	68.2	-16.6	2.34 V	287	40.0	11.6
6	15780.00	47.2 PK	74.0	-26.8	1.68 V	294	36.4	10.8
7	15780.00	35.6 AV	54.0	-18.4	1.68 V	294	24.8	10.8

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 802.11a	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	5150.00	54.5 PK	74.0	-19.5	1.43 H	320	52.5	2.0
2	5150.00	44.7 AV	54.0	-9.3	1.43 H	320	42.7	2.0
3	*5300.00	111.0 PK			1.43 H	320	109.6	1.4
4	*5300.00	97.6 AV			1.43 H	320	96.2	1.4
5	5350.00	62.3 PK	74.0	-11.7	1.43 H	320	60.7	1.6
6	5350.00	44.5 AV	54.0	-9.5	1.43 H	320	42.9	1.6
7	10600.00	51.8 PK	74.0	-22.2	1.94 H	324	39.7	12.1
8	10600.00	44.4 AV	54.0	-9.6	1.94 H	324	32.3	12.1
9	15900.00	48.7 PK	74.0	-25.3	2.19 H	318	37.6	11.1
10	15900.00	35.6 AV	54.0	-18.4	2.19 H	318	24.5	11.1
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	54.7 PK	74.0	-19.3	1.20 V	307	52.7	2.0
2	5150.00	44.9 AV	54.0	-9.1	1.20 V	307	42.9	2.0
3	*5300.00	111.9 PK			1.20 V	307	110.5	1.4
4	*5300.00	98.6 AV			1.20 V	307	97.2	1.4
5	5350.00	62.7 PK	74.0	-11.3	1.20 V	307	61.1	1.6
6	5350.00	44.8 AV	54.0	-9.2	1.20 V	307	43.2	1.6
7	10600.00	50.5 PK	74.0	-23.5	1.67 V	249	38.4	12.1
8	10600.00	43.9 AV	54.0	-10.1	1.67 V	249	31.8	12.1
9	15900.00	48.4 PK	74.0	-25.6	1.44 V	294	37.3	11.1
10	15900.00	34.8 AV	54.0	-19.2	1.44 V	294	23.7	11.1

Remarks:

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

RF Mode	TX 802.11a	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	110.7 PK			2.71 H	342	109.1	1.6
2	*5320.00	99.4 AV			2.71 H	342	97.8	1.6
3	5351.11	65.8 PK	74.0	-8.2	2.71 H	342	64.2	1.6
4	5351.11	53.8 AV	54.0	-0.2	2.71 H	342	52.2	1.6
5	10640.00	51.8 PK	74.0	-22.2	1.74 H	319	39.7	12.1
6	10640.00	44.8 AV	54.0	-9.2	1.74 H	319	32.7	12.1
7	15960.00	49.2 PK	74.0	-24.8	2.17 H	307	37.9	11.3
8	15960.00	35.5 AV	54.0	-18.5	2.17 H	307	24.2	11.3
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	*5320.00	110.5 PK			1.58 V	306	108.9	1.6
2	*5320.00	98.8 AV			1.58 V	306	97.2	1.6
3	5351.90	65.9 PK	74.0	-8.1	1.58 V	306	64.3	1.6
4	5351.90	52.3 AV	54.0	-1.7	1.58 V	306	50.7	1.6
5	10640.00	50.7 PK	74.0	-23.3	1.98 V	315	38.6	12.1
6	10640.00	43.6 AV	54.0	-10.4	1.98 V	315	31.5	12.1
7	15960.00	48.5 PK	74.0	-25.5	1.37 V	275	37.2	11.3
8	15960.00	33.5 AV	54.0	-20.5	1.37 V	275	22.2	11.3

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.

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	5459.74	56.4 PK	74.0	-17.6	1.55 H	309	54.6	1.8
2	5459.74	44.7 AV	54.0	-9.3	1.55 H	309	42.9	1.8
3	#5466.85	67.4 PK	68.2	-0.8	1.55 H	309	65.5	1.9
4	*5500.00	108.1 PK			1.55 H	309	106.2	1.9
5	*5500.00	96.9 AV			1.55 H	309	95.0	1.9
6	11000.00	48.4 PK	74.0	-25.6	1.90 H	345	35.8	12.6
7	11000.00	43.2 AV	54.0	-10.8	1.90 H	345	30.6	12.6
8	#16500.00	44.4 PK	68.2	-23.8	1.35 H	324	30.7	13.7
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	5459.68	54.4 PK	74.0	-19.6	1.30 V	351	52.6	1.8
2	5459.68	43.4 AV	54.0	-10.6	1.30 V	351	41.6	1.8
3	#5466.85	59.8 PK	68.2	-8.4	1.30 V	351	57.9	1.9
4	*5500.00	106.8 PK			1.30 V	351	104.9	1.9
5	*5500.00	94.6 AV			1.30 V	351	92.7	1.9
6	11000.00	47.1 PK	74.0	-26.9	1.51 V	291	34.5	12.6
7	11000.00	42.4 AV	54.0	-11.6	1.51 V	291	29.8	12.6
8	#16500.00	43.5 PK	68.2	-24.7	2.14 V	309	29.8	13.7

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 116 : 5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5350.00	57.1 PK	74.0	-16.9	1.37 H	319	55.5	1.6
2	5350.00	45.7 AV	54.0	-8.3	1.37 H	319	44.1	1.6
3	*5580.00	111.8 PK			1.37 H	319	109.9	1.9
4	*5580.00	100.1 AV			1.37 H	319	98.2	1.9
5	11160.00	57.1 PK	74.0	-16.9	3.26 H	356	45.1	12.0
6	11160.00	44.4 AV	54.0	-9.6	3.26 H	356	32.4	12.0
7	#16740.00	49.3 PK	68.2	-18.9	2.70 H	198	34.3	15.0
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	5350.00	55.5 PK	74.0	-18.5	1.36 V	304	53.9	1.6
2	5350.00	44.3 AV	54.0	-9.7	1.36 V	304	42.7	1.6
3	*5580.00	111.2 PK			1.36 V	304	109.3	1.9
4	*5580.00	99.1 AV			1.36 V	304	97.2	1.9
5	11160.00	56.6 PK	74.0	-17.4	1.86 V	290	44.6	12.0
6	11160.00	43.2 AV	54.0	-10.8	1.86 V	290	31.2	12.0
7	#16740.00	48.1 PK	68.2	-20.1	2.38 V	347	33.1	15.0

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 802.11a	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	111.7 PK			1.50 H	328	109.9	1.8
2	*5700.00	97.8 AV			1.50 H	328	96.0	1.8
3	#5725.00	67.9 PK	68.2	-0.3	1.50 H	328	65.9	2.0
4	11400.00	54.3 PK	74.0	-19.7	1.84 H	313	41.0	13.3
5	11400.00	41.8 AV	54.0	-12.2	1.84 H	313	28.5	13.3
6	#17100.00	47.7 PK	68.2	-20.5	1.36 H	184	31.0	16.7
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	*5700.00	110.3 PK			1.46 V	284	108.5	1.8
2	*5700.00	97.4 AV			1.46 V	284	95.6	1.8
3	#5725.00	67.6 PK	68.2	-0.6	1.46 V	284	65.6	2.0
4	11400.00	53.5 PK	74.0	-20.5	1.89 V	308	40.2	13.3
5	11400.00	40.8 AV	54.0	-13.2	1.89 V	308	27.5	13.3
6	#17100.00	46.7 PK	68.2	-21.5	1.02 V	284	30.0	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 802.11a	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	5460.00	51.9 PK	74.0	-22.1	1.59 H	315	50.1	1.8
2	5460.00	39.7 AV	54.0	-14.3	1.59 H	315	37.9	1.8
3	#5470.00	55.0 PK	68.2	-13.2	1.59 H	315	53.1	1.9
4	*5720.00	111.5 PK			1.59 H	315	109.5	2.0
5	*5720.00	100.2 AV			1.59 H	315	98.2	2.0
6	#5850.00	55.6 PK	68.2	-12.6	1.59 H	315	53.2	2.4
7	11440.00	65.5 PK	74.0	-8.5	1.94 H	307	52.4	13.1
8	11440.00	51.6 AV	54.0	-2.4	1.94 H	307	38.5	13.1
9	#17160.00	51.9 PK	68.2	-16.3	1.58 H	294	35.6	16.3
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	5460.00	51.4 PK	74.0	-22.6	1.60 V	264	49.6	1.8
2	5460.00	38.6 AV	54.0	-15.4	1.60 V	264	36.8	1.8
3	#5470.00	53.9 PK	68.2	-14.3	1.60 V	264	52.0	1.9
4	*5720.00	110.8 PK			1.60 V	264	108.8	2.0
5	*5720.00	99.0 AV			1.60 V	264	97.0	2.0
6	#5850.00	54.6 PK	68.2	-13.6	1.60 V	264	52.2	2.4
7	11440.00	62.6 PK	74.0	-11.4	1.84 V	255	49.5	13.1
8	11440.00	50.6 AV	54.0	-3.4	1.84 V	255	37.5	13.1
9	#17160.00	50.5 PK	68.2	-17.7	2.07 V	300	34.2	16.3

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 802.11a	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	#5588.50	55.0 PK	68.2	-13.2	1.45 H	309	53.1	1.9
2	*5745.00	110.5 PK			1.45 H	309	108.4	2.1
3	*5745.00	100.4 AV			1.45 H	309	98.3	2.1
4	#5965.38	52.2 PK	68.2	-16.0	1.45 H	309	49.5	2.7
5	11490.00	66.6 PK	74.0	-7.4	1.44 H	341	53.6	13.0
6	11490.00	53.8 AV	54.0	-0.2	1.44 H	341	40.8	13.0
7	#17235.00	53.9 PK	68.2	-14.3	2.97 H	184	37.7	16.2
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	#5594.04	52.9 PK	68.2	-15.3	1.06 V	344	51.1	1.8
2	*5745.00	110.4 PK			1.06 V	344	108.3	2.1
3	*5745.00	100.2 AV			1.06 V	344	98.1	2.1
4	#5927.28	51.6 PK	68.2	-16.6	1.06 V	344	48.9	2.7
5	11490.00	61.8 PK	74.0	-12.2	1.94 V	349	48.8	13.0
6	11490.00	49.2 AV	54.0	-4.8	1.94 V	349	36.2	13.0
7	#17235.00	52.5 PK	68.2	-15.7	1.11 V	294	36.3	16.2

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 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	#5636.64	56.0 PK	68.2	-12.2	1.43 H	309	54.0	2.0
2	*5785.00	110.5 PK			1.43 H	309	108.2	2.3
3	*5785.00	100.3 AV			1.43 H	309	98.0	2.3
4	#5936.70	55.6 PK	68.2	-12.6	1.43 H	309	52.9	2.7
5	11570.00	66.4 PK	74.0	-7.6	1.44 H	342	52.9	13.5
6	11570.00	53.9 AV	54.0	-0.1	1.44 H	342	40.4	13.5
7	#17355.00	53.8 PK	68.2	-14.4	2.38 H	241	36.6	17.2
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	#5636.18	54.6 PK	68.2	-13.6	1.85 V	266	52.6	2.0
2	*5785.00	110.3 PK			1.85 V	266	108.0	2.3
3	*5785.00	100.1 AV			1.85 V	266	97.8	2.3
4	#5932.52	54.2 PK	68.2	-14.0	1.85 V	266	51.5	2.7
5	11570.00	62.5 PK	74.0	-11.5	2.16 V	310	49.0	13.5
6	11570.00	50.0 AV	54.0	-4.0	2.16 V	310	36.5	13.5
7	#17355.00	53.1 PK	68.2	-15.1	1.54 V	287	35.9	17.2

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 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	#5599.53	51.3 PK	68.2	-16.9	1.36 H	310	49.5	1.8
2	*5825.00	110.6 PK			4.00 H	310	108.3	2.3
3	*5825.00	100.3 AV			4.00 H	310	98.0	2.3
4	#5974.15	55.2 PK	68.2	-13.0	1.36 H	310	52.5	2.7
5	11650.00	66.2 PK	74.0	-7.8	1.39 H	343	52.7	13.5
6	11650.00	53.4 AV	54.0	-0.6	1.39 H	343	39.9	13.5
7	#17475.00	54.9 PK	68.2	-13.3	2.85 H	143	35.8	19.1
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	#5636.19	49.5 PK	68.2	-18.7	1.44 V	240	47.5	2.0
2	*5825.00	110.4 PK			1.44 V	240	108.1	2.3
3	*5825.00	100.2 AV			1.44 V	240	97.9	2.3
4	#5975.42	55.0 PK	68.2	-13.2	1.44 V	240	52.3	2.7
5	11650.00	61.8 PK	74.0	-12.2	2.23 V	13	48.3	13.5
6	11650.00	48.9 AV	54.0	-5.1	2.23 V	13	35.4	13.5
7	#17475.00	53.7 PK	68.2	-14.5	1.99 V	214	34.6	19.1

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	5149.62	70.8 PK	74.0	-3.2	1.56 H	315	68.8	2.0
2	5149.62	53.3 AV	54.0	-0.7	1.56 H	315	51.3	2.0
3	*5180.00	110.0 PK			1.56 H	315	108.2	1.8
4	*5180.00	99.9 AV			1.56 H	315	98.1	1.8
5	#10360.00	49.0 PK	68.2	-19.2	1.67 H	349	37.6	11.4
6	15540.00	48.5 PK	74.0	-25.5	2.05 H	305	36.6	11.9
7	15540.00	35.7 AV	54.0	-18.3	2.05 H	305	23.8	11.9
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	5149.87	66.0 PK	74.0	-8.0	1.60 V	339	64.0	2.0
2	5149.87	53.8 AV	54.0	-0.2	1.60 V	339	51.8	2.0
3	*5180.00	110.0 PK			1.60 V	339	108.2	1.8
4	*5180.00	99.9 AV			1.60 V	339	98.1	1.8
5	#10360.00	48.5 PK	68.2	-19.7	1.42 V	324	37.1	11.4
6	15540.00	47.4 PK	74.0	-26.6	1.97 V	246	35.5	11.9
7	15540.00	35.6 AV	54.0	-18.4	1.97 V	246	23.7	11.9

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 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	5150.00	64.6 PK	74.0	-9.4	1.36 H	330	62.6	2.0
2	5150.00	49.3 AV	54.0	-4.7	1.36 H	330	47.3	2.0
3	*5200.00	111.9 PK			1.36 H	330	110.2	1.7
4	*5200.00	102.2 AV			1.36 H	330	100.5	1.7
5	#10400.00	49.1 PK	68.2	-19.1	1.43 H	225	37.5	11.6
6	15600.00	48.4 PK	74.0	-25.6	1.80 H	291	36.8	11.6
7	15600.00	36.4 AV	54.0	-17.6	1.80 H	291	24.8	11.6
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	64.8 PK	74.0	-9.2	1.39 V	336	62.8	2.0
2	5150.00	48.5 AV	54.0	-5.5	1.39 V	336	46.5	2.0
3	*5200.00	112.4 PK			1.39 V	336	110.7	1.7
4	*5200.00	102.3 AV			1.39 V	336	100.6	1.7
5	#10400.00	48.8 PK	68.2	-19.4	1.62 V	284	37.2	11.6
6	15600.00	50.8 PK	74.0	-23.2	2.80 V	0	39.2	11.6
7	15600.00	35.8 AV	54.0	-18.2	2.80 V	0	24.2	11.6

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 48 : 5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	111.4 PK			1.46 H	314	109.9	1.5
2	*5240.00	101.1 AV			1.46 H	314	99.6	1.5
3	5388.62	55.3 PK	74.0	-18.7	1.46 H	314	53.7	1.6
4	5388.62	43.7 AV	54.0	-10.3	1.46 H	314	42.1	1.6
5	#10480.00	49.0 PK	68.2	-19.2	3.16 H	277	37.4	11.6
6	15720.00	48.1 PK	74.0	-25.9	1.59 H	312	36.8	11.3
7	15720.00	36.2 AV	54.0	-17.8	1.59 H	312	24.9	11.3
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	*5240.00	111.9 PK			1.32 V	350	110.4	1.5
2	*5240.00	101.5 AV			1.32 V	350	100.0	1.5
3	5388.48	52.9 PK	74.0	-21.1	1.32 V	350	51.3	1.6
4	5388.48	43.8 AV	54.0	-10.2	1.32 V	350	42.2	1.6
5	#10480.00	49.3 PK	68.2	-18.9	1.28 V	345	37.7	11.6
6	15720.00	47.9 PK	74.0	-26.1	1.96 V	298	36.6	11.3
7	15720.00	35.7 AV	54.0	-18.3	1.96 V	298	24.4	11.3

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 (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	54.2 PK	74.0	-19.8	1.74 H	311	52.2	2.0
2	5150.00	44.9 AV	54.0	-9.1	1.74 H	311	42.9	2.0
3	*5260.00	111.7 PK			1.74 H	311	110.1	1.6
4	*5260.00	101.8 AV			1.74 H	311	100.2	1.6
5	#10520.00	48.8 PK	68.2	-19.4	1.90 H	335	37.2	11.6
6	15780.00	47.2 PK	74.0	-26.8	1.74 H	319	36.4	10.8
7	15780.00	36.0 AV	54.0	-18.0	1.74 H	319	25.2	10.8
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	54.4 PK	74.0	-19.6	1.50 V	307	52.4	2.0
2	5150.00	45.3 AV	54.0	-8.7	1.50 V	307	43.3	2.0
3	*5260.00	112.6 PK			1.50 V	307	111.0	1.6
4	*5260.00	102.0 AV			1.50 V	307	100.4	1.6
5	#10520.00	48.6 PK	68.2	-19.6	2.16 V	341	37.0	11.6
6	15780.00	47.1 PK	74.0	-26.9	1.88 V	319	36.3	10.8
7	15780.00	35.9 AV	54.0	-18.1	1.88 V	319	25.1	10.8

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 (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	112.9 PK			1.68 H	346	111.5	1.4
2	*5300.00	102.9 AV			1.68 H	346	101.5	1.4
3	5350.00	61.9 PK	74.0	-12.1	1.68 H	346	60.3	1.6
4	5350.00	46.6 AV	54.0	-7.4	1.68 H	346	45.0	1.6
5	10600.00	48.8 PK	74.0	-25.2	1.68 H	310	36.7	12.1
6	10600.00	35.7 AV	54.0	-18.3	1.68 H	310	23.6	12.1
7	15900.00	47.6 PK	74.0	-26.4	1.84 H	294	36.5	11.1
8	15900.00	36.2 AV	54.0	-17.8	1.84 H	294	25.1	11.1
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	*5300.00	112.8 PK			1.46 V	306	111.4	1.4
2	*5300.00	102.4 AV			1.46 V	306	101.0	1.4
3	5350.00	61.1 PK	74.0	-12.9	1.46 V	306	59.5	1.6
4	5350.00	45.9 AV	54.0	-8.1	1.46 V	306	44.3	1.6
5	10600.00	48.5 PK	74.0	-25.5	1.86 V	335	36.4	12.1
6	10600.00	36.5 AV	54.0	-17.5	1.86 V	335	24.4	12.1
7	15900.00	47.3 PK	74.0	-26.7	1.47 V	222	36.2	11.1
8	15900.00	35.7 AV	54.0	-18.3	1.47 V	222	24.6	11.1

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	110.6 PK			1.43 H	316	109.0	1.6
2	*5320.00	100.4 AV			1.43 H	316	98.8	1.6
3	5350.17	63.4 PK	74.0	-10.6	1.43 H	316	61.8	1.6
4	5350.17	53.4 AV	54.0	-0.6	1.43 H	316	51.8	1.6
5	10640.00	48.7 PK	74.0	-25.3	1.71 H	317	36.6	12.1
6	10640.00	35.8 AV	54.0	-18.2	1.71 H	317	23.7	12.1
7	15960.00	47.9 PK	74.0	-26.1	1.34 H	271	36.6	11.3
8	15960.00	37.1 AV	54.0	-16.9	1.34 H	271	25.8	11.3
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	*5320.00	110.5 PK			1.59 V	357	108.9	1.6
2	*5320.00	100.2 AV			1.59 V	357	98.6	1.6
3	5351.81	61.9 PK	74.0	-12.1	1.59 V	357	60.3	1.6
4	5351.81	51.5 AV	54.0	-2.5	1.59 V	357	49.9	1.6
5	10640.00	48.2 PK	74.0	-25.8	1.92 V	273	36.1	12.1
6	10640.00	35.7 AV	54.0	-18.3	1.92 V	273	23.6	12.1
7	15960.00	47.6 PK	74.0	-26.4	1.73 V	310	36.3	11.3
8	15960.00	36.8 AV	54.0	-17.2	1.73 V	310	25.5	11.3

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.

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	5459.84	53.4 PK	74.0	-20.6	1.50 H	312	51.6	1.8
2	5459.84	41.5 AV	54.0	-12.5	1.50 H	312	39.7	1.8
3	#5466.86	62.9 PK	68.2	-5.3	1.50 H	312	61.0	1.9
4	*5500.00	105.8 PK			1.50 H	312	103.9	1.9
5	*5500.00	95.7 AV			1.50 H	312	93.8	1.9
6	11000.00	49.7 PK	74.0	-24.3	1.84 H	317	37.1	12.6
7	11000.00	37.0 AV	54.0	-17.0	1.84 H	317	24.4	12.6
8	#16500.00	48.3 PK	68.2	-19.9	1.67 H	305	34.6	13.7
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	5459.68	60.4 PK	74.0	-13.6	1.08 V	308	58.6	1.8
2	5459.68	45.2 AV	54.0	-8.8	1.08 V	308	43.4	1.8
3	#5468.89	67.3 PK	68.2	-0.9	1.08 V	308	65.4	1.9
4	*5500.00	105.4 PK			1.08 V	308	103.5	1.9
5	*5500.00	95.5 AV			1.08 V	308	93.6	1.9
6	11000.00	48.8 PK	74.0	-25.2	1.73 V	275	36.2	12.6
7	11000.00	36.2 AV	54.0	-17.8	1.73 V	275	23.6	12.6
8	#16500.00	47.8 PK	68.2	-20.4	1.39 V	317	34.1	13.7

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 116 : 5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5350.00	56.8 PK	74.0	-17.2	1.36 H	271	55.2	1.6
2	5350.00	45.2 AV	54.0	-8.8	1.36 H	271	43.6	1.6
3	*5580.00	111.9 PK			1.36 H	271	110.0	1.9
4	*5580.00	100.5 AV			1.36 H	271	98.6	1.9
5	11160.00	49.7 PK	74.0	-24.3	2.14 H	307	37.7	12.0
6	11160.00	36.2 AV	54.0	-17.8	2.14 H	307	24.2	12.0
7	#16740.00	48.3 PK	68.2	-19.9	1.84 H	291	33.3	15.0
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	5350.00	55.5 PK	74.0	-18.5	1.43 V	281	53.9	1.6
2	5350.00	44.0 AV	54.0	-10.0	1.43 V	281	42.4	1.6
3	*5580.00	109.7 PK			1.43 V	281	107.8	1.9
4	*5580.00	99.4 AV			1.43 V	281	97.5	1.9
5	11160.00	49.6 PK	74.0	-24.4	2.09 V	249	37.6	12.0
6	11160.00	35.8 AV	54.0	-18.2	2.09 V	249	23.8	12.0
7	#16740.00	48.1 PK	68.2	-20.1	1.91 V	305	33.1	15.0

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 (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	107.6 PK			1.25 H	304	105.8	1.8
2	*5700.00	97.3 AV			1.25 H	304	95.5	1.8
3	#5725.00	68.0 PK	68.2	-0.2	1.25 H	304	66.0	2.0
4	11400.00	54.4 PK	74.0	-19.6	1.95 H	309	41.1	13.3
5	11400.00	42.2 AV	54.0	-11.8	1.95 H	309	28.9	13.3
6	#17100.00	50.7 PK	68.2	-17.5	3.76 H	296	34.0	16.7
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	*5700.00	107.2 PK			1.50 V	306	105.4	1.8
2	*5700.00	97.0 AV			1.50 V	306	95.2	1.8
3	#5725.00	67.2 PK	68.2	-1.0	1.50 V	306	65.2	2.0
4	11400.00	53.8 PK	74.0	-20.2	1.64 V	197	40.5	13.3
5	11400.00	41.0 AV	54.0	-13.0	1.64 V	197	27.7	13.3
6	#17100.00	50.3 PK	68.2	-17.9	2.17 V	313	33.6	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 (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	5460.00	52.5 PK	74.0	-21.5	1.19 H	322	50.7	1.8
2	5460.00	40.8 AV	54.0	-13.2	1.19 H	322	39.0	1.8
3	#5470.00	52.7 PK	68.2	-15.5	1.19 H	322	50.8	1.9
4	*5720.00	110.4 PK			1.19 H	322	108.4	2.0
5	*5720.00	99.9 AV			1.19 H	322	97.9	2.0
6	#5850.00	53.9 PK	68.2	-14.3	1.19 H	322	51.5	2.4
7	11440.00	54.7 PK	74.0	-19.3	2.96 H	329	41.6	13.1
8	11440.00	42.2 AV	54.0	-11.8	2.96 H	329	29.1	13.1
9	#17160.00	52.6 PK	68.2	-15.6	1.39 H	284	36.3	16.3
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	5460.00	51.9 PK	74.0	-22.1	1.44 V	312	50.1	1.8
2	5460.00	39.1 AV	54.0	-14.9	1.44 V	312	37.3	1.8
3	#5470.00	52.6 PK	68.2	-15.6	1.44 V	312	50.7	1.9
4	*5720.00	109.0 PK			1.44 V	312	107.0	2.0
5	*5720.00	98.4 AV			1.44 V	312	96.4	2.0
6	#5850.00	53.2 PK	68.2	-15.0	1.44 V	312	50.8	2.4
7	11440.00	53.9 PK	74.0	-20.1	1.57 V	284	40.8	13.1
8	11440.00	42.2 AV	54.0	-11.8	1.57 V	284	29.1	13.1
9	#17160.00	50.3 PK	68.2	-17.9	1.85 V	298	34.0	16.3

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 (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	#5618.28	51.2 PK	68.2	-17.0	1.45 H	309	49.4	1.8
2	*5745.00	111.7 PK			1.45 H	309	109.6	2.1
3	*5745.00	101.8 AV			1.45 H	309	99.7	2.1
4	#5944.36	52.7 PK	68.2	-15.5	1.45 H	309	50.0	2.7
5	11490.00	66.1 PK	74.0	-7.9	1.45 H	343	53.1	13.0
6	11490.00	53.2 AV	54.0	-0.8	1.45 H	343	40.2	13.0
7	#17235.00	52.5 PK	68.2	-15.7	2.35 H	311	36.3	16.2
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	#5592.83	54.1 PK	68.2	-14.1	1.28 V	258	52.3	1.8
2	*5745.00	111.0 PK			1.28 V	258	108.9	2.1
3	*5745.00	100.1 AV			1.28 V	258	98.0	2.1
4	#5963.67	52.8 PK	68.2	-15.4	1.28 V	258	50.1	2.7
5	11490.00	58.2 PK	74.0	-15.8	1.50 V	317	45.2	13.0
6	11490.00	48.4 AV	54.0	-5.6	1.50 V	317	35.4	13.0
7	#17235.00	52.4 PK	68.2	-15.8	1.45 V	308	36.2	16.2

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 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	#5637.27	55.7 PK	68.2	-12.5	1.46 H	311	53.7	2.0
2	*5785.00	111.2 PK			1.46 H	311	108.9	2.3
3	*5785.00	101.0 AV			1.46 H	311	98.7	2.3
4	#5932.81	55.7 PK	68.2	-12.5	1.46 H	311	53.0	2.7
5	11570.00	66.7 PK	74.0	-7.3	1.43 H	342	53.2	13.5
6	11570.00	53.6 AV	54.0	-0.4	1.43 H	342	40.1	13.5
7	#17355.00	51.8 PK	68.2	-16.4	2.08 H	354	34.6	17.2
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	#5632.59	54.9 PK	68.2	-13.3	1.54 V	238	52.9	2.0
2	*5785.00	111.4 PK			1.54 V	238	109.1	2.3
3	*5785.00	100.6 AV			1.54 V	238	98.3	2.3
4	#5937.67	54.0 PK	68.2	-14.2	1.54 V	238	51.3	2.7
5	11570.00	58.5 PK	74.0	-15.5	1.34 V	313	45.0	13.5
6	11570.00	48.9 AV	54.0	-5.1	1.34 V	313	35.4	13.5
7	#17355.00	51.1 PK	68.2	-17.1	2.19 V	255	33.9	17.2

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 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	#5617.66	50.6 PK	68.2	-17.6	1.41 H	309	48.8	1.8
2	*5825.00	111.7 PK			1.41 H	309	109.4	2.3
3	*5825.00	101.2 AV			1.41 H	309	98.9	2.3
4	#5972.74	54.6 PK	68.2	-13.6	1.41 H	309	51.9	2.7
5	11650.00	67.5 PK	74.0	-6.5	1.46 H	341	54.0	13.5
6	11650.00	53.9 AV	54.0	-0.1	1.46 H	341	40.4	13.5
7	#17475.00	52.5 PK	68.2	-15.7	1.56 H	344	33.4	19.1
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	#5592.56	50.1 PK	68.2	-18.1	1.40 V	240	48.3	1.8
2	*5825.00	111.3 PK			1.40 V	240	109.0	2.3
3	*5825.00	101.2 AV			1.40 V	240	98.9	2.3
4	#5972.76	55.6 PK	68.2	-12.6	1.40 V	240	52.9	2.7
5	11650.00	58.6 PK	74.0	-15.4	1.63 V	283	45.1	13.5
6	11650.00	48.9 AV	54.0	-5.1	1.63 V	283	35.4	13.5
7	#17475.00	52.2 PK	68.2	-16.0	1.52 V	340	33.1	19.1

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	5149.13	65.5 PK	74.0	-8.5	1.55 H	312	63.5	2.0
2	5149.13	53.8 AV	54.0	-0.2	1.55 H	312	51.8	2.0
3	*5190.00	105.2 PK			1.55 H	312	103.5	1.7
4	*5190.00	95.0 AV			1.55 H	312	93.3	1.7
5	#10380.00	49.4 PK	68.2	-18.8	2.78 H	331	37.9	11.5
6	15570.00	48.9 PK	74.0	-25.1	1.56 H	264	37.2	11.7
7	15570.00	37.2 AV	54.0	-16.8	1.56 H	264	25.5	11.7
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	65.8 PK	74.0	-8.2	1.66 V	341	63.8	2.0
2	5150.00	53.9 AV	54.0	-0.1	1.66 V	341	51.9	2.0
3	*5190.00	104.7 PK			1.66 V	341	103.0	1.7
4	*5190.00	93.9 AV			1.66 V	341	92.2	1.7
5	#10380.00	48.9 PK	68.2	-19.3	3.16 V	347	37.4	11.5
6	15570.00	48.6 PK	74.0	-25.4	1.84 V	198	36.9	11.7
7	15570.00	36.8 AV	54.0	-17.2	1.84 V	198	25.1	11.7

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 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	5149.94	65.0 PK	74.0	-9.0	1.50 H	312	63.0	2.0
2	5149.94	53.2 AV	54.0	-0.8	1.50 H	312	51.2	2.0
3	*5230.00	107.6 PK			1.50 H	312	106.0	1.6
4	*5230.00	97.7 AV			1.50 H	312	96.1	1.6
5	5380.82	52.2 PK	74.0	-21.8	1.50 H	312	50.6	1.6
6	5380.82	42.9 AV	54.0	-11.1	1.50 H	312	41.3	1.6
7	#10460.00	50.9 PK	68.2	-17.3	1.69 H	356	39.4	11.5
8	15690.00	49.6 PK	74.0	-24.4	1.59 H	268	38.2	11.4
9	15690.00	37.3 AV	54.0	-16.7	1.59 H	268	25.9	11.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	65.2 PK	74.0	-8.8	1.66 V	346	63.2	2.0
2	5150.00	53.7 AV	54.0	-0.3	1.66 V	346	51.7	2.0
3	*5230.00	105.0 PK			1.66 V	346	103.4	1.6
4	*5230.00	94.7 AV			1.66 V	346	93.1	1.6
5	5351.00	65.8 PK	74.0	-8.2	1.66 V	346	64.2	1.6
6	5351.00	38.4 AV	54.0	-15.6	1.66 V	346	36.8	1.6
7	#10460.00	49.8 PK	68.2	-18.4	1.84 V	316	38.3	11.5
8	15690.00	48.8 PK	74.0	-25.2	1.05 V	291	37.4	11.4
9	15690.00	37.2 AV	54.0	-16.8	1.05 V	291	25.8	11.4

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 (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	54.7 PK	74.0	-19.3	1.68 H	346	52.7	2.0
2	5150.00	43.8 AV	54.0	-10.2	1.68 H	346	41.8	2.0
3	*5270.00	107.0 PK			1.68 H	346	105.5	1.5
4	*5270.00	97.5 AV			1.68 H	346	96.0	1.5
5	#10540.00	49.7 PK	68.2	-18.5	2.24 H	328	38.0	11.7
6	15810.00	48.3 PK	74.0	-25.7	1.15 H	276	37.5	10.8
7	15810.00	39.9 AV	54.0	-14.1	1.15 H	276	29.1	10.8
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	54.2 PK	74.0	-19.8	1.48 V	307	52.2	2.0
2	5150.00	42.6 AV	54.0	-11.4	1.48 V	307	40.6	2.0
3	*5270.00	106.4 PK			1.48 V	307	104.9	1.5
4	*5270.00	96.5 AV			1.48 V	307	95.0	1.5
5	#10540.00	49.5 PK	68.2	-18.7	1.68 V	345	37.8	11.7
6	15810.00	48.1 PK	74.0	-25.9	2.18 V	276	37.3	10.8
7	15810.00	39.6 AV	54.0	-14.4	2.18 V	276	28.8	10.8

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 (VHT40)	Channel	CH 62 : 5310 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	105.0 PK			1.38 H	314	103.5	1.5
2	*5310.00	94.2 AV			1.38 H	314	92.7	1.5
3	5351.18	63.4 PK	74.0	-10.6	1.38 H	314	61.8	1.6
4	5351.18	53.1 AV	54.0	-0.9	1.38 H	314	51.5	1.6
5	10620.00	50.0 PK	74.0	-24.0	1.58 H	268	38.0	12.0
6	10620.00	37.5 AV	54.0	-16.5	1.58 H	268	25.5	12.0
7	15930.00	47.3 PK	74.0	-26.7	1.93 H	351	36.1	11.2
8	15930.00	35.7 AV	54.0	-18.3	1.93 H	351	24.5	11.2
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	*5310.00	104.3 PK			1.32 V	349	102.8	1.5
2	*5310.00	93.0 AV			1.32 V	349	91.5	1.5
3	5350.00	66.2 PK	74.0	-7.8	1.32 V	349	64.6	1.6
4	5350.00	52.1 AV	54.0	-1.9	1.32 V	349	50.5	1.6
5	10620.00	49.6 PK	74.0	-24.4	1.75 V	311	37.6	12.0
6	10620.00	37.2 AV	54.0	-16.8	1.75 V	311	25.2	12.0
7	15930.00	47.1 PK	74.0	-26.9	1.24 V	318	35.9	11.2
8	15930.00	35.5 AV	54.0	-18.5	1.24 V	318	24.3	11.2

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 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	5459.31	63.0 PK	74.0	-11.0	1.54 H	309	61.2	1.8
2	5459.31	48.1 AV	54.0	-5.9	1.54 H	309	46.3	1.8
3	#5469.89	67.4 PK	68.2	-0.8	1.54 H	309	65.5	1.9
4	*5510.00	105.0 PK			1.54 H	309	103.0	2.0
5	*5510.00	94.1 AV			1.54 H	309	92.1	2.0
6	11020.00	48.1 PK	74.0	-25.9	1.48 H	285	35.7	12.4
7	11020.00	36.4 AV	54.0	-17.6	1.48 H	285	24.0	12.4
8	#16530.00	45.7 PK	68.2	-22.5	2.18 H	346	31.8	13.9
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	5460.00	62.3 PK	74.0	-11.7	1.31 V	350	60.5	1.8
2	5460.00	52.7 AV	54.0	-1.3	1.31 V	350	50.9	1.8
3	#5470.00	67.4 PK	68.2	-0.8	1.31 V	350	65.5	1.9
4	*5510.00	103.4 PK			1.31 V	350	101.4	2.0
5	*5510.00	93.5 AV			1.31 V	350	91.5	2.0
6	11020.00	47.9 PK	74.0	-26.1	2.19 V	277	35.5	12.4
7	11020.00	36.6 AV	54.0	-17.4	2.19 V	277	24.2	12.4
8	#16530.00	45.4 PK	68.2	-22.8	1.97 V	329	31.5	13.9

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 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	5350.00	65.4 PK	74.0	-8.6	1.54 H	343	63.8	1.6
2	5350.00	50.1 AV	54.0	-3.9	1.54 H	343	48.5	1.6
3	*5550.00	109.3 PK			1.54 H	343	107.4	1.9
4	*5550.00	99.0 AV			1.54 H	343	97.1	1.9
5	11100.00	49.5 PK	74.0	-24.5	1.15 H	238	37.6	11.9
6	11100.00	38.3 AV	54.0	-15.7	1.15 H	238	26.4	11.9
7	#16650.00	50.3 PK	68.2	-17.9	2.18 H	302	35.5	14.8
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	5350.00	64.0 PK	74.0	-10.0	2.18 V	352	62.4	1.6
2	5350.00	49.6 AV	54.0	-4.4	2.18 V	352	48.0	1.6
3	*5550.00	108.6 PK			2.18 V	352	106.7	1.9
4	*5550.00	98.2 AV			2.18 V	352	96.3	1.9
5	11100.00	49.3 PK	74.0	-24.7	1.81 V	337	37.4	11.9
6	11100.00	37.8 AV	54.0	-16.2	1.81 V	337	25.9	11.9
7	#16650.00	50.1 PK	68.2	-18.1	1.66 V	284	35.3	14.8

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	106.1 PK			1.76 H	352	104.1	2.0
2	*5670.00	96.7 AV			1.76 H	352	94.7	2.0
3	#5725.00	67.7 PK	68.2	-0.5	1.76 H	352	65.7	2.0
4	11340.00	50.4 PK	74.0	-23.6	1.96 H	284	37.5	12.9
5	11340.00	38.3 AV	54.0	-15.7	1.96 H	284	25.4	12.9
6	#17010.00	52.1 PK	68.2	-16.1	1.24 H	318	35.5	16.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	105.7 PK			1.38 V	312	103.7	2.0
2	*5670.00	95.4 AV			1.38 V	312	93.4	2.0
3	#5725.00	67.2 PK	68.2	-1.0	1.38 V	312	65.2	2.0
4	11340.00	50.3 PK	74.0	-23.7	1.86 V	297	37.4	12.9
5	11340.00	38.1 AV	54.0	-15.9	1.86 V	297	25.2	12.9
6	#17010.00	51.8 PK	68.2	-16.4	1.50 V	269	35.2	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 (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	5460.00	51.6 PK	74.0	-22.4	1.48 H	316	49.8	1.8
2	5460.00	40.4 AV	54.0	-13.6	1.48 H	316	38.6	1.8
3	#5470.00	53.6 PK	68.2	-14.6	1.48 H	316	51.7	1.9
4	*5710.00	107.0 PK			1.48 H	316	105.1	1.9
5	*5710.00	97.1 AV			1.48 H	316	95.2	1.9
6	#5850.00	56.2 PK	68.2	-12.0	1.48 H	316	53.8	2.4
7	11420.00	50.8 PK	74.0	-23.2	1.25 H	351	37.6	13.2
8	11420.00	41.0 AV	54.0	-13.0	1.25 H	351	27.8	13.2
9	#17130.00	52.7 PK	68.2	-15.5	2.08 H	284	36.2	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	50.8 PK	74.0	-23.2	1.38 V	307	49.0	1.8
2	5460.00	39.9 AV	54.0	-14.1	1.38 V	307	38.1	1.8
3	#5470.00	52.4 PK	68.2	-15.8	1.38 V	307	50.5	1.9
4	*5710.00	105.9 PK			1.38 V	307	104.0	1.9
5	*5710.00	96.0 AV			1.38 V	307	94.1	1.9
6	#5850.00	55.1 PK	68.2	-13.1	1.38 V	307	52.7	2.4
7	11420.00	50.6 PK	74.0	-23.4	1.85 V	279	37.4	13.2
8	11420.00	40.5 AV	54.0	-13.5	1.85 V	279	27.3	13.2
9	#17130.00	52.3 PK	68.2	-15.9	1.38 V	343	35.8	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 (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	#5649.70	61.9 PK	68.2	-6.3	1.45 H	309	59.9	2.0
2	*5755.00	110.3 PK			1.45 H	309	108.1	2.2
3	*5755.00	99.5 AV			1.45 H	309	97.3	2.2
4	#5928.98	52.4 PK	68.2	-15.8	1.45 H	309	49.7	2.7
5	11510.00	61.4 PK	74.0	-12.6	1.22 H	284	48.4	13.0
6	11510.00	49.8 AV	54.0	-4.2	1.22 H	284	36.8	13.0
7	#17265.00	52.7 PK	68.2	-15.5	1.97 H	315	36.3	16.4
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	#5635.32	59.1 PK	68.2	-9.1	1.58 V	240	57.1	2.0
2	*5755.00	109.3 PK			1.58 V	240	107.1	2.2
3	*5755.00	98.7 AV			1.58 V	240	96.5	2.2
4	#5929.41	52.6 PK	68.2	-15.6	1.58 V	240	49.9	2.7
5	11510.00	56.8 PK	74.0	-17.2	1.66 V	324	43.8	13.0
6	11510.00	46.0 AV	54.0	-8.0	1.66 V	324	33.0	13.0
7	#17265.00	52.3 PK	68.2	-15.9	1.99 V	343	35.9	16.4

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 (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	#5644.15	54.7 PK	68.2	-13.5	1.46 H	309	52.7	2.0
2	*5795.00	110.4 PK			1.46 H	309	108.1	2.3
3	*5795.00	100.1 AV			1.46 H	309	97.8	2.3
4	#5949.04	56.8 PK	68.2	-11.4	1.46 H	309	54.1	2.7
5	11590.00	62.1 PK	74.0	-11.9	1.34 H	279	48.6	13.5
6	11590.00	50.3 AV	54.0	-3.7	1.34 H	279	36.8	13.5
7	#17385.00	52.9 PK	68.2	-15.3	1.75 H	306	35.3	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	#5642.47	53.9 PK	68.2	-14.3	1.44 V	239	51.9	2.0
2	*5795.00	109.5 PK			1.44 V	239	107.2	2.3
3	*5795.00	99.3 AV			1.44 V	239	97.0	2.3
4	#5929.88	55.0 PK	68.2	-13.2	1.44 V	239	52.3	2.7
5	11590.00	57.0 PK	74.0	-17.0	1.70 V	307	43.5	13.5
6	11590.00	47.9 AV	54.0	-6.1	1.70 V	307	34.4	13.5
7	#17385.00	52.6 PK	68.2	-15.6	1.44 V	311	35.0	17.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
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	5149.84	63.9 PK	74.0	-10.1	1.53 H	312	61.9	2.0
2	5149.84	53.6 AV	54.0	-0.4	1.53 H	312	51.6	2.0
3	*5210.00	100.7 PK			1.53 H	312	99.0	1.7
4	*5210.00	90.8 AV			1.53 H	312	89.1	1.7
5	5364.22	51.5 PK	74.0	-22.5	1.53 H	312	49.8	1.7
6	5364.22	41.8 AV	54.0	-12.2	1.53 H	312	40.1	1.7
7	#10420.00	49.5 PK	68.2	-18.7	1.40 H	313	37.9	11.6
8	15630.00	48.8 PK	74.0	-25.2	1.84 H	289	37.2	11.6
9	15630.00	38.3 AV	54.0	-15.7	1.84 H	289	26.7	11.6
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	5149.11	64.1 PK	74.0	-9.9	1.55 V	352	62.1	2.0
2	5149.11	53.1 AV	54.0	-0.9	1.55 V	352	51.1	2.0
3	*5210.00	99.0 PK			1.55 V	352	97.3	1.7
4	*5210.00	90.1 AV			1.55 V	352	88.4	1.7
5	5361.43	51.7 PK	74.0	-22.3	1.55 V	352	50.0	1.7
6	5361.43	41.7 AV	54.0	-12.3	1.55 V	352	40.0	1.7
7	#10420.00	49.4 PK	68.2	-18.8	2.12 V	352	37.8	11.6
8	15630.00	48.7 PK	74.0	-25.3	1.58 V	309	37.1	11.6
9	15630.00	38.0 AV	54.0	-16.0	1.58 V	309	26.4	11.6

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 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	5148.56	53.9 PK	74.0	-20.1	1.44 H	313	51.9	2.0
2	5148.56	44.8 AV	54.0	-9.2	1.44 H	313	42.8	2.0
3	*5290.00	101.2 PK			1.44 H	313	99.7	1.5
4	*5290.00	92.0 AV			1.44 H	313	90.5	1.5
5	5351.76	63.2 PK	74.0	-10.8	1.44 H	313	61.6	1.6
6	5351.76	53.1 AV	54.0	-0.9	1.44 H	313	51.5	1.6
7	#10580.00	50.1 PK	68.2	-18.1	1.84 H	309	38.2	11.9
8	15870.00	49.3 PK	74.0	-24.7	3.18 H	291	38.3	11.0
9	15870.00	38.7 AV	54.0	-15.3	3.18 H	291	27.7	11.0

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	5135.81	52.8 PK	74.0	-21.2	1.47 V	211	50.8	2.0
2	5135.81	43.3 AV	54.0	-10.7	1.47 V	211	41.3	2.0
3	*5290.00	99.3 PK			1.47 V	211	97.8	1.5
4	*5290.00	90.7 AV			1.47 V	211	89.2	1.5
5	5352.94	60.5 PK	74.0	-13.5	1.47 V	211	58.9	1.6
6	5352.94	51.7 AV	54.0	-2.3	1.47 V	211	50.1	1.6
7	#10580.00	49.5 PK	68.2	-18.7	1.29 V	308	37.6	11.9
8	15870.00	48.8 PK	74.0	-25.2	1.68 V	317	37.8	11.0
9	15870.00	38.2 AV	54.0	-15.8	1.68 V	317	27.2	11.0

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 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	5459.80	64.6 PK	74.0	-9.4	1.50 H	309	62.8	1.8
2	5459.80	53.2 AV	54.0	-0.8	1.50 H	309	51.4	1.8
3	#5465.65	67.8 PK	68.2	-0.4	1.50 H	309	66.0	1.8
4	*5530.00	100.8 PK			1.50 H	309	98.9	1.9
5	*5530.00	91.2 AV			1.50 H	309	89.3	1.9
6	#5755.51	51.4 PK	68.2	-16.8	1.50 H	309	49.2	2.2
7	11060.00	49.8 PK	74.0	-24.2	1.96 H	250	37.7	12.1
8	11060.00	37.4 AV	54.0	-16.6	1.96 H	250	25.3	12.1
9	#16590.00	48.8 PK	68.2	-19.4	2.04 H	348	34.5	14.3
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	5459.99	63.8 PK	74.0	-10.2	1.41 V	233	62.0	1.8
2	5459.99	53.9 AV	54.0	-0.1	1.41 V	233	52.1	1.8
3	#5468.77	65.5 PK	68.2	-2.7	1.41 V	233	63.6	1.9
4	*5530.00	100.3 PK			1.41 V	233	98.4	1.9
5	*5530.00	90.5 AV			1.41 V	233	88.6	1.9
6	#5756.66	51.3 PK	68.2	-16.9	1.41 V	233	49.1	2.2
7	11060.00	49.6 PK	74.0	-24.4	1.56 V	278	37.5	12.1
8	11060.00	37.3 AV	54.0	-16.7	1.56 V	278	25.2	12.1
9	#16590.00	48.7 PK	68.2	-19.5	1.25 V	315	34.4	14.3

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5610.00	102.3 PK			1.62 H	322	100.5	1.8
2	*5610.00	94.7 AV			1.62 H	322	92.9	1.8
3	#5725.00	67.6 PK	68.2	-0.6	1.62 H	322	65.6	2.0
4	11220.00	50.2 PK	74.0	-23.8	2.45 H	318	38.1	12.1
5	11220.00	39.8 AV	54.0	-14.2	2.45 H	318	27.7	12.1
6	#16830.00	49.6 PK	68.2	-18.6	2.14 H	282	34.3	15.3
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	*5610.00	102.2 PK			1.47 V	311	100.4	1.8
2	*5610.00	93.1 AV			1.47 V	311	91.3	1.8
3	#5725.00	67.8 PK	68.2	-0.4	1.47 V	311	65.8	2.0
4	11220.00	50.0 PK	74.0	-24.0	2.46 V	274	37.9	12.1
5	11220.00	38.8 AV	54.0	-15.2	2.46 V	274	26.7	12.1
6	#16830.00	49.4 PK	68.2	-18.8	2.09 V	348	34.1	15.3

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 (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	5460.00	51.9 PK	74.0	-22.1	1.68 H	270	50.1	1.8
2	5460.00	41.7 AV	54.0	-12.3	1.68 H	270	39.9	1.8
3	#5470.00	55.4 PK	68.2	-12.8	1.68 H	270	53.5	1.9
4	*5690.00	105.0 PK			1.68 H	270	103.2	1.8
5	*5690.00	96.2 AV			1.68 H	270	94.4	1.8
6	#5850.00	62.2 PK	68.2	-6.0	1.68 H	270	59.8	2.4
7	11380.00	50.3 PK	74.0	-23.7	2.18 H	331	37.2	13.1
8	11380.00	39.7 AV	54.0	-14.3	2.18 H	331	26.6	13.1
9	#17070.00	49.5 PK	68.2	-18.7	3.18 H	304	32.9	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	5460.00	51.2 PK	74.0	-22.8	1.50 V	306	49.4	1.8
2	5460.00	41.2 AV	54.0	-12.8	1.50 V	306	39.4	1.8
3	#5470.00	52.9 PK	68.2	-15.3	1.50 V	306	51.0	1.9
4	*5690.00	103.9 PK			1.50 V	306	102.1	1.8
5	*5690.00	94.1 AV			1.50 V	306	92.3	1.8
6	#5850.00	57.7 PK	68.2	-10.5	1.50 V	306	55.3	2.4
7	11380.00	50.2 PK	74.0	-23.8	1.45 V	315	37.1	13.1
8	11380.00	39.5 AV	54.0	-14.5	1.45 V	315	26.4	13.1
9	#17070.00	49.3 PK	68.2	-18.9	1.00 V	274	32.7	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 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	#5645.14	67.4 PK	68.2	-0.8	1.44 H	312	65.4	2.0
2	*5775.00	106.0 PK			1.44 H	312	103.8	2.2
3	*5775.00	96.0 AV			1.44 H	312	93.8	2.2
4	#5928.91	61.2 PK	68.2	-7.0	1.44 H	312	58.5	2.7
5	11550.00	50.2 PK	74.0	-23.8	1.73 H	284	36.9	13.3
6	11550.00	39.6 AV	54.0	-14.4	1.73 H	284	26.3	13.3
7	#17325.00	49.4 PK	68.2	-18.8	2.35 H	337	32.6	16.8
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	#5640.56	67.2 PK	68.2	-1.0	1.47 V	229	65.2	2.0
2	*5775.00	105.1 PK			1.47 V	229	102.9	2.2
3	*5775.00	95.8 AV			1.47 V	229	93.6	2.2
4	#5926.82	60.6 PK	68.2	-7.6	1.47 V	229	57.9	2.7
5	11550.00	50.0 PK	74.0	-24.0	1.94 V	326	36.7	13.3
6	11550.00	38.5 AV	54.0	-15.5	1.94 V	326	25.2	13.3
7	#17325.00	49.3 PK	68.2	-18.9	2.11 V	317	32.5	16.8

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.

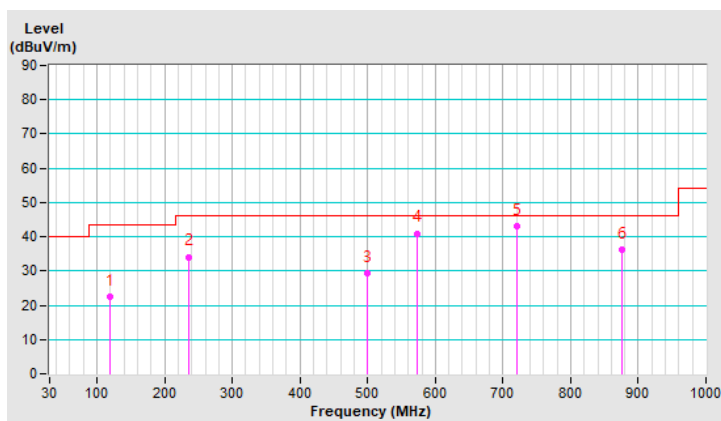
Below 1GHz Data:

RF Mode	TX 802.11ac (VHT40)	Channel	CH 46 : 5230 MHz
FREQUENCY RANGE	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	118.76	22.5 QP	43.5	-21.0	2.00 H	68	37.5	-15.0
2	235.26	34.1 QP	46.0	-11.9	1.00 H	121	48.8	-14.7
3	498.82	29.5 QP	46.0	-16.5	2.00 H	162	37.0	-7.5
4	573.18	41.0 QP	46.0	-5.0	1.50 H	360	47.0	-6.0
5	720.14	43.0 QP	46.0	-3.0	1.00 H	71	46.6	-3.6
6	875.11	36.3 QP	46.0	-9.7	1.50 H	313	37.7	-1.4

Remarks:

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

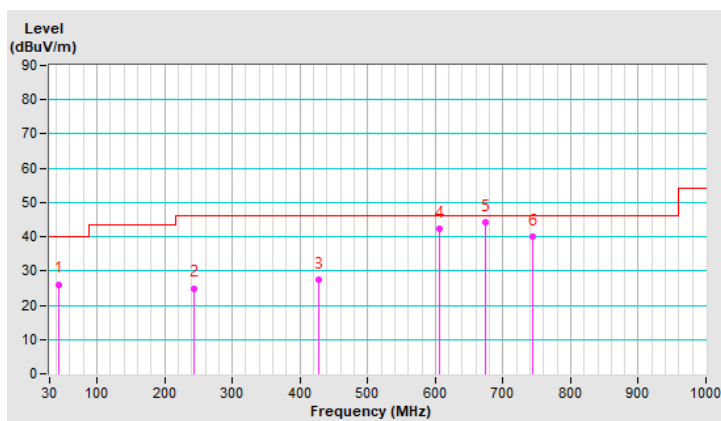


RF Mode	TX 802.11ac (VHT40)	Channel	CH 46 : 5230 MHz
FREQUENCY RANGE	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	44.36	26.1 QP	40.0	-13.9	1.00 V	2	39.0	-12.9
2	242.73	25.0 QP	46.0	-21.0	1.50 V	240	39.2	-14.2
3	427.96	27.5 QP	46.0	-18.5	1.50 V	281	36.3	-8.8
4	606.31	42.2 QP	46.0	-3.8	1.00 V	60	47.1	-4.9
5	673.92	44.3 QP	46.0	-1.7	1.50 V	218	48.5	-4.2
6	743.23	39.9 QP	46.0	-6.1	1.50 V	250	42.8	-2.9

Remarks:

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



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

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

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Oct. 20, 2020	Oct. 19, 2021
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 27, 2020	Oct. 26, 2021
Line-Impedance Stabilization Network (for Peripheral) R&S	ESH3-Z5	835239/001	Mar. 19, 2020	Mar. 18, 2021
50 ohms Terminator	50	3	Oct. 26, 2020	Oct. 25, 2021
RF Cable	5D-FB	COCCAB-001	Sep. 26, 2020	Sep. 25, 2021
Fixed attenuator EMCI	STI02-2200-10	005	Aug. 29, 2020	Aug. 28, 2021
Software BVADT	BVADT_Cond_V7.3.7.4	NA	NA	NA

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Conduction 1.
3. Tested Date: Dec. 14, 2020

4.2.3 Test Procedure

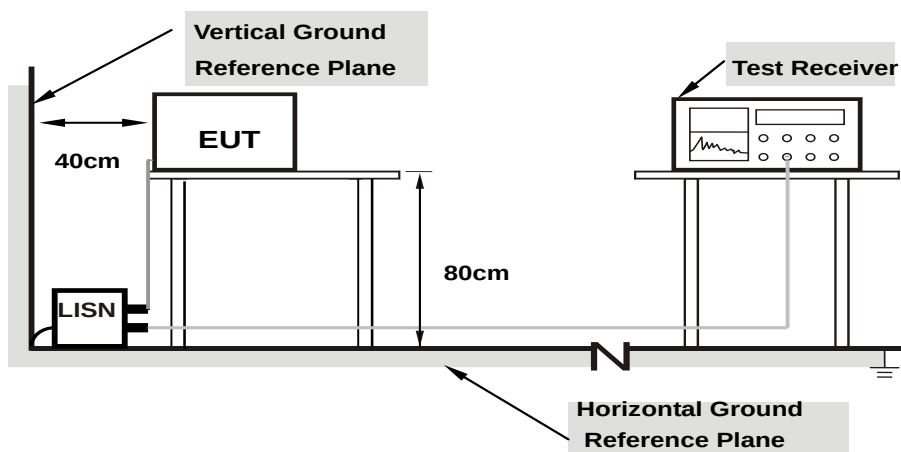
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance 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: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Condition

Same as 4.1.6.

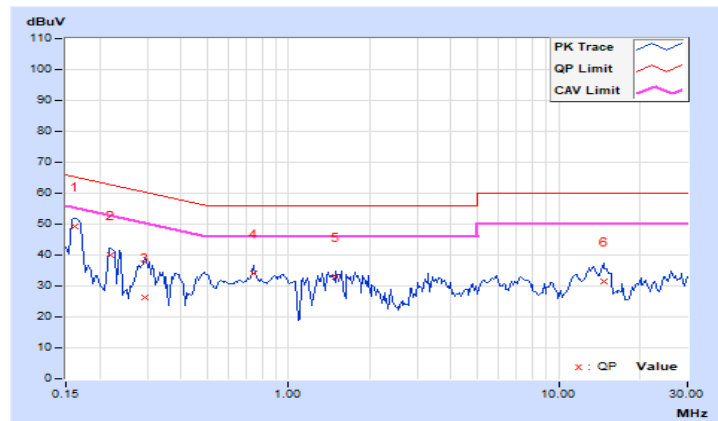
4.2.7 Test Results

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	9.97	39.44	27.13	49.41	37.10	65.38	55.38	-15.97	-18.28
2	0.22031	9.99	30.16	19.83	40.15	29.82	62.81	52.81	-22.66	-22.99
3	0.29453	10.00	16.24	-1.79	26.24	8.21	60.40	50.40	-34.16	-42.19
4	0.74375	10.04	24.05	19.83	34.09	29.87	56.00	46.00	-21.91	-16.13
5	1.50391	10.10	22.73	12.86	32.83	22.96	56.00	46.00	-23.17	-23.04
6	14.64063	11.07	20.58	11.95	31.65	23.02	60.00	50.00	-28.35	-26.98

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

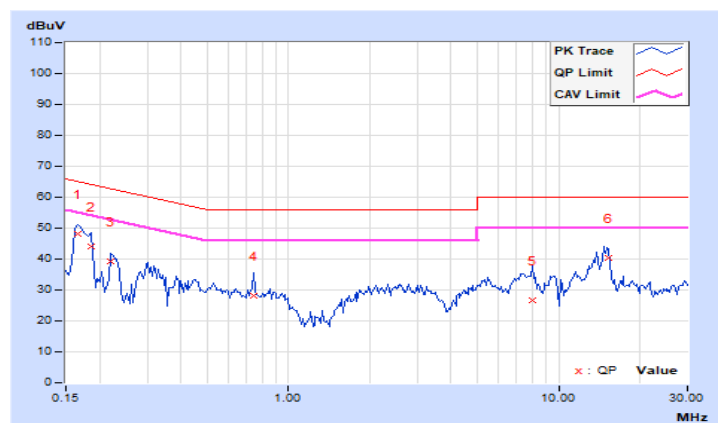


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBUV)		Emission Level (dBUV)		Limit (dBUV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	9.95	38.24	25.22	48.19	35.17	65.18	55.18	-16.99	-20.01
2	0.18516	9.97	33.93	1.16	43.90	11.13	64.25	54.25	-20.35	-43.12
3	0.22031	9.98	29.44	17.45	39.42	27.43	62.81	52.81	-23.39	-25.38
4	0.73984	10.04	18.26	15.63	28.30	25.67	56.00	46.00	-27.70	-20.33
5	8.01953	10.50	16.14	10.90	26.64	21.40	60.00	50.00	-33.36	-28.60
6	15.31250	10.92	29.54	17.02	40.46	27.94	60.00	50.00	-19.54	-22.06

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)
	√	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)

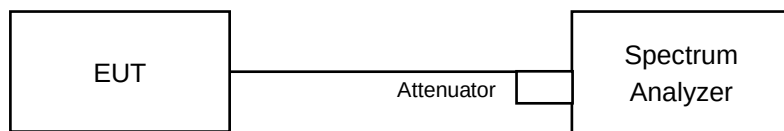
*B is the 26 dB emission bandwidth in megahertz

Note: This device can support different category application which switched by access point mode and client mode by software.

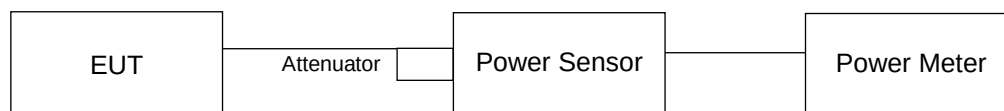
4.3.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

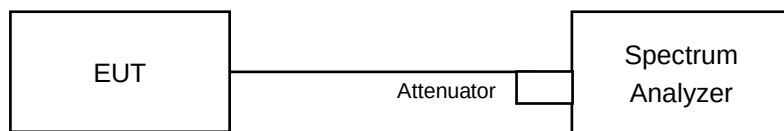
For channel straddling 5725MHz:



For other channels:



FOR 26dB OCCUPIED BANDWIDTH



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

FOR POWER OUTPUT MEASUREMENT

For channel straddling 5725MHz:

Method SA-2

1. Set span to encompass the emission bandwidth (EBW) of the signal.
2. Set RBW = 1MHz.
3. Set the VBW $\geq 3 \times$ RBW.
4. Number of points in sweep $\geq 2 \times$ Span / RBW.
5. Sweep time = auto.
6. Detector = RMS.
7. Trace average at least 100 traces in power averaging mode
8. Compute power by integrating the spectrum across the 26 dB EBW of the signal.
9. Duty factor need added to measured value (duty cycle < 98 percent).

For other channels:

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 26dB OCCUPIED BANDWIDTH

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Condition

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

4.3.7 Test Results

POWER OUTPUT

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)	Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
36	5180	19.47	88.512	19.47	24	Pass
40	5200	20.29	106.905	20.29	24	Pass
48	5240	20.36	108.643	20.36	24	Pass
52	5260	20.26	106.17	20.26	24	Pass
60	5300	20.27	106.414	20.27	24	Pass
64	5320	19.52	89.536	19.52	24	Pass
100	5500	16.94	49.431	16.94	24	Pass
116	5580	20.18	104.232	20.18	24	Pass
140	5700	18.87	77.09	18.87	24	Pass
*144 (U-NII-2C Band)	5720	17.24	54.266	17.35	24	Pass
*144 (U-NII-3 Band)	5720	10.18	10.679	10.29	30	Pass
149	5745	19.23	83.753	19.23	30	Pass
157	5785	19.21	83.368	19.21	30	Pass
165	5825	19.10	81.283	19.10	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test.

1. For UNII-1: The maximum gain = 3.98 dBi < 6 dB, so the power limit shall not be reduced.
2. For UNII-2A: The maximum gain = 3.98 dBi < 6 dBi, therefore the limit needs to reduce, so the power limit shall not be reduced.
3. For UNII-2C: The maximum gain = 3.98 dBi < 6 dBi, therefore the limit needs to reduce, so the power limit shall not be reduced.
4. For UNII-3: The maximum gain = 3.98 dBi < 6 dBi, therefore the limit needs to reduce, so the power limit shall not be reduced.

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	38.72	26.87 > 24
60	5300	41.64	27.19 > 24
64	5320	41.51	27.18 > 24
100	5500	21.78	24.38 > 24
116	5580	41.83	27.21 > 24
140	5700	41.81	27.21 > 24
144 (U-NII-2C Band)	5720	21.67	24.35 < 24

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)	Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
36	5180	19.52	89.536	19.52	24	Pass
40	5200	20.34	108.143	20.34	24	Pass
48	5240	20.29	106.905	20.29	24	Pass
52	5260	20.48	111.686	20.48	24	Pass
60	5300	20.43	110.408	20.43	24	Pass
64	5320	19.45	88.105	19.45	24	Pass
100	5500	16.92	49.204	16.92	24	Pass
116	5580	20.12	102.802	20.12	24	Pass
140	5700	18.77	75.336	18.77	24	Pass
*144 (U-NII-2C Band)	5720	18.01	64.749	18.11	24	Pass
*144 (U-NII-3 Band)	5720	11.52	14.529	11.62	30	Pass
149	5745	19.04	80.168	19.04	30	Pass
157	5785	19.06	80.538	19.06	30	Pass
165	5825	19.20	83.176	19.20	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test.

1. For UNII-1: The maximum gain = 3.98 dBi < 6 dBi, so the power limit shall not be reduced.
2. For UNII-2A: The maximum gain = 3.98 dBi < 6 dBi, therefore the limit needs to reduce, so the power limit shall not be reduced.
3. For UNII-2C: The maximum gain = 3.98 dBi < 6 dBi, therefore the limit needs to reduce, so the power limit shall not be reduced.
4. For UNII-3: The maximum gain = 3.98 dBi < 6 dBi, therefore the limit needs to reduce, so the power limit shall not be reduced.

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	47.1	27.73 > 24
60	5300	47.17	27.73 > 24
64	5320	47.54	27.77 > 24
100	5500	21.99	24.42 > 24
116	5580	47.99	27.81 > 24
140	5700	46.84	27.7 > 24
144 (U-NII-2C Band)	5720	24.53	24.89 < 24

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)	Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
38	5190	17.66	58.345	17.66	24	Pass
46	5230	20.93	123.88	20.93	24	Pass
54	5270	20.84	121.339	20.84	24	Pass
62	5310	17.62	57.81	17.62	24	Pass
102	5510	16.58	45.499	16.58	24	Pass
110	5550	20.74	118.577	20.74	24	Pass
134	5670	20.16	103.753	20.16	24	Pass
*142 (U-NII-2C Band)	5710	18.84	81.029	19.09	24	Pass
*142 (U-NII-3 Band)	5710	8.00	6.678	8.25	30	Pass
151	5755	20.72	118.032	20.72	30	Pass
159	5795	20.69	117.22	20.69	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test.

1. For UNII-1: The maximum gain = 3.98 dBi < 6 dB, so the power limit shall not be reduced.
2. For UNII-2A: The maximum gain = 3.98 dBi < 6 dBi, therefore the limit needs to reduce, so the power limit shall not be reduced.
3. For UNII-2C: The maximum gain = 3.98 dBi < 6 dBi, therefore the limit needs to reduce, so the power limit shall not be reduced.
4. For UNII-3: The maximum gain = 3.98 dBi < 6 dBi, therefore the limit needs to reduce, so the power limit shall not be reduced.

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	67.04	29.26 > 24
62	5310	64.36	29.08 > 24
102	5510	62.83	28.98 > 24
110	5550	96.09	30.82 > 24
134	5670	95.66	30.8 > 24
142 (U-NII-2C Band)	5710	65.06	29.13 > 24

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)	Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
42	5210	15.55	35.892	15.55	24	PASS
58	5290	16.99	50.003	16.99	24	PASS
106	5530	16.03	40.087	16.03	24	PASS
122	5610	20.08	101.859	20.08	24	PASS
*138 (U-NII-2C Band)	5690	18.70	81.032	19.09	24	PASS
*138 (U-NII-3 Band)	5690	4.22	2.888	4.61	30	PASS
155	5775	19.81	95.719	19.81	30	PASS

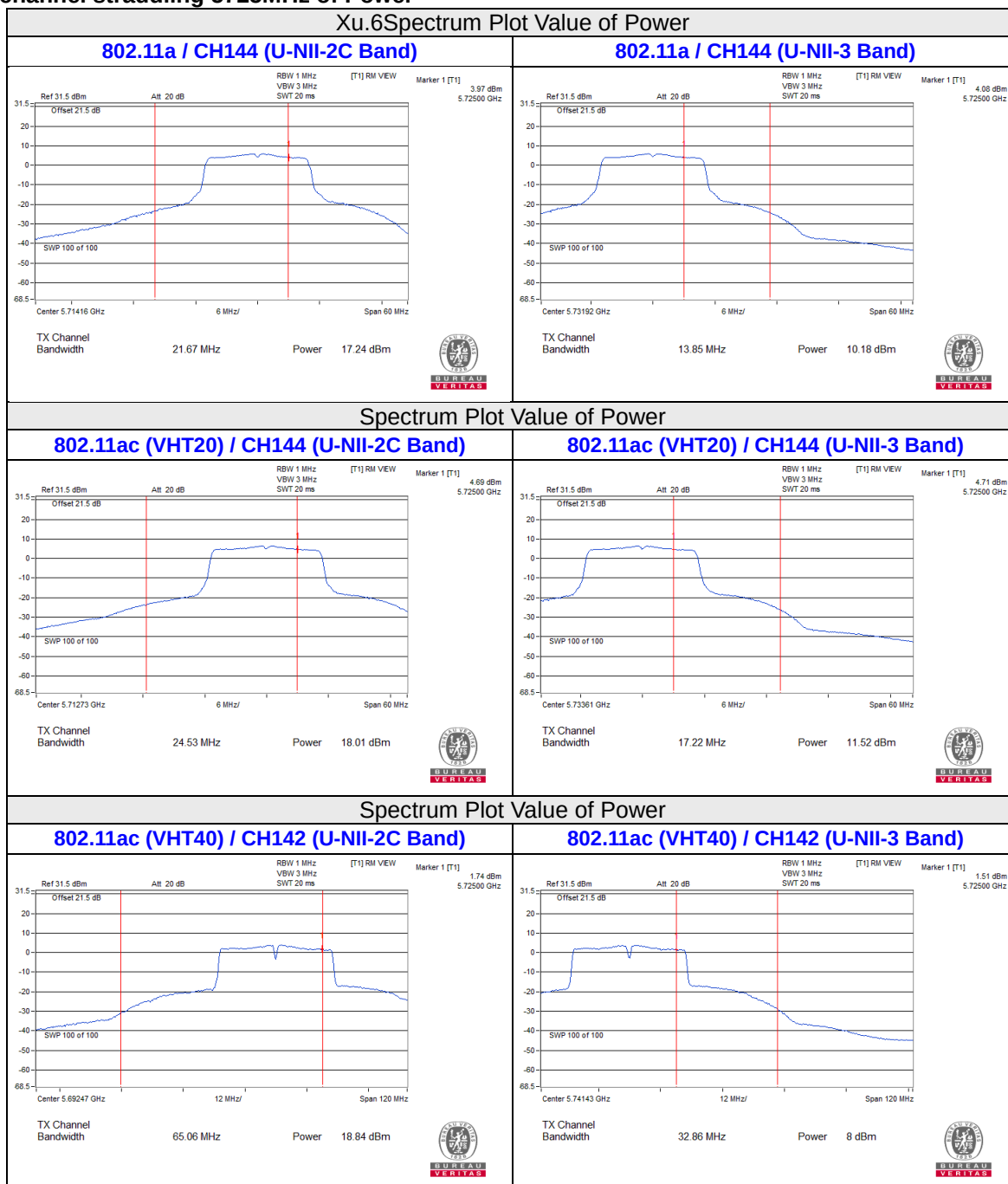
Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-2 and use spectrum analyzer test.

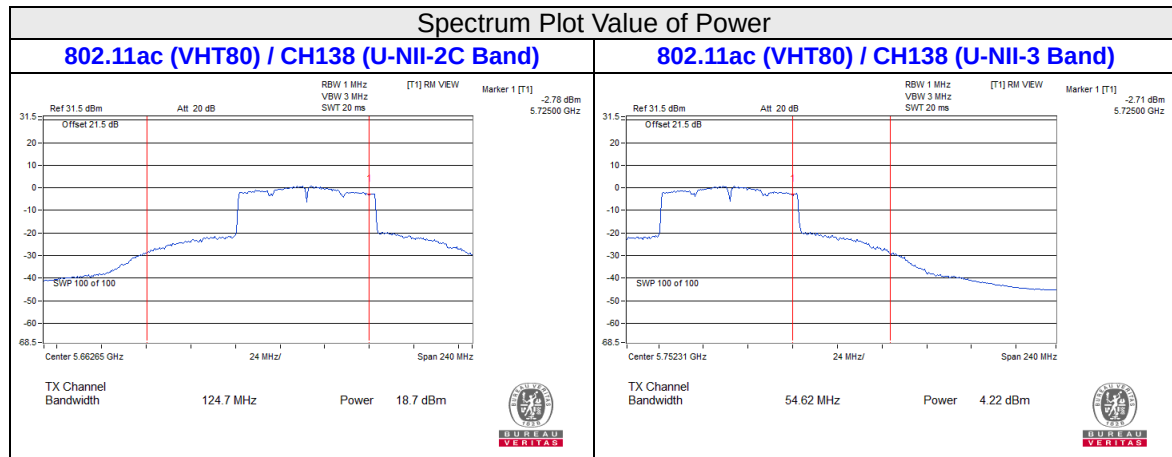
1. For UNII-1: The maximum gain = 3.98 dBi < 6 dB, so the power limit shall not be reduced.
2. For UNII-2A: The maximum gain = 3.98 dBi < 6 dBi, therefore the limit needs to reduce, so the power limit shall not be reduced.
3. For UNII-2C: The maximum gain = 3.98 dBi < 6 dBi, therefore the limit needs to reduce, so the power limit shall not be reduced.
4. For UNII-3: The maximum gain = 3.98 dBi < 6 dBi, therefore the limit needs to reduce, so the power limit shall not be reduced.

Note: For U-NII-2A, U-NII-2C Band output power limitation is determined based on 26dBc bandwidth

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	93.71	30.71 > 24
106	5530	82.68	30.17 > 24
122	5610	199.06	33.98 > 24
138 (U-NII-2C Band)	5690	124.7	31.95 > 24

For channel straddling 5725MHz of Power





26dB OCCUPIED BANDWIDTH

802.11a

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
36	5180	38.77
40	5200	38.65
48	5240	36.52
52	5260	38.72
60	5300	41.64
64	5320	41.51
100	5500	21.78
116	5580	41.83
140	5700	41.81
144 (U-NII-2C Band)	5720	21.67
144 (U-NII-3 Band)	5720	13.85
149	5745	42.38
157	5785	42.36
165	5825	42.37

802.11ac (VHT20)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
36	5180	47.07
40	5200	45.48
48	5240	46.4
52	5260	47.1
60	5300	47.17
64	5320	47.54
100	5500	21.99
116	5580	47.99
140	5700	46.84
144 (U-NII-2C Band)	5720	24.53
144 (U-NII-3 Band)	5720	17.22
149	5745	47.79
157	5785	47.6
165	5825	48.45

802.11ac (VHT40)

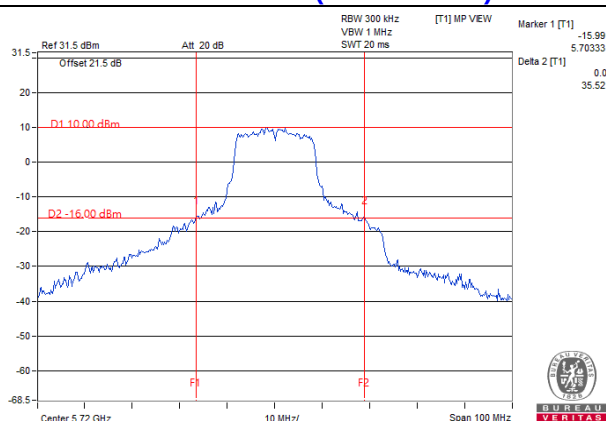
Channel	Frequency (MHz)	26dB Bandwidth (MHz)
38	5190	66.38
46	5230	62.95
54	5270	67.04
62	5310	64.36
102	5510	62.83
110	5550	96.09
134	5670	95.66
142 (U-NII-2C Band)	5710	65.06
142 (U-NII-3 Band)	5710	32.86
151	5755	102.99
159	5795	98.62

802.11ac (VHT80)

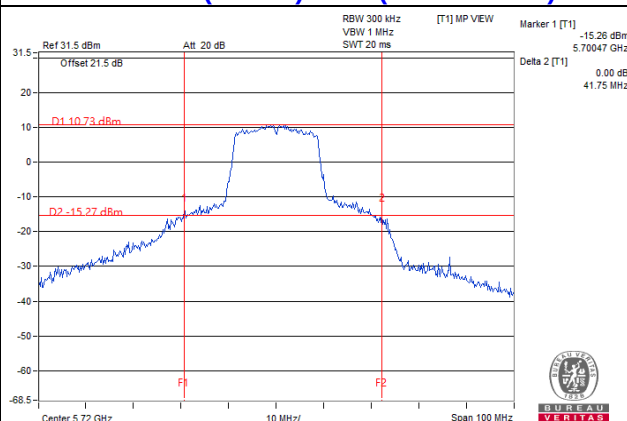
Channel	Frequency (MHz)	26dB Bandwidth (MHz)
42	5210	82.61
58	5290	93.71
106	5530	82.68
122	5610	199.06
138 (U-NII-2C Band)	5690	124.7
138 (U-NII-3 Band)	5690	54.62
155	5775	202.19

Spectrum Plot of Worst Value

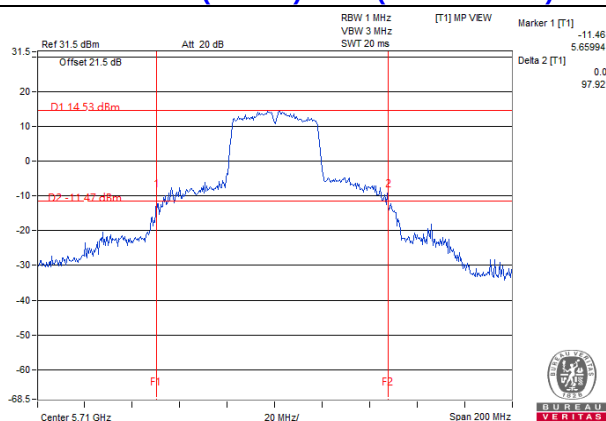
802.11a / 144 (U-NII-3 Band)



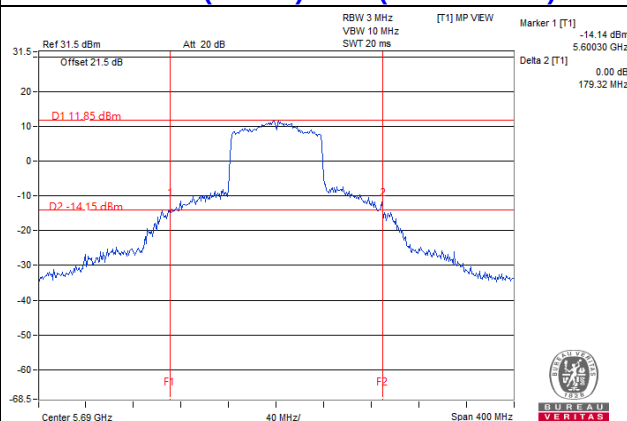
802.11ac (VHT20) / 144 (U-NII-3 Band)



802.11ac (VHT40) / 142 (U-NII-3 Band)



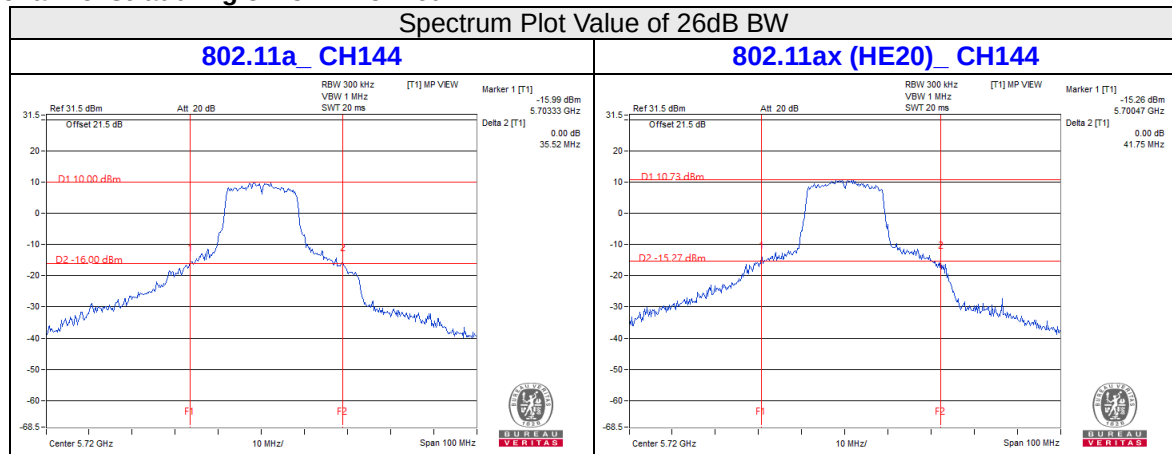
802.11ac (VHT80) / 138 (U-NII-3 Band)



Note:

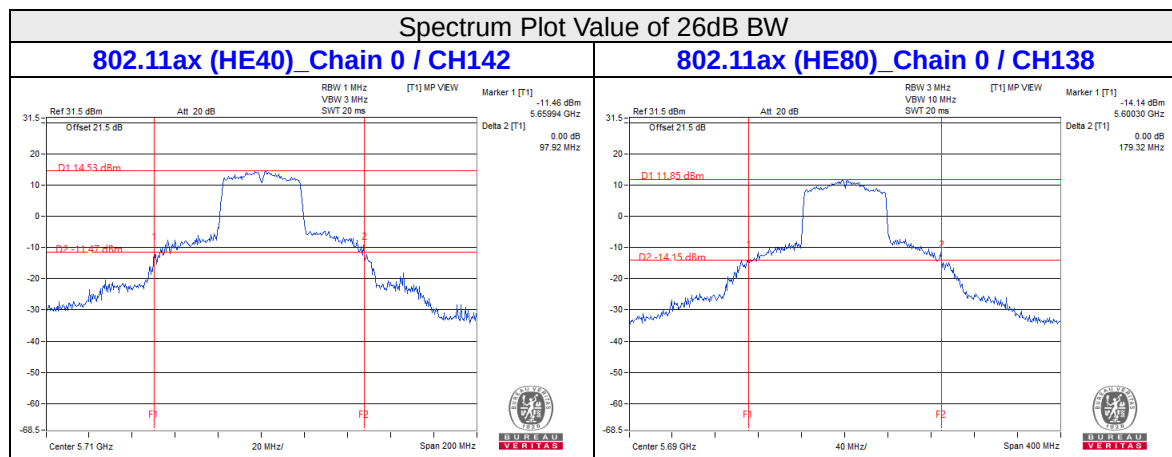
- For CH144 (U-NII-3) = Delta 2 - (5725MHz - Marker 1)
- For CH142 (U-NII-3) = Delta 2 - (5725MHz - Marker 1)
- For CH138 (U-NII-3) = Delta 2 - (5725MHz - Marker 1)

For channel straddling 5725MHz of 26dB BW



Note:

For CH144 (U-NII-2C) = 5725MHz - Marker 1



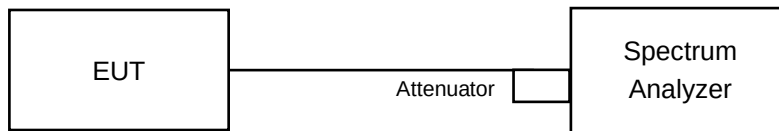
Note:

For CH142 (U-NII-2C) = 5725MHz - Marker 1

For CH138 (U-NII-2C) = 5725MHz - Marker 1

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Results

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
36	5180	18.48	PASS
40	5200	18.48	PASS
48	5240	18.24	PASS
52	5260	18.6	PASS
60	5300	19.44	PASS
64	5320	19.68	PASS
100	5500	17.16	PASS
116	5580	18.84	PASS
140	5700	19.44	PASS
144 (U-NII-2C Band)	5720	14.48	PASS
144 (U-NII-3 Band)	5720	4.48	PASS
149	5745	21.36	PASS
157	5785	21.48	PASS
165	5825	21.36	PASS

802.11ac (VHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
36	5180	18.84	PASS
40	5200	19.2	PASS
48	5240	19.08	PASS
52	5260	19.68	PASS
60	5300	19.68	PASS
64	5320	20.16	PASS
100	5500	18.12	PASS
116	5580	19.32	PASS
140	5700	19.08	PASS
144 (U-NII-2C Band)	5720	14.6	PASS
144 (U-NII-3 Band)	5720	4.84	PASS
149	5745	20.61	PASS
157	5785	20.88	PASS
165	5825	22.56	PASS

802.11ac (VHT40)

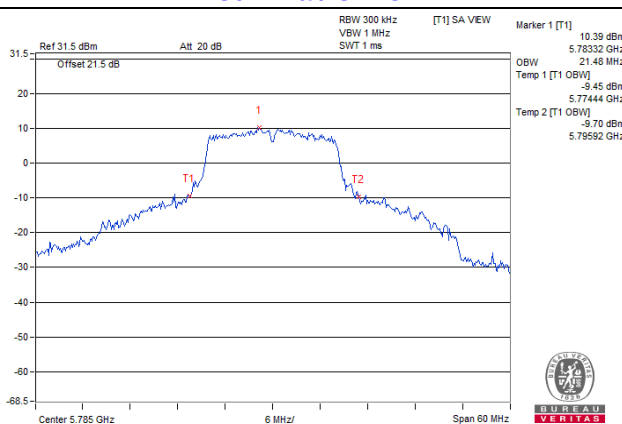
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
38	5190	36.96	PASS
46	5230	36.72	PASS
54	5270	36.96	PASS
62	5310	36.96	PASS
102	5510	36.72	PASS
110	5550	47.52	PASS
134	5670	40.18	PASS
142 (U-NII-2C Band)	5710	35.64	PASS
142 (U-NII-3 Band)	5710	12.12	PASS
151	5755	54.72	PASS
159	5795	54	PASS

802.11ac (VHT80)

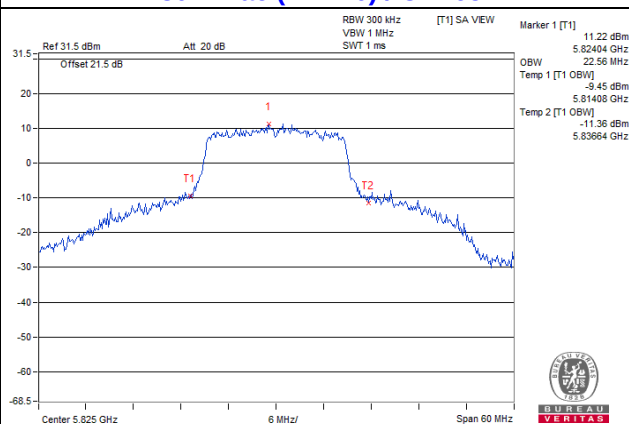
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
42	5210	75.84	PASS
58	5290	76.32	PASS
106	5530	76.32	PASS
122	5610	89.28	PASS
138 (U-NII-2C Band)	5690	73.88	PASS
138 (U-NII-3 Band)	5690	4.36	PASS
155	5775	94.26	PASS

Spectrum Plot of Max. Value

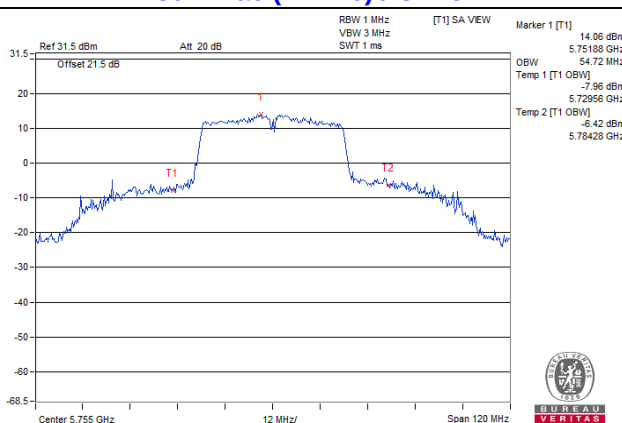
802.11a / CH157



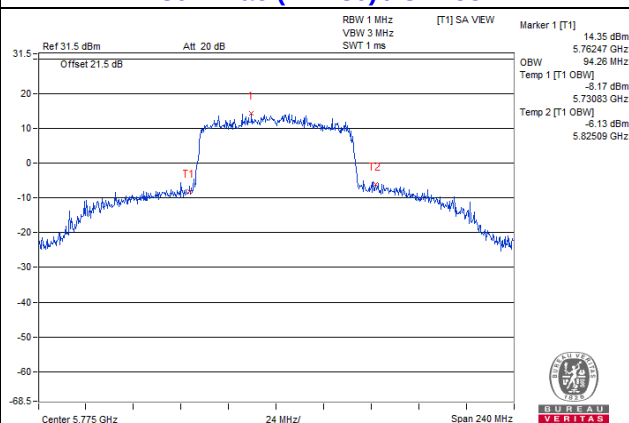
802.11ac (VHT20) / CH165



802.11ac (VHT40) / CH151

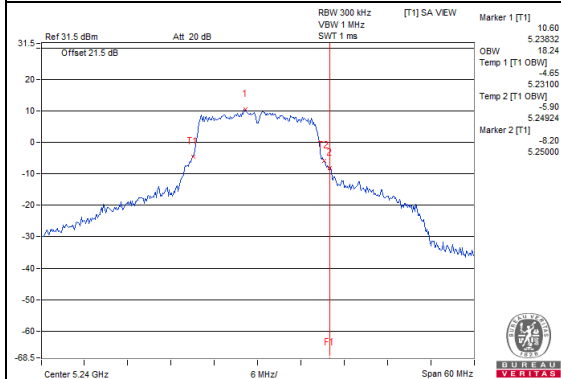


802.11ac (VHT80) / CH155

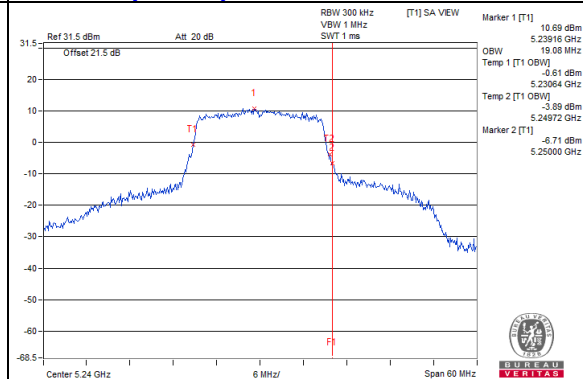


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2A band)

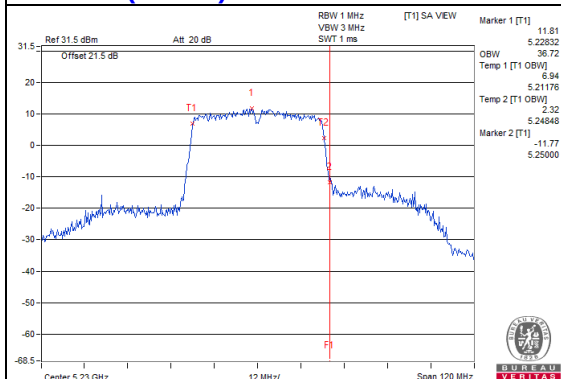
802.11a / CH48



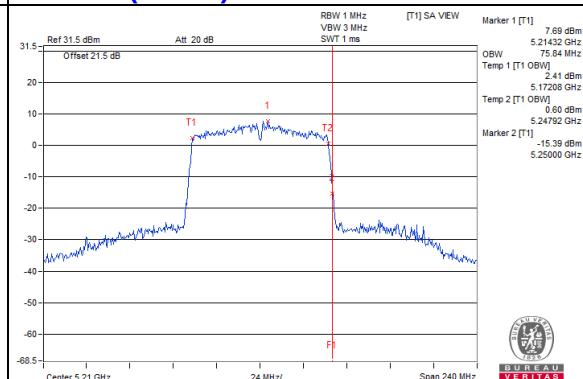
802.11ac (VHT20) / CH48



802.11ac (VHT40) / CH46

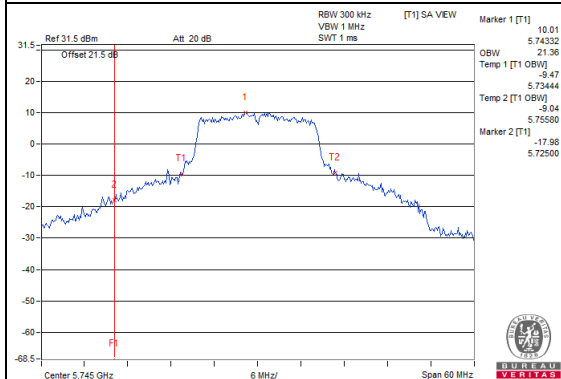


802.11ac (VHT80) / CH42

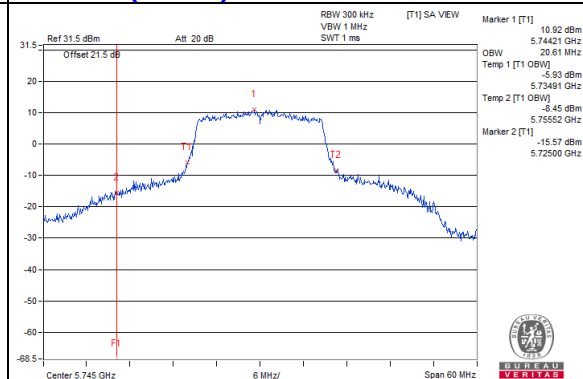


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C band)

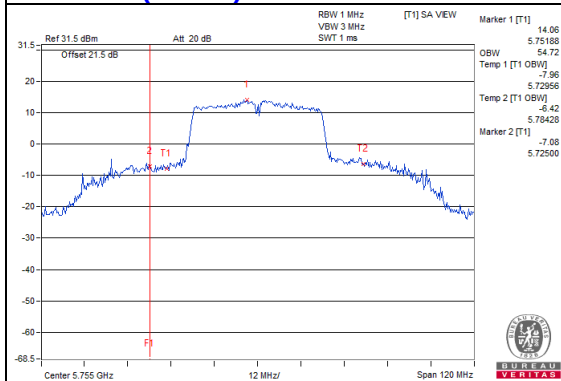
802.11a / CH149



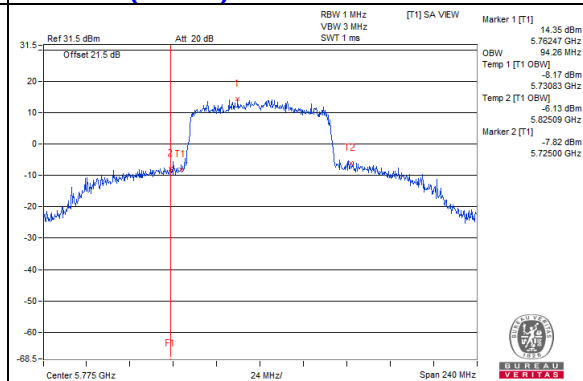
802.11ac (VHT20) / CH149



802.11ac (VHT40) / CH151



802.11ac (VHT80) / CH155



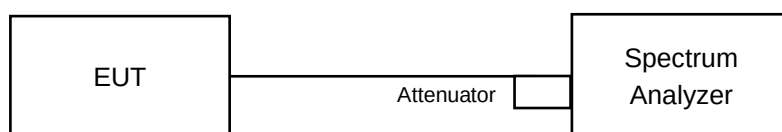
4.5 Peak Power Spectral Density Measurement

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	
	√	Client device	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

Note: This device can support different category application which switched by access point mode and client mode by software.

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 Procedure

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

Using method SA-2

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

For U-NII-3 band:

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 (increasing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500\text{kHz}/300\text{kHz})$
5. Sweep time = auto, trigger set to “free run”.
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6.

4.5.7 Test Results

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

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
36	5180	6.28	0.11	6.38	11.00	PASS
40	5200	6.24	0.11	6.35	11.00	PASS
48	5240	6.28	0.11	6.38	11.00	PASS
52	5260	6.31	0.11	6.42	11.00	PASS
60	5300	6.27	0.11	6.37	11.00	PASS
64	5320	6.45	0.11	6.56	11.00	PASS
100	5500	4.47	0.11	4.58	11.00	PASS
116	5580	6.28	0.11	6.38	11.00	PASS
140	5700	6.06	0.11	6.17	11.00	PASS
144 (U-NII-2C Band)	5720	5.92	0.11	6.02	11.00	PASS

- Note: 1. For UNII-1: The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.
2. For UNII-2A: The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.
3. For UNII-2C: The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
36	5180	6.63	0.10	6.73	11.00	PASS
40	5200	6.60	0.10	6.70	11.00	PASS
48	5240	6.67	0.10	6.77	11.00	PASS
52	5260	6.75	0.10	6.85	11.00	PASS
60	5300	6.62	0.10	6.72	11.00	PASS
64	5320	6.73	0.10	6.83	11.00	PASS
100	5500	4.49	0.10	4.59	11.00	PASS
116	5580	6.52	0.10	6.62	11.00	PASS
140	5700	6.30	0.10	6.40	11.00	PASS
144 (U-NII-2C Band)	5720	6.40	0.10	6.50	11.00	PASS

Note:

1. For UNII-1: The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.
2. For UNII-2A: The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.
3. For UNII-2C: The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
38	5190	2.06	0.25	2.31	11.00	PASS
46	5230	2.14	0.25	2.39	11.00	PASS
54	5270	1.98	0.25	2.23	11.00	PASS
62	5310	1.84	0.25	2.09	11.00	PASS
102	5510	1.27	0.25	1.52	11.00	PASS
110	5550	3.89	0.25	4.14	11.00	PASS
134	5670	3.82	0.25	4.07	11.00	PASS
142 (U-NII-2C Band)	5710	3.83	0.25	4.08	11.00	PASS

Note:

1. For UNII-1: The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.
2. For UNII-2A: The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.
3. For UNII-2C: The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.

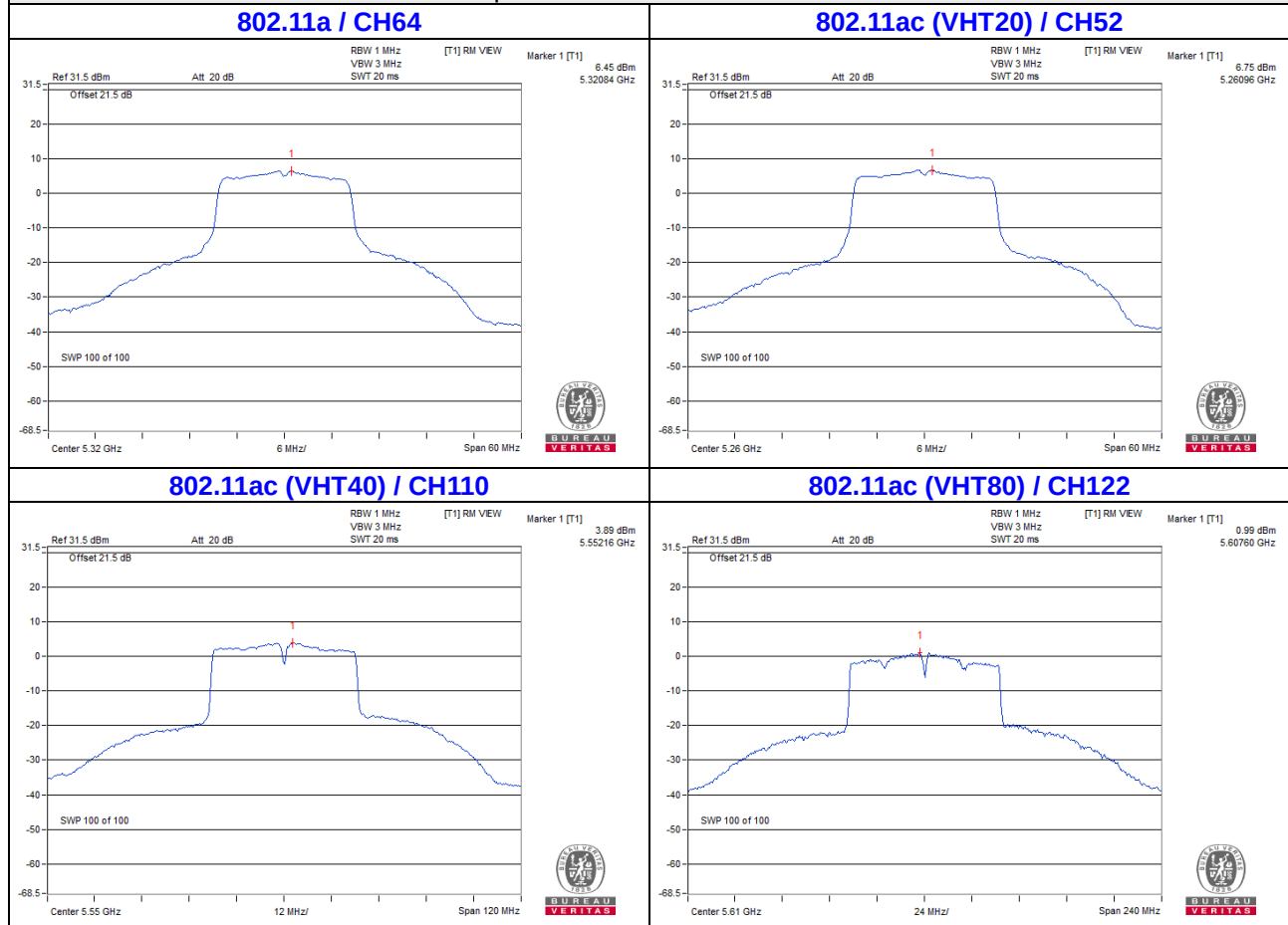
802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
42	5210	-2.90	0.39	-2.51	11.00	PASS
58	5290	-1.25	0.39	-0.86	11.00	PASS
106	5530	-2.34	0.39	-1.95	11.00	PASS
122	5610	0.99	0.39	1.38	11.00	PASS
138 (U-NII-2C Band)	5690	0.65	0.39	1.04	11.00	PASS

Note:

1. For UNII-1: The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.
2. For UNII-2A: The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.
3. For UNII-2C: The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.

Spectrum Plot of Worst Value



For U-NII-3 band:

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
144 (U-NII-3 Band)	5720	-4.83	0.11	0.3369	-4.72	-2.50	30.00	PASS
149	5745	-1.87	0.11	0.6661	-1.76	0.46	30.00	PASS
157	5785	-2.01	0.11	0.645	-1.90	0.32	30.00	PASS
165	5825	-2.18	0.11	0.6202	-2.07	0.15	30.00	PASS

Note:

1. The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
144 (U-NII-3 Band)	5720	-3.99	0.10	0.4085	-3.89	-1.67	30.00	PASS
149	5745	-1.67	0.10	0.697	-1.57	0.65	30.00	PASS
157	5785	-1.64	0.10	0.7018	-1.54	0.68	30.00	PASS
165	5825	-1.44	0.10	0.7349	-1.34	0.88	30.00	PASS

Note:

1. The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
142 (U-NII-3 Band)	5710	-7.27	0.25	0.1984	-7.02	-4.80	30.00	PASS
151	5755	-5.44	0.25	0.3024	-5.19	-2.97	30.00	PASS
159	5795	-5.10	0.25	0.3271	-4.85	-2.63	30.00	PASS

Note:

1. The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.

802.11ac (VHT80)

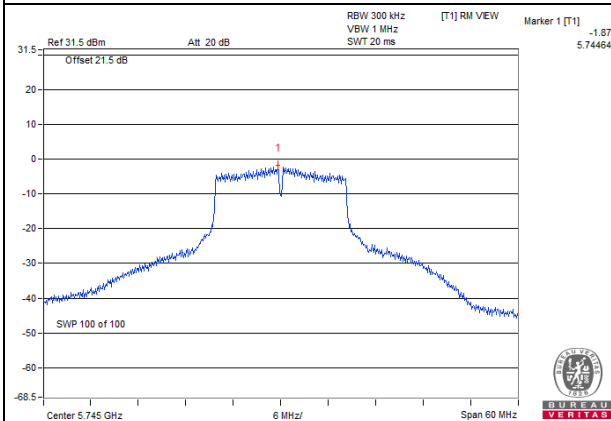
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
138 (U-NII-3 Band)	5690	-11.48	0.39	0.07774	-11.09	-8.87	30.00	PASS
155	5775	-8.29	0.39	0.1621	-7.90	-5.68	30.00	PASS

Note:

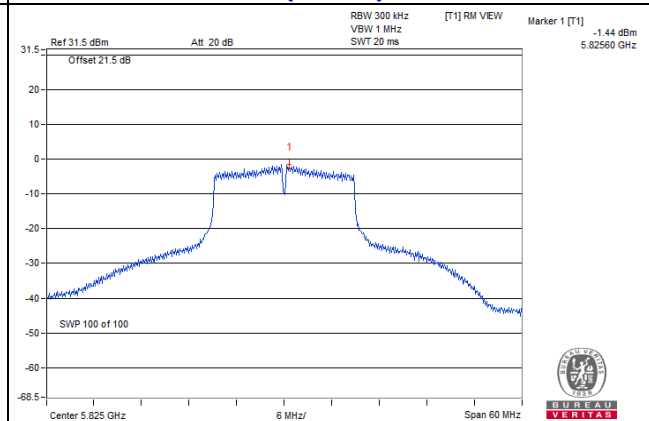
1. The maximum gain = 3.98 dBi < 6 dBi, so the so the power density limit shall not be reduced.

Spectrum Plot of Worst Value

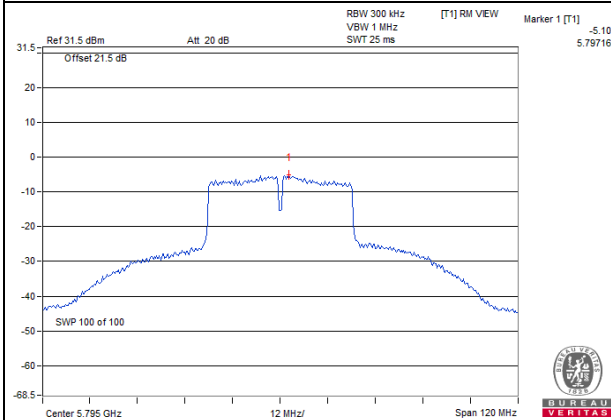
802.11a / CH149



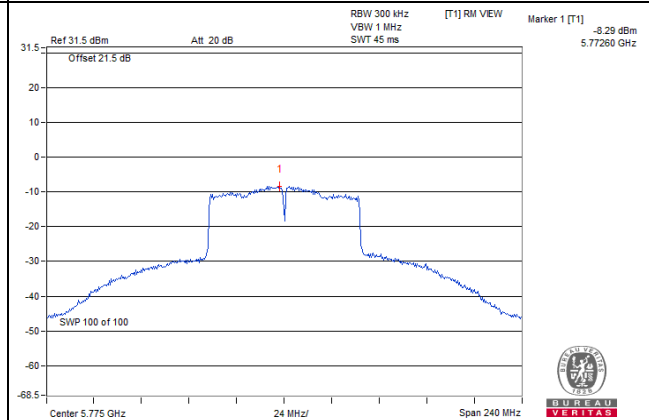
802.11ac (VHT20) / CH165



802.11ac (VHT40) / CH159



802.11ac (VHT80) / CH155

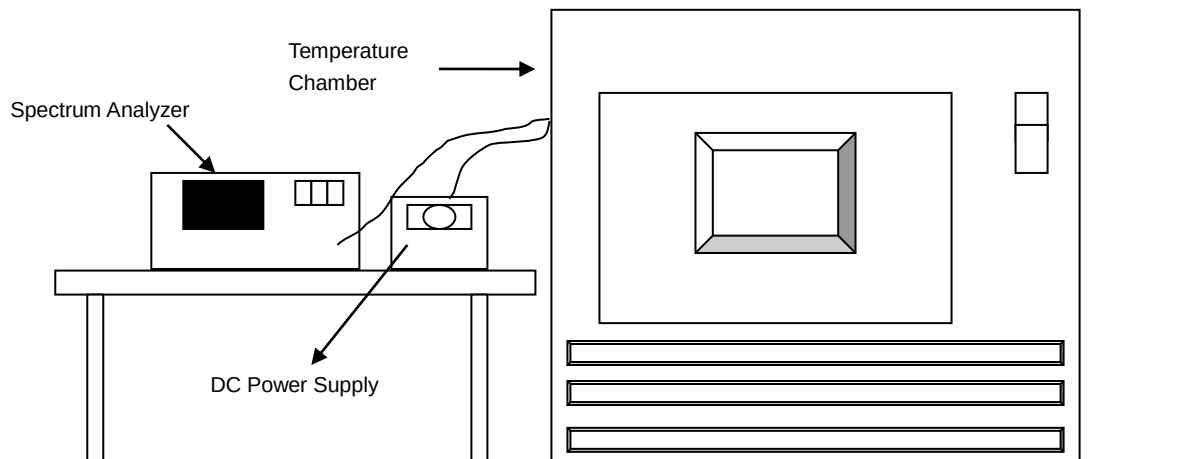


4.6 Frequency Stability Measurement

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

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal 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: 5180 MHz									
TEMP. (°C)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
60	3.3	5179.9836	PASS	5179.9834	PASS	5179.9833	PASS	5179.9794	PASS
50	3.3	5180.0213	PASS	5180.0233	PASS	5180.024	PASS	5180.0224	PASS
40	3.3	5179.9932	PASS	5179.9962	PASS	5179.9936	PASS	5179.9929	PASS
30	3.3	5180.0128	PASS	5180.0169	PASS	5180.0123	PASS	5180.0161	PASS
20	3.3	5180.0237	PASS	5180.0274	PASS	5180.0235	PASS	5180.0274	PASS
10	3.3	5179.9735	PASS	5179.9754	PASS	5179.9732	PASS	5179.974	PASS
0	3.3	5179.9988	PASS	5179.999	PASS	5179.9967	PASS	5179.9991	PASS
-10	3.3	5179.9988	PASS	5179.9973	PASS	5179.9973	PASS	5179.9977	PASS
-15	3.3	5180.0168	PASS	5180.0162	PASS	5180.0149	PASS	5180.0166	PASS

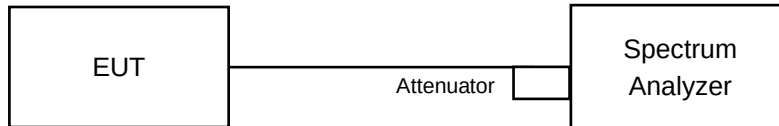
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (°C)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	3.795	5180.0243	PASS	5180.0278	PASS	5180.0241	PASS	5180.0272	PASS
	3.3	5180.0237	PASS	5180.0274	PASS	5180.0235	PASS	5180.0274	PASS
	2.805	5180.0241	PASS	5180.027	PASS	5180.0243	PASS	5180.0284	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)	Limit (MHz)	Pass / Fail
144 (U-NII-3 Band)	5720	3.15	0.5	PASS
149	5745	16.38	0.5	PASS
157	5785	16.37	0.5	PASS
165	5825	16.38	0.5	PASS

802.11ac (VHT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Pass / Fail
144 (U-NII-3 Band)	5720	3.53	0.5	PASS
149	5745	17.58	0.5	PASS
157	5785	17.59	0.5	PASS
165	5825	17.6	0.5	PASS

802.11ac (VHT40)

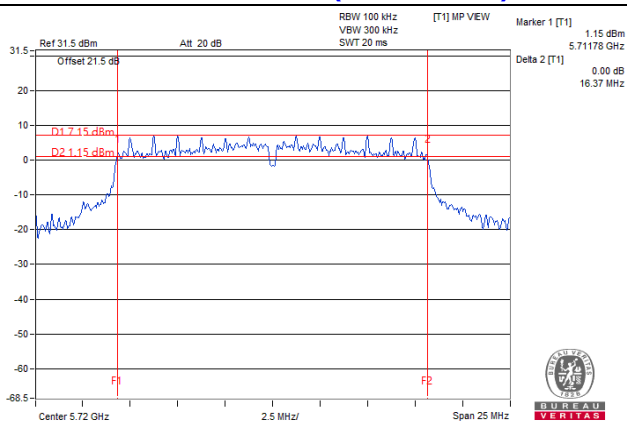
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Pass / Fail
142 (U-NII-3 Band)	5710	2.93	0.5	PASS
151	5755	36.19	0.5	PASS
159	5795	36.09	0.5	PASS

802.11ac (VHT80)

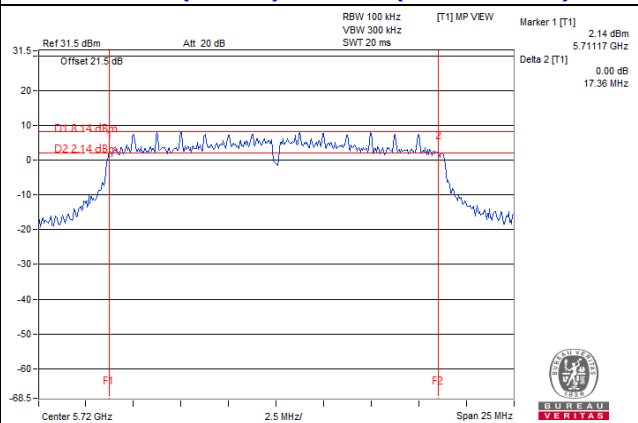
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Pass / Fail
138 (U-NII-3 Band)	5690	2.74	0.5	PASS
155	5775	75.46	0.5	PASS

Spectrum Plot of Worst Value

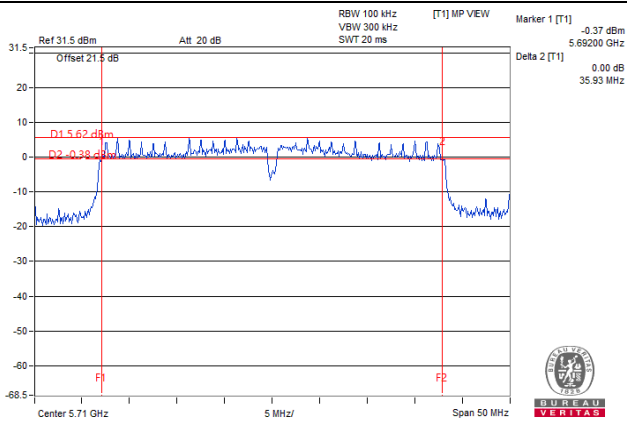
802.11a / CH144 (U-NII-3 Band)



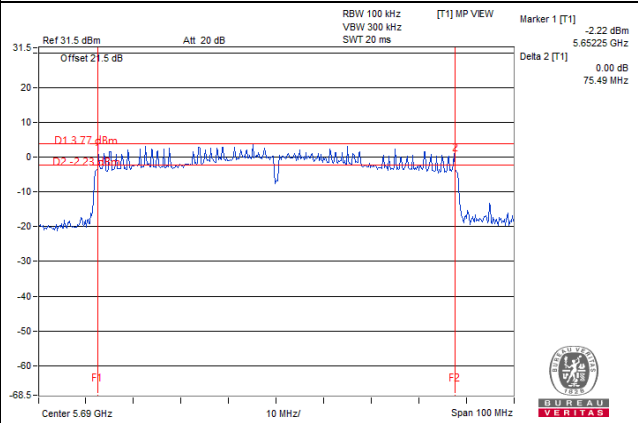
802.11ac (VHT20) / CH144 (U-NII-3 Band)



802.11ac (VHT40) / CH142 (U-NII-3 Band)



802.11ac (VHT80) / CH138 (U-NII-3 Band)



Note: The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

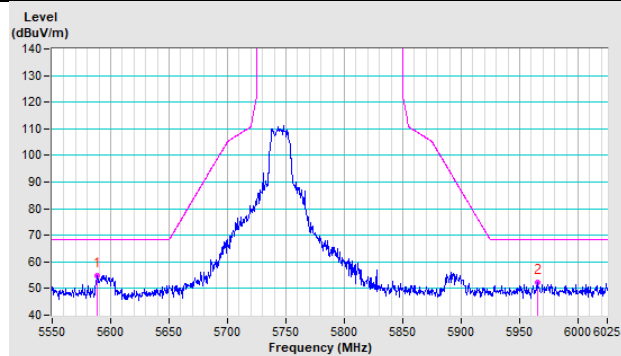
5 Pictures of Test Arrangements

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

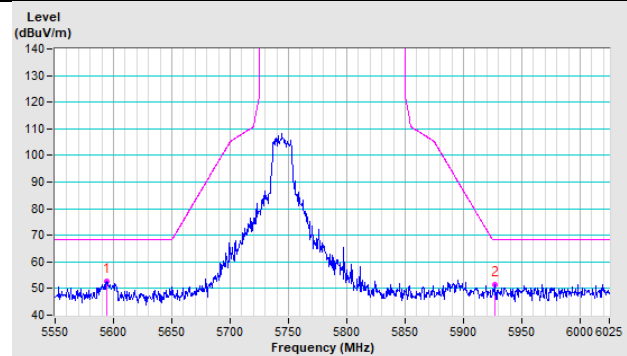
Annex A - Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a CH 149 : 5745 MHz

Horizontal

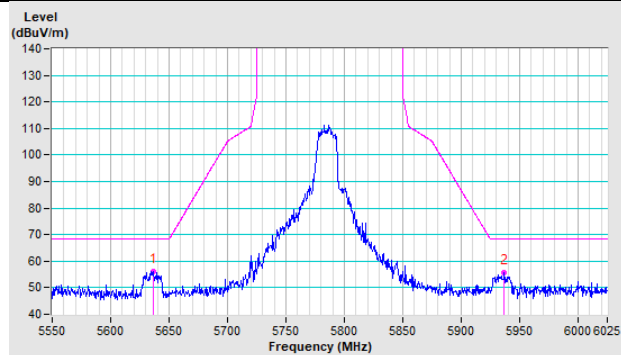


Vertical

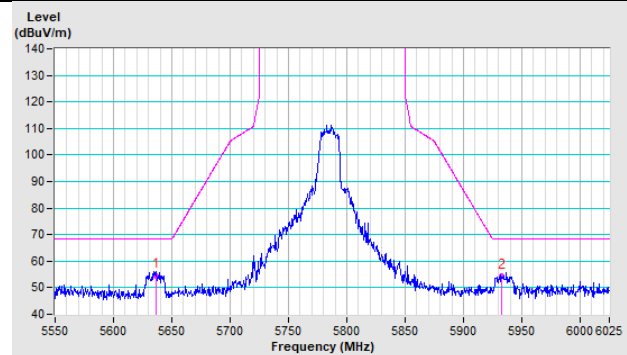


802.11a CH 157 : 5785 MHz

Horizontal

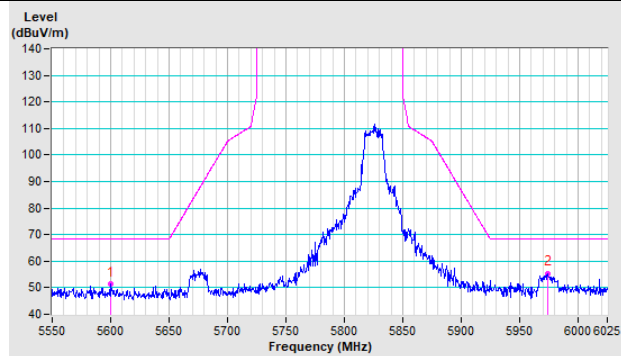


Vertical

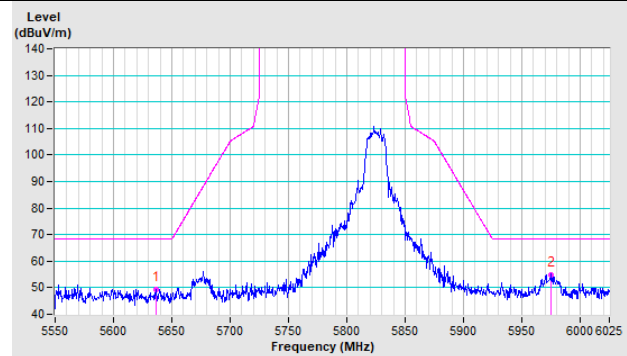


802.11a CH 165 : 5825 MHz

Horizontal

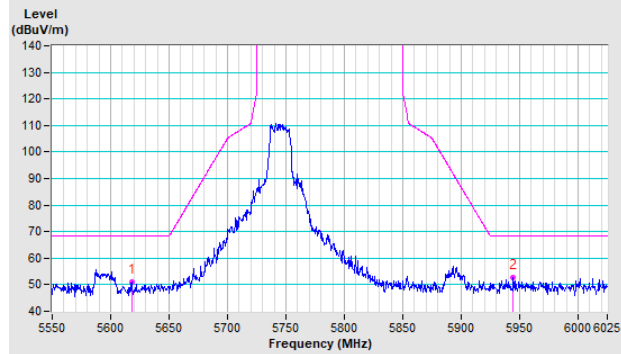


Vertical

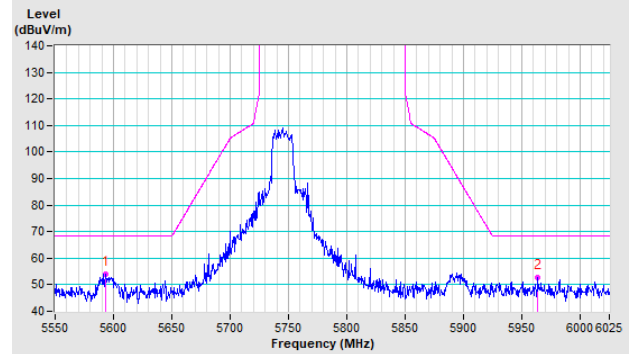


802.11ac (VHT20) CH 149 : 5745 MHz

Horizontal

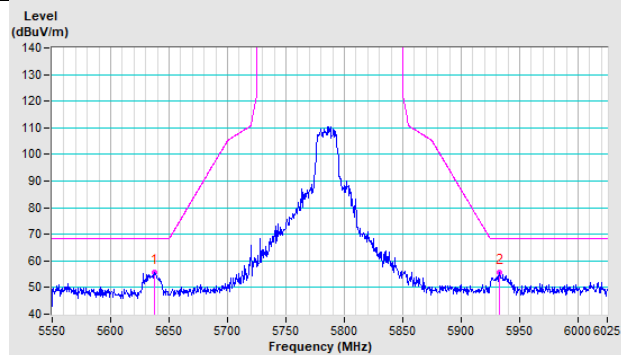


Vertical

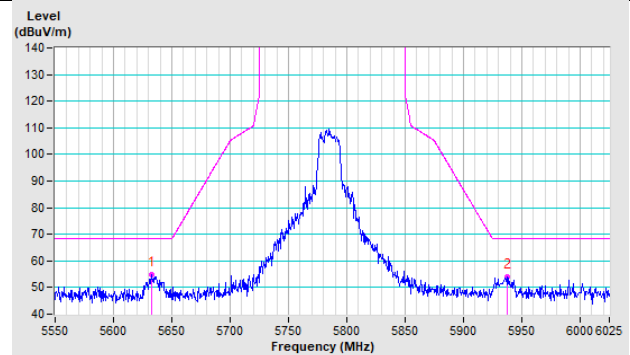


802.11ac (VHT20) CH 157 : 5785 MHz

Horizontal

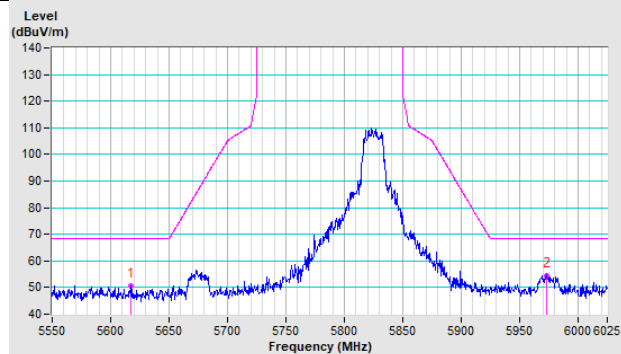


Vertical

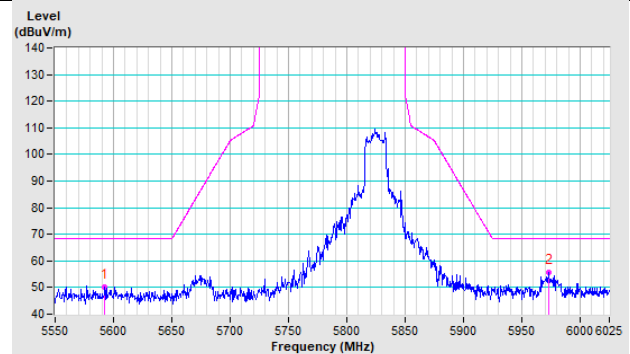


802.11ac (VHT20) CH 165 : 5825 MHz

Horizontal

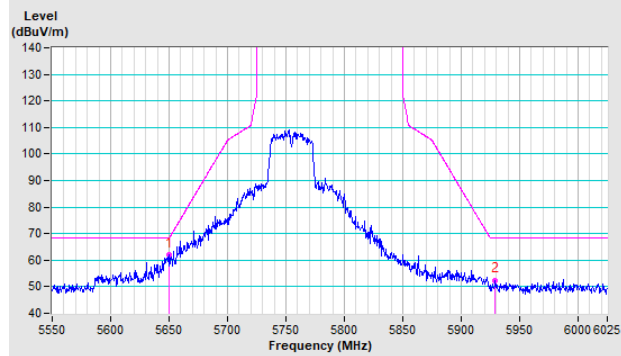


Vertical

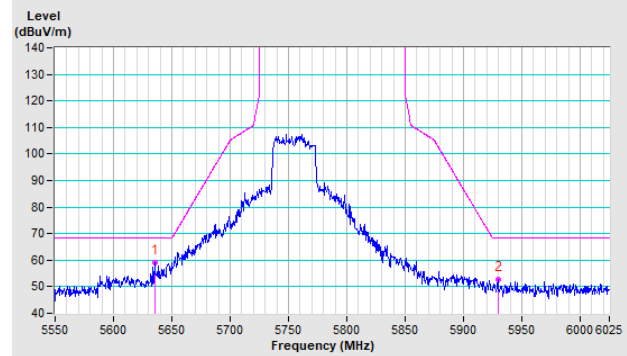


802.11ac (VHT40) CH 151 : 5755 MHz

Horizontal

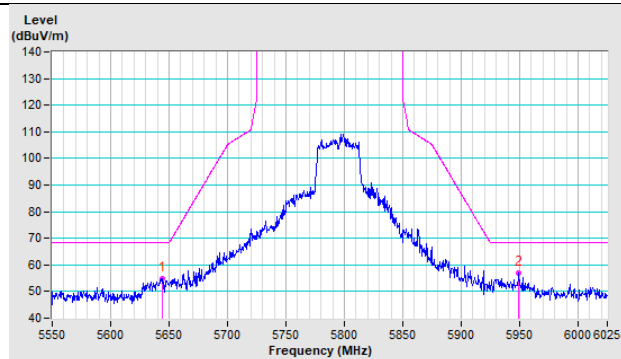


Vertical

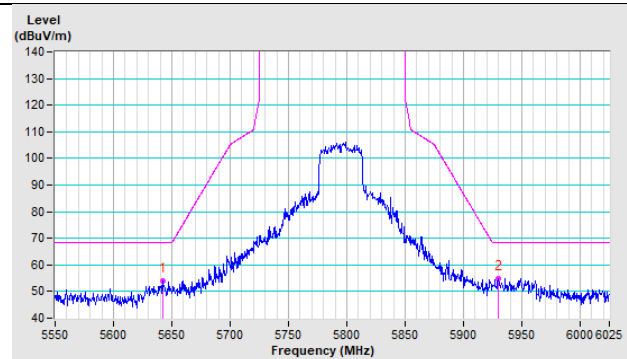


802.11ac (VHT40) CH 159 : 5795 MHz

Horizontal

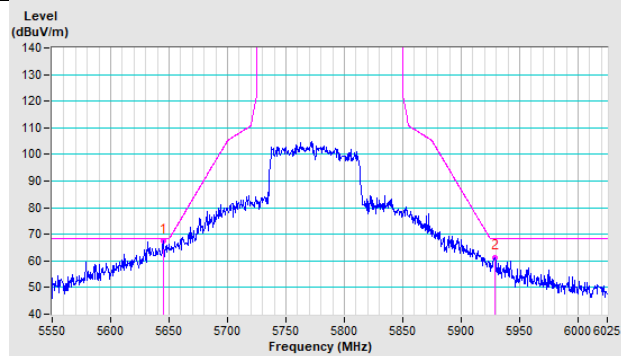


Vertical

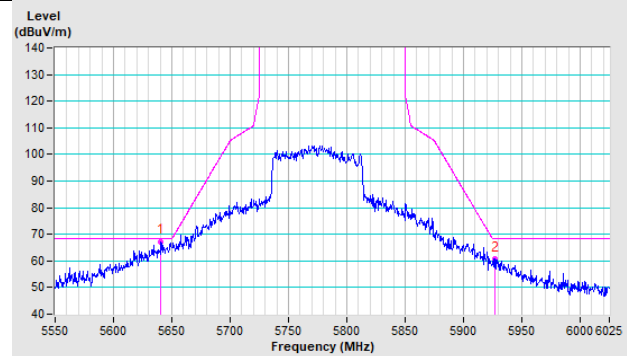


802.11ac (VHT80) CH 155 : 5775 MHz

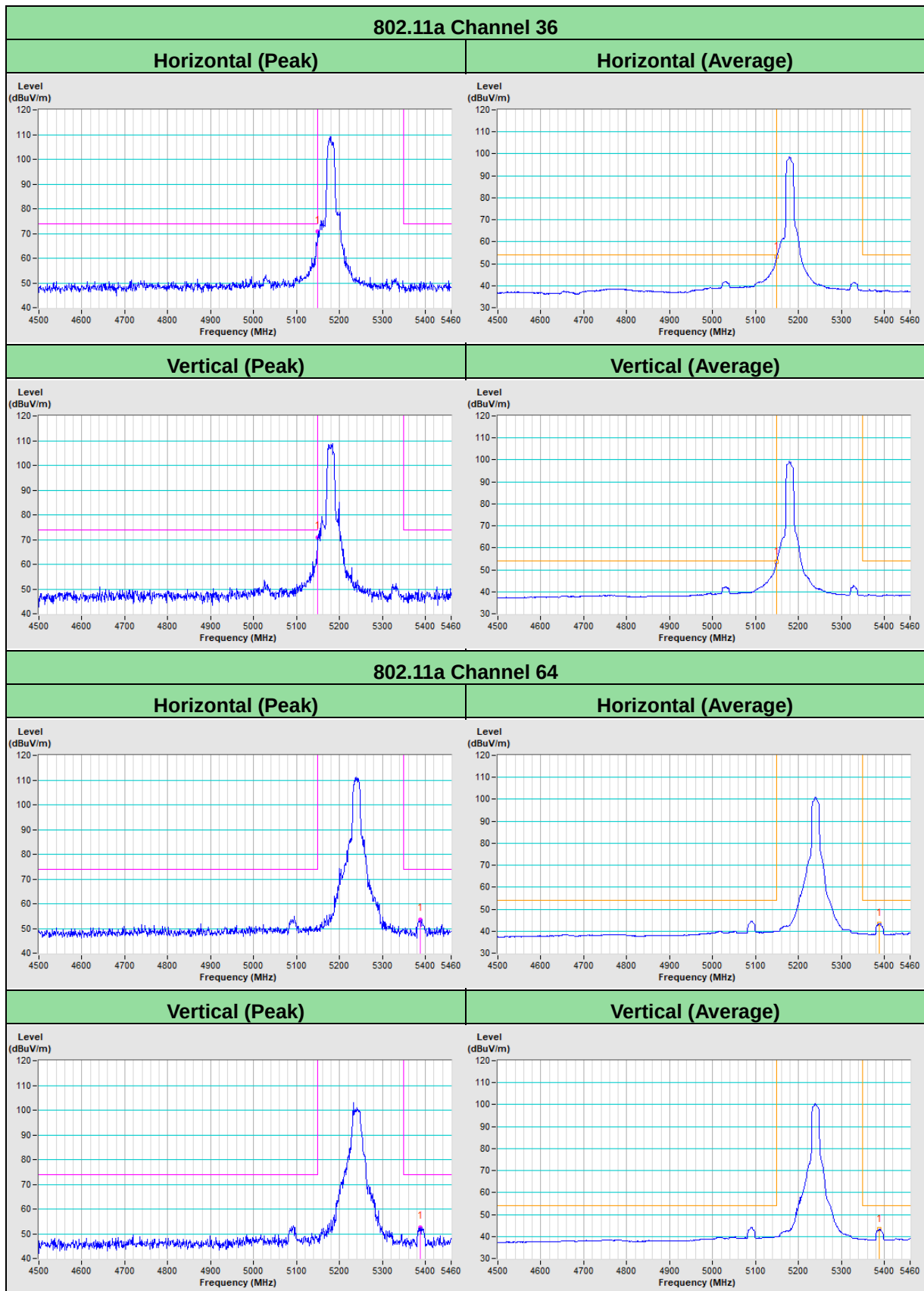
Horizontal

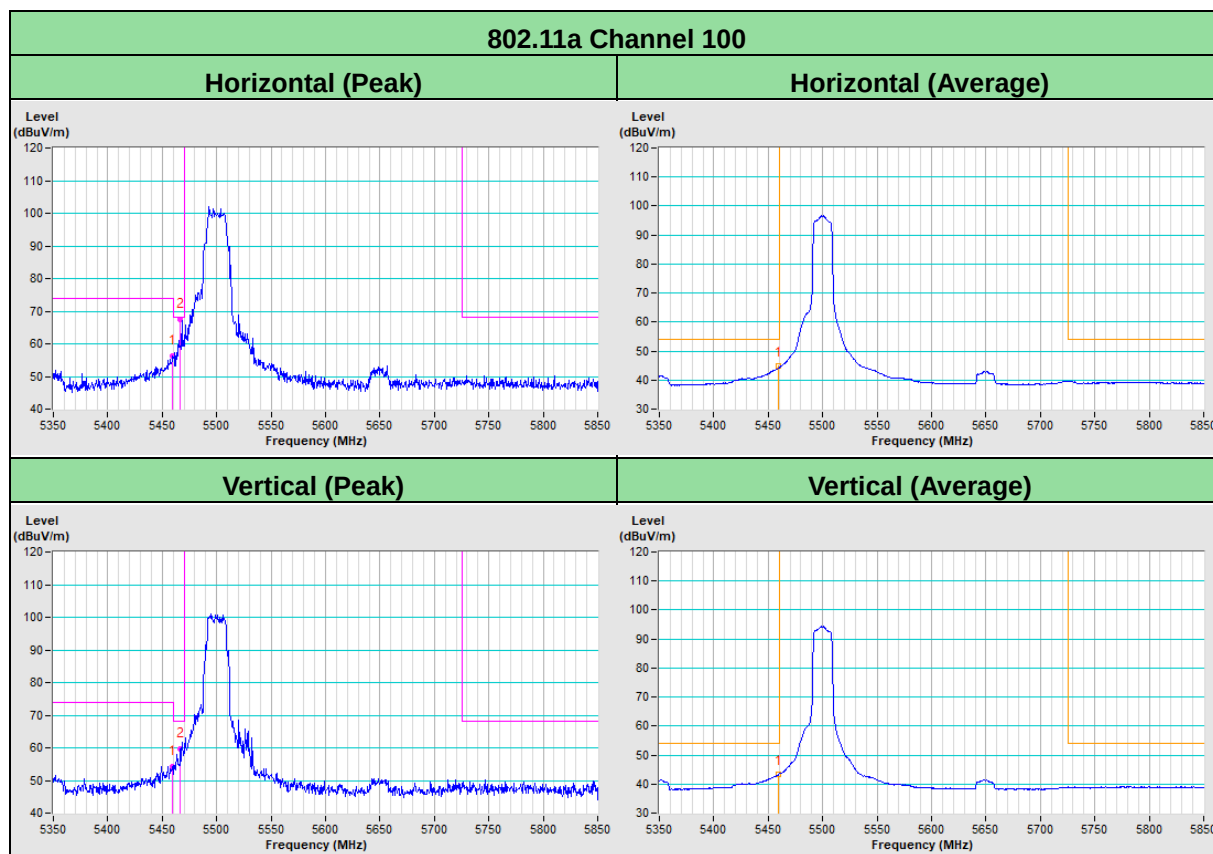


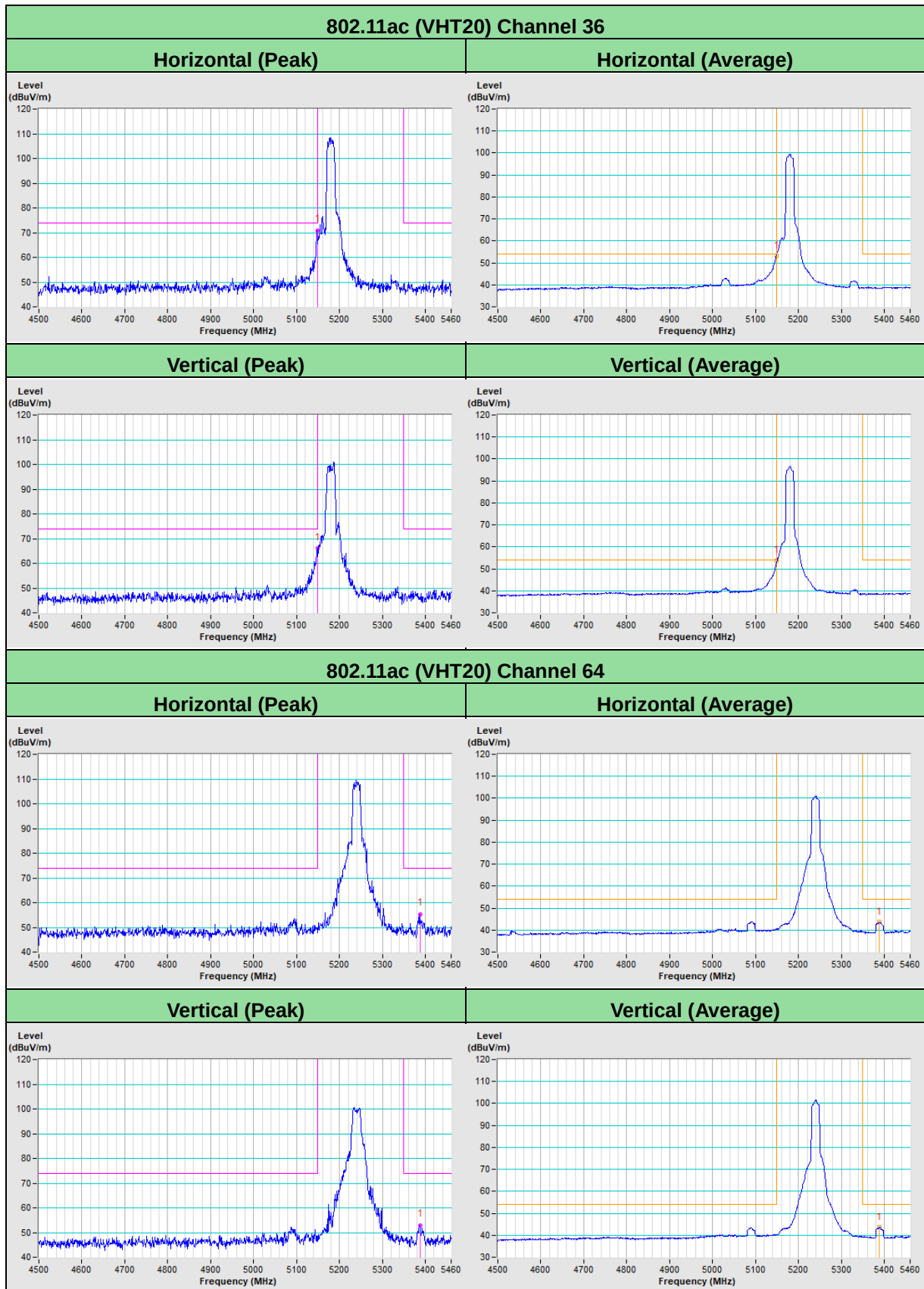
Vertical

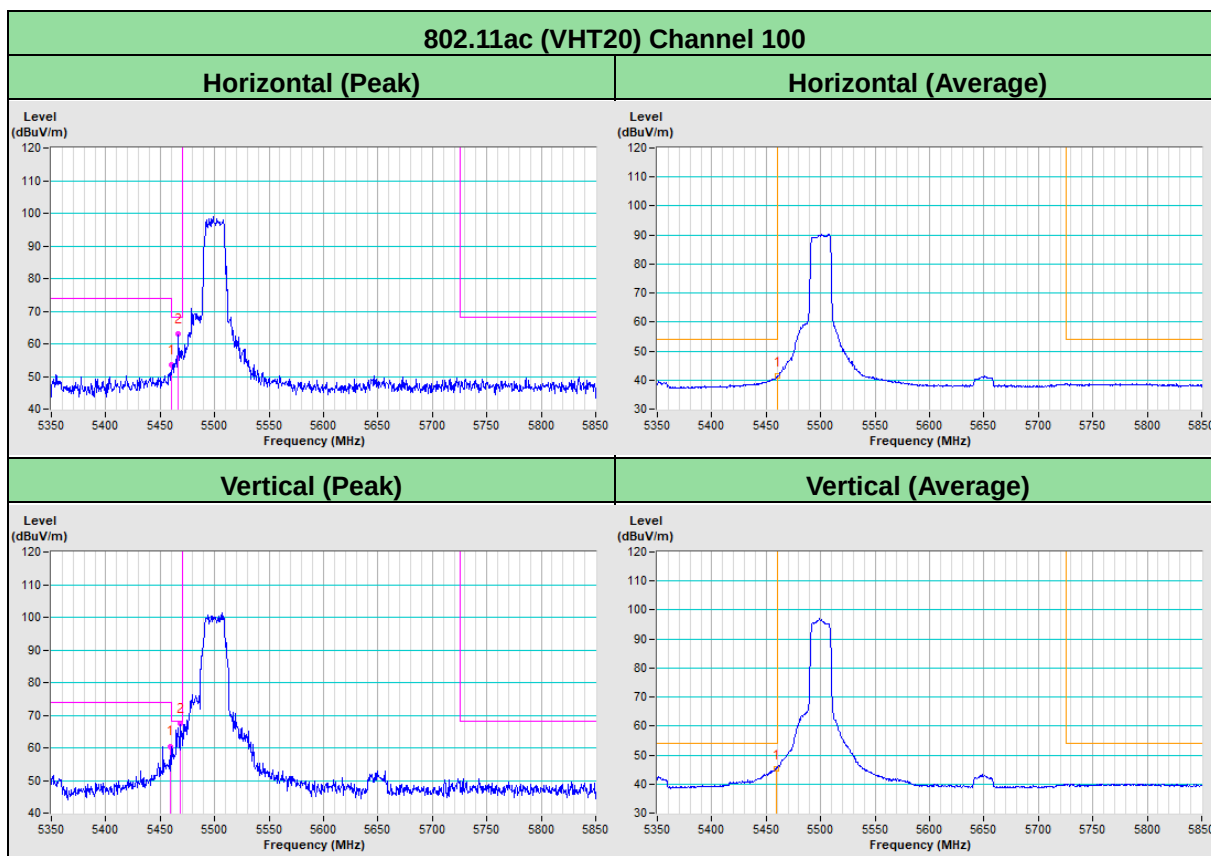


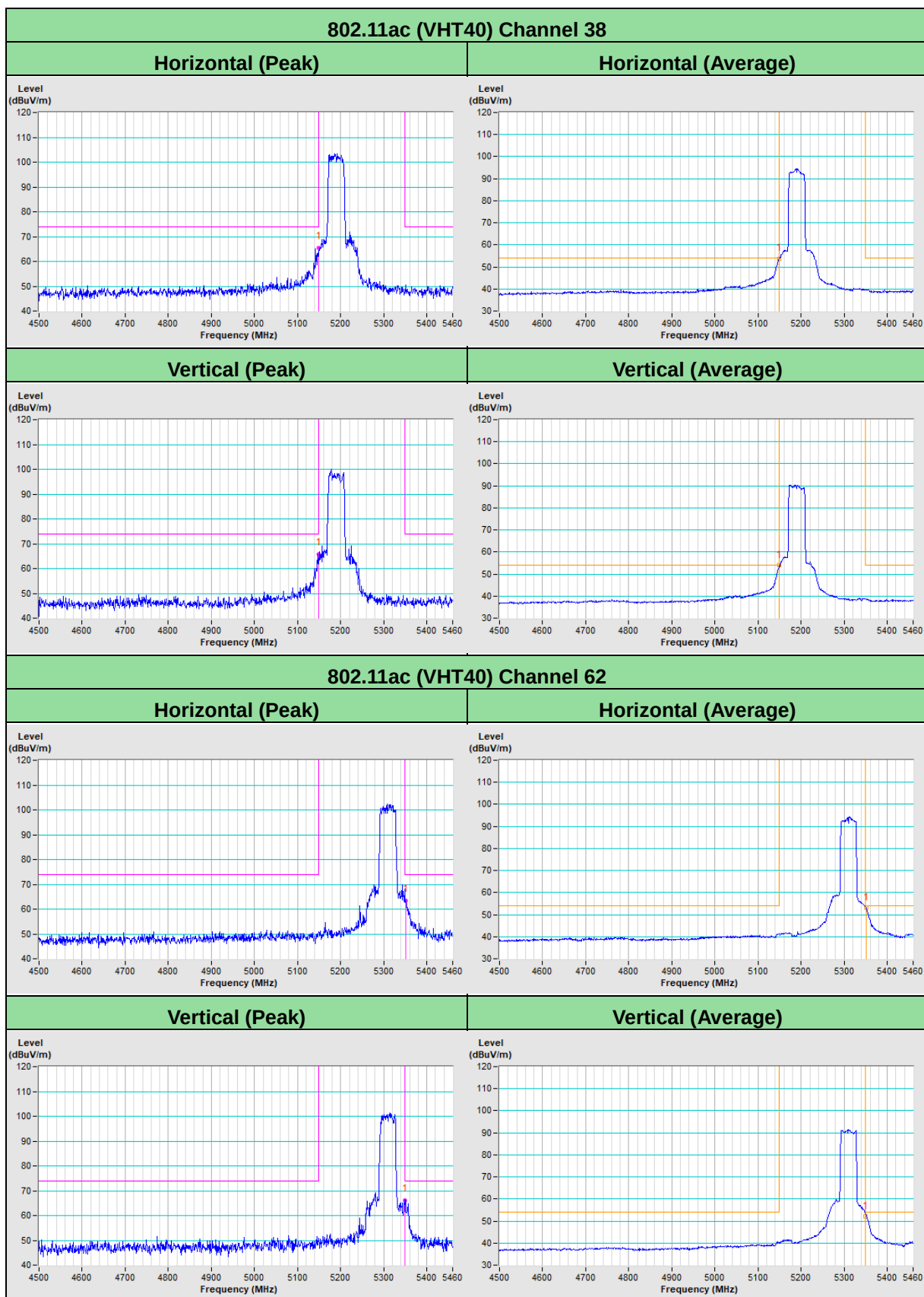
Annex B - Band-Edge Measurement (For U-NII-1, U-NII-2A, U-NII-2C band)

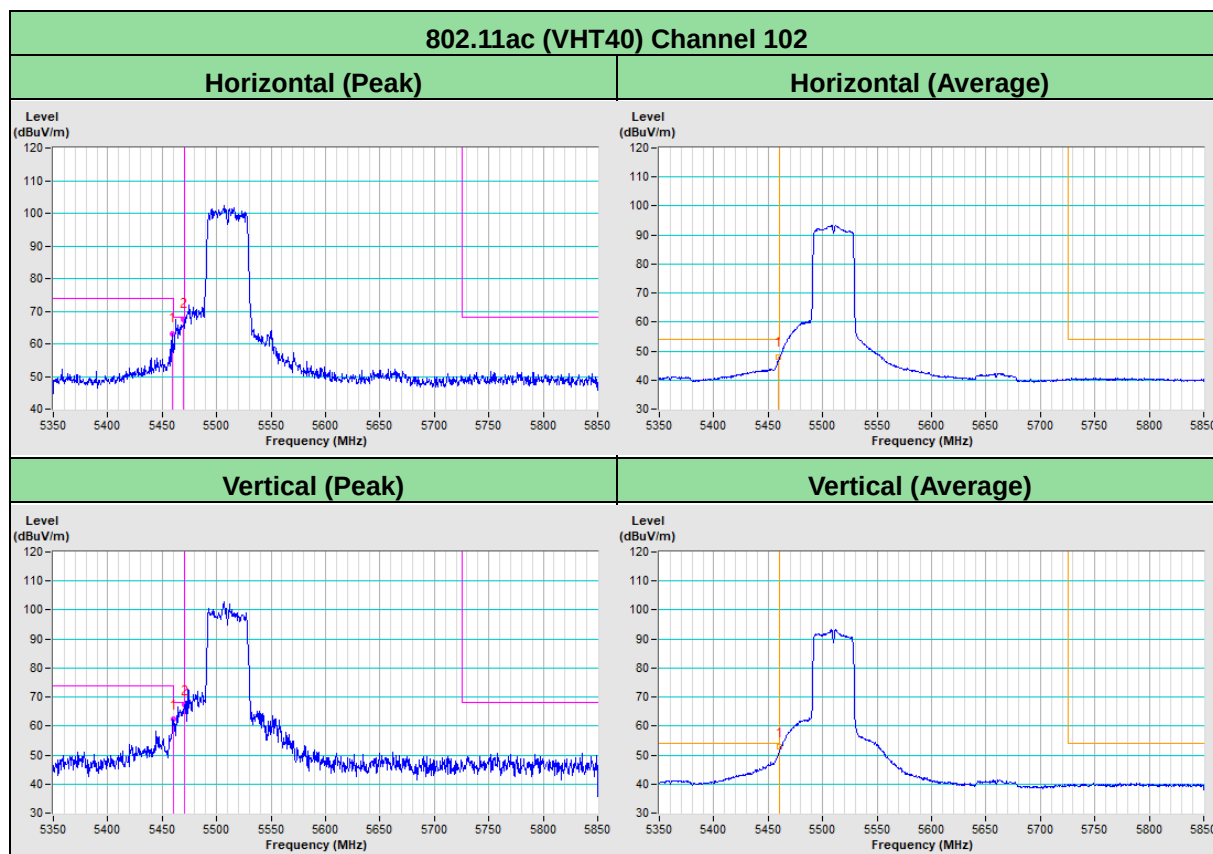


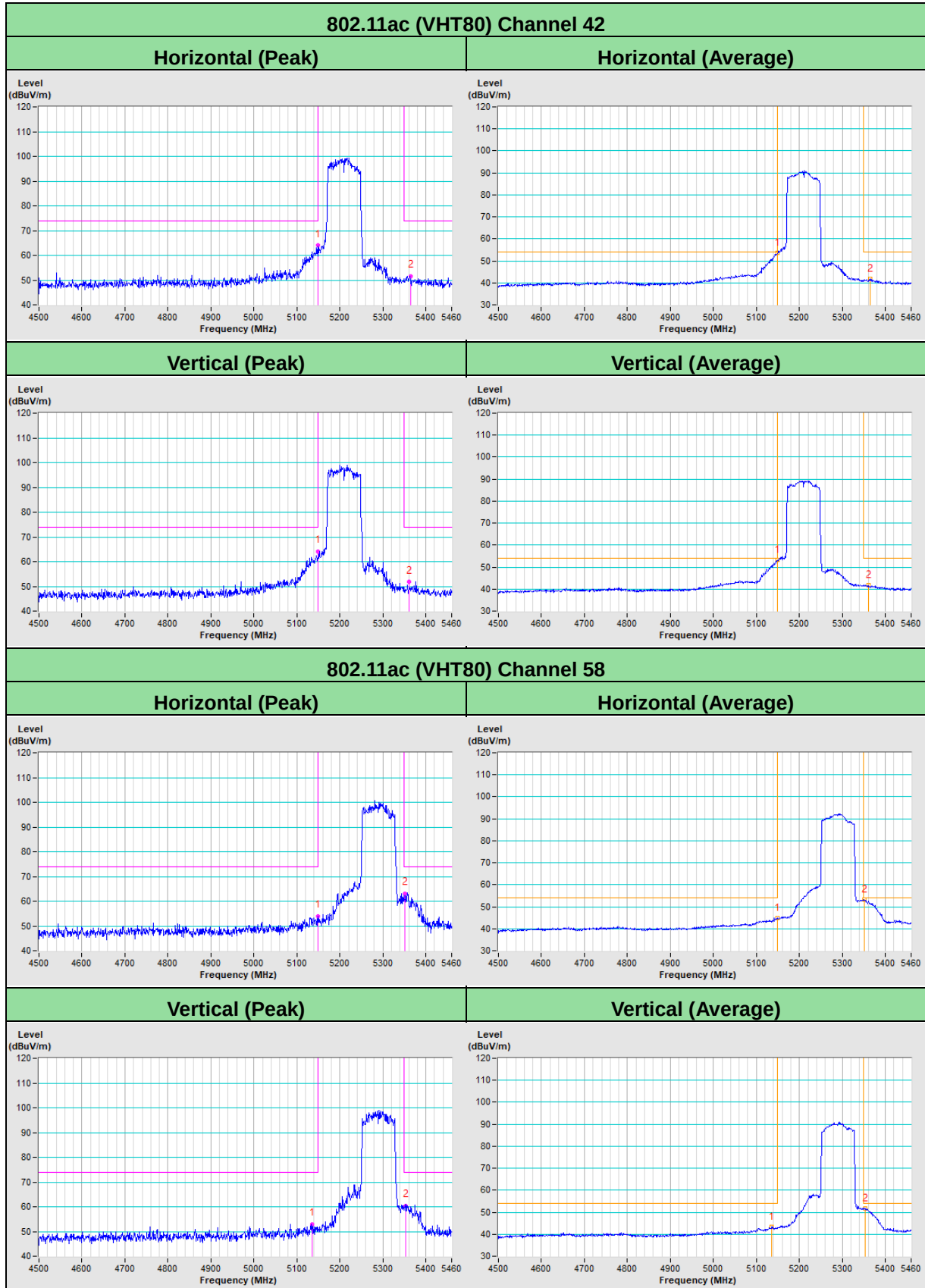


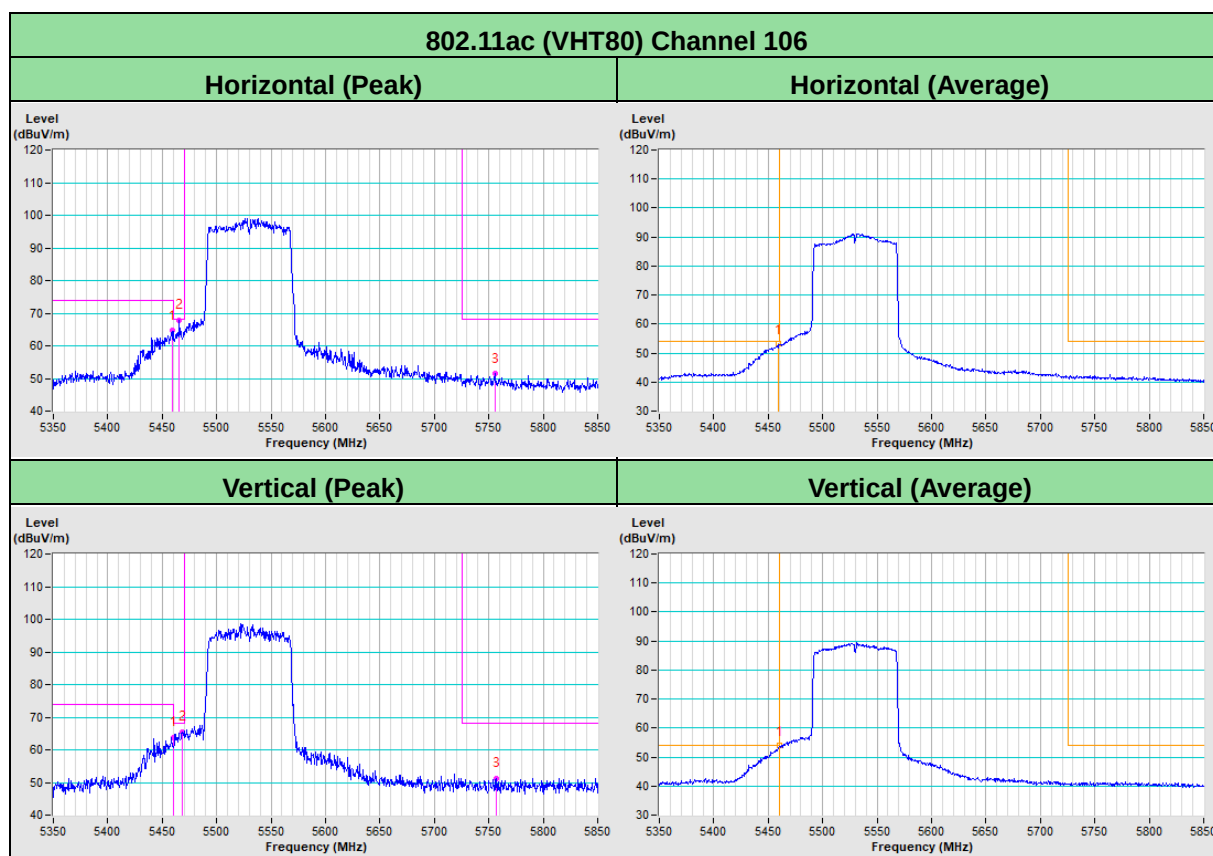












Appendix – Information of the Testing Laboratories

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

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

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

--- END ---