FCC Test Report

Report No.:	RFBEIH-WTW-P20120144-1
FCC ID:	P27XHB1
Test Model:	XHB1
Series Model:	XHB1xxxxxxxx ; SCHB1AExxxxxxxxx (the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-" , for marketing purpose)
Received Date:	Dec. 04, 2020
Test Date:	Dec. 29, 2020 to Jan. 04, 2021
Issued Date:	Jan. 18, 2021
Applicant:	Sercomm Corp.
Address:	8F, No. 3-1, YuanQu St., NanKang, Taipei 115, Taiwan, R.O.C.
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 Lab (A):	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022
Test Lab (B):	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Test Location:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan R.O.C.
FCC Registration / Designation Number:	198487 / TW2021

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Release Control Record

Issue No.	Description	Date Issued
RFBEIH-WTW-P20120144-1	Original release.	Jan. 18, 2021

1 Certificate of Conformity

Product:	Comcast Xfinity Home Doorbell Camera
Brand:	Sercomm, Comcast, Xfinity
Test Model:	XHB1
Series Model:	XHB1xxxxxxxx ; SCHB1AExxxxxxxxx (the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-" , for marketing purpose)
Sample Status:	Engineering sample
Applicant:	Sercomm Corp.
Test Date:	Dec. 29, 2020 to Jan. 04, 2021
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10: 2013

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

Prepared by : Vivian Huang , **Date:** Jan. 18, 2021

Vivian Huang / Specialist

Approved by : , **Date:** Jan. 18, 2021

Clark Lin / Technical Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -17.21dB at 11.13672 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 -1.0 dB at 5352.06 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	5.5 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.1 dB
	18GHz ~ 40GHz	5.3 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Comcast Xfinity Home Doorbell Camera
Brand	Sercomm, Comcast, Xfinity
Test Model	XHB1
Series Model	XHB1xxxxxxxx ; SCHB1AExxxxxxxxx (the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-" , for marketing purpose)
Status of EUT	Engineering sample
Power Supply Rating	AC 16~24 V, 50/60Hz
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT20/40 in 2.4GHz
Modulation Technology	DSSS,OFDM
Transfer Rate	802.11b: up to 11 Mbps 802.11a/g: up to 54 Mbps 802.11n: up to 150 Mbps 802.11ac: up to 433.3 Mbps
Operating Frequency	**2.4GHz:** 2.412 ~ 2.462GHz **5GHz:** 5.18 ~ 5.32 GHz, 5.50 ~ 5.58 GHz & 5.66 ~ 5.70 GHz, 5.745 ~ 5.825 GHz
Number of Channel	**2.4GHz:** 802.11b, 802.11g, 802.11n (HT20), VHT20: 11 802.11n (HT40), VHT40: 7 **5GHz:** 802.11a, 802.11n (HT20), 802.11ac (VHT20): 21 802.11n (HT40), 802.11ac (VHT40): 9 802.11ac (VHT80): 4
Output Power	**2.412 ~ 2.462 GHz:** 928.966 mW **5.18 ~ 5.24GHz:** 58.884 mW **5.26 ~ 5.32GHz:** 48.753 mW **5.50 ~ 5.58 GHz & 5.66 ~ 5.70 GHz:** 191.867 mW **5.745 ~ 5.825GHz:** 459.198 mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Battery x1
Data Cable Supplied	NA

Note:

1. The EUT has below model names, which are identical to each other in all aspects except for the following table:

Brand	Model No.	Description
Sercomm	XHB1	For marketing purposes.
Sercomm	XHB1xxxxxxxx (the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-" , for marketing purpose)	
Comcast, Xfinity	SCHB1AExxxxxxxxx (the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-" , for marketing purpose)	

From the above models, model: **XHB1** was selected as representative model for the test and its data was recorded in this report.

2. WLAN & Bluetooth technology cannot transmit at same time.

3. The EUT has below radios as following table:

Radio 1	Radio 2
WLAN 2.4GHz + WLAN 5GHz	Bluetooth

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

Main source			
Frequency Range (GHz)	Antenna Peak Gain (dBi)	Antenna Type	Antenna Connector
2.4~2.5	3.03	PIFA	NA
5.15~5.25	5.24		
5.25~5.35	6.09		
5.47~5.725	6.56		
5.725~5.85	6.27		
2nd source			
Frequency Range (GHz)	Antenna Peak Gain (dBi)	Antenna Type	Antenna Connector
2.4~2.5	3	PIFA	NA
5.15~5.25	5.2		
5.25~5.35	6.0		
5.47~5.725	6.3		
5.725~5.85	6.0		
Note: The maximum gain was chosen for test.			

5. The EUT must be supplied with a battery as following table:

Brand	Model No.	Spec.
Energy Master Limited	FT602025P	DC Output: 3.7V, 240mAh

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

Pre-test Mode	Description
Mode A	Adapter Mode
Mode B	Battery Mode

The worst radiated emissions were found in Mode A for below 1GHz. Therefore only the test data of the modes were recorded in this report.

7. The EUT incorporates a SISO function:

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

Note:

1. Note: The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report. (Final test mode refer to section 3.2.1)

8. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.
9. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.2 Description of Test Modes

FOR 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n (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 ~ 5580 GHz & 5660 ~ 5700 MHz

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

Channel	Frequency	Channel	Frequency
100	5500 MHz	132	5660 MHz
104	5520 MHz	136	5680 MHz
108	5540 MHz	140	5700 MHz
112	5560 MHz		
116	5580 MHz		

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

Channel	Frequency
102	5510 MHz
110	5550 MHz
134	5670 MHz

1 channels are provided for 802.11ac (VHT80):

Channel	Frequency
106	5530 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

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	5180-5320	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 62	38, 46, 54, 62	OFDM	BPSK	13.5
802.11ac (VHT80)		42, 58	42, 58	OFDM	BPSK	29.3
802.11a	5500 ~ 5580 & 5660 ~ 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	106	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 (VHT40)	5180-5320, 5500 ~ 5580 & 5660 ~ 5700, 5745-5825	38 to 62, 102 to 134, 151 to 159	159	OFDM	BPSK	13.5

Power Line Conducted Emission Test:

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11ac (VHT40)	5180-5320, 5500 ~ 5580 & 5660 ~ 5700, 5745-5825	38 to 62, 102 to 134, 151 to 159	159	OFDM	BPSK	13.5

Antenna Port Conducted Measurement:

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

Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	DATA RATE (Mbps)
802.11a	5180-5320	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6
802.11ac (VHT20)		36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 62	38, 46, 54, 62	OFDM	BPSK	13.5
802.11ac (VHT80)		42, 58	42, 58	OFDM	BPSK	29.3
802.11a	5500 ~ 5580 & 5660 ~ 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	106	OFDM	BPSK	29.3
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	13.5
802.11ac (VHT80)		155	155	OFDM	BPSK	29.3

Test Condition:

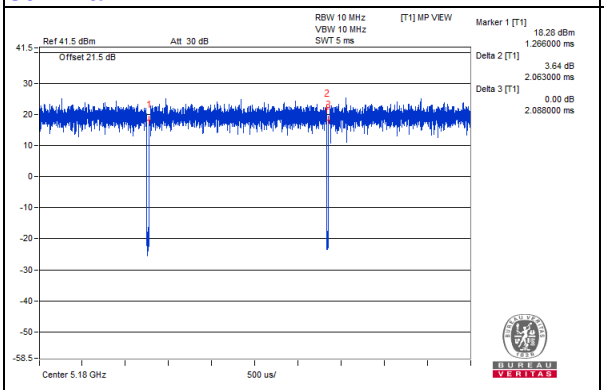
Applicable To	Environmental Conditions	Input Power (System)	TESTED BY
RE≥1G	24deg. C, 68%RH	120Vac, 60Hz	Ryan Du
RE<1G	25deg. C, 68%RH	120Vac, 60Hz	Tom Yang
PLC	25deg. C, 75%RH	120Vac, 60Hz	Dalen Dai
APCM	25deg. C, 60%RH	120Vac, 60Hz	Jyunchun Lin

3.3 Duty Cycle of Test Signal

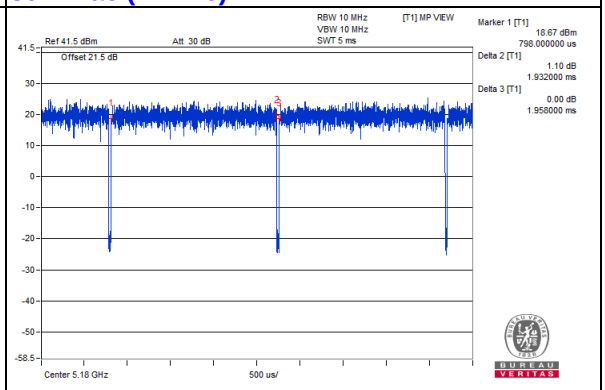
If duty cycle of test signal is ≥ 98 %, duty factor is not required.
If duty cycle of test signal is < 98%, duty factor shall be considered.

802.11a: Duty cycle = 2.063 ms /2.088 ms=0.988
802.11ac (VHT20): Duty cycle = 1.932 ms /1.958 ms=0.987
802.11ac (VHT40): Duty cycle = 0.95 ms /0.988 ms=0.962, Duty factor = 10 * log (1/Duty cycle) = 0.17 dB
802.11ac (VHT80): Duty cycle = 0.459 ms /0.486 ms=0.944, Duty factor = 10 * log (1/Duty cycle) = 0.25 dB

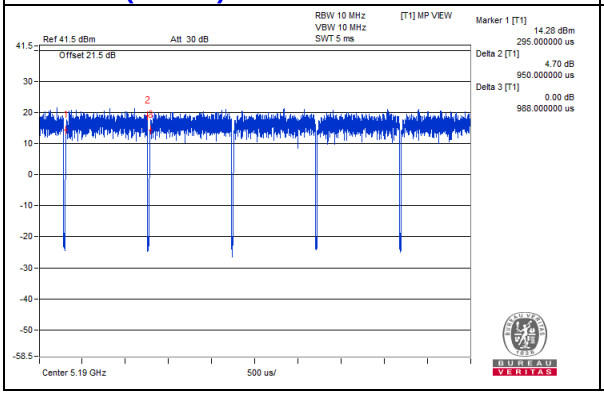
802.11a



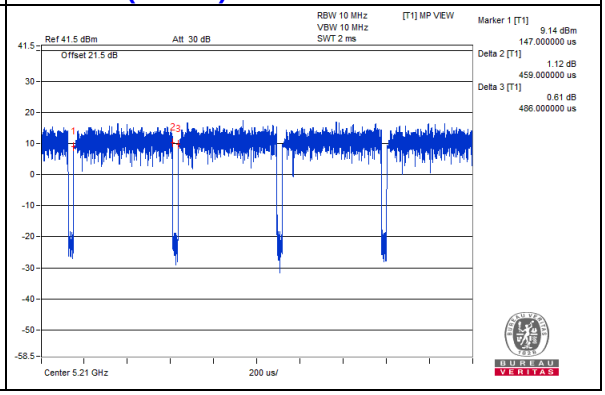
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



3.4 Description of Support Units

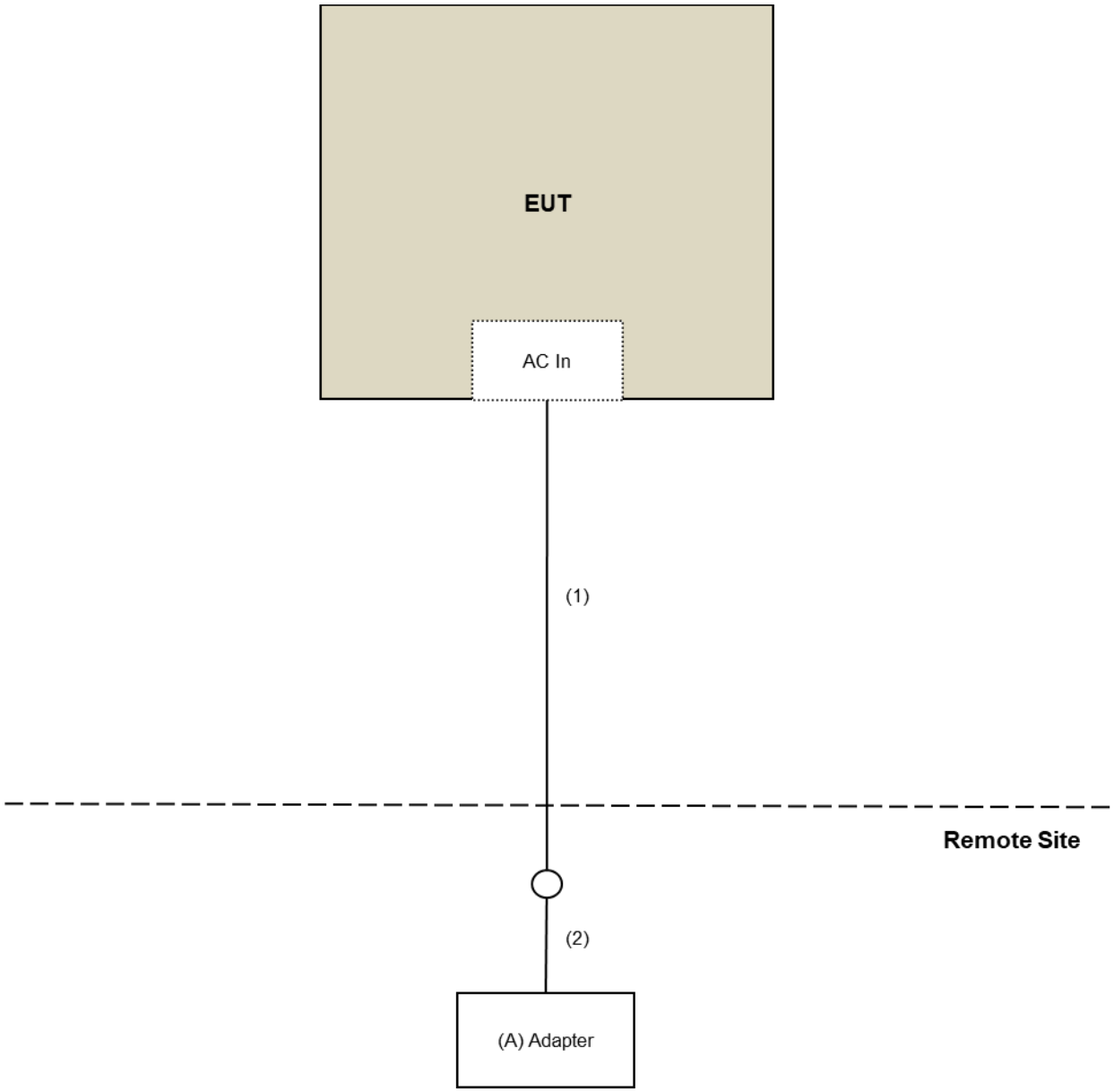
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No	FCC ID	Remarks
A.	Adapter	Xfinity	NBA12A240050HU	NA	NA	Supplied by client

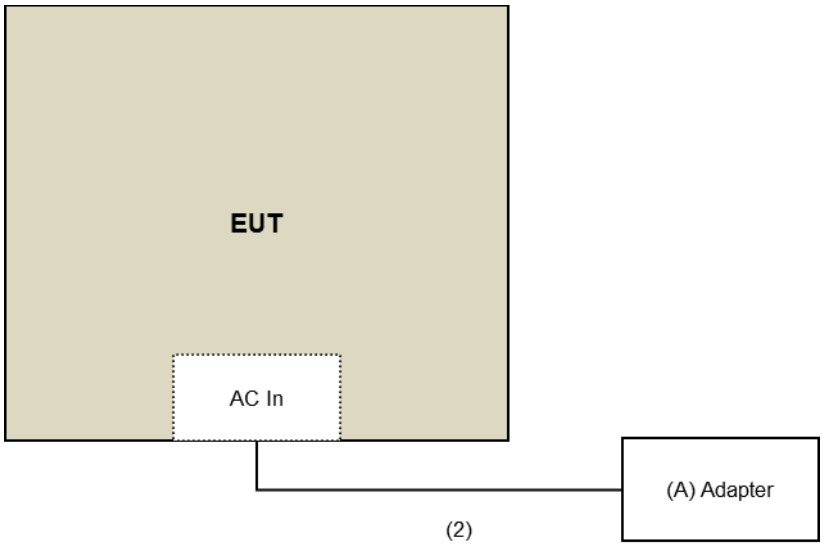
ID	Descriptions (Cables)	Qty	Length (m)	Shielding (Yes/No)	Cores (Number)	Remarks
1	AC Cable	1	10	No	0	Provided by Lab
2	AC Cable	1	2	No	0	Supplied by client

3.4.1 Configuration of System under Test

For Radiated Emissions test:



For Conducted 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

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

*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 & OOBE & BandEdge 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. 05, 2020	Nov. 04, 2021
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. 24, 2020	Sep. 23, 2021
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Nov. 22, 2020	Nov. 21, 2021
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. 22, 2020	Nov. 21, 2021
RF Cable	EMC102-KM-KM-1200	160924	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC-KM-KM-4000	200214	Mar. 11, 2020	Mar. 10, 2021
Software	ADT_Radiated_V8.7.08	NA	NA	NA
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: Dec. 29 to 30, 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
AC Power Source Extech Electronics	6205	1440452	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 16, 2020	Jan. 15, 2021
True RMS Clamp Meter FLUKE	325	31130711WS	June 06, 2020	June 05, 2021
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA

NOTE: 1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: Dec. 30, 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:

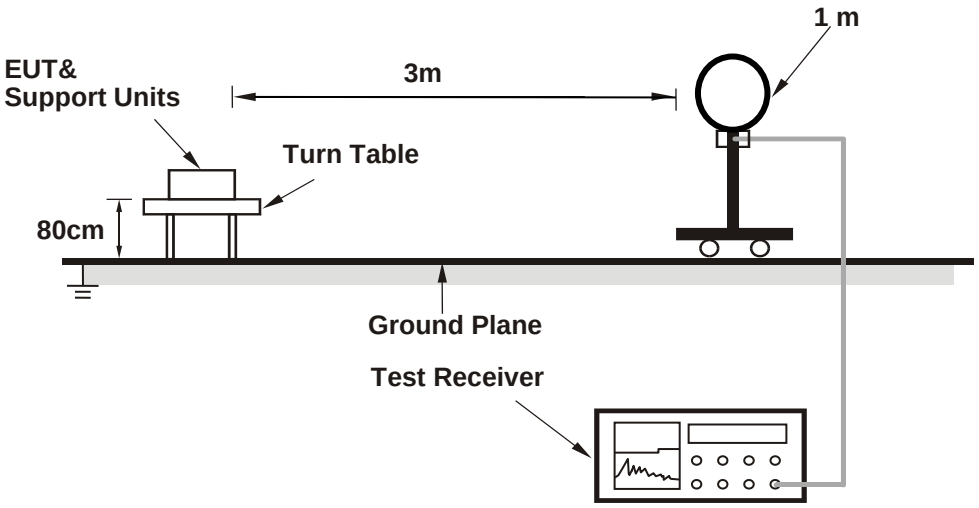
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

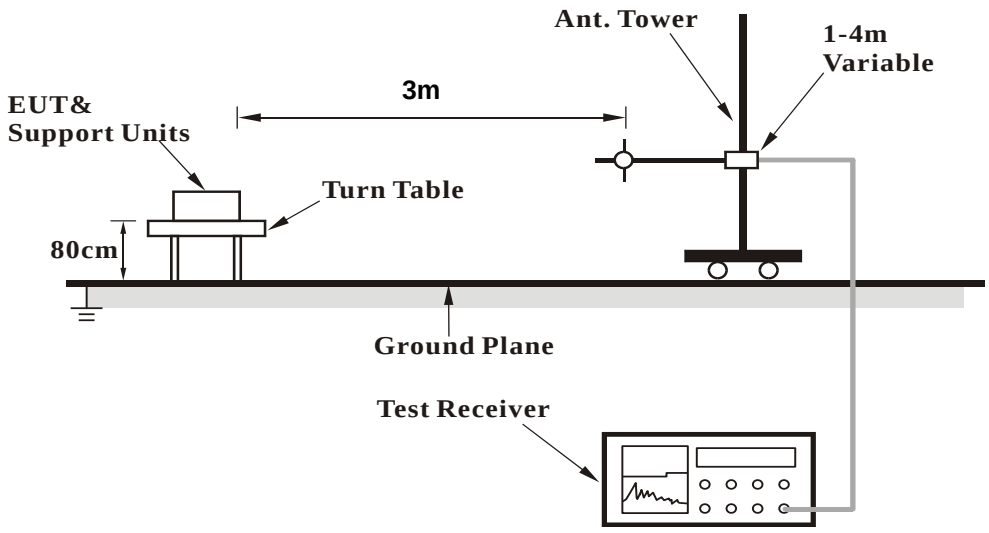
No deviation.

4.1.5 Test Setup

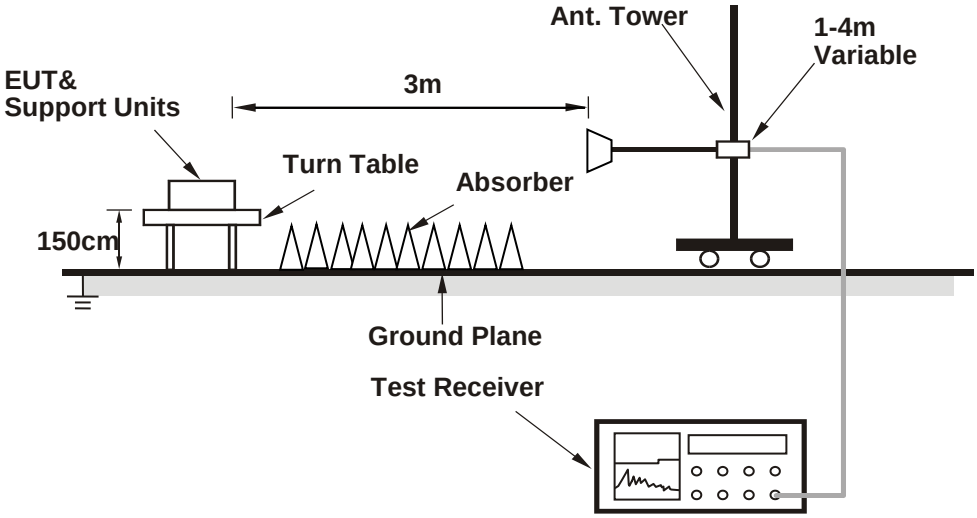
For Radiated emission below 30MHz



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. Connected the EUT with the Laptop which is placed on remote site.
b. Controlling software (HyperTerminal paste XHB1 WiFi 5G.txt command) has been activated to set the EUT under transmission condition continuously.

4.1.7 Test Results

Above 1GHz Data:

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5147.58	67.6 PK	74.0	-6.4	3.32 H	182	62.8	4.8
2	5147.58	52.3 AV	54.0	-1.7	3.32 H	182	47.5	4.8
3	*5180.00	112.8 PK			3.32 H	182	108.3	4.5
4	*5180.00	102.3 AV			3.32 H	182	97.8	4.5
5	#10360.00	49.0 PK	68.2	-19.2	1.84 H	316	35.3	13.7
6	15540.00	60.1 PK	74.0	-13.9	1.55 H	196	46.2	13.9
7	15540.00	47.3 AV	54.0	-6.7	1.55 H	196	33.4	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	70.9 PK	74.0	-3.1	1.61 V	159	66.2	4.7
2	5150.00	52.9 AV	54.0	-1.1	1.61 V	159	48.2	4.7
3	*5180.00	112.3 PK			1.61 V	159	107.8	4.5
4	*5180.00	102.0 AV			1.61 V	159	97.5	4.5
5	#10360.00	49.0 PK	68.2	-19.2	1.16 V	11	35.3	13.7
6	15540.00	51.5 PK	74.0	-22.5	1.69 V	247	37.6	13.9
7	15540.00	40.0 AV	54.0	-14.0	1.69 V	247	26.1	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 802.11a	Channel	CH 40：5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	67.4 PK	74.0	-6.6	3.31 H	188	62.7	4.7
2	5150.00	52.1 AV	54.0	-1.9	3.31 H	188	47.4	4.7
3	*5200.00	115.9 PK			3.31 H	188	111.7	4.2
4	*5200.00	105.7 AV			3.31 H	188	101.5	4.2
5	#10400.00	49.3 PK	68.2	-18.9	1.78 H	319	35.7	13.6
6	15600.00	61.5 PK	74.0	-12.5	1.63 H	186	47.4	14.1
7	15600.00	48.5 AV	54.0	-5.5	1.63 H	186	34.4	14.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	69.5 PK	74.0	-4.5	2.02 V	156	64.8	4.7
2	5150.00	52.9 AV	54.0	-1.1	2.02 V	156	48.2	4.7
3	*5200.00	116.2 PK			2.02 V	156	112.0	4.2
4	*5200.00	106.1 AV			2.02 V	156	101.9	4.2
5	#10400.00	49.1 PK	68.2	-19.1	1.13 V	18	35.5	13.6
6	15600.00	51.2 PK	74.0	-22.8	1.66 V	246	37.1	14.1
7	15600.00	39.7 AV	54.0	-14.3	1.66 V	246	25.6	14.1

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.5 PK	74.0	-17.5	3.30 H	197	51.8	4.7
2	5150.00	44.0 AV	54.0	-10.0	3.30 H	197	39.3	4.7
3	*5240.00	114.8 PK			3.30 H	197	110.5	4.3
4	*5240.00	104.4 AV			3.30 H	197	100.1	4.3
5	5392.78	57.7 PK	74.0	-16.3	3.30 H	197	53.4	4.3
6	5392.78	46.5 AV	54.0	-7.5	3.30 H	197	42.2	4.3
7	#10480.00	48.9 PK	68.2	-19.3	1.80 H	316	35.2	13.7
8	15720.00	60.3 PK	74.0	-13.7	1.60 H	201	45.9	14.4
9	15720.00	47.9 AV	54.0	-6.1	1.60 H	201	33.5	14.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	56.4 PK	74.0	-17.6	1.71 V	159	51.7	4.7
2	5150.00	43.7 AV	54.0	-10.3	1.71 V	159	39.0	4.7
3	*5240.00	114.9 PK			1.71 V	159	110.6	4.3
4	*5240.00	104.8 AV			1.71 V	159	100.5	4.3
5	5392.78	57.3 PK	74.0	-16.7	1.71 V	159	53.0	4.3
6	5392.78	46.4 AV	54.0	-7.6	1.71 V	159	42.1	4.3
7	#10480.00	48.6 PK	68.2	-19.6	1.18 V	16	34.9	13.7
8	15720.00	51.1 PK	74.0	-22.9	1.68 V	231	36.7	14.4
9	15720.00	39.7 AV	54.0	-14.3	1.68 V	231	25.3	14.4

Remarks:

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

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	52.8 PK	74.0	-21.2	3.30 H	201	48.1	4.7
2	5150.00	40.2 AV	54.0	-13.8	3.30 H	201	35.5	4.7
3	*5260.00	114.6 PK			3.30 H	201	110.3	4.3
4	*5260.00	104.7 AV			3.30 H	201	100.4	4.3
5	#10520.00	48.4 PK	68.2	-19.8	1.88 H	329	34.7	13.7
6	15780.00	60.0 PK	74.0	-14.0	1.55 H	190	46.0	14.0
7	15780.00	47.9 AV	54.0	-6.1	1.55 H	190	33.9	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	5150.00	52.3 PK	74.0	-21.7	1.67 V	153	47.6	4.7
2	5150.00	40.8 AV	54.0	-13.2	1.67 V	153	36.1	4.7
3	*5260.00	115.0 PK			1.67 V	153	110.7	4.3
4	*5260.00	105.2 AV			1.67 V	153	100.9	4.3
5	#10520.00	48.9 PK	68.2	-19.3	1.14 V	17	35.2	13.7
6	15780.00	50.1 PK	74.0	-23.9	1.74 V	258	36.1	14.0
7	15780.00	39.9 AV	54.0	-14.1	1.74 V	258	25.9	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 802.11a	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	115.1 PK			3.31 H	206	110.8	4.3
2	*5300.00	105.4 AV			3.31 H	206	101.1	4.3
3	5350.00	62.3 PK	74.0	-11.7	3.31 H	206	58.1	4.2
4	5350.00	49.7 AV	54.0	-4.3	3.31 H	206	45.5	4.2
5	10600.00	48.5 PK	74.0	-25.5	1.85 H	320	34.6	13.9
6	10600.00	36.4 AV	54.0	-17.6	1.85 H	320	22.5	13.9
7	15900.00	59.6 PK	74.0	-14.4	1.57 H	177	45.9	13.7
8	15900.00	48.3 AV	54.0	-5.7	1.57 H	177	34.6	13.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	115.7 PK			1.90 V	160	111.4	4.3
2	*5300.00	106.0 AV			1.90 V	160	101.7	4.3
3	5350.00	63.5 PK	74.0	-10.5	1.90 V	160	59.3	4.2
4	5350.00	50.8 AV	54.0	-3.2	1.90 V	160	46.6	4.2
5	10600.00	48.7 PK	74.0	-25.3	1.12 V	4	34.8	13.9
6	10600.00	36.3 AV	54.0	-17.7	1.12 V	4	22.4	13.9
7	15900.00	50.6 PK	74.0	-23.4	1.71 V	259	36.9	13.7
8	15900.00	40.1 AV	54.0	-13.9	1.71 V	259	26.4	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.

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	114.3 PK			3.27 H	174	110.0	4.3
2	*5320.00	103.8 AV			3.27 H	174	99.5	4.3
3	5352.06	63.0 PK	74.0	-11.0	3.27 H	174	58.8	4.2
4	**5352.06**	**53.0 AV**	**54.0**	**-1.0**	**3.27 H**	**174**	**48.8**	**4.2**
5	10640.00	49.7 PK	74.0	-24.3	1.82 H	321	35.8	13.9
6	10640.00	36.9 AV	54.0	-17.1	1.82 H	321	23.0	13.9
7	15960.00	59.6 PK	74.0	-14.4	1.61 H	194	45.9	13.7
8	15960.00	47.4 AV	54.0	-6.6	1.61 H	194	33.7	13.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	113.7 PK			1.98 V	160	109.4	4.3
2	*5320.00	103.8 AV			1.98 V	160	99.5	4.3
3	5350.00	64.7 PK	74.0	-9.3	1.98 V	160	60.5	4.2
4	5350.00	52.7 AV	54.0	-1.3	1.98 V	160	48.5	4.2
5	10640.00	49.0 PK	74.0	-25.0	1.15 V	9	35.1	13.9
6	10640.00	36.8 AV	54.0	-17.2	1.15 V	9	22.9	13.9
7	15960.00	49.8 PK	74.0	-24.2	1.71 V	253	36.1	13.7
8	15960.00	38.4 AV	54.0	-15.6	1.71 V	253	24.7	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.

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	5458.59	63.4 PK	74.0	-10.6	3.41 H	168	59.0	4.4
2	5458.59	52.2 AV	54.0	-1.8	3.41 H	168	47.8	4.4
3	#5469.44	65.4 PK	68.2	-2.8	3.41 H	168	60.9	4.5
4	*5500.00	115.9 PK			3.41 H	168	111.3	4.6
5	*5500.00	105.6 AV			3.41 H	168	101.0	4.6
6	11000.00	48.3 PK	74.0	-25.7	1.87 H	327	34.0	14.3
7	11000.00	35.8 AV	54.0	-18.2	1.87 H	327	21.5	14.3
8	#16500.00	60.3 PK	68.2	-7.9	1.59 H	178	44.8	15.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	63.5 PK	74.0	-10.5	2.09 V	174	59.1	4.4
2	5460.00	51.3 AV	54.0	-2.7	2.09 V	174	46.9	4.4
3	#5470.00	67.0 PK	68.2	-1.2	2.09 V	174	62.5	4.5
4	*5500.00	115.5 PK			2.09 V	174	110.9	4.6
5	*5500.00	105.4 AV			2.09 V	174	100.8	4.6
6	11000.00	48.6 PK	74.0	-25.4	1.06 V	19	34.3	14.3
7	11000.00	36.5 AV	54.0	-17.5	1.06 V	19	22.2	14.3
8	#16500.00	51.0 PK	68.2	-17.2	1.75 V	253	35.5	15.5

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 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	114.9 PK			3.26 H	161	110.3	4.6
2	*5580.00	105.4 AV			3.26 H	161	100.8	4.6
3	11160.00	49.8 PK	74.0	-24.2	1.84 H	330	35.6	14.2
4	11160.00	36.9 AV	54.0	-17.1	1.84 H	330	22.7	14.2
5	#16740.00	59.8 PK	68.2	-8.4	1.65 H	185	42.9	16.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	115.9 PK			1.95 V	164	111.3	4.6
2	*5580.00	105.7 AV			1.95 V	164	101.1	4.6
3	11160.00	48.7 PK	74.0	-25.3	1.12 V	10	34.5	14.2
4	11160.00	36.4 AV	54.0	-17.6	1.12 V	10	22.2	14.2
5	#16740.00	50.6 PK	68.2	-17.6	1.75 V	250	33.7	16.9

Remarks:

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

RF Mode	TX 802.11a	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	113.5 PK			3.29 H	163	108.9	4.6
2	*5700.00	103.4 AV			3.29 H	163	98.8	4.6
3	#5725.00	66.2 PK	68.2	-2.0	3.29 H	163	61.5	4.7
4	11400.00	48.6 PK	74.0	-25.4	1.84 H	314	34.4	14.2
5	11400.00	36.4 AV	54.0	-17.6	1.84 H	314	22.2	14.2
6	#17100.00	59.5 PK	68.2	-8.7	1.57 H	184	41.7	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	113.7 PK			1.95 V	166	109.1	4.6
2	*5700.00	103.3 AV			1.95 V	166	98.7	4.6
3	#5725.00	66.5 PK	68.2	-1.7	1.95 V	166	61.8	4.7
4	11400.00	49.1 PK	74.0	-24.9	1.18 V	19	34.9	14.2
5	11400.00	36.8 AV	54.0	-17.2	1.18 V	19	22.6	14.2
6	#17100.00	50.3 PK	68.2	-17.9	1.74 V	251	32.5	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	#5596.49	60.3 PK	68.2	-7.9	3.27 H	183	55.7	4.6
2	*5745.00	118.0 PK			3.27 H	183	113.2	4.8
3	*5745.00	106.9 AV			3.27 H	183	102.1	4.8
4	#5966.39	54.9 PK	68.2	-13.3	3.27 H	183	49.6	5.3
5	11490.00	49.8 PK	74.0	-24.2	1.88 H	225	35.2	14.6
6	11490.00	38.1 AV	54.0	-15.9	1.88 H	225	23.5	14.6
7	#17235.00	67.1 PK	68.2	-1.1	2.33 H	167	48.9	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	#5592.50	60.5 PK	68.2	-7.7	1.98 V	174	55.9	4.6
2	*5745.00	117.1 PK			1.98 V	174	112.3	4.8
3	*5745.00	106.9 AV			1.98 V	174	102.1	4.8
4	#5965.89	54.8 PK	68.2	-13.4	1.98 V	174	49.5	5.3
5	11490.00	51.0 PK	74.0	-23.0	1.26 V	330	36.4	14.6
6	11490.00	39.0 AV	54.0	-15.0	1.26 V	330	24.4	14.6
7	#17235.00	61.8 PK	68.2	-6.4	2.68 V	167	43.6	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 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	#5630.01	61.5 PK	68.2	-6.7	3.42 H	181	57.0	4.5
2	*5785.00	118.1 PK			3.42 H	181	113.2	4.9
3	*5785.00	107.1 AV			3.42 H	181	102.2	4.9
4	#5941.55	59.8 PK	68.2	-8.4	3.42 H	181	54.6	5.2
5	11570.00	50.7 PK	74.0	-23.3	1.88 H	220	36.1	14.6
6	11570.00	38.7 AV	54.0	-15.3	1.88 H	220	24.1	14.6
7	#17355.00	66.9 PK	68.2	-1.3	2.37 H	169	48.7	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	#5631.53	60.5 PK	68.2	-7.7	1.97 V	177	56.0	4.5
2	*5785.00	116.5 PK			1.97 V	177	111.6	4.9
3	*5785.00	106.4 AV			1.97 V	177	101.5	4.9
4	#5929.25	58.5 PK	68.2	-9.7	1.97 V	177	53.4	5.1
5	11570.00	50.7 PK	74.0	-23.3	1.21 V	311	36.1	14.6
6	11570.00	38.9 AV	54.0	-15.1	1.21 V	311	24.3	14.6
7	#17355.00	62.3 PK	68.2	-5.9	2.59 V	141	44.1	18.2

Remarks:

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

RF Mode	TX 802.11a	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	#5595.62	56.9 PK	68.2	-11.3	3.37 H	170	52.3	4.6
2	*5825.00	117.2 PK			3.37 H	170	112.3	4.9
3	*5825.00	106.5 AV			3.37 H	170	101.6	4.9
4	#5973.52	57.2 PK	68.2	-11.0	3.37 H	170	51.9	5.3
5	11650.00	50.4 PK	74.0	-23.6	1.89 H	223	35.8	14.6
6	11650.00	38.5 AV	54.0	-15.5	1.89 H	223	23.9	14.6
7	#17475.00	67.0 PK	68.2	-1.2	2.37 H	163	48.2	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	#5604.23	56.5 PK	68.2	-11.7	1.97 V	179	52.0	4.5
2	*5825.00	116.4 PK			1.97 V	179	111.5	4.9
3	*5825.00	106.5 AV			1.97 V	179	101.6	4.9
4	#5979.67	57.7 PK	68.2	-10.5	1.97 V	179	52.4	5.3
5	11650.00	50.8 PK	74.0	-23.2	1.25 V	321	36.2	14.6
6	11650.00	38.9 AV	54.0	-15.1	1.25 V	321	24.3	14.6
7	#17475.00	62.2 PK	68.2	-6.0	2.65 V	151	43.4	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	5148.89	66.9 PK	74.0	-7.1	3.39 H	188	62.1	4.8
2	5148.89	50.9 AV	54.0	-3.1	3.39 H	188	46.1	4.8
3	*5180.00	110.7 PK			3.39 H	188	106.2	4.5
4	*5180.00	100.5 AV			3.39 H	188	96.0	4.5
5	#10360.00	48.1 PK	68.2	-20.1	1.77 H	294	34.4	13.7
6	15540.00	60.2 PK	74.0	-13.8	1.61 H	187	46.3	13.9
7	15540.00	47.6 AV	54.0	-6.4	1.61 H	187	33.7	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	67.0 PK	74.0	-7.0	1.99 V	163	62.3	4.7
2	5150.00	52.6 AV	54.0	-1.4	1.99 V	163	47.9	4.7
3	*5180.00	111.1 PK			1.99 V	163	106.6	4.5
4	*5180.00	101.0 AV			1.99 V	163	96.5	4.5
5	#10360.00	48.6 PK	68.2	-19.6	1.21 V	20	34.9	13.7
6	15540.00	49.6 PK	74.0	-24.4	1.63 V	247	35.7	13.9
7	15540.00	38.1 AV	54.0	-15.9	1.63 V	247	24.2	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 (VHT20)	Channel	CH 40：5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	67.3 PK	74.0	-6.7	3.41 H	173	62.6	4.7
2	5150.00	51.3 AV	54.0	-2.7	3.41 H	173	46.6	4.7
3	*5200.00	114.6 PK			3.41 H	173	110.4	4.2
4	*5200.00	104.5 AV			3.41 H	173	100.3	4.2
5	#10400.00	47.9 PK	68.2	-20.3	1.74 H	307	34.3	13.6
6	15600.00	60.1 PK	74.0	-13.9	1.55 H	189	46.0	14.1
7	15600.00	47.6 AV	54.0	-6.4	1.55 H	189	33.5	14.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	69.2 PK	74.0	-4.8	1.97 V	167	64.5	4.7
2	5150.00	52.5 AV	54.0	-1.5	1.97 V	167	47.8	4.7
3	*5200.00	115.3 PK			1.97 V	167	111.1	4.2
4	*5200.00	105.0 AV			1.97 V	167	100.8	4.2
5	#10400.00	48.5 PK	68.2	-19.7	1.18 V	9	34.9	13.6
6	15600.00	49.6 PK	74.0	-24.4	1.67 V	257	35.5	14.1
7	15600.00	37.6 AV	54.0	-16.4	1.67 V	257	23.5	14.1

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	57.1 PK	74.0	-16.9	3.42 H	175	52.4	4.7
2	5150.00	44.3 AV	54.0	-9.7	3.42 H	175	39.6	4.7
3	*5240.00	114.3 PK			3.42 H	175	110.0	4.3
4	*5240.00	103.8 AV			3.42 H	175	99.5	4.3
5	5350.00	56.7 PK	74.0	-17.3	3.42 H	175	52.5	4.2
6	5350.00	46.1 AV	54.0	-7.9	3.42 H	175	41.9	4.2
7	#10480.00	47.5 PK	68.2	-20.7	1.76 H	304	33.8	13.7
8	15720.00	59.6 PK	74.0	-14.4	1.50 H	204	45.2	14.4
9	15720.00	47.3 AV	54.0	-6.7	1.50 H	204	32.9	14.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	57.2 PK	74.0	-16.8	1.96 V	170	52.5	4.7
2	5150.00	44.8 AV	54.0	-9.2	1.96 V	170	40.1	4.7
3	*5240.00	114.5 PK			1.96 V	170	110.2	4.3
4	*5240.00	103.8 AV			1.96 V	170	99.5	4.3
5	5396.60	57.2 PK	74.0	-16.8	1.96 V	170	52.9	4.3
6	5396.60	45.9 AV	54.0	-8.1	1.96 V	170	41.6	4.3
7	#10480.00	49.1 PK	68.2	-19.1	1.23 V	11	35.4	13.7
8	15720.00	49.1 PK	74.0	-24.9	1.72 V	263	34.7	14.4
9	15720.00	37.2 AV	54.0	-16.8	1.72 V	263	22.8	14.4

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 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	114.6 PK			3.44 H	164	110.3	4.3
2	*5260.00	103.4 AV			3.44 H	164	99.1	4.3
3	#10520.00	47.2 PK	68.2	-21.0	1.75 H	301	33.5	13.7
4	15780.00	59.9 PK	74.0	-14.1	1.56 H	219	45.9	14.0
5	15780.00	47.7 AV	54.0	-6.3	1.56 H	219	33.7	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	*5260.00	114.6 PK			1.94 V	163	110.3	4.3
2	*5260.00	103.9 AV			1.94 V	163	99.6	4.3
3	#10520.00	49.2 PK	68.2	-19.0	1.20 V	17	35.5	13.7
4	15780.00	48.7 PK	74.0	-25.3	1.73 V	263	34.7	14.0
5	15780.00	36.8 AV	54.0	-17.2	1.73 V	263	22.8	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 802.11ac (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	114.8 PK			3.38 H	159	110.5	4.3
2	*5300.00	103.7 AV			3.38 H	159	99.4	4.3
3	5350.00	62.4 PK	74.0	-11.6	3.38 H	159	58.2	4.2
4	5350.00	51.0 AV	54.0	-3.0	3.38 H	159	46.8	4.2
5	10600.00	47.4 PK	74.0	-26.6	1.72 H	311	33.5	13.9
6	10600.00	36.6 AV	54.0	-17.4	1.72 H	311	22.7	13.9
7	15900.00	59.8 PK	74.0	-14.2	1.47 H	196	46.1	13.7
8	15900.00	47.2 AV	54.0	-6.8	1.47 H	196	33.5	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	*5300.00	115.0 PK			1.97 V	168	110.7	4.3
2	*5300.00	104.7 AV			1.97 V	168	100.4	4.3
3	5350.00	61.9 PK	74.0	-12.1	1.97 V	168	57.7	4.2
4	5350.00	50.6 AV	54.0	-3.4	1.97 V	168	46.4	4.2
5	10600.00	49.5 PK	74.0	-24.5	1.23 V	26	35.6	13.9
6	10600.00	37.6 AV	54.0	-16.4	1.23 V	26	23.7	13.9
7	15900.00	49.0 PK	74.0	-25.0	1.74 V	264	35.3	13.7
8	15900.00	37.2 AV	54.0	-16.8	1.74 V	264	23.5	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.

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	113.3 PK			3.28 H	179	109.0	4.3
2	*5320.00	102.6 AV			3.28 H	179	98.3	4.3
3	5352.62	62.6 PK	74.0	-11.4	3.28 H	179	58.4	4.2
4	5352.62	52.0 AV	54.0	-2.0	3.28 H	179	47.8	4.2
5	10640.00	46.9 PK	74.0	-27.1	1.75 H	304	33.0	13.9
6	10640.00	36.3 AV	54.0	-17.7	1.75 H	304	22.4	13.9
7	15960.00	59.9 PK	74.0	-14.1	1.52 H	195	46.2	13.7
8	15960.00	47.4 AV	54.0	-6.6	1.52 H	195	33.7	13.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	113.7 PK			1.99 V	168	109.4	4.3
2	*5320.00	103.2 AV			1.99 V	168	98.9	4.3
3	5350.00	64.3 PK	74.0	-9.7	1.99 V	168	60.1	4.2
4	5350.00	52.6 AV	54.0	-1.4	1.99 V	168	48.4	4.2
5	10640.00	49.5 PK	74.0	-24.5	1.20 V	14	35.6	13.9
6	10640.00	37.2 AV	54.0	-16.8	1.20 V	14	23.3	13.9
7	15960.00	48.9 PK	74.0	-25.1	1.79 V	255	35.2	13.7
8	15960.00	37.2 AV	54.0	-16.8	1.79 V	255	23.5	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.

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5459.56	63.3 PK	74.0	-10.7	3.32 H	180	58.9	4.4
2	5459.56	52.0 AV	54.0	-2.0	3.32 H	180	47.6	4.4
3	#5467.88	67.0 PK	68.2	-1.2	3.32 H	180	62.5	4.5
4	*5500.00	115.4 PK			3.32 H	180	110.8	4.6
5	*5500.00	104.8 AV			3.32 H	180	100.2	4.6
6	11000.00	46.9 PK	74.0	-27.1	1.78 H	298	32.6	14.3
7	11000.00	36.1 AV	54.0	-17.9	1.78 H	298	21.8	14.3
8	#16500.00	60.1 PK	68.2	-8.1	1.50 H	209	44.6	15.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	64.4 PK	74.0	-9.6	2.08 V	166	60.0	4.4
2	5460.00	51.8 AV	54.0	-2.2	2.08 V	166	47.4	4.4
3	#5470.00	67.1 PK	68.2	-1.1	2.08 V	166	62.6	4.5
4	*5500.00	116.0 PK			2.08 V	166	111.4	4.6
5	*5500.00	105.4 AV			2.08 V	166	100.8	4.6
6	11000.00	49.5 PK	74.0	-24.5	1.25 V	14	35.2	14.3
7	11000.00	37.3 AV	54.0	-16.7	1.25 V	14	23.0	14.3
8	#16500.00	48.7 PK	68.2	-19.5	1.76 V	259	33.2	15.5

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 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	115.0 PK			3.49 H	178	110.4	4.6
2	*5580.00	103.9 AV			3.49 H	178	99.3	4.6
3	11160.00	46.9 PK	74.0	-27.1	1.69 H	305	32.7	14.2
4	11160.00	36.4 AV	54.0	-17.6	1.69 H	305	22.2	14.2
5	#16740.00	59.7 PK	68.2	-8.5	1.52 H	203	42.8	16.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	115.0 PK			1.94 V	156	110.4	4.6
2	*5580.00	104.5 AV			1.94 V	156	99.9	4.6
3	11160.00	49.6 PK	74.0	-24.4	1.20 V	32	35.4	14.2
4	11160.00	38.0 AV	54.0	-16.0	1.20 V	32	23.8	14.2
5	#16740.00	49.1 PK	68.2	-19.1	1.71 V	279	32.2	16.9

Remarks:

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

RF Mode	TX 802.11ac (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	111.9 PK			3.26 H	177	107.3	4.6
2	*5700.00	102.5 AV			3.26 H	177	97.9	4.6
3	#5725.00	66.4 PK	68.2	-1.8	3.26 H	177	61.7	4.7
4	11400.00	47.6 PK	74.0	-26.4	1.76 H	326	33.4	14.2
5	11400.00	36.9 AV	54.0	-17.1	1.76 H	326	22.7	14.2
6	#17100.00	59.3 PK	68.2	-8.9	1.44 H	205	41.5	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	112.3 PK			1.96 V	177	107.7	4.6
2	*5700.00	102.2 AV			1.96 V	177	97.6	4.6
3	#5725.00	66.8 PK	68.2	-1.4	1.96 V	177	62.1	4.7
4	11400.00	49.5 PK	74.0	-24.5	1.20 V	24	35.3	14.2
5	11400.00	37.5 AV	54.0	-16.5	1.20 V	24	23.3	14.2
6	#17100.00	48.9 PK	68.2	-19.3	1.80 V	247	31.1	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	#5591.70	62.5 PK	68.2	-5.7	3.22 H	180	57.9	4.6
2	*5745.00	119.5 PK			3.22 H	180	114.7	4.8
3	*5745.00	108.9 AV			3.22 H	180	104.1	4.8
4	#5970.88	55.3 PK	68.2	-12.9	3.22 H	180	50.0	5.3
5	11490.00	46.9 PK	74.0	-27.1	1.70 H	307	32.3	14.6
6	11490.00	36.1 AV	54.0	-17.9	1.70 H	307	21.5	14.6
7	#17235.00	60.1 PK	68.2	-8.1	1.46 H	211	41.9	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	#5591.29	61.8 PK	68.2	-6.4	1.65 V	177	57.2	4.6
2	*5745.00	118.9 PK			1.65 V	177	114.1	4.8
3	*5745.00	108.4 AV			1.65 V	177	103.6	4.8
4	#5964.90	55.5 PK	68.2	-12.7	1.65 V	177	50.2	5.3
5	11490.00	48.0 PK	74.0	-26.0	1.31 V	313	33.4	14.6
6	11490.00	37.5 AV	54.0	-16.5	1.31 V	313	22.9	14.6
7	#17235.00	54.8 PK	68.2	-13.4	1.48 V	179	36.6	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 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	#5633.31	63.4 PK	68.2	-4.8	3.34 H	180	58.9	4.5
2	*5785.00	119.0 PK			3.34 H	180	114.1	4.9
3	*5785.00	108.8 AV			3.34 H	180	103.9	4.9
4	#5941.33	60.9 PK	68.2	-7.3	3.34 H	180	55.7	5.2
5	11570.00	47.8 PK	74.0	-26.2	1.89 H	225	33.2	14.6
6	11570.00	37.1 AV	54.0	-16.9	1.89 H	225	22.5	14.6
7	#17355.00	61.7 PK	68.2	-6.5	1.58 H	175	43.5	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	#5628.66	62.7 PK	68.2	-5.5	1.67 V	186	58.2	4.5
2	*5785.00	118.5 PK			1.67 V	186	113.6	4.9
3	*5785.00	108.3 AV			1.67 V	186	103.4	4.9
4	#5931.82	59.3 PK	68.2	-8.9	1.67 V	186	54.2	5.1
5	11570.00	48.2 PK	74.0	-25.8	1.24 V	315	33.6	14.6
6	11570.00	37.3 AV	54.0	-16.7	1.24 V	315	22.7	14.6
7	#17355.00	54.7 PK	68.2	-13.5	1.54 V	168	36.5	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	#5601.09	56.3 PK	68.2	-11.9	3.40 H	174	51.8	4.5
2	*5825.00	117.3 PK			3.40 H	174	112.4	4.9
3	*5825.00	107.3 AV			3.40 H	174	102.4	4.9
4	#5978.39	59.2 PK	68.2	-9.0	3.40 H	174	53.9	5.3
5	11650.00	47.9 PK	74.0	-26.1	1.86 H	217	33.3	14.6
6	11650.00	37.1 AV	54.0	-16.9	1.86 H	217	22.5	14.6
7	#17475.00	62.3 PK	68.2	-5.9	1.61 H	176	43.5	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	#5602.77	56.9 PK	68.2	-11.3	1.68 V	179	52.4	4.5
2	*5825.00	117.9 PK			1.68 V	178	113.0	4.9
3	*5825.00	108.0 AV			1.68 V	178	103.1	4.9
4	#5980.96	58.4 PK	68.2	-9.8	1.68 V	179	53.1	5.3
5	11650.00	48.3 PK	74.0	-25.7	1.28 V	318	33.7	14.6
6	11650.00	37.6 AV	54.0	-16.4	1.28 V	318	23.0	14.6
7	#17475.00	54.7 PK	68.2	-13.5	1.53 V	164	35.9	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	5147.96	68.2 PK	74.0	-5.8	3.42 H	170	63.4	4.8
2	5147.96	52.6 AV	54.0	-1.4	3.42 H	170	47.8	4.8
3	*5190.00	106.9 PK			3.42 H	170	102.5	4.4
4	*5190.00	96.7 AV			3.42 H	170	92.3	4.4
5	#10380.00	47.1 PK	68.2	-21.1	1.74 H	284	33.6	13.5
6	15570.00	51.3 PK	74.0	-22.7	1.70 H	182	37.3	14.0
7	15570.00	40.8 AV	54.0	-13.2	1.70 H	182	26.8	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	5150.00	68.4 PK	74.0	-5.6	1.59 V	171	63.7	4.7
2	5150.00	52.7 AV	54.0	-1.3	1.59 V	171	48.0	4.7
3	*5190.00	106.1 PK			1.59 V	171	101.7	4.4
4	*5190.00	96.4 AV			1.59 V	171	92.0	4.4
5	#10380.00	48.3 PK	68.2	-19.9	1.22 V	6	34.8	13.5
6	15570.00	47.6 PK	74.0	-26.4	1.85 V	257	33.6	14.0
7	15570.00	35.8 AV	54.0	-18.2	1.85 V	257	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 802.11ac (VHT40)	Channel	CH 46：5230 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	110.5 PK			3.36 H	156	106.2	4.3
2	*5230.00	99.9 AV			3.36 H	156	95.6	4.3
3	5350.00	63.0 PK	74.0	-11.0	3.36 H	156	58.8	4.2
4	5350.00	49.4 AV	54.0	-4.6	3.36 H	156	45.2	4.2
5	#10460.00	47.2 PK	68.2	-21.0	1.81 H	302	33.6	13.6
6	15690.00	54.2 PK	74.0	-19.8	1.64 H	191	39.6	14.6
7	15690.00	41.3 AV	54.0	-12.7	1.64 H	191	26.7	14.6
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	*5230.00	110.6 PK			1.62 V	170	106.3	4.3
2	*5230.00	100.1 AV			1.62 V	170	95.8	4.3
3	5350.00	63.1 PK	74.0	-10.9	1.62 V	170	58.9	4.2
4	5350.00	49.2 AV	54.0	-4.8	1.62 V	170	45.0	4.2
5	#10460.00	48.0 PK	68.2	-20.2	1.16 V	12	34.4	13.6
6	15690.00	47.4 PK	74.0	-26.6	1.82 V	250	32.8	14.6
7	15690.00	35.8 AV	54.0	-18.2	1.82 V	250	21.2	14.6

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 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	*5270.00	111.1 PK			3.35 H	157	106.8	4.3
2	*5270.00	100.4 AV			3.35 H	157	96.1	4.3
3	5350.00	63.1 PK	74.0	-10.9	3.35 H	157	58.9	4.2
4	5350.00	50.1 AV	54.0	-3.9	3.35 H	157	45.9	4.2
5	#10540.00	47.1 PK	68.2	-21.1	1.82 H	317	33.3	13.8
6	15810.00	54.7 PK	74.0	-19.3	1.63 H	176	40.8	13.9
7	15810.00	41.7 AV	54.0	-12.3	1.63 H	176	27.8	13.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5270.00	111.3 PK			1.81 V	171	107.0	4.3
2	*5270.00	100.9 AV			1.81 V	171	96.6	4.3
3	5350.00	62.9 PK	74.0	-11.1	1.81 V	171	58.7	4.2
4	5350.00	50.8 AV	54.0	-3.2	1.81 V	171	46.6	4.2
5	#10540.00	47.6 PK	68.2	-20.6	1.17 V	11	33.8	13.8
6	15810.00	47.3 PK	74.0	-26.7	1.76 V	271	33.4	13.9
7	15810.00	35.5 AV	54.0	-18.5	1.76 V	271	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	108.6 PK			3.45 H	171	104.3	4.3
2	*5310.00	98.5 AV			3.45 H	171	94.2	4.3
3	5353.19	64.1 PK	74.0	-9.9	3.45 H	171	59.9	4.2
4	5353.19	51.9 AV	54.0	-2.1	3.45 H	171	47.7	4.2
5	10620.00	46.7 PK	74.0	-27.3	1.83 H	306	32.8	13.9
6	10620.00	36.1 AV	54.0	-17.9	1.83 H	306	22.2	13.9
7	15930.00	52.2 PK	74.0	-21.8	1.75 H	173	38.5	13.7
8	15930.00	41.1 AV	54.0	-12.9	1.75 H	173	27.4	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	*5310.00	108.5 PK			1.92 V	165	104.2	4.3
2	*5310.00	98.3 AV			1.92 V	165	94.0	4.3
3	5350.00	67.7 PK	74.0	-6.3	1.92 V	165	63.5	4.2
4	5350.00	52.6 AV	54.0	-1.4	1.92 V	165	48.4	4.2
5	10620.00	47.9 PK	74.0	-26.1	1.16 V	16	34.0	13.9
6	10620.00	36.1 AV	54.0	-17.9	1.16 V	16	22.2	13.9
7	15930.00	47.3 PK	74.0	-26.7	1.81 V	263	33.6	13.7
8	15930.00	35.7 AV	54.0	-18.3	1.81 V	263	22.0	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.

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	5423.48	62.6 PK	74.0	-11.4	3.33 H	171	58.3	4.3
2	5423.48	49.9 AV	54.0	-4.1	3.33 H	171	45.6	4.3
3	#5468.85	65.9 PK	68.2	-2.3	3.33 H	171	61.4	4.5
4	*5510.00	109.3 PK			3.33 H	171	104.7	4.6
5	*5510.00	99.0 AV			3.33 H	171	94.4	4.6
6	11020.00	47.1 PK	74.0	-26.9	1.76 H	293	32.9	14.2
7	11020.00	36.2 AV	54.0	-17.8	1.76 H	293	22.0	14.2
8	#16530.00	51.3 PK	68.2	-16.9	1.66 H	197	35.6	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	62.4 PK	74.0	-11.6	1.97 V	183	58.0	4.4
2	5460.00	50.1 AV	54.0	-3.9	1.97 V	183	45.7	4.4
3	#5469.09	66.6 PK	68.2	-1.6	1.97 V	183	62.1	4.5
4	*5510.00	109.3 PK			1.97 V	183	104.7	4.6
5	*5510.00	99.1 AV			1.97 V	183	94.5	4.6
6	11020.00	47.5 PK	74.0	-26.5	1.15 V	0	33.3	14.2
7	11020.00	35.8 AV	54.0	-18.2	1.15 V	0	21.6	14.2
8	#16530.00	47.2 PK	68.2	-21.0	1.76 V	251	31.5	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 (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	5460.00	62.0 PK	74.0	-12.0	3.44 H	178	57.6	4.4
2	5460.00	49.8 AV	54.0	-4.2	3.44 H	178	45.4	4.4
3	#5470.00	65.3 PK	68.2	-2.9	3.44 H	178	60.8	4.5
4	*5550.00	112.6 PK			3.44 H	178	108.0	4.6
5	*5550.00	101.8 AV			3.44 H	178	97.2	4.6
6	11100.00	46.5 PK	74.0	-27.5	1.79 H	304	32.7	13.8
7	11100.00	35.7 AV	54.0	-18.3	1.79 H	304	21.9	13.8
8	#16650.00	52.1 PK	68.2	-16.1	1.69 H	182	35.6	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	62.1 PK	74.0	-11.9	1.93 V	181	57.7	4.4
2	5460.00	50.2 AV	54.0	-3.8	1.93 V	181	45.8	4.4
3	#5470.00	65.1 PK	68.2	-3.1	1.93 V	181	60.6	4.5
4	*5550.00	112.8 PK			1.93 V	181	108.2	4.6
5	*5550.00	102.2 AV			1.93 V	181	97.6	4.6
6	11100.00	48.3 PK	74.0	-25.7	1.18 V	22	34.5	13.8
7	11100.00	36.3 AV	54.0	-17.7	1.18 V	22	22.5	13.8
8	#16650.00	47.3 PK	68.2	-20.9	1.85 V	262	30.8	16.5

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 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	111.9 PK			3.37 H	169	107.3	4.6
2	*5670.00	101.6 AV			3.37 H	169	97.0	4.6
3	#5725.00	65.9 PK	68.2	-2.3	3.37 H	169	61.2	4.7
4	11340.00	46.0 PK	74.0	-28.0	1.75 H	319	31.4	14.6
5	11340.00	35.2 AV	54.0	-18.8	1.75 H	319	20.6	14.6
6	#17010.00	53.8 PK	68.2	-14.4	1.69 H	189	36.1	17.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	112.2 PK			1.94 V	179	107.6	4.6
2	*5670.00	101.8 AV			1.94 V	179	97.2	4.6
3	#5725.00	66.8 PK	68.2	-1.4	1.94 V	179	62.1	4.7
4	11340.00	47.8 PK	74.0	-26.2	1.13 V	8	33.2	14.6
5	11340.00	35.9 AV	54.0	-18.1	1.13 V	8	21.3	14.6
6	#17010.00	47.3 PK	68.2	-20.9	1.70 V	260	29.6	17.7

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 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	#5646.67	63.5 PK	68.2	-4.7	3.17 H	176	59.0	4.5
2	*5755.00	116.4 PK			3.17 H	176	111.6	4.8
3	*5755.00	105.7 AV			3.17 H	176	100.9	4.8
4	#5927.84	56.0 PK	68.2	-12.2	3.17 H	176	50.9	5.1
5	11510.00	46.2 PK	74.0	-27.8	1.85 H	220	31.5	14.7
6	11510.00	35.6 AV	54.0	-18.4	1.85 H	220	20.9	14.7
7	#17265.00	56.2 PK	68.2	-12.0	1.55 H	188	38.0	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5646.53	65.0 PK	68.2	-3.2	1.46 V	185	60.5	4.5
2	*5755.00	116.0 PK			1.46 V	185	111.2	4.8
3	*5755.00	105.4 AV			1.46 V	185	100.6	4.8
4	#5937.71	56.9 PK	68.2	-11.3	1.46 V	185	51.7	5.2
5	11510.00	46.5 PK	74.0	-27.5	1.21 V	322	31.8	14.7
6	11510.00	35.7 AV	54.0	-18.3	1.21 V	322	21.0	14.7
7	#17265.00	47.2 PK	68.2	-21.0	1.49 V	150	29.0	18.2

Remarks:

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

RF Mode	TX 802.11ac (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	#5630.95	63.2 PK	68.2	-5.0	3.24 H	186	58.7	4.5
2	*5795.00	116.6 PK			3.24 H	186	111.7	4.9
3	*5795.00	105.8 AV			3.24 H	186	100.9	4.9
4	#5928.78	59.7 PK	68.2	-8.5	3.24 H	186	54.6	5.1
5	11590.00	45.9 PK	74.0	-28.1	1.82 H	223	31.3	14.6
6	11590.00	35.1 AV	54.0	-18.9	1.82 H	223	20.5	14.6
7	#17385.00	56.3 PK	68.2	-11.9	1.55 H	190	38.0	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	#5642.64	61.3 PK	68.2	-6.9	1.07 V	186	56.8	4.5
2	*5795.00	116.2 PK			1.07 V	186	111.3	4.9
3	*5795.00	105.8 AV			1.07 V	186	100.9	4.9
4	#5928.02	60.8 PK	68.2	-7.4	1.07 V	186	55.7	5.1
5	11590.00	46.5 PK	74.0	-27.5	1.23 V	319	31.9	14.6
6	11590.00	35.5 AV	54.0	-18.5	1.23 V	319	20.9	14.6
7	#17385.00	47.3 PK	68.2	-20.9	1.49 V	164	29.0	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 (VHT80)	Channel	CH 42：5210 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5149.24	67.8 PK	74.0	-6.2	3.37 H	168	63.0	4.8
2	5149.24	52.9 AV	54.0	-1.1	3.37 H	168	48.1	4.8
3	*5210.00	103.8 PK			3.37 H	168	99.5	4.3
4	*5210.00	93.8 AV			3.37 H	168	89.5	4.3
5	#10420.00	47.8 PK	68.2	-20.4	1.79 H	290	34.3	13.5
6	15630.00	47.7 PK	74.0	-26.3	1.66 H	187	33.4	14.3
7	15630.00	36.2 AV	54.0	-17.8	1.66 H	187	21.9	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	69.0 PK	74.0	-5.0	2.06 V	146	64.3	4.7
2	5150.00	52.8 AV	54.0	-1.2	2.06 V	146	48.1	4.7
3	*5210.00	104.6 PK			2.06 V	146	100.3	4.3
4	*5210.00	94.2 AV			2.06 V	146	89.9	4.3
5	#10420.00	48.7 PK	68.2	-19.5	1.21 V	18	35.2	13.5
6	15630.00	46.6 PK	74.0	-27.4	1.85 V	259	32.3	14.3
7	15630.00	35.2 AV	54.0	-18.8	1.85 V	259	20.9	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	*5290.00	106.8 PK			3.52 H	179	102.5	4.3
2	*5290.00	95.1 AV			3.52 H	179	90.8	4.3
3	5352.87	66.2 PK	74.0	-7.8	3.52 H	179	62.0	4.2
4	5352.87	52.9 AV	54.0	-1.1	3.52 H	179	48.7	4.2
5	#10580.00	48.4 PK	68.2	-19.8	1.80 H	301	34.6	13.8
6	15870.00	48.3 PK	74.0	-25.7	1.71 H	182	34.5	13.8
7	15870.00	36.7 AV	54.0	-17.3	1.71 H	182	22.9	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	*5290.00	105.0 PK			1.90 V	169	100.7	4.3
2	*5290.00	95.2 AV			1.90 V	169	90.9	4.3
3	5350.00	67.9 PK	74.0	-6.1	1.90 V	169	63.7	4.2
4	5350.00	52.4 AV	54.0	-1.6	1.90 V	169	48.2	4.2
5	#10580.00	48.2 PK	68.2	-20.0	1.20 V	6	34.4	13.8
6	15870.00	47.8 PK	74.0	-26.2	1.77 V	254	34.0	13.8
7	15870.00	36.2 AV	54.0	-17.8	1.77 V	254	22.4	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 (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	5458.97	65.1 PK	74.0	-8.9	3.40 H	184	60.7	4.4
2	5458.97	52.3 AV	54.0	-1.7	3.40 H	184	47.9	4.4
3	#5466.28	66.1 PK	68.2	-2.1	3.40 H	184	61.6	4.5
4	*5530.00	106.2 PK			3.40 H	184	101.6	4.6
5	*5530.00	95.8 AV			3.40 H	184	91.2	4.6
6	11060.00	48.2 PK	74.0	-25.8	1.80 H	299	34.2	14.0
7	11060.00	36.7 AV	54.0	-17.3	1.80 H	299	22.7	14.0
8	#16590.00	47.3 PK	68.2	-20.9	1.69 H	176	31.3	16.0
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	5460.00	64.9 PK	74.0	-9.1	2.04 V	172	60.5	4.4
2	5460.00	52.2 AV	54.0	-1.8	2.04 V	172	47.8	4.4
3	#5468.49	66.3 PK	68.2	-1.9	2.04 V	172	61.8	4.5
4	*5530.00	106.7 PK			2.04 V	172	102.1	4.6
5	*5530.00	96.4 AV			2.04 V	172	91.8	4.6
6	11060.00	48.6 PK	74.0	-25.4	1.18 V	15	34.6	14.0
7	11060.00	36.6 AV	54.0	-17.4	1.18 V	15	22.6	14.0
8	#16590.00	46.5 PK	68.2	-21.7	1.83 V	270	30.5	16.0

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 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	#5650.24	66.7 PK	68.4	-1.7	3.10 H	179	62.2	4.5
2	*5775.00	111.1 PK			3.10 H	179	106.2	4.9
3	*5775.00	100.8 AV			3.10 H	179	95.9	4.9
4	#5929.21	62.4 PK	68.2	-5.8	3.10 H	179	57.3	5.1
5	11550.00	45.7 PK	74.0	-28.3	1.78 H	236	31.1	14.6
6	11550.00	35.0 AV	54.0	-19.0	1.78 H	236	20.4	14.6
7	#17325.00	50.3 PK	68.2	-17.9	1.59 H	198	32.2	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5641.43	66.6 PK	68.2	-1.6	2.08 V	174	62.1	4.5
2	*5775.00	111.3 PK			2.08 V	174	106.4	4.9
3	*5775.00	100.4 AV			2.08 V	174	95.5	4.9
4	#5929.51	61.3 PK	68.2	-6.9	2.08 V	174	56.2	5.1
5	11550.00	46.1 PK	74.0	-27.9	1.25 V	328	31.5	14.6
6	11550.00	35.0 AV	54.0	-19.0	1.25 V	328	20.4	14.6
7	#17325.00	47.6 PK	68.2	-20.6	1.49 V	154	29.5	18.1

Remarks:

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

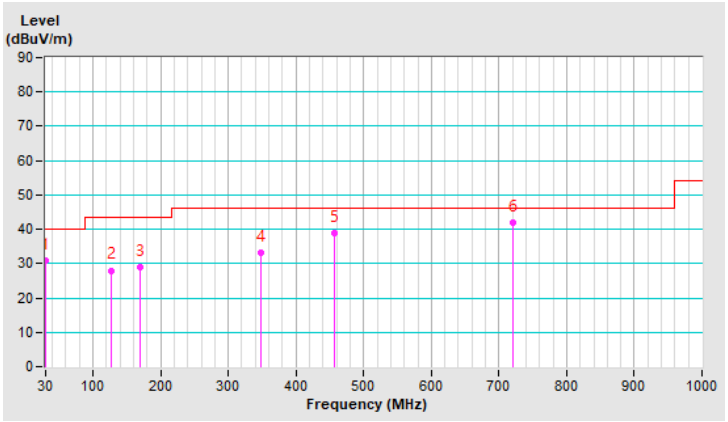
Below 1GHz Data:

RF Mode	TX 802.11ac (VHT40)	Channel	CH 159：5795 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	30.46	30.9 QP	40.0	-9.1	1.00 H	278	39.8	-8.9
2	127.46	28.0 QP	43.5	-15.5	3.00 H	51	36.4	-8.4
3	170.55	29.1 QP	43.5	-14.4	2.00 H	324	36.6	-7.5
4	347.99	33.1 QP	46.0	-12.9	1.00 H	239	37.7	-4.6
5	456.00	39.0 QP	46.0	-7.0	2.00 H	246	40.3	-1.3
6	720.01	41.8 QP	46.0	-4.2	1.00 H	255	37.6	4.2

Remarks:

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

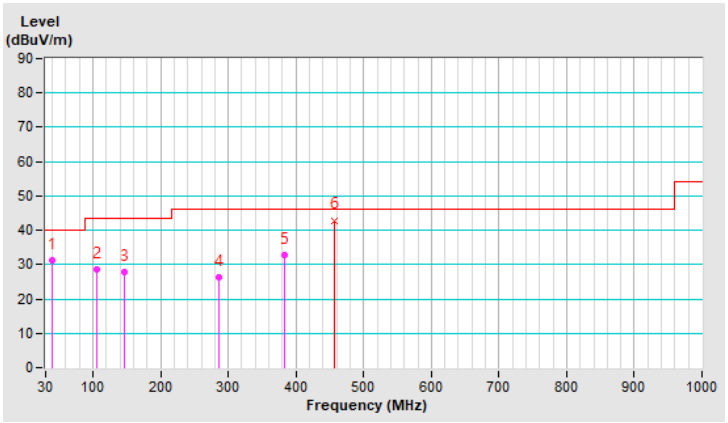


RF Mode	TX 802.11ac (VHT40)	Channel	CH 159：5795 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	40.45	31.4 QP	40.0	-8.6	1.50 V	360	39.5	-8.1
2	106.10	28.6 QP	43.5	-14.9	1.00 V	98	39.2	-10.6
3	145.60	27.7 QP	43.5	-15.8	1.50 V	4	34.9	-7.2
4	286.93	26.2 QP	46.0	-19.8	2.00 V	233	32.6	-6.4
5	384.00	32.7 QP	46.0	-13.3	1.50 V	58	36.2	-3.5
6	455.99	42.9 QP	46.0	-3.1	1.00 V	103	44.2	-1.3

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 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
ROHDE & SCHWARZ TEST RECEIVER	ESCS 30	100276	Apr. 16, 2020	Apr. 15, 2021
SCHWARZBECK Artificial Mains Network (for EUT)	NSLK 8128	8128-244	Nov. 19, 2020	Nov. 18, 2021
LISN With Adapter (for EUT)	AD10	C05Ada-001	Nov. 19, 2020	Nov. 18, 2021
SCHWARZBECK Artificial Mains Network (For EUT)	NNLK8129	8129229	May 14, 2020	May 13, 2021
R&S Artificial Mains Network (for peripherals)	ESH3-Z5	100220	Dec. 1, 2020	Nov. 30, 2021
Software	Cond_V7.3.7.4	NA	NA	NA
RF cable (JYEBAO) With 10dB PAD	5D-FB	Cable-C05.01	Jan. 30, 2020	Jan. 29, 2021

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 5.
3. Tested Date: Jan. 04, 2021

4.2.3 Test Procedure

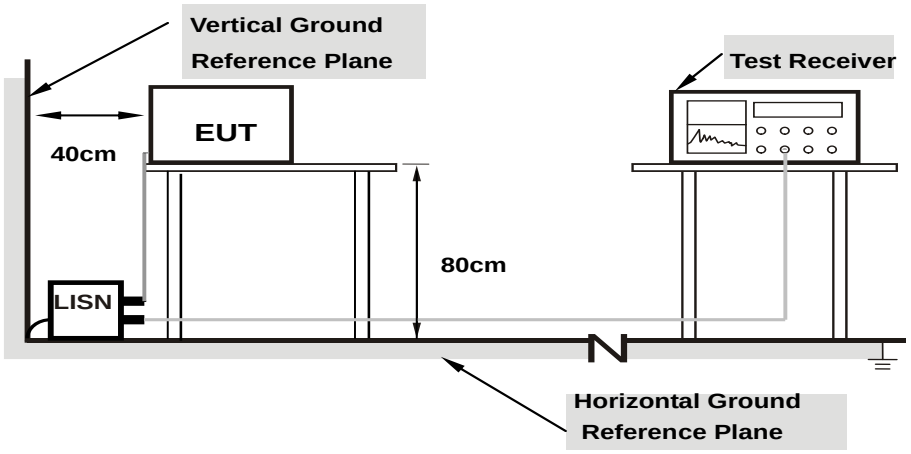
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling 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.

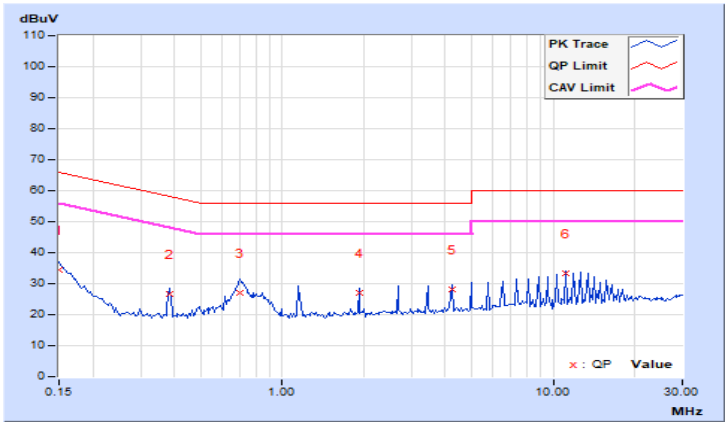
4.2.7 Test Results (Subcontract Item)

RF Mode	TX 802.11ac (VHT40)	Channel	CH 159：5795 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution 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	0.15000	9.93	24.64	15.14	34.57	25.07	66.00	56.00	-31.43	-30.93
2	0.38438	9.95	16.90	16.51	26.85	26.46	58.18	48.18	-31.33	-21.72
3	0.69688	9.98	17.19	11.47	27.17	21.45	56.00	46.00	-28.83	-24.55
4	1.92188	10.07	17.02	16.47	27.09	26.54	56.00	46.00	-28.91	-19.46
5	4.22266	10.28	17.75	17.38	28.03	27.66	56.00	46.00	-27.97	-18.34
6	**11.13672**	**10.76**	**22.42**	**22.03**	**33.18**	**32.79**	**60.00**	**50.00**	**-26.82**	**-17.21**

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

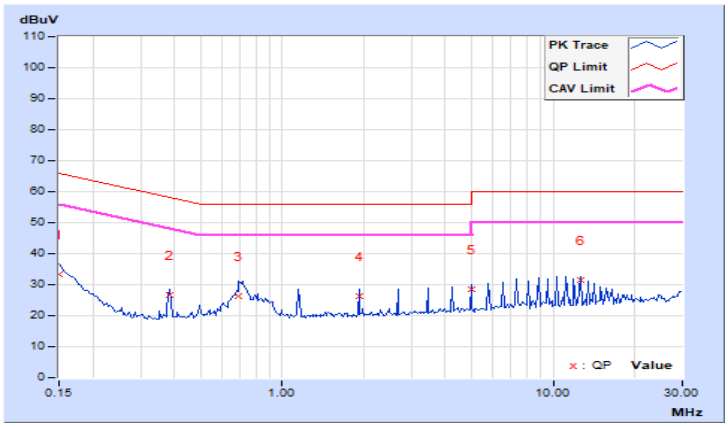


RF Mode	TX 802.11ac (VHT40)	Channel	CH 159：5795 MHz
Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz

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	0.15000	9.96	23.51	14.26	33.47	24.22	66.00	56.00	-32.53	-31.78
2	0.38438	10.00	16.57	16.24	26.57	26.24	58.18	48.18	-31.61	-21.94
3	0.69297	10.02	16.42	10.79	26.44	20.81	56.00	46.00	-29.56	-25.19
4	1.92188	10.11	16.35	16.06	26.46	26.17	56.00	46.00	-29.54	-19.83
5	4.99219	10.33	18.23	17.86	28.56	28.19	56.00	46.00	-27.44	-17.81
6	12.67188	10.85	20.52	20.09	31.37	30.94	60.00	50.00	-28.63	-19.06

Remarks:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

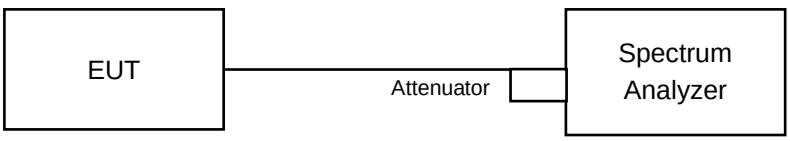
Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Client device	250mW (24 dBm)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

*B is the 26 dB emission bandwidth in megahertz
Note: This device can support different category application which switched by access point mode and client mode by software.

4.3.2 Test Setup

FOR POWER OUTPUT MEASUREMENT

FOR 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 Average Power Measurement

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

FOR 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	48.417	16.85	24	Pass
40	5200	48.641	16.87	24	Pass
48	5240	48.753	16.88	24	Pass
52	5260	47.098	16.73	23.91	Pass
60	5300	46.452	16.67	23.91	Pass
64	5320	47.206	16.74	23.91	Pass
100	5500	177.011	22.48	23.44	Pass
116	5580	182.81	22.62	23.44	Pass
140	5700	123.595	20.92	23.44	Pass
149	5745	293.089	24.67	29.73	Pass
157	5785	290.402	24.63	29.73	Pass
165	5825	272.898	24.36	29.73	Pass

Note: 1. For UNII-1: The maximum gain = 5.24 dBi < 6 dB, so the power limit shall not be reduced.

2. For UNII-2A: The maximum gain = 6.09 dBi > 6 dBi, therefore the limit needs to reduce, so the power limit shall be reduced to “Determined Conducted Limit-(6.09-6)”.

3. For UNII-2C: The maximum gain = 6.56 dBi > 6 dBi, therefore the limit needs to reduce, so the power limit shall be reduced to “Determined Conducted Limit-(6.56-6)”.

4. For UNII-3: The maximum gain = 6.27 dBi > 6 dBi, so the power limit shall be reduced to 30-(6.27-6) = 29.73dBm.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	21.9	24.4 > 24
60	5300	21.92	24.4 > 24
64	5320	21.83	24.39 > 24
100	5500	22.01	24.42 > 24
116	5580	23.23	24.66 > 24
140	5700	22.06	24.43 > 24

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
36	5180	50.933	17.07	24	Pass
40	5200	52.845	17.23	24	Pass
48	5240	52.602	17.21	24	Pass
52	5260	48.195	16.83	23.91	Pass
60	5300	47.206	16.74	23.91	Pass
64	5320	47.315	16.75	23.91	Pass
100	5500	174.181	22.41	23.44	Pass
116	5580	191.867	22.83	23.44	Pass
140	5700	105.439	20.23	23.44	Pass
149	5745	453.942	26.57	29.73	Pass
157	5785	446.684	26.50	29.73	Pass
165	5825	419.759	26.23	29.73	Pass

Note: 1. For UNII-1: The maximum gain = 5.24 dBi < 6 dB, so the power limit shall not be reduced.

2. For UNII-2A: The maximum gain = 6.09 dBi > 6 dBi, therefore the limit needs to reduce, so the power limit shall be reduced to “Determined Conducted Limit-(6.09-6)”.

3. For UNII-2C: The maximum gain = 6.56 dBi > 6 dBi, therefore the limit needs to reduce, so the power limit shall be reduced to “Determined Conducted Limit-(6.56-6)”.

4. For UNII-3: The maximum gain = 6.27 dBi > 6 dBi, so the power limit shall be reduced to 30-(6.27-6) = 29.73dBm.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
52	5260	22.08	24.43 > 24
60	5300	22.04	24.43 > 24
64	5320	22.08	24.43 > 24
100	5500	21.93	24.41 > 24
116	5580	24.05	24.81 > 24
140	5700	22.19	24.46 > 24

802.11ac (VHT40)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
38	5190	58.884	17.70	24	Pass
46	5230	57.677	17.61	24	Pass
54	5270	48.529	16.86	23.91	Pass
62	5310	48.417	16.85	23.91	Pass
102	5510	99.083	19.96	23.44	Pass
110	5550	176.198	22.46	23.44	Pass
134	5670	161.436	22.08	23.44	Pass
151	5755	431.519	26.35	29.73	Pass
159	5795	459.198	26.62	29.73	Pass

Note: 1. For UNII-1: The maximum gain = 5.24 dBi < 6 dB, so the power limit shall not be reduced.

2. For UNII-2A: The maximum gain = 6.09 dBi > 6 dBi, therefore the limit needs to reduce, so the power limit shall be reduced to “Determined Conducted Limit-(6.09-6)”.

3. For UNII-2C: The maximum gain = 6.56 dBi > 6 dBi, therefore the limit needs to reduce, so the power limit shall be reduced to “Determined Conducted Limit-(6.56-6)”.

4. For UNII-3: The maximum gain = 6.27 dBi > 6 dBi, so the power limit shall be reduced to 30-(6.27-6) = 29.73dBm.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
54	5270	41.55	27.18 > 24
62	5310	41.62	27.19 > 24
102	5510	41.59	27.18 > 24
110	5550	43.12	27.34 > 24
134	5670	42.61	27.29 > 24

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
42	5210	57.81	17.62	24	Pass
58	5290	48.753	16.88	23.91	Pass
106	5530	85.507	19.32	23.44	Pass
155	5775	236.048	23.73	29.73	Pass

Note: 1. For UNII-1: The maximum gain = 5.24 dBi < 6 dB, so the power limit shall not be reduced.

2. For UNII-2A: The maximum gain = 6.09 dBi > 6 dBi, therefore the limit needs to reduce, so the power limit shall be reduced to “Determined Conducted Limit-(6.09-6)”.

3. For UNII-2C: The maximum gain = 6.56 dBi > 6 dBi, therefore the limit needs to reduce, so the power limit shall be reduced to “Determined Conducted Limit-(6.56-6)”.

4. For UNII-3: The maximum gain = 6.27 dBi > 6 dBi, so the power limit shall be reduced to 30-(6.27-6) = 29.73dBm.

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

Power Limit = 11dBm + 10logB < U-NII-2A, U-NII-2C >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
58	5290	83.03	30.19 > 24
106	5530	82.94	30.18 > 24

26dB OCCUPIED BANDWIDTH

802.11a

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
36	5180	21.91
40	5200	21.92
48	5240	21.96
52	5260	21.9
60	5300	21.92
64	5320	21.83
100	5500	22.01
116	5580	23.23
140	5700	22.06
149	5745	26.48
157	5785	27.34
165	5825	27.64

802.11ac (VHT20)

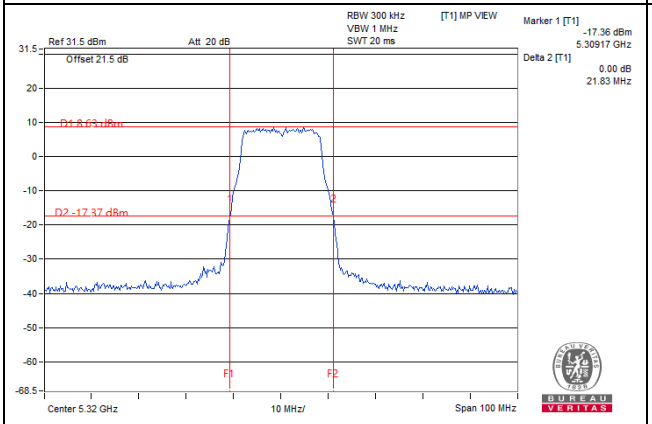
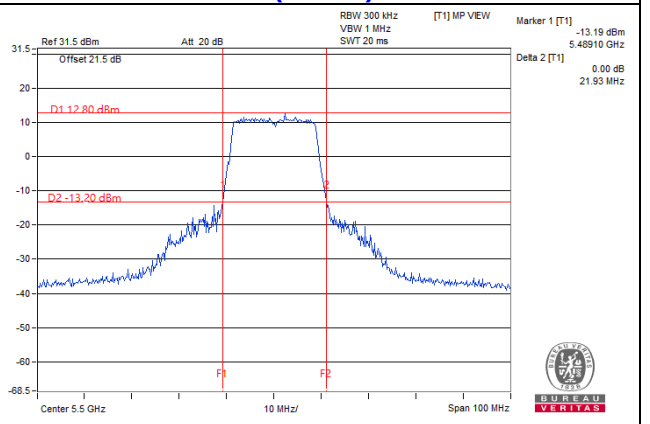
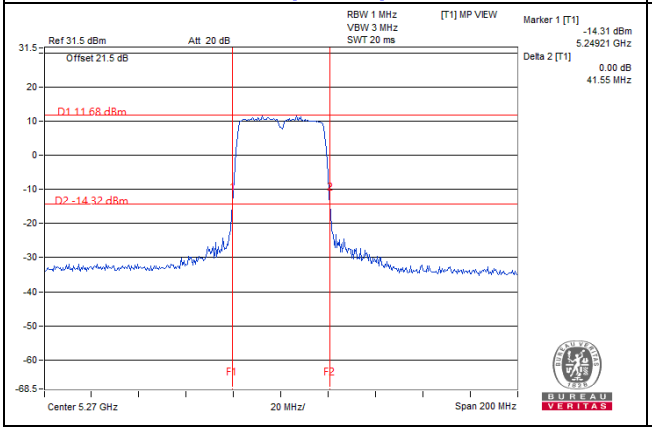
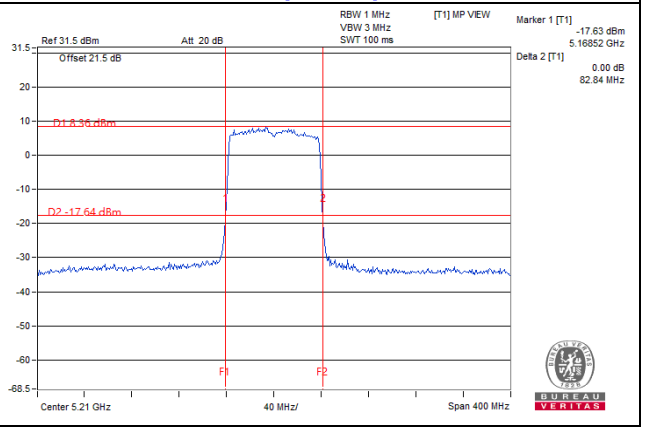
Channel	Frequency (MHz)	26dB Bandwidth (MHz)
36	5180	22.05
40	5200	22.17
48	5240	22.21
52	5260	22.08
60	5300	22.04
64	5320	22.08
100	5500	21.93
116	5580	24.05
140	5700	22.19
149	5745	46.99
157	5785	44.93
165	5825	45.3

802.11ac (VHT40)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
38	5190	41.64
46	5230	41.61
54	5270	41.55
62	5310	41.62
102	5510	41.59
110	5550	43.12
134	5670	42.61
151	5755	87.68
159	5795	83.97

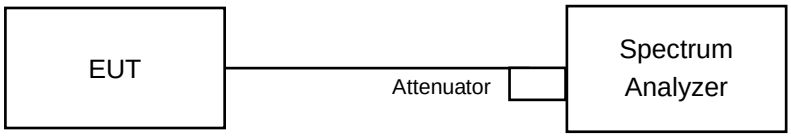
802.11ac (VHT80)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
42	5210	82.84
58	5290	83.03
106	5530	82.94
155	5775	83.09

Spectrum Plot of Worst Value	
802.11a / CH64	**802.11ac (VHT20) / CH100**
	
802.11ac (VHT40) / CH54	**802.11ac (VHT80) / CH42**
	

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	17.04
40	5200	16.92
48	5240	17.04
52	5260	17.04
60	5300	17.04
64	5320	17.04
100	5500	17.04
116	5580	17.28
140	5700	17.16
149	5745	17.4
157	5785	17.28
165	5825	17.4

802.11ac (VHT20)

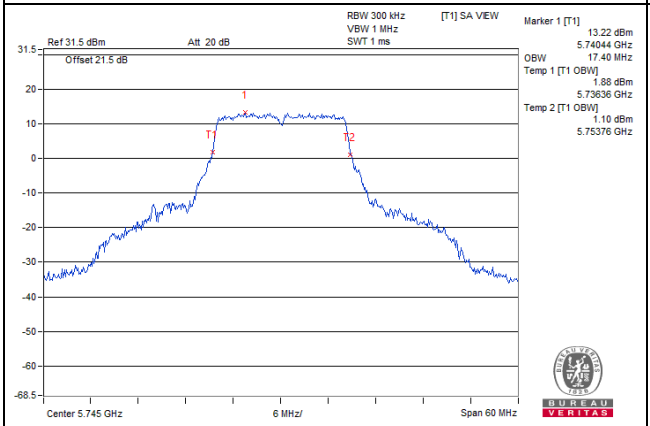
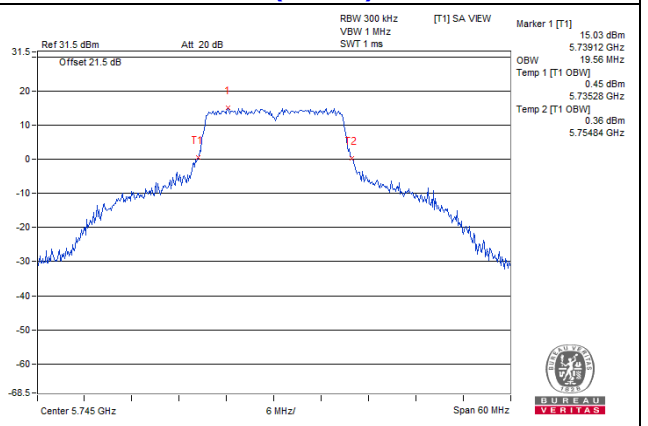
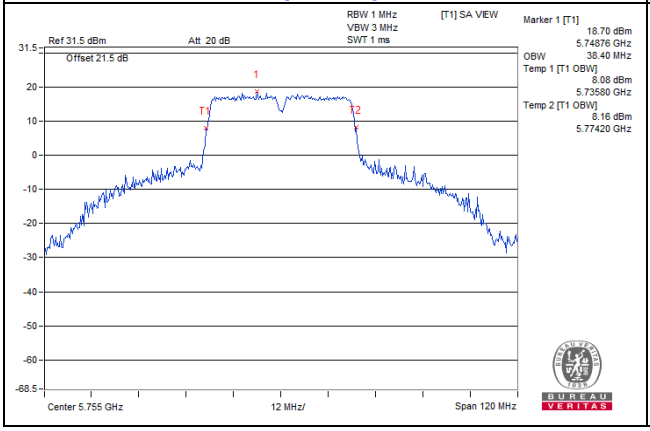
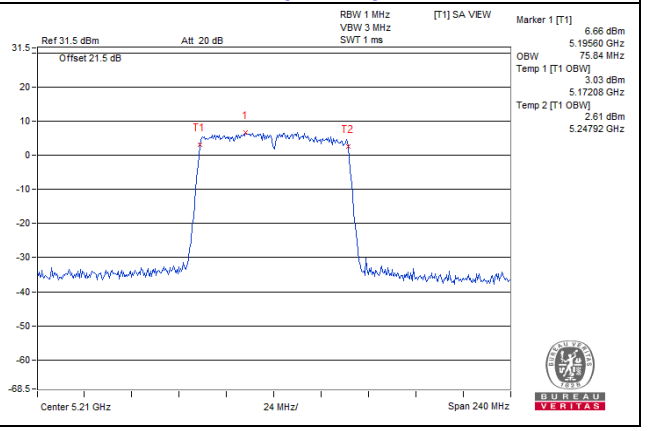
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.12
40	5200	18.12
48	5240	18.24
52	5260	18.12
60	5300	18.12
64	5320	18.24
100	5500	18.12
116	5580	18.24
140	5700	18.24
149	5745	19.56
157	5785	19.56
165	5825	19.2

802.11ac (VHT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.96
46	5230	36.96
54	5270	36.96
62	5310	36.72
102	5510	36.72
110	5550	36.96
134	5670	36.96
151	5755	38.4
159	5795	38.16

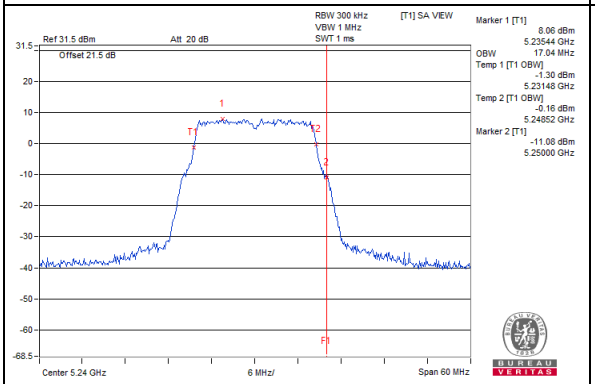
802.11ac (VHT80)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.84
58	5290	75.84
106	5530	75.84
155	5775	75.84

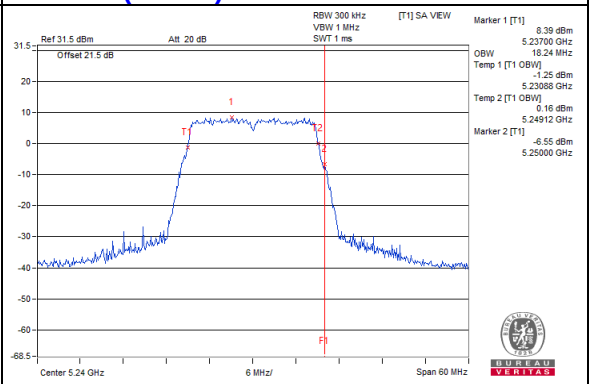
Spectrum Plot of Max. Value	
802.11a / CH149	**802.11ac (VHT20) / CH149**
	
802.11ac (VHT40) / CH151	**802.11ac (VHT80) / CH42**
	

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

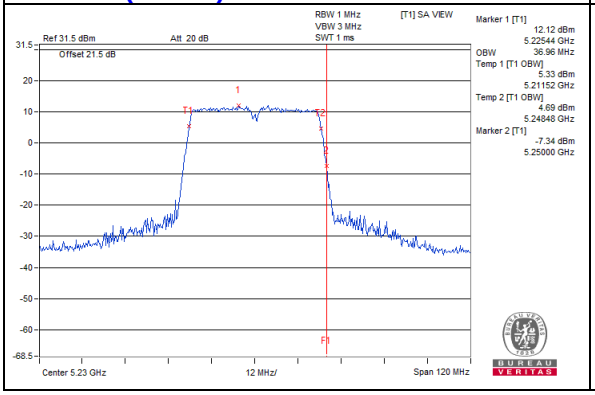
802.11a / CH48



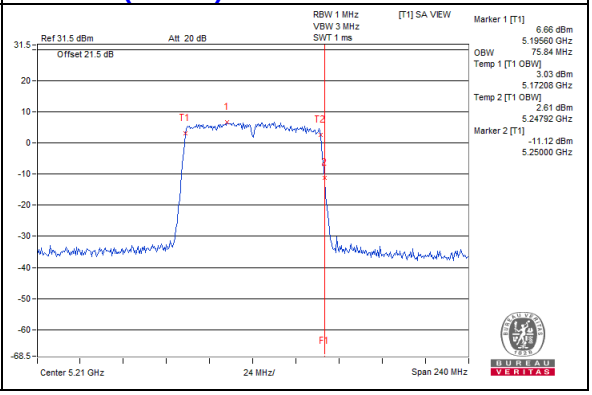
802.11ac (VHT20) / CH48



802.11ac (VHT40) / CH46

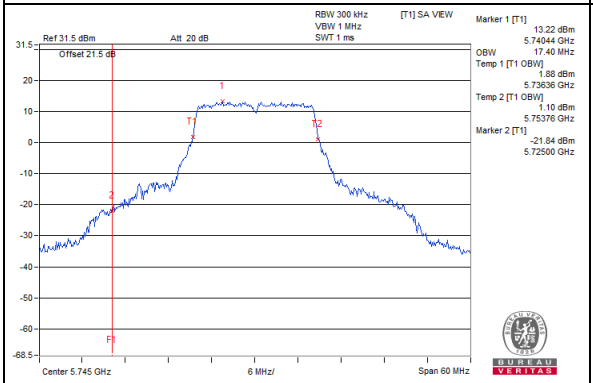


802.11ac (VHT80) / CH42

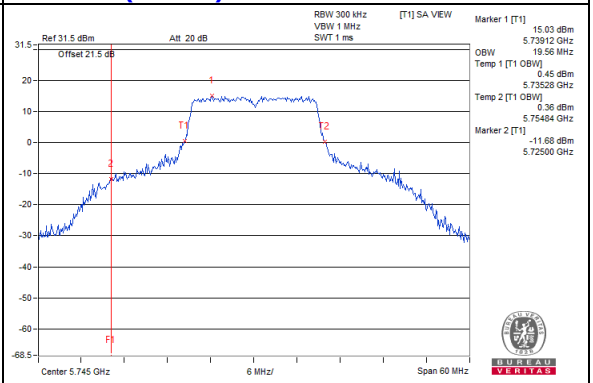


Spectrum Plot for near by DFS band
(DFS is required, if 99% OCP straddle into U-NII-2C band)

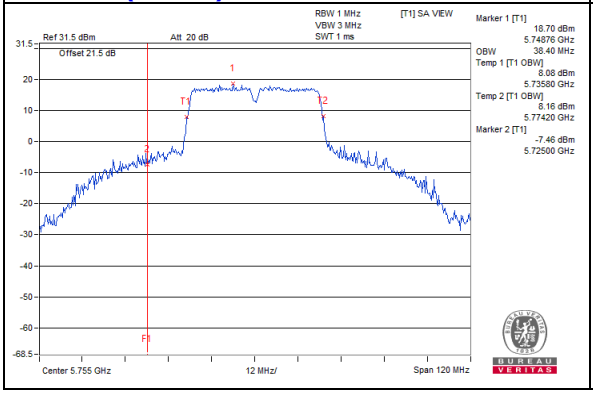
802.11a / CH149



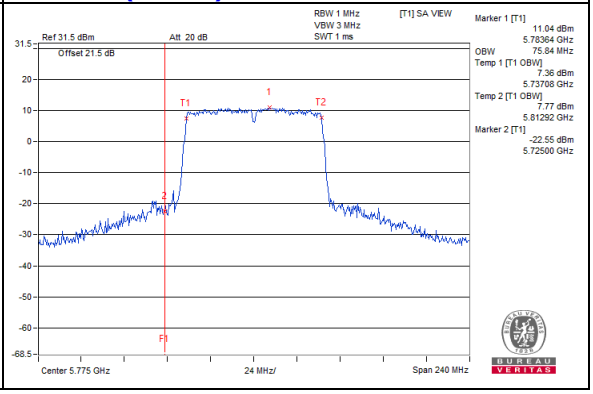
802.11ac (VHT20) / CH149



802.11ac (VHT40) / CH151



802.11ac (VHT80) / CH155



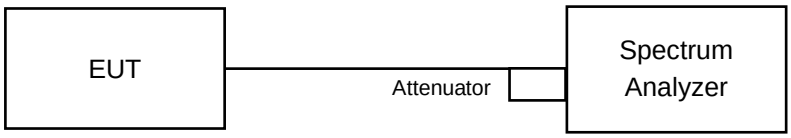
4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

For 802.11a, 802.11ac (VHT20)

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

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:

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

For 802.11ac (VHT40), 802.11ac (VHT80)

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

Using method SA-2

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

For U-NII-3 band:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/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)

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 (dBm/MHz)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
36	5180	4.09	4.09	11.00	PASS
40	5200	4.09	4.09	11.00	PASS
48	5240	4.05	4.05	11.00	PASS
52	5260	4.15	4.15	10.91	PASS
60	5300	4.18	4.18	10.91	PASS
64	5320	4.20	4.20	10.91	PASS
100	5500	7.97	7.97	10.44	PASS
116	5580	9.01	9.01	10.44	PASS
140	5700	5.57	5.57	10.44	PASS

Note: 1. For UNII-1: The maximum gain = 5.24 dBi < 6 dBi, so the so the power density limit shall not be reduced.
2. For UNII-2A: The maximum gain = 6.09 dBi > 6 dBi, so the so the power density limit shall be reduced to 11-(6.09-6) = 10.91dBm.
3. For UNII-2C: The maximum gain = 6.56 dBi > 6 dBi, so the so the power density limit shall be reduced to 11-(6.56-6) = 10.44dBm.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
36	5180	4.06	4.06	11.00	PASS
40	5200	4.05	4.05	11.00	PASS
48	5240	4.00	4.00	11.00	PASS
52	5260	3.75	3.75	10.91	PASS
60	5300	3.83	3.83	10.91	PASS
64	5320	3.82	3.82	10.91	PASS
100	5500	6.98	6.98	10.44	PASS
116	5580	7.39	7.39	10.44	PASS
140	5700	4.56	4.56	10.44	PASS

Note: 1. For UNII-1: The maximum gain = 5.24 dBi < 6 dBi, so the so the power density limit shall not be reduced.
2. For UNII-2A: The maximum gain = 6.09 dBi > 6 dBi, so the so the power density limit shall be reduced to 11-(6.09-6) = 10.91dBm.
3. For UNII-2C: The maximum gain = 6.56 dBi > 6 dBi, so the so the power density limit shall be reduced to 11-(6.56-6) = 10.44dBm.

802.11ac (VHT40)

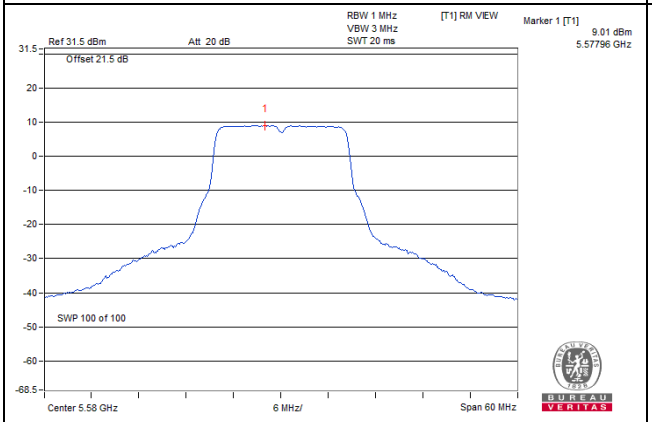
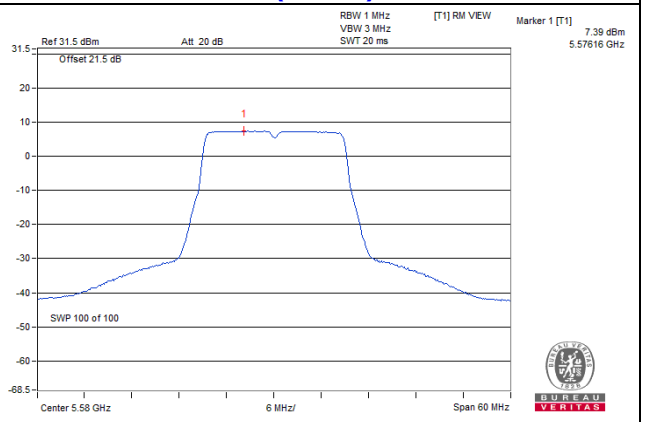
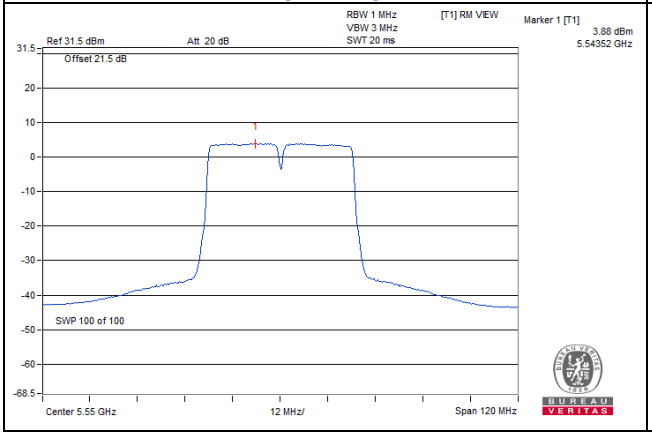
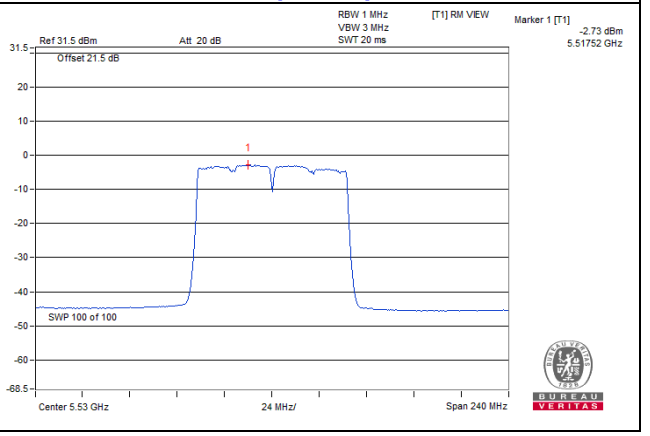
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
38	5190	0.65	0.17	0.82	11.00	PASS
46	5230	1.72	0.17	1.89	11.00	PASS
54	5270	0.73	0.17	0.90	10.91	PASS
62	5310	0.47	0.17	0.64	10.91	PASS
102	5510	0.98	0.17	1.15	10.44	PASS
110	5550	3.88	0.17	4.05	10.44	PASS
134	5670	3.60	0.17	3.77	10.44	PASS

Note:
1. For UNII-1: The maximum gain = 5.24 dBi < 6 dBi, so the so the power density limit shall not be reduced.
2. For UNII-2A: The maximum gain = 6.09 dBi > 6 dBi, so the so the power density limit shall be reduced to 11-(6.09-6) = 10.91dBm.
3. For UNII-2C: The maximum gain = 6.56 dBi > 6 dBi, so the so the power density limit shall be reduced to 11-(6.56-6) = 10.44dBm.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Pass / Fail
42	5210	-3.05	0.25	-2.80	11.00	PASS
58	5290	-3.10	0.25	-2.85	10.91	PASS
106	5530	-2.73	0.25	-2.48	10.44	PASS

Note:
1. For UNII-1: The maximum gain = 5.24 dBi < 6 dBi, so the so the power density limit shall not be reduced.
2. For UNII-2A: The maximum gain = 6.09 dBi > 6 dBi, so the so the power density limit shall be reduced to 11-(6.09-6) = 10.91dBm.
3. For UNII-2C: The maximum gain = 6.56 dBi > 6 dBi, so the so the power density limit shall be reduced to 11-(6.56-6) = 10.44dBm.

Spectrum Plot of Worst Value	
802.11a / CH116	**802.11ac (VHT20) / CH116**
	
802.11ac (VHT40) / CH110	**802.11ac (VHT80) / CH106**
	

For U-NII-3 band:

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
149	5745	1.09	1.285	1.09	3.31	29.73	PASS
157	5785	1.14	1.3	1.14	3.36	29.73	PASS
165	5825	1.22	1.324	1.22	3.44	29.73	PASS

Note: 1. The maximum gain = 6.27 dBi > 6 dBi, so the so the power density limit shall be reduced to 30-(6.27-6) = 29.73dBm.

802.11ac (VHT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
149	5745	2.31	1.702	2.31	4.53	29.73	PASS
157	5785	2.28	1.69	2.28	4.50	29.73	PASS
165	5825	1.97	1.574	1.97	4.19	29.73	PASS

Note: 1. The maximum gain = 6.27 dBi > 6 dBi, so the so the power density limit shall be reduced to 30-(6.27-6) = 29.73dBm.

802.11ac (VHT40)

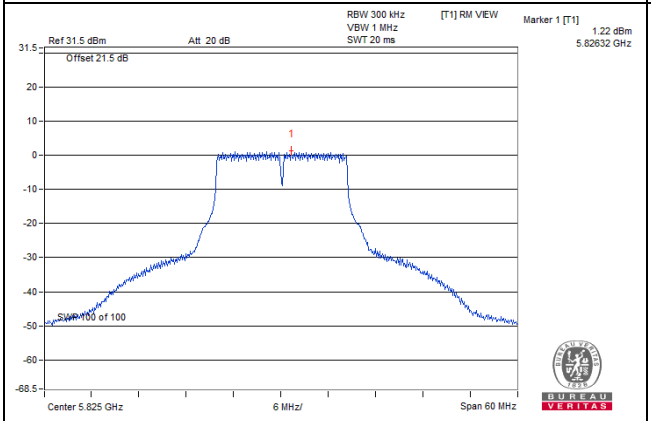
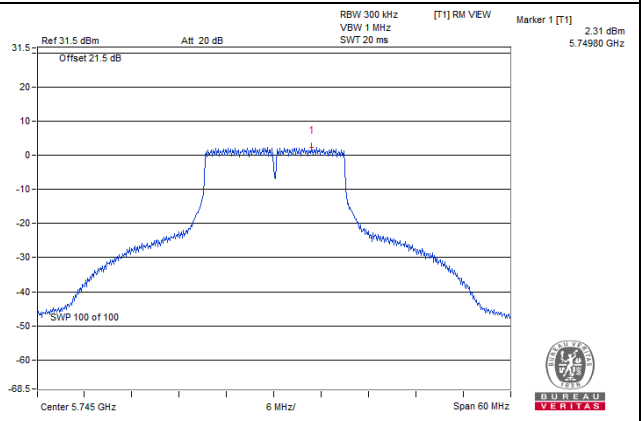
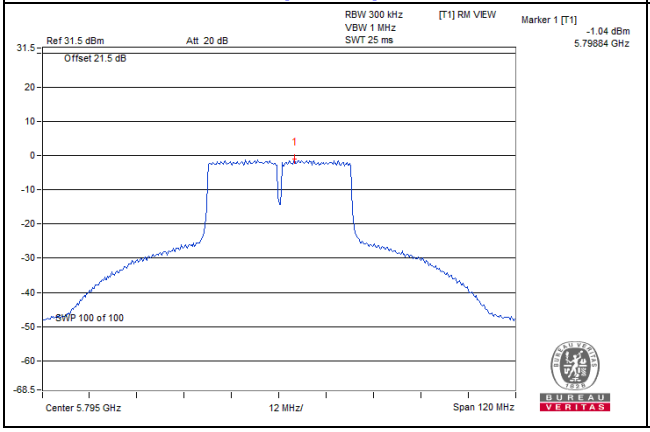
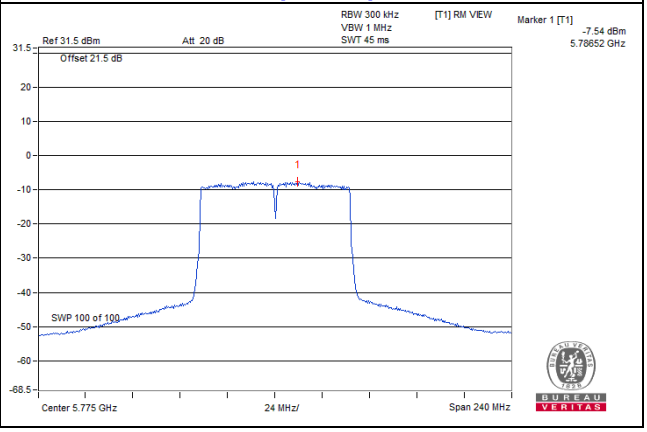
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
151	5755	-1.13	0.17	0.8017	-0.96	1.26	29.73	PASS
159	5795	-1.04	0.17	0.8185	-0.87	1.35	29.73	PASS

Note: 1. The maximum gain = 6.27 dBi > 6 dBi, so the so the power density limit shall be reduced to 30-(6.27-6) = 29.73dBm.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	Total PSD (mW/300kHz)	Total PSD (dBm/300kHz)	Total PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Pass / Fail
155	5775	-7.54	0.25	0.1866	-7.29	-5.07	29.73	PASS

Note: 1. The maximum gain = 6.27 dBi > 6 dBi, so the so the power density limit shall be reduced to 30-(6.27-6) = 29.73dBm.

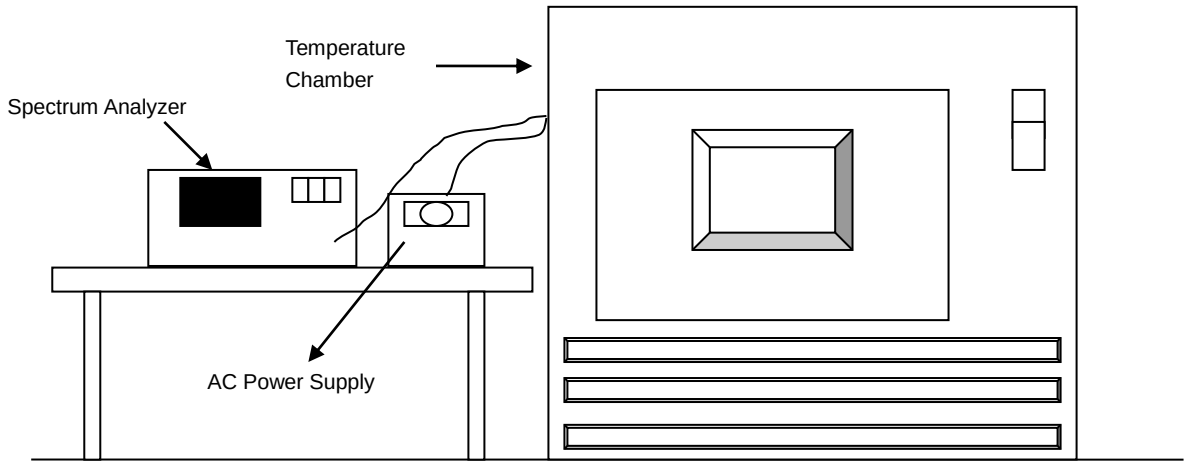
Spectrum Plot of Worst Value	
802.11a / CH165	**802.11ac (VHT20) / CH149**
	
802.11ac (VHT40) / CH159	**802.11ac (VHT80) / CH155**
	

4.6 Frequency Stability Measurement

4.6.1 Limits of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC 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 (Vac)	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
50	120	5180.0004	Pass	5180.0026	Pass	5180.0038	Pass	5180.0016	Pass
40	120	5180.0211	Pass	5180.0237	Pass	5180.0233	Pass	5180.0228	Pass
30	120	5179.9874	Pass	5179.9864	Pass	5179.9838	Pass	5179.9835	Pass
20	120	5179.9873	Pass	5179.9842	Pass	5179.9862	Pass	5179.989	Pass
10	120	5180.0187	Pass	5180.0205	Pass	5180.0205	Pass	5180.0183	Pass

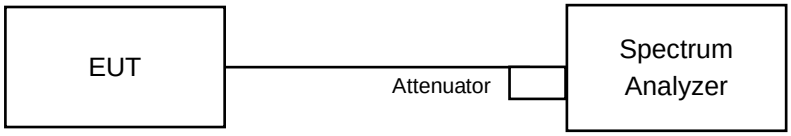
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
20	138	5179.9879	Pass	5179.9838	Pass	5179.986	Pass	5179.9884	Pass
	120	5179.9873	Pass	5179.9842	Pass	5179.9862	Pass	5179.989	Pass
	102	5179.9868	Pass	5179.9834	Pass	5179.9859	Pass	5179.9899	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)	Limit (MHz)	Pass / Fail
149	5745	16.42	0.5	PASS
157	5785	16.42	0.5	PASS
165	5825	16.42	0.5	PASS

802.11ac (VHT20)

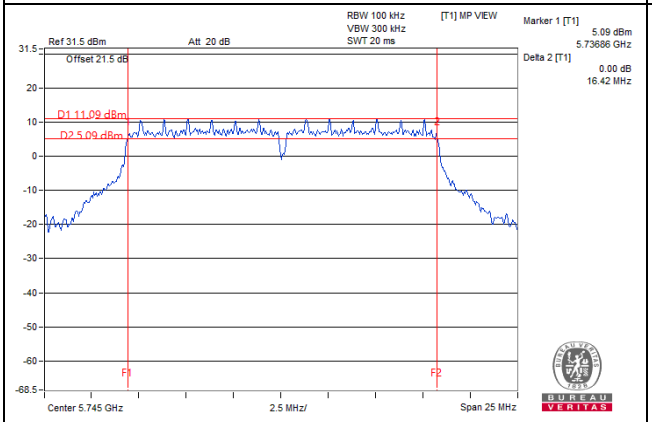
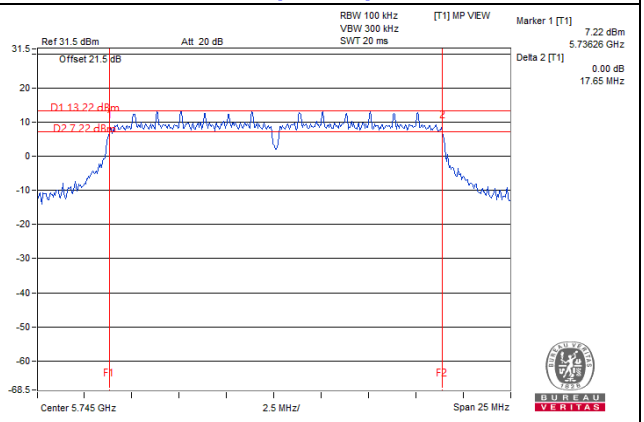
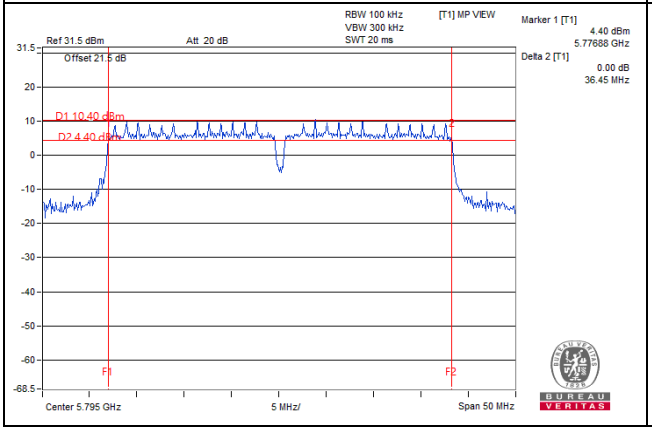
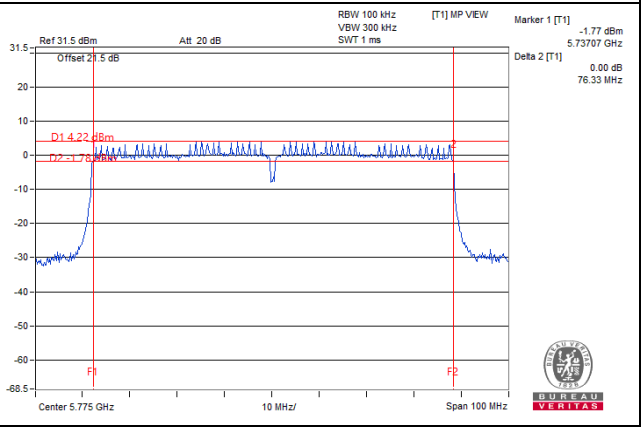
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Pass / Fail
149	5745	17.65	0.5	PASS
157	5785	17.66	0.5	PASS
165	5825	17.65	0.5	PASS

802.11ac (VHT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Pass / Fail
151	5755	36.47	0.5	PASS
159	5795	36.45	0.5	PASS

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Pass / Fail
155	5775	76.33	0.5	PASS

Spectrum Plot of Worst Value	
802.11a / CH149	**802.11ac (VHT20) / CH149**
	
802.11ac (VHT40) / CH159	**802.11ac (VHT80) / CH155**
	

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

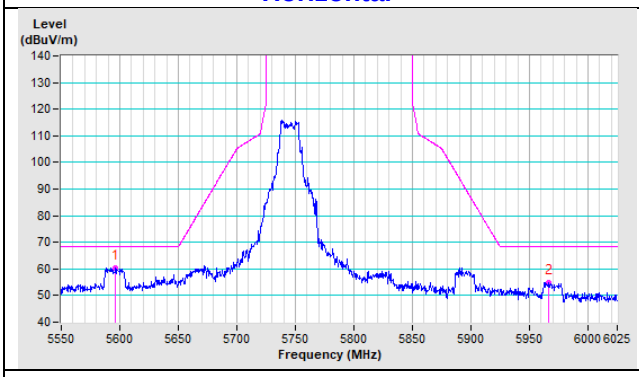
5 Pictures of Test Arrangements

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

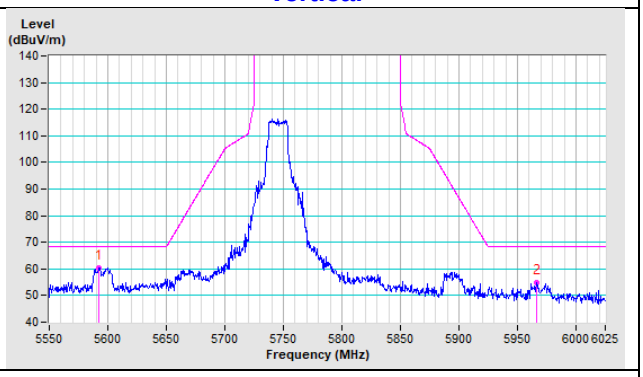
Annex A - Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

802.11a CH 149：5745 MHz

Horizontal

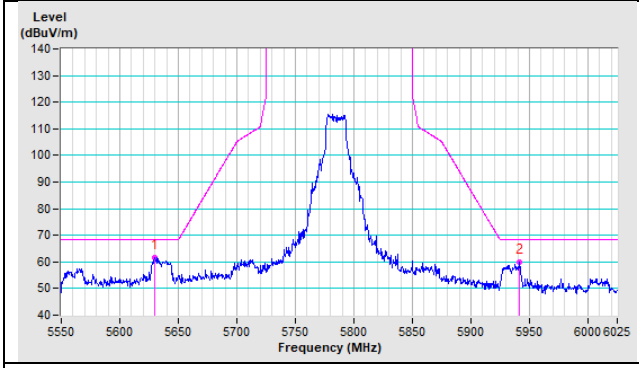


Vertical

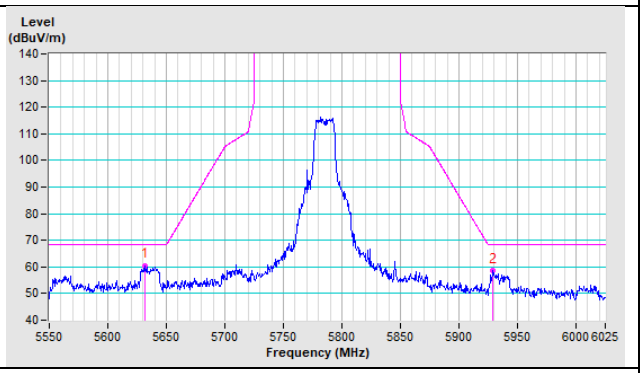


802.11a CH 157：5785 MHz

Horizontal

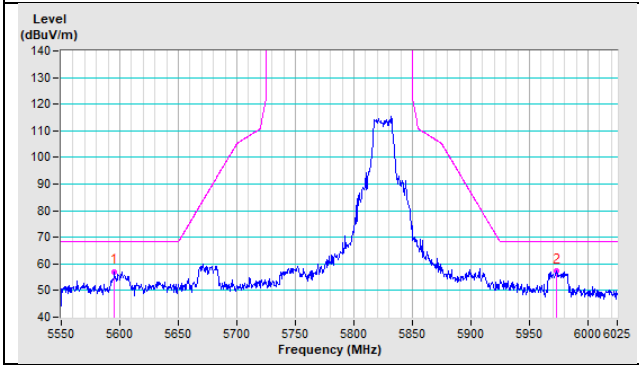


Vertical

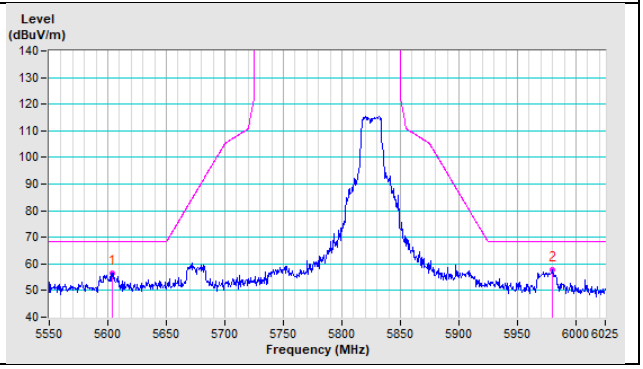


802.11a CH 165：5825 MHz

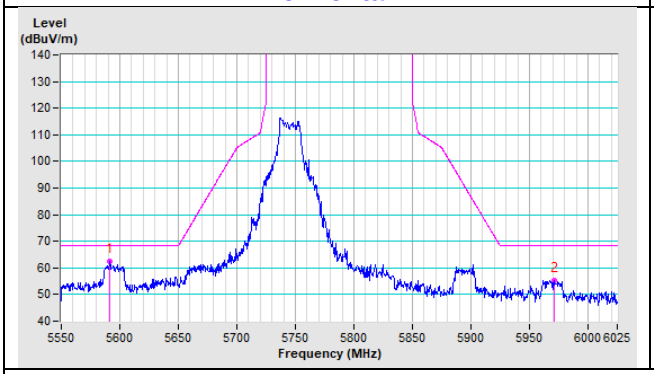
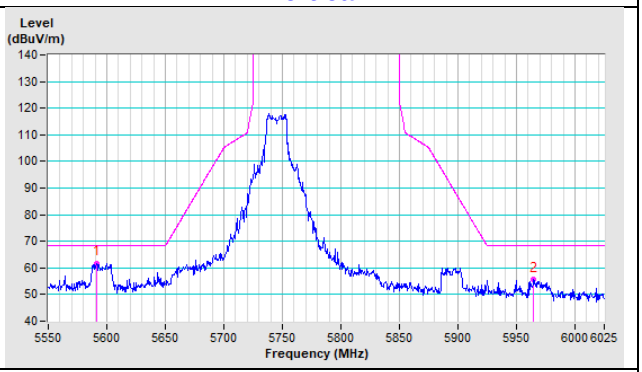
Horizontal



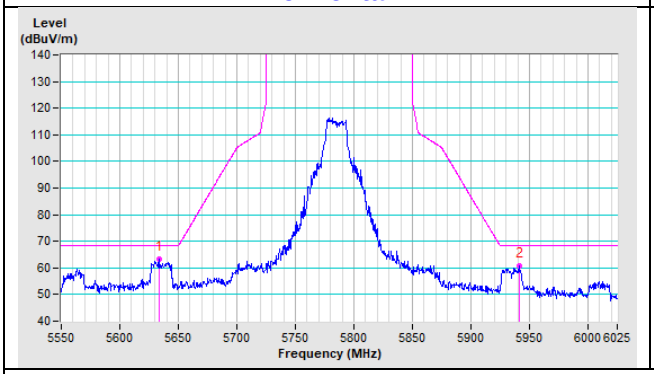
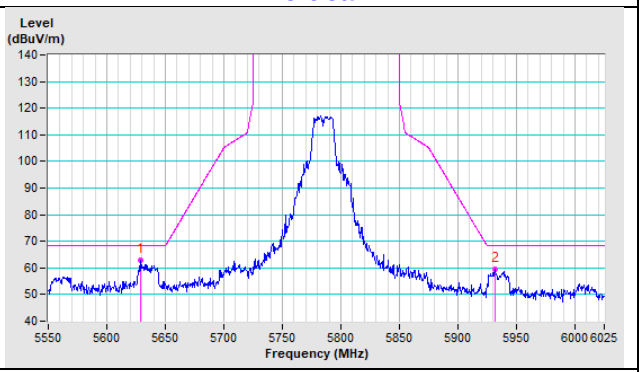
Vertical



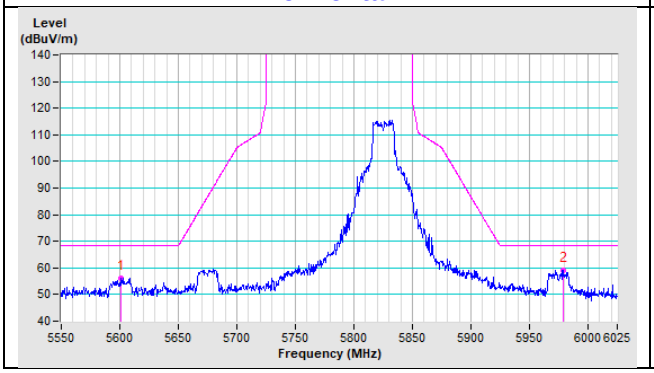
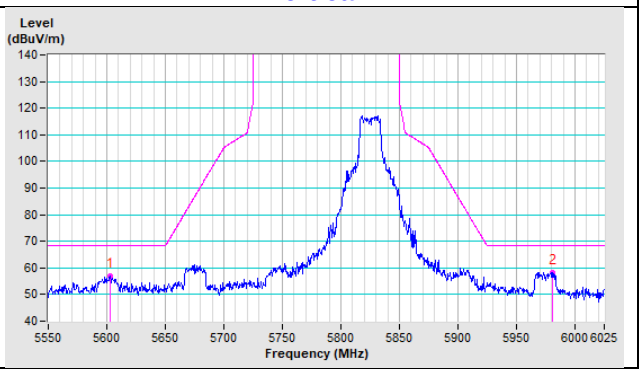
802.11ac (VHT20) CH 149：5745 MHz

Horizontal	Vertical
	

802.11ac (VHT20) CH 157：5785 MHz

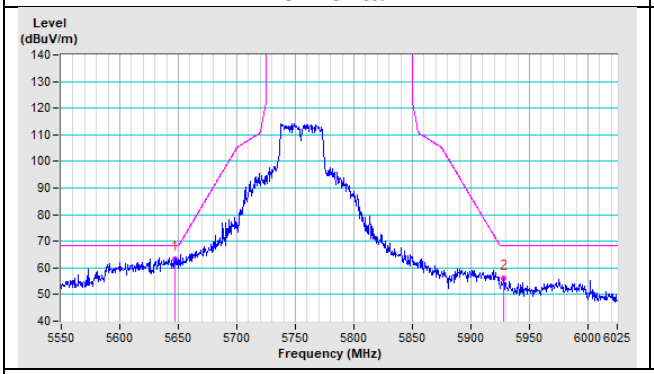
Horizontal	Vertical
	

802.11ac (VHT20) CH 165：5825 MHz

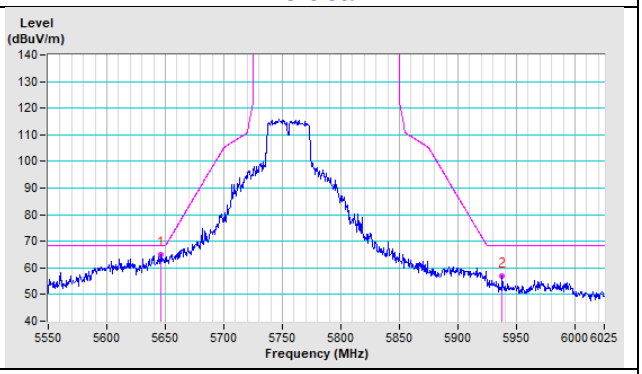
Horizontal	Vertical
	

802.11ac (VHT40) CH 151：5755 MHz

Horizontal

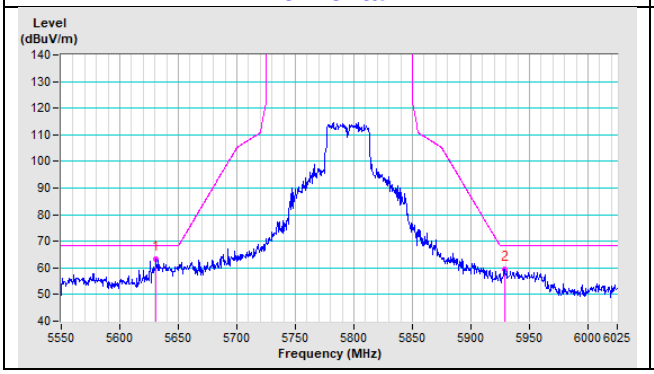


Vertical

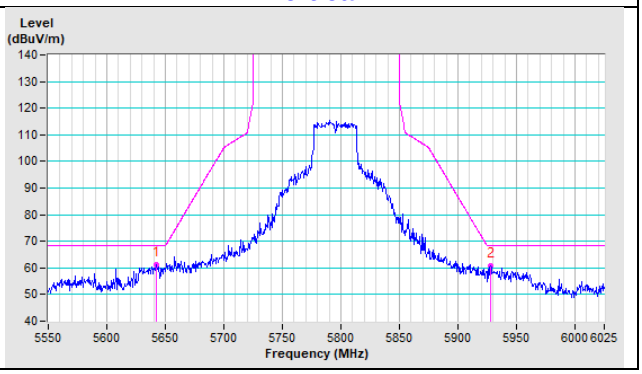


802.11ac (VHT40) CH 159：5795 MHz

Horizontal

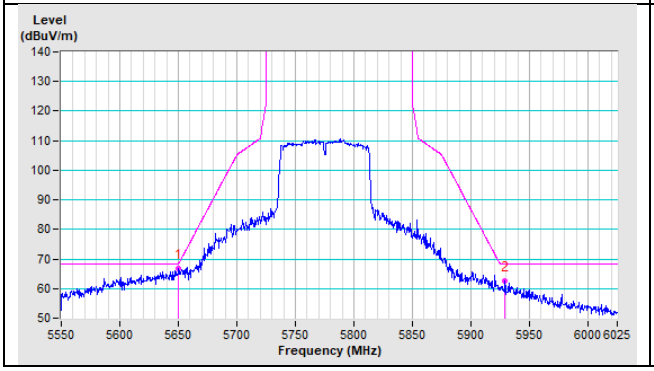


Vertical

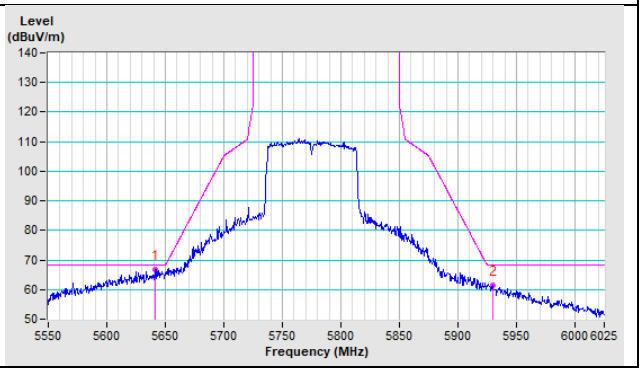


802.11ac (VHT80) CH 155：5775 MHz

Horizontal



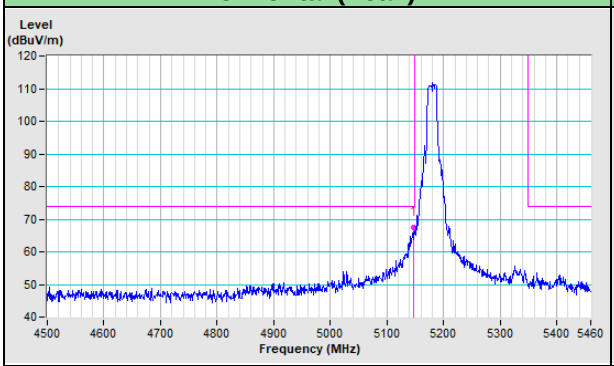
Vertical



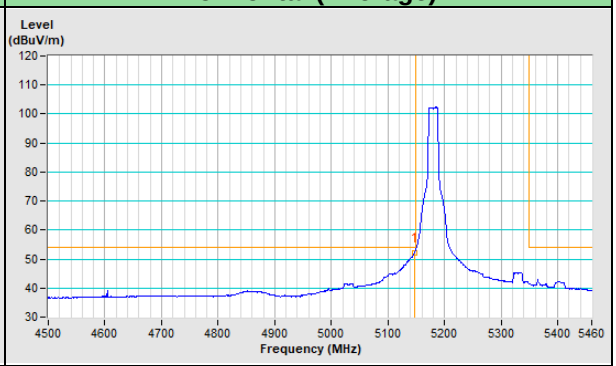
Annex B - Band-Edge Measurement (For U-NII-1, U-NII-2A, U-NII-2C band)

802.11a Channel 36

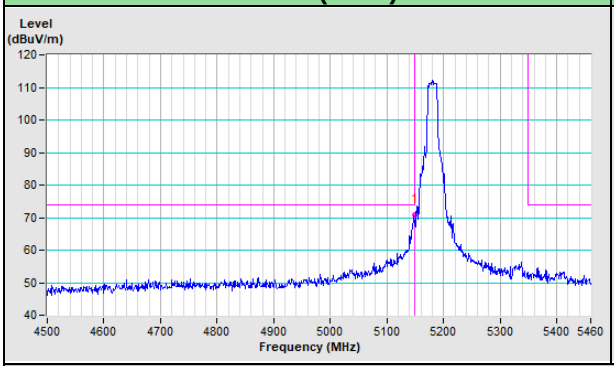
Horizontal (Peak)



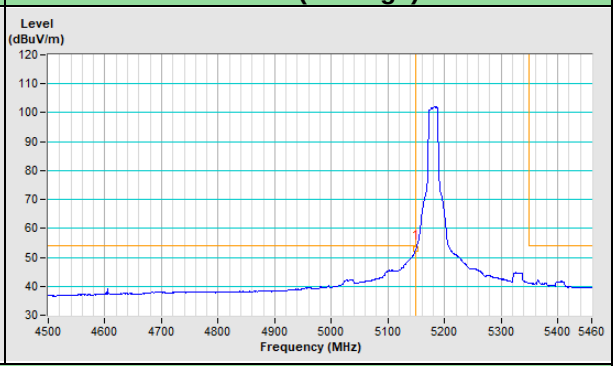
Horizontal (Average)



Vertical (Peak)

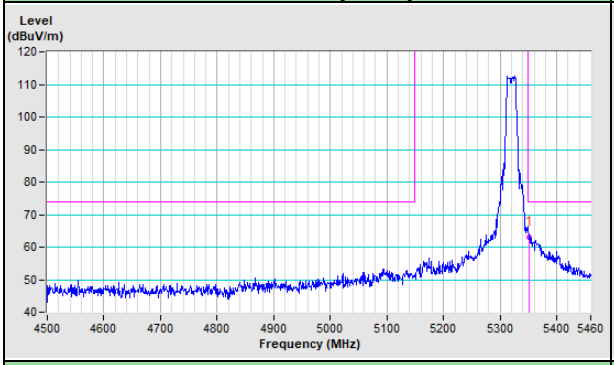


Vertical (Average)

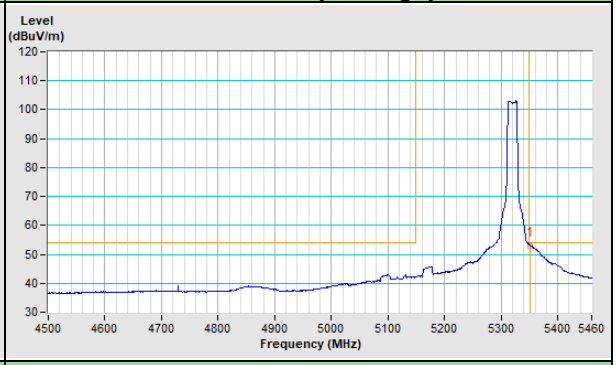


802.11a Channel 64

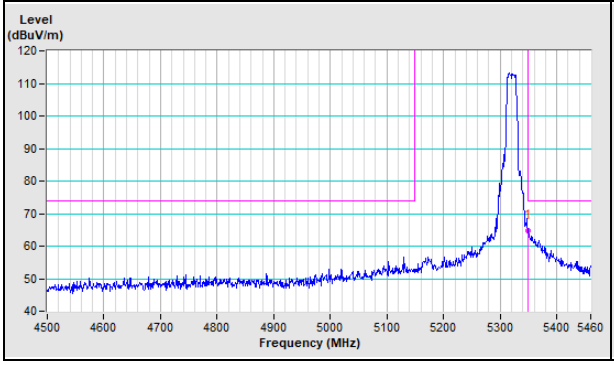
Horizontal (Peak)



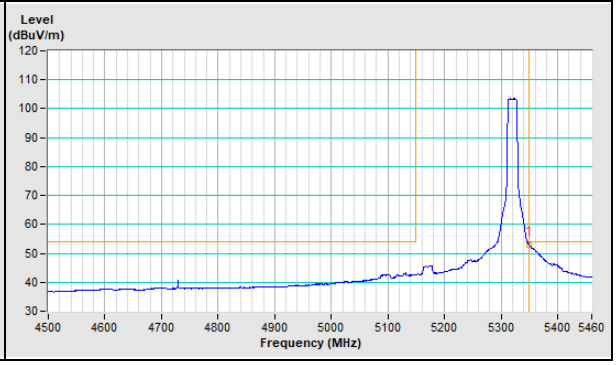
Horizontal (Average)

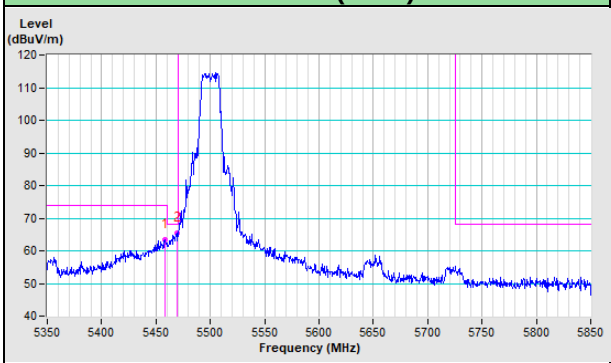
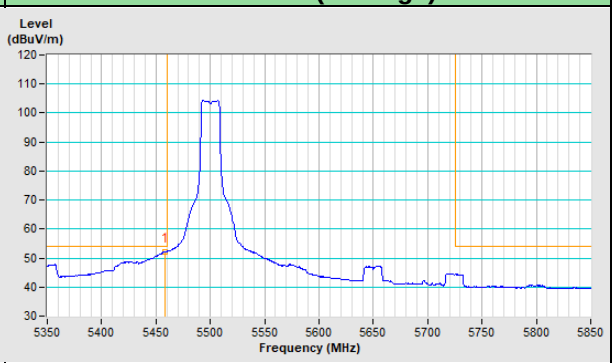
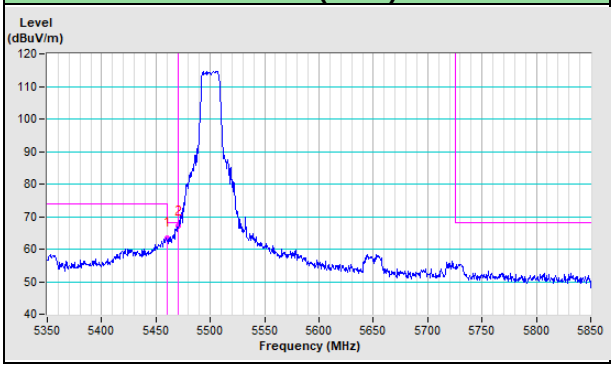
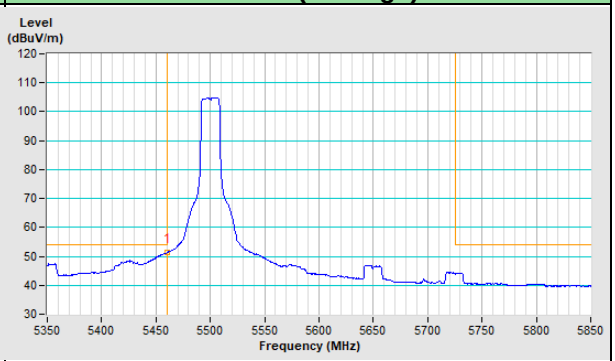


Vertical (Peak)



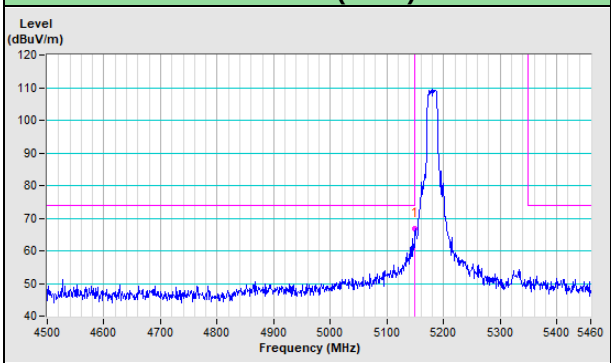
Vertical (Average)



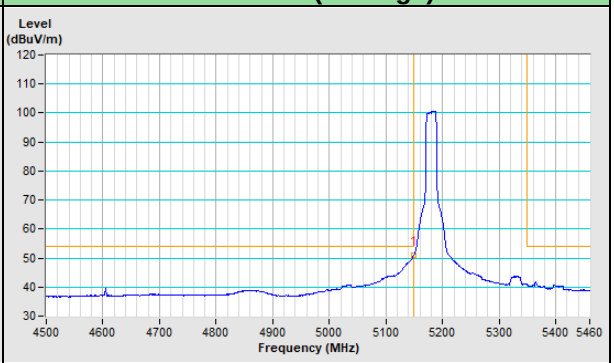
802.11a Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT20) Channel 36

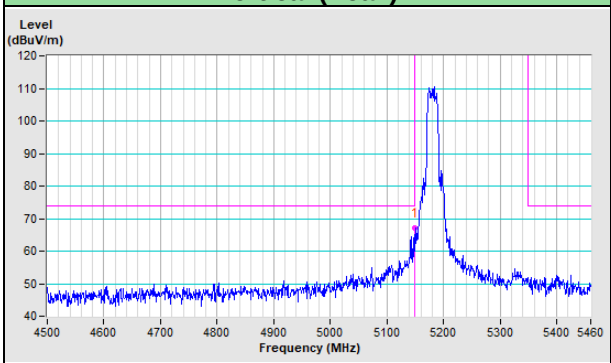
Horizontal (Peak)



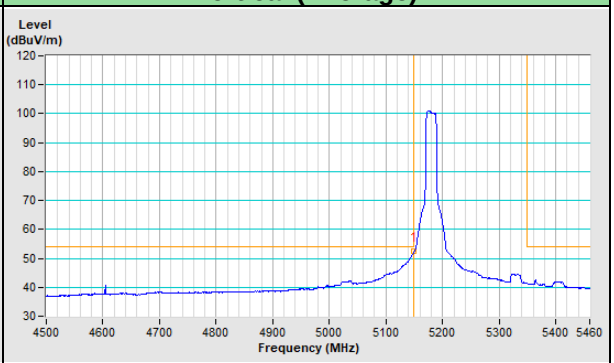
Horizontal (Average)



Vertical (Peak)

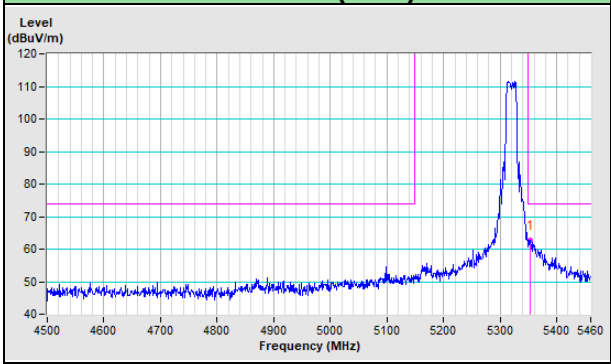


Vertical (Average)

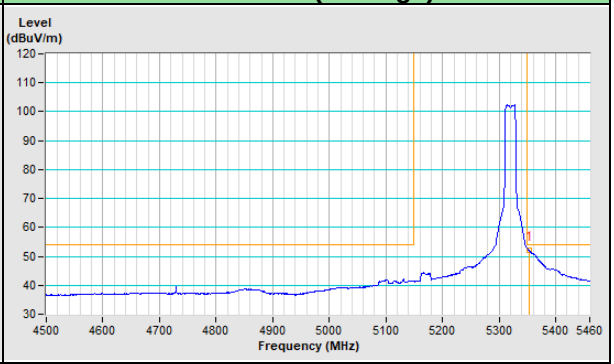


802.11ac (VHT20) Channel 64

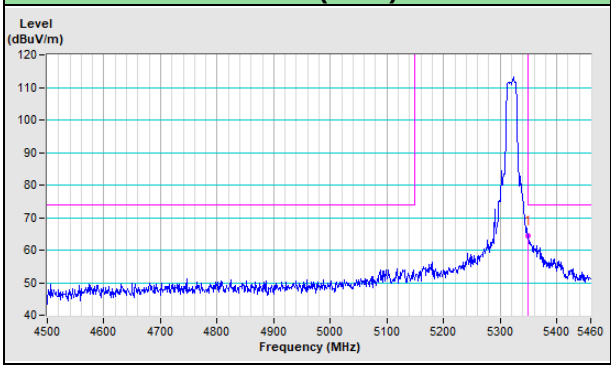
Horizontal (Peak)



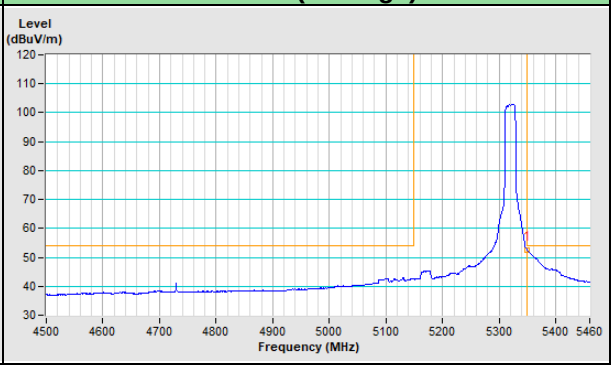
Horizontal (Average)

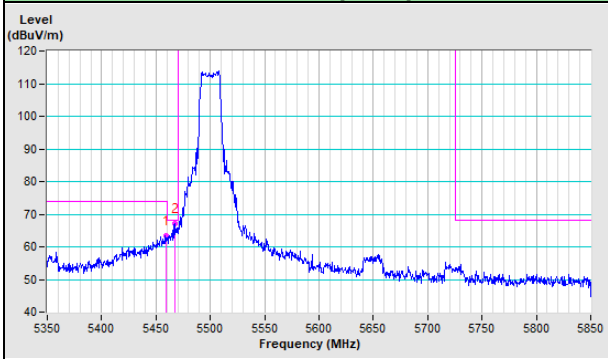
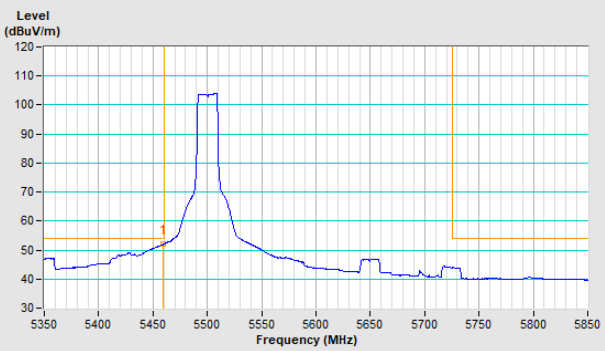
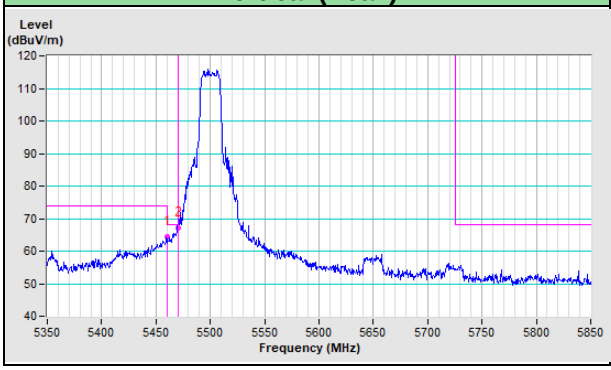
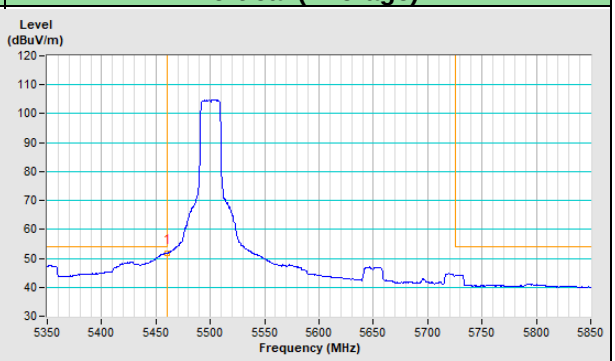


Vertical (Peak)



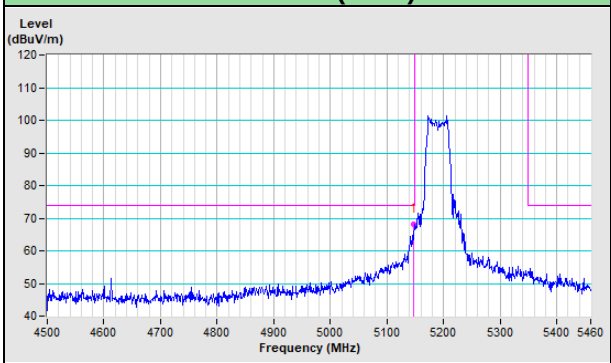
Vertical (Average)



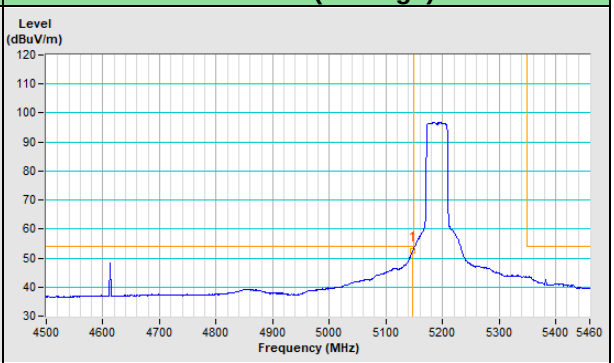
802.11ac (VHT20) Channel 100	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT40) Channel 38

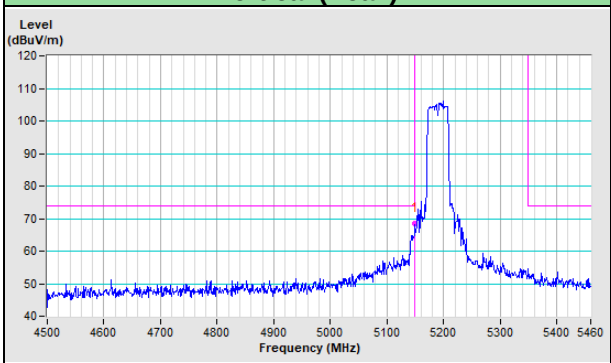
Horizontal (Peak)



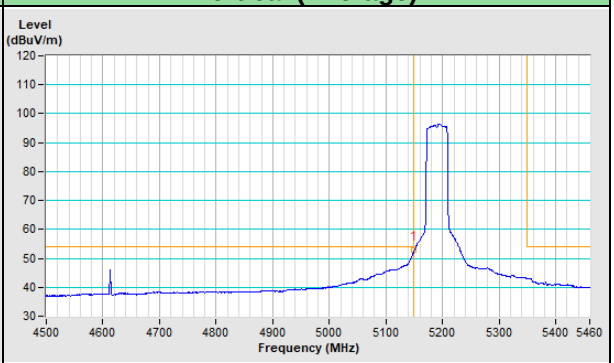
Horizontal (Average)



Vertical (Peak)

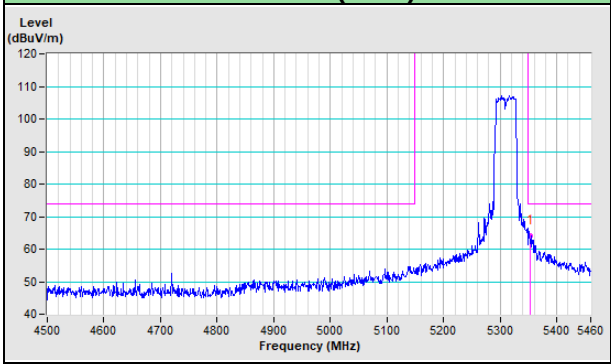


Vertical (Average)

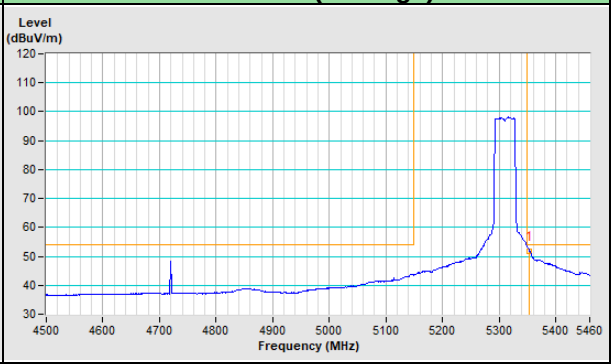


802.11ac (VHT40) Channel 62

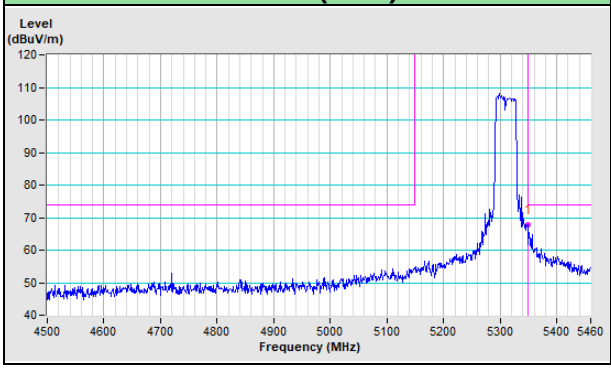
Horizontal (Peak)



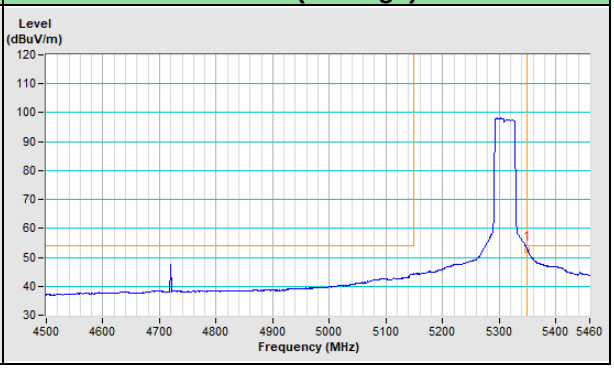
Horizontal (Average)

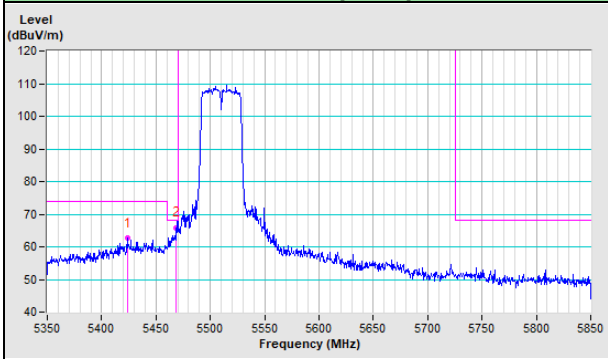
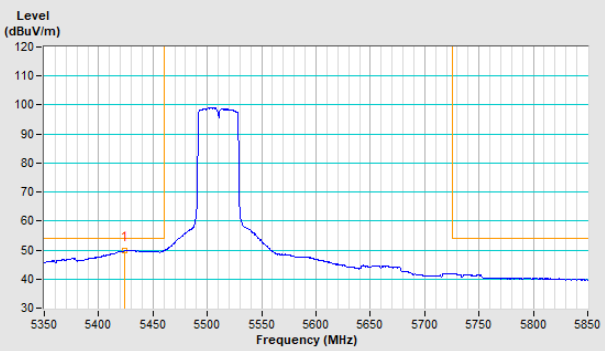
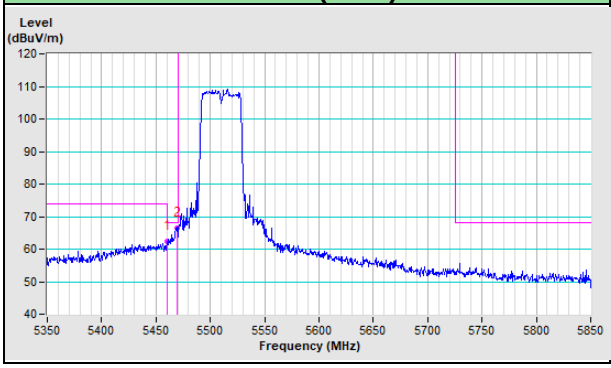
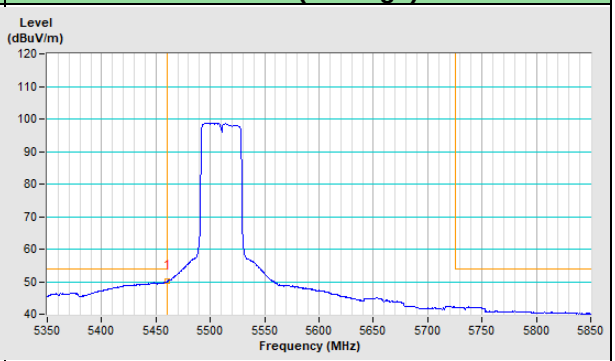


Vertical (Peak)



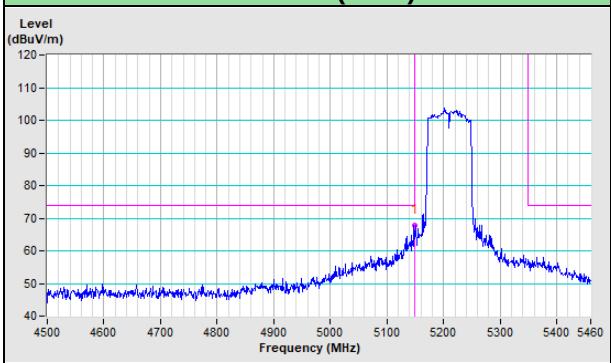
Vertical (Average)



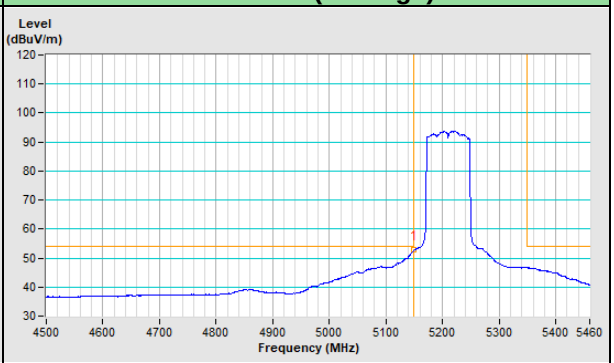
802.11ac (VHT40) Channel 102	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT80) Channel 42

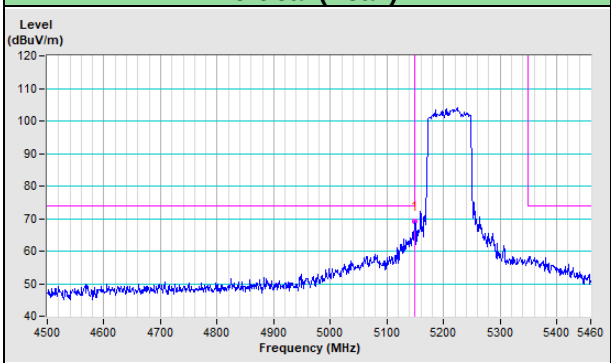
Horizontal (Peak)



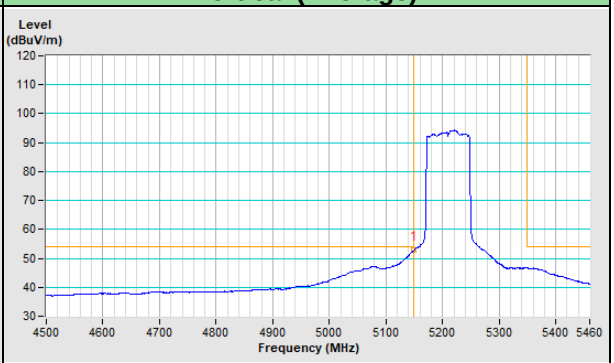
Horizontal (Average)



Vertical (Peak)

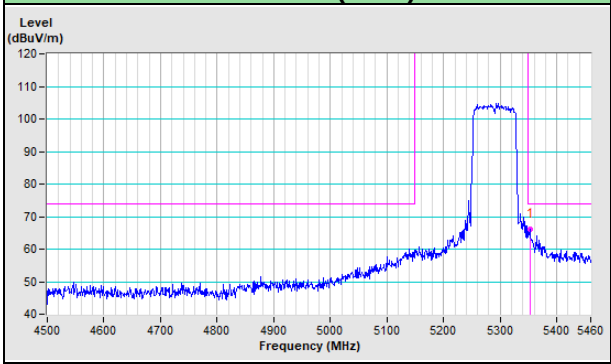


Vertical (Average)

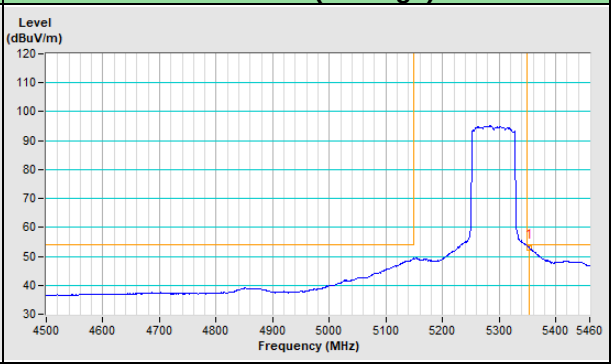


802.11ac (VHT80) Channel 58

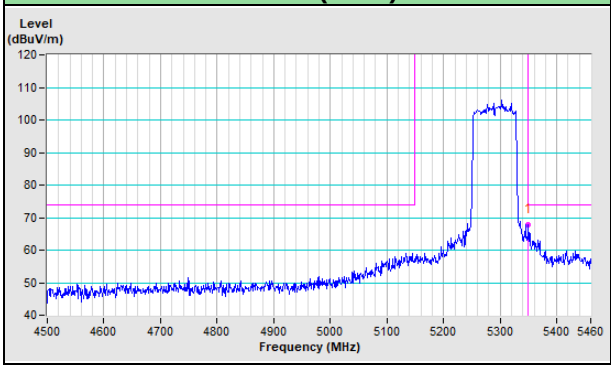
Horizontal (Peak)



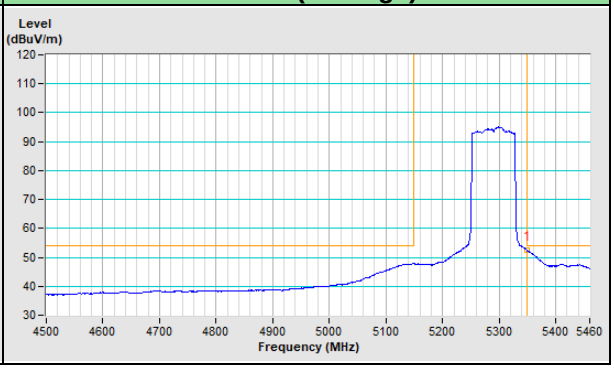
Horizontal (Average)

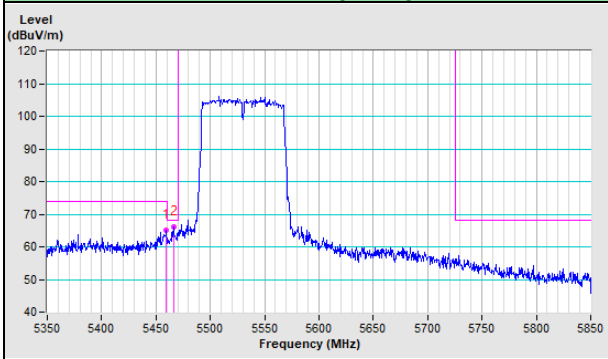
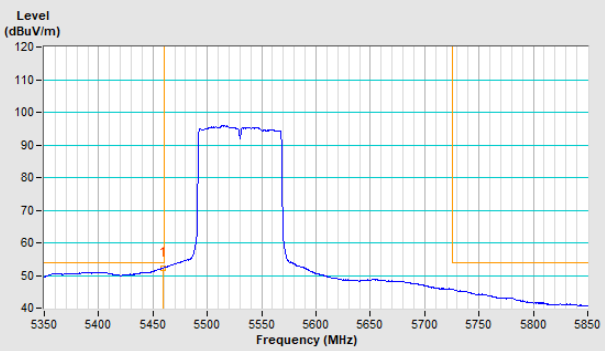
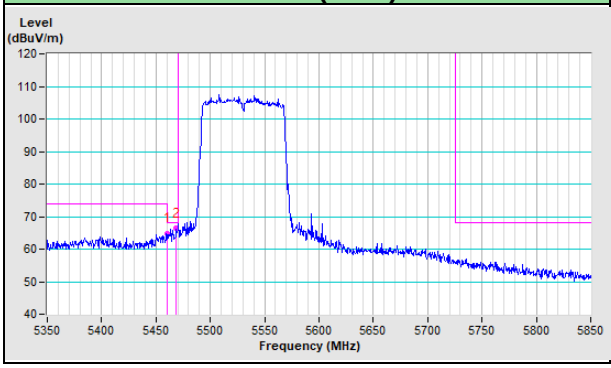
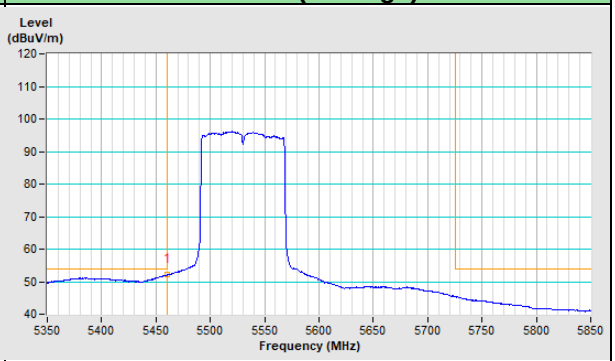


Vertical (Peak)



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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