

FCC Test Report

Report No.: RFBENL-WTW-P21051124-1

FCC ID: RYK-WNFQ261ACNIBT

Test Model: WNFQ-261ACNI(BT)

Received Date: May 28, 2021

Test Date: July 10 to 19, 2021

Issued Date: Aug. 25, 2021

Applicant: SparkLAN Communications, Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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**FCC Registration /
Designation Number:** 723255 / TW2022



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Release Control Record

Issue No.	Description	Date Issued
RFBENL-WTW-P21051124-1	Original release.	Aug. 25, 2021

1 Certificate of Conformity

Product: 802.11ac/a/b/g/n 2T2R Industrial-graded Wi-Fi / Bluetooth 4.2 Combo M.2 2230 Module

Brand: Sparklan

Test Model: WNFQ-261ACNI(BT)

Sample Status: R&D SAMPLE

Applicant: SparkLAN Communications, Inc.

Test Date: July 10 to 19, 2021

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 :  , **Date:** Aug. 25, 2021
Claire Kuan / Specialist

Approved by :  , **Date:** Aug. 25, 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	N/A	Refer to Note 4 below
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 -0.5dB at 7440.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	PASS	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	N/A	Refer to Note 4 below
15.407(a)(1/2/3)	Peak Power Spectral Density	N/A	Refer to Note 4 below
15.407(e)	6dB bandwidth	N/A	Refer to Note 4 below
15.407(g)	Frequency Stability	N/A	Refer to Note 4 below
15.203	Antenna Requirement	PASS	Antenna connector is i-pex(MHF) not a standard connector.

Note:

1. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.
2. For U-NII-1 band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex B. Test Procedures refer to report 4.1.3.
3. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
4. Only Radiated Emissions and Conducted power were performed for this addendum. Other test items data refer to original test report.
5. N/A: Not Applicable.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted emissions	-	2.5 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.1 dB
	30MHz ~ 1GHz	5.5 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.1 dB
	18GHz ~ 40GHz	5.3 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	802.11ac/a/b/g/n 2T2R Industrial-graded Wi-Fi / Bluetooth 4.2 Combo M.2 2230 Module
Brand	Sparklan
Test Model	WNFQ-261ACNI(BT)
Status of EUT	R&D SAMPLE
Power Supply Rating	3.3Vdc form host equipment
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT20/40 in 2.4GHz
Modulation Technology	OFDM
Transfer Rate	802.11a: up to 54 Mbps 802.11n: up to 600 Mbps 802.11ac: up to 1733.3 Mbps
Operating Frequency	5.18 ~ 5.24GHz, 5.26 ~ 5.32GHz, 5.50 ~ 5.72GHz, 5.745 ~ 5.825GHz
Number of Channel	802.11a, 802.11n (HT20), 802.11ac (VHT20): 25 802.11n (HT40), 802.11ac (VHT40): 12 802.11ac (VHT80): 6
Output Power	5.18 ~ 5.24GHz: 111.461mW 5.26 ~ 5.32GHz: 111.355mW 5.50 ~ 5.72GHz: 106.279mW 5.745 ~ 5.825GH: 108.058mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

- This report is prepared for FCC Class II permissive change. The difference compared with the Report No.: RF170816E06H-1 design is as the following information:

◆ Added new antennas as below table:

Original										
Ant. Set.	Transmitter Circuit	Brand	Model	Ant. Type	2.4GHz Gain with cable loss (dBi)	5GHz Gain with cable loss (dBi)	2.4GHz Cable Loss (dBi)	5G Cable Loss (dBi)	Connector Type	Cable Length (mm)
1	Chain (0)	WNC	81-EBJ15.005	PIFA	3.00	Band 1&2: 2.56	1.15	Band 1&2: 1.70	IPEX	300
						Band 3: 4.76		Band 3: 1.74		
						Band 4: 4.76		Band 4: 1.79		
	Chain (1)	WNC	81-EBJ15.005	PIFA	3.62	Band 1&2: 3.08	1.15	Band 1&2: 1.70	IPEX	300
						Band 3: 3.31		Band 3: 1.74		
						Band 4: 2.42		Band 4: 1.79		

Ant. Set.	Transmitter Circuit	Brand	Model	Ant. Type	2.4GHz Gain with cable loss (dBi)	5GHz Gain with cable loss (dBi)	2.4GHz Cable Loss (dBi)	5G Cable Loss (dBi)	Connector Type	Cable Length (mm)
2	Chain (0)	INPAQ	DAM-I6-H-DB-800-10-17	Dipole	1.13	Band 1&2: 1.33	NA	NA	SMA RP Plug	900
						Band 3: -0.63				
						Band 4: -0.97				
	Chain (1)	INPAQ	DAM-I6-H-DB-800-10-17	Dipole	1.29	Band 1&2: 1.94	NA	NA	SMA RP Plug	900
						Band 3: -0.49				
						Band 4: -0.93				
Ant. Set.	Transmitter Circuit	Brand	Model	Ant. Type	2.4GHz Gain with cable loss (dBi)		5GHz Gain with cable loss (dBi)		Connector Type	Cable Length (mm)
3	Chain (0) Chain (1)	Sparklan	AD-301N	Dipole	4.4		Band 1&2: 5.2 Band 3&4: 5.8		IPEX MHF 4 at modular side & RP-SMA (M) at antenna side	150
4	Chain (0) Chain (1)	Sparklan	AD-103AG	Dipole	2.02		Band 1&2: 1.93 Band 3&4: 2.03			150
5	Chain (0) Chain (1)	Sparklan	AD-305N	Dipole	5.0		5.0			150
6	Chain (0) Chain (1)	Sparklan	AD-303N	Dipole	3.0		3.0			150
7	Chain (0) Chain (1)	Sparklan	AD-302N	Dipole	3.0		2.0			150
Newly										
Ant. Set.	Transmitter Circuit	Brand	Model	Ant. Type	2.4GHz Gain with cable loss (dBi)		5GHz Gain with cable loss (dBi)		Connector Type	Cable Length (mm)
8	Chain (0) Chain (1)	SANAV	GEPH-023 401GEPH16-022G 000000032-001	PCB	4.78		4.73		IPEX4L MHF	320

- According to above conditions, only Radiated Emissions and Conducted power test items need to be performed. And all data were verified to meet the requirements.
- There are Bluetooth technology and WLAN technology used for the EUT.
- The EUT incorporates a MIMO function.

MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11a	6 ~ 54Mbps	2TX	2RX
802.11n (HT20)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX
802.11n (HT40)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX
802.11ac (VHT20)	MCS 0~8, Nss=1	2TX	2RX
	MCS 0~8, Nss=2	2TX	2RX
802.11ac (VHT40)	MCS 0~9, Nss=1	2TX	2RX
	MCS 0~9, Nss=2	2TX	2RX
802.11ac (VHT80)	MCS 0~9, Nss=1	2TX	2RX
	MCS 0~9, Nss=2	2TX	2RX

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. (Final test mode refer section 3.2.1)

5. The EUT was pre-tested under the following modes:

Test Mode	Data rate
Mode A	400ns GI
Mode B	800ns GI

From the above modes, the worst case was found in **Mode B**. Therefore only the test data of the mode was recorded in this report.

6. WLAN/BT coexistence mode:

◆ 2x2 WLAN + BT:

➤ 5GHz 802.11a/an (or 11ac) transmit concurrent with BT.

➤ 2.4GHz: timely shared coexistence.

7. The emission (conducted & radiated emission) of the simultaneous operation (WiFi <5GHz> & Bluetooth) have been evaluated and no non-compliance found. The detail combinations of transmitters / frequencies / modes as below table

Mode	Available Channel	Tested Channel	Modulation Technology
5 GHz (802.11ac (VHT20))	36 to 165	149	OFDM
+ Bluetooth (LE)	0 to 39	0	GFSK

8. 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.
9. 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 ~ 5240MHz

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210 MHz

FOR 5260 ~ 5320MHz

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290 MHz

FOR 5500 ~ 5720MHz

12 channels are provided for 802.11a, 802.11ac (VHT20), 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 802.11ac (VHT40), 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, 802.11ac (VHT20), 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 802.11ac (VHT40), 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

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

Note: The EUT's PCB antenna had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-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)	5180-5240	36 to 48	60	OFDM	BPSK	6.5
	5260-5320	52 to 64				
	5500-5720	100 to 140				
	5745-5825	149 to 165				

Antenna Port Conducted Measurement:

- ☒ 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	25deg. C, 66%RH	120Vac, 60Hz	Carter Lin
	25deg. C, 66%RH		Tom Yang
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Carter Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Eric Peng

3.3 Duty Cycle of Test Signal

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

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

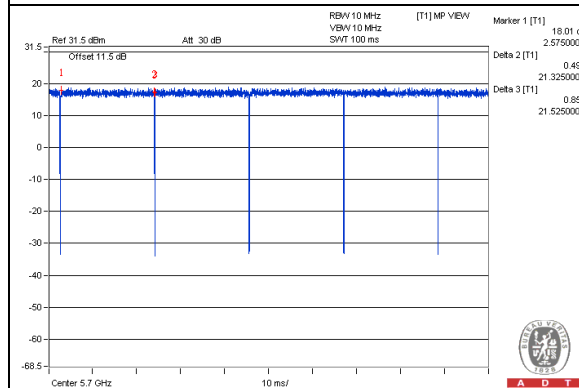
802.11a: Duty cycle = $21.325 \text{ ms} / 21.525 \text{ ms} = 0.991$

802.11ac (VHT20): Duty cycle = $19.825 \text{ ms} / 20.025 \text{ ms} = 0.99$

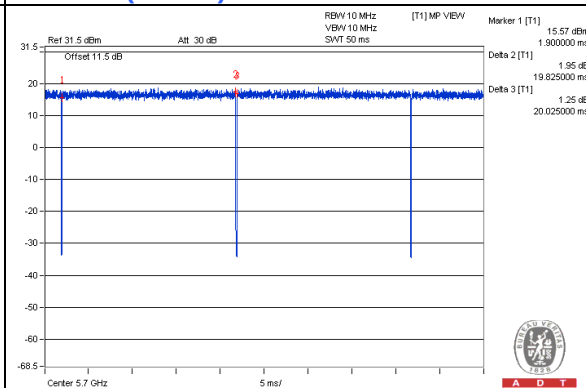
802.11ac (VHT40): Duty cycle = $9.535 \text{ ms} / 9.64 \text{ ms} = 0.989$

802.11ac (VHT80): Duty cycle = $4.425 \text{ ms} / 4.54 \text{ ms} = 0.975$, Duty factor = $10 * \log(1/0.975) = 0.11$

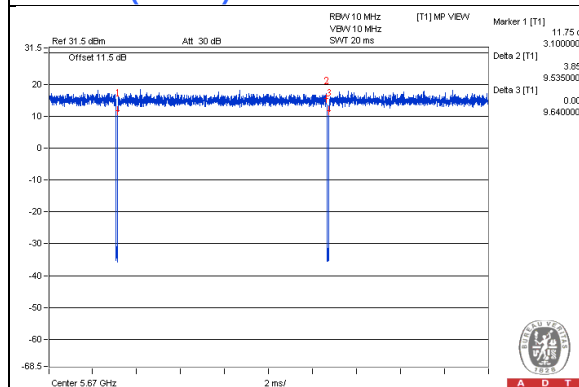
802.11a



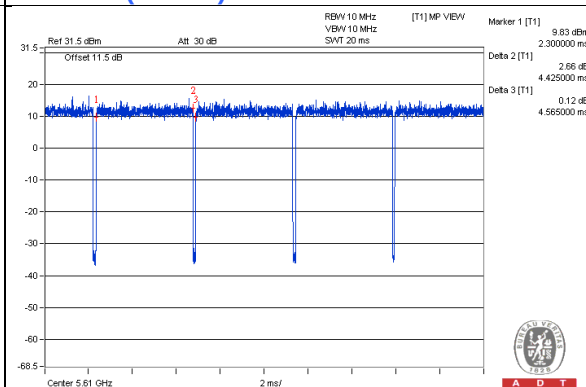
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



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.

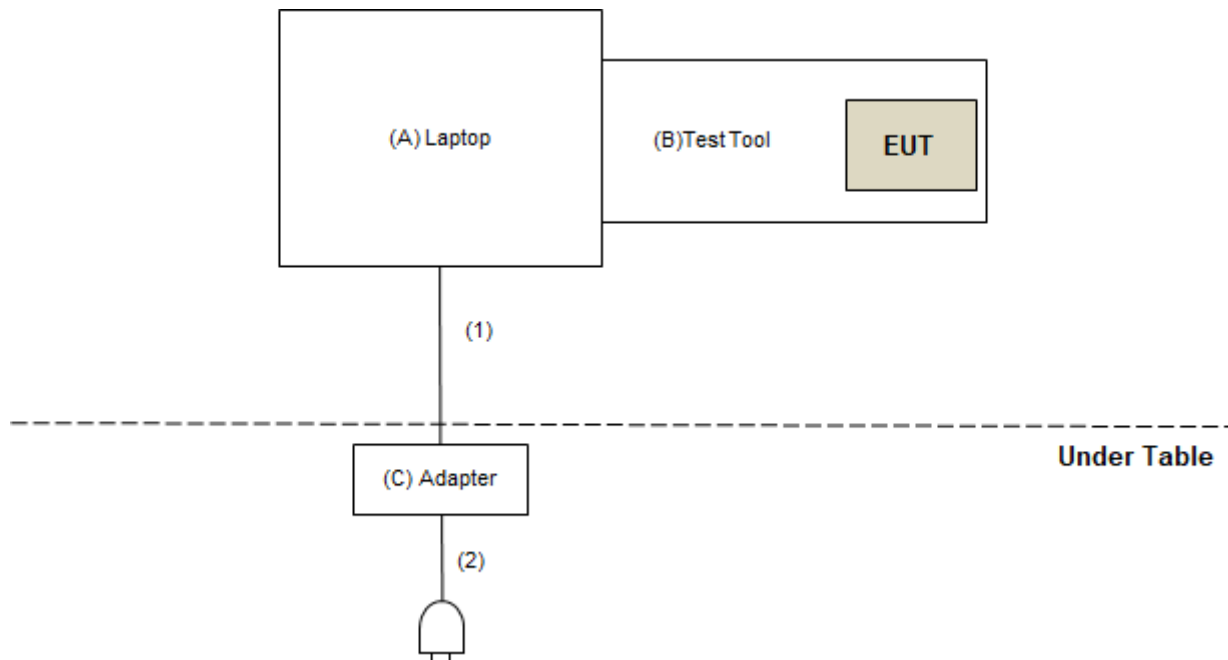
ID	Product	Brand	Model No.	Serial No	FCC ID	Remarks
A.	Laptop	Dell	E5430	NA	NA	Provided by Lab
B.	Test Tool	Qualcomm Atheros	NA	NA	NA	Supplied by client
C.	Adapter	Dell	FA65NE0-00	NA	NA	Provided by Lab

Note:

1. All power cords of the above support units are non-shielded (1.8m).

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC Cable	1	1.8	No	0	Provided by Lab
2.	AC Cable	1	1	No	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
KDB 662911 D01 Multiple Transmitter Output v02r01

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

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

Limits of unwanted emission out of the restricted bands

Applicable To		Limit	
789033 D02 General UNII Test Procedure New Rules v02r01		Field Strength at 3m	
		PK:74 (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:

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

4.1.2 Test Instruments

For Radiated emission & OOB & Bandedge test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 01, 2020	Nov. 30, 2021
Pre-Amplifier EMCI	EMC001340	980142	May 24, 2021	May 23, 2022
Loop Antenna Electro-Metrics	EM-6879	264	Mar. 05, 2021	Mar. 04, 2022
RF Cable	5D-FB	LOOPCAB-001	Jan. 07, 2021	Jan. 06, 2022
RF Cable	5D-FB	LOOPCAB-002	Jan. 07, 2021	Jan. 06, 2022
Pre-Amplifier EMCI	EMC330N	980701	Mar. 10, 2021	Mar. 09, 2022
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Nov. 06, 2020	Nov. 05, 2021
RF Cable	8D	966-4-1	Mar. 17, 2021	Mar. 16, 2022
RF Cable	8D	966-4-2	Mar. 17, 2021	Mar. 16, 2022
RF Cable	8D	966-4-3	Mar. 17, 2021	Mar. 16, 2022
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-03	Jan. 11, 2021	Jan. 10, 2022
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Nov. 22, 2020	Nov. 21, 2021
Pre-Amplifier EMCI	EMC 12630 SE	980638	Apr. 07, 2021	Apr. 06, 2022
RF Cable	EMC104-SM-SM-1200	160922	Dec. 25, 2020	Dec. 24, 2021
RF Cable	EMC104-SM-SM-2000	180502	Apr. 26, 2021	Apr. 25, 2022
RF Cable	EMC104-SM-SM-6000	180418	Apr. 26, 2021	Apr. 25, 2022
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 11, 2021	Jan. 10, 2022
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 22, 2020	Nov. 21, 2021
RF Cable	EMC102-KM-KM-1200	160924	Jan. 11, 2021	Jan. 10, 2022
RF Cable	EMC-KM-KM-4000	200214	Mar. 10, 2021	Mar. 09, 2022
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. 4.
3. Tested Date: July 10 to 16, 2021

For other test

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power meter Anritsu	ML2495A	1529002	June 21, 2021	June 20, 2022
Power sensor Anritsu	MA2411B	1339443	May 31, 2021	May 30, 2022
10dB Attenuator Woken	MDCS18N-10	MDCS18N-10-01	Apr. 13, 2021	Apr. 12, 2022
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: July 19, 2021

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:

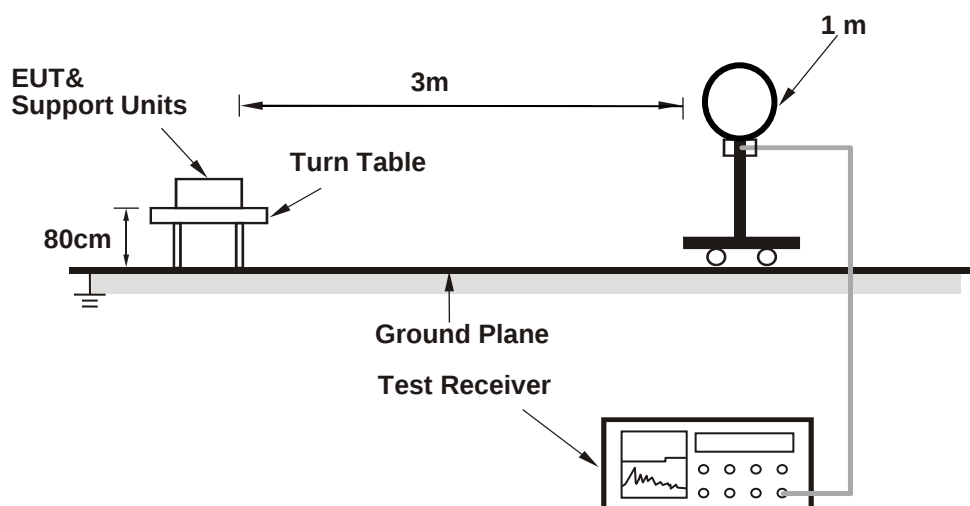
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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

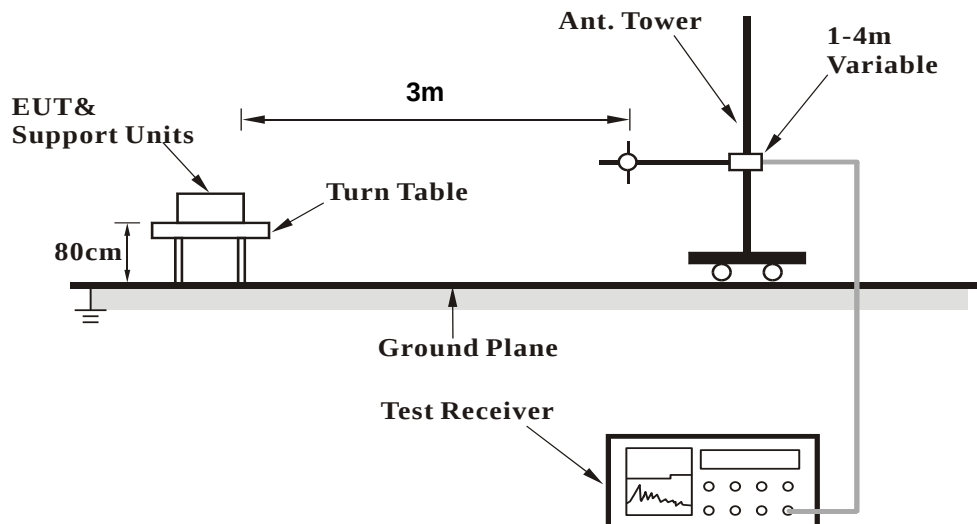
No deviation.

4.1.5 Test Setup

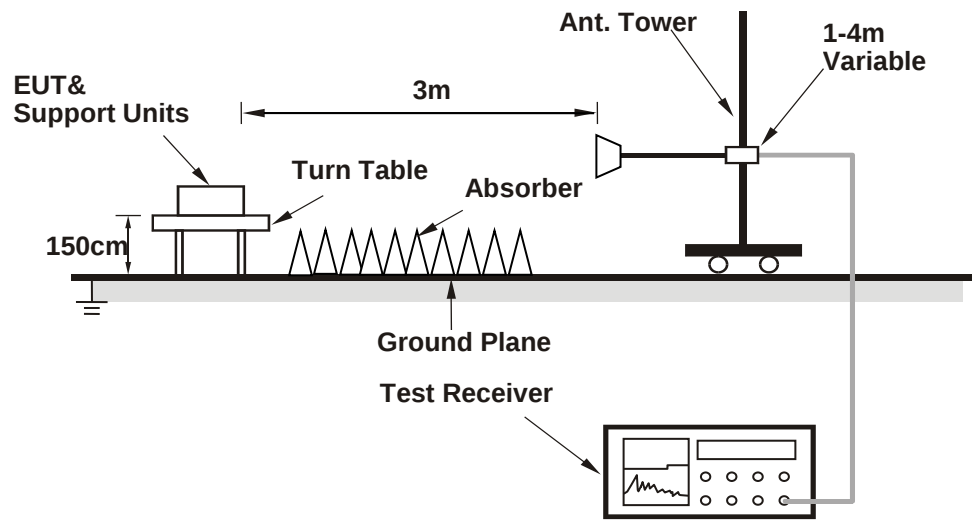
For Radiated emission below 30MHz



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

- Connected the EUT with the Laptop Computer which is placed on remote site.
- Controlling software (QDART 1.0.38) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz Data:

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	54.7 PK	74.0	-19.3	2.04 H	220	53.6	1.1
2	5150.00	44.0 AV	54.0	-10.0	2.04 H	220	42.9	1.1
3	*5180.00	111.6 PK			2.04 H	220	110.6	1.0
4	*5180.00	102.9 AV			2.04 H	220	101.9	1.0
5	#10360.00	43.8 PK	68.2	-24.4	1.74 H	275	33.5	10.3
6	15540.00	45.4 PK	74.0	-28.6	2.47 H	144	33.4	12.0
7	15540.00	34.7 AV	54.0	-19.3	2.47 H	144	22.7	12.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	49.2 PK	74.0	-24.8	3.02 V	241	48.1	1.1
2	5150.00	38.6 AV	54.0	-15.4	3.02 V	241	37.5	1.1
3	*5180.00	108.2 PK			3.02 V	241	107.2	1.0
4	*5180.00	99.8 AV			3.02 V	241	98.8	1.0
5	#10360.00	43.5 PK	68.2	-24.7	1.46 V	290	33.2	10.3
6	15540.00	45.8 PK	74.0	-28.2	1.22 V	99	33.8	12.0
7	15540.00	35.2 AV	54.0	-18.8	1.22 V	99	23.2	12.0

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 40 : 5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	111.6 PK			2.12 H	221	110.5	1.1
2	*5200.00	103.0 AV			2.12 H	221	101.9	1.1
3	#10400.00	43.2 PK	68.2	-25.0	1.69 H	267	32.8	10.4
4	15600.00	45.6 PK	74.0	-28.4	2.47 H	129	33.6	12.0
5	15600.00	34.9 AV	54.0	-19.1	2.47 H	129	22.9	12.0
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	*5200.00	108.4 PK			3.03 V	231	107.3	1.1
2	*5200.00	99.8 AV			3.03 V	231	98.7	1.1
3	#10400.00	43.7 PK	68.2	-24.5	1.46 V	296	33.3	10.4
4	15600.00	45.6 PK	74.0	-28.4	1.24 V	92	33.6	12.0
5	15600.00	34.8 AV	54.0	-19.2	1.24 V	92	22.8	12.0

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 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	111.8 PK			2.08 H	206	111.0	0.8
2	*5240.00	103.1 AV			2.08 H	206	102.3	0.8
3	5350.00	52.6 PK	74.0	-21.4	2.08 H	206	51.8	0.8
4	5350.00	40.3 AV	54.0	-13.7	2.08 H	206	39.5	0.8
5	#10480.00	43.8 PK	68.2	-24.4	1.68 H	259	33.5	10.3
6	15720.00	46.0 PK	74.0	-28.0	2.49 H	144	34.8	11.2
7	15720.00	35.2 AV	54.0	-18.8	2.49 H	144	24.0	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	*5240.00	108.3 PK			3.03 V	242	107.5	0.8
2	*5240.00	100.0 AV			3.03 V	242	99.2	0.8
3	5350.00	47.3 PK	74.0	-26.7	3.03 V	242	46.5	0.8
4	5350.00	36.4 AV	54.0	-17.6	3.03 V	242	35.6	0.8
5	#10480.00	43.5 PK	68.2	-24.7	1.49 V	290	33.2	10.3
6	15720.00	45.5 PK	74.0	-28.5	1.27 V	107	34.3	11.2
7	15720.00	35.0 AV	54.0	-19.0	1.27 V	107	23.8	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.
6. " # ": The radiated frequency is out of the restricted band.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	52.3 PK	74.0	-21.7	2.08 H	196	51.2	1.1
2	5150.00	40.3 AV	54.0	-13.7	2.08 H	196	39.2	1.1
3	*5260.00	111.6 PK			2.08 H	196	110.9	0.7
4	*5260.00	102.9 AV			2.08 H	196	102.2	0.7
5	#10520.00	43.4 PK	68.2	-24.8	1.73 H	253	33.0	10.4
6	15780.00	45.2 PK	74.0	-28.8	2.43 H	127	34.1	11.1
7	15780.00	34.8 AV	54.0	-19.2	2.43 H	127	23.7	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	47.1 PK	74.0	-26.9	3.02 V	252	46.0	1.1
2	5150.00	36.0 AV	54.0	-18.0	3.02 V	252	34.9	1.1
3	*5260.00	107.8 PK			3.02 V	252	107.1	0.7
4	*5260.00	99.8 AV			3.02 V	252	99.1	0.7
5	#10520.00	44.0 PK	68.2	-24.2	1.43 V	312	33.6	10.4
6	15780.00	45.6 PK	74.0	-28.4	1.21 V	107	34.5	11.1
7	15780.00	34.6 AV	54.0	-19.4	1.21 V	107	23.5	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.
6. " # ": The radiated frequency is out of the restricted band.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	111.4 PK			2.09 H	214	110.7	0.7
2	*5300.00	102.6 AV			2.09 H	214	101.9	0.7
3	10600.00	43.3 PK	74.0	-30.7	1.71 H	272	32.8	10.5
4	10600.00	33.7 AV	54.0	-20.3	1.71 H	272	23.2	10.5
5	15900.00	44.8 PK	74.0	-29.2	2.49 H	127	33.0	11.8
6	15900.00	34.5 AV	54.0	-19.5	2.49 H	127	22.7	11.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	108.1 PK			2.99 V	233	107.4	0.7
2	*5300.00	99.9 AV			2.99 V	233	99.2	0.7
3	10600.00	43.5 PK	74.0	-30.5	1.48 V	289	33.0	10.5
4	10600.00	33.9 AV	54.0	-20.1	1.48 V	289	23.4	10.5
5	15900.00	45.4 PK	74.0	-28.6	1.25 V	107	33.6	11.8
6	15900.00	34.8 AV	54.0	-19.2	1.25 V	107	23.0	11.8

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 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	110.8 PK			2.13 H	209	110.1	0.7
2	*5320.00	101.6 AV			2.13 H	209	100.9	0.7
3	5350.00	54.4 PK	74.0	-19.6	2.13 H	209	53.6	0.8
4	5350.00	43.5 AV	54.0	-10.5	2.13 H	209	42.7	0.8
5	10640.00	43.6 PK	74.0	-30.4	1.70 H	280	33.2	10.4
6	10640.00	33.8 AV	54.0	-20.2	1.70 H	280	23.4	10.4
7	15960.00	44.4 PK	74.0	-29.6	2.50 H	136	32.3	12.1
8	15960.00	34.2 AV	54.0	-19.8	2.50 H	136	22.1	12.1
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	*5320.00	105.3 PK			3.20 V	258	104.6	0.7
2	*5320.00	96.4 AV			3.20 V	258	95.7	0.7
3	5350.00	50.0 PK	74.0	-24.0	3.20 V	258	49.2	0.8
4	5350.00	40.1 AV	54.0	-13.9	3.20 V	258	39.3	0.8
5	10640.00	43.6 PK	74.0	-30.4	1.42 V	275	33.2	10.4
6	10640.00	33.8 AV	54.0	-20.2	1.42 V	275	23.4	10.4
7	15960.00	45.7 PK	74.0	-28.3	1.23 V	116	33.6	12.1
8	15960.00	34.1 AV	54.0	-19.9	1.23 V	116	22.0	12.1

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 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	5452.00	52.9 PK	74.0	-21.1	2.04 H	203	51.8	1.1
2	5452.00	43.4 AV	54.0	-10.6	2.04 H	203	42.3	1.1
3	5460.00	53.6 PK	74.0	-20.4	2.04 H	203	52.5	1.1
4	5460.00	42.2 AV	54.0	-11.8	2.04 H	203	41.1	1.1
5	#5468.50	55.2 PK	68.2	-13.0	2.04 H	203	54.1	1.1
6	*5500.00	110.4 PK			2.04 H	203	109.3	1.1
7	*5500.00	100.7 AV			2.04 H	203	99.6	1.1
8	11000.00	43.3 PK	74.0	-30.7	1.65 H	285	31.9	11.4
9	11000.00	33.6 AV	54.0	-20.4	1.65 H	285	22.2	11.4
10	#16500.00	44.6 PK	68.2	-23.6	2.50 H	115	30.4	14.2
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	5460.00	50.2 PK	74.0	-23.8	3.14 V	94	49.1	1.1
2	5460.00	38.8 AV	54.0	-15.2	3.14 V	94	37.7	1.1
3	#5468.50	52.4 PK	68.2	-15.8	3.14 V	94	51.3	1.1
4	*5500.00	107.6 PK			3.14 V	94	106.5	1.1
5	*5500.00	97.8 AV			3.14 V	94	96.7	1.1
6	11000.00	42.8 PK	74.0	-31.2	1.52 V	287	31.4	11.4
7	11000.00	33.5 AV	54.0	-20.5	1.52 V	287	22.1	11.4
8	#16500.00	45.3 PK	68.2	-22.9	1.27 V	122	31.1	14.2

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 116 : 5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	111.4 PK			2.10 H	210	110.1	1.3
2	*5580.00	102.5 AV			2.10 H	210	101.2	1.3
3	7440.00	54.9 PK	74.0	-19.1	1.89 H	133	48.2	6.7
4	7440.00	53.5 AV	54.0	-0.5	1.89 H	133	46.8	6.7
5	11160.00	44.1 PK	74.0	-29.9	1.68 H	268	32.9	11.2
6	11160.00	34.2 AV	54.0	-19.8	1.68 H	268	23.0	11.2
7	#16740.00	45.2 PK	68.2	-23.0	2.44 H	128	29.9	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	*5580.00	107.9 PK			3.09 V	90	106.6	1.3
2	*5580.00	99.7 AV			3.09 V	90	98.4	1.3
3	7440.00	47.6 PK	74.0	-26.4	1.50 V	338	40.9	6.7
4	7440.00	43.4 AV	54.0	-10.6	1.50 V	338	36.7	6.7
5	11160.00	43.3 PK	74.0	-30.7	1.47 V	285	32.1	11.2
6	11160.00	33.5 AV	54.0	-20.5	1.47 V	285	22.3	11.2
7	#16740.00	45.6 PK	68.2	-22.6	1.28 V	112	30.3	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 802.11a	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	1081.0 PK			2.06 H	217	1079.5	1.5
2	*5700.00	99.7 AV			2.06 H	217	98.2	1.5
3	#5725.00	53.0 PK	68.2	-15.2	2.06 H	217	51.4	1.6
4	11400.00	43.2 PK	74.0	-30.8	1.68 H	275	31.0	12.2
5	11400.00	33.8 AV	54.0	-20.2	1.68 H	275	21.6	12.2
6	#17100.00	44.6 PK	68.2	-23.6	2.47 H	119	27.8	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	*5700.00	107.4 PK			3.14 V	107	105.9	1.5
2	*5700.00	97.1 AV			3.14 V	107	95.6	1.5
3	#5725.00	49.7 PK	68.2	-18.5	3.14 V	107	48.1	1.6
4	11400.00	43.4 PK	74.0	-30.6	1.52 V	276	31.2	12.2
5	11400.00	33.9 AV	54.0	-20.1	1.52 V	276	21.7	12.2
6	#17100.00	45.6 PK	68.2	-22.6	1.24 V	112	28.8	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.

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	47.5 PK	74.0	-26.5	1.99 H	195	46.4	1.1
2	5460.00	35.9 AV	54.0	-18.1	1.99 H	195	34.8	1.1
3	#5470.00	48.3 PK	68.2	-19.9	1.99 H	195	47.2	1.1
4	*5720.00	112.5 PK			1.99 H	195	110.9	1.6
5	*5720.00	103.1 AV			1.99 H	195	101.5	1.6
6	#5850.00	48.4 PK	68.2	-19.8	1.99 H	195	46.5	1.9
7	11440.00	47.1 PK	74.0	-26.9	1.74 H	253	34.9	12.2
8	11440.00	36.1 AV	54.0	-17.9	1.74 H	253	23.9	12.2
9	#17160.00	49.4 PK	68.2	-18.8	2.43 H	154	33.2	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	5460.00	48.3 PK	74.0	-25.7	3.26 V	86	47.2	1.1
2	5460.00	36.4 AV	54.0	-17.6	3.26 V	86	35.3	1.1
3	#5470.00	48.6 PK	68.2	-19.6	3.26 V	86	47.5	1.1
4	*5720.00	106.9 PK			3.26 V	86	105.3	1.6
5	*5720.00	98.4 AV			3.26 V	86	96.8	1.6
6	#5850.00	48.2 PK	68.2	-20.0	3.26 V	86	46.3	1.9
7	11440.00	45.2 PK	74.0	-28.8	1.51 V	283	33.0	12.2
8	11440.00	34.8 AV	54.0	-19.2	1.51 V	283	22.6	12.2
9	#17160.00	50.4 PK	68.2	-17.8	1.29 V	101	34.2	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 802.11a	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	#5574.75	49.8 PK	68.2	-18.4	1.94 H	202	48.1	1.7
2	*5745.00	112.1 PK			1.94 H	202	110.4	1.7
3	*5745.00	102.8 AV			1.94 H	202	101.1	1.7
4	#6012.65	49.4 PK	68.2	-18.8	1.94 H	202	47.1	2.3
5	7660.00	50.9 PK	74.0	-23.1	2.00 H	136	44.2	6.7
6	7660.00	48.9 AV	54.0	-5.1	2.00 H	136	42.2	6.7
7	11490.00	46.7 PK	74.0	-27.3	1.71 H	256	34.6	12.1
8	11490.00	35.8 AV	54.0	-18.2	1.71 H	256	23.7	12.1
9	#17235.00	49.7 PK	68.2	-18.5	2.47 H	138	33.9	15.8
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	#5594.84	48.3 PK	68.2	-19.9	3.31 V	92	46.6	1.7
2	*5745.00	106.6 PK			3.31 V	92	104.9	1.7
3	*5745.00	98.0 AV			3.31 V	92	96.3	1.7
4	#5947.31	48.6 PK	68.2	-19.6	3.31 V	92	46.3	2.3
5	11490.00	46.9 PK	74.0	-27.1	1.53 V	274	34.8	12.1
6	11490.00	36.2 AV	54.0	-17.8	1.53 V	274	24.1	12.1
7	#17235.00	49.9 PK	68.2	-18.3	1.34 V	97	34.1	15.8

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 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	#5645.04	49.6 PK	68.2	-18.6	1.98 H	200	47.8	1.8
2	*5785.00	112.4 PK			1.98 H	200	110.6	1.8
3	*5785.00	102.7 AV			1.98 H	200	100.9	1.8
4	#5927.87	49.1 PK	68.2	-19.1	1.98 H	200	46.9	2.2
5	11570.00	46.7 PK	74.0	-27.3	1.71 H	264	34.7	12.0
6	11570.00	36.1 AV	54.0	-17.9	1.71 H	264	24.1	12.0
7	#17355.00	49.6 PK	68.2	-18.6	2.51 H	148	33.1	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	#5607.83	49.4 PK	68.2	-18.8	3.33 V	91	47.7	1.7
2	*5785.00	106.0 PK			3.33 V	91	104.2	1.8
3	*5785.00	97.8 AV			3.33 V	91	96.0	1.8
4	#5976.02	49.5 PK	68.2	-18.7	3.33 V	91	47.2	2.3
5	11570.00	47.0 PK	74.0	-27.0	1.54 V	269	35.0	12.0
6	11570.00	36.1 AV	54.0	-17.9	1.54 V	269	24.1	12.0
7	#17355.00	49.8 PK	68.2	-18.4	1.34 V	112	33.3	16.5

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 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	#5599.46	48.4 PK	68.2	-19.8	2.04 H	199	46.7	1.7
2	*5825.00	111.5 PK			2.04 H	199	109.7	1.8
3	*5825.00	102.7 AV			2.04 H	199	100.9	1.8
4	#5972.90	49.0 PK	68.2	-19.2	2.04 H	199	46.7	2.3
5	11650.00	46.4 PK	74.0	-27.6	1.72 H	262	34.7	11.7
6	11650.00	35.3 AV	54.0	-18.7	1.72 H	262	23.6	11.7
7	#17475.00	49.7 PK	68.2	-18.5	2.48 H	150	31.7	18.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5605.42	49.8 PK	68.2	-18.4	3.37 V	92	48.1	1.7
2	*5825.00	106.5 PK			3.37 V	92	104.7	1.8
3	*5825.00	97.5 AV			3.37 V	92	95.7	1.8
4	#5934.76	49.8 PK	68.2	-18.4	3.37 V	92	47.6	2.2
5	11650.00	47.2 PK	74.0	-26.8	1.55 V	272	35.5	11.7
6	11650.00	36.3 AV	54.0	-17.7	1.55 V	272	24.6	11.7
7	#17475.00	50.2 PK	68.2	-18.0	1.40 V	94	32.2	18.0

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	53.9 PK	74.0	-20.1	2.07 H	210	52.8	1.1
2	5150.00	45.1 AV	54.0	-8.9	2.07 H	210	44.0	1.1
3	*5180.00	111.4 PK			2.07 H	210	110.4	1.0
4	*5180.00	102.3 AV			2.07 H	210	101.3	1.0
5	#10360.00	43.5 PK	68.2	-24.7	1.69 H	263	33.2	10.3
6	15540.00	45.6 PK	74.0	-28.4	2.53 H	160	33.6	12.0
7	15540.00	34.7 AV	54.0	-19.3	2.53 H	160	22.7	12.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	51.7 PK	74.0	-22.3	4.00 V	243	50.6	1.1
2	5150.00	41.3 AV	54.0	-12.7	4.00 V	243	40.2	1.1
3	*5180.00	108.8 PK			4.00 V	243	107.8	1.0
4	*5180.00	98.8 AV			4.00 V	243	97.8	1.0
5	#10360.00	43.3 PK	68.2	-24.9	1.50 V	290	33.0	10.3
6	15540.00	45.6 PK	74.0	-28.4	1.27 V	89	33.6	12.0
7	15540.00	35.2 AV	54.0	-18.8	1.27 V	89	23.2	12.0

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 40 : 5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	111.3 PK			2.04 H	220	110.2	1.1
2	*5200.00	102.8 AV			2.04 H	220	101.7	1.1
3	#10400.00	44.1 PK	68.2	-24.1	1.77 H	285	33.7	10.4
4	15600.00	44.9 PK	74.0	-29.1	2.51 H	134	32.9	12.0
5	15600.00	34.3 AV	54.0	-19.7	2.51 H	134	22.3	12.0
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	*5200.00	109.9 PK			3.11 V	269	108.8	1.1
2	*5200.00	98.9 AV			3.11 V	269	97.8	1.1
3	#10400.00	43.9 PK	68.2	-24.3	1.42 V	284	33.5	10.4
4	15600.00	45.7 PK	74.0	-28.3	1.20 V	103	33.7	12.0
5	15600.00	35.1 AV	54.0	-18.9	1.20 V	103	23.1	12.0

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 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	111.2 PK			2.00 H	230	110.4	0.8
2	*5240.00	102.7 AV			2.00 H	230	101.9	0.8
3	5350.00	52.3 PK	74.0	-21.7	2.05 H	215	51.5	0.8
4	5350.00	41.7 AV	54.0	-12.3	2.05 H	215	40.9	0.8
5	#10480.00	43.9 PK	68.2	-24.3	1.70 H	281	33.6	10.3
6	15720.00	45.9 PK	74.0	-28.1	2.41 H	138	34.7	11.2
7	15720.00	35.0 AV	54.0	-19.0	2.41 H	138	23.8	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	*5240.00	109.2 PK			3.07 V	246	108.4	0.8
2	*5240.00	98.4 AV			3.07 V	246	97.6	0.8
3	5350.00	49.3 PK	74.0	-24.7	3.07 V	246	48.5	0.8
4	5350.00	38.7 AV	54.0	-15.3	3.07 V	246	37.9	0.8
5	#10480.00	43.8 PK	68.2	-24.4	1.51 V	299	33.5	10.3
6	15720.00	45.6 PK	74.0	-28.4	1.20 V	95	34.4	11.2
7	15720.00	34.8 AV	54.0	-19.2	1.20 V	95	23.6	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.
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	52.0 PK	74.0	-22.0	2.04 H	216	50.9	1.1
2	5150.00	40.5 AV	54.0	-13.5	2.04 H	216	39.4	1.1
3	*5260.00	110.8 PK			2.05 H	224	110.1	0.7
4	*5260.00	102.6 AV			2.05 H	224	101.9	0.7
5	#10520.00	44.2 PK	68.2	-24.0	1.78 H	279	33.8	10.4
6	15780.00	45.4 PK	74.0	-28.6	2.45 H	147	34.3	11.1
7	15780.00	34.7 AV	54.0	-19.3	2.45 H	147	23.6	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	49.2 PK	74.0	-24.8	3.11 V	259	48.1	1.1
2	5150.00	38.5 AV	54.0	-15.5	3.11 V	259	37.4	1.1
3	*5260.00	109.8 PK			3.11 V	259	109.1	0.7
4	*5260.00	98.8 AV			3.11 V	259	98.1	0.7
5	#10520.00	43.7 PK	68.2	-24.5	1.46 V	292	33.3	10.4
6	15780.00	45.8 PK	74.0	-28.2	1.21 V	106	34.7	11.1
7	15780.00	35.3 AV	54.0	-18.7	1.21 V	106	24.2	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.
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	111.7 PK			1.96 H	230	111.0	0.7
2	*5300.00	103.1 AV			1.96 H	230	102.4	0.7
3	10600.00	43.4 PK	74.0	-30.6	1.76 H	283	32.9	10.5
4	10600.00	33.7 AV	54.0	-20.3	1.76 H	283	23.2	10.5
5	15900.00	44.9 PK	74.0	-29.1	2.52 H	128	33.1	11.8
6	15900.00	34.8 AV	54.0	-19.2	2.52 H	128	23.0	11.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	109.2 PK			3.12 V	236	108.5	0.7
2	*5300.00	98.4 AV			3.12 V	236	97.7	0.7
3	10600.00	43.3 PK	74.0	-30.7	1.48 V	275	32.8	10.5
4	10600.00	33.6 AV	54.0	-20.4	1.48 V	275	23.1	10.5
5	15900.00	46.9 PK	74.0	-27.1	1.24 V	94	35.1	11.8
6	15900.00	34.0 AV	54.0	-20.0	1.24 V	94	22.2	11.8

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	109.8 PK			2.06 H	210	109.1	0.7
2	*5320.00	100.6 AV			2.06 H	210	99.9	0.7
3	5350.00	54.2 PK	74.0	-19.8	2.06 H	210	53.4	0.8
4	5350.00	43.8 AV	54.0	-10.2	2.06 H	210	43.0	0.8
5	10640.00	43.1 PK	74.0	-30.9	1.74 H	274	32.7	10.4
6	10640.00	33.4 AV	54.0	-20.6	1.74 H	274	23.0	10.4
7	15960.00	44.7 PK	74.0	-29.3	2.45 H	133	32.6	12.1
8	15960.00	34.7 AV	54.0	-19.3	2.45 H	133	22.6	12.1
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	*5320.00	107.0 PK			3.82 V	259	106.3	0.7
2	*5320.00	97.1 AV			3.82 V	259	96.4	0.7
3	5350.00	50.6 PK	74.0	-23.4	3.82 V	259	49.8	0.8
4	5350.00	39.6 AV	54.0	-14.4	3.82 V	259	38.8	0.8
5	10640.00	43.6 PK	74.0	-30.4	1.48 V	288	33.2	10.4
6	10640.00	33.8 AV	54.0	-20.2	1.48 V	288	23.4	10.4
7	15960.00	46.7 PK	74.0	-27.3	1.21 V	104	34.6	12.1
8	15960.00	34.1 AV	54.0	-19.9	1.21 V	104	22.0	12.1

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 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	5452.10	52.8 PK	74.0	-21.2	2.10 H	201	51.7	1.1
2	5452.10	44.1 AV	54.0	-9.9	2.10 H	201	43.0	1.1
3	5454.15	54.5 PK	74.0	-19.5	2.10 H	201	53.4	1.1
4	5454.15	41.6 AV	54.0	-12.4	2.10 H	201	40.5	1.1
5	#5470.00	55.4 PK	68.2	-12.8	2.10 H	201	54.3	1.1
6	*5500.00	110.1 PK			2.10 H	201	109.0	1.1
7	*5500.00	100.9 AV			2.10 H	201	99.8	1.1
8	11000.00	46.9 PK	74.0	-27.1	1.72 H	244	35.5	11.4
9	11000.00	35.3 AV	54.0	-18.7	1.72 H	244	23.9	11.4
10	#16500.00	48.2 PK	68.2	-20.0	2.47 H	120	34.0	14.2
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	5452.05	50.9 PK	74.0	-23.1	3.92 V	279	49.8	1.1
2	5452.05	40.5 AV	54.0	-13.5	3.92 V	279	39.4	1.1
3	#5470.00	53.0 PK	68.2	-15.2	3.92 V	279	51.9	1.1
4	*5500.00	107.2 PK			3.92 V	279	106.1	1.1
5	*5500.00	96.6 AV			3.92 V	279	95.5	1.1
6	11000.00	45.7 PK	74.0	-28.3	1.60 V	265	34.3	11.4
7	11000.00	34.7 AV	54.0	-19.3	1.60 V	265	23.3	11.4
8	#16500.00	48.4 PK	68.2	-19.8	1.40 V	103	34.2	14.2

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 116 : 5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	111.3 PK			1.98 H	193	110.0	1.3
2	*5580.00	102.7 AV			1.98 H	193	101.4	1.3
3	11160.00	46.1 PK	74.0	-27.9	1.68 H	253	34.9	11.2
4	11160.00	35.3 AV	54.0	-18.7	1.68 H	253	24.1	11.2
5	#16740.00	48.9 PK	68.2	-19.3	2.44 H	127	33.6	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	*5580.00	105.8 PK			3.21 V	93	104.5	1.3
2	*5580.00	96.8 AV			3.21 V	93	95.5	1.3
3	11160.00	45.8 PK	74.0	-28.2	1.58 V	278	34.6	11.2
4	11160.00	34.9 AV	54.0	-19.1	1.58 V	278	23.7	11.2
5	#16740.00	48.7 PK	68.2	-19.5	1.41 V	89	33.4	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 (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	110.2 PK			2.06 H	194	108.7	1.5
2	*5700.00	99.2 AV			2.06 H	194	97.7	1.5
3	#5725.00	55.3 PK	68.2	-12.9	2.06 H	194	53.7	1.6
4	11400.00	46.6 PK	74.0	-27.4	1.68 H	242	34.4	12.2
5	11400.00	35.9 AV	54.0	-18.1	1.68 H	242	23.7	12.2
6	#17100.00	49.8 PK	68.2	-18.4	2.50 H	140	33.0	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	*5700.00	105.7 PK			3.22 V	90	104.2	1.5
2	*5700.00	94.9 AV			3.22 V	90	93.4	1.5
3	#5725.00	51.4 PK	68.2	-16.8	3.22 V	90	49.8	1.6
4	11400.00	45.2 PK	74.0	-28.8	1.58 V	264	33.0	12.2
5	11400.00	35.4 AV	54.0	-18.6	1.58 V	264	23.2	12.2
6	#17100.00	50.5 PK	68.2	-17.7	1.45 V	83	33.7	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.

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	48.3 PK	74.0	-25.7	2.02 H	194	47.2	1.1
2	5460.00	36.1 AV	54.0	-17.9	2.02 H	194	35.0	1.1
3	#5470.00	48.6 PK	68.2	-19.6	2.02 H	194	47.5	1.1
4	*5720.00	111.4 PK			2.02 H	194	109.8	1.6
5	*5720.00	102.5 AV			2.02 H	194	100.9	1.6
6	#5850.00	49.5 PK	68.2	-18.7	2.02 H	194	47.6	1.9
7	11440.00	46.7 PK	74.0	-27.3	1.70 H	262	34.5	12.2
8	11440.00	35.9 AV	54.0	-18.1	1.70 H	262	23.7	12.2
9	#17160.00	49.3 PK	68.2	-18.9	2.47 H	141	33.1	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	5460.00	48.1 PK	74.0	-25.9	3.27 V	80	47.0	1.1
2	5460.00	36.2 AV	54.0	-17.8	3.27 V	80	35.1	1.1
3	#5470.00	48.1 PK	68.2	-20.1	3.27 V	80	47.0	1.1
4	*5720.00	106.2 PK			3.27 V	80	104.6	1.6
5	*5720.00	97.1 AV			3.27 V	80	95.5	1.6
6	#5850.00	49.0 PK	68.2	-19.2	3.27 V	80	47.1	1.9
7	11440.00	47.3 PK	74.0	-26.7	1.58 V	276	35.1	12.2
8	11440.00	36.7 AV	54.0	-17.3	1.58 V	276	24.5	12.2
9	#17160.00	50.1 PK	68.2	-18.1	1.39 V	89	33.9	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 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	#5646.91	49.9 PK	68.2	-18.3	2.00 H	203	48.1	1.8
2	*5745.00	111.3 PK			2.00 H	203	109.6	1.7
3	*5745.00	102.3 AV			2.00 H	203	100.6	1.7
4	#5943.53	48.8 PK	68.2	-19.4	2.00 H	203	46.5	2.3
5	11490.00	46.1 PK	74.0	-27.9	1.73 H	262	34.0	12.1
6	11490.00	35.4 AV	54.0	-18.6	1.73 H	262	23.3	12.1
7	#17235.00	49.4 PK	68.2	-18.8	2.51 H	149	33.6	15.8
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	#5612.70	48.2 PK	68.2	-20.0	3.29 V	91	46.5	1.7
2	*5745.00	106.4 PK			3.29 V	91	104.7	1.7
3	*5745.00	97.5 AV			3.29 V	91	95.8	1.7
4	#5944.32	49.8 PK	68.2	-18.4	3.29 V	91	47.5	2.3
5	11490.00	47.4 PK	74.0	-26.6	1.59 V	259	35.3	12.1
6	11490.00	36.3 AV	54.0	-17.7	1.59 V	259	24.2	12.1
7	#17235.00	49.8 PK	68.2	-18.4	1.35 V	110	34.0	15.8

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 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	#5637.72	49.1 PK	68.2	-19.1	2.02 H	201	47.3	1.8
2	*5785.00	110.5 PK			2.02 H	201	108.7	1.8
3	*5785.00	102.1 AV			2.02 H	201	100.3	1.8
4	#5997.16	48.5 PK	68.2	-19.7	2.02 H	201	46.2	2.3
5	11570.00	46.5 PK	74.0	-27.5	1.68 H	258	34.5	12.0
6	11570.00	35.4 AV	54.0	-18.6	1.68 H	258	23.4	12.0
7	#17355.00	49.9 PK	68.2	-18.3	2.46 H	147	33.4	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	#5610.05	49.2 PK	68.2	-19.0	3.30 V	97	47.5	1.7
2	*5785.00	106.1 PK			3.30 V	97	104.3	1.8
3	*5785.00	97.1 AV			3.30 V	97	95.3	1.8
4	#5998.90	48.6 PK	68.2	-19.6	3.30 V	97	46.3	2.3
5	11570.00	47.3 PK	74.0	-26.7	1.49 V	265	35.3	12.0
6	11570.00	36.3 AV	54.0	-17.7	1.49 V	265	24.3	12.0
7	#17355.00	50.2 PK	68.2	-18.0	1.42 V	82	33.7	16.5

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	#5596.11	48.9 PK	68.2	-19.3	2.06 H	198	47.2	1.7
2	*5825.00	111.5 PK			2.06 H	198	109.7	1.8
3	*5825.00	102.0 AV			2.06 H	198	100.2	1.8
4	#5960.44	48.5 PK	68.2	-19.7	2.06 H	198	46.2	2.3
5	11650.00	47.0 PK	74.0	-27.0	1.67 H	248	35.3	11.7
6	11650.00	36.0 AV	54.0	-18.0	1.67 H	248	24.3	11.7
7	#17475.00	49.9 PK	68.2	-18.3	2.43 H	143	31.9	18.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5649.54	48.7 PK	68.2	-19.5	3.27 V	95	46.9	1.8
2	*5825.00	107.2 PK			3.27 V	95	105.4	1.8
3	*5825.00	97.4 AV			3.27 V	95	95.6	1.8
4	#5998.28	48.8 PK	68.2	-19.4	3.27 V	95	46.5	2.3
5	11650.00	46.9 PK	74.0	-27.1	1.51 V	284	35.2	11.7
6	11650.00	36.1 AV	54.0	-17.9	1.51 V	284	24.4	11.7
7	#17475.00	50.0 PK	68.2	-18.2	1.43 V	92	32.0	18.0

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 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	5128.60	56.2 PK	74.0	-17.8	2.04 H	211	55.1	1.1
2	5128.60	39.8 AV	54.0	-14.2	2.04 H	211	38.7	1.1
3	5150.00	53.6 PK	74.0	-20.4	2.04 H	211	52.5	1.1
4	5150.00	44.9 AV	54.0	-9.1	2.04 H	211	43.8	1.1
5	*5190.00	103.7 PK			2.04 H	211	102.7	1.0
6	*5190.00	96.0 AV			2.04 H	211	95.0	1.0
7	#10380.00	44.1 PK	68.2	-24.1	1.73 H	289	33.8	10.3
8	15570.00	45.2 PK	74.0	-28.8	2.54 H	140	33.1	12.1
9	15570.00	35.5 AV	54.0	-18.5	2.54 H	140	23.4	12.1
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	49.3 PK	74.0	-24.7	3.94 V	243	48.2	1.1
2	5150.00	40.6 AV	54.0	-13.4	3.94 V	243	39.5	1.1
3	*5190.00	101.0 PK			3.94 V	243	100.0	1.0
4	*5190.00	93.2 AV			3.94 V	243	92.2	1.0
5	#10380.00	43.3 PK	68.2	-24.9	1.55 V	293	33.0	10.3
6	15570.00	46.5 PK	74.0	-27.5	1.18 V	78	34.4	12.1
7	15570.00	35.8 AV	54.0	-18.2	1.18 V	78	23.7	12.1

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	110.0 PK			2.08 H	218	109.1	0.9
2	*5230.00	101.4 AV			2.08 H	218	100.5	0.9
3	5350.00	49.2 PK	74.0	-24.8	2.08 H	218	48.4	0.8
4	5350.00	40.6 AV	54.0	-13.4	2.08 H	218	39.8	0.8
5	#10460.00	44.4 PK	68.2	-23.8	1.72 H	281	34.0	10.4
6	15690.00	45.5 PK	74.0	-28.5	2.47 H	157	34.2	11.3
7	15690.00	35.8 AV	54.0	-18.2	2.47 H	157	24.5	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	*5230.00	106.8 PK			3.87 V	254	105.9	0.9
2	*5230.00	97.1 AV			3.87 V	254	96.2	0.9
3	5350.00	47.3 PK	74.0	-26.7	3.87 V	254	46.5	0.8
4	5350.00	36.4 AV	54.0	-17.6	3.87 V	254	35.6	0.8
5	#10460.00	43.5 PK	68.2	-24.7	1.56 V	289	33.1	10.4
6	15690.00	45.2 PK	74.0	-28.8	1.19 V	78	33.9	11.3
7	15690.00	34.8 AV	54.0	-19.2	1.19 V	78	23.5	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.
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	49.8 PK	74.0	-24.2	2.06 H	218	48.7	1.1
2	5150.00	40.9 AV	54.0	-13.1	2.06 H	218	39.8	1.1
3	*5270.00	109.7 PK			2.06 H	218	109.0	0.7
4	*5270.00	100.9 AV			2.06 H	218	100.2	0.7
5	#10540.00	43.5 PK	68.2	-24.7	1.75 H	284	33.1	10.4
6	15810.00	44.8 PK	74.0	-29.2	2.50 H	146	33.6	11.2
7	15810.00	35.3 AV	54.0	-18.7	2.50 H	146	24.1	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	5150.00	47.6 PK	74.0	-26.4	3.85 V	247	46.5	1.1
2	5150.00	36.5 AV	54.0	-17.5	3.85 V	247	35.4	1.1
3	*5270.00	106.6 PK			3.85 V	247	105.9	0.7
4	*5270.00	97.0 AV			3.85 V	247	96.3	0.7
5	#10540.00	44.4 PK	68.2	-23.8	1.55 V	286	34.0	10.4
6	15810.00	46.3 PK	74.0	-27.7	1.27 V	62	35.1	11.2
7	15810.00	35.7 AV	54.0	-18.3	1.27 V	62	24.5	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.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	TX 802.11ac (VHT40)	Channel	CH 62 : 5310 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	106.7 PK			2.07 H	206	106.0	0.7
2	*5310.00	97.9 AV			2.07 H	206	97.2	0.7
3	5350.00	63.0 PK	74.0	-11.0	2.07 H	206	62.2	0.8
4	5350.00	46.3 AV	54.0	-7.7	2.07 H	206	45.5	0.8
5	10620.00	45.4 PK	74.0	-28.6	1.72 H	297	34.9	10.5
6	10620.00	34.8 AV	54.0	-19.2	1.72 H	297	24.3	10.5
7	15930.00	47.8 PK	74.0	-26.2	2.56 H	146	35.8	12.0
8	15930.00	36.3 AV	54.0	-17.7	2.56 H	146	24.3	12.0
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	*5310.00	104.0 PK			4.00 V	270	103.3	0.7
2	*5310.00	94.5 AV			4.00 V	270	93.8	0.7
3	5350.00	51.7 PK	74.0	-22.3	4.00 V	270	50.9	0.8
4	5350.00	40.6 AV	54.0	-13.4	4.00 V	270	39.8	0.8
5	10620.00	45.7 PK	74.0	-28.3	1.51 V	294	35.2	10.5
6	10620.00	35.1 AV	54.0	-18.9	1.51 V	294	24.6	10.5
7	15930.00	47.5 PK	74.0	-26.5	1.30 V	89	35.5	12.0
8	15930.00	35.9 AV	54.0	-18.1	1.30 V	89	23.9	12.0

Remarks:

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

RF Mode	TX 802.11ac (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	5459.20	62.6 PK	74.0	-11.4	2.05 H	202	61.5	1.1
2	5459.20	45.1 AV	54.0	-8.9	2.05 H	202	44.0	1.1
3	#5462.30	64.8 PK	68.2	-3.4	2.05 H	202	63.7	1.1
4	*5510.00	104.2 PK			2.05 H	202	103.1	1.1
5	*5510.00	95.7 AV			2.05 H	202	94.6	1.1
6	11020.00	46.7 PK	74.0	-27.3	1.68 H	261	35.3	11.4
7	11020.00	35.7 AV	54.0	-18.3	1.68 H	261	24.3	11.4
8	#16530.00	50.3 PK	68.2	-17.9	2.42 H	140	35.8	14.5
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	5414.21	49.9 PK	74.0	-24.1	4.00 V	244	48.9	1.0
2	5414.21	39.2 AV	54.0	-14.8	4.00 V	244	38.2	1.0
3	#5465.05	51.4 PK	68.2	-16.8	4.00 V	244	50.3	1.1
4	*5510.00	101.3 PK			4.00 V	244	100.2	1.1
5	*5510.00	92.7 AV			4.00 V	244	91.6	1.1
6	11020.00	47.5 PK	74.0	-26.5	1.62 V	287	36.1	11.4
7	11020.00	36.7 AV	54.0	-17.3	1.62 V	287	25.3	11.4
8	#16530.00	49.9 PK	68.2	-18.3	1.36 V	80	35.4	14.5

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 110 : 5550 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5550.00	110.3 PK			2.07 H	218	109.1	1.2
2	*5550.00	99.3 AV			2.07 H	218	98.1	1.2
3	11100.00	46.9 PK	74.0	-27.1	1.70 H	241	35.6	11.3
4	11100.00	36.1 AV	54.0	-17.9	1.70 H	241	24.8	11.3
5	#16650.00	50.4 PK	68.2	-17.8	2.52 H	148	35.0	15.4
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	*5550.00	105.5 PK			3.82 V	244	104.3	1.2
2	*5550.00	95.9 AV			3.82 V	244	94.7	1.2
3	11100.00	47.0 PK	74.0	-27.0	1.58 V	293	35.7	11.3
4	11100.00	36.1 AV	54.0	-17.9	1.58 V	293	24.8	11.3
5	#16650.00	50.4 PK	68.2	-17.8	1.30 V	83	35.0	15.4

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 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	109.8 PK			2.07 H	211	108.4	1.4
2	*5670.00	98.8 AV			2.07 H	211	97.4	1.4
3	#5725.00	50.4 PK	68.2	-17.8	2.07 H	211	48.8	1.6
4	11340.00	46.6 PK	74.0	-27.4	1.65 H	241	34.9	11.7
5	11340.00	35.7 AV	54.0	-18.3	1.65 H	241	24.0	11.7
6	#17010.00	49.6 PK	68.2	-18.6	2.49 H	150	32.3	17.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	105.5 PK			3.80 V	257	104.1	1.4
2	*5670.00	96.1 AV			3.80 V	257	94.7	1.4
3	#5725.00	47.9 PK	68.2	-20.3	3.80 V	257	46.3	1.6
4	11340.00	47.2 PK	74.0	-26.8	1.64 V	289	35.5	11.7
5	11340.00	36.5 AV	54.0	-17.5	1.64 V	289	24.8	11.7
6	#17010.00	50.0 PK	68.2	-18.2	1.38 V	103	32.7	17.3

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	47.7 PK	74.0	-26.3	2.00 H	197	46.6	1.1
2	5460.00	35.9 AV	54.0	-18.1	2.00 H	197	34.8	1.1
3	#5470.00	48.1 PK	68.2	-20.1	2.00 H	197	47.0	1.1
4	*5710.00	109.6 PK			2.00 H	197	108.0	1.6
5	*5710.00	100.1 AV			2.00 H	197	98.5	1.6
6	#5850.00	49.4 PK	68.2	-18.8	2.00 H	197	47.5	1.9
7	11420.00	47.1 PK	74.0	-26.9	1.72 H	245	34.9	12.2
8	11420.00	36.1 AV	54.0	-17.9	1.72 H	245	23.9	12.2
9	#17130.00	49.9 PK	68.2	-18.3	2.47 H	133	33.4	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	48.1 PK	74.0	-25.9	3.84 V	254	47.0	1.1
2	5460.00	36.3 AV	54.0	-17.7	3.84 V	254	35.2	1.1
3	#5470.00	48.3 PK	68.2	-19.9	3.84 V	254	47.2	1.1
4	*5710.00	101.1 PK			3.84 V	254	99.5	1.6
5	*5710.00	96.4 AV			3.84 V	254	94.8	1.6
6	#5850.00	49.1 PK	68.2	-19.1	3.84 V	254	47.2	1.9
7	11420.00	46.8 PK	74.0	-27.2	1.53 V	274	34.6	12.2
8	11420.00	36.2 AV	54.0	-17.8	1.53 V	274	24.0	12.2
9	#17130.00	50.0 PK	68.2	-18.2	1.31 V	92	33.5	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	#5649.99	49.3 PK	68.2	-18.9	1.99 H	206	47.5	1.8
2	*5755.00	108.0 PK			1.99 H	206	106.3	1.7
3	*5755.00	99.7 AV			1.99 H	206	98.0	1.7
4	#6023.16	48.3 PK	68.2	-19.9	1.99 H	206	45.9	2.4
5	11510.00	46.3 PK	74.0	-27.7	1.75 H	256	34.2	12.1
6	11510.00	35.5 AV	54.0	-18.5	1.75 H	256	23.4	12.1
7	#17265.00	49.3 PK	68.2	-18.9	2.45 H	127	33.5	15.8
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	#5630.26	48.5 PK	68.2	-19.7	3.28 V	90	46.7	1.8
2	*5755.00	101.6 PK			3.28 V	90	99.9	1.7
3	*5755.00	95.6 AV			3.28 V	90	93.9	1.7
4	#5932.87	50.6 PK	68.2	-17.6	3.28 V	90	48.4	2.2
5	11510.00	47.3 PK	74.0	-26.7	1.55 V	279	35.2	12.1
6	11510.00	36.7 AV	54.0	-17.3	1.55 V	279	24.6	12.1
7	#17265.00	50.2 PK	68.2	-18.0	1.33 V	94	34.4	15.8

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 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	#5627.43	50.7 PK	68.2	-17.5	2.01 H	202	48.9	1.8
2	*5795.00	107.4 PK			2.01 H	202	105.5	1.9
3	*5795.00	99.5 AV			2.01 H	202	97.6	1.9
4	#5938.85	49.3 PK	68.2	-18.9	2.01 H	202	47.0	2.3
5	11590.00	46.4 PK	74.0	-27.6	1.71 H	241	34.4	12.0
6	11590.00	35.4 AV	54.0	-18.6	1.71 H	241	23.4	12.0
7	#17385.00	49.9 PK	68.2	-18.3	2.45 H	128	32.7	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	#5586.15	48.5 PK	68.2	-19.7	3.30 V	93	46.8	1.7
2	*5795.00	101.4 PK			3.30 V	93	99.5	1.9
3	*5795.00	96.7 AV			3.30 V	93	94.8	1.9
4	#5945.68	48.6 PK	68.2	-19.6	3.30 V	93	46.3	2.3
5	11590.00	47.5 PK	74.0	-26.5	1.53 V	282	35.5	12.0
6	11590.00	36.8 AV	54.0	-17.2	1.53 V	282	24.8	12.0
7	#17385.00	49.9 PK	68.2	-18.3	1.35 V	102	32.7	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 (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	5128.70	56.7 PK	74.0	-17.3	2.03 H	210	55.6	1.1
2	5128.70	48.2 AV	54.0	-5.8	2.03 H	210	47.1	1.1
3	*5210.00	101.7 PK			2.03 H	210	100.7	1.0
4	*5210.00	94.1 AV			2.03 H	210	93.1	1.0
5	5361.51	52.0 PK	74.0	-22.0	2.03 H	210	51.1	0.9
6	5361.51	41.6 AV	54.0	-12.4	2.03 H	210	40.7	0.9
7	#10420.00	44.1 PK	68.2	-24.1	1.73 H	296	33.7	10.4
8	15630.00	45.2 PK	74.0	-28.8	2.48 H	146	33.4	11.8
9	15630.00	35.4 AV	54.0	-18.6	2.48 H	146	23.6	11.8

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	5128.70	51.7 PK	74.0	-22.3	3.78 V	282	50.6	1.1
2	5128.70	42.2 AV	54.0	-11.8	3.78 V	282	41.1	1.1
3	*5210.00	98.5 PK			3.78 V	282	97.5	1.0
4	*5210.00	91.7 AV			3.78 V	282	90.7	1.0
5	5361.51	50.5 PK	74.0	-23.5	3.78 V	282	49.6	0.9
6	5361.51	39.0 AV	54.0	-15.0	3.78 V	282	38.1	0.9
7	#10420.00	43.7 PK	68.2	-24.5	1.51 V	296	33.3	10.4
8	15630.00	45.9 PK	74.0	-28.1	1.24 V	75	34.1	11.8
9	15630.00	35.3 AV	54.0	-18.7	1.24 V	75	23.5	11.8

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 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	5068.34	50.3 PK	74.0	-23.7	2.03 H	211	49.2	1.1
2	5068.34	40.8 AV	54.0	-13.2	2.03 H	211	39.7	1.1
3	*5290.00	101.0 PK			2.03 H	211	100.3	0.7
4	*5290.00	92.6 AV			2.03 H	211	91.9	0.7
5	5383.78	56.8 PK	74.0	-17.2	2.03 H	211	55.8	1.0
6	5383.78	45.8 AV	54.0	-8.2	2.03 H	211	44.8	1.0
7	#10580.00	44.4 PK	68.2	-23.8	1.80 H	288	34.0	10.4
8	15870.00	44.6 PK	74.0	-29.4	2.54 H	137	33.0	11.6
9	15870.00	34.9 AV	54.0	-19.1	2.54 H	137	23.3	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	5068.34	49.3 PK	74.0	-24.7	4.00 V	271	48.2	1.1
2	5068.34	38.1 AV	54.0	-15.9	4.00 V	271	37.0	1.1
3	5150.00	49.0 PK	74.0	-25.0	4.00 V	271	47.9	1.1
4	5150.00	38.3 AV	54.0	-15.7	4.00 V	271	37.2	1.1
5	*5290.00	97.4 PK			4.00 V	271	96.7	0.7
6	*5290.00	90.3 AV			4.00 V	271	89.6	0.7
7	5383.78	52.1 PK	74.0	-21.9	4.00 V	271	51.1	1.0
8	5383.78	40.6 AV	54.0	-13.4	4.00 V	271	39.6	1.0
9	#10580.00	43.6 PK	68.2	-24.6	1.47 V	291	33.2	10.4
10	15870.00	45.7 PK	74.0	-28.3	1.32 V	88	34.1	11.6
11	15870.00	35.3 AV	54.0	-18.7	1.32 V	88	23.7	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 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	5454.00	59.2 PK	74.0	-14.8	2.08 H	218	58.1	1.1
2	5454.00	48.9 AV	54.0	-5.1	2.08 H	218	47.8	1.1
3	5457.50	59.8 PK	74.0	-14.2	2.08 H	218	58.7	1.1
4	5457.50	48.0 AV	54.0	-6.0	2.08 H	218	46.9	1.1
5	#5465.50	59.3 PK	68.2	-8.9	2.08 H	218	58.2	1.1
6	*5530.00	100.8 PK			2.08 H	218	99.7	1.1
7	*5530.00	92.2 AV			2.08 H	218	91.1	1.1
8	#5734.50	49.4 PK	68.2	-18.8	2.08 H	218	47.7	1.7
9	11060.00	46.6 PK	74.0	-27.4	1.70 H	244	35.2	11.4
10	11060.00	35.9 AV	54.0	-18.1	1.70 H	244	24.5	11.4
11	#16590.00	50.2 PK	68.2	-18.0	2.50 H	132	34.9	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	5445.54	56.0 PK	74.0	-18.0	3.86 V	281	55.0	1.0
2	5445.54	44.3 AV	54.0	-9.7	3.86 V	281	43.3	1.0
3	#5468.95	54.4 PK	68.2	-13.8	3.86 V	281	53.3	1.1
4	*5530.00	98.3 PK			3.86 V	281	97.2	1.1
5	*5530.00	90.3 AV			3.86 V	281	89.2	1.1
6	#5784.05	49.6 PK	68.2	-18.6	3.86 V	281	47.8	1.8
7	11060.00	46.7 PK	74.0	-27.3	1.61 V	266	35.3	11.4
8	11060.00	36.1 AV	54.0	-17.9	1.61 V	266	24.7	11.4
9	#16590.00	49.7 PK	68.2	-18.5	1.37 V	101	34.4	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 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	106.3 PK			2.09 H	215	104.9	1.4
2	*5610.00	96.1 AV			2.09 H	215	94.7	1.4
3	#5725.00	49.7 PK	68.2	-18.5	2.09 H	215	48.1	1.6
4	11220.00	46.7 PK	74.0	-27.3	1.73 H	268	35.4	11.3
5	11220.00	35.6 AV	54.0	-18.4	1.73 H	268	24.3	11.3
6	#16830.00	49.5 PK	68.2	-18.7	2.52 H	154	33.9	15.6
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	*5610.00	104.3 PK			3.91 V	286	102.9	1.4
2	*5610.00	94.9 AV			3.91 V	286	93.5	1.4
3	#5725.00	48.5 PK	68.2	-19.7	3.91 V	286	46.9	1.6
4	11220.00	46.6 PK	74.0	-27.4	1.65 V	292	35.3	11.3
5	11220.00	36.0 AV	54.0	-18.0	1.65 V	292	24.7	11.3
6	#16830.00	49.9 PK	68.2	-18.3	1.33 V	87	34.3	15.6

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 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	47.6 PK	74.0	-26.4	2.15 H	215	46.5	1.1
2	5460.00	35.8 AV	54.0	-18.2	2.15 H	215	34.7	1.1
3	#5470.00	47.8 PK	68.2	-20.4	2.15 H	215	46.7	1.1
4	*5690.00	106.3 PK			2.15 H	215	104.9	1.4
5	*5690.00	96.0 AV			2.15 H	215	94.6	1.4
6	#5850.00	49.2 PK	68.2	-19.0	2.15 H	215	47.3	1.9
7	11380.00	46.6 PK	74.0	-27.4	1.75 H	247	34.6	12.0
8	11380.00	35.8 AV	54.0	-18.2	1.75 H	247	23.8	12.0
9	#17070.00	49.7 PK	68.2	-18.5	2.46 H	134	32.8	16.9
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	47.5 PK	74.0	-26.5	3.86 V	282	46.4	1.1
2	5460.00	35.7 AV	54.0	-18.3	3.86 V	282	34.6	1.1
3	#5470.00	47.5 PK	68.2	-20.7	3.86 V	282	46.4	1.1
4	*5690.00	103.7 PK			3.86 V	282	102.3	1.4
5	*5690.00	94.6 AV			3.86 V	282	93.2	1.4
6	#5850.00	49.5 PK	68.2	-18.7	3.86 V	282	47.6	1.9
7	11380.00	46.6 PK	74.0	-27.4	1.51 V	267	34.6	12.0
8	11380.00	36.0 AV	54.0	-18.0	1.51 V	267	24.0	12.0
9	#17070.00	49.9 PK	68.2	-18.3	1.43 V	100	33.0	16.9

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5644.43	54.8 PK	68.2	-13.4	2.13 H	223	53.0	1.8
2	*5775.00	106.7 PK			2.13 H	223	104.9	1.8
3	*5775.00	96.4 AV			2.13 H	223	94.6	1.8
4	#5971.55	49.7 PK	68.2	-18.5	2.13 H	223	47.4	2.3
5	11550.00	47.0 PK	74.0	-27.0	1.76 H	260	34.9	12.1
6	11550.00	36.0 AV	54.0	-18.0	1.76 H	260	23.9	12.1
7	#17325.00	49.2 PK	68.2	-19.0	2.53 H	144	33.1	16.1
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	#5645.69	52.4 PK	68.2	-15.8	3.86 V	268	50.6	1.8
2	*5775.00	105.1 PK			3.86 V	268	103.3	1.8
3	*5775.00	94.5 AV			3.86 V	268	92.7	1.8
4	#5936.57	49.7 PK	68.2	-18.5	3.86 V	268	47.5	2.2
5	11550.00	47.0 PK	74.0	-27.0	1.59 V	277	34.9	12.1
6	11550.00	36.3 AV	54.0	-17.7	1.59 V	277	24.2	12.1
7	#17325.00	50.1 PK	68.2	-18.1	1.35 V	92	34.0	16.1

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.

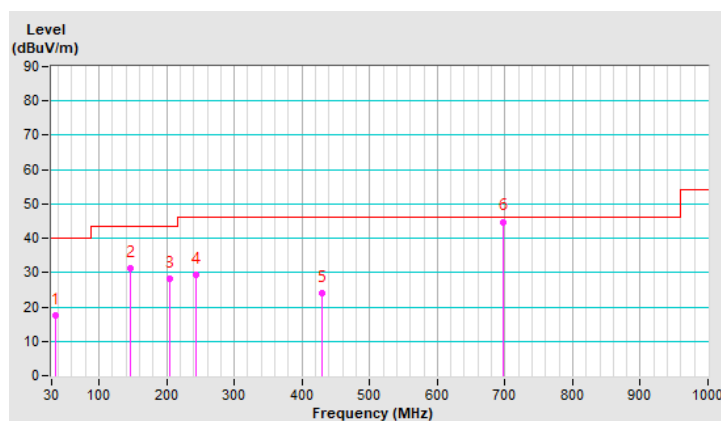
Below 1GHz Data:

RF Mode	TX 802.11ac (VHT20)	Channel	CH 60 : 5300 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	35.60	17.5 QP	40.0	-22.5	1.50 H	89	30.9	-13.4
2	146.93	31.4 QP	43.5	-12.1	1.50 H	75	43.3	-11.9
3	204.16	28.2 QP	43.5	-15.3	1.00 H	60	43.2	-15.0
4	243.40	29.3 QP	46.0	-16.7	1.00 H	181	42.3	-13.0
5	429.54	24.1 QP	46.0	-21.9	1.00 H	5	30.8	-6.7
6	697.02	44.8 QP	46.0	-1.2	1.00 H	55	45.3	-0.5

Remarks:

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

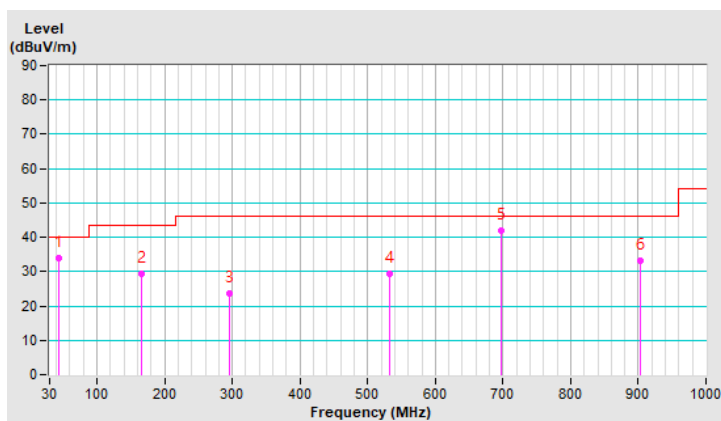


RF Mode	TX 802.11ac (VHT20)	Channel	CH 60 : 5300 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	43.41	33.9 QP	40.0	-6.1	1.00 V	1	46.6	-12.7
2	166.43	29.5 QP	43.5	-14.0	1.00 V	236	41.7	-12.2
3	294.88	23.7 QP	46.0	-22.3	1.00 V	0	34.7	-11.0
4	532.10	29.5 QP	46.0	-16.5	1.00 V	166	33.8	-4.3
5	696.97	41.8 QP	46.0	-4.2	1.00 V	88	42.3	-0.5
6	902.73	33.2 QP	46.0	-12.8	1.50 V	240	29.6	3.6

Remarks:

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

4.2.1 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

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

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

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

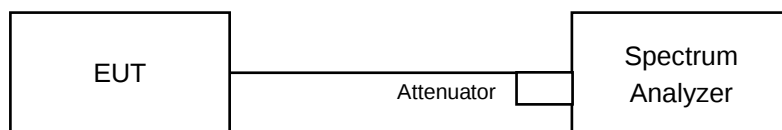
Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

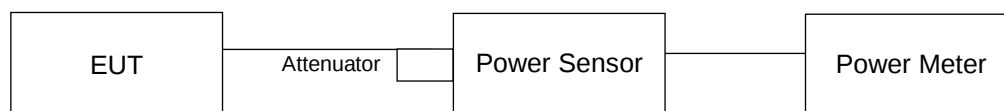
4.2.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

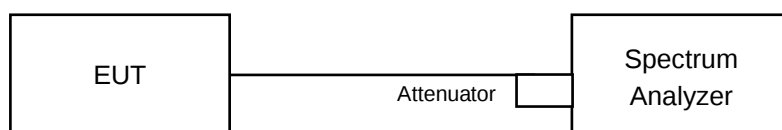
For channel straddling 5725MHz:



For other channels:



FOR 26dB OCCUPIED BANDWIDTH



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedure

FOR AVERAGE POWER MEASUREMENT

For channel straddling 5725MHz:

Follow FCC KDB 789033 UNII test procedure:

802.11ac (VHT80)

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).

Other Modulation mode

Method SA-1

1. Set span to encompass the entire 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. Set trigger to free run (duty cycle ≥ 98 percent) ; Set video trigger (duty cycle < 98 percent)
7. Detector = RMS.
8. Trace average at least 100 traces in power averaging mode
9. Compute power by integrating the spectrum across the 26 dB EBW of the signal.

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%.

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Condition

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

4.2.7 Test Results

802.11a

Power Output:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	17.01	17.19	102.594	20.11	24	Pass
40	5200	17.02	17.12	101.873	20.08	24	Pass
48	5240	17.27	17.25	106.422	20.27	24	Pass
52	5260	17.12	17.38	106.224	20.26	24	Pass
60	5300	17.42	17.33	109.283	20.39	24	Pass
64	5320	14.86	14.97	62.025	17.93	23.9	Pass
100	5500	14.26	14.72	56.317	17.51	23.84	Pass
116	5580	17.06	17.15	102.696	20.12	24	Pass
140	5700	14.22	14.15	52.426	17.20	23.88	Pass
*144 (UNII-2C Band)	5720	17.08	17.28	104.507	20.19	23.02	Pass
*144 (UNII-3 Band)	5720	8.76	8.86	15.208	11.82	30	Pass
149	5745	17.23	17.12	104.367	20.19	30	Pass
157	5785	17.24	17.13	104.608	20.20	30	Pass
165	5825	17.31	17.12	105.35	20.23	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

The Average Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
144	5720	103.883	20.17

Note: The total power was calculated through formula and record the value for reference only.

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	20.27	20.71
60	5300	20.46	20.96
64	5320	19.85	19.52
100	5500	20.05	19.25
116	5580	23.80	21.05
140	5700	19.69	19.43
144 (UNII-2C Band)	5720	16.49	15.93

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	20.27	24.06 > 24
60	5300	20.46	24.1 > 24
64	5320	19.51	23.9 < 24
100	5500	19.24	23.84 < 24
116	5580	21.04	24.23 > 24
140	5700	19.42	23.88 < 24
144 (UNII-2C Band)	5720	15.93	23.02 < 24

802.11ac (VHT20)

Power Output:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	16.75	16.68	93.874	19.73	24	Pass
40	5200	17.42	17.41	110.289	20.43	24	Pass
48	5240	17.37	17.55	111.461	20.47	24	Pass
52	5260	17.33	17.58	111.355	20.47	24	Pass
60	5300	16.88	16.96	98.412	19.93	24	Pass
64	5320	14.27	14.31	53.707	17.30	24	Pass
100	5500	14.52	15.07	60.451	17.81	24	Pass
116	5580	17.06	17.44	106.279	20.26	24	Pass
140	5700	13.88	13.88	48.869	16.89	24	Pass
*144 (UNII-2C Band)	5720	16.87	16.89	97.506	19.89	23.01	Pass
*144 (UNII-3 Band)	5720	9.51	10.07	19.096	12.81	30	Pass
149	5745	17.43	17.22	108.058	20.34	30	Pass
157	5785	17.22	17.32	106.674	20.28	30	Pass
165	5825	16.85	16.85	96.834	19.86	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

The Average Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
144	5720	105.593	20.24

Note: The total power was calculated through formula and record the value for reference only.

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	22.72	21.34
60	5300	22.08	21.41
64	5320	20.51	20.20
100	5500	21.34	20.30
116	5580	23.58	20.85
140	5700	20.61	20.71
144 (UNII-2C Band)	5720	17.73	15.90

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	21.34	24.29 > 24
60	5300	21.40	24.3 > 24
64	5320	20.19	24.05 > 24
100	5500	20.29	24.07 > 24
116	5580	20.85	24.19 > 24
140	5700	20.60	24.13 > 24
144 (UNII-2C Band)	5720	15.90	23.01 < 24

802.11ac (VHT40)

Power Output:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	13.16	13.66	43.929	16.43	24	Pass
46	5230	17.05	17.01	100.933	20.04	24	Pass
54	5270	17.17	17.09	103.288	20.14	24	Pass
62	5310	14.03	14.33	52.395	17.19	24	Pass
102	5510	12.33	12.67	35.593	15.51	24	Pass
110	5550	16.43	17.29	97.534	19.89	24	Pass
134	5670	16.44	17.02	94.406	19.75	24	Pass
*142 (UNII-2C Band)	5710	16.95	16.84	97.851	19.91	24	Pass
*142 (UNII-3 Band)	5710	4.54	4.96	5.978	7.77	30	Pass
151	5755	17.12	16.75	98.838	19.95	30	Pass
159	5795	17.36	17.21	107.052	20.30	30	Pass

Note: * Test was performed in accordance with Measurement follow FCC KDB 789033 UNII test procedure Method SA-1 and use spectrum analyzer test.

The Average Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
142	5710	103.165	20.14

Note: The total power was calculated through formula and record the value for reference only.

26dB OCCUPIED BANDWIDTH

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	43.34	42.44
62	5310	42.02	41.70
102	5510	42.20	41.64
110	5550	48.56	42.60
134	5670	42.99	42.37
142 (UNII-2C Band)	5710	40.20	36.74

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	42.44	27.27 > 24
62	5310	41.69	27.2 > 24
102	5510	41.63	27.19 > 24
110	5550	42.60	27.29 > 24
134	5670	42.37	27.27 > 24
142 (UNII-2C Band)	5710	36.74	26.65 > 24

802.11ac (VHT80)

Power Output:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	12.77	12.98	38.784	15.89	24	Pass
58	5290	11.48	11.42	27.928	14.46	24	Pass
106	5530	11.95	12.22	32.34	15.10	24	Pass
122	5610	15.98	16.43	83.582	19.22	24	Pass
*138 (UNII-2C Band)	5690	15.57	15.60	74.655	18.73	24	Pass
*138 (UNII-3 Band)	5690	-0.07	-0.46	1.9431	2.88	30	Pass
155	5775	16.62	16.18	87.415	19.42	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. The duty factor was included in the total power.

The Average Power for the straddle channel:

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
138	5690	78.349	18.94

Note: The total power was calculated through formula and record the value for reference only.

26dB OCCUPIED BANDWIDTH

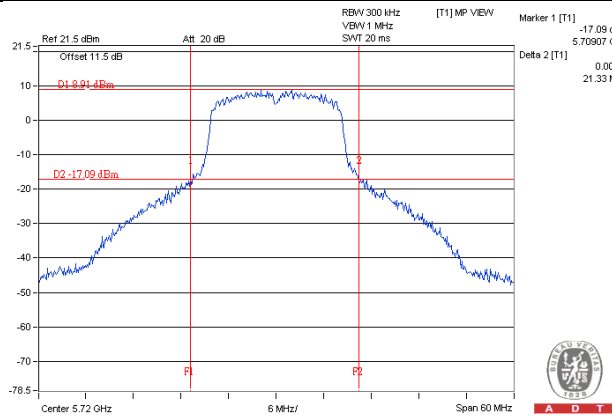
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	83.22	83.86
106	5530	83.39	82.55
122	5610	92.36	83.58
138 (UNII-2C Band)	5690	77.98	76.93

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

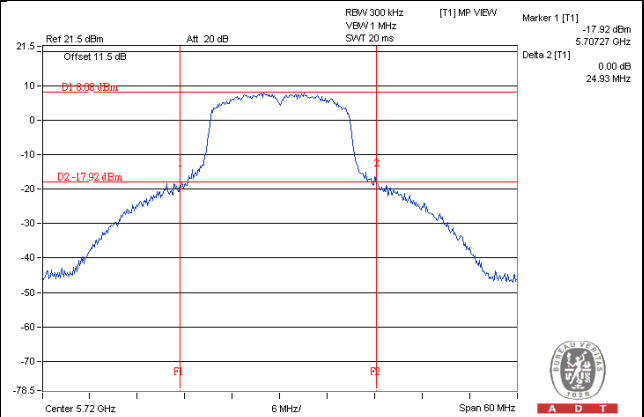
Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	83.21	30.2 > 24
106	5530	82.55	30.16 > 24
122	5610	83.58	30.22 > 24
138 (UNII-2C Band)	5690	76.93	29.86 > 24

Spectrum Plot of Worst Value

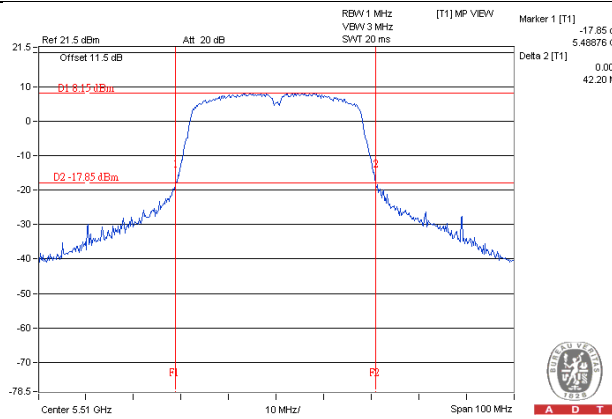
802.11a / Chain 1 : CH144 (UNII-2C)



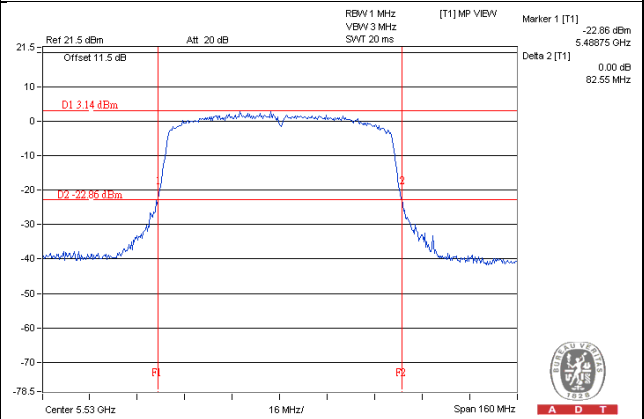
802.11ac (VHT20) / Chain 0 : CH144 (UNII-2C)



802.11ac (VHT40) / Chain 0 : CH102



802.11ac (VHT80) / Chain 1 : CH106



NOTE:

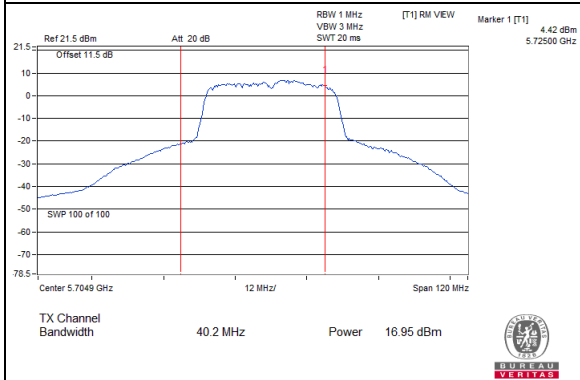
For CH144 (UNII-2C Band) = 5725MHz - Marker 1

For channel straddling 5725MHz of Power

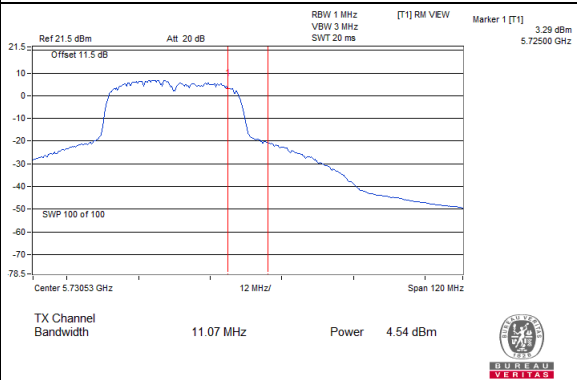


Spectrum Plot Value of Power

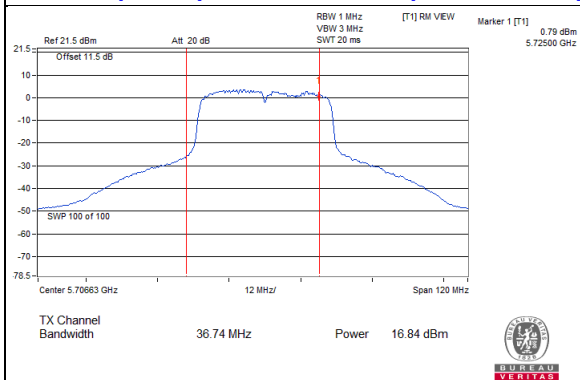
802.11ac (VHT40)_Chain 0 / CH142 (U-NII-2C Band)



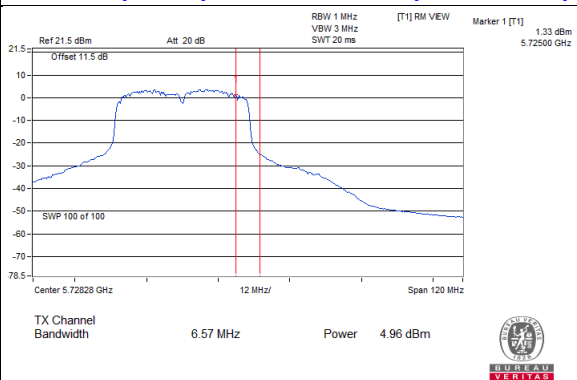
802.11ac (VHT40)_Chain 0 / CH142 (U-NII-3 Band)



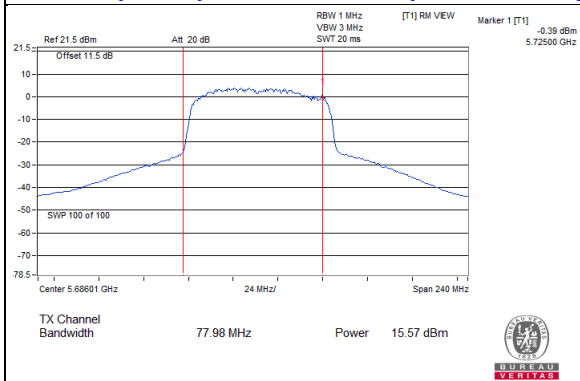
802.11ac (VHT40)_Chain 1 / CH142 (U-NII-2C Band)



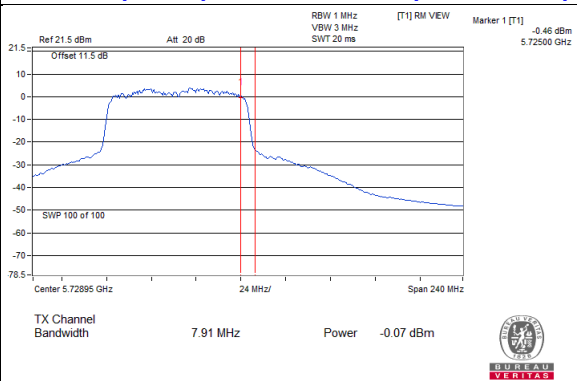
802.11ac (VHT40)_Chain 1 / CH142 (U-NII-3 Band)



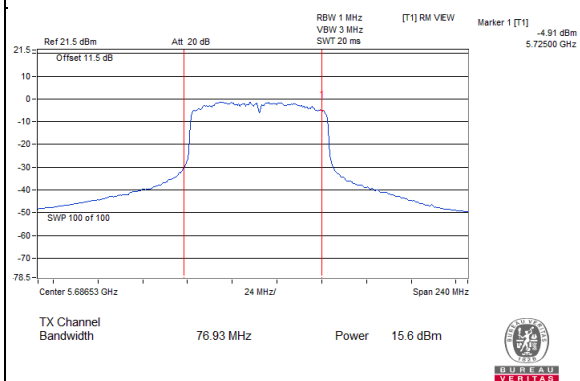
802.11ac (VHT80)_Chain 0 / CH138 (U-NII-2C Band)



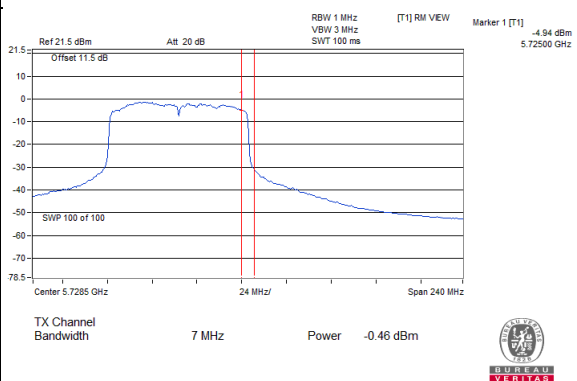
802.11ac (VHT80)_Chain 0 / CH138 (U-NII-3 Band)



802.11ac (VHT80)_Chain 1 / CH138 (U-NII-2C Band)



802.11ac (VHT80)_Chain 1 / CH138 (U-NII-3 Band)



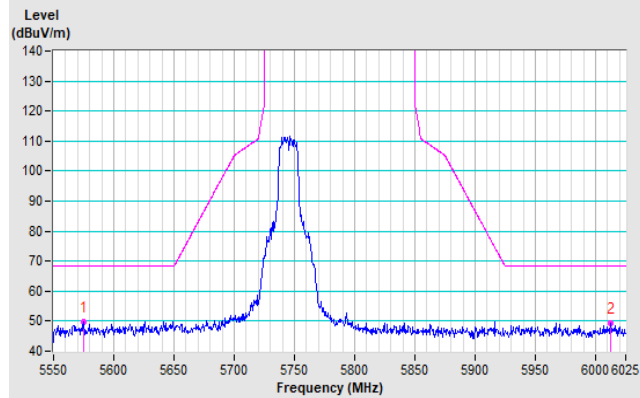
5 Pictures of Test Arrangements

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

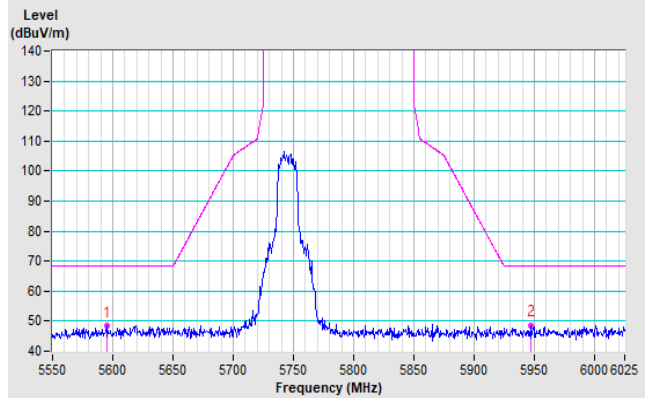
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a CH 149 : 5745 MHz

Horizontal

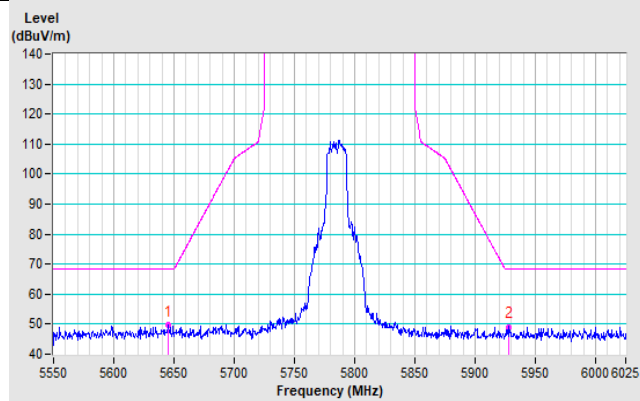


Vertical

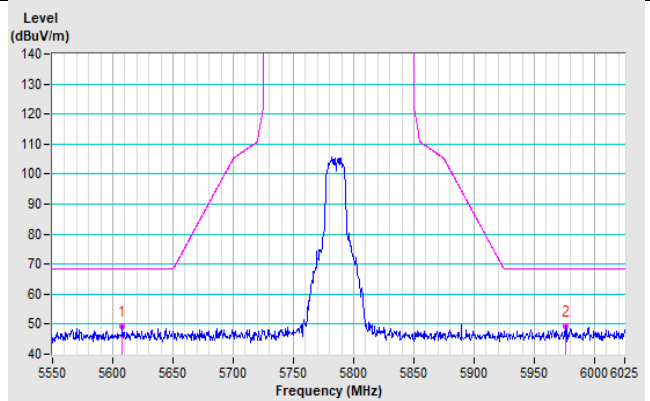


802.11a CH 157 : 5785 MHz

Horizontal

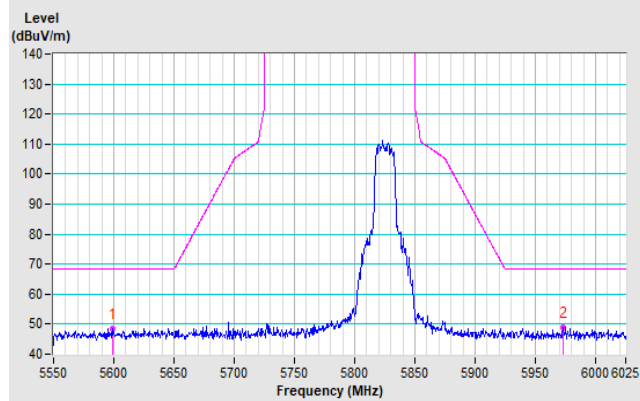


Vertical

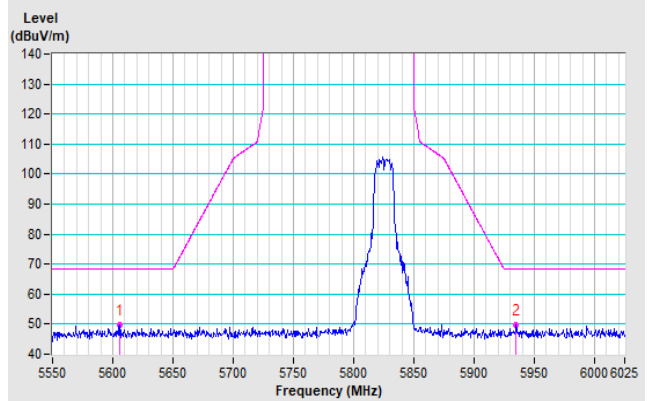


802.11a CH 165 : 5825 MHz

Horizontal

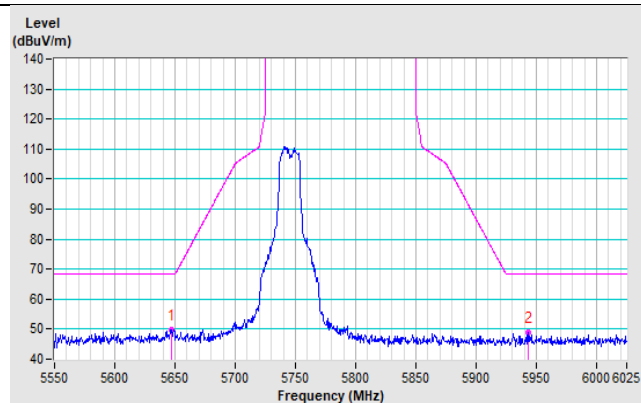


Vertical

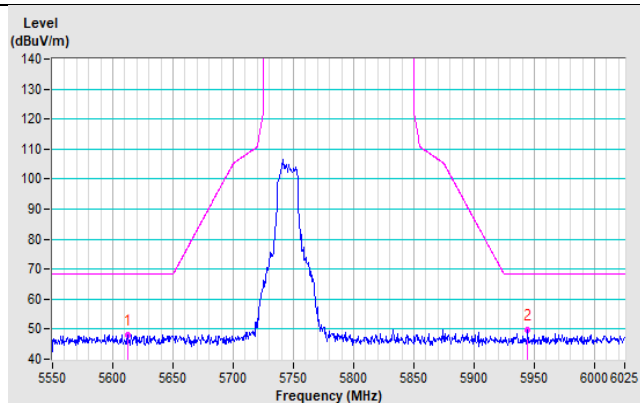


802.11ac (VHT20) CH 149 : 5745 MHz

Horizontal

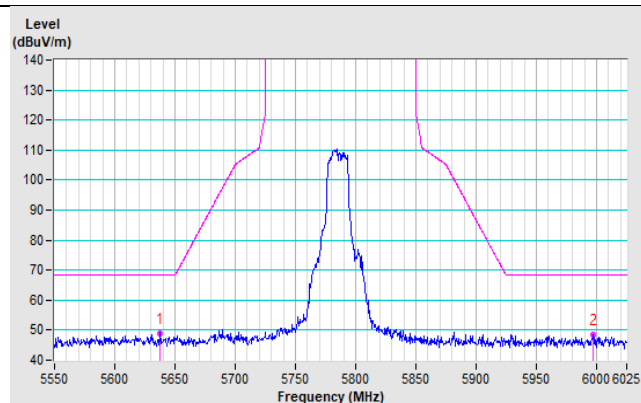


Vertical

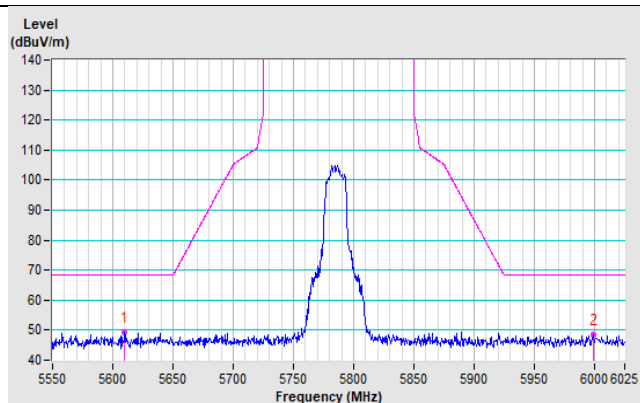


802.11ac (VHT20) CH 157 : 5785 MHz

Horizontal

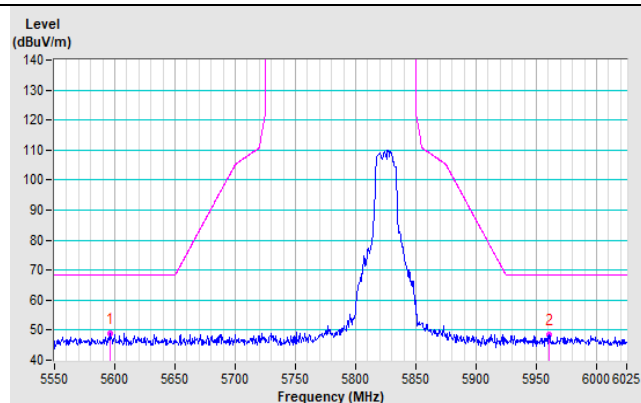


Vertical

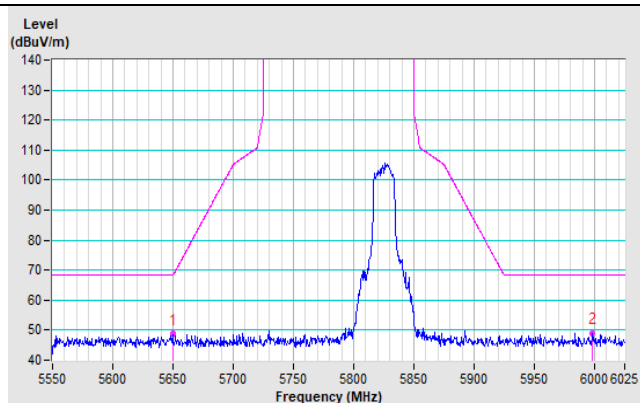


802.11ac (VHT20) CH 165 : 5825 MHz

Horizontal

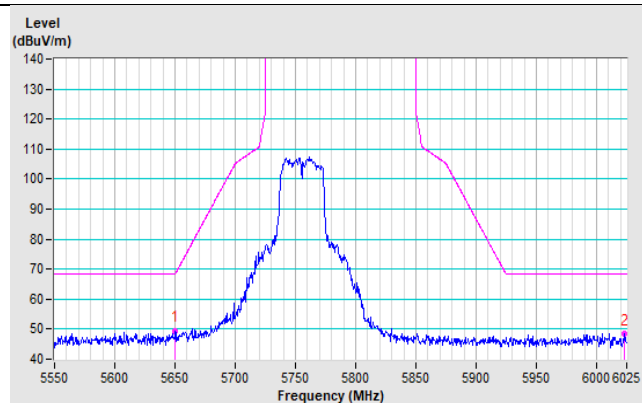


Vertical

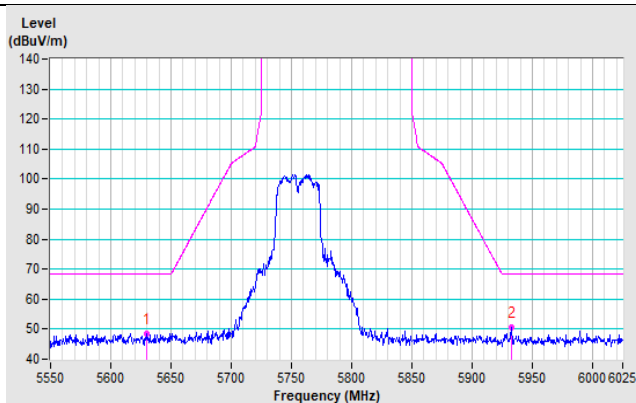


802.11ac (VHT40) CH 151 : 5755 MHz

Horizontal

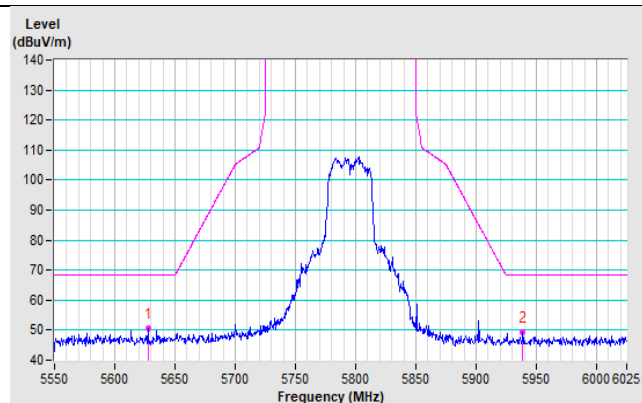


Vertical

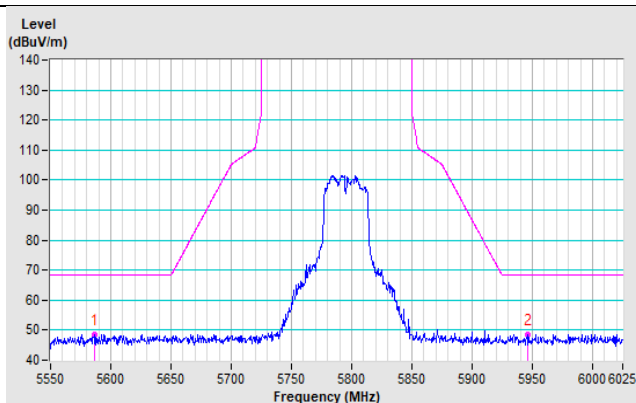


802.11ac (VHT40) CH 159 : 5795 MHz

Horizontal

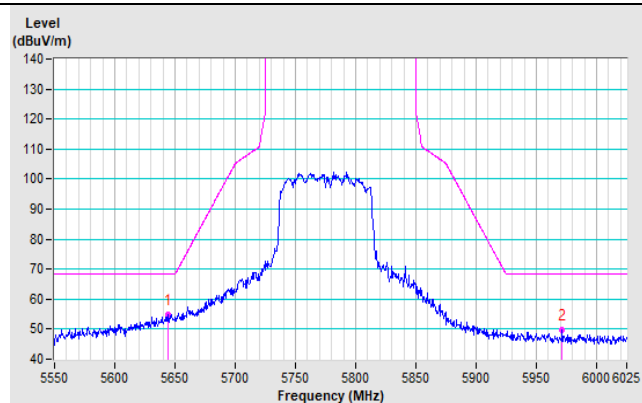


Vertical

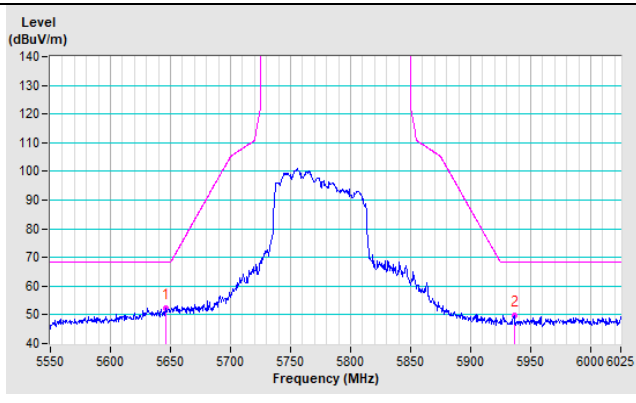


802.11ac (VHT80) CH 155 : 5775 MHz

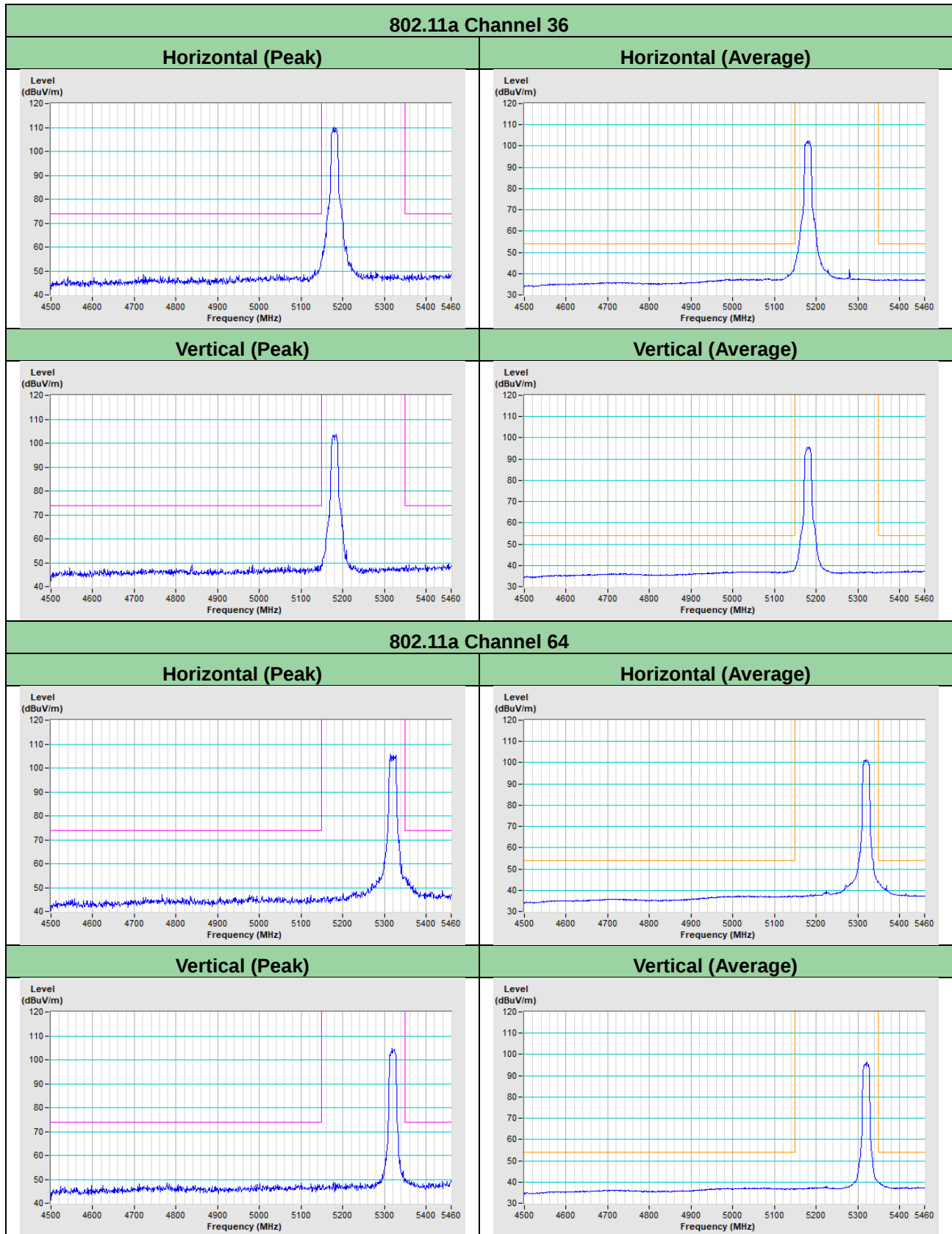
Horizontal

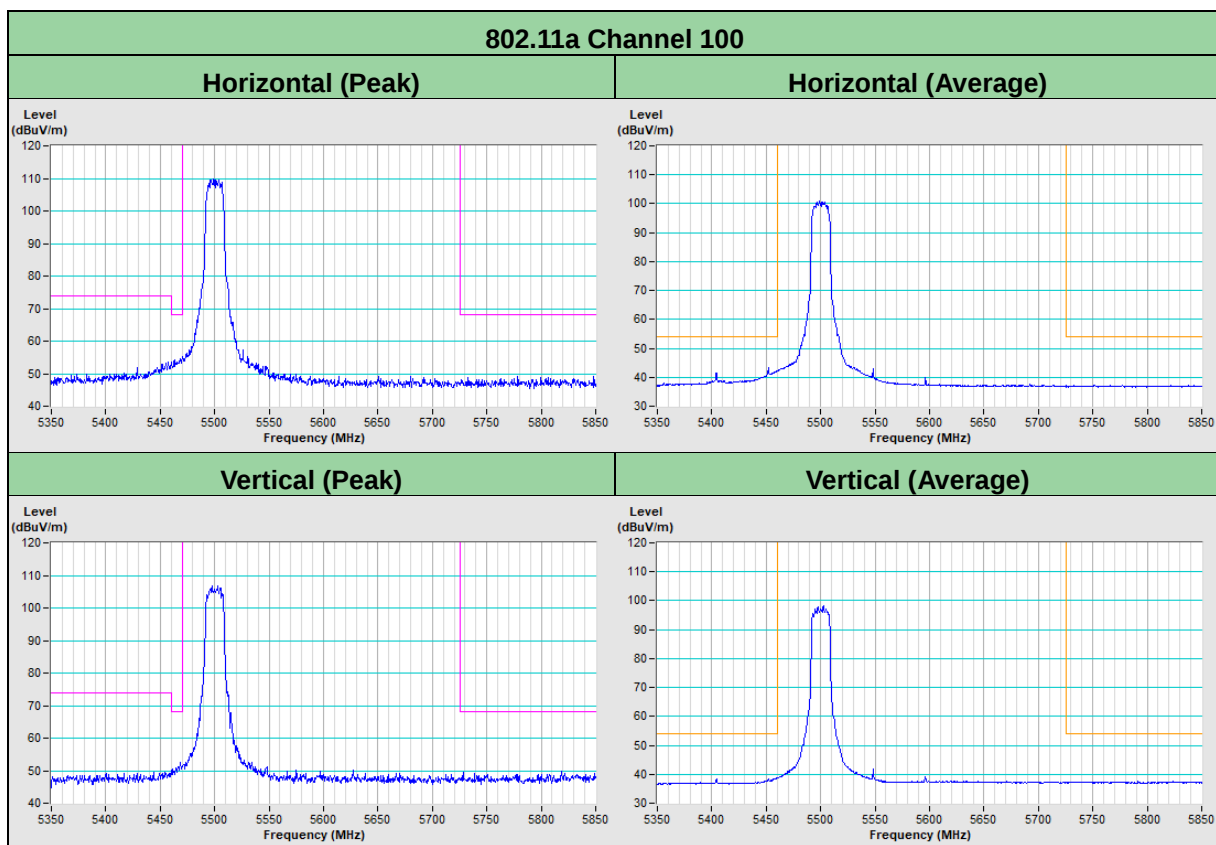


Vertical



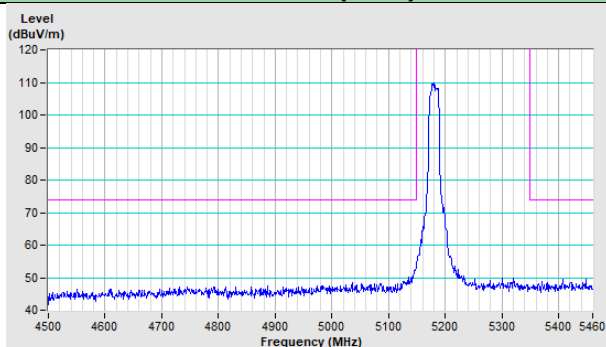
Annex B- Band-edge measurement



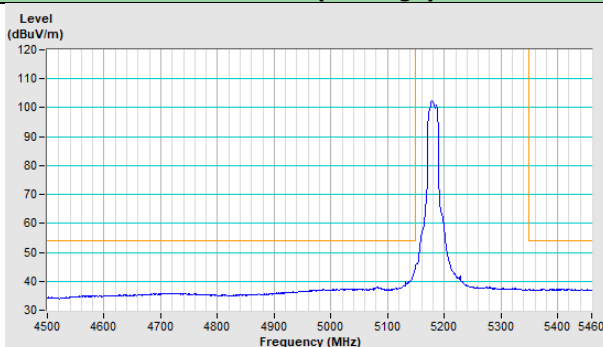


802.11ac (VHT20) Channel 36

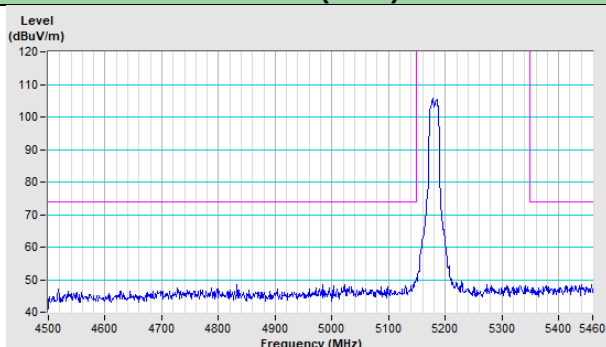
Horizontal (Peak)



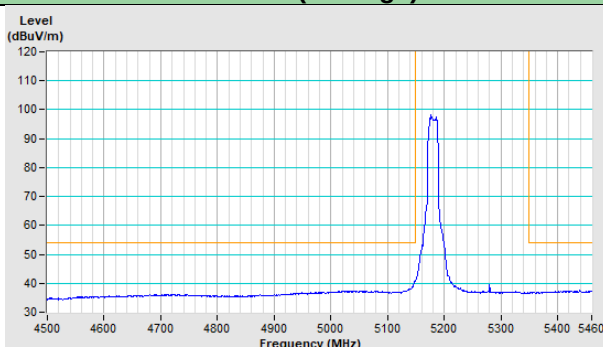
Horizontal (Average)



Vertical (Peak)

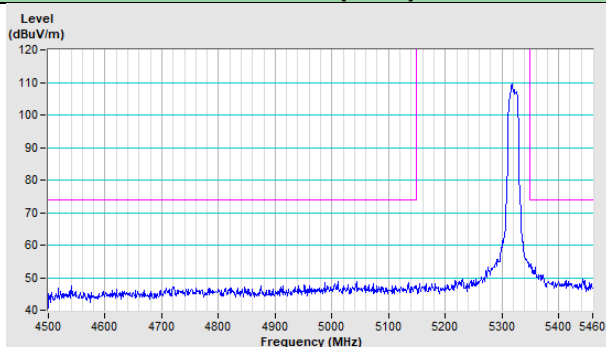


Vertical (Average)

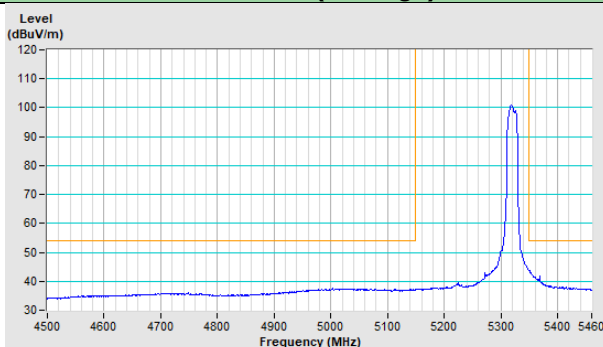


802.11ac (VHT20) Channel 64

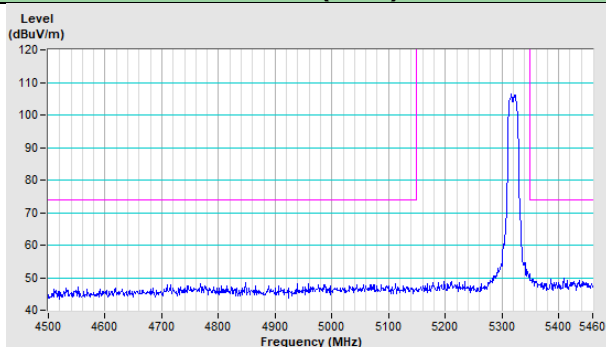
Horizontal (Peak)



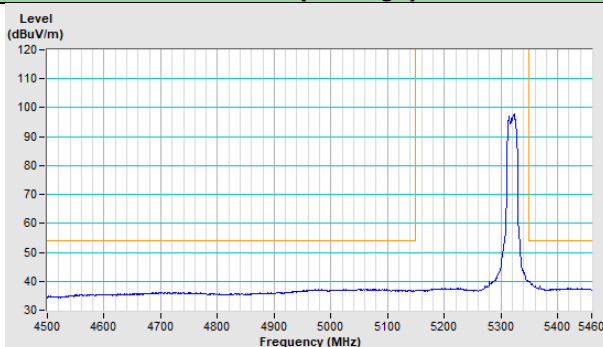
Horizontal (Average)

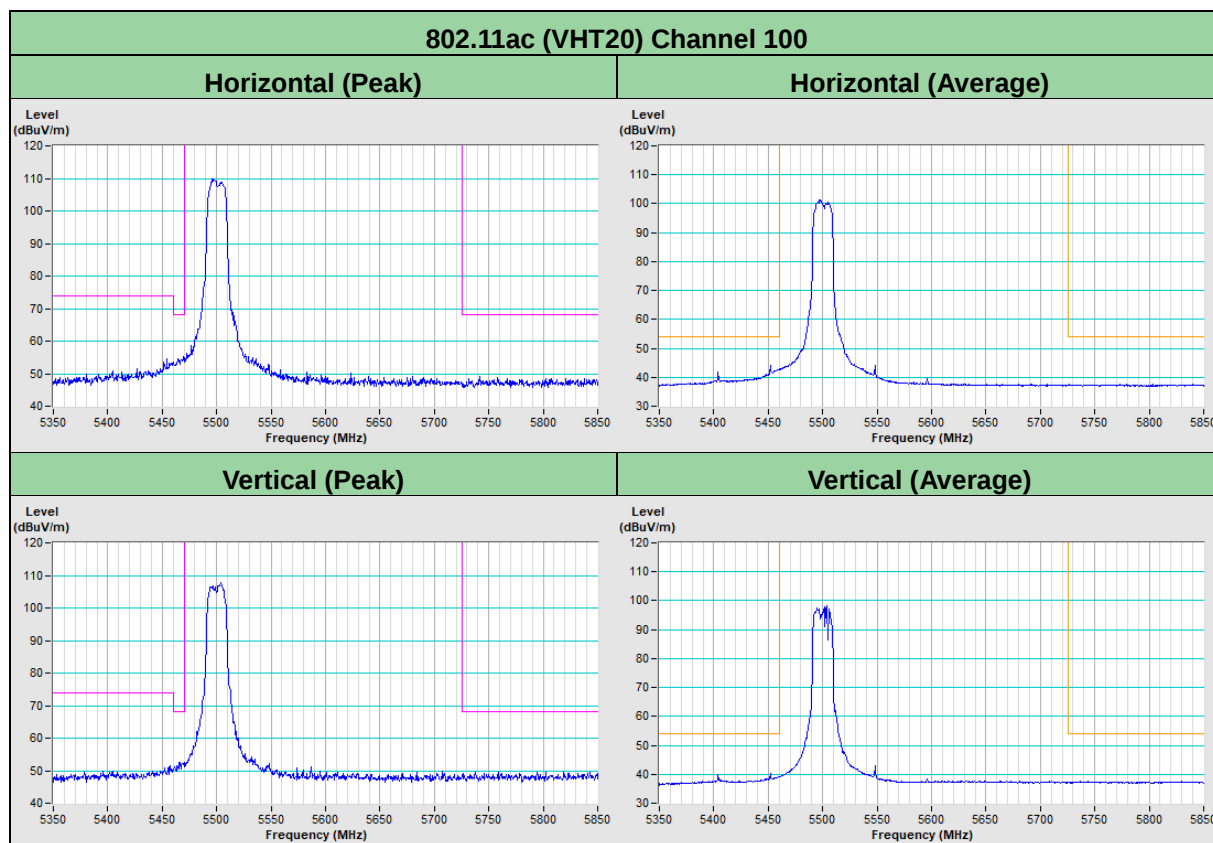


Vertical (Peak)



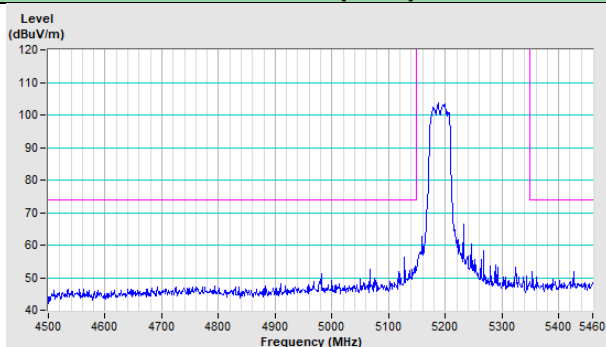
Vertical (Average)



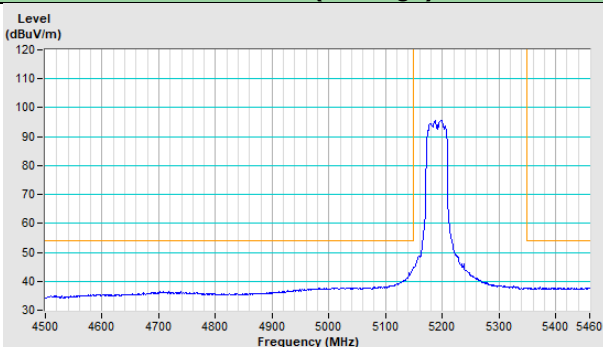


802.11ac (VHT40) Channel 38

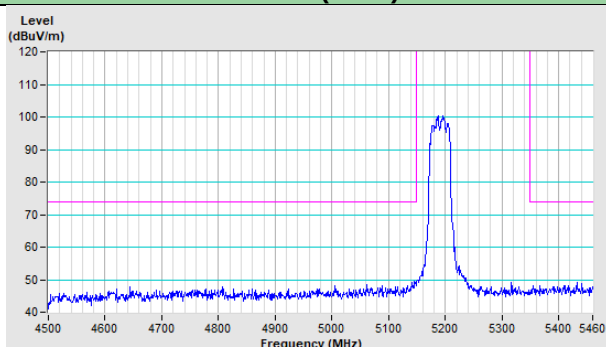
Horizontal (Peak)



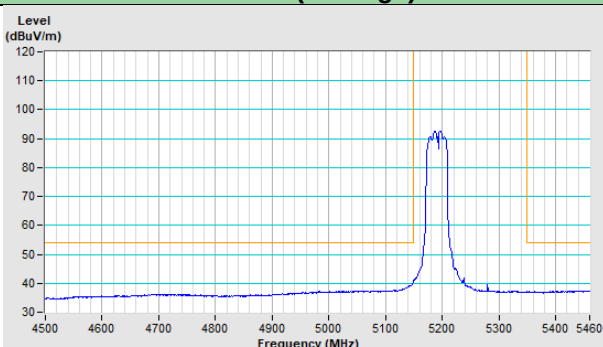
Horizontal (Average)



Vertical (Peak)

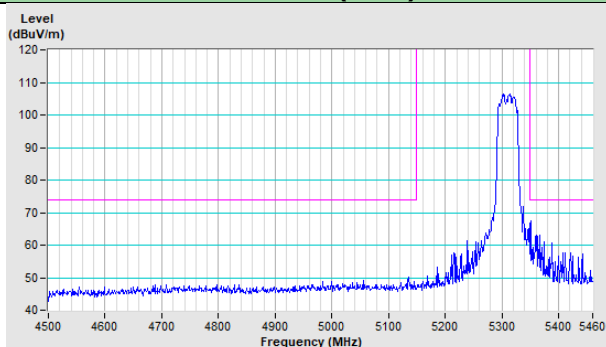


Vertical (Average)

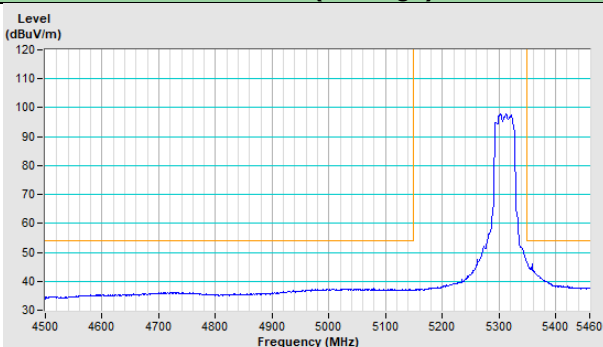


802.11ac (VHT40) Channel 62

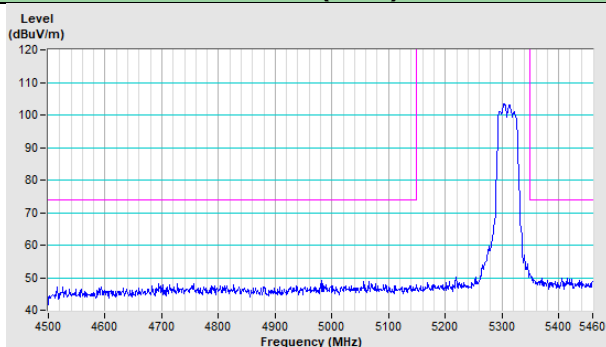
Horizontal (Peak)



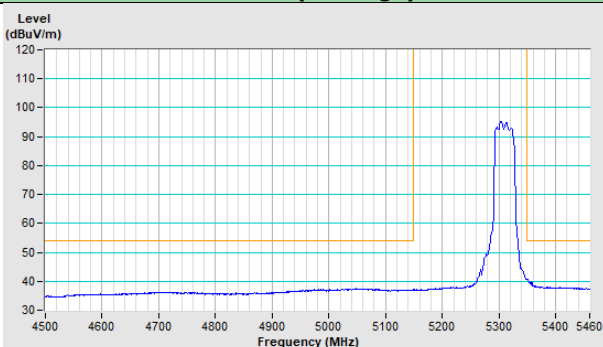
Horizontal (Average)



Vertical (Peak)

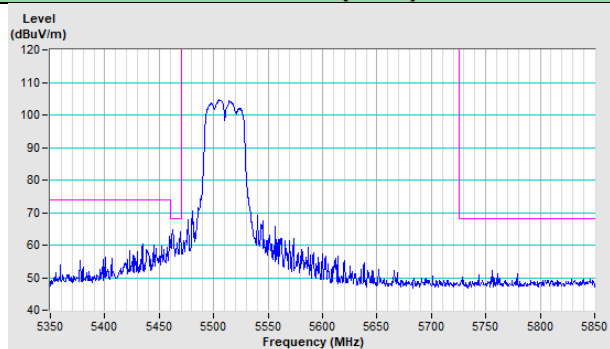


Vertical (Average)

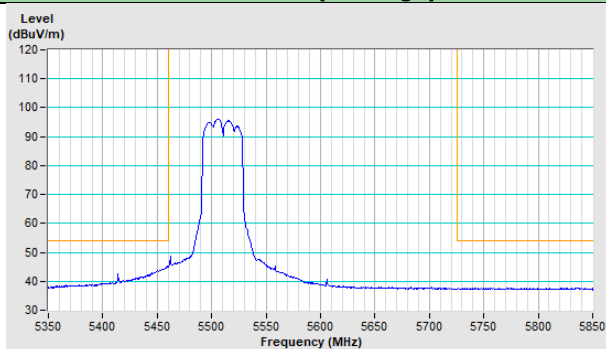


802.11ac (VHT40) Channel 102

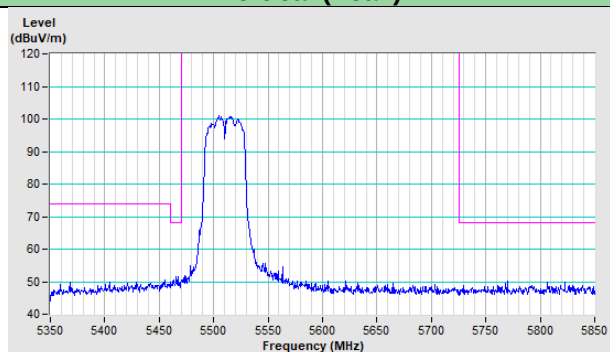
Horizontal (Peak)



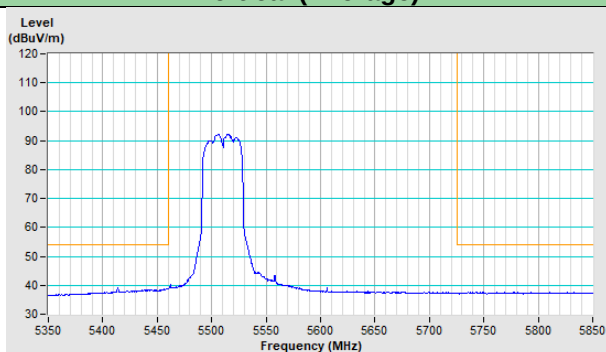
Horizontal (Average)



Vertical (Peak)

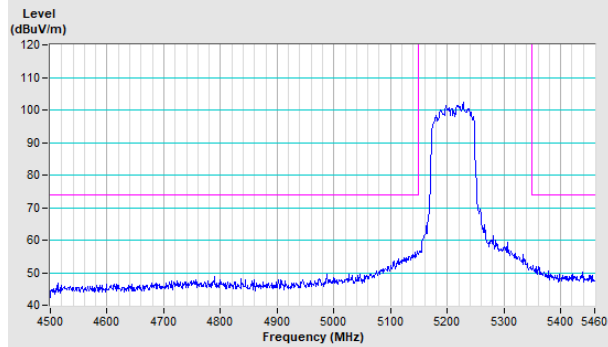


Vertical (Average)

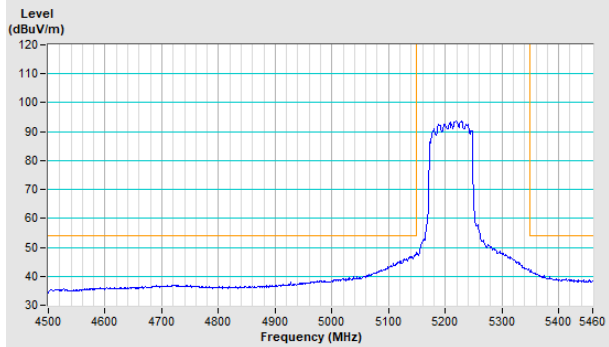


802.11ac (VHT80) Channel 42

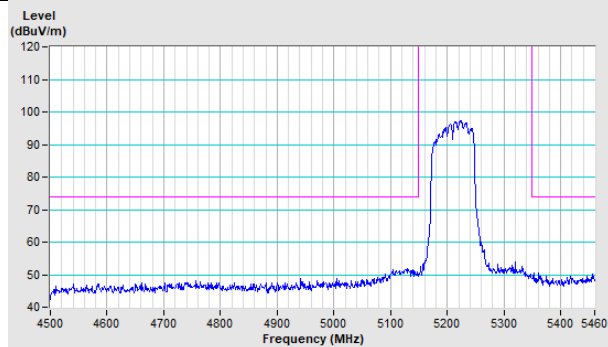
Horizontal (Peak)



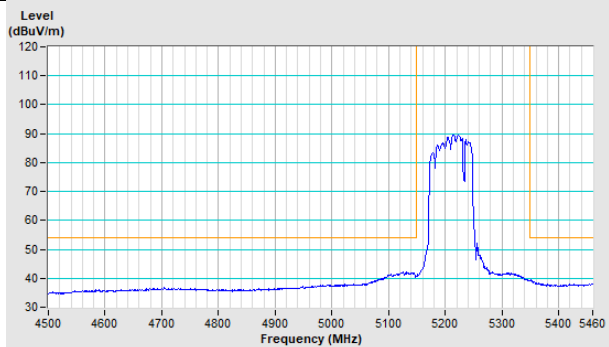
Horizontal (Average)



Vertical (Peak)

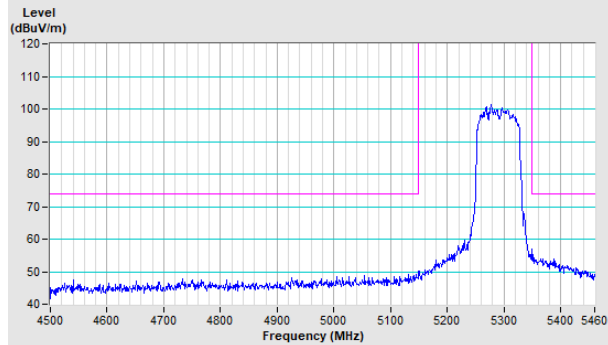


Vertical (Average)

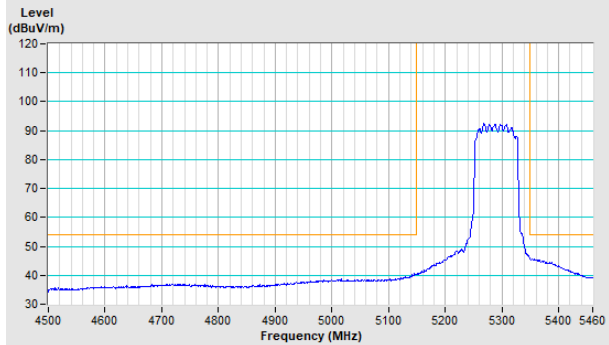


802.11ac (VHT80) Channel 58

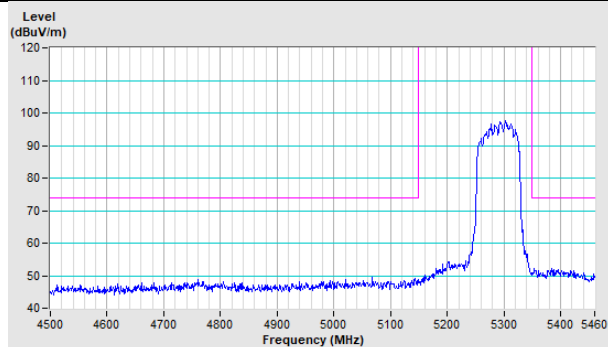
Horizontal (Peak)



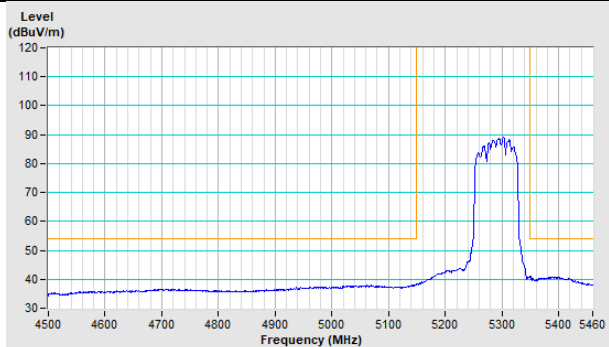
Horizontal (Average)

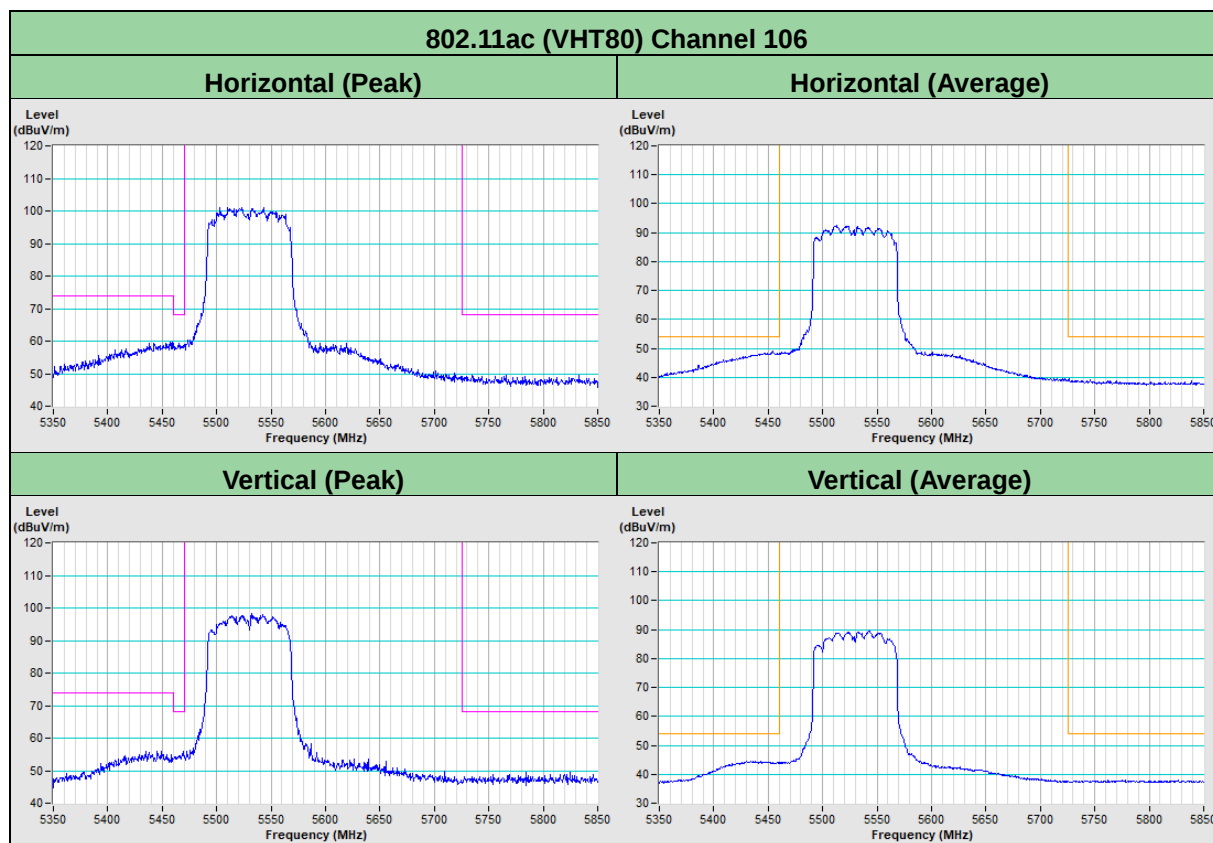


Vertical (Peak)



Vertical (Average)





Appendix – Information of the Testing Laboratories

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

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Web Site: www.bureauveritas-adt.com

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

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