FCC Test Report

Report No.:	RFBHDC-WTW-P20120816-4 R1
FCC ID:	2AYY9FMP182
Test Model:	F-41B
Received Date:	Dec. 24, 2020
Test Date:	Jan. 21 ~ Mar. 23, 2021
Issued Date:	Mar. 31, 2021
Applicant:	FCNT Limited
Address:	Chuorinkan 7-10-1 Yamato, Kanagawa 242-0007, Japan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
RFBHDC-WTW-P20120816-4	Original Release	Mar. 04, 2021
RFBHDC-WTW-P20120816-4 R1	Add Channel 144/142/138 of data	Mar. 31, 2021

1 Certificate of Conformity

Product:	Smart Phone
Brand:	FUJITSU
Test Model:	F-41B
Sample Status:	Engineering Sample
Applicant:	FCNT Limited
Test Date:	Jan. 21 ~ Mar. 23, 2021
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

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

Prepared by :  , **Date:** Mar. 31, 2021

Gina Liu / Specialist

Approved by :  , **Date:** Mar. 31, 2021

Dylan Chiou / Senior Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	**Test Item**	**Result**	**Remarks**
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -29.2 dB at 0.506 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 -1.01 dB at 5350.00 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB 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 B.
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 A. 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	150 kHz ~ 30 MHz	2.79 dB
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.04 dB
	30 MHz ~ 200 MHz	2.93 dB
	200 MHz ~ 1000 MHz	2.95 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Smart Phone
Brand	FUJITSU
Test Model	F-41B
Status of EUT	Engineering Sample
Power Supply Rating	3.85 Vdc (Battery) 5 Vdc (Adapter)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0 Mbps 802.11n: up to 150.0 Mbps 802.11ac: up to 433.3 Mbps
Operating Frequency	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5720 MHz, 5745 ~ 5825 MHz
Number of Channel	5180 ~ 5240 MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 1 for 802.11ac (VHT80) 5260 ~ 5320 MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 1 for 802.11ac (VHT80) 5500 ~ 5720 MHz: 12 for 802.11a, 802.11n (HT20) 6 for 802.11n (HT40) 3 for 802.11ac (VHT80) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 1 for 802.11ac (VHT80)
Output Power	29.242 mW for 5180 ~ 5240 MHz 28.774 mW for 5260 ~ 5320 MHz 32.063 mW for 5500 ~ 5720 MHz 30.690 mW for 5745 ~ 5825 MHz
Antenna Type	Monopole antenna with -2.2 dBi gain
Antenna Connector	N/A
Accessory Device	Refer to Note as below
Data Cable Supplied	Refer to Note as below

Note:

1. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

Modulation Mode	Tx Function
802.11a	1TX
802.11n (HT20)	1TX
802.11n (HT40)	1TX
802.11ac (VHT80)	1TX

2. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter	NTT docomo	AC adaptor 06	I/P: 100-240 Vac, 50/60 Hz, 0.8 A O/P: 5 Vdc, 3 A
Battery	N/A	CA54310-0081	3.85 Vdc, 3500 mAh, 13.47Wh

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

3.2 Description of Test Modes

For 5180 ~ 5240 MHz

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
42	5210

For 5260 ~ 5320 MHz

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
54	5270	62	5310

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
58	5290

For 5500 ~ 5720 MHz

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

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

6 channels are provided for 802.11n (HT40):

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

3 channels are provided for 802.11ac (VHT80):

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

For 5745 ~ 5825 MHz:

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
155	5775

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

Note:
1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.
2. "-" means no effect.

Radiated Emission Test (Above 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	6.5
-		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	13.5
-		802.11ac (VHT80)	42	42	OFDM	BPSK	29.3
-	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11n (HT20)	52 to 64	52, 60, 64	OFDM	BPSK	6.5
-		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	13.5
-		802.11ac (VHT80)	58	58	OFDM	BPSK	29.3
-	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
-		802.11n (HT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
-		802.11n (HT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
-		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	BPSK	29.3
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
-		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5
-		802.11ac (VHT80)	155	155	OFDM	BPSK	29.3

Radiated Emission Test (Below 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5260-5320	802.11ac (VHT80)	58	58	OFDM	BPSK	29.3

Power Line Conducted Emission Test:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5260-5320	802.11ac (VHT80)	58	58	OFDM	BPSK	29.3

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	6.5
-		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	13.5
-		802.11ac (VHT80)	42	42	OFDM	BPSK	29.3
-	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11n (HT20)	52 to 64	52, 60, 64	OFDM	BPSK	6.5
-		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	13.5
-		802.11ac (VHT80)	58	58	OFDM	BPSK	29.3
-	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
-		802.11n (HT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
-		802.11n (HT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
-		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	BPSK	29.3
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
-		802.11n (HT40)	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	Tested by
RE≥1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Tim Chen
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Tim Chen
PLC	25 deg. C, 65 % RH	120 Vac, 60 Hz	Tim Chen
APCM	25 deg. C, 65 % RH	3.8 Vdc	Vincent Huang

3.3 Duty Cycle of Test Signal

MODULATION TYPE: BPSK

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

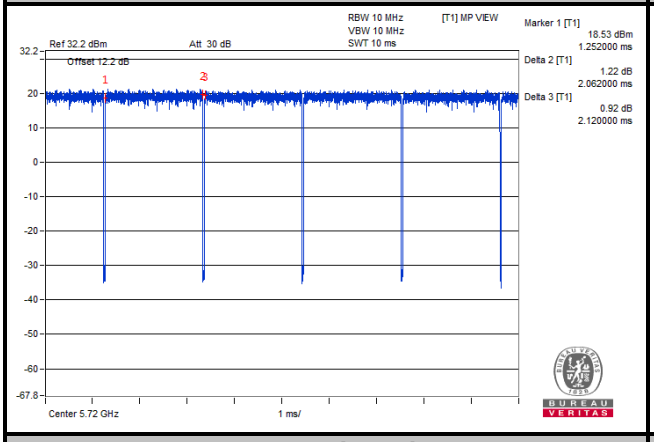
802.11a: Duty cycle = 2.062/2.12 = 0.973, Duty factor = 10 * log(1/0.973) = 0.12

802.11n (HT20): Duty cycle = 1.918/1.959 = 0.979, Duty factor = 10 * log(1/0.979) = 0.09

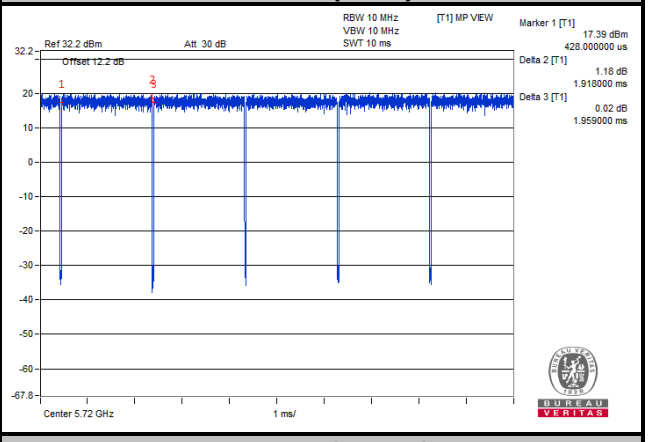
802.11n (HT40): Duty cycle = 0.947/0.986 = 0.960, Duty factor = 10 * log(1/0.960) = 0.18

802.11ac (VHT80): Duty cycle = 0.463/0.509 = 0.910, Duty factor = 10 * log(1/0.910) = 0.41

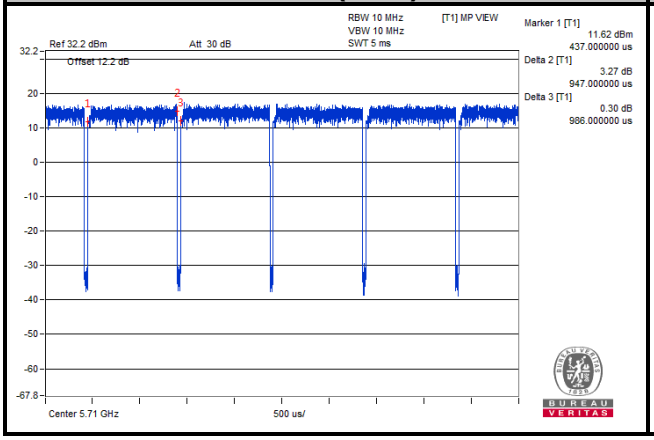
802.11a



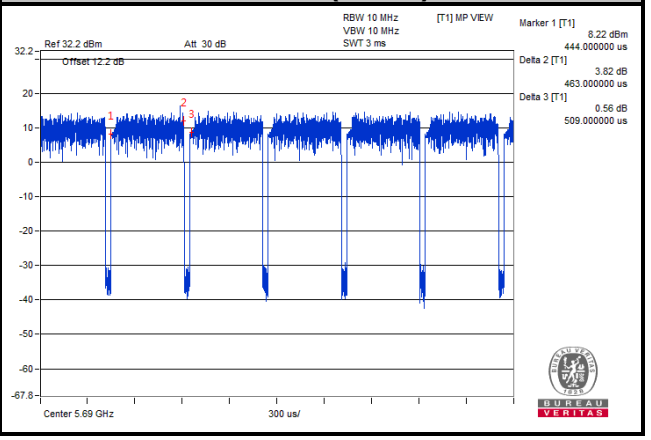
802.11n (HT20)



802.11n (HT40)



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.

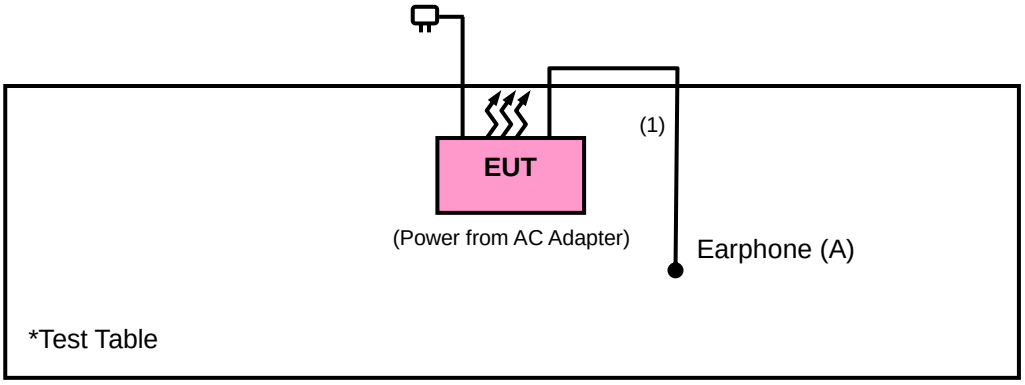
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Earphone	Apple	EW101BK	N/A	N/A	--

Note:

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

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Earphone Cable	1	1.0	N	0	--

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards and References

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

Test Standard:

FCC Part 15, Subpart E (15.407)
ANSI C63.10-2013

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

References Test Guidance:

KDB 789033 D02 General UNII Test Procedures 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 1000 MHz, 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 20 dB under any condition of modulation.

Limits of Unwanted Emission Out of the Restricted Bands

Applicable To			Limit	
789033 D02 General UNII Test Procedures New Rules v02r01			Field Strength at 3 m	
			PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Frequency Band	**Applicable To**		**EIRP Limit**	**Equivalent Field Strength at 3 m**
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
	☐	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

*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

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent	N9038A	MY51210203	Mar. 18, 2020	Mar. 17, 2021
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 16, 2020	Apr. 15, 2021
Spectrum Analyzer Agilent	N9010A	MY52220314	Dec. 07, 2020	Dec. 06, 2021
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 16, 2020	Apr. 15, 2021
Broadband Horn Antenna SCHWARZBECK	BBHA 9170	148	Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Nov. 22, 2020	Nov. 21, 2021
BILOG Antenna SCHWARZBECK	VULB 9168	9168-472	Nov. 06, 2020	Nov. 05, 2021
Fixed Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
Loop Antenna	EM-6879	269	Sep. 17, 2020	Sep. 16, 2021
Preamplifier EMCI	EMC001340	980201	Oct. 21, 2020	Oct. 20, 2021
Preamplifier EMCI	EMC 012645	980115	Oct. 07, 2020	Oct. 06, 2021
Preamplifier EMCI	EMC 184045	980116	Oct. 07, 2020	Oct. 06, 2021
Preamplifier EMCI	EMC 330H	980112	Oct. 07, 2020	Oct. 06, 2021
Power Meter Anritsu	ML2495A	1012010	Sep. 01, 2020	Aug. 31, 2021
Power Sensor Anritsu	MA2411B	1315050	Sep. 01, 2020	Aug. 31, 2021
RF Coaxial Cable EMCI	EMC104-SM-SM-8000	171005	Oct. 07, 2020	Oct. 06, 2021
RF Coaxial Cable HUBER+SUHNNER	SUCOFLEX 104	EMC104-SM-SM-1000(140807)	Oct. 07, 2020	Oct. 06, 2021
RF Coaxial Cable WOKEN	8D-FB	Cable-Ch10-01	Oct. 07, 2020	Oct. 06, 2021
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	NA	NA	NA

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

2. The test was performed in HwaYa Chamber 10.

4.1.3 Test Procedures

For Radiated Emission below 30 MHz

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 9 kHz at frequency below 30 MHz.

For Radiated Emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 1 GHz) / 1.5 meters (for above 1 GHz) 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 detected 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:

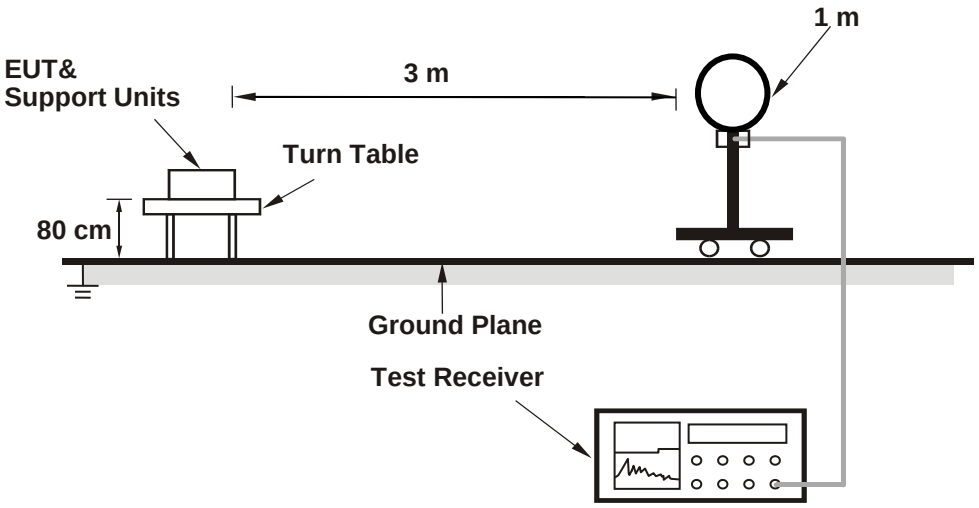
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98 %) or 10 Hz (Duty cycle ≥ 98 %) for Average detection (AV) at frequency above 1 GHz.
   (11a: RBW = 1 MHz, VBW = 1 kHz ; 11n (HT20): RBW = 1 MHz, VBW = 1 kHz ;
   11n (HT40): RBW = 1 MHz, VBW = 3 kHz ; 11ac (VHT80): RBW = 1 MHz, VBW = 3 kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

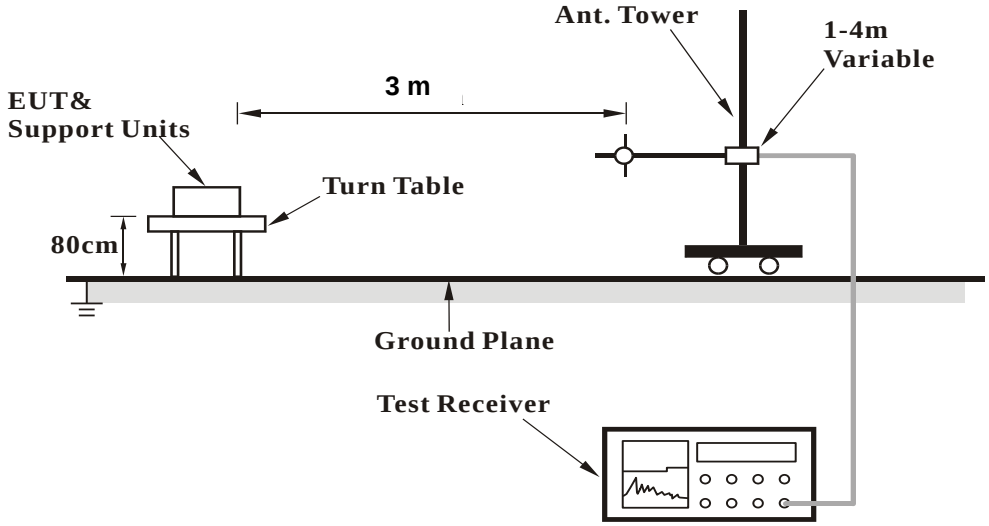
No deviation.

4.1.5 Test Setup

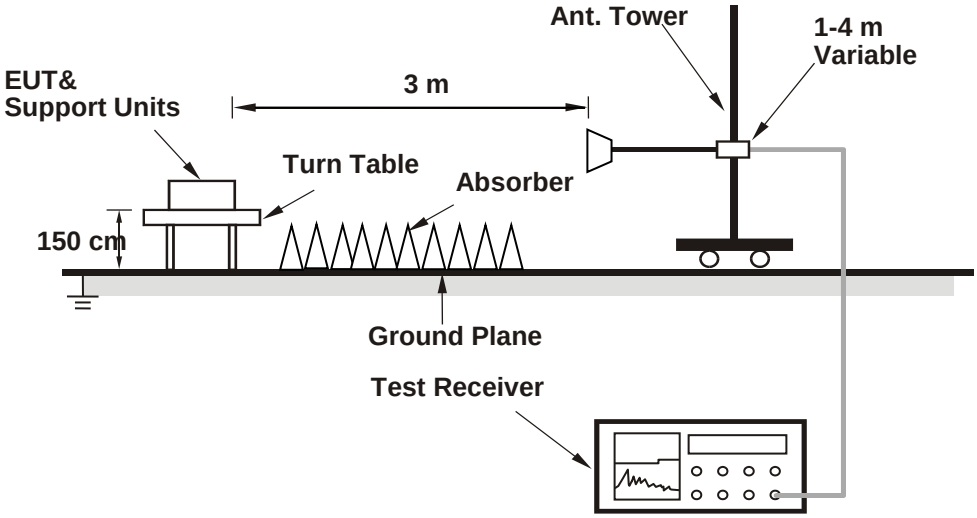
<Radiated Emission below 30 MHz>



<Radiated Emission 30 MHz to 1 GHz>



<Radiated Emission above 1 GHz>



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

4.1.6 EUT Operating Conditions

a. Placed the EUT on a testing table.
b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1 GHz Data：

802.11a

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.58	41.45	-0.87	54	-13.42	105	14	Average
5150	49.98	50.85	-0.87	74	-24.02	105	14	Peak
5180	90.94	91.84	-0.9	------	------	105	14	Average
5180	96.77	97.67	-0.9	------	------	105	14	Peak
10360	48.06	47.84	0.22	68.2	-20.14	174	122	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.6	41.47	-0.87	54	-13.4	247	314	Average
5150	50.4	51.27	-0.87	74	-23.6	247	314	Peak
5180	92.64	93.54	-0.9	------	------	247	314	Average
5180	98.33	99.23	-0.9	------	------	247	314	Peak
10360	47.13	46.91	0.22	68.2	-21.07	103	114	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 40	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.72	41.59	-0.87	54	-13.28	101	32	Average
5150	49.78	50.65	-0.87	74	-24.22	101	32	Peak
5200	91.11	92.04	-0.93	------	------	101	32	Average
5200	97.06	97.99	-0.93	------	------	101	32	Peak
10400	49.25	49.07	0.18	68.2	-18.95	122	110	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.51	41.38	-0.87	54	-13.49	258	318	Average
5150	50.11	50.98	-0.87	74	-23.89	258	318	Peak
5200	92.53	93.46	-0.93	------	------	258	318	Average
5200	98.69	99.62	-0.93	------	------	258	318	Peak
10400	48.9	48.72	0.18	68.2	-19.3	145	133	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5200 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.4	41.27	-0.87	54	-13.6	106	26	Average
5150	50.06	50.93	-0.87	74	-23.94	106	26	Peak
5240	93.08	94.22	-1.14	------	------	106	26	Average
5240	99.51	100.65	-1.14	------	------	106	26	Peak
5350	39.62	40.75	-1.13	54	-14.38	106	26	Average
5350	48.42	49.55	-1.13	74	-25.58	106	26	Peak
10480	51.08	50.37	0.71	68.2	-17.12	197	103	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.52	41.39	-0.87	54	-13.48	254	318	Average
5150	50.5	51.37	-0.87	74	-23.5	254	318	Peak
5240	92.78	93.92	-1.14	------	------	254	318	Average
5240	98.71	99.85	-1.14	------	------	254	318	Peak
5350	39.69	40.82	-1.13	54	-14.31	254	318	Average
5350	47.72	48.85	-1.13	74	-26.28	254	318	Peak
10480	50.43	49.72	0.71	68.2	-17.77	100	147	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5240 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 52	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.59	41.46	-0.87	54	-13.41	128	28	Average
5150	49.88	50.75	-0.87	74	-24.12	128	28	Peak
5260	92.09	93.4	-1.31	------	------	128	28	Average
5260	98.46	99.77	-1.31	------	------	128	28	Peak
5350	39.71	40.84	-1.13	54	-14.29	128	28	Average
5350	48.66	49.79	-1.13	74	-25.34	128	28	Peak
10520	50.32	49.45	0.87	68.2	-17.88	148	133	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.56	41.43	-0.87	54	-13.44	238	305	Average
5150	50.64	51.51	-0.87	74	-23.36	238	305	Peak
5260	91	92.31	-1.31	------	------	238	305	Average
5260	96.72	98.03	-1.31	------	------	238	305	Peak
5350	39.69	40.82	-1.13	54	-14.31	238	305	Average
5350	48.88	50.01	-1.13	74	-25.12	238	305	Peak
10520	50.14	49.27	0.87	68.2	-18.06	188	103	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5260 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 60	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.52	41.39	-0.87	54	-13.48	132	21	Average
5150	50.02	50.89	-0.87	74	-23.98	132	21	Peak
5300	92.91	94.3	-1.39	------	------	132	21	Average
5300	98.54	99.93	-1.39	------	------	132	21	Peak
5350	40.15	41.28	-1.13	54	-13.85	132	21	Average
5350	48.76	49.89	-1.13	74	-25.24	132	21	Peak
10600	44.13	43.11	1.02	54	-9.87	218	306	Average
10600	51.25	50.23	1.02	74	-22.75	218	306	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.58	41.45	-0.87	54	-13.42	233	302	Average
5150	50.62	51.49	-0.87	74	-23.38	233	302	Peak
5300	90.93	92.32	-1.39	------	------	233	302	Average
5300	96.73	98.12	-1.39	------	------	233	302	Peak
5350	39.64	40.77	-1.13	54	-14.36	233	302	Average
5350	49.27	50.4	-1.13	74	-24.73	233	302	Peak
10600	43.55	42.53	1.02	54	-10.45	133	242	Average
10600	50.71	49.69	1.02	74	-23.29	133	242	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5300 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 64	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	92.13	93.44	-1.31	------	------	129	26	Average
5320	98.11	99.42	-1.31	------	------	129	26	Peak
5350	41.19	42.32	-1.13	54	-12.81	129	26	Average
5350	49.35	50.48	-1.13	74	-24.65	129	26	Peak
10640	42.77	41.92	0.85	54	-11.23	259	101	Average
10640	49.08	48.23	0.85	74	-24.92	259	101	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	91.69	93	-1.31	------	------	230	302	Average
5320	97.27	98.58	-1.31	------	------	230	302	Peak
5350	41.48	42.61	-1.13	54	-12.52	230	302	Average
5350	48.88	50.01	-1.13	74	-25.12	230	302	Peak
10640	42.09	41.24	0.85	54	-11.91	189	315	Average
10640	48.37	47.52	0.85	74	-25.63	189	315	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5320 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 100	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.45	41.33	-0.88	54	-13.55	118	26	Average
5460	50.7	51.58	-0.88	74	-23.3	118	26	Peak
5470	51.76	52.64	-0.88	68.2	-16.44	118	26	Peak
5500	93.7	94.55	-0.85	------	------	118	26	Average
5500	99.32	100.17	-0.85	------	------	118	26	Peak
5725	49.94	50.88	-0.94	68.2	-18.26	118	26	Peak
11000	43.37	42.47	0.9	54	-10.63	157	246	Average
11000	50.59	49.69	0.9	74	-23.41	157	246	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.2	41.08	-0.88	54	-13.8	233	306	Average
5460	49.89	50.77	-0.88	74	-24.11	233	306	Peak
5470	53.02	53.9	-0.88	68.2	-15.18	233	306	Peak
5500	92.27	93.12	-0.85	------	------	233	306	Average
5500	98.02	98.87	-0.85	------	------	233	306	Peak
5725	49.88	50.82	-0.94	68.2	-18.32	233	306	Peak
11000	43.18	42.28	0.9	54	-10.82	263	301	Average
11000	50.32	49.42	0.9	74	-23.68	263	301	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5500 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 116	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.88	40.76	-0.88	54	-14.12	103	23	Average
5460	49.59	50.47	-0.88	74	-24.41	103	23	Peak
5470	48.92	49.8	-0.88	68.2	-19.28	103	23	Peak
5580	94.69	95.68	-0.99	------	------	103	23	Average
5580	100.57	101.56	-0.99	------	------	103	23	Peak
5725	50.16	51.1	-0.94	68.2	-18.04	103	23	Peak
11160	43.36	43.06	0.3	54	-10.64	194	313	Average
11160	50.6	50.3	0.3	74	-23.4	194	313	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.67	40.55	-0.88	54	-14.33	278	277	Average
5460	49.66	50.54	-0.88	74	-24.34	278	277	Peak
5470	48.65	49.53	-0.88	68.2	-19.55	278	277	Peak
5580	90.13	91.12	-0.99	------	------	278	277	Average
5580	95.8	96.79	-0.99	------	------	278	277	Peak
5725	50.28	51.22	-0.94	68.2	-17.92	278	277	Peak
11160	44.39	44.09	0.3	54	-9.61	177	68	Average
11160	51.5	51.2	0.3	74	-22.5	177	68	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5580 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 140	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.79	40.67	-0.88	54	-14.21	115	24	Average
5460	50.36	51.24	-0.88	74	-23.64	115	24	Peak
5470	48.9	49.78	-0.88	68.2	-19.3	115	24	Peak
5700	93.91	94.95	-1.04	------	------	115	24	Average
5700	99.57	100.61	-1.04	------	------	115	24	Peak
5725	52.38	53.32	-0.94	68.2	-15.82	115	24	Peak
11400	41.96	41.32	0.64	54	-12.04	258	137	Average
11400	49.11	48.47	0.64	74	-24.89	258	137	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.71	40.59	-0.88	54	-14.29	100	290	Average
5460	49.64	50.52	-0.88	74	-24.36	100	290	Peak
5470	49.66	50.54	-0.88	68.2	-18.54	100	290	Peak
5700	89.41	90.45	-1.04	------	------	100	290	Average
5700	95.29	96.33	-1.04	------	------	100	290	Peak
5725	50.22	51.16	-0.94	68.2	-17.98	100	290	Peak
11400	43.76	43.12	0.64	54	-10.24	242	187	Average
11400	50.87	50.23	0.64	74	-23.13	242	187	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5700 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 144	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.78	40.66	-0.88	54	-14.22	122	24	Average
5460	49.41	50.29	-0.88	74	-24.59	122	24	Peak
5470	48.26	49.14	-0.88	68.2	-19.94	122	24	Peak
5720	93.94	94.88	-0.94	------	------	122	24	Average
5720	99.6	100.54	-0.94	------	------	122	24	Peak
5850	50.86	51.37	-0.51	68.2	-17.34	122	24	Peak
11440	42.09	41.43	0.66	54	-11.91	139	104	Average
11440	49.26	48.6	0.66	74	-24.74	139	104	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.76	40.64	-0.88	54	-14.24	100	289	Average
5460	49.61	50.49	-0.88	74	-24.39	100	289	Peak
5470	48.46	49.34	-0.88	68.2	-19.74	100	289	Peak
5720	90.67	91.61	-0.94	------	------	100	289	Average
5720	96.18	97.12	-0.94	------	------	100	289	Peak
5850	50.43	50.94	-0.51	68.2	-17.77	100	289	Peak
11440	43.53	42.87	0.66	54	-10.47	196	244	Average
11440	50.62	49.96	0.66	74	-23.38	196	244	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5720 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	92.83	93.74	-0.91	------	------	123	19	Average
5745	99.34	100.25	-0.91	------	------	123	19	Peak
11490	43.06	42.42	0.64	54	-10.94	259	184	Average
11490	50.18	49.54	0.64	74	-23.82	259	184	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	89.09	90	-0.91	------	------	318	3	Average
5745	95.74	96.65	-0.91	------	------	318	3	Peak
11490	42.27	41.63	0.64	54	-11.73	152	231	Average
11490	49.45	48.81	0.64	74	-24.55	152	231	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5600.35	51.12	52.07	-0.95	68.2	-17.08	123	19	Peak
5659.725	49.51	50.45	-0.94	75.42	-25.91	123	19	Peak
5921.45	49.4	49.75	-0.35	70.82	-21.42	123	19	Peak
5973.7	50.45	50.76	-0.31	68.2	-17.75	123	19	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5590.375	50.37	51.34	-0.97	68.2	-17.83	318	3	Peak
5659.725	50.15	51.09	-0.94	75.42	-25.27	318	3	Peak
5918.6	49.6	49.95	-0.35	72.92	-23.32	318	3	Peak
6023.575	50.92	51.13	-0.21	68.2	-17.28	318	3	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	92.72	93.55	-0.83	------	------	122	19	Average
5785	99.22	100.05	-0.83	------	------	122	19	Peak
11570	43.38	42.62	0.76	54	-10.62	261	307	Average
11570	50.52	49.76	0.76	74	-23.48	261	307	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	88.63	89.46	-0.83	------	------	329	359	Average
5785	94.98	95.81	-0.83	------	------	329	359	Peak
11570	44.36	43.6	0.76	54	-9.64	183	226	Average
11570	51.54	50.78	0.76	74	-22.46	183	226	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5639.775	49.39	50.33	-0.94	68.2	-18.81	122	19	Peak
5652.125	50.11	50.99	-0.88	69.78	-19.67	122	19	Peak
5920.5	49.23	49.58	-0.35	71.52	-22.29	122	19	Peak
6018.35	50.13	50.36	-0.23	68.2	-18.07	122	19	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5640.725	50.11	51.05	-0.94	68.2	-18.09	329	359	Peak
5651.65	49.61	50.49	-0.88	69.43	-19.82	329	359	Peak
5923.825	49.4	49.75	-0.35	69.07	-19.67	329	359	Peak
6015.025	49.85	50.08	-0.23	68.2	-18.35	329	359	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	92.72	93.32	-0.6	------	------	115	17	Average
5825	99.37	99.97	-0.6	------	------	115	17	Peak
11650	43.78	43.05	0.73	54	-10.22	187	263	Average
11650	50.96	50.23	0.73	74	-23.04	187	263	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	89.89	90.49	-0.6	------	------	326	360	Average
5825	96.81	97.41	-0.6	------	------	326	360	Peak
11650	43.29	42.56	0.73	54	-10.71	129	246	Average
11650	50.47	49.74	0.73	74	-23.53	129	246	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5597.025	50.35	51.32	-0.97	68.2	-17.85	115	17	Peak
5653.55	49.63	50.51	-0.88	70.84	-21.21	115	17	Peak
5923.825	48.71	49.06	-0.35	69.07	-20.36	115	17	Peak
6021.675	50.37	50.6	-0.23	68.2	-17.83	115	17	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5562.35	49.58	50.55	-0.97	68.2	-18.62	326	360	Peak
5653.55	49.49	50.37	-0.88	70.84	-21.35	326	360	Peak
5916.225	49.88	50.23	-0.35	74.67	-24.79	326	360	Peak
5956.6	50.69	51.01	-0.32	68.2	-17.51	326	360	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

802.11n (HT20)

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.79	41.66	-0.87	54	-13.21	123	20	Average
5150	49.99	50.86	-0.87	74	-24.01	123	20	Peak
5180	90.65	91.55	-0.9	------	------	123	20	Average
5180	98.1	99	-0.9	------	------	123	20	Peak
10360	47.34	52.28	-4.94	68.2	-20.86	112	187	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.89	41.76	-0.87	54	-13.11	243	313	Average
5150	50.72	51.59	-0.87	74	-23.28	243	313	Peak
5180	89.54	90.44	-0.9	------	------	243	313	Average
5180	96.56	97.46	-0.9	------	------	243	313	Peak
10360	49.08	54.02	-4.94	68.2	-19.12	112	136	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 40	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.8	41.67	-0.87	54	-13.2	132	19	Average
5150	49.74	50.61	-0.87	74	-24.26	132	19	Peak
5200	91.33	92.26	-0.93	------	------	132	19	Average
5200	98.95	99.88	-0.93	------	------	132	19	Peak
10400	50.59	55.42	-4.83	68.2	-17.61	194	156	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.72	41.59	-0.87	54	-13.28	332	316	Average
5150	50.45	51.32	-0.87	74	-23.55	332	316	Peak
5200	90.33	91.26	-0.93	------	------	332	316	Average
5200	96.41	97.34	-0.93	------	------	332	316	Peak
10400	49.46	54.29	-4.83	68.2	-18.74	125	246	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5200 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.75	41.62	-0.87	54	-13.25	152	20	Average
5150	49.56	50.43	-0.87	74	-24.44	152	20	Peak
5240	91.58	92.72	-1.14	------	------	152	20	Average
5240	98.01	99.15	-1.14	------	------	152	20	Peak
5350	39.55	40.68	-1.13	54	-14.45	152	20	Average
5350	48.8	49.93	-1.13	74	-25.2	152	20	Peak
10480	49.42	53.79	-4.37	68.2	-18.78	121	107	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.81	41.68	-0.87	54	-13.19	281	321	Average
5150	50.09	50.96	-0.87	74	-23.91	281	321	Peak
5240	89.68	90.82	-1.14	------	------	281	321	Average
5240	97.47	98.61	-1.14	------	------	281	321	Peak
5350	39.65	40.78	-1.13	54	-14.35	281	321	Average
5350	49.09	50.22	-1.13	74	-24.91	281	321	Peak
10480	48.32	52.69	-4.37	68.2	-19.88	100	178	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5240 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 52	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.91	41.78	-0.87	54	-13.09	106	13	Average
5150	50.14	51.01	-0.87	74	-23.86	106	13	Peak
5260	90.67	91.98	-1.31	------	------	106	13	Average
5260	96.6	97.91	-1.31	------	------	106	13	Peak
5350	39.63	40.76	-1.13	54	-14.37	106	13	Average
5350	49.3	50.43	-1.13	74	-24.7	106	13	Peak
10520	49.29	53.52	-4.23	68.2	-18.91	221	121	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.76	41.63	-0.87	54	-13.24	267	313	Average
5150	50.53	51.4	-0.87	74	-23.47	267	313	Peak
5260	89.17	90.48	-1.31	------	------	267	313	Average
5260	95.57	96.88	-1.31	------	------	267	313	Peak
5350	39.54	40.67	-1.13	54	-14.46	267	313	Average
5350	49.2	50.33	-1.13	74	-24.8	267	313	Peak
10520	48.22	52.45	-4.23	68.2	-19.98	174	109	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5260 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 60	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.78	41.65	-0.87	54	-13.22	120	25	Average
5150	50.21	51.08	-0.87	74	-23.79	120	25	Peak
5300	91.93	93.32	-1.39	------	------	120	25	Average
5300	98.68	100.07	-1.39	------	------	120	25	Peak
5350	40.14	41.27	-1.13	54	-13.86	120	25	Average
5350	49.63	50.76	-1.13	74	-24.37	120	25	Peak
10600	39.89	44.21	-4.32	54	-14.11	174	125	Average
10600	49.19	53.51	-4.32	74	-24.81	174	125	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.19	42.06	-0.87	54	-12.81	246	312	Average
5150	49.96	50.83	-0.87	74	-24.04	246	312	Peak
5300	90.3	91.69	-1.39	------	------	246	312	Average
5300	96.83	98.22	-1.39	------	------	246	312	Peak
5350	39.79	40.92	-1.13	54	-14.21	246	312	Average
5350	49.12	50.25	-1.13	74	-24.88	246	312	Peak
10600	40.89	45.21	-4.32	54	-13.11	145	111	Average
10600	48.22	52.54	-4.32	74	-25.78	145	111	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5300 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 64	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	92.85	94.16	-1.31	------	------	112	30	Average
5320	100.97	102.28	-1.31	------	------	112	30	Peak
5350	42.01	43.14	-1.13	54	-11.99	112	30	Average
5350	51.5	52.63	-1.13	74	-22.5	112	30	Peak
10640	40.14	44.44	-4.3	54	-13.86	183	231	Average
10640	47.22	51.52	-4.3	74	-26.78	183	231	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	90.08	91.39	-1.31	------	------	290	314	Average
5320	96.86	98.17	-1.31	------	------	290	314	Peak
5350	40.56	41.69	-1.13	54	-13.44	290	314	Average
5350	49.62	50.75	-1.13	74	-24.38	290	314	Peak
10640	40.82	45.12	-4.3	54	-13.18	125	67	Average
10640	48	52.3	-4.3	74	-26	125	67	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5320 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 100	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.85	41.73	-0.88	54	-13.15	117	29	Average
5460	50.06	50.94	-0.88	74	-23.94	117	29	Peak
5470	50.28	51.16	-0.88	68.2	-17.92	117	29	Peak
5500	93.78	94.63	-0.85	------	------	117	29	Average
5500	101.72	102.57	-0.85	------	------	117	29	Peak
5725	50.1	51.04	-0.94	68.2	-18.1	117	29	Peak
11000	43.5	42.6	0.9	54	-10.5	238	146	Average
11000	50.72	49.82	0.9	74	-23.28	238	146	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.02	40.9	-0.88	54	-13.98	117	315	Average
5460	50.26	51.14	-0.88	74	-23.74	117	315	Peak
5470	50.02	50.9	-0.88	68.2	-18.18	117	315	Peak
5500	90.03	90.88	-0.85	------	------	117	315	Average
5500	96.75	97.6	-0.85	------	------	117	315	Peak
5725	50	50.94	-0.94	68.2	-18.2	117	315	Peak
11000	43.31	42.41	0.9	54	-10.69	214	237	Average
11000	50.43	49.53	0.9	74	-23.57	214	237	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5500 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 116	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.97	40.85	-0.88	54	-14.03	133	28	Average
5460	49.58	50.46	-0.88	74	-24.42	133	28	Peak
5470	48.79	49.67	-0.88	68.2	-19.41	133	28	Peak
5580	92.8	93.79	-0.99	------	------	133	28	Average
5580	99.64	100.63	-0.99	------	------	133	28	Peak
5725	49.84	50.78	-0.94	68.2	-18.36	133	28	Peak
11160	42.74	42.44	0.3	54	-11.26	259	238	Average
11160	49.98	49.68	0.3	74	-24.02	259	238	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.75	40.63	-0.88	54	-14.25	100	317	Average
5460	49.78	50.66	-0.88	74	-24.22	100	317	Peak
5470	50.05	50.93	-0.88	68.2	-18.15	100	317	Peak
5580	89.05	90.04	-0.99	------	------	100	317	Average
5580	95.67	96.66	-0.99	------	------	100	317	Peak
5725	49.92	50.86	-0.94	68.2	-18.28	100	317	Peak
11160	43.32	43.02	0.3	54	-10.68	177	248	Average
11160	50.35	50.05	0.3	74	-23.65	177	248	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5580 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 140	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.8	40.68	-0.88	54	-14.2	128	16	Average
5460	50.1	50.98	-0.88	74	-23.9	128	16	Peak
5470	48.59	49.47	-0.88	68.2	-19.61	128	16	Peak
5700	90.98	92.02	-1.04	------	------	128	16	Average
5700	98.5	99.54	-1.04	------	------	128	16	Peak
5725	50.09	51.03	-0.94	68.2	-18.11	128	16	Peak
11400	42.67	42.03	0.64	54	-11.33	153	288	Average
11400	49.33	48.69	0.64	74	-24.67	153	288	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.7	40.58	-0.88	54	-14.3	135	318	Average
5460	49.94	50.82	-0.88	74	-24.06	135	318	Peak
5470	49.37	50.25	-0.88	68.2	-18.83	135	318	Peak
5700	88.81	89.85	-1.04	------	------	135	318	Average
5700	95.76	96.8	-1.04	------	------	135	318	Peak
5725	50.19	51.13	-0.94	68.2	-18.01	135	318	Peak
11400	43.66	43.02	0.64	54	-10.34	267	86	Average
11400	51.05	50.41	0.64	74	-22.95	267	86	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5700 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 144	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.86	40.74	-0.88	54	-14.14	123	23	Average
5460	50	50.88	-0.88	74	-24	123	23	Peak
5470	49.66	50.54	-0.88	68.2	-18.54	123	23	Peak
5720	91.42	92.36	-0.94	------	------	123	23	Average
5720	98.09	99.03	-0.94	------	------	123	23	Peak
5850	50.84	51.35	-0.51	68.2	-17.36	123	23	Peak
11440	42.36	41.7	0.66	54	-11.64	145	301	Average
11440	49.53	48.87	0.66	74	-24.47	145	301	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.58	40.46	-0.88	54	-14.42	100	291	Average
5460	49.22	50.1	-0.88	74	-24.78	100	291	Peak
5470	48.78	49.66	-0.88	68.2	-19.42	100	291	Peak
5720	88.08	89.02	-0.94	------	------	100	291	Average
5720	93.84	94.78	-0.94	------	------	100	291	Peak
5850	50.14	50.65	-0.51	68.2	-18.06	100	291	Peak
11440	43.67	43.01	0.66	54	-10.33	233	209	Average
11440	50.76	50.1	0.66	74	-23.24	233	209	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5720 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	89.98	90.89	-0.91	------	------	110	19	Average
5745	96.56	97.47	-0.91	------	------	110	19	Peak
11490	43.41	42.77	0.64	54	-10.59	145	218	Average
11490	50.63	49.99	0.64	74	-23.37	145	218	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	86.39	87.3	-0.91	------	------	291	3	Average
5745	92.71	93.62	-0.91	------	------	291	3	Peak
11490	42.26	41.62	0.64	54	-11.74	251	179	Average
11490	49.37	48.73	0.64	74	-24.63	251	179	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5591.8	49.92	50.89	-0.97	68.2	-18.28	110	19	Peak
5659.725	50.64	51.58	-0.94	75.42	-24.78	110	19	Peak
5915.75	49.44	49.79	-0.35	75.02	-25.58	110	19	Peak
5971.325	50.52	50.85	-0.33	68.2	-17.68	110	19	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5644.05	51.13	52.07	-0.94	68.2	-17.07	291	3	Peak
5652.125	49.28	50.16	-0.88	69.78	-20.5	291	3	Peak
5917.65	48.14	48.49	-0.35	73.62	-25.48	291	3	Peak
6008.85	50.68	50.92	-0.24	68.2	-17.52	291	3	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	90.23	91.06	-0.83	------	------	123	18	Average
5785	96.89	97.72	-0.83	------	------	123	18	Peak
11570	43.4	42.64	0.76	54	-10.6	132	258	Average
11570	50.64	49.88	0.76	74	-23.36	132	258	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	86.76	87.59	-0.83	------	------	314	360	Average
5785	93.27	94.1	-0.83	------	------	314	360	Peak
11570	44.26	43.5	0.76	54	-9.74	294	105	Average
11570	51.43	50.67	0.76	74	-22.57	294	105	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5601.3	50.12	51.07	-0.95	68.2	-18.08	123	18	Peak
5657.825	50.53	51.47	-0.94	74.01	-23.48	123	18	Peak
5918.6	49.39	49.74	-0.35	72.92	-23.53	123	18	Peak
5957.075	50.58	50.9	-0.32	68.2	-17.62	123	18	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5644.05	49.56	50.5	-0.94	68.2	-18.64	314	360	Peak
5658.3	49.3	50.24	-0.94	74.36	-25.06	314	360	Peak
5918.6	49.1	49.45	-0.35	72.92	-23.82	314	360	Peak
5984.15	50.07	50.38	-0.31	68.2	-18.13	314	360	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	90.78	91.38	-0.6	------	------	114	18	Average
5825	98.14	98.74	-0.6	------	------	114	18	Peak
11650	43.64	42.91	0.73	54	-10.36	279	62	Average
11650	50.75	50.02	0.73	74	-23.25	279	62	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	88.13	88.73	-0.6	------	------	325	2	Average
5825	95.25	95.85	-0.6	------	------	325	2	Peak
11650	43.06	42.33	0.73	54	-10.94	192	203	Average
11650	50.22	49.49	0.73	74	-23.78	192	203	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5595.125	49.97	50.94	-0.97	68.2	-18.23	114	18	Peak
5654.975	49.7	50.64	-0.94	71.9	-22.2	114	18	Peak
5920.5	49.55	49.9	-0.35	71.52	-21.97	114	18	Peak
6017.4	51.03	51.26	-0.23	68.2	-17.17	114	18	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5606.525	49.89	50.9	-1.01	68.2	-18.31	325	2	Peak
5658.3	48.76	49.7	-0.94	74.36	-25.6	325	2	Peak
5923.35	49.19	49.54	-0.35	69.42	-20.23	325	2	Peak
6023.1	50.15	50.38	-0.23	68.2	-18.05	325	2	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	42.44	43.31	-0.87	54	-11.56	126	5	Average
5150	51.75	52.62	-0.87	74	-22.25	126	5	Peak
5190	86.93	87.83	-0.9	------	------	126	5	Average
5190	94.48	95.38	-0.9	------	------	126	5	Peak
5350	40.12	41.25	-1.13	54	-13.88	126	5	Average
5350	49.06	50.19	-1.13	74	-24.94	126	5	Peak
10380	48.26	53.14	-4.88	68.2	-19.94	158	302	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.67	42.54	-0.87	54	-12.33	300	311	Average
5150	49.99	50.86	-0.87	74	-24.01	300	311	Peak
5190	86.09	86.99	-0.9	------	------	300	311	Average
5190	93.64	94.54	-0.9	------	------	300	311	Peak
5350	40	41.13	-1.13	54	-14	300	311	Average
5350	49.23	50.36	-1.13	74	-24.77	300	311	Peak
10380	49.09	53.97	-4.88	68.2	-19.11	221	109	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5190 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 46	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.24	42.11	-0.87	54	-12.76	122	30	Average
5150	50.34	51.21	-0.87	74	-23.66	122	30	Peak
5230	88.33	89.47	-1.14	------	------	122	30	Average
5230	95.15	96.29	-1.14	------	------	122	30	Peak
5350	40.06	41.19	-1.13	54	-13.94	122	30	Average
5350	49.64	50.77	-1.13	74	-24.36	122	30	Peak
10460	50	54.54	-4.54	68.2	-18.2	235	104	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.05	41.92	-0.87	54	-12.95	296	311	Average
5150	50.53	51.4	-0.87	74	-23.47	296	311	Peak
5230	86.88	88.02	-1.14	------	------	296	311	Average
5230	94.83	95.97	-1.14	------	------	296	311	Peak
5350	39.89	41.02	-1.13	54	-14.11	296	311	Average
5350	48.62	49.75	-1.13	74	-25.38	296	311	Peak
10460	50.67	55.21	-4.54	68.2	-17.53	169	81	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5230 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 54	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.09	41.96	-0.87	54	-12.91	114	5	Average
5150	50.42	51.29	-0.87	74	-23.58	114	5	Peak
5270	87.5	88.81	-1.31	------	------	114	5	Average
5270	94.27	95.58	-1.31	------	------	114	5	Peak
5350	40.05	41.18	-1.13	54	-13.95	114	5	Average
5350	48.56	49.69	-1.13	74	-25.44	114	5	Peak
10540	48.69	52.97	-4.28	68.2	-19.51	107	223	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.2	42.07	-0.87	54	-12.8	400	328	Average
5150	51.19	52.06	-0.87	74	-22.81	400	328	Peak
5270	84.75	86.06	-1.31	------	------	400	328	Average
5270	91.26	92.57	-1.31	------	------	400	328	Peak
5350	39.85	40.98	-1.13	54	-14.15	400	328	Average
5350	48.12	49.25	-1.13	74	-25.88	400	328	Peak
10540	50.06	54.34	-4.28	68.2	-18.14	298	142	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5270 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 62	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.17	42.04	-0.87	54	-12.83	117	30	Average
5150	49.55	50.42	-0.87	74	-24.45	117	30	Peak
5310	88.11	89.42	-1.31	------	------	117	30	Average
5310	95.55	96.86	-1.31	------	------	117	30	Peak
5350	49.04	50.17	-1.13	54	-4.96	117	30	Average
5350	57.73	58.86	-1.13	74	-16.27	117	30	Peak
10620	41.33	45.64	-4.31	54	-12.67	155	48	Average
10620	48.41	52.72	-4.31	74	-25.59	155	48	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.28	42.15	-0.87	54	-12.72	318	317	Average
5150	50.16	51.03	-0.87	74	-23.84	318	317	Peak
5310	84.87	86.18	-1.31	------	------	318	317	Average
5310	91.27	92.58	-1.31	------	------	318	317	Peak
5350	45.44	46.57	-1.13	54	-8.56	318	317	Average
5350	52.53	53.66	-1.13	74	-21.47	318	317	Peak
10620	42.2	46.51	-4.31	54	-11.8	273	144	Average
10620	49.43	53.74	-4.31	74	-24.57	273	144	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5310 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 102	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	44.37	45.25	-0.88	54	-9.63	111	28	Average
5460	53	53.88	-0.88	74	-21	111	28	Peak
5470	59.96	60.84	-0.88	68.2	-8.24	111	28	Peak
5510	90.66	91.54	-0.88	------	------	111	28	Average
5510	98.55	99.43	-0.88	------	------	111	28	Peak
5725	49.58	50.52	-0.94	68.2	-18.62	111	28	Peak
11020	42.74	46.28	-3.54	54	-11.26	182	331	Average
11020	49.87	53.41	-3.54	74	-24.13	182	331	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	42.47	43.35	-0.88	54	-11.53	142	308	Average
5460	52.32	53.2	-0.88	74	-21.68	142	308	Peak
5470	56.17	57.05	-0.88	68.2	-12.03	142	308	Peak
5510	86.41	87.29	-0.88	------	------	142	308	Average
5510	94.27	95.15	-0.88	------	------	142	308	Peak
5725	50.08	51.02	-0.94	68.2	-18.12	142	308	Peak
11020	42.82	46.36	-3.54	54	-11.18	119	206	Average
11020	49.99	53.53	-3.54	74	-24.01	119	206	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5510 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 110	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.87	41.75	-0.88	54	-13.13	110	25	Average
5460	50.07	50.95	-0.88	74	-23.93	110	25	Peak
5470	49.71	50.59	-0.88	68.2	-18.49	110	25	Peak
5550	89.04	89.98	-0.94	------	------	110	25	Average
5550	96.1	97.04	-0.94	------	------	110	25	Peak
5725	49.85	50.79	-0.94	68.2	-18.35	110	25	Peak
11100	41.46	45.12	-3.66	54	-12.54	291	187	Average
11100	48.59	52.25	-3.66	74	-25.41	291	187	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.17	41.05	-0.88	54	-13.83	134	309	Average
5460	49.84	50.72	-0.88	74	-24.16	134	309	Peak
5470	51.41	52.29	-0.88	68.2	-16.79	134	309	Peak
5550	86.01	86.95	-0.94	------	------	134	309	Average
5550	93.09	94.03	-0.94	------	------	134	309	Peak
5725	49.86	50.8	-0.94	68.2	-18.34	134	309	Peak
11100	42.58	46.24	-3.66	54	-11.42	157	199	Average
11100	49.74	53.4	-3.66	74	-24.26	157	199	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5550 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 134	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.33	41.21	-0.88	54	-13.67	113	22	Average
5460	50.05	50.93	-0.88	74	-23.95	113	22	Peak
5470	48.77	49.65	-0.88	68.2	-19.43	113	22	Peak
5670	88.24	89.2	-0.96	------	------	113	22	Average
5670	95.72	96.68	-0.96	------	------	113	22	Peak
5725	50.08	51.02	-0.94	68.2	-18.12	113	22	Peak
11340	41.67	45.52	-3.85	54	-12.33	217	53	Average
11340	48.86	52.71	-3.85	74	-25.14	217	53	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.1	40.98	-0.88	54	-13.9	104	315	Average
5460	49.52	50.4	-0.88	74	-24.48	104	315	Peak
5470	49.62	50.5	-0.88	68.2	-18.58	104	315	Peak
5670	84.69	85.65	-0.96	------	------	104	315	Average
5670	91.58	92.54	-0.96	------	------	104	315	Peak
5725	49.71	50.65	-0.94	68.2	-18.49	104	315	Peak
11340	41.99	45.84	-3.85	54	-12.01	231	125	Average
11340	49.11	52.96	-3.85	74	-24.89	231	125	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5670 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 142	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.08	40.96	-0.88	54	-13.92	113	16	Average
5460	49.67	50.55	-0.88	74	-24.33	113	16	Peak
5470	48.98	49.86	-0.88	68.2	-19.22	113	16	Peak
5710	87.34	88.34	-1	------	------	113	16	Average
5710	94.29	95.29	-1	------	------	113	16	Peak
5850	50.32	50.83	-0.51	68.2	-17.88	113	16	Peak
11420	43.33	47	-3.67	54	-10.67	161	238	Average
11420	49.44	53.11	-3.67	74	-24.56	161	238	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	39.96	40.84	-0.88	54	-14.04	125	318	Average
5460	49.56	50.44	-0.88	74	-24.44	125	318	Peak
5470	49.09	49.97	-0.88	68.2	-19.11	125	318	Peak
5710	84.62	85.62	-1	------	------	125	318	Average
5710	91.59	92.59	-1	------	------	125	318	Peak
5850	51.28	51.79	-0.51	68.2	-16.92	125	318	Peak
11420	43.51	47.18	-3.67	54	-10.49	259	148	Average
11420	49.53	53.2	-3.67	74	-24.47	259	148	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5710 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 151	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5755	86.3	87.14	-0.84	------	------	100	19	Average
5755	93.57	94.41	-0.84	------	------	100	19	Peak
11510	40.85	44.53	-3.68	54	-13.15	163	98	Average
11510	48	51.68	-3.68	74	-26	163	98	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5755	83.22	84.06	-0.84	------	------	318	2	Average
5755	90.32	91.16	-0.84	------	------	318	2	Peak
11510	41.04	44.72	-3.68	54	-12.96	234	161	Average
11510	48.18	51.86	-3.68	74	-25.82	234	161	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5617.925	50.15	51.1	-0.95	68.2	-18.05	100	19	Peak
5659.725	48.99	49.93	-0.94	75.42	-26.43	100	19	Peak
5916.225	48.78	49.13	-0.35	74.67	-25.89	100	19	Peak
6004.1	50.65	50.93	-0.28	68.2	-17.55	100	19	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5576.6	49.8	50.75	-0.95	68.2	-18.4	318	2	Peak
5651.65	49.46	50.34	-0.88	69.43	-19.97	318	2	Peak
5922.4	48.64	48.99	-0.35	70.12	-21.48	318	2	Peak
6021.2	50.86	51.09	-0.23	68.2	-17.34	318	2	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5755 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 159	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5795	87.47	88.23	-0.76	------	------	122	19	Average
5795	93.52	94.28	-0.76	------	------	122	19	Peak
11590	41.54	45.38	-3.84	54	-12.46	101	228	Average
11590	48.66	52.5	-3.84	74	-25.34	101	228	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5795	83.67	84.43	-0.76	------	------	328	2	Average
5795	90.68	91.44	-0.76	------	------	328	2	Peak
11590	42.01	45.85	-3.84	54	-11.99	245	76	Average
11590	49.16	53	-3.84	74	-24.84	245	76	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5607.95	50.32	51.33	-1.01	68.2	-17.88	122	19	Peak
5658.775	49.5	50.44	-0.94	74.72	-25.22	122	19	Peak
5917.65	49.42	49.77	-0.35	73.62	-24.2	122	19	Peak
5987.95	50.46	50.77	-0.31	68.2	-17.74	122	19	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5588.475	49.82	50.79	-0.97	68.2	-18.38	328	2	Peak
5653.55	49.47	50.35	-0.88	70.84	-21.37	328	2	Peak
5922.875	49.43	49.78	-0.35	69.77	-20.34	328	2	Peak
5990.325	50.47	50.75	-0.28	68.2	-17.73	328	2	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5795 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

802.11ac (VHT80)

EUT Test Condition		Measurement Detail	
Channel	Channel 42	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	45.2	46.07	-0.87	54	-8.8	113	28	Average
5150	54.11	54.98	-0.87	74	-19.89	113	28	Peak
5210	85.15	86.21	-1.06	------	------	113	28	Average
5210	92.98	94.04	-1.06	------	------	113	28	Peak
5350	40.38	41.51	-1.13	54	-13.62	113	28	Average
5350	48.79	49.92	-1.13	74	-25.21	113	28	Peak
10420	49.04	53.81	-4.77	68.2	-19.16	189	255	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	44.57	45.44	-0.87	54	-9.43	315	315	Average
5150	54.36	55.23	-0.87	74	-19.64	315	315	Peak
5210	83.91	84.97	-1.06	------	------	315	315	Average
5210	91.77	92.83	-1.06	------	------	315	315	Peak
5350	40.18	41.31	-1.13	54	-13.82	315	315	Average
5350	48.94	50.07	-1.13	74	-25.06	315	315	Peak
10420	48.79	53.56	-4.77	68.2	-19.41	113	197	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5210 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 58	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.46	42.33	-0.87	54	-12.54	128	27	Average
5150	50.68	51.55	-0.87	74	-23.32	128	27	Peak
5290	84.89	86.23	-1.34	------	------	128	27	Average
5290	92.59	93.93	-1.34	------	------	128	27	Peak
5350	52.99	54.12	-1.13	54	-1.01	128	27	Average
5350	61.76	62.89	-1.13	74	-12.24	128	27	Peak
10580	50.66	55	-4.34	68.2	-17.54	145	110	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	41.4	42.27	-0.87	54	-12.6	396	328	Average
5150	49.87	50.74	-0.87	74	-24.13	396	328	Peak
5290	82.87	84.21	-1.34	------	------	396	328	Average
5290	90.64	91.98	-1.34	------	------	396	328	Peak
5350	44.45	45.58	-1.13	54	-9.55	396	328	Average
5350	52.24	53.37	-1.13	74	-21.76	396	328	Peak
10580	50.04	54.38	-4.34	68.2	-18.16	284	109	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5290 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 106	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	50.81	51.69	-0.88	54	-3.19	108	24	Average
5460	59.33	60.21	-0.88	74	-14.67	108	24	Peak
5470	63.23	64.11	-0.88	68.2	-4.97	108	24	Peak
5530	86.38	87.3	-0.92	------	------	108	24	Average
5530	93.29	94.21	-0.92	------	------	108	24	Peak
5725	50.64	51.58	-0.94	68.2	-17.56	108	24	Peak
11060	42.62	46.22	-3.6	54	-11.38	196	258	Average
11060	48.88	52.48	-3.6	74	-25.12	196	258	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	47.26	48.14	-0.88	54	-6.74	102	315	Average
5460	56.89	57.77	-0.88	74	-17.11	102	315	Peak
5470	57.42	58.3	-0.88	68.2	-10.78	102	315	Peak
5530	83.4	84.32	-0.92	------	------	102	315	Average
5530	90.33	91.25	-0.92	------	------	102	315	Peak
5725	50.21	51.15	-0.94	68.2	-17.99	102	315	Peak
11060	41.97	45.57	-3.6	54	-12.03	279	88	Average
11060	48.33	51.93	-3.6	74	-25.67	279	88	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5530 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 122	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.36	41.24	-0.88	54	-13.64	110	24	Average
5460	50.04	50.92	-0.88	74	-23.96	110	24	Peak
5470	50.07	50.95	-0.88	68.2	-18.13	110	24	Peak
5610	85.31	86.32	-1.01	------	------	110	24	Average
5610	92.93	93.94	-1.01	------	------	110	24	Peak
5725	50.56	51.5	-0.94	68.2	-17.64	110	24	Peak
11220	42.83	46.61	-3.78	54	-11.17	270	111	Average
11220	49.06	52.84	-3.78	74	-24.94	270	111	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.37	41.25	-0.88	54	-13.63	110	317	Average
5460	51.1	51.98	-0.88	74	-22.9	110	317	Peak
5470	49.87	50.75	-0.88	68.2	-18.33	110	317	Peak
5610	81.97	82.98	-1.01	------	------	110	317	Average
5610	88.78	89.79	-1.01	------	------	110	317	Peak
5725	50.19	51.13	-0.94	68.2	-18.01	110	317	Peak
11220	41.74	45.52	-3.78	54	-12.26	147	238	Average
11220	47.96	51.74	-3.78	74	-26.04	147	238	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5610 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 138	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.29	41.17	-0.88	54	-13.71	129	22	Average
5460	49.41	50.29	-0.88	74	-24.59	129	22	Peak
5470	49.68	50.56	-0.88	68.2	-18.52	129	22	Peak
5690	83.99	85.03	-1.04	------	------	129	22	Average
5690	91.72	92.76	-1.04	------	------	129	22	Peak
5850	50.72	51.23	-0.51	68.2	-17.48	129	22	Peak
11380	42.55	46.26	-3.71	54	-11.45	107	92	Average
11380	49.67	53.38	-3.71	74	-24.33	107	92	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.35	41.23	-0.88	54	-13.65	104	319	Average
5460	49.58	50.46	-0.88	74	-24.42	104	319	Peak
5470	49.04	49.92	-0.88	68.2	-19.16	104	319	Peak
5690	80.97	82.01	-1.04	------	------	104	319	Average
5690	87.88	88.92	-1.04	------	------	104	319	Peak
5850	51.1	51.61	-0.51	68.2	-17.1	104	319	Peak
11380	41.59	45.3	-3.71	54	-12.41	185	254	Average
11380	47.73	51.44	-3.71	74	-26.27	185	254	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5690 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 155	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5775	83.39	84.18	-0.79	------	------	104	18	Average
5775	90.8	91.59	-0.79	------	------	104	18	Peak
11550	41.14	44.92	-3.78	54	-12.86	143	291	Average
11550	48.26	52.04	-3.78	74	-25.74	143	291	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5775	80.06	80.85	-0.79	------	------	290	360	Average
5775	87.33	88.12	-0.79	------	------	290	360	Peak
11550	41.25	45.03	-3.78	54	-12.75	159	248	Average
11550	48.38	52.16	-3.78	74	-25.62	159	248	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5609.85	49.8	50.81	-1.01	68.2	-18.4	104	18	Peak
5654.975	50.44	51.38	-0.94	71.9	-21.46	104	18	Peak
5916.225	49.56	49.91	-0.35	74.67	-25.11	104	18	Peak
6023.1	51.4	51.63	-0.23	68.2	-16.8	104	18	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5597.5	50.22	51.19	-0.97	68.2	-17.98	290	360	Peak
5660.2	49.21	50.15	-0.94	75.77	-26.56	290	360	Peak
5916.7	49.32	49.67	-0.35	74.32	-25	290	360	Peak
5990.325	49.67	49.95	-0.28	68.2	-18.53	290	360	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5775 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

9 kHz ~ 30 MHz Data:

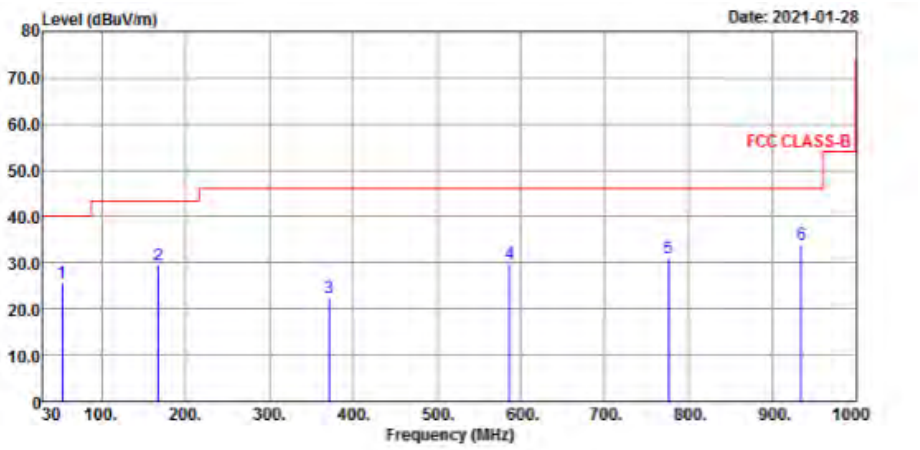
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

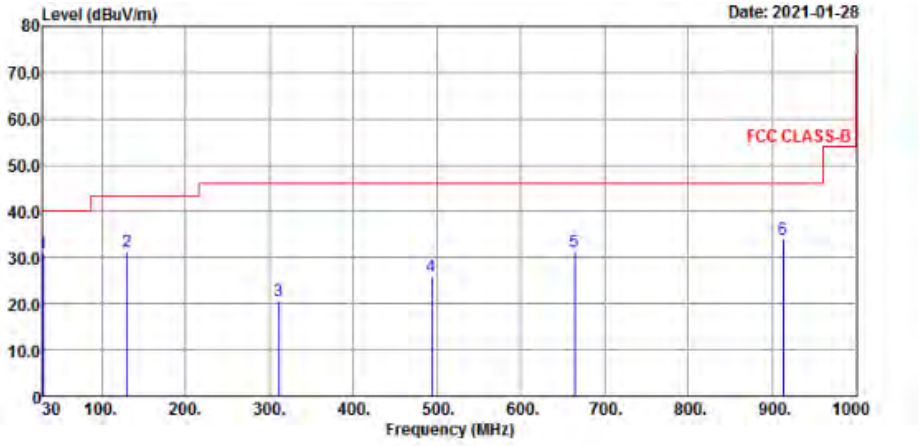
802.11ac (VHT80)

EUT Test Condition		Measurement Detail	
Channel	Channel 58	**Frequency Range**	30 MHz ~ 1 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Quasi-peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Tim Chen

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
53.28	25.83	38.4	-12.57	40	-14.17	155	231	QP
167.74	29.41	42.91	-13.5	43.5	-14.09	284	169	QP
371.44	22.41	31.68	-9.27	46	-23.59	259	326	QP
586.78	29.79	33	-3.21	46	-16.21	149	207	QP
775.93	30.98	30.54	0.44	46	-15.02	241	355	QP
935.01	33.97	30.99	2.98	46	-12.03	102	94	QP
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
30	31.13	44.37	-13.24	40	-8.87	199	224	QP
129.91	31.17	44.24	-13.07	43.5	-12.33	123	107	QP
311.3	20.6	31.62	-11.02	46	-25.4	217	64	QP
493.66	25.98	31.76	-5.78	46	-20.02	205	172	QP
664.38	31.18	32.91	-1.73	46	-14.82	320	40	QP
912.7	33.85	31.25	2.6	46	-12.15	149	228	QP

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. The emission levels of other frequencies were very low against the limit

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 0.50 MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESR3	102783	Jan. 06, 2021	Jan. 05, 2022
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 04, 2020	Sep. 03, 2021
V-LISN SCHWARZBECK (EUT)	NNBL 8226-2	8226-142	Jul. 31, 2020	Jul. 30, 2021
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 18, 2020	Aug. 17, 2021
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 2 (Conduction 2).
3. The VCCI Site Registration No. is C-12047.

4.2.3 Test Procedures

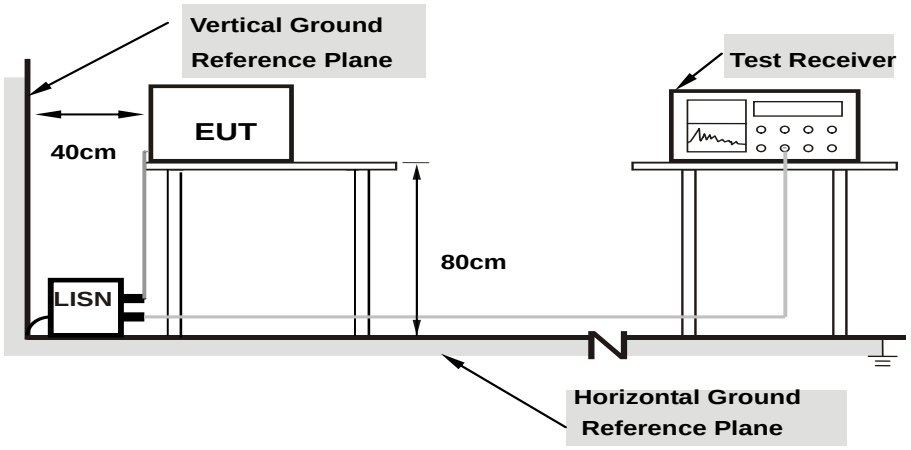
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling 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 150 kHz to 30 MHz was searched. Emission levels under (Limit -20 dB) 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.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.2.6 EUT Operating Conditions

a. Placed the EUT on a testing table.
b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

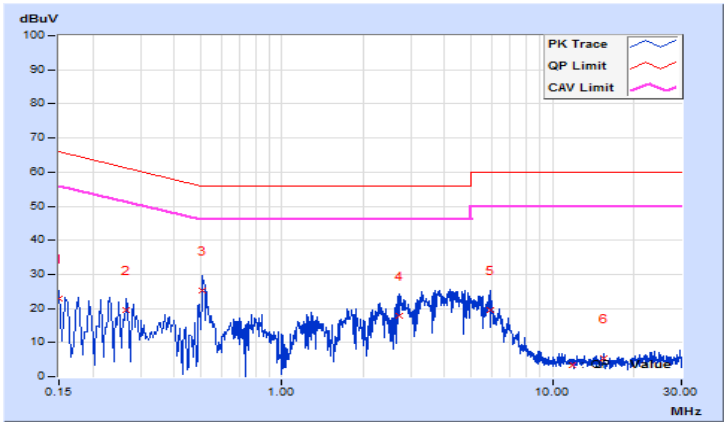
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	21℃, 68%RH
Tested by	Tim Chen	**Test Date**	2021/1/29

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	0.13	22.73	8.01	22.86	8.14	66.00	56.00	-43.14	-47.86
2	0.26600	0.21	19.25	7.57	19.46	7.78	61.24	51.24	-41.78	-43.46
3	**0.50600**	**0.25**	**24.91**	**16.55**	**25.16**	**16.80**	**56.00**	**46.00**	**-30.84**	**-29.20**
4	2.71400	0.38	17.31	7.39	17.69	7.77	56.00	46.00	-38.31	-38.23
5	5.88200	0.46	19.00	9.55	19.46	10.01	60.00	50.00	-40.54	-39.99
6	15.43000	0.60	4.70	1.03	5.30	1.63	60.00	50.00	-54.70	-48.37

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

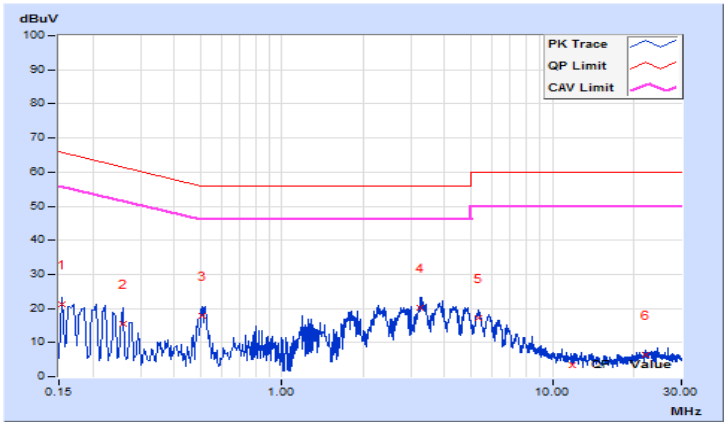


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	21℃, 68%RH
Tested by	Tim Chen	**Test Date**	2021/1/29

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	0.15400	0.10	21.12	5.34	21.22	5.44	65.78	55.78	-44.56	-50.34
2	0.25800	0.17	15.22	4.12	15.39	4.29	61.50	51.50	-46.11	-47.21
3	0.50600	0.24	17.65	8.28	17.89	8.52	56.00	46.00	-38.11	-37.48
4	3.26600	0.42	19.90	5.21	20.32	5.63	56.00	46.00	-35.68	-40.37
5	5.35400	0.49	16.83	5.14	17.32	5.63	60.00	50.00	-42.68	-44.37
6	22.01800	0.88	5.57	1.96	6.45	2.84	60.00	50.00	-53.55	-47.16

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

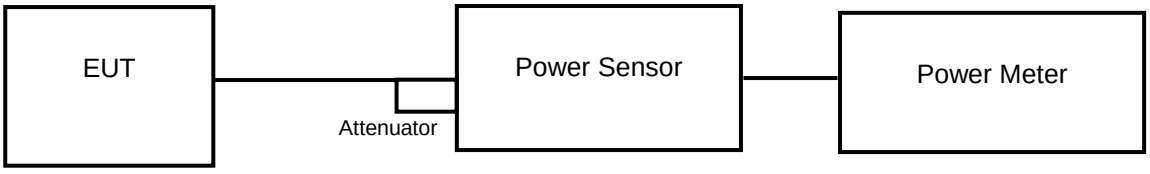
4.3.1 Limits of Transmit Power Measurement

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

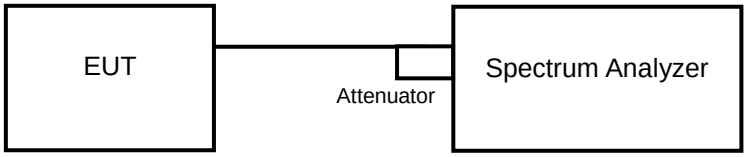
*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

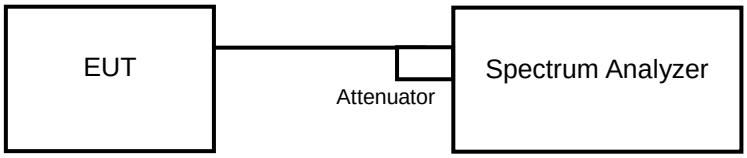
<Power Output Measurement>



or



<26 dB Bandwidth>



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

Average Power Measurement

<802.11a, 802.11n (HT20), 802.11n (HT40)>

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

<802.11ac (VHT80)>

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

26 dB Bandwidth

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Results

Power Output:

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	25.882	14.13	24	Pass
40	5200	25.763	14.11	24	Pass
48	5240	29.242	14.66	24	Pass
52	5260	28.379	14.53	24	Pass
60	5300	28.774	14.59	24	Pass
64	5320	26.915	14.30	24	Pass
100	5500	28.119	14.49	24	Pass
116	5580	28.445	14.54	24	Pass
140	5700	32.063	15.06	24	Pass
144	5720 (U-NII-2C)	28.444	14.54	23.11	Pass
144	5720 (U-NII-3)	5.727	7.58	30	Pass
149	5745	30.69	14.87	30	Pass
157	5785	30.2	14.80	30	Pass
165	5825	30.549	14.85	30	Pass

Note:

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

1. 11 dBm + 10log (23.06) = 24.62dBm > 24 dBm.
2. 11 dBm + 10log (22.34) = 24.49dBm > 24 dBm.
3. 11 dBm + 10log (22.4) = 24.50dBm > 24 dBm.
4. 11 dBm + 10log (22.38) = 24.49dBm > 24 dBm.
5. 11 dBm + 10log (22.33) = 24.48dBm > 24 dBm.
6. 11 dBm + 10log (22.29) = 24.48dBm > 24 dBm.
7. 11 dBm + 10log (16.29) = 23.11dBm < 24 dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	21.979	13.42	24	Pass
40	5200	21.677	13.36	24	Pass
48	5240	23.659	13.74	24	Pass
52	5260	23.55	13.72	24	Pass
60	5300	22.699	13.56	24	Pass
64	5320	20.797	13.18	24	Pass
100	5500	22.182	13.46	24	Pass
116	5580	23.768	13.76	24	Pass
140	5700	28.119	14.49	24	Pass
144	5720 (U-NII-2C)	26.668	14.26	23.18	Pass
144	5720 (U-NII-3)	6.039	7.81	30	Pass
149	5745	28.576	14.56	30	Pass
157	5785	28.708	14.58	30	Pass
165	5825	28.51	14.55	30	Pass

Note:

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

1. 11 dBm + 10log (23.21) = 24.65dBm > 24 dBm.
2. 11 dBm + 10log (23.25) = 24.66dBm > 24 dBm.
3. 11 dBm + 10log (23.03) = 24.62dBm > 24 dBm.
4. 11 dBm + 10log (23.37) = 24.68dBm > 24 dBm.
5. 11 dBm + 10log (24.15) = 24.82dBm > 24 dBm.
6. 11 dBm + 10log (23.17) = 24.64dBm > 24 dBm.
7. 11 dBm + 10log (16.53) = 23.18dBm < 24 dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	19.999	13.01	24	Pass
46	5230	21.184	13.26	24	Pass
54	5270	24.044	13.81	24	Pass
62	5310	20.845	13.19	24	Pass
102	5510	21.677	13.36	24	Pass
110	5550	20.464	13.11	24	Pass
134	5670	22.182	13.46	24	Pass
142	5710 (U-NII-2C)	18.99	12.79	24	Pass
142	5710 (U-NII-3)	1.508	1.78	30	Pass
151	5755	23.174	13.65	30	Pass
159	5795	22.909	13.60	30	Pass

Note:

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

1. 11 dBm + 10log (42.16) = 42.16 dBm > 24 dBm.
2. 11 dBm + 10log (42) = 42.00 dBm > 24 dBm.
3. 11 dBm + 10log (42.23) = 42.23 dBm > 24 dBm.
4. 11 dBm + 10log (41.99) = 41.99 dBm > 24 dBm.
5. 11 dBm + 10log (42.15) = 42.15 dBm > 24 dBm.
6. 11 dBm + 10log (36.16) = 36.16 dBm > 24 dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	15.066	11.78	24	Pass
58	5290	13.74	11.38	24	Pass
106	5530	14.454	11.60	24	Pass
122	5610	14.028	11.47	24	Pass
138	5690 (U-NII-2C)	9.462	9.76	24	Pass
138	5690 (U-NII-3)	0.309	-5.10	30	Pass
155	5775	14.962	11.75	30	Pass

Note:

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

1. 11 dBm + 10log (84.16) = 30.25dBm > 24 dBm.
2. 11 dBm + 10log (83.77) = 30.23dBm > 24 dBm.
3. 11 dBm + 10log (83.77) = 30.23dBm > 24 dBm.
4. 11 dBm + 10log (77.56) = 29.89dBm > 24 dBm.

26 dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
36	5180	23.01
40	5200	22.40
48	5240	22.87
52	5260	23.06
60	5300	22.34
64	5320	22.40
100	5500	22.38
116	5580	22.33
140	5700	22.29
144	5720 (U-NII-2C)	16.29
144	5720 (U-NII-3)	6.06

802.11n (HT20)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
36	5180	22.92
40	5200	23.18
48	5240	23.64
52	5260	23.21
60	5300	23.25
64	5320	23.03
100	5500	23.37
116	5580	24.15
140	5700	23.17
144	5720 (U-NII-2C)	16.53
144	5720 (U-NII-3)	6.88

802.11n (HT40)

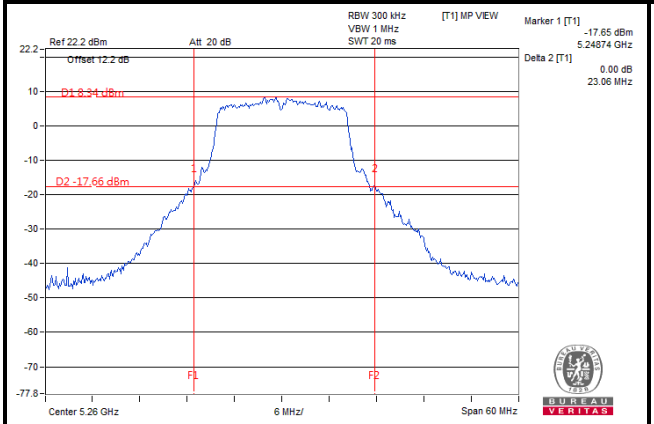
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
38	5190	41.92
46	5230	42.00
54	5270	42.16
62	5310	42.00
102	5510	42.23
110	5550	41.99
134	5670	42.15
142	5710 (U-NII-2C)	36.16
142	5710 (U-NII-3)	6.06

802.11ac (VHT80)

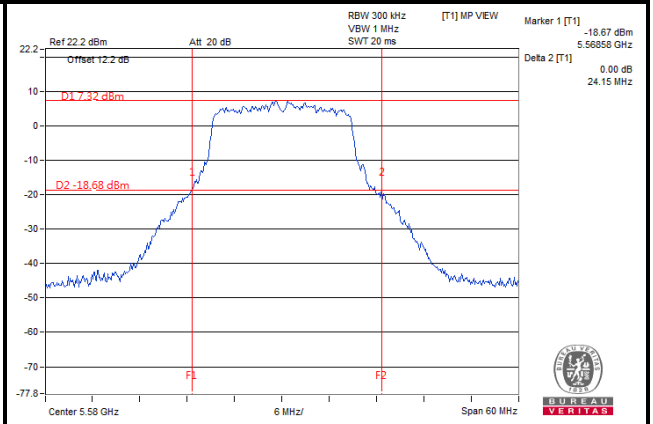
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
42	5210	83.69
58	5290	84.16
106	5530	83.77
122	5610	83.77
138	5690 (U-NII-2C)	77.56
138	5690 (U-NII-3)	6.79

Spectrum Plot of Worst Value

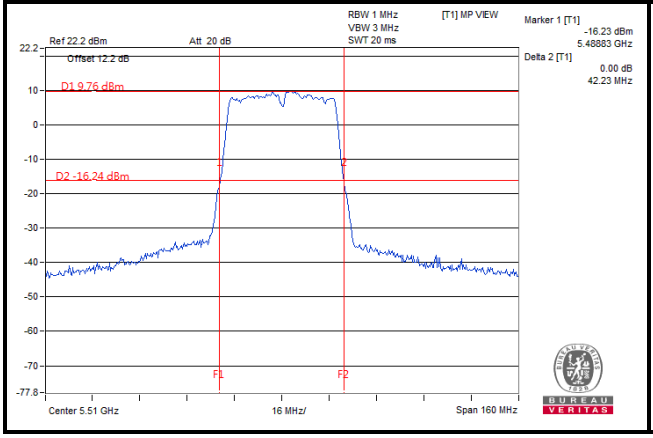
802.11a



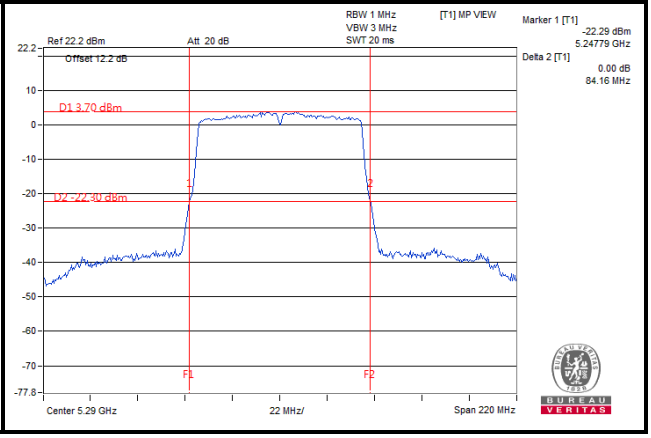
802.11n (HT20)



802.11n (HT40)

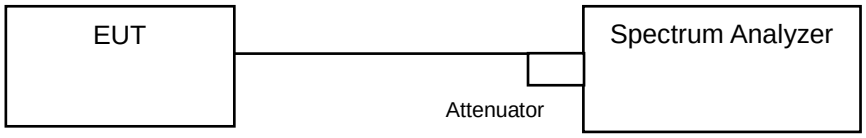


802.11ac (VHT80)



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	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.68
40	5200	16.68
48	5240	16.68
52	5260	16.68
60	5300	16.68
64	5320	16.68
100	5500	16.68
116	5580	16.68
140	5700	16.68
144	5720 (U-NII-2C)	13.40
144	5720 (U-NII-3)	3.28
149	5745	17.02
157	5785	17.02
165	5825	17.16

802.11n (HT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.88
40	5200	17.88
48	5240	17.88
52	5260	17.88
60	5300	17.88
64	5320	17.88
100	5500	17.88
116	5580	17.88
140	5700	17.88
144	5720 (U-NII-2C)	13.88
144	5720 (U-NII-3)	3.88
149	5745	17.98
157	5785	17.98
165	5825	18.07

802.11n (HT40)

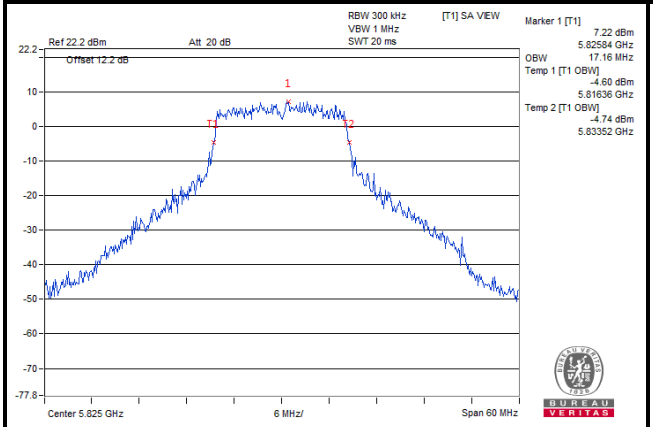
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.72
46	5230	36.72
54	5270	36.72
62	5310	36.48
102	5510	36.48
110	5550	36.72
134	5670	36.48
142	5710 (U-NII-2C)	33.24
142	5710 (U-NII-3)	3.24
151	5755	36.72
159	5795	36.72

802.11ac (VHT80)

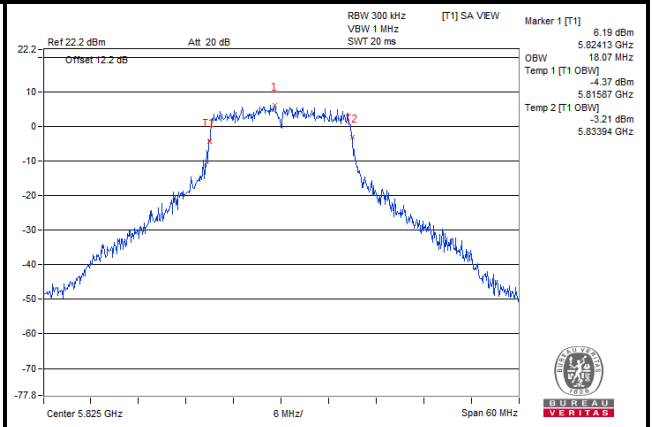
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.36
58	5290	75.84
106	5530	75.36
122	5610	75.84
138	5690 (U-NII-2C)	72.92
138	5690 (U-NII-3)	2.92
155	5775	75.77

Spectrum Plot of Worst Value

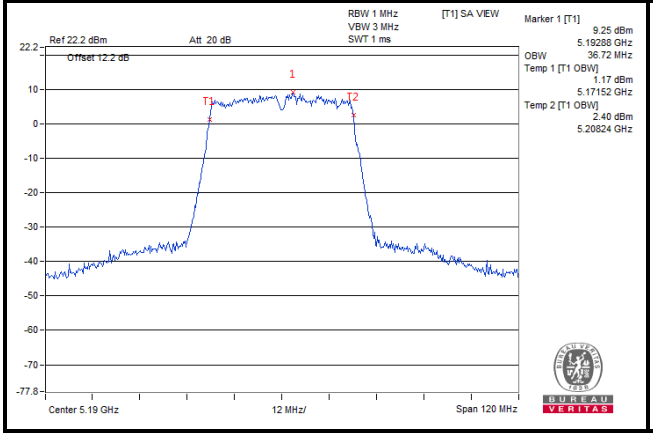
802.11a



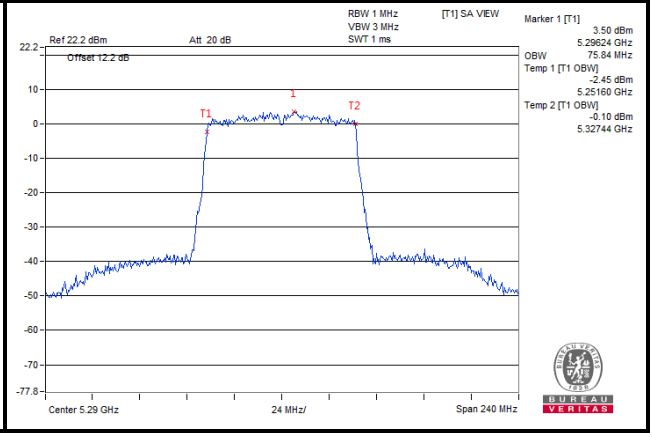
802.11n (HT20)

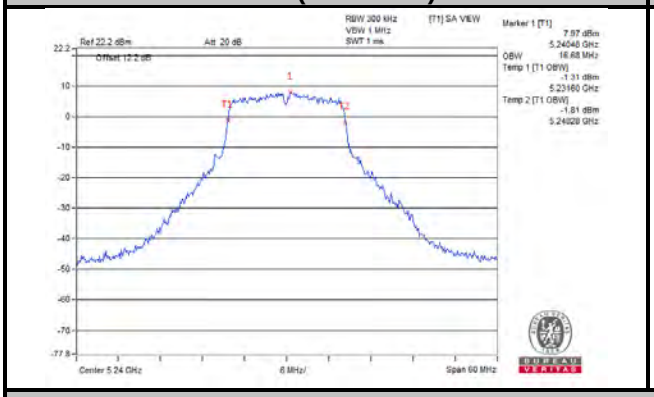
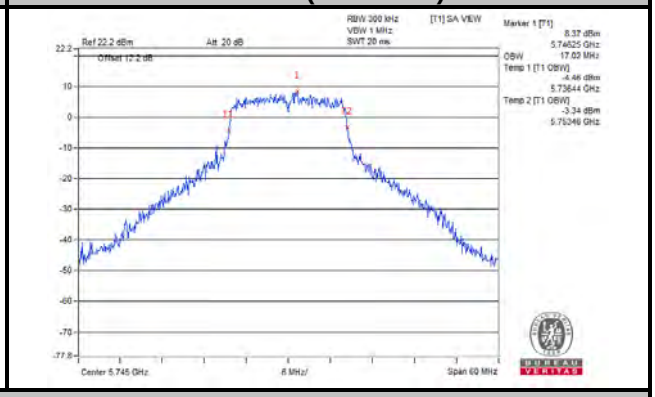
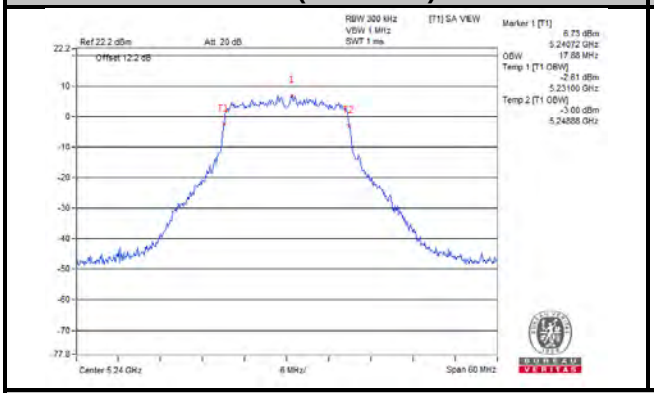
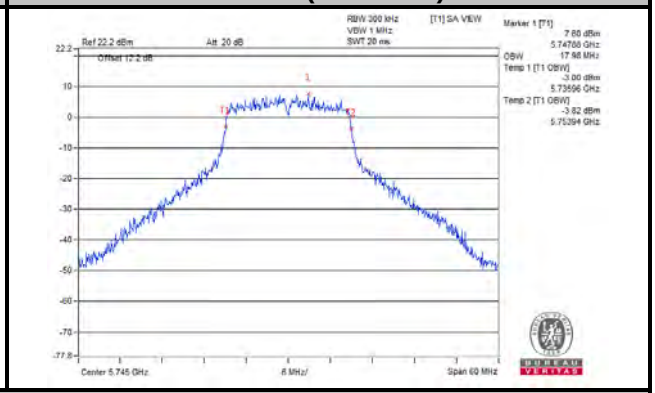
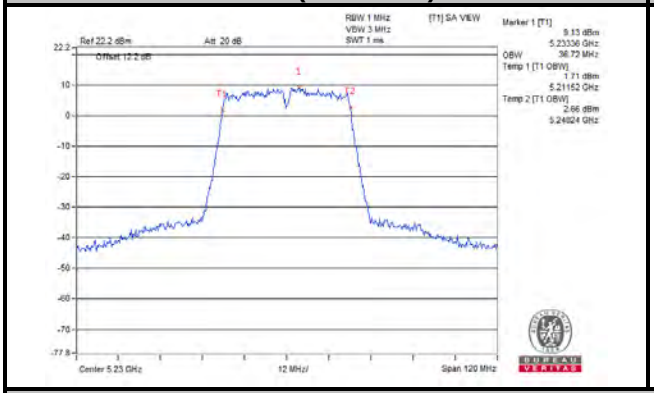
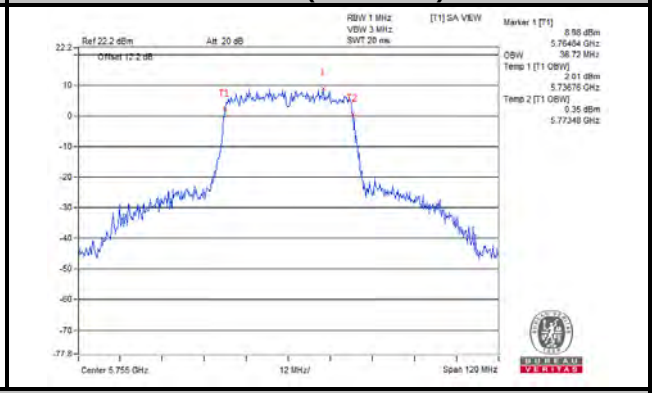
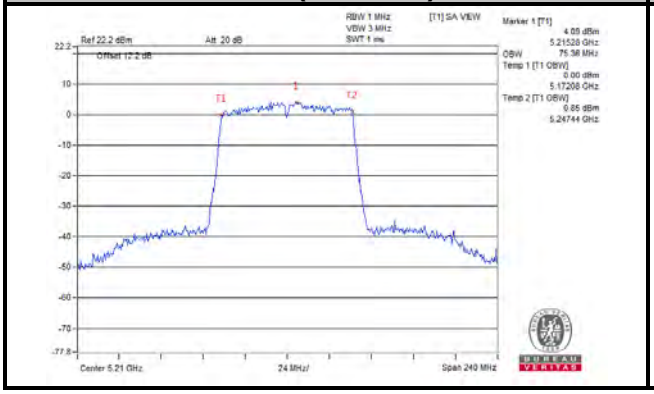
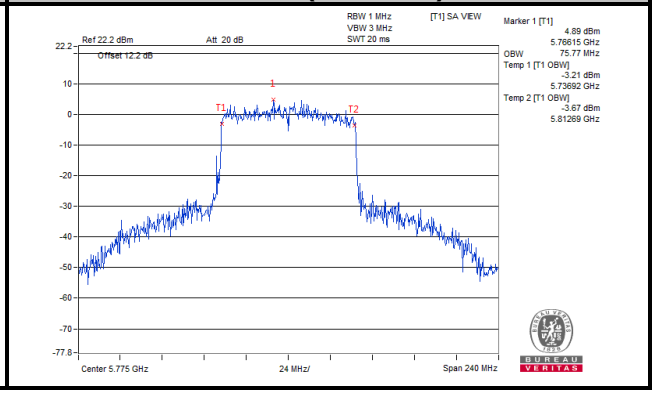


802.11n (HT40)



802.11ac (VHT80)



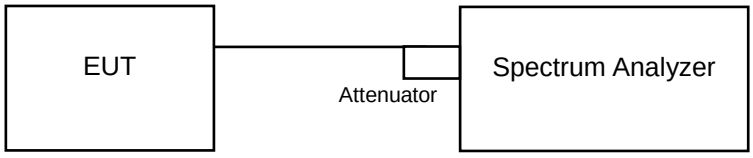
Spectrum Plot for Nearby DFS Band	
802.11a	
Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	
802.11n (HT20)	
Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	
802.11n (HT40)	
Ch 46 (5230 MHz)	Ch 151 (5755 MHz)
	
802.11ac (VHT80)	
Ch 42 (5210 MHz)	Ch 155 (5775 MHz)
	

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	17 dBm/MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11 dBm/MHz
U-NII-2A	√		11 dBm/MHz
U-NII-2C	√		11 dBm/MHz
U-NII-3	√		30 dBm/500 kHz

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

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

Using method SA-2 Duty cycle <98%

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW ≥ 3 RBW, 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:** with duty cycle & Duty cycle <98 %

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 1 RBW, 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 (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz / 300 kHz).
5. Sweep time = auto, trigger set to “free run”.
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value and add 10 log (1/duty cycle)

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

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

4.5.7 Test Results

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

802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
36	5180	4.71	0.12	4.83	11	Pass
40	5200	5.02	0.12	5.14	11	Pass
48	5240	5.34	0.12	5.46	11	Pass
52	5260	5.17	0.12	5.29	11	Pass
60	5300	4.82	0.12	4.94	11	Pass
64	5320	4.79	0.12	4.91	11	Pass
100	5500	4.84	0.12	4.96	11	Pass
116	5580	5.05	0.12	5.17	11	Pass
140	5700	5.31	0.12	5.43	11	Pass
144	5720 (U-NII-2C)	5.37	0.12	5.49	11	Pass

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

802.11n (HT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
36	5180	3.25	0.09	3.34	11	Pass
40	5200	3.36	0.09	3.45	11	Pass
48	5240	3.63	0.09	3.72	11	Pass
52	5260	3.36	0.09	3.45	11	Pass
60	5300	3.03	0.09	3.12	11	Pass
64	5320	3.25	0.09	3.34	11	Pass
100	5500	3.40	0.09	3.49	11	Pass
116	5580	3.83	0.09	3.92	11	Pass
140	5700	4.09	0.09	4.18	11	Pass
144	5720 (U-NII-2C)	4.13	0.09	4.22	11	Pass

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

802.11n (HT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
38	5190	0.24	0.18	0.41	11	Pass
46	5230	0.48	0.18	0.66	11	Pass
54	5270	0.75	0.18	0.92	11	Pass
62	5310	0.34	0.18	0.52	11	Pass
102	5510	0.53	0.18	0.70	11	Pass
110	5550	0.18	0.18	0.35	11	Pass
134	5670	0.38	0.18	0.55	11	Pass
142	5710 (U-NII-2C)	0.49	0.18	0.67	11	Pass

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

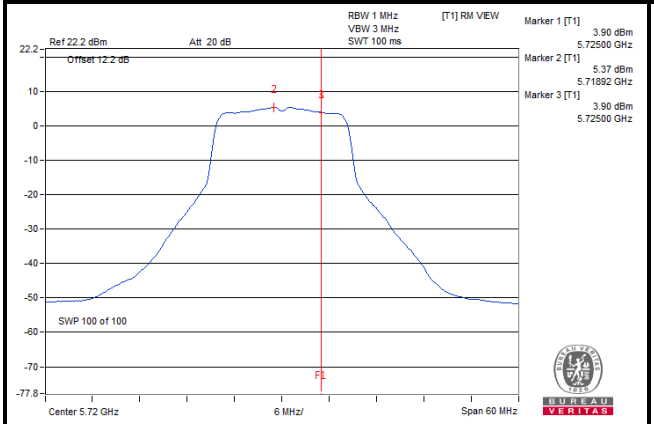
802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
42	5210	-4.41	0.41	-4.00	11	Pass
58	5290	-5.14	0.41	-4.73	11	Pass
106	5530	-4.63	0.41	-4.22	11	Pass
122	5610	-4.52	0.41	-4.11	11	Pass
138	5690 (U-NII-2C)	-4.34	0.41	-3.93	11	Pass

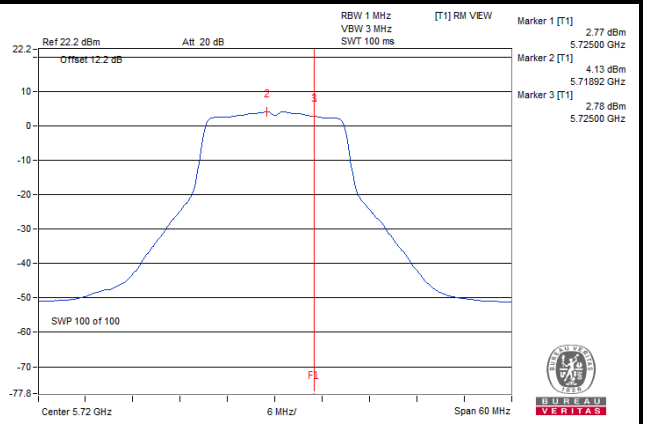
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

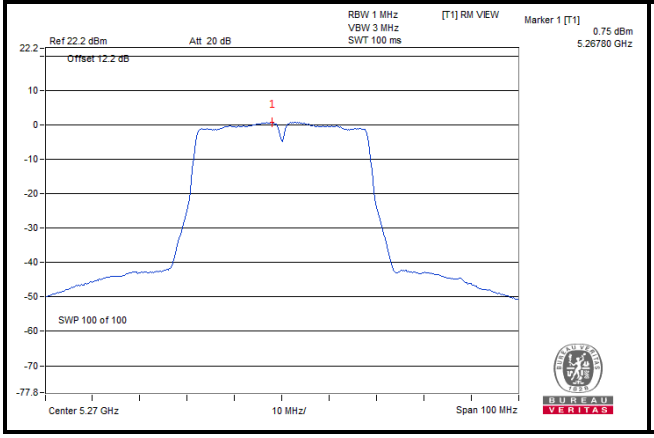
802.11a



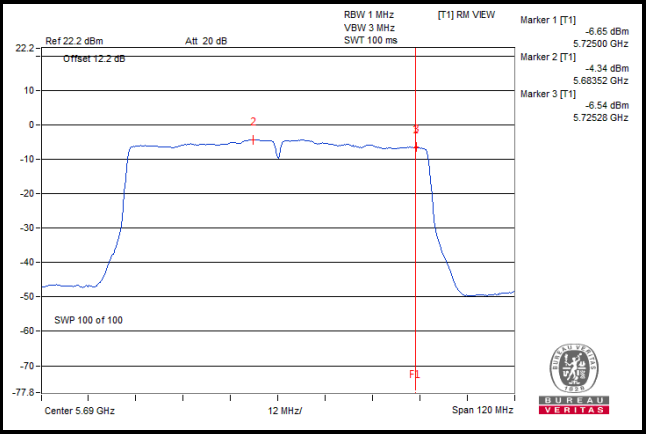
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



For U-NII-3 Band

802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
144	5720 (U-NII-3)	-1.23	0.99	0.12	1.11	30	Pass
149	5745	-4.26	-2.04	0.12	-1.92	30	Pass
157	5785	-4.45	-2.23	0.12	-2.11	30	Pass
165	5825	-4.95	-2.73	0.12	-2.61	30	Pass

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

802.11n (HT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
144	5720 (U-NII-3)	-2.47	-0.25	0.09	-0.16	30	Pass
149	5745	-6.05	-3.83	0.09	-3.74	30	Pass
157	5785	-6.07	-3.85	0.09	-3.76	30	Pass
165	5825	-6.39	-4.17	0.09	-4.08	30	Pass

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

802.11n (HT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
142	5710 (U-NII-3)	-6.64	-4.42	0.18	-4.24	30	Pass
151	5755	-9.51	-7.29	0.18	-7.11	30	Pass
159	5795	-10.16	-7.94	0.18	-7.76	30	Pass

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

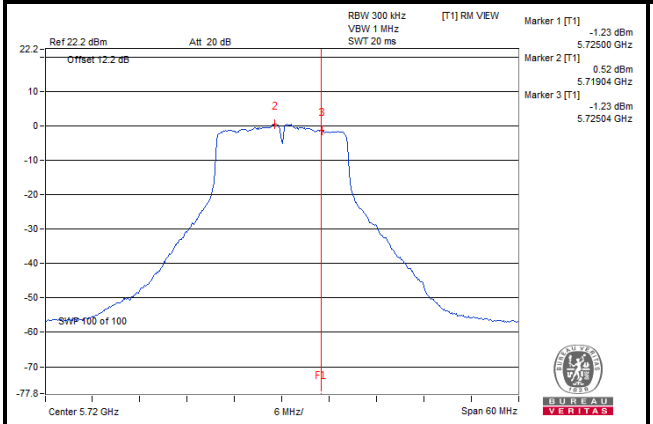
802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
138	5690 (U-NII-3)	-11.68	-9.46	0.41	-9.05	30	Pass
155	5775	-14.09	-11.87	0.41	-11.46	30	Pass

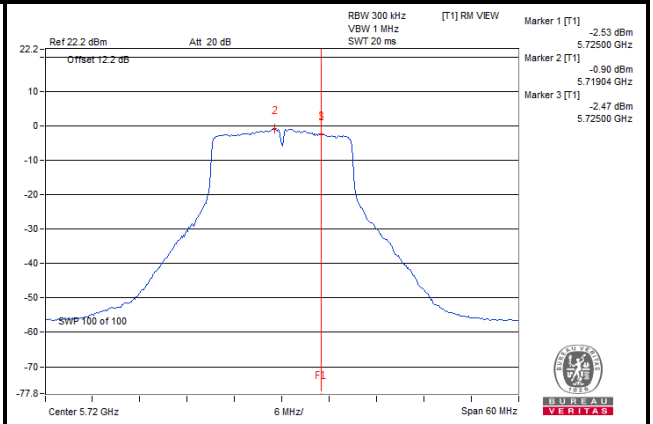
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

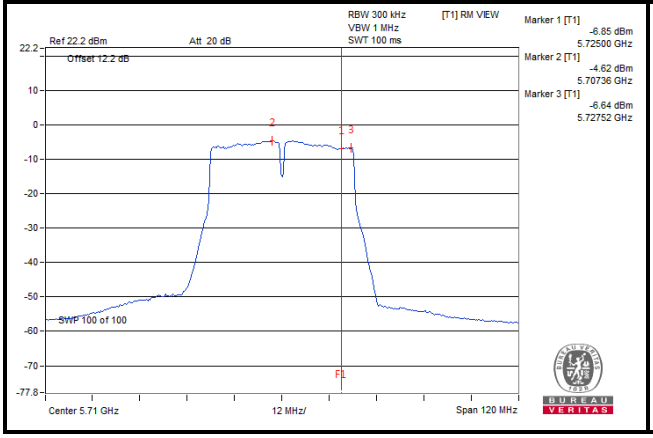
802.11a



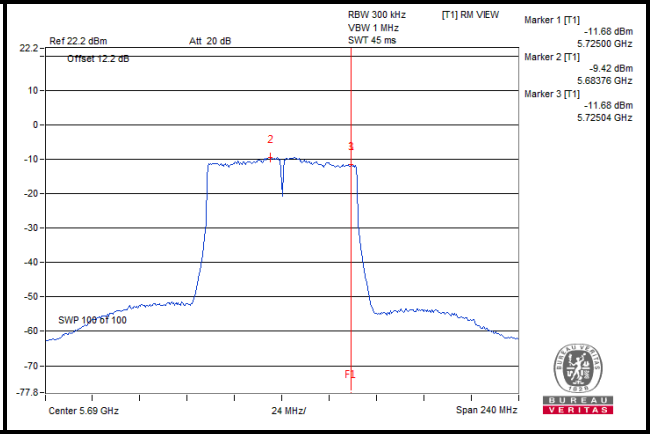
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

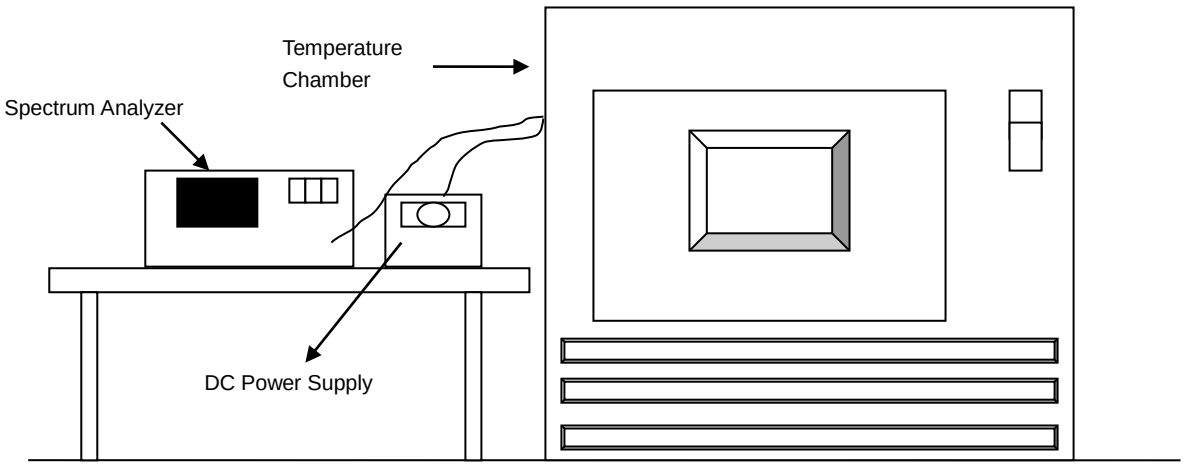


4.6 Frequency Stability

4.6.1 Limit of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
55	120	5180.0177	PASS	5180.018	PASS	5180.0188	PASS	5180.0198	PASS
50	120	5179.99	PASS	5179.992	PASS	5179.9902	PASS	5179.9934	PASS
40	120	5180.0005	PASS	5180.0035	PASS	5180.0037	PASS	5180.0026	PASS
30	120	5179.9884	PASS	5179.9847	PASS	5179.9851	PASS	5179.9871	PASS
20	120	5179.9962	PASS	5179.9991	PASS	5179.995	PASS	5179.9969	PASS
10	120	5179.9928	PASS	5179.9929	PASS	5179.9937	PASS	5179.9932	PASS
0	120	5180.0105	PASS	5180.0078	PASS	5180.0118	PASS	5180.008	PASS
-10	120	5180.0227	PASS	5180.0217	PASS	5180.0228	PASS	5180.0227	PASS

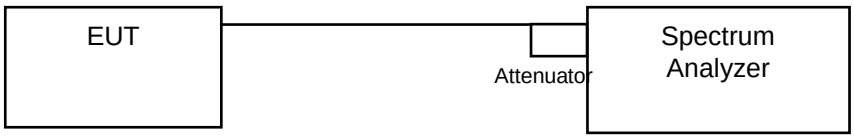
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	138	5179.996	PASS	5179.9999	PASS	5179.9945	PASS	5179.9978	PASS
	120	5179.9962	PASS	5179.9991	PASS	5179.995	PASS	5179.9969	PASS
	102	5179.9963	PASS	5179.9996	PASS	5179.9949	PASS	5179.9971	PASS

4.7 6 dB Bandwidth Measurement

4.7.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

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) = 100 kHz
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)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 (U-NII-3)	2.59	0.5	Pass
149	5745	15.56	0.5	Pass
157	5785	16.07	0.5	Pass
165	5825	15.55	0.5	Pass

802.11n (HT20)

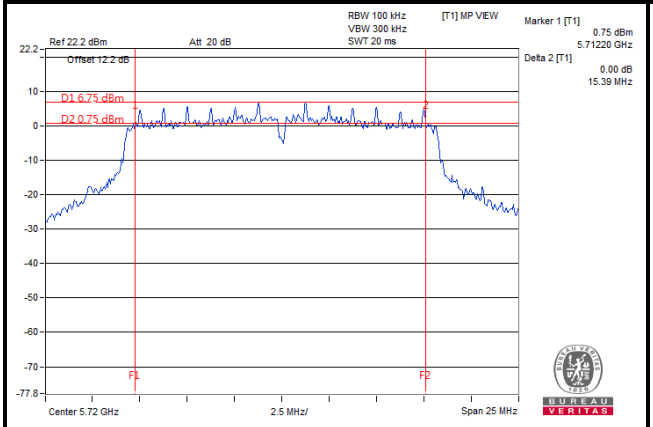
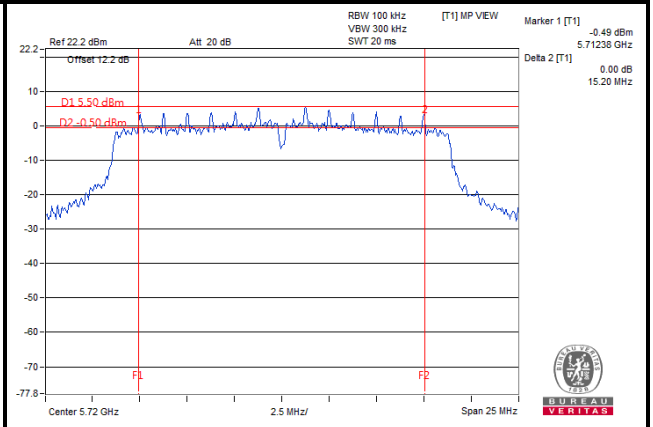
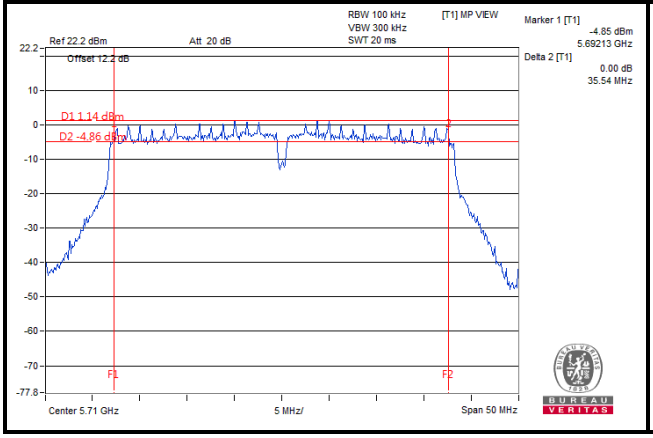
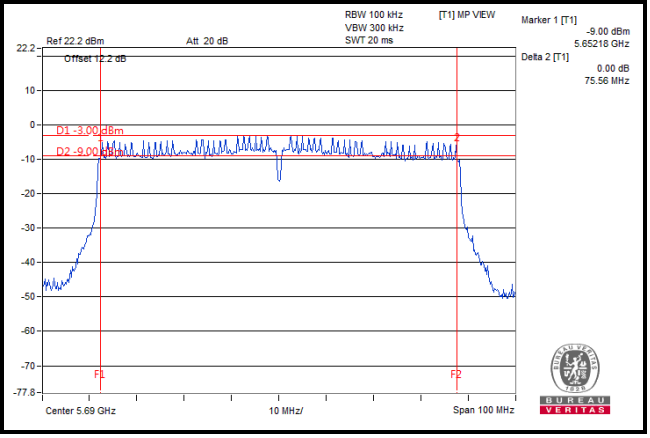
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 (U-NII-3)	2.58	0.5	Pass
149	5745	16.87	0.5	Pass
157	5785	16.39	0.5	Pass
165	5825	16.34	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
142	5710 (U-NII-3)	2.67	0.5	Pass
157	5785	36.07	0.5	Pass
165	5825	36.24	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
138	5690 (U-NII-3)	2.74	0.5	Pass
155	5775	75.54	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

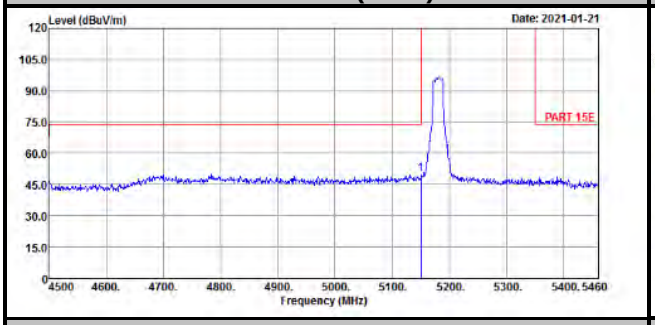
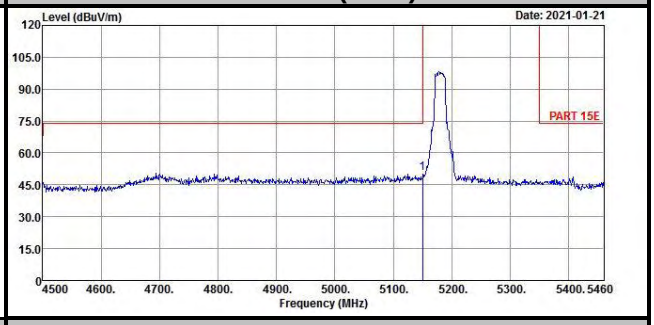
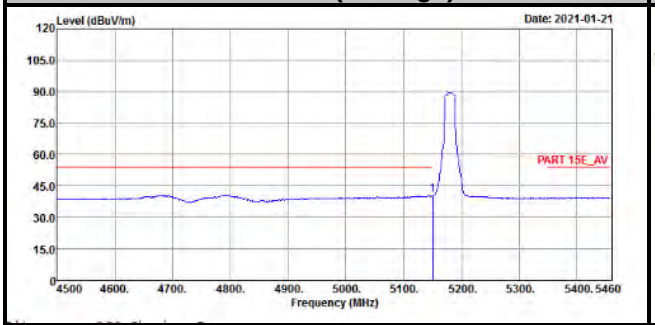
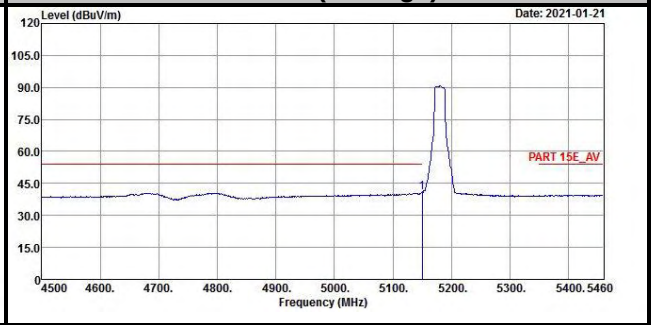
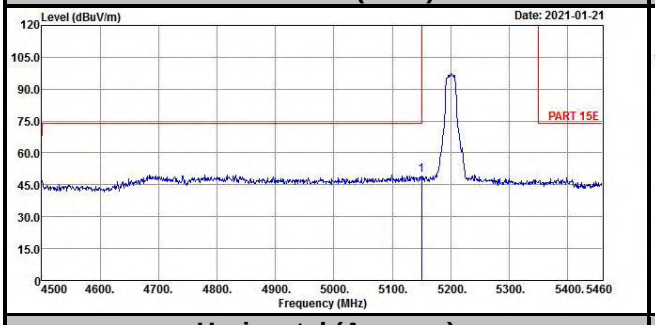
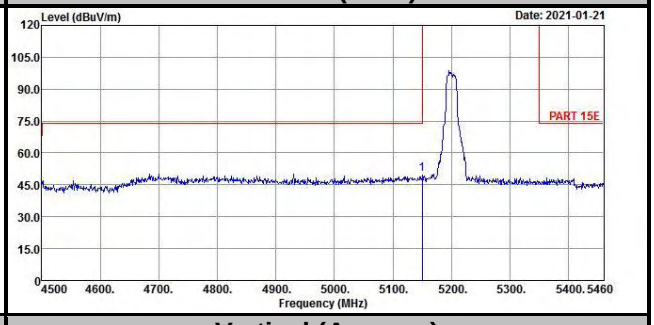
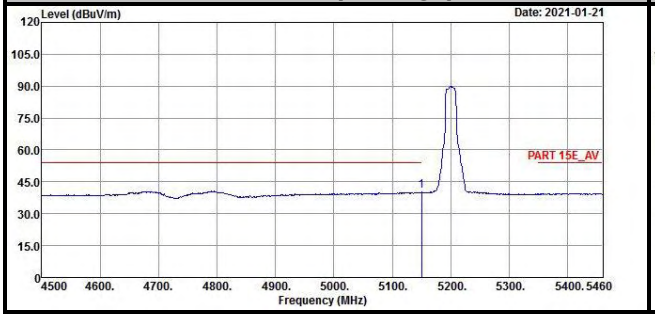
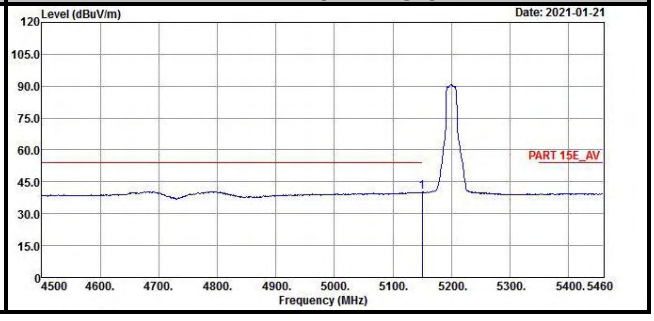
Note:
For Ch144 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
For Ch142 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

5 Pictures of Test Arrangements

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

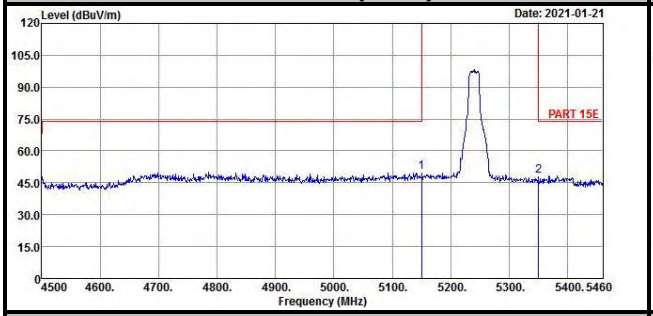
Annex A- Band Edge Measurement

802.11a

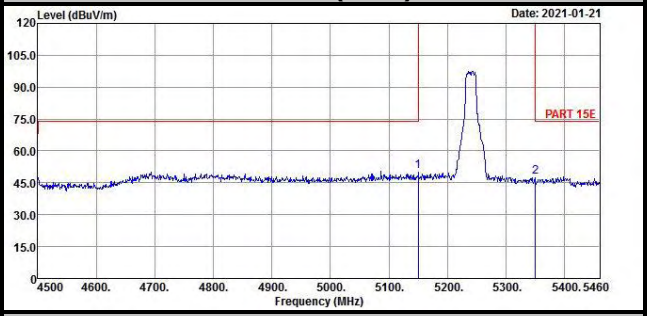
Ch 36	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	
Ch 40	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	

Ch 48

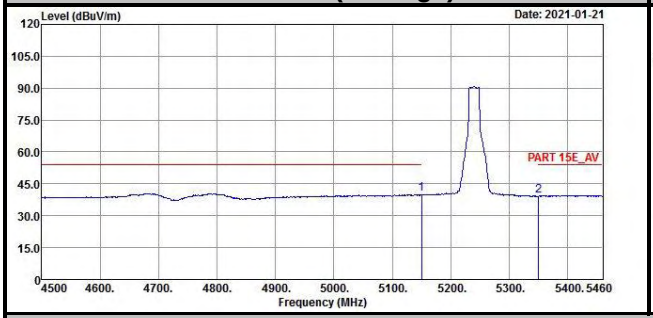
Horizontal (Peak)



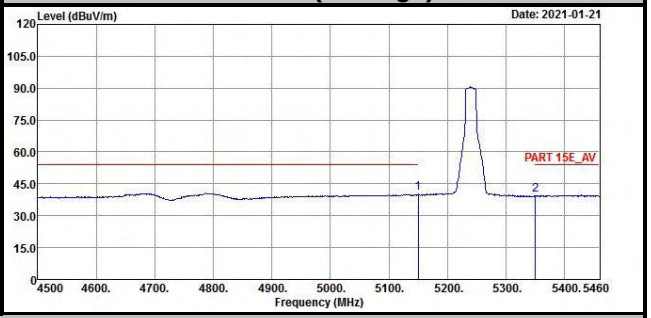
Vertical (Peak)



Horizontal (Average)

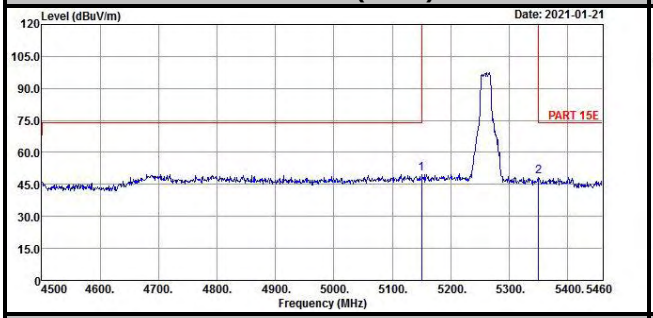


Vertical (Average)

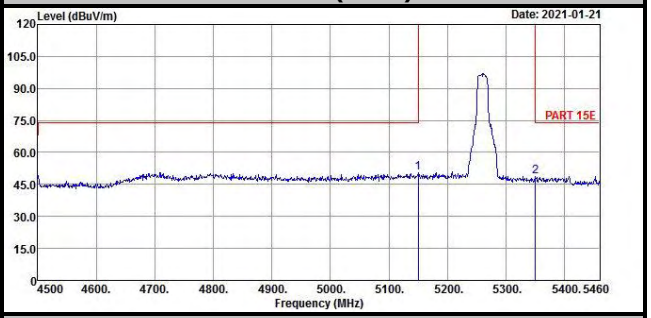


Ch 52

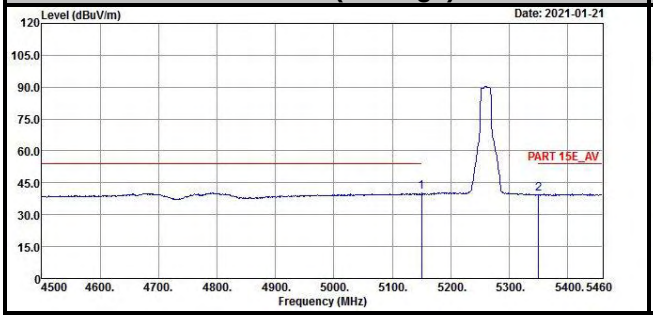
Horizontal (Peak)



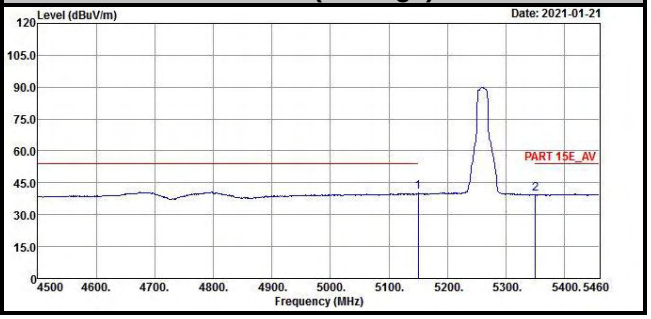
Vertical (Peak)



Horizontal (Average)

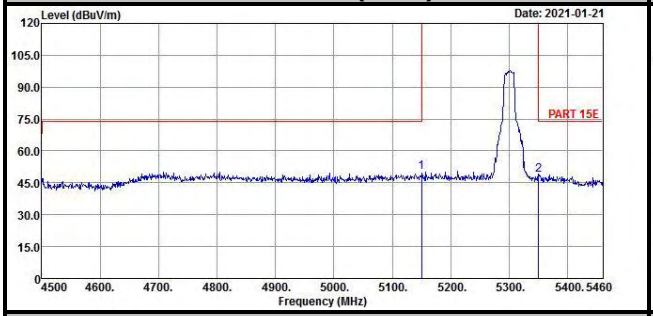


Vertical (Average)

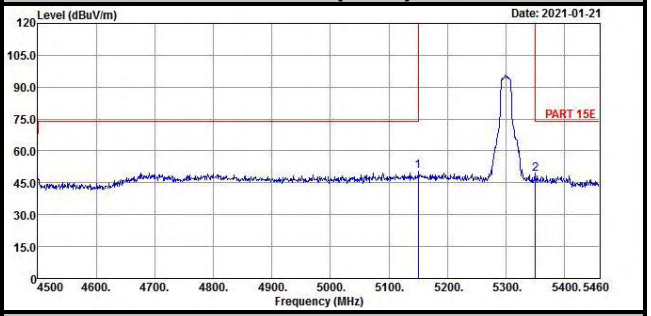


Ch 60

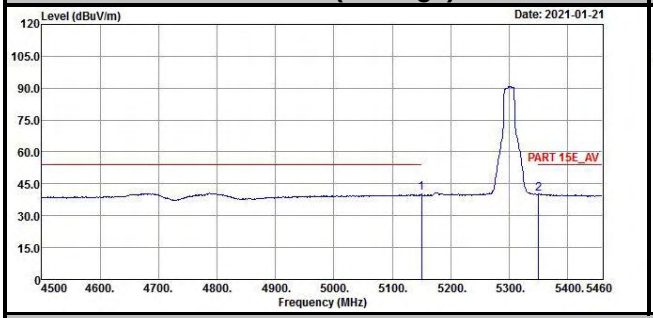
Horizontal (Peak)



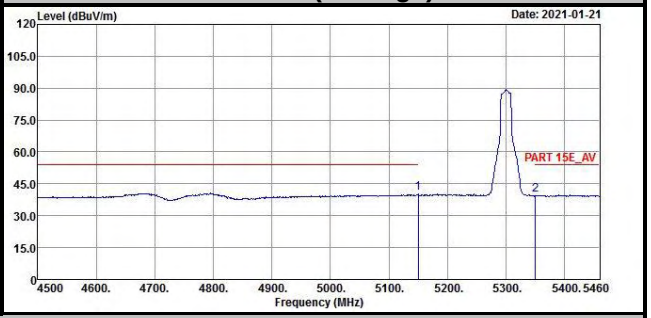
Vertical (Peak)



Horizontal (Average)

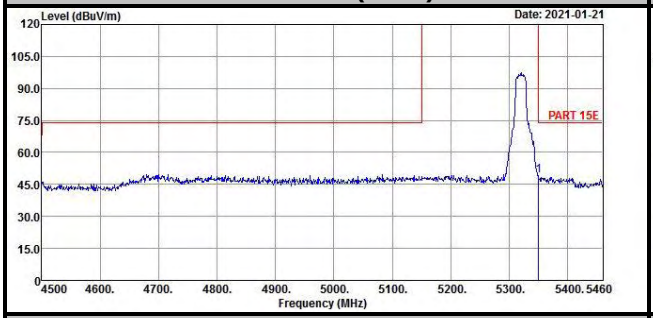


Vertical (Average)

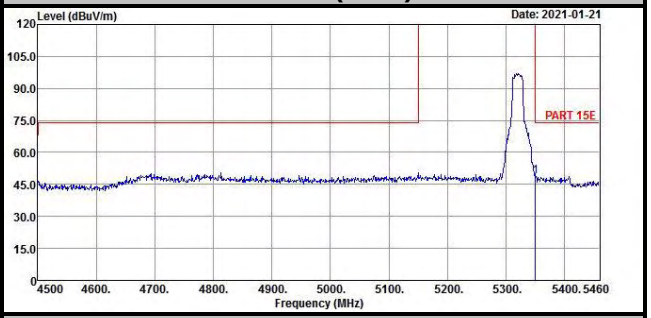


Ch 64

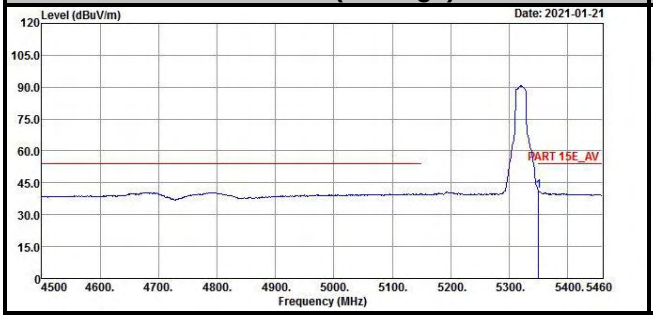
Horizontal (Peak)



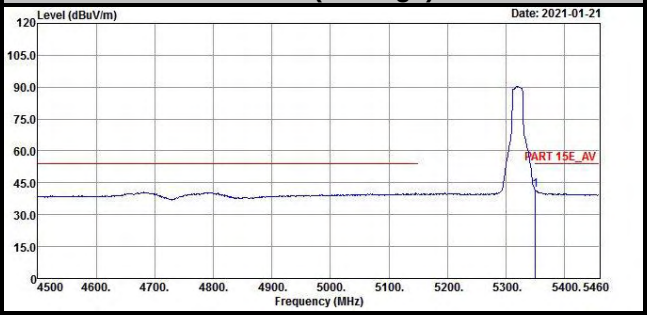
Vertical (Peak)

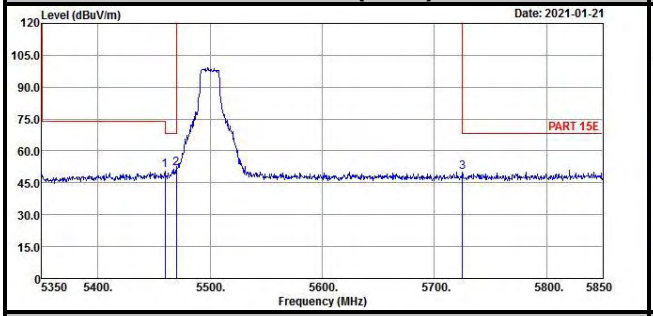
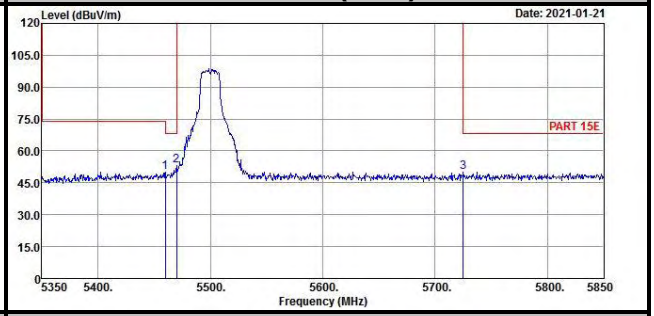
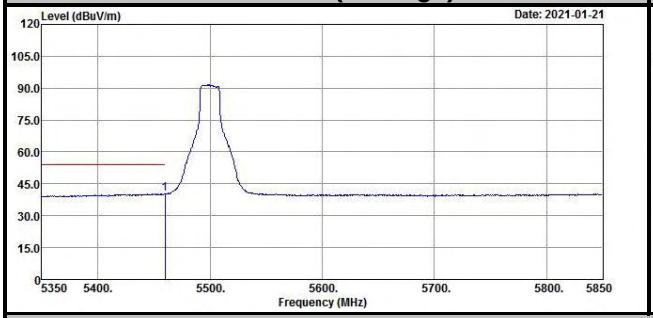
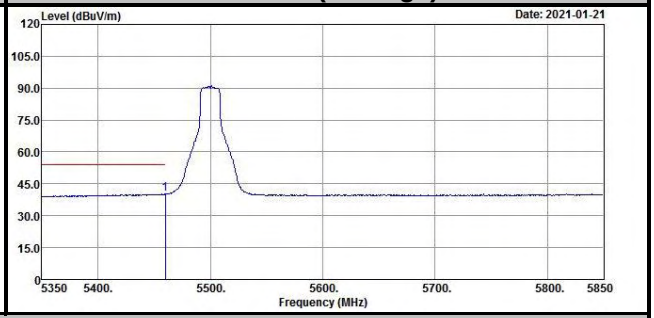
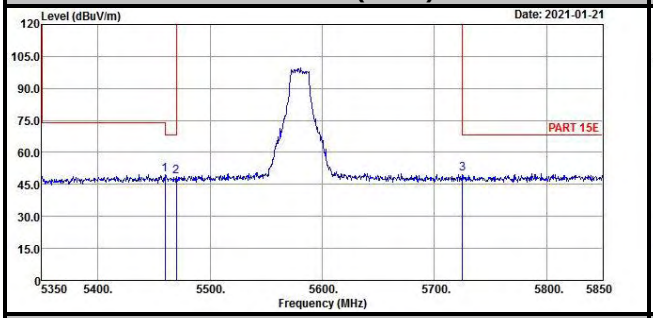
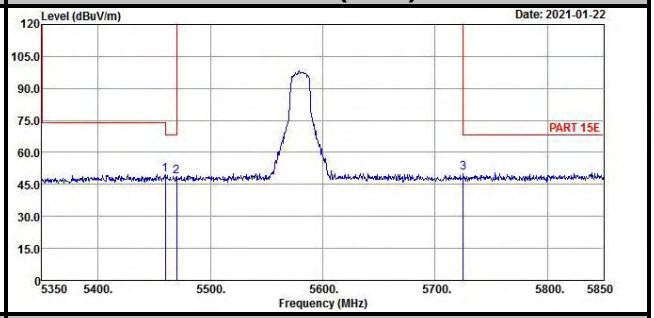
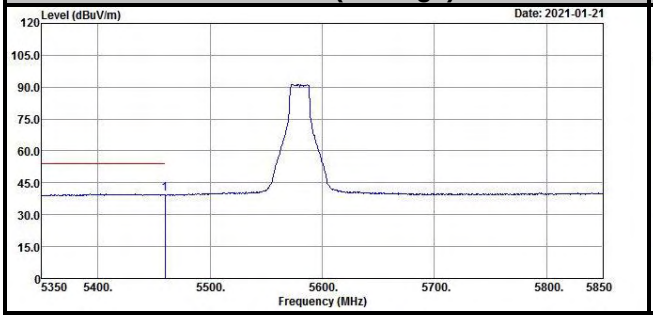
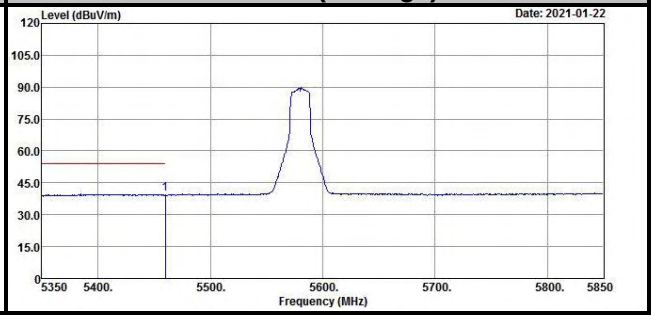


Horizontal (Average)



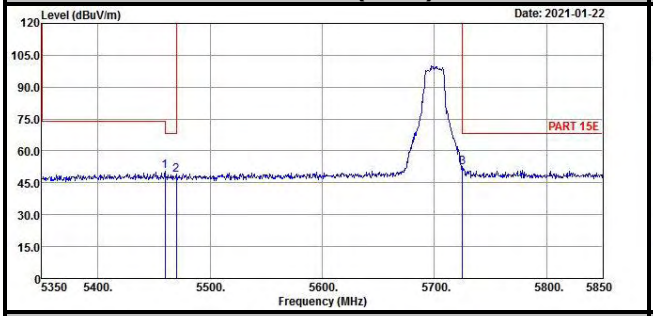
Vertical (Average)



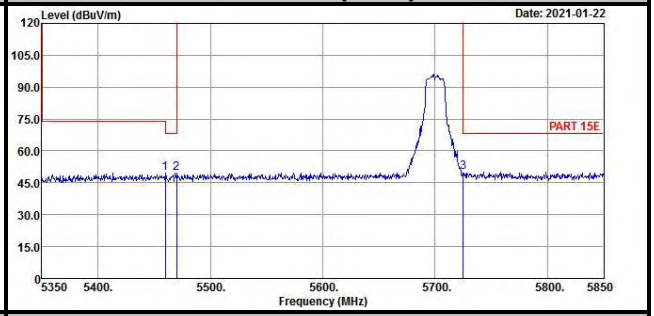
Ch 100	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	
Ch 116	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	

Ch 140

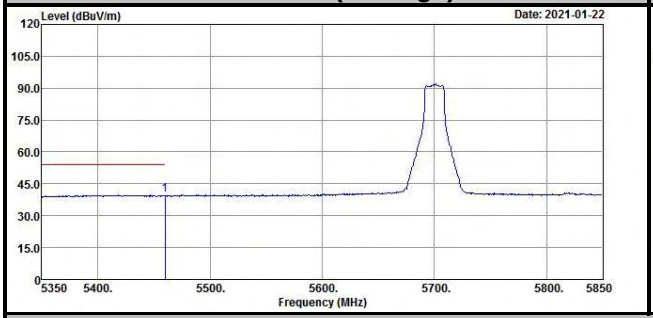
Horizontal (Peak)



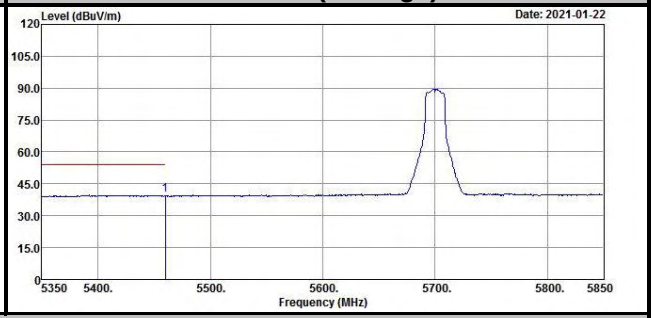
Vertical (Peak)



Horizontal (Average)

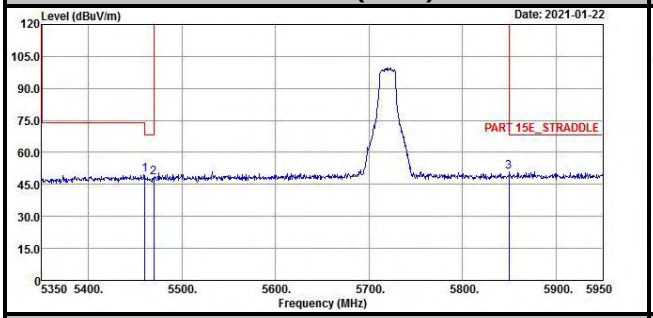


Vertical (Average)

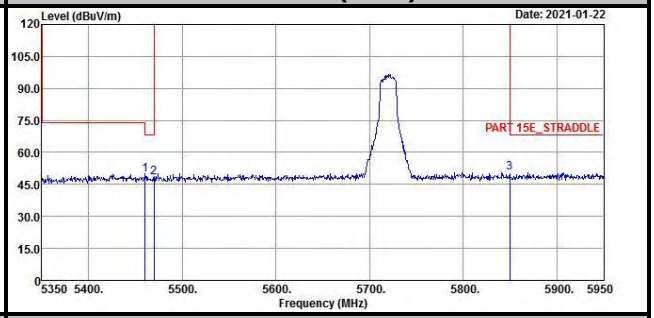


Ch 144

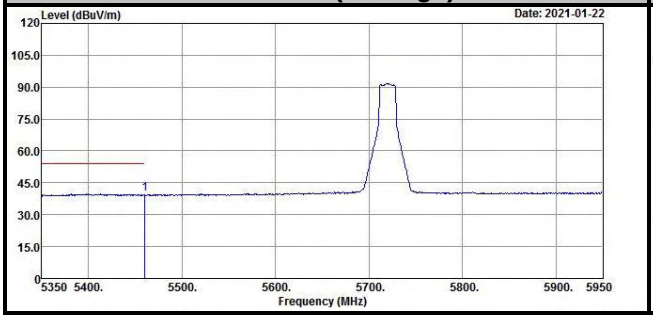
Horizontal (Peak)



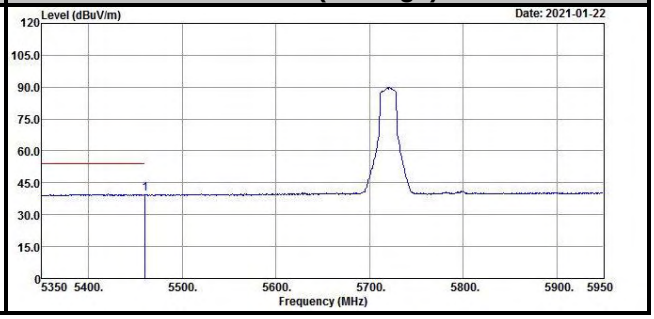
Vertical (Peak)



Horizontal (Average)



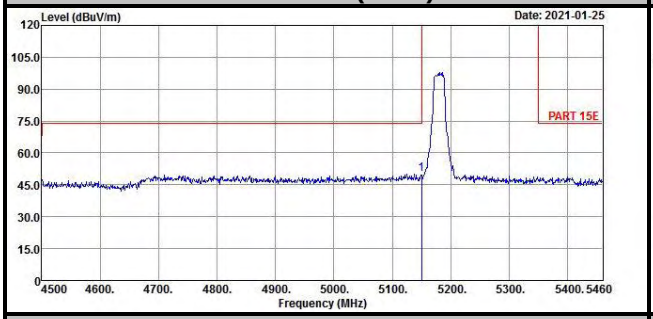
Vertical (Average)



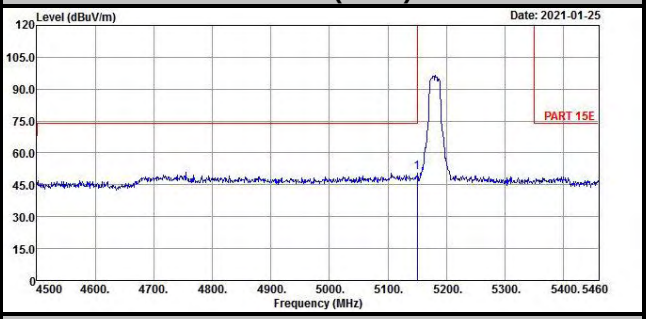
802.11n (HT20)

Ch 36

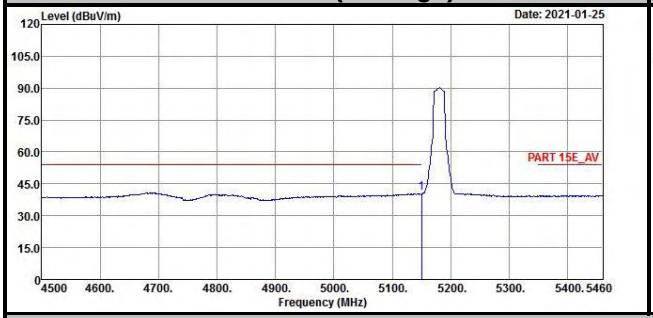
Horizontal (Peak)



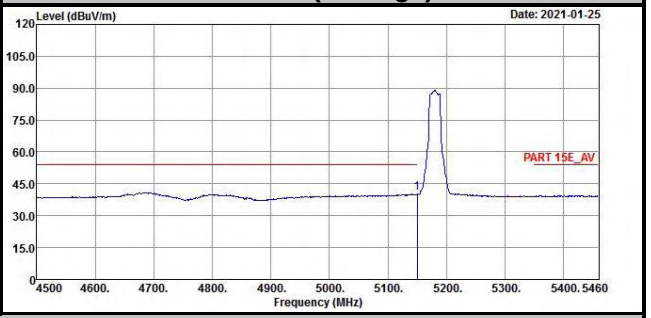
Vertical (Peak)



Horizontal (Average)

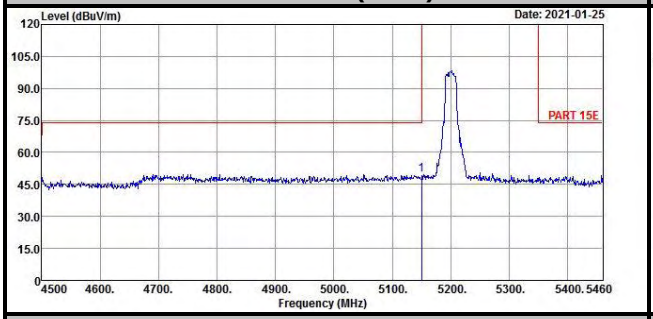


Vertical (Average)

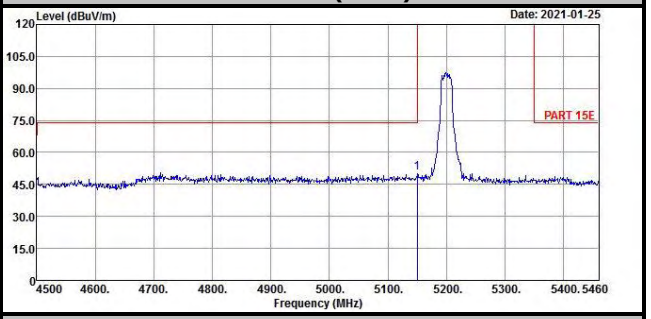


Ch 40

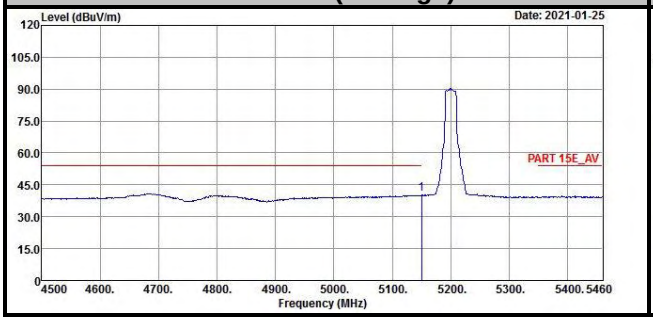
Horizontal (Peak)



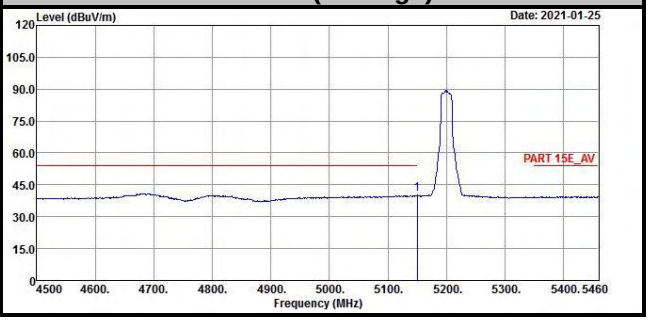
Vertical (Peak)

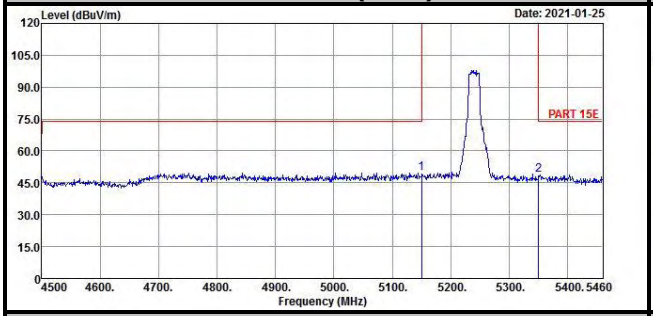
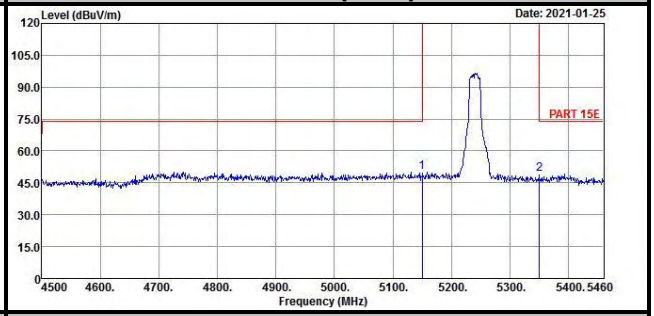
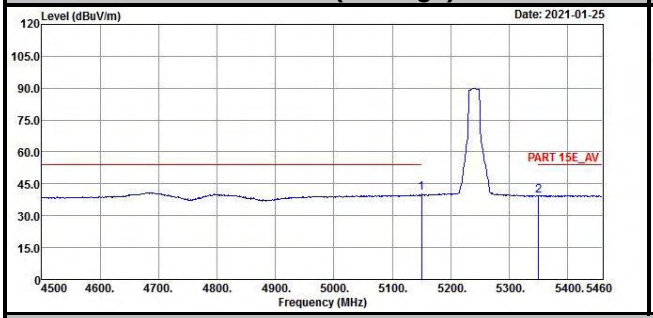
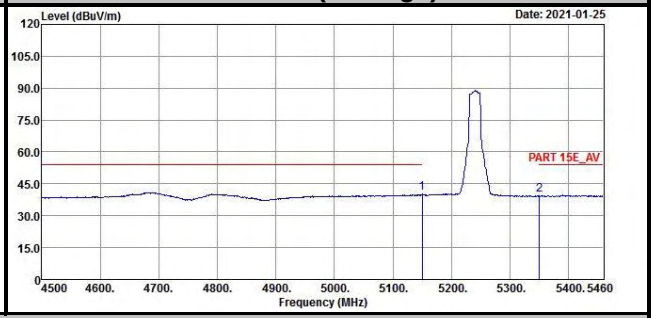
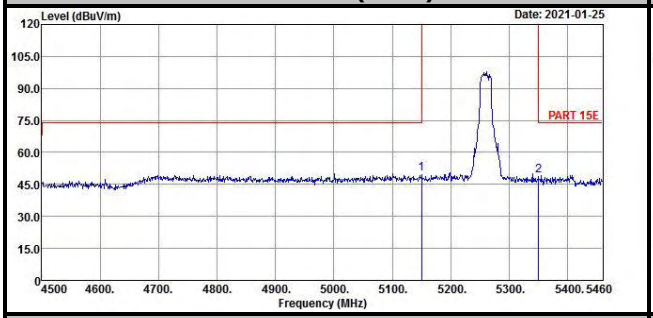
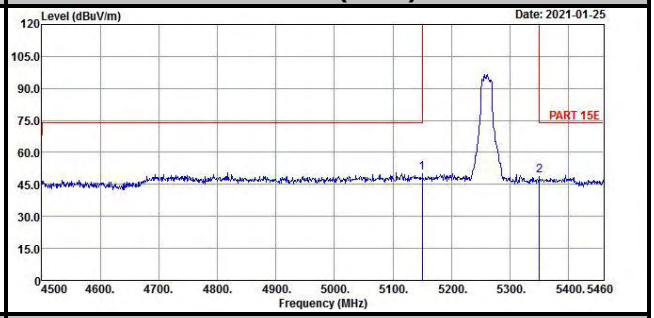
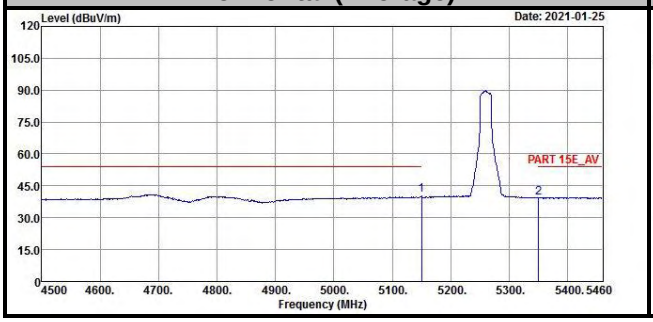
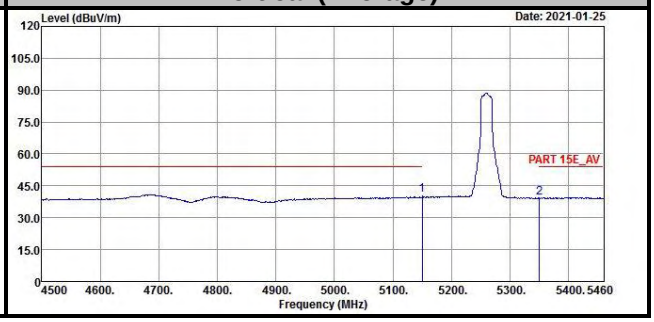


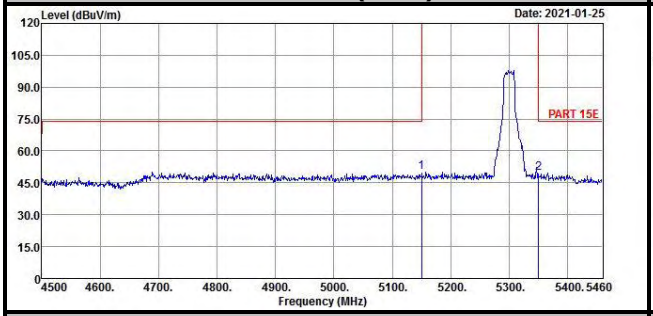
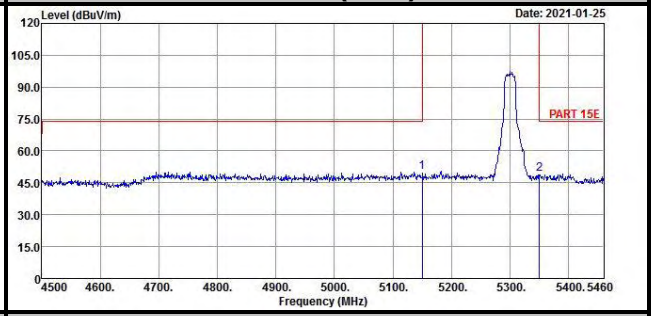
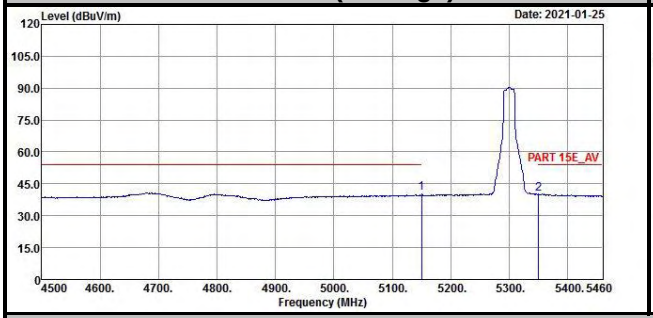
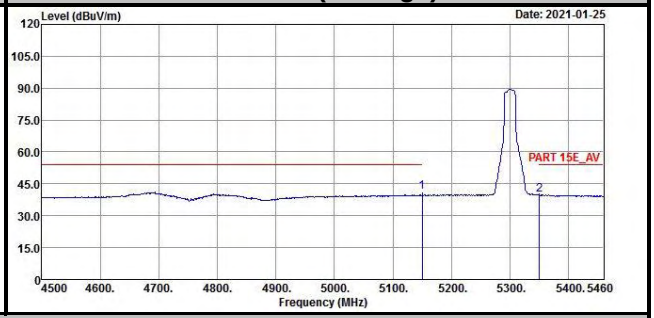
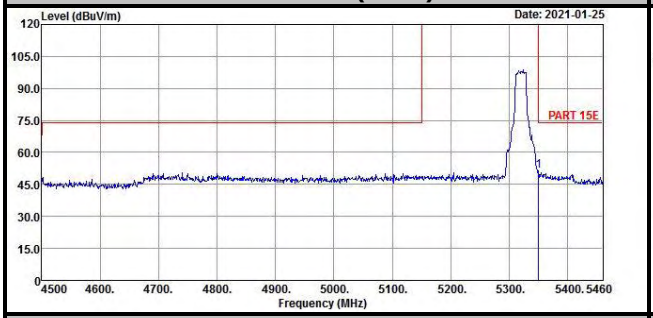
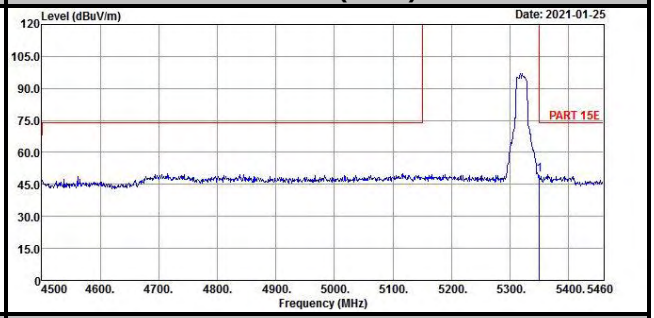
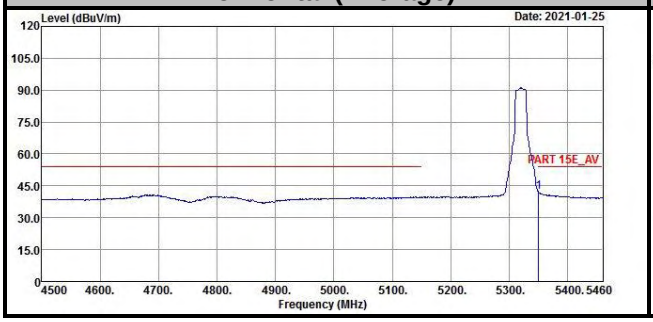
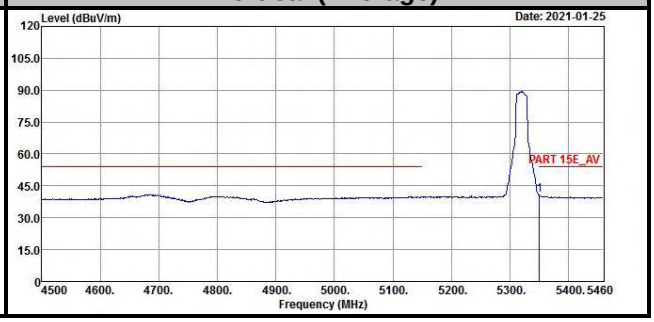
Horizontal (Average)

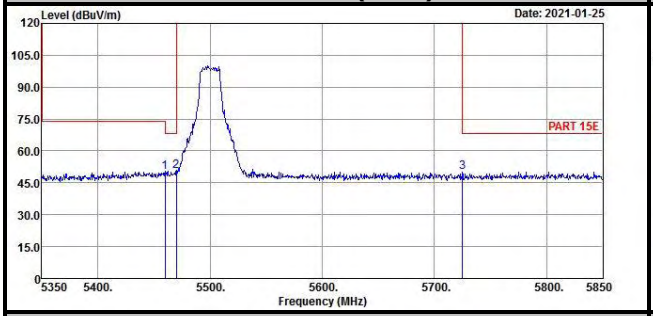
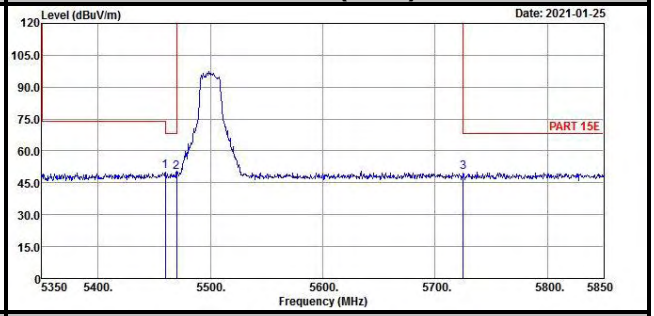
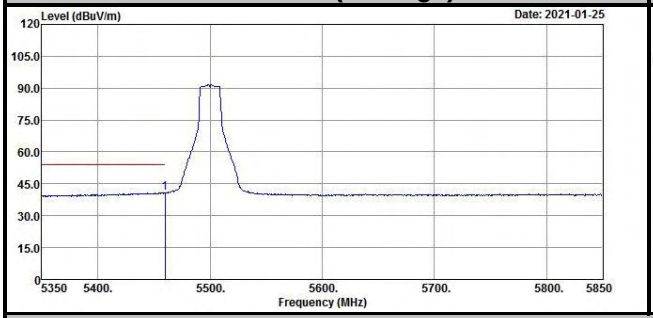
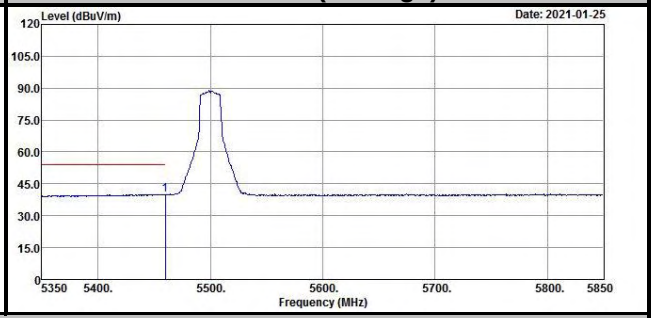
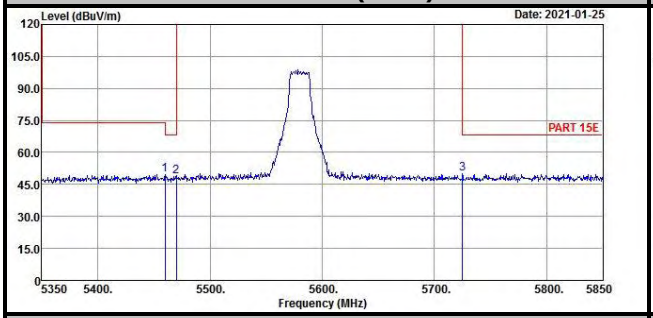
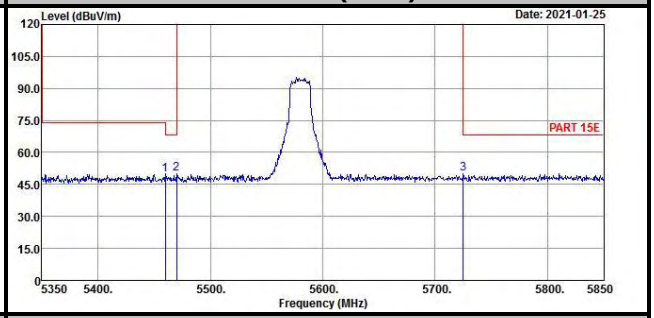
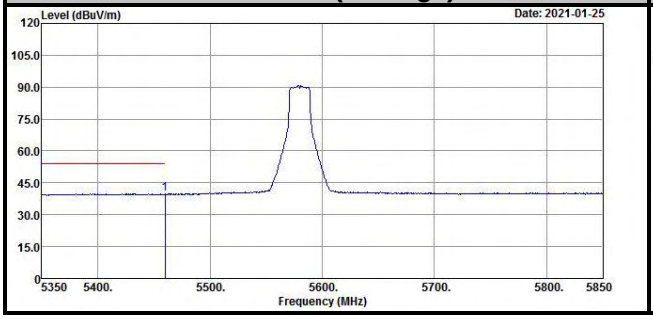
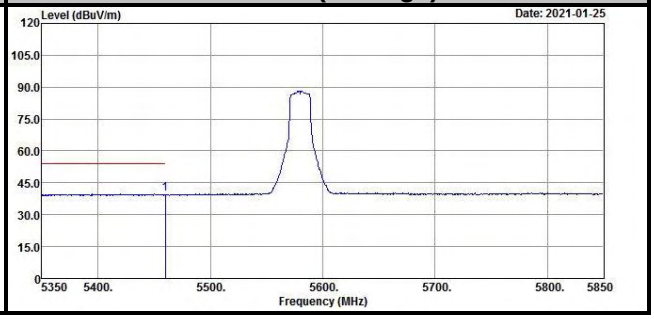


Vertical (Average)



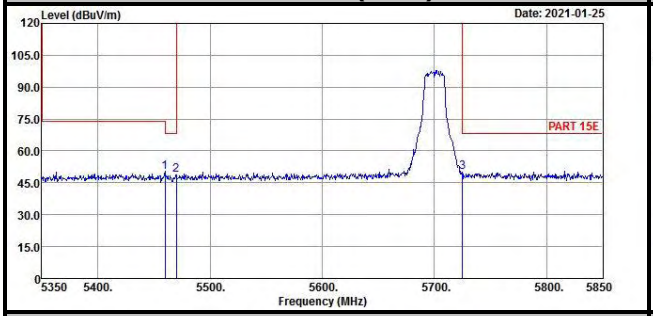
Ch 48	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	
Ch 52	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	

Ch 60	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	
Ch 64	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	

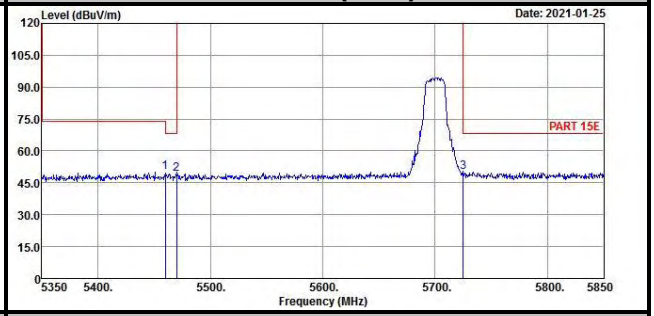
Ch 100	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	
Ch 116	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	

Ch 140

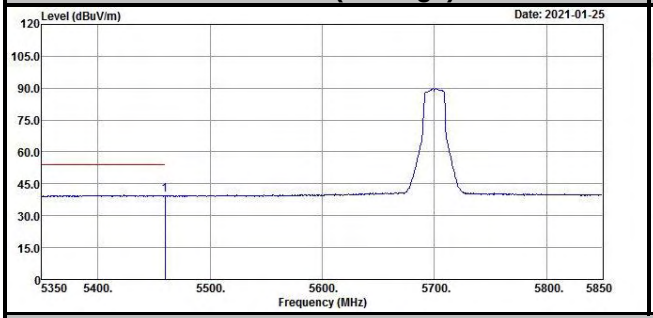
Horizontal (Peak)



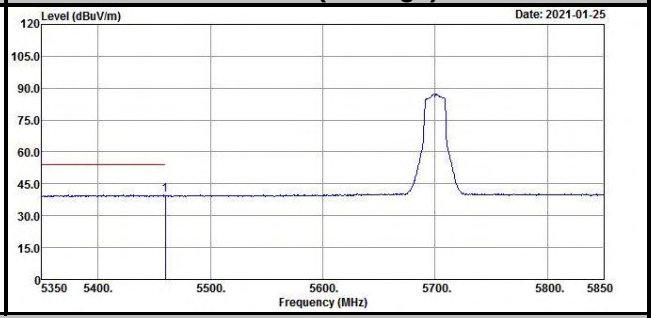
Vertical (Peak)



Horizontal (Average)

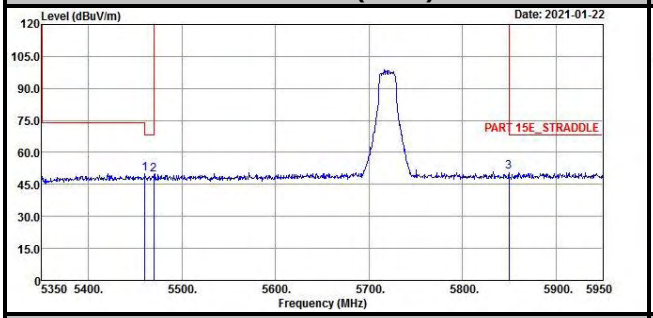


Vertical (Average)

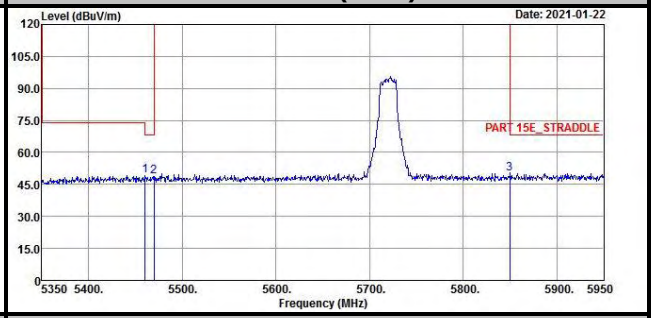


Ch 144

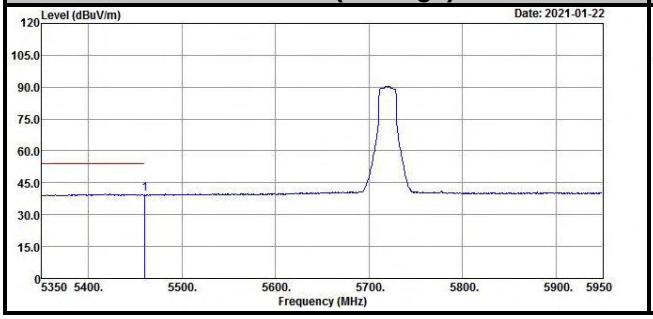
Horizontal (Peak)



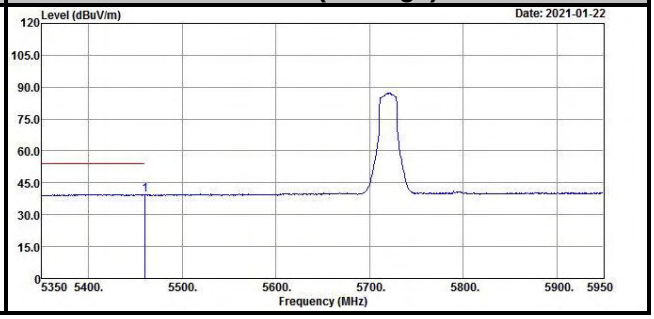
Vertical (Peak)



Horizontal (Average)



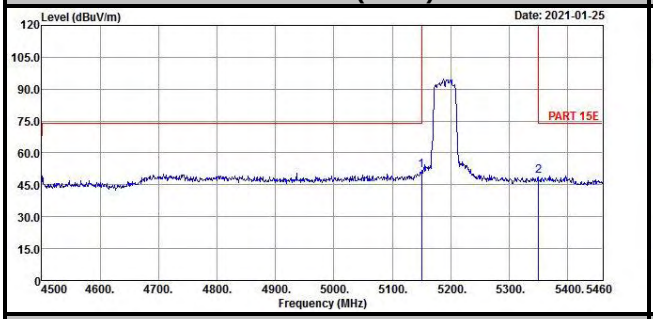
Vertical (Average)



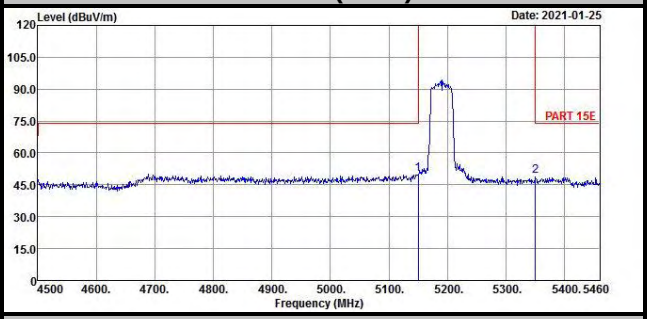
802.11n (HT40)

Ch 38

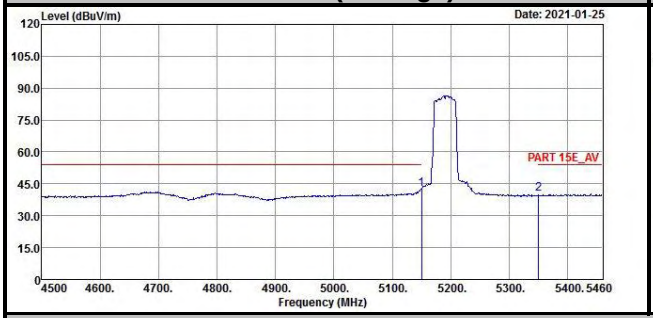
Horizontal (Peak)



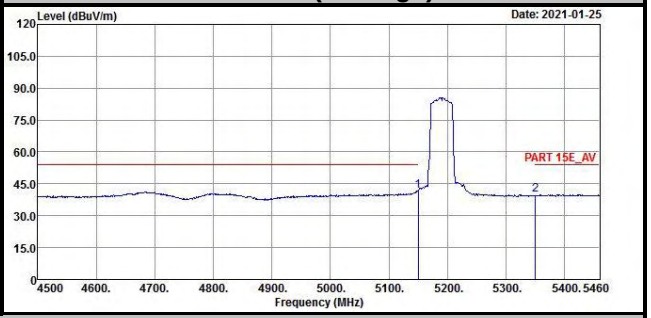
Vertical (Peak)



Horizontal (Average)

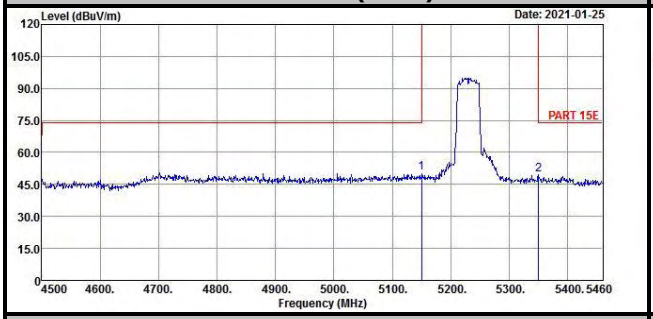


Vertical (Average)

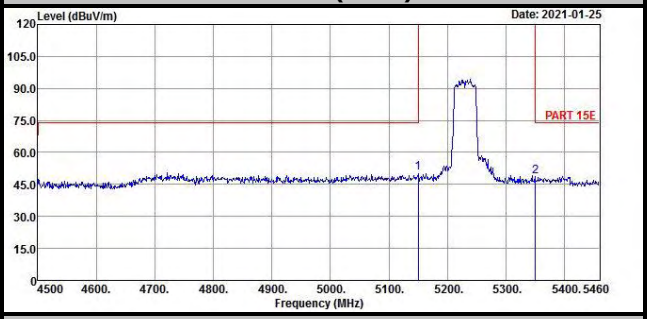


Ch 46

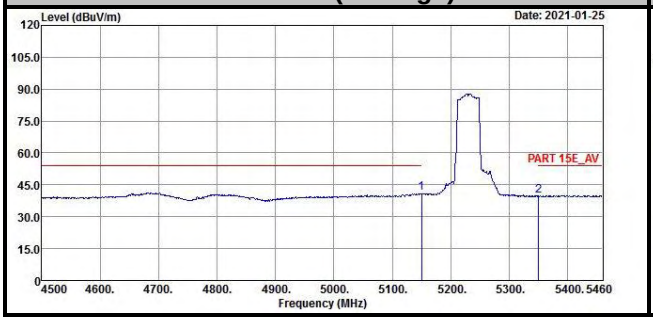
Horizontal (Peak)



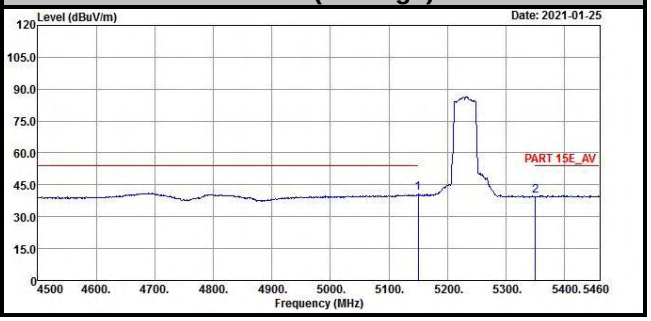
Vertical (Peak)

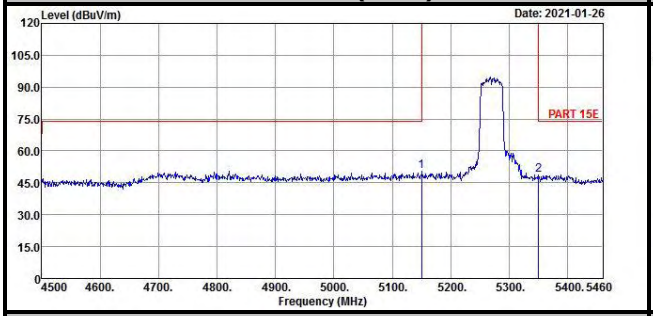
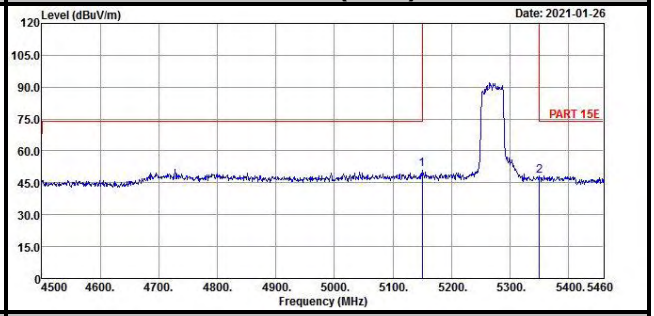
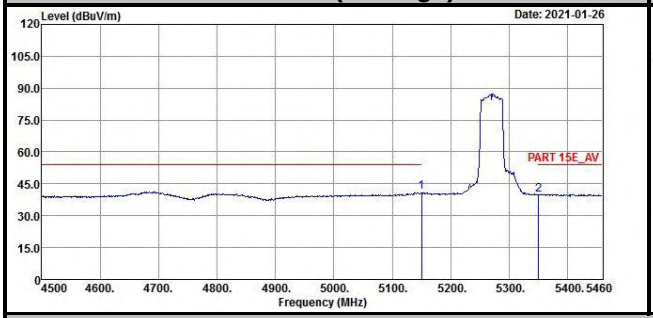
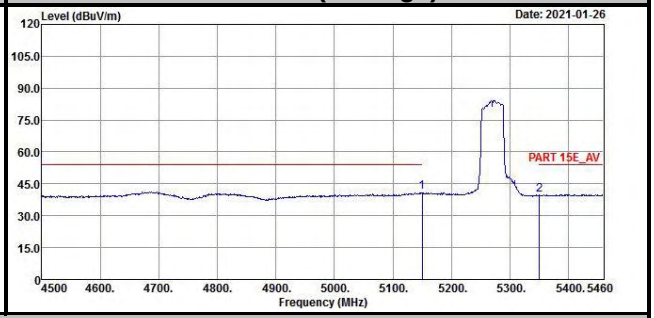
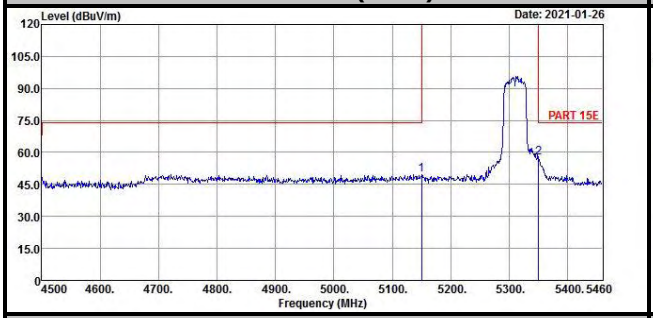
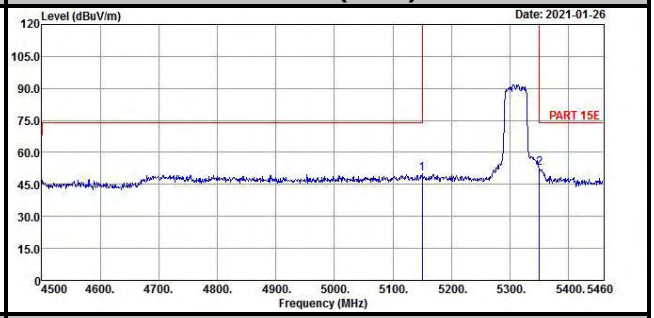
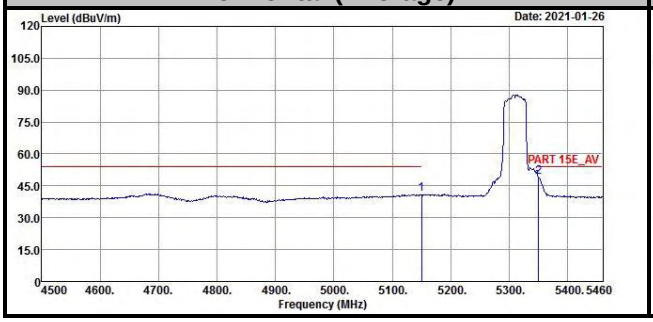
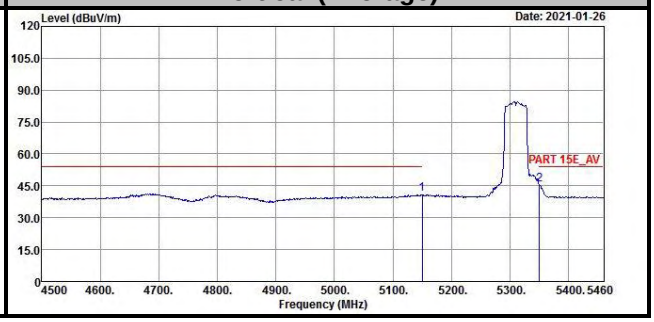


Horizontal (Average)



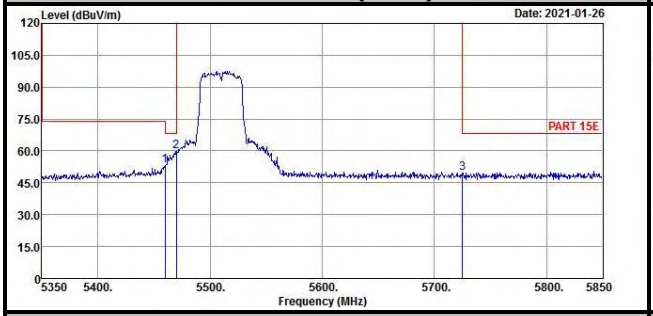
Vertical (Average)



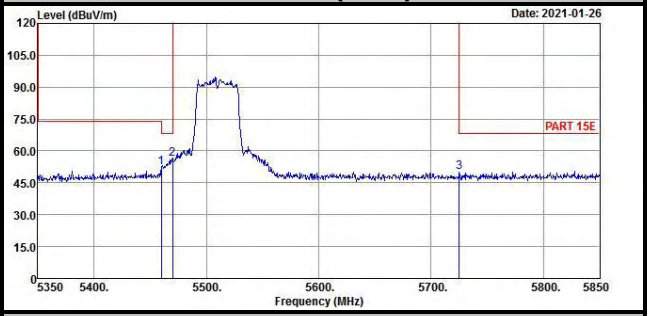
Ch 54	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	
Ch 62	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	

Ch 102

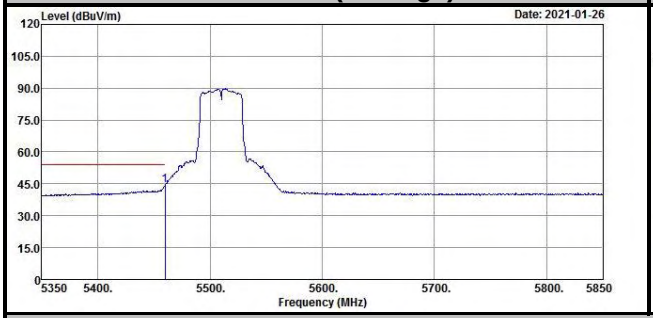
Horizontal (Peak)



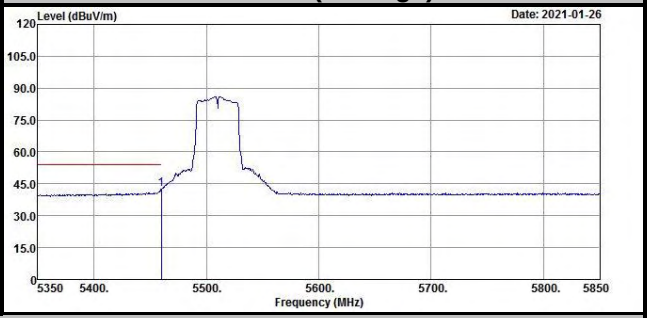
Vertical (Peak)



Horizontal (Average)

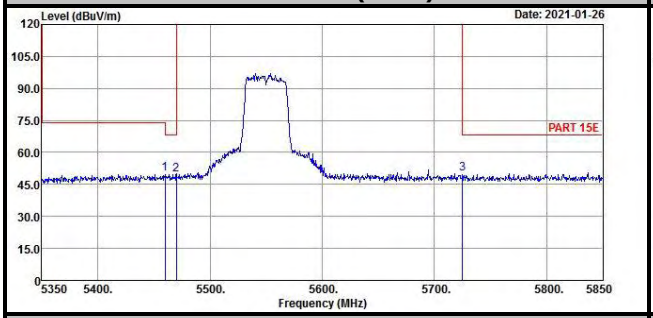


Vertical (Average)

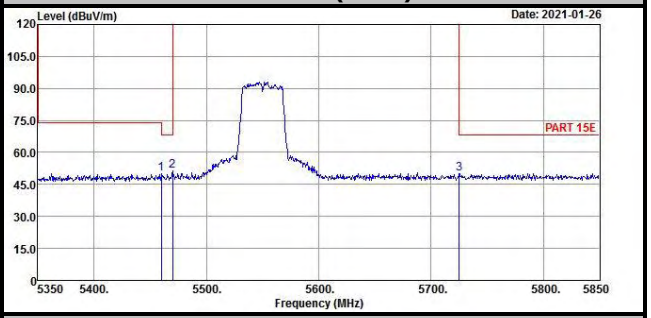


Ch 110

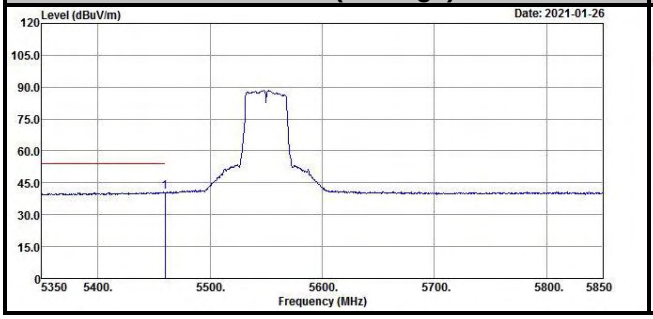
Horizontal (Peak)



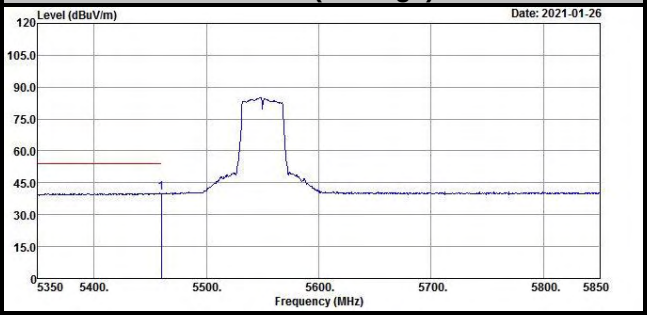
Vertical (Peak)



Horizontal (Average)

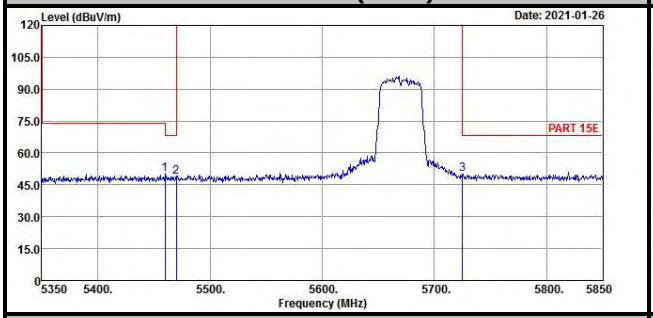


Vertical (Average)

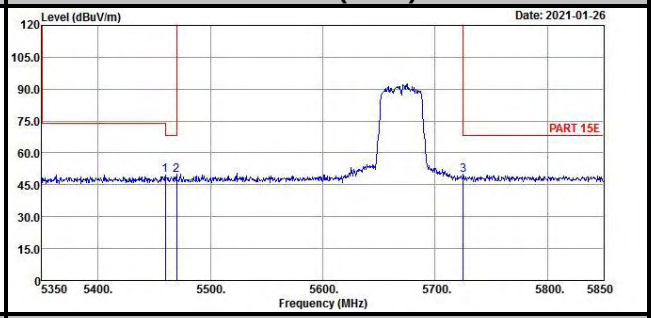


Ch 134

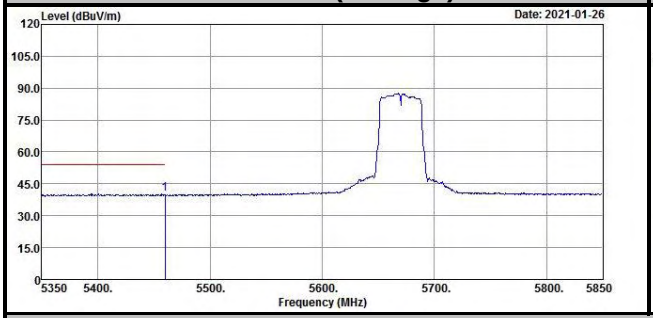
Horizontal (Peak)



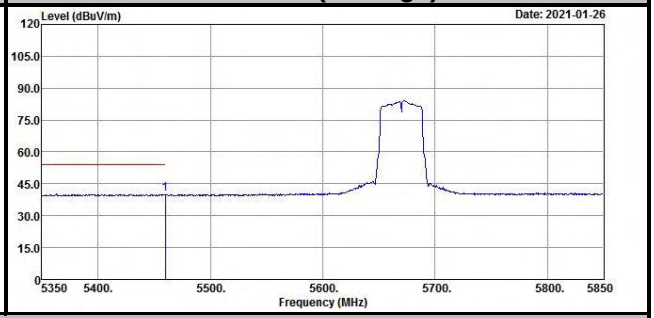
Vertical (Peak)



Horizontal (Average)

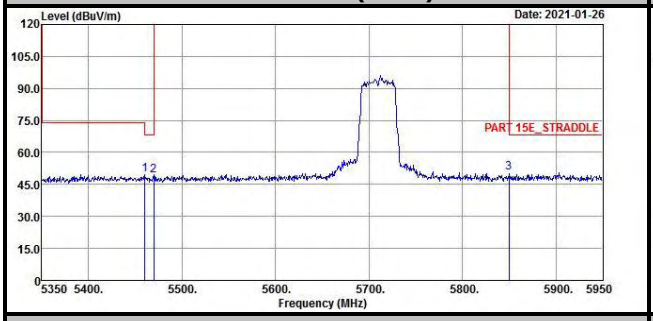


Vertical (Average)

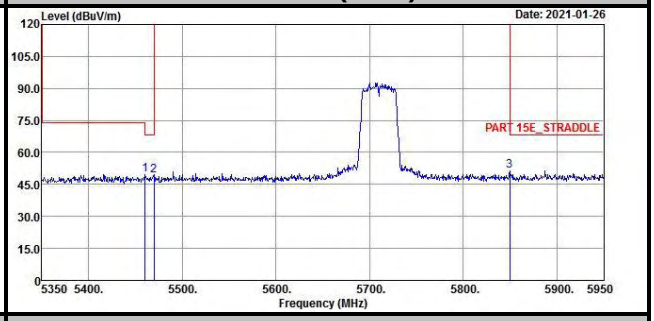


Ch 142

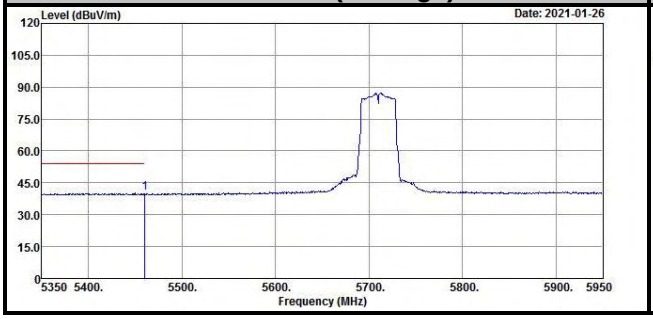
Horizontal (Peak)



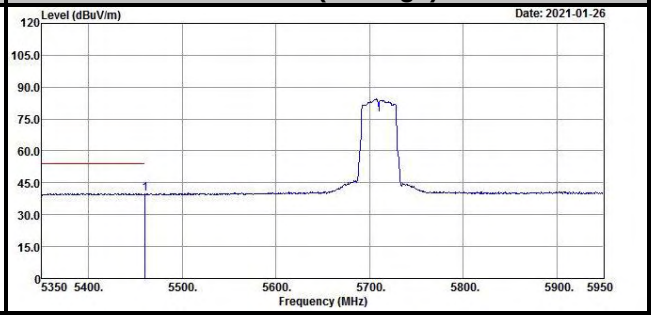
Vertical (Peak)



Horizontal (Average)



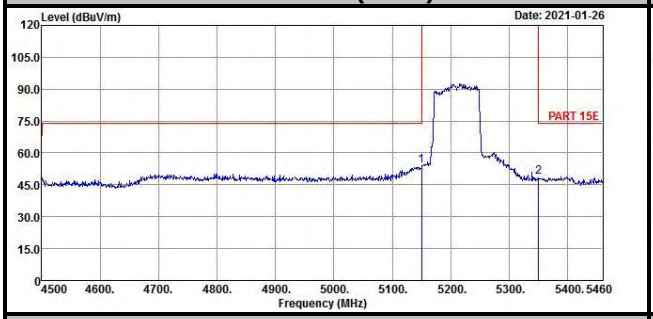
Vertical (Average)



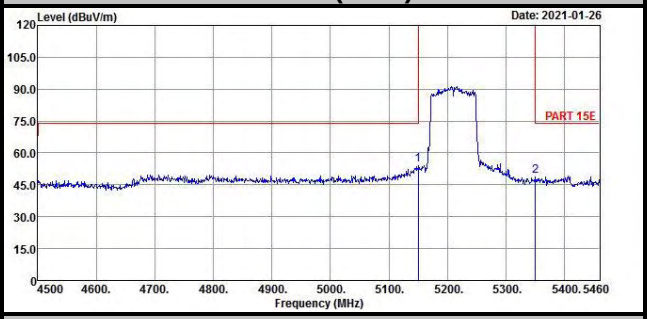
802.11ac (VHT80)

Ch 42

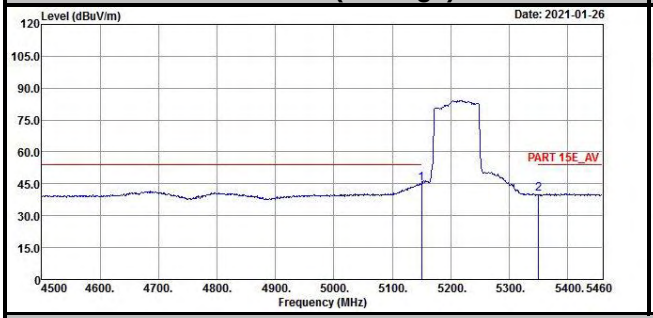
Horizontal (Peak)



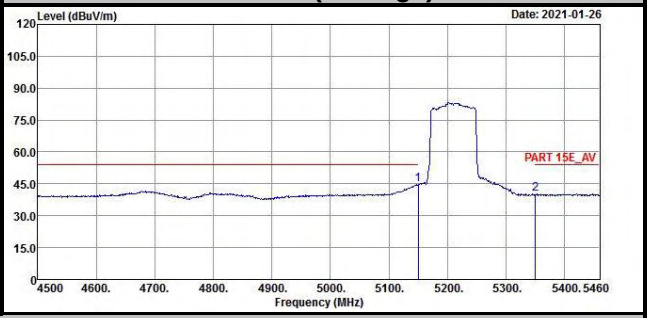
Vertical (Peak)



Horizontal (Average)

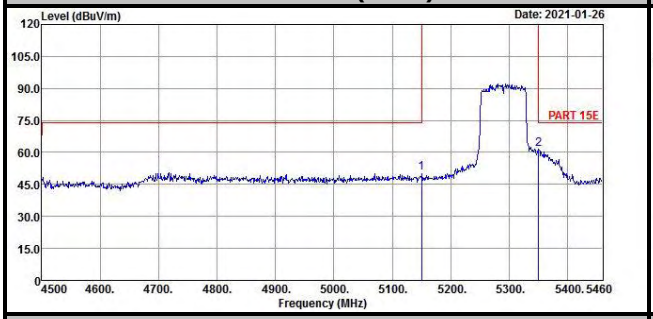


Vertical (Average)

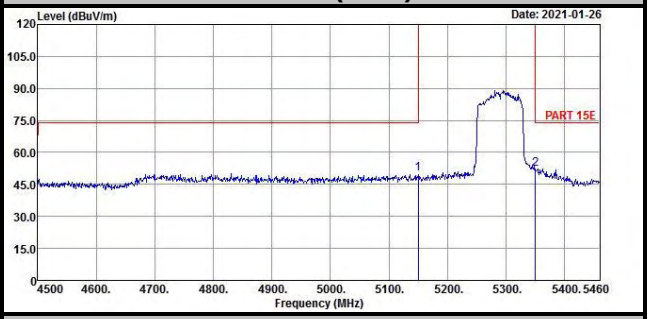


Ch 58

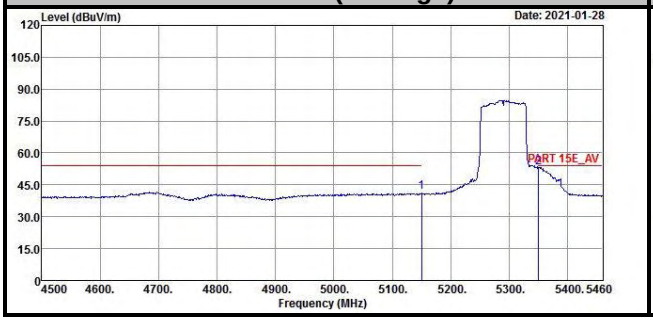
Horizontal (Peak)



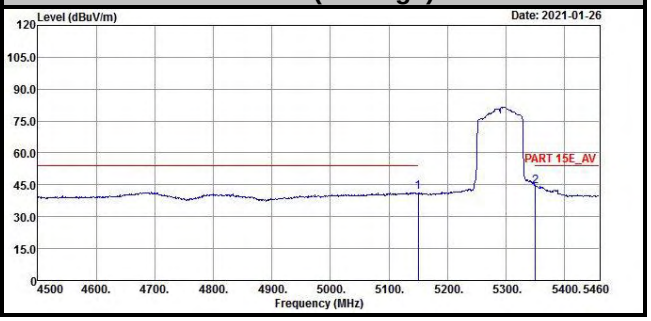
Vertical (Peak)

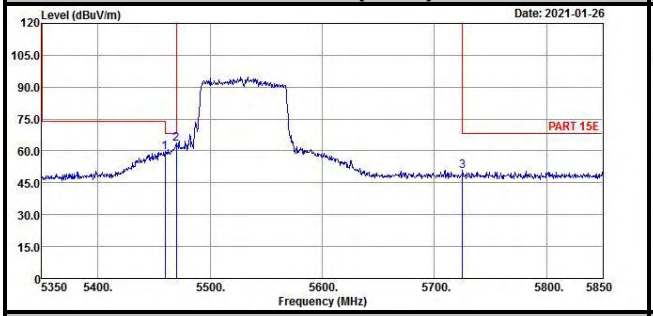
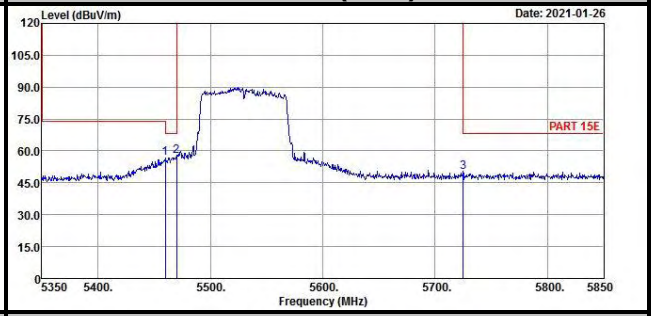
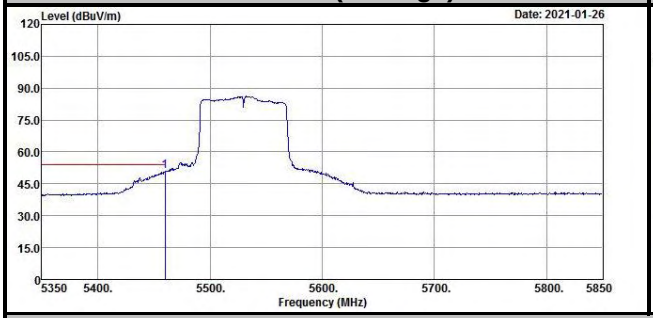
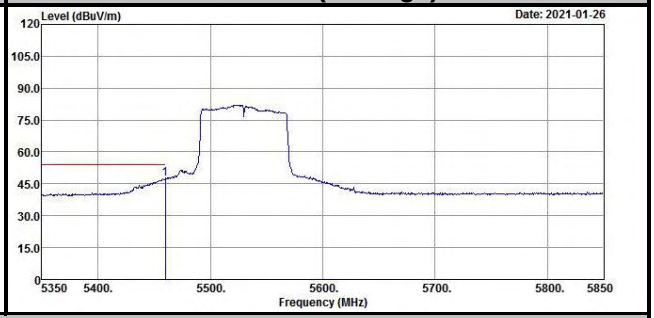
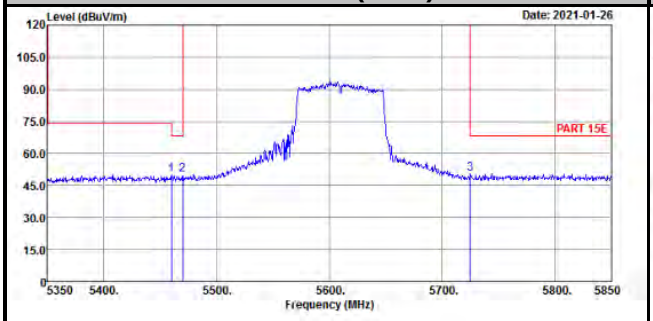
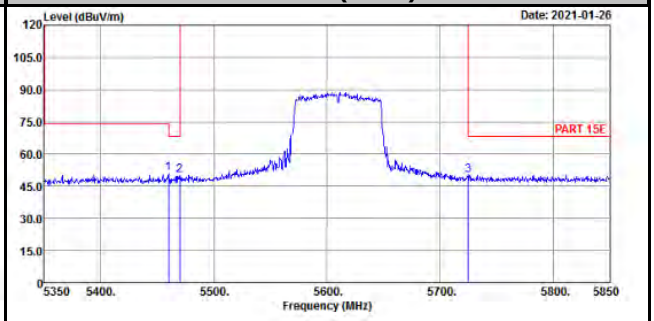
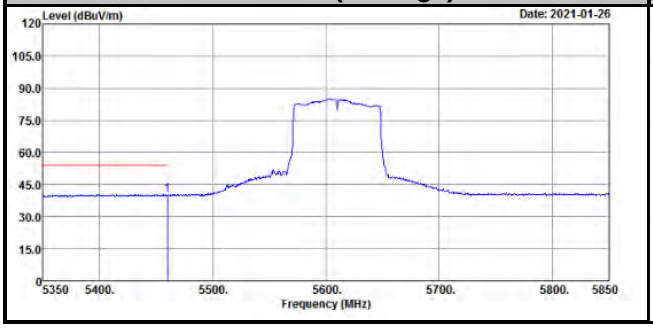
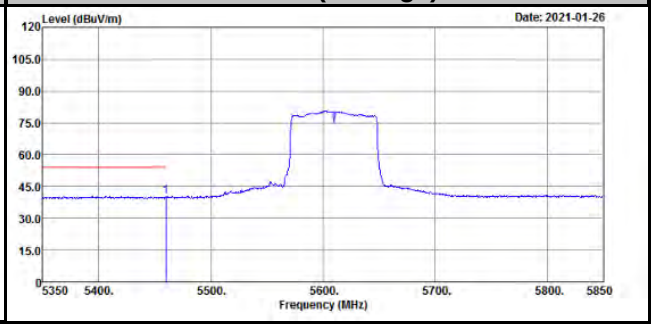


Horizontal (Average)



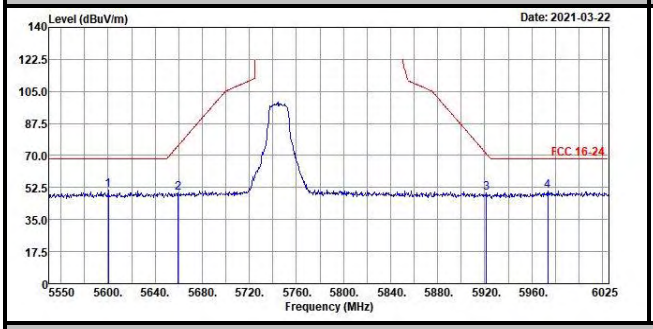
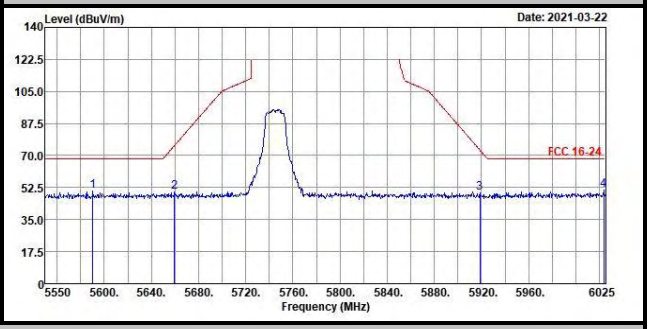
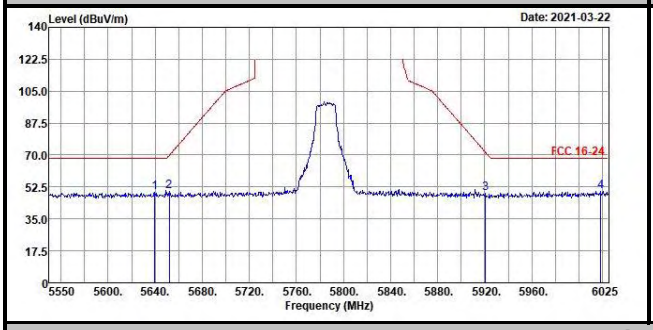
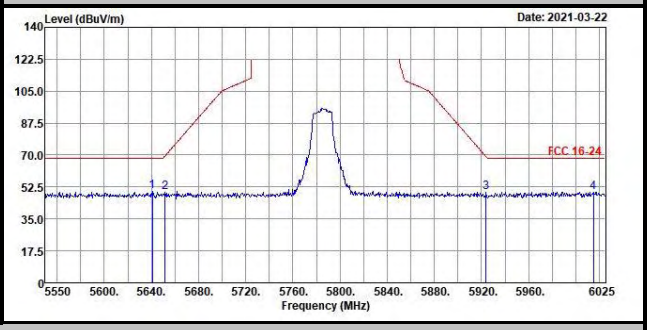
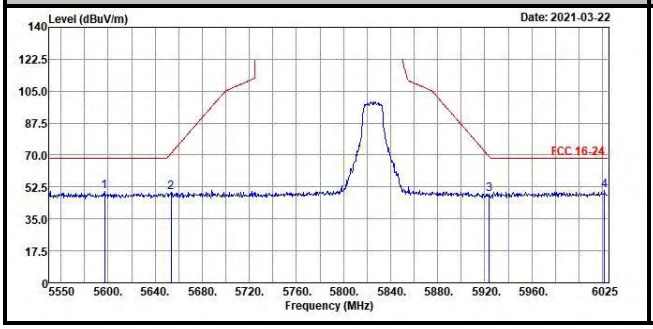
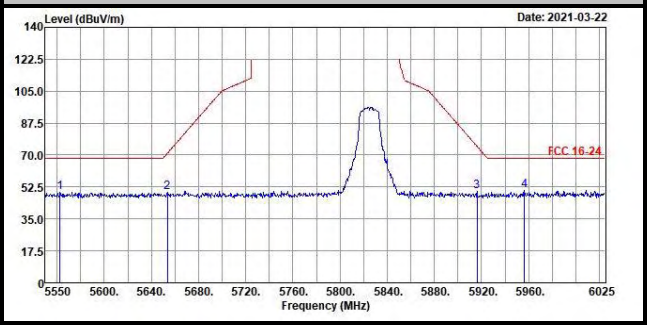
Vertical (Average)



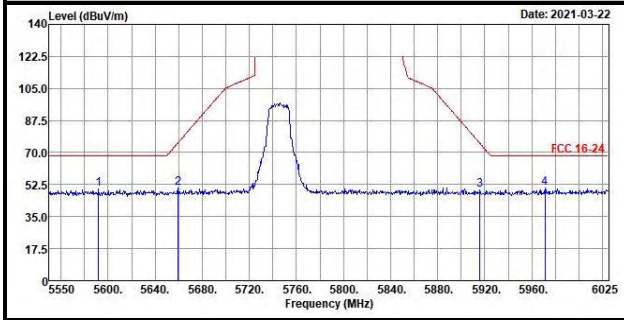
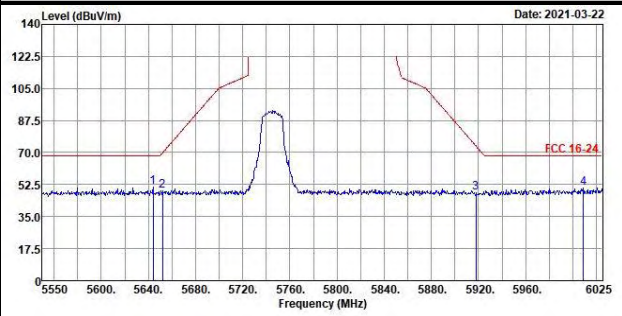
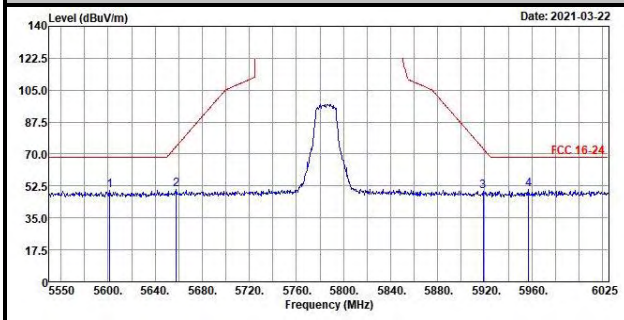
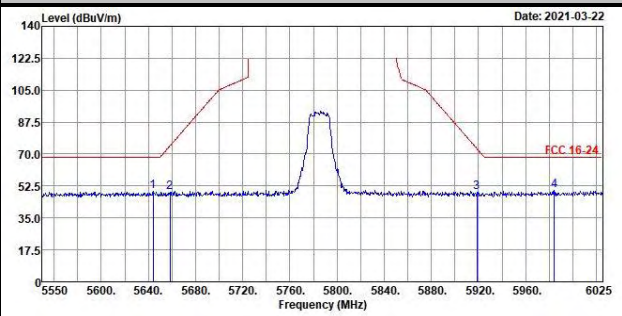
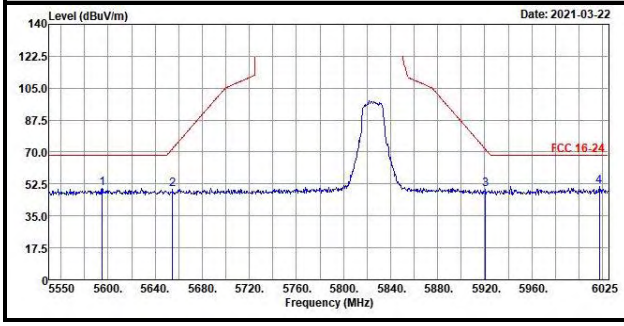
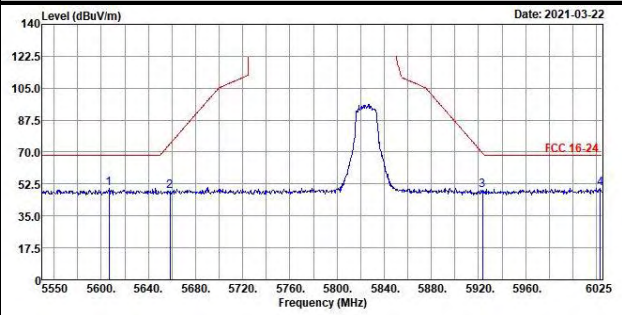
Ch 106	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	
Ch 122	
Horizontal (Peak)	Vertical (Peak)
	
Horizontal (Average)	Vertical (Average)
	

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

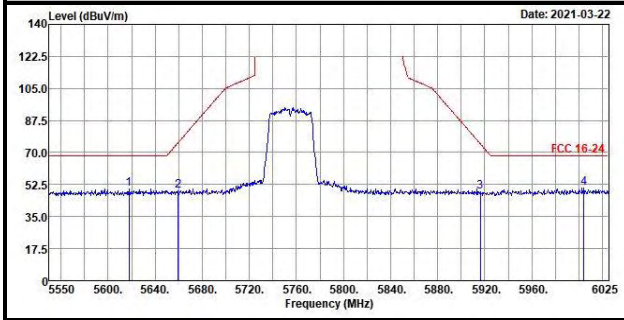
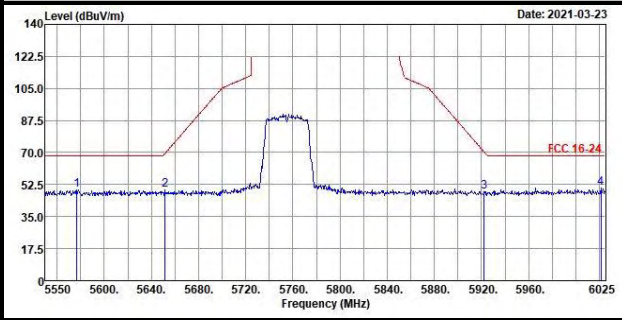
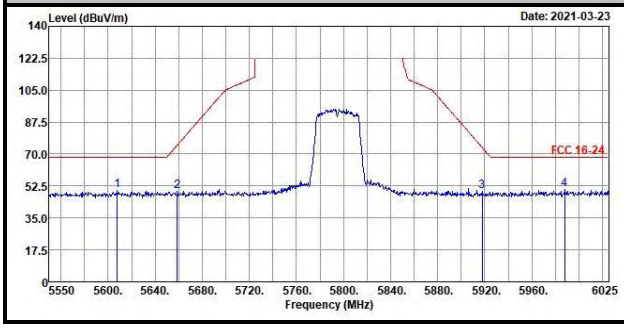
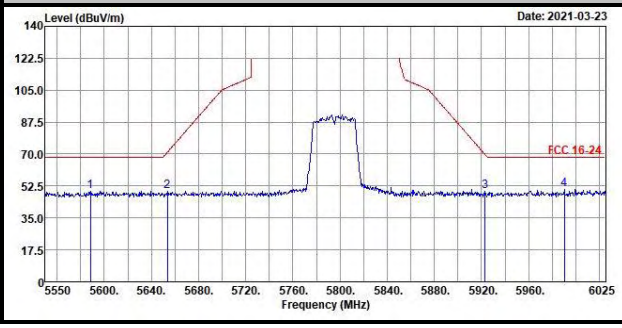
802.11a

Ch 149	
Horizontal	Vertical
	
Ch 157	
Horizontal	Vertical
	
Ch 165	
Horizontal	Vertical
	

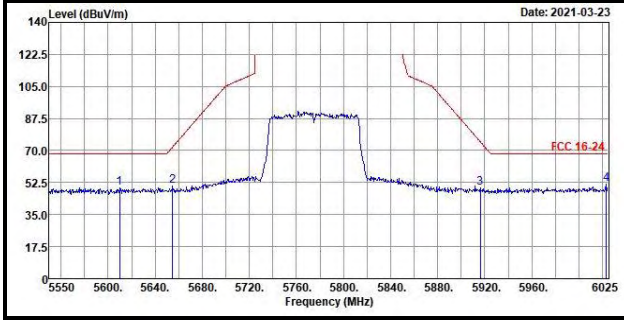
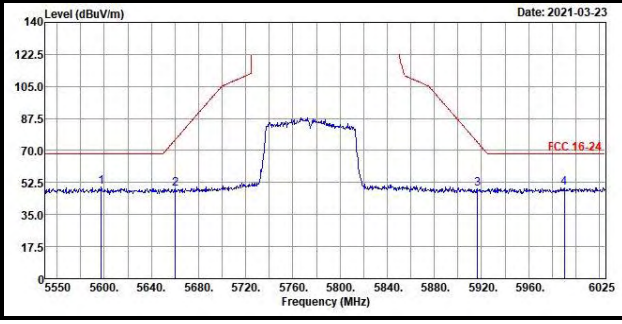
802.11n (HT20)

Ch 149	
Horizontal	**Vertical**
	
Ch 157	
Horizontal	**Vertical**
	
Ch 165	
Horizontal	**Vertical**
	

802.11n (HT40)

Ch 151	
Horizontal	**Vertical**
	
Ch 159	
Horizontal	**Vertical**
	

802.11ac (VHT80)

Ch 155	
Horizontal	**Vertical**
	

Appendix – Information of the Testing Laboratories

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

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

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Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

--- END ---