

Partial FCC Test Report

Report No.: RF200428C08-3

FCC ID: QYLAX200NG

Test Model: AX200NGW

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Test Date: May 12 ~ May 29, 2020

Issued Date: Jun. 11, 2020

Applicant: Getac Technology Corporation

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**FCC Registration /
Designation Number:** 788550 / TW0003



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Release Control Record

Issue No.	Description	Date Issued
RF200428C08-3	Original Release	Jun. 11, 2020

1 Certificate of Conformity

Product: Wireless module

Brand: Getac

Test Model: AX200NGW

Sample Status: Identical Prototype

Applicant: Getac Technology Corporation

Test Date: May 12 ~ May 29, 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 : Gina Liu, **Date:** Jun. 11, 2020
Gina Liu / Specialist

Approved by : Dylan Chiou, **Date:** Jun. 11, 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 -4.81 dB at 0.814 MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -0.92 dB at 5458 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

*For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OBE test plots were recorded in Annex A.
Note:

- Only test item of Average Transmit Power, Radiated Emissions test and AC Power Conducted Emission tests were performed for this report. For other test data, please refer to Intel Report No.: 181210-03.TR04 、 181210-03.TR02 、 181210-03.TR03 for module (Brand: Intel, Model: AX200NGW).
- 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.
- 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	Wireless module
Brand	Getac
Test Model	AX200NGW
Status of EUT	Identical Prototype
Power Supply Rating	19 Vdc (adapter) 11.1 Vdc (Li-ion battery)
Modulation Type	1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM, OFDMA
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 300.0 Mbps 802.11ac: up to 1733.3 Mbps 802.11ax: up to 2402.0 Mbps
Operating Frequency	5180 ~ 5250 MHz, 5250 ~ 5320 MHz, 5500 ~ 5720 MHz, 5745 ~ 5825 MHz
Number of Channel	5180 ~ 5320 MHz: 8 for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20) 4 for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40) 2 for 802.11ac (VHT80), 802.11ax (HE80) 1 for 802.11ac (VHT160), 802.11ax (HE160) 5500 ~ 5720 MHz: 12 for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20) 6 for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40) 3 for 802.11ac (VHT80), 802.11ax (HE80) 1 for 802.11ac (VHT160), 802.11ax (HE160) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20) 2 for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40) 1 for 802.11ac (VHT80), 802.11ax (HE80)
Output Power (Measured Max. Average)	154.562 mW for 5180 ~ 5250 MHz 152.951 mW for 5250 ~ 5320 MHz 152.055 mW for 5500 ~ 5720 MHz 198.556 mW for 5745 ~ 5825 MHz
Antenna Type	Refer to Note as below
Antenna Connector	N/A
Accessory Device	Refer to Note as below
Data Cable Supplied	Refer to Note as below

Note:

1. The EUT is authorized for use in specific End-product. Please refer to below table for more details.

Product	Brand	Model
Notebook	Getac	V110 , V110G6

2. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

Modulation Mode	Tx Function
802.11a	1TX
802.11n (HT20)	2TX
802.11n (HT40)	2TX
802.11ac (VHT20)	2TX
802.11ac (VHT40)	2TX
802.11ac (VHT80)	2TX
802.11ac (VHT160)	2TX
802.11ax (HE20)	2TX
802.11ax (HE40)	2TX
802.11ax (HE80)	2TX
802.11ax (HE160)	2TX

*The modulation and bandwidth are similar for 802.11n mode for HT20 / HT40 and 802.11ac mode for VHT20 / VHT40 / VHT80 / VHT160 and 802.11ax mode for HE20 / HE40 / HE80 / HE160, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

3. The following accessories were for the End-product.

Product	Brand	Model	Description
Adapter	Getac	MTA190474W4	I/P: 100-240 Vac, 50-60 Hz, 1.6 A O/P: 19 Vdc, 4.74 A, 90W
Battery	Getac	BP3S1P2100-S	11.1 Vdc, 2100 mAh
WLAN Module	Getac	AX200NGW	--
LCD Panel 1	New IPS KD	KD116N11-30NP-A9	11.6"
LCD Panel 2	KingDisplay	KD Full HD Panel 800 nits	11.6"
Bottom Camera	Foxlink	FN80AF-443H	8M
RFID	NXP	PN-7462	13.56MHz
Digitizer	Microchip	PIC32MX270	250-290kHz
GPS	GlobalSat	MC1010	--
CPU 1	Intel	Kaby lake	i7-10510U
CPU 2	Intel	Comet lake	i7-10710U
DDR 1	Kingston	N/A	32GB (16GB+16GB)
DDR 2	Kingston	N/A	16GB
SSD 1	Lite-on	N/A	512GB
SSD 2	Sandisk	N/A	1TB
SD Card reader	N/A	N/A	N/A
Smart Card	N/A	N/A	N/A
USB 3.1 (Type C)	N/A	N/A	N/A

4. The antenna information is listed.

Ant. Type	Manufacturer	Parts Number	Frequency (MHz)				
			2400~2500	5150~5250	5250~5350	5470~5725	5725~5850
PIFA	GETAC	WLAN Main Antenna: 421129000002	2.06 dBi	2.40 dBi	3.51 dBi	3.19 dBi	2.26 dBi
		WLAN Aux. Antenna: 421129000003	-0.14 dBi	0.97 dBi	1.67 dBi	1.62 dBi	1.35 dBi

5. The configurations of all SKU are listed as below.

Part	Brand	Model	Specification	Configurations	
				SKU 1	SKU 2
CPU	Intel	Kaby lake	i7-10510U	V	
	Intel	Comet lake	i7-10710U		V
DDR	Kingston	N/A	32GB (16GB+16GB)	V	
	Kingston	N/A	16GB		V
SSD	Lite-on	N/A	512GB	V	
	Sandisk	N/A	1TB		V
LCD Panel	New IPS KD	KD116N11-30NP-A9	11.6"	V	V
	KingDisplay	KD Full HD Panel 800 nits	11.6"	V	
SD Card reader	N/A	N/A	N/A	V	
Smart Card	N/A	N/A	N/A	V	
USB 3.1 (Type C)	N/A	N/A	N/A		V
WLAN/ BT Module	Intel	Intel AX200NGW	--	V	V
GPS	GlobalSat	MC1010	--	V	
Battery	Getac Technology Corp.	BP3S1P2100-S	11.1Vdc, 2100mAh	V	V
Adapter	Getac Technology Corp.	MTA190474W4	100-240V~1.6A 50-60Hz 19V / 4.74A(90.0W)	V	V
Bottom Camera	Foxlink	FN80AF-443H	8M	V	
RFID	NXP	PN-7462	13.56MHz		V
Digitizer	Microchip	PIC32MX270	250-290kHz		V

* After pre-tested all the configurations and found SKU 2 was the worst. Therefore only SKU 2 was for the final test and presented in the test

6. 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 ~ 5320 MHz

8 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	52	5260
40	5200	56	5280
44	5220	60	5300
48	5240	64	5320

4 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	54	5270
46	5230	62	5310

2 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	58	5290

1 channel is provided for 802.11ac (VHT160), 802.11ax (HE160):

Channel	Frequency (MHz)
50	5250

For 5500 ~ 5720 MHz

12 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

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), 802.11ac (VHT40), 802.11ax (HE40):

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), 802.11ax (HE80):

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

1 channel is provided for 802.11ac (VHT160), 802.11ax (HE160):

Channel	Frequency (MHz)
114	5570

For 5745 ~ 5825 MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

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

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency (MHz)
155	5775

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE $\geq$ 1G	RE<1G	PLC	Power	
A	√	√	-	√	1TX
B	√	√	√	√	2TX

Where **RE $\geq$ 1G**: Radiated Emission above 1 GHz

RE<1G: Radiated Emission below 1 GHz

PLC: Power Line Conducted Emission

Power: Maximum Output Power Measurement

Note: “-” 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)
A	5180-5320	802.11a	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0
B		802.11n (HT20)	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.5
B		802.11n (HT40)	38 to 62	38, 46, 54, 62	OFDM	BPSK	13.5
B		802.11ac (VHT80)	42 to 58	42, 58	OFDM	BPSK	29.3
B		802.11ac (VHT160)	50	50	OFDM	BPSK	58.5
B		802.11ax (HE20)	36 to 64	36, 40, 48, 52, 60, 64	OFDMA	BPSK	MCS0
B		802.11ax (HE40)	38 to 62	38, 46, 54, 62	OFDMA	BPSK	MCS0
B		802.11ax (HE80)	42 to 58	42, 58	OFDMA	BPSK	MCS0
B		802.11ax (HE160)	50	50	OFDMA	BPSK	MCS0
A	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
B		802.11n (HT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
B		802.11n (HT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
B		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	BPSK	29.3
B		802.11ac (VHT160)	114	114	OFDM	BPSK	58.5
B		802.11ax (HE20)	100 to 144	100, 116, 140, 144	OFDMA	BPSK	MCS0
B		802.11ax (HE40)	102 to 142	102, 110, 134, 142	OFDMA	BPSK	MCS0
B		802.11ax (HE80)	106 to 138	106, 122, 138	OFDMA	BPSK	MCS0
B		802.11ax (HE160)	114	114	OFDMA	BPSK	MCS0
A	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
B		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
B		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5
B		802.11ac (VHT80)	155	155	OFDM	BPSK	29.3
B		802.11ax (HE20)	149 to 165	149, 157, 165	OFDMA	BPSK	MCS0
B		802.11ax (HE40)	151 to 159	151, 159	OFDMA	BPSK	MCS0
B		802.11ax (HE80)	155	155	OFDMA	BPSK	MCS0

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)
B	5500-5720	802.11ax (HE80)	106 to 138	106	OFDMA	BPSK	MCS0

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)
B	5500-5720	802.11ax (HE80)	106 to 138	106	OFDMA	BPSK	MCS0

Maximum Output Power 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)
A	5180-5320	802.11a	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0
B		802.11n (HT20)	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.5
B		802.11n (HT40)	38 to 62	38, 46, 54, 62	OFDM	BPSK	13.5
B		802.11ac (VHT80)	42 to 58	42, 58	OFDM	BPSK	29.3
B		802.11ac (VHT160)	50	50	OFDM	BPSK	58.5
B		802.11ax (HE20)	36 to 64	36, 40, 48, 52, 60, 64	OFDMA	BPSK	MCS0
B		802.11ax (HE40)	38 to 62	38, 46, 54, 62	OFDMA	BPSK	MCS0
B		802.11ax (HE80)	42 to 58	42, 58	OFDMA	BPSK	MCS0
B		802.11ax (HE160)	50	50	OFDMA	BPSK	MCS0
A		802.11a	100 to 140	100, 120, 140	OFDM	BPSK	6.0
B	5500-5720	802.11n (HT20)	100 to 144	100, 120, 140, 144	OFDM	BPSK	6.5
B		802.11n (HT40)	102 to 142	102, 118, 134, 142	OFDM	BPSK	13.5
B		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	BPSK	29.3
B		802.11ac (VHT160)	114	114	OFDM	BPSK	58.5
B		802.11ax (HE20)	100 to 144	100, 120, 140, 144	OFDMA	BPSK	MCS0
B		802.11ax (HE40)	102 to 142	102, 118, 134, 142	OFDMA	BPSK	MCS0
B		802.11ax (HE80)	106 to 138	106, 122, 138	OFDMA	BPSK	MCS0
B		802.11ax (HE160)	114	114	OFDMA	BPSK	MCS0

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
B		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
B		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5
B		802.11ac (VHT80)	155	155	OFDM	BPSK	29.3
B		802.11ax (HE20)	149 to 165	149, 157, 165	OFDMA	BPSK	MCS0
B		802.11ax (HE40)	151 to 159	151, 159	OFDMA	BPSK	MCS0
B		802.11ax (HE80)	155	155	OFDMA	BPSK	MCS0

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE $\geq$ 1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Jisyong Wang, Tim Chen, Getaz Yang
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Jisyong Wang
PLC	25 deg. C, 65 % RH	120 Vac, 60 Hz	Jisyong Wang
APCM	25 deg. C, 65 % RH	11.1 Vdc	Wayne Lin

3.3 Duty Cycle of Test Signal

MODULATION TYPE: BPSK

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

802.11a: Duty cycle = $2.086/2.133 = 0.978$, Duty factor = $10 * \log(1/0.978) = 0.10$

802.11n (HT20): Duty cycle of test signal is $\geq 98 \%$, duty factor is not required.

802.11n (HT40): Duty cycle of test signal is $\geq 98 \%$, duty factor is not required.

802.11ac (VHT80): Duty cycle of test signal is $\geq 98 \%$, duty factor is not required.

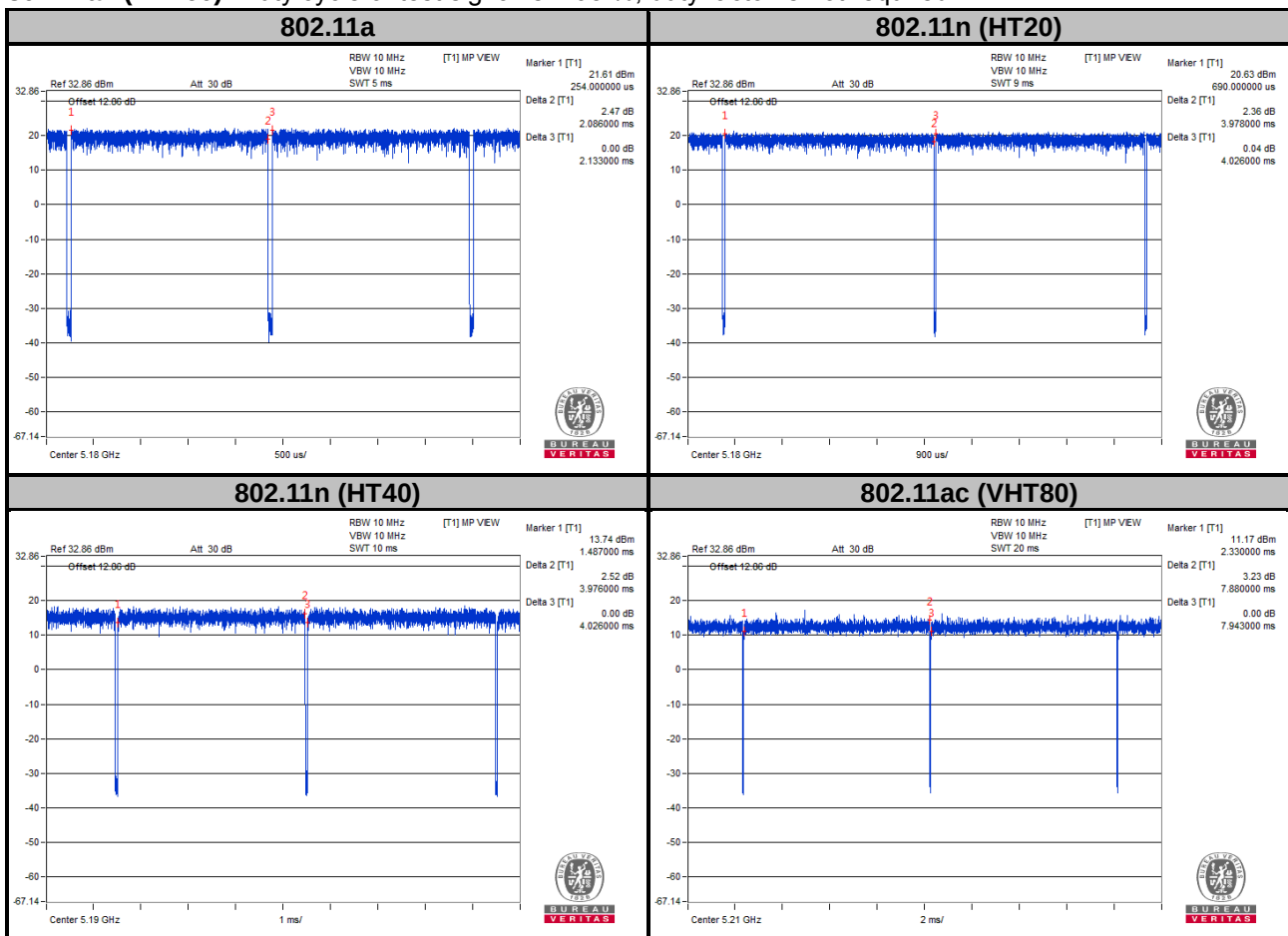
802.11ac (VHT160): Duty cycle of test signal is $\geq 98 \%$, duty factor is not required.

802.11ax (HE20): Duty cycle of test signal is $\geq 98 \%$, duty factor is not required.

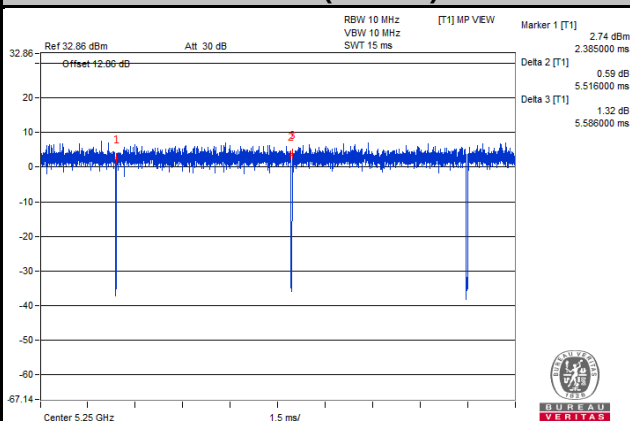
802.11ax (HE40): Duty cycle of test signal is $\geq 98 \%$, duty factor is not required.

802.11ax (HE80): Duty cycle of test signal is $\geq 98 \%$, duty factor is not required.

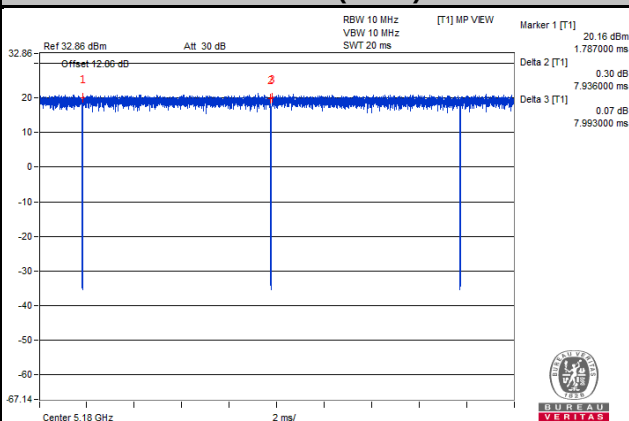
802.11ax (HE160): Duty cycle of test signal is $\geq 98 \%$, duty factor is not required.



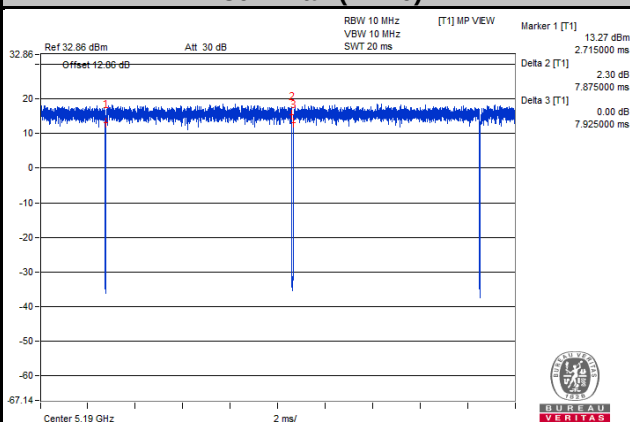
802.11ac (VHT160)



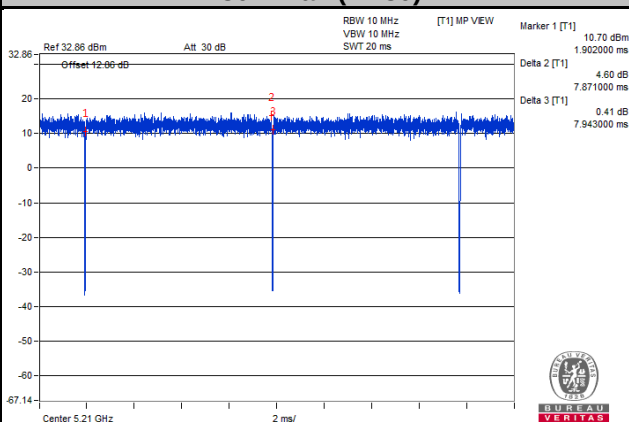
802.11ax (HE20)



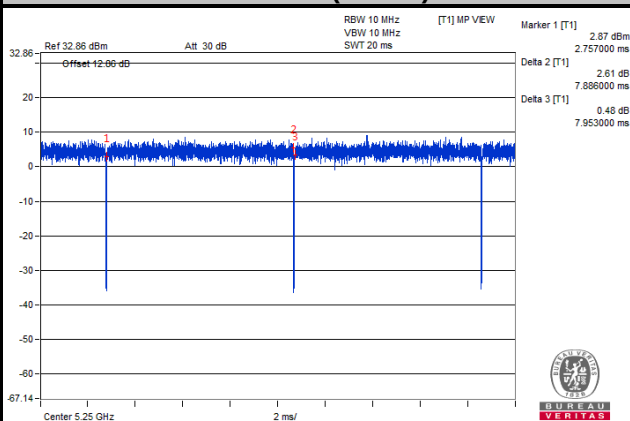
802.11ax (HE40)



802.11ax (HE80)



802.11ax (HE160)



3.4 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	Getac	V110 , V110G6	N/A	N/A	Provided by Client
B.	Bluetooth Tester	R&S	CBT	100980	N/A	Provided by Lab
C.	Microphone	Labtec	LVA7313	N/A	N/A	Provided by Lab
D.	HDD*2	TOSHIBA	DTB305	45TGCN0IT3ZB 45U6CMSPT3ZB	N/A	Provided by Lab
E.	MODEM	ACEEX	1414V/3	0401008243	IFAXDM1414	Provided by Lab
F.	MONITOR	DELL	U2410	CN-0J257M-7287 2-0A6-08JL	Doc	Provided by Lab
G.	USB MOUSE	DELL	MS111-P	CN-011D3V-7158 1-1CJ-0936	FCC DoC Approved	Provided by Lab
H.	SD Card	Transcend	16GB	N/A	N/A	Provided by Lab
I.	Terminal	N/A	N/A	N/A	N/A	Provided by Lab

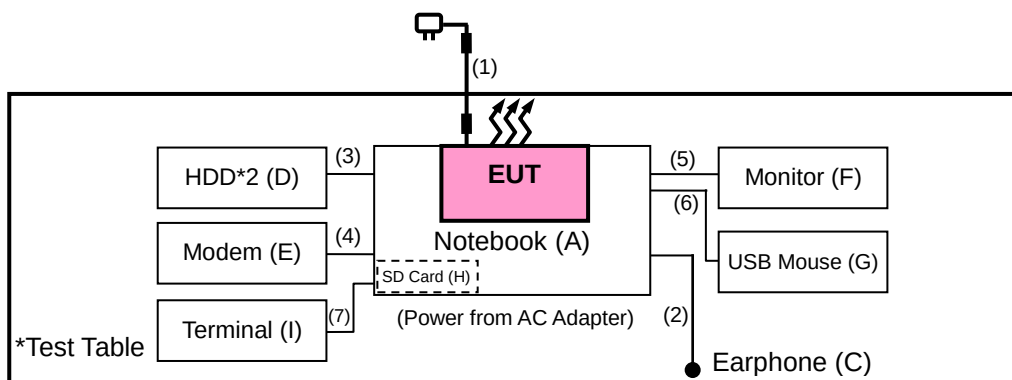
Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item B acted as communication partner to transfer data.

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Adapter Cable	1	1.55	Y	2	Accessory of the EUT
2.	Microphone Cable	1	1.0	Y	0	Provided by Lab
3.	USB Cable	1	0.5	N	0	Provided by Lab
4.	RS-232 Cable	1	1.2	Y	0	Provided by Lab
5.	HDMI Cable	1	2.0	Y	0	Provided by Lab HDMI 2.0 (Amber / HDMI-AA120)
6.	USB Cable	1	1.8	Y	0	Provided by Lab
7.	RJ45 Cable	1	1.5	N	0	Provided by Lab

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

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards and References

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

Test Standard:

FCC Part 15, Subpart E (15.407)

ANSI C63.10-2013

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

References Test Guidance:

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

Note:

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

Limits of Unwanted Emission Out of the Restricted Bands

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

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

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

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

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

Note:

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent	N9038A	MY51210203	Mar. 18, 2020	Mar. 17, 2021
Spectrum Analyzer Agilent	N9010A	MY52220314	Dec. 12, 2019	Dec. 11, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	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 WOKEN	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
Loop Antenna	HLA 6121	45745	Jul. 01, 2019	Jun. 30, 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
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190004/MY55190007/MY55210005	Jul. 15, 2019	Jul. 14, 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 WOKEN	8D-FB	Cable-Ch10-01	Oct. 08, 2019	Oct. 07, 2020
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 10.

4.1.3 Test Procedures

For Radiated Emission below 30 MHz

- 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.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- 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.
- The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

- 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

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

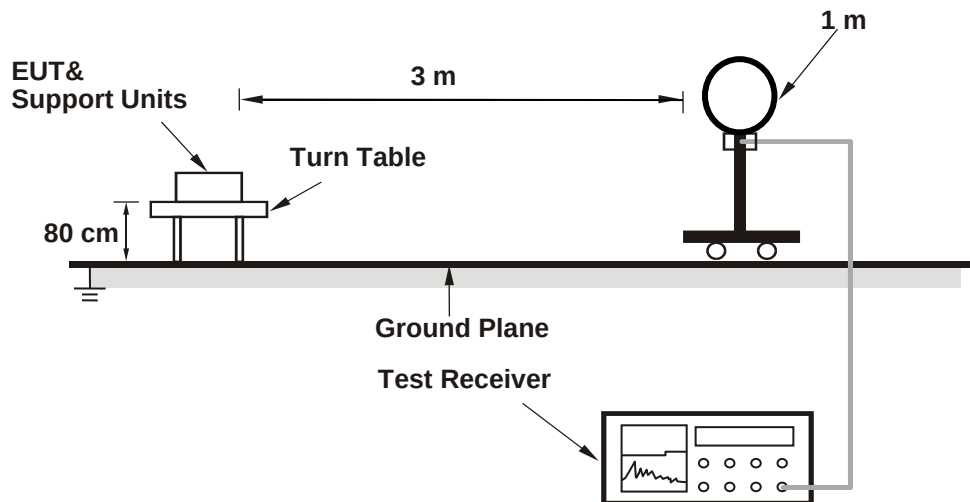
- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10 Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1 GHz.
(11a: RBW = 1 MHz, VBW = 1 kHz ; 11n (HT20): RBW = 1 MHz, VBW = 10 Hz ; 11n (HT40): RBW = 1 MHz, VBW = 10 Hz ; 11ac (VHT80): RBW = 1 MHz, VBW = 10 Hz ; 11ac (VHT160): RBW = 1 MHz, VBW = 10 Hz ; 11ax (HE20): RBW = 1 MHz, VBW = 10 Hz ; 11ax (HE40): RBW = 1 MHz, VBW = 10 Hz ; 11ax (HE80): RBW = 1 MHz, VBW = 10 Hz ; 11ax (HE160): RBW = 1 MHz, VBW = 10 Hz)
- All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

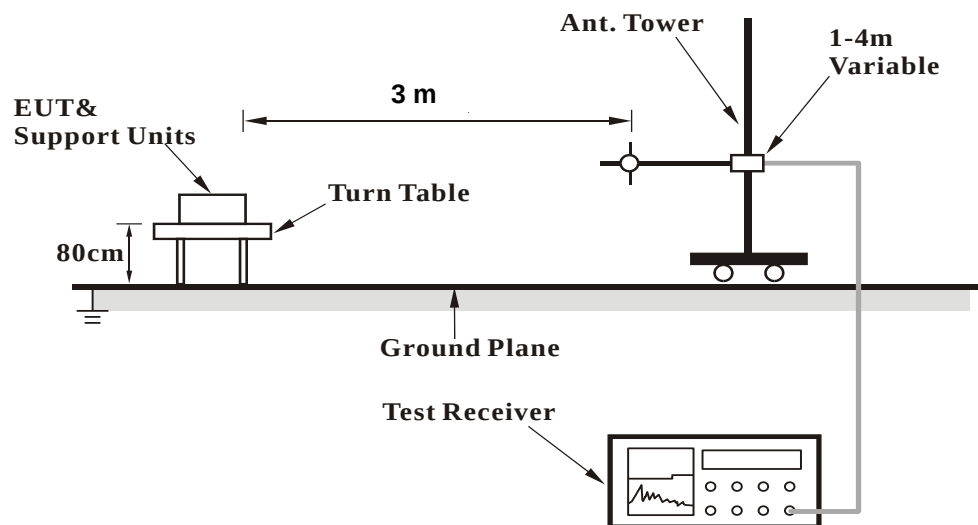
No deviation.

4.1.5 Test Setup

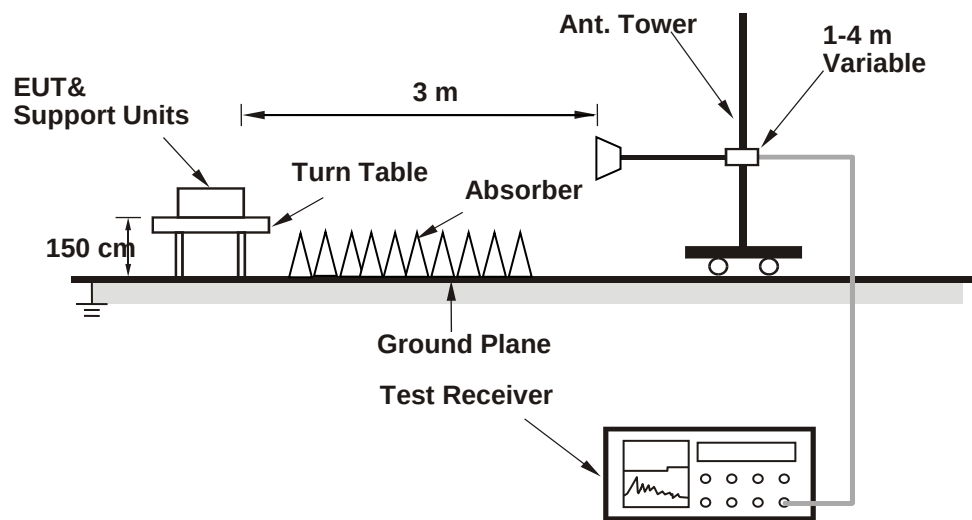
<Radiated Emission below 30 MHz>



<Radiated Emission 30 MHz to 1 GHz>



<Radiated Emission above 1 GHz>



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

4.1.6 EUT Operating Conditions

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

4.1.7 Test Results

Above 1 GHz Data :

802.11a

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

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	43.83	43.41	0.42	54	-10.17	258	15	Average
5150	52.38	51.96	0.42	74	-21.62	258	15	Peak
5180	97.9	97.64	0.26	-----	-----	258	15	Average
5180	105.45	105.19	0.26	-----	-----	258	15	Peak
10360	55.45	57.37	-1.92	68.2	-12.75	123	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	44.43	44.01	0.42	54	-9.57	160	106	Average
5150	51.73	51.31	0.42	74	-22.27	160	106	Peak
5180	96.85	96.59	0.26	-----	-----	160	106	Average
5180	104.75	104.49	0.26	-----	-----	160	106	Peak
10360	55.69	57.61	-1.92	68.2	-12.51	111	302	Peak

Remarks:

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

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

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	39.71	39.29	0.42	54	-14.29	269	7	Average
5150	46.66	46.24	0.42	74	-27.34	269	7	Peak
5200	93.08	92.94	0.14	-----	-----	269	7	Average
5200	101.49	101.35	0.14	-----	-----	269	7	Peak
10400	55.72	57.54	-1.82	68.2	-12.48	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
5150	39.8	39.38	0.42	54	-14.2	191	96	Average
5150	47.28	46.86	0.42	74	-26.72	191	96	Peak
5200	96.12	95.98	0.14	-----	-----	191	96	Average
5200	104.42	104.28	0.14	-----	-----	191	96	Peak
10400	55.57	57.39	-1.82	68.2	-12.63	132	196	Peak

Remarks:

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

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

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	39.65	39.23	0.42	54	-14.35	275	3	Average
5150	47.27	46.85	0.42	74	-26.73	275	3	Peak
5240	98.86	98.76	0.1	-----	-----	275	3	Average
5240	105.94	105.84	0.1	-----	-----	275	3	Peak
5350	39.46	39.13	0.33	54	-14.54	275	3	Average
5350	47.09	46.76	0.33	74	-26.91	275	3	Peak
10480	56.71	58.19	-1.48	68.2	-11.49	135	214	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	39.76	39.34	0.42	54	-14.24	113	93	Average
5150	46.26	45.84	0.42	74	-27.74	113	93	Peak
5240	99.48	99.38	0.1	-----	-----	113	93	Average
5240	106.76	106.66	0.1	-----	-----	113	93	Peak
5350	39.38	39.05	0.33	54	-14.62	113	93	Average
5350	47.11	46.78	0.33	74	-26.89	113	93	Peak
10480	57.02	58.5	-1.48	68.2	-11.18	105	166	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5150	39.6	39.18	0.42	54	-14.4	273	2	Average
5150	48.4	47.98	0.42	74	-25.6	273	2	Peak
5260	98.9	98.77	0.13	-----	-----	273	2	Average
5260	105.77	105.64	0.13	-----	-----	273	2	Peak
5350	39.2	38.87	0.33	54	-14.8	273	2	Average
5350	45.44	45.11	0.33	74	-28.56	273	2	Peak
10520	54.63	56.08	-1.45	68.2	-13.57	139	205	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	39.95	39.53	0.42	54	-14.05	130	95	Average
5150	45.67	45.25	0.42	74	-28.33	130	95	Peak
5260	99.01	98.88	0.13	-----	-----	130	95	Average
5260	105.74	105.61	0.13	-----	-----	130	95	Peak
5350	39.28	38.95	0.33	54	-14.72	130	95	Average
5350	45.72	45.39	0.33	74	-28.28	130	95	Peak
10520	56.34	57.79	-1.45	68.2	-11.86	134	81	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5300	98.97	98.76	0.21	-----	-----	271	10	Average
5300	105.07	104.86	0.21	-----	-----	271	10	Peak
5350	40.03	39.7	0.33	54	-13.97	271	10	Average
5350	46.09	45.76	0.33	74	-27.91	271	10	Peak
10600	48.43	50.04	-1.61	54	-5.57	125	166	Average
10600	57.72	59.33	-1.61	74	-16.28	125	166	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
5300	98.07	97.86	0.21	-----	-----	115	97	Average
5300	104.48	104.27	0.21	-----	-----	115	97	Peak
5350	40.02	39.69	0.33	54	-13.98	115	97	Average
5350	46.17	45.84	0.33	74	-27.83	115	97	Peak
10600	47.75	49.36	-1.61	54	-6.25	114	229	Average
10600	57.19	58.8	-1.61	74	-16.81	114	229	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5320	97.55	97.29	0.26	-----	-----	280	2	Average
5320	104.3	104.04	0.26	-----	-----	280	2	Peak
5350	42.73	42.4	0.33	54	-11.27	280	2	Average
5350	50.03	49.7	0.33	74	-23.97	280	2	Peak
10640	48.82	50.44	-1.62	54	-5.18	112	201	Average
10640	57.53	59.15	-1.62	74	-16.47	112	201	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	96.79	96.53	0.26	-----	-----	102	43	Average
5320	103.39	103.13	0.26	-----	-----	102	43	Peak
5350	42.04	41.71	0.33	54	-11.96	102	43	Average
5350	50.25	49.92	0.33	74	-23.75	102	43	Peak
10640	48.26	49.88	-1.62	54	-5.74	141	169	Average
10640	57.17	58.79	-1.62	74	-16.83	141	169	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	44.78	44.03	0.75	54	-9.22	252	234	Average
5460	53.25	52.5	0.75	74	-20.75	252	234	Peak
5470	56.54	55.77	0.77	68.2	-11.66	252	234	Peak
5500	99.17	98.28	0.89	-----	-----	252	234	Average
5500	106.22	105.33	0.89	-----	-----	252	234	Peak
5725	47.51	46.64	0.87	68.2	-20.69	252	234	Peak
11000	47.86	49.17	-1.31	54	-6.14	162	258	Average
11000	56.07	57.38	-1.31	74	-17.93	162	258	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	43.79	43.04	0.75	54	-10.21	238	77	Average
5460	53.11	52.36	0.75	74	-20.89	238	77	Peak
5470	56.58	55.81	0.77	68.2	-11.62	238	77	Peak
5500	97.99	97.1	0.89	-----	-----	238	77	Average
5500	105.34	104.45	0.89	-----	-----	238	77	Peak
5725	47.42	46.55	0.87	68.2	-20.78	238	77	Peak
11000	48.83	50.14	-1.31	54	-5.17	125	166	Average
11000	56.77	58.08	-1.31	74	-17.23	125	166	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	40.29	39.54	0.75	54	-13.71	254	235	Average
5460	49.72	48.97	0.75	74	-24.28	254	235	Peak
5470	48.78	48.01	0.77	68.2	-19.42	254	235	Peak
5580	98.81	98.01	0.8	-----	-----	254	235	Average
5580	105.73	104.93	0.8	-----	-----	254	235	Peak
5725	48.17	47.3	0.87	68.2	-20.03	254	235	Peak
11160	47.13	48.66	-1.53	54	-6.87	152	203	Average
11160	55.95	57.48	-1.53	74	-18.05	152	203	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.99	39.24	0.75	54	-14.01	186	89	Average
5460	49.47	48.72	0.75	74	-24.53	186	89	Peak
5470	47.96	47.19	0.77	68.2	-20.24	186	89	Peak
5580	96.92	96.12	0.8	-----	-----	186	89	Average
5580	103.88	103.08	0.8	-----	-----	186	89	Peak
5725	46.91	46.04	0.87	68.2	-21.29	186	89	Peak
11160	49.25	50.78	-1.53	54	-4.75	119	73	Average
11160	57.69	59.22	-1.53	74	-16.31	119	73	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.99	39.24	0.75	54	-14.01	252	265	Average
5460	49.34	48.59	0.75	74	-24.66	252	265	Peak
5470	50.24	49.47	0.77	68.2	-17.96	252	265	Peak
5700	100.28	99.43	0.85	-----	-----	252	265	Average
5700	107.91	107.06	0.85	-----	-----	252	265	Peak
5725	67.15	66.28	0.87	68.2	-1.05	252	265	Peak
11400	49.32	50.67	-1.35	54	-4.68	133	102	Average
11400	58.19	59.54	-1.35	74	-15.81	133	102	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.75	39	0.75	54	-14.25	117	126	Average
5460	48.62	47.87	0.75	74	-25.38	117	126	Peak
5470	49.38	48.61	0.77	68.2	-18.82	117	126	Peak
5700	96.24	95.39	0.85	-----	-----	117	126	Average
5700	102.72	101.87	0.85	-----	-----	117	126	Peak
5725	59.96	59.09	0.87	68.2	-8.24	117	126	Peak
11400	49.43	50.78	-1.35	54	-4.57	102	36	Average
11400	57.89	59.24	-1.35	74	-16.11	102	36	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.48	38.73	0.75	54	-14.52	108	235	Average
5460	48.63	47.88	0.75	68.2	-19.57	108	235	Peak
5470	49.16	48.39	0.77	68.2	-19.04	108	235	Peak
5720	99.11	98.25	0.86	-----	-----	108	235	Average
5720	106.01	105.15	0.86	-----	-----	108	235	Peak
5905	50.93	49.64	1.29	68.2	-17.27	108	235	Peak
11440	49.7	51.03	-1.33	54	-4.3	109	62	Average
11440	59.48	60.81	-1.33	74	-14.52	109	62	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.54	38.79	0.75	54	-14.46	188	70	Average
5460	48.77	48.02	0.75	68.2	-19.43	188	70	Peak
5470	48.2	47.43	0.77	68.2	-20	188	70	Peak
5720	96.97	96.11	0.86	-----	-----	188	70	Average
5720	103.97	103.11	0.86	-----	-----	188	70	Peak
5855.2	49.98	48.8	1.18	68.2	-18.22	188	70	Peak
11440	49.45	50.78	-1.33	54	-4.55	136	179	Average
11440	57.85	59.18	-1.33	74	-16.15	136	179	Peak

Remarks:

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

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

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5745	99.64	98.76	0.88	-----	-----	264	340	Average
5745	106.17	105.29	0.88	-----	-----	264	340	Peak
11490	47.32	48.64	-1.32	54	-6.68	153	224	Average
11490	56.44	57.76	-1.32	74	-17.56	153	224	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	96.41	95.53	0.88	-----	-----	189	117	Average
5745	103.46	102.58	0.88	-----	-----	189	117	Peak
11490	47.65	48.97	-1.32	54	-6.35	163	313	Average
11490	56.36	57.68	-1.32	74	-17.64	163	313	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
5613.65	51.05	50.32	0.73	68.2	-17.15	264	340	Peak
5656.875	50.97	50.32	0.65	73.31	-22.34	264	340	Peak
5920.975	49.32	48.02	1.3	71.17	-21.85	264	340	Peak
5952.325	51.2	49.88	1.32	68.2	-17	264	340	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
5626	50.3	49.57	0.73	68.2	-17.9	189	117	Peak
5658.775	48.83	48.17	0.66	74.72	-25.89	189	117	Peak
5922.4	49.48	48.18	1.3	70.12	-20.64	189	117	Peak
6019.775	50.75	49.31	1.44	68.2	-17.45	189	117	Peak

Remarks:

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

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

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5785	99.24	98.32	0.92	-----	-----	247	265	Average
5785	106.21	105.29	0.92	-----	-----	247	265	Peak
11570	44.84	46.55	-1.71	54	-9.16	163	225	Average
11570	54.26	55.97	-1.71	74	-19.74	163	225	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	95.44	94.52	0.92	-----	-----	100	52	Average
5785	101.94	101.02	0.92	-----	-----	100	52	Peak
11570	46.06	47.77	-1.71	54	-7.94	193	306	Average
11570	54.38	56.09	-1.71	74	-19.62	193	306	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
5606.525	50.38	49.65	0.73	68.2	-17.82	247	265	Peak
5658.775	49.44	48.78	0.66	74.72	-25.28	247	265	Peak
5916.7	50.75	49.45	1.3	74.32	-23.57	247	265	Peak
5934.75	51.54	50.24	1.3	68.2	-16.66	247	265	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
5611.275	49.4	48.67	0.73	68.2	-18.8	100	52	Peak
5659.25	49.03	48.36	0.67	75.07	-26.04	100	52	Peak
5916.225	49.91	48.61	1.3	74.67	-24.76	100	52	Peak
6016.925	50.31	48.87	1.44	68.2	-17.89	100	52	Peak

Remarks:

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

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

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5825	101.8	100.74	1.06	-----	-----	249	261	Average
5825	108.94	107.88	1.06	-----	-----	249	261	Peak
11650	46.19	48.25	-2.06	54	-7.81	121	134	Average
11650	54.19	56.25	-2.06	74	-19.81	121	134	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	96.08	95.02	1.06	-----	-----	194	127	Average
5825	103.4	102.34	1.06	-----	-----	194	127	Peak
11650	44.36	46.42	-2.06	54	-9.64	127	302	Average
11650	53.54	55.6	-2.06	74	-20.46	127	302	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
5647.85	51.28	50.61	0.67	68.2	-16.92	249	261	Peak
5658.3	50.21	49.55	0.66	74.36	-24.15	249	261	Peak
5918.6	50.45	49.15	1.3	72.92	-22.47	249	261	Peak
5955.65	51.13	49.8	1.33	68.2	-17.07	249	261	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
5616.5	50.16	49.43	0.73	68.2	-18.04	194	127	Peak
5654.5	48.92	48.28	0.64	71.54	-22.62	194	127	Peak
5919.075	50.79	49.49	1.3	72.57	-21.78	194	127	Peak
5961.35	50.4	49.08	1.32	68.2	-17.8	194	127	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5825 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Jisyoung Wang

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5150	41.36	40.94	0.42	54	-12.64	272	13	Average
5150	49.84	49.42	0.42	74	-24.16	272	13	Peak
5180	96.12	95.86	0.26	-----	-----	272	13	Average
5180	104.17	103.91	0.26	-----	-----	272	13	Peak
10360	54.48	56.4	-1.92	68.2	-13.72	118	134	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	41.87	41.45	0.42	54	-12.13	197	241	Average
5150	48.63	48.21	0.42	74	-25.37	197	241	Peak
5180	95.22	94.96	0.26	-----	-----	197	241	Average
5180	103.02	102.76	0.26	-----	-----	197	241	Peak
10360	54.7	56.62	-1.92	68.2	-13.5	157	226	Peak

Remarks:

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

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

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	40.1	39.68	0.42	54	-13.9	267	14	Average
5150	46.25	45.83	0.42	74	-27.75	267	14	Peak
5200	95.12	94.98	0.14	-----	-----	267	14	Average
5200	103.32	103.18	0.14	-----	-----	267	14	Peak
10400	56.37	58.19	-1.82	68.2	-11.83	125	123	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	40.08	39.66	0.42	54	-13.92	191	238	Average
5150	46.64	46.22	0.42	74	-27.36	191	238	Peak
5200	95.97	95.83	0.14	-----	-----	191	238	Average
5200	103.58	103.44	0.14	-----	-----	191	238	Peak
10400	55.58	57.4	-1.82	68.2	-12.62	154	243	Peak

Remarks:

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

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

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	39.27	38.85	0.42	54	-14.73	260	14	Average
5150	46.12	45.7	0.42	74	-27.88	260	14	Peak
5240	95.54	95.44	0.1	-----	-----	260	14	Average
5240	103.55	103.45	0.1	-----	-----	260	14	Peak
5350	38.96	38.63	0.33	54	-15.04	260	14	Average
5350	46.09	45.76	0.33	74	-27.91	260	14	Peak
10480	55.93	57.41	-1.48	68.2	-12.27	119	110	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5150	39.87	39.45	0.42	54	-14.13	206	234	Average
5150	46.04	45.62	0.42	74	-27.96	206	234	Peak
5240	95.04	94.94	0.1	-----	-----	206	234	Average
5240	103.01	102.91	0.1	-----	-----	206	234	Peak
5350	38.85	38.52	0.33	54	-15.15	206	234	Average
5350	46.36	46.03	0.33	74	-27.64	206	234	Peak
10480	55.02	56.5	-1.48	68.2	-13.18	163	258	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5240 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Getaz Yang

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	48.67	48.25	0.42	74	-25.33	200	254	Peak
5150	39.55	39.13	0.42	54	-14.45	200	254	Peak
5260	100.29	100.16	0.13	-----	-----	200	254	Average
5260	106.39	106.26	0.13	-----	-----	200	254	Peak
5350	39.68	39.35	0.33	54	-14.32	200	254	Average
5350	50.14	49.81	0.33	74	-23.86	200	254	Peak
10520	56.01	57.46	-1.45	68.2	-12.19	136	135	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	49.43	49.01	0.42	74	-24.57	199	62	Peak
5150	39.54	39.12	0.42	54	-14.46	199	62	Peak
5260	99.57	99.44	0.13	-----	-----	199	62	Average
5260	106.72	106.59	0.13	-----	-----	199	62	Peak
5350	39.1	38.77	0.33	54	-14.9	199	62	Average
5350	47.85	47.52	0.33	74	-26.15	199	62	Peak
10520	55.17	56.62	-1.45	68.2	-13.03	165	257	Peak

Remarks:

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

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

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
5300	100.59	100.38	0.21	-----	-----	194	253	Average
5300	107.31	107.1	0.21	-----	-----	194	253	Peak
5350	41.05	40.72	0.33	54	-12.95	194	253	Average
5350	49.64	49.31	0.33	74	-24.36	194	253	Peak
10600	46.58	48.19	-1.61	54	-7.42	140	119	Average
10600	55.21	56.82	-1.61	74	-18.79	140	119	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
5300	89.78	89.57	0.21	-----	-----	198	60	Average
5300	106.73	106.52	0.21	-----	-----	198	60	Peak
5350	40.18	39.85	0.33	54	-13.82	198	60	Average
5350	48.71	48.38	0.33	74	-25.29	198	60	Peak
10600	46.97	48.58	-1.61	54	-7.03	162	262	Average
10600	55.44	57.05	-1.61	74	-18.56	162	262	Peak

Remarks:

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

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

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	97.9	97.64	0.26	-----	-----	197	253	Average
5320	104.37	104.11	0.26	-----	-----	197	253	Peak
5350	42.04	41.71	0.33	54	-11.96	197	253	Average
5350	51.76	51.43	0.33	74	-22.24	197	253	Peak
10640	46.47	48.09	-1.62	54	-7.53	130	127	Average
10640	55.19	56.81	-1.62	74	-18.81	130	127	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	96.52	96.26	0.26	-----	-----	194	60	Average
5320	103.77	103.51	0.26	-----	-----	194	60	Peak
5350	41.22	40.89	0.33	54	-12.78	194	60	Average
5350	48.61	48.28	0.33	74	-25.39	194	60	Peak
10640	46.86	48.48	-1.62	54	-7.14	169	272	Average
10640	55.62	57.24	-1.62	74	-18.38	169	272	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	41.55	40.8	0.75	54	-12.45	248	259	Average
5460	50.29	49.54	0.75	74	-23.71	248	259	Peak
5470	52.09	51.32	0.77	68.2	-16.11	248	259	Peak
5500	98.38	97.49	0.89	-----	-----	248	259	Average
5500	105.33	104.44	0.89	-----	-----	248	259	Peak
5725	46.3	45.43	0.87	68.2	-21.9	248	259	Peak
11000	47.82	49.13	-1.31	54	-6.18	153	241	Average
11000	57.08	58.39	-1.31	74	-16.92	153	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
5460	40.69	39.94	0.75	54	-13.31	100	245	Average
5460	49.16	48.41	0.75	74	-24.84	100	245	Peak
5470	50.81	50.04	0.77	68.2	-17.39	100	245	Peak
5500	96.07	95.18	0.89	-----	-----	100	245	Average
5500	103.81	102.92	0.89	-----	-----	100	245	Peak
5725	46.55	45.68	0.87	68.2	-21.65	100	245	Peak
11000	48.36	49.67	-1.31	54	-5.64	104	64	Average
11000	57.16	58.47	-1.31	74	-16.84	104	64	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	41.05	40.3	0.75	54	-12.95	253	257	Average
5460	50.08	49.33	0.75	74	-23.92	253	257	Peak
5470	49.78	49.01	0.77	68.2	-18.42	253	257	Peak
5580	101.45	100.65	0.8	-----	-----	253	257	Average
5580	108.14	107.34	0.8	-----	-----	253	257	Peak
5725	48.37	47.5	0.87	68.2	-19.83	253	257	Peak
11160	47.4	48.93	-1.53	54	-6.6	103	25	Average
11160	56.16	57.69	-1.53	74	-17.84	103	25	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.92	39.17	0.75	54	-14.08	103	246	Average
5460	48.77	48.02	0.75	74	-25.23	103	246	Peak
5470	48.47	47.7	0.77	68.2	-19.73	103	246	Peak
5580	95.26	94.46	0.8	-----	-----	103	246	Average
5580	102.87	102.07	0.8	-----	-----	103	246	Peak
5725	46.1	45.23	0.87	68.2	-22.1	103	246	Peak
11160	48.15	49.68	-1.53	54	-5.85	141	189	Average
11160	56.82	58.35	-1.53	74	-17.18	141	189	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	40.5	39.75	0.75	54	-13.5	249	258	Average
5460	49.5	48.75	0.75	74	-24.5	249	258	Peak
5470	48.81	48.04	0.77	68.2	-19.39	249	258	Peak
5700	101.53	100.68	0.85	-----	-----	249	258	Average
5700	108.24	107.39	0.85	-----	-----	249	258	Peak
5725	64.1	63.23	0.87	68.2	-4.1	249	258	Peak
11400	49.02	50.37	-1.35	54	-4.98	136	287	Average
11400	58.34	59.69	-1.35	74	-15.66	136	287	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.71	38.96	0.75	54	-14.29	100	276	Average
5460	48.88	48.13	0.75	74	-25.12	100	276	Peak
5470	48.95	48.18	0.77	68.2	-19.25	100	276	Peak
5700	96.71	95.86	0.85	-----	-----	100	276	Average
5700	104.35	103.5	0.85	-----	-----	100	276	Peak
5725	54.97	54.1	0.87	68.2	-13.23	100	276	Peak
11400	47.32	48.67	-1.35	54	-6.68	112	107	Average
11400	56.51	57.86	-1.35	74	-17.49	112	107	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.59	38.84	0.75	54	-14.41	247	252	Average
5460	48.97	48.22	0.75	74	-25.03	247	252	Peak
5470	48.31	47.54	0.77	68.2	-19.89	247	252	Peak
5720	98.62	97.76	0.86	-----	-----	247	252	Average
5720	105.52	104.66	0.86	-----	-----	247	252	Peak
5904.4	50.35	49.06	1.29	68.2	-17.85	247	252	Peak
11440	47.61	48.94	-1.33	54	-6.39	103	124	Average
11440	56.15	57.48	-1.33	74	-17.85	103	124	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.61	38.86	0.75	54	-14.39	105	267	Average
5460	48.53	47.78	0.75	74	-25.47	105	267	Peak
5470	47.85	47.08	0.77	68.2	-20.35	105	267	Peak
5720	93.91	93.05	0.86	-----	-----	105	267	Average
5720	102.09	101.23	0.86	-----	-----	105	267	Peak
5861.2	51.53	50.33	1.2	68.2	-16.67	105	267	Peak
11440	47.03	48.36	-1.33	54	-6.97	206	79	Average
11440	56.33	57.66	-1.33	74	-17.67	206	79	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5720 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Jisyong Wang

<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	97.97	97.09	0.88	-----	-----	247	252	Average
5745	105.98	105.1	0.88	-----	-----	247	252	Peak
11490	48.71	50.03	-1.32	54	-5.29	163	221	Average
11490	57.91	59.23	-1.32	74	-16.09	163	221	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	92.87	91.99	0.88	-----	-----	176	72	Average
5745	101.07	100.19	0.88	-----	-----	176	72	Peak
11490	48.22	49.54	-1.32	54	-5.78	124	166	Average
11490	56.77	58.09	-1.32	74	-17.23	124	166	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
5647.85	50.55	49.88	0.67	68.2	-17.65	247	252	Peak
5657.825	50.19	49.53	0.66	74.01	-23.82	247	252	Peak
5919.075	49.37	48.07	1.3	72.57	-23.2	247	252	Peak
5994.125	50.25	48.88	1.37	68.2	-17.95	247	252	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
5595.6	49.63	48.84	0.79	68.2	-18.57	176	72	Peak
5658.775	48.88	48.22	0.66	74.72	-25.84	176	72	Peak
5919.55	49.95	48.65	1.3	72.22	-22.27	176	72	Peak
5982.725	50.75	49.4	1.35	68.2	-17.45	176	72	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5745 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Jisyong Wang

<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	99.88	98.96	0.92	-----	-----	253	259	Average
5785	107.86	106.94	0.92	-----	-----	253	259	Peak
11570	47.45	49.16	-1.71	54	-6.55	163	208	Average
11570	55.35	57.06	-1.71	74	-18.65	163	208	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	98.28	97.36	0.92	-----	-----	183	43	Average
5785	105.79	104.87	0.92	-----	-----	183	43	Peak
11570	46.47	48.18	-1.71	54	-7.53	125	36	Average
11570	55.46	57.17	-1.71	74	-18.54	125	36	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5595.6	50.91	50.12	0.79	68.2	-17.29	253	259	Peak
5651.65	50.18	49.49	0.69	69.43	-19.25	253	259	Peak
5916.7	52.14	50.84	1.3	74.32	-22.18	253	259	Peak
6022.15	51.46	50.01	1.45	68.2	-16.74	253	259	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
5595.6	49.91	49.12	0.79	68.2	-18.29	183	43	Peak
5653.55	48.8	48.1	0.7	70.84	-22.04	183	43	Peak
5922.4	49.24	47.94	1.3	70.12	-20.88	183	43	Peak
5989.85	50.73	49.36	1.37	68.2	-17.47	183	43	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5785 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Jisyong Wang

<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	99.71	98.65	1.06	-----	-----	253	257	Average
5825	107.71	106.65	1.06	-----	-----	253	257	Peak
11650	45.75	47.81	-2.06	54	-8.25	164	22	Average
11650	54.69	56.75	-2.06	74	-19.31	164	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
5825	97.11	96.05	1.06	-----	-----	179	56	Average
5825	105.39	104.33	1.06	-----	-----	179	56	Peak
11650	45.89	47.95	-2.06	54	-8.11	149	236	Average
11650	54.09	56.15	-2.06	74	-19.91	149	236	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
5612.225	50.71	49.98	0.73	68.2	-17.49	253	257	Peak
5656.4	50.17	49.52	0.65	72.95	-22.78	253	257	Peak
5920.5	50.72	49.42	1.3	71.52	-20.8	253	257	Peak
5936.175	51.12	49.82	1.3	68.2	-17.08	253	257	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
5630.75	50.97	50.29	0.68	68.2	-17.23	179	56	Peak
5657.825	49.14	48.48	0.66	74.01	-24.87	179	56	Peak
5918.125	50.2	48.9	1.3	73.27	-23.07	179	56	Peak
5966.575	50.92	49.58	1.34	68.2	-17.28	179	56	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5825 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5150	41.75	41.33	0.42	54	-12.25	262	14	Average
5150	48.78	48.36	0.42	74	-25.22	262	14	Peak
5190	93.07	92.87	0.2	-----	-----	262	14	Average
5190	100.92	100.72	0.2	-----	-----	262	14	Peak
5350	39.16	38.83	0.33	54	-14.84	262	14	Average
5350	45.36	45.03	0.33	74	-28.64	262	14	Peak
10380	55.46	57.32	-1.86	68.2	-12.74	130	140	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	42.32	41.9	0.42	54	-11.68	196	297	Average
5150	49.51	49.09	0.42	74	-24.49	196	297	Peak
5190	92.23	92.03	0.2	-----	-----	196	297	Average
5190	100.22	100.02	0.2	-----	-----	196	297	Peak
5350	39.23	38.9	0.33	54	-14.77	196	297	Average
5350	46.82	46.49	0.33	74	-27.18	196	297	Peak
10380	55.52	57.38	-1.86	68.2	-12.68	140	237	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5190 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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

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	39.83	39.41	0.42	54	-14.17	275	10	Average
5150	46.49	46.07	0.42	74	-27.51	275	10	Peak
5230	90.96	90.84	0.12	-----	-----	275	10	Average
5230	98.86	98.74	0.12	-----	-----	275	10	Peak
5350	38.98	38.65	0.33	54	-15.02	275	10	Average
5350	48.15	47.82	0.33	74	-25.85	275	10	Peak
10460	56.53	58.12	-1.59	68.2	-11.67	118	131	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	39.79	39.37	0.42	54	-14.21	197	238	Average
5150	46.16	45.74	0.42	74	-27.84	197	238	Peak
5230	91.96	91.84	0.12	-----	-----	197	238	Average
5230	100.16	100.04	0.12	-----	-----	197	238	Peak
5350	39.17	38.84	0.33	54	-14.83	197	238	Average
5350	46.93	46.6	0.33	74	-27.07	197	238	Peak
10460	55.4	56.99	-1.59	68.2	-12.8	158	222	Peak

Remarks:

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

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

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
5149.92	39.74	39.32	0.42	54	-14.26	198	253	Average
5149.92	48.99	48.57	0.42	74	-25.01	198	253	Peak
5270	97.23	97.1	0.13	-----	-----	198	253	Average
5270	104.06	103.93	0.13	-----	-----	198	253	Peak
5350	43.22	42.89	0.33	54	-10.78	198	253	Average
5350	52.59	52.26	0.33	74	-21.41	198	253	Peak
10540	54.8	56.29	-1.49	68.2	-13.4	142	138	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
5149.92	39.47	39.05	0.42	54	-14.53	194	60	Average
5149.92	48.79	48.37	0.42	74	-25.21	194	60	Peak
5270	96.41	96.28	0.13	-----	-----	194	60	Average
5270	103.67	103.54	0.13	-----	-----	194	60	Peak
5350	41.48	41.15	0.33	54	-12.52	194	60	Average
5350	51.69	51.36	0.33	74	-22.31	194	60	Peak
10540	55.17	56.66	-1.49	68.2	-13.03	164	268	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5270 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Getaz Yang

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
5149.92	39.1	38.68	0.42	54	-14.9	201	258	Average
5149.92	47.8	47.38	0.42	74	-26.2	201	258	Peak
5310	93.53	93.3	0.23	-----	-----	201	258	Average
5310	100.53	100.3	0.23	-----	-----	201	258	Peak
5350	44.32	43.99	0.33	54	-9.68	201	258	Average
5350	52.58	52.25	0.33	74	-21.42	201	258	Peak
10620	46.51	48.13	-1.62	54	-7.49	140	123	Average
10620	55.95	57.57	-1.62	74	-18.05	140	123	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
5149.92	38.88	38.46	0.42	54	-15.12	182	58	Average
5149.92	48.97	48.55	0.42	74	-25.03	182	58	Peak
5310	91.53	91.3	0.23	-----	-----	182	58	Average
5310	99.07	98.84	0.23	-----	-----	182	58	Peak
5350	42.57	42.24	0.33	54	-11.43	182	58	Average
5350	49.76	49.43	0.33	74	-24.24	182	58	Peak
10620	46.89	48.51	-1.62	54	-7.11	162	260	Average
10620	55.73	57.35	-1.62	74	-18.27	162	260	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	45.73	44.98	0.75	54	-8.27	247	259	Average
5460	59	58.25	0.75	74	-15	247	259	Peak
5470	58.57	57.8	0.77	68.2	-9.63	247	259	Peak
5510	95.32	94.45	0.87	-----	-----	247	259	Average
5510	103.02	102.15	0.87	-----	-----	247	259	Peak
5725	49.73	48.86	0.87	68.2	-18.47	247	259	Peak
11020	47.35	48.68	-1.33	54	-6.65	112	137	Average
11020	56.51	57.84	-1.33	74	-17.49	112	137	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	41.95	41.2	0.75	54	-12.05	100	248	Average
5460	51.58	50.83	0.75	74	-22.42	100	248	Peak
5470	53.61	52.84	0.77	68.2	-14.59	100	248	Peak
5510	92.1	91.23	0.87	-----	-----	100	248	Average
5510	99.7	98.83	0.87	-----	-----	100	248	Peak
5725	50.81	49.94	0.87	68.2	-17.39	100	248	Peak
11020	47.3	48.63	-1.33	54	-6.7	113	27	Average
11020	56.26	57.59	-1.33	74	-17.74	113	27	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	49.45	48.7	0.75	54	-4.55	249	260	Average
5460	58.48	57.73	0.75	74	-15.52	249	260	Peak
5470	59.12	58.35	0.77	68.2	-9.08	249	260	Peak
5550	98.33	97.46	0.87	-----	-----	249	260	Average
5550	106.86	105.99	0.87	-----	-----	249	260	Peak
5725	49.94	49.07	0.87	68.2	-18.26	249	260	Peak
11100	47.55	48.94	-1.39	54	-6.45	121	109	Average
11100	56.18	57.57	-1.39	74	-17.82	121	109	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	47.02	46.27	0.75	54	-6.98	108	248	Average
5460	54.31	53.56	0.75	74	-19.69	108	248	Peak
5470	56.26	55.49	0.77	68.2	-11.94	108	248	Peak
5550	95.42	94.55	0.87	-----	-----	108	248	Average
5550	102.99	102.12	0.87	-----	-----	108	248	Peak
5725	49.82	48.95	0.87	68.2	-18.38	108	248	Peak
11100	48.65	50.04	-1.39	54	-5.35	162	294	Average
11100	57.65	59.04	-1.39	74	-16.35	162	294	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	41.02	40.27	0.75	54	-12.98	247	260	Average
5460	49.73	48.98	0.75	74	-24.27	247	260	Peak
5470	50	49.23	0.77	68.2	-18.2	247	260	Peak
5670	99.16	98.43	0.73	-----	-----	247	260	Average
5670	106.71	105.98	0.73	-----	-----	247	260	Peak
5725	66.78	65.91	0.87	68.2	-1.42	247	260	Peak
11340	46.92	48.53	-1.61	54	-7.08	124	167	Average
11340	56.45	58.06	-1.61	74	-17.55	124	167	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.91	39.16	0.75	54	-14.09	113	276	Average
5460	49.57	48.82	0.75	74	-24.43	113	276	Peak
5470	48.59	47.82	0.77	68.2	-19.61	113	276	Peak
5670	94.99	94.26	0.73	-----	-----	113	276	Average
5670	103.7	102.97	0.73	-----	-----	113	276	Peak
5725	63.82	62.95	0.87	68.2	-4.38	113	276	Peak
11340	48.02	49.63	-1.61	54	-5.98	165	77	Average
11340	56.57	58.18	-1.61	74	-17.43	165	77	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.79	39.04	0.75	54	-14.21	250	257	Average
5460	48.95	48.2	0.75	74	-25.05	250	257	Peak
5470	48.47	47.7	0.77	68.2	-19.73	250	257	Peak
5710	98.11	97.27	0.84	-----	-----	250	257	Average
5710	105.44	104.6	0.84	-----	-----	250	257	Peak
5873.2	51.45	50.23	1.22	68.2	-16.75	250	257	Peak
11420	48.69	50.04	-1.35	54	-5.31	137	266	Average
11420	58.26	59.61	-1.35	74	-15.74	137	266	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.58	38.83	0.75	54	-14.42	106	269	Average
5460	48.76	48.01	0.75	74	-25.24	106	269	Peak
5470	48.25	47.48	0.77	68.2	-19.95	106	269	Peak
5710	93.47	92.63	0.84	-----	-----	106	269	Average
5710	102.15	101.31	0.84	-----	-----	106	269	Peak
5874.4	50.72	49.5	1.22	68.2	-17.48	106	269	Peak
11420	48.31	49.66	-1.35	54	-5.69	165	227	Average
11420	57.04	58.39	-1.35	74	-16.96	165	227	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5710 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Getaz Yang

<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	97.97	97.06	0.91	-----	-----	257	257	Average
5755	105.65	104.74	0.91	-----	-----	257	257	Peak
11510	47	48.35	-1.35	54	-7	123	167	Average
11510	56.2	57.55	-1.35	74	-17.8	123	167	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	95	94.09	0.91	-----	-----	188	85	Average
5755	102.11	101.2	0.91	-----	-----	188	85	Peak
11510	47.62	48.97	-1.35	54	-6.38	132	268	Average
11510	56.14	57.49	-1.35	74	-17.86	132	268	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
5647.85	57.31	56.64	0.67	68.2	-10.89	257	257	Peak
5659.25	57.75	57.08	0.67	75.07	-17.32	257	257	Peak
5918.125	50.44	49.14	1.3	73.27	-22.83	257	257	Peak
5963.25	51.14	49.81	1.33	68.2	-17.06	257	257	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
5643.575	53.11	52.43	0.68	68.2	-15.09	188	85	Peak
5658.775	56.92	56.26	0.66	74.72	-17.8	188	85	Peak
5919.075	49.92	48.62	1.3	72.57	-22.65	188	85	Peak
5932.375	50.8	49.5	1.3	68.2	-17.4	188	85	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5755 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Getaz Yang

<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	97.93	96.98	0.95	-----	-----	251	259	Average
5795	105.38	104.43	0.95	-----	-----	251	259	Peak
11590	45.72	47.52	-1.8	54	-8.28	132	306	Average
11590	53.94	55.74	-1.8	74	-20.06	132	306	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5795	94.33	93.38	0.95	-----	-----	187	85	Average
5795	102.26	101.31	0.95	-----	-----	187	85	Peak
11590	45.89	47.69	-1.8	54	-8.11	146	37	Average
11590	54.8	56.6	-1.8	74	-19.2	146	37	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
5630.275	52.7	52.02	0.68	68.2	-15.5	251	259	Peak
5655.925	52.55	51.9	0.65	72.6	-20.05	251	259	Peak
5915.275	55.18	53.88	1.3	75.37	-20.19	251	259	Peak
5929.525	52.55	51.25	1.3	68.2	-15.65	251	259	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5640.725	51.97	51.29	0.68	68.2	-16.23	187	85	Peak
5659.725	51.07	50.4	0.67	75.42	-24.35	187	85	Peak
5917.175	52.1	50.8	1.3	73.97	-21.87	187	85	Peak
5977.975	50.73	49.38	1.35	68.2	-17.47	187	85	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5795 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5150	42.82	42.4	0.42	54	-11.18	273	23	Average
5150	50.28	49.86	0.42	74	-23.72	273	23	Peak
5210	90.24	90.12	0.12	-----	-----	273	23	Average
5210	98.23	98.11	0.12	-----	-----	273	23	Peak
5350	39.48	39.15	0.33	54	-14.52	273	23	Average
5350	46.56	46.23	0.33	74	-27.44	273	23	Peak
10420	55.08	56.82	-1.74	68.2	-13.12	113	127	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	42.66	42.24	0.42	54	-11.34	183	241	Average
5150	49.85	49.43	0.42	74	-24.15	183	241	Peak
5210	90.13	90.01	0.12	-----	-----	183	241	Average
5210	97.63	97.51	0.12	-----	-----	183	241	Peak
5350	39.32	38.99	0.33	54	-14.68	183	241	Average
5350	46.2	45.87	0.33	74	-27.8	183	241	Peak
10420	55.69	57.43	-1.74	68.2	-12.51	160	246	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5210 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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

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
5149.92	39.39	38.97	0.42	54	-14.61	198	257	Average
5149.92	48.18	47.76	0.42	74	-25.82	198	257	Peak
5290	92.26	92.09	0.17	-----	-----	198	257	Average
5290	99.43	99.26	0.17	-----	-----	198	257	Peak
5350	46.16	45.83	0.33	54	-7.84	198	257	Average
5350	55.46	55.13	0.33	74	-18.54	198	257	Peak
10580	55.98	57.55	-1.57	68.2	-12.22	133	138	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
5149.92	39.14	38.72	0.42	54	-14.86	203	58	Average
5149.92	49.18	48.76	0.42	74	-24.82	203	58	Peak
5290	90.71	90.54	0.17	-----	-----	203	58	Average
5290	98.13	97.96	0.17	-----	-----	203	58	Peak
5350	43.46	43.13	0.33	54	-10.54	203	58	Average
5350	53.15	52.82	0.33	74	-20.85	203	58	Peak
10580	56.66	58.23	-1.57	68.2	-11.54	162	250	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5290 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Jisyong Wang

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	49.11	48.36	0.75	54	-4.89	253	259	Average
5460	57.16	56.41	0.75	74	-16.84	253	259	Peak
5470	57.16	56.39	0.77	68.2	-11.04	253	259	Peak
5530	92.75	91.89	0.86	-----	-----	253	259	Average
5530	100.51	99.65	0.86	-----	-----	253	259	Peak
5725	47.68	46.81	0.87	68.2	-20.52	253	259	Peak
11060	48.77	50.12	-1.35	54	-5.23	102	111	Average
11060	56.77	58.12	-1.35	74	-17.23	102	111	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5459	45.32	44.57	0.75	54	-8.68	115	248	Average
5459	54.95	54.2	0.75	74	-19.05	115	248	Peak
5467	55.3	54.53	0.77	68.2	-12.9	115	248	Peak
5530	90.26	89.4	0.86	-----	-----	115	248	Average
5530	98.26	97.4	0.86	-----	-----	115	248	Peak
5725	45.15	44.28	0.87	68.2	-23.05	115	248	Peak
11060	49.37	50.72	-1.35	54	-4.63	132	162	Average
11060	57.38	58.73	-1.35	74	-16.62	132	162	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

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	43.58	42.83	0.75	54	-10.42	254	257	Average
5460	52.9	52.15	0.75	74	-21.1	254	257	Peak
5463	53.39	52.63	0.76	68.2	-14.81	254	257	Peak
5610	92.9	92.17	0.73	-----	-----	254	257	Average
5610	100.27	99.54	0.73	-----	-----	254	257	Peak
5725	53.61	52.74	0.87	68.2	-14.59	254	257	Peak
11220	50.56	52.22	-1.66	54	-3.44	152	132	Average
11220	58.54	60.2	-1.66	74	-15.46	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
5457	40.44	39.69	0.75	54	-13.56	114	233	Average
5457	49.48	48.73	0.75	74	-24.52	114	233	Peak
5462.5	49.5	48.74	0.76	68.2	-18.7	114	233	Peak
5610	89.18	88.45	0.73	-----	-----	114	233	Average
5610	97.48	96.75	0.73	-----	-----	114	233	Peak
5725	46.52	45.65	0.87	68.2	-21.68	114	233	Peak
11220	49.22	50.88	-1.66	54	-4.78	145	152	Average
11220	57.3	58.96	-1.66	74	-16.7	145	152	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	45.79	45.04	0.75	54	-8.21	250	253	Average
5460	54.89	54.14	0.75	74	-19.11	250	253	Peak
5470	55.1	54.33	0.77	68.2	-13.1	250	253	Peak
5690	95.36	94.57	0.79	-----	-----	250	253	Average
5690	102.47	101.68	0.79	-----	-----	250	253	Peak
5858.8	59.25	58.06	1.19	68.2	-8.95	250	253	Peak
11380	47.21	48.63	-1.42	54	-6.79	102	56	Average
11380	56.57	57.99	-1.42	74	-17.43	102	56	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	40.15	39.4	0.75	54	-13.85	104	268	Average
5460	50.09	49.34	0.75	74	-23.91	104	268	Peak
5470	48.81	48.04	0.77	68.2	-19.39	104	268	Peak
5690	91.5	90.71	0.79	-----	-----	104	268	Average
5690	98.8	98.01	0.79	-----	-----	104	268	Peak
5854.6	54.57	53.39	1.18	68.2	-13.63	104	268	Peak
11380	47.61	49.03	-1.42	54	-6.39	111	264	Average
11380	55.93	57.35	-1.42	74	-18.07	111	264	Peak

Remarks:

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

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

<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	94.48	93.54	0.94	-----	-----	195	257	Average
5775	101.61	100.67	0.94	-----	-----	195	257	Peak
11550	48.82	50.42	-1.6	54	-5.18	132	168	Average
11550	57.67	59.27	-1.6	74	-16.33	132	168	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	91.14	90.2	0.94	-----	-----	186	87	Average
5775	98.3	97.36	0.94	-----	-----	186	87	Peak
11550	47.04	48.64	-1.6	54	-6.96	112	163	Average
11550	55.83	57.43	-1.6	74	-18.17	112	163	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
5641.675	60.11	59.43	0.68	68.2	-8.09	195	257	Peak
5655.925	61.23	60.58	0.65	72.6	-11.37	195	257	Peak
5915.75	60.01	58.71	1.3	75.02	-15.01	195	257	Peak
5927.625	56.16	54.86	1.3	68.2	-12.04	195	257	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
5646.425	59.58	58.91	0.67	68.2	-8.62	186	87	Peak
5658.775	57.64	56.98	0.66	74.72	-17.08	186	87	Peak
5921.45	54.91	53.61	1.3	70.82	-15.91	186	87	Peak
5929.05	53.73	52.43	1.3	68.2	-14.47	186	87	Peak

Remarks:

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

802.11ac (VHT160)

EUT Test Condition		Measurement Detail	
Channel	Channel 50	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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5150	41.46	41.04	0.42	54	-12.54	276	1	Average
5150	48.07	47.65	0.42	74	-25.93	276	1	Peak
5250	83.92	83.79	0.13	-----	-----	276	1	Average
5250	92.16	92.03	0.13	-----	-----	276	1	Peak
5350	44.07	43.74	0.33	54	-9.93	276	1	Average
5350	51.24	50.91	0.33	74	-22.76	276	1	Peak
10500	54.94	56.35	-1.41	68.2	-13.26	127	141	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	43.9	43.48	0.42	54	-10.1	195	240	Average
5150	50.99	50.57	0.42	74	-23.01	195	240	Peak
5250	85.02	84.89	0.13	-----	-----	195	240	Average
5250	93.16	93.03	0.13	-----	-----	195	240	Peak
5350	43	42.67	0.33	54	-11	195	240	Average
5350	48.21	47.88	0.33	74	-25.79	195	240	Peak
10500	55.45	56.86	-1.41	68.2	-12.75	170	239	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5250 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 114	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

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
5458	48.32	47.57	0.75	54	-5.68	257	256	Average
5458	56.5	55.75	0.75	74	-17.5	257	256	Peak
5464	56.86	56.1	0.76	68.2	-11.34	257	256	Peak
5570	87.81	86.98	0.83	-----	-----	257	256	Average
5570	95.23	94.4	0.83	-----	-----	257	256	Peak
5725	57.99	57.12	0.87	68.2	-10.21	257	256	Peak
11140	49.68	51.19	-1.51	54	-4.32	125	132	Average
11140	57.68	59.19	-1.51	74	-16.32	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
5459	45.38	44.63	0.75	54	-8.62	105	248	Average
5459	54.13	53.38	0.75	74	-19.87	105	248	Peak
5469	54.1	53.33	0.77	68.2	-14.1	105	248	Peak
5570	84.81	83.98	0.83	-----	-----	105	248	Average
5570	92.13	91.3	0.83	-----	-----	105	248	Peak
5725	53.61	52.74	0.87	68.2	-14.59	105	248	Peak
11140	51.12	52.63	-1.51	54	-2.88	132	165	Average
11140	56.76	58.27	-1.51	74	-17.24	132	165	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5570 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The emission levels of other frequencies were very low against the limit

802.11ax (HE20)

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	Jisyoung Wang

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
5149.92	40.98	40.56	0.42	54	-13.02	269	11	Average
5150	48.4	47.98	0.42	74	-25.6	269	11	Peak
5180	95.95	95.69	0.26	-----	-----	269	11	Average
5180	104.46	104.2	0.26	-----	-----	269	11	Peak
10360	55.24	57.16	-1.92	68.2	-12.96	114	130	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
5149	41.96	41.54	0.42	54	-12.04	198	311	Average
5149	49.96	49.54	0.42	74	-24.04	198	311	Peak
5180	98.21	97.95	0.26	-----	-----	198	311	Average
5180	106.21	105.95	0.26	-----	-----	198	311	Peak
10360	54.88	56.8	-1.92	68.2	-13.32	158	232	Peak

Remarks:

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

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

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	39.93	39.51	0.42	54	-14.07	272	18	Average
5150	45.64	45.22	0.42	74	-28.36	272	18	Peak
5200	95.37	95.23	0.14	-----	-----	272	18	Average
5200	103.37	103.23	0.14	-----	-----	272	18	Peak
10400	53.98	55.8	-1.82	68.2	-14.22	133	139	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	39.65	39.23	0.42	54	-14.35	222	347	Average
5150	45.83	45.41	0.42	74	-28.17	222	347	Peak
5200	96.12	95.98	0.14	-----	-----	222	347	Average
5200	104.47	104.33	0.14	-----	-----	222	347	Peak
10400	54.31	56.13	-1.82	68.2	-13.89	156	210	Peak

Remarks:

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

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

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	39.84	39.42	0.42	54	-14.16	265	21	Average
5150	45.98	45.56	0.42	74	-28.02	265	21	Peak
5240	97.54	97.44	0.1	-----	-----	265	21	Average
5240	105.61	105.51	0.1	-----	-----	265	21	Peak
5350	39.59	39.26	0.33	54	-14.41	265	21	Average
5350	45.95	45.62	0.33	74	-28.05	265	21	Peak
10480	55.37	56.85	-1.48	68.2	-12.83	123	135	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	40.22	39.8	0.42	54	-13.78	197	321	Average
5150	46.76	46.34	0.42	74	-27.24	197	321	Peak
5240	100.94	100.84	0.1	-----	-----	197	321	Average
5240	109.03	108.93	0.1	-----	-----	197	321	Peak
5350	39.4	39.07	0.33	54	-14.6	197	321	Average
5350	47.43	47.1	0.33	74	-26.57	197	321	Peak
10480	54.71	56.19	-1.48	68.2	-13.49	141	228	Peak

Remarks:

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

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

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
5149.92	39.45	39.03	0.42	54	-14.55	200	255	Average
5149.92	48.29	47.87	0.42	74	-25.71	200	255	Peak
5260	96.55	96.42	0.13	-----	-----	200	255	Average
5260	104.44	104.31	0.13	-----	-----	200	255	Peak
5350	39.76	39.43	0.33	54	-14.24	200	255	Average
5350	50.13	49.8	0.33	74	-23.87	200	255	Peak
10520	55.7	57.15	-1.45	68.2	-12.5	143	148	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
5149.92	39.39	38.97	0.42	54	-14.61	194	60	Average
5149.92	49.34	48.92	0.42	74	-24.66	194	60	Peak
5260	97.7	97.57	0.13	-----	-----	194	60	Average
5260	105.65	105.52	0.13	-----	-----	194	60	Peak
5350	39.27	38.94	0.33	54	-14.73	194	60	Average
5350	49.34	49.01	0.33	74	-24.66	194	60	Peak
10520	54.99	56.44	-1.45	68.2	-13.21	164	270	Peak

Remarks:

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

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

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
5300	97.26	97.05	0.21	-----	-----	193	255	Average
5300	104.75	104.54	0.21	-----	-----	193	255	Peak
5350	41.21	40.88	0.33	54	-12.79	193	255	Average
5350	51.45	51.12	0.33	74	-22.55	193	255	Peak
10600	46.53	48.14	-1.61	54	-7.47	139	146	Average
10600	55.74	57.35	-1.61	74	-18.26	139	146	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5300	95.77	95.56	0.21	-----	-----	198	58	Average
5300	103.9	103.69	0.21	-----	-----	198	58	Peak
5350	40.06	39.73	0.33	54	-13.94	198	58	Average
5350	50.04	49.71	0.33	74	-23.96	198	58	Peak
10600	46.94	48.55	-1.61	54	-7.06	162	262	Average
10600	55.48	57.09	-1.61	74	-18.52	162	262	Peak

Remarks:

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

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

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	95.38	95.12	0.26	-----	-----	198	256	Average
5320	103.32	103.06	0.26	-----	-----	198	256	Peak
5350	42.36	42.03	0.33	54	-11.64	198	256	Average
5350	50.48	50.15	0.33	74	-23.52	198	256	Peak
10640	46.5	48.12	-1.62	54	-7.5	127	155	Average
10640	55.89	57.51	-1.62	74	-18.11	127	155	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	93.74	93.48	0.26	-----	-----	196	56	Average
5320	102.91	102.65	0.26	-----	-----	196	56	Peak
5350	41.2	40.87	0.33	54	-12.8	196	56	Average
5350	50.84	50.51	0.33	74	-23.16	196	56	Peak
10640	46.88	48.5	-1.62	54	-7.12	175	268	Average
10640	56.1	57.72	-1.62	74	-17.9	175	268	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	46.16	45.41	0.75	54	-7.84	254	258	Average
5460	59.72	58.97	0.75	74	-14.28	254	258	Peak
5470	65.81	65.04	0.77	68.2	-2.39	254	258	Peak
5500	100.26	99.37	0.89	-----	-----	254	258	Average
5500	107.08	106.19	0.89	-----	-----	254	258	Peak
5725	49.63	48.76	0.87	68.2	-18.57	254	258	Peak
11000	48.33	49.64	-1.31	54	-5.67	122	104	Average
11000	57.47	58.78	-1.31	74	-16.53	122	104	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	43.41	42.66	0.75	54	-10.59	102	248	Average
5460	54.45	53.7	0.75	74	-19.55	102	248	Peak
5470	59.55	58.78	0.77	68.2	-8.65	102	248	Peak
5500	96.14	95.25	0.89	-----	-----	102	248	Average
5500	104.04	103.15	0.89	-----	-----	102	248	Peak
5725	50.65	49.78	0.87	68.2	-17.55	102	248	Peak
11000	48.7	50.01	-1.31	54	-5.3	167	309	Average
11000	57.15	58.46	-1.31	74	-16.85	167	309	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	41.63	40.88	0.75	54	-12.37	121	197	Average
5460	51.37	50.62	0.75	74	-22.63	121	197	Peak
5470	52.01	51.24	0.77	68.2	-16.19	121	197	Peak
5580	99.51	98.71	0.8	-----	-----	121	197	Average
5580	106.76	105.96	0.8	-----	-----	121	197	Peak
5725	49.2	48.33	0.87	68.2	-19	121	197	Peak
11160	48.1	49.63	-1.53	54	-5.9	101	73	Average
11160	56.86	58.39	-1.53	74	-17.14	101	73	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	41.24	40.49	0.75	54	-12.76	100	247	Average
5460	50.8	50.05	0.75	74	-23.2	100	247	Peak
5470	52.6	51.83	0.77	68.2	-15.6	100	247	Peak
5580	97.07	96.27	0.8	-----	-----	100	247	Average
5580	106.27	105.47	0.8	-----	-----	100	247	Peak
5725	50.97	50.1	0.87	68.2	-17.23	100	247	Peak
11160	47.29	48.82	-1.53	54	-6.71	164	308	Average
11160	56.33	57.86	-1.53	74	-17.67	164	308	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	40.35	39.6	0.75	54	-13.65	250	258	Average
5460	49.02	48.27	0.75	74	-24.98	250	258	Peak
5470	49.48	48.71	0.77	68.2	-18.72	250	258	Peak
5700	98.76	97.91	0.85	-----	-----	250	258	Average
5700	107.11	106.26	0.85	-----	-----	250	258	Peak
5725	67.21	66.34	0.87	68.2	-0.99	250	258	Peak
11400	47.42	48.77	-1.35	54	-6.58	137	46	Average
11400	56.3	57.65	-1.35	74	-17.7	137	46	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	39.77	39.02	0.75	54	-14.23	100	276	Average
5460	49.16	48.41	0.75	74	-24.84	100	276	Peak
5470	49.1	48.33	0.77	68.2	-19.1	100	276	Peak
5700	93.34	92.49	0.85	-----	-----	100	276	Average
5700	101.36	100.51	0.85	-----	-----	100	276	Peak
5725	61.03	60.16	0.87	68.2	-7.17	100	276	Peak
11400	47.48	48.83	-1.35	54	-6.52	116	37	Average
11400	56.19	57.54	-1.35	74	-17.81	116	37	Peak

Remarks:

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

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

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
5459	39.62	38.87	0.75	54	-14.38	248	252	Average
5459	49.17	48.42	0.75	74	-24.83	248	252	Peak
5465.2	47.79	47.02	0.77	68.2	-20.41	248	252	Peak
5720	96.82	95.96	0.86	-----	-----	248	252	Average
5720	104.77	103.91	0.86	-----	-----	248	252	Peak
5906.8	50.06	48.77	1.29	68.2	-18.14	248	252	Peak
11440	48.19	49.52	-1.33	54	-5.81	125	132	Average
11440	56.47	57.8	-1.33	74	-17.53	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
5459	39.62	38.87	0.75	54	-14.38	108	122	Average
5459	48.58	47.83	0.75	74	-25.42	108	122	Peak
5464.6	47.4	46.64	0.76	68.2	-20.8	108	122	Peak
5720	92.95	92.09	0.86	-----	-----	108	122	Average
5720	100.42	99.56	0.86	-----	-----	108	122	Peak
5948.8	50.42	49.1	1.32	68.2	-17.78	108	122	Peak
11440	49.73	51.06	-1.33	54	-4.27	132	162	Average
11440	57.76	59.09	-1.33	74	-16.24	132	162	Peak

Remarks:

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

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

<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	96.87	95.99	0.88	-----	-----	248	260	Average
5745	105.05	104.17	0.88	-----	-----	248	260	Peak
11490	47.21	48.53	-1.32	54	-6.79	163	29	Average
11490	56.18	57.5	-1.32	74	-17.82	163	29	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	94.87	93.99	0.88	-----	-----	182	42	Average
5745	103.32	102.44	0.88	-----	-----	182	42	Peak
11490	47.31	48.63	-1.32	54	-6.69	113	110	Average
11490	56.02	57.34	-1.32	74	-17.98	113	110	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
5637.875	50.08	49.41	0.67	68.2	-18.12	248	260	Peak
5660.2	50.06	49.39	0.67	75.77	-25.71	248	260	Peak
5922.4	50.16	48.86	1.3	70.12	-19.96	248	260	Peak
5949.95	50.92	49.6	1.32	68.2	-17.28	248	260	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
5609.375	50.18	49.45	0.73	68.2	-18.02	182	42	Peak
5651.175	49.05	48.36	0.69	69.07	-20.02	182	42	Peak
5919.075	50.31	49.01	1.3	72.57	-22.26	182	42	Peak
5947.575	50.53	49.21	1.32	68.2	-17.67	182	42	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5745 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Jisyong Wang

<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	99.24	98.32	0.92	-----	-----	244	262	Average
5785	107.24	106.32	0.92	-----	-----	244	262	Peak
11570	46.24	47.95	-1.71	54	-7.76	122	104	Average
11570	54.89	56.6	-1.71	74	-19.11	122	104	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5785	98.31	97.39	0.92	-----	-----	180	39	Average
5785	105.61	104.69	0.92	-----	-----	180	39	Peak
11570	46.16	47.87	-1.71	54	-7.84	167	303	Average
11570	55.17	56.88	-1.71	74	-18.83	167	303	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
5638.825	50.56	49.89	0.67	68.2	-17.64	244	262	Peak
5657.825	49.4	48.74	0.66	74.01	-24.61	244	262	Peak
5915.275	50.62	49.32	1.3	75.37	-24.75	244	262	Peak
6010.275	51.11	49.7	1.41	68.2	-17.09	244	262	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
5593.225	50.58	49.79	0.79	68.2	-17.62	180	39	Peak
5651.65	51.09	50.4	0.69	69.43	-18.34	180	39	Peak
5920.025	49.83	48.53	1.3	71.87	-22.04	180	39	Peak
5953.275	50.76	49.44	1.32	68.2	-17.44	180	39	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5785 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Jisyong Wang

<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	101.11	100.05	1.06	-----	-----	250	254	Average
5825	109.2	108.14	1.06	-----	-----	250	254	Peak
11650	45.12	47.18	-2.06	54	-8.88	134	167	Average
11650	53.61	55.67	-2.06	74	-20.39	134	167	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	98.41	97.35	1.06	-----	-----	168	57	Average
5825	105.84	104.78	1.06	-----	-----	168	57	Peak
11650	44.49	46.55	-2.06	54	-9.51	133	177	Average
11650	53.05	55.11	-2.06	74	-20.95	133	177	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
5643.575	50.67	49.99	0.68	68.2	-17.53	250	254	Peak
5657.825	50.01	49.35	0.66	74.01	-24	250	254	Peak
5920.5	51.48	50.18	1.3	71.52	-20.04	250	254	Peak
5962.3	52.08	50.76	1.32	68.2	-16.12	250	254	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	50.56	49.72	0.84	68.2	-17.64	168	57	Peak
5650.7	49.48	48.8	0.68	68.72	-19.24	168	57	Peak
5922.875	50.81	49.51	1.3	69.77	-18.96	168	57	Peak
5958.025	51.15	49.82	1.33	68.2	-17.05	168	57	Peak

Remarks:

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

802.11ax (HE40)

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	Jisyoung Wang

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5150	42.54	42.12	0.42	54	-11.46	262	105	Average
5150	49.07	48.65	0.42	74	-24.93	262	105	Peak
5190	92.17	91.97	0.2	-----	-----	262	105	Average
5190	100.53	100.33	0.2	-----	-----	262	105	Peak
5350	39.69	39.36	0.33	54	-14.31	262	105	Average
5350	46.2	45.87	0.33	74	-27.8	262	105	Peak
10380	54.61	56.47	-1.86	68.2	-13.59	111	141	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	42.26	41.84	0.42	54	-11.74	195	239	Average
5150	50.48	50.06	0.42	74	-23.52	195	239	Peak
5190	92.17	91.97	0.2	-----	-----	195	239	Average
5190	100.26	100.06	0.2	-----	-----	195	239	Peak
5350	39.42	39.09	0.33	54	-14.58	195	239	Average
5350	45.24	44.91	0.33	74	-28.76	195	239	Peak
10380	55.15	57.01	-1.86	68.2	-13.05	160	238	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5190 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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

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	39.98	39.56	0.42	54	-14.02	264	107	Average
5150	46.81	46.39	0.42	74	-27.19	264	107	Peak
5230	93.29	93.17	0.12	-----	-----	264	107	Average
5230	100.83	100.71	0.12	-----	-----	264	107	Peak
5350	39.18	38.85	0.33	54	-14.82	264	107	Average
5350	45.8	45.47	0.33	74	-28.2	264	107	Peak
10460	56.21	57.8	-1.59	68.2	-11.99	124	115	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	39.97	39.55	0.42	54	-14.03	190	304	Average
5150	45.27	44.85	0.42	74	-28.73	190	304	Peak
5230	91.69	91.57	0.12	-----	-----	190	304	Average
5230	99.77	99.65	0.12	-----	-----	190	304	Peak
5350	39.16	38.83	0.33	54	-14.84	190	304	Average
5350	46.6	46.27	0.33	74	-27.4	190	304	Peak
10460	55.43	57.02	-1.59	68.2	-12.77	164	266	Peak

Remarks:

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

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

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
5149.92	41.96	41.54	0.42	54	-12.04	202	258	Average
5149.92	52.79	52.37	0.42	74	-21.21	202	258	Peak
5270	97.27	97.14	0.13	-----	-----	202	258	Average
5270	105.54	105.41	0.13	-----	-----	202	258	Peak
5350	46.37	46.04	0.33	54	-7.63	202	258	Average
5350	58.71	58.38	0.33	74	-15.29	202	258	Peak
10540	55.18	56.67	-1.49	68.2	-13.02	144	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
5149.92	41.24	40.82	0.42	54	-12.76	195	60	Average
5149.92	51.06	50.64	0.42	74	-22.94	195	60	Peak
5270	96.21	96.08	0.13	-----	-----	195	60	Average
5270	104.31	104.18	0.13	-----	-----	195	60	Peak
5350	44.31	43.98	0.33	54	-9.69	195	60	Average
5350	52.9	52.57	0.33	74	-21.1	195	60	Peak
10540	56.31	57.8	-1.49	68.2	-11.89	149	258	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5270 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Getaz Yang

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
5149.92	38.96	38.54	0.42	54	-15.04	204	255	Average
5149.92	48.72	48.3	0.42	74	-25.28	204	255	Peak
5310	91.84	91.61	0.23	-----	-----	204	255	Average
5310	100.18	99.95	0.23	-----	-----	204	255	Peak
5350	44.36	44.03	0.33	54	-9.64	204	255	Average
5350	56.13	55.8	0.33	74	-17.87	204	255	Peak
10620	46.52	48.14	-1.62	54	-7.48	137	142	Average
10620	56.41	58.03	-1.62	74	-17.59	137	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
5149.92	38.92	38.5	0.42	54	-15.08	186	59	Average
5149.92	48.55	48.13	0.42	74	-25.45	186	59	Peak
5310	89.8	89.57	0.23	-----	-----	186	59	Average
5310	98.35	98.12	0.23	-----	-----	186	59	Peak
5350	42.47	42.14	0.33	54	-11.53	186	59	Average
5350	53.63	53.3	0.33	74	-20.37	186	59	Peak
10620	46.9	48.52	-1.62	54	-7.1	158	264	Average
10620	56.43	58.05	-1.62	74	-17.57	158	264	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	48.77	48.02	0.75	54	-5.23	252	251	Average
5460	60.86	60.11	0.75	74	-13.14	252	251	Peak
5470	65.85	65.08	0.77	68.2	-2.35	252	251	Peak
5510	94.33	93.46	0.87	-----	-----	252	251	Average
5510	102.77	101.9	0.87	-----	-----	252	251	Peak
5725	50.29	49.42	0.87	68.2	-17.91	252	251	Peak
11020	48.51	49.84	-1.33	54	-5.49	136	255	Average
11020	57.62	58.95	-1.33	74	-16.38	136	255	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	46.88	46.13	0.75	54	-7.12	100	166	Average
5460	58.26	57.51	0.75	74	-15.74	100	166	Peak
5470	64.41	63.64	0.77	68.2	-3.79	100	166	Peak
5510	92.21	91.34	0.87	-----	-----	100	166	Average
5510	101	100.13	0.87	-----	-----	100	166	Peak
5725	49.66	48.79	0.87	68.2	-18.54	100	166	Peak
11020	47.64	48.97	-1.33	54	-6.36	131	164	Average
11020	56.42	57.75	-1.33	74	-17.58	131	164	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	52.94	52.19	0.75	54	-1.06	255	235	Average
5460	64.3	63.55	0.75	74	-9.7	255	235	Peak
5470	66.09	65.32	0.77	68.2	-2.11	255	235	Peak
5550	97.18	96.31	0.87	-----	-----	255	235	Average
5550	105.48	104.61	0.87	-----	-----	255	235	Peak
5725	51.75	50.88	0.87	68.2	-16.45	255	235	Peak
11100	46.18	47.57	-1.39	54	-7.82	132	101	Average
11100	55.65	57.04	-1.39	74	-18.35	132	101	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	53.02	52.27	0.75	54	-0.98	100	249	Average
5460	64.15	63.4	0.75	74	-9.85	100	249	Peak
5470	65.77	65	0.77	68.2	-2.43	100	249	Peak
5550	95.43	94.56	0.87	-----	-----	100	249	Average
5550	104.04	103.17	0.87	-----	-----	100	249	Peak
5725	47.85	46.98	0.87	68.2	-20.35	100	249	Peak
11100	47.58	48.97	-1.39	54	-6.42	122	103	Average
11100	55.84	57.23	-1.39	74	-18.16	122	103	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5460	40.92	40.17	0.75	54	-13.08	140	197	Average
5460	50.06	49.31	0.75	74	-23.94	140	197	Peak
5470	49.76	48.99	0.77	68.2	-18.44	140	197	Peak
5670	97	96.27	0.73	-----	-----	140	197	Average
5670	104.52	103.79	0.73	-----	-----	140	197	Peak
5725	66.46	65.59	0.87	68.2	-1.74	140	197	Peak
11340	48.72	50.33	-1.61	54	-5.28	122	193	Average
11340	57.96	59.57	-1.61	74	-16.04	122	193	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	40.07	39.32	0.75	54	-13.93	100	277	Average
5460	49.23	48.48	0.75	74	-24.77	100	277	Peak
5470	48.2	47.43	0.77	68.2	-20	100	277	Peak
5670	93.12	92.39	0.73	-----	-----	100	277	Average
5670	102.1	101.37	0.73	-----	-----	100	277	Peak
5725	63.48	62.61	0.87	68.2	-4.72	100	277	Peak
11340	47.64	49.25	-1.61	54	-6.36	154	93	Average
11340	56.56	58.17	-1.61	74	-17.44	154	93	Peak

Remarks:

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

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

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
5459	40.04	39.29	0.75	54	-13.96	246	256	Average
5459	49	48.25	0.75	74	-25	246	256	Peak
5470	49.4	48.63	0.77	68.2	-18.8	246	256	Peak
5710	100.39	99.55	0.84	-----	-----	246	256	Average
5710	106.43	105.59	0.84	-----	-----	246	256	Peak
5863.6	51.83	50.63	1.2	68.2	-16.37	246	256	Peak
11420	48.18	49.53	-1.35	54	-5.82	152	162	Average
11420	56.53	57.88	-1.35	74	-17.47	152	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
5459	39.83	39.08	0.75	54	-14.17	184	85	Average
5459	49.9	49.15	0.75	74	-24.1	184	85	Peak
5465.2	48.03	47.26	0.77	68.2	-20.17	184	85	Peak
5710	94.79	93.95	0.84	-----	-----	184	85	Average
5710	102.55	101.71	0.84	-----	-----	184	85	Peak
5895.4	50.69	49.41	1.28	68.2	-17.51	184	85	Peak
11420	49.28	50.63	-1.35	54	-4.72	132	295	Average
11420	57.53	58.88	-1.35	74	-16.47	132	295	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5710 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Getaz Yang

<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	97.35	96.44	0.91	-----	-----	200	266	Average
5755	105.03	104.12	0.91	-----	-----	200	266	Peak
11510	48.29	49.64	-1.35	54	-5.71	183	202	Average
11510	57.06	58.41	-1.35	74	-16.94	183	202	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	93.92	93.01	0.91	-----	-----	191	83	Average
5755	102.4	101.49	0.91	-----	-----	191	83	Peak
11510	47.59	48.94	-1.35	54	-6.41	133	107	Average
11510	56.42	57.77	-1.35	74	-17.58	133	107	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
5635.975	60.18	59.51	0.67	68.2	-8.02	200	266	Peak
5659.25	63.13	62.46	0.67	75.07	-11.94	200	266	Peak
5918.125	53.98	52.68	1.3	73.27	-19.29	200	266	Peak
5953.75	51.93	50.61	1.32	68.2	-16.27	200	266	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
5643.1	58.72	58.04	0.68	68.2	-9.48	191	83	Peak
5654.5	60.01	59.37	0.64	71.54	-11.53	191	83	Peak
5920.025	50.91	49.61	1.3	71.87	-20.96	191	83	Peak
5929.05	50.91	49.61	1.3	68.2	-17.29	191	83	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5755 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Getaz Yang

<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	97.13	96.18	0.95	-----	-----	250	259	Average
5795	105.83	104.88	0.95	-----	-----	250	259	Peak
11590	45.33	47.13	-1.8	54	-8.67	134	307	Average
11590	53.52	55.32	-1.8	74	-20.48	134	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
5795	93.23	92.28	0.95	-----	-----	181	81	Average
5795	100.99	100.04	0.95	-----	-----	181	81	Peak
11590	44.43	46.23	-1.8	54	-9.57	101	73	Average
11590	53.76	55.56	-1.8	74	-20.24	101	73	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
5646.425	58.83	58.16	0.67	68.2	-9.37	250	259	Peak
5655.925	59.45	58.8	0.65	72.6	-13.15	250	259	Peak
5917.65	58.51	57.21	1.3	73.62	-15.11	250	259	Peak
5937.6	57.28	55.96	1.32	68.2	-10.92	250	259	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
5638.35	55.25	54.58	0.67	68.2	-12.95	181	81	Peak
5651.175	55.6	54.91	0.69	69.07	-13.47	181	81	Peak
5915.275	54.58	53.28	1.3	75.37	-20.79	181	81	Peak
5926.675	53.36	52.06	1.3	68.2	-14.84	181	81	Peak

Remarks:

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

802.11ax (HE80)

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	Jisyong Wang

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	51.33	50.91	0.42	54	-2.67	269	13	Average
5150	57.83	57.41	0.42	74	-16.17	269	13	Peak
5210	93.11	92.99	0.12	-----	-----	269	13	Average
5210	100.99	100.87	0.12	-----	-----	269	13	Peak
5350	42.44	42.11	0.33	54	-11.56	269	13	Average
5350	49.93	49.6	0.33	74	-24.07	269	13	Peak
10420	55.09	56.83	-1.74	68.2	-13.11	130	148	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	47.8	47.38	0.42	54	-6.2	194	236	Average
5150	54.61	54.19	0.42	74	-19.39	194	236	Peak
5210	92.1	91.98	0.12	-----	-----	194	236	Average
5210	99.77	99.65	0.12	-----	-----	194	236	Peak
5350	41.27	40.94	0.33	54	-12.73	194	236	Average
5350	48.75	48.42	0.33	74	-25.25	194	236	Peak
10420	55.43	57.17	-1.74	68.2	-12.77	166	260	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5210 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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

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
5149.92	39.77	39.35	0.42	54	-14.23	201	255	Average
5149.92	49.55	49.13	0.42	74	-24.45	201	255	Peak
5290	89.43	89.26	0.17	-----	-----	201	255	Average
5290	98.78	98.61	0.17	-----	-----	201	255	Peak
5350	47.22	46.89	0.33	54	-6.78	201	255	Average
5350	61.76	61.43	0.33	74	-12.24	201	255	Peak
10580	55.38	56.95	-1.57	68.2	-12.82	143	150	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
5149.92	39.34	38.92	0.42	54	-14.66	184	57	Average
5149.92	48.61	48.19	0.42	74	-25.39	184	57	Peak
5290	87.63	87.46	0.17	-----	-----	184	57	Average
5290	95.79	95.62	0.17	-----	-----	184	57	Peak
5350	44.95	44.62	0.33	54	-9.05	184	57	Average
5350	56.78	56.45	0.33	74	-17.22	184	57	Peak
10580	56.01	57.58	-1.57	68.2	-12.19	163	274	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5290 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Jisyong Wang

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
5450.5	46.25	45.52	0.73	54	-7.75	253	254	Average
5450.5	54.43	53.7	0.73	74	-19.57	253	254	Peak
5470	54.17	53.4	0.77	68.2	-14.03	253	254	Peak
5530	92.8	91.94	0.86	-----	-----	253	254	Average
5530	100.81	99.95	0.86	-----	-----	253	254	Peak
5725	48.35	47.48	0.87	68.2	-19.85	253	254	Peak
11060	48.27	49.62	-1.35	54	-5.73	165	132	Average
11060	56.28	57.63	-1.35	74	-17.72	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
5458	53.08	52.33	0.75	54	-0.92	104	246	Average
5458	62.89	62.14	0.75	74	-11.11	104	246	Peak
5465.5	63.82	63.05	0.77	68.2	-4.38	104	246	Peak
5530	92.59	91.73	0.86	-----	-----	104	246	Average
5530	100.37	99.51	0.86	-----	-----	104	246	Peak
5725	48.24	47.37	0.87	68.2	-19.96	104	246	Peak
11060	48.58	49.93	-1.35	54	-5.42	145	152	Average
11060	56.58	57.93	-1.35	74	-17.42	145	152	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

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	43.31	42.56	0.75	54	-10.69	254	256	Average
5460	51.35	50.6	0.75	74	-22.65	254	256	Peak
5470	53.18	52.41	0.77	68.2	-15.02	254	256	Peak
5610	94.47	93.74	0.73	-----	-----	254	256	Average
5610	102.43	101.7	0.73	-----	-----	254	256	Peak
5725	53.41	52.54	0.87	68.2	-14.79	254	256	Peak
11220	48.96	50.62	-1.66	54	-5.04	147	152	Average
11220	56.97	58.63	-1.66	74	-17.03	147	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
5434	40.66	40.04	0.62	54	-13.34	113	238	Average
5434	50.1	49.48	0.62	74	-23.9	113	238	Peak
5468	49.08	48.31	0.77	68.2	-19.12	113	238	Peak
5610	90.56	89.83	0.73	-----	-----	113	238	Average
5610	96.59	95.86	0.73	-----	-----	113	238	Peak
5725	47.69	46.82	0.87	68.2	-20.51	113	238	Peak
11220	48.56	50.22	-1.66	54	-5.44	125	132	Average
11220	56.57	58.23	-1.66	74	-17.43	125	132	Peak

Remarks:

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

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

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
5459	46.7	45.95	0.75	54	-7.3	246	253	Average
5459	55.78	55.03	0.75	74	-18.22	246	253	Peak
5467	56.54	55.77	0.77	68.2	-11.66	246	253	Peak
5690	96.81	96.02	0.79	-----	-----	246	253	Average
5690	105.01	104.22	0.79	-----	-----	246	253	Peak
5853.4	64.19	63.02	1.17	68.2	-4.01	246	253	Peak
11380	49.23	50.65	-1.42	54	-4.77	100	360	Average
11380	57.24	58.66	-1.42	74	-16.76	100	360	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
5459	44.17	43.42	0.75	54	-9.83	182	84	Average
5459	52.7	51.95	0.75	74	-21.3	182	84	Peak
5467	53.55	52.78	0.77	68.2	-14.65	182	84	Peak
5690	92.01	91.22	0.79	-----	-----	182	84	Average
5690	99.64	98.85	0.79	-----	-----	182	84	Peak
5851	56.27	55.1	1.17	68.2	-11.93	182	84	Peak
11380	48.97	50.39	-1.42	54	-5.03	182	265	Average
11380	56.97	58.39	-1.42	74	-17.03	182	265	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5690 MHz: Fundamental Frequency
- *: Out of Restricted Band
- 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	Getaz Yang

<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	91.54	90.6	0.94	-----	-----	252	258	Average
5775	100.69	99.75	0.94	-----	-----	252	258	Peak
11550	46.67	48.27	-1.6	54	-7.33	173	209	Average
11550	55.89	57.49	-1.6	74	-18.11	173	209	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	88.13	87.19	0.94	-----	-----	187	85	Average
5775	96.83	95.89	0.94	-----	-----	187	85	Peak
11550	47.09	48.69	-1.6	54	-6.91	107	133	Average
11550	55.51	57.11	-1.6	74	-18.49	107	133	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
5646.9	60.18	59.51	0.67	68.2	-8.02	252	258	Peak
5659.25	64.51	63.84	0.67	75.07	-10.56	252	258	Peak
5920.5	59	57.7	1.3	71.52	-12.52	252	258	Peak
5926.675	58.07	56.77	1.3	68.2	-10.13	252	258	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5644.525	58.16	57.49	0.67	68.2	-10.04	187	85	Peak
5659.25	60.95	60.28	0.67	75.07	-14.12	187	85	Peak
5921.925	55.02	53.72	1.3	70.47	-15.45	187	85	Peak
5926.2	55.01	53.71	1.3	68.2	-13.19	187	85	Peak

Remarks:

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

802.11ax (HE160)

EUT Test Condition		Measurement Detail	
Channel	Channel 50	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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5150	41.13	40.71	0.42	54	-12.87	278	2	Average
5150	48.4	47.98	0.42	74	-25.6	278	2	Peak
5250	84.95	84.82	0.13	-----	-----	278	2	Average
5250	92.76	92.63	0.13	-----	-----	278	2	Peak
5350	42.8	42.47	0.33	54	-11.2	278	2	Average
5350	50.23	49.9	0.33	74	-23.77	278	2	Peak
10500	55.43	56.84	-1.41	68.2	-12.77	126	128	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	43.29	0.42	54	-10.29	190	240	Average
5150	50.4	49.98	0.42	74	-23.6	278	2	Peak
5250	85.05	84.92	0.13	-----	-----	190	240	Average
5250	92.59	92.46	0.13	-----	-----	190	240	Peak
5350	41.6	41.27	0.33	54	-12.4	190	240	Average
5350	52.23	51.9	0.33	74	-21.77	278	2	Peak
10500	55.02	56.43	-1.41	68.2	-13.18	144	247	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5250 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 114	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

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
5459	46.39	45.64	0.75	54	-7.61	253	255	Average
5459	55.98	55.23	0.75	74	-18.02	253	255	Peak
5461	55.78	55.03	0.75	68.2	-12.42	253	255	Peak
5570	87.91	87.08	0.83	-----	-----	253	255	Average
5570	95.86	95.03	0.83	-----	-----	253	255	Peak
5725	56.33	55.46	0.87	68.2	-11.87	253	255	Peak
11140	50.02	51.53	-1.51	54	-3.98	145	125	Average
11140	58.05	59.56	-1.51	74	-15.95	145	125	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5459	42.93	42.18	0.75	54	-11.07	113	238	Average
5459	51.99	51.24	0.75	74	-22.01	113	238	Peak
5460.5	52.13	51.38	0.75	68.2	-16.07	113	238	Peak
5570	84.48	83.65	0.83	-----	-----	113	238	Average
5570	92.65	91.82	0.83	-----	-----	113	238	Peak
5725	50.06	49.19	0.87	68.2	-18.14	113	238	Peak
11140	49.26	50.77	-1.51	54	-4.74	102	256	Average
11140	57.25	58.76	-1.51	74	-16.75	102	256	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 5570 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The emission levels of other frequencies were very low against the limit

9 kHz ~ 30 MHz Data:

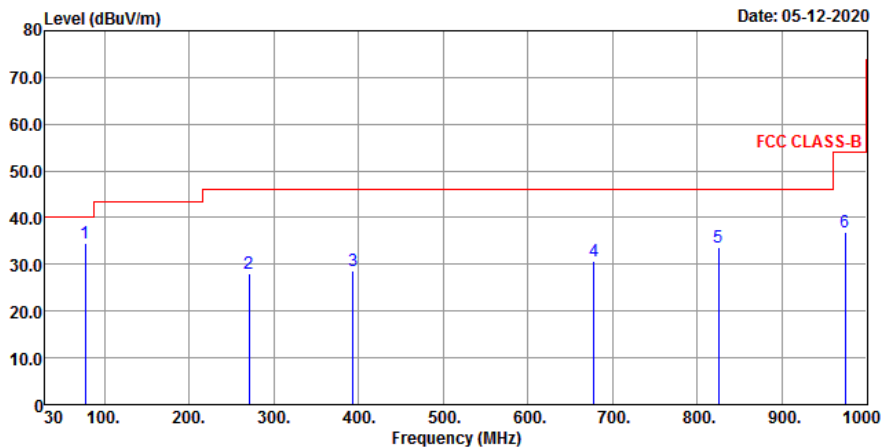
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

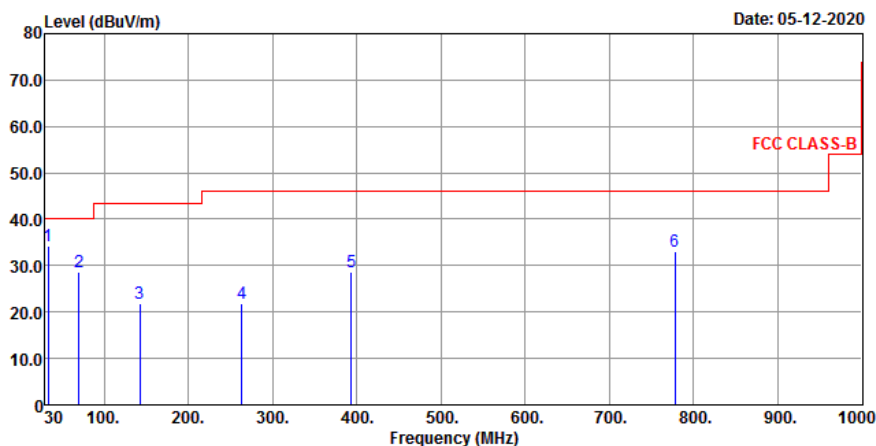
802.11ax (HE80)

EUT Test Condition		Measurement Detail	
Channel	Channel 106	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	Jisyoung 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
77.53	34.4	50.27	-15.87	40	-5.6	111	125	Peak
270.56	28.06	40.15	-12.09	46	-17.94	132	214	Peak
393.75	28.66	37.16	-8.5	46	-17.34	152	162	Peak
677.96	30.63	31.73	-1.1	46	-15.37	111	132	Peak
825.4	33.58	31.35	2.23	46	-12.42	102	214	Peak
974.78	36.91	33.11	3.8	54	-17.09	165	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
33.88	34.36	47.23	-12.87	40	-5.64	132	152	Peak
69.77	28.69	42.54	-13.85	40	-11.31	111	162	Peak
142.52	21.82	33.77	-11.95	43.5	-21.68	114	125	Peak
263.77	21.91	34.39	-12.48	46	-24.09	132	251	Peak
393.75	28.65	37.15	-8.5	46	-17.35	162	251	Peak
777.87	33.02	31.54	1.48	46	-12.98	102	231	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
- 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 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

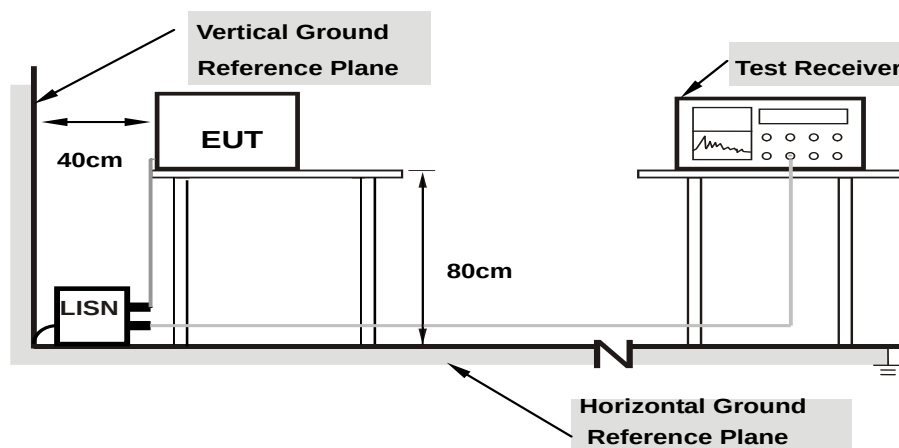
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

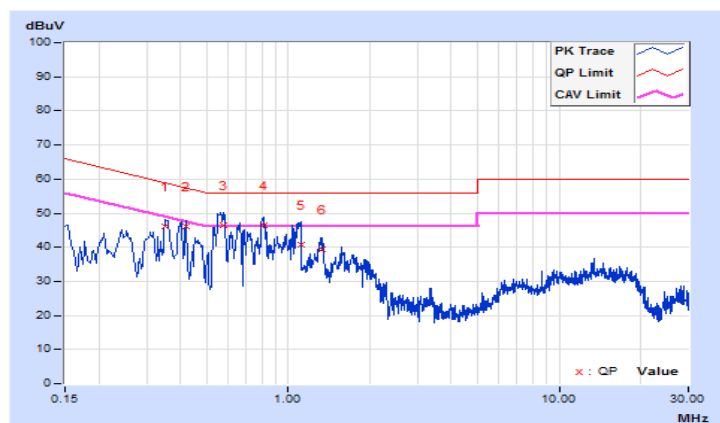
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25°C, 65%RH
Tested by	Jisyong Wang	Test Date	2020/5/14

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	0.35000	10.19	36.01	28.96	46.20	39.15	58.96	48.96	-12.76	-9.81
2	0.42131	10.20	35.87	27.07	46.07	37.27	57.42	47.42	-11.35	-10.15
3	0.57644	10.22	36.25	30.92	46.47	41.14	56.00	46.00	-9.53	-4.86
4	0.81400	10.24	36.38	30.95	46.62	41.19	56.00	46.00	-9.38	-4.81
5	1.11000	10.26	30.43	23.02	40.69	33.28	56.00	46.00	-15.31	-12.72
6	1.33800	10.27	29.16	20.98	39.43	31.25	56.00	46.00	-16.57	-14.75

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

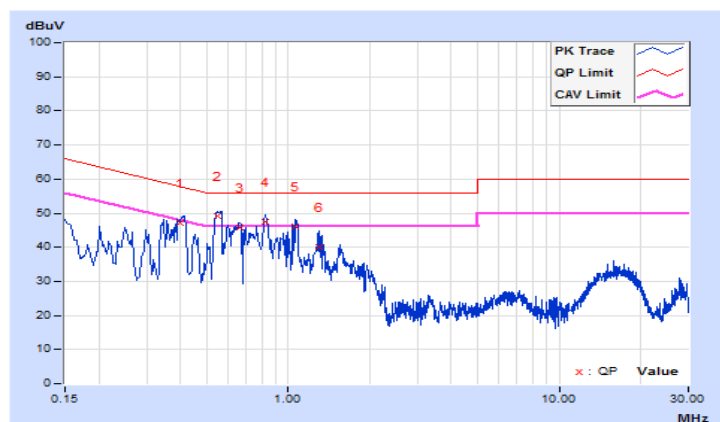


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25°C, 65%RH
Tested by	Jisyong Wang	Test Date	2020/5/14

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	0.40074	10.18	36.97	30.70	47.15	40.88	57.84	47.84	-10.69	-6.96
2	0.54830	10.19	39.02	29.71	49.21	39.90	56.00	46.00	-6.79	-6.10
3	0.66200	10.21	35.43	27.61	45.64	37.82	56.00	46.00	-10.36	-8.18
4	0.82600	10.22	37.32	28.53	47.54	38.75	56.00	46.00	-8.46	-7.25
5	1.06220	10.24	35.95	27.18	46.19	37.42	56.00	46.00	-9.81	-8.58
6	1.29400	10.25	29.68	21.08	39.93	31.33	56.00	46.00	-16.07	-14.67

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 $\leq$ 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 $N_{ANT} \leq 4$;

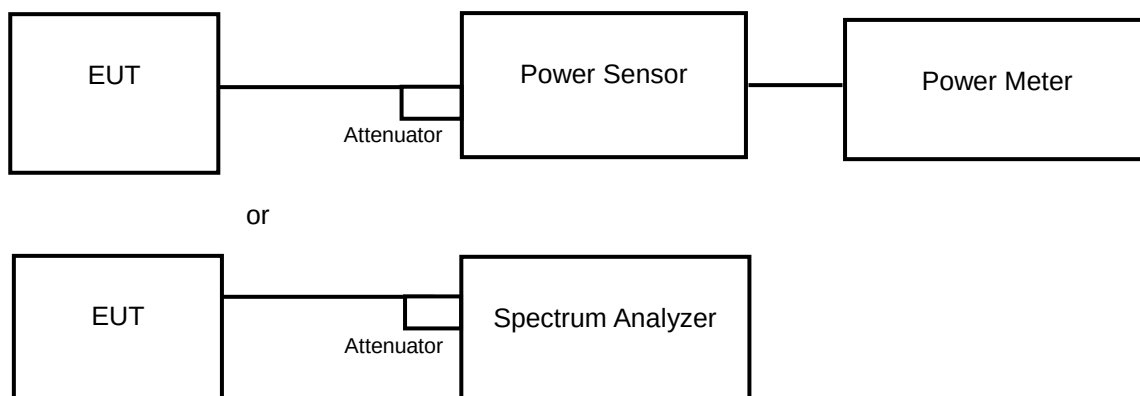
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

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), 802.11ac (VHT80), 802.11ac (VHT160), 802.11ax (HE20), 802.11ax (HE40), 802.11ax (HE80), 802.11ax (HE160)>

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.

<Straddle Channel>

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

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

Chain 0

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	77.446	18.89	24	Pass
40	5200	77.09	18.87	24	Pass
48	5240	76.56	18.84	24	Pass
52	5260	76.208	18.82	24	Pass
60	5300	75.858	18.80	24	Pass
64	5320	67.764	18.31	24	Pass
100	5500	77.268	18.88	24	Pass
120	5600	77.983	18.92	24	Pass
140	5700	73.114	18.64	24	Pass
149	5745	106.17	20.26	30	Pass
157	5785	113.763	20.56	30	Pass
165	5825	109.144	20.38	30	Pass

Chain 1

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	77.268	18.88	24	Pass
40	5200	74.817	18.74	24	Pass
48	5240	77.268	18.88	24	Pass
52	5260	80.538	19.06	24	Pass
60	5300	78.524	18.95	24	Pass
64	5320	63.680	18.04	24	Pass
100	5500	76.033	18.81	24	Pass
120	5600	71.614	18.55	24	Pass
140	5700	70.307	18.47	24	Pass
149	5745	100.000	20.00	30	Pass
157	5785	100.462	20.02	30	Pass
165	5825	102.565	20.11	30	Pass

802.11n (HT20)

Chain 0+1

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	17.73	17.75	118.859	20.75	24	Pass
40	5200	18.86	18.79	152.596	21.84	24	Pass
48	5240	18.77	18.83	151.719	21.81	24	Pass
52	5260	18.79	18.88	152.951	21.85	24	Pass
60	5300	18.76	18.83	151.546	21.81	24	Pass
64	5320	16.33	16.45	87.111	19.40	24	Pass
100	5500	17.77	17.68	118.455	20.74	24	Pass
120	5600	18.83	18.41	145.881	21.64	24	Pass
140	5700	17.63	17.59	115.355	20.62	24	Pass
144	5720 (U-NII-2C)	18.57	18.43	141.608	21.51	24	Pass
144	5720 (U-NII-3)	13.40	13.60	44.786	16.51	30	Pass
149	5745	19.99	19.90	197.494	22.96	30	Pass
157	5785	19.89	19.92	195.674	22.92	30	Pass
165	5825	19.79	20.14	198.556	22.98	30	Pass

802.11n (HT40)

Chain 0+1

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	17.28	17.16	105.456	20.23	24	Pass
46	5230	18.96	18.80	154.562	21.89	24	Pass
54	5270	18.45	18.47	140.291	21.47	24	Pass
62	5310	14.46	14.36	55.215	17.42	24	Pass
102	5510	17.52	17.44	111.956	20.49	24	Pass
118	5590	18.95	18.67	152.055	21.82	24	Pass
134	5670	18.86	18.47	147.22	21.68	24	Pass
142	5710 (U-NII-2C)	18.84	18.46	146.705	21.66	24	Pass
142	5710 (U-NII-3)	9.80	9.46	18.381	12.64	30	Pass
151	5755	19.19	18.82	159.193	22.02	30	Pass
159	5795	20.04	19.29	185.843	22.69	30	Pass

802.11ac (VHT80)

Chain 0+1

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	17.15	16.98	101.768	20.08	24	Pass
58	5290	15.54	15.67	72.707	18.62	24	Pass
106	5530	17.76	17.56	116.72	20.67	24	Pass
122	5610	18.64	18.91	150.918	21.79	24	Pass
138	5690 (U-NII-2C)	18.93	18.65	151.445	21.80	24	Pass
138	5690 (U-NII-3)	3.53	3.72	4.609	6.64	30	Pass
155	5775	18.13	17.80	125.269	20.98	30	Pass

802.11ac (VHT160)

Chain 0+1

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
50	5250	13.21	13.34	42.519	16.29	24	Pass
114	5570	13.90	13.63	47.615	16.78	24	Pass

802.11ax (HE20)

Chain 0+1

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	17.71	17.85	119.974	20.79	24	Pass
40	5200	18.31	18.26	134.753	21.30	24	Pass
48	5240	18.39	18.25	135.858	21.33	24	Pass
52	5260	18.32	18.24	134.601	21.29	24	Pass
60	5300	18.34	18.23	134.761	21.30	24	Pass
64	5320	16.74	16.90	96.184	19.83	24	Pass
100	5500	17.81	17.73	119.687	20.78	24	Pass
120	5600	18.33	17.89	129.718	21.13	24	Pass
140	5700	14.58	14.52	57.022	17.56	24	Pass
144	5720 (U-NII-2C)	18.09	17.91	126.219	21.01	24	Pass
144	5720 (U-NII-3)	13.70	13.61	46.404	16.67	30	Pass
149	5745	20.02	19.79	195.741	22.92	30	Pass
157	5785	20.15	19.75	197.92	22.96	30	Pass
165	5825	20.04	19.89	198.424	22.98	30	Pass

802.11ax (HE40)

Chain 0+1

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	16.99	16.88	98.756	19.95	24	Pass
46	5230	17.84	17.86	121.908	20.86	24	Pass
54	5270	17.94	17.99	125.181	20.98	24	Pass
62	5310	14.90	14.97	62.308	17.95	24	Pass
102	5510	13.98	13.75	48.717	16.88	24	Pass
118	5590	17.94	17.71	121.339	20.84	24	Pass
134	5670	16.85	16.43	92.371	19.66	24	Pass
142	5710 (U-NII-2C)	17.73	17.51	115.656	20.63	24	Pass
142	5710 (U-NII-3)	10.20	10.09	20.681	13.16	30	Pass
151	5755	19.19	18.82	159.193	22.02	30	Pass
159	5795	20.04	19.29	185.843	22.69	30	Pass

802.11ax (HE80)

Chain 0+1

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	17.17	17.09	103.288	20.14	24	Pass
58	5290	16.15	16.27	83.574	19.22	24	Pass
106	5530	17.70	17.61	116.561	20.67	24	Pass
122	5610	18.22	17.87	127.609	21.06	24	Pass
138	5690 (U-NII-2C)	17.98	17.75	122.372	20.88	24	Pass
138	5690 (U-NII-3)	4.30	4.46	5.484	7.39	30	Pass
155	5775	17.85	17.51	117.317	20.69	30	Pass

802.11ax (HE160)

Chain 0+1

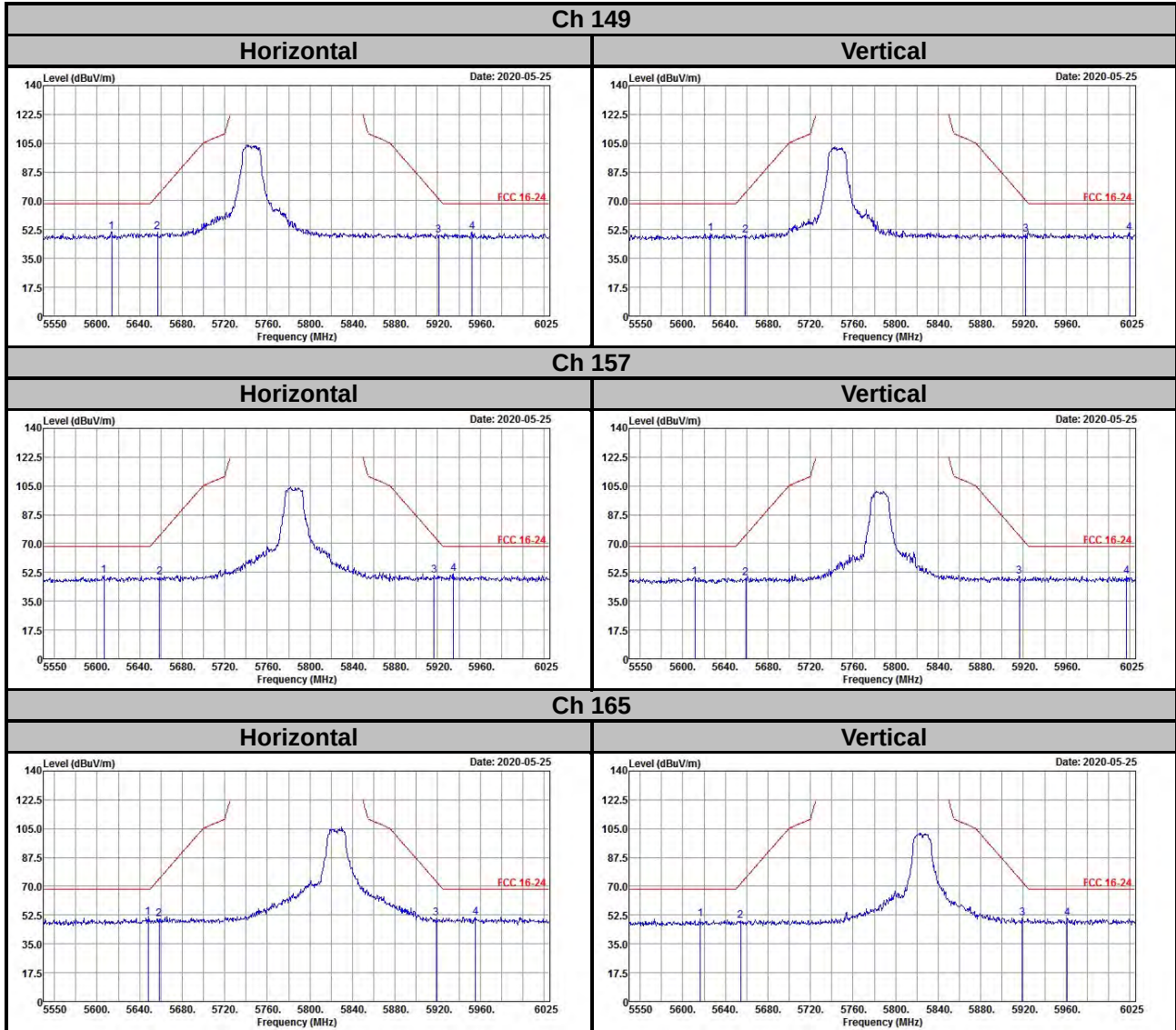
Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
50	5250	13.05	13.23	41.221	16.15	24	Pass
114	5570	13.71	13.59	46.352	16.66	24	Pass

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)

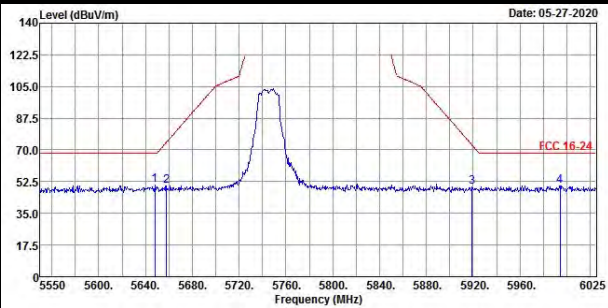
802.11a



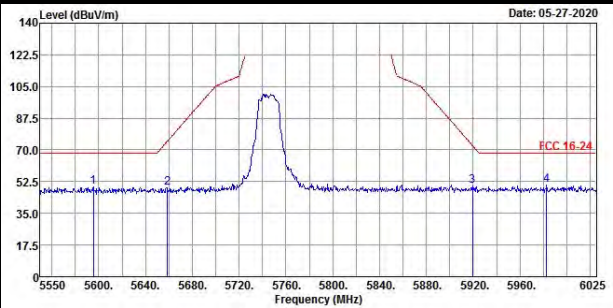
802.11n (HT20)

Ch 149

Horizontal

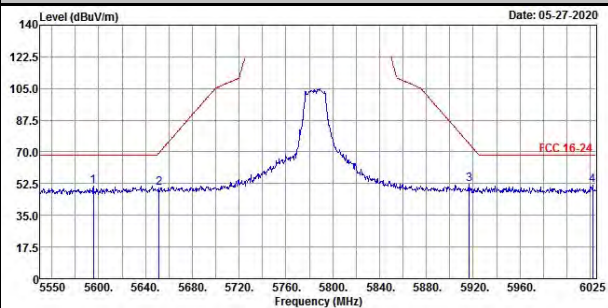


Vertical

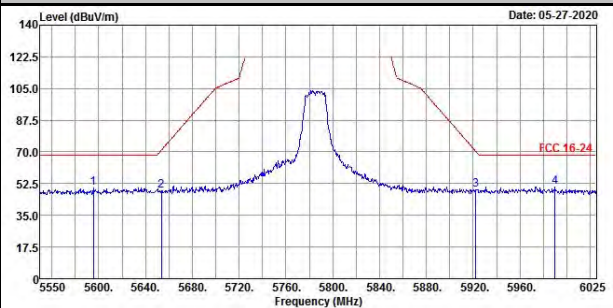


Ch 157

Horizontal

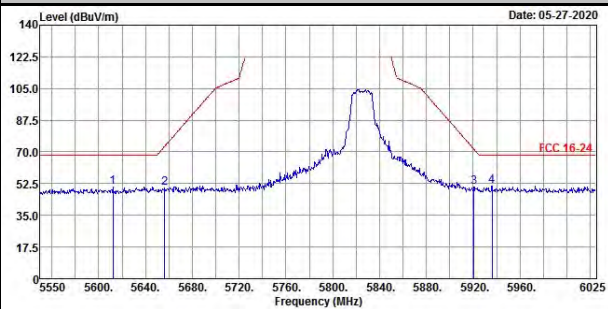


Vertical

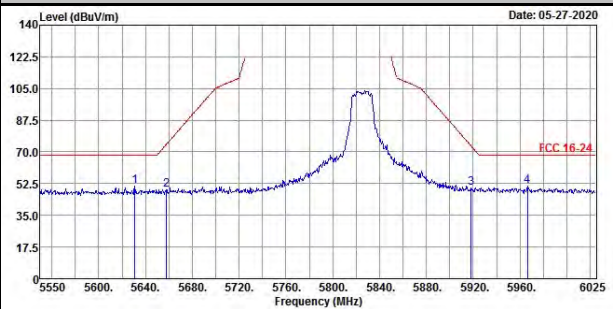


Ch 165

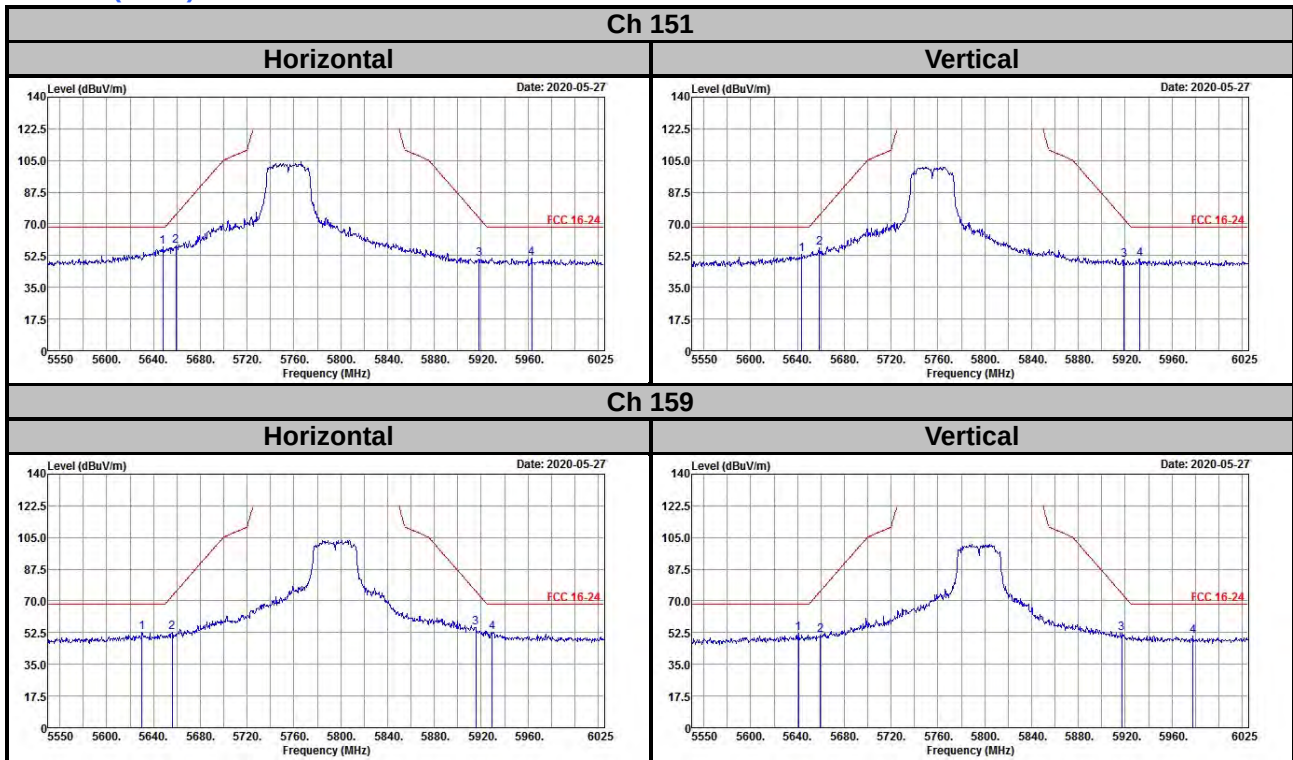
Horizontal



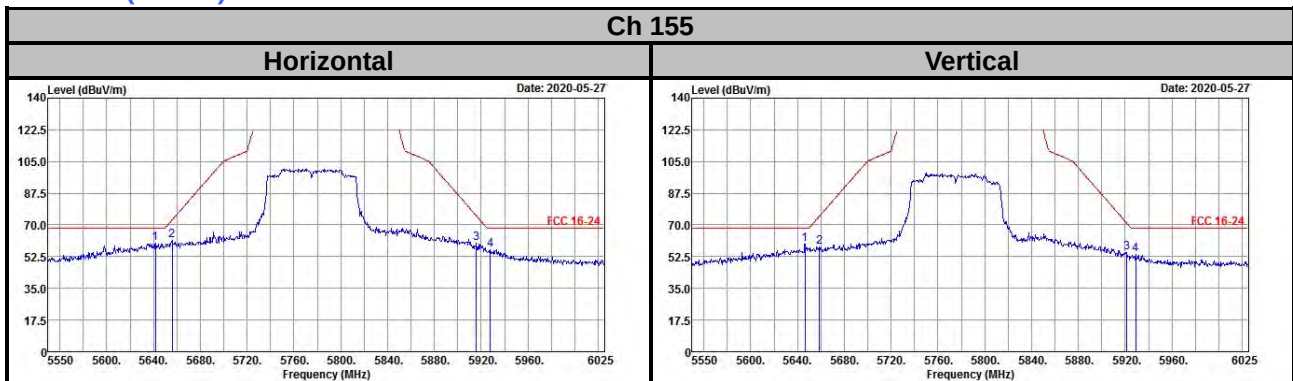
Vertical



802.11n (HT40)



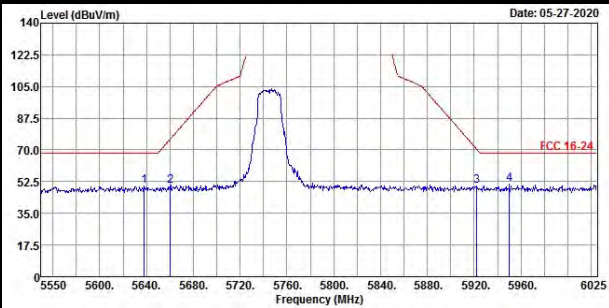
802.11ac (VHT80)



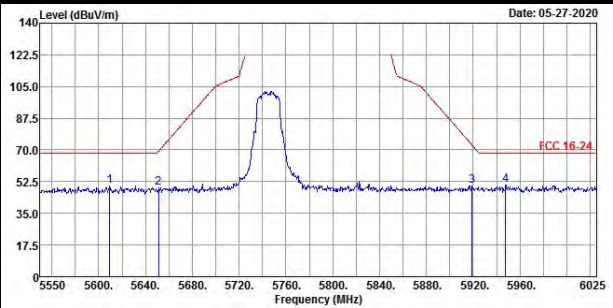
802.11ax (HE20)

Ch 149

Horizontal

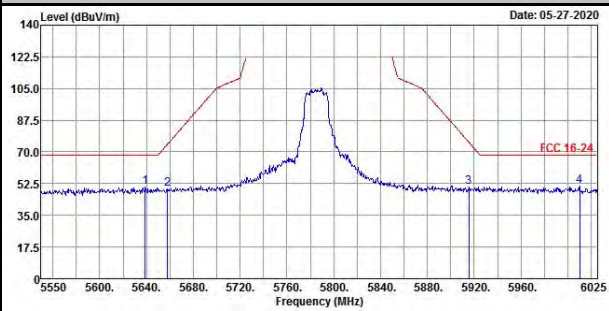


Vertical

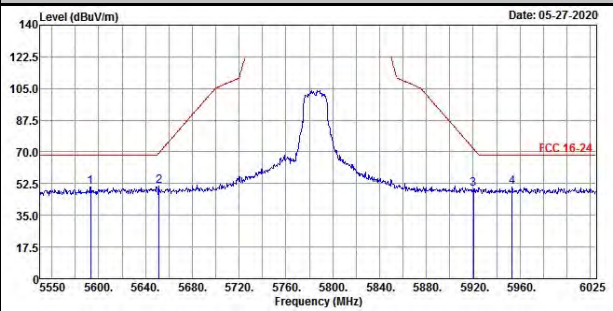


Ch 157

Horizontal

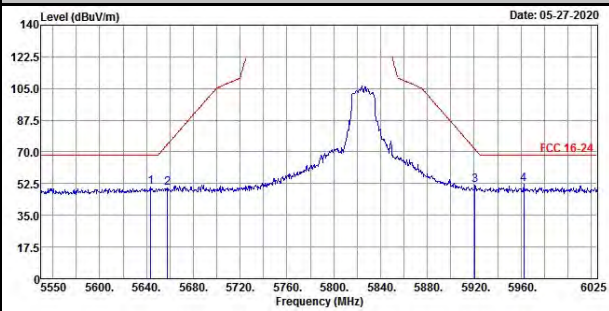


Vertical

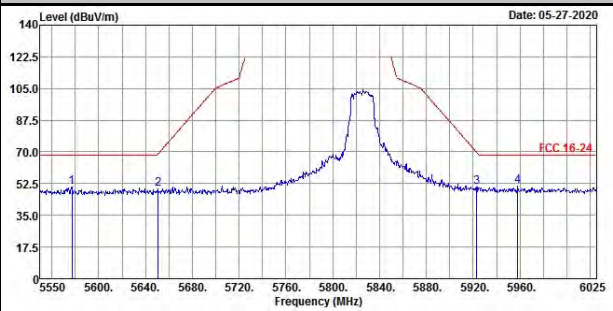


Ch 165

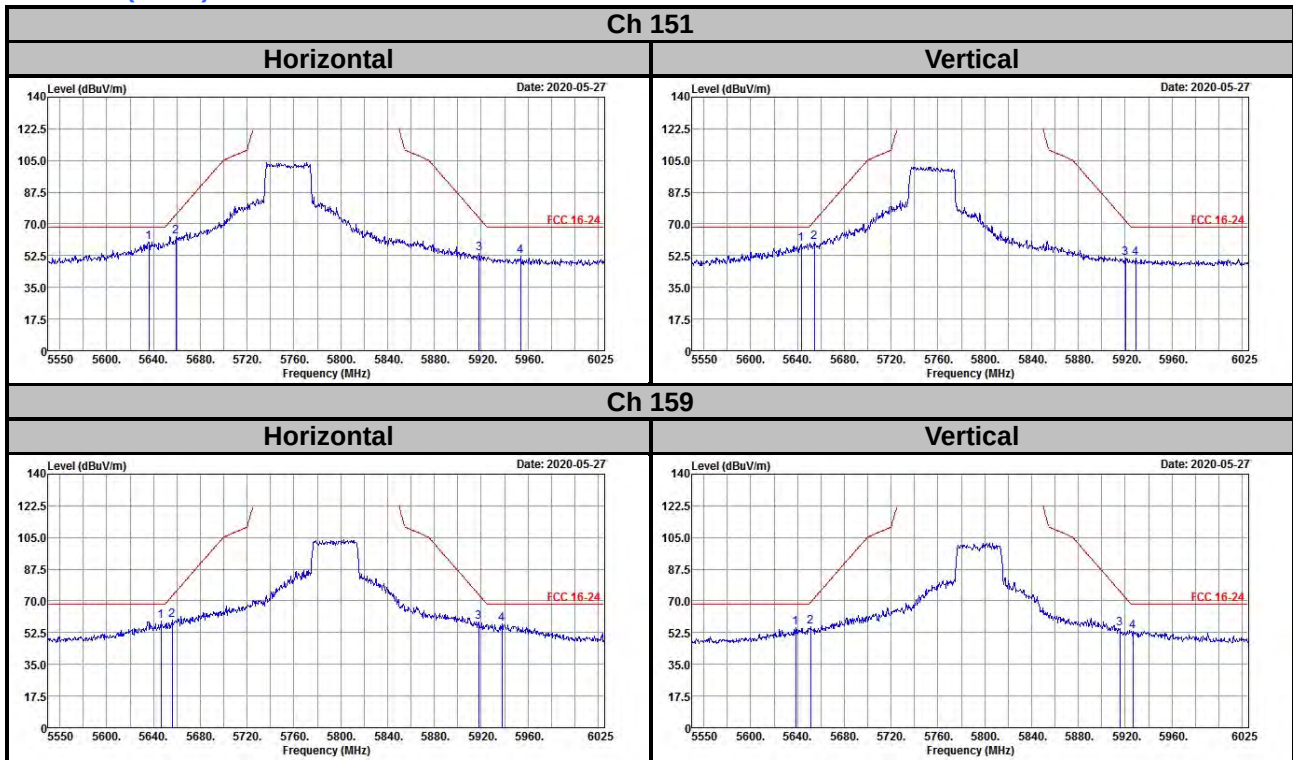
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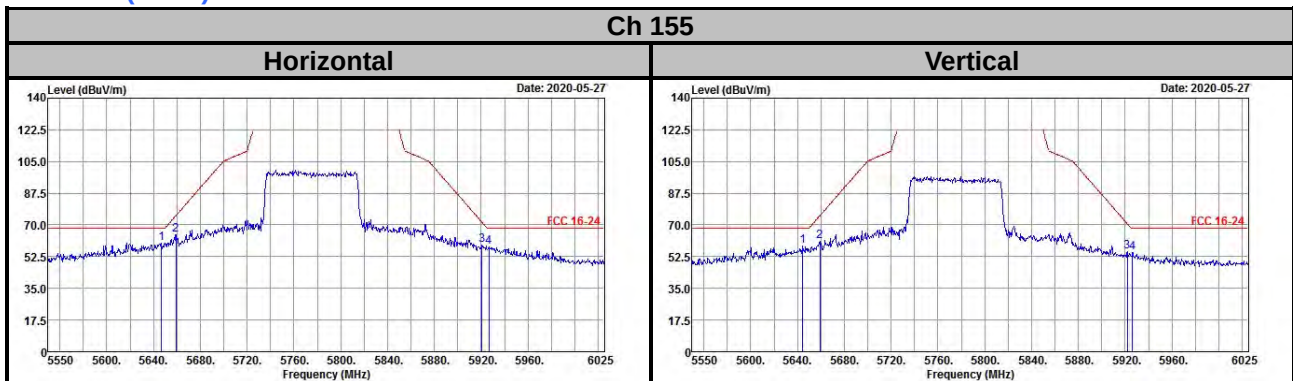
Vertical



802.11ax (HE40)

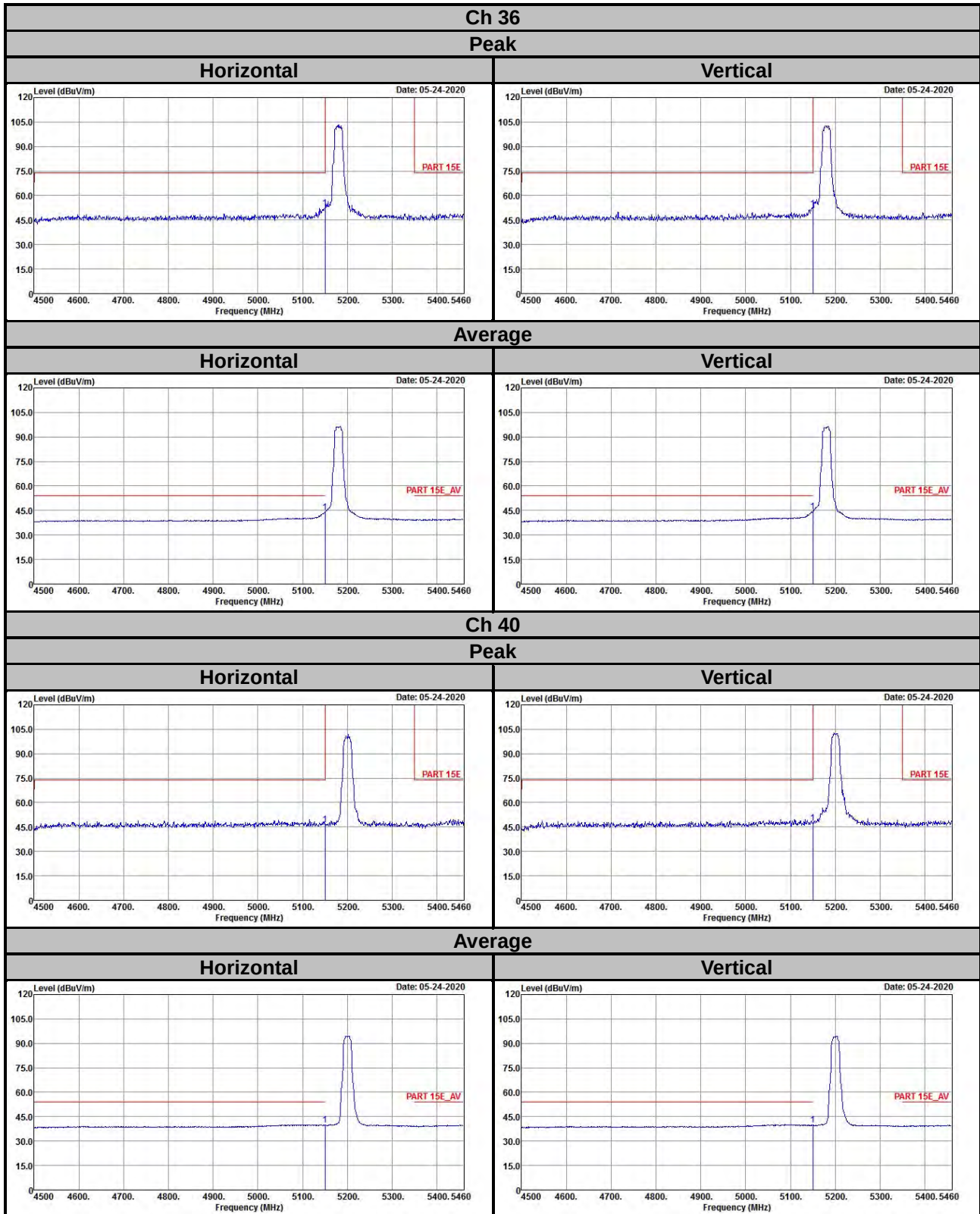


802.11ax (HE80)



Annex B- Band Edge Measurement

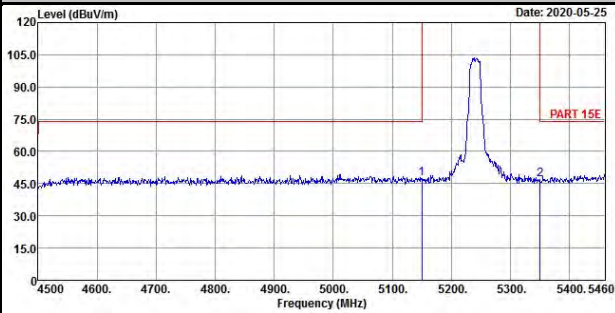
802.11a



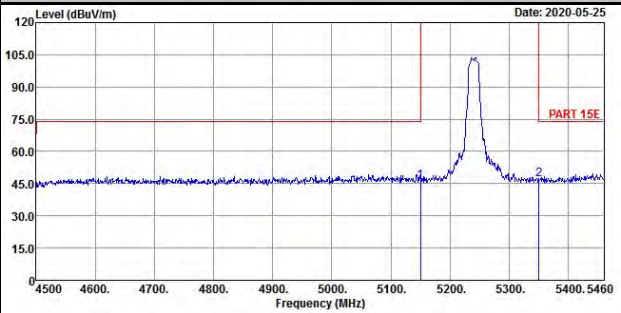
Ch 48

Peak

Horizontal

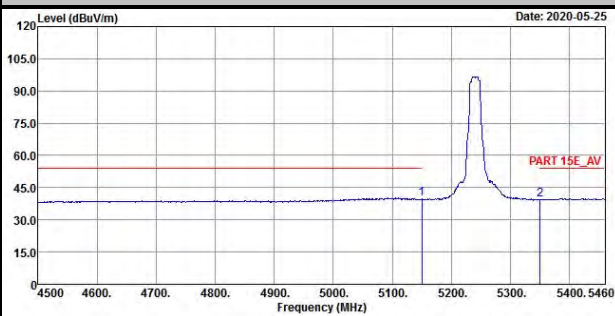


Vertical

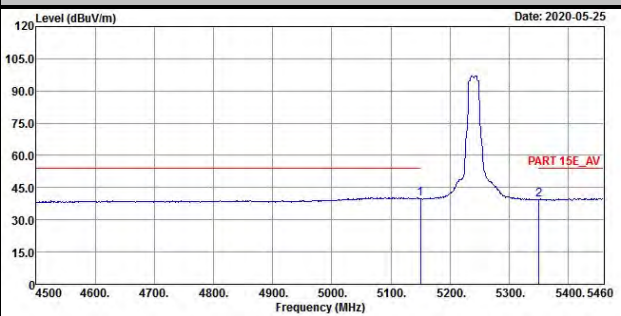


Average

Horizontal



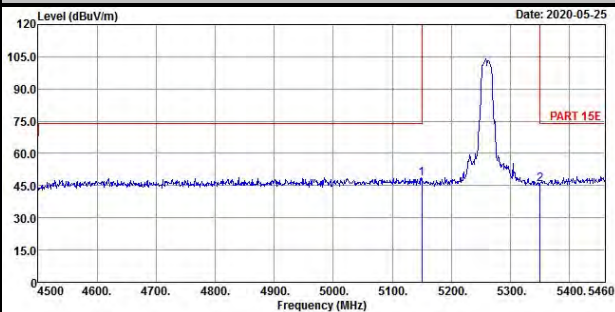
Vertical



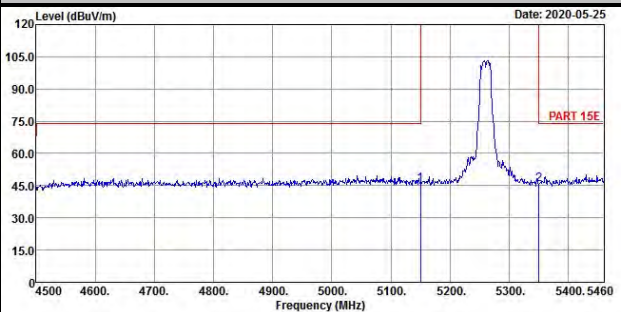
Ch 52

Peak

Horizontal

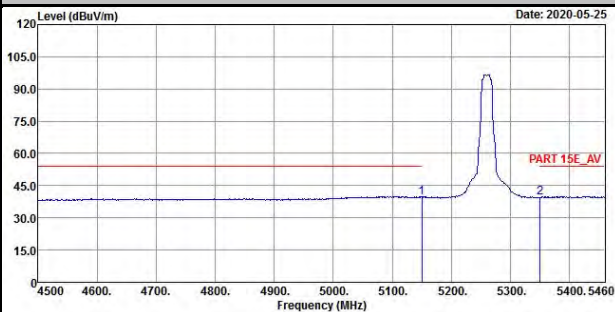


Vertical

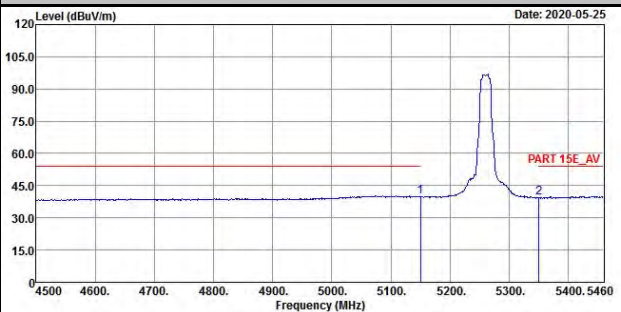


Average

Horizontal



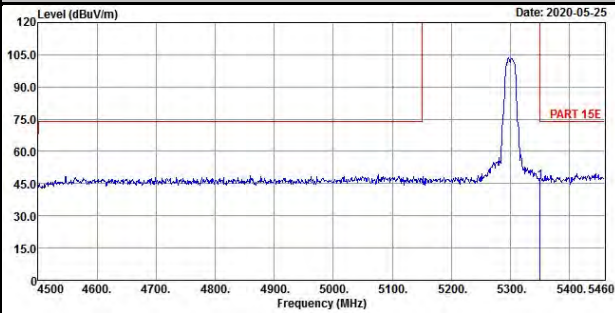
Vertical



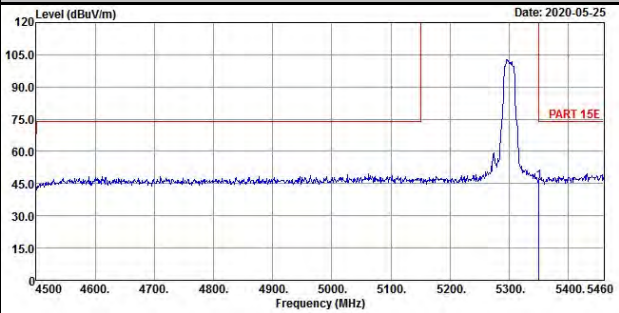
Ch 60

Peak

Horizontal

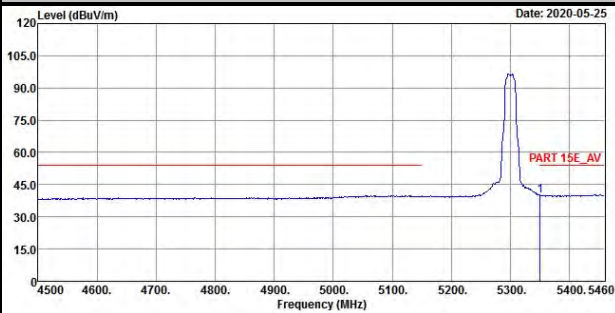


Vertical

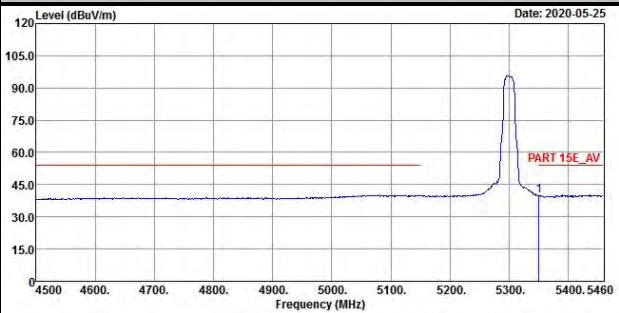


Average

Horizontal



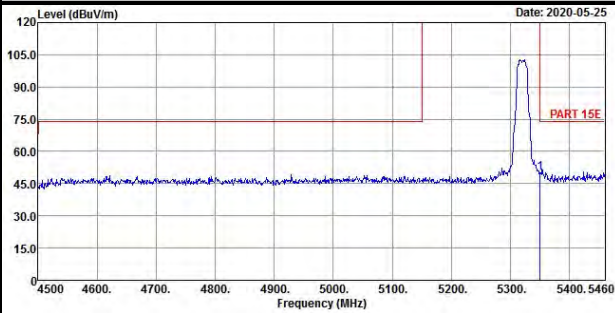
Vertical



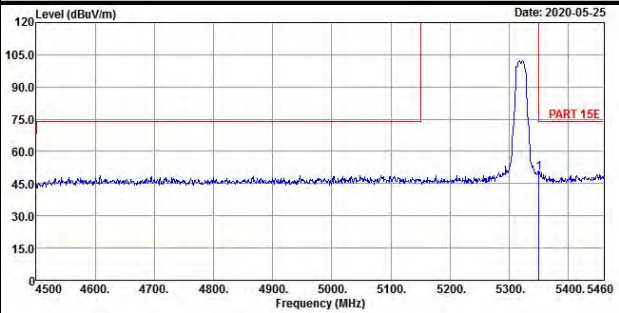
Ch 64

Peak

Horizontal

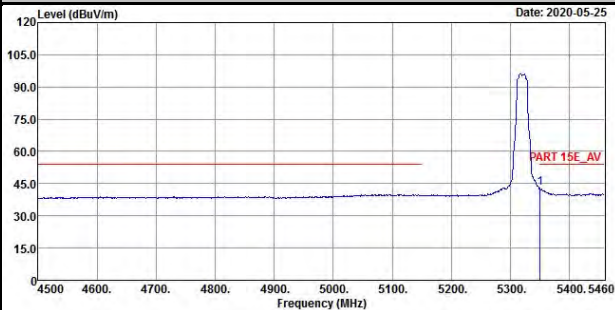


Vertical

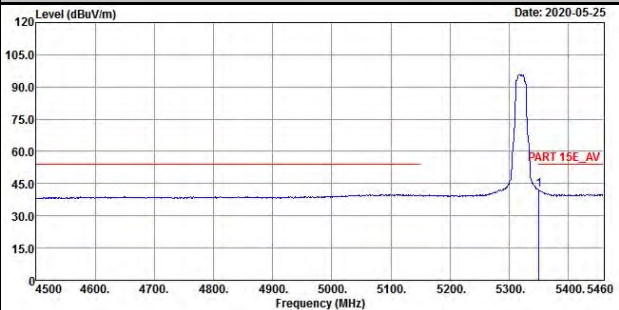


Average

Horizontal



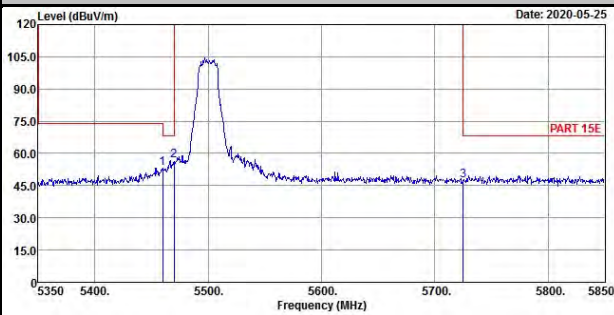
Vertical



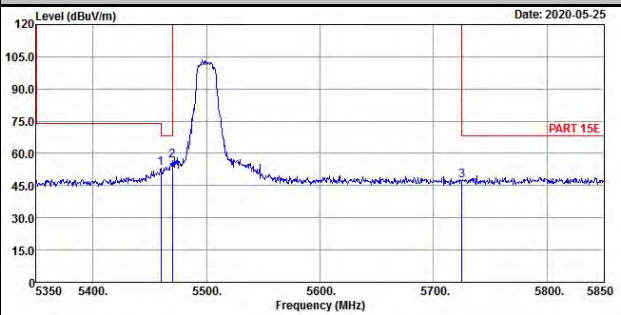
Ch 100

Peak

Horizontal

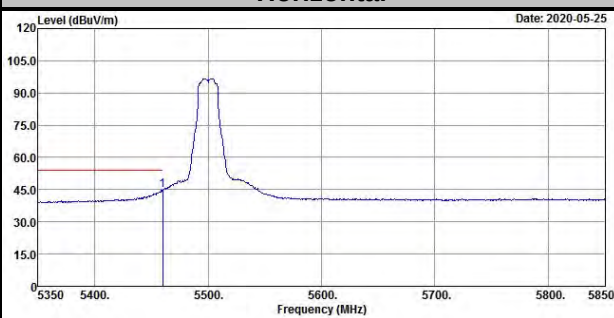


Vertical

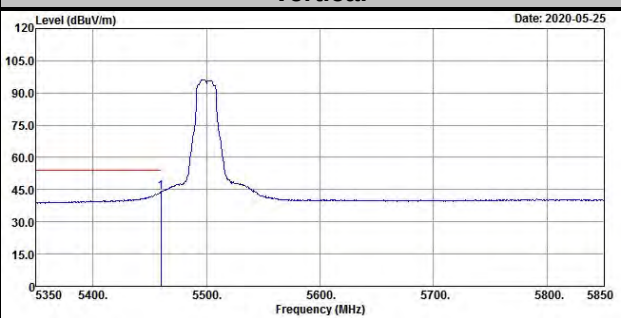


Average

Horizontal



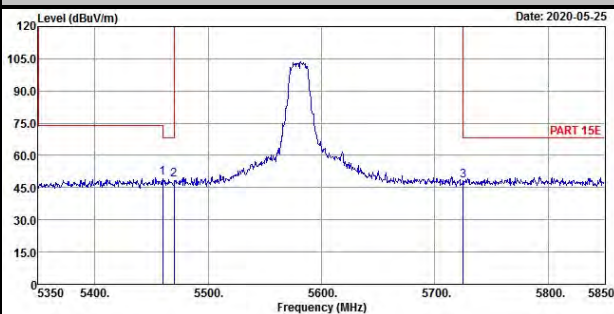
Vertical



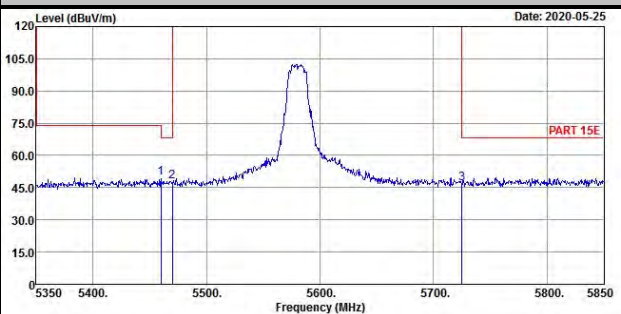
Ch 116

Peak

Horizontal

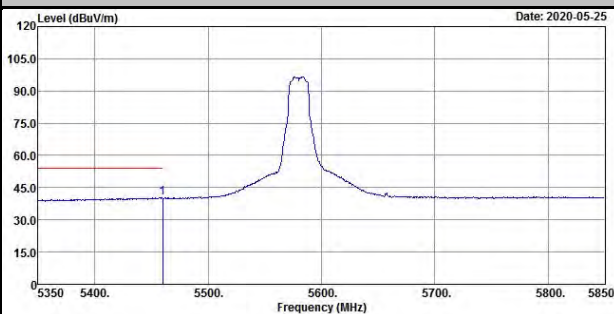


Vertical

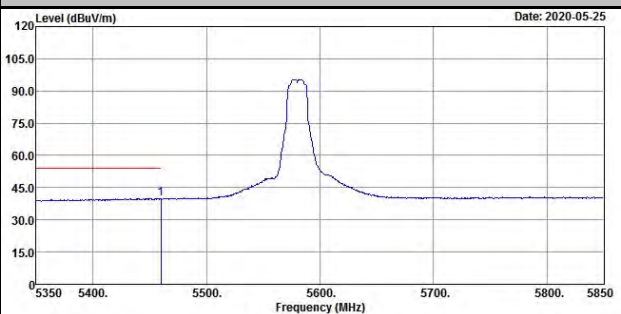


Average

Horizontal



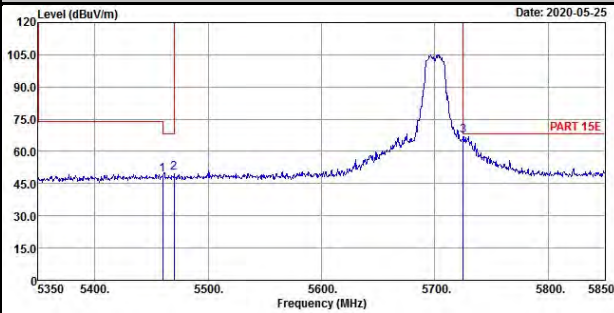
Vertical



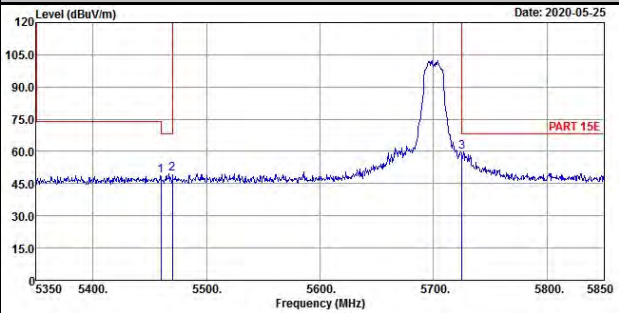
Ch 140

Peak

Horizontal

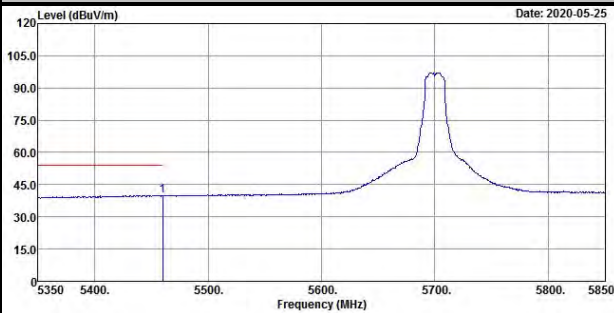


Vertical

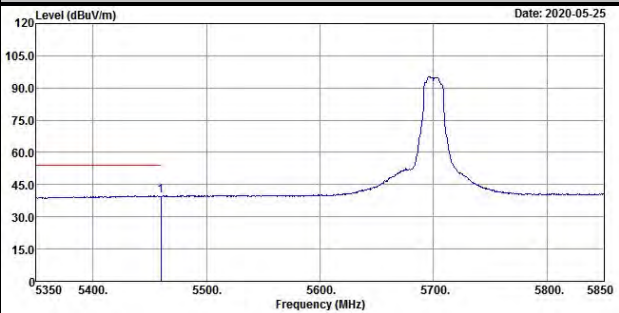


Average

Horizontal



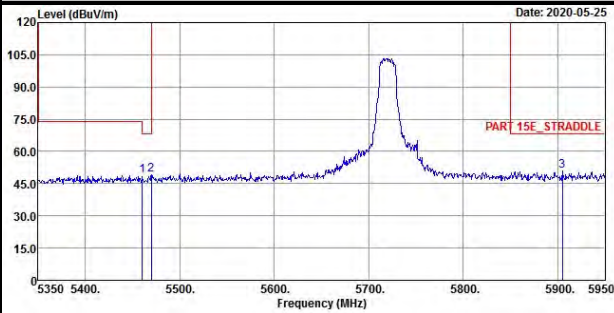
Vertical



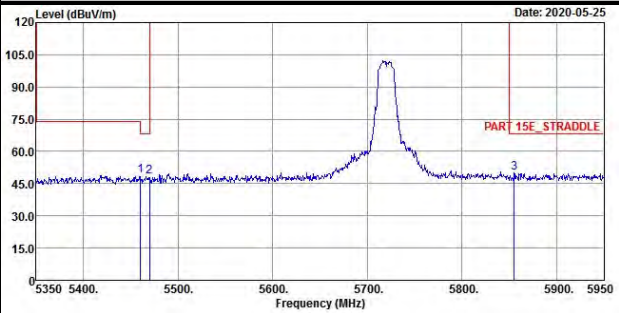
Ch 144

Peak

Horizontal

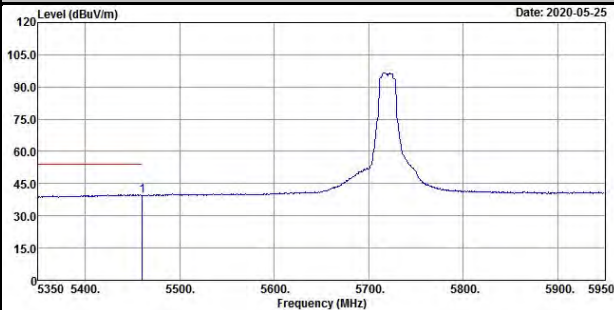


Vertical

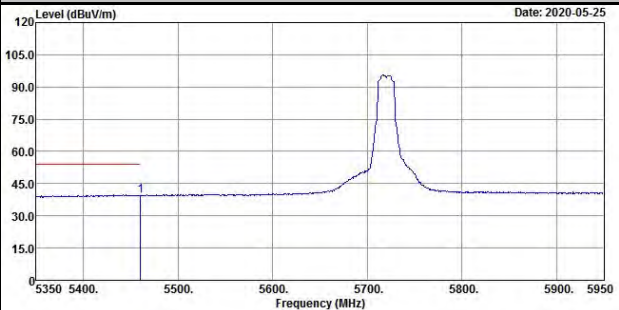


Average

Horizontal



Vertical

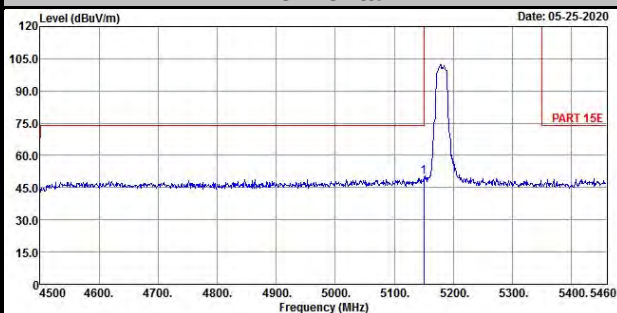


802.11n (HT20)

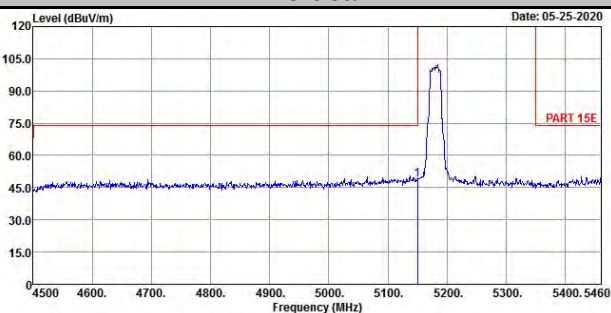
Ch 36

Peak

Horizontal

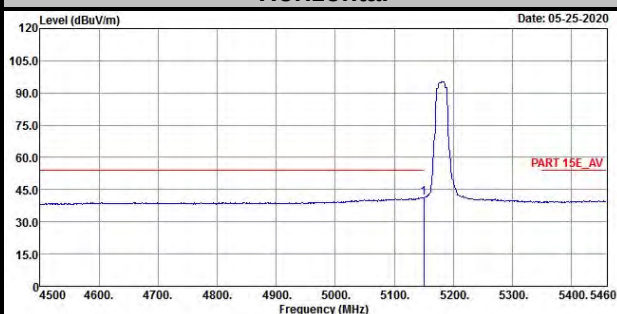


Vertical

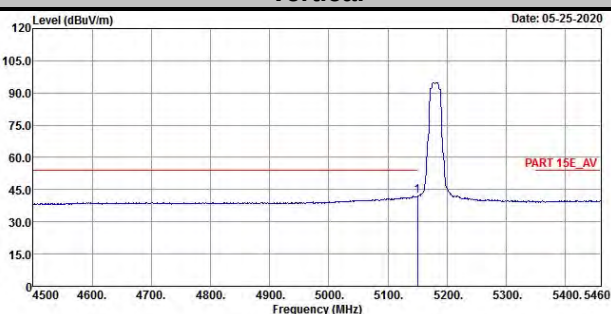


Average

Horizontal



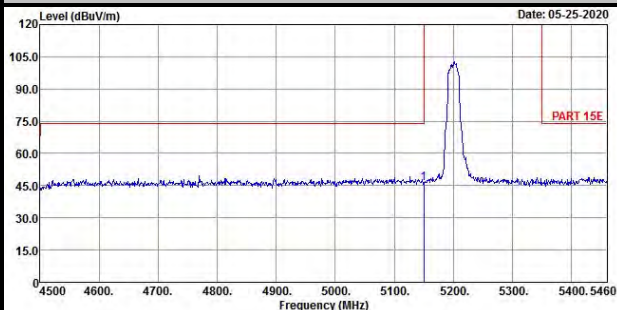
Vertical



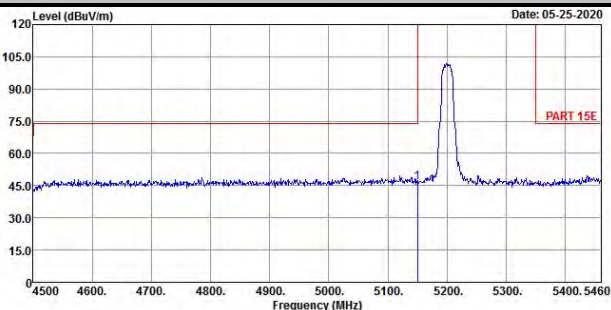
Ch 40

Peak

Horizontal

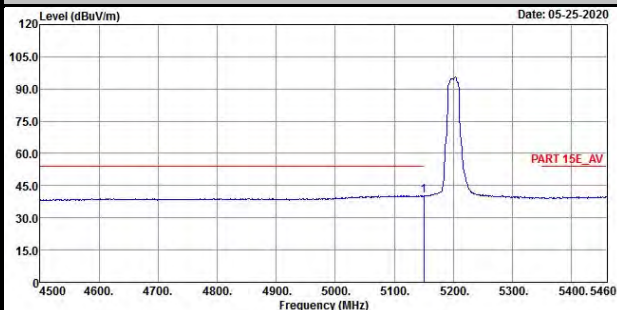


Vertical

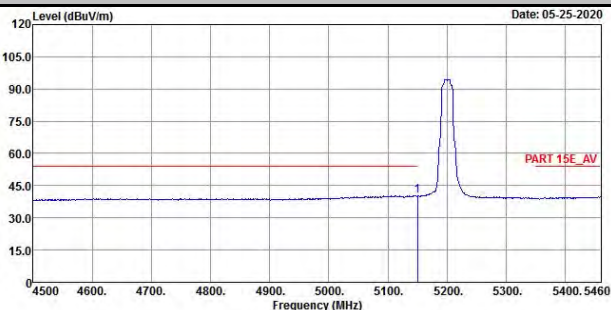


Average

Horizontal



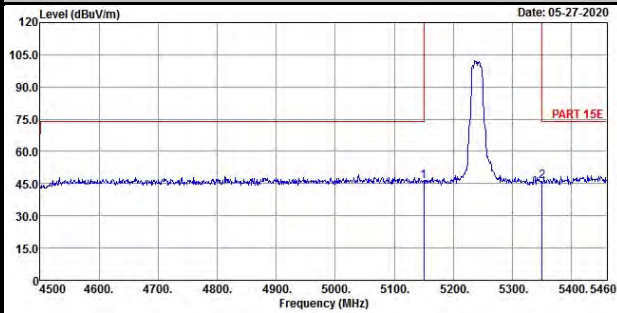
Vertical



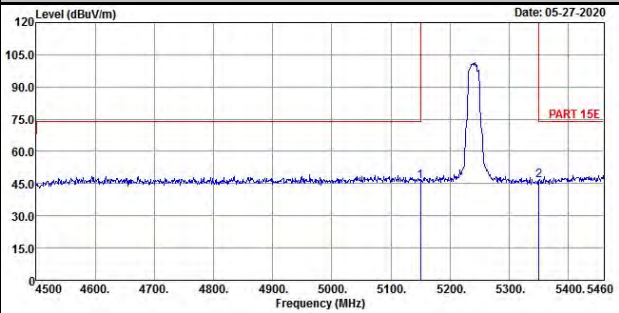
Ch 48

Peak

Horizontal

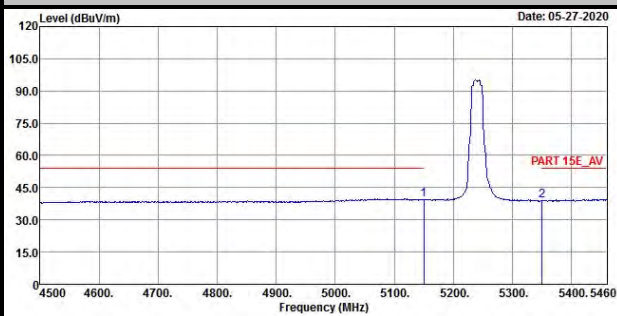


Vertical

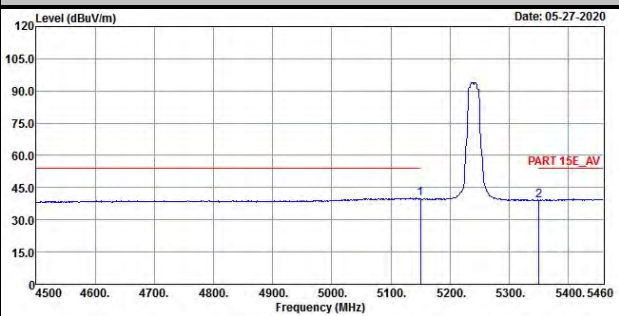


Average

Horizontal



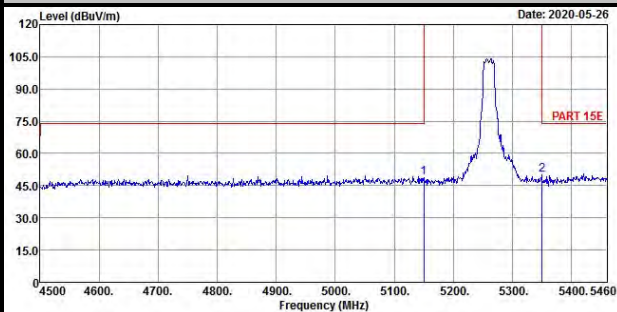
Vertical



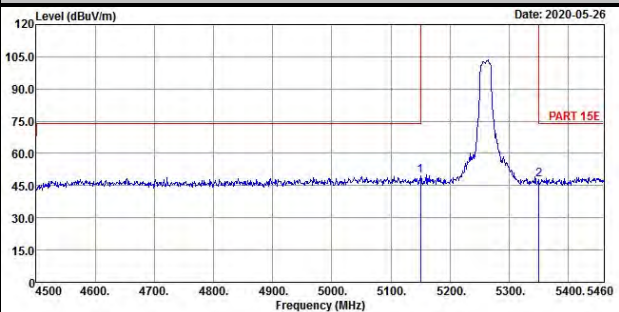
Ch 52

Peak

Horizontal

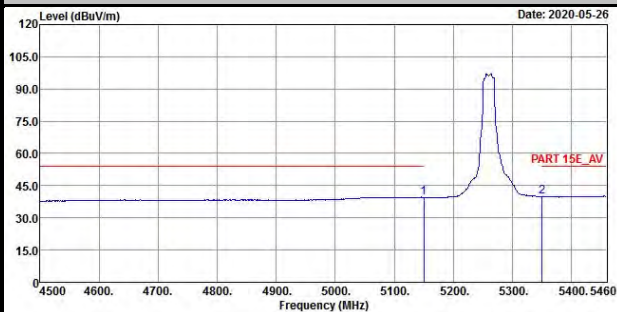


Vertical

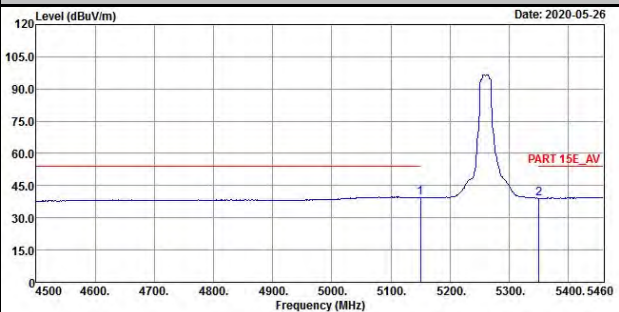


Average

Horizontal



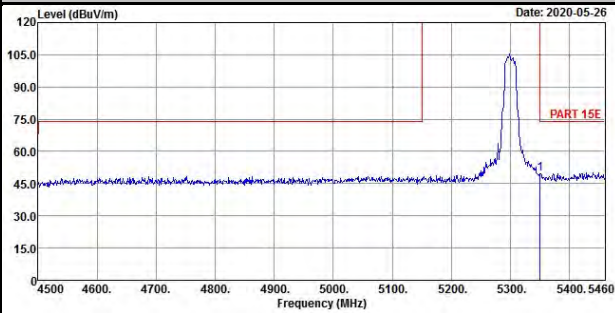
Vertical



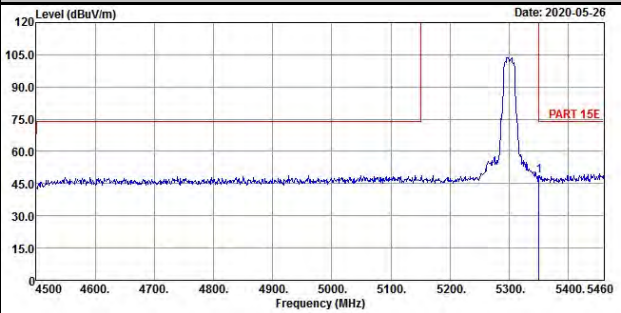
Ch 60

Peak

Horizontal

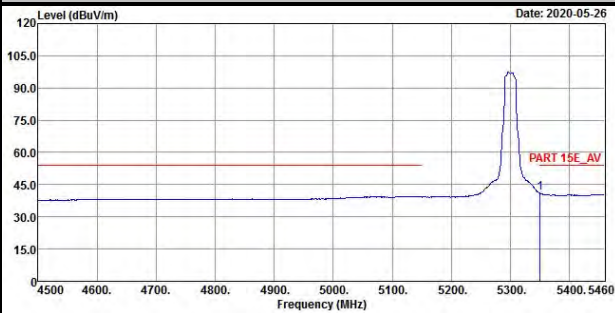


Vertical

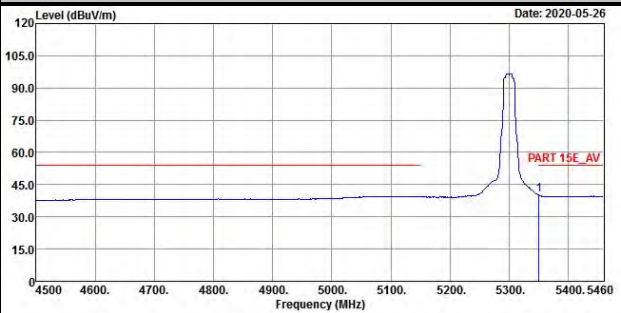


Average

Horizontal



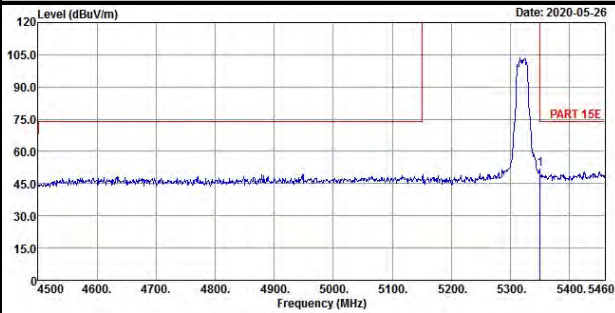
Vertical



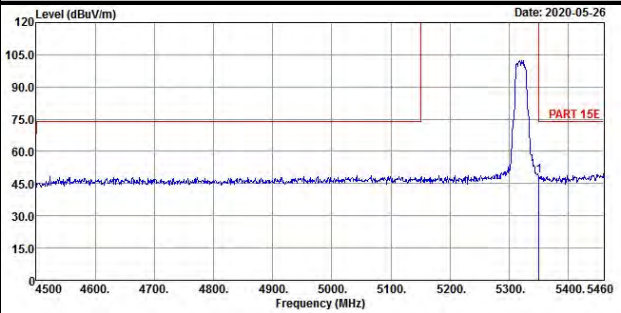
Ch 64

Peak

Horizontal

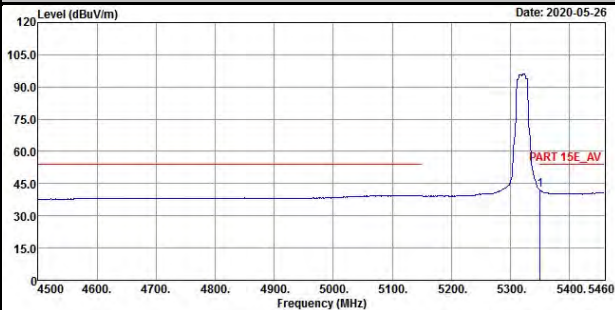


Vertical

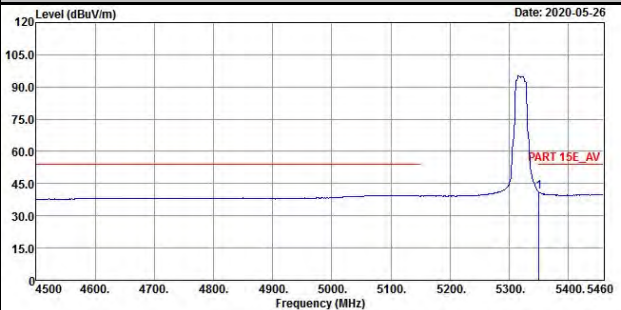


Average

Horizontal



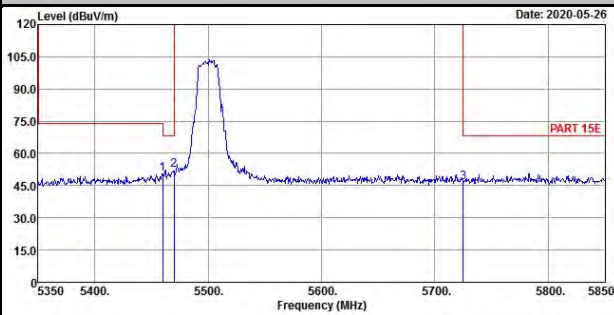
Vertical



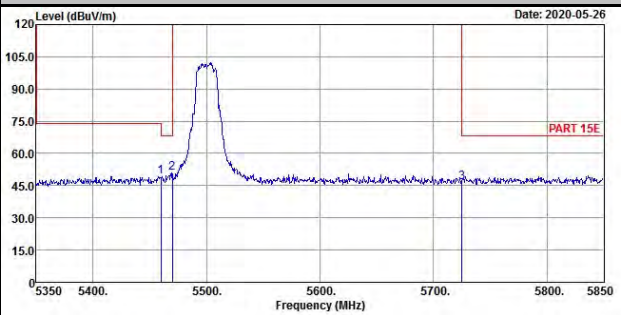
Ch 100

Peak

Horizontal

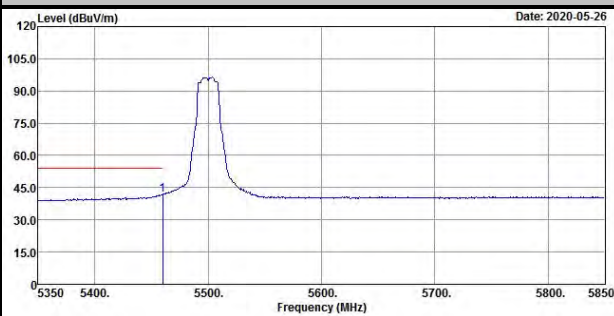


Vertical

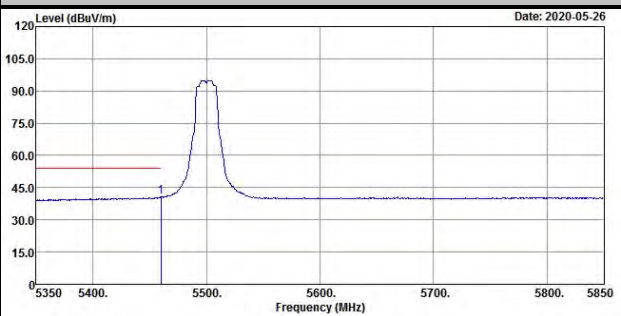


Average

Horizontal



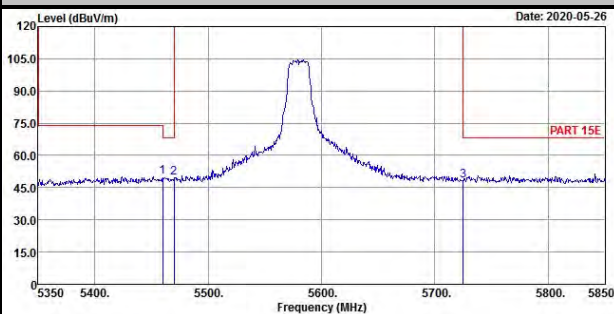
Vertical



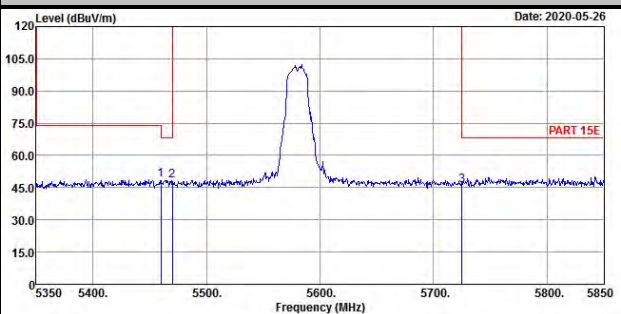
Ch 116

Peak

Horizontal

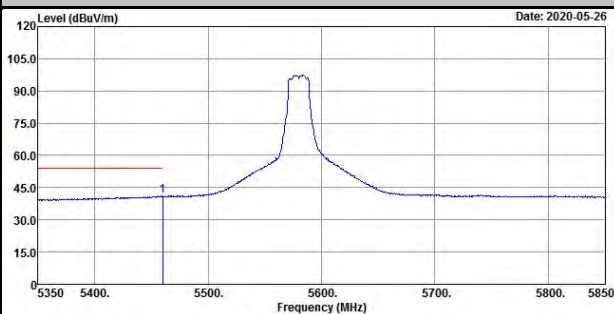


Vertical

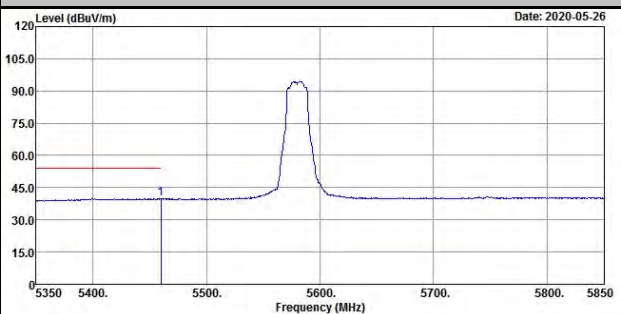


Average

Horizontal



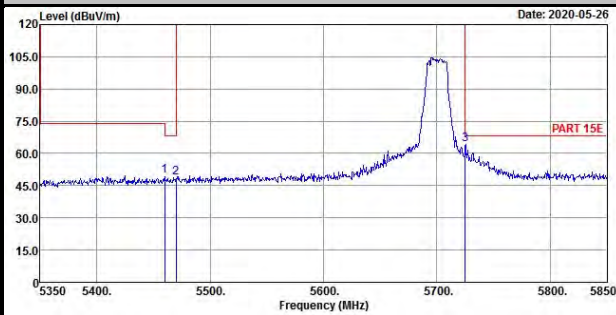
Vertical



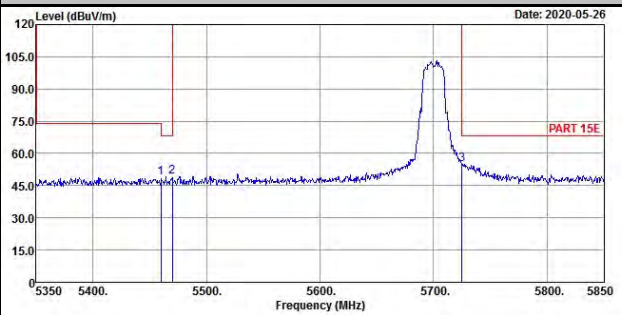
Ch 140

Peak

Horizontal

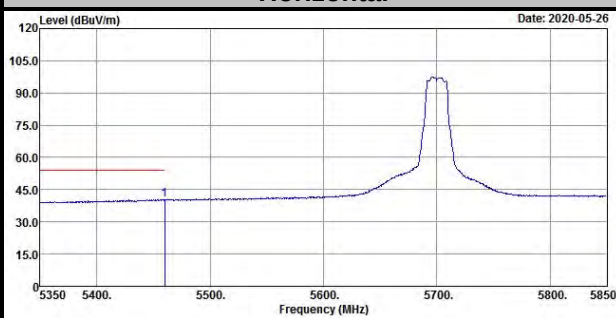


Vertical

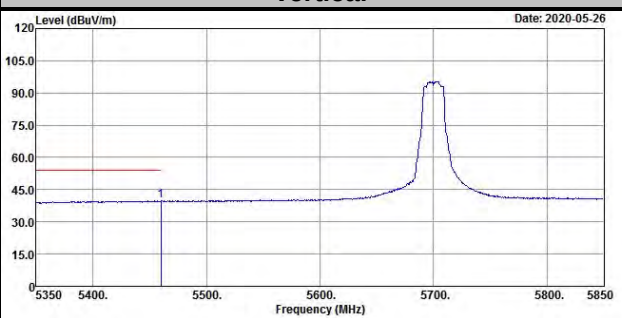


Average

Horizontal



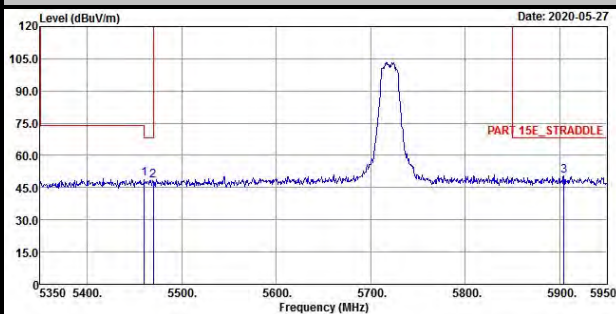
Vertical



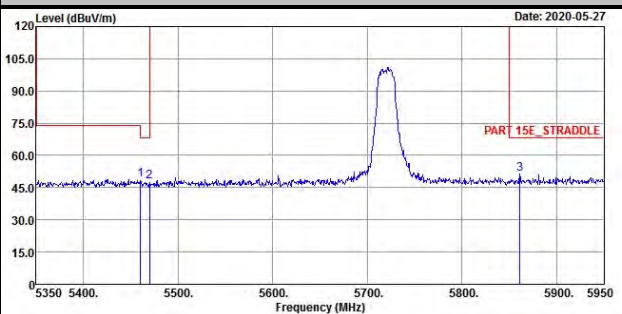
Ch 144

Peak

Horizontal

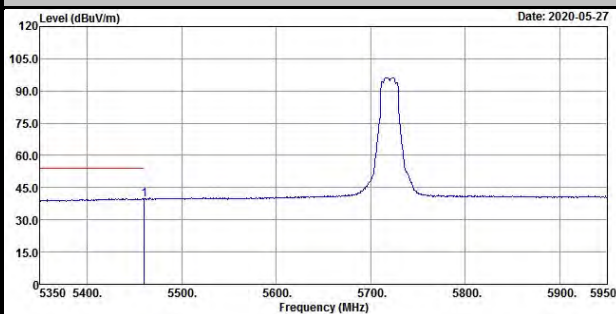


Vertical

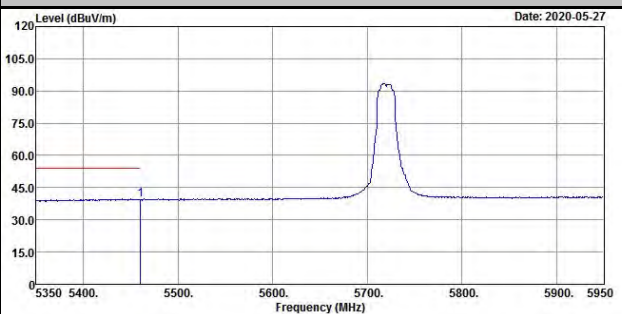


Average

Horizontal



Vertical

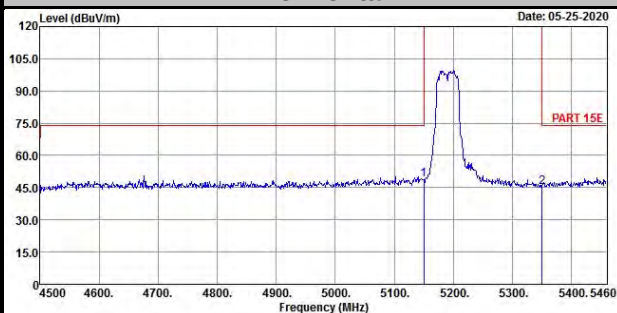


802.11n (HT40)

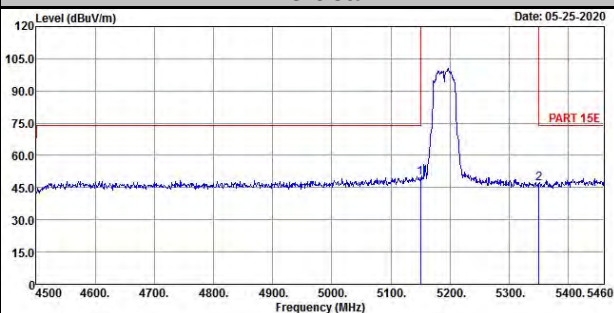
Ch 38

Peak

Horizontal

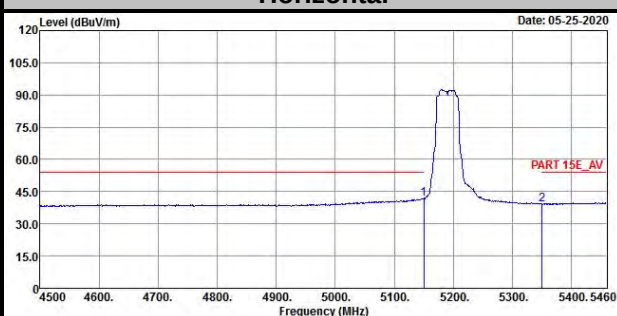


Vertical

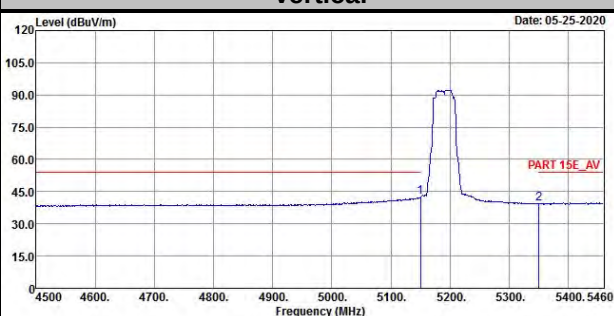


Average

Horizontal



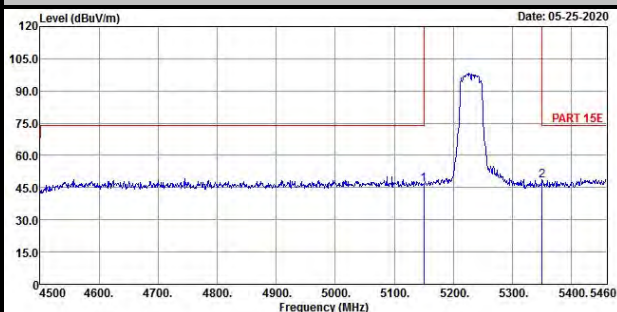
Vertical



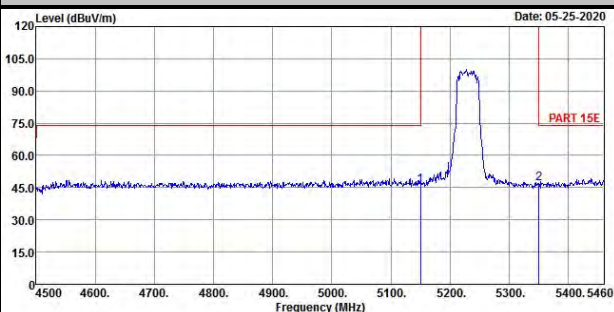
Ch 46

Peak

Horizontal

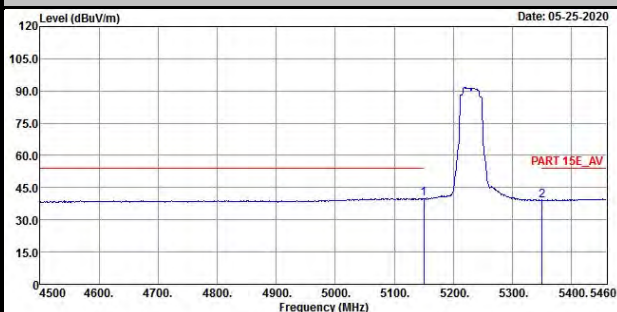


Vertical

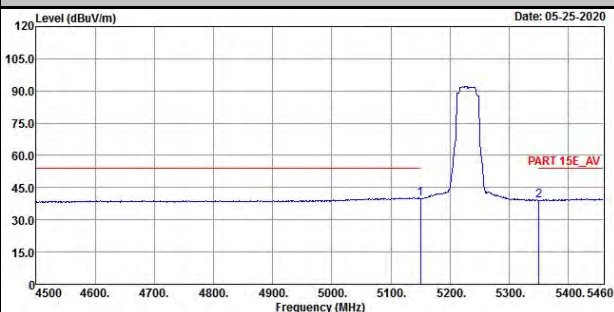


Average

Horizontal



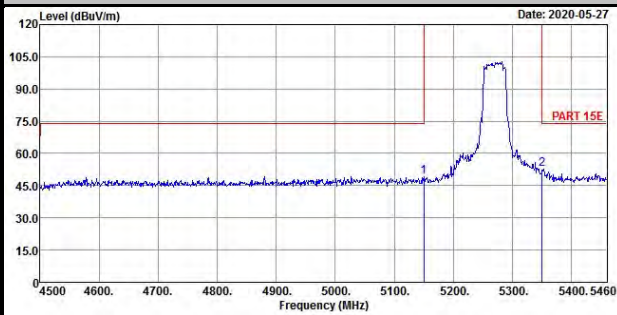
Vertical



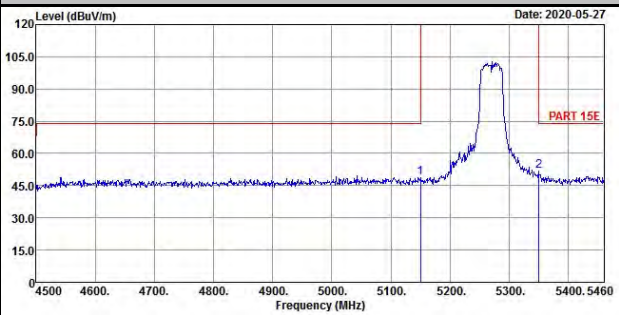
Ch 54

Peak

Horizontal

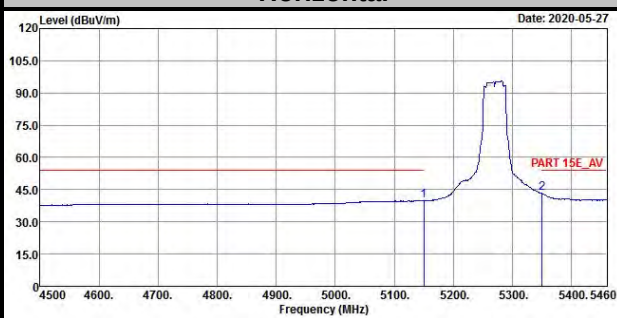


Vertical

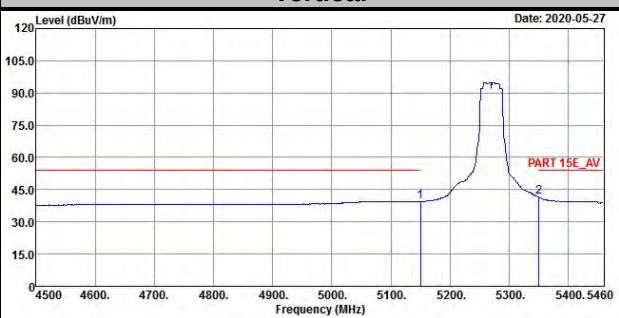


Average

Horizontal



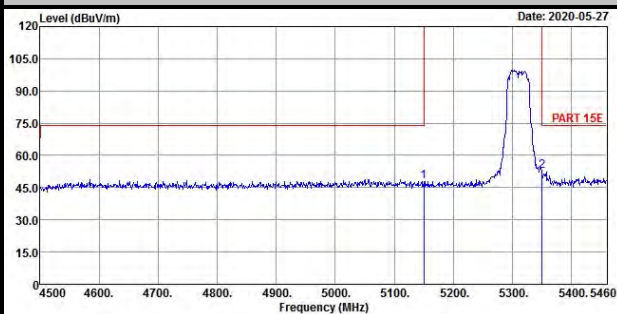
Vertical



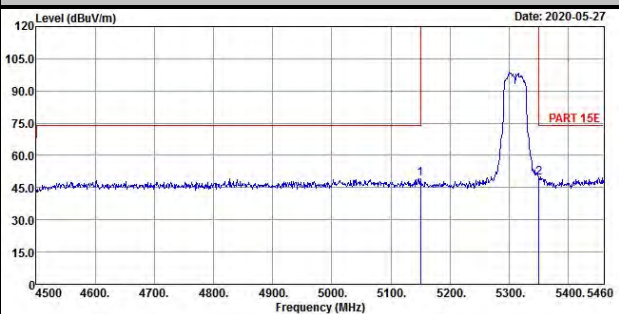
Ch 62

Peak

Horizontal

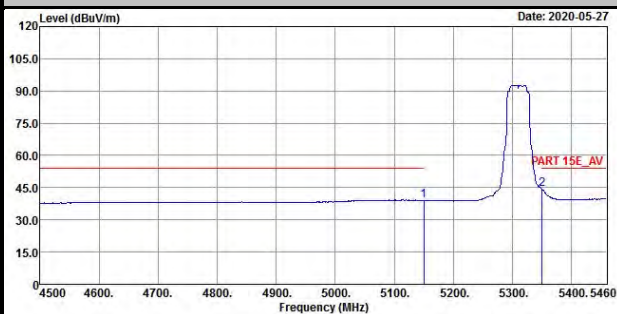


Vertical

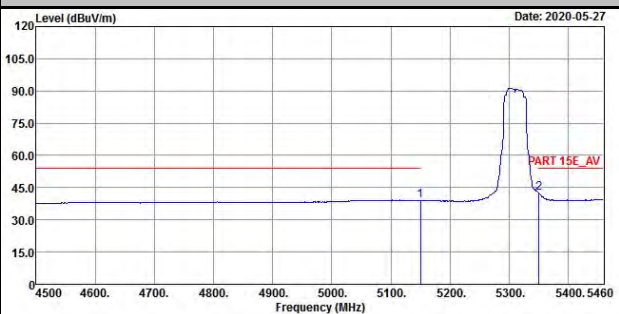


Average

Horizontal



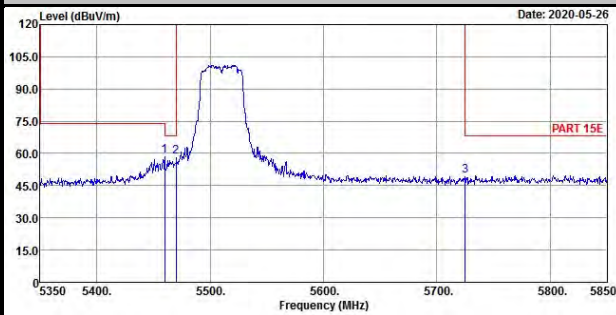
Vertical



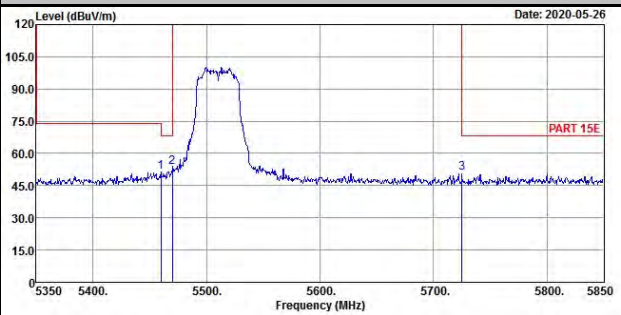
Ch 102

Peak

Horizontal

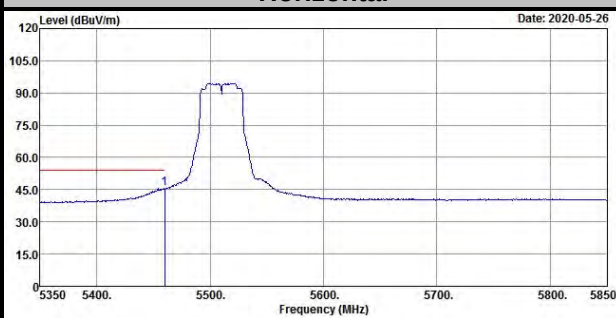


Vertical

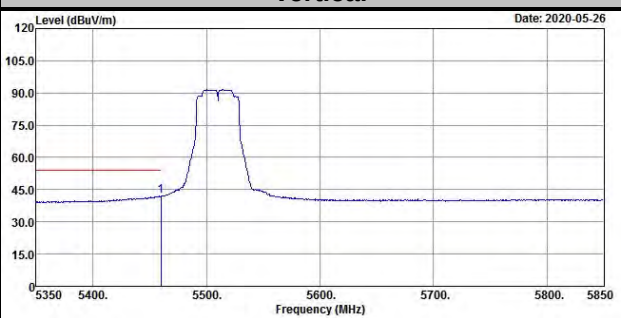


Average

Horizontal



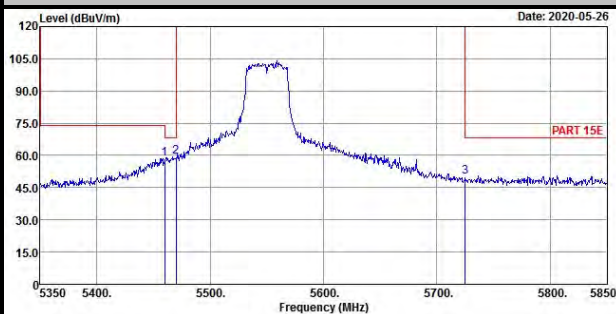
Vertical



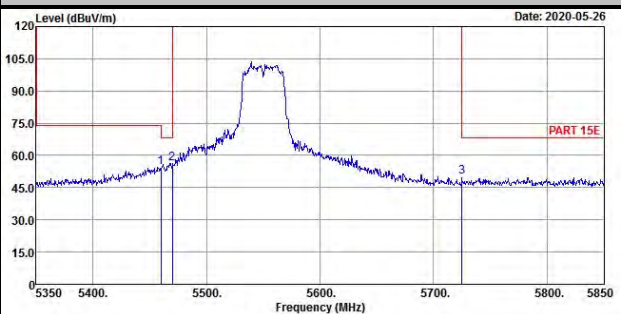
Ch 110

Peak

Horizontal

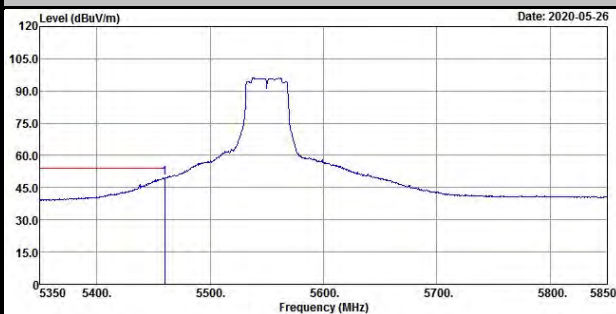


Vertical

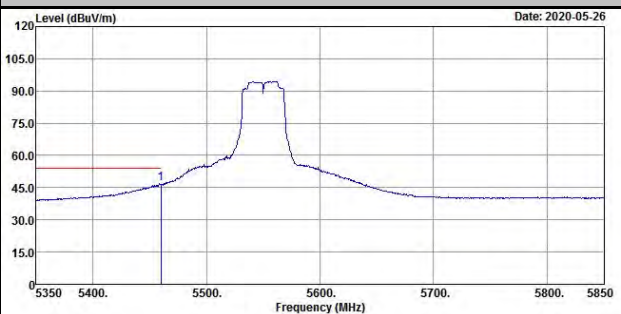


Average

Horizontal



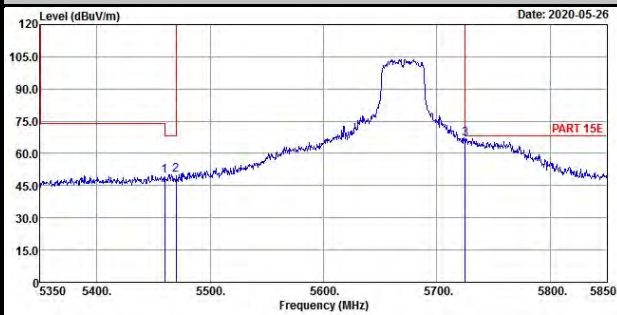
Vertical



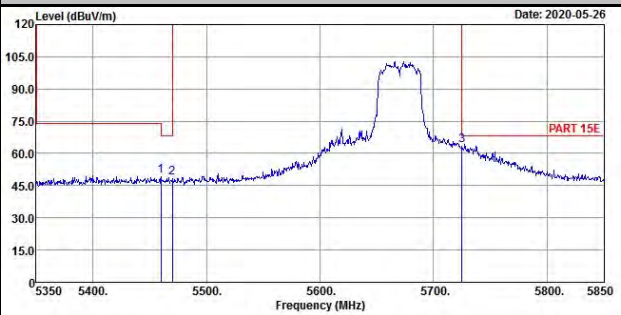
Ch 134

Peak

Horizontal

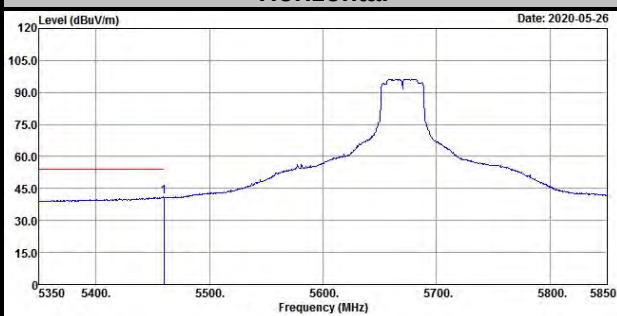


Vertical

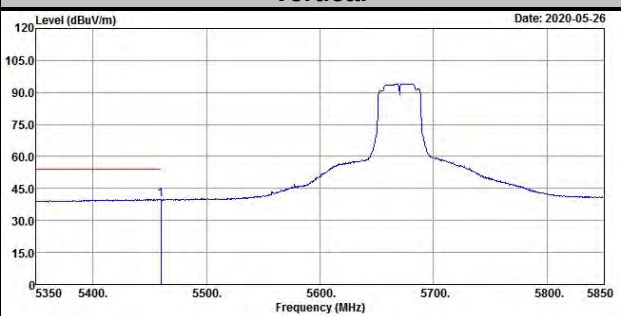


Average

Horizontal



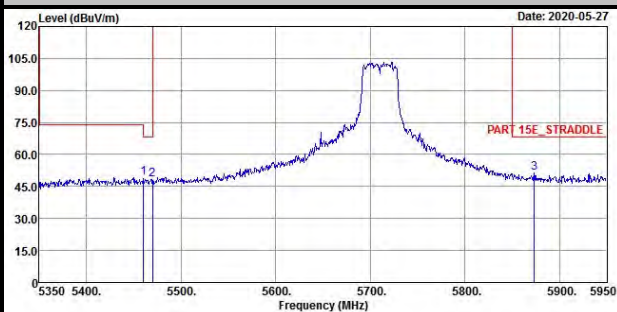
Vertical



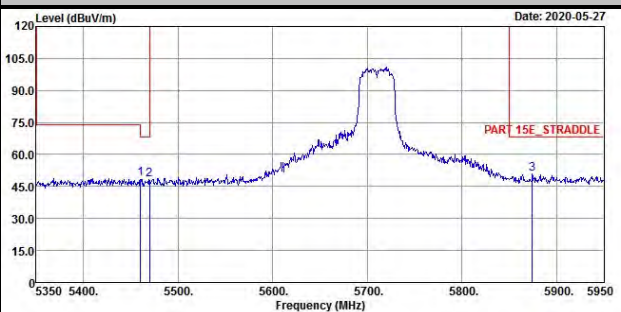
Ch 142

Peak

Horizontal

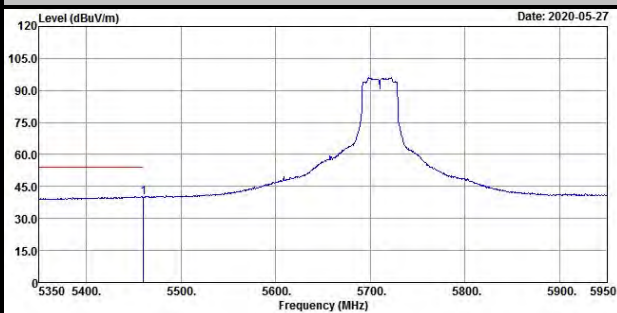


Vertical

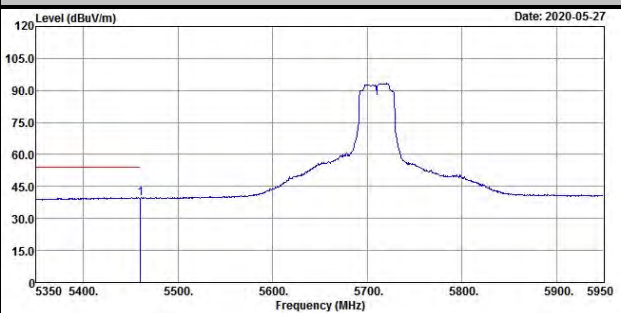


Average

Horizontal



Vertical

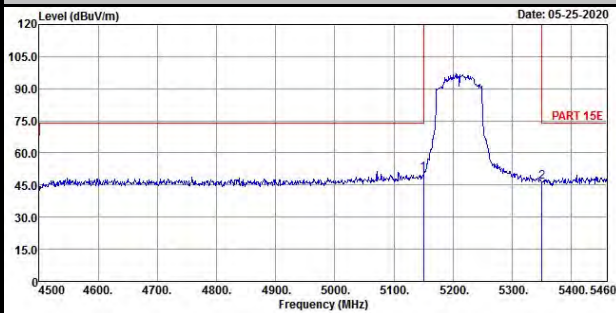


802.11ac (VHT80)

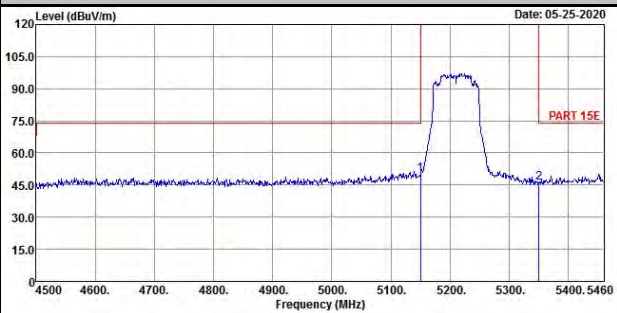
Ch 42

Peak

Horizontal

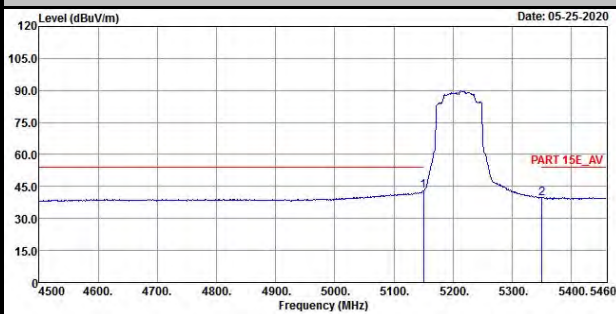


Vertical

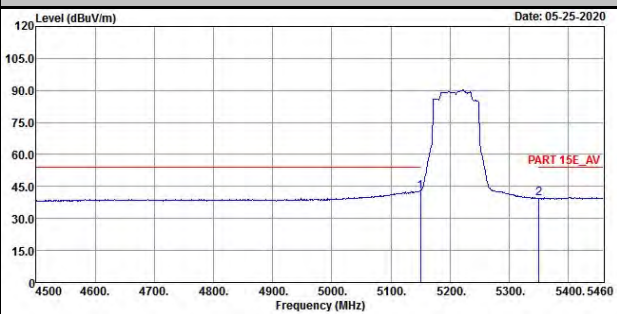


Average

Horizontal



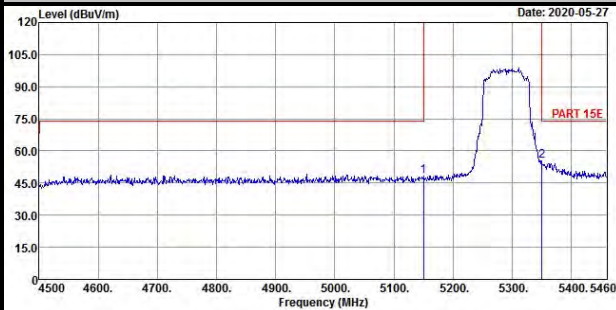
Vertical



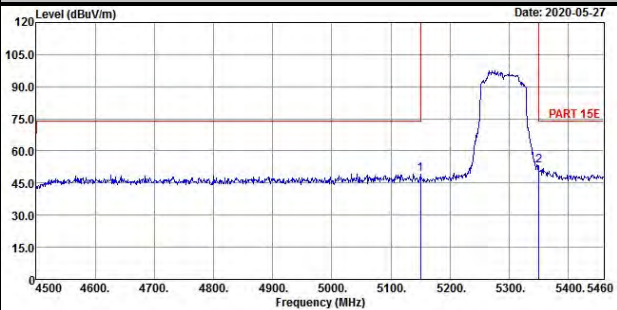
Ch 58

Peak

Horizontal

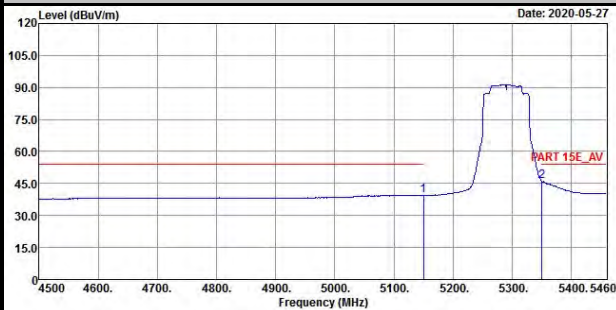


Vertical

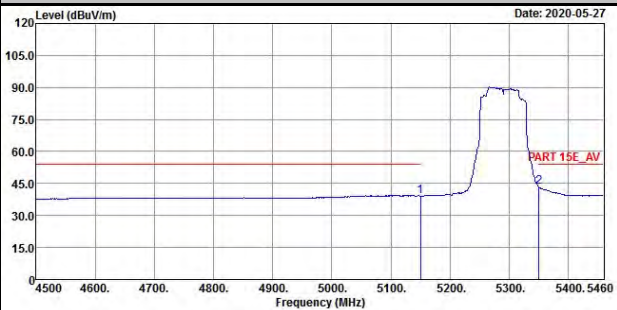


Average

Horizontal



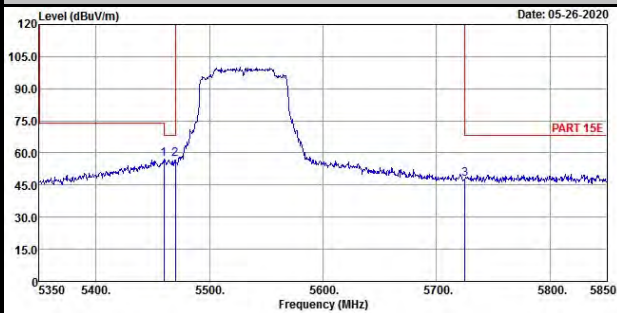
Vertical



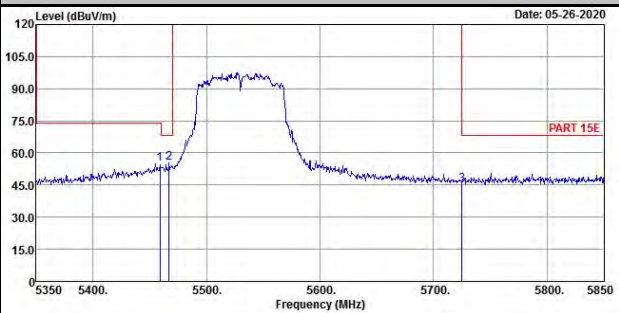
Ch 106

Peak

Horizontal

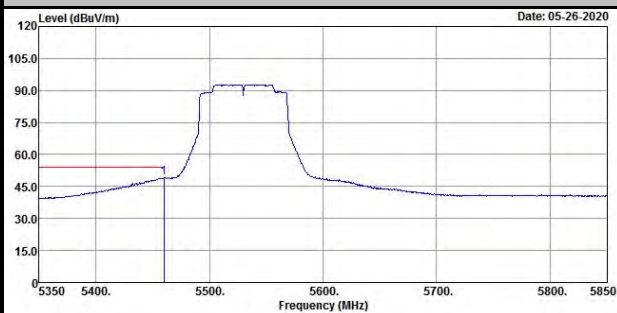


Vertical

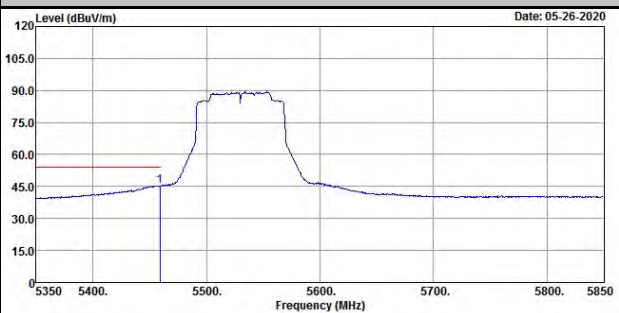


Average

Horizontal



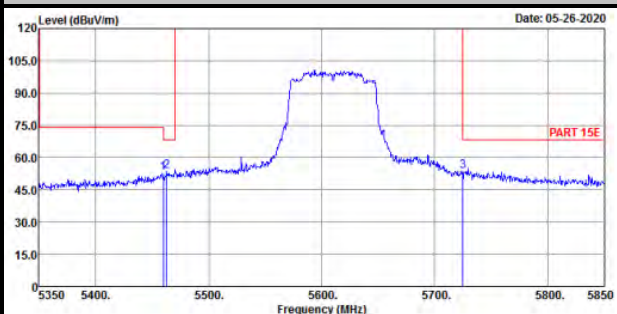
Vertical



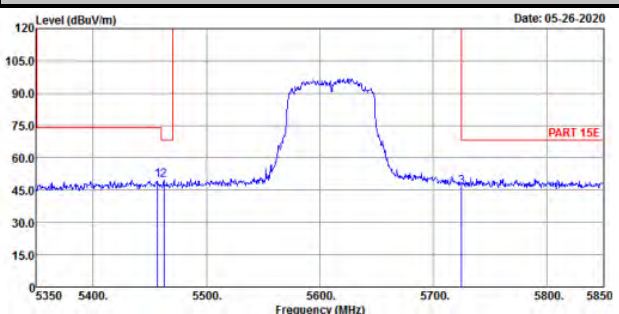
Ch 122

Peak

Horizontal

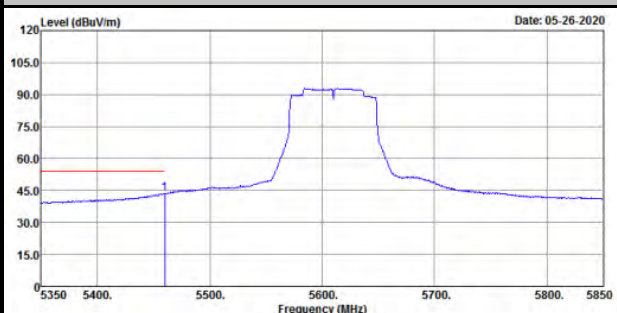


Vertical

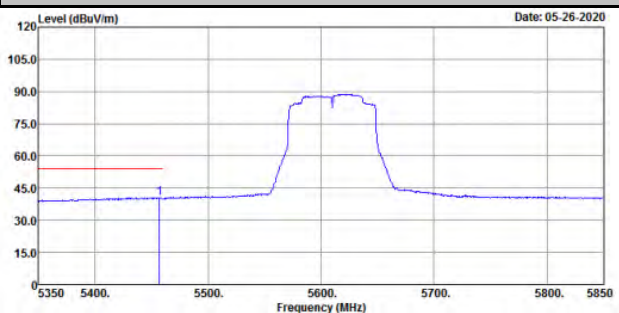


Average

Horizontal



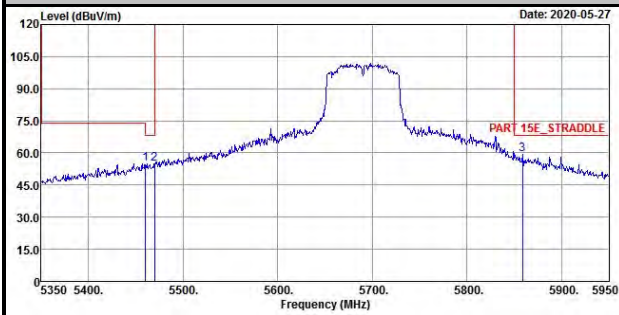
Vertical



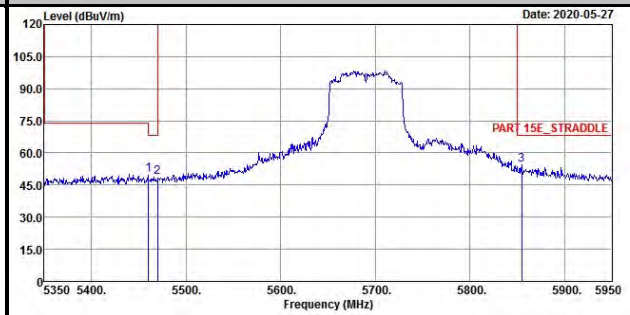
Ch 138

Peak

Horizontal

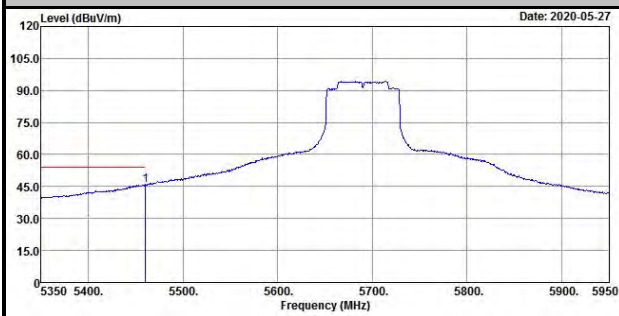


Vertical

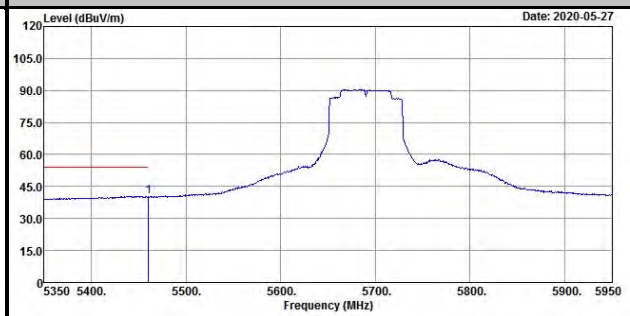


Average

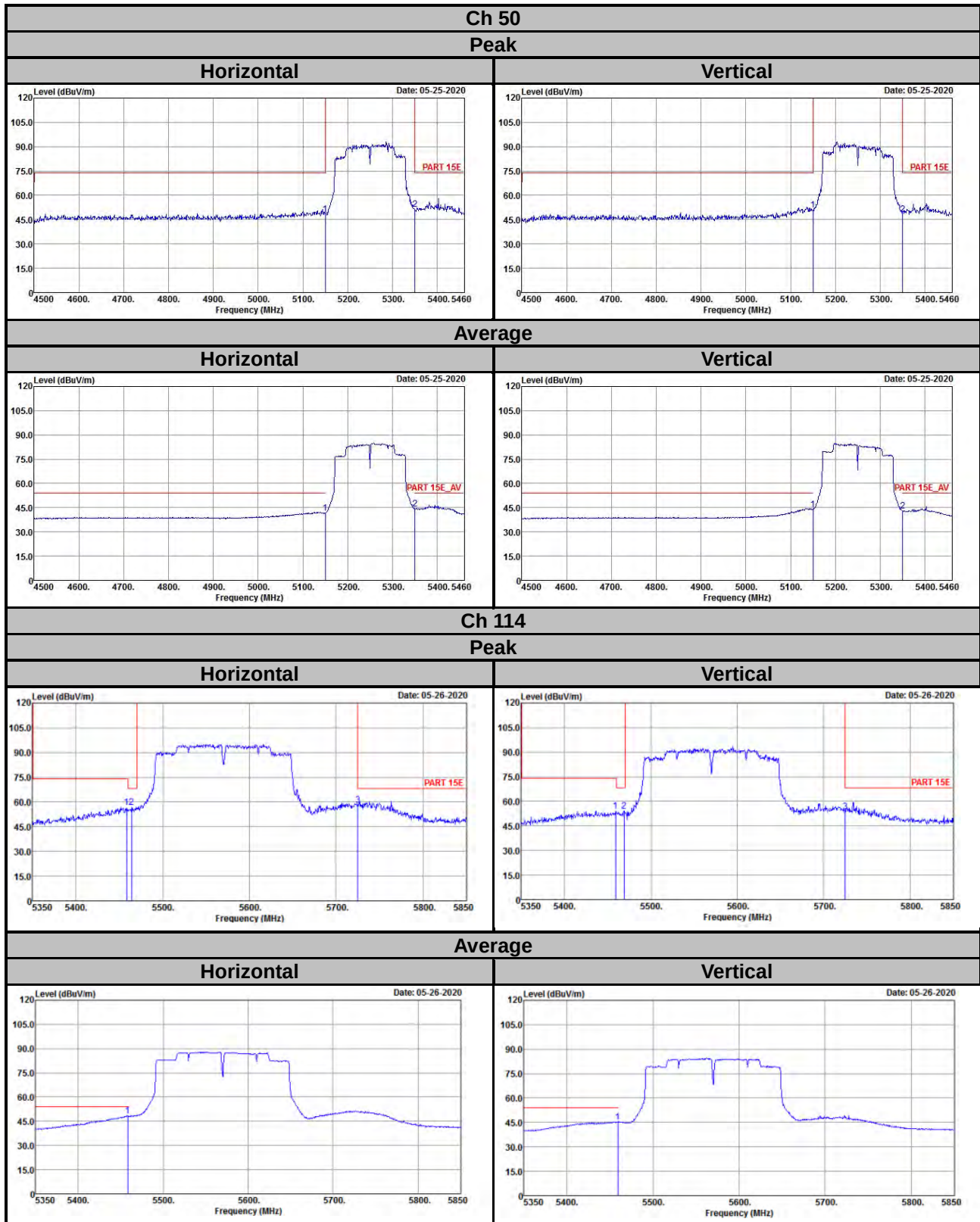
Horizontal



Vertical



802.11ac (VHT160)

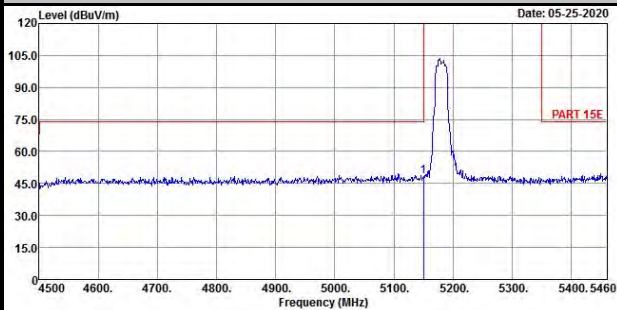


802.11ax (HE20)

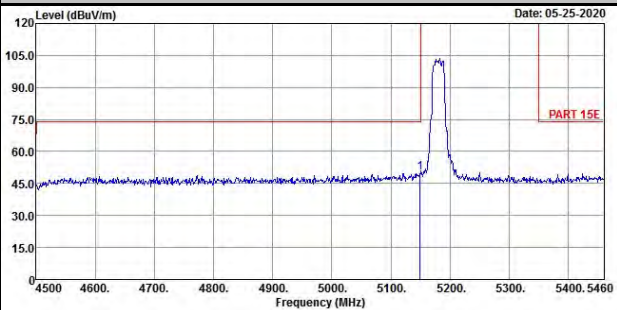
Ch 36

Peak

Horizontal

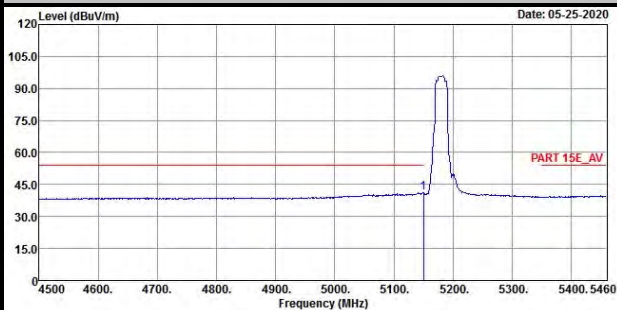


Vertical

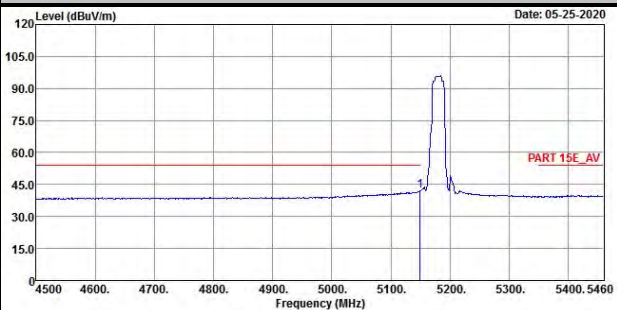


Average

Horizontal



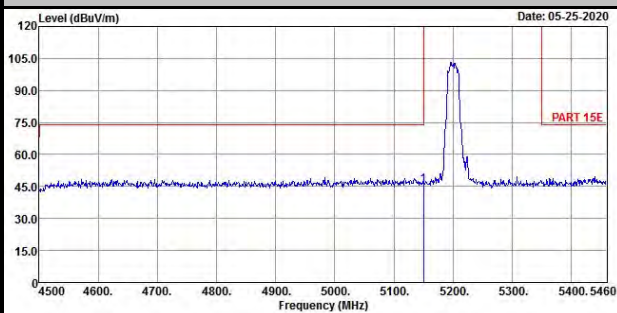
Vertical



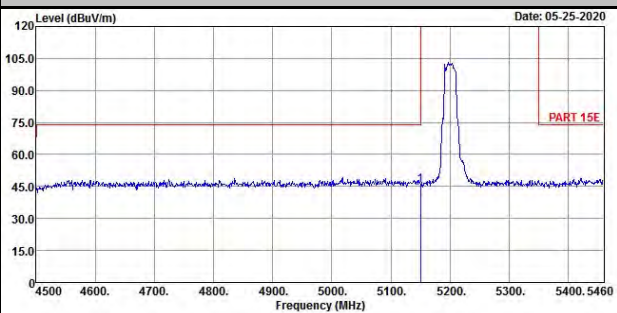
Ch 40

Peak

Horizontal

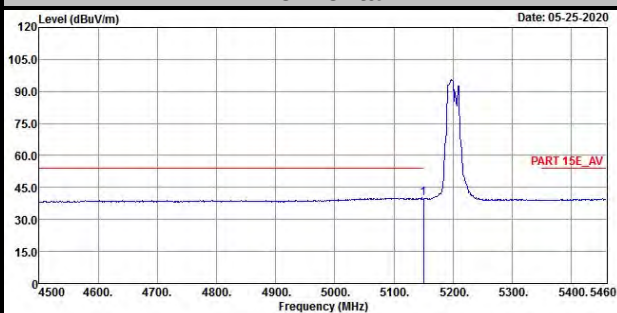


Vertical

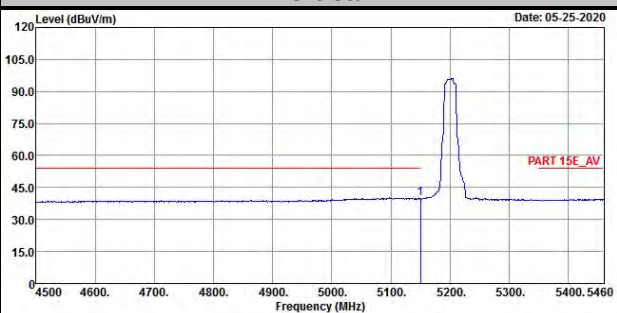


Average

Horizontal



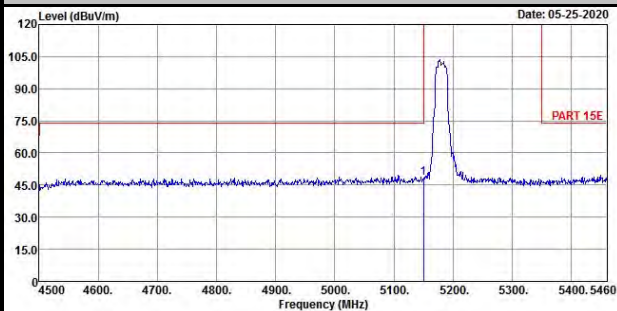
Vertical



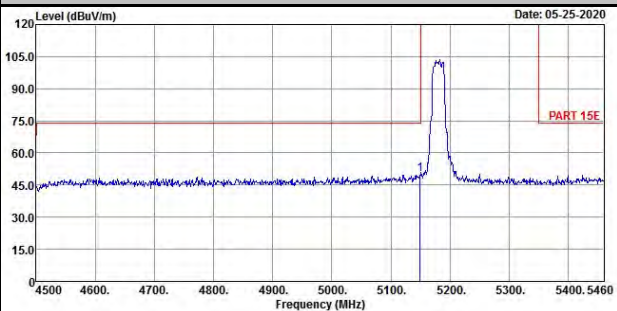
Ch 36

Peak

Horizontal

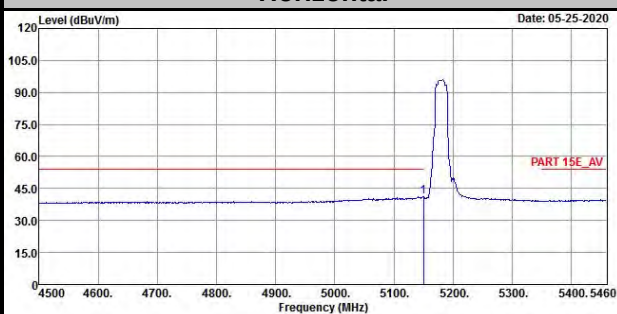


Vertical

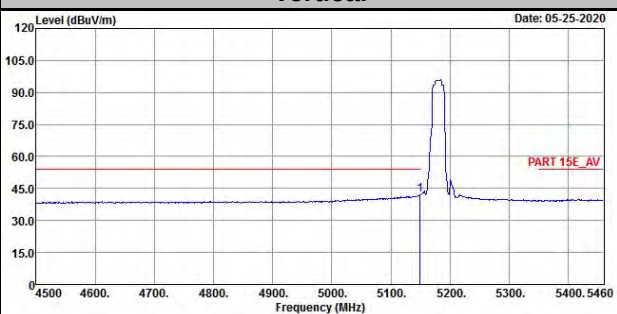


Average

Horizontal



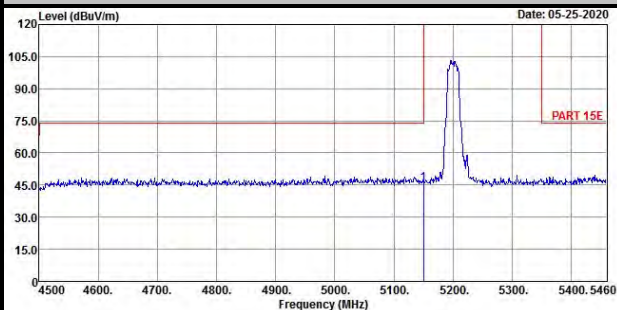
Vertical



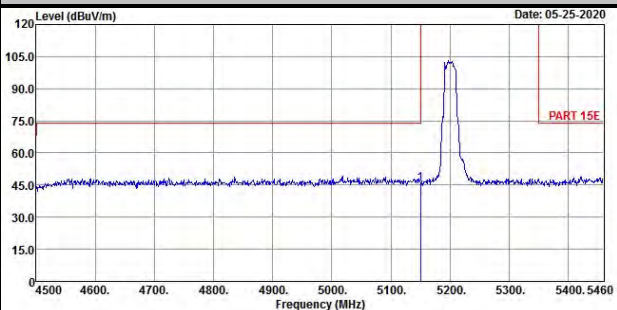
Ch 40

Peak

Horizontal

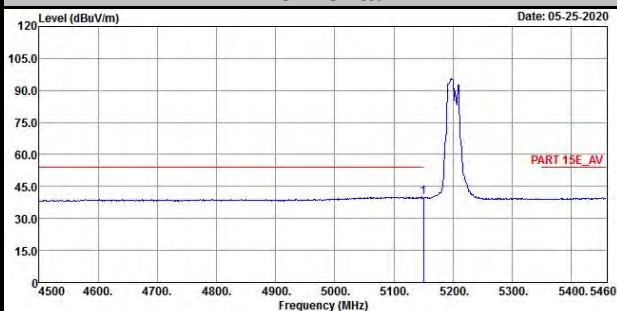


Vertical

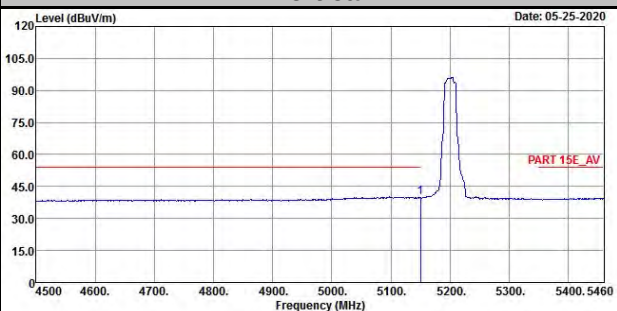


Average

Horizontal



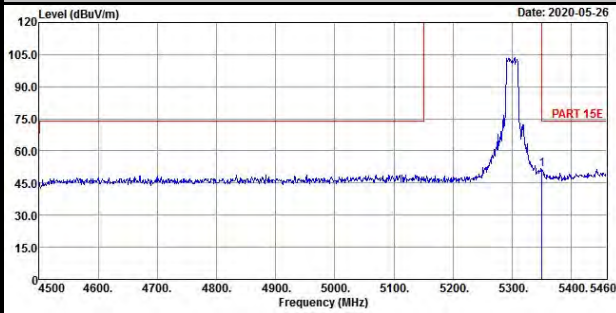
Vertical



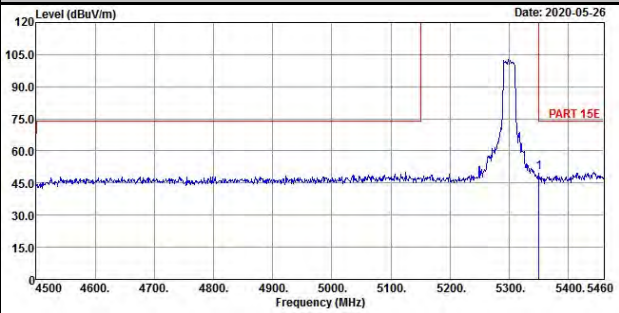
Ch 60

Peak

Horizontal

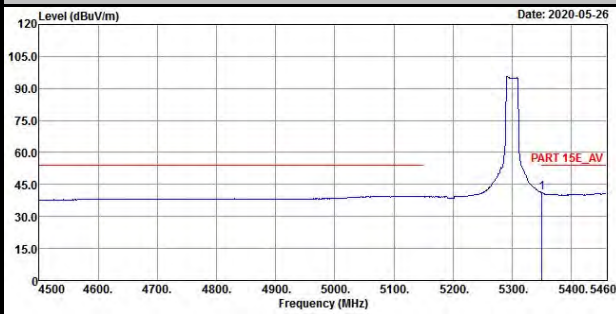


Vertical

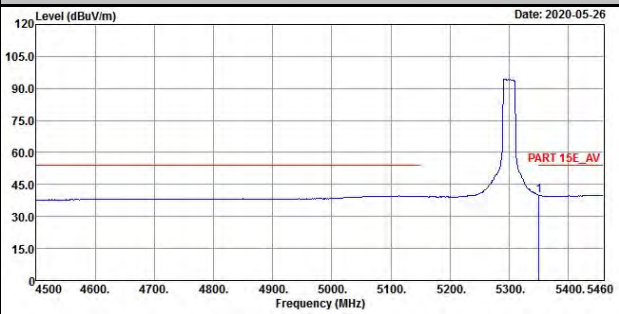


Average

Horizontal



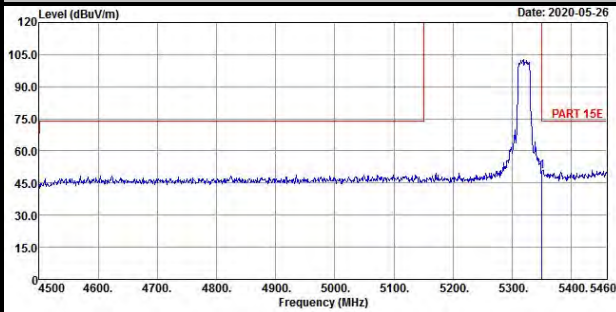
Vertical



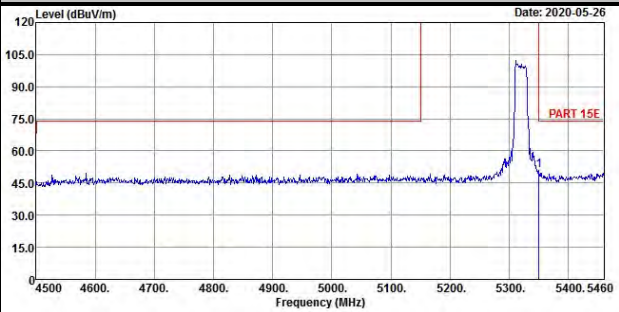
Ch 64

Peak

Horizontal

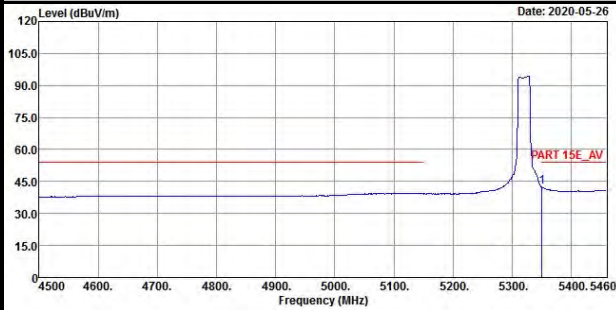


Vertical

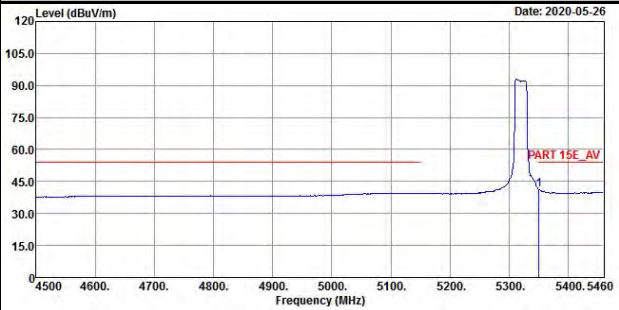


Average

Horizontal



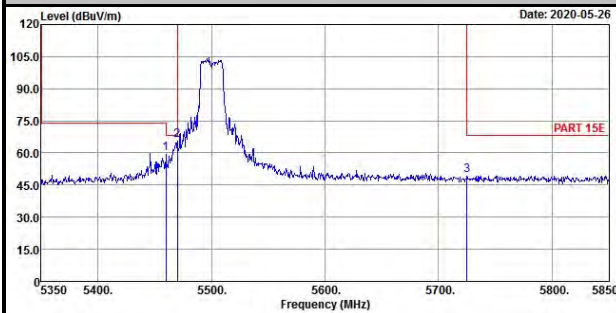
Vertical



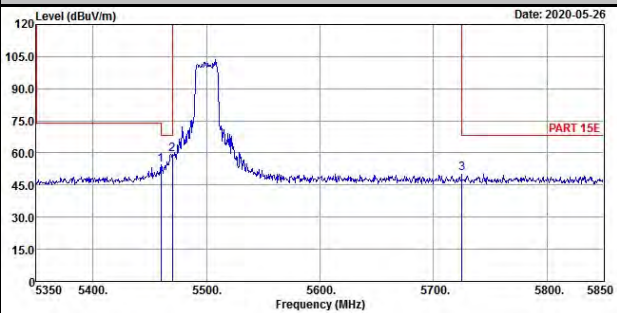
Ch 100

Peak

Horizontal

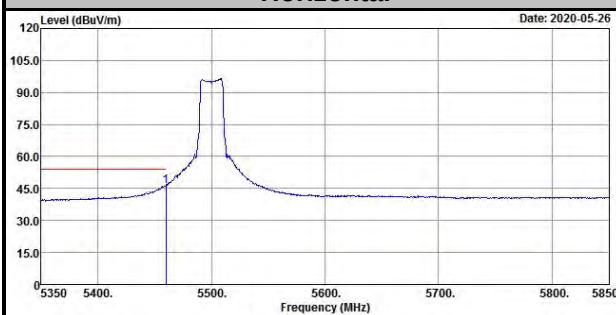


Vertical

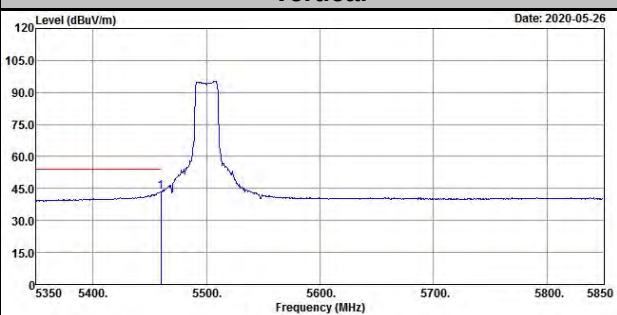


Average

Horizontal



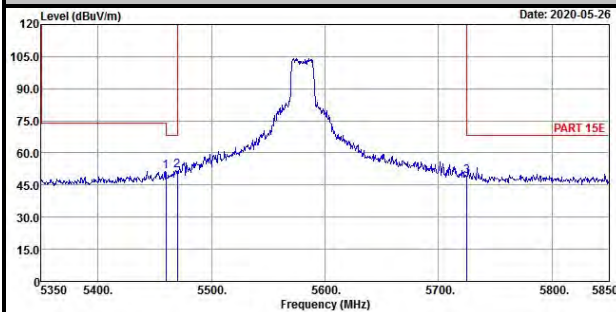
Vertical



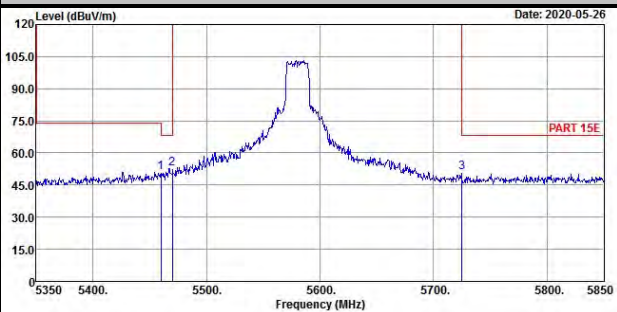
Ch 116

Peak

Horizontal

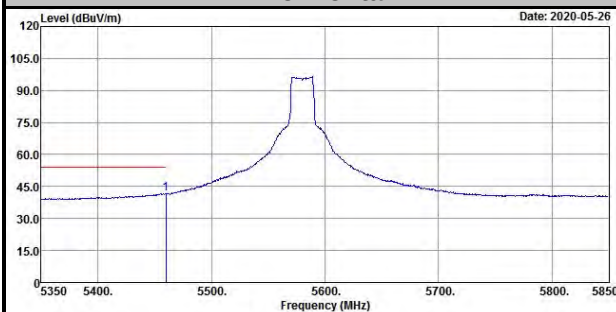


Vertical

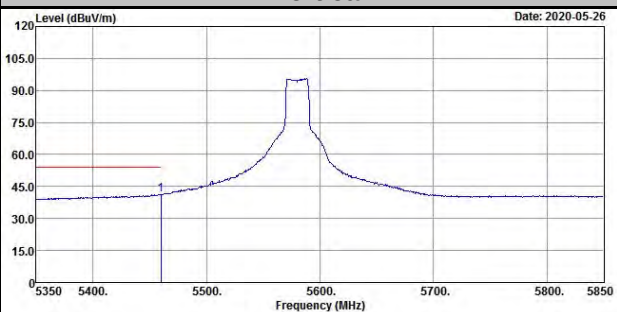


Average

Horizontal



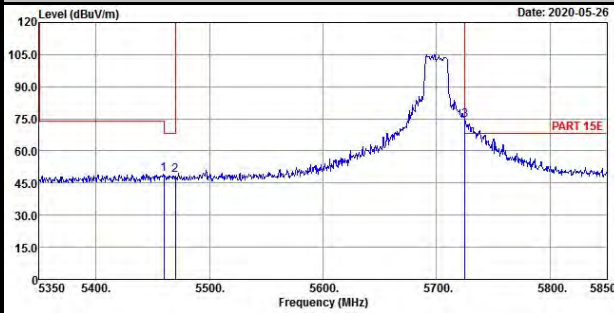
Vertical



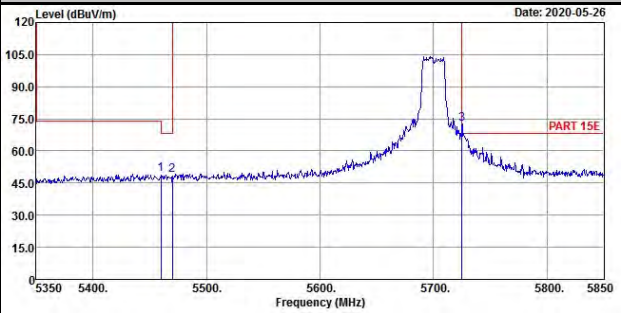
Ch 140

Peak

Horizontal

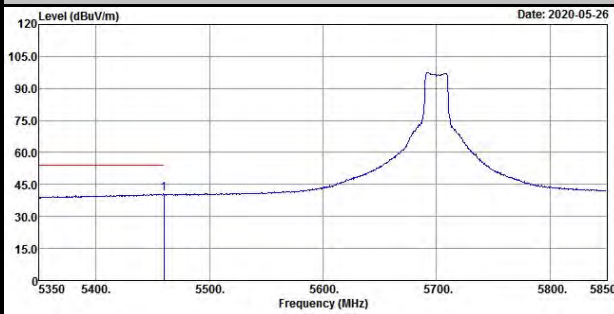


Vertical

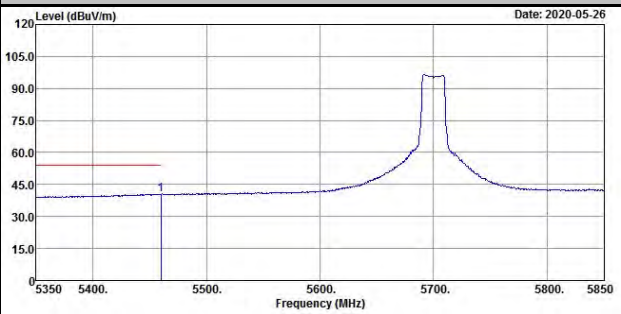


Average

Horizontal



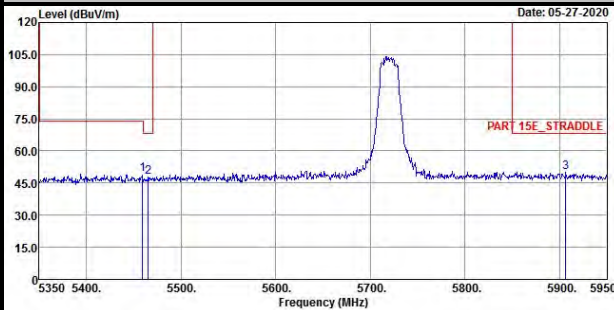
Vertical



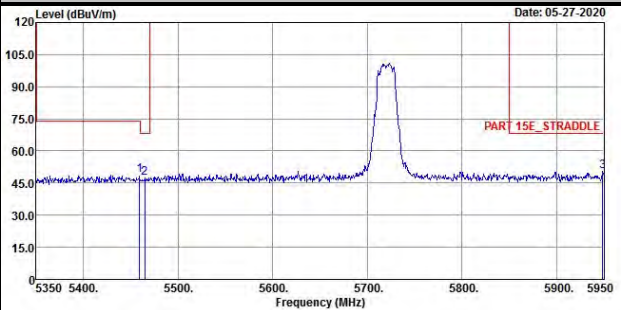
Ch 144

Peak

Horizontal

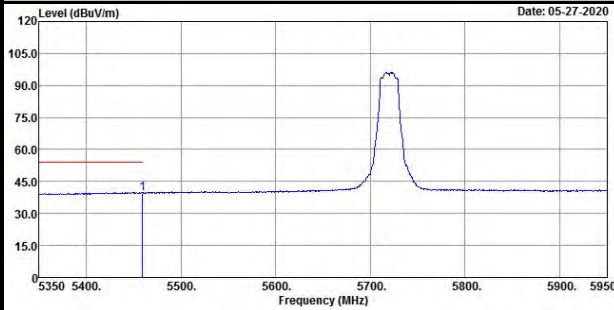


Vertical

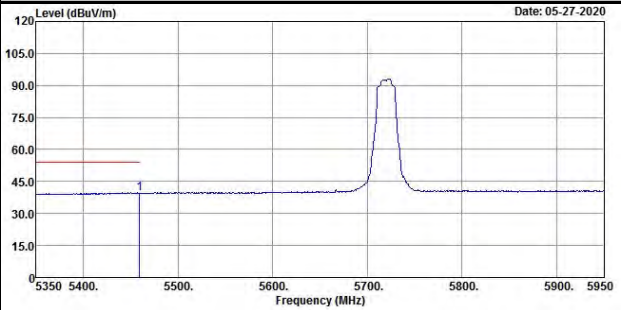


Average

Horizontal



Vertical

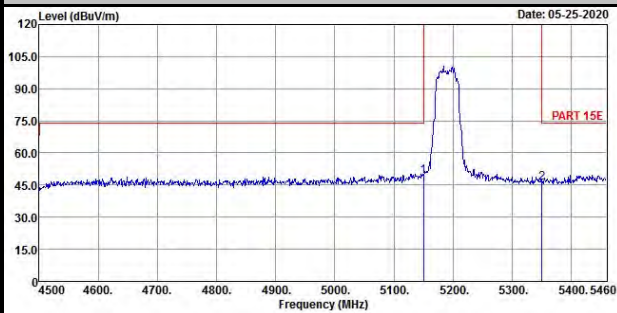


802.11ax (HE40)

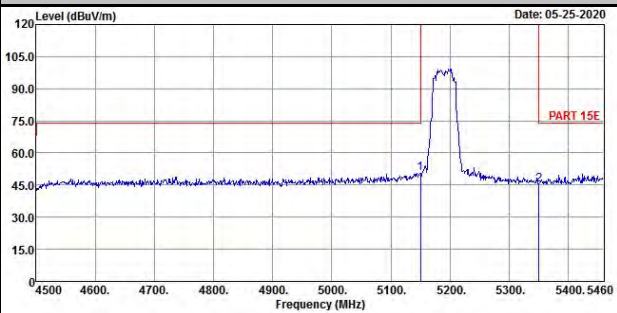
Ch 38

Peak

Horizontal

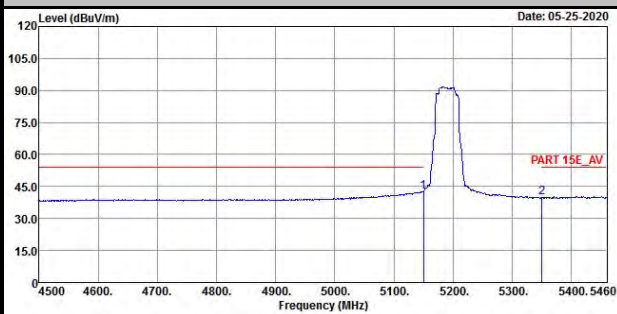


Vertical

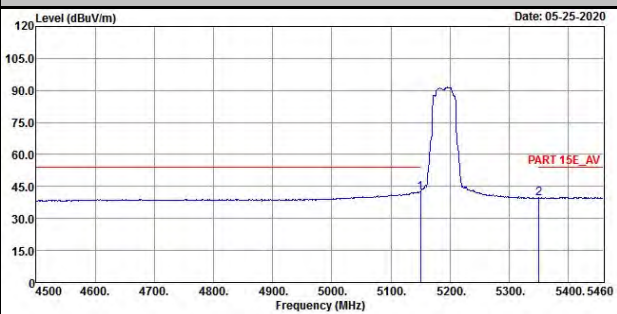


Average

Horizontal



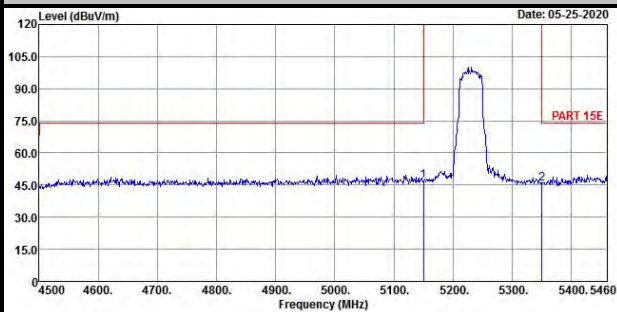
Vertical



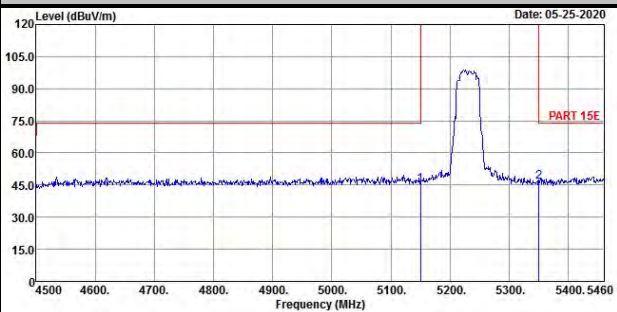
Ch 46

Peak

Horizontal

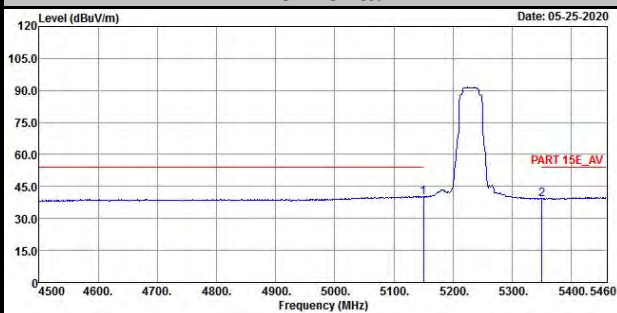


Vertical

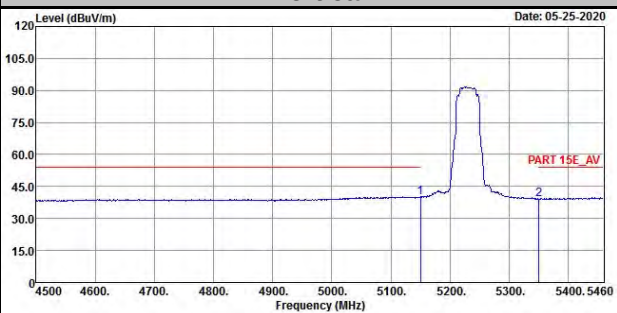


Average

Horizontal



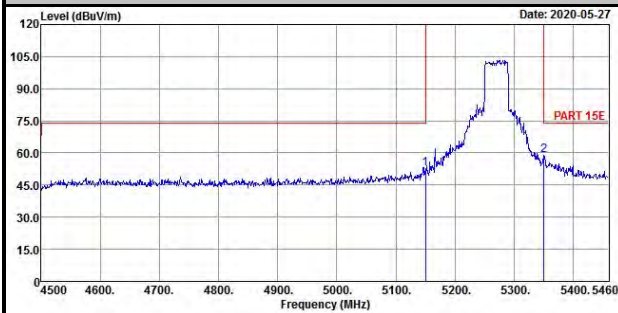
Vertical



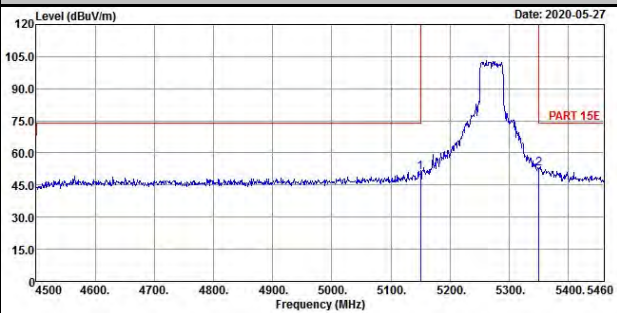
Ch 54

Peak

Horizontal

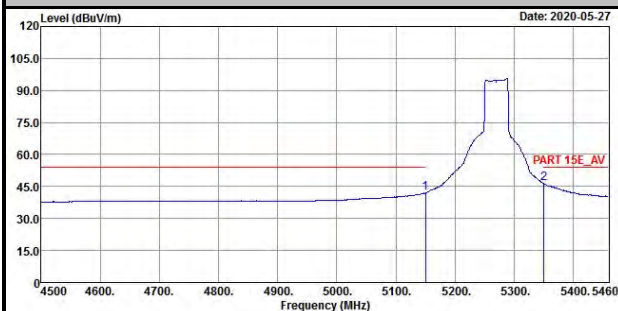


Vertical

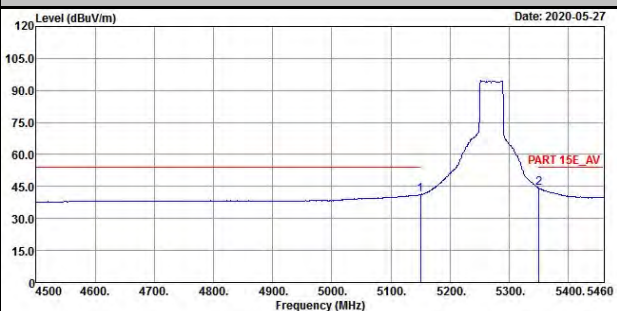


Average

Horizontal



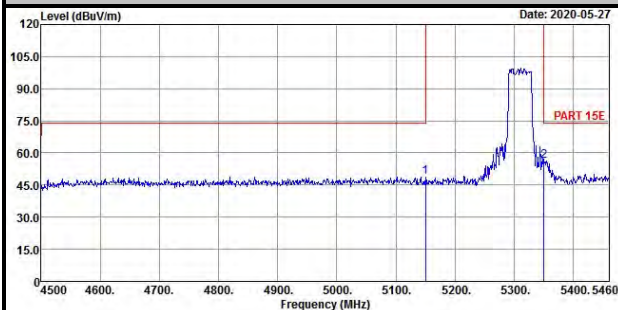
Vertical



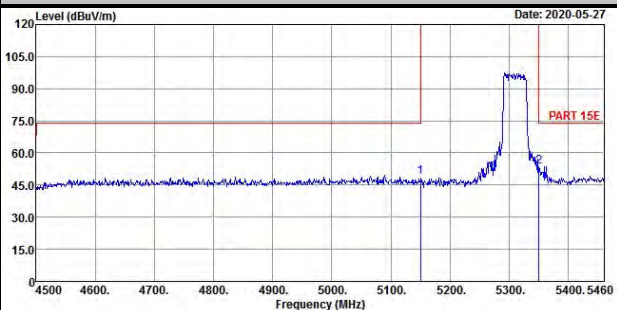
Ch 62

Peak

Horizontal

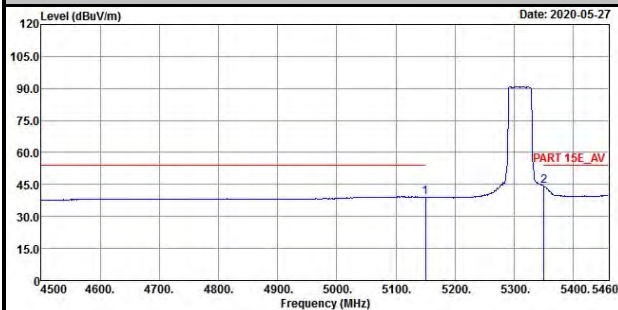


Vertical

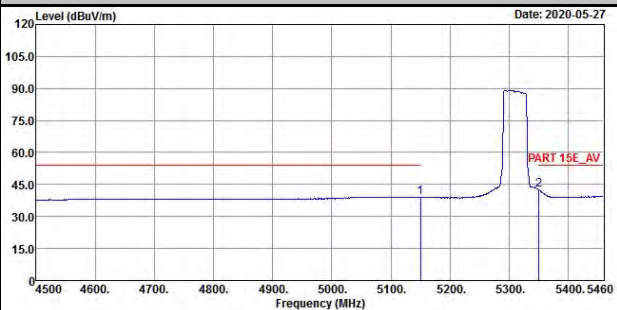


Average

Horizontal



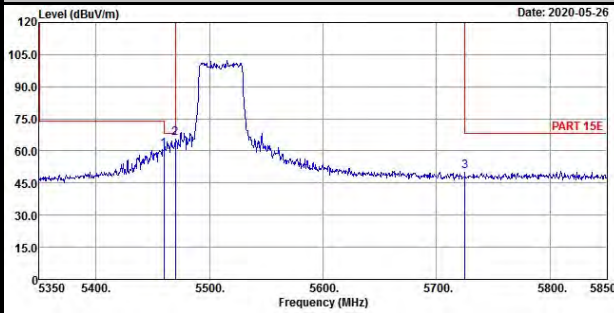
Vertical



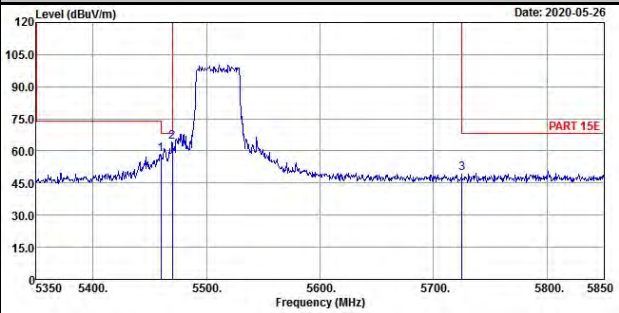
Ch 102

Peak

Horizontal

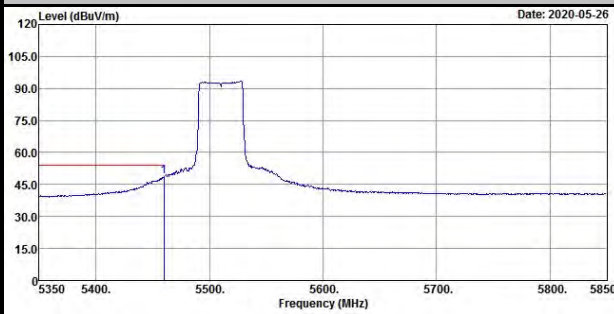


Vertical

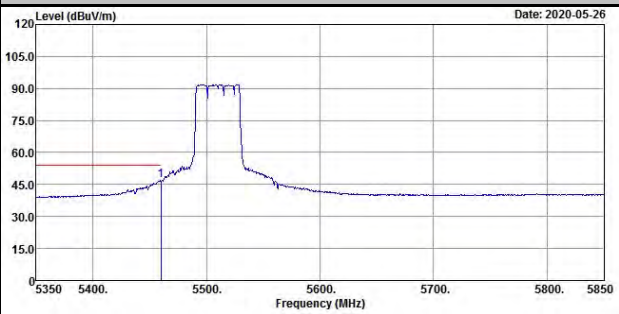


Average

Horizontal



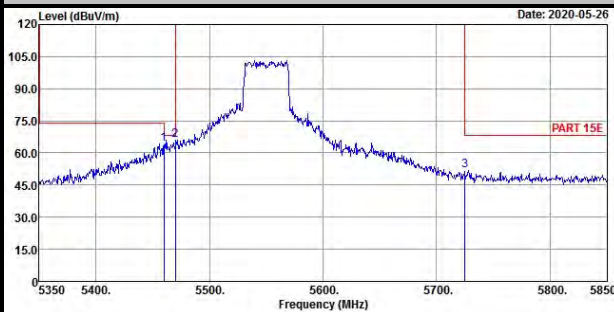
Vertical



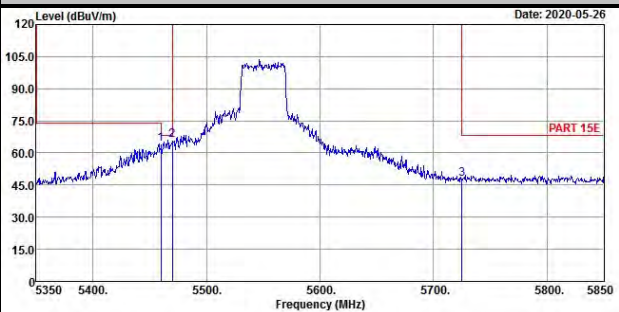
Ch 110

Peak

Horizontal

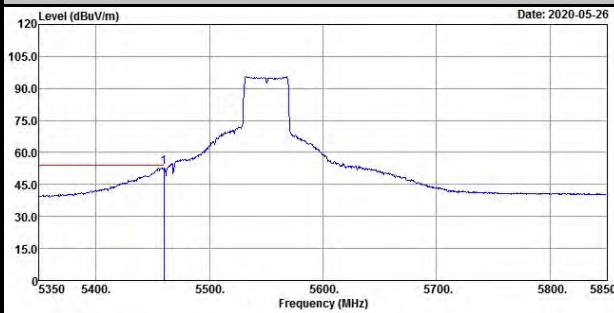


Vertical

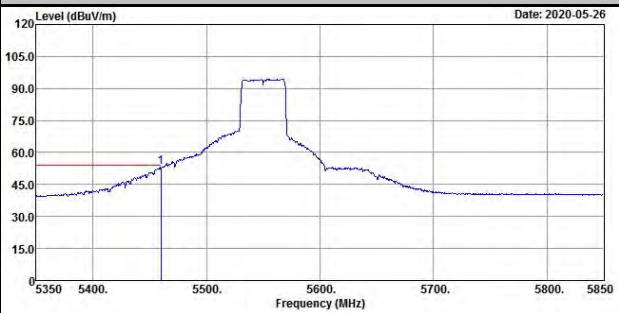


Average

Horizontal



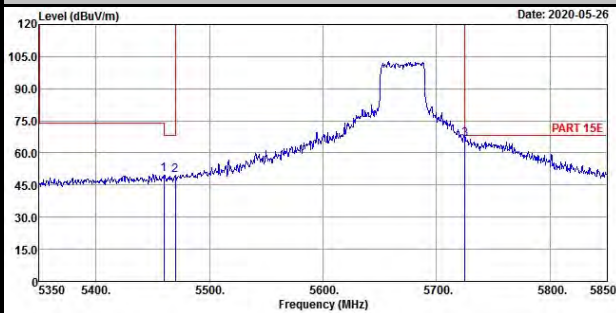
Vertical



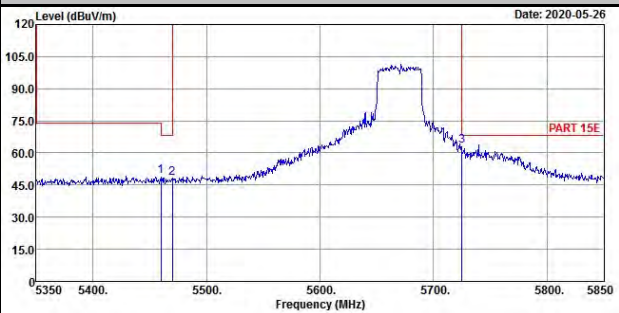
Ch 134

Peak

Horizontal

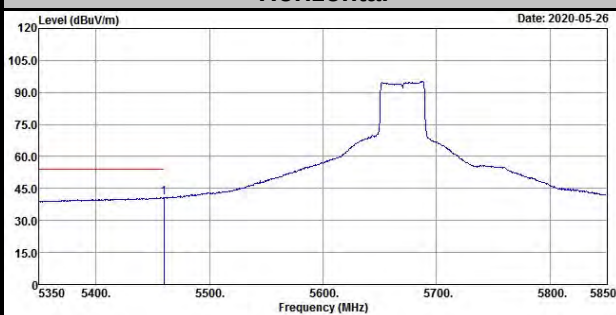


Vertical

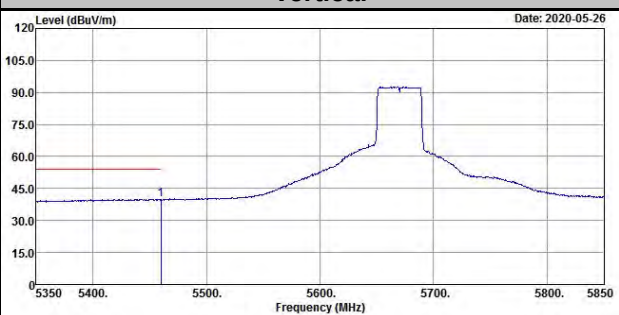


Average

Horizontal



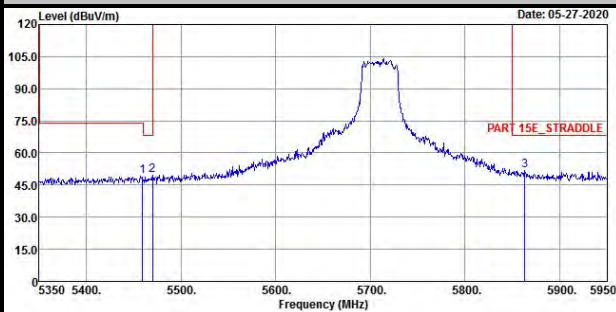
Vertical



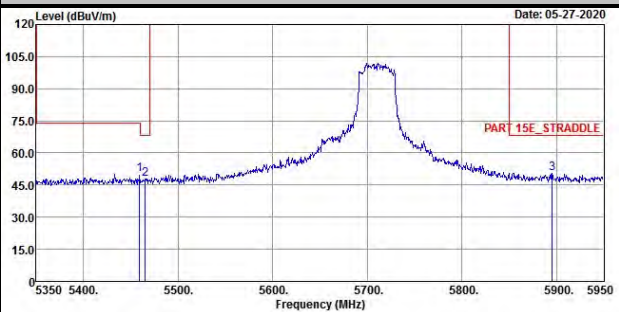
Ch 142

Peak

Horizontal

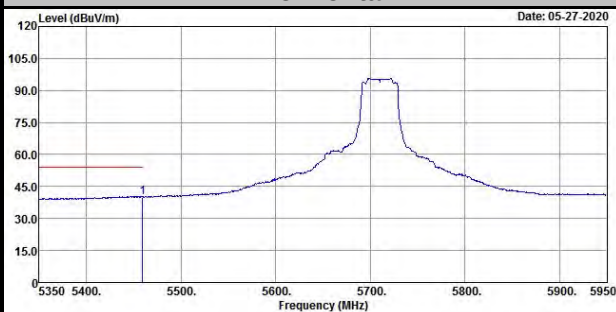


Vertical

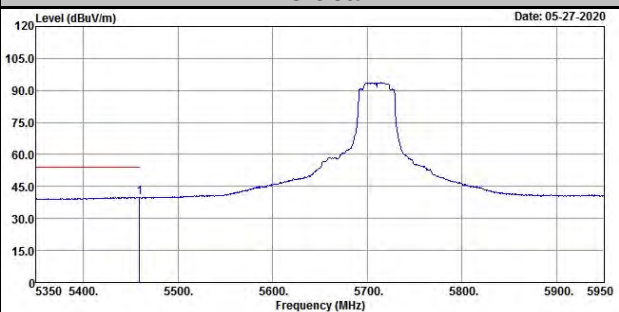


Average

Horizontal



Vertical

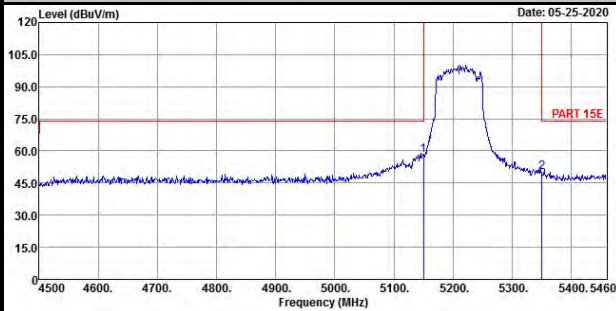


802.11ax (HE80)

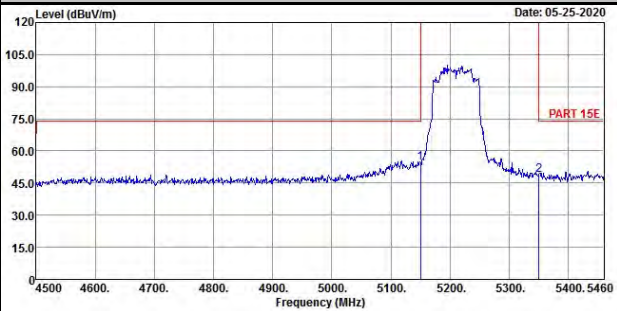
Ch 42

Peak

Horizontal

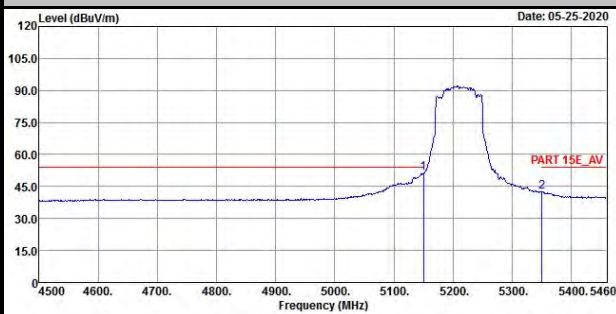


Vertical

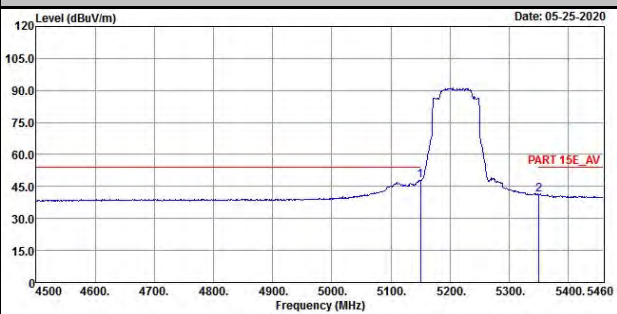


Average

Horizontal



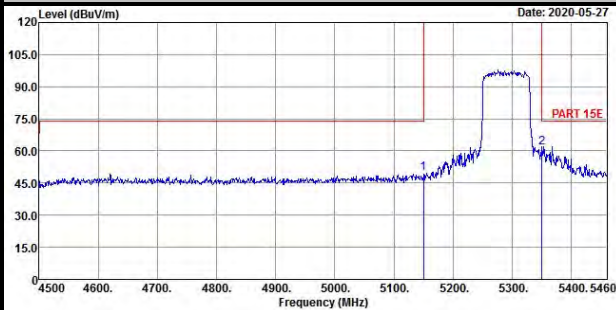
Vertical



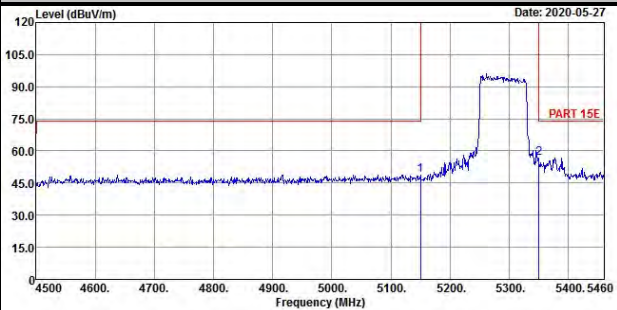
Ch 58

Peak

Horizontal

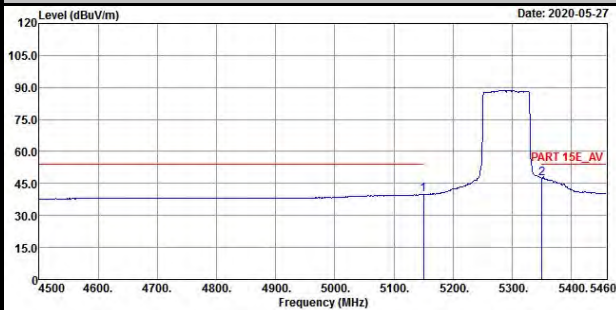


Vertical

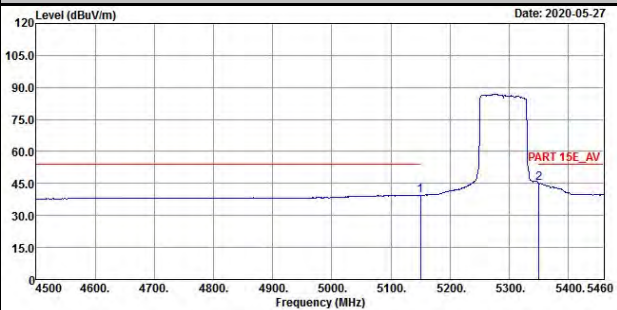


Average

Horizontal



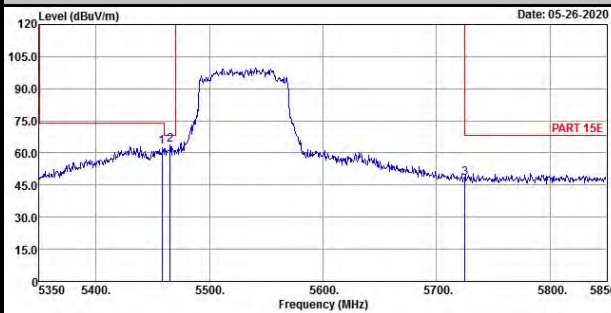
Vertical



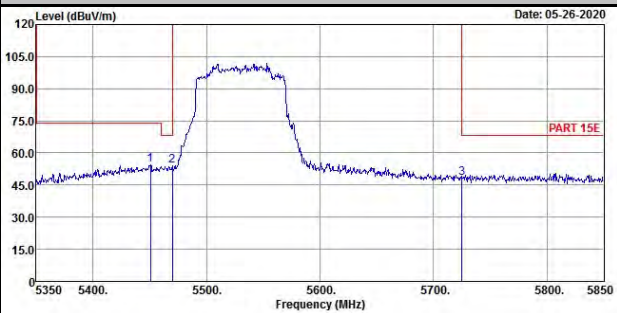
Ch 106

Peak

Horizontal

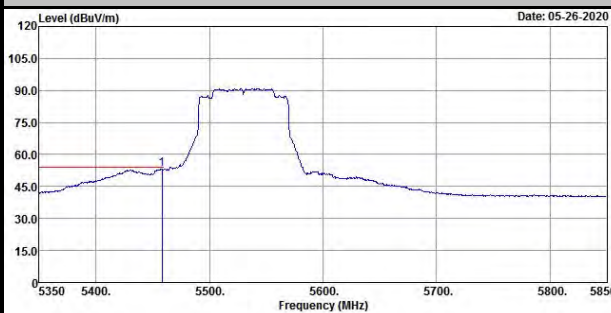


Vertical

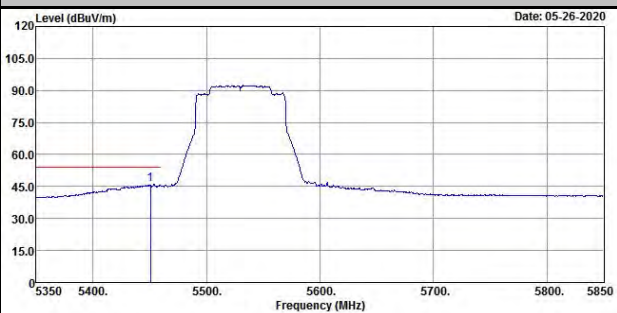


Average

Horizontal



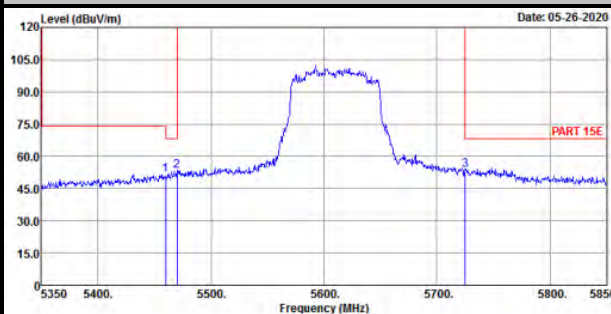
Vertical



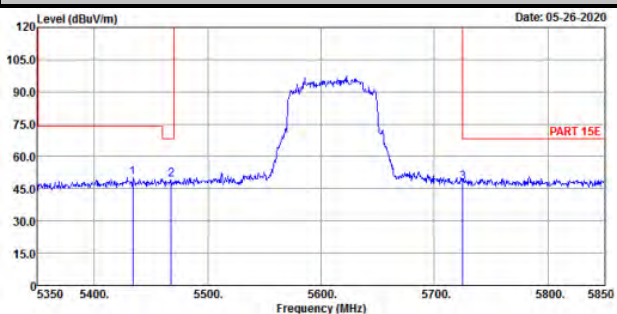
Ch 122

Peak

Horizontal

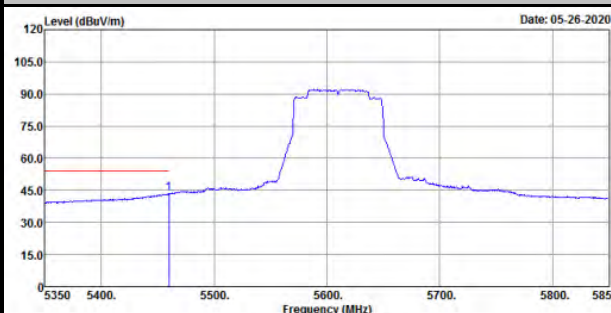


Vertical

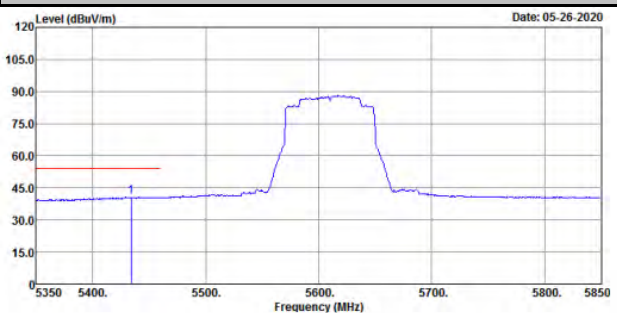


Average

Horizontal



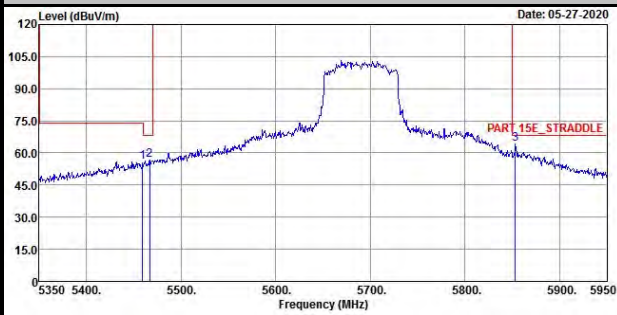
Vertical



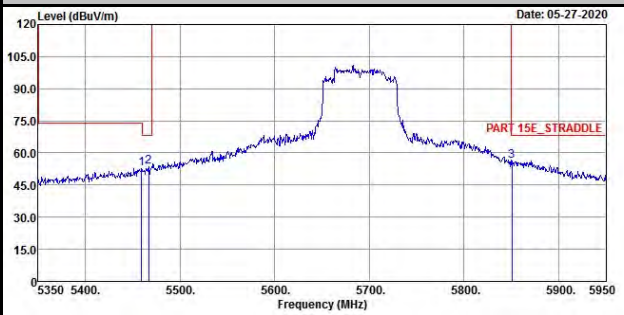
Ch 138

Peak

Horizontal

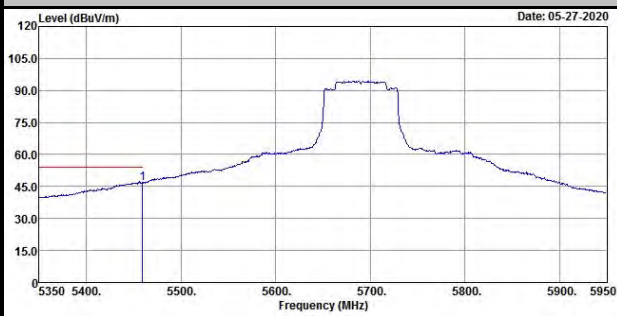


Vertical

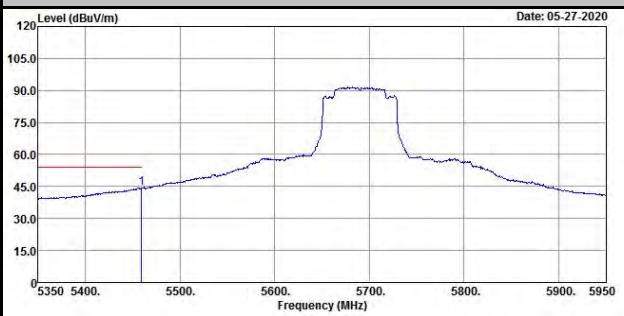


Average

Horizontal



Vertical

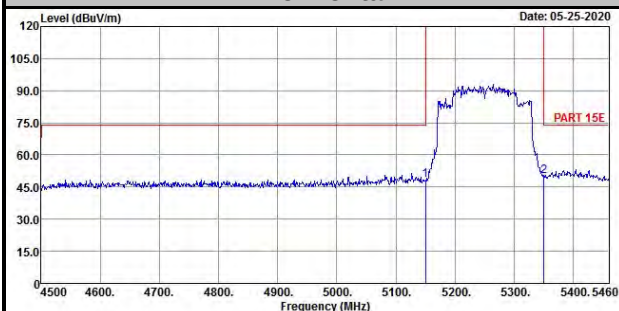


802.11ax (HE160)

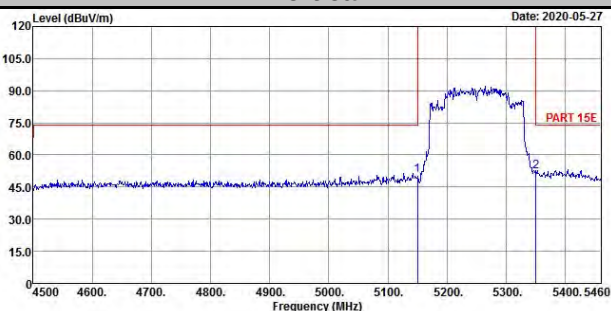
Ch 50

Peak

Horizontal

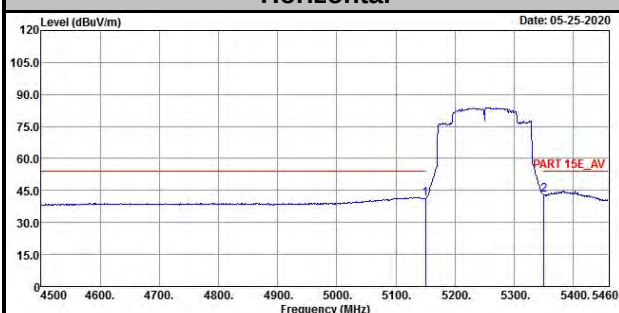


Vertical

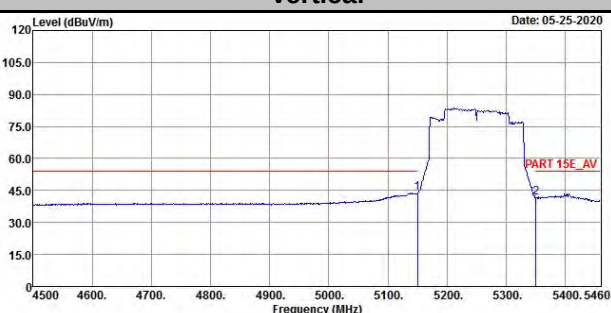


Average

Horizontal



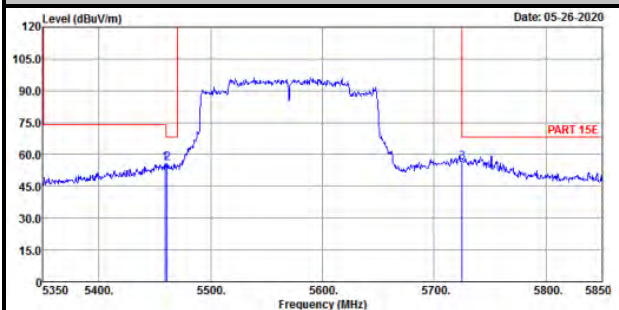
Vertical



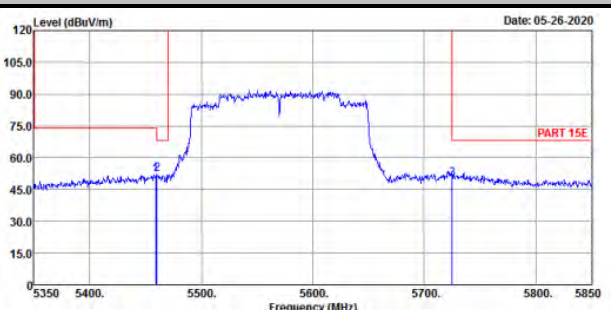
Ch 114

Peak

Horizontal

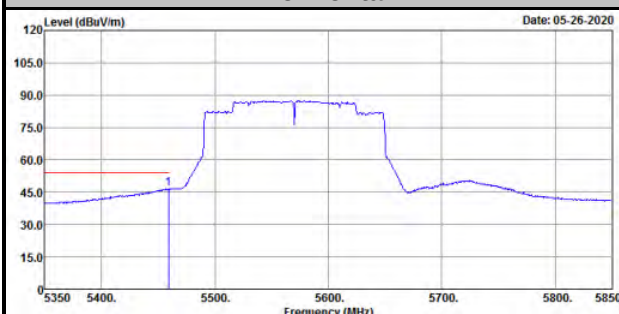


Vertical

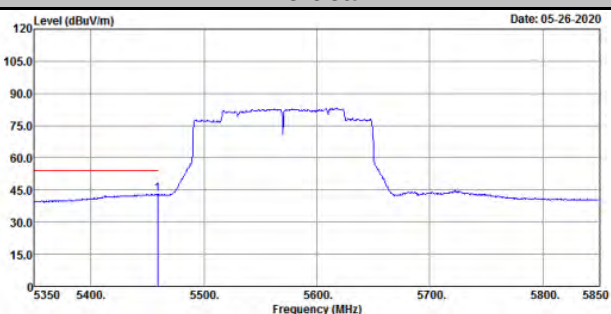


Average

Horizontal



Vertical



Appendix – Information of the Testing Laboratories

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

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

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Web Site: www.bureauveritas-adt.com

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

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