FCC Test Report

Report No.:	RF191021C06-4
FCC ID:	I4L-LAVIELVAX200
Test Model:	LN20006A
Received Date:	Oct. 21, 2019
Test Date:	Nov. 16 ~ Nov. 24, 2019
Issued Date:	Nov. 28, 2019
Applicant:	Micro-Star International Co., Ltd.
Address:	No. 69, Lide St., Zhonghe Dist., 235 New Taipei City Taiwan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location (1):	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
Test Location (2):	B2F., No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan
FCC Registration / Designation Number:	788550 / TW0003 427177 / TW0011

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Release Control Record

Issue No.	Description	Date Issued
RF191021C06-4	Original Release	Nov. 28, 2019

1 Certificate of Conformity

Product:	Notebook PC
Brand:	NEC
Test Model:	LN20006A
Sample Status:	Mass product
Applicant:	Micro-Star International Co., Ltd.
Test Date:	Nov. 16 ~ Nov. 24, 2019
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

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

Prepared by : _____ , **Date:** Nov. 28, 2019

Gina Liu / Specialist

Approved by : _____ , **Date:** Nov. 28, 2019

Dylan Chiou / 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 -12.5 dB at 0.462 MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.01 dB at 5350 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is i-pex(MHF) not a standard connector.

Note:

1. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.
2. 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	2.0153 dB
	200 MHz ~ 1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	1.1508 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Notebook PC
Brand	NEC
Test Model	LN20006A
Status of EUT	Mass product
Power Supply Rating	20.0 / 15.0 / 9.0 / 5.0 Vdc (adapter) 15.36 Vdc (Li-ion battery)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM for OFDMA
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 400.0 Mbps 802.11ac: up to 1733.3 Mbps 802.11ax: up to 2402 Mbps
Operating Frequency	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5720 MHz, 5745 ~ 5825 MHz
Number of Channel	5180 ~ 5240 MHz: 4 for 802.11a, 802.11n (HT20), 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) 5250 ~ 5320 MHz: 4 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) 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	44.211 mW for 5180 ~ 5240 MHz 43.909 mW for 5250 ~ 5320 MHz 44.263 mW for 5500 ~ 5720 MHz 43.159 mW for 5745 ~ 5825 MHz
Antenna Type	5180 ~ 5240 MHz: PIFA antenna with -1.67 dBi gain 5250 ~ 5320 MHz: PIFA antenna with -1.67 dBi gain 5500 ~ 5720 MHz: PIFA antenna with -1.01 dBi gain 5745 ~ 5825 MHz: PIFA antenna with -1.04 dBi gain
Antenna Connector	i-pex(MHF)
Accessory Device	Refer to Note as below

Data Cable Supplied	Refer to Note as below

Note:

1. 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) / 802.11ac (VHT20) / 802.11ax (HE20)	2TX
802.11n (HT40) / 802.11ac (VHT40) / 802.11ax (HE40)	2TX
802.11ac (VHT80) / 802.11ax (HE80)	2TX
802.11ac (VHT160) / 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)

2. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter	NEC	A19-095P1A	I/P: 100-240 Vac, 50-60 Hz, 1.6 A O/P: 20 Vdc, 4.75 A / 15 Vdc, 3 A / 9 Vdc, 3 A / 5 Vdc, 3 A
Battery	NEC	PC-VP-WP151	15.36 Vdc, 5235 mAh, Min.4711 mAh (72Wh)
WLAN Module	Intel	AX200NGW	--

3. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

For 5180 ~ 5240 MHz

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

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

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

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

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

Channel	Frequency (MHz)
42	5210

For 5250 ~ 5320 MHz

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

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

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

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

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

Channel	Frequency (MHz)
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≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where **RE≥1G:** Radiated Emission above 1 GHz **RE<1G:** Radiated Emission below 1 GHz
PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement
Note: "-" means no effect.

Radiated Emission Test (Above 1 GHz):

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

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-		802.11ac (VHT20)	36 to 48	36, 40, 48	OFDM	BPSK	7.2
-		802.11ac (VHT40)	38 to 46	38, 46	OFDM	BPSK	15.0
-		802.11ac (VHT80)	42	42	OFDM	BPSK	29.3
-		802.11ax (HE20)	36 to 48	36, 40, 48	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	38 to 46	38, 46	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	42	42	OFDMA	BPSK	MCS0
-	5250-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11ac (VHT20)	52 to 64	52, 60, 64	OFDM	BPSK	7.2
-		802.11ac (VHT40)	54 to 62	54, 62	OFDM	BPSK	15.0
-		802.11ac (VHT80)	58	58	OFDM	BPSK	29.3
-		802.11ac (VHT160)	50	5250	OFDM	BPSK	58.5
-		802.11ax (HE20)	36 to 48	36, 40, 48	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	38 to 46	38, 46	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	42	42	OFDMA	BPSK	MCS0
-		802.11ax (HE160)	50	50	OFDMA	BPSK	MCS0
-	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
-		802.11ac (VHT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	7.2
-		802.11ac (VHT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	15.0
-		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	BPSK	29.3
-		802.11ac (VHT160)	114	114	OFDM	BPSK	58.5
-		802.11ax (HE20)	100 to 144	100, 116, 140, 144	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	102 to 142	102, 110, 134, 142	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	106 to 138	106, 122, 138	OFDMA	BPSK	MCS0
-		802.11ax (HE160)	114	114	OFDMA	BPSK	MCS0
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11ac (VHT20)	149 to 165	149, 157, 165	OFDM	BPSK	7.2
-		802.11ac (VHT40)	151 to 159	151, 159	OFDM	BPSK	15.0
-		802.11ac (VHT80)	155	155	OFDM	BPSK	29.3
-		802.11ax (HE20)	149 to 165	149, 157, 165	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	151 to 159	151, 159	OFDMA	BPSK	MCS0
-		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)
-	5250-5320	802.11ac (VHT40)	54 to 62	62	OFDM	BPSK	15.0

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)
-	5250-5320	802.11ac (VHT40)	54 to 62	62	OFDM	BPSK	15.0

Antenna Port Conducted Measurement:

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

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

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-		802.11ac (VHT20)	36 to 48	36, 40, 48	OFDM	BPSK	7.2
-		802.11ac (VHT40)	38 to 46	38, 46	OFDM	BPSK	15.0
-		802.11ac (VHT80)	42	42	OFDM	BPSK	29.3
-		802.11ax (HE20)	36 to 48	36, 40, 48	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	38 to 46	38, 46	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	42	42	OFDMA	BPSK	MCS0
-	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11ac (VHT20)	52 to 64	52, 60, 64	OFDM	BPSK	7.2
-		802.11ac (VHT40)	54 to 62	54, 62	OFDM	BPSK	15.0
-		802.11ac (VHT80)	58	58	OFDM	BPSK	29.3
-		802.11ac (VHT160)	50	5250	OFDM	BPSK	58.5
-		802.11ax (HE20)	36 to 48	36, 40, 48	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	38 to 46	38, 46	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	42	42	OFDMA	BPSK	MCS0
-		802.11ax (HE160)	50	50	OFDMA	BPSK	MCS0

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
-		802.11ac (VHT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	7.2
-		802.11ac (VHT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	15.0
-		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	BPSK	29.3
-		802.11ac (VHT160)	114	114	OFDMA	BPSK	58.5
-		802.11ax (HE20)	100 to 144	100, 116, 140, 144	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	102 to 142	102, 110, 134, 142	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	106 to 138	106, 122, 138	OFDMA	BPSK	MCS0
-		802.11ax (HE160)	114	114	OFDMA	BPSK	MCS0
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11ac (VHT20)	149 to 165	149, 157, 165	OFDM	BPSK	7.2
-		802.11ac (VHT40)	151 to 159	151, 159	OFDM	BPSK	15.0
-		802.11ac (VHT80)	155	155	OFDM	BPSK	29.3
-		802.11ax (HE20)	149 to 165	149, 157, 165	OFDMA	BPSK	MCS0
-		802.11ax (HE40)	151 to 159	151, 159	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	155	155	OFDMA	BPSK	MCS0

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE≥1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Charles Hsiao
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Karl Lee
PLC	25 deg. C, 65 % RH	120 Vac, 60 Hz	Jisyong Wang
APCM	25 deg. C, 65 % RH	15.36 Vdc	Gavin Wu

3.3 Duty Cycle of Test Signal

MODULATION TYPE: BPSK

802.11a: Duty cycle = 2.085/2.133 = 0.977, Duty factor = 10 * log(1/0.977) = 0.10

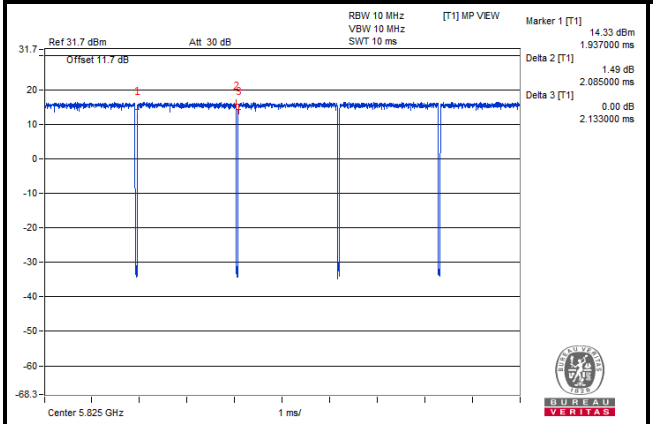
802.11ac (VHT20): Duty cycle of test signal is ≥ 98 %, duty factor is not required.

802.11ac (VHT40): Duty cycle of test signal is ≥ 98 %, duty factor is not required.

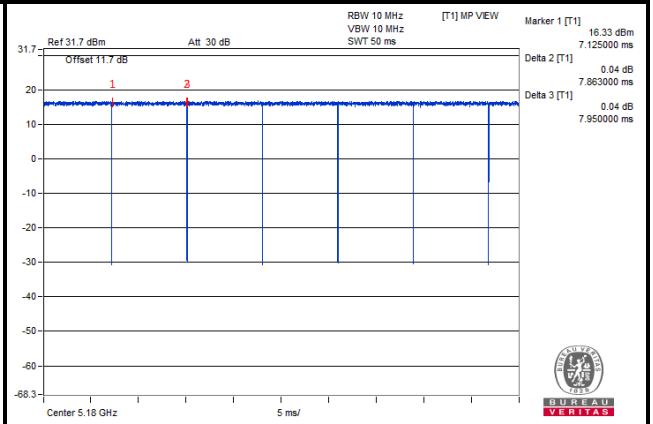
802.11ac (VHT80): Duty cycle = 3.901/4.013 = 0.972, Duty factor = 10 * log(1/0.972) = 0.12

802.11ac (VHT160): Duty cycle = 2.765/2.845 = 0.972, Duty factor = 10 * log(1/0.972) = 0.12

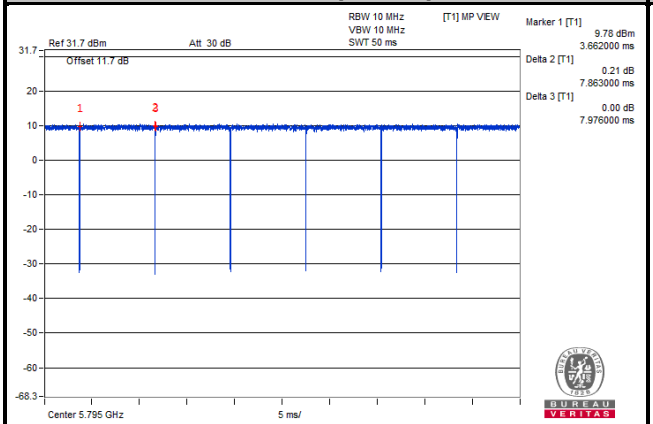
802.11a



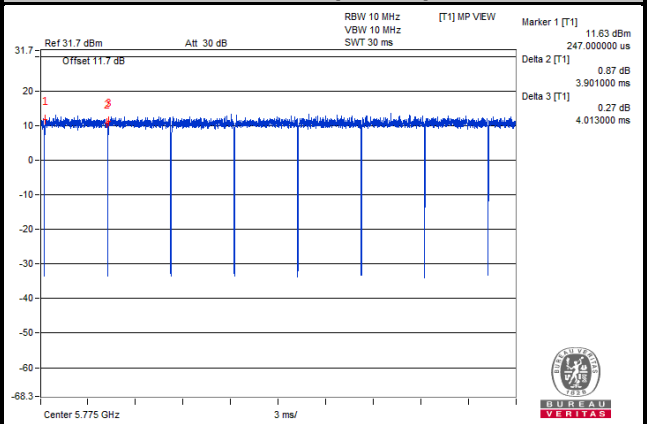
802.11ac (VHT20)



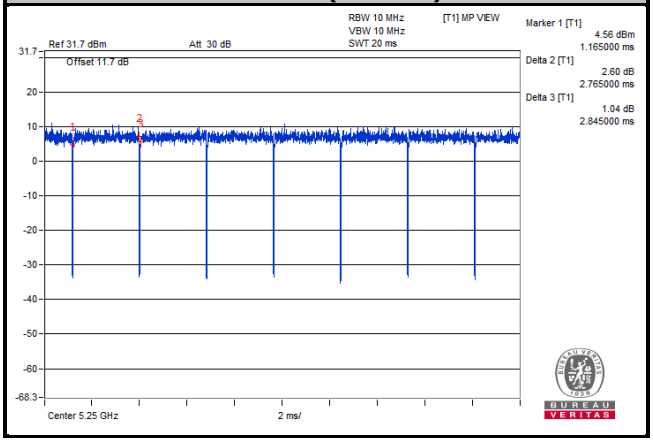
802.11ac (VHT40)



802.11ac (VHT80)



802.11ac (VHT160)



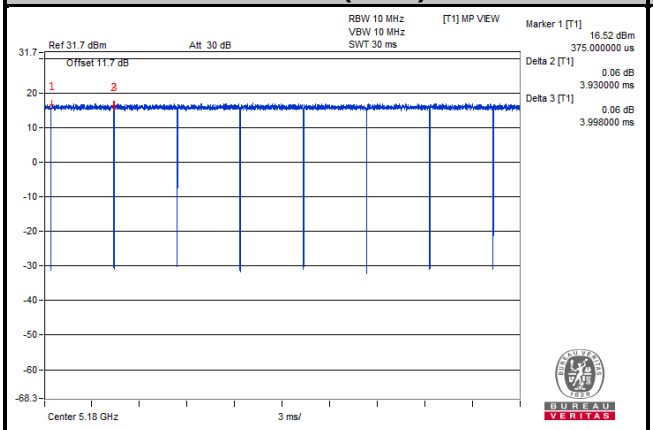
802.11ax (HE20): Duty cycle of test signal is ≥ 98 %, duty factor is not required.

802.11ax (HE40): Duty cycle = 3.915/4.028 = 0.972, Duty factor = 10 * log(1/0.972) = 0.12

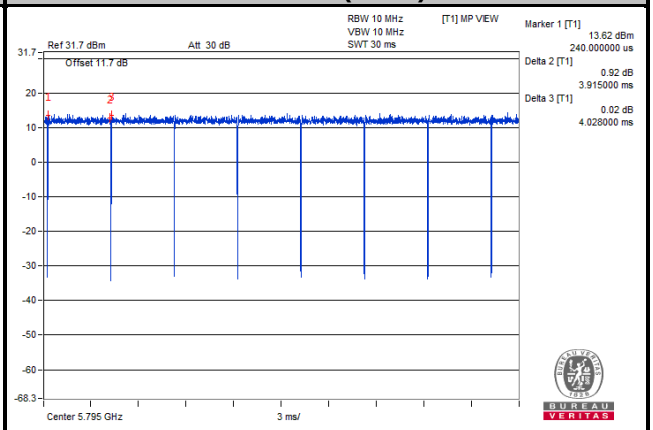
802.11ax (HE80): Duty cycle = 3.922/4.027 = 0.974, Duty factor = 10 * log(1/0.974) = 0.11

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

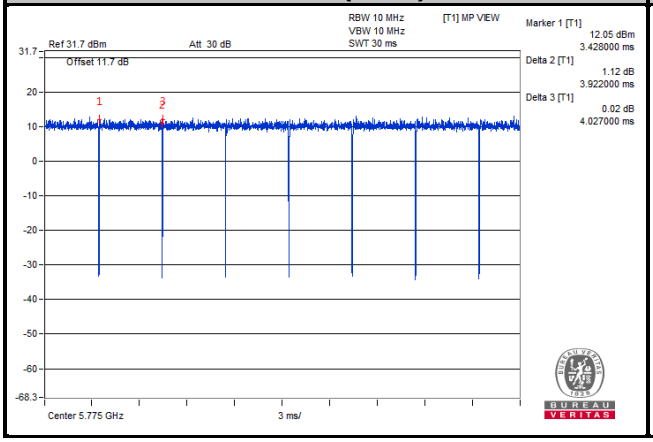
802.11ax (HE20)



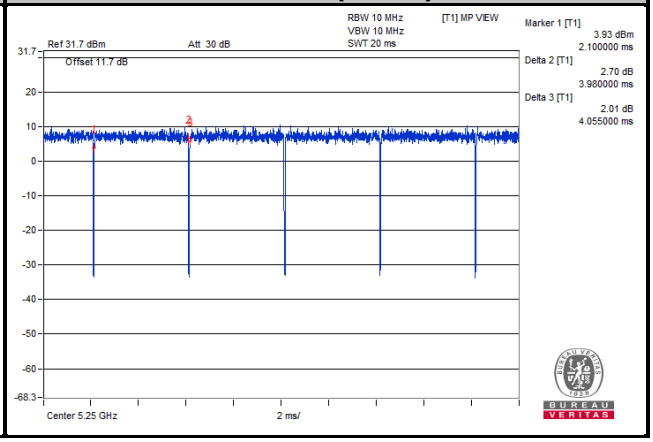
802.11ax (HE40)



802.11ax (HE80)



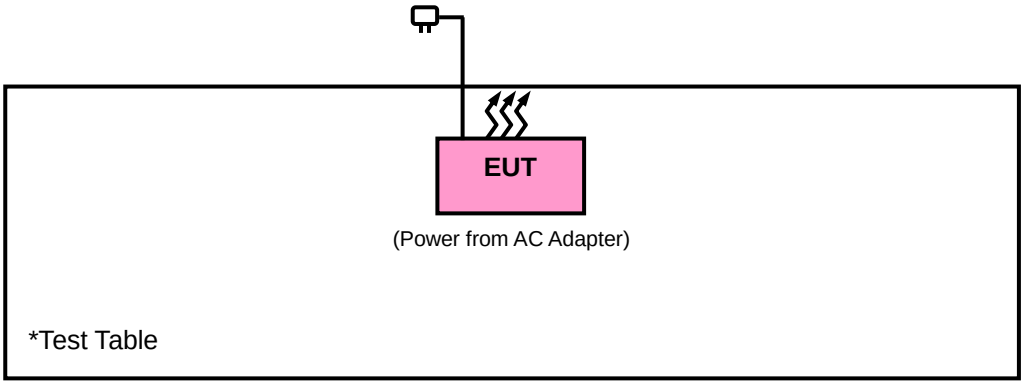
802.11ax (HE160)



3.4 Description of Support Units

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

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.

4.1.2 Limits of Unwanted Emission Out of the Restricted Bands

<table>
<tr><th colspan="3">Applicable To</th><th colspan="2">Limit</th></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedures New Rules v02r01</td><td colspan="2">Field Strength at 3 m</td></tr>
<tr><td>PK: 74 (dBµV/m)</td><td>AV: 54 (dBµV/m)</td></tr>
<tr><th>Frequency Band</th><th colspan="2">Applicable To</th><th>EIRP Limit</th><th>Equivalent Field Strength at 3 m</th></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK: -27 (dBm/MHz)</td><td rowspan="3">PK: 68.2 (dBµV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK:-27 (dBm/MHz) *1
PK:10 (dBm/MHz) *2
PK:15.6 (dBm/MHz) *3
PK:27 (dBm/MHz) *4</td><td>PK: 68.2 (dBµV/m) *1
PK:105.2 (dBµV/m) *2
PK: 110.8 (dBµV/m) *3
PK:122.2 (dBµV/m) *4</td></tr>
<tr><td>☐</td><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="5">*1 beyond 75 MHz or more above of the band edge.
*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.
*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.
*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</td></tr>
</table>

Note:

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

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

4.1.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY52260177	Aug. 26, 2019	Aug. 25, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSW26	102023	Oct. 08, 2019	Oct. 07, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 15, 2019	Apr. 14, 2020
BILOG Antenna SCHWARZBECK	VULB 9168	9168-616	Nov. 27, 2018	Nov. 26, 2019
HORN Antenna ETS-Lindgren	3117	00143293	Nov. 25, 2018	Nov. 24, 2019
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Nov. 25, 2018	Nov. 24, 2019
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 15, 2019	Apr. 14, 2020
Loop Antenna	EM-6879	269	Sep. 16, 2019	Sep. 15, 2020
Preamplifier Agilent	310N	187226	Jun. 18, 2019	Jun. 17, 2020
Preamplifier Agilent	83017A	MY39501357	Jun. 18, 2019	Jun. 17, 2020
Preamplifier EMCI	EMC 184045	980116	Oct. 08, 2019	Oct. 07, 2020
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190004/MY55190007/MY55210005	Jul. 15, 2019	Jul. 14, 2020
Peak Power Analyzer KEYSIGHT (Support 8TX and 160M Bandwidth)	8990B	MY51000485	Jan. 14, 2019	Jan. 13, 2020
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400)	Jun. 18, 2019	Jun. 17, 2020
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 18, 2019	Jun. 17, 2020
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	NA	NA	NA
AC Power Source	6905S	1991553	NA	NA
Digital Multimeter Fluke	87-III	70360742	Jun. 27, 2019	Jun. 26, 2020
Temperature & Humidity Chamber	GTH-120-40-CP-AR	MAA1306-019	Sep. 10, 2019	Sep. 09, 2020

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

4.1.4 Test Procedures

For Radiated Emission below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

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

For Radiated Emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
f. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

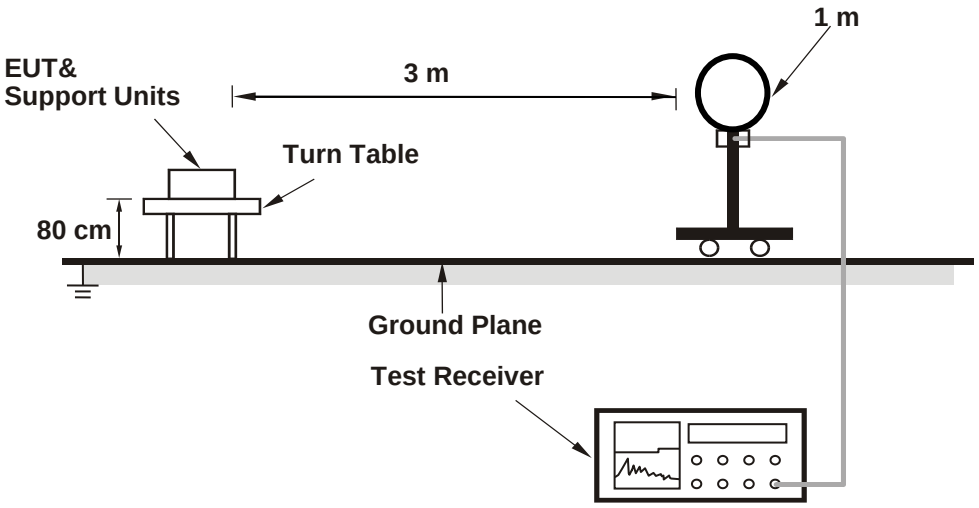
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98 %) or 10 Hz (Duty cycle ≥ 98 %) for Average detection (AV) at frequency above 1 GHz.
   (11a: RBW = 1 MHz, VBW = 1 kHz ; 11ac (VHT20): RBW = 1 MHz, VBW = 10 Hz ;
   11ac (VHT40): RBW = 1 MHz, VBW = 10 Hz; 11ac (VHT80): RBW = 1 MHz, VBW = 300 kHz;
   11ac (VHT160): RBW = 1 MHz, VBW = 1 kHz; 11ax (HE20): RBW = 1 MHz, VBW = 10 Hz ;
   11ax (HE40): RBW = 1 MHz, VBW = 300 kHz; 11ax (HE80): RBW = 1 MHz, VBW = 300 kHz;
   11ax (HE160): RBW = 1 MHz, VBW = 10 Hz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 Deviation from Test Standard

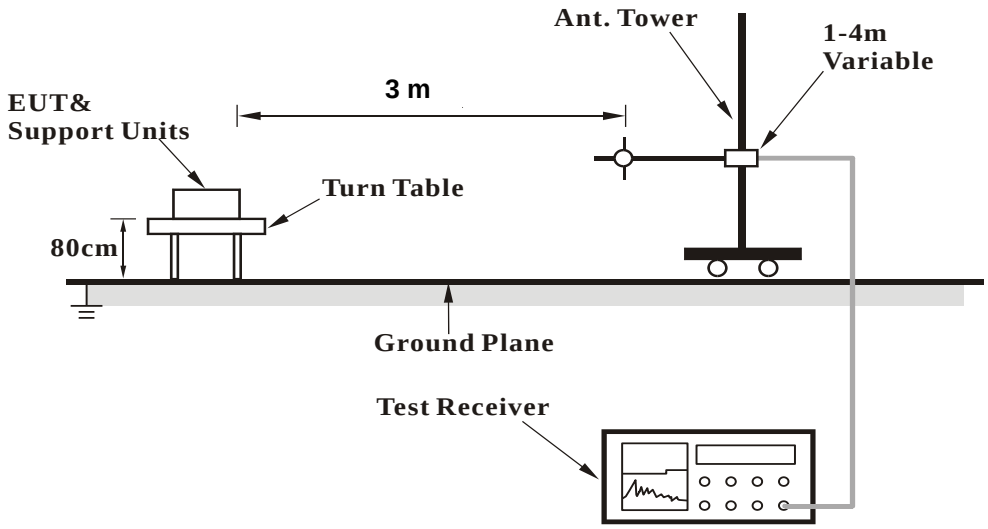
No deviation.

4.1.6 Test Setup

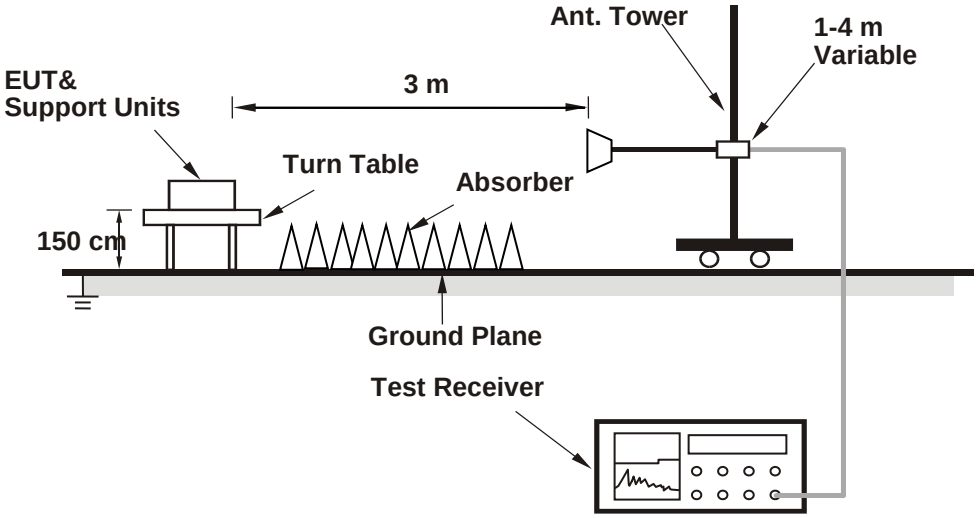
<Radiated Emission below 30 MHz>



<Radiated Emission 30 MHz to 1 GHz>



<Radiated Emission above 1 GHz>



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

4.1.7 EUT Operating Conditions

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

4.1.8 Test Results

Above 1 GHz Data：

802.11a

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

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**
5130.5	42.16	32.16	10	54	-11.84	100	194	Average
5130.5	52.21	42.21	10	74	-21.79	100	194	Peak
5180	93.14	83.02	10.12			100	194	Average
5180	100.09	89.97	10.12			100	194	Peak
*10360	56.53	40.51	16.02	68.2	-11.67	140	246	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5127.8	42.07	32.07	10	54	-11.93	142	136	Average
5127.8	53.5	43.5	10	74	-20.5	142	136	Peak
5180	94.87	84.75	10.12			142	136	Average
5180	101.09	90.97	10.12			142	136	Peak
*10360	55.4	39.38	16.02	68.2	-12.8	112	247	Peak

Remarks:

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

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

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**
5148.65	42.02	31.97	10.05	54	-11.98	100	194	Average
5148.65	53	42.95	10.05	74	-21	100	194	Peak
5200	93.67	83.51	10.16			100	194	Average
5200	100.03	89.87	10.16			100	194	Peak
5444.71	42.01	31.53	10.48	54	-11.99	100	194	Average
5444.71	52.97	42.49	10.48	74	-21.03	100	194	Peak
*10400	56.86	40.68	16.18	68.2	-11.34	176	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**
5130.8	42.07	32.07	10	54	-11.93	142	136	Average
5130.8	53.25	43.25	10	74	-20.75	142	136	Peak
5200	94.11	83.95	10.16			142	136	Average
5200	101.28	91.12	10.16			142	136	Peak
5439.21	42.14	31.66	10.48	54	-11.86	142	136	Average
5439.21	52.6	42.12	10.48	74	-21.4	142	136	Peak
*10400	56.21	40.03	16.18	68.2	-11.99	117	24	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**	Charles Hsiao

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**
5240	93.44	83.3	10.14			100	194	Average
5240	100.55	90.41	10.14			100	194	Peak
5444.49	42.03	31.55	10.48	54	-11.97	100	194	Average
5444.49	53.48	43	10.48	74	-20.52	100	194	Peak
*10480	56.37	40.47	15.9	68.2	-11.83	171	48	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	94.64	84.5	10.14			142	136	Average
5240	101.9	91.76	10.14			142	136	Peak
5358.8	42.2	31.95	10.25	54	-11.8	142	136	Average
5358.8	52.87	42.62	10.25	74	-21.13	142	136	Peak
*10480	56.87	40.97	15.9	68.2	-11.33	119	24	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**	Charles Hsiao

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**
5106.95	42.14	32.18	9.96	54	-11.86	100	194	Average
5106.95	53.44	43.48	9.96	74	-20.56	100	194	Peak
5260	93.28	83.16	10.12			100	194	Average
5260	100.59	90.47	10.12			100	194	Peak
*10520	56.25	40.37	15.88	68.2	-11.95	178	88	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**
5139.65	42.02	32.01	10.01	54	-11.98	142	136	Average
5139.65	53.11	43.1	10.01	74	-20.89	142	136	Peak
5260	95.64	85.52	10.12			142	136	Average
5260	102.16	92.04	10.12			142	136	Peak
*10520	56.14	40.26	15.88	68.2	-12.06	136	321	Peak

Remarks:

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

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

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**
5100.8	42.18	32.25	9.93	54	-11.82	100	194	Average
5100.8	52.37	42.44	9.93	74	-21.63	100	194	Peak
5300	93.22	83.16	10.06			100	194	Average
5300	100.5	90.44	10.06			100	194	Peak
5351.43	42.13	31.9	10.23	54	-11.87	100	194	Average
5351.43	52.93	42.7	10.23	74	-21.07	100	194	Peak
10600	47.43	31.67	15.76	54	-6.57	140	144	Average
10600	56.3	40.54	15.76	74	-17.7	140	144	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**
5145.35	42.04	31.99	10.05	54	-11.96	142	136	Average
5145.35	53.85	43.8	10.05	74	-20.15	142	136	Peak
5300	95.47	85.41	10.06			142	136	Average
5300	102.65	92.59	10.06			142	136	Peak
5436.57	42.1	31.62	10.48	54	-11.9	142	136	Average
5436.57	53.35	42.87	10.48	74	-20.65	142	136	Peak
10600	47.26	31.5	15.76	54	-6.74	155	278	Average
10600	55.94	40.18	15.76	74	-18.06	155	278	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**	Charles Hsiao

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	93.36	83.27	10.09			100	194	Average
5320	100.24	90.15	10.09			100	194	Peak
5447.57	42.08	31.59	10.49	54	-11.92	100	194	Average
5447.57	53.24	42.75	10.49	74	-20.76	100	194	Peak
10640	47.27	31.28	15.99	54	-6.73	175	188	Average
10640	57.18	41.19	15.99	74	-16.82	175	188	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	95.44	85.35	10.09			142	136	Average
5320	102	91.91	10.09			142	136	Peak
5352.86	43.38	33.15	10.23	54	-10.62	142	136	Average
5352.86	53.23	43	10.23	74	-20.77	142	136	Peak
10640	47.36	31.37	15.99	54	-6.64	140	349	Average
10640	56.42	40.43	15.99	74	-17.58	140	349	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**	Charles Hsiao

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**
5447.44	42.3	31.81	10.49	54	-11.7	205	69	Average
5447.44	53.44	42.95	10.49	74	-20.56	205	69	Peak
*5469.84	51.36	40.83	10.53	68.2	-16.84	205	69	Peak
5500	94.4	83.8	10.6			205	69	Average
5500	101.78	91.18	10.6			205	69	Peak
11000	47.41	31.28	16.13	54	-6.59	192	244	Average
11000	57.31	41.18	16.13	74	-16.69	192	244	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	42.18	31.67	10.51	54	-11.82	200	68	Average
5459.44	52.56	42.05	10.51	74	-21.44	200	68	Peak
*5469.84	50.93	40.4	10.53	68.2	-17.27	200	68	Peak
5500	93.77	83.17	10.6			200	68	Average
5500	100.5	89.9	10.6			200	68	Peak
11000	47.52	31.39	16.13	54	-6.48	137	255	Average
11000	56.46	40.33	16.13	74	-17.54	137	255	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**	Charles Hsiao

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**
5443.28	42.09	31.61	10.48	54	-11.91	205	69	Average
5443.28	53.08	42.6	10.48	74	-20.92	205	69	Peak
*5469.84	50.78	40.25	10.53	68.2	-17.42	205	69	Peak
5580	95.79	85.08	10.71			205	69	Average
5580	102.97	92.26	10.71			205	69	Peak
*5725.24	53.3	42.38	10.92	68.2	-14.9	205	69	Peak
11160	47.72	31.36	16.36	54	-6.28	178	177	Average
11160	57.18	40.82	16.36	74	-16.82	178	177	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**
5450.64	42.11	31.6	10.51	54	-11.89	200	68	Average
5450.64	53.2	42.69	10.51	74	-20.8	200	68	Peak
*5469.84	52.39	41.86	10.53	68.2	-15.81	200	68	Peak
5580	94.95	84.24	10.71			200	68	Average
5580	101.29	90.58	10.71			200	68	Peak
*5725.56	52.38	41.46	10.92	68.2	-15.82	200	68	Peak
11160	47.81	31.45	16.36	54	-6.19	110	215	Average
11160	57.46	41.1	16.36	74	-16.54	110	215	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**	Charles Hsiao

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**
5700	94.37	83.42	10.95			283	69	Average
5700	101.03	90.08	10.95			283	69	Peak
*5725.16	53.66	42.74	10.92	68.2	-14.54	283	69	Peak
11400	47.56	31.37	16.19	54	-6.44	192	32	Average
11400	57.22	41.03	16.19	74	-16.78	192	32	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**
5700	92.79	81.84	10.95			200	68	Average
5700	99.82	88.87	10.95			200	68	Peak
*5725.32	52.75	41.83	10.92	68.2	-15.45	200	68	Peak
11400	47.71	31.52	16.19	54	-6.29	157	187	Average
11400	56.4	40.21	16.19	74	-17.6	157	187	Peak

Remarks:

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

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

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**
5454.96	42.06	31.55	10.51	54	-11.94	283	69	Average
5454.96	52.79	42.28	10.51	74	-21.21	283	69	Peak
*5469.04	51.16	40.63	10.53	68.2	-17.04	283	69	Peak
5720	94.31	83.39	10.92			283	69	Average
5720	101.75	90.83	10.92			283	69	Peak
11440	47.58	31.29	16.29	54	-6.42	185	246	Average
11440	57.92	41.63	16.29	74	-16.08	185	246	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5421.52	42	31.58	10.42	54	-12	200	68	Average
5421.52	52.96	42.54	10.42	74	-21.04	200	68	Peak
*5470	51.77	41.24	10.53	68.2	-16.43	200	68	Peak
5720	92.49	81.57	10.92			200	68	Average
5720	99.54	88.62	10.92			200	68	Peak
11440	47.63	31.34	16.29	54	-6.37	123	252	Average
11440	57.42	41.13	16.29	74	-16.58	123	252	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**	Charles Hsiao

<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	93.85	82.97	10.88			100	168	Average
5745	100.42	89.54	10.88			100	168	Peak
11490	47.75	31.28	16.47	54	-6.25	164	4	Average
11490	57.44	40.97	16.47	74	-16.56	164	4	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	95.42	84.54	10.88			100	5	Average
5745	102.56	91.68	10.88			100	5	Peak
11490	48.11	31.64	16.47	54	-5.89	189	357	Average
11490	57.43	40.96	16.47	74	-16.57	189	357	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**
*5509.975	53.3	42.7	10.6	68.2	-14.9	100	168	Peak
5661.175	52.05	41.18	10.87	76.47	-24.42	100	168	Peak
5916.325	51.64	40.55	11.09	74.62	-22.98	100	168	Peak
*5990.35	53.44	42.11	11.33	68.2	-14.76	100	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**
*5650.15	52.81	41.94	10.87	68.31	-15.5	100	5	Peak
5653.825	53.9	43.03	10.87	71.03	-17.13	100	5	Peak
5915.8	52.56	41.47	11.09	75.01	-22.45	100	5	Peak
*5990.35	53.11	41.78	11.33	68.2	-15.09	100	5	Peak

Remarks:

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

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

<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	93.37	82.56	10.81			100	168	Average
5785	100.3	89.49	10.81			100	168	Peak
11570	48.11	31.62	16.49	54	-5.89	195	55	Average
11570	57.55	41.06	16.49	74	-16.45	195	55	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	95.46	84.65	10.81			100	5	Average
5785	102.65	91.84	10.81			100	5	Peak
11570	48.03	31.54	16.49	54	-5.97	185	175	Average
11570	58.41	41.92	16.49	74	-15.59	185	175	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**
*5646.475	52.83	41.98	10.85	68.2	-15.37	100	168	Peak
5656.975	52.04	41.17	10.87	73.36	-21.32	100	168	Peak
5920	49.71	38.62	11.09	71.9	-22.19	100	168	Peak
*6007.15	53.49	42.14	11.35	68.2	-14.71	100	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**
*5635.45	53.62	42.79	10.83	68.2	-14.58	100	5	Peak
5652.25	50.2	39.33	10.87	69.86	-19.66	100	5	Peak
5919.475	50.62	39.53	11.09	72.29	-21.67	100	5	Peak
*6019.75	53.22	41.87	11.35	68.2	-14.98	100	5	Peak

Remarks:

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

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

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	92.88	82	10.88			100	168	Average
5825	99.44	88.56	10.88			100	168	Peak
11650	48.26	31.48	16.78	54	-5.74	165	5	Average
11650	57.6	40.82	16.78	74	-16.4	165	5	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	94.47	83.59	10.88			100	5	Average
5825	101.5	90.62	10.88			100	5	Peak
11650	48.23	31.45	16.78	54	-5.77	134	332	Average
11650	58.99	42.21	16.78	74	-15.01	134	332	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**
*5610.775	53.42	42.65	10.77	68.2	-14.78	100	168	Peak
5658.55	52.52	41.65	10.87	74.53	-22.01	100	168	Peak
5918.95	52.2	41.11	11.09	72.68	-20.48	100	168	Peak
*5979.325	53.89	42.63	11.26	68.2	-14.31	100	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**
*5627.575	52.39	41.6	10.79	68.2	-15.81	100	5	Peak
5654.35	50.4	39.53	10.87	71.42	-21.02	100	5	Peak
5915.275	52.08	40.99	11.09	75.4	-23.32	100	5	Peak
*5994.55	54.4	43.07	11.33	68.2	-13.8	100	5	Peak

Remarks:

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

802.11ac (VHT20)

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**	Charles Hsiao

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**
5149.4	42.48	32.43	10.05	54	-11.52	100	193	Average
5149.4	52.37	42.32	10.05	74	-21.63	100	193	Peak
5180	97.46	87.34	10.12			100	193	Average
5180	104.82	94.7	10.12			100	193	Peak
*10360	55.79	39.77	16.02	68.2	-12.41	197	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**
5149.25	42.52	32.47	10.05	54	-11.48	100	143	Average
5149.25	53.34	43.29	10.05	74	-20.66	100	143	Peak
5180	98.49	88.37	10.12			100	143	Average
5180	105.11	94.99	10.12			100	143	Peak
*10360	55.9	39.88	16.02	68.2	-12.3	112	275	Peak

Remarks:

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

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

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**
5147.75	42.18	32.13	10.05	54	-11.82	100	193	Average
5147.75	52.91	42.86	10.05	74	-21.09	100	193	Peak
5200	97.46	87.3	10.16			100	193	Average
5200	104.19	94.03	10.16			100	193	Peak
5359.24	42.12	31.87	10.25	54	-11.88	100	193	Average
5359.24	52.88	42.63	10.25	74	-21.12	100	193	Peak
*10400	55.91	39.73	16.18	68.2	-12.29	110	144	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**
5144.9	42.31	32.26	10.05	54	-11.69	100	143	Average
5144.9	52.29	42.24	10.05	74	-21.71	100	143	Peak
5200	98.34	88.18	10.16			100	143	Average
5200	105.48	95.32	10.16			100	143	Peak
5369.8	42.3	32.04	10.26	54	-11.7	100	143	Average
5369.8	53.19	42.93	10.26	74	-20.81	100	143	Peak
*10400	56.11	39.93	16.18	68.2	-12.09	134	345	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**	Charles Hsiao

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**
5240	97.47	87.33	10.14			100	193	Average
5240	104.37	94.23	10.14			100	193	Peak
5439.98	42.15	31.67	10.48	54	-11.85	100	193	Average
5439.98	52.48	42	10.48	74	-21.52	100	193	Peak
*10480	56.17	40.27	15.9	68.2	-12.03	164	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**
5240	98.85	88.71	10.14			100	143	Average
5240	105.54	95.4	10.14			100	143	Peak
5452.19	42.41	31.9	10.51	54	-11.59	100	143	Average
5452.19	52.61	42.1	10.51	74	-21.39	100	143	Peak
*10480	54.88	38.98	15.9	68.2	-13.32	119	347	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**	Karl Lee

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**
5122.85	43.1	33.11	9.99	54	-10.9	305	67	Average
5122.85	52.29	42.3	9.99	74	-21.71	305	67	Peak
5260	97.85	87.73	10.12			305	67	Average
5260	104.49	94.37	10.12			305	67	Peak
*10520	55.3	39.42	15.88	68.2	-12.9	146	11	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**
5145.35	43.24	33.19	10.05	54	-10.76	230	44	Average
5145.35	53.08	43.03	10.05	74	-20.92	230	44	Peak
5260	100.32	90.2	10.12			230	44	Average
5260	107.8	97.68	10.12			230	44	Peak
*10520	54.85	38.97	15.88	68.2	-13.35	177	159	Peak

Remarks:

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

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

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**
5119.15	43.13	33.16	9.97	54	-10.87	305	67	Average
5119.55	53.64	43.67	9.97	74	-20.36	305	67	Peak
5300	96.85	86.79	10.06			305	67	Average
5300	104.84	94.78	10.06			305	67	Peak
5374.53	43.53	33.24	10.29	54	-10.47	305	67	Average
5374.53	53.01	42.72	10.29	74	-20.99	305	67	Peak
10600	47.26	31.5	15.76	54	-6.74	137	284	Average
10600	54.46	38.7	15.76	74	-19.54	137	284	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**
5121.65	43.18	33.21	9.97	54	-10.82	230	44	Average
5121.65	53.2	43.23	9.97	74	-20.8	230	44	Peak
5300	100.25	90.19	10.06			230	44	Average
5300	107.48	97.42	10.06			230	44	Peak
5386.08	42.62	32.28	10.34	54	-11.38	230	44	Average
5386.08	53.19	42.85	10.34	74	-20.81	230	44	Peak
10600	47.23	31.47	15.76	54	-6.77	119	333	Average
10600	55.92	40.16	15.76	74	-18.08	119	333	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**	Karl Lee

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	96.81	86.72	10.09			305	67	Average
5320	104.36	94.27	10.09			305	67	Peak
5350.11	45.73	35.5	10.23	54	-8.27	305	67	Average
5350.11	54.9	44.67	10.23	74	-19.1	305	67	Peak
10640	47.27	31.28	15.99	54	-6.73	199	310	Average
10640	55.84	39.85	15.99	74	-18.16	199	310	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	100.08	89.99	10.09			230	44	Average
5320	107.7	97.61	10.09			230	44	Peak
5350.33	45.86	35.63	10.23	54	-8.14	242	44	Average
5350.33	56.65	46.42	10.23	74	-17.35	242	44	Peak
10640	47.64	31.65	15.99	54	-6.36	140	224	Average
10640	57.44	41.45	15.99	74	-16.56	140	224	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**	Charles Hsiao

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**
5457.84	43.24	32.73	10.51	54	-10.76	100	181	Average
5457.84	53.22	42.71	10.51	74	-20.78	100	181	Peak
*5469.84	51.79	41.26	10.53	68.2	-16.41	100	181	Peak
5500	97.1	86.5	10.6			100	181	Average
5500	104.6	94	10.6			100	181	Peak
11000	47.71	31.58	16.13	54	-6.29	164	178	Average
11000	56.55	40.42	16.13	74	-17.45	164	178	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**
5459.92	43.75	33.24	10.51	54	-10.25	105	225	Average
5459.92	53.2	42.69	10.51	74	-20.8	105	225	Peak
*5469.04	53.23	42.7	10.53	68.2	-14.97	105	225	Peak
5500	98.37	87.77	10.6			105	225	Average
5500	105.73	95.13	10.6			105	225	Peak
11000	47.69	31.56	16.13	54	-6.31	154	177	Average
11000	55.95	39.82	16.13	74	-18.05	154	177	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**	Charles Hsiao

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**
5448.4	42.09	31.6	10.49	54	-11.91	100	181	Average
5448.4	52.81	42.32	10.49	74	-21.19	100	181	Peak
*5469.2	51.2	40.67	10.53	68.2	-17	100	181	Peak
5580	97.46	86.75	10.71			100	181	Average
5580	104.7	93.99	10.71			100	181	Peak
*5725.24	51.27	40.35	10.92	68.2	-16.93	100	181	Peak
11160	47.81	31.45	16.36	54	-6.19	157	4	Average
11160	57.17	40.81	16.36	74	-16.83	157	4	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**
5445.84	42.39	31.9	10.49	54	-11.61	105	225	Average
5445.84	52.92	42.43	10.49	74	-21.08	105	225	Peak
*5469.36	51.75	41.22	10.53	68.2	-16.45	105	225	Peak
5580	98.43	87.72	10.71			105	225	Average
5580	105.77	95.06	10.71			105	225	Peak
*5725.72	52.07	41.15	10.92	68.2	-16.13	105	225	Peak
11160	48.05	31.69	16.36	54	-5.95	175	215	Average
11160	57.15	40.79	16.36	74	-16.85	175	215	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**	Charles Hsiao

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**
5700	95.26	84.31	10.95			100	181	Average
5700	102.86	91.91	10.95			100	181	Peak
*5725	53.96	43.04	10.92	68.2	-14.24	100	181	Peak
11400	47.46	31.27	16.19	54	-6.54	135	5	Average
11400	56.7	40.51	16.19	74	-17.3	135	5	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**
5700	96.59	85.64	10.95			105	225	Average
5700	103.32	92.37	10.95			105	225	Peak
*5725	57.32	46.4	10.92	68.2	-10.88	105	225	Peak
11400	47.67	31.48	16.19	54	-6.33	137	178	Average
11400	56.7	40.51	16.19	74	-17.3	137	178	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**	Karl Lee

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**
5448.08	43.12	32.63	10.49	54	-10.88	101	166	Average
5448.08	52.65	42.16	10.49	74	-21.35	101	166	Peak
*5470	51.88	41.35	10.53	68.2	-16.32	101	166	Peak
5720	100.08	89.16	10.92			101	166	Average
5720	107.15	96.23	10.92			101	166	Peak
11440	47.24	30.95	16.29	54	-6.76	187	155	Average
11440	56.86	40.57	16.29	74	-17.14	187	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**
5453.36	42.03	31.52	10.51	54	-11.97	114	135	Average
5453.36	53.22	42.71	10.51	74	-20.78	114	135	Peak
*5469.2	50.61	40.08	10.53	68.2	-17.59	114	135	Peak
5720	100.44	89.52	10.92			114	135	Average
5720	107.86	96.94	10.92			114	135	Peak
11440	48.03	31.74	16.29	54	-5.97	105	69	Average
11440	57.65	41.36	16.29	74	-16.35	105	69	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**	Karl Lee

<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	97.79	86.91	10.88			102	166	Average
5745	105.87	94.99	10.88			102	166	Peak
11490	47.68	31.21	16.47	54	-6.32	130	269	Average
11490	57.15	40.68	16.47	74	-16.85	130	269	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	99.11	88.23	10.88			114	135	Average
5745	107	96.12	10.88			114	135	Peak
11490	47.23	30.76	16.47	54	-6.77	124	180	Average
11490	57.14	40.67	16.47	74	-16.86	124	180	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**
*5581.9	53.05	42.32	10.73	68.2	-15.15	102	166	Peak
5653.825	52.79	41.92	10.87	71.03	-18.24	102	166	Peak
5919.475	52.42	41.33	11.09	72.29	-19.87	102	166	Peak
*5999.275	53.55	42.22	11.33	68.2	-14.65	102	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**
*5549.875	53.31	42.63	10.68	68.2	-14.89	114	135	Peak
5652.25	51.61	40.74	10.87	69.86	-18.25	114	135	Peak
5918.425	53.64	42.55	11.09	73.07	-19.43	114	135	Peak
*5938.9	53.96	42.78	11.18	68.2	-14.24	114	135	Peak

Remarks:

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

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

<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	98.31	87.5	10.81			102	166	Average
5785	106.37	95.56	10.81			102	166	Peak
11570	48.04	31.55	16.49	54	-5.96	192	311	Average
11570	57.71	41.22	16.49	74	-16.29	192	311	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	99.71	88.9	10.81			114	135	Average
5785	107.65	96.84	10.81			114	135	Peak
11570	48.13	31.64	16.49	54	-5.87	158	131	Average
11570	57.94	41.45	16.49	74	-16.06	158	131	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**
*5544.625	53.11	42.45	10.66	68.2	-15.09	102	166	Peak
5655.925	52.57	41.7	10.87	72.58	-20.01	102	166	Peak
5922.1	52.79	41.68	11.11	70.35	-17.56	102	166	Peak
*5955.7	53.32	42.11	11.21	68.2	-14.88	102	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**
*5624.95	53.88	43.09	10.79	68.2	-14.32	114	135	Peak
5654.35	51.01	40.14	10.87	71.42	-20.41	114	135	Peak
5921.575	51.56	40.45	11.11	70.73	-19.17	114	135	Peak
*5978.8	55.2	43.94	11.26	68.2	-13	114	135	Peak

Remarks:

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

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

<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	99.75	88.87	10.88			102	166	Average
5825	106.66	95.78	10.88			102	166	Peak
11650	49.6	32.82	16.78	54	-4.4	151	263	Average
11650	59.45	42.67	16.78	74	-14.55	151	263	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	100.88	90	10.88			114	135	Average
5825	107.98	97.1	10.88			114	135	Peak
11650	48.36	31.58	16.78	54	-5.64	126	48	Average
11650	58.16	41.38	16.78	74	-15.84	126	48	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**
*5554.075	53.03	42.37	10.66	68.2	-15.17	102	166	Peak
5654.35	51.6	40.73	10.87	71.42	-19.82	102	166	Peak
5918.425	51.32	40.23	11.09	73.07	-21.75	102	166	Peak
*5979.325	53.02	41.76	11.26	68.2	-15.18	102	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**
*5638.075	53.74	42.91	10.83	68.2	-14.46	114	135	Peak
5651.725	50.81	39.94	10.87	69.48	-18.67	114	135	Peak
5916.85	54.03	42.94	11.09	74.23	-20.2	114	135	Peak
*5991.4	53.28	41.95	11.33	68.2	-14.92	114	135	Peak

Remarks:

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

802.11ac (VHT40)

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**	Charles Hsiao

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**
5149.4	47.51	37.46	10.05	54	-6.49	100	193	Average
5149.4	56.76	46.71	10.05	74	-17.24	100	193	Peak
5190	94.75	84.63	10.12			100	193	Average
5190	101.72	91.6	10.12			100	193	Peak
5366.61	42.17	31.91	10.26	54	-11.83	100	193	Average
5366.61	53.06	42.8	10.26	74	-20.94	100	193	Peak
*10380	57.49	41.39	16.1	68.2	-10.71	117	185	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**
5149.25	45.85	35.8	10.05	54	-8.15	100	143	Average
5149.25	57.23	47.18	10.05	74	-16.77	100	143	Peak
5190	95.46	85.34	10.12			100	143	Average
5190	102	91.88	10.12			100	143	Peak
5352.86	42.44	32.21	10.23	54	-11.56	100	143	Average
5352.86	53.57	43.34	10.23	74	-20.43	100	143	Peak
*10380	55.09	38.99	16.1	68.2	-13.11	119	325	Peak

Remarks:

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

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

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**
5120	42.11	32.14	9.97	54	-11.89	100	193	Average
5120	52.6	42.63	9.97	74	-21.4	100	193	Peak
5230	93.51	83.37	10.14			100	193	Average
5230	100.28	90.14	10.14			100	193	Peak
5374.2	42.07	31.78	10.29	54	-11.93	100	193	Average
5374.2	52.52	42.23	10.29	74	-21.48	100	193	Peak
*10460	54.72	38.72	16	68.2	-13.48	118	245	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**
5139.35	42.16	32.16	10	54	-11.84	100	143	Average
5139.35	52.27	42.27	10	74	-21.73	100	143	Peak
5230	94.64	84.5	10.14			100	143	Average
5230	101.64	91.5	10.14			100	143	Peak
5357.7	42.21	31.98	10.23	54	-11.79	100	143	Average
5357.7	52.98	42.75	10.23	74	-21.02	100	143	Peak
*10460	54.64	38.64	16	68.2	-13.56	154	277	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**	Karl Lee

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**
5131.85	42.16	32.16	10	54	-11.84	305	67	Average
5131.85	52.27	42.27	10	74	-21.73	305	67	Peak
5270	95.32	85.2	10.12			305	67	Average
5270	104.06	93.94	10.12			305	67	Peak
5350.22	43.48	33.25	10.23	54	-10.52	305	67	Average
5350.22	54.77	44.54	10.23	74	-19.23	305	67	Peak
*10540	55.44	39.61	15.83	68.2	-12.76	188	244	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**
5149.4	42.28	32.23	10.05	54	-11.72	230	44	Average
5149.4	52.67	42.62	10.05	74	-21.33	230	44	Peak
5270	97.92	87.8	10.12			230	44	Average
5270	105.46	95.34	10.12			230	44	Peak
5420.18	43.51	33.09	10.42	54	-10.49	230	44	Average
5420.18	54.3	43.88	10.42	74	-19.7	230	44	Peak
*10540	55.43	39.6	15.83	68.2	-12.77	159	3	Peak

Remarks:

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

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

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**
5123.45	42.15	32.16	9.99	54	-11.85	170	281	Average
5123.45	52.6	42.61	9.99	74	-21.4	170	281	Peak
5310	94.79	84.7	10.09			170	281	Average
5310	101.47	91.38	10.09			170	281	Peak
5350.33	52.33	42.1	10.23	54	-1.67	170	281	Average
5350.33	61.73	51.5	10.23	74	-12.27	170	281	Peak
10620	47.78	31.9	15.88	54	-6.22	155	278	Average
10620	55.28	39.4	15.88	74	-18.72	155	278	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**
5138.75	42.21	32.21	10	54	-11.79	100	226	Average
5138.75	53.27	43.27	10	74	-20.73	100	226	Peak
5310	96.71	86.62	10.09			100	226	Average
5310	103.73	93.64	10.09			100	226	Peak
5350	52.99	42.76	10.23	54	-1.01	104	226	Average
5350	62.27	52.04	10.23	74	-11.73	104	226	Peak
10620	47.77	31.89	15.88	54	-6.23	117	45	Average
10620	55.48	39.6	15.88	74	-18.52	117	45	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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	42.99	32.48	10.51	54	-11.01	100	181	Average
5460	52.94	42.43	10.51	74	-21.06	100	181	Peak
*5469.68	55.01	44.48	10.53	68.2	-13.19	100	181	Peak
5510	95.39	84.79	10.6			100	181	Average
5510	102.11	91.51	10.6			100	181	Peak
*5725.8	52.23	41.31	10.92	68.2	-15.97	100	181	Peak
11020	48.16	32	16.16	54	-5.84	156	299	Average
11020	57.71	41.55	16.16	74	-16.29	156	299	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	45.46	34.95	10.51	54	-8.54	105	225	Average
5460	53.89	43.38	10.51	74	-20.11	105	225	Peak
*5470	56.83	46.3	10.53	68.2	-11.37	105	225	Peak
5510	96.87	86.27	10.6			105	225	Average
5510	103.05	92.45	10.6			105	225	Peak
*5725.32	52.89	41.97	10.92	68.2	-15.31	105	225	Peak
11020	48.03	31.87	16.16	54	-5.97	108	144	Average
11020	56.27	40.11	16.16	74	-17.73	108	144	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**	Charles Hsiao

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**
5437.2	42.19	31.71	10.48	54	-11.81	100	181	Average
5437.2	53.29	42.81	10.48	74	-20.71	100	181	Peak
*5469.36	51.27	40.74	10.53	68.2	-16.93	100	181	Peak
5550	95.78	85.1	10.68			100	181	Average
5550	102.72	92.04	10.68			100	181	Peak
*5725.88	51.02	40.1	10.92	68.2	-17.18	100	181	Peak
11100	48.22	31.95	16.27	54	-5.78	128	346	Average
11100	57.03	40.76	16.27	74	-16.97	128	346	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**
5454.48	42.42	31.91	10.51	54	-11.58	105	225	Average
5454.48	52.6	42.09	10.51	74	-21.4	105	225	Peak
*5470	51.8	41.27	10.53	68.2	-16.4	105	225	Peak
5550	96.71	86.03	10.68			105	225	Average
5550	103.16	92.48	10.68			105	225	Peak
*5725.72	52.6	41.68	10.92	68.2	-15.6	105	225	Peak
11100	48.3	32.03	16.27	54	-5.7	140	155	Average
11100	56.7	40.43	16.27	74	-17.3	140	155	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**	Charles Hsiao

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**
5442.8	42.07	31.59	10.48	54	-11.93	100	181	Average
5442.8	52.63	42.15	10.48	74	-21.37	100	181	Peak
*5469.04	51.12	40.59	10.53	68.2	-17.08	100	181	Peak
5670	94.85	83.95	10.9			100	181	Average
5670	101.65	90.75	10.9			100	181	Peak
*5725	53.95	43.03	10.92	68.2	-14.25	100	181	Peak
11340	48.1	31.68	16.42	54	-5.9	185	155	Average
11340	56.81	40.39	16.42	74	-17.19	185	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**
5458.96	42.25	31.74	10.51	54	-11.75	105	225	Average
5458.96	52.89	42.38	10.51	74	-21.11	105	225	Peak
*5469.36	52.46	41.93	10.53	68.2	-15.74	105	225	Peak
5670	95.58	84.68	10.9			105	225	Average
5670	102.79	91.89	10.9			105	225	Peak
*5725.08	54.03	43.11	10.92	68.2	-14.17	105	225	Peak
11340	48.41	31.99	16.42	54	-5.59	137	253	Average
11340	57.5	41.08	16.42	74	-16.5	137	253	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**	Karl Lee

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**
5424.4	41.88	31.43	10.45	54	-12.12	100	166	Average
5424.4	52.69	42.24	10.45	74	-21.31	100	166	Peak
*5469.36	51.01	40.48	10.53	68.2	-17.19	100	166	Peak
5710	96.26	85.35	10.91			100	166	Average
5710	103.3	92.39	10.91			100	166	Peak
11420	47.21	30.95	16.26	54	-6.79	134	248	Average
11420	56.94	40.68	16.26	74	-17.06	134	248	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**
5448.08	42.13	31.64	10.49	54	-11.87	114	135	Average
5448.08	52.94	42.45	10.49	74	-21.06	114	135	Peak
*5470	50.9	40.37	10.53	68.2	-17.3	114	135	Peak
5710	95.91	85	10.91			114	135	Average
5710	104.06	93.15	10.91			114	135	Peak
11420	47.47	31.21	16.26	54	-6.53	150	92	Average
11420	57.16	40.9	16.26	74	-16.84	150	92	Peak

Remarks:

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

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

<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	96.54	85.64	10.9			102	166	Average
5755	103.95	93.05	10.9			102	166	Peak
11510	48.67	32.16	16.51	54	-5.33	128	310	Average
11510	58.81	42.3	16.51	74	-15.19	128	310	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	96.63	85.73	10.9			114	134	Average
5755	105.3	94.4	10.9			114	134	Peak
11510	47.54	31.03	16.51	54	-6.46	143	175	Average
11510	57.22	40.71	16.51	74	-16.78	143	175	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**
*5579.8	53.19	42.48	10.71	68.2	-15.01	102	166	Peak
5652.25	51.8	40.93	10.87	69.86	-18.06	102	166	Peak
5923.675	51.32	40.21	11.11	69.18	-17.86	102	166	Peak
*5948.35	52.84	41.66	11.18	68.2	-15.36	102	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**
*5648.05	52.79	41.94	10.85	68.2	-15.41	114	134	Peak
5651.725	52.09	41.22	10.87	69.48	-17.39	114	134	Peak
5922.1	51.11	40	11.11	70.35	-19.24	114	134	Peak
*5962.525	53.47	42.24	11.23	68.2	-14.73	114	134	Peak

Remarks:

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

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

<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	96.99	86.17	10.82			114	135	Average
5795	104.36	93.54	10.82			114	135	Peak
11590	48.36	31.85	16.51	54	-5.64	146	81	Average
11590	57.96	41.45	16.51	74	-16.04	146	81	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	97.27	86.45	10.82			114	134	Average
5795	105.27	94.45	10.82			114	134	Peak
11590	47.59	31.08	16.51	54	-6.41	130	308	Average
11590	57.36	40.85	16.51	74	-16.64	130	308	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**
*5621.8	53.49	42.7	10.79	68.2	-14.71	102	166	Peak
5655.4	51.62	40.75	10.87	72.2	-20.58	102	166	Peak
5914.75	52.96	41.89	11.07	75.78	-22.82	102	166	Peak
*5987.725	53.42	42.11	11.31	68.2	-14.78	102	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**
*5597.125	53.28	42.53	10.75	68.2	-14.92	114	134	Peak
5655.925	51.85	40.98	10.87	72.58	-20.73	114	134	Peak
5922.1	51.37	40.26	11.11	70.35	-18.98	114	134	Peak
*5952.55	53.1	41.91	11.19	68.2	-15.1	114	134	Peak

Remarks:

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

802.11ac (VHT80)

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

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**
5149.7	47.27	37.22	10.05	54	-6.73	100	193	Average
5149.7	55.87	45.82	10.05	74	-18.13	100	193	Peak
5210	90.54	80.37	10.17			100	193	Average
5210	97.31	87.14	10.17			100	193	Peak
5350.77	42.32	32.09	10.23	54	-11.68	100	193	Average
5350.77	53.18	42.95	10.23	74	-20.82	100	193	Peak
*10420	54.24	38.08	16.16	68.2	-13.96	105	345	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**
5147.6	47.19	37.14	10.05	54	-6.81	100	143	Average
5147.6	56.38	46.33	10.05	74	-17.62	100	143	Peak
5210	91.7	81.53	10.17			100	143	Average
5210	98.29	88.12	10.17			100	143	Peak
5355.39	42.35	32.12	10.23	54	-11.65	100	143	Average
5355.39	53.02	42.79	10.23	74	-20.98	100	143	Peak
*10420	54.93	38.77	16.16	68.2	-13.27	115	245	Peak

Remarks:

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

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

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**
5144.9	43.04	32.99	10.05	54	-10.96	305	67	Average
5144.9	53.68	43.63	10.05	74	-20.32	305	67	Peak
5290	91.56	81.46	10.1			305	67	Average
5290	99.23	89.13	10.1			305	67	Peak
5350.11	48.91	38.68	10.23	54	-5.09	305	67	Average
5350.11	57.98	47.75	10.23	74	-16.02	305	67	Peak
*10580	55.07	39.36	15.71	68.2	-13.13	127	336	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**
5142.65	43.29	33.26	10.03	54	-10.71	242	39	Average
5142.65	52.88	42.85	10.03	74	-21.12	242	39	Peak
5290	95.85	85.75	10.1			232	44	Average
5290	102.65	92.55	10.1			232	44	Peak
5350.11	50.46	40.23	10.23	54	-3.54	242	39	Average
5350.11	60.81	50.58	10.23	74	-13.19	242	39	Peak
*10580	55.2	39.49	15.71	68.2	-13	125	55	Peak

Remarks:

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

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

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**
5459.44	44.46	33.95	10.51	54	-9.54	100	181	Average
5459.44	53.42	42.91	10.51	74	-20.58	100	181	Peak
*5469.04	53.71	43.18	10.53	68.2	-14.49	100	181	Peak
5530	92.35	81.72	10.63			100	181	Average
5530	99.31	88.68	10.63			100	181	Peak
*5725.96	52.18	41.26	10.92	68.2	-16.02	100	181	Peak
11060	48.92	32.69	16.23	54	-5.08	188	145	Average
11060	56.85	40.62	16.23	74	-17.15	188	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**
5457.68	46.56	36.05	10.51	54	-7.44	105	225	Average
5457.68	55.58	45.07	10.51	74	-18.42	105	225	Peak
*5470	54.95	44.42	10.53	68.2	-13.25	105	225	Peak
5530	93.65	83.02	10.63			105	225	Average
5530	100.49	89.86	10.63			105	225	Peak
*5725.32	51.84	40.92	10.92	68.2	-16.36	105	225	Peak
11060	48.1	31.87	16.23	54	-5.9	164	178	Average
11060	56.93	40.7	16.23	74	-17.07	164	178	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**	Charles Hsiao

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**
5452.88	42.09	31.58	10.51	54	-11.91	100	181	Average
5452.88	52.81	42.3	10.51	74	-21.19	100	181	Peak
*5469.84	51.76	41.23	10.53	68.2	-16.44	100	181	Peak
5610	92.43	81.66	10.77			100	181	Average
5610	99.06	88.29	10.77			100	181	Peak
*5725.4	52.53	41.61	10.92	68.2	-15.67	100	181	Peak
11220	48.42	32	16.42	54	-5.58	144	17	Average
11220	57.04	40.62	16.42	74	-16.96	144	17	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5447.76	42.57	32.08	10.49	54	-11.43	105	225	Average
5447.76	53.54	43.05	10.49	74	-20.46	105	225	Peak
*5469.2	51.67	41.14	10.53	68.2	-16.53	105	225	Peak
5610	93.14	82.37	10.77			105	225	Average
5610	100.19	89.42	10.77			105	225	Peak
*5725.56	53.3	42.38	10.92	68.2	-14.9	105	225	Peak
11220	48.32	31.9	16.42	54	-5.68	127	208	Average
11220	57.6	41.18	16.42	74	-16.4	127	208	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**	Karl Lee

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**
5456.4	43	32.49	10.51	54	-11	100	166	Average
5456.4	52.25	41.74	10.51	74	-21.75	100	166	Peak
*5469.04	51.06	40.53	10.53	68.2	-17.14	100	166	Peak
5690	90.97	80.04	10.93			100	166	Average
5690	99.42	88.49	10.93			100	166	Peak
11380	47.33	31.06	16.27	54	-6.67	120	48	Average
11380	56.7	40.43	16.27	74	-17.3	120	48	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5456.4	42.12	31.61	10.51	54	-11.88	114	135	Average
5456.4	53.76	43.25	10.51	74	-20.24	114	135	Peak
*5469.04	52.24	41.71	10.53	68.2	-15.96	114	135	Peak
5690	92.57	81.64	10.93			114	135	Average
5690	99.99	89.06	10.93			114	135	Peak
11380	48.37	32.1	16.27	54	-5.63	157	7	Average
11380	57.34	41.07	16.27	74	-16.66	157	7	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**	Karl Lee

<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	91.75	80.88	10.87			102	166	Average
5775	99.8	88.93	10.87			102	166	Peak
11550	47.48	30.98	16.5	54	-6.52	137	109	Average
11550	57.3	40.8	16.5	74	-16.7	137	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**
5775	93.48	82.61	10.87			114	135	Average
5775	101.37	90.5	10.87			114	135	Peak
11550	47.92	31.42	16.5	54	-6.08	104	56	Average
11550	57.54	41.04	16.5	74	-16.46	104	56	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**
*5640.175	52.91	42.08	10.83	68.2	-15.29	102	166	Peak
5653.3	51.1	40.23	10.87	70.64	-19.54	102	166	Peak
5921.05	50.47	39.38	11.09	71.12	-20.65	102	166	Peak
*5960.425	53.36	42.13	11.23	68.2	-14.84	102	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**
*5572.45	53.66	42.96	10.7	68.2	-14.54	114	135	Peak
5651.725	52.74	41.87	10.87	69.48	-16.74	114	135	Peak
5922.625	51.81	40.7	11.11	69.96	-18.15	114	135	Peak
*5955.175	53.06	41.87	11.19	68.2	-15.14	114	135	Peak

Remarks:

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

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**	Karl Lee

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**
5147.45	45.93	35.88	10.05	54	-8.07	305	67	Average
5147.45	54.81	44.76	10.05	74	-19.19	305	67	Peak
5250	87.66	77.56	10.1			305	67	Average
5250	95.83	85.73	10.1			305	67	Peak
5350	49.12	38.89	10.23	54	-4.88	305	67	Average
5350	58.45	48.22	10.23	74	-15.55	305	67	Peak
*10500	54.8	38.97	15.83	68.2	-13.4	113	285	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**
5149.7	46.57	36.52	10.05	54	-7.43	242	38	Average
5149.7	56.52	46.47	10.05	74	-17.48	242	38	Peak
5250	91.73	81.63	10.1			263	44	Average
5250	98.54	88.44	10.1			263	44	Peak
5351.21	50.02	39.79	10.23	54	-3.98	242	38	Average
5351.21	60.14	49.91	10.23	74	-13.86	242	38	Peak
*10500	55.27	39.44	15.83	68.2	-12.93	155	54	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5250 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 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**	Charles Hsiao

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	46.19	35.68	10.51	54	-7.81	100	181	Average
5458.48	55.78	45.27	10.51	74	-18.22	100	181	Peak
*5470	53.79	43.26	10.53	68.2	-14.41	100	181	Peak
5570	88.25	77.55	10.7			100	181	Average
5570	95.55	84.85	10.7			100	181	Peak
*5725.48	57.71	46.79	10.92	68.2	-10.49	100	181	Peak
11140	48.37	32.03	16.34	54	-5.63	187	8	Average
11140	57.29	40.95	16.34	74	-16.71	187	8	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**
5457.68	47.72	37.21	10.51	54	-6.28	105	225	Average
5457.68	58.37	47.86	10.51	74	-15.63	105	225	Peak
*5469.2	55.87	45.34	10.53	68.2	-12.33	105	225	Peak
5570	89.58	78.88	10.7			105	225	Average
5570	96.85	86.15	10.7			105	225	Peak
*5725.96	61.29	50.37	10.92	68.2	-6.91	105	225	Peak
11140	48.48	32.14	16.34	54	-5.52	168	278	Average
11140	57	40.66	16.34	74	-17	168	278	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5570 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. 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**	Charles Hsiao

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	42.92	32.87	10.05	54	-11.08	100	193	Average
5150	53.18	43.13	10.05	74	-20.82	100	193	Peak
5180	97.64	87.52	10.12			100	193	Average
5180	104.3	94.18	10.12			100	193	Peak
*10360	56.14	40.12	16.02	68.2	-12.06	187	78	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**
5149.1	42.93	32.88	10.05	54	-11.07	100	143	Average
5149.1	52.97	42.92	10.05	74	-21.03	100	143	Peak
5180	98.64	88.52	10.12			100	143	Average
5180	105.5	95.38	10.12			100	143	Peak
*10360	55.12	39.1	16.02	68.2	-13.08	112	345	Peak

Remarks:

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

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

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**
5149.7	42.29	32.24	10.05	54	-11.71	100	193	Average
5149.7	52.83	42.78	10.05	74	-21.17	100	193	Peak
5200	97.44	87.28	10.16			100	193	Average
5200	104.61	94.45	10.16			100	193	Peak
5429.75	42.16	31.69	10.47	54	-11.84	100	193	Average
5429.75	52.78	42.31	10.47	74	-21.22	100	193	Peak
*10400	55.99	39.81	16.18	68.2	-12.21	187	185	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**
5147.6	42.37	32.32	10.05	54	-11.63	100	143	Average
5147.6	53.32	43.27	10.05	74	-20.68	100	143	Peak
5200	98.52	88.36	10.16			100	143	Average
5200	105.12	94.96	10.16			100	143	Peak
5374.64	42.19	31.9	10.29	54	-11.81	100	143	Average
5374.64	53.73	43.44	10.29	74	-20.27	100	143	Peak
*10400	56.76	40.58	16.18	68.2	-11.44	154	5	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**	Charles Hsiao

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**
5240	96.54	86.4	10.14			100	193	Average
5240	103.43	93.29	10.14			100	193	Peak
5356.16	42.13	31.9	10.23	54	-11.87	100	193	Average
5356.16	52.7	42.47	10.23	74	-21.3	100	193	Peak
*10480	54.51	38.61	15.9	68.2	-13.69	119	326	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**
5240	98.46	88.32	10.14			100	143	Average
5240	105	94.86	10.14			100	143	Peak
5350.77	42.26	32.03	10.23	54	-11.74	100	143	Average
5350.77	52.97	42.74	10.23	74	-21.03	100	143	Peak
*10480	55.08	39.18	15.9	68.2	-13.12	118	245	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**	Karl Lee

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**
5131.25	43.02	33.02	10	54	-10.98	305	67	Average
5131.25	52.52	42.52	10	74	-21.48	305	67	Peak
5260	95.36	85.24	10.12			305	67	Average
5260	104.46	94.34	10.12			305	67	Peak
*10520	55.23	39.35	15.88	68.2	-12.97	134	178	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**
5138.9	43.16	33.16	10	54	-10.84	230	44	Average
5138.9	53.11	43.11	10	74	-20.89	230	44	Peak
5260	98.37	88.25	10.12			230	44	Average
5260	107.55	97.43	10.12			230	44	Peak
*10520	55.81	39.93	15.88	68.2	-12.39	118	24	Peak

Remarks:

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

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

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**
5133.5	43.06	33.06	10	54	-10.94	305	67	Average
5133.5	53.34	43.34	10	74	-20.66	305	67	Peak
5300	95.64	85.58	10.06			305	67	Average
5300	104.81	94.75	10.06			305	67	Peak
5446.03	43.35	32.86	10.49	54	-10.65	305	67	Average
5446.03	53.55	43.06	10.49	74	-20.45	305	67	Peak
10600	47.12	31.36	15.76	54	-6.88	140	175	Average
10600	56.51	40.75	15.76	74	-17.49	140	175	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5138.6	43.27	33.27	10	54	-10.73	230	44	Average
5138.6	52.44	42.44	10	74	-21.56	230	44	Peak
5300	98.43	88.37	10.06			230	44	Average
5300	107.88	97.82	10.06			230	44	Peak
5443.72	43.59	33.11	10.48	54	-10.41	230	44	Average
5443.72	53.56	43.08	10.48	74	-20.44	230	44	Peak
10600	47.63	31.87	15.76	54	-6.37	155	287	Average
10600	55.11	39.35	15.76	74	-18.89	155	287	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**	Karl Lee

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	95.6	85.51	10.09			305	67	Average
5320	104.29	94.2	10.09			305	67	Peak
5350.22	44.83	34.6	10.23	54	-9.17	305	67	Average
5350.22	53.63	43.4	10.23	74	-20.37	305	67	Peak
10640	47.45	31.46	15.99	54	-6.55	145	166	Average
10640	55.6	39.61	15.99	74	-18.4	145	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**
5320	98.01	87.92	10.09			230	44	Average
5320	107.39	97.3	10.09			230	44	Peak
5350.99	43.29	33.06	10.23	54	-10.71	242	44	Average
5350.99	53.39	43.16	10.23	74	-20.61	242	44	Peak
10640	47.57	31.58	15.99	54	-6.43	158	199	Average
10640	56.05	40.06	15.99	74	-17.95	158	199	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**	Charles Hsiao

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**
5450.96	42.34	31.83	10.51	54	-11.66	100	181	Average
5450.96	53.44	42.93	10.51	74	-20.56	100	181	Peak
*5469.84	52.78	42.25	10.53	68.2	-15.42	100	181	Peak
5500	97.49	86.89	10.6			100	181	Average
5500	104.69	94.09	10.6			100	181	Peak
11000	47.81	31.68	16.13	54	-6.19	149	9	Average
11000	56.97	40.84	16.13	74	-17.03	149	9	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**
5452.56	43.68	33.17	10.51	54	-10.32	105	225	Average
5452.56	52.88	42.37	10.51	74	-21.12	105	225	Peak
*5469.52	51.95	41.42	10.53	68.2	-16.25	105	225	Peak
5500	98.8	88.2	10.6			105	225	Average
5500	105.57	94.97	10.6			105	225	Peak
11000	47.67	31.54	16.13	54	-6.33	187	140	Average
11000	56.95	40.82	16.13	74	-17.05	187	140	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**	Charles Hsiao

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**
5373.52	42.09	31.8	10.29	54	-11.91	100	181	Average
5373.52	52.38	42.09	10.29	74	-21.62	100	181	Peak
*5469.52	50.44	39.91	10.53	68.2	-17.76	100	181	Peak
5580	97.27	86.56	10.71			100	181	Average
5580	104.3	93.59	10.71			100	181	Peak
*5725	52.27	41.35	10.92	68.2	-15.93	100	181	Peak
11160	47.99	31.63	16.36	54	-6.01	149	341	Average
11160	56.79	40.43	16.36	74	-17.21	149	341	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**
5454.96	42.42	31.91	10.51	54	-11.58	105	225	Average
5454.96	55.12	44.61	10.51	74	-18.88	105	225	Peak
*5470	51.87	41.34	10.53	68.2	-16.33	105	225	Peak
5580	98.55	87.84	10.71			105	225	Average
5580	105.26	94.55	10.71			105	225	Peak
*5725.4	52.91	41.99	10.92	68.2	-15.29	105	225	Peak
11160	47.83	31.47	16.36	54	-6.17	124	215	Average
11160	58.97	42.61	16.36	74	-15.03	124	215	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**	Charles Hsiao

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**
5700	95.19	84.24	10.95			100	181	Average
5700	102.06	91.11	10.95			100	181	Peak
*5725	55.96	45.04	10.92	68.2	-12.24	100	181	Peak
11400	47.83	31.64	16.19	54	-6.17	198	8	Average
11400	56.87	40.68	16.19	74	-17.13	198	8	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**
5700	96.44	85.49	10.95			105	225	Average
5700	103.87	92.92	10.95			105	225	Peak
*5725.08	58.11	47.19	10.92	68.2	-10.09	105	225	Peak
11400	47.77	31.58	16.19	54	-6.23	167	77	Average
11400	56.42	40.23	16.19	74	-17.58	167	77	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**	Karl Lee

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**
5454.48	42.02	31.51	10.51	54	-11.98	100	166	Average
5454.48	52.55	42.04	10.51	74	-21.45	100	166	Peak
*5469.84	50.41	39.88	10.53	68.2	-17.79	100	166	Peak
5720	97.24	86.32	10.92			100	166	Average
5720	105.92	95	10.92			100	166	Peak
11440	45.86	29.57	16.29	54	-8.14	148	127	Average
11440	55.52	39.23	16.29	74	-18.48	148	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**
5445.68	43.14	32.65	10.49	54	-10.86	114	135	Average
5445.68	53.85	43.36	10.49	74	-20.15	114	135	Peak
*5469.68	51.35	40.82	10.53	68.2	-16.85	114	135	Peak
5720	97.7	86.78	10.92			114	135	Average
5720	106.44	95.52	10.92			114	135	Peak
11440	46.12	29.83	16.29	54	-7.88	130	49	Average
11440	55.69	39.4	16.29	74	-18.31	130	49	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**	Karl Lee

<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	96.34	85.46	10.88			102	166	Average
5745	105.82	94.94	10.88			102	166	Peak
11490	46.62	30.15	16.47	54	-7.38	103	336	Average
11490	56.21	39.74	16.47	74	-17.79	103	336	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	98.13	87.25	10.88			114	135	Average
5745	107.18	96.3	10.88			114	135	Peak
11490	46.82	30.35	16.47	54	-7.18	125	134	Average
11490	56.56	40.09	16.47	74	-17.44	125	134	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5611.3	53.59	42.82	10.77	68.2	-14.61	102	166	Peak
5652.25	51.09	40.22	10.87	69.86	-18.77	102	166	Peak
5921.05	52.56	41.47	11.09	71.12	-18.56	102	166	Peak
*5960.95	54.39	43.16	11.23	68.2	-13.81	102	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**
*5570.875	52.53	41.83	10.7	68.2	-15.67	114	135	Peak
5655.4	51.14	40.27	10.87	72.2	-21.06	114	135	Peak
5919.475	51.71	40.62	11.09	72.29	-20.58	114	135	Peak
*5966.2	54.65	43.42	11.23	68.2	-13.55	114	135	Peak

Remarks:

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

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

<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	97.5	86.69	10.81			102	166	Average
5785	105.77	94.96	10.81			102	166	Peak
11570	46.23	29.74	16.49	54	-7.77	126	59	Average
11570	56.35	39.86	16.49	74	-17.65	126	59	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	98.8	87.99	10.81			114	135	Average
5785	107.22	96.41	10.81			114	135	Peak
11570	46.85	30.36	16.49	54	-7.15	136	181	Average
11570	56.52	40.03	16.49	74	-17.48	136	181	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**
*5622.325	52.8	42.01	10.79	68.2	-15.4	102	166	Peak
5655.925	52.57	41.7	10.87	72.58	-20.01	102	166	Peak
5923.15	51.72	40.61	11.11	69.57	-17.85	102	166	Peak
*5990.35	53.72	42.39	11.33	68.2	-14.48	102	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**
*5579.275	53.96	43.25	10.71	68.2	-14.24	114	135	Peak
5652.25	51.3	40.43	10.87	69.86	-18.56	114	135	Peak
5922.1	52.71	41.6	11.11	70.35	-17.64	114	135	Peak
*6000.325	53.26	41.93	11.33	68.2	-14.94	114	135	Peak

Remarks:

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

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

<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	98.72	87.84	10.88			102	166	Average
5825	106.38	95.5	10.88			102	166	Peak
11650	46.88	30.1	16.78	54	-7.12	192	127	Average
11650	56.69	39.91	16.78	74	-17.31	192	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**
5825	98.83	87.95	10.88			114	135	Average
5825	107.26	96.38	10.88			114	135	Peak
11650	47.11	30.33	16.78	54	-6.89	147	325	Average
11650	56.75	39.97	16.78	74	-17.25	147	325	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**
*5644.375	52.37	41.54	10.83	68.2	-15.83	102	166	Peak
5652.775	51.87	41	10.87	70.25	-18.38	102	166	Peak
5916.325	52.66	41.57	11.09	74.62	-21.96	102	166	Peak
*5927.875	52.96	41.85	11.11	68.2	-15.24	102	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**
*5588.2	52.54	41.81	10.73	68.2	-15.66	114	135	Peak
5653.825	51.63	40.76	10.87	71.03	-19.4	114	135	Peak
5920.525	52.16	41.07	11.09	71.51	-19.35	114	135	Peak
*5975.65	53.45	42.19	11.26	68.2	-14.75	114	135	Peak

Remarks:

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

802.11ax (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**	Charles Hsiao

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**
5149.7	47.17	37.12	10.05	54	-6.83	100	193	Average
5149.7	55.35	45.3	10.05	74	-18.65	100	193	Peak
5190	94.61	84.49	10.12			100	193	Average
5190	101.72	91.6	10.12			100	193	Peak
5353.19	42.14	31.91	10.23	54	-11.86	100	193	Average
5353.19	52.72	42.49	10.23	74	-21.28	100	193	Peak
*10380	56.12	40.02	16.1	68.2	-12.08	101	15	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	47.26	37.21	10.05	54	-6.74	100	143	Average
5150	56.86	46.81	10.05	74	-17.14	100	143	Peak
5190	95.46	85.34	10.12			100	143	Average
5190	102.19	92.07	10.12			100	143	Peak
5351.98	42.32	32.09	10.23	54	-11.68	100	143	Average
5351.98	53.26	43.03	10.23	74	-20.74	100	143	Peak
*10380	55.44	39.34	16.1	68.2	-12.76	113	315	Peak

Remarks:

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

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

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**
5133.95	42.15	32.15	10	54	-11.85	100	193	Average
5133.95	52.83	42.83	10	74	-21.17	100	193	Peak
5230	92.41	82.27	10.14			100	193	Average
5230	99.5	89.36	10.14			100	193	Peak
5358.58	42.04	31.79	10.25	54	-11.96	100	193	Average
5358.58	53.44	43.19	10.25	74	-20.56	100	193	Peak
*10460	54.93	38.93	16	68.2	-13.27	154	310	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**
5120	42.27	32.3	9.97	54	-11.73	100	143	Average
5120	53.13	43.16	9.97	74	-20.87	100	143	Peak
5230	93.49	83.35	10.14			100	143	Average
5230	100.56	90.42	10.14			100	143	Peak
5449.11	42.2	31.71	10.49	54	-11.8	100	143	Average
5449.11	53.13	42.64	10.49	74	-20.87	100	143	Peak
*10460	55.73	39.73	16	68.2	-12.47	118	349	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**	Karl Lee

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**
5136.5	43.17	33.17	10	54	-10.83	305	67	Average
5136.5	52.81	42.81	10	74	-21.19	305	67	Peak
5270	93.54	83.42	10.12			305	67	Average
5270	102.86	92.74	10.12			305	67	Peak
5353.41	43.36	33.13	10.23	54	-10.64	305	67	Average
5353.41	53.12	42.89	10.23	74	-20.88	305	67	Peak
*10540	56.57	40.74	15.83	68.2	-11.63	198	8	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**
5108.6	42.23	32.27	9.96	54	-11.77	230	44	Average
5108.6	53.88	43.92	9.96	74	-20.12	230	44	Peak
5270	96.54	86.42	10.12			230	44	Average
5270	105.98	95.86	10.12			230	44	Peak
5444.05	43.6	33.12	10.48	54	-10.4	230	44	Average
5444.05	53.38	42.9	10.48	74	-20.62	230	44	Peak
*10540	54.83	39	15.83	68.2	-13.37	154	188	Peak

Remarks:

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

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

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**
5124.95	43.07	33.07	10	54	-10.93	305	67	Average
5124.95	52.88	42.88	10	74	-21.12	305	67	Peak
5310	93.69	83.6	10.09			305	67	Average
5310	102.39	92.3	10.09			305	67	Peak
5350.99	47.62	37.39	10.23	54	-6.38	305	67	Average
5350.99	58.37	48.14	10.23	74	-15.63	305	67	Peak
10620	47.74	31.86	15.88	54	-6.26	187	7	Average
10620	55.24	39.36	15.88	74	-18.76	187	7	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**
5112.8	43.23	33.27	9.96	54	-10.77	251	36	Average
5112.8	53.52	43.56	9.96	74	-20.48	251	36	Peak
5310	96.66	86.57	10.09			230	44	Average
5310	105.77	95.68	10.09			230	44	Peak
5350	50.68	40.45	10.23	54	-3.32	251	36	Average
5350	62.51	52.28	10.23	74	-11.49	251	36	Peak
10620	47.88	32	15.88	54	-6.12	156	22	Average
10620	54.61	38.73	15.88	74	-19.39	156	22	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**	Charles Hsiao

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**
5458.16	44.07	33.56	10.51	54	-9.93	100	181	Average
5458.16	53.77	43.26	10.51	74	-20.23	100	181	Peak
*5470	53.05	42.52	10.53	68.2	-15.15	100	181	Peak
5510	95.79	85.19	10.6			100	181	Average
5510	102.2	91.6	10.6			100	181	Peak
*5725.72	53.65	42.73	10.92	68.2	-14.55	100	181	Peak
11020	47.79	31.63	16.16	54	-6.21	155	240	Average
11020	56.31	40.15	16.16	74	-17.69	155	240	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	45.36	34.85	10.51	54	-8.64	105	225	Average
5460	53.85	43.34	10.51	74	-20.15	105	225	Peak
*5470	54.7	44.17	10.53	68.2	-13.5	105	225	Peak
5510	96.71	86.11	10.6			105	225	Average
5510	103.61	93.01	10.6			105	225	Peak
*5725.96	51.91	40.99	10.92	68.2	-16.29	105	225	Peak
11020	47.91	31.75	16.16	54	-6.09	165	55	Average
11020	56.88	40.72	16.16	74	-17.12	165	55	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**	Charles Hsiao

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**
5456.4	42.17	31.66	10.51	54	-11.83	100	181	Average
5456.4	53.38	42.87	10.51	74	-20.62	100	181	Peak
*5470	51.6	41.07	10.53	68.2	-16.6	100	181	Peak
5550	94.64	83.96	10.68			100	181	Average
5550	101.76	91.08	10.68			100	181	Peak
*5725.16	52.15	41.23	10.92	68.2	-16.05	100	181	Peak
11100	48.1	31.83	16.27	54	-5.9	185	187	Average
11100	56.56	40.29	16.27	74	-17.44	185	187	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.76	42.49	31.98	10.51	54	-11.51	105	225	Average
5459.76	53.28	42.77	10.51	74	-20.72	105	225	Peak
*5469.84	51.54	41.01	10.53	68.2	-16.66	105	225	Peak
5550	95.37	84.69	10.68			105	225	Average
5550	102.25	91.57	10.68			105	225	Peak
*5725.8	51.66	40.74	10.92	68.2	-16.54	105	225	Peak
11100	47.94	31.67	16.27	54	-6.06	166	352	Average
11100	57.87	41.6	16.27	74	-16.13	166	352	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**	Charles Hsiao

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	42.2	31.69	10.51	54	-11.8	100	181	Average
5450	53.76	43.25	10.51	74	-20.24	100	181	Peak
*5469.04	51.67	41.14	10.53	68.2	-16.53	100	181	Peak
5670	94.31	83.41	10.9			100	181	Average
5670	101.2	90.3	10.9			100	181	Peak
*5725.56	53.84	42.92	10.92	68.2	-14.36	100	181	Peak
11340	48.27	31.85	16.42	54	-5.73	156	6	Average
11340	56.63	40.21	16.42	74	-17.37	156	6	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**
5452.24	42.52	32.01	10.51	54	-11.48	105	225	Average
5452.24	52.44	41.93	10.51	74	-21.56	105	225	Peak
*5469.04	51.78	41.25	10.53	68.2	-16.42	105	225	Peak
5670	95.87	84.97	10.9			105	225	Average
5670	102.88	91.98	10.9			105	225	Peak
*5725.48	54.72	43.8	10.92	68.2	-13.48	105	225	Peak
11340	48.2	31.78	16.42	54	-5.8	134	25	Average
11340	56.47	40.05	16.42	74	-17.53	134	25	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**	Karl Lee

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**
5456.56	42.08	31.57	10.51	54	-11.92	100	166	Average
5456.56	52.06	41.55	10.51	74	-21.94	100	166	Peak
*5469.2	50.55	40.02	10.53	68.2	-17.65	100	166	Peak
5710	94.13	83.22	10.91			100	166	Average
5710	103.31	92.4	10.91			100	166	Peak
11420	47.31	31.05	16.26	54	-6.69	104	29	Average
11420	56.94	40.68	16.26	74	-17.06	104	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**
5444.08	42.11	31.63	10.48	54	-11.89	114	135	Average
5444.08	54.01	43.53	10.48	74	-19.99	114	135	Peak
*5469.84	51.08	40.55	10.53	68.2	-17.12	114	135	Peak
5710	94.51	83.6	10.91			114	135	Average
5710	103.92	93.01	10.91			114	135	Peak
11420	46.47	30.21	16.26	54	-7.53	181	226	Average
11420	56.23	39.97	16.26	74	-17.77	181	226	Peak

Remarks:

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

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

<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	95.26	84.36	10.9			102	166	Average
5755	104.06	93.16	10.9			102	166	Peak
11510	47.13	30.62	16.51	54	-6.87	123	95	Average
11510	56.85	40.34	16.51	74	-17.15	123	95	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	95.32	84.42	10.9			114	135	Average
5755	105.21	94.31	10.9			114	135	Peak
11510	47.21	30.7	16.51	54	-6.79	134	74	Average
11510	56.9	40.39	16.51	74	-17.1	134	74	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**
*5645.95	52.54	41.69	10.85	68.2	-15.66	102	166	Peak
5654.35	51.58	40.71	10.87	71.42	-19.84	102	166	Peak
5916.85	51.65	40.56	11.09	74.23	-22.58	102	166	Peak
*5988.775	53.6	42.29	11.31	68.2	-14.6	102	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**
*5586.625	54.06	43.33	10.73	68.2	-14.14	114	135	Peak
5652.25	52.18	41.31	10.87	69.86	-17.68	114	135	Peak
5923.15	53.07	41.96	11.11	69.57	-16.5	114	135	Peak
*6015.55	53.73	42.38	11.35	68.2	-14.47	114	135	Peak

Remarks:

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

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

<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	94.48	83.66	10.82			102	166	Average
5795	104.84	94.02	10.82			102	166	Peak
11590	46.93	30.42	16.51	54	-7.07	131	48	Average
11590	56.61	40.1	16.51	74	-17.39	131	48	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5795	96.57	85.75	10.82			114	135	Average
5795	105.85	95.03	10.82			114	135	Peak
11590	47.37	30.86	16.51	54	-6.63	141	315	Average
11590	57.04	40.53	16.51	74	-16.96	141	315	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5600.8	52.52	41.76	10.76	68.2	-15.68	102	166	Peak
5653.825	51.15	40.28	10.87	71.03	-19.88	102	166	Peak
5915.275	52.34	41.25	11.09	75.4	-23.06	102	166	Peak
*5992.45	54.04	42.71	11.33	68.2	-14.16	102	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**
*5601.325	53.23	42.47	10.76	68.2	-14.97	114	135	Peak
5655.4	53.01	42.14	10.87	72.2	-19.19	114	135	Peak
5917.375	52.06	40.97	11.09	73.84	-21.78	114	135	Peak
*6000.325	53.33	42	11.33	68.2	-14.87	114	135	Peak

Remarks:

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

802.11ax (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**	Charles Hsiao

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**
5149.85	49.81	39.76	10.05	54	-4.19	102	169	Average
5149.85	60.23	50.18	10.05	74	-13.77	102	169	Peak
5210	93.64	83.47	10.17			100	193	Average
5210	100.01	89.84	10.17			100	193	Peak
5352.2	42.33	32.1	10.23	54	-11.67	100	193	Average
5352.2	53.27	43.04	10.23	74	-20.73	100	193	Peak
*10420	55.15	38.99	16.16	68.2	-13.05	118	87	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**
5149.4	50.83	40.78	10.05	54	-3.17	100	218	Average
5149.4	61.3	51.25	10.05	74	-12.7	100	218	Peak
5210	94.53	84.36	10.17			100	143	Average
5210	101.33	91.16	10.17			100	143	Peak
5350.33	42.51	32.28	10.23	54	-11.49	100	143	Average
5350.33	52.93	42.7	10.23	74	-21.07	100	143	Peak
*10420	55.58	39.42	16.16	68.2	-12.62	115	254	Peak

Remarks:

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

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

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**
5123.9	42.17	32.18	9.99	54	-11.83	170	281	Average
5123.9	53.1	43.11	9.99	74	-20.9	170	281	Peak
5290	92.79	82.69	10.1			170	281	Average
5290	99.37	89.27	10.1			170	281	Peak
5350.33	51.63	41.4	10.23	54	-2.37	170	281	Average
5350.33	59.58	49.35	10.23	74	-14.42	170	281	Peak
*10580	54.82	39.11	15.71	68.2	-13.38	110	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**
5128.85	42.41	32.41	10	54	-11.59	100	226	Average
5128.85	53.04	43.04	10	74	-20.96	100	226	Peak
5290	94.77	84.67	10.1			100	226	Average
5290	101.18	91.08	10.1			100	226	Peak
5350.66	52.1	41.87	10.23	54	-1.9	104	226	Average
5350.66	61.83	51.6	10.23	74	-12.17	104	226	Peak
*10580	56.22	40.51	15.71	68.2	-11.98	199	65	Peak

Remarks:

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

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

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**
5459.44	45.64	35.13	10.51	54	-8.36	100	181	Average
5459.44	54.6	44.09	10.51	74	-19.4	100	181	Peak
*5469.36	56.35	45.82	10.53	68.2	-11.85	100	181	Peak
5530	92.25	81.62	10.63			100	181	Average
5530	99.36	88.73	10.63			100	181	Peak
*5725.32	51.39	40.47	10.92	68.2	-16.81	100	181	Peak
11060	48.28	32.05	16.23	54	-5.72	158	8	Average
11060	56.41	40.18	16.23	74	-17.59	158	8	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**
5458.8	48.82	38.31	10.51	54	-5.18	105	225	Average
5458.8	57.5	46.99	10.51	74	-16.5	105	225	Peak
*5469.2	59.53	49	10.53	68.2	-8.67	105	225	Peak
5530	93.59	82.96	10.63			105	225	Average
5530	100.2	89.57	10.63			105	225	Peak
*5725.16	52.66	41.74	10.92	68.2	-15.54	105	225	Peak
11060	48.39	32.16	16.23	54	-5.61	164	222	Average
11060	55.92	39.69	16.23	74	-18.08	164	222	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**	Charles Hsiao

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**
5445.68	42.25	31.76	10.49	54	-11.75	100	181	Average
5445.68	52.63	42.14	10.49	74	-21.37	100	181	Peak
*5469.52	51.36	40.83	10.53	68.2	-16.84	100	181	Peak
5610	92.77	82	10.77			100	181	Average
5610	99.22	88.45	10.77			100	181	Peak
*5725.48	52.35	41.43	10.92	68.2	-15.85	100	181	Peak
11220	48.48	32.06	16.42	54	-5.52	158	85	Average
11220	58.35	41.93	16.42	74	-15.65	158	85	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**
5455.28	42.74	32.23	10.51	54	-11.26	105	225	Average
5455.28	53.15	42.64	10.51	74	-20.85	105	225	Peak
*5469.36	51.7	41.17	10.53	68.2	-16.5	105	225	Peak
5610	93.36	82.59	10.77			105	225	Average
5610	100.07	89.3	10.77			105	225	Peak
*5725.48	53.23	42.31	10.92	68.2	-14.97	105	225	Peak
11220	48.56	32.14	16.42	54	-5.44	140	185	Average
11220	56.79	40.37	16.42	74	-17.21	140	185	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**	Karl Lee

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**
5456.56	42.98	32.47	10.51	54	-11.02	100	166	Average
5456.56	53.53	43.02	10.51	74	-20.47	100	166	Peak
*5469.84	51.33	40.8	10.53	68.2	-16.87	100	166	Peak
5690	92.2	81.27	10.93			100	166	Average
5690	101.63	90.7	10.93			100	166	Peak
11380	47.35	31.08	16.27	54	-6.65	194	237	Average
11380	56.93	40.66	16.27	74	-17.07	194	237	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**
5450.32	43.23	32.72	10.51	54	-10.77	114	135	Average
5450.32	52.57	42.06	10.51	74	-21.43	114	135	Peak
*5469.68	51.07	40.54	10.53	68.2	-17.13	114	135	Peak
5690	92.25	81.32	10.93			114	135	Average
5690	101.55	90.62	10.93			114	135	Peak
11380	45.61	29.34	16.27	54	-8.39	150	52	Average
11380	55.38	39.11	16.27	74	-18.62	150	52	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**	Karl Lee

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5775	92.94	82.07	10.87			102	166	Average
5775	101.79	90.92	10.87			102	166	Peak
11550	47.27	30.77	16.5	54	-6.73	101	352	Average
11550	57.1	40.6	16.5	74	-16.9	101	352	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	93.19	82.32	10.87			114	135	Average
5775	102.89	92.02	10.87			114	135	Peak
11550	46.53	30.03	16.5	54	-7.47	149	170	Average
11550	56.24	39.74	16.5	74	-17.76	149	170	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**
*5610.25	52.82	42.05	10.77	68.2	-15.38	102	166	Peak
5654.875	53.31	42.44	10.87	71.81	-18.5	102	166	Peak
5923.675	51.51	40.4	11.11	69.18	-17.67	102	166	Peak
*6002.425	53.31	41.98	11.33	68.2	-14.89	102	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**
*5628.625	53.91	43.1	10.81	68.2	-14.29	114	135	Peak
5653.825	52.69	41.82	10.87	71.03	-18.34	114	135	Peak
5920.525	51.23	40.14	11.09	71.51	-20.28	114	135	Peak
*5954.65	53.2	42.01	11.19	68.2	-15	114	135	Peak

Remarks:

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

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**	Karl Lee

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**
5144.75	45.09	35.04	10.05	54	-8.91	170	281	Average
5144.75	54.77	44.72	10.05	74	-19.23	170	281	Peak
5250	88.75	78.65	10.1			170	281	Average
5250	95.14	85.04	10.1			170	281	Peak
5376.07	51.09	40.8	10.29	54	-2.91	170	281	Average
5376.07	60.41	50.12	10.29	74	-13.59	170	281	Peak
*10500	55.98	40.15	15.83	68.2	-12.22	195	357	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**
5147.45	45.32	35.27	10.05	54	-8.68	100	226	Average
5147.45	55.26	45.21	10.05	74	-18.74	100	226	Peak
5250	90.58	80.48	10.1			100	226	Average
5250	97.71	87.61	10.1			100	226	Peak
5381.02	52.64	42.3	10.34	54	-1.36	102	226	Average
5381.02	61.55	51.21	10.34	74	-12.45	102	226	Peak
*10500	55.4	39.57	15.83	68.2	-12.8	117	145	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5250 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 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**	Charles Hsiao

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**
5456.24	47.16	36.65	10.51	54	-6.84	100	181	Average
5456.24	55.34	44.83	10.51	74	-18.66	100	181	Peak
*5469.36	55.04	44.51	10.53	68.2	-13.16	100	181	Peak
5570	90.58	79.88	10.7			100	181	Average
5570	97.74	87.04	10.7			100	181	Peak
*5725.24	58.18	47.26	10.92	68.2	-10.02	100	181	Peak
11140	48.35	32.01	16.34	54	-5.65	168	14	Average
11140	56.37	40.03	16.34	74	-17.63	168	14	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**
5457.52	49.4	38.89	10.51	54	-4.6	104	225	Average
5457.52	58.42	47.91	10.51	74	-15.58	104	225	Peak
*5469.04	60	49.47	10.53	68.2	-8.2	104	225	Peak
5570	91.47	80.77	10.7			105	225	Average
5570	98.3	87.6	10.7			105	225	Peak
*5725.4	61.17	50.25	10.92	68.2	-7.03	104	225	Peak
11140	48.58	32.24	16.34	54	-5.42	168	344	Average
11140	56.51	40.17	16.34	74	-17.49	168	344	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5570 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

9 kHz ~ 30 MHz Data:

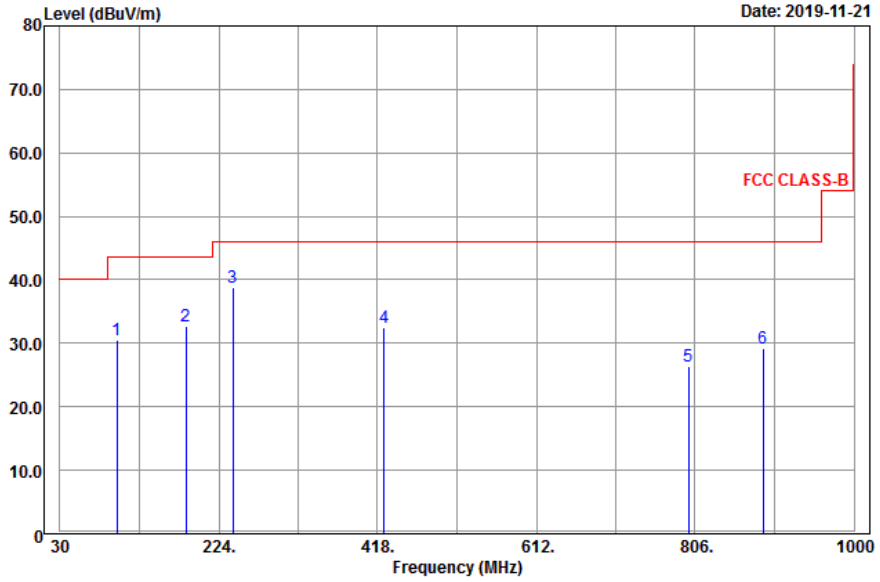
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

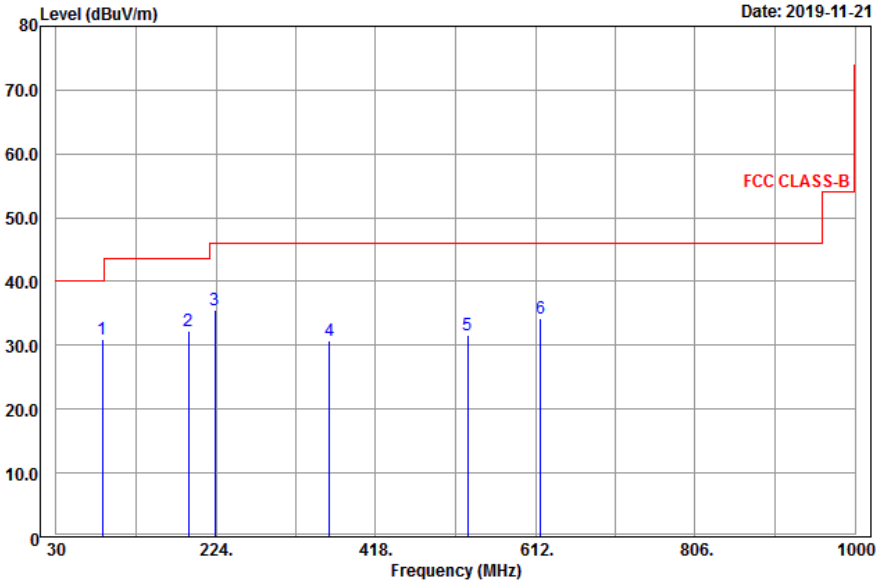
802.11ac (VHT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 62	**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**	Karl Lee

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**
99.66	30.43	47.63	-17.2	43.5	-13.07	134	21	Peak
184.17	32.66	51.9	-19.24	43.5	-10.84	148	115	Peak
241.14	38.81	55.82	-17.01	46	-7.19	192	53	Peak
426	32.41	45.95	-13.54	46	-13.59	131	43	Peak
797.7	26.43	34.08	-7.65	46	-19.57	187	254	Peak
888.7	29.13	35.2	-6.07	46	-16.87	191	32	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**
85.89	31.05	51.14	-20.09	40	-8.95	102	55	Peak
190.92	32.18	50.83	-18.65	43.5	-11.32	132	68	Peak
222.78	35.43	53.14	-17.71	46	-10.57	171	254	Peak
361.6	30.7	45.26	-14.56	46	-15.3	121	63	Peak
529.6	31.55	43.43	-11.88	46	-14.45	125	178	Peak
618.5	34.19	44.51	-10.32	46	-11.81	143	229	Peak

Remarks:

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 10, 2018	Dec. 09, 2019
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Sep. 05, 2019	Sep. 04, 2020
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 21, 2019	Feb. 20, 2020
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 22, 2019	Aug. 21, 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 1.
3. The VCCI Site Registration No. is C-12040.

4.2.3 Test Procedures

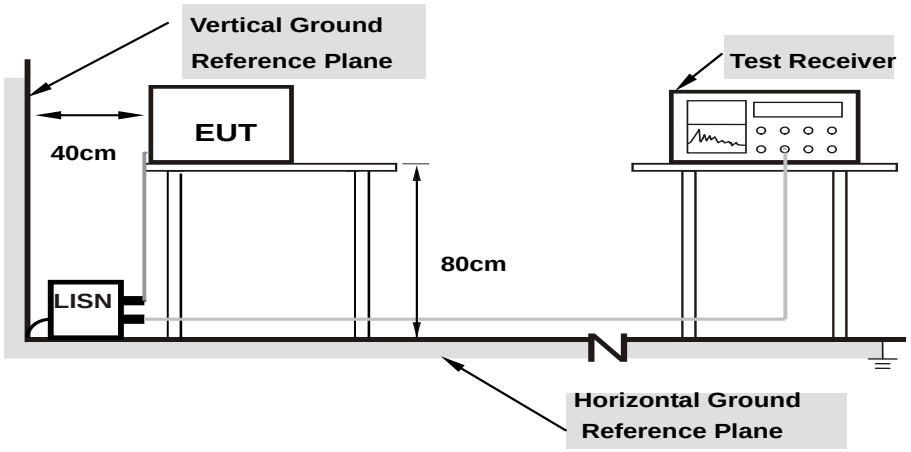
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.2.6 EUT Operating Conditions

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

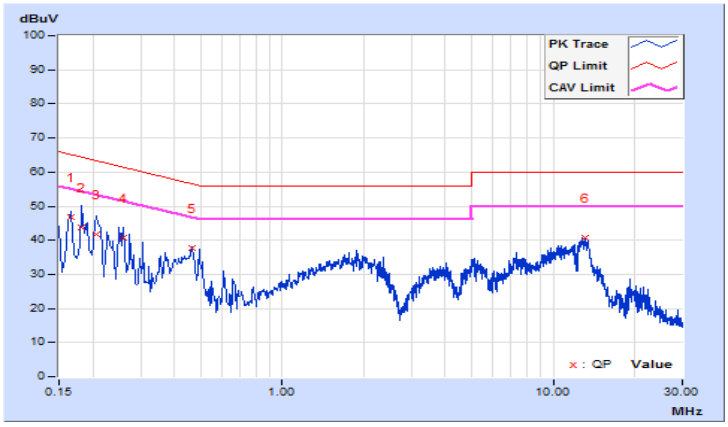
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Jisyong Wang	Test Date	2019/11/24

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	0.16600	9.67	37.00	29.67	46.67	39.34	65.16	55.16	-18.49	-15.82
2	0.18200	9.66	34.20	28.93	43.86	38.59	64.39	54.39	-20.53	-15.80
3	0.20600	9.66	32.07	28.92	41.73	38.58	63.37	53.37	-21.64	-14.79
4	0.25800	9.67	30.99	22.44	40.66	32.11	61.50	51.50	-20.84	-19.39
5	**0.46200**	**9.69**	**28.06**	**24.47**	**37.75**	**34.16**	**56.66**	**46.66**	**-18.91**	**-12.50**
6	13.19000	9.95	30.70	23.18	40.65	33.13	60.00	50.00	-19.35	-16.87

Remarks:

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

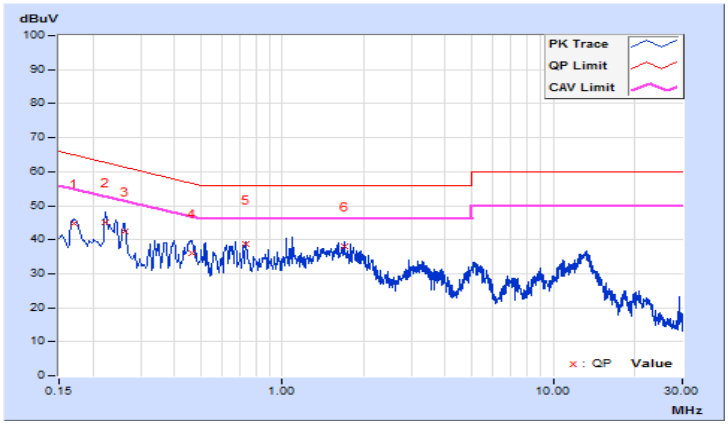


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Jisyong Wang	Test Date	2019/11/24

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	0.16977	9.64	35.16	30.95	44.80	40.59	64.97	54.97	-20.17	-14.38
2	0.22200	9.64	35.56	30.29	45.20	39.93	62.74	52.74	-17.54	-12.81
3	0.26083	9.65	32.68	27.72	42.33	37.37	61.40	51.40	-19.07	-14.03
4	0.46200	9.66	26.30	23.33	35.96	32.99	56.66	46.66	-20.70	-13.67
5	0.73400	9.68	30.33	22.56	40.01	32.24	56.00	46.00	-15.99	-13.76
6	1.69400	9.73	28.32	21.00	38.05	30.73	56.00	46.00	-17.95	-15.27

Remarks:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

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

*B is the 26 dB emission bandwidth in megahertz

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

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

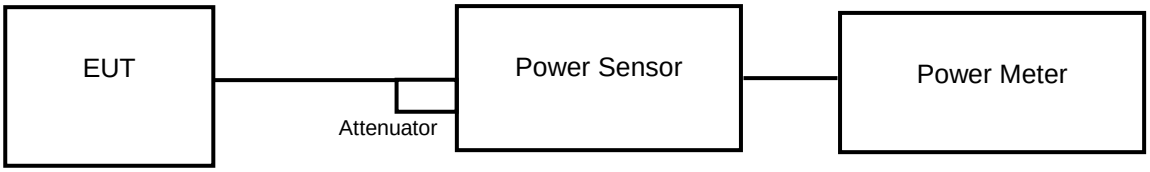
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};

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

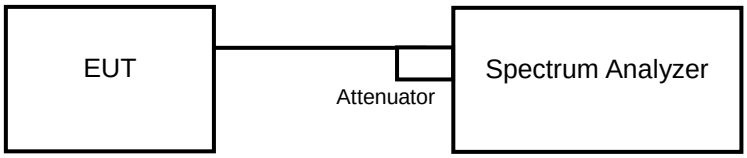
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

<Power Output Measurement>



<26 dB Bandwidth>



4.3.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.3.4 Test Procedure

Average Power Measurement

<802.11a, 802.11ac (VHT20), 802.11ac (VHT40), 802.11ax (HE20), 802.11ax (HE40)>

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.

<Channel aggregation (channel 138, 142, 144) transmission and 802.11ac (VHT80), 802.11ac (VHT160), 802.11ax (HE80), 802.11ax (HE160)>

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

26 dB Bandwidth

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Results

Power Output:

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	21.135	13.25	24	Pass
40	5200	20.941	13.21	24	Pass
48	5240	20.893	13.20	24	Pass
52	5260	20.941	13.21	24	Pass
60	5300	21.135	13.25	24	Pass
64	5320	20.893	13.20	24	Pass
100	5500	21.038	13.23	24	Pass
116	5580	20.989	13.22	24	Pass
140	5700	20.893	13.20	24	Pass
144	5720 (U-NII-2C)	12.618	11.01	23.34	Pass
144	5720 (U-NII-3)	2.78	4.44	30	Pass
149	5745	20.797	13.18	30	Pass
157	5785	20.845	13.19	30	Pass
165	5825	20.989	13.22	30	Pass

Note:

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

1. 11 dBm + 10log (24.99) = 24.98 dBm > 24 dBm.
2. 11 dBm + 10log (24.34) = 24.86 dBm > 24 dBm.
3. 11 dBm + 10log (25.09) = 25.00 dBm > 24 dBm.
4. 11 dBm + 10log (24.30) = 24.86 dBm > 24 dBm.
5. 11 dBm + 10log (24.56) = 24.90 dBm > 24 dBm.
6. 11 dBm + 10log (24.90) = 24.96 dBm > 24 dBm.
7. 11 dBm + 10log (17.14) = 23.34 dBm < 24 dBm.

802.11ac (VHT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	13.39	13.25	42.962	16.33	24	Pass
40	5200	13.35	13.22	42.616	16.30	24	Pass
48	5240	13.39	13.35	43.454	16.38	24	Pass
52	5260	12.88	12.93	39.043	15.92	24	Pass
60	5300	13.27	13.32	42.71	16.31	24	Pass
64	5320	13.31	13.26	42.613	16.30	24	Pass
100	5500	13.20	13.26	42.077	16.24	24	Pass
116	5580	13.24	13.22	42.075	16.24	24	Pass
140	5700	13.30	13.22	42.369	16.27	24	Pass
144	5720 (U-NII-2C)	11.78	12.34	32.206	15.08	23.41	Pass
144	5720 (U-NII-3)	6.02	6.90	8.897	9.49	30	Pass
149	5745	13.26	13.25	42.319	16.27	30	Pass
157	5785	13.21	13.22	41.93	16.23	30	Pass
165	5825	13.28	13.25	42.416	16.28	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (24.83) = 24.95 dBm > 24 dBm.
2. 11 dBm + 10log (25.07) = 24.99 dBm > 24 dBm.
3. 11 dBm + 10log (24.90) = 24.96 dBm > 24 dBm.
4. 11 dBm + 10log (24.54) = 24.90 dBm > 24 dBm.
5. 11 dBm + 10log (25.27) = 25.03 dBm > 24 dBm.
6. 11 dBm + 10log (24.82) = 24.95 dBm > 24 dBm.
7. 11 dBm + 10log (17.65) = 23.47 dBm < 24 dBm.

Chain 1

1. 11 dBm + 10log (24.81) = 24.95 dBm > 24 dBm.
2. 11 dBm + 10log (24.83) = 24.95 dBm > 24 dBm.
3. 11 dBm + 10log (24.88) = 24.96 dBm > 24 dBm.
4. 11 dBm + 10log (25.33) = 25.04 dBm > 24 dBm.
5. 11 dBm + 10log (25.85) = 25.12 dBm > 24 dBm.
6. 11 dBm + 10log (24.78) = 24.94 dBm > 24 dBm.
7. 11 dBm + 10log (17.43) = 23.41 dBm < 24 dBm.

802.11ac (VHT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	13.40	13.36	43.555	16.39	24	Pass
46	5230	12.67	12.36	35.712	15.53	24	Pass
54	5270	13.33	13.32	43.006	16.34	24	Pass
62	5310	13.32	13.35	43.105	16.35	24	Pass
102	5510	13.25	13.24	42.221	16.26	24	Pass
110	5550	13.25	13.22	42.124	16.25	24	Pass
134	5670	13.24	13.28	42.367	16.27	24	Pass
142	5710 (U-NII-2C)	12.90	13.30	40.878	16.11	24	Pass
142	5710 (U-NII-3)	3.18	2.77	3.972	5.99	30	Pass
151	5755	13.24	13.17	41.835	16.22	30	Pass
159	5795	13.26	13.25	42.319	16.27	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (45.24) = 27.56 dBm > 24 dBm.
2. 11 dBm + 10log (44.84) = 27.52 dBm > 24 dBm.
3. 11 dBm + 10log (45.67) = 27.60 dBm > 24 dBm.
4. 11 dBm + 10log (45.37) = 27.57 dBm > 24 dBm.
5. 11 dBm + 10log (45.40) = 27.57 dBm > 24 dBm.
6. 11 dBm + 10log (37.48) = 26.74 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (45.16) = 27.55 dBm > 24 dBm.
2. 11 dBm + 10log (45.67) = 27.60 dBm > 24 dBm.
3. 11 dBm + 10log (45.24) = 27.56 dBm > 24 dBm.
4. 11 dBm + 10log (45.42) = 27.57 dBm > 24 dBm.
5. 11 dBm + 10log (45.21) = 27.55 dBm > 24 dBm.
6. 11 dBm + 10log (37.59) = 26.75 dBm > 24 dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	13.45	13.44	44.211	16.46	24	Pass
58	5290	13.30	13.37	43.107	16.35	24	Pass
106	5530	13.35	13.36	43.304	16.37	24	Pass
122	5610	13.37	13.29	43.057	16.34	24	Pass
138	5690 (U-NII-2C)	11.93	11.38	29.336	14.67	24	Pass
138	5690 (U-NII-3)	-4.76	-5.02	0.649	-1.88	30	Pass
155	5775	13.28	13.40	43.159	16.35	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (85.98) = 30.34 dBm > 24 dBm.
2. 11 dBm + 10log (85.83) = 30.34 dBm > 24 dBm.
3. 11 dBm + 10log (86.62) = 30.38 dBm > 24 dBm.
4. 11 dBm + 10log (77.96) = 29.92 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (85.13) = 30.30 dBm > 24 dBm.
2. 11 dBm + 10log (86.81) = 30.39 dBm > 24 dBm.
3. 11 dBm + 10log (86.78) = 30.38 dBm > 24 dBm.
4. 11 dBm + 10log (78.66) = 29.96 dBm > 24 dBm.

802.11ac (VHT160)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
50	5250	13.37	13.46	43.909	16.43	24	Pass
114	5570	13.48	13.42	44.263	16.46	24	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (165.20) = 33.18 dBm > 24 dBm.
2. 11 dBm + 10log (165.02) = 33.18 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (163.73) = 33.14 dBm > 24 dBm.
2. 11 dBm + 10log (163.39) = 33.13 dBm > 24 dBm.

802.11ax (HE20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	13.33	13.29	42.858	16.32	24	Pass
40	5200	13.30	13.25	42.515	16.29	24	Pass
48	5240	13.33	13.27	42.76	16.31	24	Pass
52	5260	12.55	12.27	34.855	15.42	24	Pass
60	5300	13.29	13.38	43.107	16.35	24	Pass
64	5320	13.27	13.33	42.76	16.31	24	Pass
100	5500	13.28	13.27	42.513	16.29	24	Pass
116	5580	13.24	13.18	41.883	16.22	24	Pass
140	5700	13.21	13.15	41.595	16.19	24	Pass
144	5720 (U-NII-2C)	11.03	11.40	26.481	14.23	23.48	Pass
144	5720 (U-NII-3)	5.17	6.70	7.966	9.01	30	Pass
149	5745	13.23	13.15	41.692	16.20	30	Pass
157	5785	13.24	13.18	41.883	16.22	30	Pass
165	5825	13.15	13.21	41.595	16.19	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (26.27) = 25.19 dBm > 24 dBm.
2. 11 dBm + 10log (25.34) = 25.04 dBm > 24 dBm.
3. 11 dBm + 10log (26.02) = 25.15 dBm > 24 dBm.
4. 11 dBm + 10log (26.28) = 25.20 dBm > 24 dBm.
5. 11 dBm + 10log (26.08) = 25.16 dBm > 24 dBm.
6. 11 dBm + 10log (26.16) = 25.18 dBm > 24 dBm.
7. 11 dBm + 10log (17.95) = 23.54 dBm < 24 dBm.

Chain 1

1. 11 dBm + 10log (25.24) = 25.02 dBm > 24 dBm.
2. 11 dBm + 10log (25.80) = 25.12 dBm > 24 dBm.
3. 11 dBm + 10log (25.63) = 25.09 dBm > 24 dBm.
4. 11 dBm + 10log (25.53) = 25.07 dBm > 24 dBm.
5. 11 dBm + 10log (25.43) = 25.05 dBm > 24 dBm.
6. 11 dBm + 10log (25.55) = 25.07 dBm > 24 dBm.
7. 11 dBm + 10log (17.70) = 23.48 dBm < 24 dBm.

802.11ax (HE40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	13.36	13.35	43.304	16.37	24	Pass
46	5230	12.50	12.02	33.705	15.28	24	Pass
54	5270	13.33	13.34	43.105	16.35	24	Pass
62	5310	13.37	13.38	43.504	16.39	24	Pass
102	5510	13.21	13.20	41.834	16.22	24	Pass
110	5550	13.17	13.18	41.546	16.19	24	Pass
134	5670	13.28	13.25	42.416	16.28	24	Pass
142	5710 (U-NII-2C)	11.54	11.88	29.673	14.72	24	Pass
142	5710 (U-NII-3)	1.12	2.64	3.131	4.96	30	Pass
151	5755	13.24	13.17	41.835	16.22	30	Pass
159	5795	13.26	13.25	42.319	16.27	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (47.69) = 27.78 dBm > 24 dBm.
2. 11 dBm + 10log (47.86) = 27.80 dBm > 24 dBm.
3. 11 dBm + 10log (46.66) = 27.69 dBm > 24 dBm.
4. 11 dBm + 10log (47.56) = 27.77 dBm > 24 dBm.
5. 11 dBm + 10log (47.53) = 27.77 dBm > 24 dBm.
6. 11 dBm + 10log (38.53) = 26.86 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (46.66) = 27.69 dBm > 24 dBm.
2. 11 dBm + 10log (47.09) = 27.73 dBm > 24 dBm.
3. 11 dBm + 10log (47.42) = 27.76 dBm > 24 dBm.
4. 11 dBm + 10log (46.73) = 27.70 dBm > 24 dBm.
5. 11 dBm + 10log (47.79) = 27.79 dBm > 24 dBm.
6. 11 dBm + 10log (39.04) = 26.92 dBm > 24 dBm.

802.11ax (HE80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	13.42	13.25	43.114	16.35	24	Pass
58	5290	13.33	13.30	42.908	16.33	24	Pass
106	5530	13.21	13.28	42.222	16.26	24	Pass
122	5610	13.21	13.22	41.93	16.23	24	Pass
138	5690 (U-NII-2C)	10.90	10.50	23.523	13.71	24	Pass
138	5690 (U-NII-3)	-6.09	-5.33	0.5391	-2.68	30	Pass
155	5775	13.26	13.19	42.029	16.24	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (87.34) = 30.41 dBm > 24 dBm.
2. 11 dBm + 10log (88.69) = 30.48 dBm > 24 dBm.
3. 11 dBm + 10log (87.65) = 30.43 dBm > 24 dBm.
4. 11 dBm + 10log (79.24) = 29.99 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (88.37) = 30.46 dBm > 24 dBm.
2. 11 dBm + 10log (86.84) = 30.39 dBm > 24 dBm.
3. 11 dBm + 10log (86.97) = 30.39 dBm > 24 dBm.
4. 11 dBm + 10log (78.89) = 29.97 dBm > 24 dBm.

802.11ax (HE160)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
50	5250	13.01	13.07	40.276	16.05	24	Pass
114	5570	13.19	13.22	41.834	16.22	24	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (164.13) = 33.15 dBm > 24 dBm.
2. 11 dBm + 10log (163.73) = 33.14 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (163.60) = 33.14 dBm > 24 dBm.
2. 11 dBm + 10log (163.51) = 33.14 dBm > 24 dBm.

26 dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
36	5180	24.21
40	5200	24.52
48	5240	24.49
52	5260	24.99
60	5300	24.34
64	5320	25.09
100	5500	24.30
116	5580	24.56
140	5700	24.90
144	5720 (U-NII-2C)	17.14
144	5720 (U-NII-3)	7.35

802.11ac (VHT20)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	25.32	25.10
40	5200	24.97	24.81
48	5240	25.01	24.62
52	5260	24.83	24.81
60	5300	25.07	24.83
64	5320	24.90	24.88
100	5500	24.54	25.33
116	5580	25.27	25.85
140	5700	24.82	24.78
144	5720 (U-NII-2C)	17.65	17.43
144	5720 (U-NII-3)	7.24	7.23

802.11ac (VHT40)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	45.31	44.67
46	5230	45.51	45.34
54	5270	45.24	45.16
62	5310	44.84	45.67
102	5510	45.67	45.24
110	5550	45.37	45.42
134	5670	45.40	45.21
142	5710 (U-NII-2C)	37.48	37.59
142	5710 (U-NII-3)	7.45	7.82

802.11ac (VHT80)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	87.83	85.18
58	5290	85.98	85.13
106	5530	85.83	86.81
122	5610	86.62	86.78
138	5690 (U-NII-2C)	77.96	78.66
138	5690 (U-NII-3)	9.06	8.45

802.11ac (VHT160)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
50	5250	165.20	163.73
114	5570	165.02	163.39

802.11ax (HE20)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	26.16	25.83
40	5200	25.78	25.39
48	5240	25.49	26.35
52	5260	26.27	25.24
60	5300	25.34	25.80
64	5320	26.02	25.63
100	5500	26.28	25.53
116	5580	26.08	25.43
140	5700	26.16	25.55
144	5720 (U-NII-2C)	17.95	17.70
144	5720 (U-NII-3)	26.16	25.83

802.11ax (HE40)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	46.74	46.13
46	5230	46.76	46.75
54	5270	47.69	46.66
62	5310	47.86	47.09
102	5510	46.66	47.42
110	5550	47.56	46.73
134	5670	47.53	47.79
142	5710 (U-NII-2C)	38.53	39.04
142	5710 (U-NII-3)	8.31	9.01

802.11ac (VHT80)

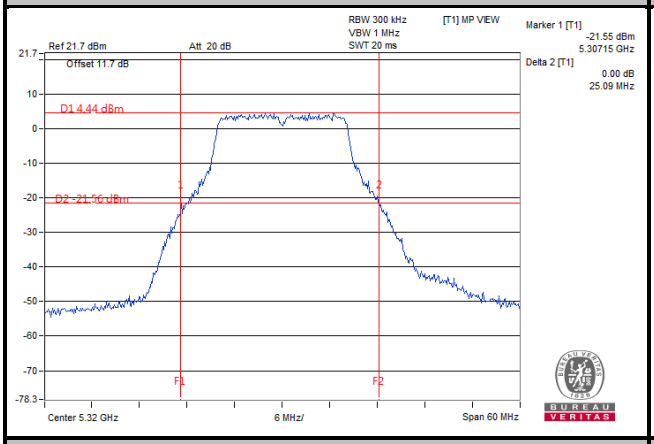
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	87.98	87.31
58	5290	87.34	88.37
106	5530	88.69	86.84
122	5610	87.65	86.97
138	5690 (U-NII-2C)	79.24	78.89
138	5690 (U-NII-3)	8.78	9.15

802.11ac (VHT160)

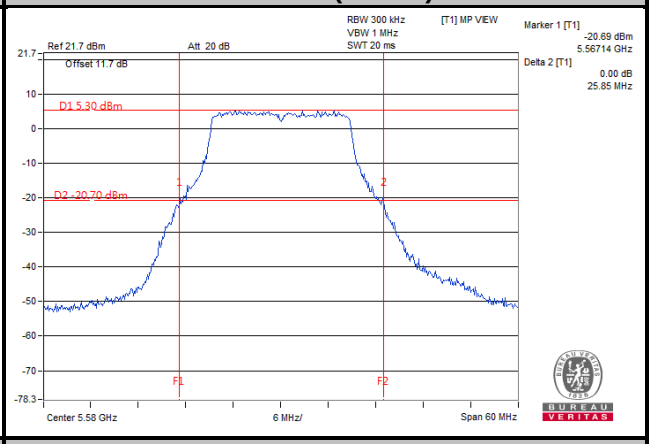
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
50	5250	164.13	163.60
114	5570	163.73	163.51

Spectrum Plot of Worst Value

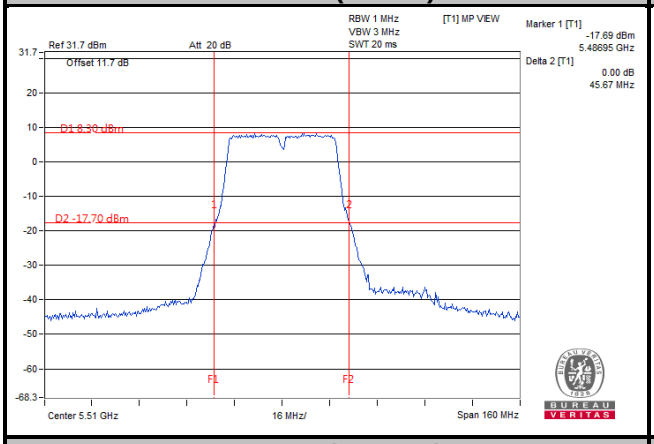
802.11a



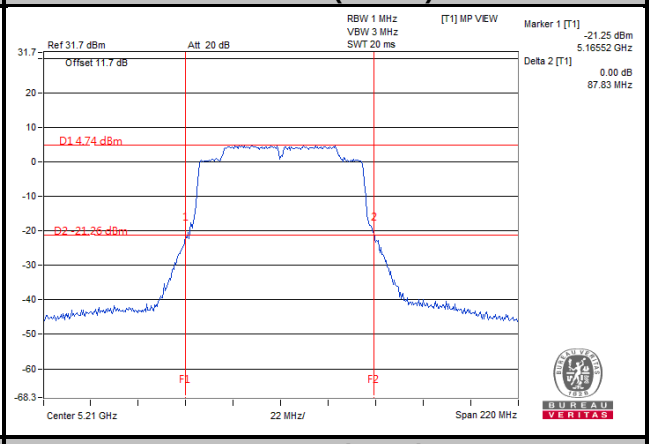
802.11ac (VHT20)



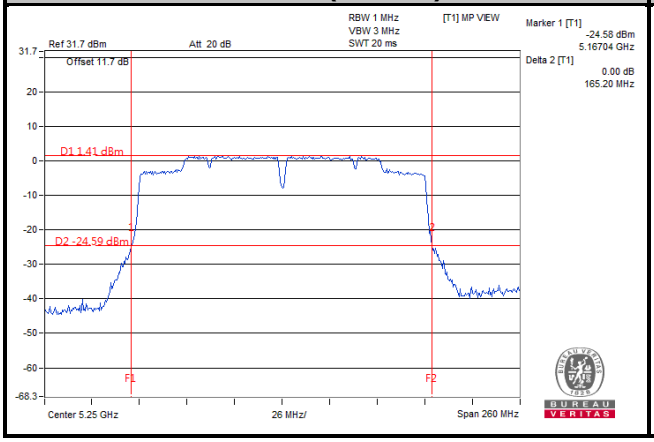
802.11ac (VHT40)



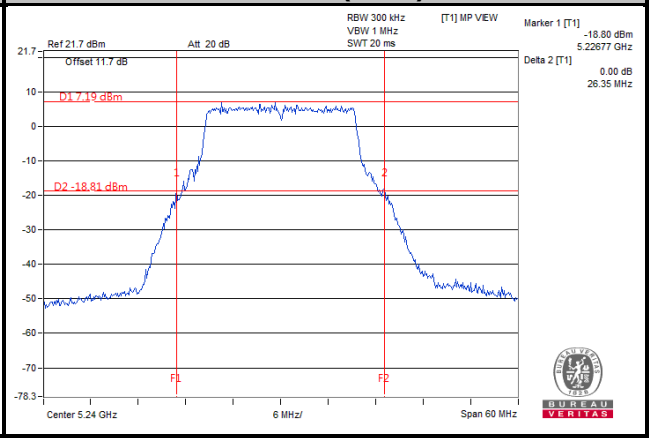
802.11ac (VHT80)



802.11ac (VHT160)

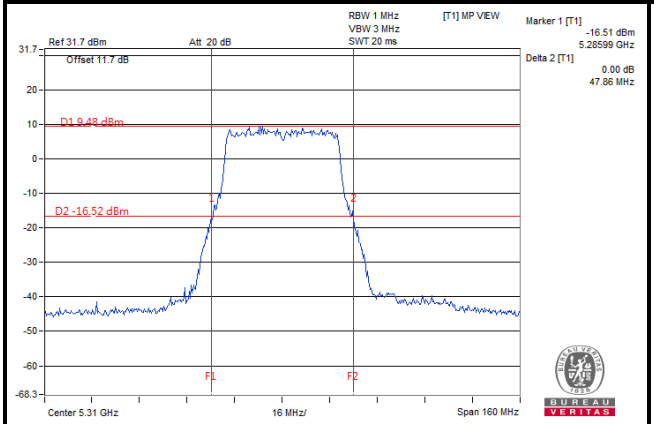


802.11ax (HE20)

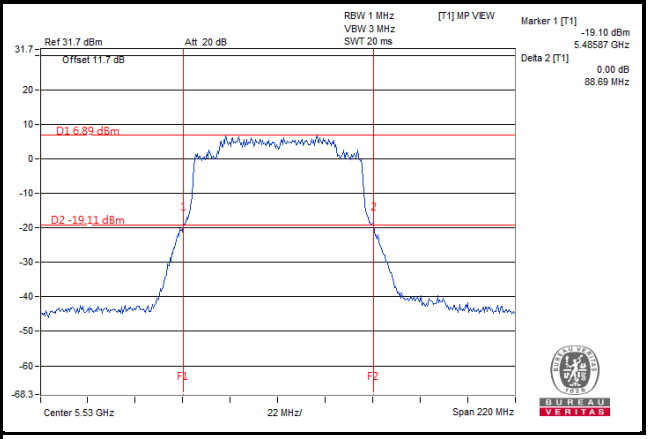


Spectrum Plot of Worst Value

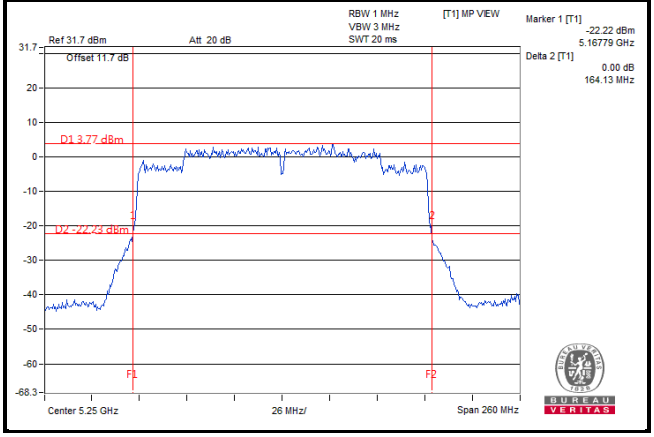
802.11ax (HE40)



802.11ax (HE80)

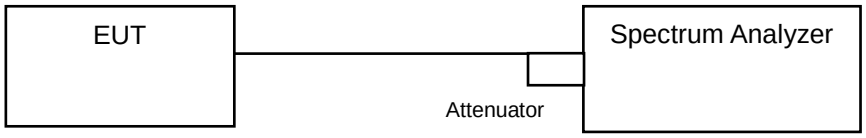


802.11ax (HE160)



4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.92
40	5200	17.04
48	5240	17.04
52	5260	17.04
60	5300	17.04
64	5320	17.04
100	5500	17.16
116	5580	17.04
140	5700	17.04
144	5720 (U-NII-2C)	13.40
144	5720 (U-NII-3)	3.16
149	5745	17.04
157	5785	17.04
165	5825	17.04

802.11ac (VHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.12	18.12
40	5200	18.12	18.12
48	5240	18.12	18.12
52	5260	18.12	18.12
60	5300	18.12	18.12
64	5320	18.12	18.12
100	5500	18.12	18.12
116	5580	18.12	18.12
140	5700	18.12	18.12
144	5720 (U-NII-2C)	14.00	14.00
144	5720 (U-NII-3)	3.88	3.88
149	5745	18.18	18.06
157	5785	18.06	18.06
165	5825	18.06	18.06

802.11ac (VHT40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.84	36.84
46	5230	36.72	36.84
54	5270	36.84	36.84
62	5310	36.84	36.84
102	5510	36.84	36.84
110	5550	36.96	36.84
134	5670	36.84	36.84
142	5710 (U-NII-2C)	33.60	33.60
142	5710 (U-NII-3)	3.24	3.36
151	5755	36.84	36.78
159	5795	36.78	36.78

802.11ac (VHT80)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	75.12	75.12
58	5290	75.36	75.36
106	5530	75.12	75.60
122	5610	75.12	75.12
138	5690 (U-NII-2C)	72.68	72.92
138	5690 (U-NII-3)	2.44	2.44
155	5775	75.24	75.12

802.11ac (VHT160)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
50	5250	153.60	153.60
114	5570	153.20	153.20

802.11ax (HE20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	19.32	19.20
40	5200	19.20	19.32
48	5240	19.32	19.20
52	5260	19.32	19.08
60	5300	19.32	19.08
64	5320	19.20	19.08
100	5500	19.20	19.32
116	5580	19.20	19.20
140	5700	19.08	19.32
144	5720 (U-NII-2C)	14.60	14.60
144	5720 (U-NII-3)	4.48	4.48
149	5745	19.26	19.26
157	5785	19.20	19.26
165	5825	19.26	19.20

802.11ax (HE40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	38.40	38.40
46	5230	38.40	38.28
54	5270	38.28	38.28
62	5310	38.28	38.40
102	5510	38.40	38.28
110	5550	38.28	38.28
134	5670	38.28	38.28
142	5710 (U-NII-2C)	34.20	34.20
142	5710 (U-NII-3)	4.08	4.08
151	5755	38.28	38.34
159	5795	38.28	38.34

802.11ax (HE80)

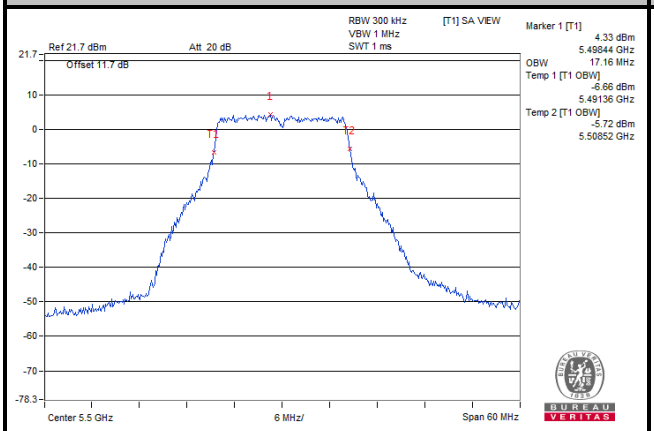
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	77.04	76.80
58	5290	76.80	76.80
106	5530	76.80	76.80
122	5610	76.80	77.04
138	5690 (U-NII-2C)	73.64	73.64
138	5690 (U-NII-3)	3.16	3.40
155	5775	76.68	76.92

802.11ax (HE160)

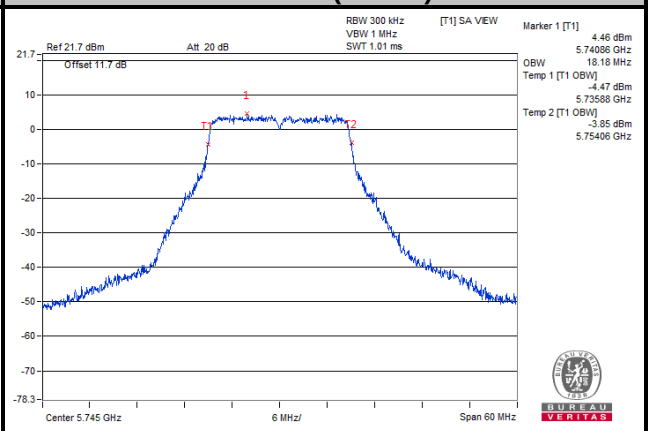
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
50	5250	154.40	155.20
114	5570	155.20	155.20

Spectrum Plot of Worst Value

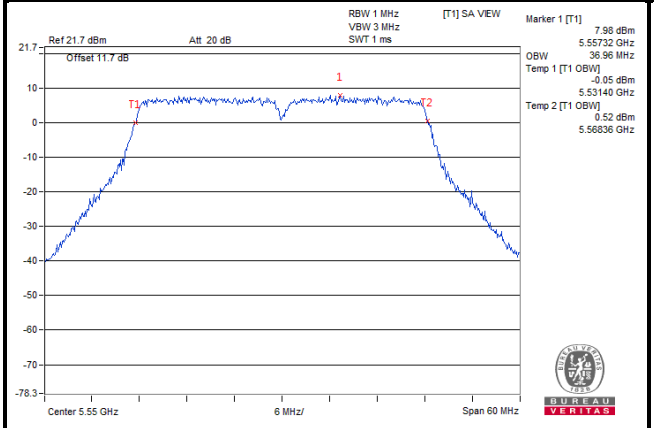
802.11a



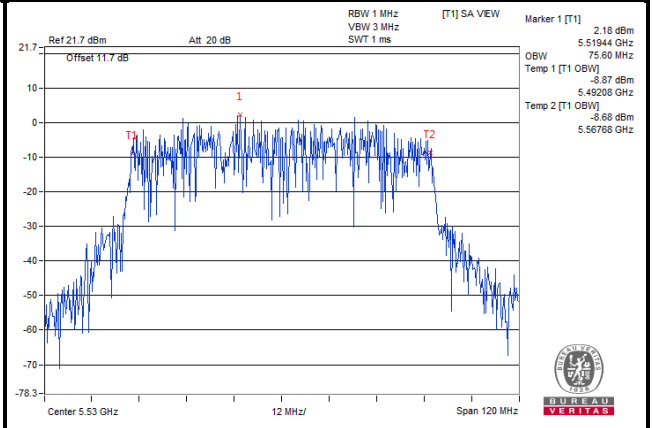
802.11ac (VHT20)



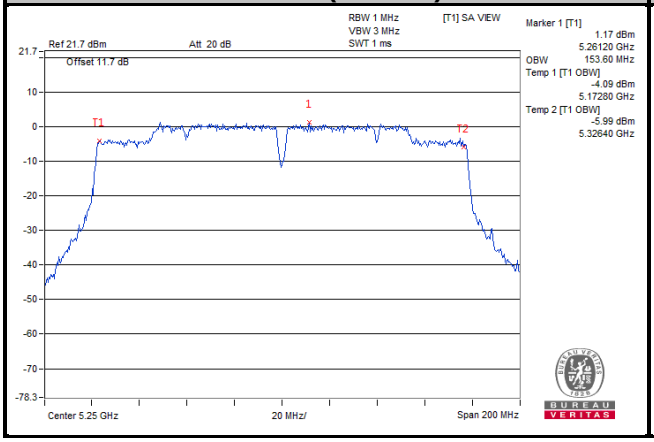
802.11ac (VHT40)



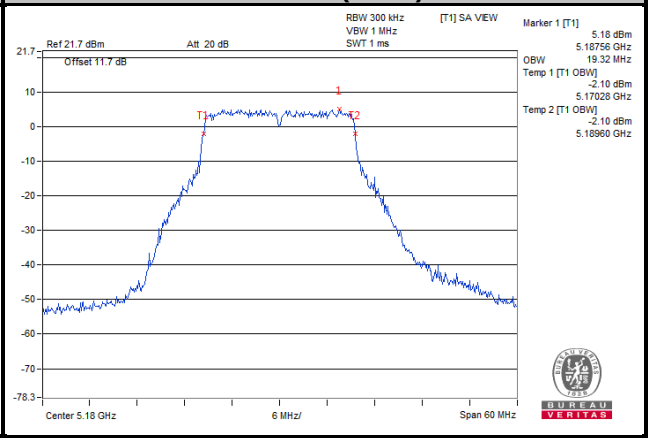
802.11ac (VHT80)

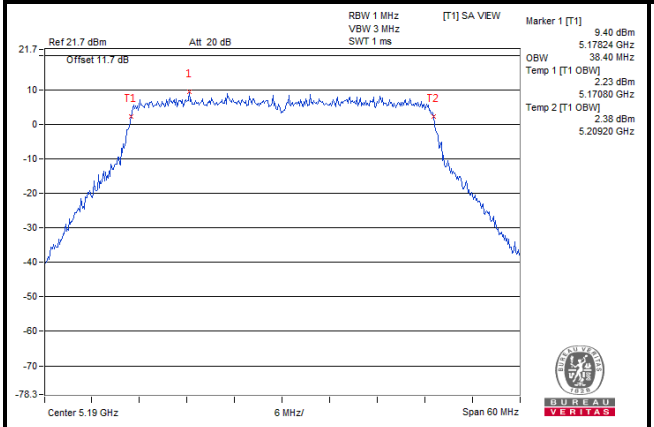
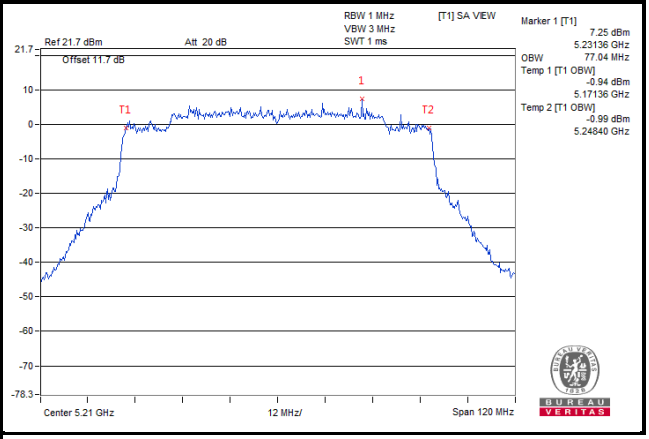
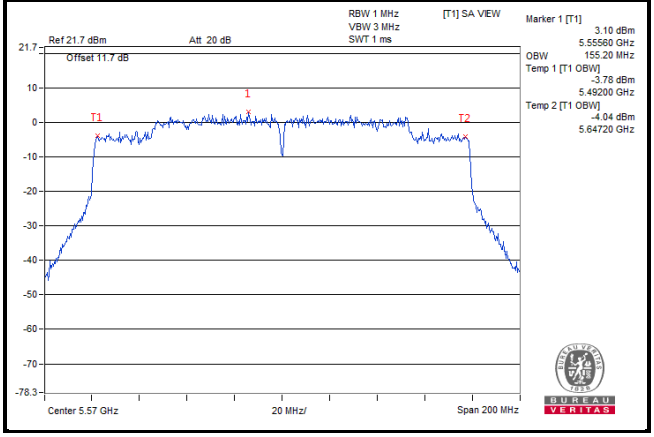


802.11ac (VHT160)

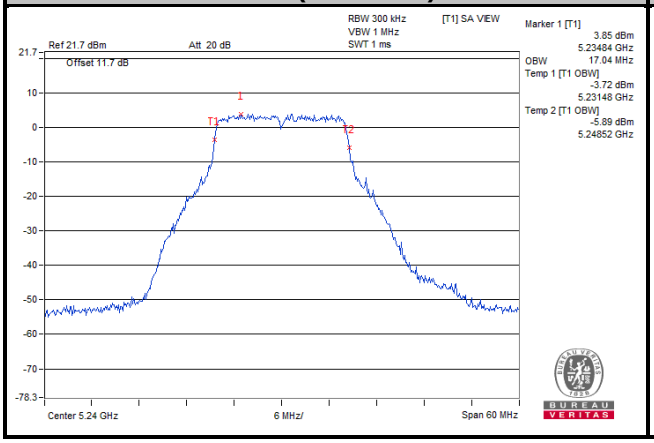
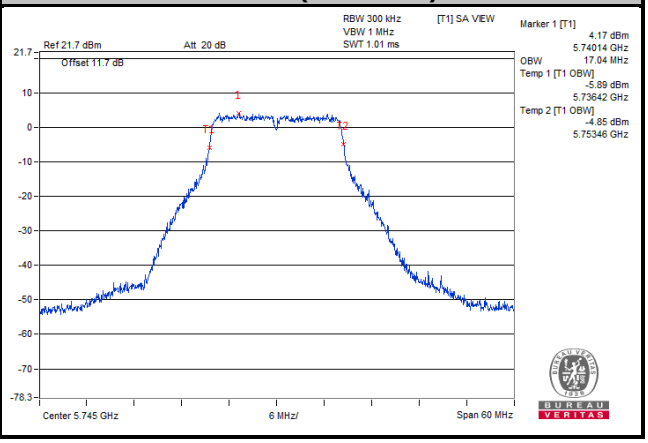


802.11ax (HE20)



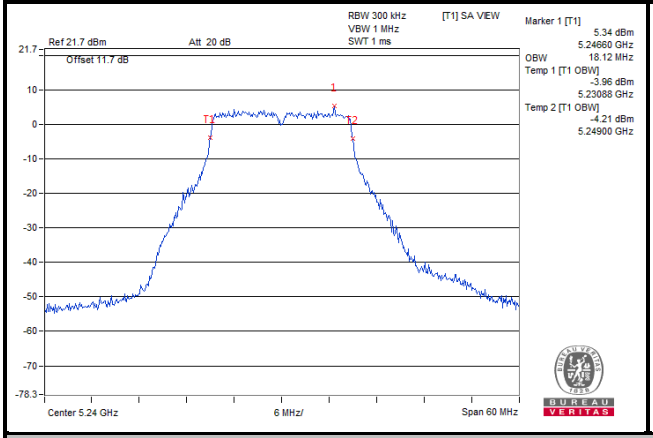
Spectrum Plot of Worst Value	
802.11ax (HE40)	802.11ax (HE80)
	
802.11ax (HE160)	
	

Chain 0

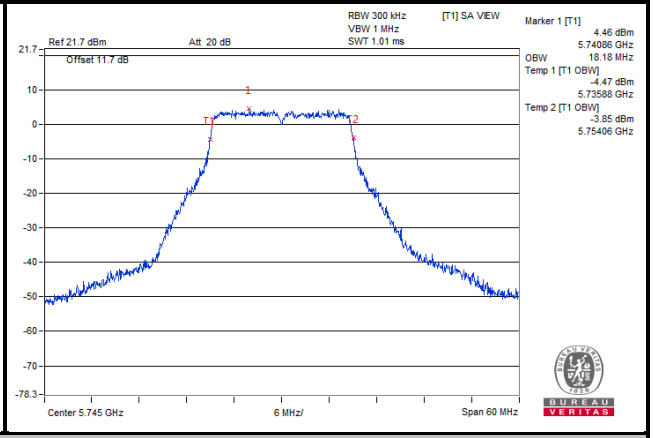
Spectrum Plot for near by DFS band	
802.11a	
Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	

802.11ac (VHT20)

Ch 48 (5240 MHz)

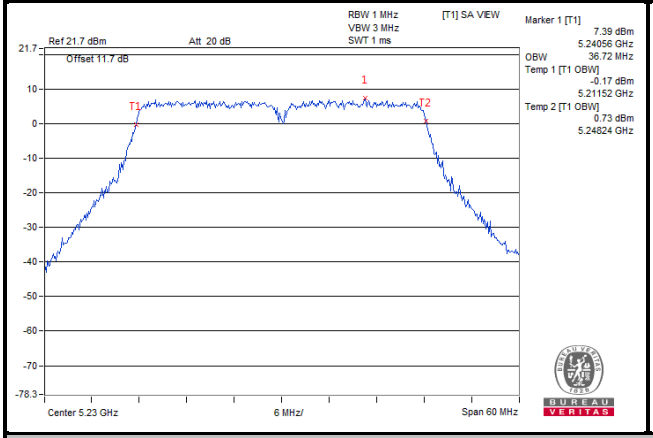


Ch 149 (5745 MHz)

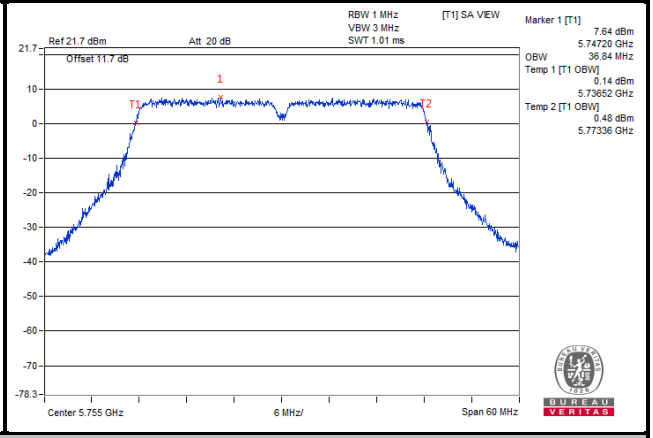


802.11ac (VHT40)

Ch 46 (5230 MHz)

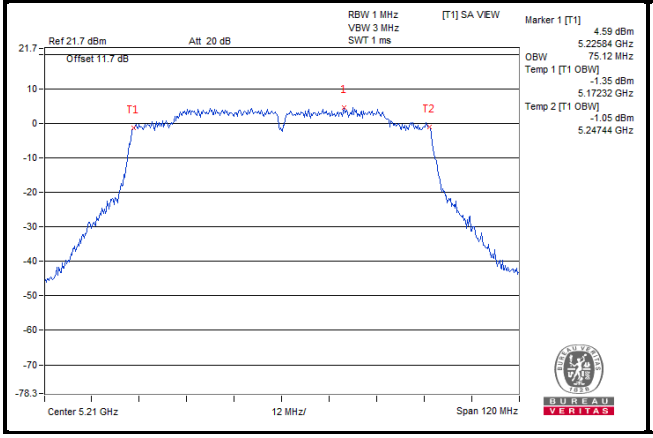


Ch 151 (5755 MHz)

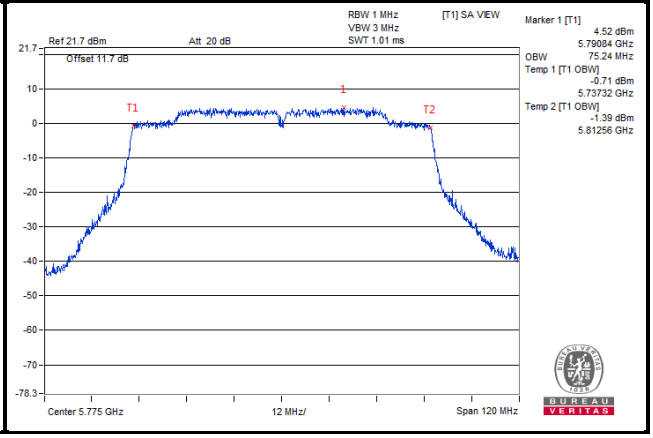


802.11ac (VHT80)

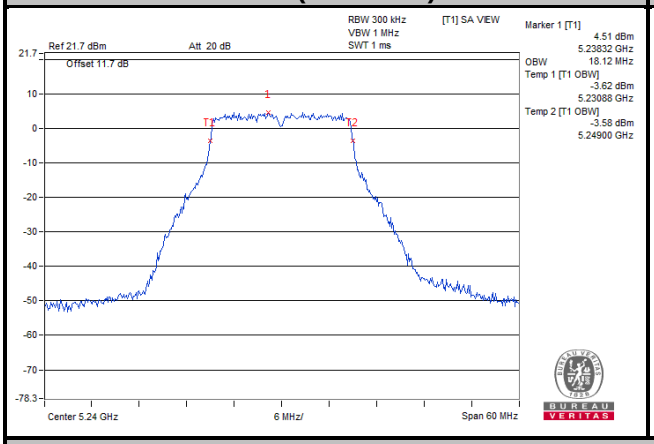
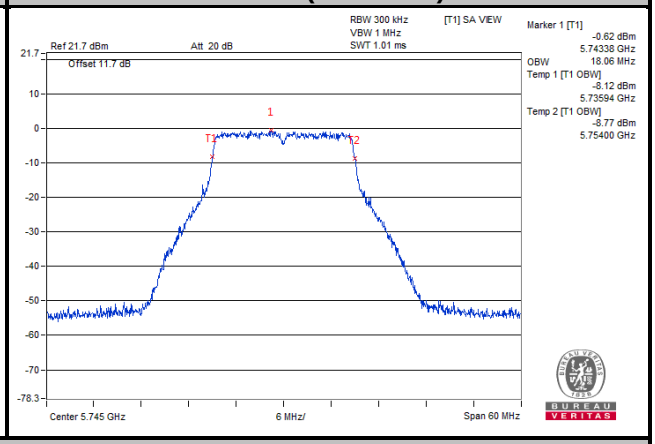
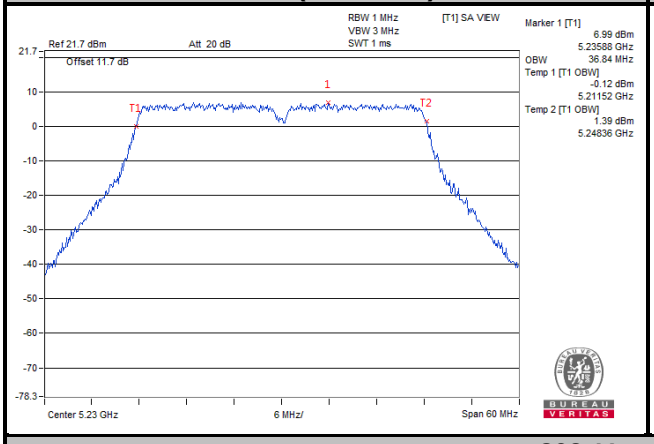
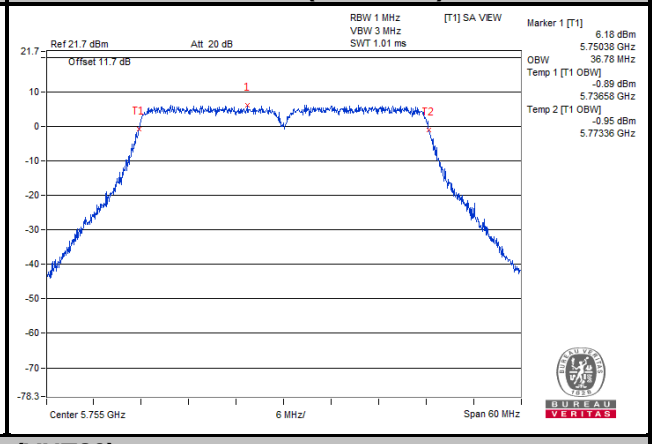
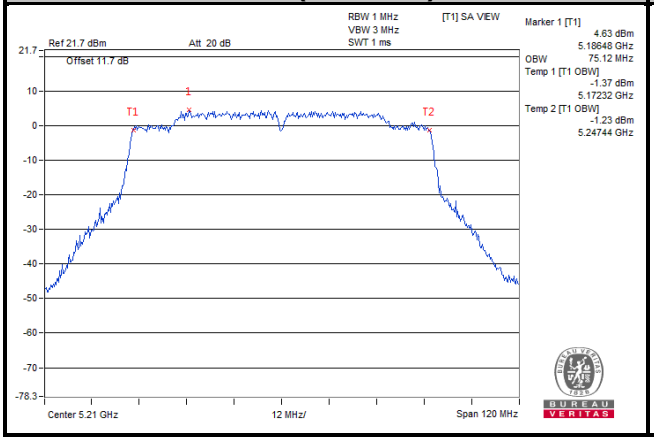
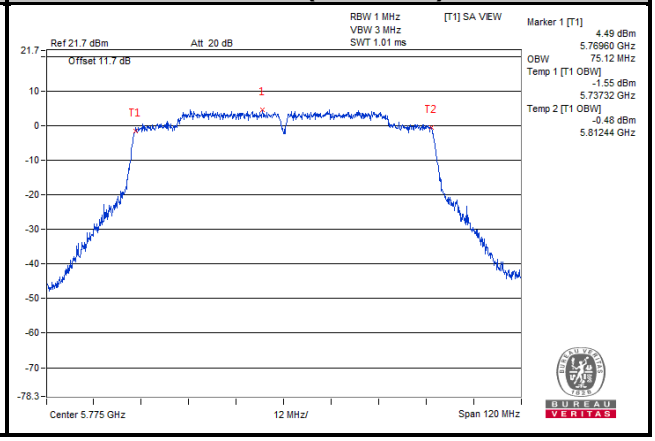
Ch 42 (5210 MHz)



Ch 155 (5775 MHz)



Chain 1

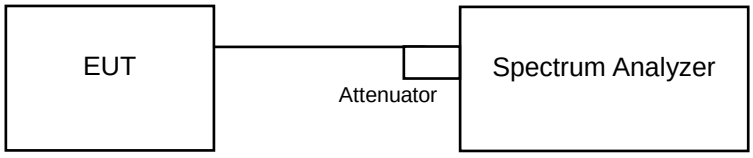
Spectrum Plot for near by DFS band	
802.11ac (VHT20)	
Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	
802.11ac (VHT40)	
Ch 46 (5230 MHz)	Ch 151 (5755 MHz)
	
802.11ac (VHT80)	
Ch 42 (5210 MHz)	Ch 155 (5775 MHz)
	

4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.5.4 Test Procedures

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

Using method SA-2 Duty cycle <98%

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

※**For U-NII-3:** with duty cycle & Duty cycle <98 %

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

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

4.5.7 Test Results

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

802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
36	5180	0.72	0.10	0.82	11	Pass
40	5200	0.65	0.10	0.75	11	Pass
48	5240	0.42	0.10	0.52	11	Pass
52	5260	0.64	0.10	0.74	11	Pass
60	5300	1.21	0.10	1.31	11	Pass
64	5320	0.50	0.10	0.60	11	Pass
100	5500	0.82	0.10	0.92	11	Pass
116	5580	0.98	0.10	1.08	11	Pass
140	5700	0.63	0.10	0.73	11	Pass
144	5720 (U-NII-2C)	0.55	0.10	0.65	11	Pass

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

802.11ac (VHT20)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	0.82	1.34	4.10	11	Pass
40	5200	0.82	1.25	4.05	11	Pass
48	5240	0.52	1.21	3.89	11	Pass
52	5260	0.45	1.04	3.77	11	Pass
60	5300	0.86	1.11	4.00	11	Pass
64	5320	0.88	1.12	4.01	11	Pass
100	5500	0.74	1.49	4.14	11	Pass
116	5580	1.31	1.31	4.32	11	Pass
140	5700	1.10	1.45	4.29	11	Pass
144	5720 (U-NII-2C)	1.00	1.28	4.15	11	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band, U-NII-2A:**
   Directional gain = -1.67 dBi + 10log(2) = 1.34 dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = -1.01 dBi + 10log(2) = 2 dBi < 6 dBi, so the limit no need to be reduced.

802.11ac (VHT40)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
38	5190	-1.67	-1.72	1.32	11	Pass
46	5230	-2.60	-2.62	0.40	11	Pass
54	5270	-1.76	-1.64	1.31	11	Pass
62	5310	-1.89	-1.69	1.22	11	Pass
102	5510	-1.85	-1.82	1.18	11	Pass
110	5550	-1.84	-1.75	1.22	11	Pass
134	5670	-1.32	-1.32	1.69	11	Pass
142	5710 (U-NII-2C)	-1.57	-1.50	1.48	11	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band, U-NII-2A:**
   Directional gain = -1.67 dBi + 10log(2) = 1.34 dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = -1.01 dBi + 10log(2) = 2 dBi < 6 dBi, so the limit no need to be reduced.

802.11ac (VHT80)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-5.21	-5.48	0.12	-2.21	11	Pass
58	5290	-4.41	-4.60	0.12	-1.37	11	Pass
106	5530	-4.97	-5.38	0.12	-2.04	11	Pass
122	5610	-4.76	-5.32	0.12	-1.90	11	Pass
138	5690 (U-NII-2C)	-4.57	-5.15	0.12	-1.72	11	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band, U-NII-2A:**
   Directional gain = -1.67 dBi + 10log(2) = 1.34 dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = -1.01 dBi + 10log(2) = 2 dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT160)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
50	5250	-8.42	-8.31	0.12	-5.23	11	Pass
114	5570	-8.42	-8.78	0.12	-5.47	11	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band, U-NII-2A:**
   Directional gain = -1.67 dBi + 10log(2) = 1.34 dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = -1.01 dBi + 10log(2) = 2 dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	0.29	0.73	3.53	11	Pass
40	5200	0.36	0.80	3.60	11	Pass
48	5240	0.12	0.69	3.42	11	Pass
52	5260	-0.24	0.24	3.02	11	Pass
60	5300	0.47	0.46	3.48	11	Pass
64	5320	0.56	0.41	3.50	11	Pass
100	5500	0.48	0.79	3.65	11	Pass
116	5580	0.90	0.81	3.87	11	Pass
140	5700	0.78	0.73	3.77	11	Pass
144	5720 (U-NII-2C)	0.81	0.48	3.66	11	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band, U-NII-2A:**
   Directional gain = -1.67 dBi + 10log(2) = 1.34 dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = -1.01 dBi + 10log(2) = 2 dBi < 6 dBi, so the limit no need to be reduced.

802.11ax (HE40)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-2.39	-2.43	0.12	0.72	11	Pass
46	5230	-3.27	-3.34	0.12	-0.17	11	Pass
54	5270	-2.43	-2.48	0.12	0.68	11	Pass
62	5310	-2.58	-2.43	0.12	0.63	11	Pass
102	5510	-2.56	-2.48	0.12	0.61	11	Pass
110	5550	-2.46	-2.49	0.12	0.66	11	Pass
134	5670	-2.31	-1.99	0.12	0.98	11	Pass
142	5710 (U-NII-2C)	-2.52	-1.79	0.12	0.99	11	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band, U-NII-2A:**
   Directional gain = -1.67 dBi + 10log(2) = 1.34 dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = -1.01 dBi + 10log(2) = 2 dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
42	5210	-5.63	-5.11	0.11	-2.24	11	Pass
58	5290	-4.62	-4.72	0.11	-1.55	11	Pass
106	5530	-5.28	-5.78	0.11	-2.40	11	Pass
122	5610	-5.23	-5.74	0.11	-2.36	11	Pass
138	5690 (U-NII-2C)	-5.11	-5.77	0.11	-2.31	11	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band, U-NII-2A:**
   Directional gain = -1.67 dBi + 10log(2) = 1.34 dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = -1.01 dBi + 10log(2) = 2 dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE160)

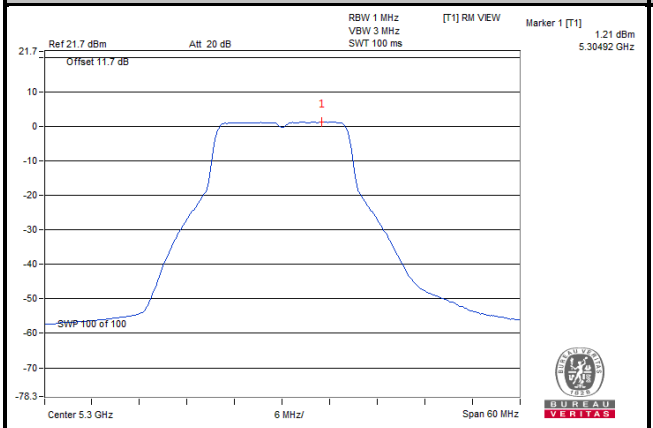
Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
50	5250	-8.96	-8.67	-5.80	11	Pass
114	5570	-9.38	-8.58	-5.95	11	Pass

Note:

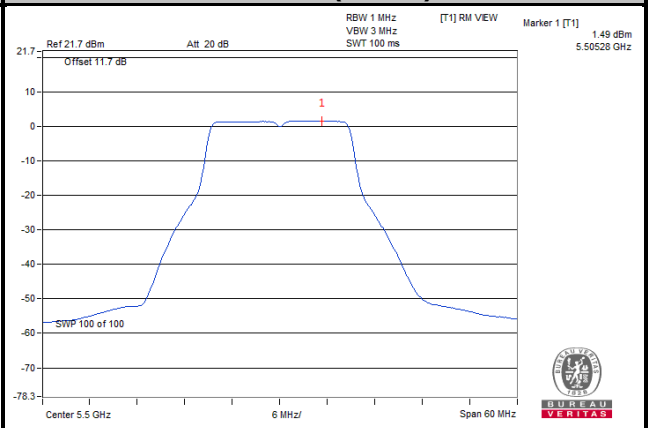
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band, U-NII-2A:**
   Directional gain = -1.67 dBi + 10log(2) = 1.34 dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = -1.01 dBi + 10log(2) = 2 dBi < 6 dBi, so the limit no need to be reduced.

Spectrum Plot of Worst Value

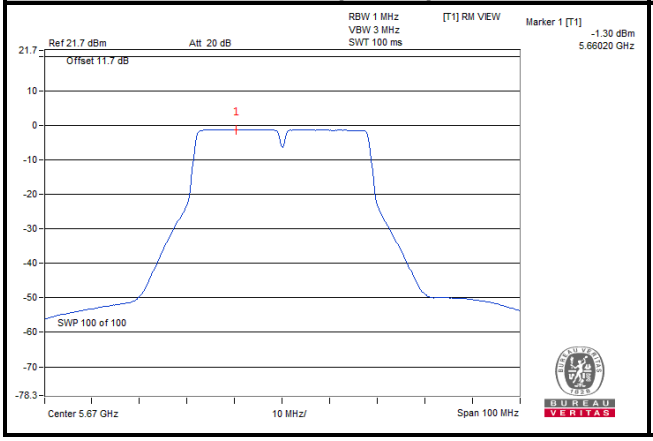
802.11a



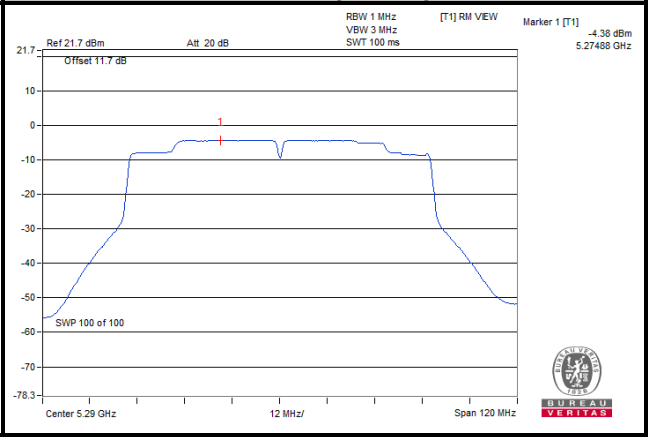
802.11ac (VHT20)



802.11ac (VHT40)

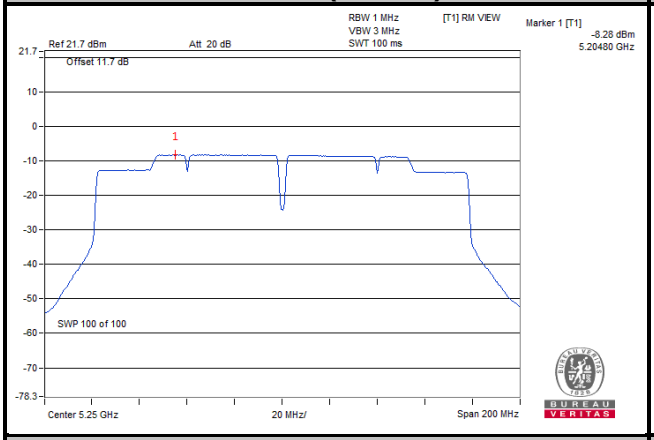


802.11ac (VHT80)

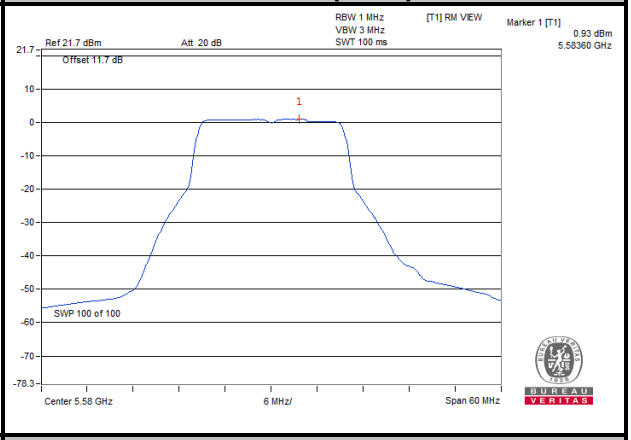


Spectrum Plot of Worst Value

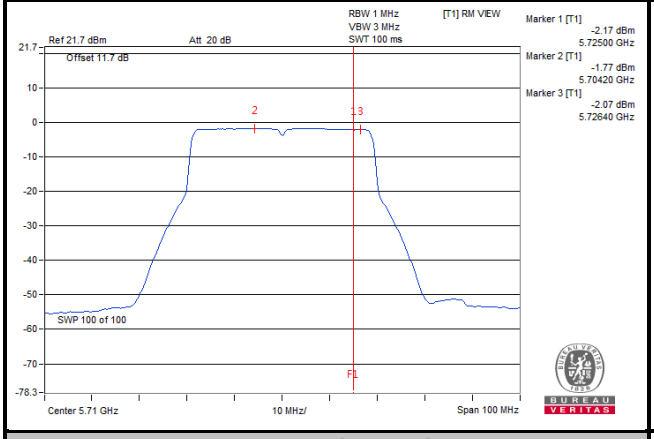
802.11ac (VHT160)



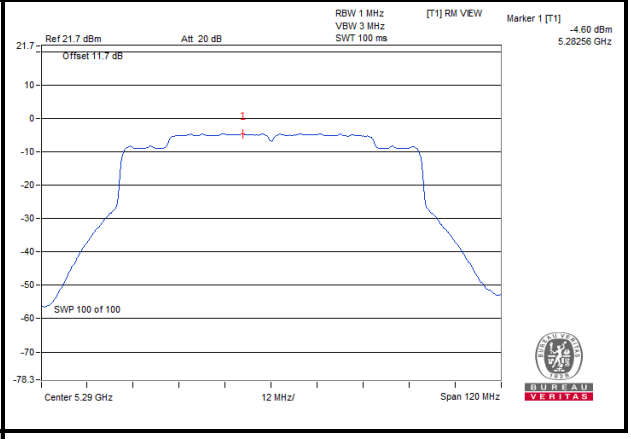
802.11ax (HE20)



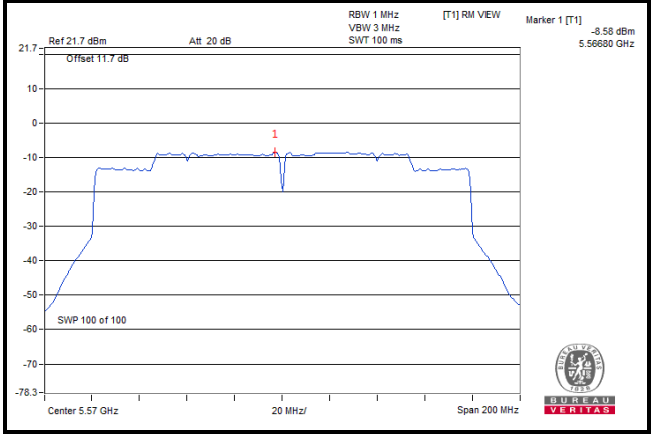
802.11ax (HE40)



802.11ax (HE80)



802.11ax (HE160)



For U-NII-3 Band

802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
		(dBm/300 kHz)	(dBm/500 kHz)				
144	5720 (U-NII-3)	-4.82	-2.60	0.10	-2.50	30	Pass
149	5745	-4.50	-2.28	0.10	-2.18	30	Pass
157	5785	-4.58	-2.36	0.10	-2.26	30	Pass
165	5825	-4.14	-1.92	0.10	-1.82	30	Pass

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

802.11ac (VHT20)

TX Chain	Channel	Freq. (MHz)	PSD		10 log (N=2) dB	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)				
0	144	5720 (U-NII-3)	-4.40	-2.18	3.01	0.83	30	Pass
	149	5745	-4.25	-2.03	3.01	0.98	30	Pass
	157	5785	-4.37	-2.15	3.01	0.86	30	Pass
	165	5825	-4.11	-1.89	3.01	1.12	30	Pass
1	144	5720 (U-NII-3)	-4.01	-1.79	3.01	1.22	30	Pass
	149	5745	-3.80	-1.58	3.01	1.43	30	Pass
	157	5785	-3.96	-1.74	3.01	1.27	30	Pass
	165	5825	-3.75	-1.53	3.01	1.48	30	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = -1.04 dBi + 10log(2) = 1.97 dBi < 6 dBi, so the limit no need to be reduced.

802.11ac (VHT40)

TX Chain	Channel	Freq. (MHz)	PSD		10 log (N=2) dB	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)				
0	142	5710 (U-NII-3)	-6.97	-4.75	3.01	-1.74	30	Pass
	151	5755	-7.34	-5.12	3.01	-2.11	30	Pass
	159	5795	-7.33	-5.11	3.01	-2.10	30	Pass
1	142	5710 (U-NII-3)	-6.86	-4.64	3.01	-1.63	30	Pass
	151	5755	-8.05	-5.83	3.01	-2.82	30	Pass
	159	5795	-7.35	-5.13	3.01	-2.12	30	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = -1.04 dBi + 10log(2) = 1.97 dBi < 6 dBi, so the limit no need to be reduced.

802.11ac (VHT80)

TX Chain	Channel	Frequency (MHz)	PSD		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	138	5690 (U-NII-3)	-14.31	-12.09	3.01	0.12	-8.96	30	Pass
	155	5775	-10.34	-8.12	3.01	0.12	-4.99	30	Pass
1	138	5690 (U-NII-3)	-14.85	-12.63	3.01	0.12	-9.50	30	Pass
	155	5775	-10.77	-8.55	3.01	0.12	-5.42	30	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = -1.04 dBi + 10log(2) = 1.97 dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX Chain	Channel	Freq. (MHz)	PSD		10 log (N=2) dB	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)				
0	144	5720 (U-NII-3)	-4.68	-2.46	3.01	0.55	30	Pass
	149	5745	-4.61	-2.39	3.01	0.62	30	Pass
	157	5785	-4.81	-2.59	3.01	0.42	30	Pass
	165	5825	-4.70	-2.48	3.01	0.53	30	Pass
1	144	5720 (U-NII-3)	-4.17	-1.95	3.01	1.06	30	Pass
	149	5745	-4.49	-2.27	3.01	0.74	30	Pass
	157	5785	-4.62	-2.40	3.01	0.61	30	Pass
	165	5825	-4.60	-2.38	3.01	0.63	30	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = -1.04 dBi + 10log(2) = 1.97 dBi < 6 dBi, so the limit no need to be reduced.

802.11ax (HE40)

TX Chain	Channel	Frequency (MHz)	PSD		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	142	5710 (U-NII-3)	-8.27	-6.05	3.01	0.12	0.58	30	Pass
	151	5755	-8.37	-6.15	3.01	0.12	0.77	30	Pass
	159	5795	-8.23	-6.01	3.01	0.12	1.02	30	Pass
1	142	5710 (U-NII-3)	-7.88	-5.66	3.01	0.12	0.58	30	Pass
	151	5755	-7.93	-5.71	3.01	0.12	0.46	30	Pass
	159	5795	-8.26	-6.04	3.01	0.12	0.54	30	Pass

Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = -1.04 dBi + 10log(2) = 1.97 dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

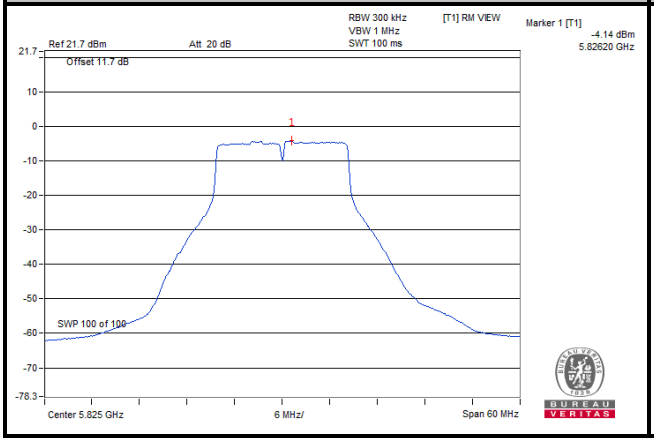
802.11ax (HE80)

TX Chain	Channel	Frequency (MHz)	PSD		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	138	5690 (U-NII-3)	-15.03	-12.81	3.01	0.11	-9.69	30	Pass
	155	5775	-10.48	-8.26	3.01	0.11	-5.14	30	Pass
1	138	5690 (U-NII-3)	-15.02	-12.80	3.01	0.11	-9.68	30	Pass
	155	5775	-10.90	-8.68	3.01	0.11	-5.56	30	Pass

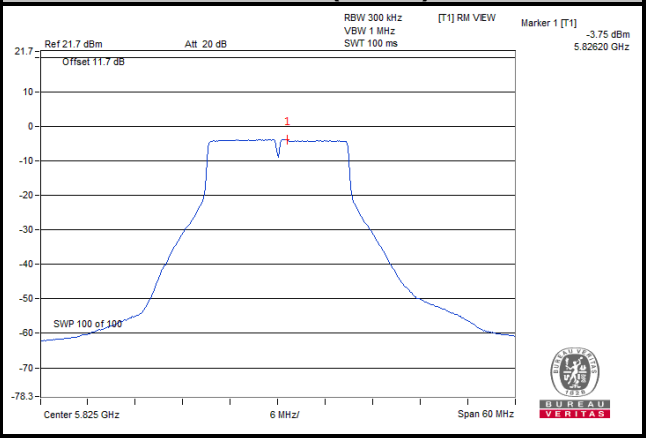
Note:
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = -1.04 dBi + 10log(2) = 1.97 dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

802.11a

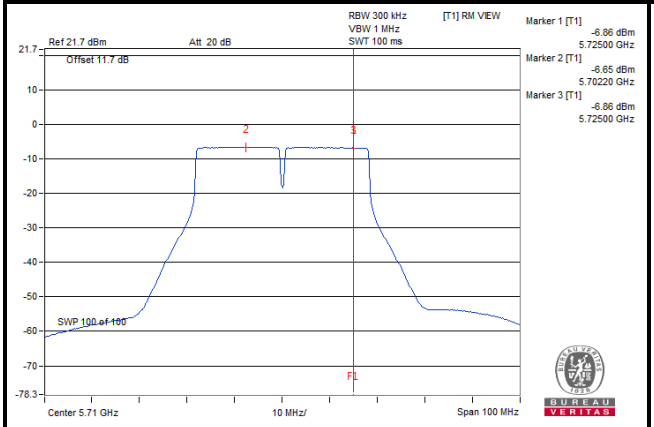


802.11ac (VHT20)

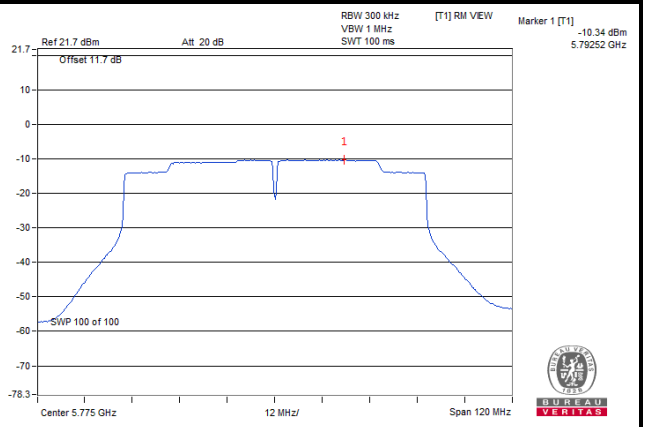


Spectrum Plot of Worst Value

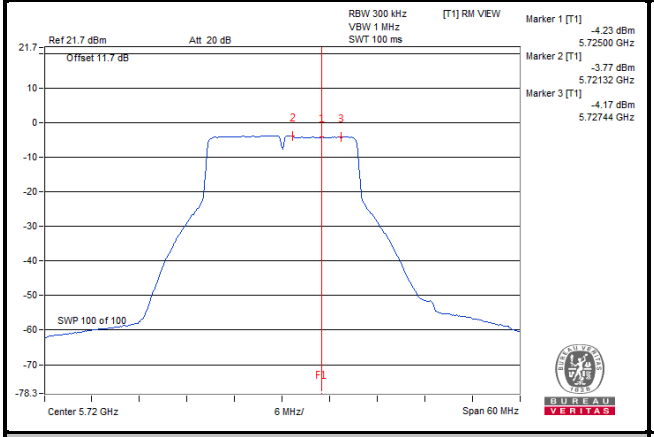
802.11ac (VHT40)



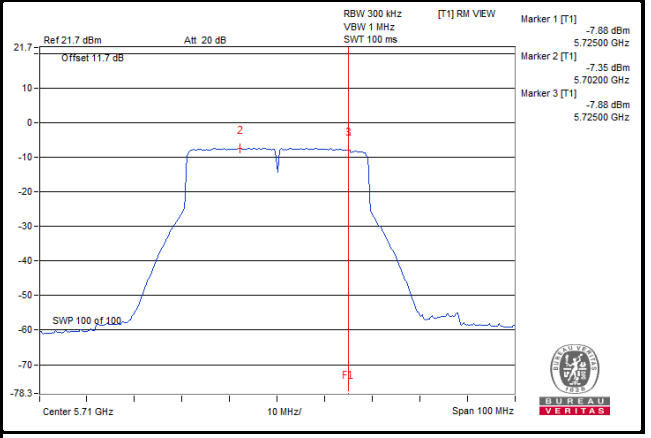
802.11ac (VHT80)



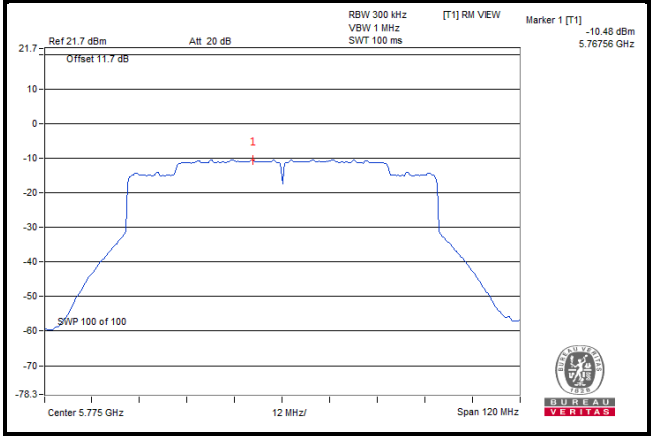
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)

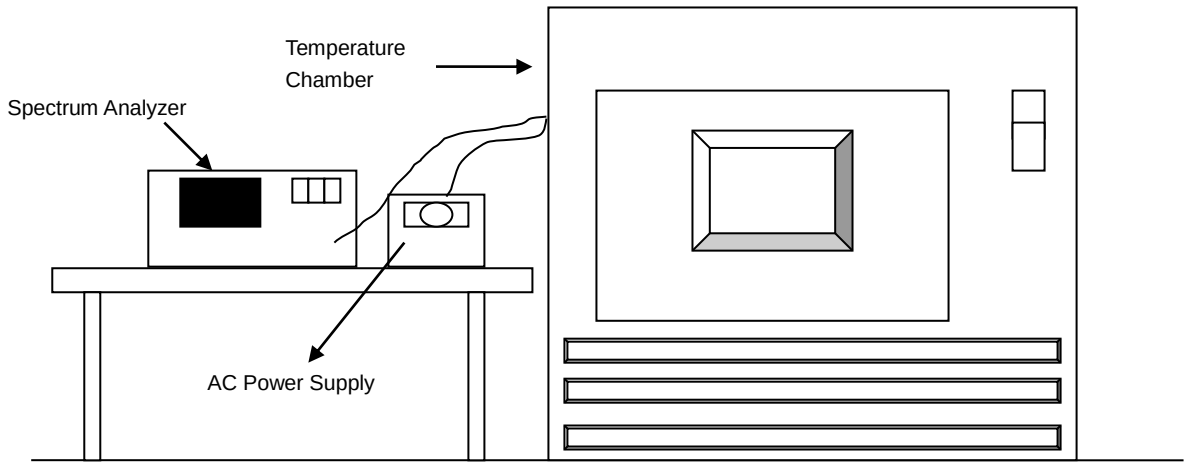


4.6 Frequency Stability

4.6.1 Limit of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.6.4 Test Procedure

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
40	120	5180.0012	PASS	5180.0051	PASS	5180.0036	PASS	5180.0018	PASS
30	120	5180.0146	PASS	5180.0189	PASS	5180.0161	PASS	5180.0151	PASS
20	120	5179.992	PASS	5179.9941	PASS	5179.9952	PASS	5179.9917	PASS
10	120	5180.0133	PASS	5180.0134	PASS	5180.0135	PASS	5180.0143	PASS

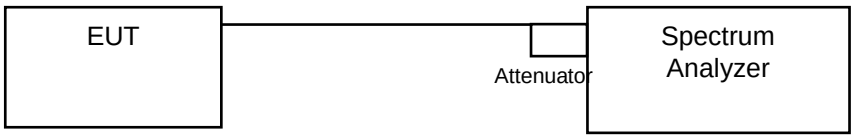
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	138	5179.9913	PASS	5179.9936	PASS	5179.995	PASS	5179.9916	PASS
	120	5179.992	PASS	5179.9941	PASS	5179.9952	PASS	5179.9917	PASS
	102	5179.9919	PASS	5179.9936	PASS	5179.9954	PASS	5179.9907	PASS

4.7 6 dB Bandwidth Measurement

4.7.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 (U-NII-3)	3.18	0.5	Pass
149	5745	16.36	0.5	Pass
157	5785	16.37	0.5	Pass
165	5825	16.36	0.5	Pass

802.11ac (VHT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144	5720 (U-NII-3)	3.82	3.81	0.5	Pass
149	5745	17.60	17.61	0.5	Pass
157	5785	17.62	17.60	0.5	Pass
165	5825	17.59	17.60	0.5	Pass

802.11ac (VHT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
142	5710 (U-NII-3)	3.22	3.22	0.5	Pass
151	5755	36.39	36.35	0.5	Pass
159	5795	36.42	36.40	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
138	5690 (U-NII-3)	2.44	2.44	0.5	Pass
155	5775	72.56	73.86	0.5	Pass

802.11ax (HE20)

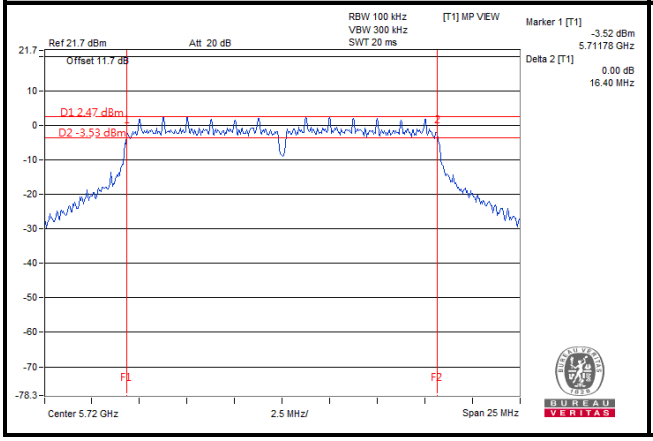
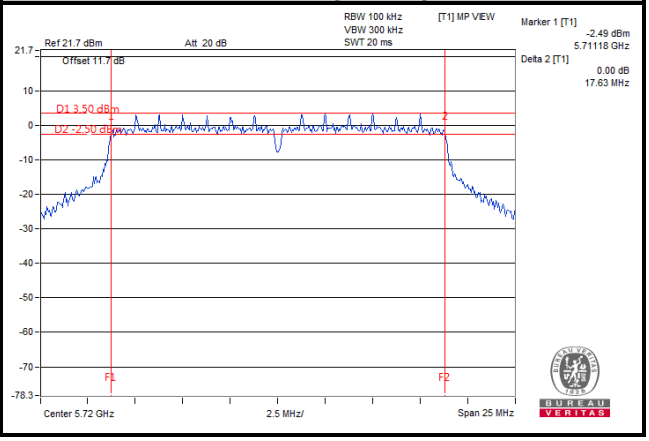
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144	5720 (U-NII-3)	4.25	4.43	0.5	Pass
149	5745	18.75	18.57	0.5	Pass
157	5785	18.78	18.67	0.5	Pass
165	5825	18.64	18.77	0.5	Pass

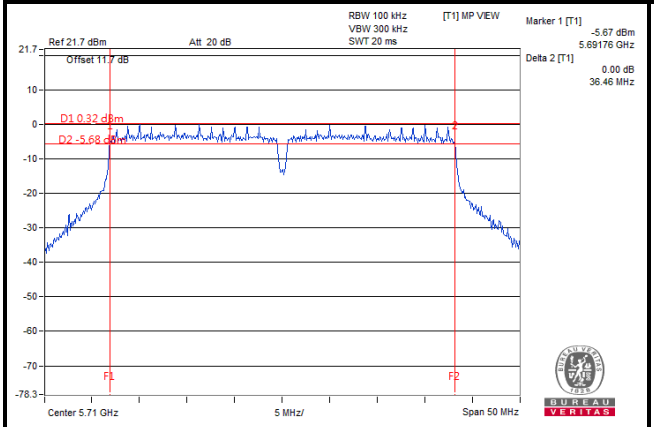
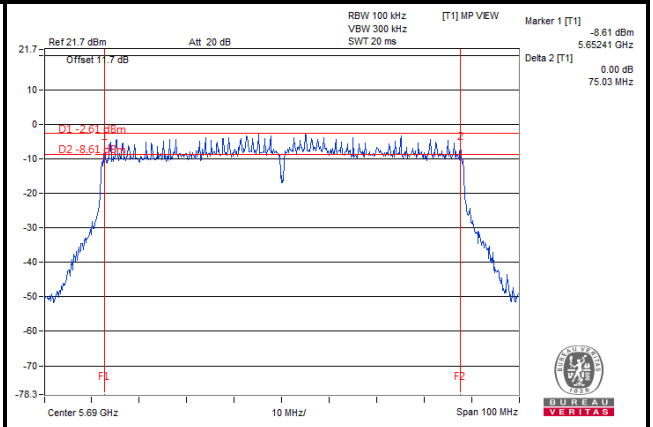
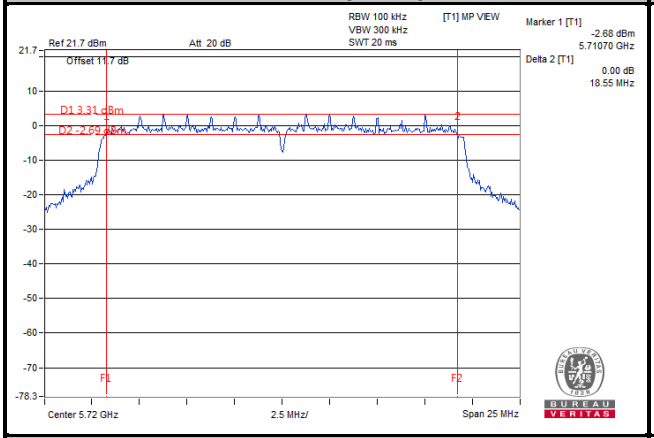
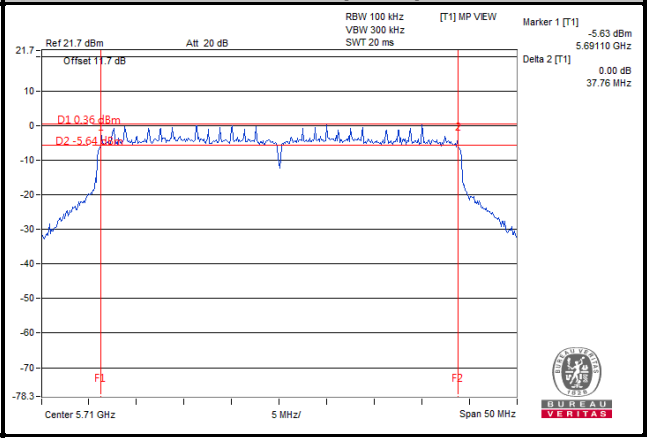
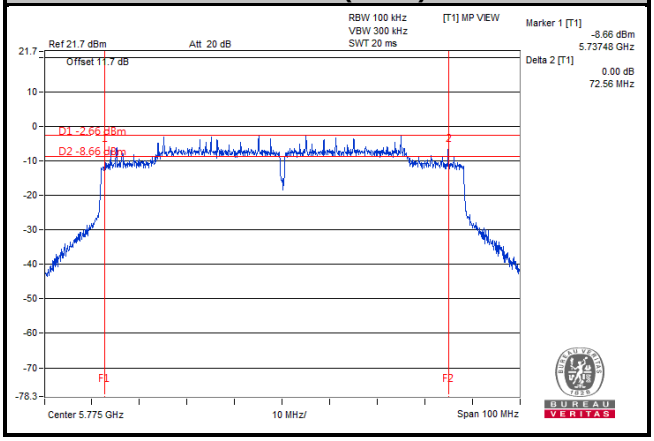
802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
142	5710 (U-NII-3)	4.00	3.86	0.5	Pass
151	5755	37.73	37.73	0.5	Pass
159	5795	37.87	37.77	0.5	Pass

802.11ax (HE80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
138	5690 (U-NII-3)	2.60	2.62	0.5	Pass
155	5775	75.15	73.92	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	

Spectrum Plot of Worst Value	
802.11ac (VHT40)	802.11ac (VHT80)
	
802.11ax (HE20)	802.11ax (HE40)
	
802.11ax (HE80)	
	

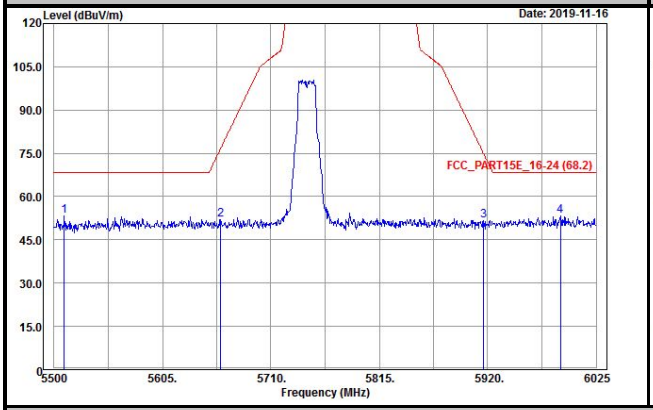
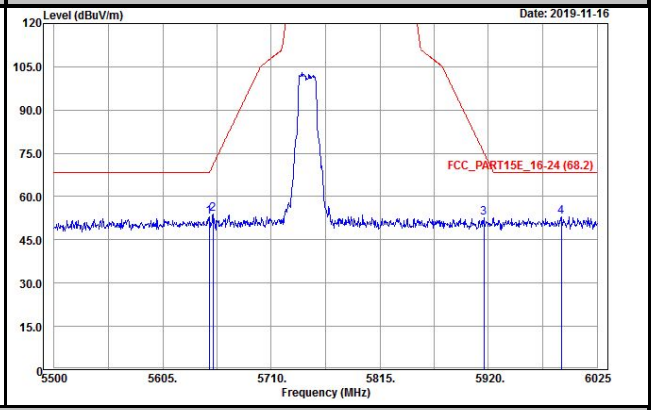
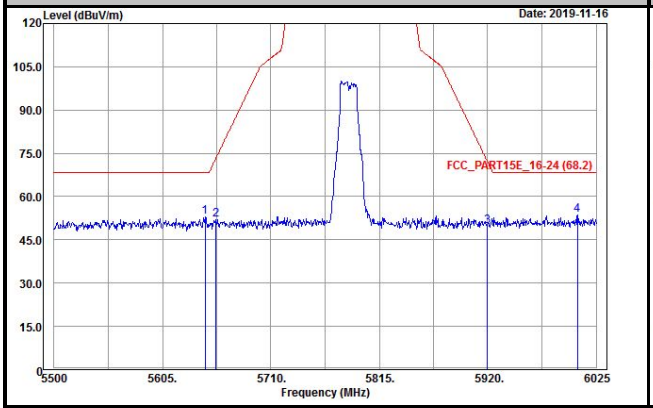
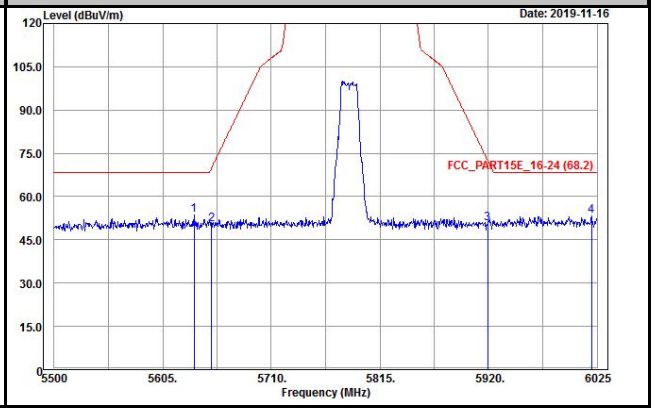
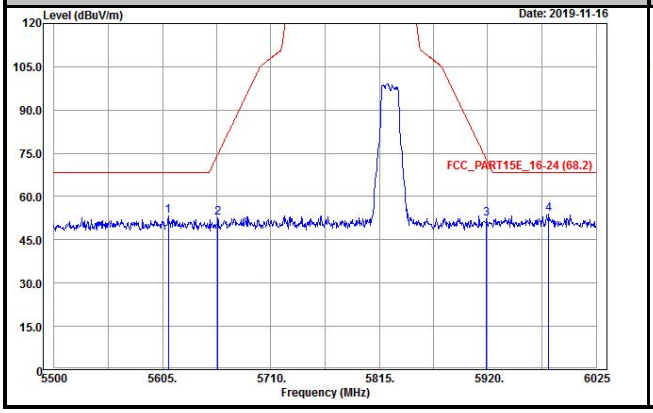
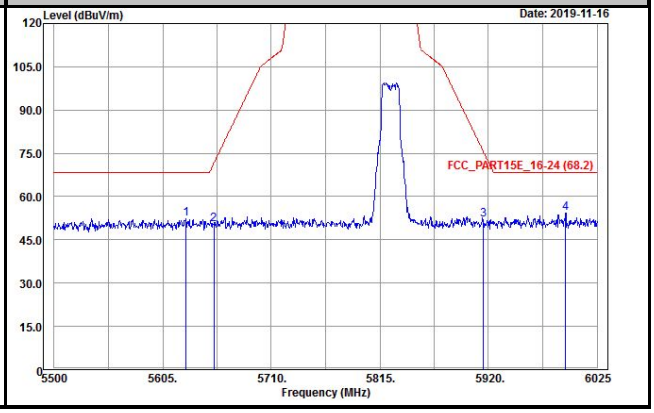
Note:
For Ch144 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
For Ch142 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
For Ch138 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

5 Pictures of Test Arrangements

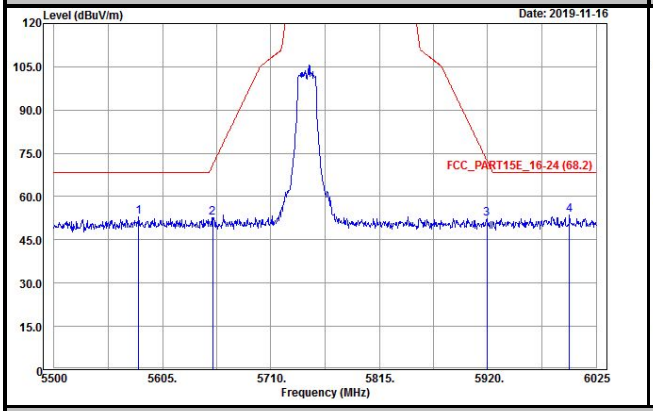
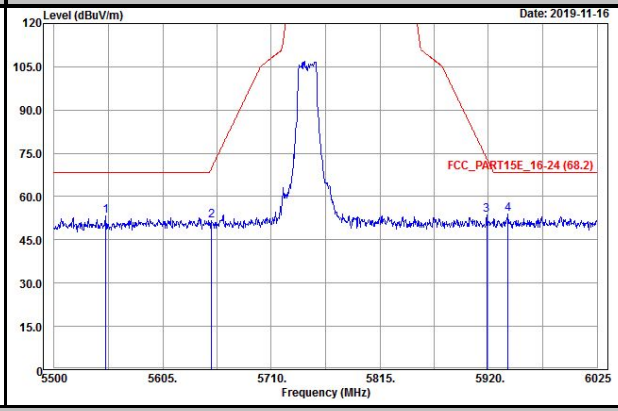
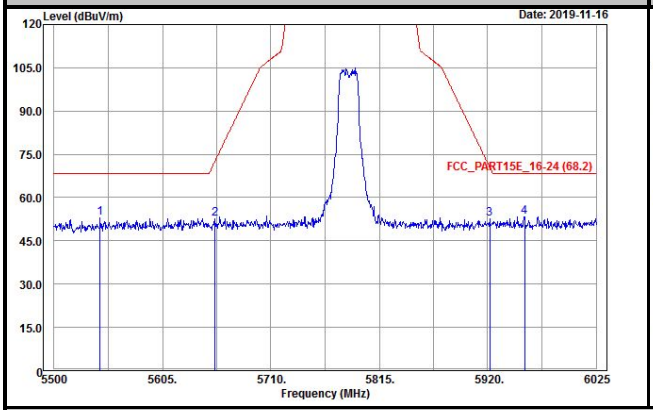
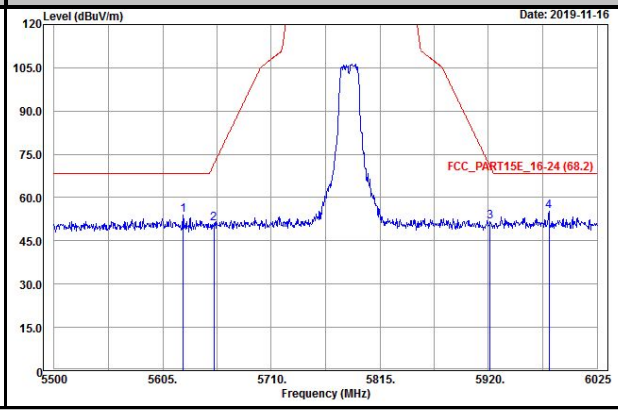
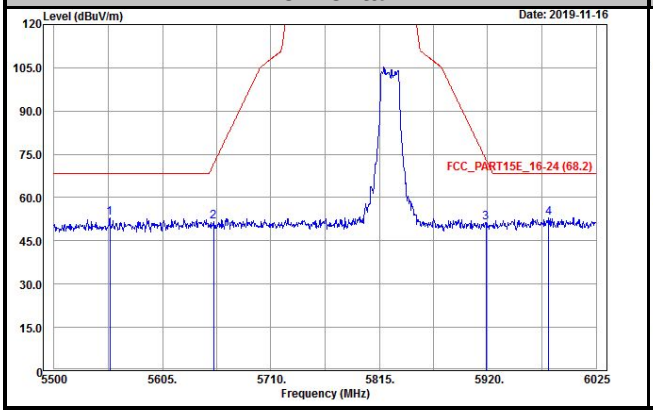
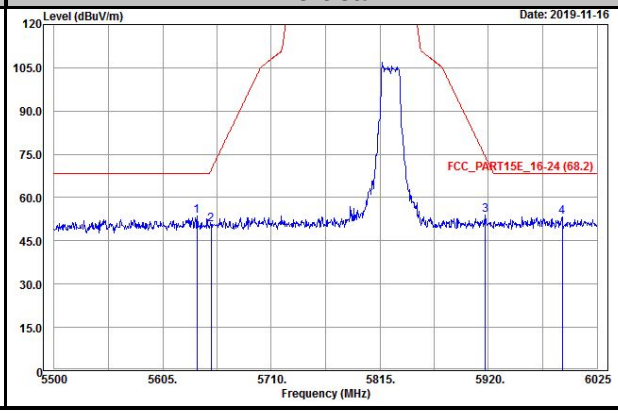
Please refer to the attached file (Test Setup Photo).

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

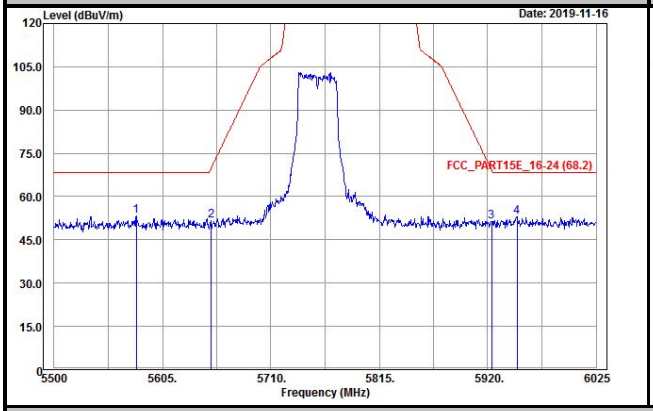
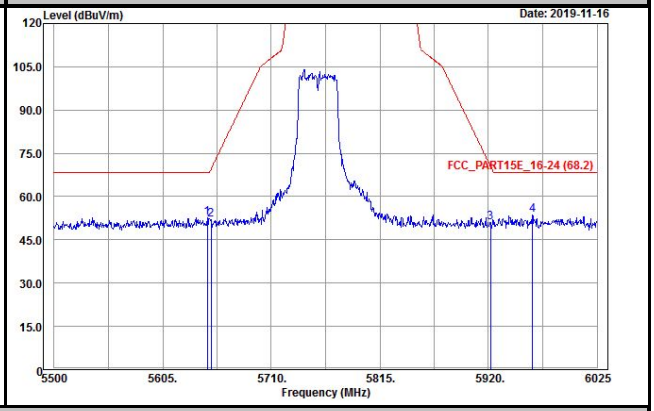
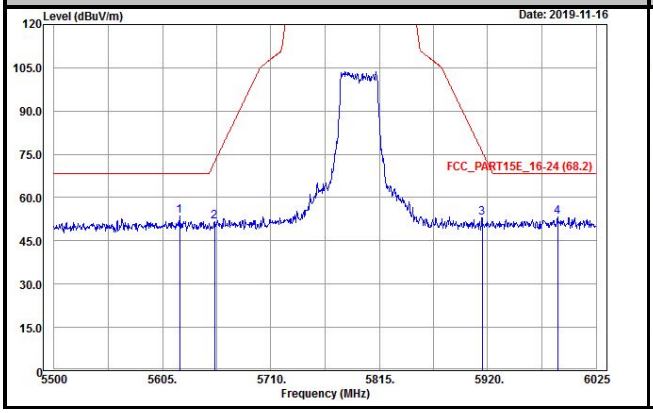
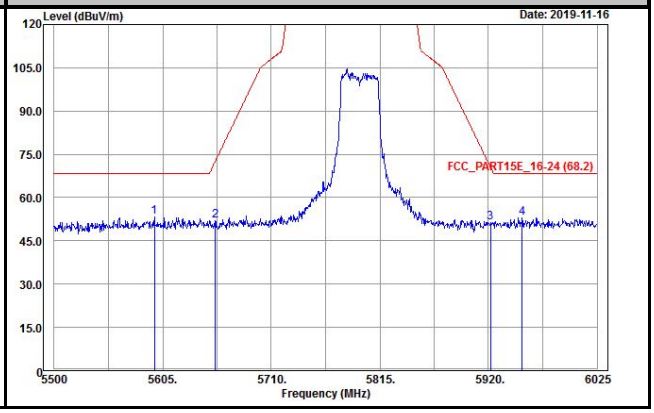
802.11a

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

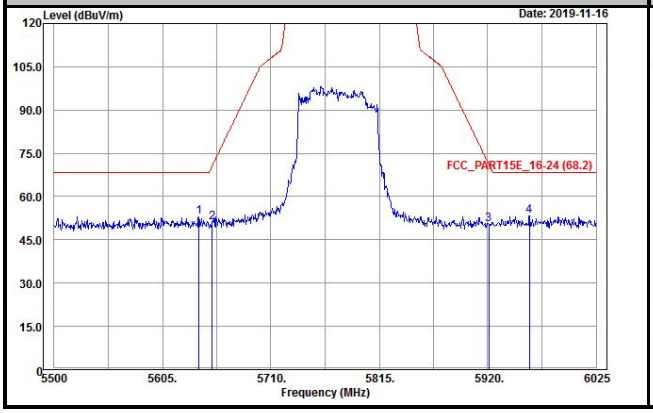
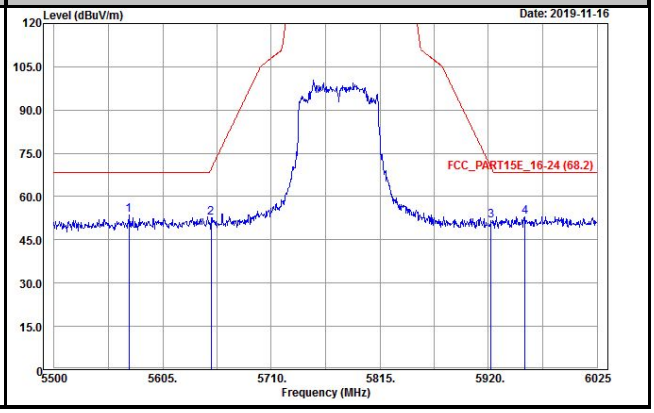
802.11ac (VHT20)

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

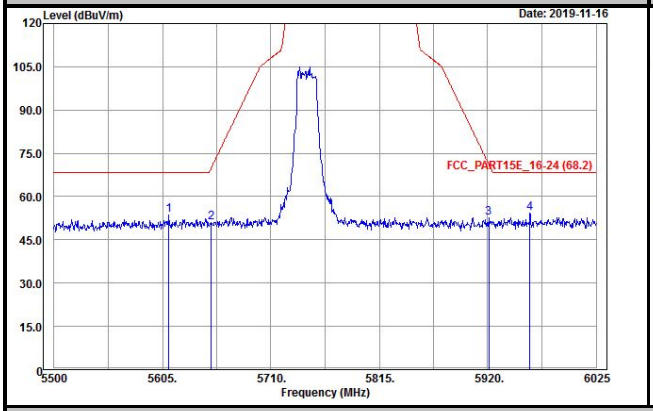
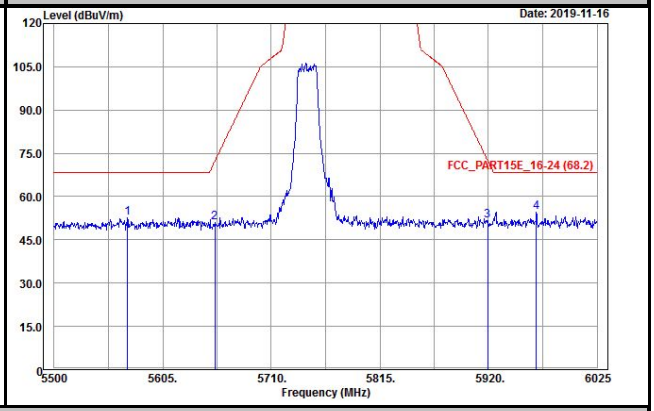
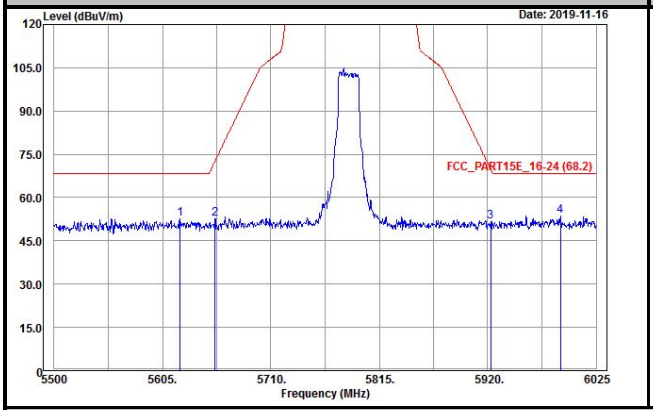
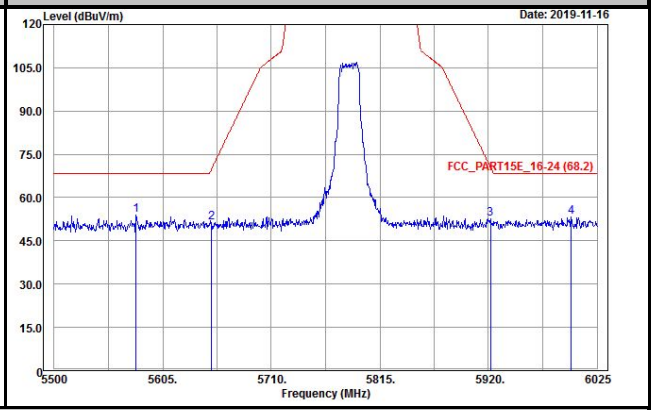
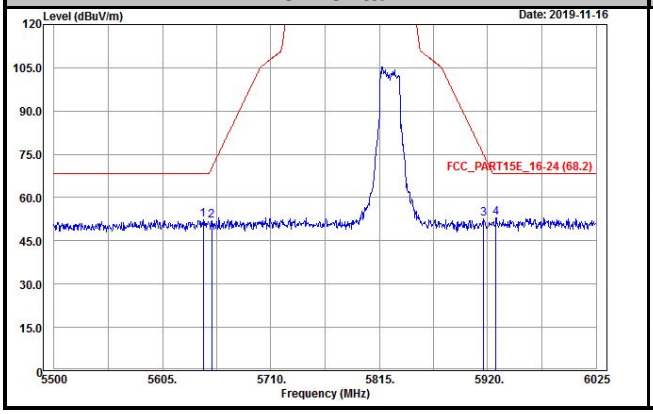
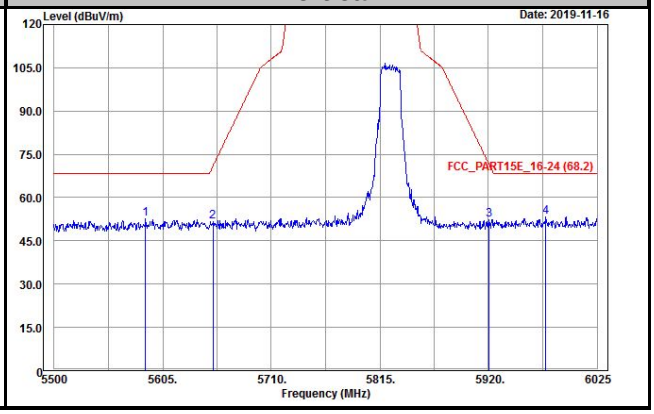
802.11ac (VHT40)

Ch 151	
Horizontal	Vertical
	
Ch 159	
Horizontal	Vertical
	

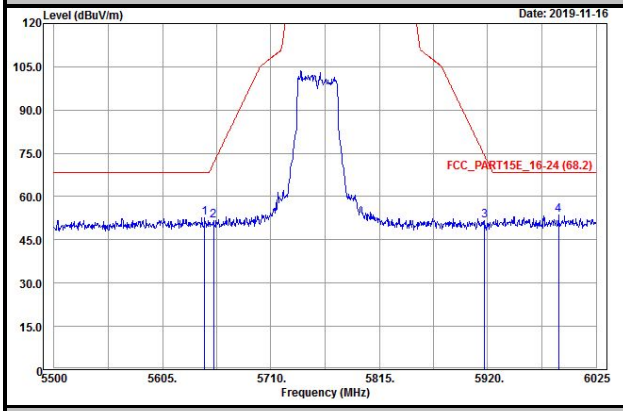
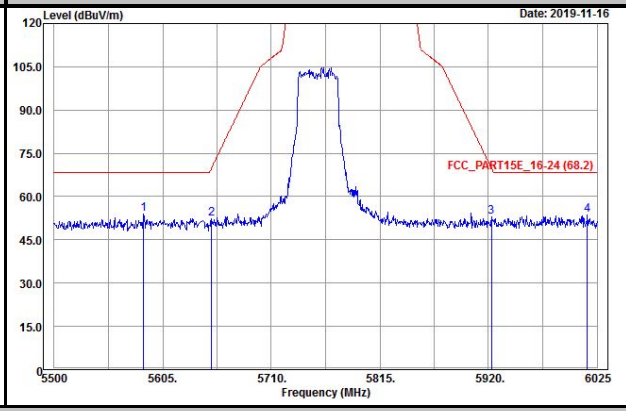
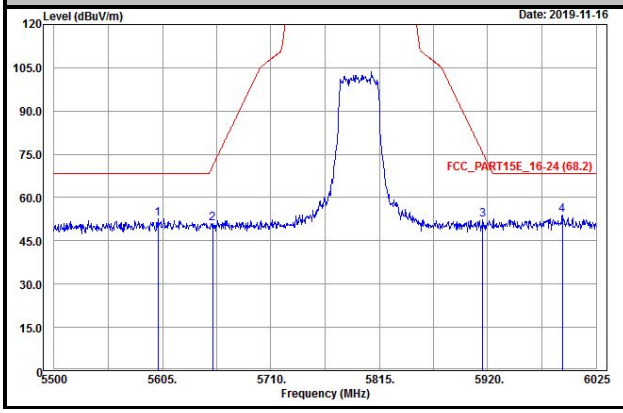
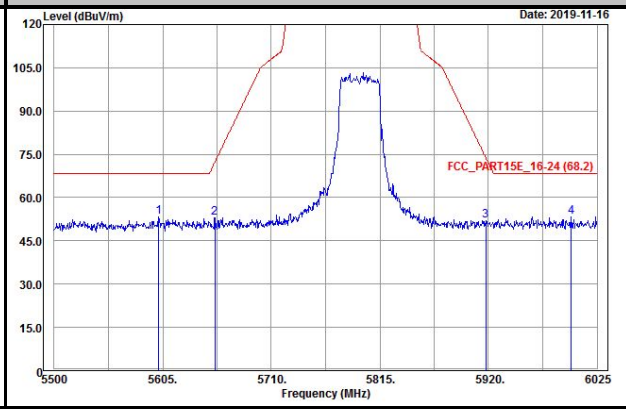
802.11ac (VHT80)

Ch 155	
Horizontal	Vertical
	

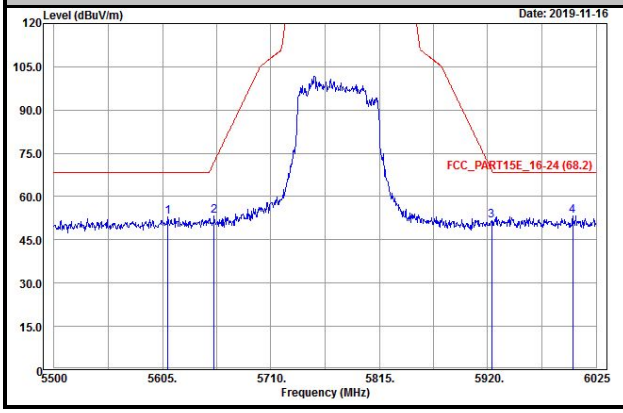
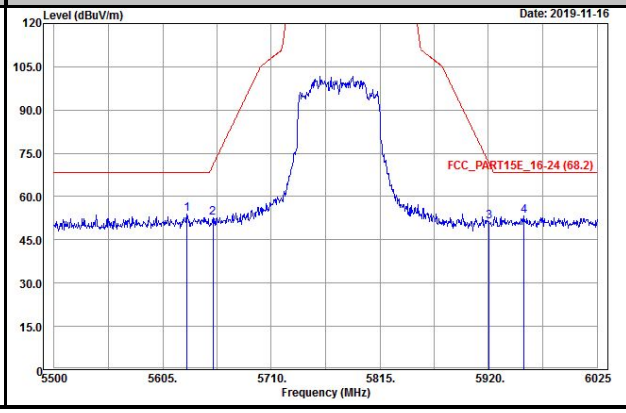
802.11ax (HE20)

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

802.11ax (HE40)

Ch 151	
Horizontal	Vertical
	
Ch 159	
Horizontal	Vertical
	

802.11ax (HE80)

Ch 155	
Horizontal	Vertical
	

Appendix – Information of the Testing Laboratories

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

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

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

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