FCC Test Report

Report No.:	RFBEMT-WTW-P20090204-1
FCC ID:	K7S-03609
Test Model:	WUSB6300 V2
Received Date:	July 16, 2020
Test Date:	July 16 to Oct. 06, 2020
Issued Date:	Nov. 06, 2020
Applicant:	Belkin International, Inc.
Address:	12045 East Waterfront Drive Playa Vista, CA. 90094, USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
RFBEMT-WTW-P20090204-1	Original release.	Nov. 06, 2020

1 Certificate of Conformity

Product:	Wireless-AC USB Adapter
Brand:	Linksys
Test Model:	WUSB6300 V2
Sample Status:	Engineering sample
Applicant:	Belkin International, Inc.
Test Date:	July 16 to Oct. 06, 2020
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10: 2013

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

Prepared by : Phoenix Huang , **Date:** Nov. 06, 2020

Phoenix Huang / Specialist

Approved by : , **Date:** Nov. 06, 2020

Clark Lin / Technical Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -17.09 dB at 0.17734 MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement*	Pass	Meet the requirement of limit. Minimum passing margin is -0.2 dB at 5470.00 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	No antenna connector is used.

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

2.1 Measurement Uncertainty

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

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

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Wireless-AC USB Adapter
Brand	Linksys
Test Model	WUSB6300 V2
Status of EUT	Engineering sample
Driver Version	1030.39.106.2020
Power Supply Rating	5 Vdc from USB interface
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11 Mbps 802.11a/g: up to 54 Mbps 802.11n: up to 300 Mbps 802.11ac: up to 866.7 Mbps
Operating Frequency	2.4GHz: 2.412 ~ 2.462 GHz 5GHz: 5.18 ~ 5.24 GHz, 5.26 ~ 5.32 GHz, 5.50 ~ 5.70 GHz, 5.745 ~ 5.825 GHz
Number of Channel	**2.4GHz:** 802.11b, 802.11g, 802.11n (HT20): 11 802.11n (HT40): 7 **5GHz:** 802.11a, 802.11n (HT20), 802.11ac (VHT20): 24 802.11n (HT40), 802.11ac (VHT40): 11 802.11ac (VHT80): 5
Output Power	**2.4GHz:** 571.565 mW **5.18 ~ 5.24 GHz:** 68.622 mW **5.26 ~ 5.32 GHz:** 79.165 mW **5.5 ~ 5.7 GHz:** 62.378 mW **5.745 ~ 5.825 GHz:** 110.898 mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. The device of WLAN (2.4GHz) and WLAN (5GHz) technology cannot transmit simultaneously.
2. The antennas provided to the EUT, please refer to the following table:

Antenna No.	RF Chain No.	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
1	PathA for 2G	1.54	2.4~2.4835	Monopole	None
	PathA for 5G	2.74	5.15~5.85		
2	PathB for 2G	1.51	2.4~2.4835	Monopole	None
	PathB for 5G	3.3	5.15~5.85		

3. The EUT incorporates a MIMO function.

2.4GHz Band		
MODULATION MODE	**TX & RX CONFIGURATION**	
802.11b	1TX (Fixed Chain 0)	1RX (Fixed Chain 0)
802.11g	1TX (Fixed Chain 0)	1RX (Fixed Chain 0)
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
5GHz Band		
MODULATION MODE	**TX & RX CONFIGURATION**	
802.11a	1TX (Fixed Chain 0)	1RX (Fixed Chain 0)
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX
Note: The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore the manufacturer will control the power for 802.11n mode is the same as the 802.11ac or more lower than it and investigated worst case to representative mode in test report. (Final test mode refer to section 3.2.1)		

4. 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.
5. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.2 Description of Test Modes

FOR 5180 ~ 5240MHz

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210 MHz

FOR 5260 ~ 5320MHz

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290 MHz

FOR 5500 ~ 5700MHz

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

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

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

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

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	122	5610 MHz

FOR 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775 MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

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

Where **RE≥1G:** Radiated Emission above 1GHz **RE<1G:** Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

Note: The EUT had been pre-tested on the positioned of each 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	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6
802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 122	106, 122	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 (VHT80)	5180-5320, 5500-5700, 5745-5825	42 to 58, 106 to 122, 155	155	OFDM	BPSK	29.3

Power Line Conducted Emission Test:

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT80)	5180-5320, 5500-5700, 5745-5825	42 to 58, 106 to 122, 155	155	OFDM	BPSK	29.3

Antenna Port Conducted Measurement:

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

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	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6
802.11ac (VHT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
802.11ac (VHT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
802.11ac (VHT80)		106 to 122	106, 122	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:

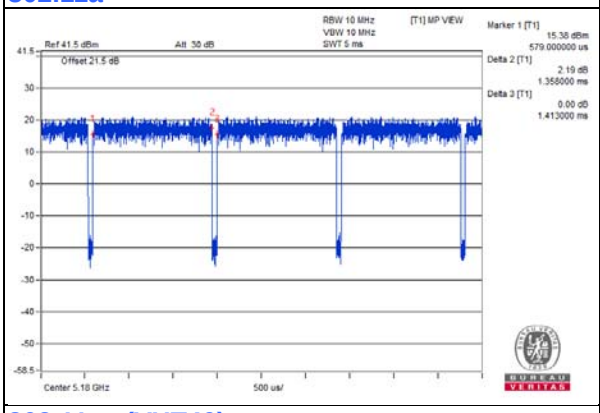
Applicable To	Environmental Conditions	Input Power (System)	Tested By
RE≥1G	29deg. C, 73%RH, 25deg. C, 75%RH	120Vac, 60Hz	Kevin Ko, Ryan Du
RE<1G	24deg. C, 66%RH	120Vac, 60Hz	Kevin Ko
PLC	25deg. C, 75%RH	120Vac, 60Hz	Kevin Ko
APCM	21deg. C, 60%RH	120Vac, 60Hz	Nick Chen

3.3 Duty Cycle of Test Signal

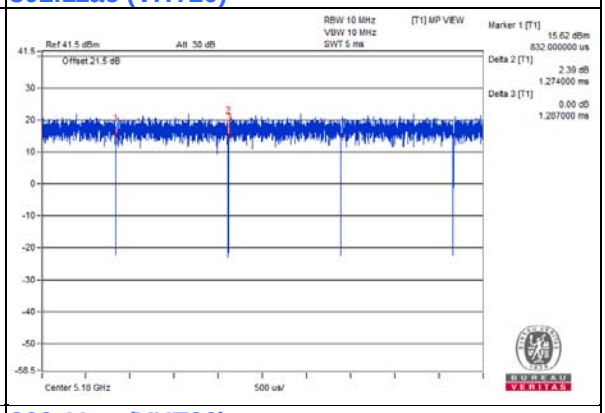
If duty cycle of test signal is ≥ 98 %, duty factor is not required.
If duty cycle of test signal is < 98%, duty factor shall be considered.

802.11a: Duty cycle = 1.358 ms/1.413 ms = 0.961, Duty factor = 10 * log (1/Duty cycle) = 0.17 dB
802.11ac (VHT20): Duty cycle = 1.274 ms/1.287 ms = 0.99
802.11ac (VHT40): Duty cycle = 0.635 ms/0.642 ms = 0.989
802.11ac (VHT80): Duty cycle = 0.316 ms/0.319 ms = 0.991

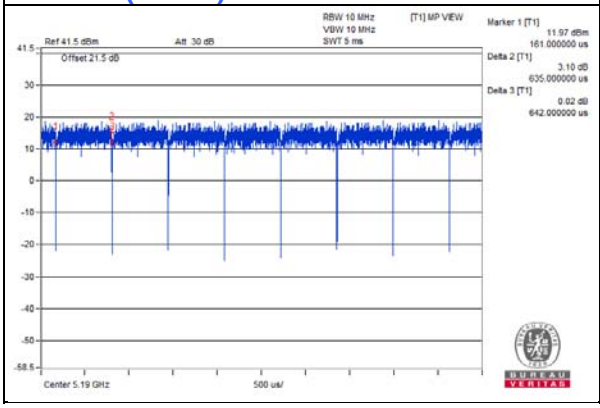
802.11a



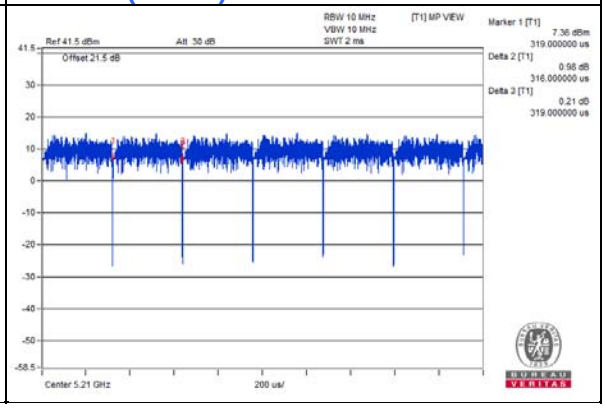
802.11ac (VHT20)



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.

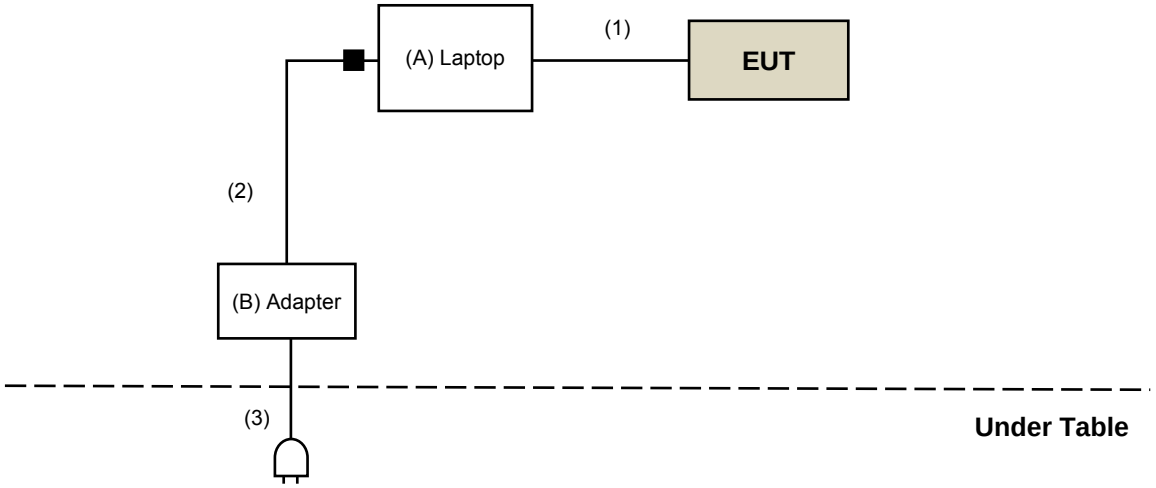
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	DELL	E5430	GM1SKV1	FCC DoC	Provided by Lab
B.	Adapter	DELL	LA65NS1-00	NA	NA	Provided by Lab

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Cable	1	1.5	Yes	0	Provided by Lab
2.	DC Cable	1	1.8	No	1	Provided by Lab
3.	AC Cable	1	0.9	No	0	Provided by Lab

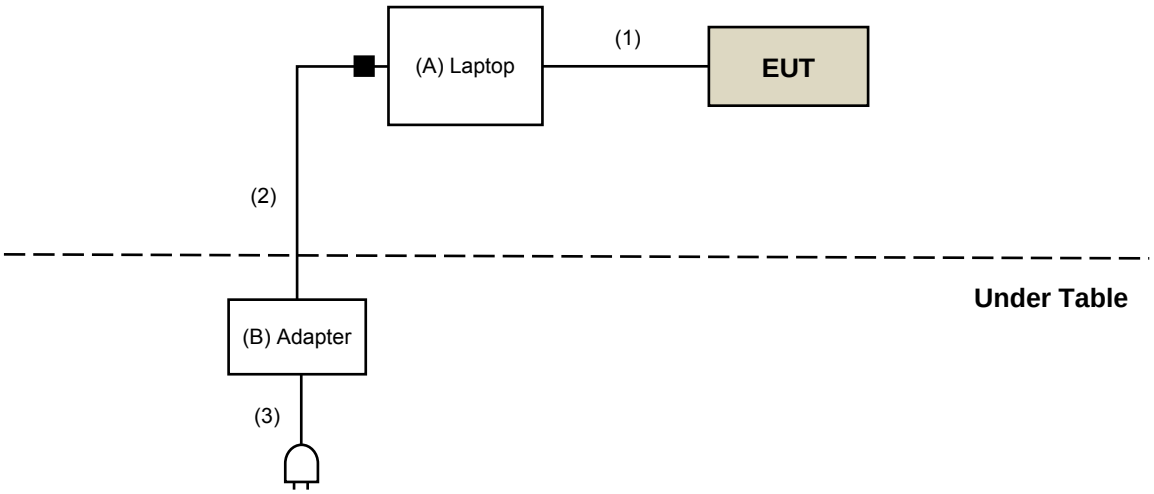
Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test

For AC Power Conducted Emissions test:



For Radiated Emissions 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 (dBμV/m)	AV:54 (dBμV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBμV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	15.407(b)(4)(i)	PK: -27 (dBm/MHz) *1 PK: 10 (dBm/MHz) *2 PK: 15.6 (dBm/MHz) *3 PK: 27 (dBm/MHz) *4	PK: 68.2(dBμV/m) *1 PK: 105.2 (dBμV/m) *2 PK: 110.8(dBμV/m) *3 PK: 122.2 (dBμV/m) *4
5725~5850 MHz	15.407(b)(4)(i)	PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 68.2(dBμV/m) *1 PK:105.2 (dBμV/m) *2 PK: 110.8(dBμV/m) *3 PK:122.2 (dBμV/m) *4

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

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

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

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

Note:

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

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

4.1.2 Test Instruments

For Radiated Emission (Below 1GHz), Bandedge & OOBE test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 06, 2020	July 05, 2021
Pre-Amplifier EMCI	EMC001340	980142	May 25, 2020	May 24, 2021
Loop Antenna Electro-Metrics	EM-6879	264	Feb. 18, 2020	Feb. 17, 2021
RF Cable	NA	LOOPCAB-001	Jan. 08, 2020	Jan. 07, 2021
RF Cable	NA	LOOPCAB-002	Jan. 08, 2020	Jan. 07, 2021
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	Apr. 28, 2020	Apr. 27, 2021
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 11, 2019	Nov. 10, 2020
RF Cable	8D	966-3-1	Mar. 17, 2020	Mar. 16, 2021
RF Cable	8D	966-3-2	Mar. 17, 2020	Mar. 16, 2021
RF Cable	8D	966-3-3	Mar. 17, 2020	Mar. 16, 2021
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Sep. 26, 2019	Sep. 25, 2020
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Nov. 24, 2019	Nov. 23, 2020
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC104-SM-SM-1200	160922	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC104-SM-SM-2000	180601	June 09, 2020	June 08, 2021
RF Cable	EMC104-SM-SM-6000	180602	June 09, 2020	June 08, 2021
Spectrum Analyzer Keysight	N9030A	MY54490679	July 13, 2020	July 12, 2021
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 15, 2020	Jan. 14, 2021
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 24, 2019	Nov. 23, 2020
RF Cable	EMC102-KM-KM-1200	160924	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC-KM-KM-4000	200214	Mar. 11, 2020	Mar. 10, 2021
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	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. 3.
3. Tested Date: July 16 to 28, 2020

For Radiated Emission (Above 1GHz) test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 06, 2020	July 05, 2021
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Nov. 24, 2019	Nov. 23, 2020
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC104-SM-SM-1500	180504	Apr. 29, 2020	Apr. 28, 2021
RF Cable	EMC104-SM-SM-2000	180601	June 09, 2020	June 08, 2021
RF Cable	EMC104-SM-SM-6000	180602	June 09, 2020	June 08, 2021
Spectrum Analyzer Keysight	N9030A	MY54490679	July 13, 2020	July 12, 2021
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 15, 2020	Jan. 14, 2021
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 24, 2019	Nov. 23, 2020
RF Cable	EMC102-KM-KM-1200	160924	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC-KM-KM-4000	200214	Mar. 11, 2020	Mar. 10, 2021
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	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. 3.
3. Tested Date: Oct. 05, 2020

For other test items:

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

NOTE: 1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: Oct. 06, 2020

4.1.3 Test Procedure

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

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

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

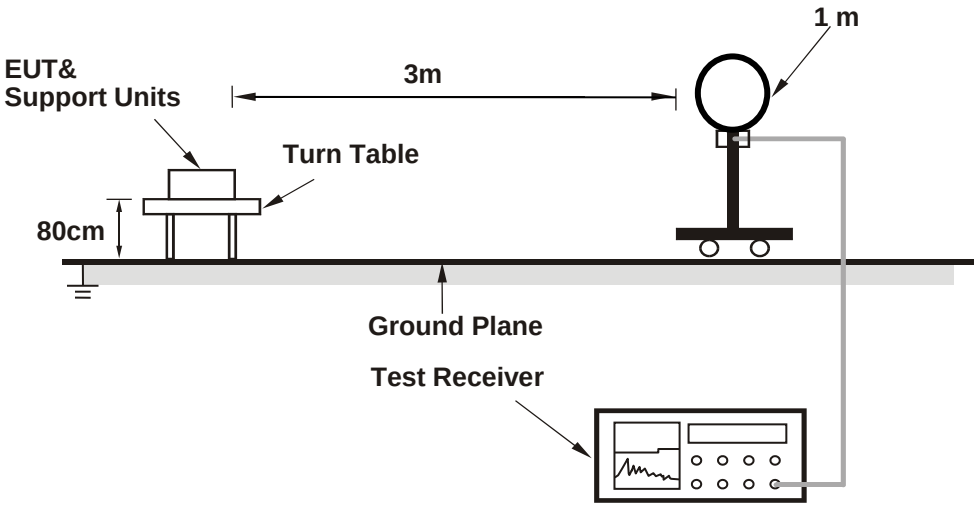
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 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

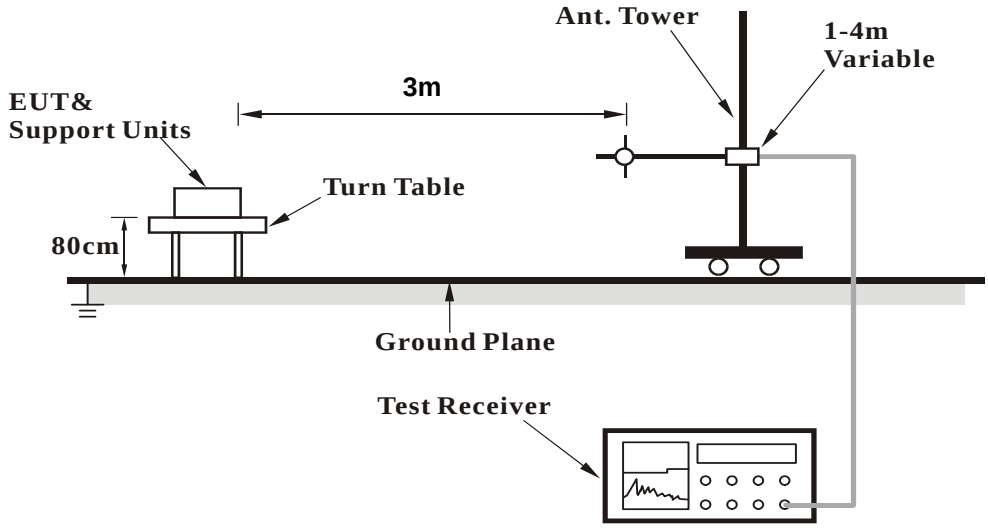
No deviation.

4.1.5 Test Setup

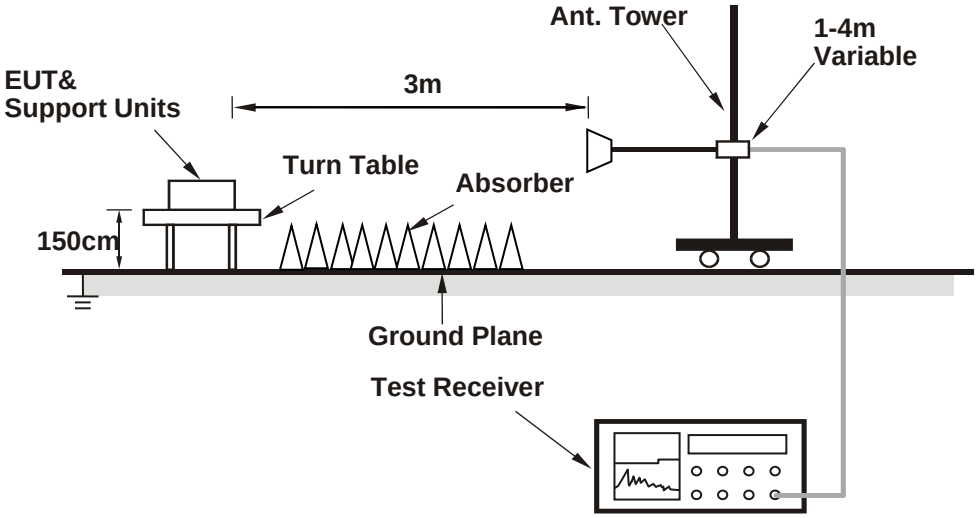
For Radiated emission below 30MHz



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

a. Placed the EUT on the testing table.
b. Controlling software (MP Tool 0.0006.06.20190321) 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	62.3 PK	74.0	-11.7	2.61 H	235	58.1	4.2
2	5150.00	49.0 AV	54.0	-5.0	2.61 H	235	44.8	4.2
3	*5180.00	110.1 PK			2.61 H	235	106.0	4.1
4	*5180.00	99.5 AV			2.61 H	235	95.4	4.1
5	#10360.00	47.9 PK	68.2	-20.3	1.49 H	251	34.7	13.2
6	15540.00	46.4 PK	74.0	-27.6	1.47 H	320	32.7	13.7
7	15540.00	34.8 AV	54.0	-19.2	1.47 H	320	21.1	13.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.9 PK	74.0	-7.1	1.00 V	276	62.7	4.2
2	5150.00	53.7 AV	54.0	-0.3	1.00 V	276	49.5	4.2
3	*5180.00	114.1 PK			1.00 V	276	110.0	4.1
4	*5180.00	103.9 AV			1.00 V	276	99.8	4.1
5	#10360.00	46.9 PK	68.2	-21.3	1.51 V	321	33.7	13.2
6	15540.00	46.3 PK	74.0	-27.7	1.58 V	228	32.6	13.7
7	15540.00	35.6 AV	54.0	-18.4	1.58 V	228	21.9	13.7

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 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	109.1 PK			2.75 H	235	105.2	3.9
2	*5200.00	99.2 AV			2.75 H	235	95.3	3.9
3	#10400.00	47.6 PK	68.2	-20.6	1.54 H	265	34.4	13.2
4	15600.00	46.0 PK	74.0	-28.0	1.51 H	318	32.0	14.0
5	15600.00	34.4 AV	54.0	-19.6	1.51 H	318	20.4	14.0
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	113.6 PK			1.11 V	262	109.7	3.9
2	*5200.00	103.8 AV			1.11 V	262	99.9	3.9
3	#10400.00	46.6 PK	68.2	-21.6	1.57 V	316	33.4	13.2
4	15600.00	46.7 PK	74.0	-27.3	1.56 V	216	32.7	14.0
5	15600.00	35.8 AV	54.0	-18.2	1.56 V	216	21.8	14.0

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	109.1 PK			2.68 H	236	105.2	3.9
2	*5240.00	99.8 AV			2.68 H	236	95.9	3.9
3	5364.50	50.6 PK	74.0	-23.4	2.68 H	236	46.8	3.8
4	5364.50	39.1 AV	54.0	-14.9	2.68 H	236	35.3	3.8
5	#10480.00	47.7 PK	68.2	-20.5	1.48 H	266	34.2	13.5
6	15720.00	46.6 PK	74.0	-27.4	1.46 H	329	32.1	14.5
7	15720.00	34.7 AV	54.0	-19.3	1.46 H	329	20.2	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	*5240.00	112.6 PK			1.33 V	277	108.7	3.9
2	*5240.00	102.6 AV			1.33 V	277	98.7	3.9
3	5355.50	52.4 PK	74.0	-21.6	1.33 V	277	48.7	3.7
4	5355.50	40.5 AV	54.0	-13.5	1.33 V	277	36.8	3.7
5	#10480.00	47.3 PK	68.2	-20.9	1.54 V	317	33.8	13.5
6	15720.00	46.0 PK	74.0	-28.0	1.57 V	235	31.5	14.5
7	15720.00	35.5 AV	54.0	-18.5	1.57 V	235	21.0	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 802.11a	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	*5260.00	109.8 PK			2.67 H	236	106.0	3.8
2	*5260.00	100.0 AV			2.67 H	236	96.2	3.8
3	5375.50	50.9 PK	74.0	-23.1	2.67 H	236	47.1	3.8
4	5375.50	39.6 AV	54.0	-14.4	2.67 H	236	35.8	3.8
5	#10520.00	47.1 PK	68.2	-21.1	1.46 H	241	33.7	13.4
6	15780.00	46.1 PK	74.0	-27.9	1.48 H	321	31.9	14.2
7	15780.00	34.6 AV	54.0	-19.4	1.48 H	321	20.4	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	5144.50	50.6 PK	74.0	-23.4	1.58 V	262	46.4	4.2
2	5144.50	40.0 AV	54.0	-14.0	1.58 V	262	35.8	4.2
3	*5260.00	113.0 PK			1.58 V	262	109.2	3.8
4	*5260.00	103.3 AV			1.58 V	262	99.5	3.8
5	#10520.00	46.9 PK	68.2	-21.3	1.52 V	319	33.5	13.4
6	15780.00	46.3 PK	74.0	-27.7	1.56 V	244	32.1	14.2
7	15780.00	35.4 AV	54.0	-18.6	1.56 V	244	21.2	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 802.11a	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	109.4 PK			2.63 H	235	105.7	3.7
2	*5300.00	99.4 AV			2.63 H	235	95.7	3.7
3	10600.00	47.3 PK	74.0	-26.7	1.51 H	244	33.9	13.4
4	10600.00	35.8 AV	54.0	-18.2	1.51 H	244	22.4	13.4
5	15900.00	46.2 PK	74.0	-27.8	1.51 H	318	32.7	13.5
6	15900.00	34.5 AV	54.0	-19.5	1.51 H	318	21.0	13.5
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	*5300.00	112.2 PK			1.01 V	262	108.5	3.7
2	*5300.00	102.6 AV			1.01 V	262	98.9	3.7
3	10600.00	46.9 PK	74.0	-27.1	1.46 V	307	33.5	13.4
4	10600.00	36.7 AV	54.0	-17.3	1.46 V	307	23.3	13.4
5	15900.00	46.3 PK	74.0	-27.7	1.58 V	232	32.8	13.5
6	15900.00	35.7 AV	54.0	-18.3	1.58 V	232	22.2	13.5

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 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	109.0 PK			2.62 H	235	105.2	3.8
2	*5320.00	99.6 AV			2.62 H	235	95.8	3.8
3	5350.00	61.0 PK	74.0	-13.0	2.62 H	235	57.3	3.7
4	5350.00	47.5 AV	54.0	-6.5	2.62 H	235	43.8	3.7
5	10640.00	48.3 PK	74.0	-25.7	1.46 H	263	34.8	13.5
6	10640.00	36.8 AV	54.0	-17.2	1.46 H	263	23.3	13.5
7	15960.00	46.0 PK	74.0	-28.0	1.47 H	315	32.5	13.5
8	15960.00	34.6 AV	54.0	-19.4	1.47 H	315	21.1	13.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	111.9 PK			1.15 V	275	108.1	3.8
2	*5320.00	102.0 AV			1.15 V	275	98.2	3.8
3	5350.00	62.9 PK	74.0	-11.1	1.15 V	275	59.2	3.7
4	5350.00	49.9 AV	54.0	-4.1	1.15 V	275	46.2	3.7
5	10640.00	47.2 PK	74.0	-26.8	1.51 V	313	33.7	13.5
6	10640.00	36.5 AV	54.0	-17.5	1.51 V	313	23.0	13.5
7	15960.00	46.8 PK	74.0	-27.2	1.62 V	232	33.3	13.5
8	15960.00	35.8 AV	54.0	-18.2	1.62 V	232	22.3	13.5

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	56.7 PK	74.0	-17.3	2.59 H	236	52.6	4.1
2	5460.00	40.4 AV	54.0	-13.6	2.59 H	236	36.3	4.1
3	#5470.00	63.0 PK	68.2	-5.2	2.59 H	236	58.8	4.2
4	*5500.00	107.6 PK			2.59 H	236	103.4	4.2
5	*5500.00	97.6 AV			2.59 H	236	93.4	4.2
6	11000.00	48.5 PK	74.0	-25.5	1.54 H	245	35.0	13.5
7	11000.00	36.6 AV	54.0	-17.4	1.54 H	245	23.1	13.5
8	#16500.00	46.8 PK	68.2	-21.4	1.42 H	321	31.7	15.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	58.5 PK	74.0	-15.5	1.00 V	263	54.4	4.1
2	5460.00	42.9 AV	54.0	-11.1	1.00 V	263	38.8	4.1
3	**#5470.00**	**68.0 PK**	**68.2**	**-0.2**	**1.00 V**	**263**	**63.8**	**4.2**
4	*5500.00	111.5 PK			1.00 V	263	107.3	4.2
5	*5500.00	102.1 AV			1.00 V	263	97.9	4.2
6	11000.00	55.9 PK	74.0	-18.1	1.62 V	332	42.4	13.5
7	11000.00	43.5 AV	54.0	-10.5	1.62 V	332	30.0	13.5
8	#16500.00	52.8 PK	68.2	-15.4	1.57 V	297	37.7	15.1

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	109.1 PK			2.76 H	236	104.8	4.3
2	*5580.00	98.3 AV			2.76 H	236	94.0	4.3
3	11160.00	48.1 PK	74.0	-25.9	1.50 H	253	34.5	13.6
4	11160.00	36.6 AV	54.0	-17.4	1.50 H	253	23.0	13.6
5	#16740.00	46.5 PK	68.2	-21.7	1.47 H	309	29.9	16.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	110.7 PK			1.27 V	277	106.4	4.3
2	*5580.00	101.6 AV			1.27 V	277	97.3	4.3
3	11160.00	55.7 PK	74.0	-18.3	1.63 V	326	42.1	13.6
4	11160.00	43.5 AV	54.0	-10.5	1.63 V	326	29.9	13.6
5	#16740.00	53.1 PK	68.2	-15.1	1.63 V	309	36.5	16.6

Remarks:

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

RF Mode	TX 802.11a	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	108.2 PK			2.54 H	237	103.9	4.3
2	*5700.00	99.0 AV			2.54 H	237	94.7	4.3
3	#5725.00	67.8 PK	68.2	-0.4	2.54 H	237	63.4	4.4
4	11400.00	47.3 PK	74.0	-26.7	1.49 H	253	33.7	13.6
5	11400.00	35.9 AV	54.0	-18.1	1.49 H	253	22.3	13.6
6	#17100.00	46.4 PK	68.2	-21.8	1.52 H	335	28.6	17.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	111.5 PK			1.19 V	254	107.2	4.3
2	*5700.00	101.7 AV			1.19 V	254	97.4	4.3
3	#5725.00	66.9 PK	68.2	-1.3	1.19 V	254	62.5	4.4
4	11400.00	56.5 PK	74.0	-17.5	1.60 V	348	42.9	13.6
5	11400.00	43.8 AV	54.0	-10.2	1.60 V	348	30.2	13.6
6	#17100.00	53.0 PK	68.2	-15.2	1.64 V	300	35.2	17.8

Remarks:

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

RF Mode	TX 802.11a	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	#5593.00	50.9 PK	68.2	-17.3	1.57 H	229	46.6	4.3
2	*5745.00	108.6 PK			1.57 H	229	104.2	4.4
3	*5745.00	98.1 AV			1.57 H	229	93.7	4.4
4	#5932.72	51.0 PK	68.2	-17.2	1.57 H	229	46.1	4.9
5	11490.00	49.5 PK	74.0	-24.5	1.59 H	218	35.6	13.9
6	11490.00	38.3 AV	54.0	-15.7	1.59 H	218	24.4	13.9
7	#17235.00	51.5 PK	68.2	-16.7	1.62 H	290	33.2	18.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5629.05	51.6 PK	68.2	-16.6	1.07 V	240	47.3	4.3
2	*5745.00	111.2 PK			1.07 V	240	106.8	4.4
3	*5745.00	101.7 AV			1.07 V	240	97.3	4.4
4	#5987.42	53.2 PK	68.2	-15.0	1.07 V	240	48.2	5.0
5	11490.00	55.9 PK	74.0	-18.1	1.59 V	339	42.0	13.9
6	11490.00	43.5 AV	54.0	-10.5	1.59 V	339	29.6	13.9
7	#17235.00	52.6 PK	68.2	-15.6	1.60 V	305	34.3	18.3

Remarks:

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

RF Mode	TX 802.11a	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	#5644.04	51.2 PK	68.2	-17.0	1.33 H	230	46.9	4.3
2	*5785.00	111.2 PK			1.33 H	230	106.7	4.5
3	*5785.00	97.9 AV			1.33 H	230	93.4	4.5
4	#5938.36	51.8 PK	68.2	-16.4	1.33 H	230	46.8	5.0
5	11570.00	49.2 PK	74.0	-24.8	1.53 H	228	35.3	13.9
6	11570.00	38.3 AV	54.0	-15.7	1.53 H	228	24.4	13.9
7	#17355.00	52.0 PK	68.2	-16.2	1.55 H	312	33.8	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5584.60	52.3 PK	68.2	-15.9	1.04 V	240	48.0	4.3
2	*5785.00	111.3 PK			1.04 V	240	106.8	4.5
3	*5785.00	101.6 AV			1.04 V	240	97.1	4.5
4	#5942.56	51.6 PK	68.2	-16.6	1.04 V	240	46.6	5.0
5	11570.00	56.1 PK	74.0	-17.9	1.58 V	337	42.2	13.9
6	11570.00	43.8 AV	54.0	-10.2	1.58 V	337	29.9	13.9
7	#17355.00	52.5 PK	68.2	-15.7	1.57 V	335	34.3	18.2

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 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	#5645.05	49.9 PK	68.2	-18.3	1.60 H	230	45.6	4.3
2	*5825.00	109.4 PK			1.60 H	230	104.7	4.7
3	*5825.00	99.1 AV			1.60 H	230	94.4	4.7
4	#5933.28	52.4 PK	68.2	-15.8	1.60 H	230	47.5	4.9
5	11650.00	49.8 PK	74.0	-24.2	1.54 H	220	35.8	14.0
6	11650.00	38.7 AV	54.0	-15.3	1.54 H	220	24.7	14.0
7	#17475.00	52.2 PK	68.2	-16.0	1.58 H	301	33.4	18.8
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	#5636.85	51.4 PK	68.2	-16.8	1.04 V	242	47.1	4.3
2	*5825.00	111.8 PK			1.04 V	242	107.1	4.7
3	*5825.00	102.2 AV			1.04 V	242	97.5	4.7
4	#6014.85	53.2 PK	68.2	-15.0	1.04 V	242	48.1	5.1
5	11650.00	56.3 PK	74.0	-17.7	1.64 V	349	42.3	14.0
6	11650.00	44.0 AV	54.0	-10.0	1.64 V	349	30.0	14.0
7	#17475.00	52.5 PK	68.2	-15.7	1.62 V	320	33.7	18.8

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 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	52.7 PK	74.0	-21.3	1.60 H	232	48.5	4.2
2	5150.00	42.7 AV	54.0	-11.3	1.60 H	232	38.5	4.2
3	*5180.00	107.4 PK			1.60 H	232	103.3	4.1
4	*5180.00	96.1 AV			1.60 H	232	92.0	4.1
5	#10360.00	47.9 PK	68.2	-20.3	1.48 H	241	34.7	13.2
6	15540.00	46.6 PK	74.0	-27.4	1.45 H	311	32.9	13.7
7	15540.00	35.1 AV	54.0	-18.9	1.45 H	311	21.4	13.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.3 PK	74.0	-14.7	1.75 V	251	55.1	4.2
2	5150.00	41.9 AV	54.0	-12.1	1.75 V	251	37.7	4.2
3	*5180.00	111.7 PK			1.75 V	251	107.6	4.1
4	*5180.00	98.6 AV			1.75 V	251	94.5	4.1
5	#10360.00	47.4 PK	68.2	-20.8	1.55 V	315	34.2	13.2
6	15540.00	46.0 PK	74.0	-28.0	1.61 V	235	32.3	13.7
7	15540.00	35.2 AV	54.0	-18.8	1.61 V	235	21.5	13.7

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	107.0 PK			1.69 H	234	103.1	3.9
2	*5200.00	95.3 AV			1.69 H	234	91.4	3.9
3	#10400.00	47.2 PK	68.2	-21.0	1.55 H	264	34.0	13.2
4	15600.00	46.2 PK	74.0	-27.8	1.46 H	334	32.2	14.0
5	15600.00	34.6 AV	54.0	-19.4	1.46 H	334	20.6	14.0
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	111.5 PK			1.06 V	253	107.6	3.9
2	*5200.00	99.7 AV			1.06 V	253	95.8	3.9
3	#10400.00	46.5 PK	68.2	-21.7	1.47 V	310	33.3	13.2
4	15600.00	46.6 PK	74.0	-27.4	1.58 V	231	32.6	14.0
5	15600.00	35.9 AV	54.0	-18.1	1.58 V	231	21.9	14.0

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	108.0 PK			1.52 H	232	104.1	3.9
2	*5240.00	94.3 AV			1.52 H	232	90.4	3.9
3	5350.00	50.6 PK	74.0	-23.4	1.52 H	232	46.9	3.7
4	5350.00	37.9 AV	54.0	-16.1	1.52 H	232	34.2	3.7
5	#10480.00	47.4 PK	68.2	-20.8	1.44 H	252	33.9	13.5
6	15720.00	46.3 PK	74.0	-27.7	1.52 H	314	31.8	14.5
7	15720.00	34.6 AV	54.0	-19.4	1.52 H	314	20.1	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	*5240.00	111.3 PK			1.00 V	252	107.4	3.9
2	*5240.00	99.2 AV			1.00 V	252	95.3	3.9
3	5350.00	51.3 PK	74.0	-22.7	1.00 V	252	47.6	3.7
4	5350.00	40.6 AV	54.0	-13.4	1.00 V	252	36.9	3.7
5	#10480.00	46.4 PK	68.2	-21.8	1.46 V	336	32.9	13.5
6	15720.00	46.5 PK	74.0	-27.5	1.52 V	239	32.0	14.5
7	15720.00	35.9 AV	54.0	-18.1	1.52 V	239	21.4	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 (VHT20)	Channel	CH 52：5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	50.1 PK	74.0	-23.9	1.59 H	233	45.9	4.2
2	5150.00	38.4 AV	54.0	-15.6	1.59 H	233	34.2	4.2
3	*5260.00	104.0 PK			1.59 H	233	100.2	3.8
4	*5260.00	91.3 AV			1.59 H	233	87.5	3.8
5	#10520.00	48.0 PK	68.2	-20.2	1.50 H	267	34.6	13.4
6	15780.00	46.7 PK	74.0	-27.3	1.53 H	309	32.5	14.2
7	15780.00	34.9 AV	54.0	-19.1	1.53 H	309	20.7	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	5150.00	50.3 PK	74.0	-23.7	1.00 V	253	46.1	4.2
2	5150.00	38.7 AV	54.0	-15.3	1.00 V	253	34.5	4.2
3	*5260.00	111.5 PK			1.00 V	253	107.7	3.8
4	*5260.00	99.9 AV			1.00 V	253	96.1	3.8
5	#10520.00	47.0 PK	68.2	-21.2	1.48 V	336	33.6	13.4
6	15780.00	45.7 PK	74.0	-28.3	1.54 V	223	31.5	14.2
7	15780.00	35.2 AV	54.0	-18.8	1.54 V	223	21.0	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 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	107.7 PK			1.57 H	231	104.0	3.7
2	*5300.00	95.8 AV			1.57 H	231	92.1	3.7
3	10600.00	47.2 PK	74.0	-26.8	1.45 H	265	33.8	13.4
4	10600.00	35.9 AV	54.0	-18.1	1.45 H	265	22.5	13.4
5	15900.00	46.4 PK	74.0	-27.6	1.46 H	319	32.9	13.5
6	15900.00	35.1 AV	54.0	-18.9	1.46 H	319	21.6	13.5
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	*5300.00	110.2 PK			1.00 V	252	106.5	3.7
2	*5300.00	98.4 AV			1.00 V	252	94.7	3.7
3	10600.00	46.6 PK	74.0	-27.4	1.50 V	334	33.2	13.4
4	10600.00	36.0 AV	54.0	-18.0	1.50 V	334	22.6	13.4
5	15900.00	46.0 PK	74.0	-28.0	1.55 V	238	32.5	13.5
6	15900.00	35.5 AV	54.0	-18.5	1.55 V	238	22.0	13.5

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	106.8 PK			1.54 H	231	103.0	3.8
2	*5320.00	94.7 AV			1.54 H	231	90.9	3.8
3	5350.00	49.9 PK	74.0	-24.1	1.54 H	231	46.2	3.7
4	5350.00	40.9 AV	54.0	-13.1	1.54 H	231	37.2	3.7
5	10640.00	48.2 PK	74.0	-25.8	1.55 H	265	34.7	13.5
6	10640.00	36.3 AV	54.0	-17.7	1.55 H	265	22.8	13.5
7	15960.00	46.4 PK	74.0	-27.6	1.48 H	336	32.9	13.5
8	15960.00	34.8 AV	54.0	-19.2	1.48 H	336	21.3	13.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	110.1 PK			1.00 V	252	106.3	3.8
2	*5320.00	98.6 AV			1.00 V	252	94.8	3.8
3	5350.00	51.5 PK	74.0	-22.5	1.00 V	252	47.8	3.7
4	5350.00	41.9 AV	54.0	-12.1	1.00 V	252	38.2	3.7
5	10640.00	46.9 PK	74.0	-27.1	1.55 V	320	33.4	13.5
6	10640.00	36.6 AV	54.0	-17.4	1.55 V	320	23.1	13.5
7	15960.00	47.0 PK	74.0	-27.0	1.61 V	230	33.5	13.5
8	15960.00	36.1 AV	54.0	-17.9	1.61 V	230	22.6	13.5

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	49.6 PK	74.0	-24.4	1.55 H	235	45.5	4.1
2	5460.00	38.7 AV	54.0	-15.3	1.55 H	235	34.6	4.1
3	#5470.00	52.7 PK	68.2	-15.5	1.55 H	235	48.5	4.2
4	*5500.00	106.7 PK			1.55 H	235	102.5	4.2
5	*5500.00	94.2 AV			1.55 H	235	90.0	4.2
6	11000.00	47.3 PK	74.0	-26.7	1.44 H	264	33.8	13.5
7	11000.00	35.9 AV	54.0	-18.1	1.44 H	264	22.4	13.5
8	#16500.00	46.5 PK	68.2	-21.7	1.45 H	305	31.4	15.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	51.3 PK	74.0	-22.7	1.01 V	253	47.2	4.1
2	5460.00	40.1 AV	54.0	-13.9	1.01 V	253	36.0	4.1
3	#5470.00	58.3 PK	68.2	-9.9	1.01 V	253	54.1	4.2
4	*5500.00	108.8 PK			1.01 V	253	104.6	4.2
5	*5500.00	97.8 AV			1.01 V	253	93.6	4.2
6	11000.00	47.6 PK	74.0	-26.4	1.48 V	319	34.1	13.5
7	11000.00	36.8 AV	54.0	-17.2	1.48 V	319	23.3	13.5
8	#16500.00	45.8 PK	68.2	-22.4	1.54 V	222	30.7	15.1

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	107.2 PK			1.46 H	234	102.9	4.3
2	*5580.00	93.8 AV			1.46 H	234	89.5	4.3
3	11160.00	47.8 PK	74.0	-26.2	1.47 H	259	34.2	13.6
4	11160.00	36.1 AV	54.0	-17.9	1.47 H	259	22.5	13.6
5	#16740.00	47.0 PK	68.2	-21.2	1.45 H	307	30.4	16.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	110.1 PK			1.00 V	255	105.8	4.3
2	*5580.00	98.0 AV			1.00 V	255	93.7	4.3
3	11160.00	47.2 PK	74.0	-26.8	1.49 V	317	33.6	13.6
4	11160.00	36.5 AV	54.0	-17.5	1.49 V	317	22.9	13.6
5	#16740.00	45.9 PK	68.2	-22.3	1.63 V	236	29.3	16.6

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	107.2 PK			1.54 H	235	102.9	4.3
2	*5700.00	95.5 AV			1.54 H	235	91.2	4.3
3	#5725.00	54.5 PK	68.2	-13.7	1.00 H	0	50.1	4.4
4	11400.00	47.6 PK	74.0	-26.4	1.44 H	239	34.0	13.6
5	11400.00	36.1 AV	54.0	-17.9	1.44 H	239	22.5	13.6
6	#17100.00	46.2 PK	68.2	-22.0	1.43 H	317	28.4	17.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	111.2 PK			1.01 V	255	106.9	4.3
2	*5700.00	99.0 AV			1.01 V	255	94.7	4.3
3	#5725.00	62.2 PK	68.2	-6.0	1.01 V	255	57.8	4.4
4	11400.00	46.4 PK	74.0	-27.6	1.56 V	322	32.8	13.6
5	11400.00	36.0 AV	54.0	-18.0	1.56 V	322	22.4	13.6
6	#17100.00	46.2 PK	68.2	-22.0	1.61 V	238	28.4	17.8

Remarks:

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

RF Mode	TX 802.11ac (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	#5593.82	50.7 PK	68.2	-17.5	1.74 H	239	46.4	4.3
2	*5745.00	108.1 PK			1.74 H	239	103.7	4.4
3	*5745.00	95.7 AV			1.74 H	239	91.3	4.4
4	#5959.18	51.1 PK	68.2	-17.1	1.74 H	239	46.2	4.9
5	11490.00	47.9 PK	74.0	-26.1	1.44 H	262	34.0	13.9
6	11490.00	36.2 AV	54.0	-17.8	1.44 H	262	22.3	13.9
7	#17235.00	46.5 PK	68.2	-21.7	1.43 H	307	28.2	18.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5595.53	50.2 PK	68.2	-18.0	1.06 V	241	45.9	4.3
2	*5745.00	109.5 PK			1.06 V	241	105.1	4.4
3	*5745.00	98.3 AV			1.06 V	241	93.9	4.4
4	#5938.17	51.6 PK	68.2	-16.6	1.06 V	241	46.6	5.0
5	11490.00	46.6 PK	74.0	-27.4	1.56 V	318	32.7	13.9
6	11490.00	36.1 AV	54.0	-17.9	1.56 V	318	22.2	13.9
7	#17235.00	46.1 PK	68.2	-22.1	1.55 V	236	27.8	18.3

Remarks:

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

RF Mode	TX 802.11ac (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	#5580.74	50.8 PK	68.2	-17.4	1.72 H	239	46.5	4.3
2	*5785.00	107.1 PK			1.72 H	239	102.6	4.5
3	*5785.00	95.2 AV			1.72 H	239	90.7	4.5
4	#5982.48	51.0 PK	68.2	-17.2	1.72 H	239	46.1	4.9
5	11570.00	48.0 PK	74.0	-26.0	1.47 H	265	34.1	13.9
6	11570.00	36.1 AV	54.0	-17.9	1.47 H	265	22.2	13.9
7	#17355.00	46.6 PK	68.2	-21.6	1.49 H	331	28.4	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5631.83	51.2 PK	68.2	-17.0	1.03 V	242	46.9	4.3
2	*5785.00	110.1 PK			1.03 V	242	105.6	4.5
3	*5785.00	98.7 AV			1.03 V	242	94.2	4.5
4	#5930.83	52.6 PK	68.2	-15.6	1.03 V	242	47.7	4.9
5	11570.00	46.7 PK	74.0	-27.3	1.52 V	332	32.8	13.9
6	11570.00	36.2 AV	54.0	-17.8	1.52 V	332	22.3	13.9
7	#17355.00	46.4 PK	68.2	-21.8	1.63 V	216	28.2	18.2

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5629.66	51.4 PK	68.2	-16.8	1.72 H	230	47.1	4.3
2	*5825.00	108.8 PK			1.72 H	230	104.1	4.7
3	*5825.00	96.3 AV			1.72 H	230	91.6	4.7
4	#5966.67	50.5 PK	68.2	-17.7	1.72 H	230	45.6	4.9
5	11650.00	47.6 PK	74.0	-26.4	1.41 H	258	33.6	14.0
6	11650.00	35.8 AV	54.0	-18.2	1.41 H	258	21.8	14.0
7	#17475.00	47.0 PK	68.2	-21.2	1.67 H	315	28.2	18.8
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	#5560.44	51.7 PK	68.2	-16.5	1.03 V	243	47.5	4.2
2	*5825.00	110.6 PK			1.03 V	243	105.9	4.7
3	*5825.00	100.1 AV			1.03 V	243	95.4	4.7
4	#5956.16	52.3 PK	68.2	-15.9	1.03 V	243	47.4	4.9
5	11650.00	46.8 PK	74.0	-27.2	1.57 V	325	32.8	14.0
6	11650.00	36.5 AV	54.0	-17.5	1.57 V	325	22.5	14.0
7	#17475.00	46.4 PK	68.2	-21.8	1.58 V	214	27.6	18.8

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 38：5190 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.2 PK	74.0	-14.8	1.56 H	231	55.0	4.2
2	5150.00	47.6 AV	54.0	-6.4	1.56 H	231	43.4	4.2
3	*5190.00	105.1 PK			1.56 H	231	101.0	4.1
4	*5190.00	90.8 AV			1.56 H	231	86.7	4.1
5	#10380.00	48.4 PK	68.2	-19.8	1.48 H	265	35.2	13.2
6	15570.00	46.7 PK	74.0	-27.3	1.47 H	334	32.9	13.8
7	15570.00	34.9 AV	54.0	-19.1	1.47 H	334	21.1	13.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	64.3 PK	74.0	-9.7	1.14 V	244	60.1	4.2
2	5150.00	50.8 AV	54.0	-3.2	1.14 V	244	46.6	4.2
3	*5190.00	107.8 PK			1.14 V	244	103.7	4.1
4	*5190.00	98.9 AV			1.14 V	244	94.8	4.1
5	#10380.00	46.6 PK	68.2	-21.6	1.50 V	320	33.4	13.2
6	15570.00	46.4 PK	74.0	-27.6	1.59 V	213	32.6	13.8
7	15570.00	35.8 AV	54.0	-18.2	1.59 V	213	22.0	13.8

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 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	103.7 PK			1.54 H	231	99.8	3.9
2	*5230.00	90.2 AV			1.54 H	231	86.3	3.9
3	5350.00	49.1 PK	74.0	-24.9	1.54 H	231	45.4	3.7
4	5350.00	37.7 AV	54.0	-16.3	1.54 H	231	34.0	3.7
5	#10460.00	48.3 PK	68.2	-19.9	1.55 H	235	35.0	13.3
6	15690.00	46.4 PK	74.0	-27.6	1.50 H	328	31.9	14.5
7	15690.00	34.8 AV	54.0	-19.2	1.50 H	328	20.3	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	*5230.00	107.0 PK			1.78 V	252	103.1	3.9
2	*5230.00	94.1 AV			1.78 V	252	90.2	3.9
3	5390.00	50.2 PK	74.0	-23.8	1.78 V	252	46.3	3.9
4	5390.00	37.6 AV	54.0	-16.4	1.78 V	252	33.7	3.9
5	#10460.00	47.0 PK	68.2	-21.2	1.52 V	321	33.7	13.3
6	15690.00	46.8 PK	74.0	-27.2	1.53 V	240	32.3	14.5
7	15690.00	36.0 AV	54.0	-18.0	1.53 V	240	21.5	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 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	48.8 PK	74.0	-25.2	1.56 H	231	44.6	4.2
2	5150.00	38.2 AV	54.0	-15.8	1.56 H	231	34.0	4.2
3	*5270.00	103.9 PK			1.56 H	231	100.1	3.8
4	*5270.00	90.3 AV			1.56 H	231	86.5	3.8
5	#10540.00	47.7 PK	68.2	-20.5	1.50 H	239	34.3	13.4
6	15810.00	46.2 PK	74.0	-27.8	1.50 H	315	32.3	13.9
7	15810.00	34.8 AV	54.0	-19.2	1.50 H	315	20.9	13.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	50.3 PK	74.0	-23.7	1.02 V	252	46.1	4.2
2	5150.00	39.1 AV	54.0	-14.9	1.02 V	252	34.9	4.2
3	*5270.00	108.8 PK			1.02 V	252	105.0	3.8
4	*5270.00	96.1 AV			1.02 V	252	92.3	3.8
5	#10540.00	46.2 PK	68.2	-22.0	1.46 V	334	32.8	13.4
6	15810.00	46.1 PK	74.0	-27.9	1.54 V	232	32.2	13.9
7	15810.00	35.5 AV	54.0	-18.5	1.54 V	232	21.6	13.9

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 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	103.9 PK			1.57 H	232	100.2	3.7
2	*5310.00	91.8 AV			1.57 H	232	88.1	3.7
3	5350.00	56.1 PK	74.0	-17.9	1.57 H	232	52.4	3.7
4	5350.00	45.9 AV	54.0	-8.1	1.57 H	232	42.2	3.7
5	10620.00	48.3 PK	74.0	-25.7	1.49 H	248	34.9	13.4
6	10620.00	36.4 AV	54.0	-17.6	1.49 H	248	23.0	13.4
7	15930.00	46.2 PK	74.0	-27.8	1.46 H	335	32.7	13.5
8	15930.00	34.9 AV	54.0	-19.1	1.46 H	335	21.4	13.5
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	*5310.00	107.2 PK			1.67 V	252	103.5	3.7
2	*5310.00	94.5 AV			1.67 V	252	90.8	3.7
3	5350.00	62.9 PK	74.0	-11.1	1.67 V	252	59.2	3.7
4	5350.00	50.0 AV	54.0	-4.0	1.67 V	252	46.3	3.7
5	10620.00	47.2 PK	74.0	-26.8	1.53 V	326	33.8	13.4
6	10620.00	36.7 AV	54.0	-17.3	1.53 V	326	23.3	13.4
7	15930.00	46.8 PK	74.0	-27.2	1.62 V	228	33.3	13.5
8	15930.00	35.8 AV	54.0	-18.2	1.62 V	228	22.3	13.5

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	54.4 PK	74.0	-19.6	1.53 H	233	50.3	4.1
2	5460.00	43.9 AV	54.0	-10.1	1.53 H	233	39.8	4.1
3	#5470.00	60.5 PK	68.2	-7.7	1.53 H	233	56.3	4.2
4	*5510.00	103.4 PK			1.53 H	233	99.2	4.2
5	*5510.00	91.6 AV			1.53 H	233	87.4	4.2
6	11020.00	48.5 PK	74.0	-25.5	1.48 H	262	35.0	13.5
7	11020.00	36.6 AV	54.0	-17.4	1.48 H	262	23.1	13.5
8	#16530.00	46.2 PK	68.2	-22.0	1.45 H	313	30.9	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	5460.00	58.9 PK	74.0	-15.1	1.08 V	254	54.8	4.1
2	5460.00	45.1 AV	54.0	-8.9	1.08 V	254	41.0	4.1
3	#5470.00	63.6 PK	68.2	-4.6	1.08 V	254	59.4	4.2
4	*5510.00	107.3 PK			1.08 V	254	103.1	4.2
5	*5510.00	98.3 AV			1.08 V	254	94.1	4.2
6	11020.00	46.4 PK	74.0	-27.6	1.51 V	320	32.9	13.5
7	11020.00	36.1 AV	54.0	-17.9	1.51 V	320	22.6	13.5
8	#16530.00	45.9 PK	68.2	-22.3	1.53 V	227	30.6	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 (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	104.4 PK			1.49 H	234	100.2	4.2
2	*5550.00	92.3 AV			1.49 H	234	88.1	4.2
3	11100.00	48.3 PK	74.0	-25.7	1.49 H	263	34.9	13.4
4	11100.00	36.8 AV	54.0	-17.2	1.49 H	263	23.4	13.4
5	#16650.00	46.7 PK	68.2	-21.5	1.47 H	334	30.5	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	*5550.00	106.3 PK			1.07 V	253	102.1	4.2
2	*5550.00	97.3 AV			1.07 V	253	93.1	4.2
3	11100.00	46.5 PK	74.0	-27.5	1.51 V	317	33.1	13.4
4	11100.00	36.2 AV	54.0	-17.8	1.51 V	317	22.8	13.4
5	#16650.00	46.8 PK	68.2	-21.4	1.63 V	238	30.6	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 (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	103.8 PK			1.55 H	234	99.4	4.4
2	*5670.00	90.2 AV			1.55 H	234	85.8	4.4
3	#5725.00	56.6 PK	68.2	-11.6	1.55 H	234	52.2	4.4
4	11340.00	48.0 PK	74.0	-26.0	1.49 H	252	34.1	13.9
5	11340.00	36.4 AV	54.0	-17.6	1.49 H	252	22.5	13.9
6	#17010.00	46.3 PK	68.2	-21.9	1.53 H	307	28.8	17.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	106.6 PK			1.62 V	253	102.2	4.4
2	*5670.00	92.8 AV			1.62 V	253	88.4	4.4
3	#5725.00	55.3 PK	68.2	-12.9	1.62 V	253	50.9	4.4
4	11340.00	47.2 PK	74.0	-26.8	1.56 V	336	33.3	13.9
5	11340.00	36.9 AV	54.0	-17.1	1.56 V	336	23.0	13.9
6	#17010.00	46.1 PK	68.2	-22.1	1.60 V	220	28.6	17.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
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	#5586.81	50.1 PK	68.2	-18.1	1.69 H	230	45.8	4.3
2	*5755.00	105.2 PK			1.69 H	230	100.8	4.4
3	*5755.00	92.6 AV			1.69 H	230	88.2	4.4
4	#5993.33	50.9 PK	68.2	-17.3	1.69 H	230	45.8	5.1
5	11510.00	47.3 PK	74.0	-26.7	1.47 H	244	33.3	14.0
6	11510.00	35.9 AV	54.0	-18.1	1.47 H	244	21.9	14.0
7	#17265.00	46.5 PK	68.2	-21.7	1.50 H	316	28.4	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5590.65	50.7 PK	68.2	-17.5	1.00 V	254	46.4	4.3
2	*5755.00	106.1 PK			1.00 V	254	101.7	4.4
3	*5755.00	94.5 AV			1.00 V	254	90.1	4.4
4	#5949.65	52.0 PK	68.2	-16.2	1.00 V	254	47.1	4.9
5	11510.00	46.8 PK	74.0	-27.2	1.47 V	342	32.8	14.0
6	11510.00	36.5 AV	54.0	-17.5	1.47 V	342	22.5	14.0
7	#17265.00	46.4 PK	68.2	-21.8	1.63 V	214	28.3	18.1

Remarks:

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

RF Mode	TX 802.11ac (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	#5578.49	50.6 PK	68.2	-17.6	1.68 H	229	46.3	4.3
2	*5795.00	105.6 PK			1.68 H	229	101.0	4.6
3	*5795.00	92.6 AV			1.68 H	229	88.0	4.6
4	#5983.69	50.8 PK	68.2	-17.4	1.68 H	229	45.8	5.0
5	11590.00	48.4 PK	74.0	-25.6	1.53 H	263	34.5	13.9
6	11590.00	36.6 AV	54.0	-17.4	1.53 H	263	22.7	13.9
7	#17385.00	46.6 PK	68.2	-21.6	1.42 H	335	28.2	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5560.87	51.1 PK	68.2	-17.1	1.01 V	253	46.9	4.2
2	*5795.00	106.8 PK			1.01 V	253	102.2	4.6
3	*5795.00	94.6 AV			1.01 V	253	90.0	4.6
4	#5947.85	51.0 PK	68.2	-17.2	1.01 V	253	46.1	4.9
5	11590.00	47.2 PK	74.0	-26.8	1.48 V	312	33.3	13.9
6	11590.00	36.9 AV	54.0	-17.1	1.48 V	312	23.0	13.9
7	#17385.00	46.5 PK	68.2	-21.7	1.52 V	231	28.1	18.4

Remarks:

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

RF Mode	TX 802.11ac (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	5124.53	60.9 PK	74.0	-13.1	1.55 H	232	56.6	4.3
2	5124.53	45.7 AV	54.0	-8.3	1.55 H	232	41.4	4.3
3	5150.00	58.2 PK	74.0	-15.8	1.55 H	232	54.0	4.2
4	5150.00	48.5 AV	54.0	-5.5	1.55 H	232	44.3	4.2
5	*5210.00	102.7 PK			1.55 H	232	98.8	3.9
6	*5210.00	89.6 AV			1.55 H	232	85.7	3.9
7	5350.00	48.5 PK	74.0	-25.5	1.55 H	232	44.8	3.7
8	5350.00	38.1 AV	54.0	-15.9	1.55 H	232	34.4	3.7
9	#10420.00	47.6 PK	68.2	-20.6	1.46 H	256	34.4	13.2
10	15630.00	46.0 PK	74.0	-28.0	1.46 H	317	31.7	14.3
11	15630.00	34.6 AV	54.0	-19.4	1.46 H	317	20.3	14.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	67.4 PK	74.0	-6.6	1.04 V	252	63.2	4.2
2	5150.00	50.7 AV	54.0	-3.3	1.04 V	252	46.5	4.2
3	*5210.00	106.8 PK			1.04 V	252	102.9	3.9
4	*5210.00	93.6 AV			1.04 V	252	89.7	3.9
5	5357.40	49.3 PK	74.0	-24.7	1.04 V	252	45.6	3.7
6	5357.40	38.1 AV	54.0	-15.9	1.04 V	252	34.4	3.7
7	#10420.00	47.2 PK	68.2	-21.0	1.51 V	318	34.0	13.2
8	15630.00	46.5 PK	74.0	-27.5	1.57 V	222	32.2	14.3
9	15630.00	36.0 AV	54.0	-18.0	1.57 V	222	21.7	14.3

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	48.3 PK	74.0	-25.7	1.56 H	231	44.1	4.2
2	5150.00	38.1 AV	54.0	-15.9	1.56 H	231	33.9	4.2
3	*5290.00	102.2 PK			1.56 H	231	98.5	3.7
4	*5290.00	89.3 AV			1.56 H	231	85.6	3.7
5	5350.00	56.3 PK	74.0	-17.7	1.56 H	231	52.6	3.7
6	5350.00	45.9 AV	54.0	-8.1	1.56 H	231	42.2	3.7
7	5383.06	61.7 PK	74.0	-12.3	1.56 H	231	57.9	3.8
8	5383.06	42.7 AV	54.0	-11.3	1.56 H	231	38.9	3.8
9	#10580.00	47.8 PK	68.2	-20.4	1.50 H	244	34.4	13.4
10	15870.00	46.3 PK	74.0	-27.7	1.52 H	316	32.6	13.7
11	15870.00	34.5 AV	54.0	-19.5	1.52 H	316	20.8	13.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	50.3 PK	74.0	-23.7	1.02 V	253	46.1	4.2
2	5150.00	39.5 AV	54.0	-14.5	1.02 V	253	35.3	4.2
3	*5290.00	104.4 PK			1.02 V	253	100.7	3.7
4	*5290.00	96.1 AV			1.02 V	253	92.4	3.7
5	5358.40	64.9 PK	74.0	-9.1	1.02 V	253	61.1	3.8
6	5358.40	51.1 AV	54.0	-2.9	1.02 V	253	47.3	3.8
7	#10580.00	47.3 PK	68.2	-20.9	1.47 V	317	33.9	13.4
8	15870.00	46.4 PK	74.0	-27.6	1.53 V	214	32.7	13.7
9	15870.00	35.9 AV	54.0	-18.1	1.53 V	214	22.2	13.7

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	59.4 PK	74.0	-14.6	1.55 H	231	55.3	4.1
2	5460.00	49.1 AV	54.0	-4.9	1.55 H	231	45.0	4.1
3	#5470.00	60.8 PK	68.2	-7.4	1.55 H	231	56.6	4.2
4	*5530.00	100.5 PK			1.55 H	231	96.3	4.2
5	*5530.00	87.7 AV			1.55 H	231	83.5	4.2
6	#5819.90	50.0 PK	68.2	-18.2	1.55 H	231	45.3	4.7
7	#16590.00	46.7 PK	68.2	-21.5	1.51 H	335	31.0	15.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	60.2 PK	74.0	-13.8	1.64 V	253	56.1	4.1
2	5460.00	52.4 AV	54.0	-1.6	1.64 V	253	48.3	4.1
3	#5470.00	61.4 PK	68.2	-6.8	1.64 V	253	57.2	4.2
4	*5530.00	105.9 PK			1.64 V	253	101.7	4.2
5	*5530.00	92.4 AV			1.64 V	253	88.2	4.2
6	#5817.70	49.5 PK	68.2	-18.7	1.64 V	253	44.8	4.7
7	11060.00	46.6 PK	74.0	-27.4	1.55 V	333	33.2	13.4
8	11060.00	36.1 AV	54.0	-17.9	1.55 V	333	22.7	13.4
9	#16590.00	46.3 PK	68.2	-21.9	1.56 V	238	30.6	15.7

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 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	101.1 PK			1.55 H	232	96.9	4.2
2	*5610.00	88.4 AV			1.55 H	232	84.2	4.2
3	#5731.10	51.5 PK	68.2	-16.7	1.55 H	232	47.1	4.4
4	11220.00	47.4 PK	74.0	-26.6	1.44 H	262	33.6	13.8
5	11220.00	36.1 AV	54.0	-17.9	1.44 H	262	22.3	13.8
6	#16830.00	46.1 PK	68.2	-22.1	1.42 H	331	29.4	16.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5610.00	104.6 PK			1.67 V	253	100.4	4.2
2	*5610.00	91.5 AV			1.67 V	253	87.3	4.2
3	#5725.00	52.4 PK	68.2	-15.8	1.67 V	253	48.0	4.4
4	11220.00	47.5 PK	74.0	-26.5	1.48 V	320	33.7	13.8
5	11220.00	36.8 AV	54.0	-17.2	1.48 V	320	23.0	13.8
6	#16830.00	46.2 PK	68.2	-22.0	1.58 V	218	29.5	16.7

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 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	#5627.26	53.6 PK	68.2	-14.6	1.68 H	229	49.3	4.3
2	*5775.00	102.9 PK			1.68 H	229	98.4	4.5
3	*5775.00	90.4 AV			1.68 H	229	85.9	4.5
4	#6007.85	51.5 PK	68.2	-16.7	1.68 H	229	46.4	5.1
5	11550.00	47.5 PK	74.0	-26.5	1.45 H	254	33.6	13.9
6	11550.00	35.9 AV	54.0	-18.1	1.45 H	254	22.0	13.9
7	#17325.00	46.9 PK	68.2	-21.3	1.49 H	313	28.7	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5609.07	53.2 PK	68.2	-15.0	1.70 V	254	49.0	4.2
2	*5775.00	105.2 PK			1.70 V	254	100.7	4.5
3	*5775.00	93.4 AV			1.70 V	254	88.9	4.5
4	#5937.15	52.0 PK	68.2	-16.2	1.70 V	254	47.0	5.0
5	11550.00	47.2 PK	74.0	-26.8	1.55 V	319	33.3	13.9
6	11550.00	36.6 AV	54.0	-17.4	1.55 V	319	22.7	13.9
7	#17325.00	46.6 PK	68.2	-21.6	1.55 V	233	28.4	18.2

Remarks:

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

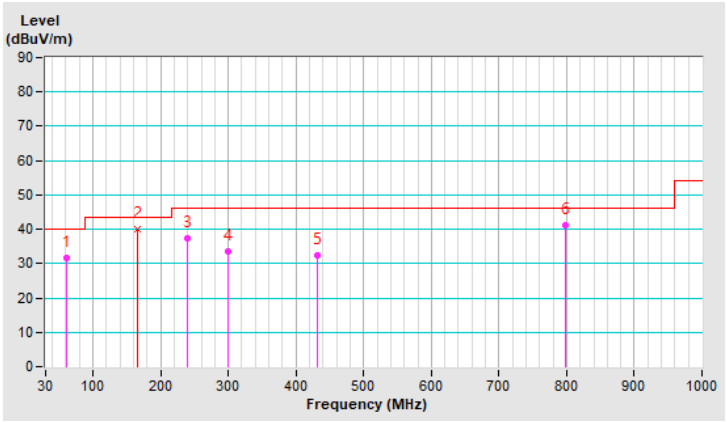
Below 1GHz Data:

RF Mode	TX 802.11ac (VHT80)	Channel	CH 155：5775 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	60.22	31.7 QP	40.0	-8.3	3.00 H	319	40.0	-8.3
2	166.26	40.0 QP	43.5	-3.5	1.50 H	281	47.1	-7.1
3	240.00	37.3 QP	46.0	-8.7	1.00 H	242	45.4	-8.1
4	298.74	33.7 QP	46.0	-12.3	1.00 H	277	39.6	-5.9
5	432.02	32.4 QP	46.0	-13.6	1.50 H	317	34.2	-1.8
6	797.29	41.1 QP	46.0	-4.9	1.50 H	283	35.3	5.8

Remarks:

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

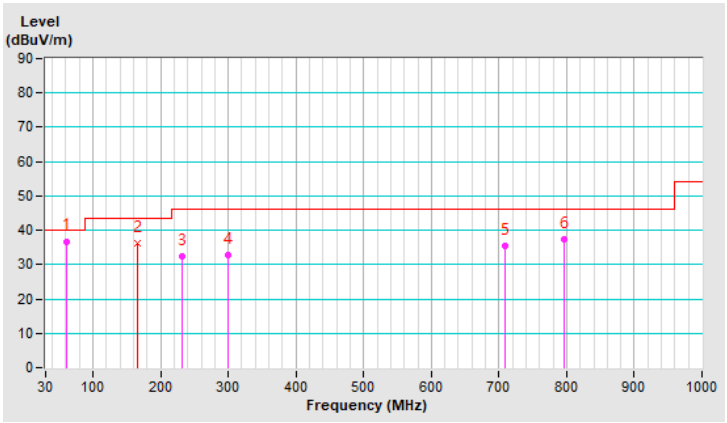


RF Mode	TX 802.11ac (VHT80)	Channel	CH 155：5775 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	61.31	36.8 QP	40.0	-3.2	1.00 V	294	45.2	-8.4
2	166.28	36.1 QP	43.5	-7.4	1.00 V	87	43.2	-7.1
3	232.37	32.4 QP	46.0	-13.6	1.00 V	122	41.2	-8.8
4	300.53	32.8 QP	46.0	-13.2	1.50 V	0	38.6	-5.8
5	708.93	35.6 QP	46.0	-10.4	1.50 V	317	31.6	4.0
6	796.57	37.4 QP	46.0	-8.6	1.00 V	134	31.6	5.8

Remarks:

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



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Oct. 23, 2019	Oct. 22, 2020
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 23, 2019	Oct. 22, 2020
Line-Impedance Stabilization Network (for Peripheral) R&S	ESH3-Z5	835239/001	Mar. 19, 2020	Mar. 18, 2021
50 ohms Terminator	50	3	Oct. 23, 2019	Oct. 22, 2020
RF Cable	5D-FB	COCCAB-001	Sep. 27, 2019	Sep. 26, 2020
Fixed attenuator EMCI	STI02-2200-10	005	Aug. 30, 2019	Aug. 29, 2020
Software BVADT	BVADT_Cond_ V7.3.7.4	NA	NA	NA

Note:
1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Conduction 1.
3 Tested Date: July 26, 2020

4.2.3 Test Procedure

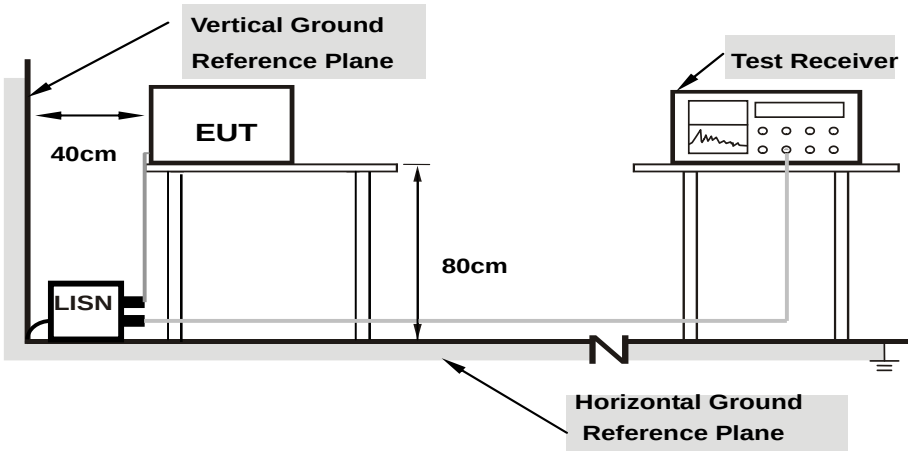
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Condition

Same as 4.1.6.

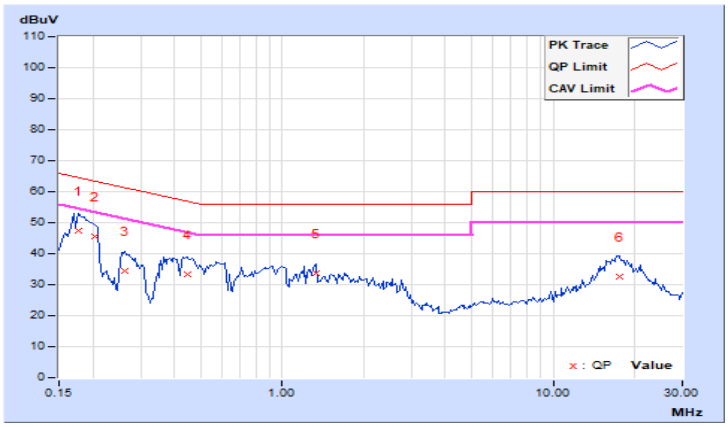
4.2.7 Test Results

RF Mode	TX 802.11ac (VHT80)	Channel	CH 155：5775 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.17734**	**9.97**	**37.55**	**12.91**	**47.52**	**22.88**	**64.61**	**54.61**	**-17.09**	**-31.73**
2	0.20469	9.97	35.73	13.79	45.70	23.76	63.42	53.42	-17.72	-29.66
3	0.26328	9.97	24.41	1.88	34.38	11.85	61.33	51.33	-26.95	-39.48
4	0.44688	9.98	23.50	5.37	33.48	15.35	56.93	46.93	-23.45	-31.58
5	1.33203	10.04	23.77	9.63	33.81	19.67	56.00	46.00	-22.19	-26.33
6	17.52344	10.91	21.70	17.09	32.61	28.00	60.00	50.00	-27.39	-22.00

Remarks:

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

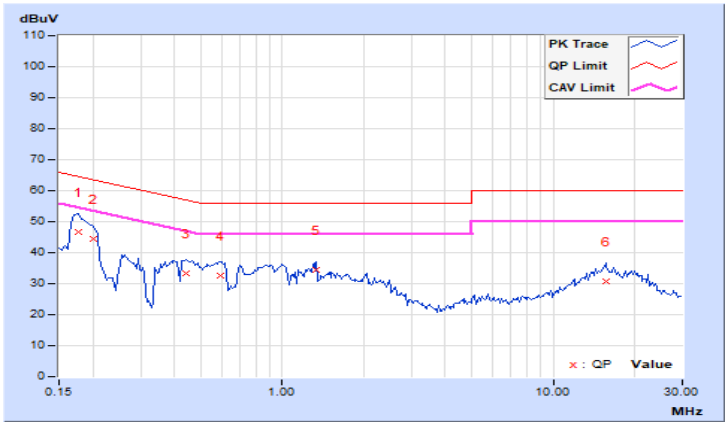


RF Mode	TX 802.11ac (VHT80)	Channel	CH 155：5775 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17734	9.97	36.56	12.65	46.53	22.62	64.61	54.61	-18.08	-31.99
2	0.20078	9.97	34.35	14.60	44.32	24.57	63.58	53.58	-19.26	-29.01
3	0.43906	9.98	23.17	5.03	33.15	15.01	57.08	47.08	-23.93	-32.07
4	0.59141	9.99	22.47	6.31	32.46	16.30	56.00	46.00	-23.54	-29.70
5	1.33594	10.03	24.31	8.68	34.34	18.71	56.00	46.00	-21.66	-27.29
6	15.62891	10.63	19.97	13.25	30.60	23.88	60.00	50.00	-29.40	-26.12

Remarks:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

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

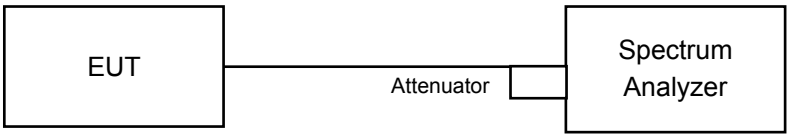
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

4.3.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

FOR 26dB OCCUPIED BANDWIDTH



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

FOR POWER OUTPUT MEASUREMENT

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

FOR 26dB OCCUPIED BANDWIDTH

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Condition

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

4.3.7 Test Results

Power Output:

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
36	5180	35.156	15.46	24.00	Pass
40	5200	36.644	15.64	24.00	Pass
48	5240	35.892	15.55	24.00	Pass
52	5260	36.813	15.66	24.00	Pass
60	5300	37.844	15.78	24.00	Pass
64	5320	35.892	15.55	24.00	Pass
100	5500	28.184	14.50	24.00	Pass
116	5580	29.648	14.72	24.00	Pass
140	5700	28.119	14.49	24.00	Pass
149	5745	52.119	17.17	30.00	Pass
157	5785	51.523	17.12	30.00	Pass
165	5825	52.966	17.24	30.00	Pass

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	21.3	24.28 > 24
60	5300	21.31	24.28 > 24
64	5320	21.45	24.31 > 24
100	5500	21.25	24.27 > 24
116	5580	21.27	24.27 > 24
140	5700	21.33	24.28 > 24

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

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	15.33	14.51	62.368	17.95	24.00	Pass
40	5200	15.39	14.64	63.701	18.04	24.00	Pass
48	5240	15.74	14.42	65.167	18.14	24.00	Pass
52	5260	15.70	15.63	73.713	18.68	24.00	Pass
60	5300	15.82	15.73	75.605	18.79	24.00	Pass
64	5320	15.74	15.71	74.736	18.74	24.00	Pass
100	5500	14.48	14.63	57.095	17.57	24.00	Pass
116	5580	14.68	14.79	59.507	17.75	24.00	Pass
140	5700	14.49	14.63	57.159	17.57	24.00	Pass
149	5745	17.11	17.19	103.764	20.16	30.00	Pass
157	5785	17.21	17.41	107.682	20.32	30.00	Pass
165	5825	17.18	17.44	107.702	20.32	30.00	Pass

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
52	5260	21.85	24.39 > 24
60	5300	22.19	24.46 > 24
64	5320	21.9	24.4 > 24
100	5500	21.49	24.32 > 24
116	5580	21.46	24.31 > 24
140	5700	21.5	24.32 > 24

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

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	15.57	14.69	65.502	18.16	24.00	Pass
46	5230	15.63	14.78	66.62	18.24	24.00	Pass
54	5270	15.63	15.53	72.287	18.59	24.00	Pass
62	5310	15.94	15.62	75.74	18.79	24.00	Pass
102	5510	14.75	14.69	59.298	17.73	24.00	Pass
110	5550	14.78	14.70	59.573	17.75	24.00	Pass
134	5670	14.76	14.66	59.164	17.72	24.00	Pass
151	5755	17.18	17.16	104.239	20.18	30.00	Pass
159	5795	17.22	17.32	106.674	20.28	30.00	Pass

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
54	5270	45.73	27.6 > 24
62	5310	45.58	27.58 > 24
102	5510	45.36	27.56 > 24
110	5550	45.35	27.56 > 24
134	5670	45.24	27.55 > 24

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

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	15.79	14.87	68.622	18.36	24.00	Pass
58	5290	15.99	15.96	79.165	18.99	24.00	Pass
106	5530	14.92	14.96	62.378	17.95	24.00	Pass
122	5610	14.82	14.85	60.888	17.85	24.00	Pass
155	5775	17.25	17.62	110.898	20.45	30.00	Pass

Determined Power Limit			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Power Limit (dBm)
58	5290	91.91	30.63 > 24
106	5530	84.4	30.26 > 24
122	5610	84.29	30.25 > 24

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

26dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
52	5260	21.3
60	5300	21.31
64	5320	21.45
100	5500	21.25
116	5580	21.27
140	5700	21.33

802.11ac (VHT20)

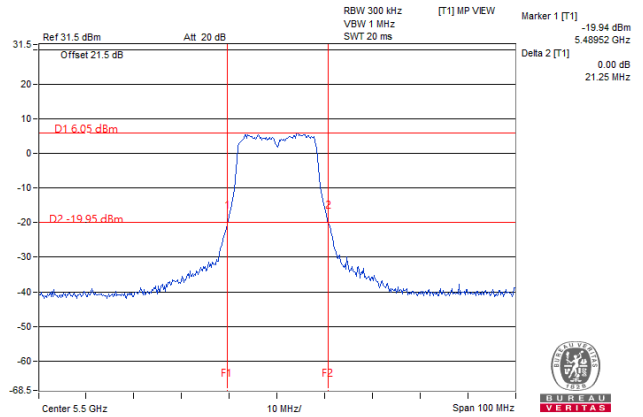
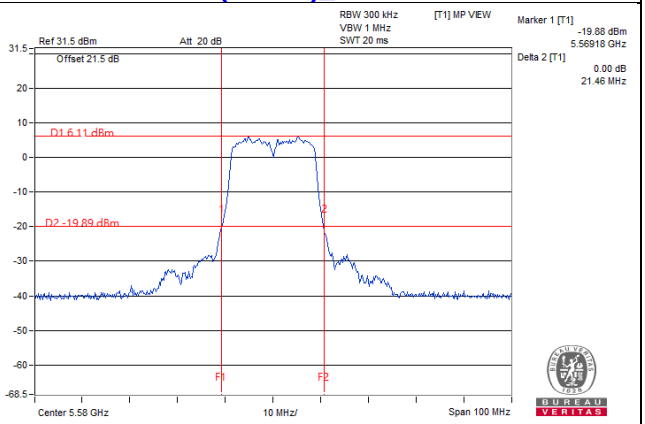
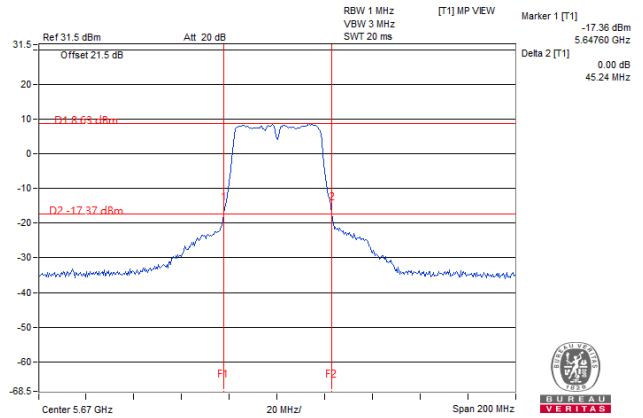
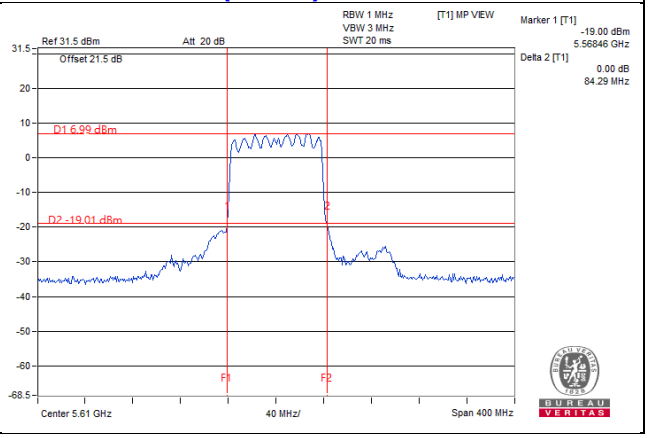
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		Chain 0	Chain 1
52	5260	22.41	21.85
60	5300	22.4	22.19
64	5320	22.14	21.9
100	5500	21.78	21.49
116	5580	21.76	21.46
140	5700	21.68	21.5

802.11ac (VHT40)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		Chain 0	Chain 1
54	5270	45.81	45.73
62	5310	45.58	45.79
102	5510	45.37	45.36
110	5550	45.49	45.35
134	5670	45.24	45.46

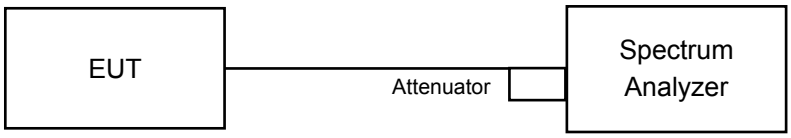
802.11ac (VHT80)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		Chain 0	Chain 1
58	5290	92.98	91.91
106	5530	84.4	85.25
122	5610	84.29	84.39

Spectrum Plot of Worst Value	
802.11a / CH100	**802.11ac (VHT20)_Chain 1 / CH116**
	
802.11ac (VHT40)_Chain 0 / CH134	**802.11ac (VHT80)_Chain 0 / CH122**
	

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Results

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.8
40	5200	16.8
48	5240	16.8
52	5260	16.8
60	5300	16.8
64	5320	16.8
100	5500	16.8
116	5580	16.68
140	5700	16.8
149	5745	16.8
157	5785	16.8
165	5825	16.8

802.11ac (VHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.76	17.64
40	5200	17.88	17.64
48	5240	17.88	17.64
52	5260	17.88	17.76
60	5300	17.88	17.76
64	5320	17.88	17.76
100	5500	17.88	17.64
116	5580	17.76	17.64
140	5700	17.76	17.64
149	5745	17.88	17.88
157	5785	17.88	17.88
165	5825	17.88	17.88

802.11ac (VHT40)

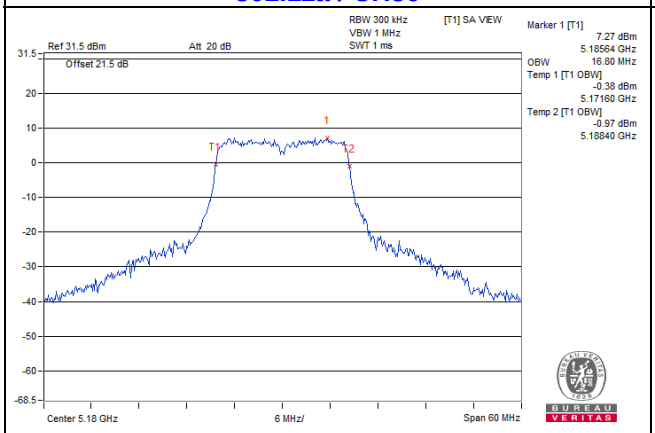
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	37.2	37.2
46	5230	36.96	36.96
54	5270	36.96	37.44
62	5310	37.44	37.2
102	5510	37.2	37.44
110	5550	37.2	37.2
134	5670	37.2	37.44
151	5755	37.68	37.68
159	5795	37.44	37.44

802.11ac (VHT80)

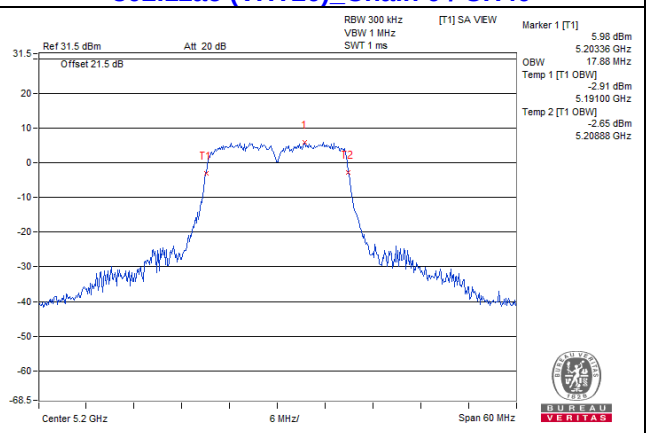
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.84	75.84
58	5290	75.84	75.84
106	5530	75.84	75.84
122	5610	75.84	75.84
155	5775	75.84	75.84

Spectrum Plot of Max. Value

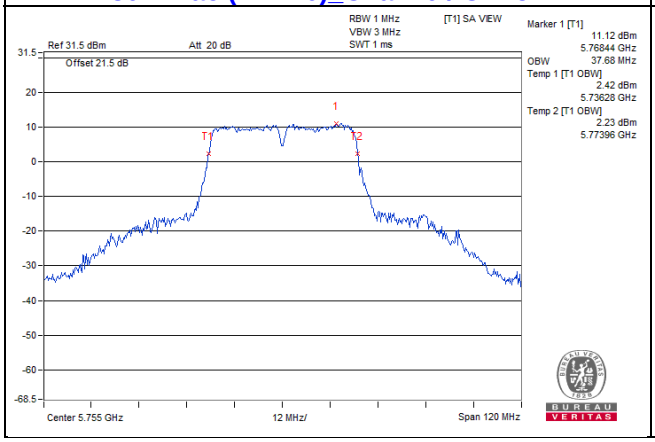
802.11a / CH36



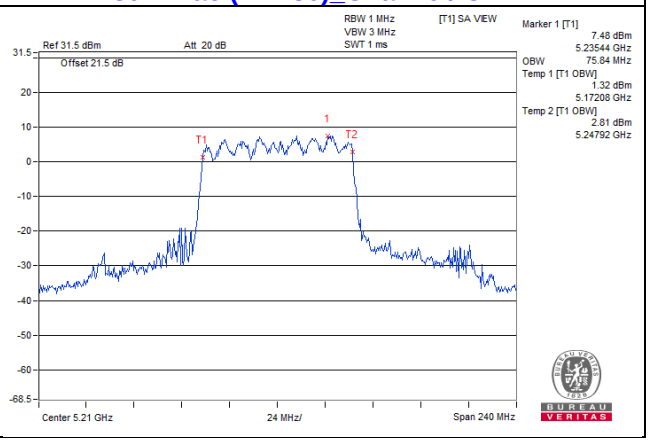
802.11ac (VHT20)_Chain 0 / CH40

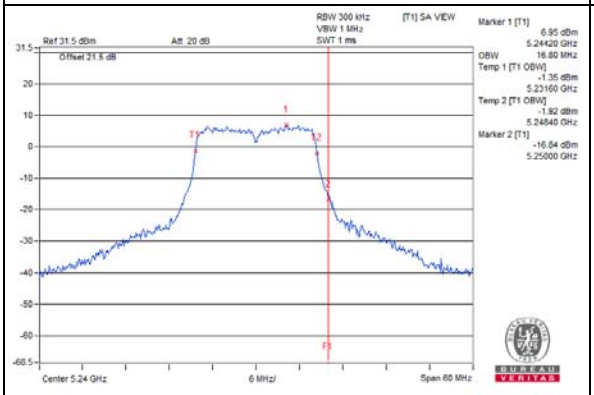
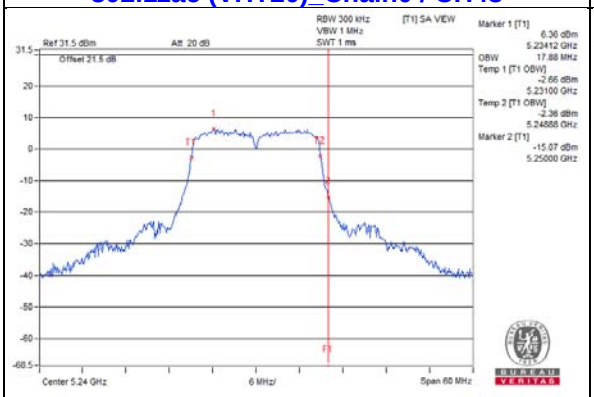
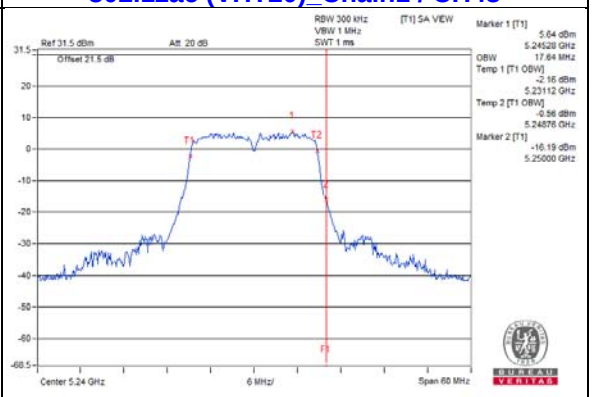
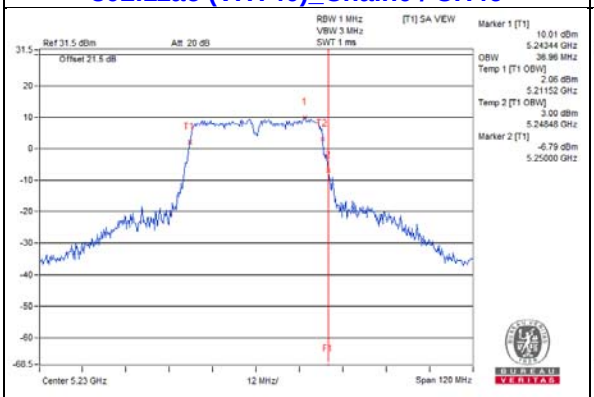
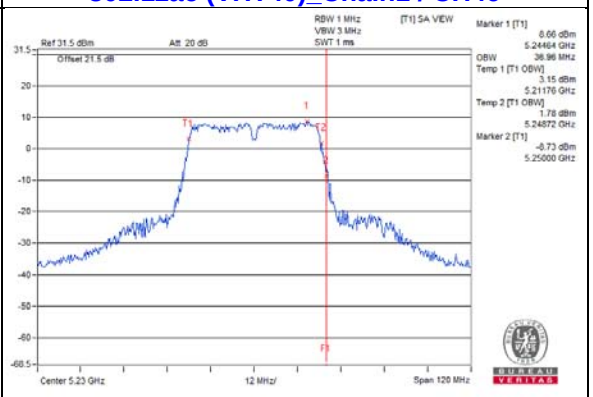
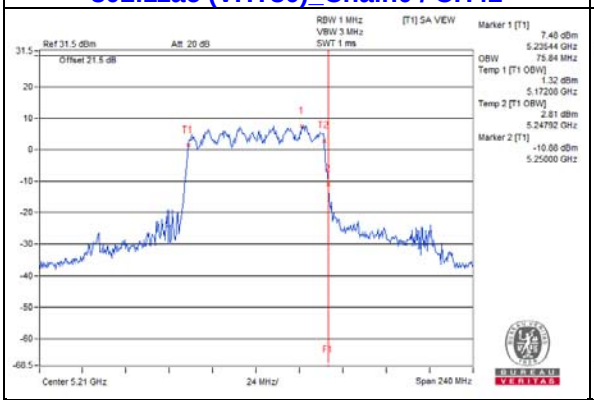
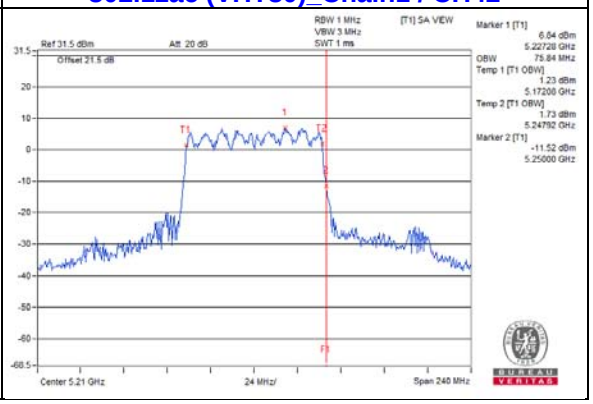


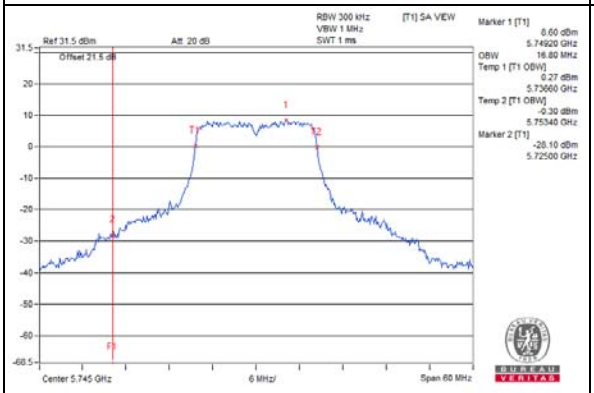
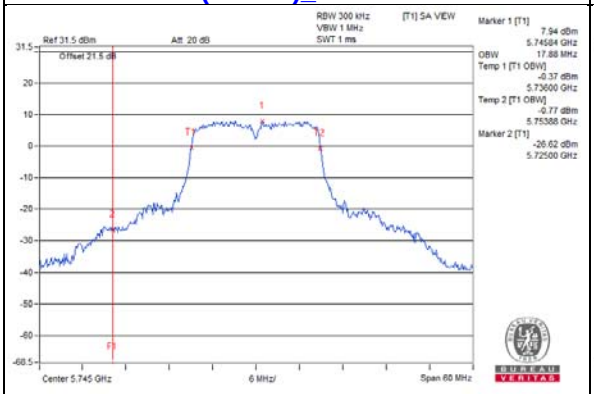
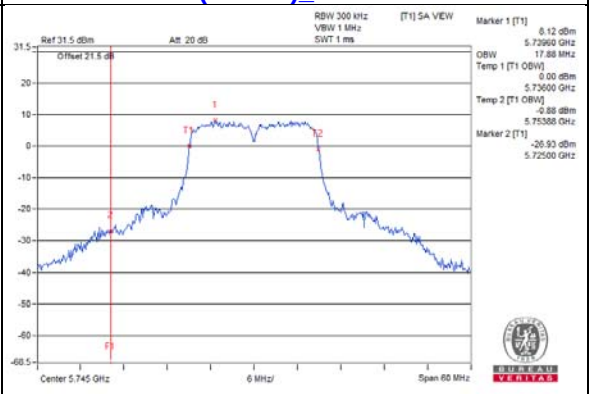
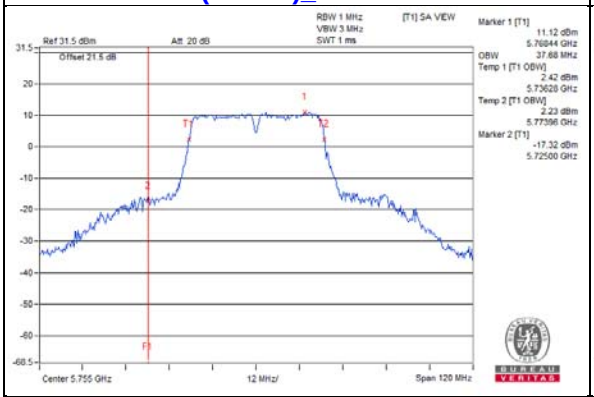
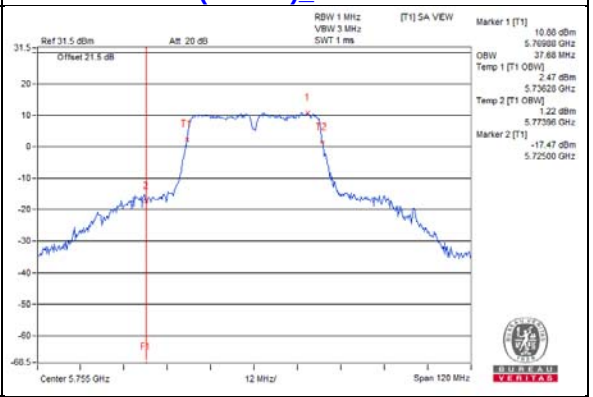
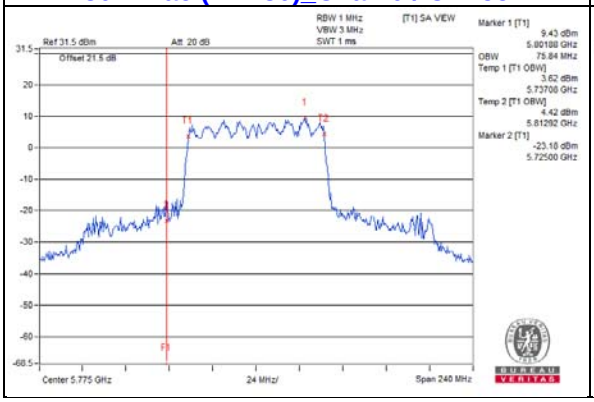
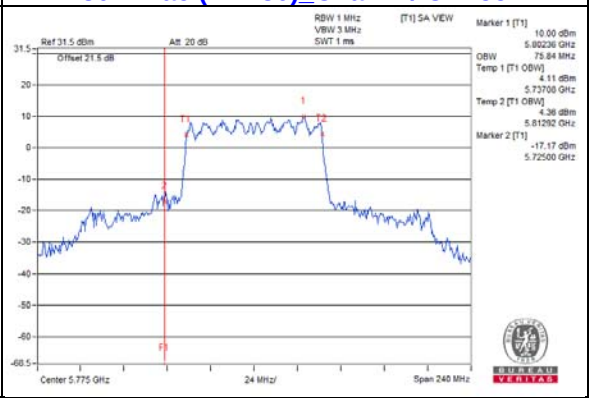
802.11ac (VHT40)_Chain 0 / CH151



802.11ac (VHT80)_Chain 0 / CH42



Spectrum Plot for near by DFS band (DFS is required, if 99% OCP straddle into U-NII-2A band)	
802.11a / CH48	
	
802.11ac (VHT20)_Chain0 / CH48	**802.11ac (VHT20)_Chain1 / CH48**
	
802.11ac (VHT40)_Chain0 / CH46	**802.11ac (VHT40)_Chain1 / CH46**
	
802.11ac (VHT80)_Chain0 / CH42	**802.11ac (VHT80)_Chain1 / CH42**
	

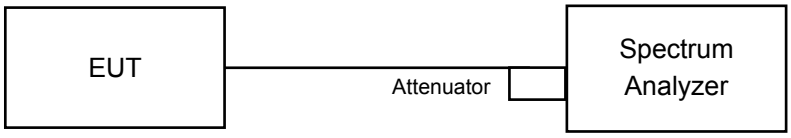
Spectrum Plot for near by DFS band (DFS is required, if 99% OCP straddle into U-NII-2C band)	
802.11a / CH149	
	
802.11ac (VHT20)_Chain0 / CH149	**802.11ac (VHT20)_Chain1 / CH149**
	
802.11ac (VHT40)_Chain0 / CH151	**802.11ac (VHT40)_Chain1 / CH151**
	
802.11ac (VHT80)_Chain0 / CH155	**802.11ac (VHT80)_Chain1 / CH155**
	

4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

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

For 802.11a test

Using method SA-2

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

For other modulation test

Using method SA-1

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

For U-NII-3 band:

For 802.11a test

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500kHz/300kHz)
5. Sweep time = auto, trigger set to “free run”.
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value and add 10 log (1/duty cycle)

For other modulation test

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500kHz/300kHz)
5. Sweep time = auto, trigger set to “free run”.
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6.

4.5.7 Test Results

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

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
36	5180	3.86	0.17	4.03	11.00	Pass
40	5200	2.83	0.17	3.00	11.00	Pass
48	5240	2.89	0.17	3.06	11.00	Pass
52	5260	2.80	0.17	2.97	11.00	Pass
60	5300	2.89	0.17	3.06	11.00	Pass
64	5320	3.16	0.17	3.33	11.00	Pass
100	5500	1.83	0.17	2.00	11.00	Pass
116	5580	1.84	0.17	2.01	11.00	Pass
140	5700	1.74	0.17	1.91	11.00	Pass

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

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	1.15	0.19	3.71	10.97	Pass
40	5200	1.14	0.23	3.72	10.97	Pass
48	5240	1.27	0.12	3.74	10.97	Pass
52	5260	2.86	2.38	5.64	10.97	Pass
60	5300	2.64	3.11	5.89	10.97	Pass
64	5320	2.37	2.75	5.57	10.97	Pass
100	5500	1.35	1.76	4.57	10.97	Pass
116	5580	1.36	1.72	4.55	10.97	Pass
140	5700	1.13	1.94	4.56	10.97	Pass

Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 6.03 dBi > 6dBi, so the power density limit shall be reduced to 11-(6.03-6) = 10.97 dBm/MHz.

802.11ac (VHT40)

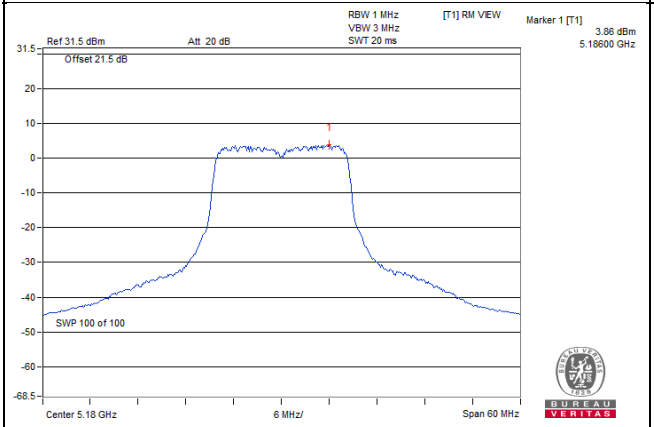
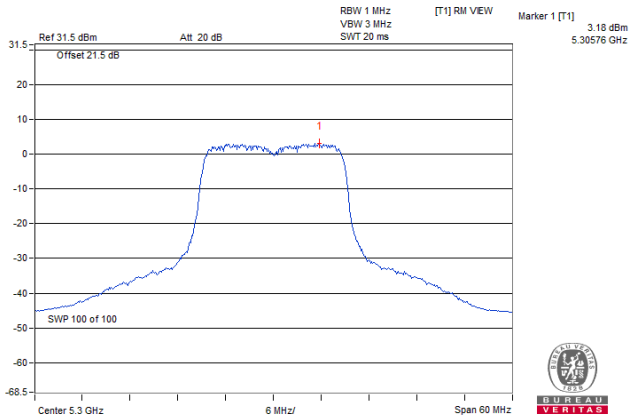
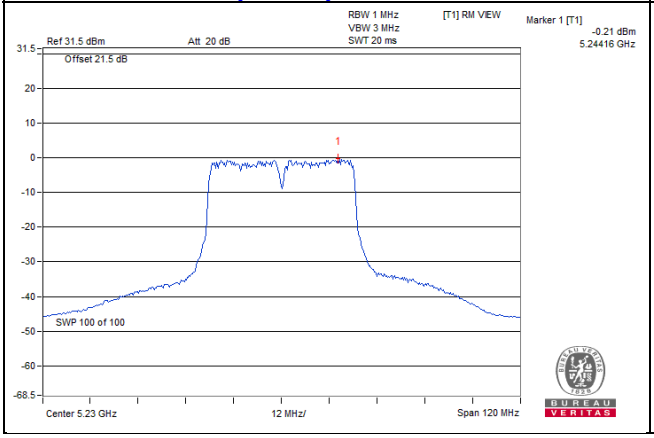
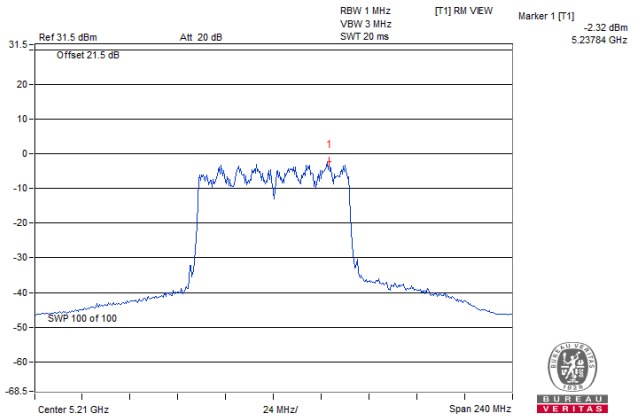
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
38	5190	-0.71	-1.87	1.76	10.97	Pass
46	5230	-0.21	-1.28	2.30	10.97	Pass
54	5270	-1.29	-0.92	1.91	10.97	Pass
62	5310	-0.33	-0.71	2.49	10.97	Pass
102	5510	-1.48	-2.00	1.28	10.97	Pass
110	5550	-1.72	-1.96	1.17	10.97	Pass
134	5670	-1.26	-1.66	1.55	10.97	Pass

Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 6.03 dBi > 6dBi, so the power density limit shall be reduced to 11-(6.03-6) = 10.97 dBm/MHz.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)		Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
42	5210	-2.32	-4.36	-0.21	10.97	Pass
58	5290	-2.60	-3.36	0.05	10.97	Pass
106	5530	-3.76	-3.84	-0.79	10.97	Pass
122	5610	-3.64	-3.80	-0.71	10.97	Pass

Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 6.03 dBi > 6dBi, so the power density limit shall be reduced to 11-(6.03-6) = 10.97 dBm/MHz.

Spectrum Plot of Worst Value	
802.11a / CH36	**802.11ac (VHT20)_Chain 1 / CH60**
	
802.11ac (VHT40)_Chain 0 / CH46	**802.11ac (VHT80)_Chain 0 / CH42**
	

For U-NII-3 band:

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
149	5745	-4.10	0.17	-3.93	-1.71	30.00	Pass
157	5785	-3.72	0.17	-3.55	-1.33	30.00	Pass
165	5825	-3.92	0.17	-3.75	-1.53	30.00	Pass

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

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)		Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
		Chain 0	Chain 1				
149	5745	-4.89	-4.73	-1.80	0.42	29.97	Pass
157	5785	-4.59	-4.43	-1.50	0.72	29.97	Pass
165	5825	-4.30	-4.24	-1.26	0.96	29.97	Pass

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 6.03 dBi > 6dBi, so the power density limit shall be reduced to 30-(6.03-6) = 29.97 dBm/500kHz.

802.11ac (VHT40)

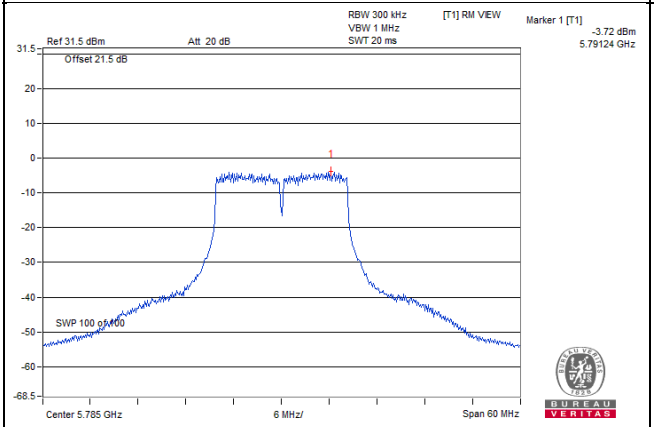
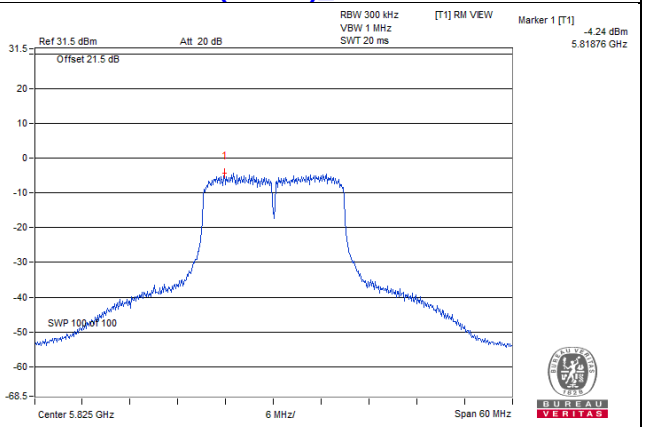
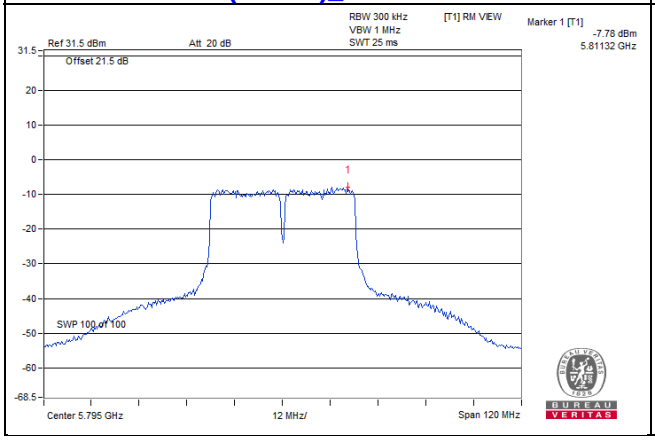
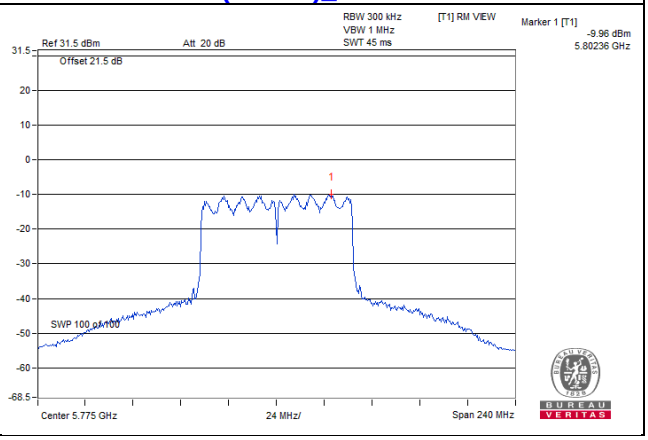
Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)		Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
		Chain 0	Chain 1				
151	5755	-7.97	-8.50	-5.22	-3.00	29.97	Pass
159	5795	-8.57	-7.78	-5.15	-2.93	29.97	Pass

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 6.03 dBi > 6dBi, so the power density limit shall be reduced to 30-(6.03-6) = 29.97 dBm/500kHz.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)		Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
		Chain 0	Chain 1				
155	5775	-10.20	-9.96	-7.07	-4.85	29.97	Pass

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 6.03 dBi > 6dBi, so the power density limit shall be reduced to 30-(6.03-6) = 29.97 dBm/500kHz.

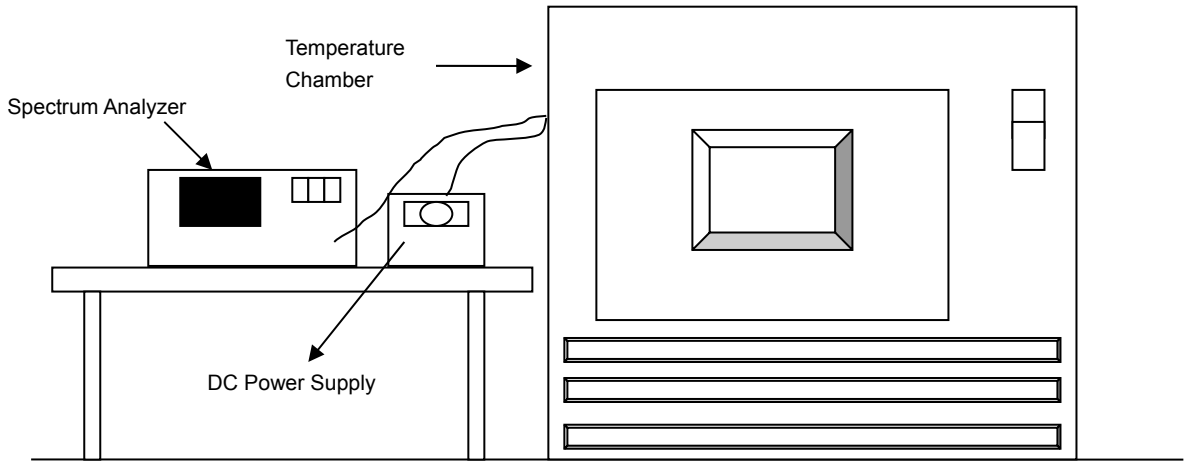
Spectrum Plot of Worst Value	
802.11a / CH157	**802.11ac (VHT20)_Chain 1 / CH165**
	
802.11ac (VHT40)_Chain 1 / CH159	**802.11ac (VHT80)_Chain 1 / CH155**
	

4.6 Frequency Stability Measurement

4.6.1 Limits of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
TEMP. (℃)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
40	5	5179.9935	Pass	5179.9903	Pass	5179.9938	Pass	5179.9902	Pass
30	5	5180.0246	Pass	5180.0256	Pass	5180.0252	Pass	5180.0239	Pass
20	5	5180.011	Pass	5180.0102	Pass	5180.0112	Pass	5180.0086	Pass
10	5	5180.0237	Pass	5180.0219	Pass	5180.0231	Pass	5180.0248	Pass
0	5	5179.9914	Pass	5179.9883	Pass	5179.9889	Pass	5179.9904	Pass

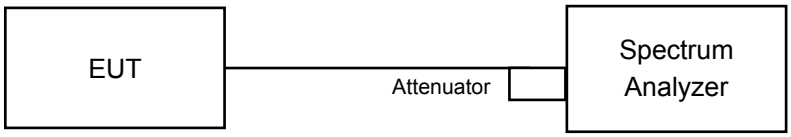
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (℃)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	5.75	5180.0112	Pass	5180.011	Pass	5180.0106	Pass	5180.008	Pass
	5	5180.011	Pass	5180.0102	Pass	5180.0112	Pass	5180.0086	Pass
	4.25	5180.0119	Pass	5180.011	Pass	5180.0112	Pass	5180.0077	Pass

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.38	0.5	Pass
157	5785	16.37	0.5	Pass
165	5825	16.37	0.5	Pass

802.11ac (VHT20)

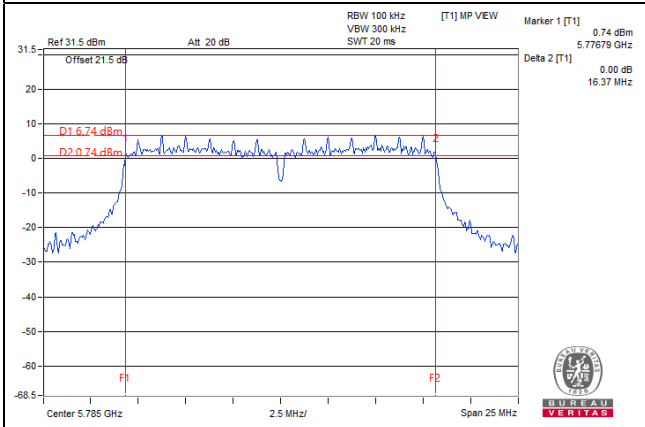
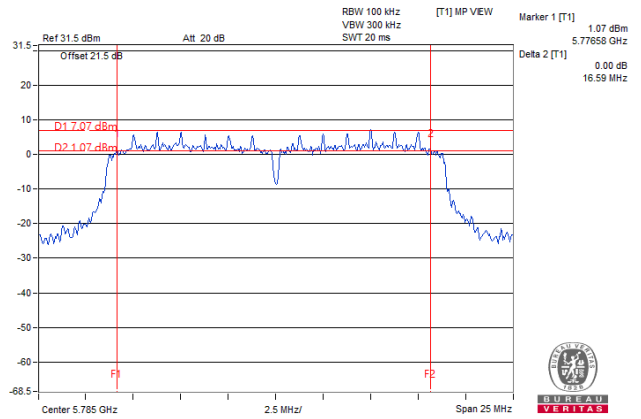
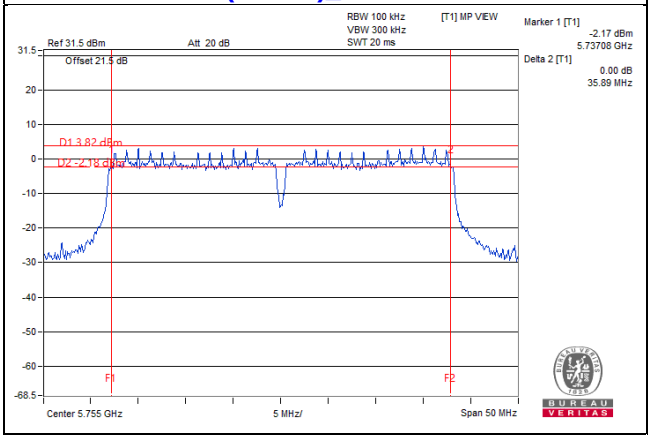
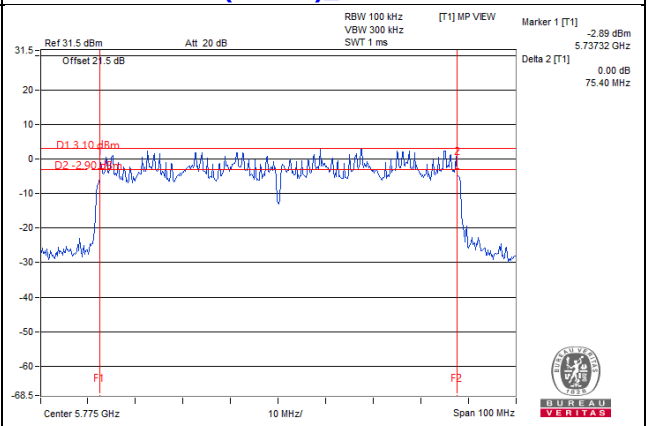
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17	16.94	0.5	Pass
157	5785	16.98	16.59	0.5	Pass
165	5825	17	16.6	0.5	Pass

802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	36.13	35.89	0.5	Pass
159	5795	36.01	35.94	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	75.44	75.4	0.5	Pass

Spectrum Plot of Worst Value	
802.11a / CH157	**802.11ac (VHT20)_Chain 1 / CH157**
	
802.11ac (VHT40)_Chain 1 / CH151	**802.11ac (VHT80)_Chain 1 / CH155**
	

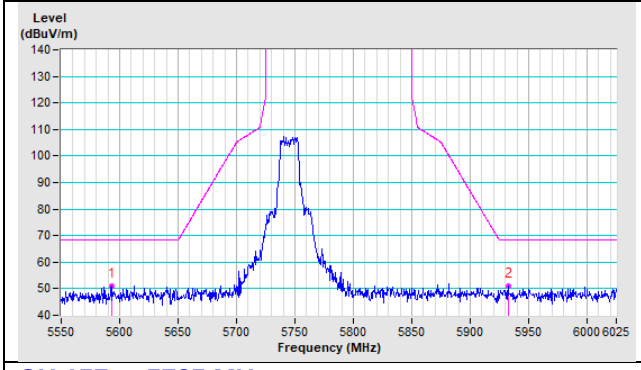
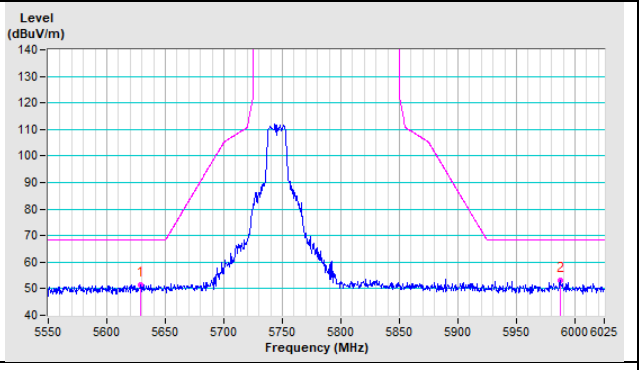
5 Pictures of Test Arrangements

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

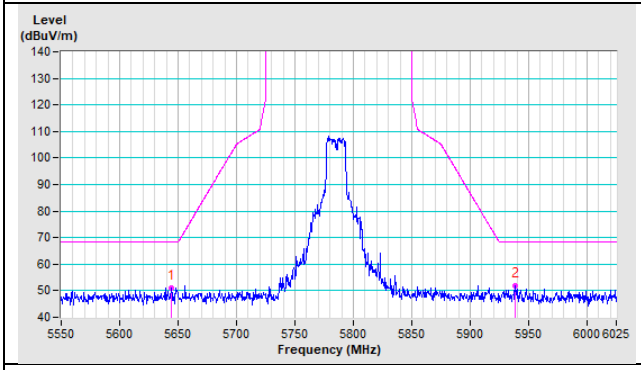
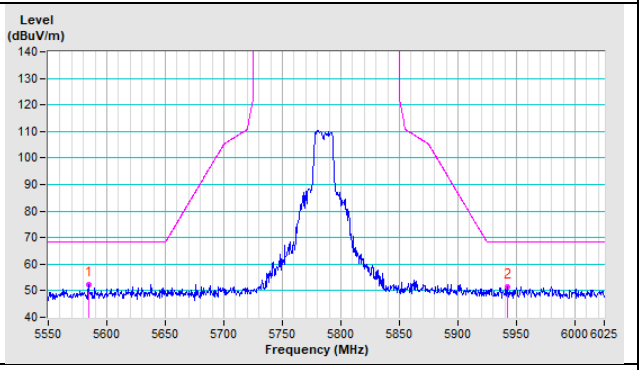
Annex A - Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a

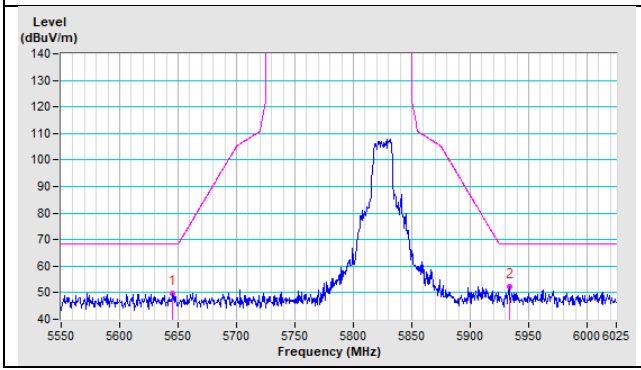
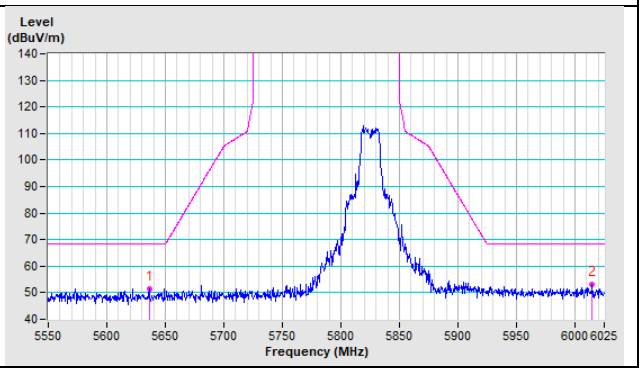
CH 149 5745 MHz

Horizontal	Vertical
	

CH 157 5785 MHz

Horizontal	Vertical
	

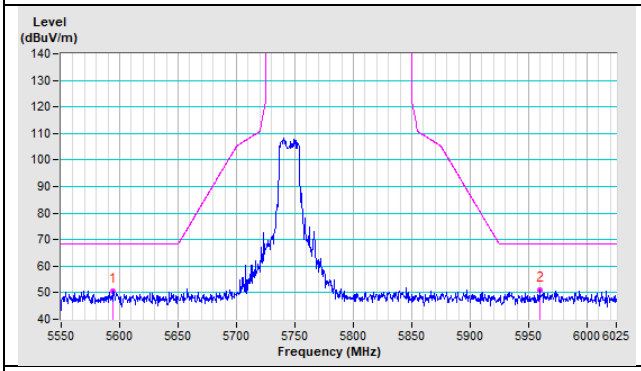
CH 165 5825 MHz

Horizontal	Vertical
	

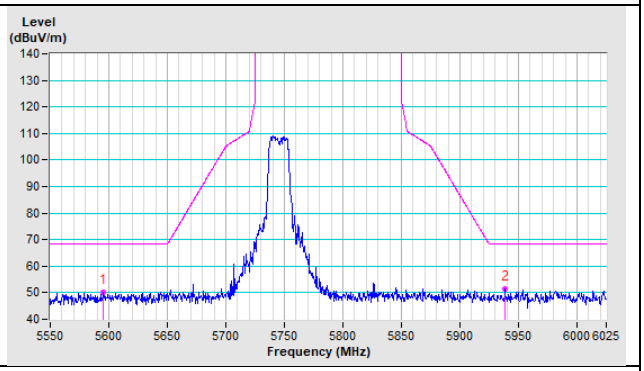
802.11ac (VHT20)

CH 149 5745 MHz

Horizontal

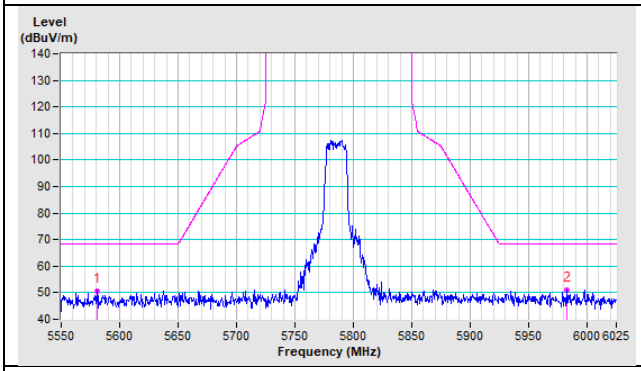


Vertical

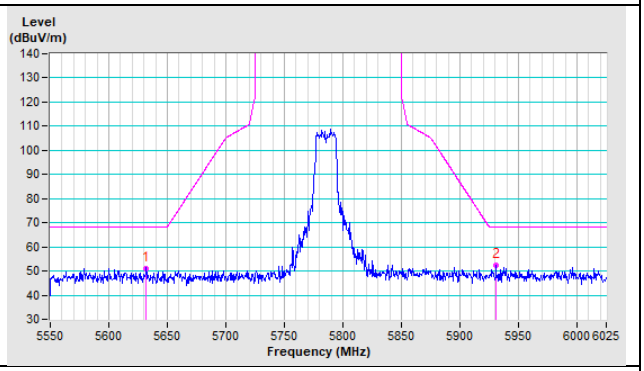


CH 157 5785 MHz

Horizontal

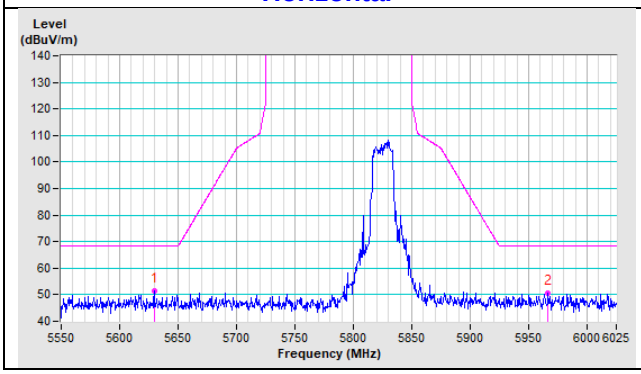


Vertical

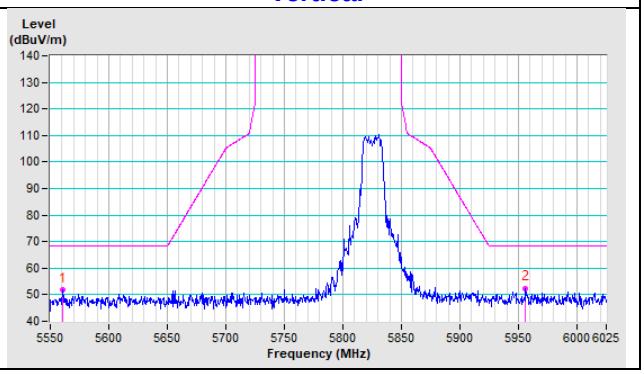


CH 165 5825 MHz

Horizontal



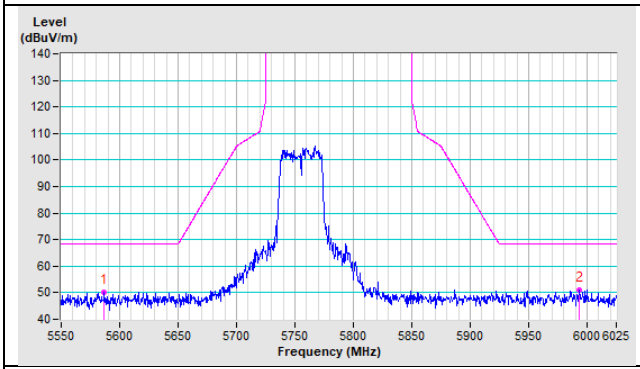
Vertical



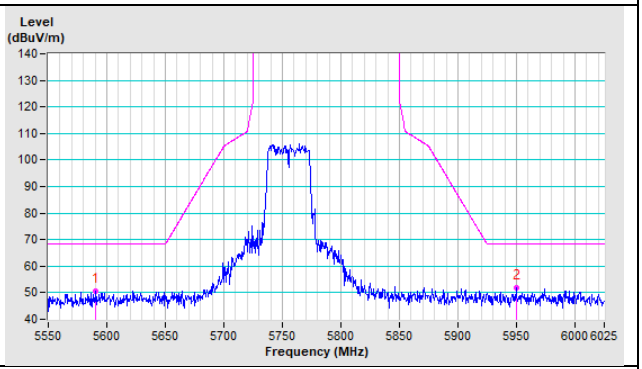
802.11ac (VHT40)

CH 151 5755 MHz

Horizontal

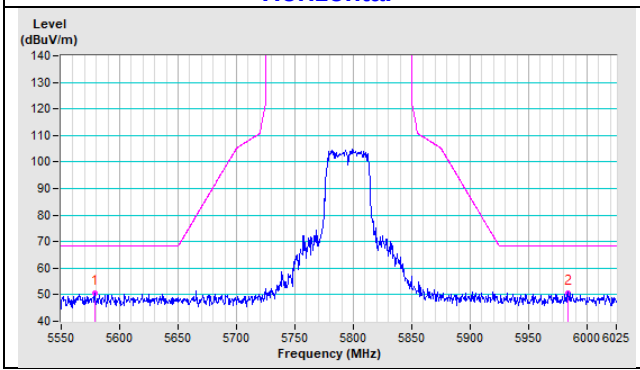


Vertical

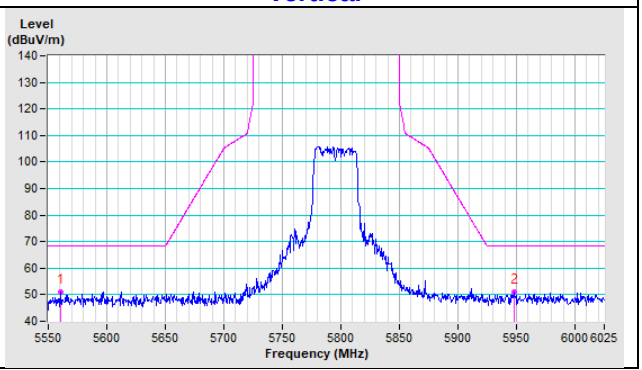


CH 159 5795 MHz

Horizontal



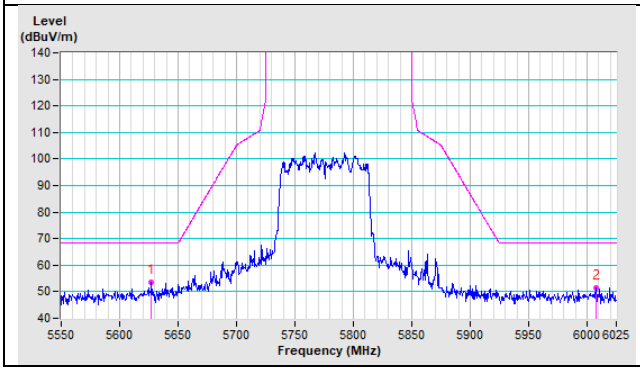
Vertical



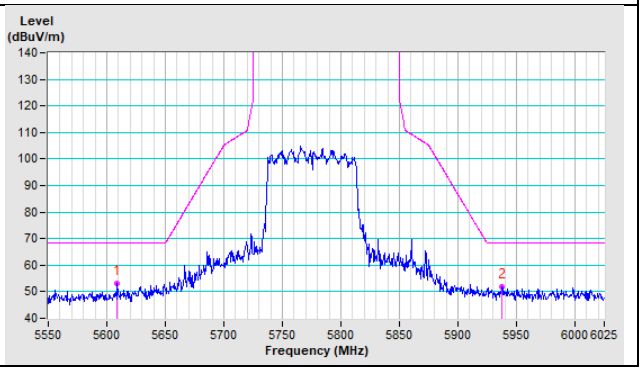
802.11ac (VHT80)

CH 155 5775 MHz

Horizontal



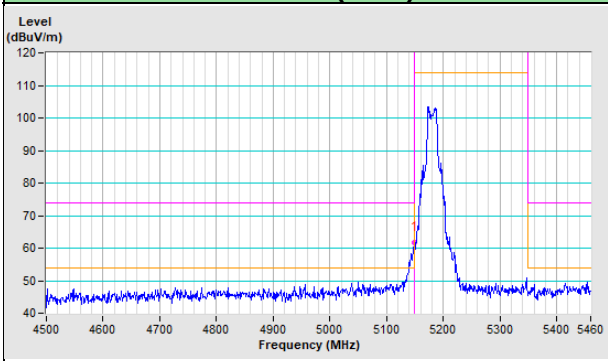
Vertical



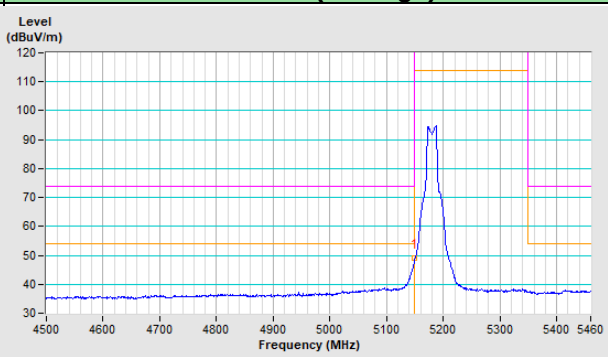
Annex B - Band-Edge Measurement (For U-NII-1, U-NII-2A, U-NII-2C band)

802.11a Channel 36

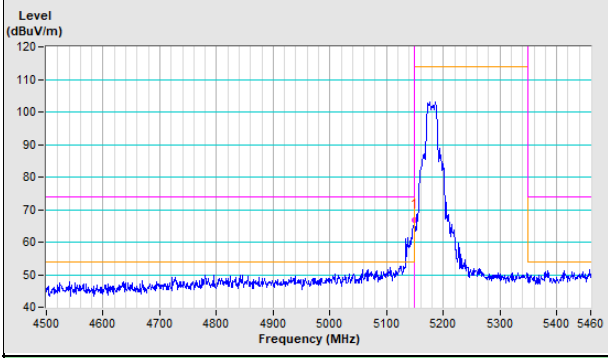
Horizontal (Peak)



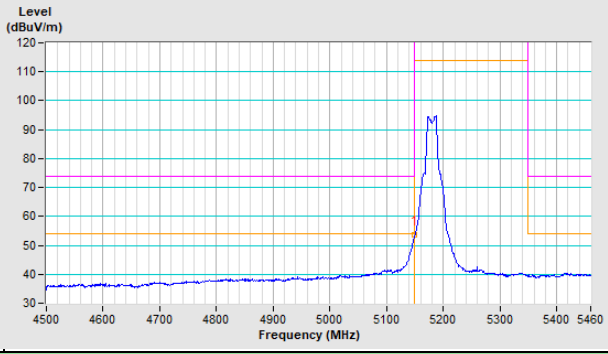
Horizontal (Average)



Vertical (Peak)

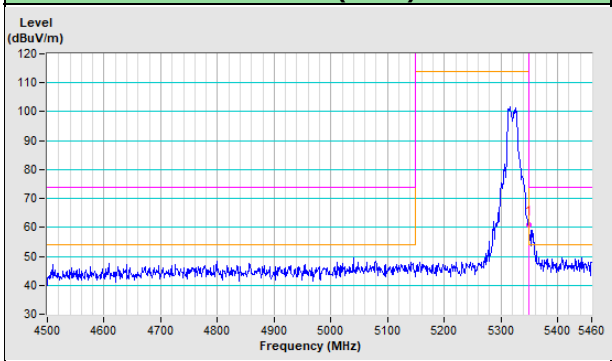


Vertical (Average)

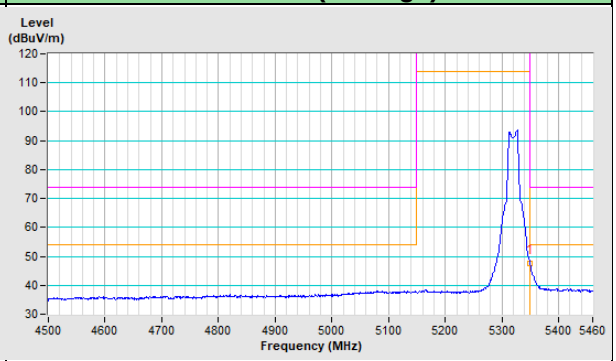


802.11a Channel 64

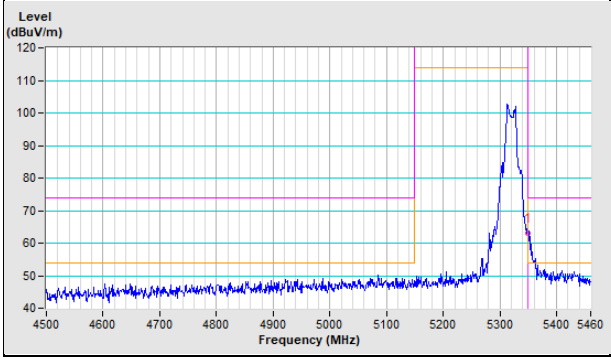
Horizontal (Peak)



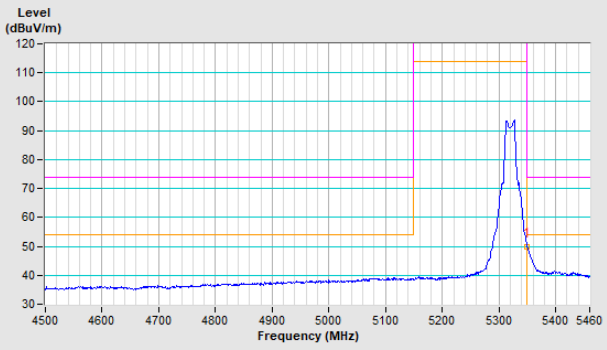
Horizontal (Average)

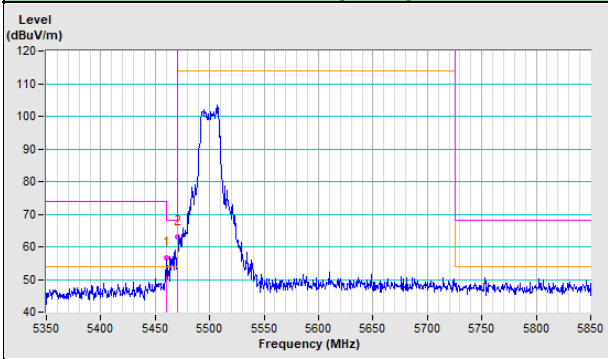
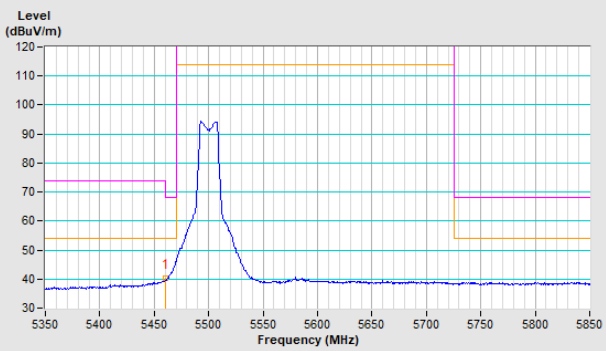
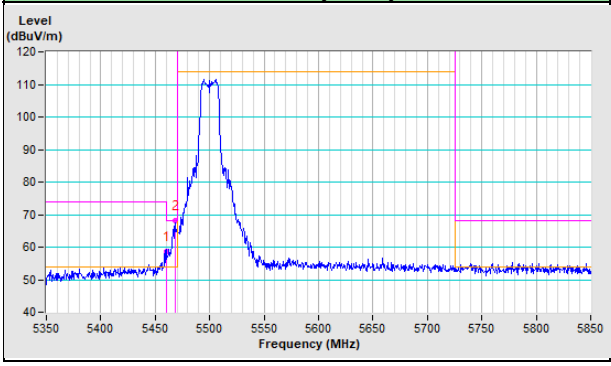
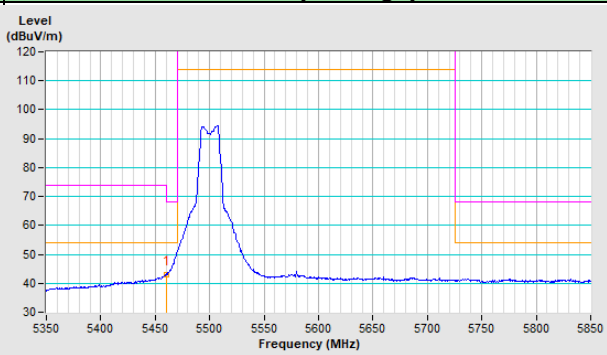


Vertical (Peak)



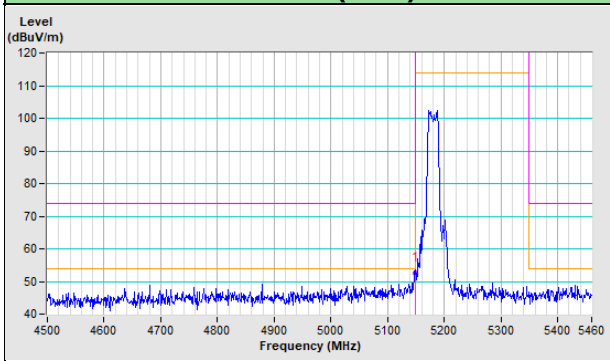
Vertical (Average)



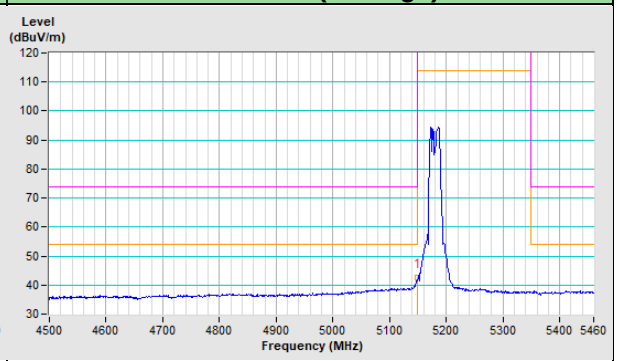
802.11a Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT20) Channel 36

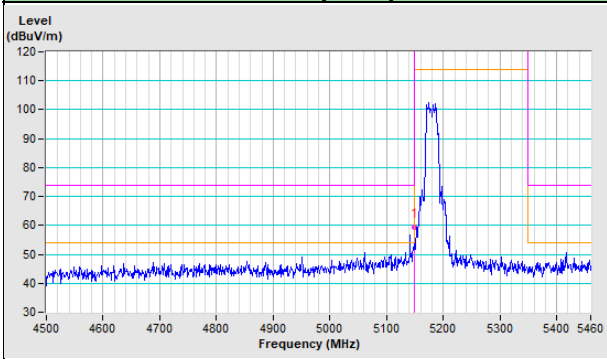
Horizontal (Peak)



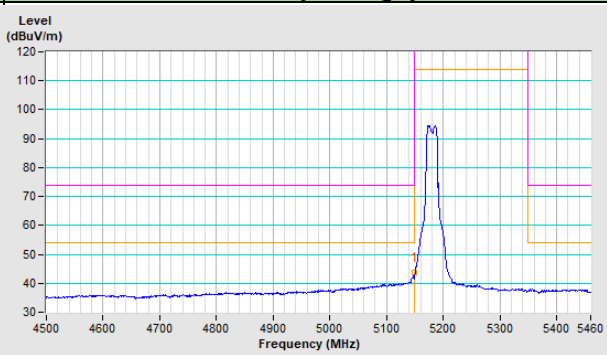
Horizontal (Average)



Vertical (Peak)

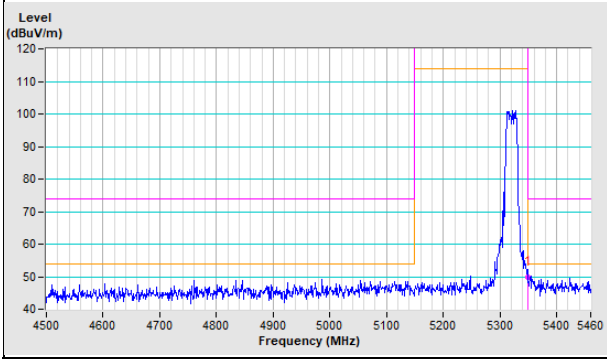


Vertical (Average)

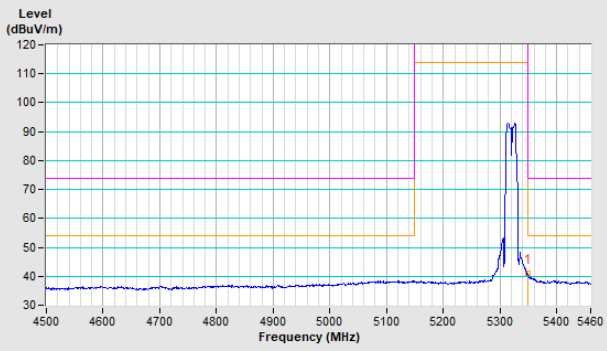


802.11ac (VHT20) Channel 64

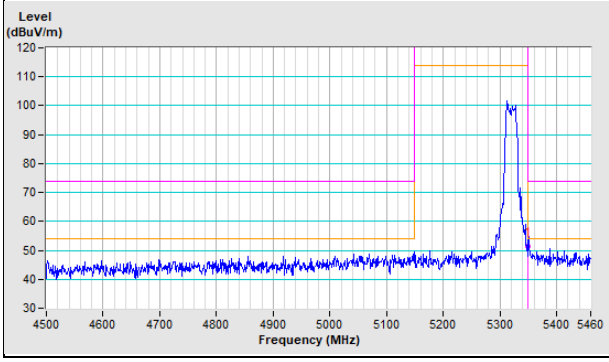
Horizontal (Peak)



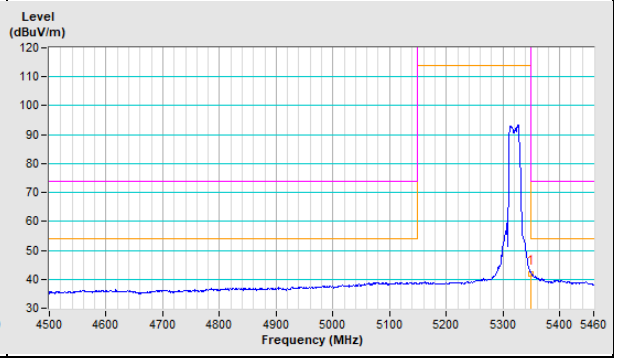
Horizontal (Average)

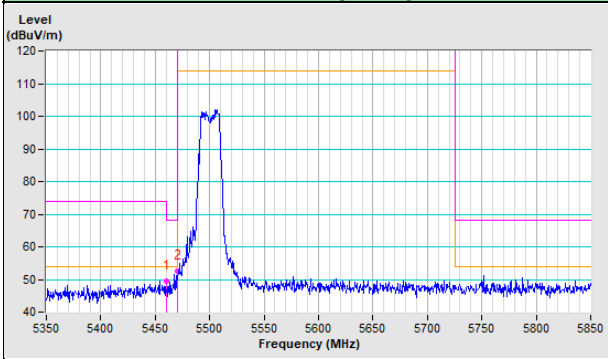
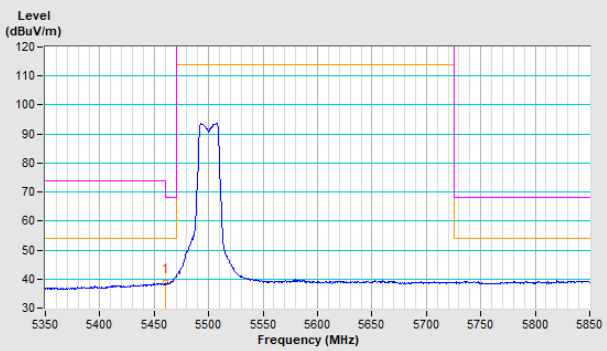
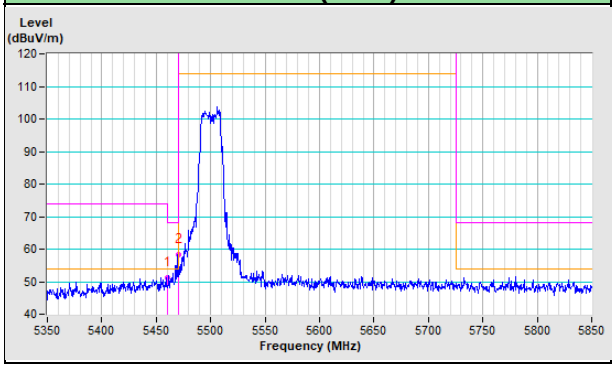
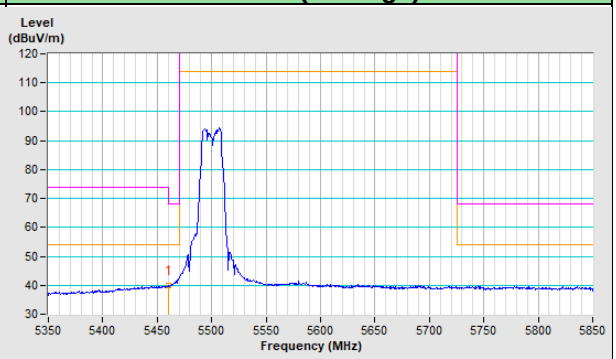


Vertical (Peak)



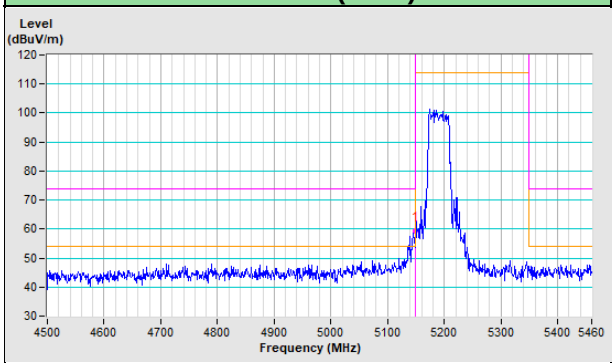
Vertical (Average)



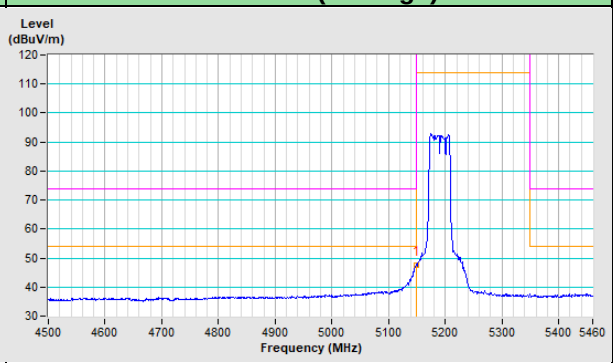
802.11ac (VHT20) Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT40) Channel 38

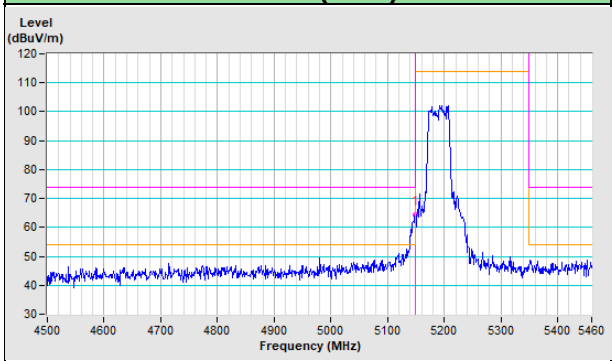
Horizontal (Peak)



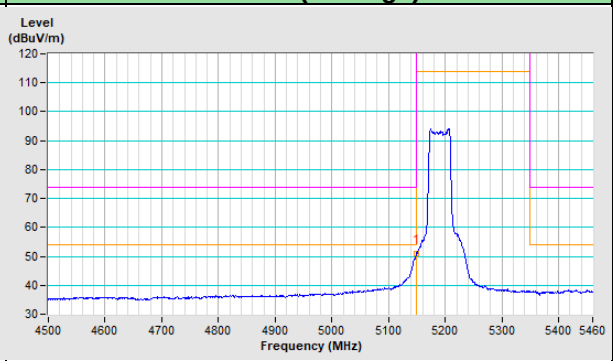
Horizontal (Average)



Vertical (Peak)

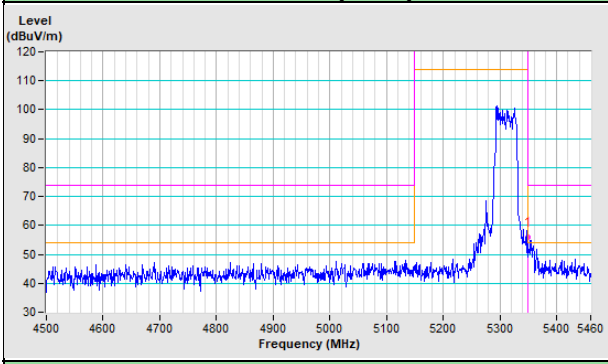


Vertical (Average)

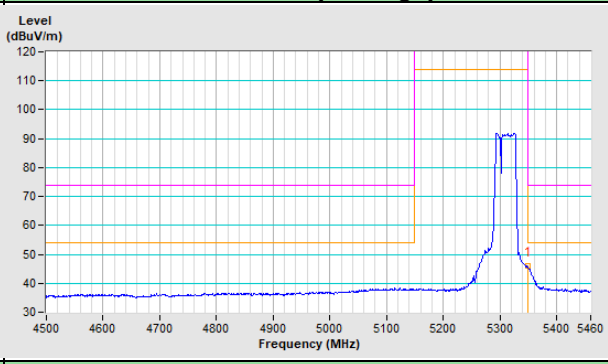


802.11ac (VHT40) Channel 62

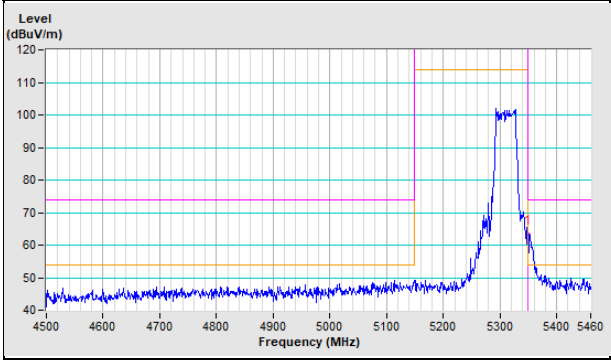
Horizontal (Peak)



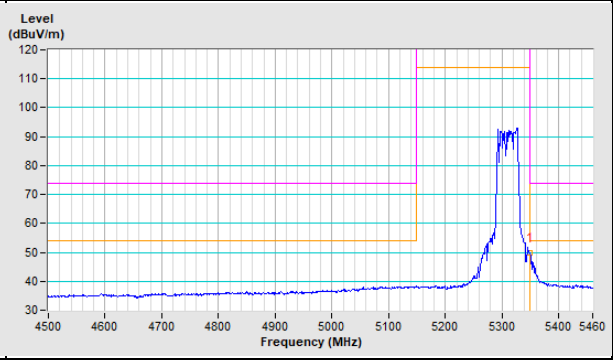
Horizontal (Average)

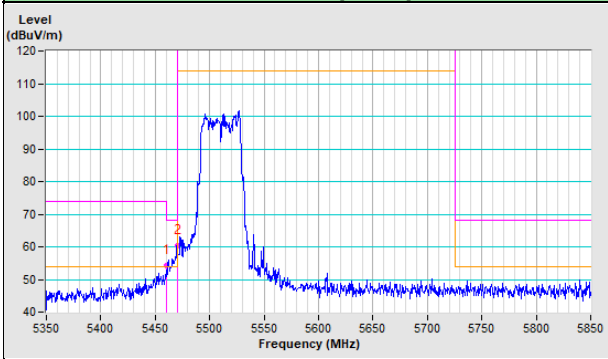
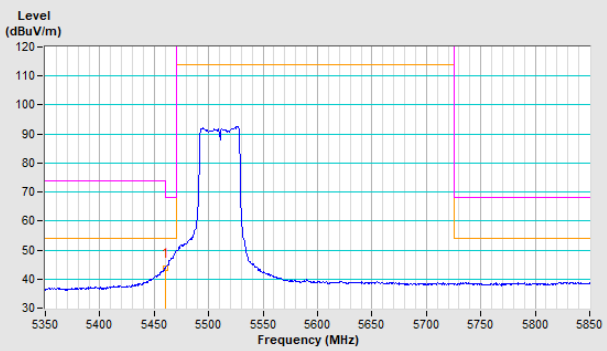
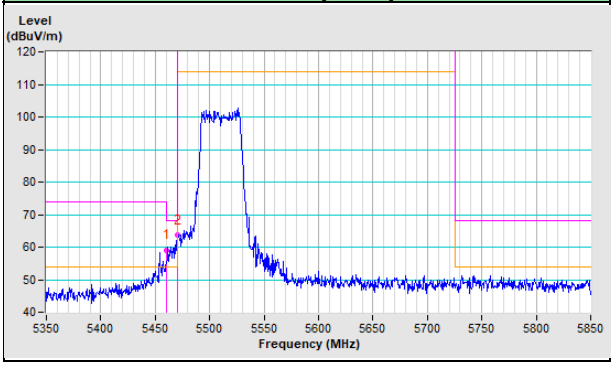
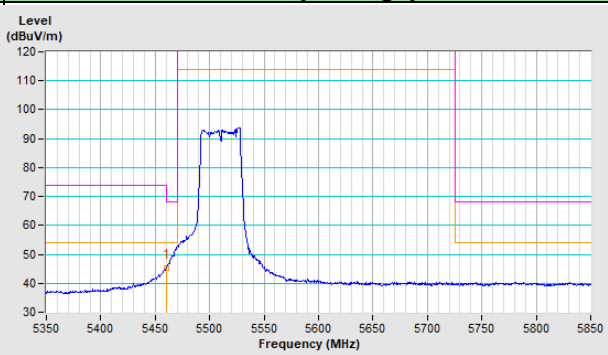


Vertical (Peak)



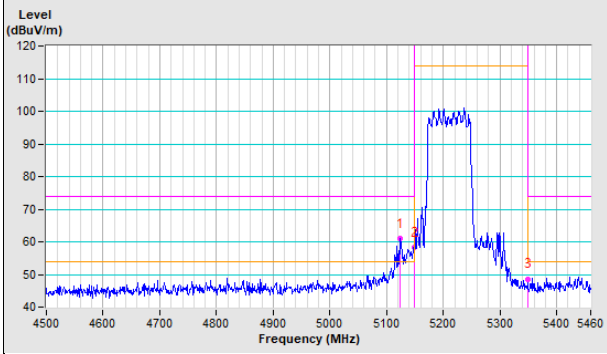
Vertical (Average)



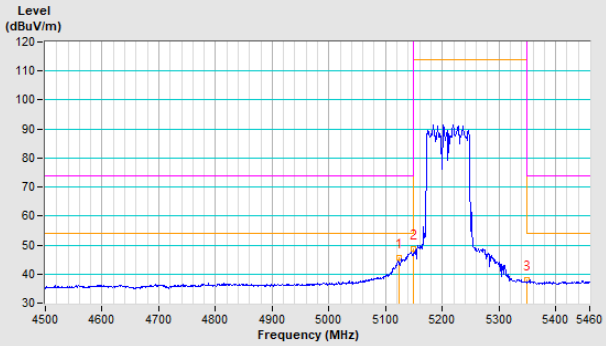
802.11ac (VHT40) Channel 102	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT80) Channel 42

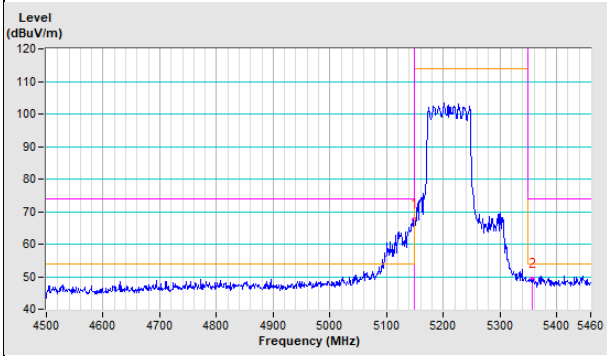
Horizontal (Peak)



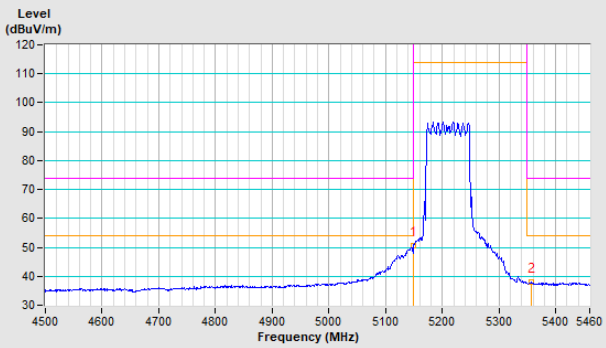
Horizontal (Average)



Vertical (Peak)

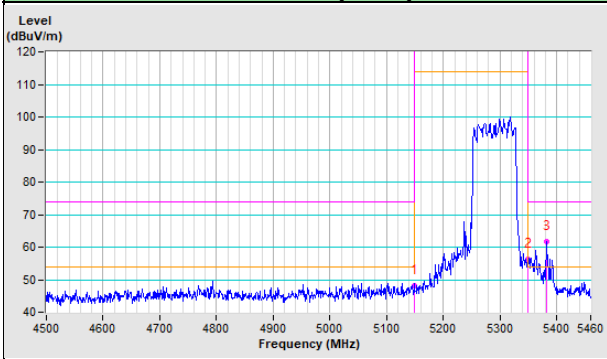


Vertical (Average)

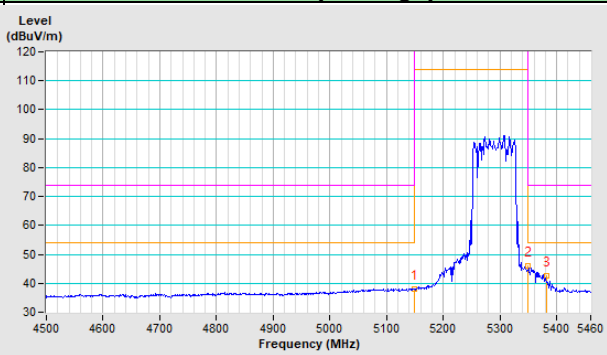


802.11ac (VHT80) Channel 58

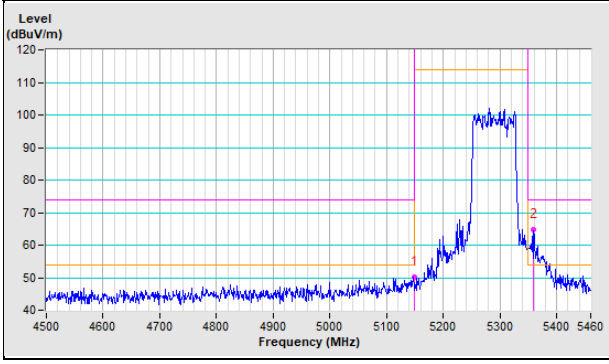
Horizontal (Peak)



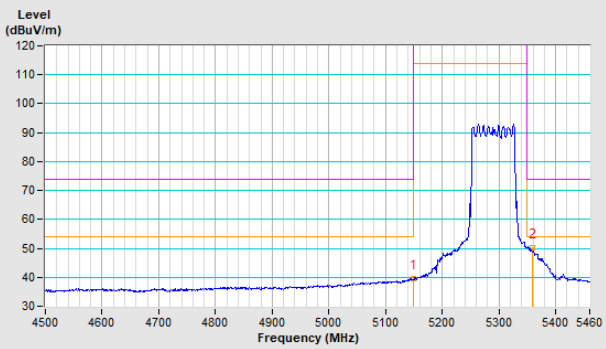
Horizontal (Average)

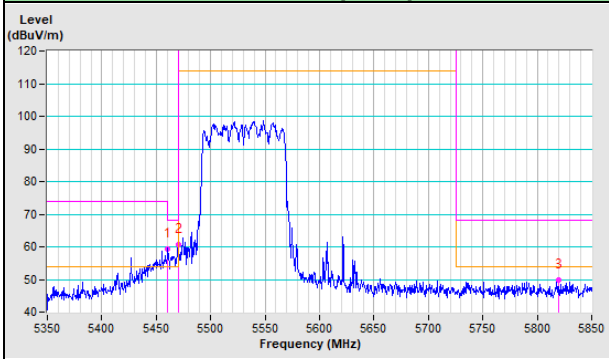
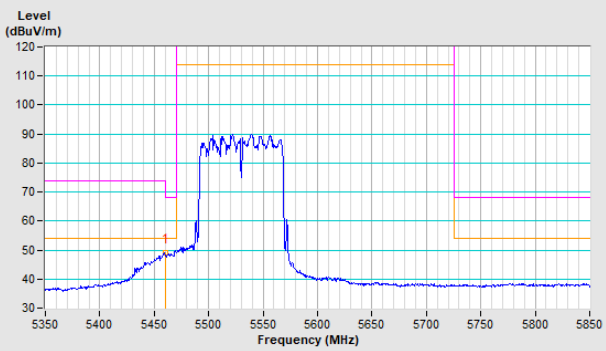
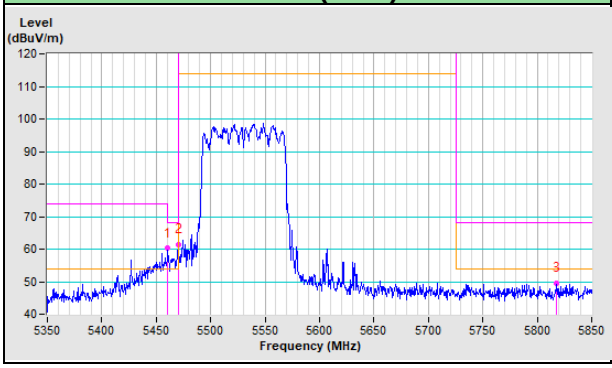
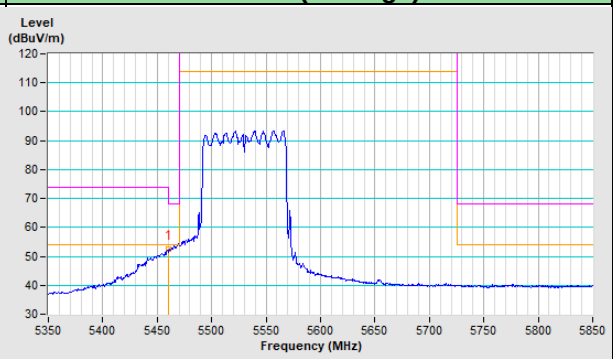


Vertical (Peak)



Vertical (Average)



802.11ac (VHT80) Channel 106	
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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The address and road map of all our labs can be found in our web site also.

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