Variant FCC Test Report

Report No.:	RF190606C07A-4
FCC ID:	A4R-H2C
Test Model:	H2C
Received Date:	Dec. 25, 2019
Test Date:	Mar. 22 ~ Apr. 23, 2020
Issued Date:	Apr. 23, 2020
Applicant:	Google LLC
Address:	1600 Amphitheatre Parkway, Mountain View, CA 94043, USA
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

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RF190606C07A-4	Original Release	Apr. 23, 2020

1 Certificate of Conformity

Product:	Interactive media streaming device
Test Model:	H2C
Sample Status:	Production Unit
Applicant:	Google LLC
Test Date:	Mar. 22 ~ Apr. 23, 2020
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 : Lena Wang , **Date:** Apr. 23, 2020

Lena Wang / Specialist

Approved by : , **Date:** Apr. 23, 2020

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 -11.56 dB at 0.63150 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 -1.51 dB at 5350 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	N/A	Refer to Note
15.407(e)	6 dB Bandwidth	N/A	Refer to Note
15.407(g)	Frequency Stability	N/A	Refer to Note
15.203	Antenna Requirement	N/A	Refer to Note

Note:

1. Only AC Power Conducted Emission, Max Average Transmit Power and Radiated Emissions tests were verified and recorded in this report. Refer to original report no.: RF190606C07-4 for other test data.
2. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.
3. For U-NII-1, U-NII-2A, U-NII-2C band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex B. Test Procedures refer to report 4.1.3.
4. 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	Interactive media streaming device
Test Model	H2C
Status of EUT	Production Unit
Power Supply Rating	14 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 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	142.233 mW for 5180 ~ 5240 MHz 182.39 mW for 5260 ~ 5320 MHz 137.088 mW for 5500 ~ 5720 MHz 162.555 mW for 5745 ~ 5825 MHz
Antenna Type	Refer to Note as below
Antenna Connector	Refer to Note as below
Accessory Device	Refer to Note as below
Data Cable Supplied	N/A

Note:

1. This report is issued as a supplementary report to BV CPS report no.: RF190606C07-4. The difference compared with the original report refers to the detail of the change letter. Therefore, only AC Power Conducted Emission, Max Average Transmit Power and Radiated Emissions tests were verified and recorded in this report.
2. The EUT provides 1 completed transmitter and 1 receiver.

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

3. The EUT's accessories list refers to EUT Photo.pdf.

4. The following antennas were provided to the EUT.

Ant. No.	Model	Type	Connector	Antenna Gain (dBi)				
				2.4~2.4835 GHz	5.15~5.25 GHz	5.25~5.35 GHz	5.47~5.725 GHz	5.725~5.85 GHz
1	N/A	PIFA	N/A	0.79	4.06	3.10	5.15	5.23
2	N/A	PIFA	N/A	1.39	3.00	2.69	5.35	5.29

5. 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	OFDM	BPSK	6.0
-		802.11n (HT20)	36 to 48	36	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, 64	OFDM	BPSK	6.0
-		802.11n (HT20)	52 to 64	52, 64	OFDM	BPSK	6.5
-		802.11n (HT40)	54 to 62	62	OFDM	BPSK	13.5
-		802.11ac (VHT80)	58	58	OFDM	BPSK	29.3
-	5500-5720	802.11a	100 to 144	100, 116, 140	OFDM	BPSK	6.0
-		802.11n (HT20)	100 to 144	100, 116, 140	OFDM	BPSK	6.5
-		802.11n (HT40)	102 to 142	102, 110, 134	OFDM	BPSK	13.5
-		802.11ac (VHT80)	106 to 138	106, 122	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)
-	5180-5240	802.11n (HT40)	38 to 46	46	OFDM	BPSK	13.5

Power Line Conducted Emission Test:

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

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11n (HT40)	38 to 46	46	OFDM	BPSK	13.5

Antenna Port Conducted Measurement:

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

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

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

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	OFDM	BPSK	6.0
-		802.11n (HT20)	100 to 144	100, 116, 140	OFDM	BPSK	6.5
-		802.11n (HT40)	102 to 142	102, 110, 134	OFDM	BPSK	13.5
-		802.11ac (VHT80)	106 to 138	106, 122	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, Getaz Yang, Jisyong Wang
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Getaz Yang
PLC	25 deg. C, 65 % RH	120 Vac, 60 Hz	Jisyong Wang
APCM	25 deg. C, 65 % RH	14 Vdc	Wayne Lin

3.3 Duty Cycle of Test Signal

MODULATION TYPE: BPSK

Duty cycle of test signal is 100 %, duty factor is not required.

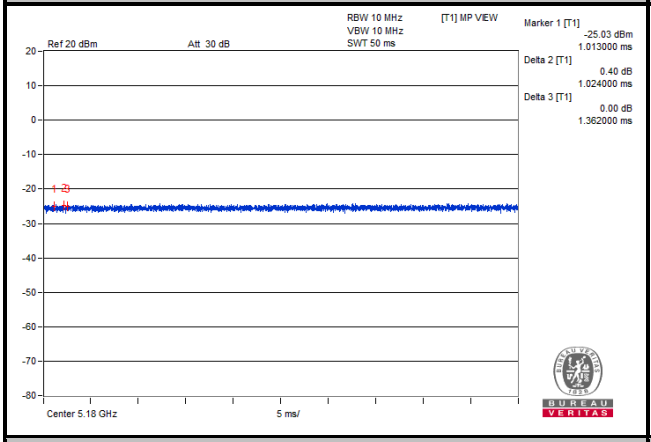
802.11a: Duty cycle = 100%

802.11n (HT20): Duty cycle = 100%

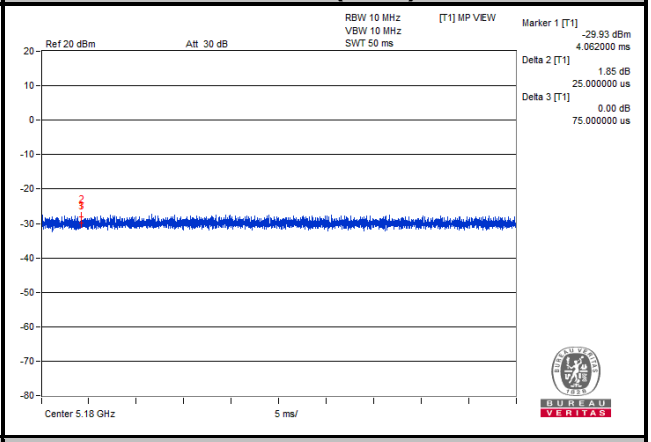
802.11n (HT40): Duty cycle = 100%

802.11ac (VHT80): Duty cycle = 100%

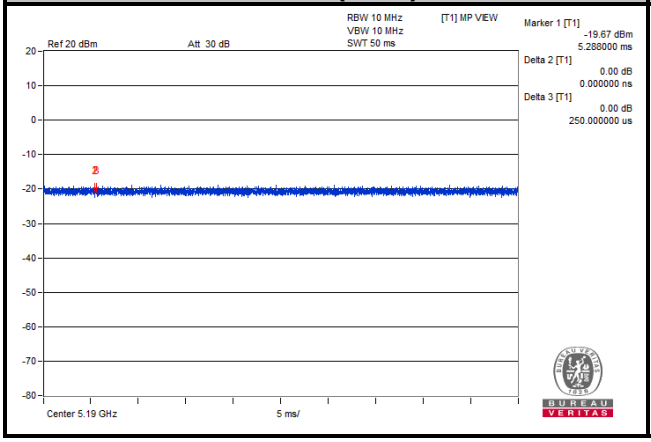
802.11a



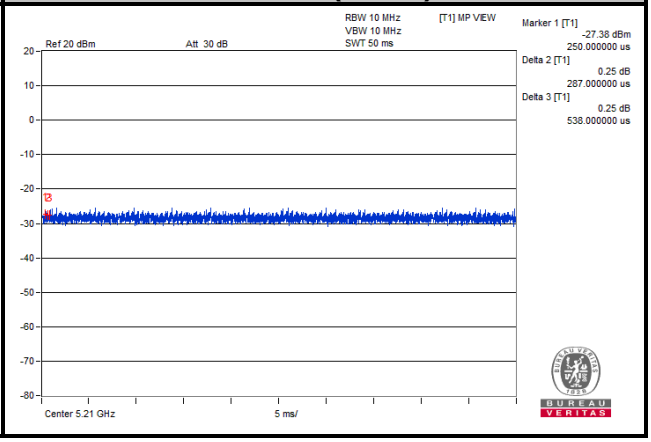
802.11n (HT20)



802.11n (HT40)



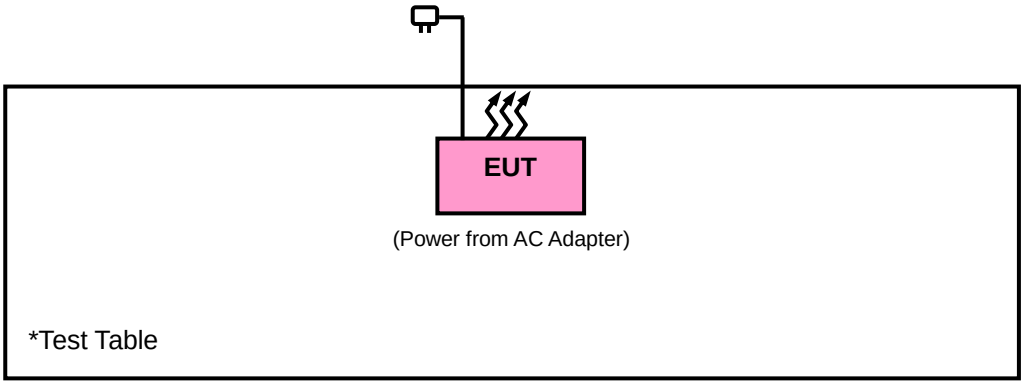
802.11ac (VHT80)



3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units.

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

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.

4.1.2 Limits of Unwanted Emission Out of the Restricted Bands

<table>
<tr><th colspan="3">Applicable To</th><th colspan="2">Limit</th></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedures New Rules v02r01</td><td colspan="2">Field Strength at 3 m</td></tr>
<tr><td>PK: 74 (dBµV/m)</td><td>AV: 54 (dBµV/m)</td></tr>
<tr><th>Frequency Band</th><th colspan="2">Applicable To</th><th>EIRP Limit</th><th>Equivalent Field Strength at 3 m</th></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK: -27 (dBm/MHz)</td><td rowspan="3">PK: 68.2 (dBµV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK:-27 (dBm/MHz) *1
PK:10 (dBm/MHz) *2
PK:15.6 (dBm/MHz) *3
PK:27 (dBm/MHz) *4</td><td>PK: 68.2 (dBµV/m) *1
PK:105.2 (dBµV/m) *2
PK: 110.8 (dBµV/m) *3
PK:122.2 (dBµV/m) *4</td></tr>
<tr><td>☐</td><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="5">*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.</td></tr>
</table>

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).

4.1.3 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
Spectrum Analyzer Agilent	N9010A	MY52220314	Dec. 12, 2019	Dec. 11, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 15, 2019	Apr. 14, 2020
			Apr. 16, 2020	Apr. 15, 2021
Broadband Horn Antenna SCHWARZBECK	BBHA 9170	148	Nov. 24, 2019	Nov. 23, 2020
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Nov. 24, 2019	Nov. 23, 2020
BILOG Antenna SCHWARZBECK	VULB 9168	9168-472	Nov. 08, 2019	Nov. 07, 2020
Fixed Attenuator WORKEN	MDCS18N-10	MDCS18N-10-01	Apr. 15, 2019	Apr. 14, 2020
			Apr. 14, 2020	Apr. 13, 2021
Loop Antenna	EM-6879	269	Sep. 16, 2019	Sep. 15, 2020
Preamplifier EMCI	EMC001340	980201	Oct. 14, 2019	Oct. 13, 2020
Preamplifier EMCI	EMC 012645	980115	Oct. 08, 2019	Oct. 07, 2020
Preamplifier EMCI	EMC 184045	980116	Oct. 08, 2019	Oct. 07, 2020
Preamplifier EMCI	EMC 330H	980112	Oct. 08, 2019	Oct. 07, 2020
Power Meter Anritsu	ML2495A	1012010	Sep. 04, 2019	Sep. 03, 2020
Power Sensor Anritsu	MA2411B	1315050	Sep. 04, 2019	Sep. 03, 2020
RF Coaxial Cable HUBER+SUHNNER	EMC104-SM-SM-8000&3000	140811+170717	Oct. 08, 2019	Oct. 07, 2020
RF Coaxial Cable HUBER+SUHNNER	SUCOFLEX 104	EMC104-SM-SM-1000(140807)	Oct. 08, 2019	Oct. 07, 2020
RF Coaxial Cable Worken	8D-FB	Cable-Ch10-01	Oct. 08, 2019	Oct. 07, 2020
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
Temperature & Humidity Chamber	GTH-120-40-CP-AR	MAA1306-019	Sep. 06, 2019	Sep. 05, 2020

DC Power Supply Topward	33010D	807748	NA	NA
Digital Multimeter Fluke	87-III	70360742	Jun. 27, 2019	Jun. 26, 2020

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.

4.1.4 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. Both 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:

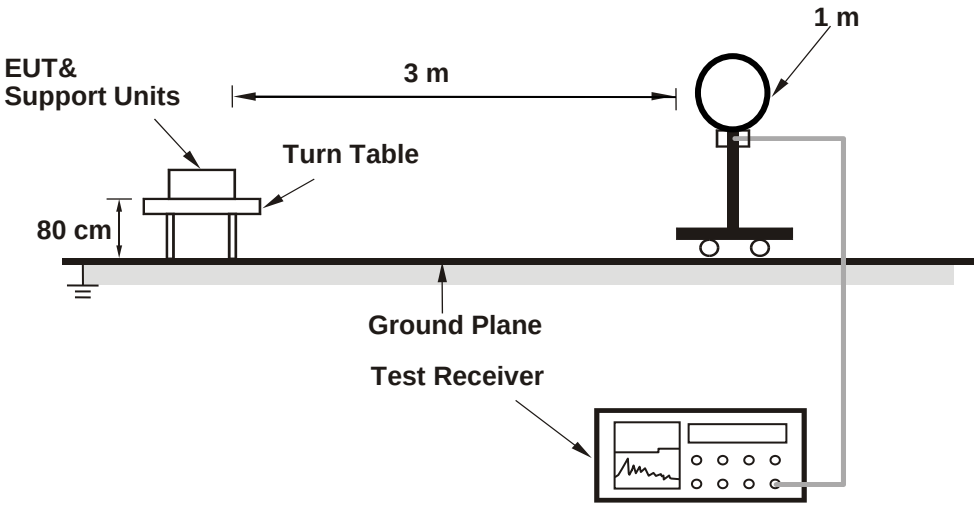
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK)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

4.1.5 Deviation from Test Standard

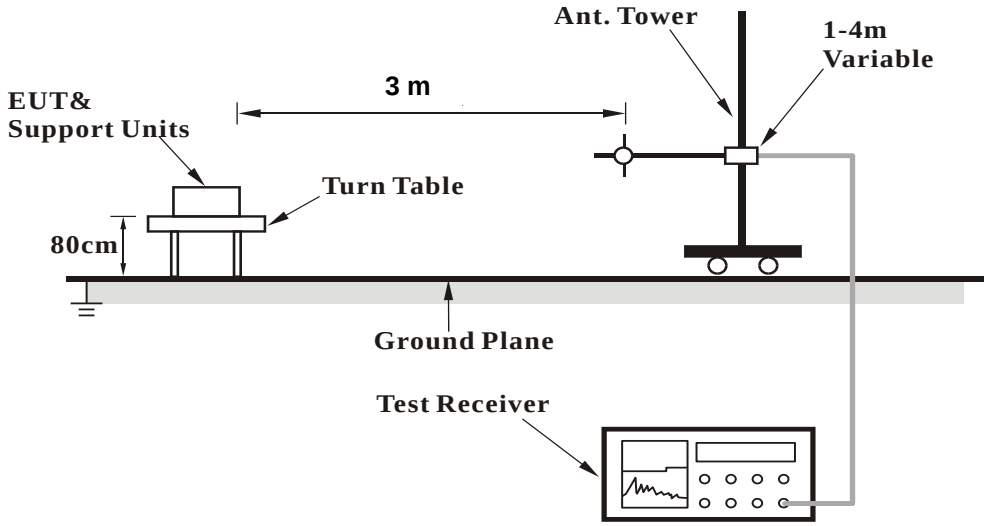
No deviation.

4.1.6 Test Setup

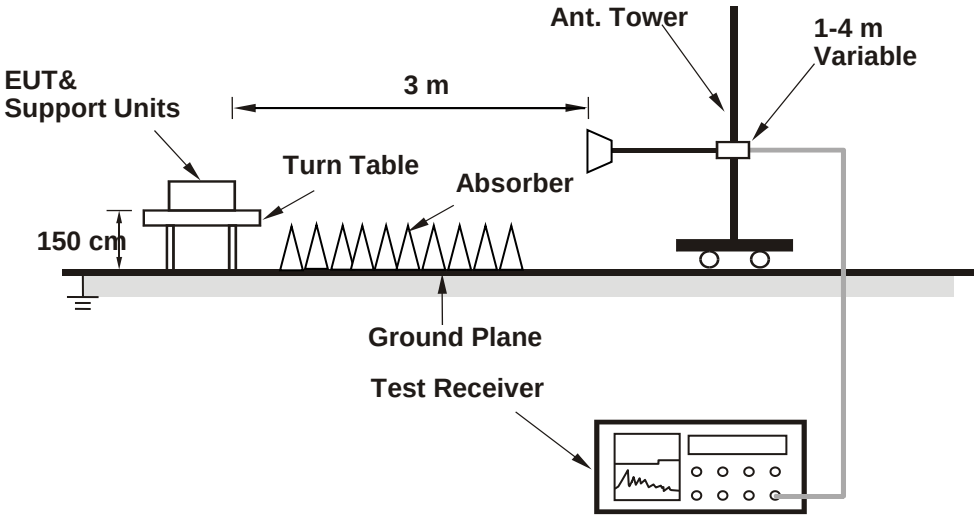
<Radiated Emission below 30 MHz>



<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).

4.1.7 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.

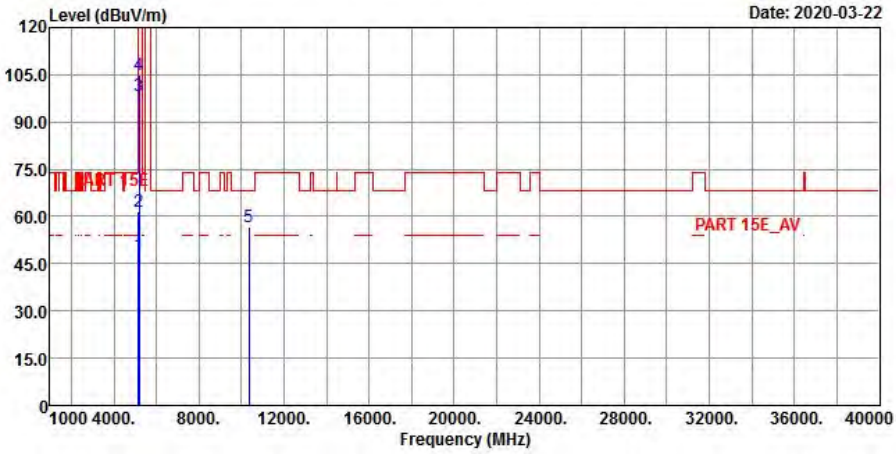
4.1.8 Test Results

Above 1 GHz Data：

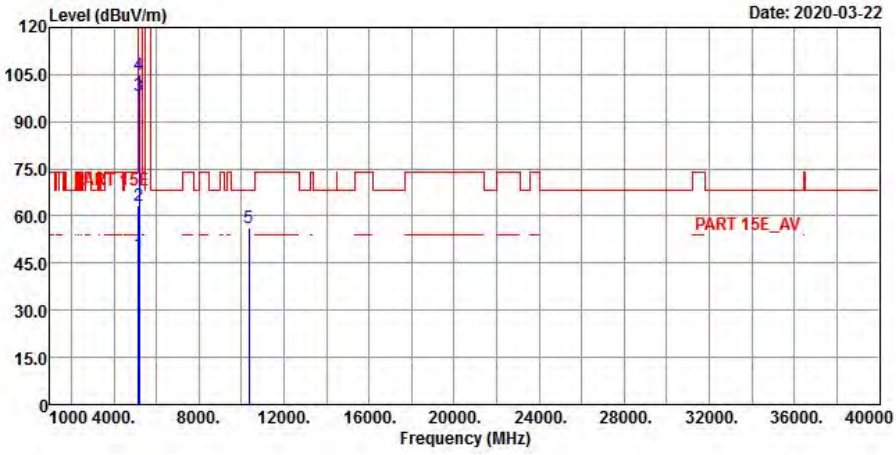
802.11a

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

Horizontal



Vertical



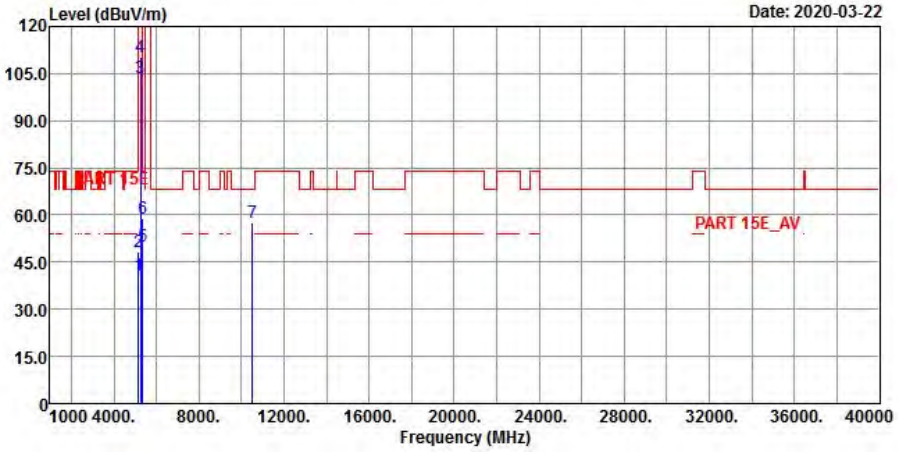
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	47.8	46.76	1.04	54	-6.2	124	128	Average
5150	61.66	60.62	1.04	74	-12.34	124	128	Peak
5180	98.22	97.33	0.89	------	------	124	128	Average
5180	104.84	103.95	0.89	------	------	124	128	Peak
*10360	56.83	57.39	-0.56	68.2	-11.37	153	240	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	47.99	46.95	1.04	54	-6.01	108	245	Average
5150	63.14	62.1	1.04	74	-10.86	108	245	Peak
5180	98.2	97.31	0.89	------	------	108	245	Average
5180	104.78	103.89	0.89	------	------	108	245	Peak
*10360	56.3	56.86	-0.56	68.2	-11.9	107	112	Peak

Remarks:

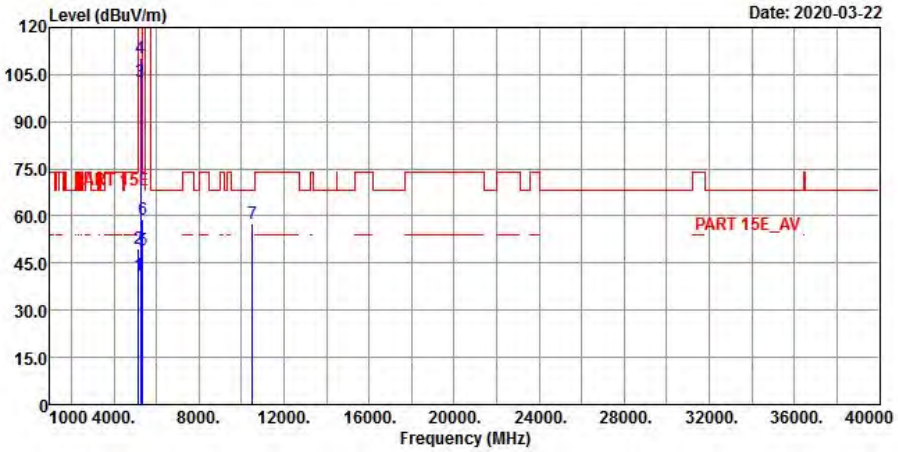
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 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

Horizontal



Vertical



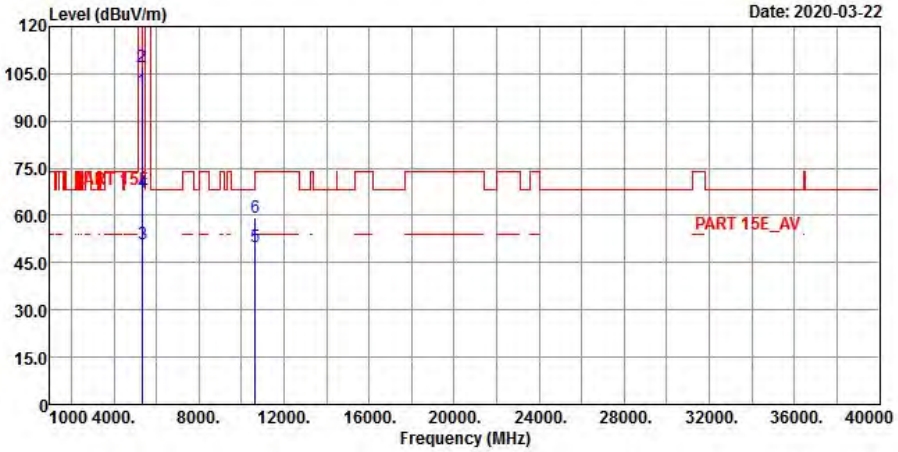
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.86	39.82	1.04	54	-13.14	109	116	Average
5150	48.07	47.03	1.04	74	-25.93	109	116	Peak
5260	103.5	102.52	0.98	------	------	109	116	Average
5260	110.39	109.41	0.98	------	------	109	116	Peak
5350	50.06	48.77	1.29	54	-3.94	109	116	Average
5350	59.05	57.76	1.29	74	-14.95	109	116	Peak
*10520	57.39	57.43	-0.04	68.2	-10.81	136	305	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	41.01	39.97	1.04	54	-12.99	103	256	Average
5150	49.71	48.67	1.04	74	-24.29	103	256	Peak
5260	102.58	101.6	0.98	------	------	103	256	Average
5260	110.13	109.15	0.98	------	------	103	256	Peak
5350	49.23	47.94	1.29	54	-4.77	103	256	Average
5350	59	57.71	1.29	74	-15	103	256	Peak
*10520	57.44	57.48	-0.04	68.2	-10.76	113	309	Peak

Remarks:

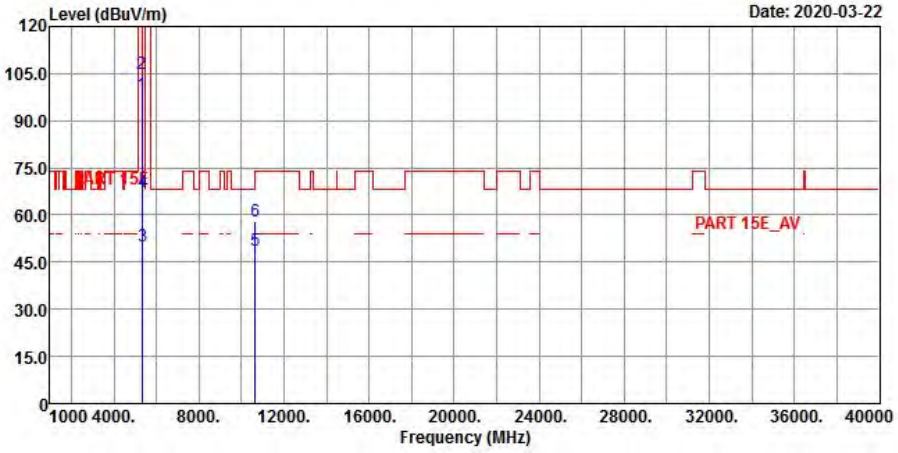
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5260 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 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

Horizontal



Vertical



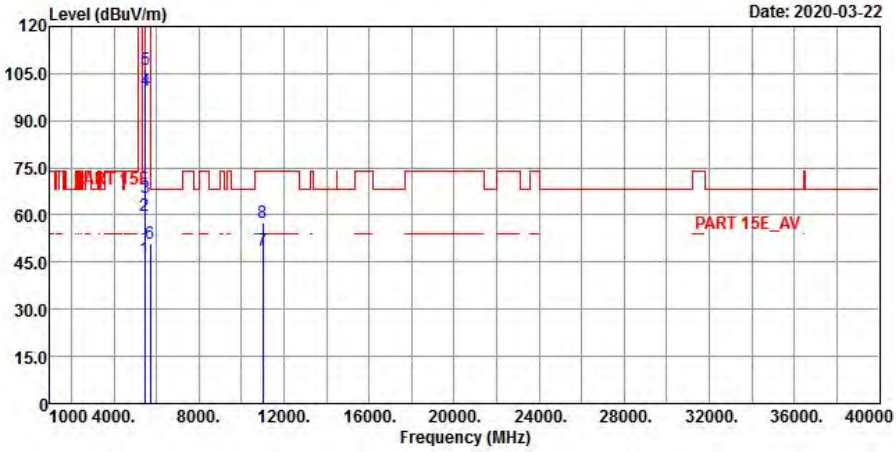
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	99.81	98.58	1.23	------	------	104	120	Average
5320	107.26	106.03	1.23	------	------	104	120	Peak
5350	50.78	49.49	1.29	54	-3.22	104	120	Average
5350	67.31	66.02	1.29	74	-6.69	104	120	Peak
10640	49.84	49.65	0.19	54	-4.16	133	204	Average
10640	59.14	58.95	0.19	74	-14.86	133	204	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	98.29	97.06	1.23	------	------	104	262	Average
5320	104.84	103.61	1.23	------	------	104	262	Peak
5350	50	48.71	1.29	54	-4	104	262	Average
5350	67.22	65.93	1.29	74	-6.78	104	262	Peak
10640	48.72	48.53	0.19	54	-5.28	112	108	Average
10640	58.14	57.95	0.19	74	-15.86	112	108	Peak

Remarks:

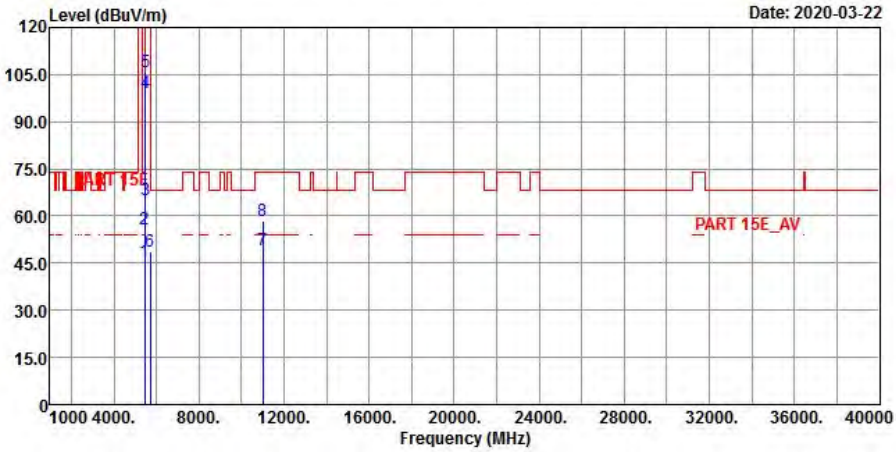
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5320 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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

Horizontal



Vertical



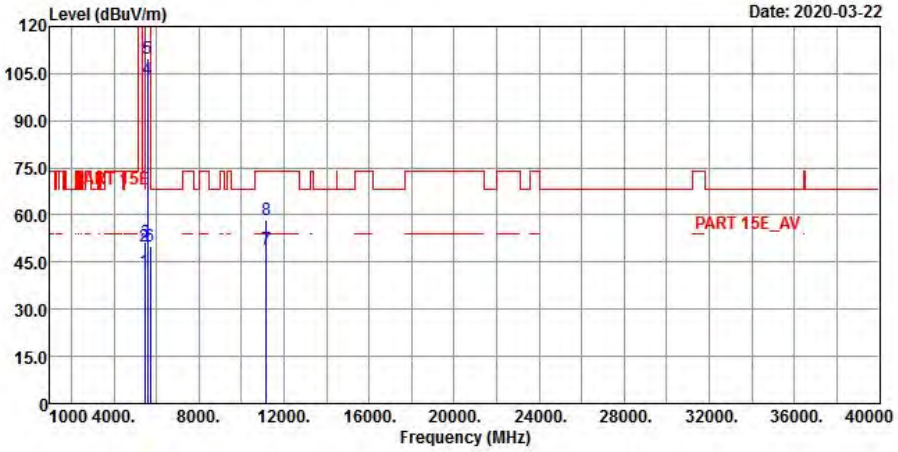
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	45.88	44.24	1.64	54	-8.12	116	38	Average
5460	59.61	57.97	1.64	74	-14.39	116	38	Peak
*5470	65.33	63.68	1.65	68.2	-2.87	116	38	Peak
5500	99.85	98.11	1.74	------	------	116	38	Average
5500	106.24	104.5	1.74	------	------	116	38	Peak
*5725	51.05	49.42	1.63	68.2	-17.15	116	38	Peak
11000	48.69	47.73	0.96	54	-5.31	122	309	Average
11000	57.52	56.56	0.96	74	-16.48	122	309	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	45.45	43.81	1.64	54	-8.55	106	248	Average
5460	55.73	54.09	1.64	74	-18.27	106	248	Peak
*5470	65.14	63.49	1.65	68.2	-3.06	106	248	Peak
5500	99.26	97.52	1.74	------	------	106	248	Average
5500	105.82	104.08	1.74	------	------	106	248	Peak
*5725	48.72	47.09	1.63	68.2	-19.48	106	248	Peak
11000	49.04	48.08	0.96	54	-4.96	103	116	Average
11000	58.33	57.37	0.96	74	-15.67	103	116	Peak

Remarks:

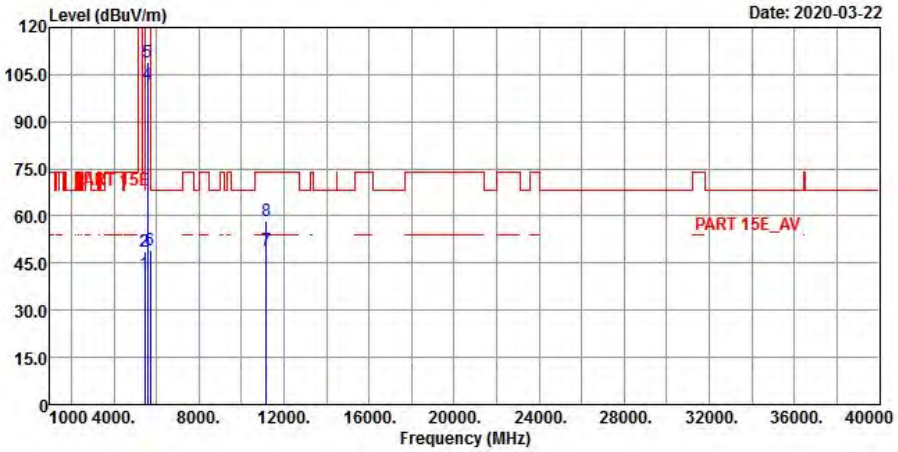
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5500 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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

Horizontal



Vertical



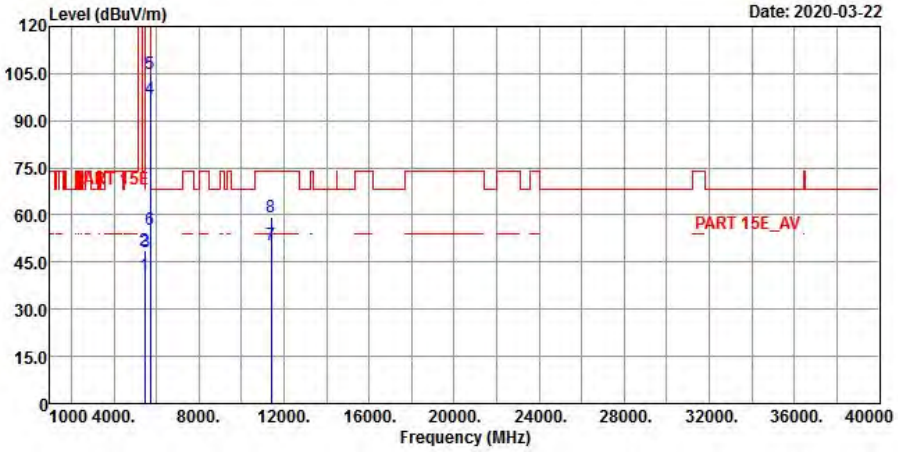
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	42.27	40.63	1.64	54	-11.73	100	37	Average
5460	50.21	48.57	1.64	74	-23.79	100	37	Peak
*5470	51.53	49.88	1.65	68.2	-16.67	100	37	Peak
5580	103.03	101.45	1.58	------	------	100	37	Average
5580	110.03	108.45	1.58	------	------	100	37	Peak
*5725	49.88	48.25	1.63	68.2	-18.32	100	37	Peak
11160	49.05	48.23	0.82	54	-4.95	159	333	Average
11160	58.52	57.7	0.82	74	-15.48	159	333	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	41.59	39.95	1.64	54	-12.41	100	262	Average
5460	48.79	47.15	1.64	74	-25.21	100	262	Peak
*5470	48.77	47.12	1.65	68.2	-19.43	100	262	Peak
5580	101.75	100.17	1.58	------	------	100	262	Average
5580	109.15	107.57	1.58	------	------	100	262	Peak
*5725	49.16	47.53	1.63	68.2	-19.04	100	262	Peak
11160	49.22	48.4	0.82	54	-4.78	121	143	Average
11160	58.39	57.57	0.82	74	-15.61	121	143	Peak

Remarks:

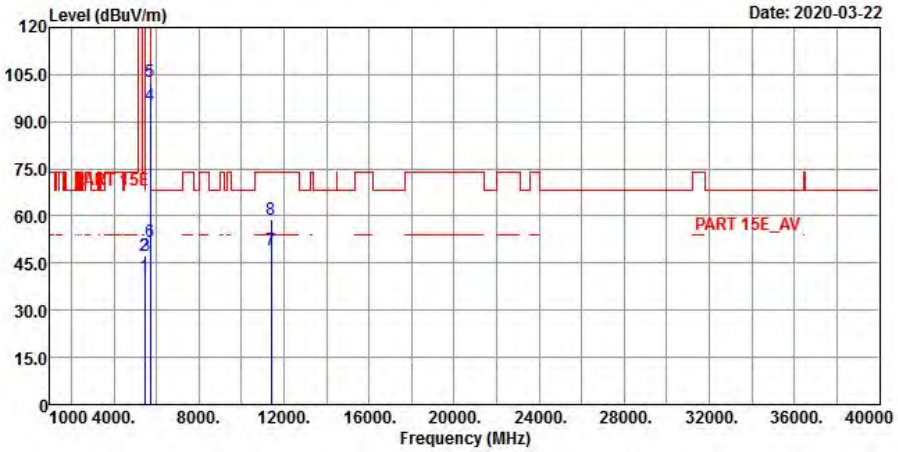
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5580 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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

Horizontal



Vertical



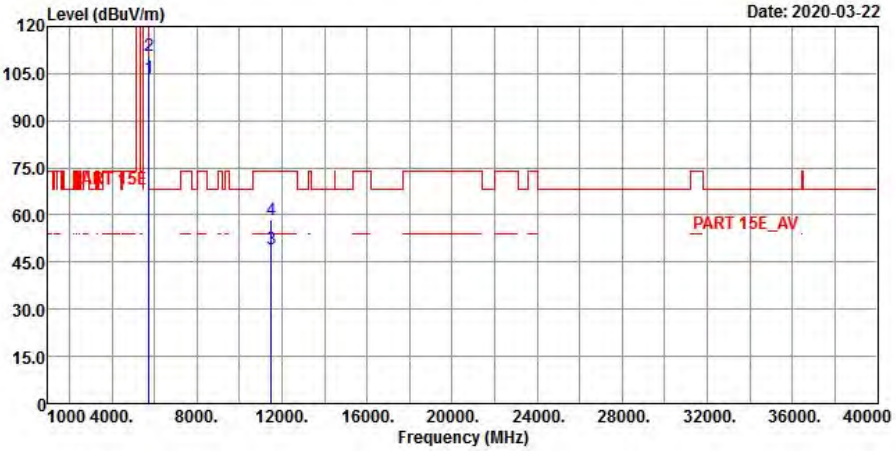
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.62	38.98	1.64	54	-13.38	105	36	Average
5460	48.81	47.17	1.64	74	-25.19	105	36	Peak
*5470	48.4	46.75	1.65	68.2	-19.8	105	36	Peak
5700	97.19	95.61	1.58	------	------	105	36	Average
5700	104.92	103.34	1.58	------	------	105	36	Peak
*5725	55.57	53.94	1.63	68.2	-12.63	105	36	Peak
11400	50.36	49.35	1.01	54	-3.64	132	22	Average
11400	59.14	58.13	1.01	74	-14.86	132	22	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	40.54	38.9	1.64	54	-13.46	105	252	Average
5460	47.49	45.85	1.64	74	-26.51	105	252	Peak
*5470	47.21	45.56	1.65	68.2	-20.99	105	252	Peak
5700	95.41	93.83	1.58	------	------	105	252	Average
5700	102.77	101.19	1.58	------	------	105	252	Peak
*5725	51.82	50.19	1.63	68.2	-16.38	105	252	Peak
11400	49.22	48.21	1.01	54	-4.78	102	76	Average
11400	58.94	57.93	1.01	74	-15.06	102	76	Peak

Remarks:

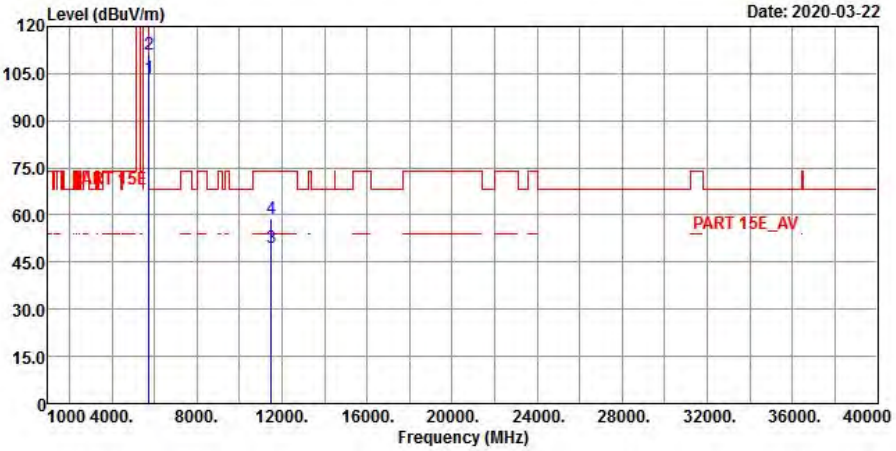
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5700 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 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

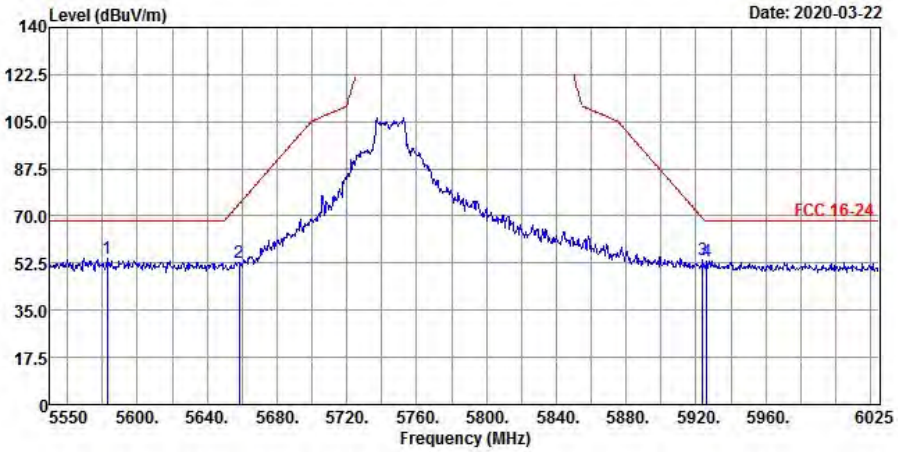
<Spurious Emission>
Horizontal



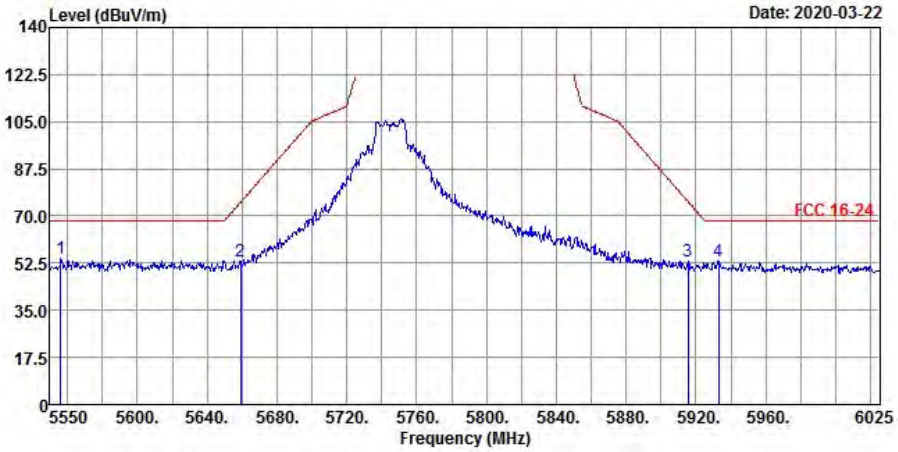
Vertical



<Out of Band Emission (OOBE)>
Horizontal



Vertical



<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	103.59	101.92	1.67	------	------	103	38	Average
5745	110.88	109.21	1.67	------	------	103	38	Peak
11490	49.29	48.21	1.08	54	-4.71	161	182	Average
11490	58.57	57.49	1.08	74	-15.43	161	182	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	103.62	101.95	1.67	------	------	100	258	Average
5745	110.96	109.29	1.67	------	------	100	258	Peak
11490	49.77	48.69	1.08	54	-4.23	169	317	Average
11490	58.75	57.67	1.08	74	-15.25	169	317	Peak

<Out of Band Emission (OOBE)>

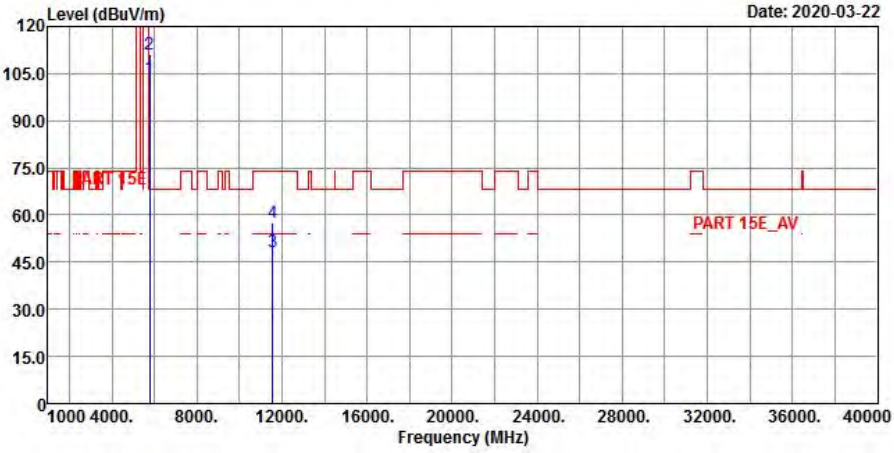
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5582.775	54.17	52.59	1.58	68.2	-14.03	103	38	Peak
5658.3	52.85	51.44	1.41	74.36	-21.51	103	38	Peak
5923.825	53.57	51.21	2.36	69.07	-15.5	103	38	Peak
5926.2	53.47	51.1	2.37	68.2	-14.73	103	38	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**
5556.175	54.15	52.5	1.65	68.2	-14.05	100	258	Peak
5659.25	53.46	52.04	1.42	75.07	-21.61	100	258	Peak
5915.275	52.97	50.63	2.34	75.37	-22.4	100	258	Peak
5932.85	53	50.62	2.38	68.2	-15.2	100	258	Peak

Remarks:

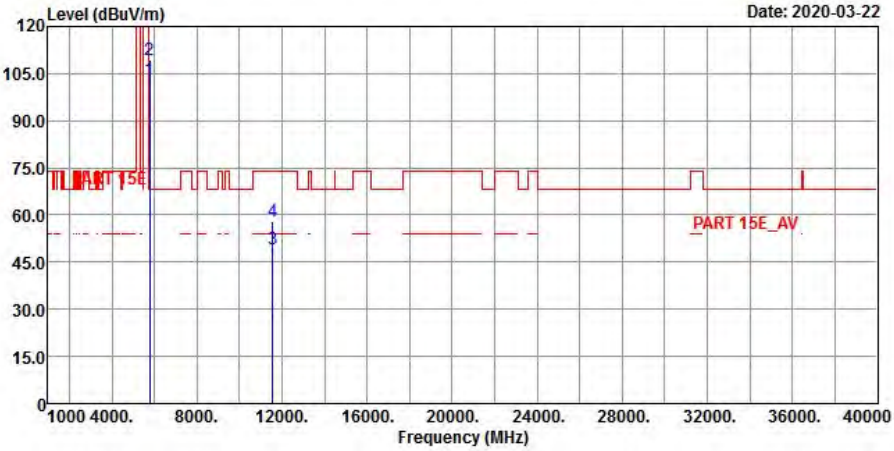
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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

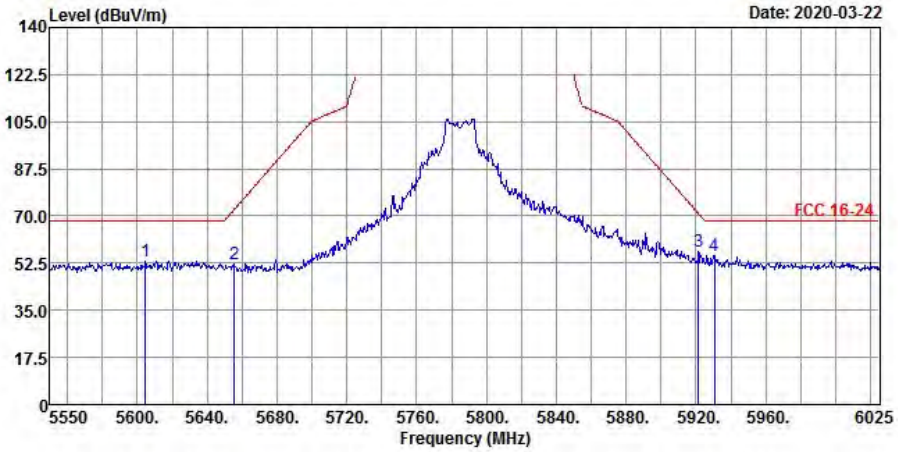
<Spurious Emission>
Horizontal



Vertical



<Out of Band Emission (OOBE)>
Horizontal



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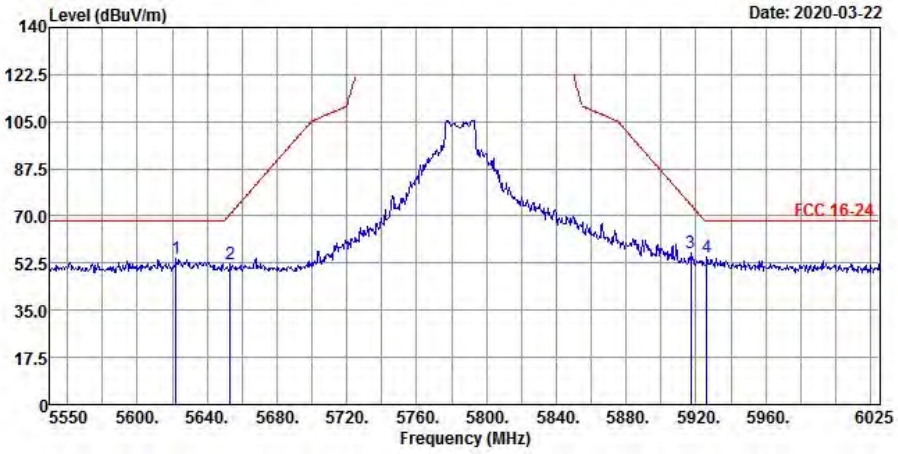


<Spurious Emission>

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	103.46	101.71	1.75	------	------	100	40	Average
5785	110.99	109.24	1.75	------	------	100	40	Peak
11570	48.1	47.26	0.84	54	-5.9	142	199	Average
11570	57.67	56.83	0.84	74	-16.33	142	199	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	103.01	101.26	1.75	------	------	100	259	Average
5785	109.21	107.46	1.75	------	------	100	259	Peak
11570	49.04	48.2	0.84	54	-4.96	108	264	Average
11570	58.08	57.24	0.84	74	-15.92	108	264	Peak

<Out of Band Emission (OOBE)>

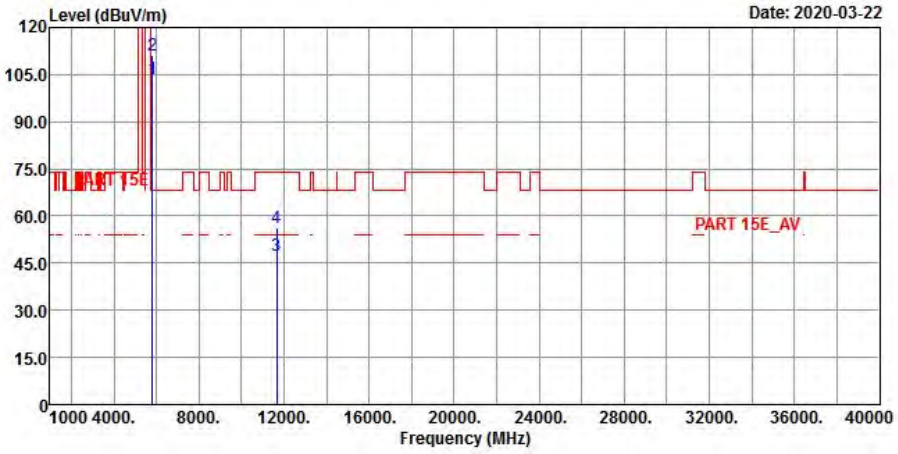
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5604.625	53.24	51.74	1.5	68.2	-14.96	100	40	Peak
5655.45	51.93	50.53	1.4	72.25	-20.32	100	40	Peak
5921.45	56.82	54.47	2.35	70.82	-14	100	40	Peak
5930.475	55.25	52.87	2.38	68.2	-12.95	100	40	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**
5622.2	54.34	52.85	1.49	68.2	-13.86	100	259	Peak
5653.075	52.05	50.6	1.45	70.49	-18.44	100	259	Peak
5917.175	56.44	54.1	2.34	73.97	-17.53	100	259	Peak
5926.2	54.61	52.24	2.37	68.2	-13.59	100	259	Peak

Remarks:

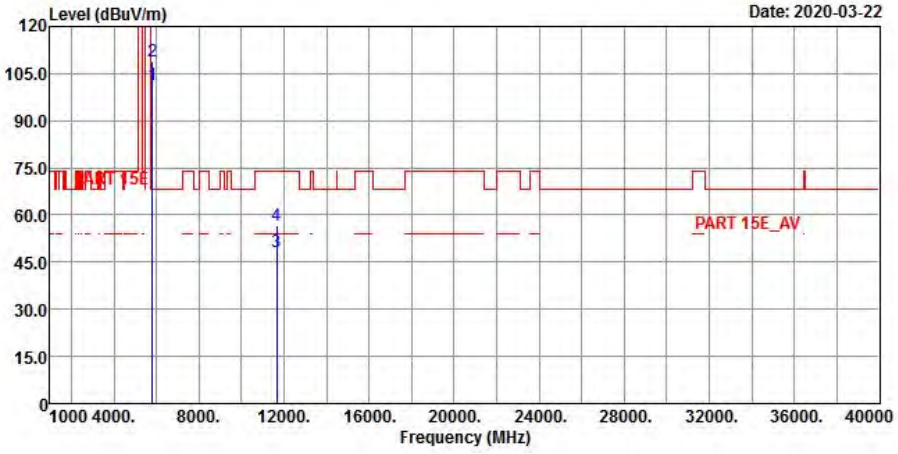
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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

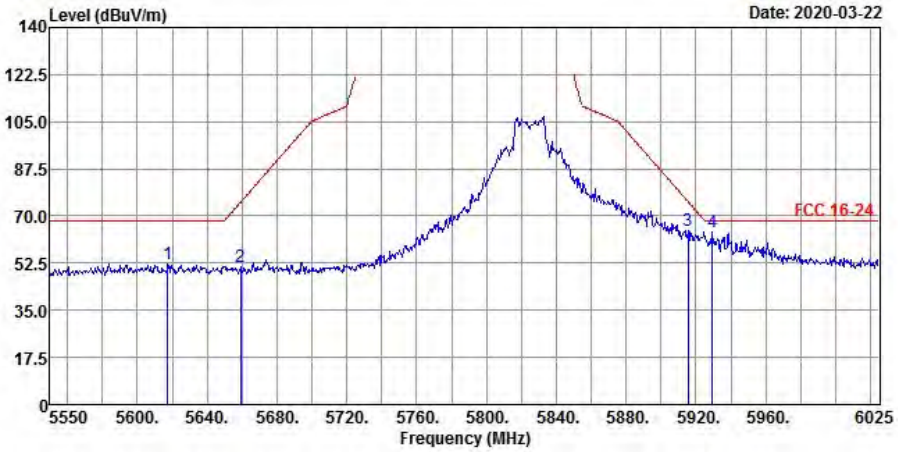
<Spurious Emission>
Horizontal



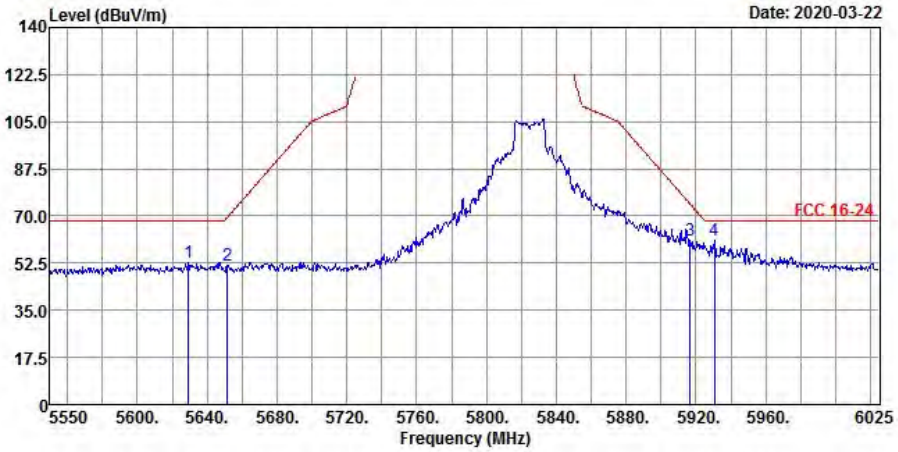
Vertical



<Out of Band Emission (OOBE)>
Horizontal



Vertical



<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	103.5	101.55	1.95	------	------	107	164	Average
5825	111.26	109.31	1.95	------	------	107	164	Peak
11650	47.3	46.82	0.48	54	-6.7	124	64	Average
11650	56.35	55.87	0.48	74	-17.65	124	64	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	101.54	99.59	1.95	------	------	104	263	Average
5825	108.73	106.78	1.95	------	------	104	263	Peak
11650	48.12	47.64	0.48	54	-5.88	138	309	Average
11650	56.62	56.14	0.48	74	-17.38	138	309	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**
5617.45	52.37	50.87	1.5	68.2	-15.83	107	164	Peak
5659.25	51.24	49.82	1.42	75.07	-23.83	107	164	Peak
5915.275	64.7	62.36	2.34	75.37	-10.67	107	164	Peak
5929.525	64.15	61.78	2.37	68.2	-4.05	107	164	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**
5629.325	52.78	51.35	1.43	68.2	-15.42	104	263	Peak
5651.65	51.69	50.25	1.44	69.43	-17.74	104	263	Peak
5916.7	60.7	58.36	2.34	74.32	-13.62	104	263	Peak
5930.475	60.86	58.48	2.38	68.2	-7.34	104	263	Peak

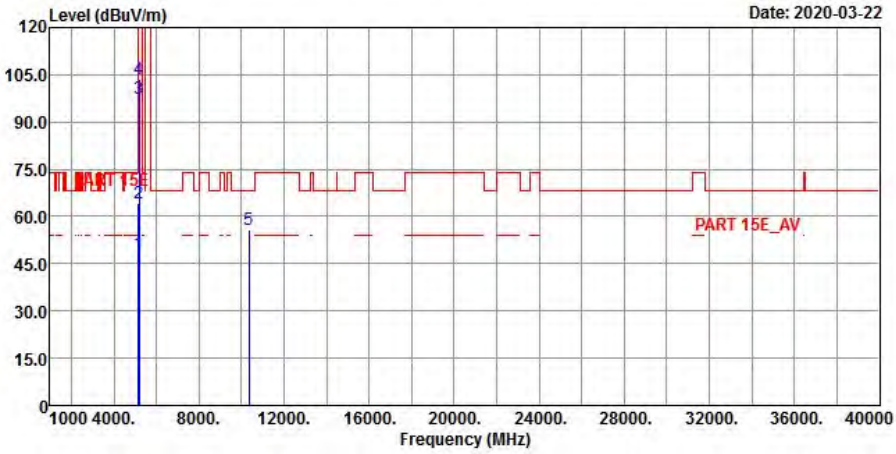
Remarks:

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

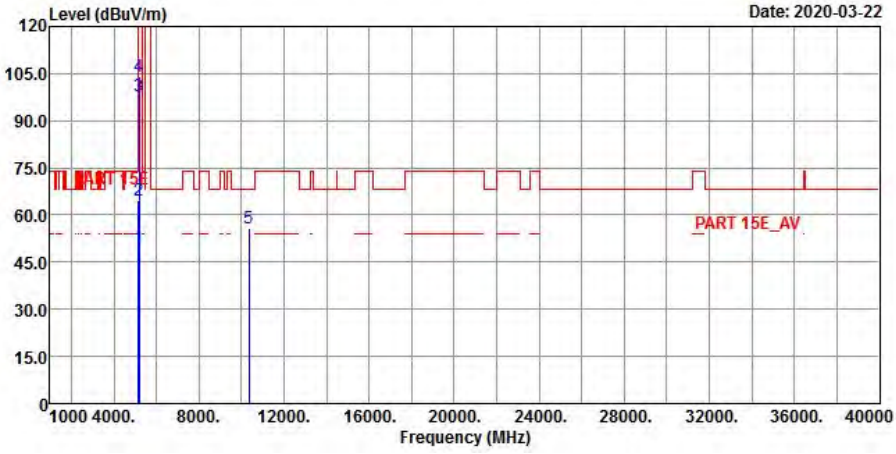
802.11n (HT20)

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

Horizontal



Vertical



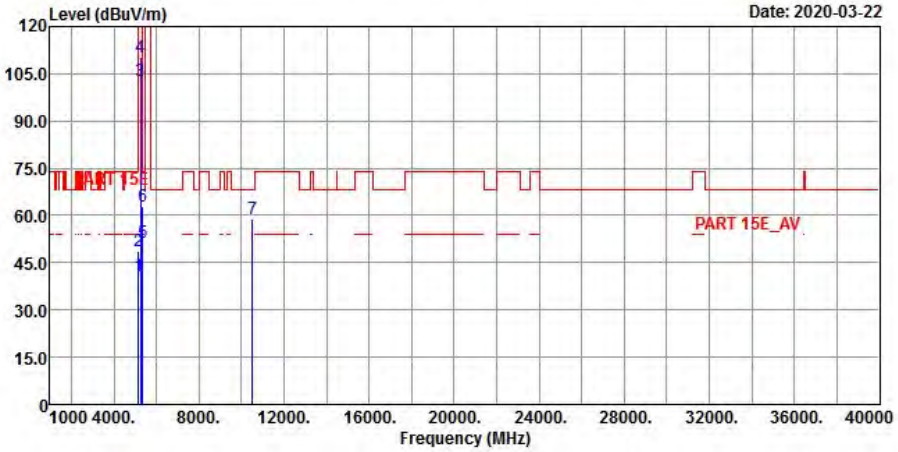
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	48.19	47.15	1.04	54	-5.81	112	122	Average
5150	64.14	63.1	1.04	74	-9.86	112	122	Peak
5180	97.24	96.35	0.89	------	------	112	122	Average
5180	103.72	102.83	0.89	------	------	112	122	Peak
*10360	55.78	56.34	-0.56	68.2	-12.42	165	132	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	49.81	48.77	1.04	54	-4.19	100	255	Average
5150	64.64	63.6	1.04	74	-9.36	100	255	Peak
5180	97.72	96.83	0.89	------	------	100	255	Average
5180	104.14	103.25	0.89	------	------	100	255	Peak
*10360	55.63	56.19	-0.56	68.2	-12.57	112	125	Peak

Remarks:

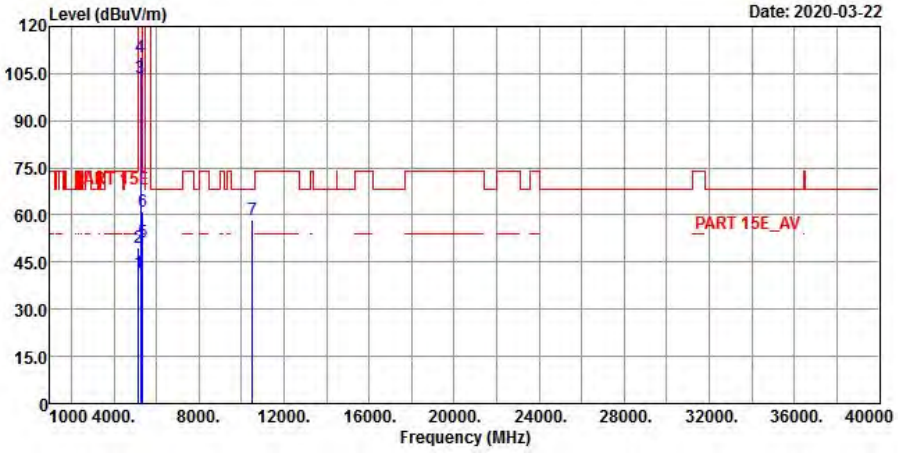
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 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

Horizontal



Vertical



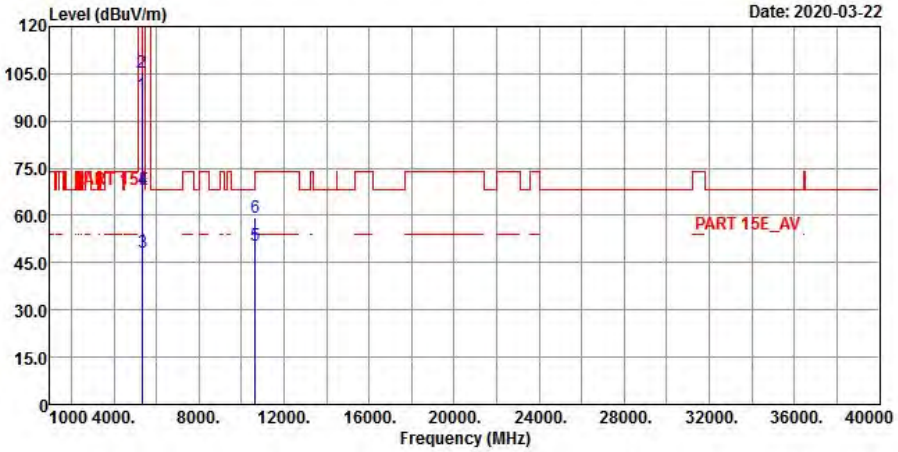
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.55	39.51	1.04	54	-13.45	103	130	Average
5150	48.57	47.53	1.04	74	-25.43	103	130	Peak
5260	102.74	101.76	0.98	------	------	103	130	Average
5260	110.25	109.27	0.98	------	------	103	130	Peak
5350	51.58	50.29	1.29	54	-2.42	103	130	Average
5350	62.75	61.46	1.29	74	-11.25	103	130	Peak
*10520	58.71	58.75	-0.04	68.2	-9.49	152	132	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	41.57	40.53	1.04	54	-12.43	137	343	Average
5150	49.73	48.69	1.04	74	-24.27	137	343	Peak
5260	103.69	102.71	0.98	------	------	137	343	Average
5260	110.23	109.25	0.98	------	------	137	343	Peak
5350	51.29	50	1.29	54	-2.71	137	343	Average
5350	60.97	59.68	1.29	74	-13.03	137	343	Peak
*10520	58.5	58.54	-0.04	68.2	-9.7	162	231	Peak

Remarks:

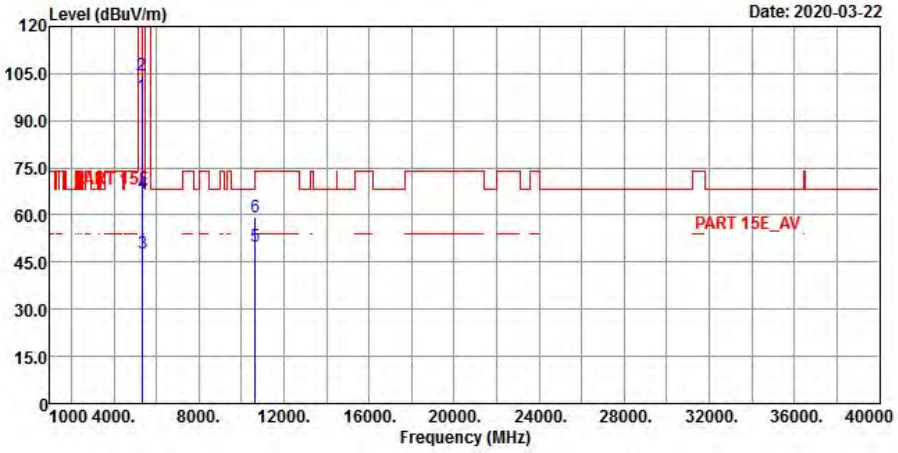
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5260 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 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

Horizontal



Vertical



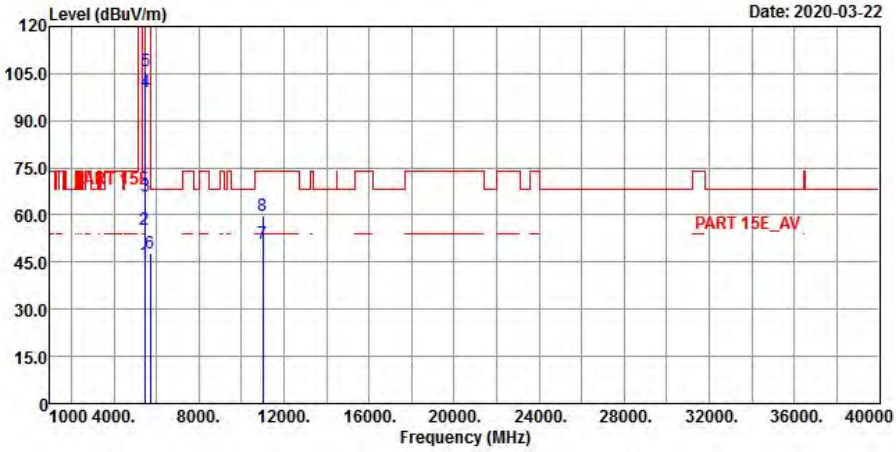
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	98.16	96.93	1.23	------	------	128	120	Average
5320	105.41	104.18	1.23	------	------	128	120	Peak
5350	48.19	46.9	1.29	54	-5.81	128	120	Average
5350	67.99	66.7	1.29	74	-6.01	128	120	Peak
10640	50.37	50.18	0.19	54	-3.63	132	174	Average
10640	59.42	59.23	0.19	74	-14.58	132	174	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	97.86	96.63	1.23	------	------	100	257	Average
5320	104.43	103.2	1.23	------	------	100	257	Peak
5350	47.95	46.66	1.29	54	-6.05	100	257	Average
5350	67.04	65.75	1.29	74	-6.96	100	257	Peak
10640	50.16	49.97	0.19	54	-3.84	165	174	Average
10640	59.38	59.19	0.19	74	-14.62	165	174	Peak

Remarks:

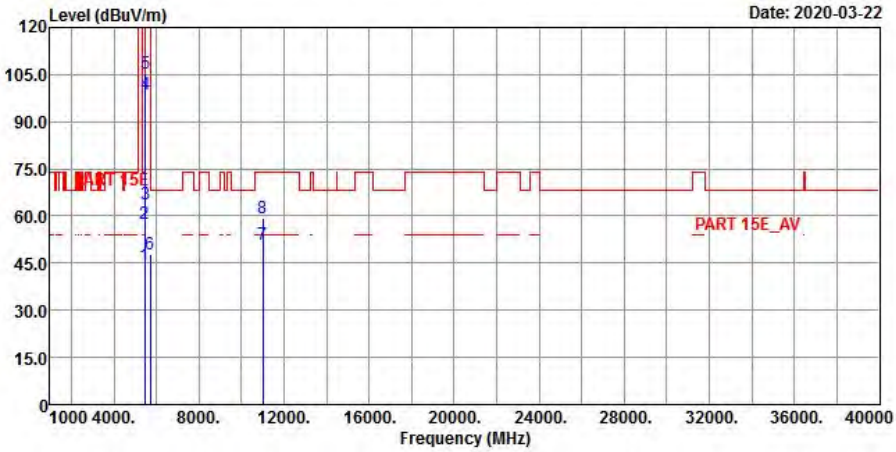
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5320 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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

Horizontal



Vertical



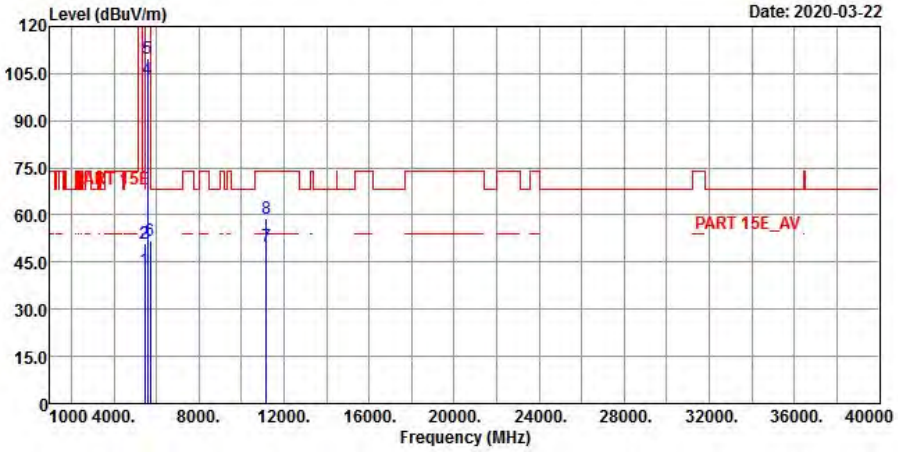
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	44.53	42.89	1.64	54	-9.47	103	117	Average
5460	55.18	53.54	1.64	74	-18.82	103	117	Peak
*5470	66.18	64.53	1.65	68.2	-2.02	103	117	Peak
5500	99.25	97.51	1.74	------	------	103	117	Average
5500	105.78	104.04	1.74	------	------	103	117	Peak
*5725	47.66	46.03	1.63	68.2	-20.54	103	117	Peak
11000	51.08	50.12	0.96	54	-2.92	125	145	Average
11000	59.6	58.64	0.96	74	-14.4	125	145	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	44.13	42.49	1.64	54	-9.87	109	257	Average
5460	57.68	56.04	1.64	74	-16.32	109	257	Peak
*5470	63.81	62.16	1.65	68.2	-4.39	109	257	Peak
5500	98.54	96.8	1.74	------	------	109	257	Average
5500	105.33	103.59	1.74	------	------	109	257	Peak
*5725	47.63	46	1.63	68.2	-20.57	109	257	Peak
11000	51.01	50.05	0.96	54	-2.99	165	132	Average
11000	59.34	58.38	0.96	74	-14.66	165	132	Peak

Remarks:

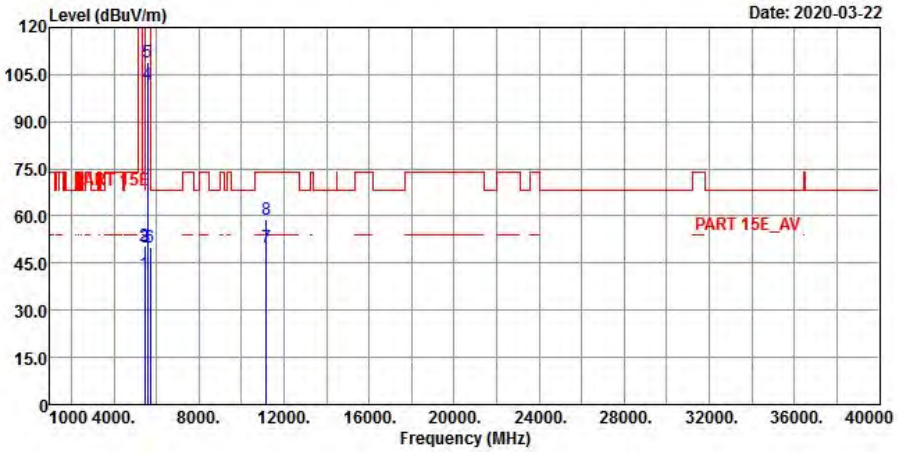
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5500 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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

Horizontal



Vertical



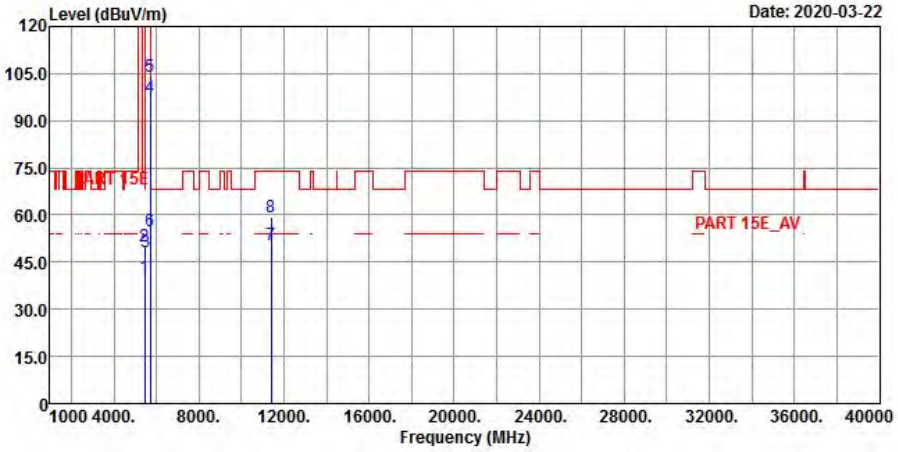
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	42.33	40.69	1.64	54	-11.67	100	39	Average
5460	50.77	49.13	1.64	74	-23.23	100	39	Peak
*5470	50.9	49.25	1.65	68.2	-17.3	100	39	Peak
5580	103.25	101.67	1.58	------	------	100	39	Average
5580	109.71	108.13	1.58	------	------	100	39	Peak
*5725	51.64	50.01	1.63	68.2	-16.56	100	39	Peak
11160	50.06	49.24	0.82	54	-3.94	125	162	Average
11160	58.91	58.09	0.82	74	-15.09	125	162	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	41.75	40.11	1.64	54	-12.25	107	258	Average
5460	50.63	48.99	1.64	74	-23.37	107	258	Peak
*5470	50.11	48.46	1.65	68.2	-18.09	107	258	Peak
5580	101.9	100.32	1.58	------	------	107	258	Average
5580	108.72	107.14	1.58	------	------	107	258	Peak
*5725	49.86	48.23	1.63	68.2	-18.34	107	258	Peak
11160	49.95	49.13	0.82	54	-4.05	152	168	Average
11160	58.81	57.99	0.82	74	-15.19	152	168	Peak

Remarks:

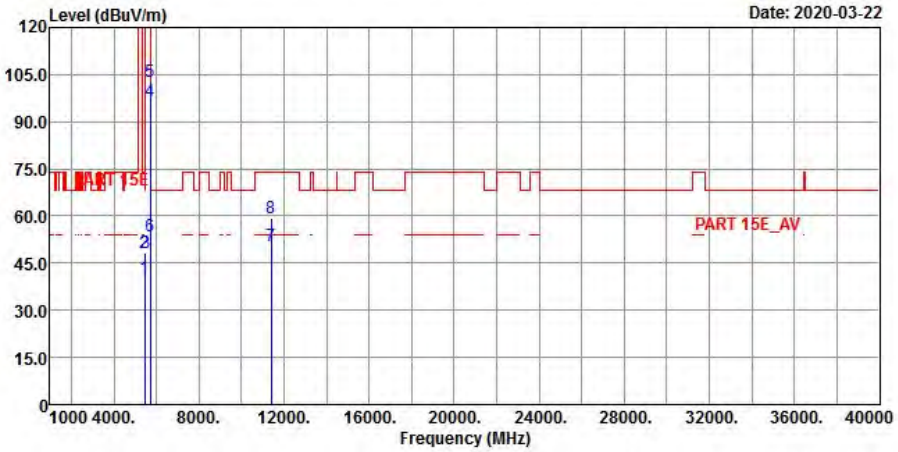
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5580 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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

Horizontal



Vertical



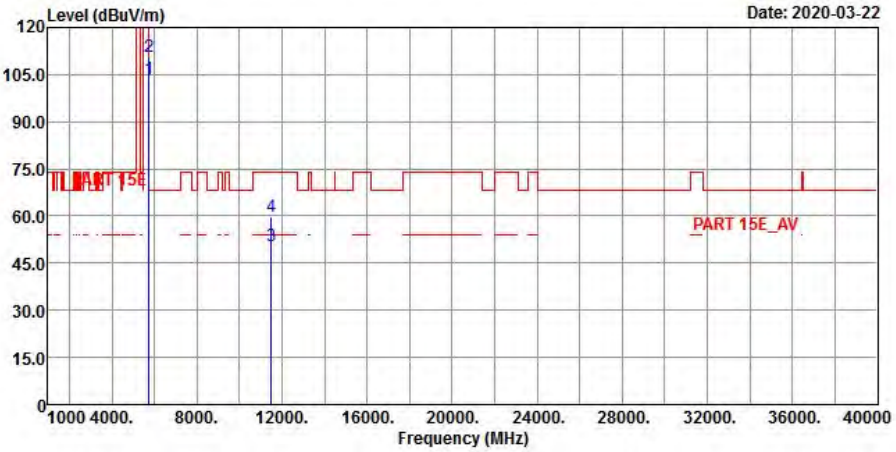
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	40.5	38.86	1.64	54	-13.5	113	39	Average
5460	50	48.36	1.64	74	-24	113	39	Peak
*5470	48.07	46.42	1.65	68.2	-20.13	113	39	Peak
5700	97.24	95.66	1.58	------	------	113	39	Average
5700	104.12	102.54	1.58	------	------	113	39	Peak
*5725	54.98	53.35	1.63	68.2	-13.22	113	39	Peak
11400	50.63	49.62	1.01	54	-3.37	125	142	Average
11400	59.44	58.43	1.01	74	-14.56	125	142	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	40.34	38.7	1.64	54	-13.66	103	254	Average
5460	48.08	46.44	1.64	74	-25.92	103	254	Peak
*5470	48.34	46.69	1.65	68.2	-19.86	103	254	Peak
5700	96.36	94.78	1.58	------	------	103	254	Average
5700	102.72	101.14	1.58	------	------	103	254	Peak
*5725	53.57	51.94	1.63	68.2	-14.63	103	254	Peak
11400	50.43	49.42	1.01	54	-3.57	132	265	Average
11400	59.25	58.24	1.01	74	-14.75	132	265	Peak

Remarks:

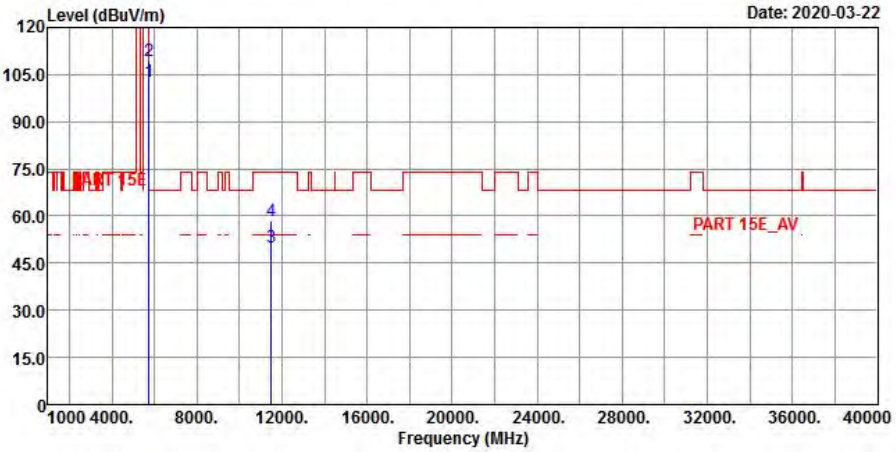
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5700 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 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

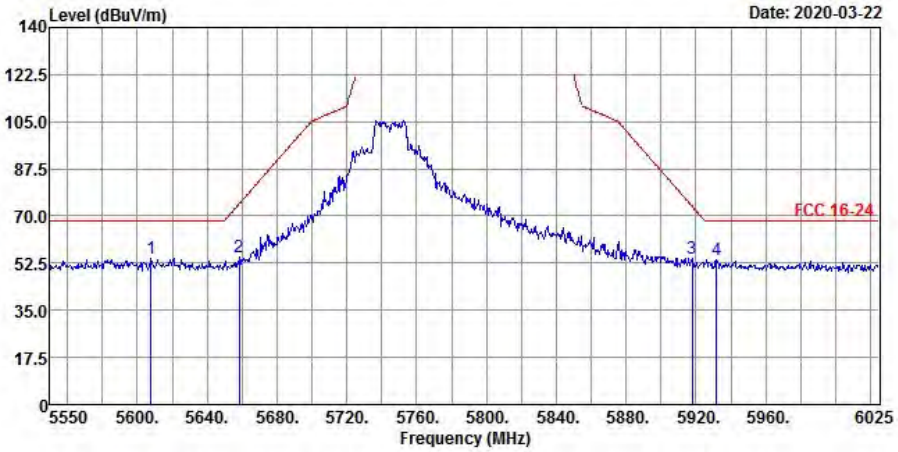
<Spurious Emission>
Horizontal



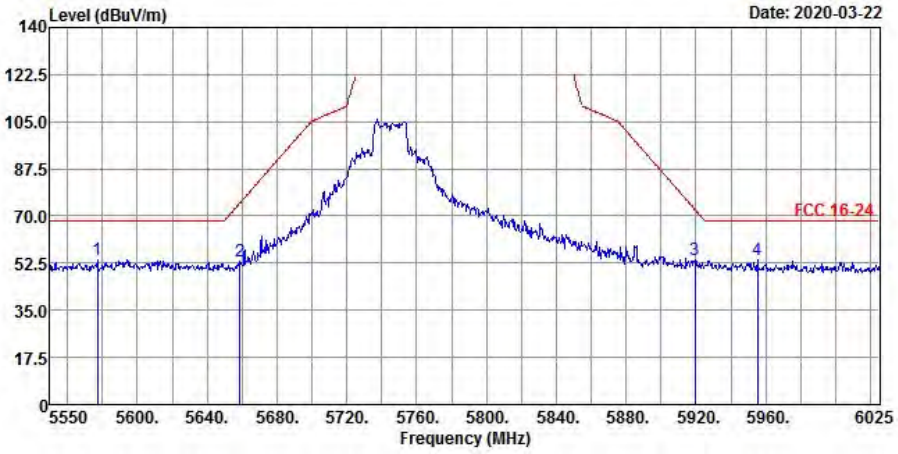
Vertical



<Out of Band Emission (OOBE)>
Horizontal



Vertical



<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	103.7	102.03	1.67	------	------	100	31	Average
5745	110.77	109.1	1.67	------	------	100	31	Peak
11490	50.61	49.53	1.08	54	-3.39	126	154	Average
11490	59.74	58.66	1.08	74	-14.26	126	154	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	102.64	100.97	1.67	------	------	100	254	Average
5745	109.43	107.76	1.67	------	------	100	254	Peak
11490	50.13	49.05	1.08	54	-3.87	162	185	Average
11490	58.65	57.57	1.08	74	-15.35	162	185	Peak

<Out of Band Emission (OOBE)>

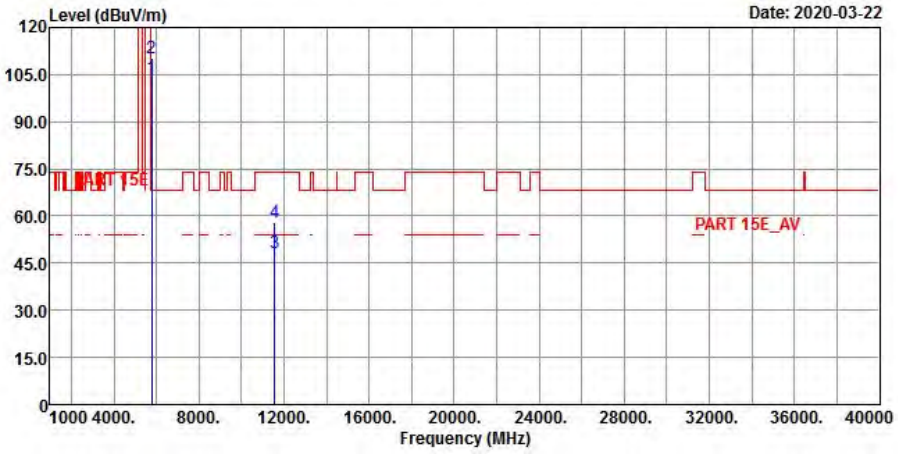
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5607.95	54.07	52.58	1.49	68.2	-14.13	100	31	Peak
5658.3	54.61	53.2	1.41	74.36	-19.75	100	31	Peak
5917.65	54.5	52.16	2.34	73.62	-19.12	100	31	Peak
5931.9	53.73	51.35	2.38	68.2	-14.47	100	31	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**
5577.075	53.65	52.03	1.62	68.2	-14.55	100	254	Peak
5658.775	52.99	51.58	1.41	74.72	-21.73	100	254	Peak
5919.55	53.6	51.25	2.35	72.22	-18.62	100	254	Peak
5955.175	53.91	51.45	2.46	68.2	-14.29	100	254	Peak

Remarks:

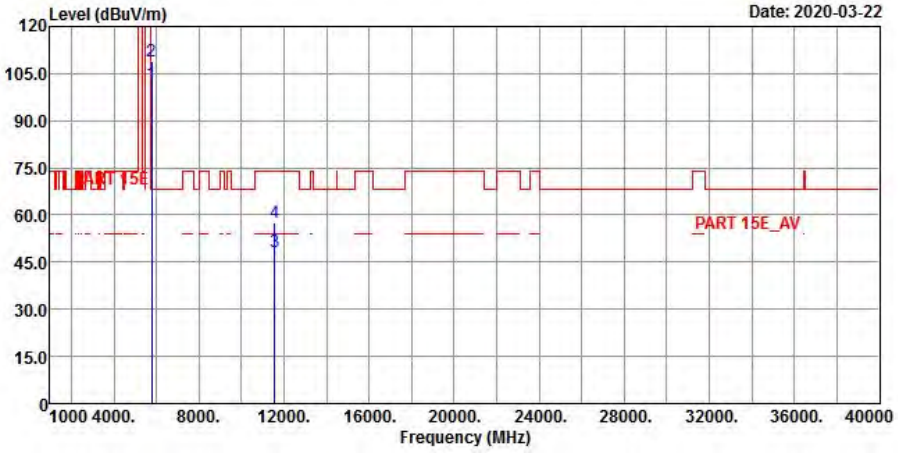
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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

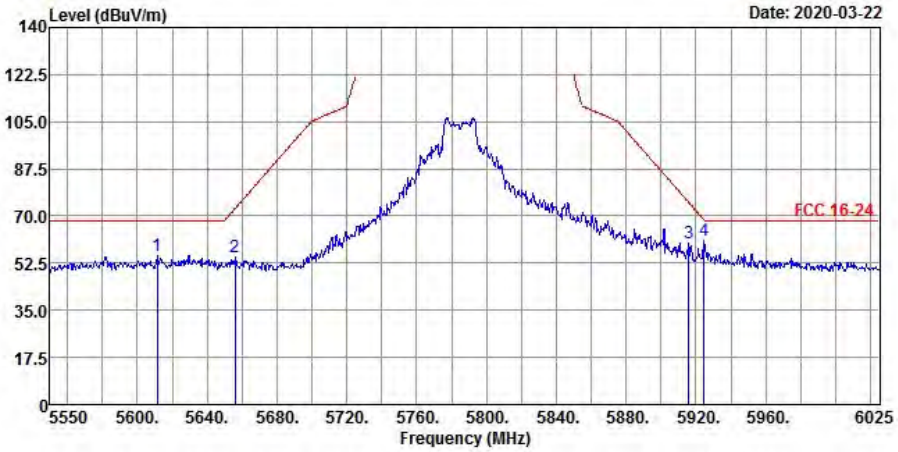
<Spurious Emission>
Horizontal



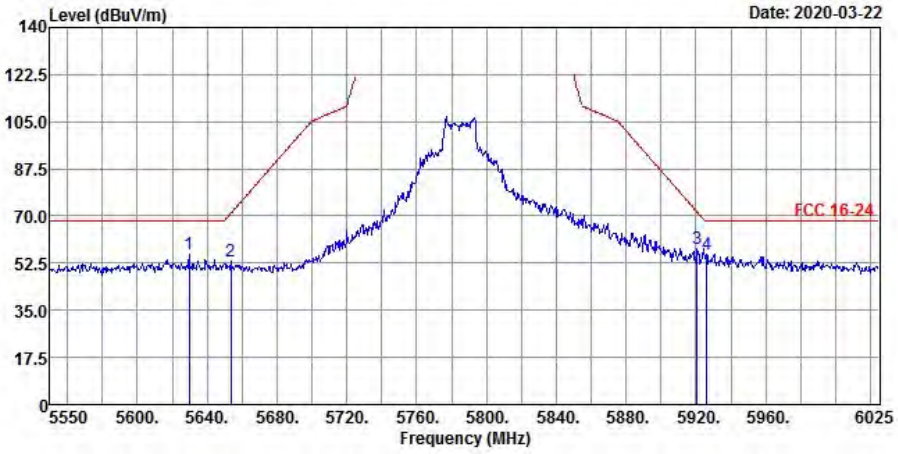
Vertical



<Out of Band Emission (OOBE)>
Horizontal



Vertical



<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	103.86	102.11	1.75	------	------	100	38	Average
5785	110.47	108.72	1.75	------	------	100	38	Peak
11570	48.36	47.52	0.84	54	-5.64	128	165	Average
11570	57.8	56.96	0.84	74	-16.2	128	165	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	101.83	100.08	1.75	------	------	100	263	Average
5785	109.04	107.29	1.75	------	------	100	263	Peak
11570	48.26	47.42	0.84	54	-5.74	135	142	Average
11570	57.65	56.81	0.84	74	-16.35	135	142	Peak

<Out of Band Emission (OOBE)>

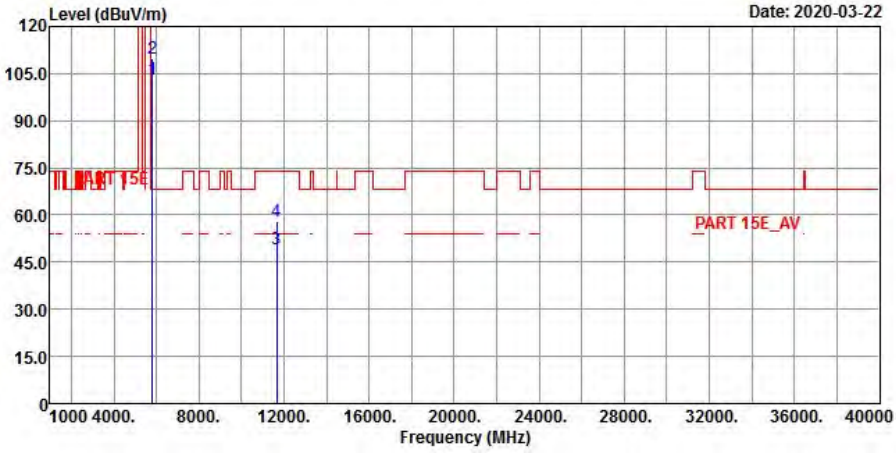
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5611.275	55.48	53.98	1.5	68.2	-12.72	100	38	Peak
5655.925	54.53	53.13	1.4	72.6	-18.07	100	38	Peak
5915.75	59.69	57.35	2.34	75.02	-15.33	100	38	Peak
5924.775	60.86	58.5	2.36	68.37	-7.51	100	38	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**
5629.8	55.79	54.36	1.43	68.2	-12.41	100	263	Peak
5653.55	53.04	51.59	1.45	70.84	-17.8	100	263	Peak
5920.5	57.91	55.56	2.35	71.52	-13.61	100	263	Peak
5926.2	55.71	53.34	2.37	68.2	-12.49	100	263	Peak

Remarks:

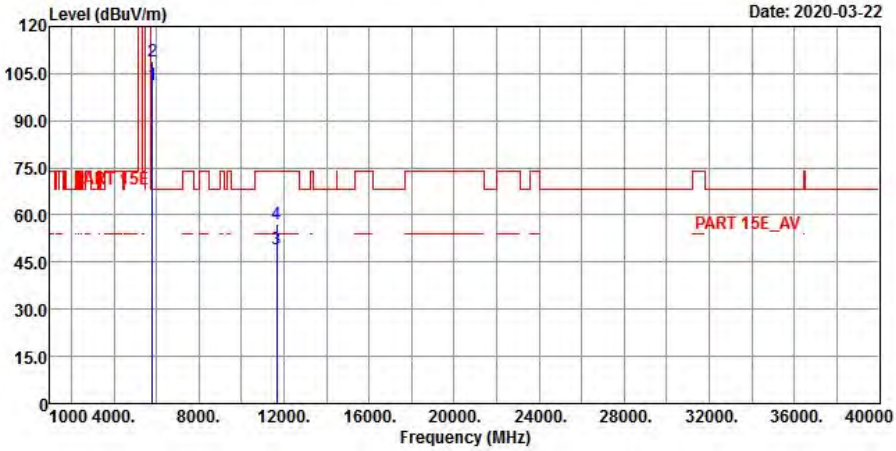
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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

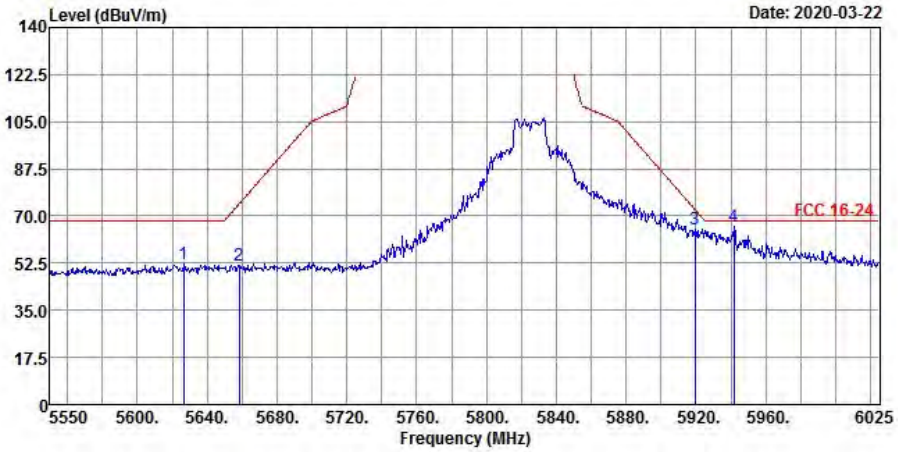
<Spurious Emission>
Horizontal



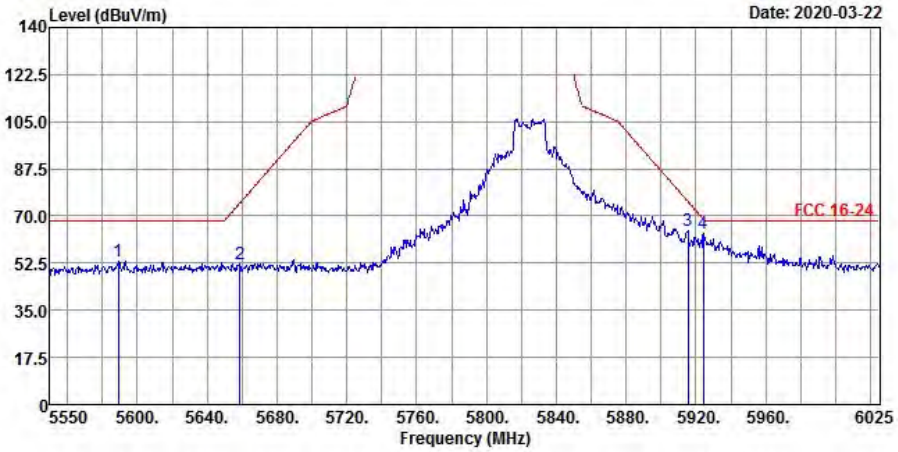
Vertical



<Out of Band Emission (OOBE)>
Horizontal



Vertical



<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	103	101.05	1.95	------	------	100	163	Average
5825	109.84	107.89	1.95	------	------	100	163	Peak
11650	49.03	48.55	0.48	54	-4.97	132	152	Average
11650	58.23	57.75	0.48	74	-15.77	132	152	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	101.35	99.4	1.95	------	------	100	263	Average
5825	108.93	106.98	1.95	------	------	100	263	Peak
11650	48.95	48.47	0.48	54	-5.05	145	125	Average
11650	57.27	56.79	0.48	74	-16.73	145	125	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**
5626.475	52.3	50.81	1.49	68.2	-15.9	100	163	Peak
5658.3	51.79	50.38	1.41	74.36	-22.57	100	163	Peak
5919.55	64.86	62.51	2.35	72.22	-7.36	100	163	Peak
5941.875	66.23	63.82	2.41	68.2	-1.97	100	163	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**
5588.95	53.23	51.66	1.57	68.2	-14.97	100	263	Peak
5658.775	52.12	50.71	1.41	74.72	-22.6	100	263	Peak
5915.275	64.73	62.39	2.34	75.37	-10.64	100	263	Peak
5924.3	63.37	61.01	2.36	68.72	-5.35	100	263	Peak

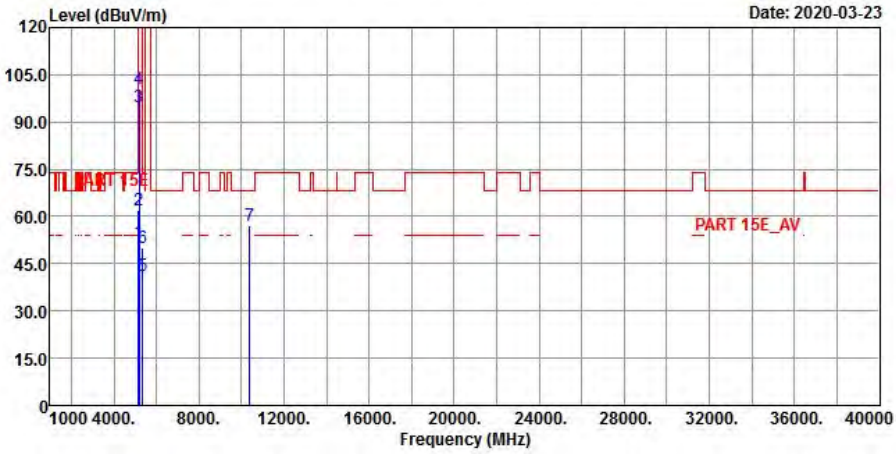
Remarks:

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

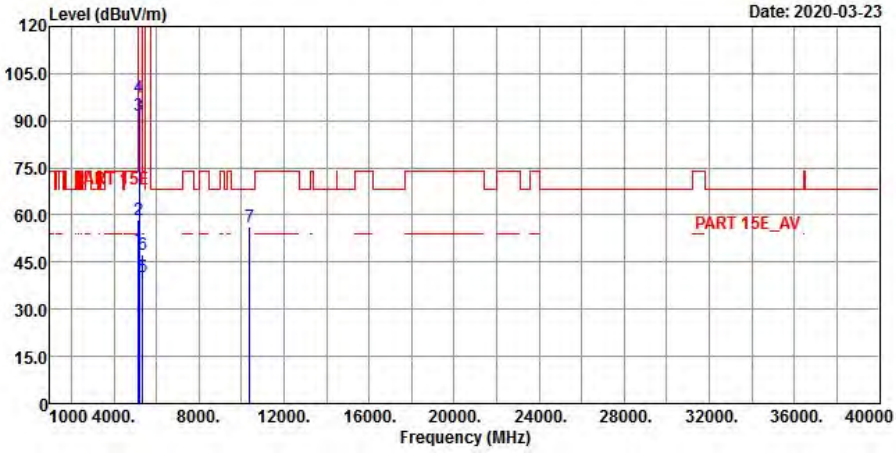
802.11n (HT40)

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**	Jisyong Wang

Horizontal



Vertical



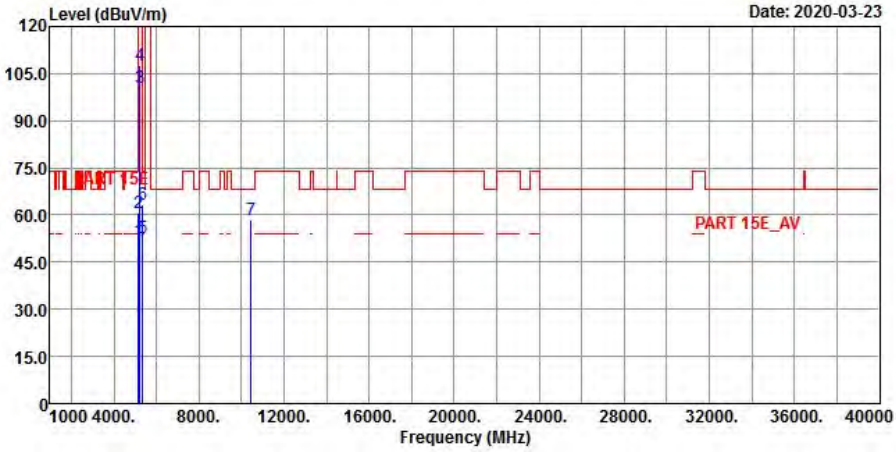
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	51.71	50.67	1.04	54	-2.29	225	123	Average
5150	61.89	60.85	1.04	74	-12.11	225	123	Peak
5190	94.82	93.98	0.84	------	------	225	123	Average
5190	100.32	99.48	0.84	------	------	225	123	Peak
5350	41.35	40.06	1.29	54	-12.65	225	123	Average
5350	49.87	48.58	1.29	74	-24.13	225	123	Peak
*10380	56.93	57.41	-0.48	68.2	-11.27	112	152	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	49.23	48.19	1.04	54	-4.77	119	244	Average
5150	58.32	57.28	1.04	74	-15.68	119	244	Peak
5190	91.87	91.03	0.84	------	------	119	244	Average
5190	97.54	96.7	0.84	------	------	119	244	Peak
5350	40.34	39.05	1.29	54	-13.66	119	244	Average
5350	47.41	46.12	1.29	74	-26.59	119	244	Peak
*10380	56.44	56.92	-0.48	68.2	-11.76	125	132	Peak

Remarks:

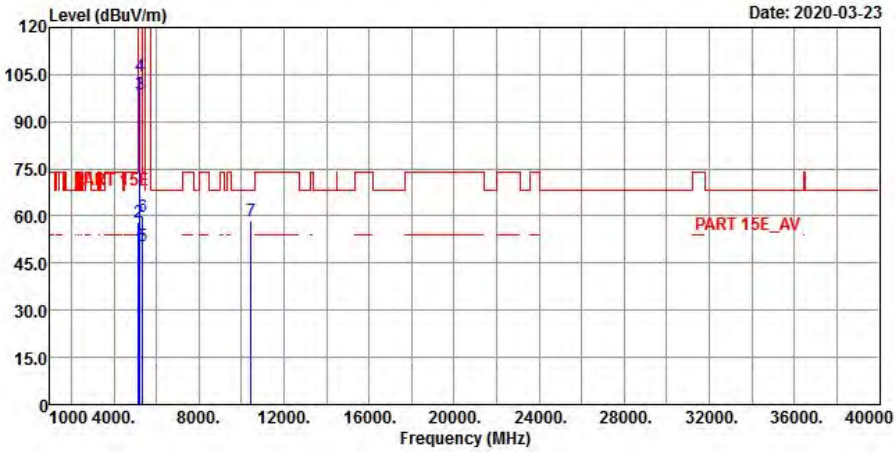
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5190 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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**	Jisyong Wang

Horizontal



Vertical



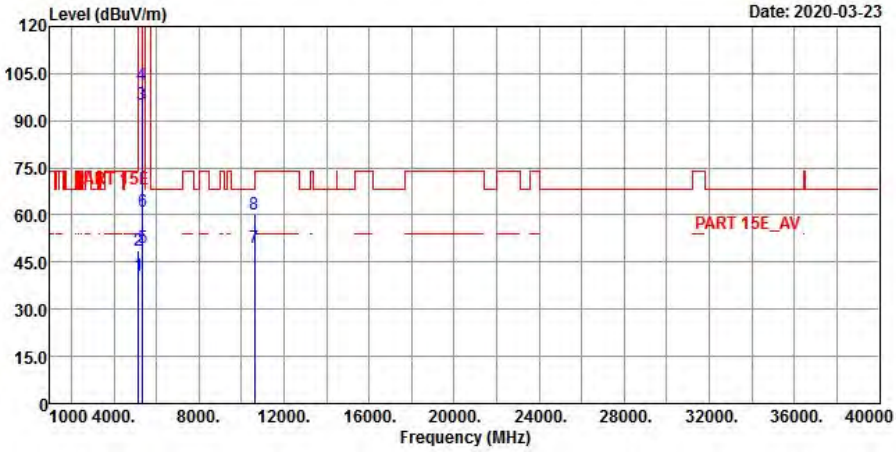
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	51.78	50.74	1.04	54	-2.22	207	129	Average
5150	60.75	59.71	1.04	74	-13.25	207	129	Peak
5230	100.52	99.66	0.86	------	------	207	129	Average
5230	107.48	106.62	0.86	------	------	207	129	Peak
5350	**52.49**	**51.2**	**1.29**	**54**	**-1.51**	**207**	**129**	**Average**
5350	63.22	61.93	1.29	74	-10.78	207	129	Peak
*10460	58.63	58.82	-0.19	68.2	-9.57	152	163	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	49.41	48.37	1.04	54	-4.59	113	265	Average
5150	58.14	57.1	1.04	74	-15.86	113	265	Peak
5230	98.56	97.7	0.86	------	------	113	265	Average
5230	104.58	103.72	0.86	------	------	113	265	Peak
5350	50.4	49.11	1.29	54	-3.6	113	265	Average
5350	59.92	58.63	1.29	74	-14.08	113	265	Peak
*10460	58.54	58.73	-0.19	68.2	-9.66	125	145	Peak

Remarks:

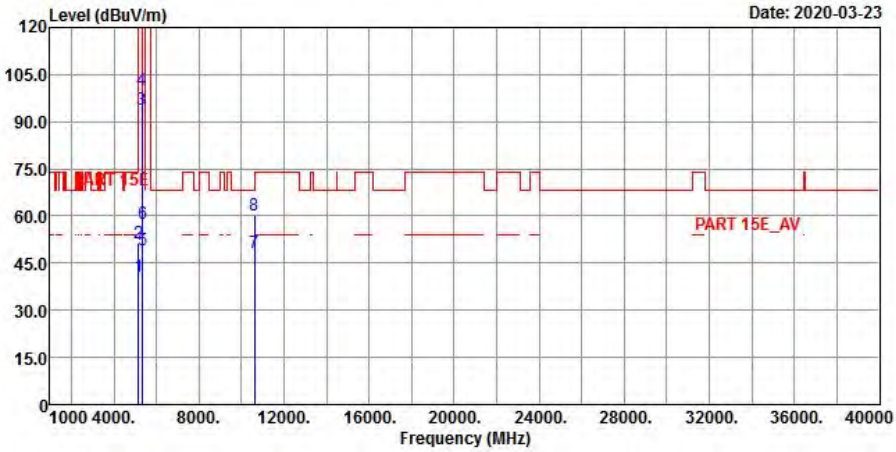
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5230 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 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

Horizontal



Vertical



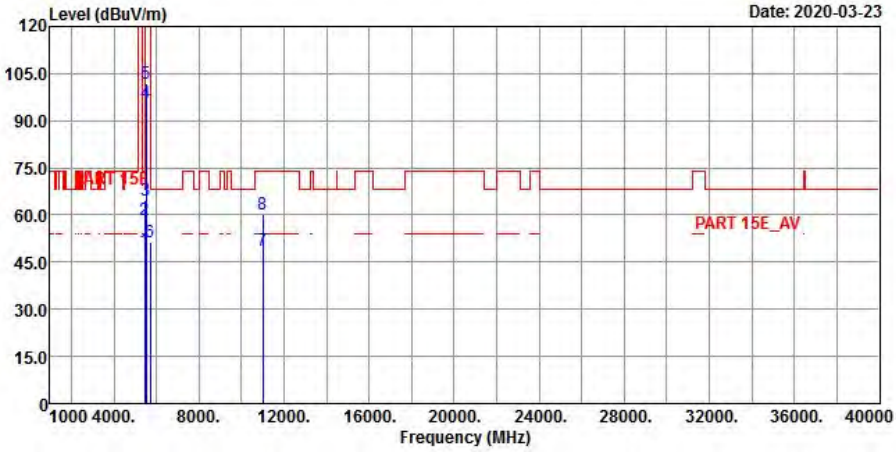
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	40.56	39.52	1.04	54	-13.44	105	118	Average
5150	48.61	47.57	1.04	74	-25.39	105	118	Peak
5310	95.21	94.01	1.2	------	------	105	118	Average
5310	101.39	100.19	1.2	------	------	105	118	Peak
5350	49.44	48.15	1.29	54	-4.56	105	118	Average
5350	60.95	59.66	1.29	74	-13.05	105	118	Peak
10620	49.39	49.3	0.09	54	-4.61	137	241	Average
10620	60.16	60.07	0.09	74	-13.84	137	241	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	40.77	39.73	1.04	54	-13.23	106	261	Average
5150	51.54	50.5	1.04	74	-22.46	106	261	Peak
5310	93.91	92.71	1.2	------	------	106	261	Average
5310	100.24	99.04	1.2	------	------	106	261	Peak
5350	49.04	47.75	1.29	54	-4.96	106	261	Average
5350	57.77	56.48	1.29	74	-16.23	106	261	Peak
10620	48.14	48.05	0.09	54	-5.86	125	344	Average
10620	60.01	59.92	0.09	74	-13.99	125	344	Peak

Remarks:

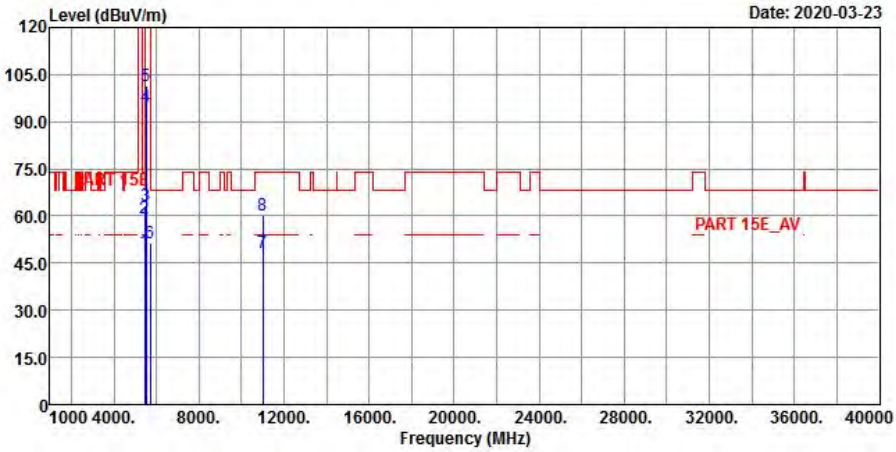
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5310 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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

Horizontal



Vertical



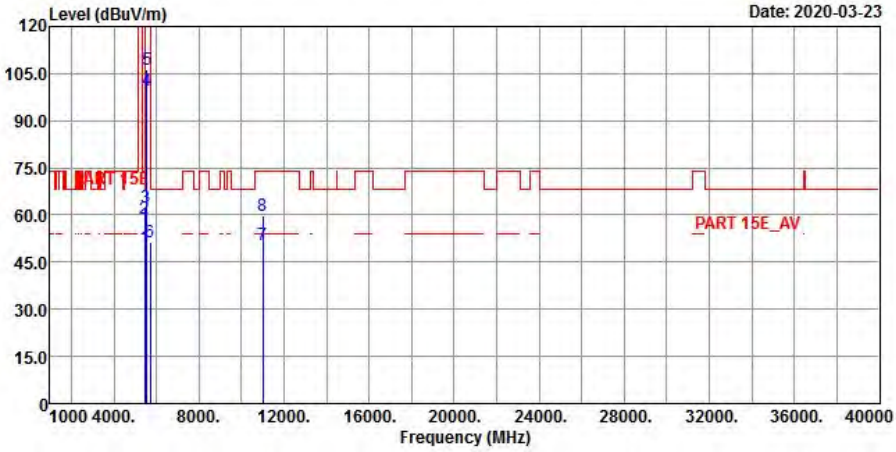
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	48.91	47.27	1.64	54	-5.09	110	36	Average
5460	58.46	56.82	1.64	74	-15.54	110	36	Peak
*5470	64.49	62.84	1.65	68.2	-3.71	110	36	Peak
5510	95.81	94.1	1.71	------	------	110	36	Average
5510	102.03	100.32	1.71	------	------	110	36	Peak
*5725	51.17	49.54	1.63	68.2	-17.03	110	36	Peak
11020	48.78	47.84	0.94	54	-5.22	174	307	Average
11020	60.17	59.23	0.94	74	-13.83	174	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**
5460	48.75	47.11	1.64	54	-5.25	121	260	Average
5460	59.12	57.48	1.64	74	-14.88	121	260	Peak
*5470	63.45	61.8	1.65	68.2	-4.75	121	260	Peak
5510	94.93	93.22	1.71	------	------	121	260	Average
5510	101.23	99.52	1.71	------	------	121	260	Peak
*5725	51.5	49.87	1.63	68.2	-16.7	121	260	Peak
11020	48.22	47.28	0.94	54	-5.78	136	269	Average
11020	60.23	59.29	0.94	74	-13.77	136	269	Peak

Remarks:

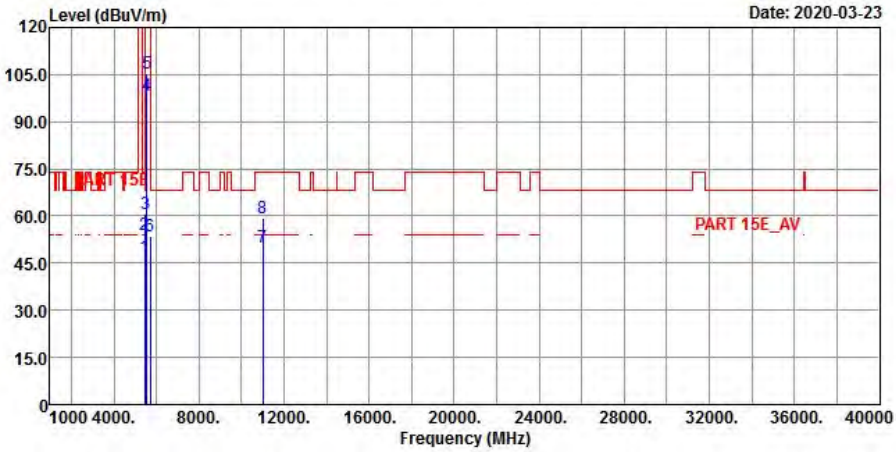
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5510 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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**	Jisyong Wang

Horizontal



Vertical



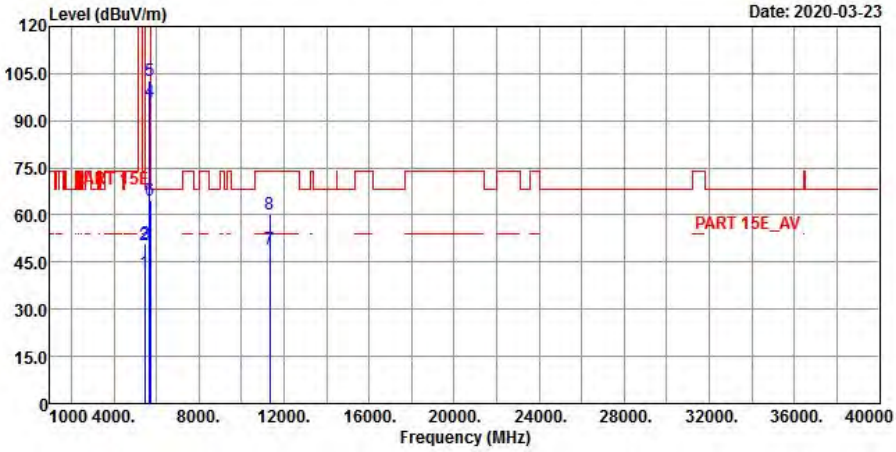
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	49.69	48.05	1.64	54	-4.31	205	130	Average
5460	58.94	57.3	1.64	74	-15.06	205	130	Peak
*5470	62.35	60.7	1.65	68.2	-5.85	205	130	Peak
5550	99.47	97.79	1.68	------	------	205	130	Average
5550	106.06	104.38	1.68	------	------	205	130	Peak
*5725	51.37	49.74	1.63	68.2	-16.83	205	130	Peak
11000	50.29	49.33	0.96	54	-3.71	125	162	Average
11000	59.76	58.8	0.96	74	-14.24	125	162	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	46.98	45.34	1.64	54	-7.02	105	261	Average
5460	53.98	52.34	1.64	74	-20.02	105	261	Peak
*5470	60.66	59.01	1.65	68.2	-7.54	105	261	Peak
5550	98.32	96.64	1.68	------	------	105	261	Average
5550	105.35	103.67	1.68	------	------	105	261	Peak
*5725	53.53	51.9	1.63	68.2	-14.67	105	261	Peak
11000	50.25	49.29	0.96	54	-3.75	162	176	Average
11000	59.43	58.47	0.96	74	-14.57	162	176	Peak

Remarks:

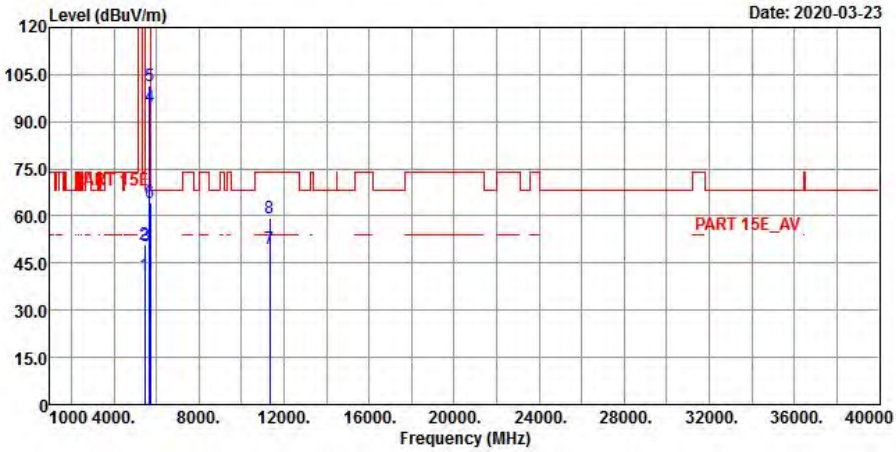
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5550 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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

Horizontal



Vertical



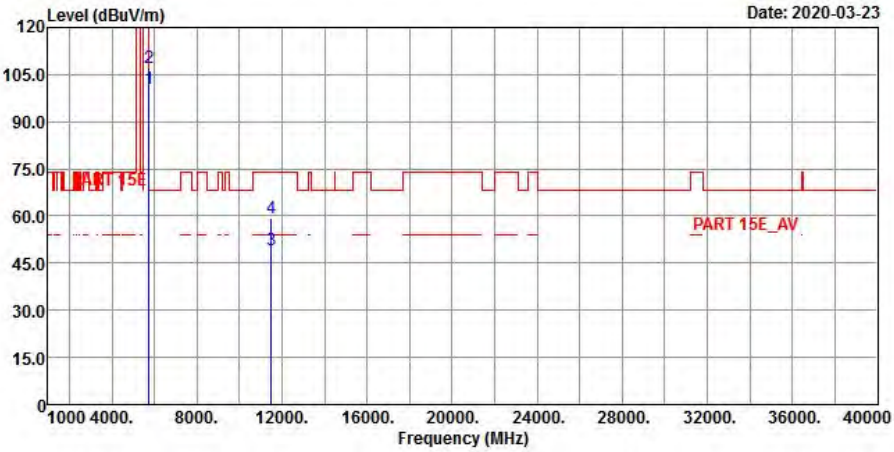
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	41.6	39.96	1.64	54	-12.4	106	37	Average
5460	50.43	48.79	1.64	74	-23.57	106	37	Peak
*5470	51.11	49.46	1.65	68.2	-17.09	106	37	Peak
5670	96.1	94.62	1.48	------	------	106	37	Average
5670	102.53	101.05	1.48	------	------	106	37	Peak
*5725	64.63	63	1.63	68.2	-3.57	106	37	Peak
11340	49.25	48.32	0.93	54	-4.75	168	251	Average
11340	60.16	59.23	0.93	74	-13.84	168	251	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	41.39	39.75	1.64	54	-12.61	104	260	Average
5460	50.75	49.11	1.64	74	-23.25	104	260	Peak
*5470	50.61	48.96	1.65	68.2	-17.59	104	260	Peak
5670	94.9	93.42	1.48	------	------	104	260	Average
5670	101.46	99.98	1.48	------	------	104	260	Peak
*5725	64.09	62.46	1.63	68.2	-4.11	104	260	Peak
11340	49.46	48.53	0.93	54	-4.54	106	178	Average
11340	59.48	58.55	0.93	74	-14.52	106	178	Peak

Remarks:

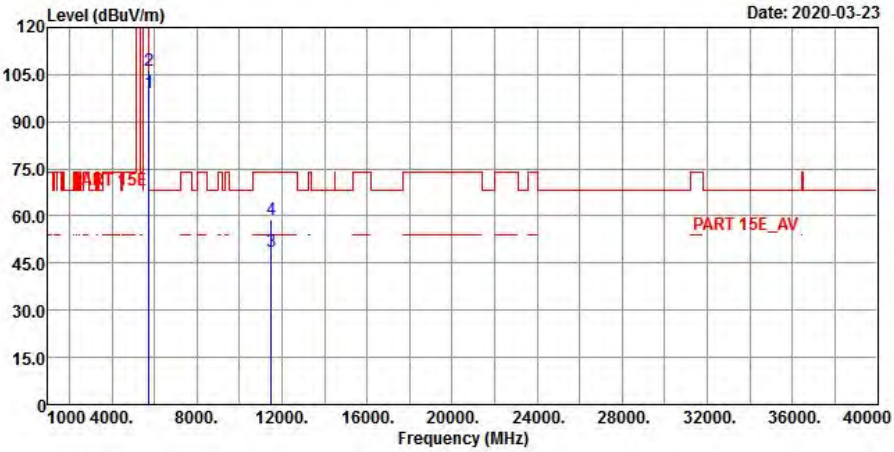
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5670 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 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**	Jisyong Wang

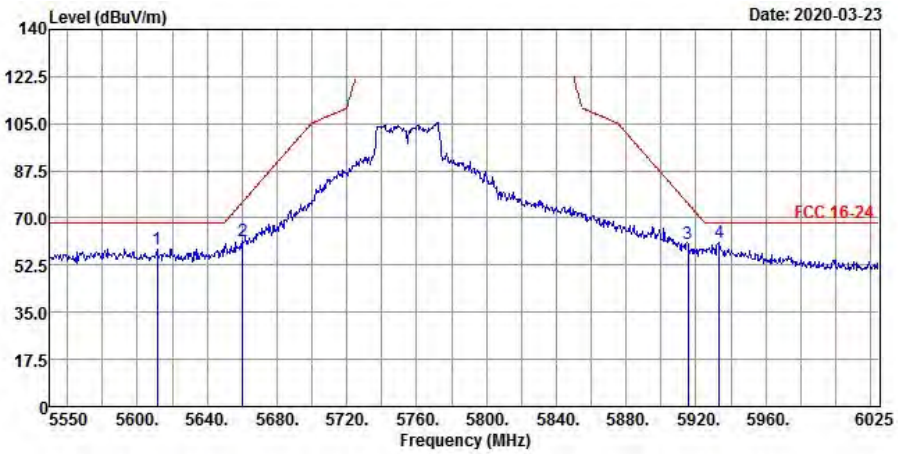
<Spurious Emission>
Horizontal



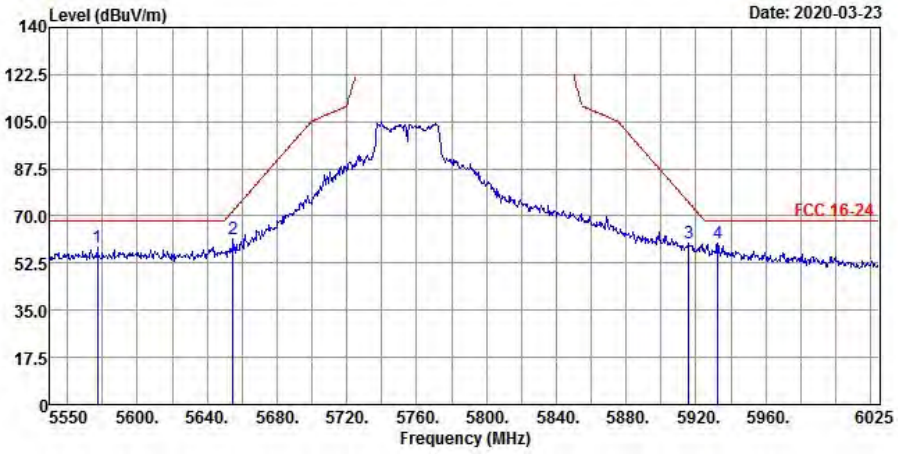
Vertical



<Out of Band Emission (OOBE)>
Horizontal



Vertical



<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	100.44	98.74	1.7	------	------	110	30	Average
5755	107.12	105.42	1.7	------	------	110	30	Peak
11510	49.32	48.26	1.06	54	-4.68	125	132	Average
11510	59.14	58.08	1.06	74	-14.86	125	132	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	99.22	97.52	1.7	------	------	100	263	Average
5755	106.37	104.67	1.7	------	------	100	263	Peak
11510	48.92	47.86	1.06	54	-5.08	128	165	Average
11510	58.7	57.64	1.06	74	-15.3	128	165	Peak

<Out of Band Emission (OOBE)>

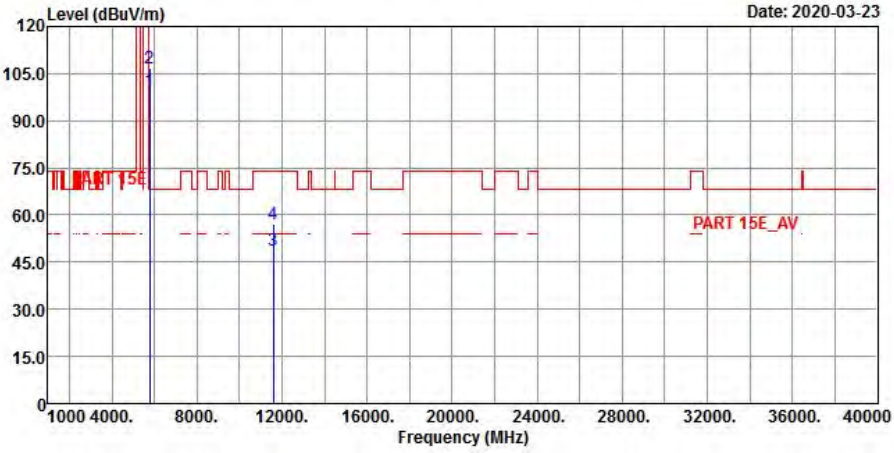
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5611.275	58.59	57.09	1.5	68.2	-9.61	110	30	Peak
5660.2	61.26	59.84	1.42	75.77	-14.51	110	30	Peak
5915.275	60.37	58.03	2.34	75.37	-15	110	30	Peak
5933.325	60.81	58.43	2.38	68.2	-7.39	110	30	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**
5577.075	58.49	56.87	1.62	68.2	-9.71	101	263	Peak
5654.975	61.5	60.11	1.39	71.9	-10.4	101	263	Peak
5915.75	60.16	57.82	2.34	75.02	-14.86	101	263	Peak
5932.375	59.78	57.4	2.38	68.2	-8.42	101	263	Peak

Remarks:

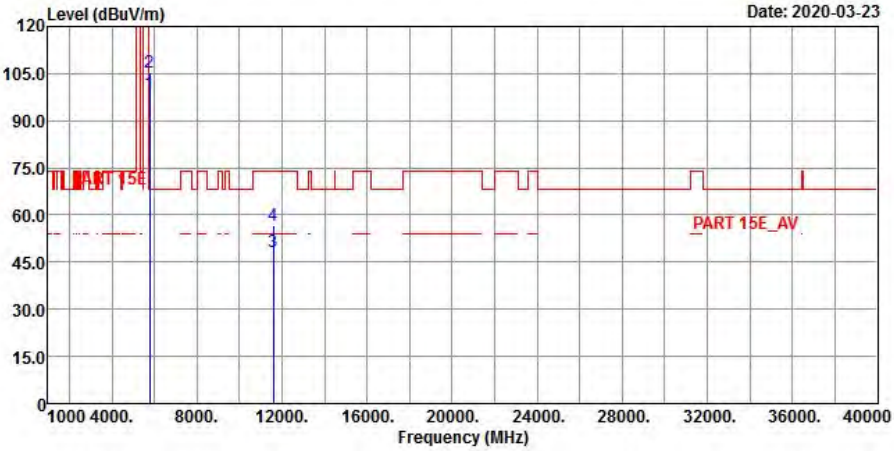
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5755 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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**	Jisyong Wang

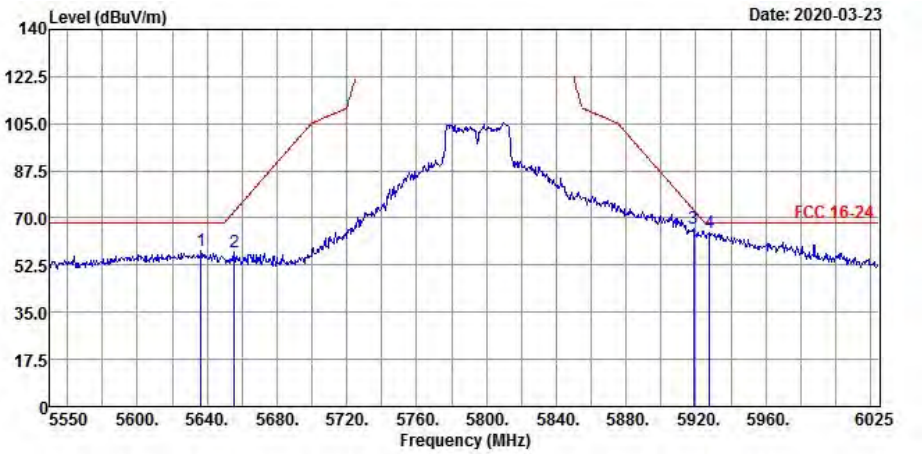
<Spurious Emission>
Horizontal



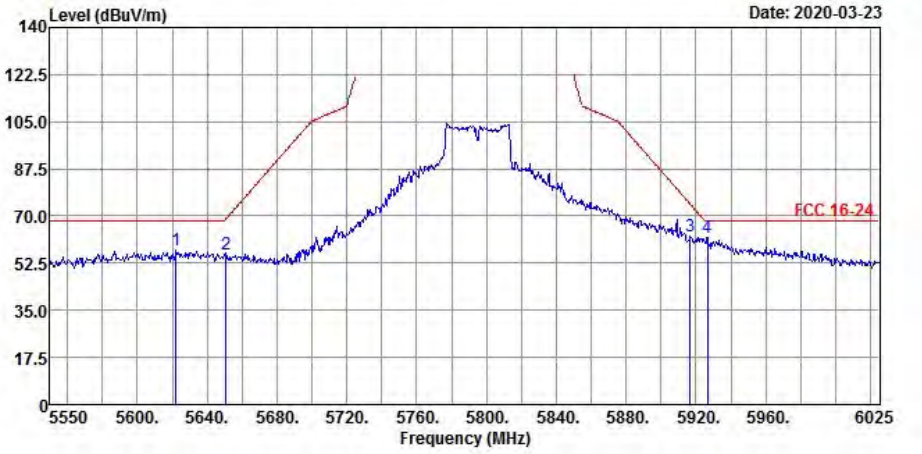
Vertical



<Out of Band Emission (OOBE)>
Horizontal



Vertical



<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	99.7	97.91	1.79	------	------	200	169	Average
5795	106.7	104.91	1.79	------	------	200	169	Peak
11590	48.62	47.85	0.77	54	-5.38	126	175	Average
11590	56.96	56.19	0.77	74	-17.04	126	175	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	98.67	96.88	1.79	------	------	103	259	Average
5795	105.31	103.52	1.79	------	------	103	259	Peak
11590	48.43	47.66	0.77	54	-5.57	132	186	Average
11590	56.85	56.08	0.77	74	-17.15	132	186	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**
5636.45	57.98	56.55	1.43	68.2	-10.22	200	169	Peak
5655.45	57.44	56.04	1.4	72.25	-14.81	200	169	Peak
5918.6	66.14	63.79	2.35	72.92	-6.78	200	169	Peak
5927.625	64.83	62.46	2.37	68.2	-3.37	200	169	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**
5622.2	57.35	55.86	1.49	68.2	-10.85	103	259	Peak
5650.7	55.62	54.19	1.43	68.72	-13.1	103	259	Peak
5916.7	62.51	60.17	2.34	74.32	-11.81	103	259	Peak
5926.675	61.96	59.59	2.37	68.2	-6.24	103	259	Peak

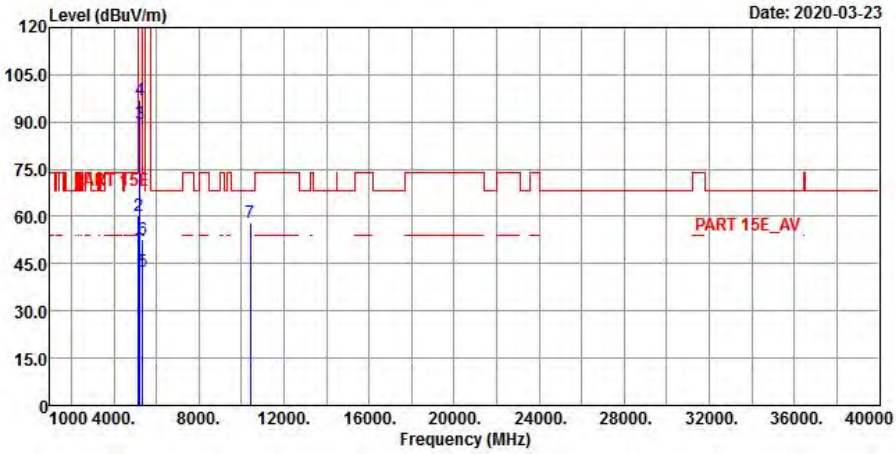
Remarks:

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

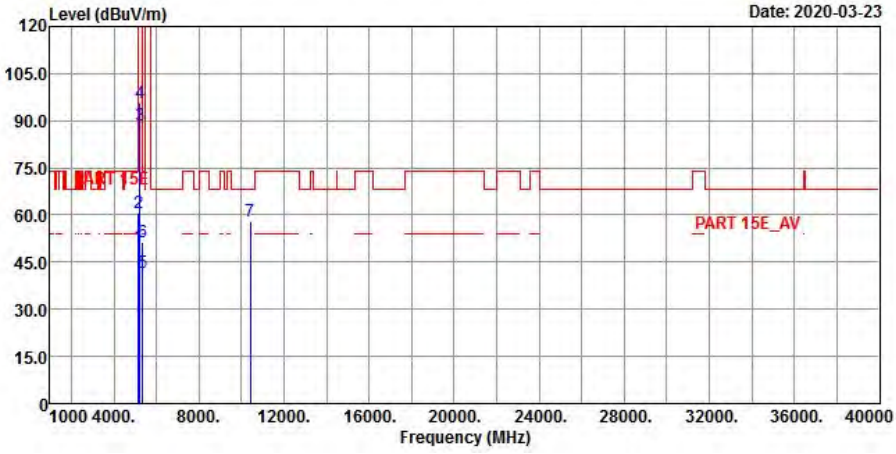
802.11ac (VHT80)

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

Horizontal



Vertical



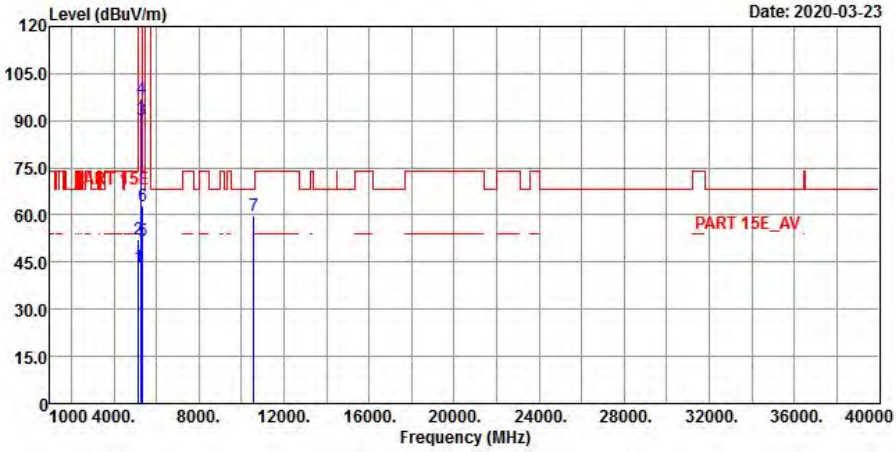
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	50.15	49.11	1.04	54	-3.85	121	117	Average
5150	60.22	59.18	1.04	74	-13.78	121	117	Peak
5210	89.32	88.52	0.8	------	------	121	117	Average
5210	97.16	96.36	0.8	------	------	121	117	Peak
5350	42.33	41.04	1.29	54	-11.67	121	117	Average
5350	52.51	51.22	1.29	74	-21.49	121	117	Peak
*10420	58.12	58.46	-0.34	68.2	-10.08	125	132	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	50.21	49.17	1.04	54	-3.79	112	246	Average
5150	60.82	59.78	1.04	74	-13.18	112	246	Peak
5210	88.6	87.8	0.8	------	------	112	246	Average
5210	95.59	94.79	0.8	------	------	112	246	Peak
5350	41.55	40.26	1.29	54	-12.45	112	246	Average
5350	51.39	50.1	1.29	74	-22.61	112	246	Peak
*10420	58.01	58.35	-0.34	68.2	-10.19	132	152	Peak

Remarks:

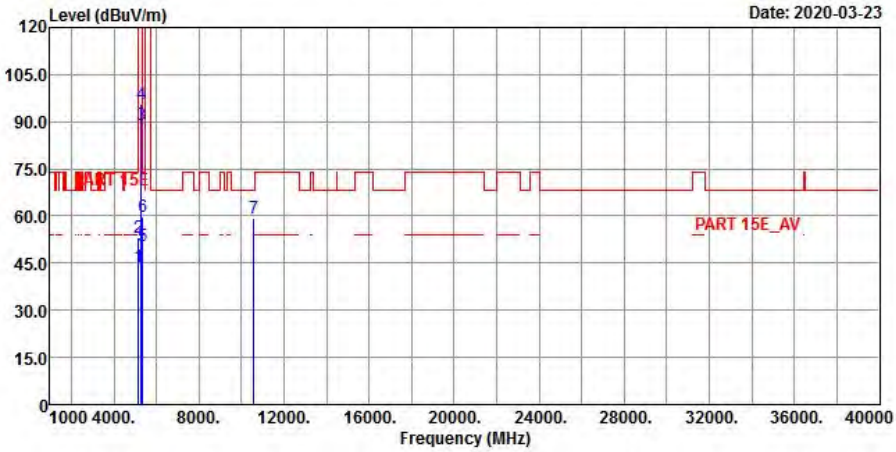
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5210 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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**	Getaz Yang

Horizontal



Vertical



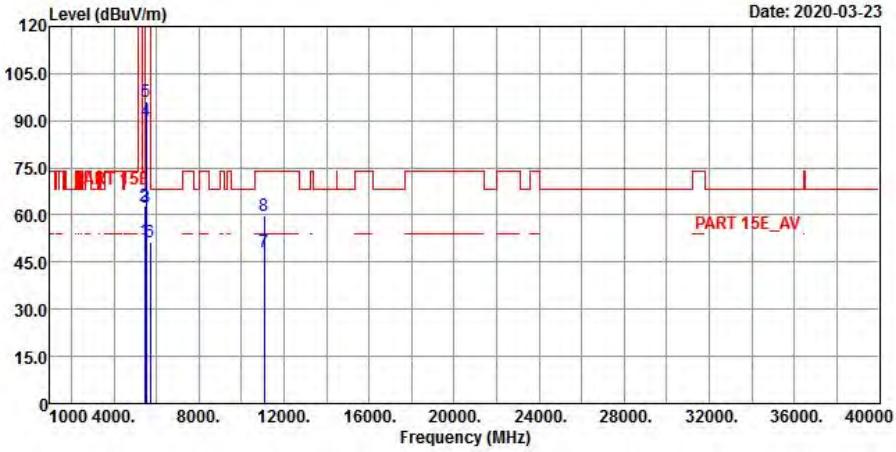
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	43.57	42.53	1.04	54	-10.43	108	128	Average
5150	52.21	51.17	1.04	74	-21.79	108	128	Peak
5290	90.34	89.23	1.11	------	------	108	128	Average
5290	97.11	96	1.11	------	------	108	128	Peak
5350	51.98	50.69	1.29	54	-2.02	108	128	Average
5350	62.9	61.61	1.29	74	-11.1	108	128	Peak
*10580	59.75	59.77	-0.02	68.2	-8.45	134	152	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	43.71	42.67	1.04	54	-10.29	109	262	Average
5150	53.35	52.31	1.04	74	-20.65	109	262	Peak
5290	89.2	88.09	1.11	------	------	109	262	Average
5290	95.52	94.41	1.11	------	------	109	262	Peak
5350	50.53	49.24	1.29	54	-3.47	109	262	Average
5350	59.62	58.33	1.29	74	-14.38	109	262	Peak
*10580	59.56	59.58	-0.02	68.2	-8.64	165	192	Peak

Remarks:

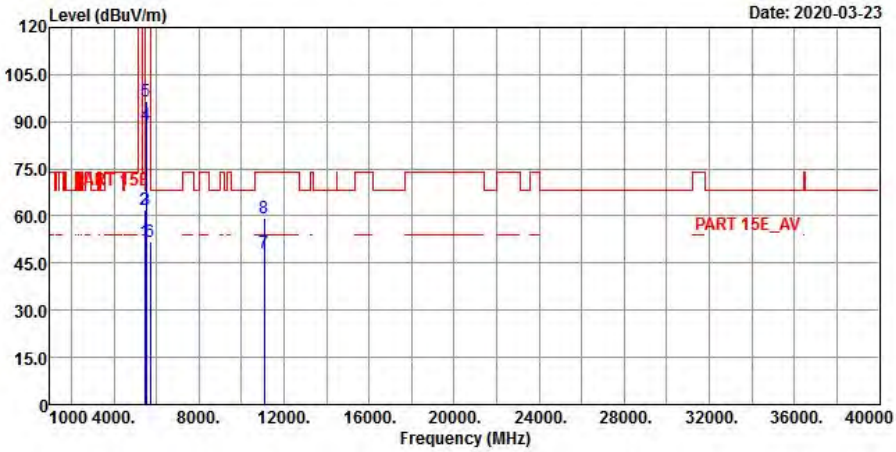
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5290 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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**	Getaz Yang

Horizontal



Vertical



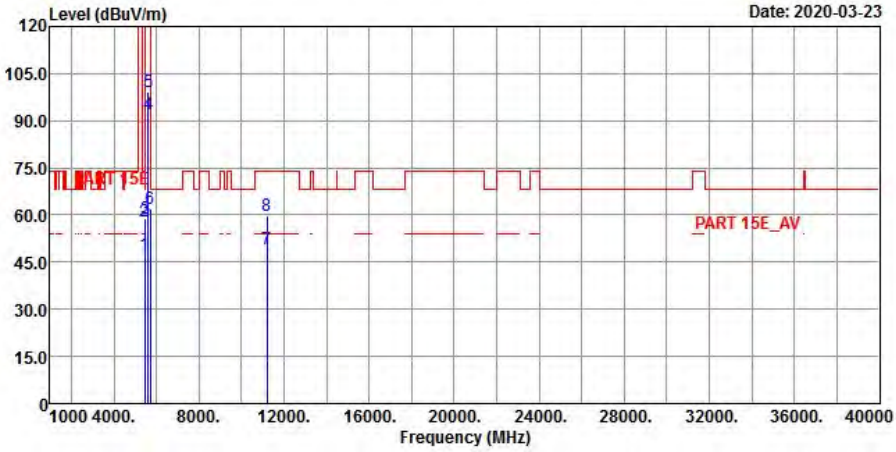
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	52	50.36	1.64	54	-2	107	36	Average
5460	62.8	61.16	1.64	74	-11.2	107	36	Peak
*5470	62.22	60.57	1.65	68.2	-5.98	107	36	Peak
5530	89.96	88.28	1.68	------	------	107	36	Average
5530	96.25	94.57	1.68	------	------	107	36	Peak
*5725	51.25	49.62	1.63	68.2	-16.95	107	36	Peak
11060	48.38	47.45	0.93	54	-5.62	125	152	Average
11060	59.87	58.94	0.93	74	-14.13	125	152	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	51.76	50.12	1.64	54	-2.24	110	260	Average
5460	62.08	60.44	1.64	74	-11.92	110	260	Peak
*5470	61.91	60.26	1.65	68.2	-6.29	110	260	Peak
5530	89.02	87.34	1.68	------	------	110	260	Average
5530	96.32	94.64	1.68	------	------	110	260	Peak
*5725	51.79	50.16	1.63	68.2	-16.41	110	260	Peak
11060	48.11	47.18	0.93	54	-5.89	128	145	Average
11060	59.42	58.49	0.93	74	-14.58	128	145	Peak

Remarks:

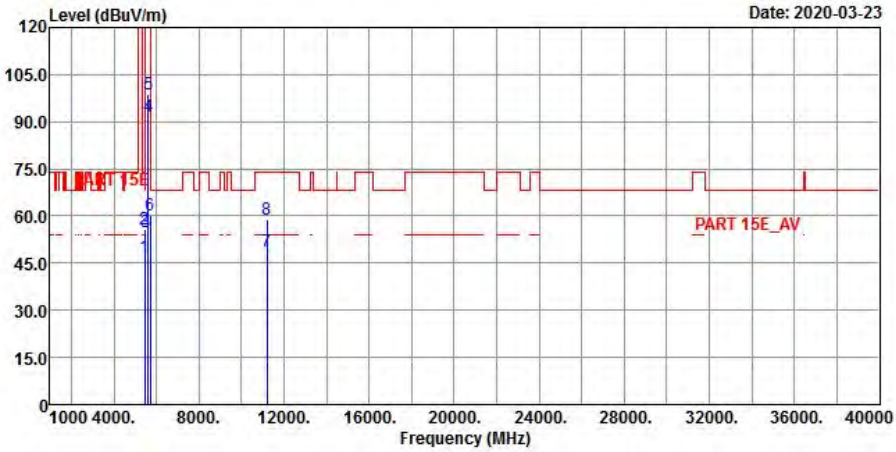
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5530 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

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**	Jisyong Wang

Horizontal



Vertical



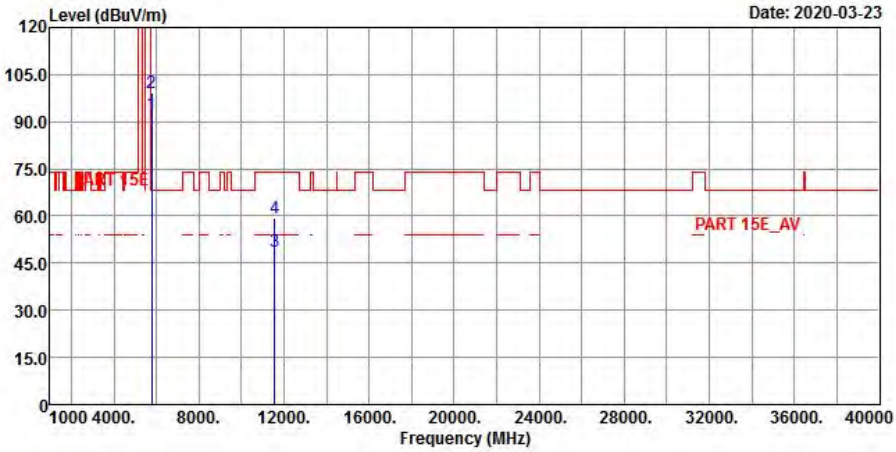
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	47.46	45.82	1.64	54	-6.54	212	50	Average
5460	57.8	56.16	1.64	74	-16.2	212	50	Peak
*5470	58.83	57.18	1.65	68.2	-9.37	212	50	Peak
5610	92.17	90.68	1.49	------	------	212	50	Average
5610	99	97.51	1.49	------	------	212	50	Peak
*5725	61.89	60.26	1.63	68.2	-6.31	212	50	Peak
11220	49.29	48.52	0.77	54	-4.71	152	132	Average
11220	59.9	59.13	0.77	74	-14.1	152	132	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	46.81	45.17	1.64	54	-7.19	104	260	Average
5460	55.75	54.11	1.64	74	-18.25	104	260	Peak
85470	55.09	53.44	1.65	68.2	-13.11	104	260	Peak
5610	91.74	90.25	1.49	------	------	104	260	Average
5610	98.73	97.24	1.49	------	------	104	260	Peak
*5725	60.25	58.62	1.63	68.2	-7.95	104	260	Peak
11220	48.79	48.02	0.77	54	-5.21	162	145	Average
11220	59.05	58.28	0.77	74	-14.95	162	145	Peak

Remarks:

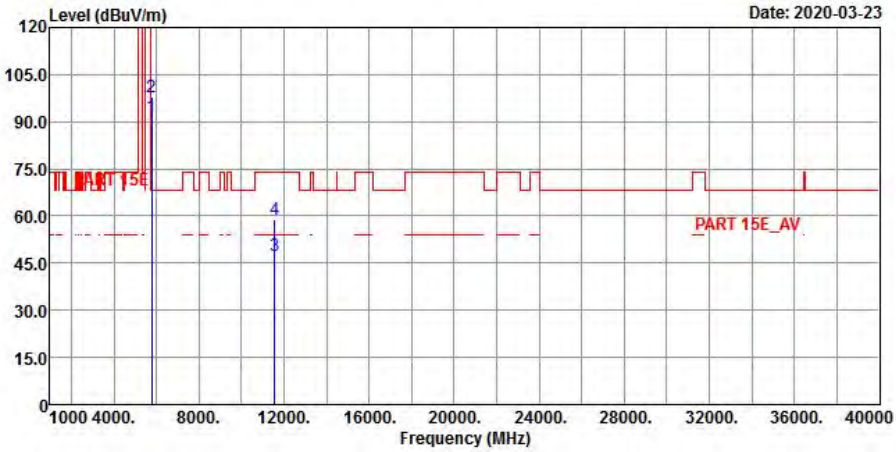
1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5610 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 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**	Jisyong Wang

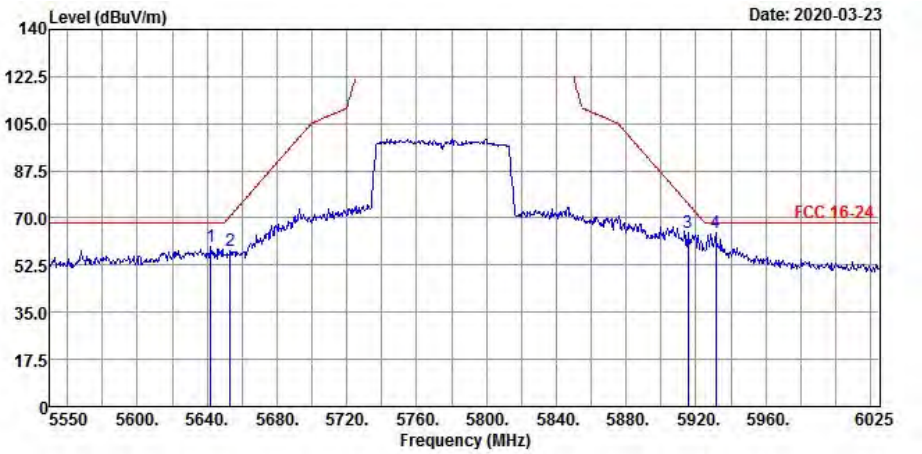
<Spurious Emission>
Horizontal



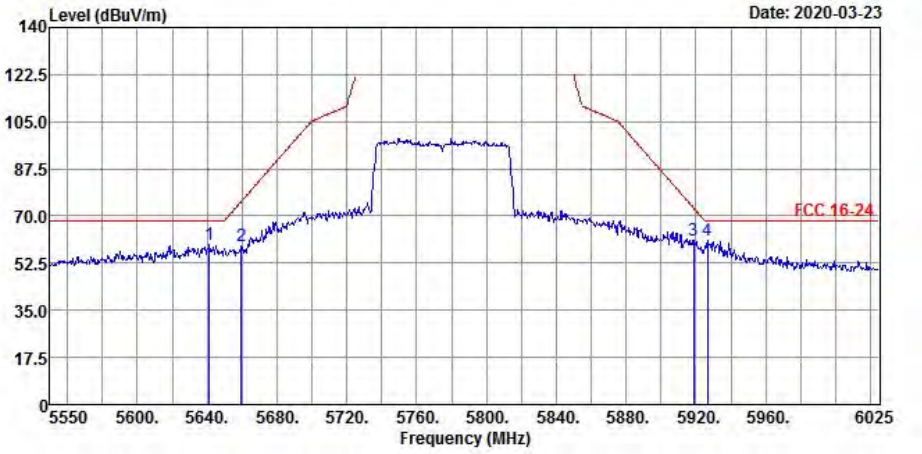
Vertical



<Out of Band Emission (OOBE)>
Horizontal



Vertical



<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	92.39	90.63	1.76	------	------	100	173	Average
5775	99.23	97.47	1.76	------	------	100	173	Peak
11550	48.53	47.61	0.92	54	-5.47	123	142	Average
11550	59.15	58.23	0.92	74	-14.85	123	142	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	91.51	89.75	1.76	------	------	102	262	Average
5775	97.92	96.16	1.76	------	------	102	262	Peak
11550	47.44	46.52	0.92	54	-6.56	132	164	Average
11550	58.72	57.8	0.92	74	-15.28	132	164	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**
5642.15	59.3	57.87	1.43	68.2	-8.9	100	173	Peak
5653.075	58.08	56.63	1.45	70.49	-12.41	100	173	Peak
5915.275	64.38	62.04	2.34	75.37	-10.99	100	173	Peak
5931.425	64.58	62.2	2.38	68.2	-3.62	100	173	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**
5641.2	59.16	57.73	1.43	68.2	-9.04	102	262	Peak
5659.725	58.8	57.38	1.42	75.42	-16.62	102	262	Peak
5918.6	61.18	58.83	2.35	72.92	-11.74	102	262	Peak
5926.675	61.02	58.65	2.37	68.2	-7.18	102	262	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:

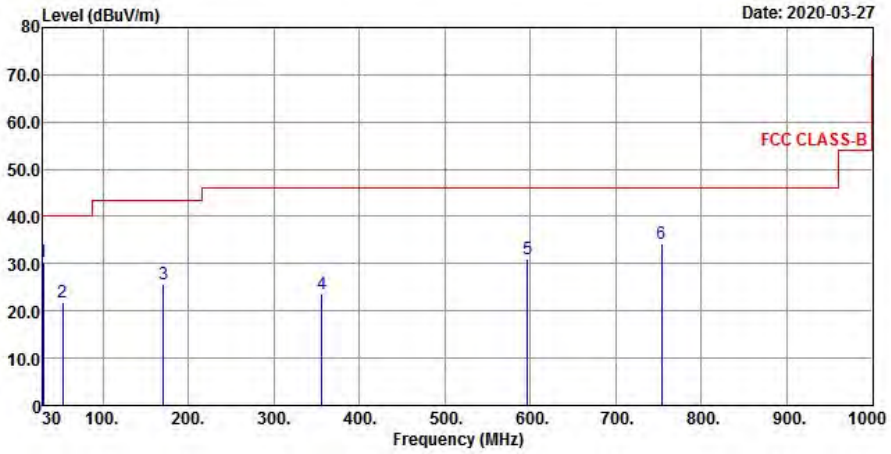
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

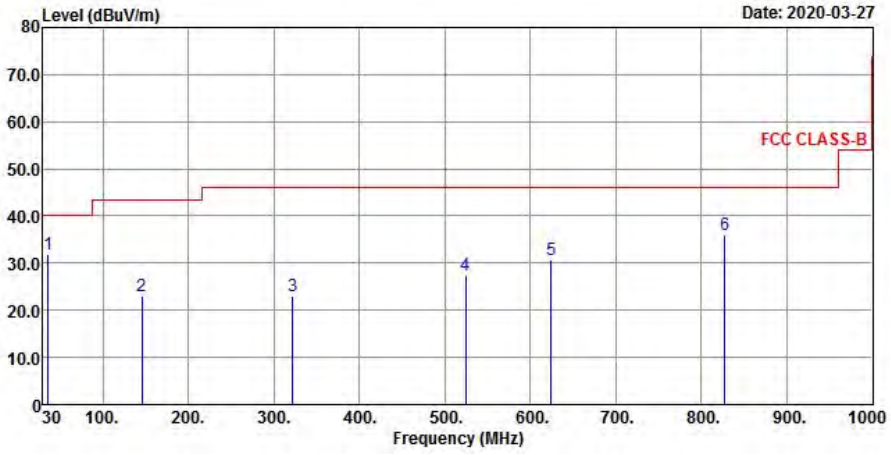
802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 46	**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**	Getaz Yang

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**
30	30.47	43.35	-12.88	40	-9.53	129	74	Peak
53.28	21.72	33.57	-11.85	40	-18.28	138	63	Peak
170.65	25.55	37.89	-12.34	43.5	-17.95	100	5	Peak
355.92	23.53	33.09	-9.56	46	-22.47	131	267	Peak
596.48	30.99	33.8	-2.81	46	-15.01	100	35	Peak
753.62	34.24	33.24	1	46	-11.76	107	44	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**
35.82	31.79	44.54	-12.75	40	-8.21	138	134	Peak
145.43	23.06	34.86	-11.8	43.5	-20.44	103	119	Peak
321.97	23.06	33.42	-10.36	46	-22.94	104	329	Peak
524.7	27.42	32.47	-5.05	46	-18.58	101	309	Peak
624.61	30.79	32.7	-1.91	46	-15.21	110	228	Peak
827.34	36.07	33.84	2.23	46	-9.93	135	45	Peak

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	102412	Feb. 17, 2020	Feb. 16, 2021
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 05, 2019	Sep. 04, 2020
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Jan. 20, 2020	Jan. 19, 2021
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 13, 2019	Aug. 12, 2020
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.
3. The VCCI Site Registration No. is C-12047.

4.2.3 Test Procedures

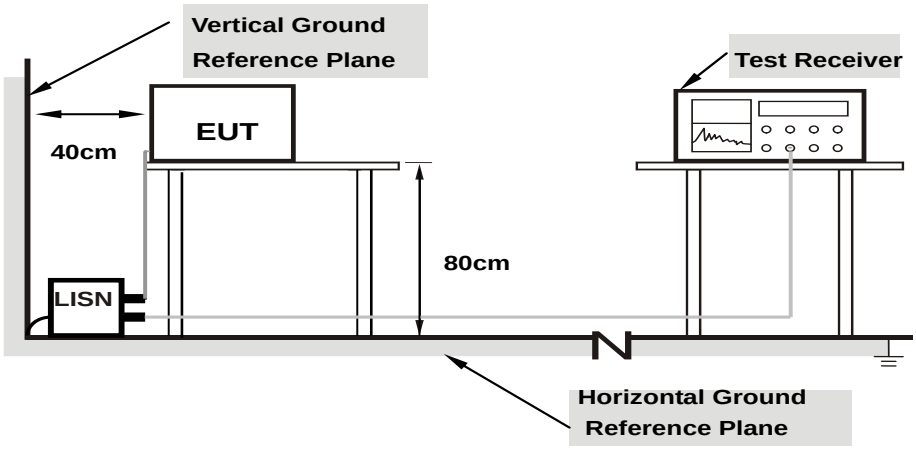
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

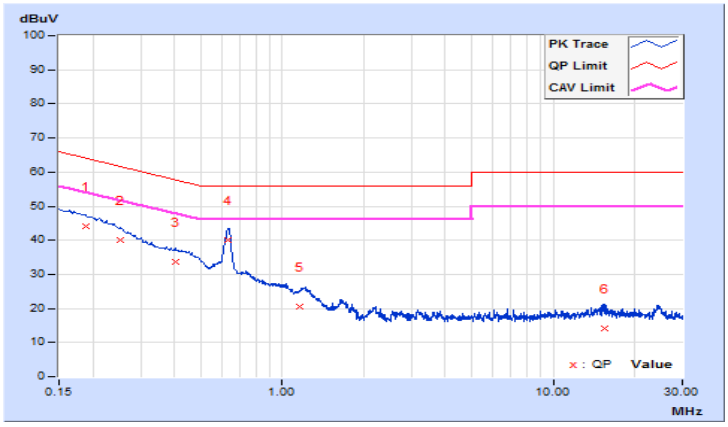
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Jisyong Wang	Test Date	2020/4/23

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	0.18825	10.17	33.94	30.69	44.11	40.86	64.11	54.11	-20.00	-13.25
2	0.25210	10.18	29.78	25.52	39.96	35.70	61.69	51.69	-21.73	-15.99
3	0.40200	10.20	23.56	20.14	33.76	30.34	57.81	47.81	-24.05	-17.47
4	0.62853	10.22	29.83	23.23	40.05	33.45	56.00	46.00	-15.95	-12.55
5	1.15575	10.27	10.25	8.09	20.52	18.36	56.00	46.00	-35.48	-27.64
6	15.57375	10.54	3.64	1.14	14.18	11.68	60.00	50.00	-45.82	-38.32

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

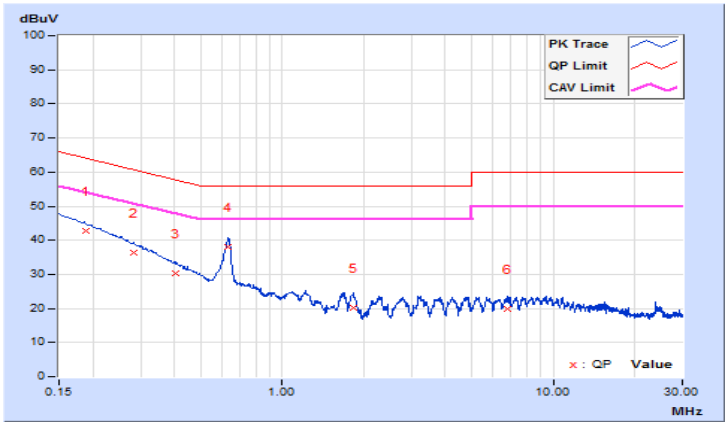


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Jisyong Wang	Test Date	2020/4/23

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	0.18825	10.13	32.52	30.17	42.65	40.30	64.11	54.11	-21.46	-13.81
2	0.28167	10.15	26.34	24.11	36.49	34.26	60.77	50.77	-24.28	-16.51
3	0.40200	10.18	20.07	18.54	30.25	28.72	57.81	47.81	-27.56	-19.09
4	0.63150	10.20	27.86	24.24	38.06	34.44	56.00	46.00	-17.94	-11.56
5	1.83300	10.27	9.85	6.50	20.12	16.77	56.00	46.00	-35.88	-29.23
6	6.81000	10.47	9.44	6.36	19.91	16.83	60.00	50.00	-40.09	-33.17

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

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

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

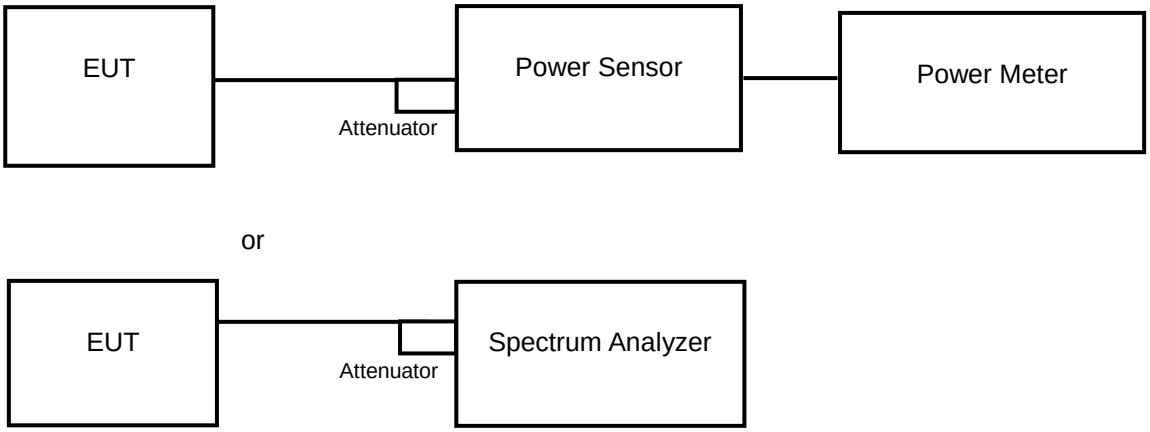
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};

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

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

4.3.2 Test Setup

<Power Output Measurement>



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.

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	47.098	16.73	24	Pass
40	5200	131.522	21.19	24	Pass
48	5240	100.231	20.01	24	Pass
52	5260	158.855	22.01	24	Pass
60	5300	93.756	19.72	24	Pass
64	5320	42.364	16.27	24	Pass
100	5500	41.879	16.22	24	Pass
116	5580	110.408	20.43	24	Pass
140	5700	19.011	12.79	24	Pass
144	5720 (U-NII-2C)	82.224	19.15	24	Pass
144	5720 (U-NII-3)	22.182	13.46	30	Pass
149	5745	142.233	21.53	30	Pass
157	5785	140.929	21.49	30	Pass
165	5825	136.144	21.34	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	62.517	17.96	24	Pass
40	5200	142.233	21.53	24	Pass
48	5240	115.878	20.64	24	Pass
52	5260	182.39	22.61	24	Pass
60	5300	97.949	19.91	24	Pass
64	5320	44.566	16.49	24	Pass
100	5500	44.668	16.50	24	Pass
116	5580	137.088	21.37	24	Pass
140	5700	25.41	14.05	24	Pass
144	5720 (U-NII-2C)	83.368	19.21	24	Pass
144	5720 (U-NII-3)	25.823	14.12	30	Pass
149	5745	143.219	21.56	30	Pass
157	5785	162.555	22.11	30	Pass
165	5825	129.718	21.13	30	Pass

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	20.045	13.02	24	Pass
46	5230	130.918	21.17	24	Pass
54	5270	77.09	18.87	24	Pass
62	5310	28.054	14.48	24	Pass
102	5510	35.481	15.50	24	Pass
110	5550	116.95	20.68	24	Pass
134	5670	31.769	15.02	24	Pass
142	5710 (U-NII-2C)	100.925	20.04	24	Pass
142	5710 (U-NII-3)	12.445	10.95	30	Pass
151	5755	140.281	21.47	30	Pass
159	5795	125.026	20.97	30	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	13.459	11.29	24	Pass
58	5290	19.861	12.98	24	Pass
106	5530	19.055	12.80	24	Pass
122	5610	46.559	16.68	24	Pass
138	5690 (U-NII-2C)	65.615	18.17	24	Pass
138	5690 (U-NII-3)	3.54	5.49	30	Pass
155	5775	46.452	16.67	30	Pass

EUT Maximum Conducted Power

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5180-5240	131.522	21.19
5260-5320	158.855	22.01
5500-5720	110.408	20.43
5745-5825	142.233	21.53

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5180-5240	142.233	21.53
5260-5320	182.39	22.61
5500-5720	137.088	21.37
5745-5825	162.555	22.11

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5190-5230	130.918	21.17
5270-5310	77.09	18.87
5510-5710	116.950	20.68
5755-5795	140.281	21.47

802.11ac (VHT80)

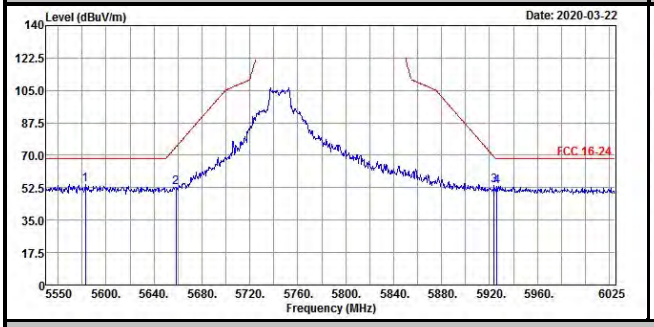
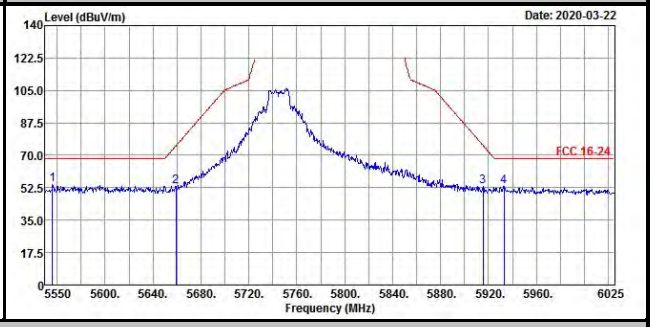
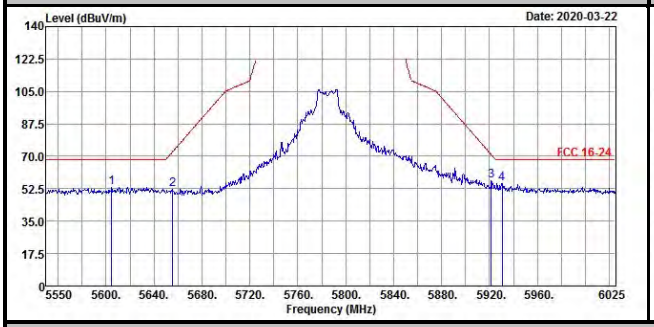
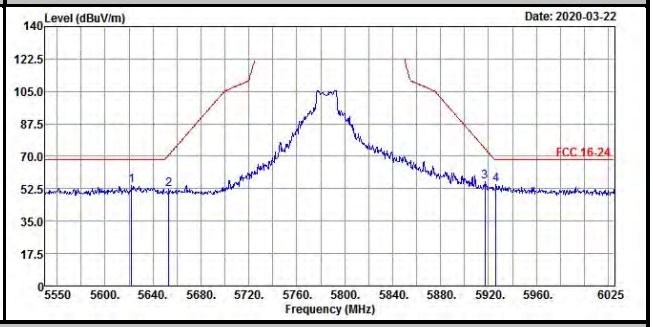
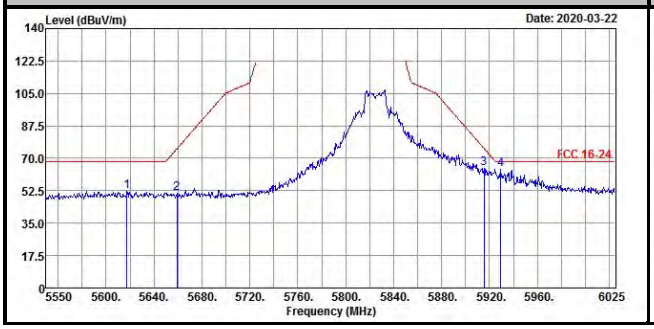
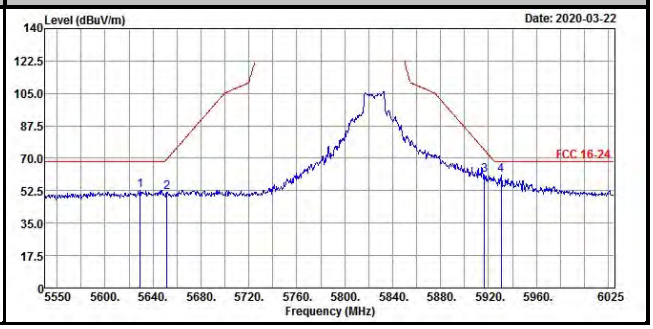
Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5210	20.941	13.21
5290	19.861	12.98
5530-5690	65.615	18.17
5775	46.452	16.67

5 Pictures of Test Arrangements

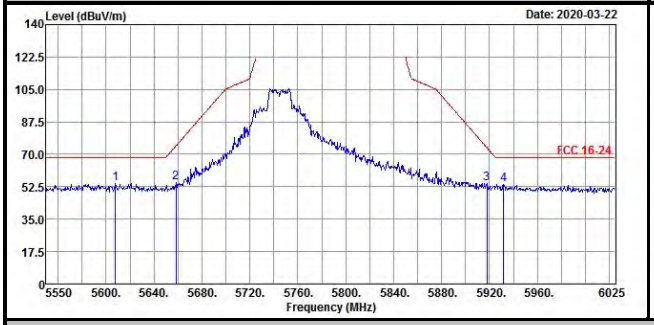
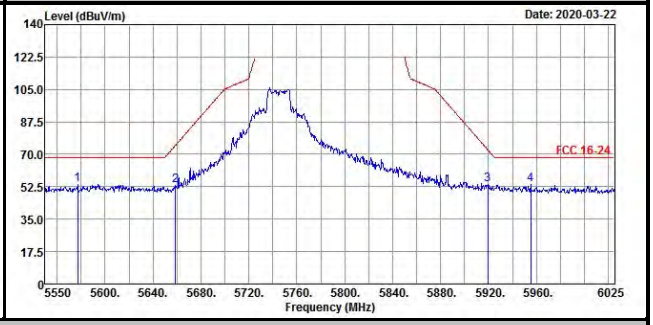
Please refer to the attached file (Test Setup Photo).

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

802.11a

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

802.11n (HT20)

Ch 149	
Horizontal	Vertical
	
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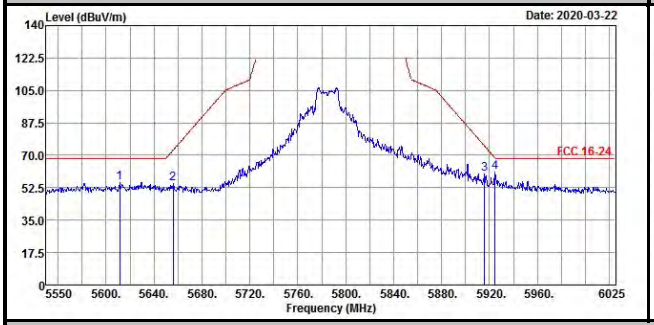
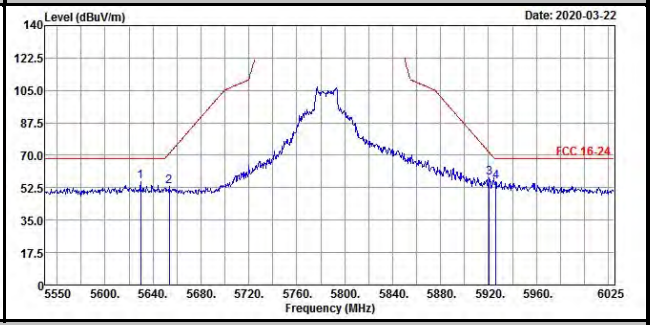
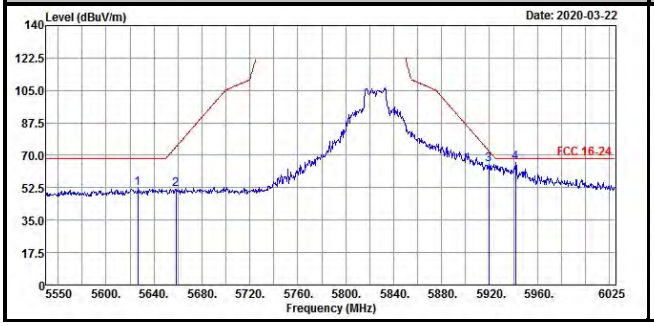
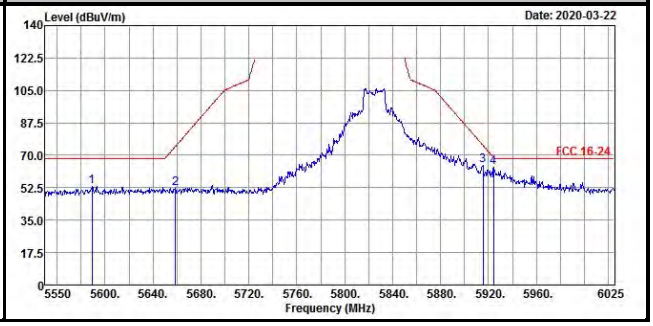
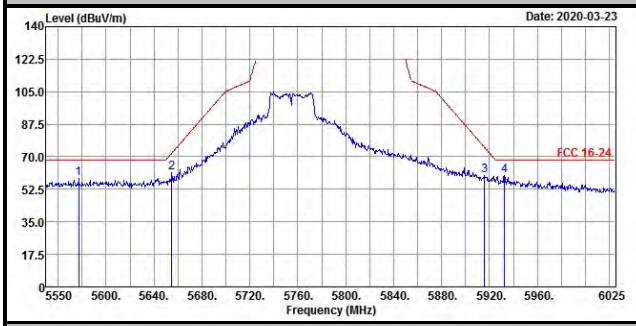
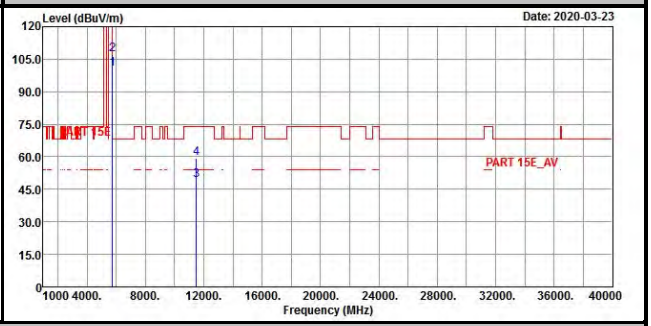
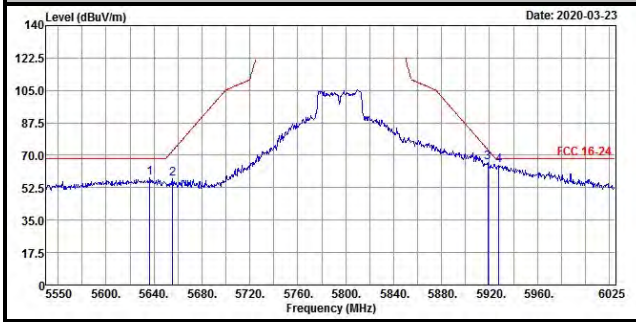
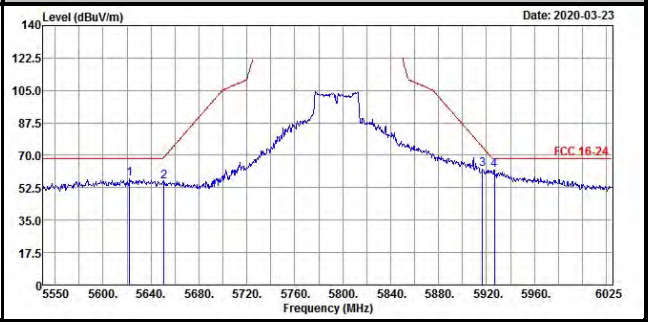
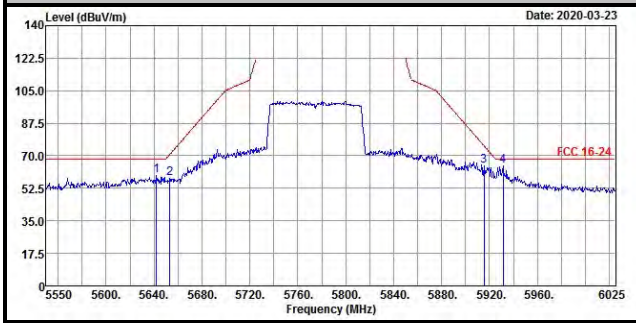
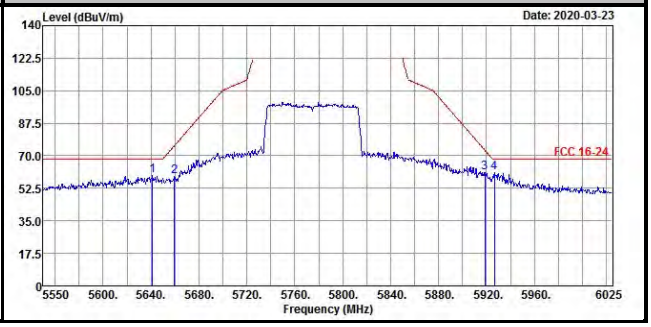
Horizontal	Vertical
	
Ch 165	
Horizontal	Vertical
	

802.11n (HT40)

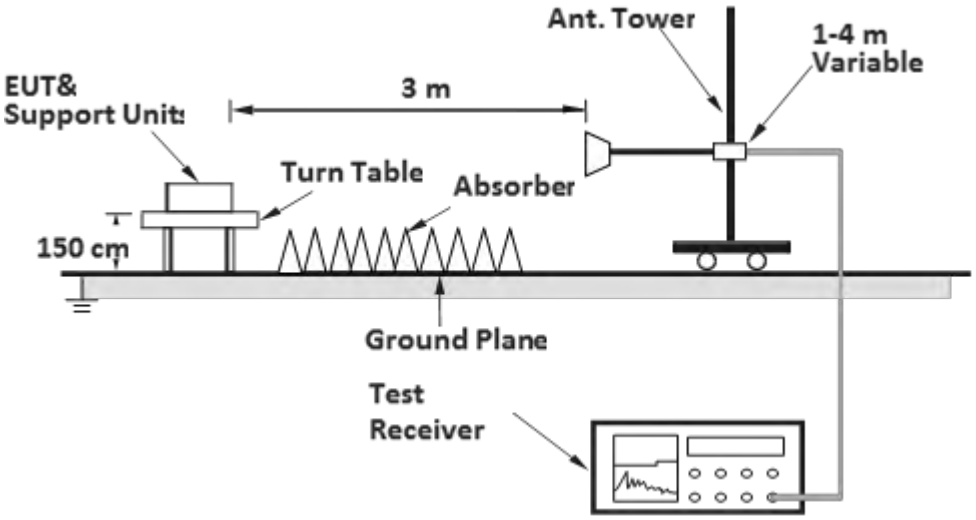
Ch 151	
Horizontal	Vertical
	
Ch 159	
Horizontal	Vertical
	

802.11ac (VHT80)

Ch 155	
Horizontal	Vertical
	

Annex B- Band-edge measurement

<Radiated Emission above 1 GHz>



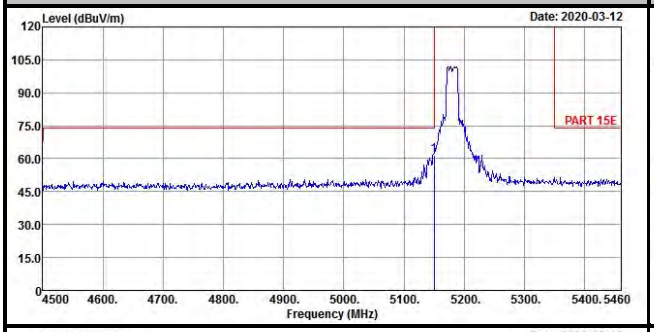
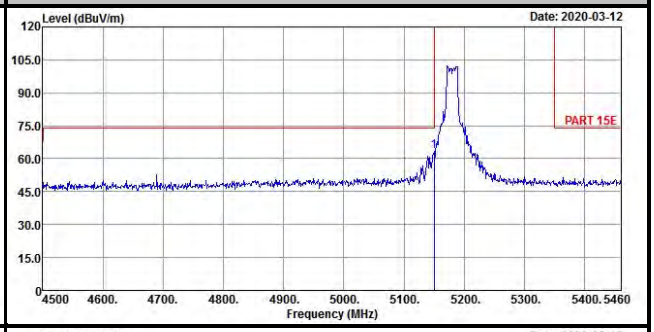
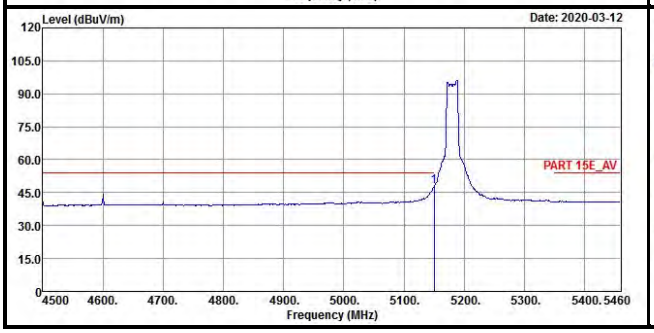
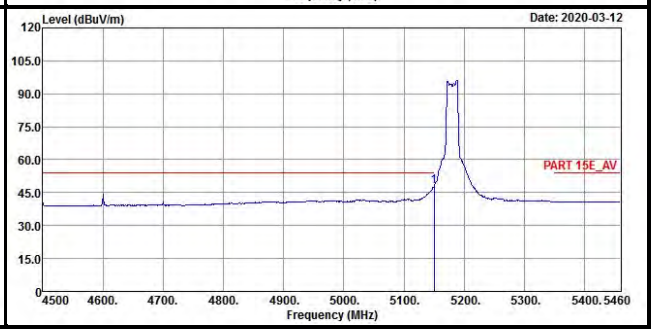
For the actual test configuration, please refer to the attached file (Test Setup Photo).

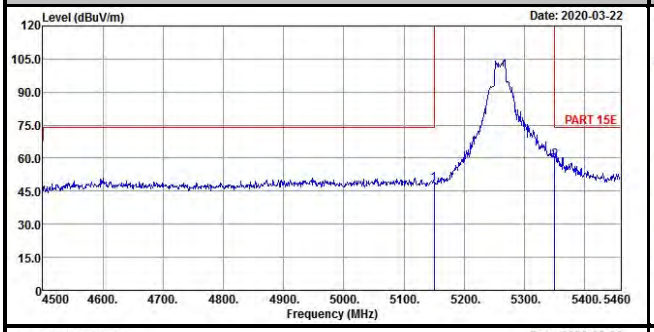
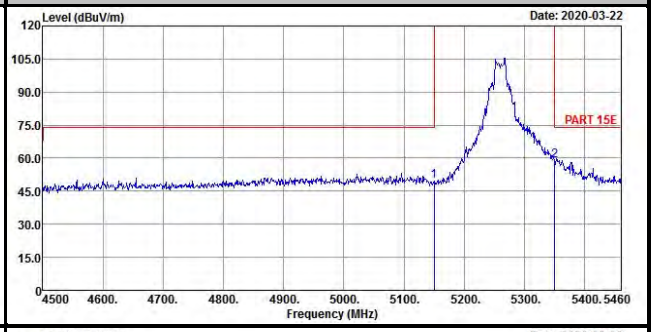
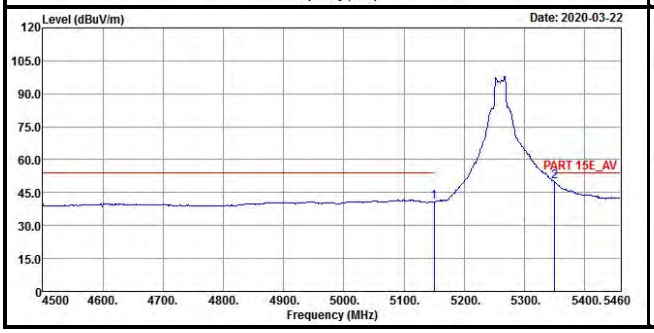
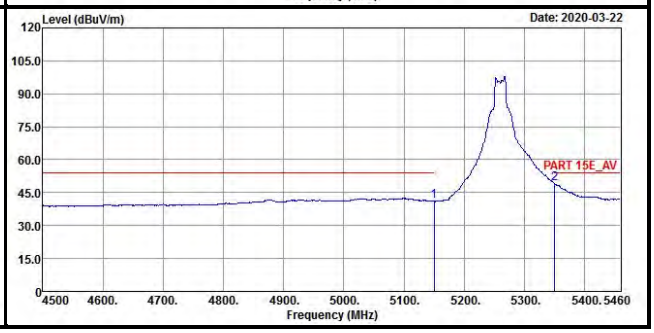
EUT Operating Conditions

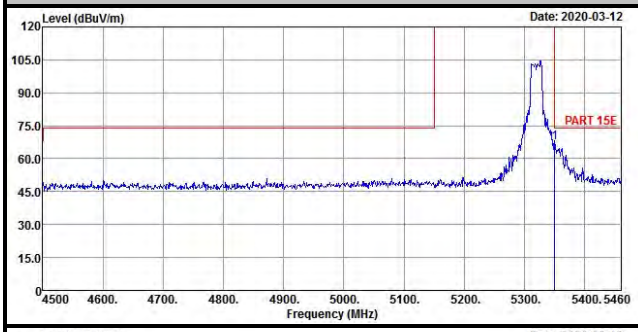
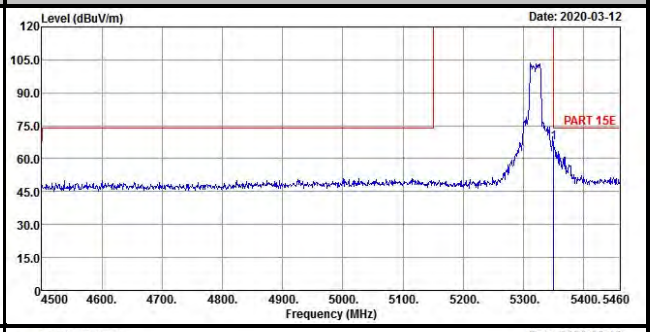
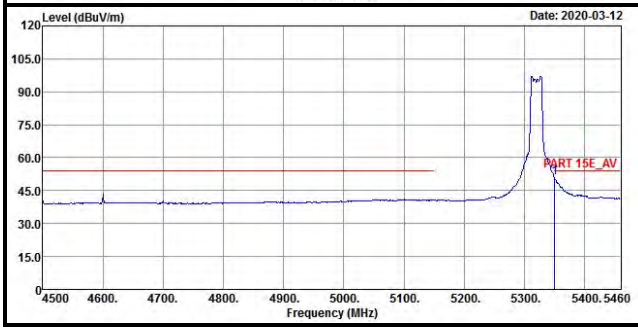
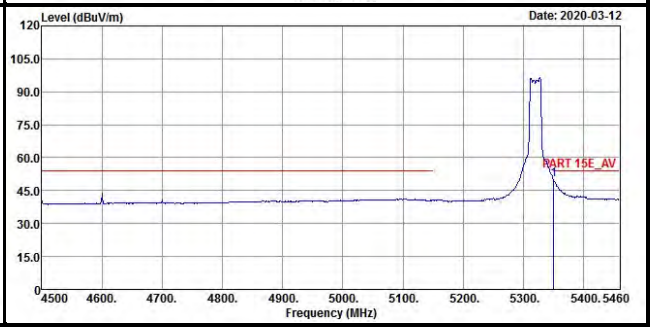
a. Placed the EUT on a testing table.

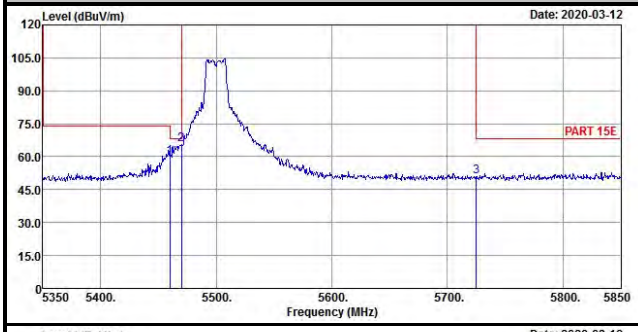
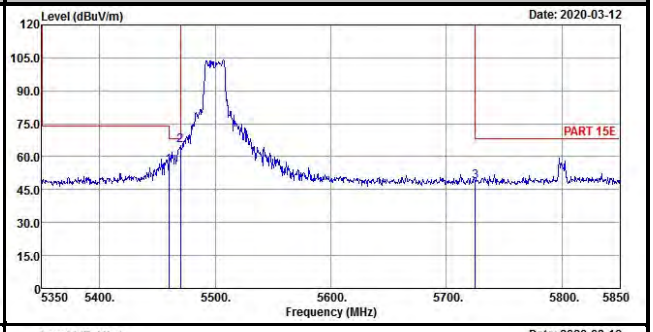
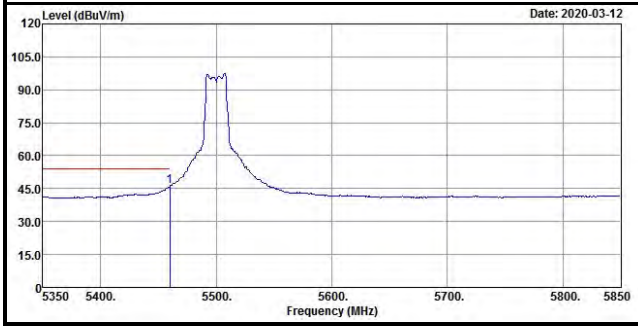
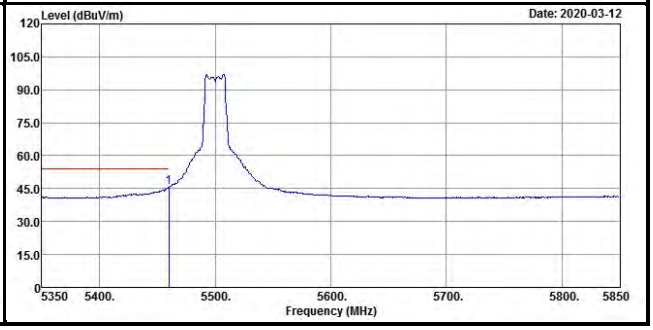
b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

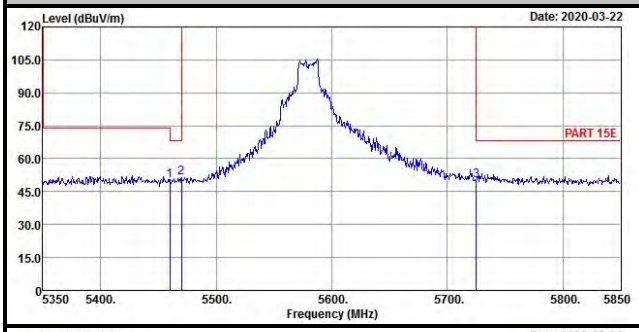
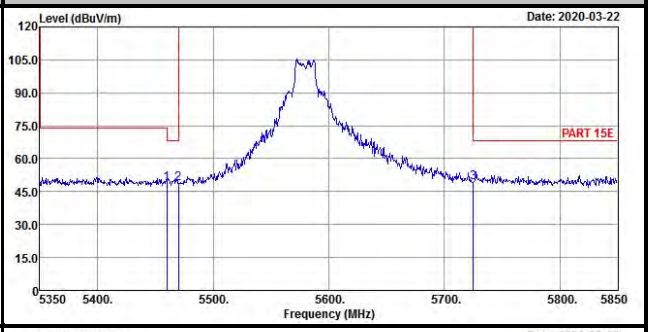
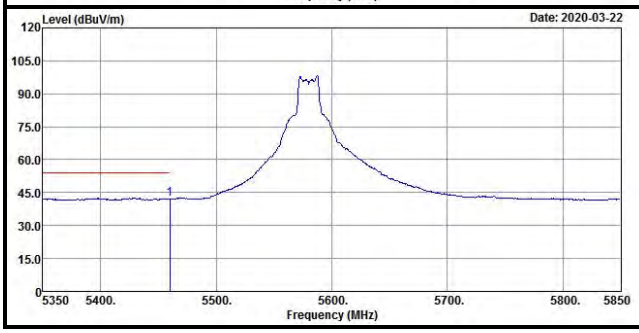
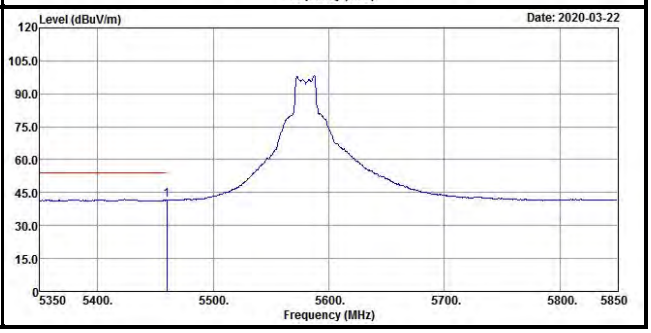
802.11a

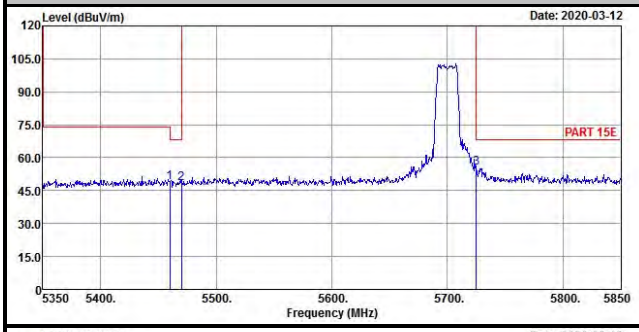
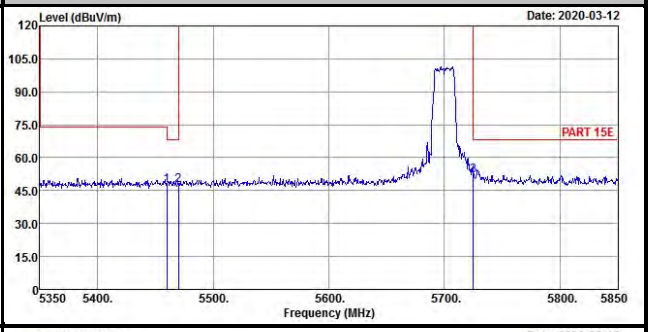
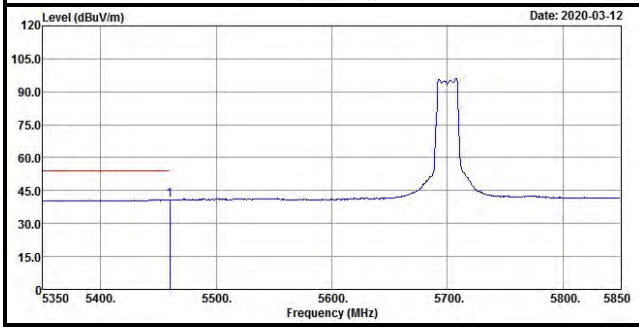
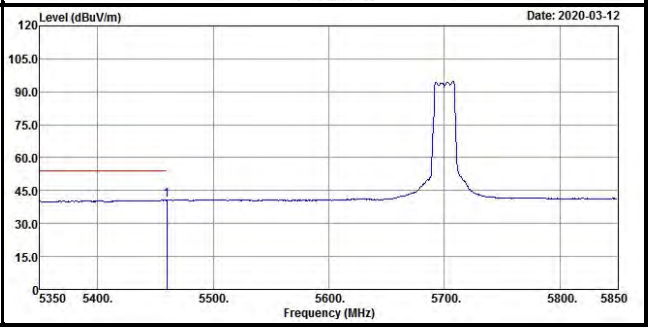
Ch 36	
Horizontal	**Vertical**
	
	

Ch 52	
Horizontal	**Vertical**
	
	

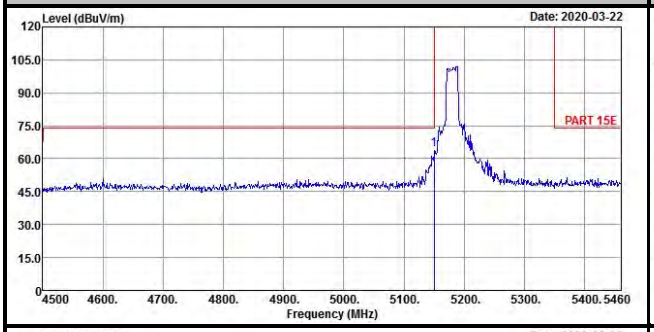
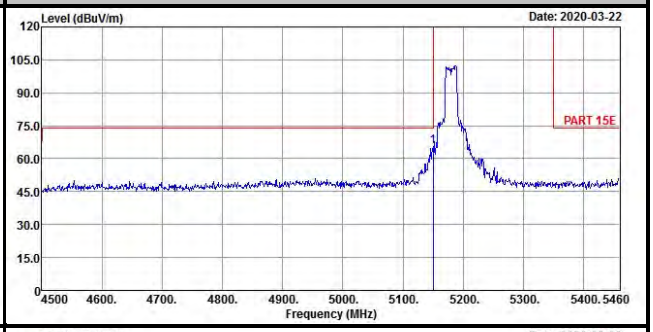
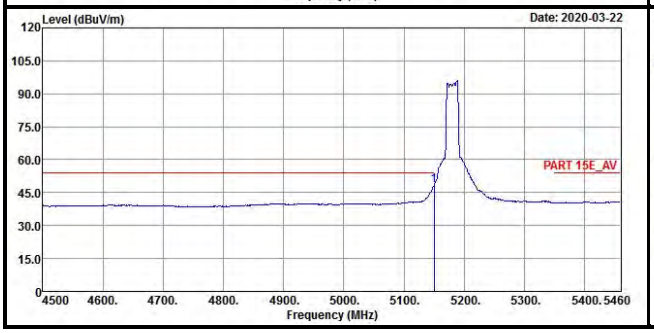
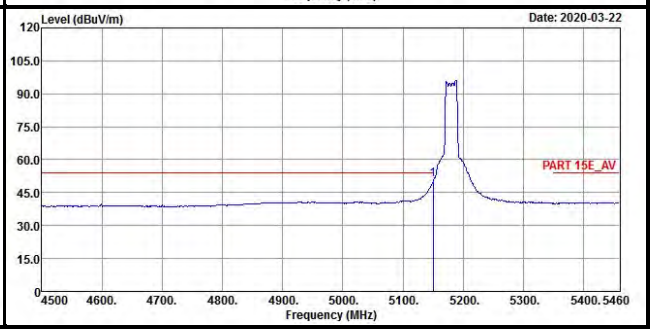
Ch 64	
Horizontal	Vertical
	
	

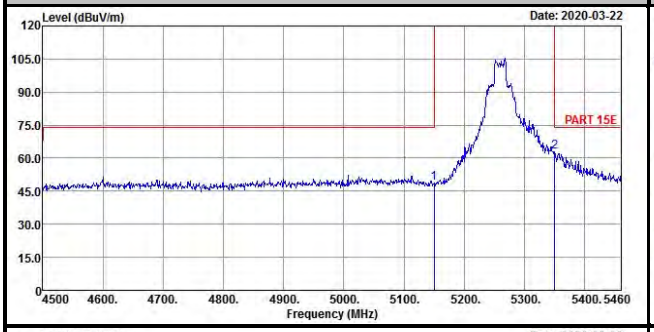
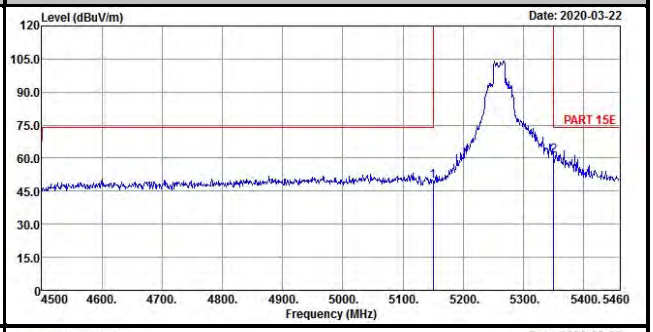
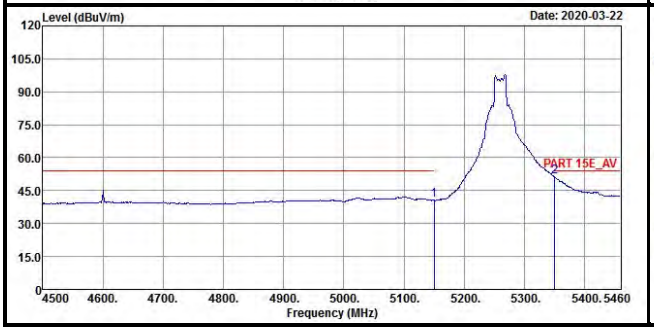
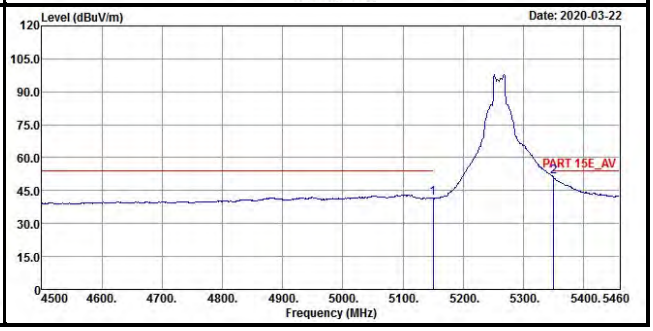
Ch 100	
Horizontal	Vertical
	
	

Ch 116	
Horizontal	Vertical
	
	

Ch 140	
Horizontal	Vertical
	
	

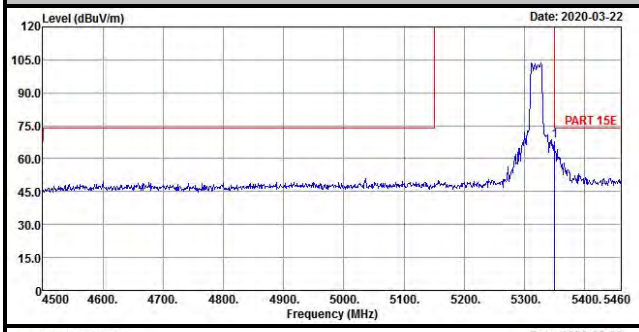
802.11n (HT20)

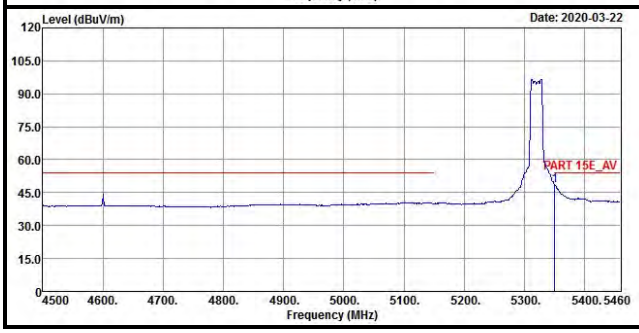
Ch 36	
Horizontal	Vertical
	
	

Ch 52	
Horizontal	Vertical
	
	

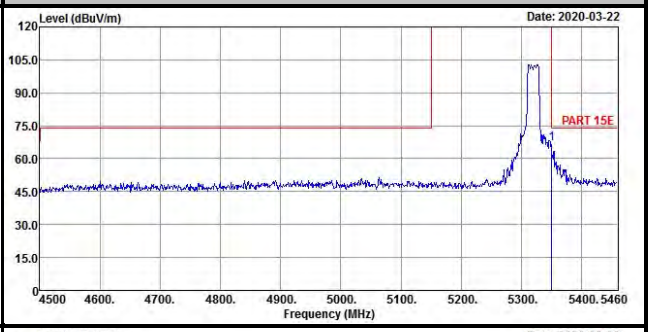
Ch 64

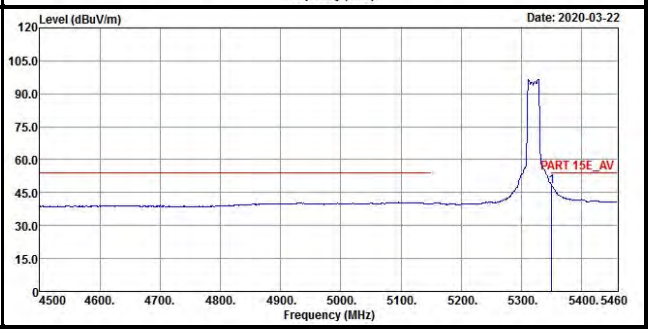
Horizontal





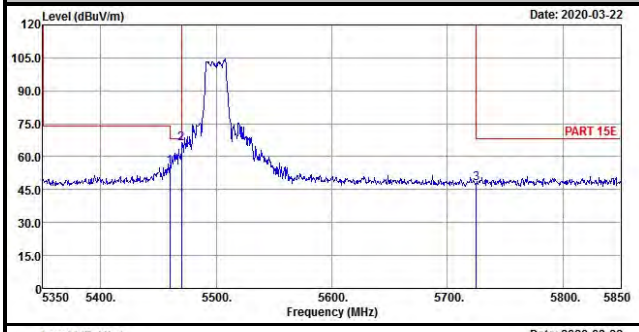
Vertical

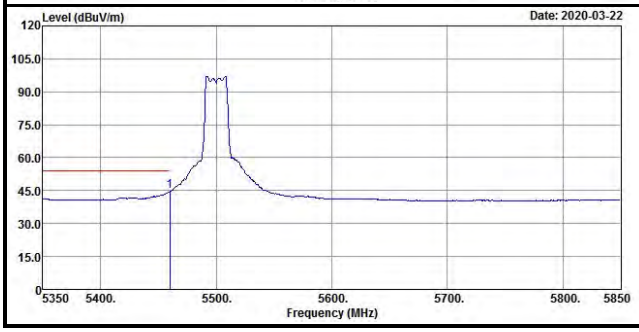




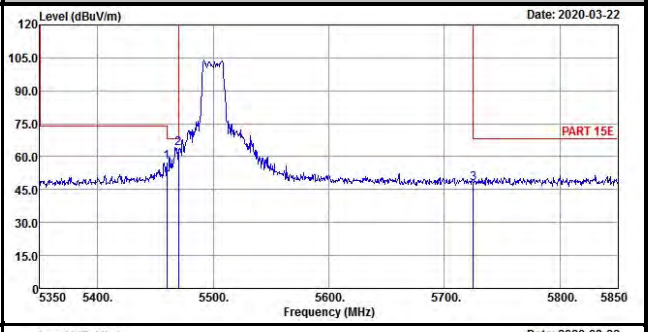
Ch 100

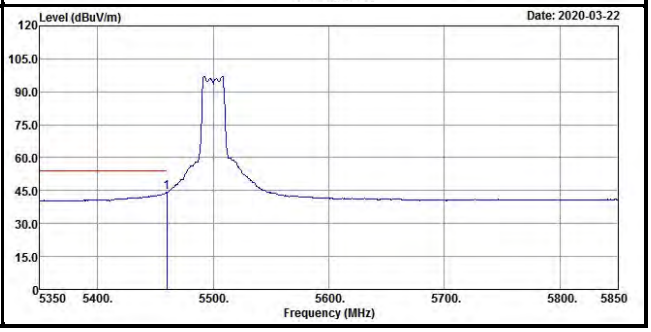
Horizontal





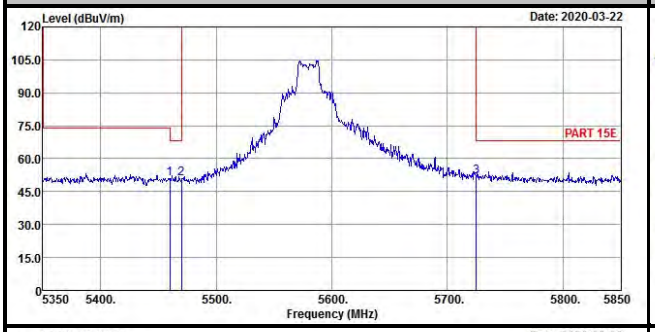
Vertical

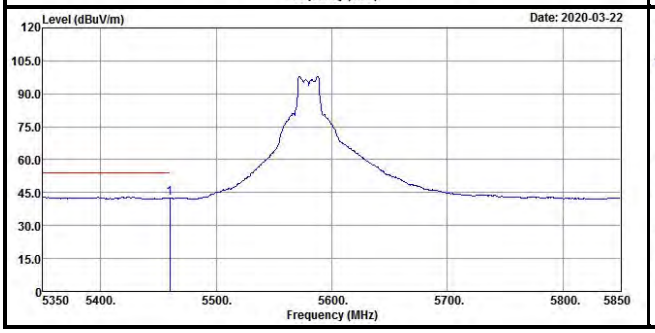




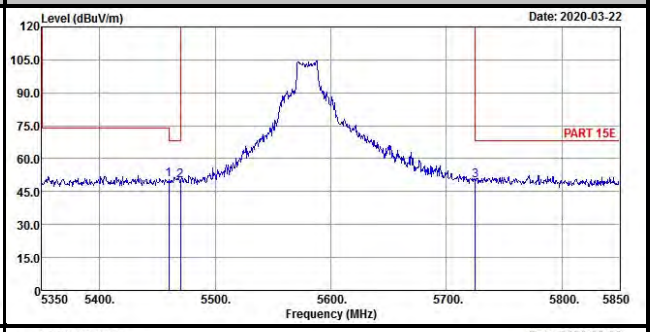
Ch 116

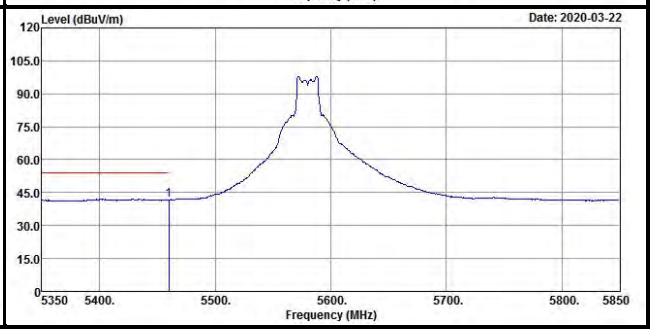
Horizontal





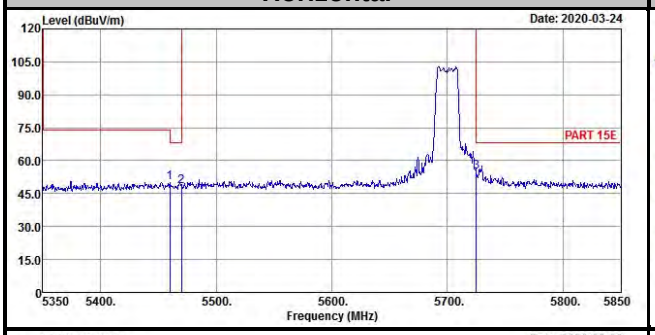
Vertical

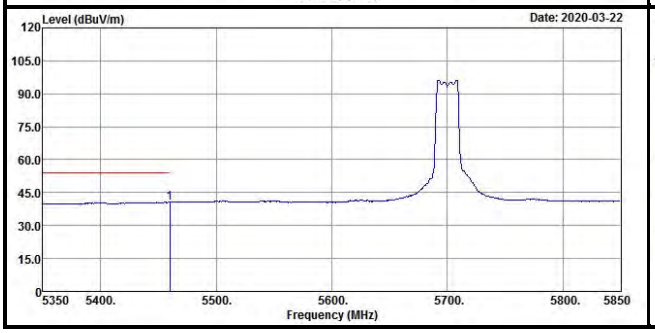




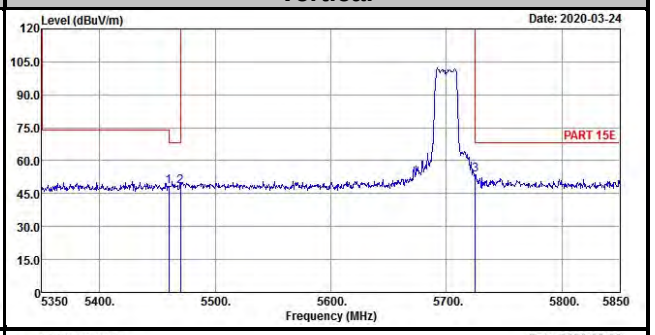
Ch 140

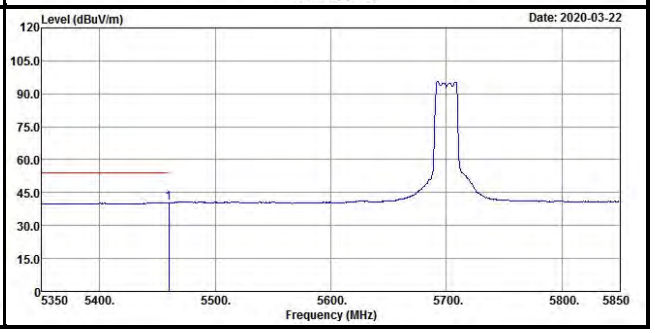
Horizontal



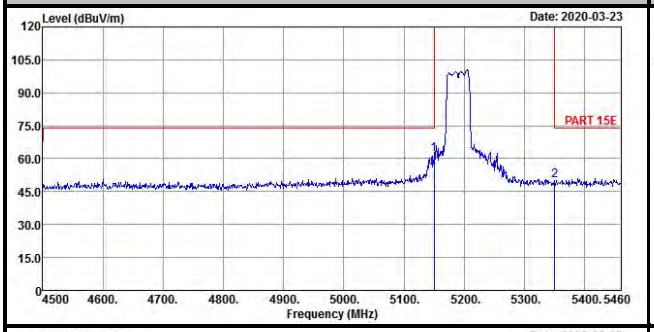
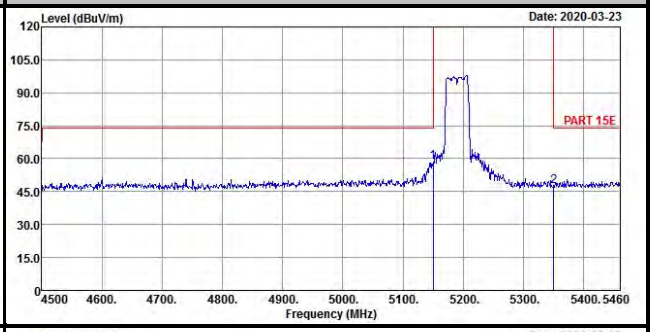
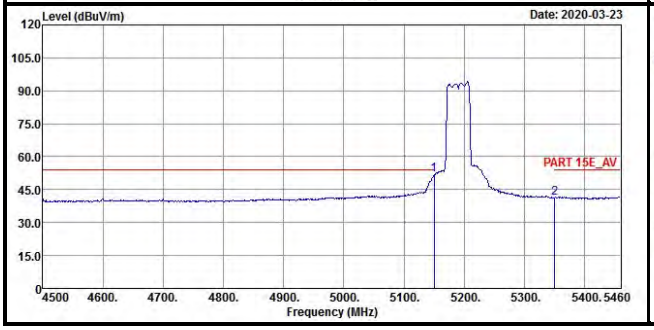
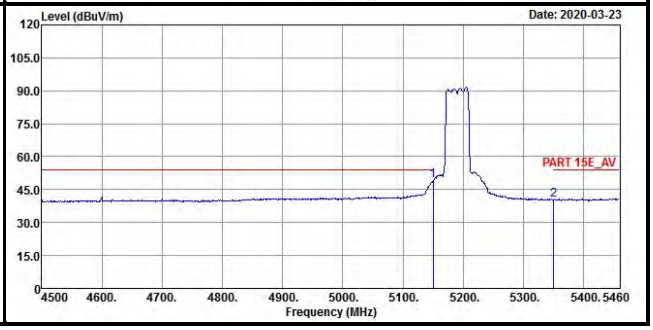


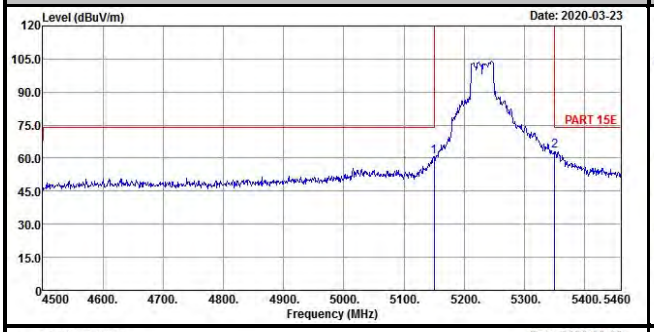
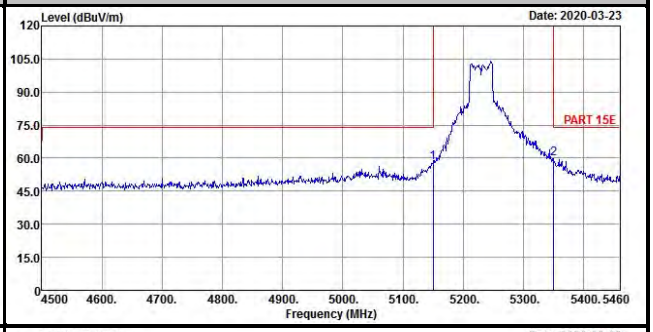
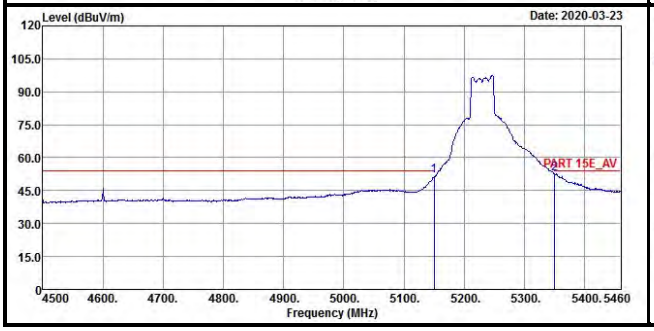
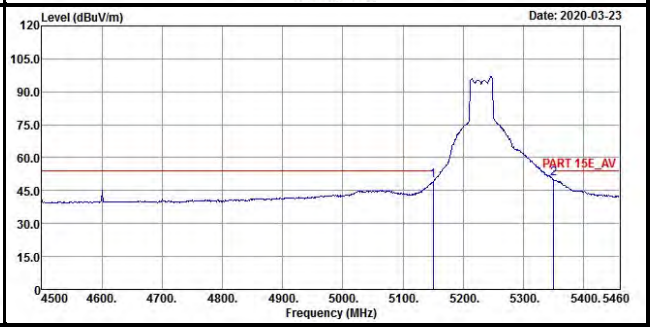
Vertical

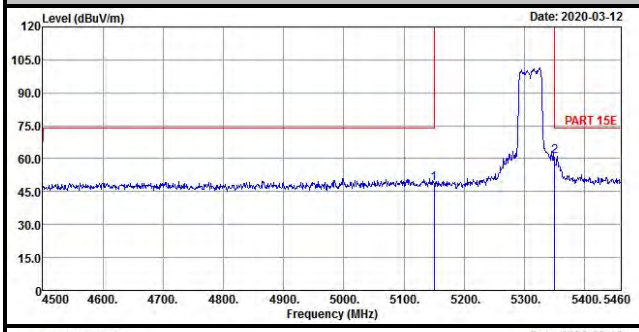
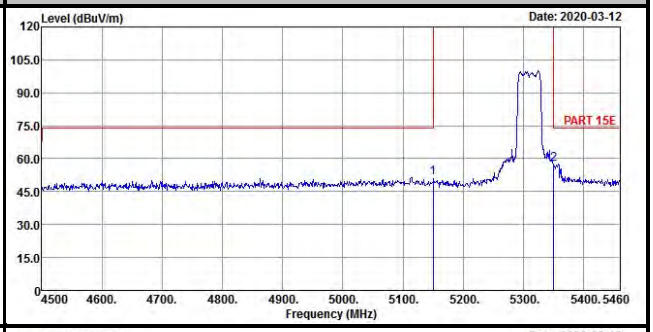
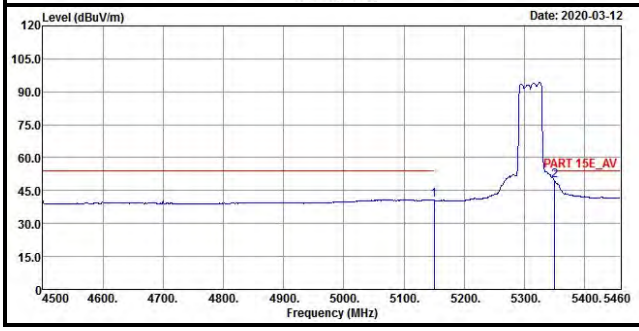
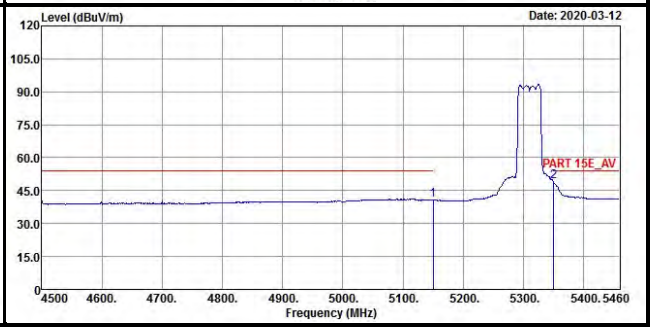


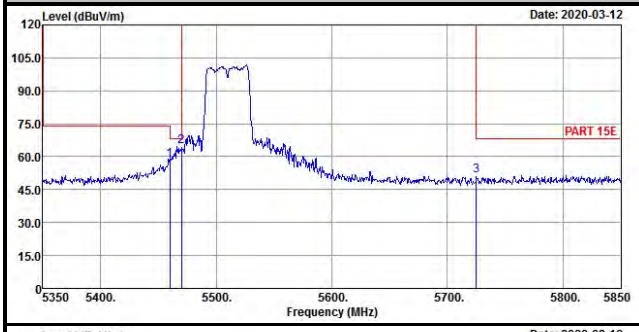
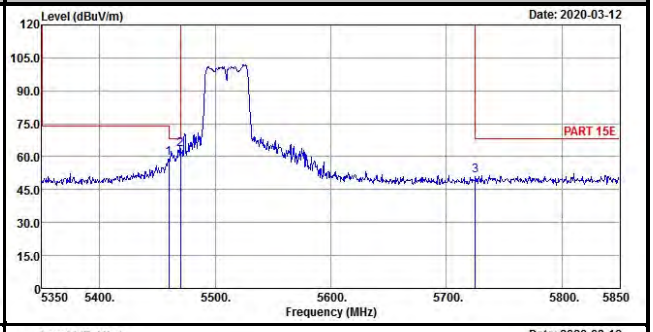
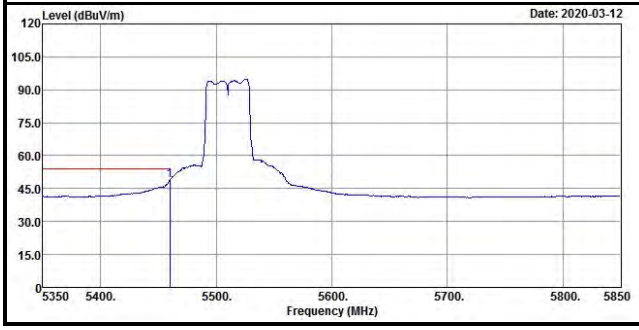
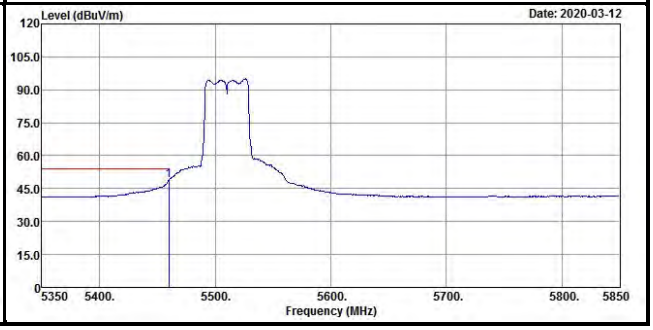


802.11n (HT40)

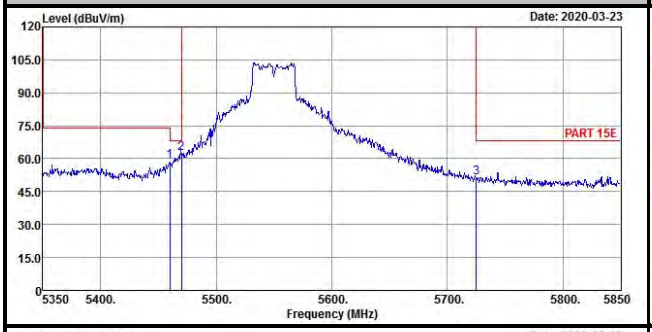
Ch 38	
Horizontal	**Vertical**
	
	

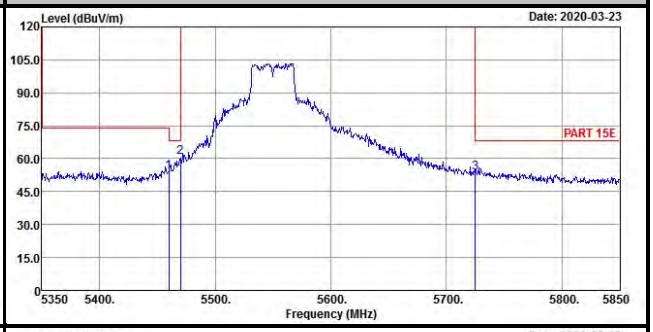
Ch 46	
Horizontal	**Vertical**
	
	

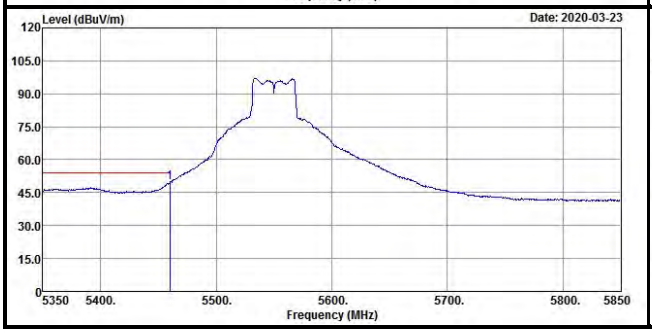
Ch 62	
Horizontal	Vertical
	
	

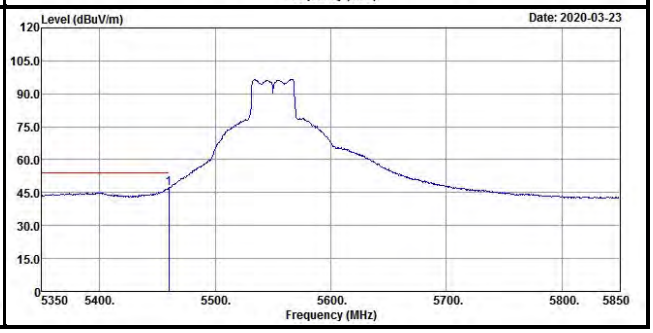
Ch 102	
Horizontal	Vertical
	
	

Ch 110	
Horizontal	Vertical

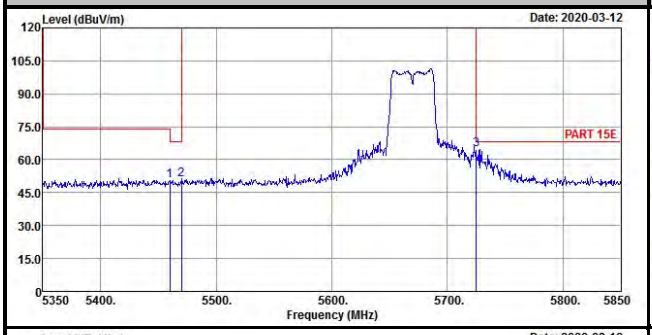


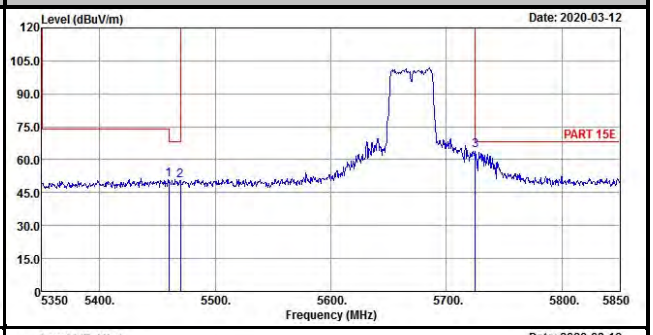


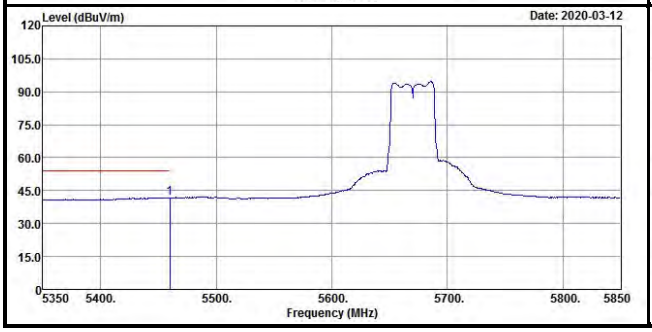


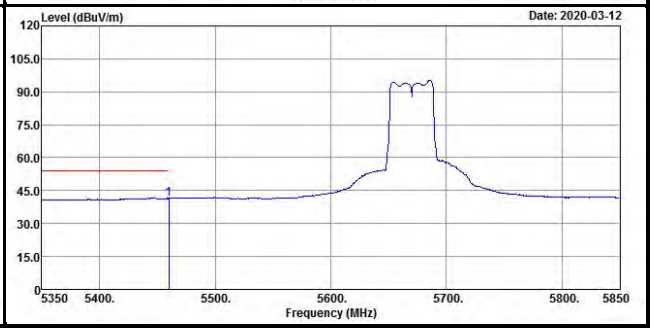


Ch 134	
Horizontal	Vertical

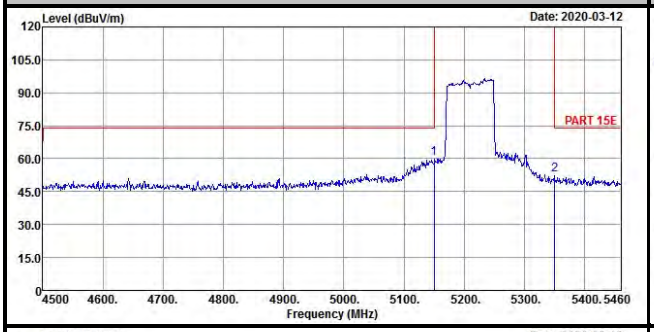
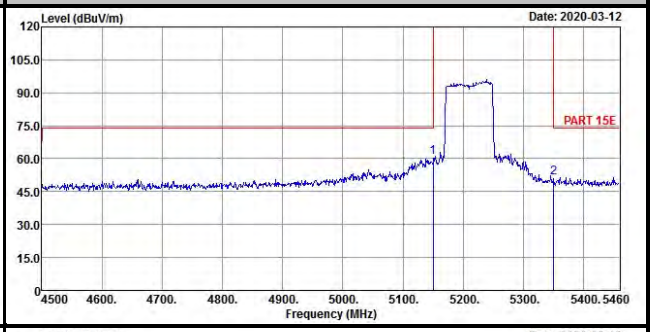
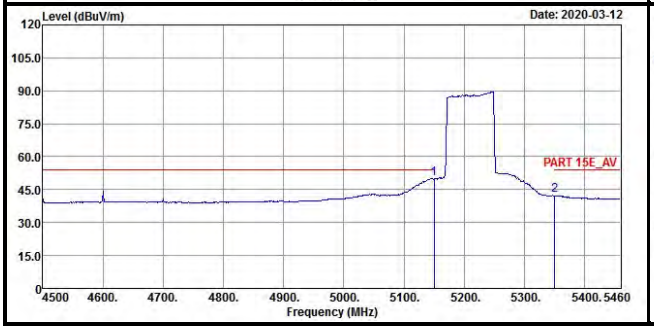
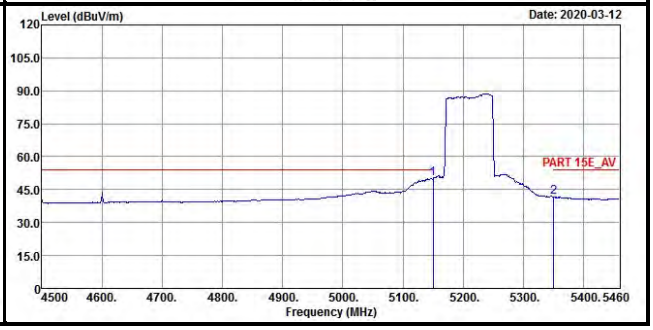


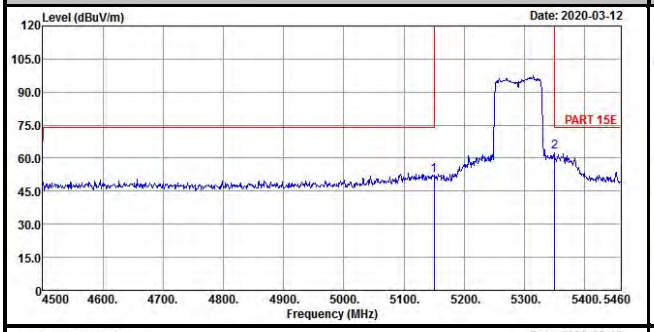
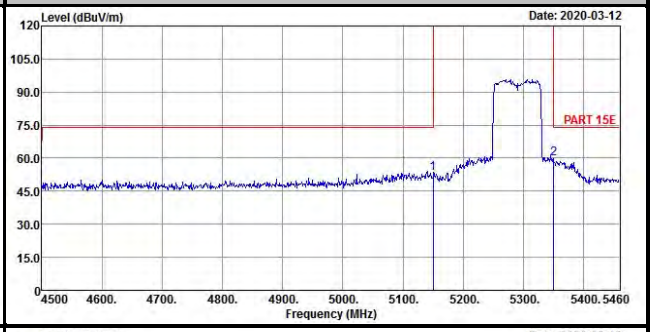
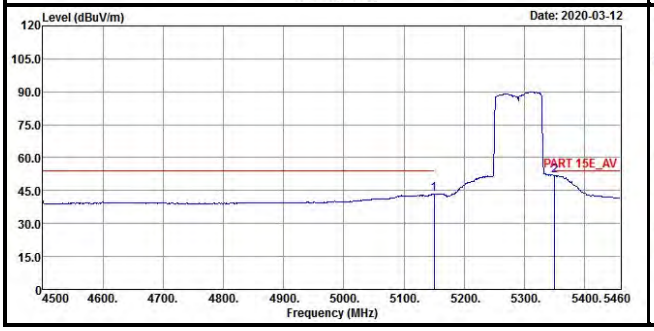
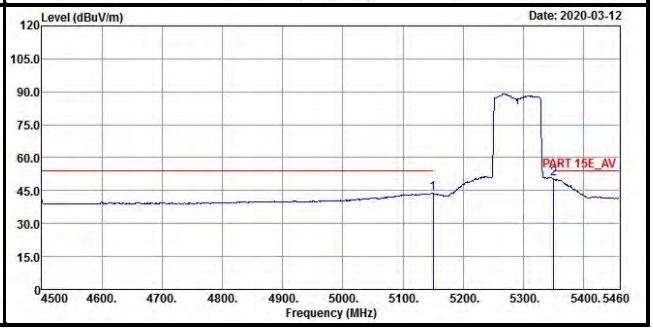


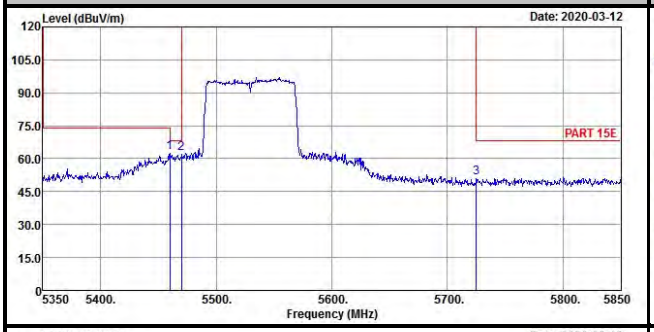
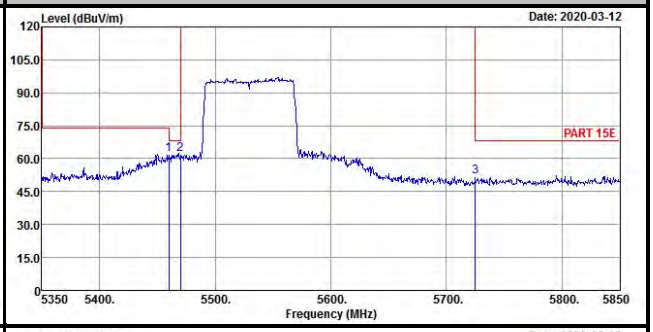
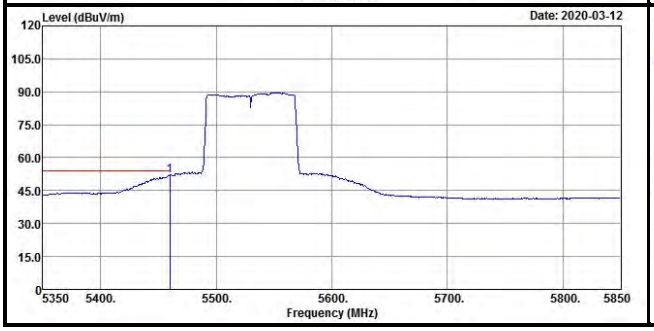
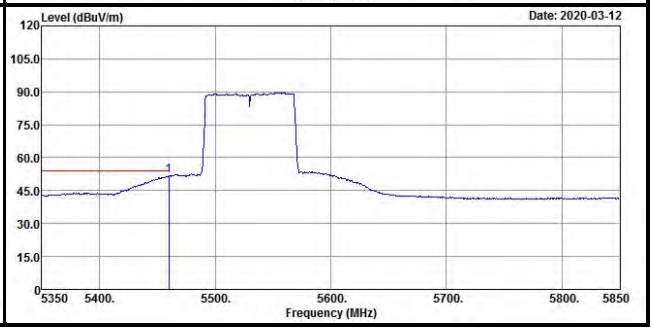


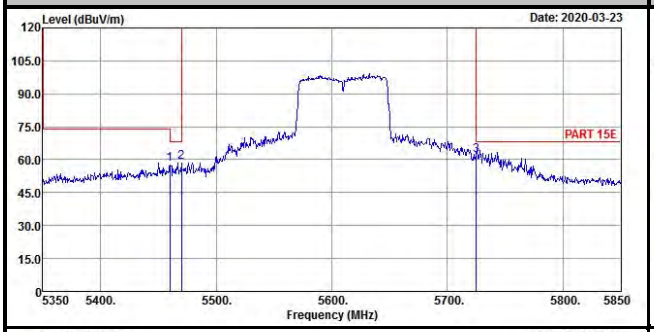
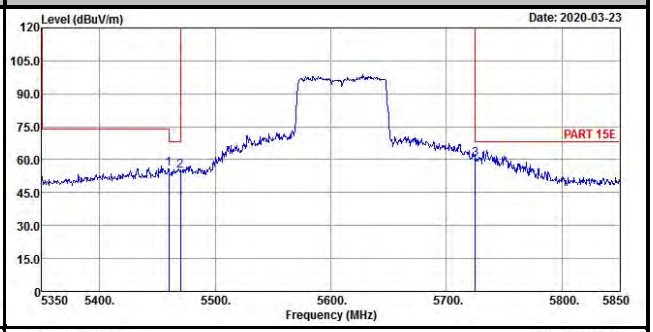
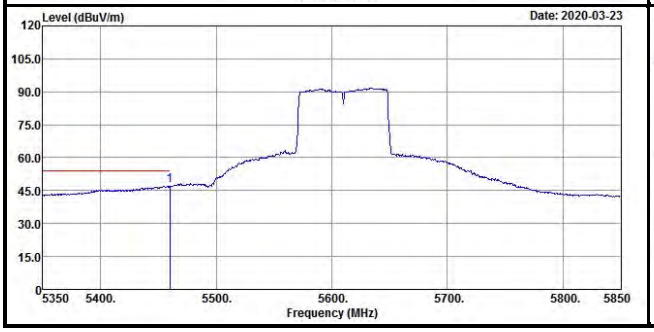
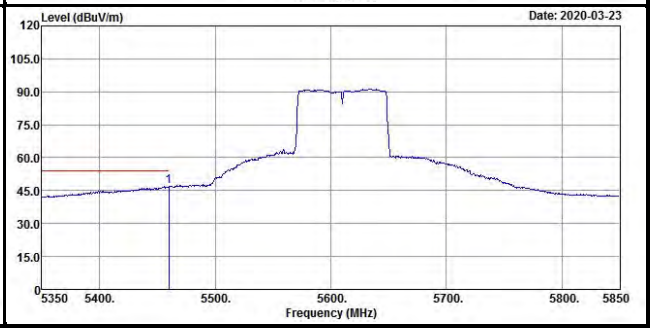


802.11ac (VHT80)

Ch 42	
Horizontal	**Vertical**
	
	

Ch 58	
Horizontal	**Vertical**
	
	

Ch 106	
Horizontal	Vertical
	
	

Ch 122	
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.

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

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