FCC Test Report

Report No.:	RF191125C08-4
FCC ID:	I4L-LAVIEHAAX200
Test Model:	PC-HA97GRAW
Received Date:	Nov. 25, 2019
Test Date:	Dec. 09, 2019 ~ Jan. 05, 2020
Issued Date:	Jan. 17, 2020
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
RF191125C08-4	Original Release	Jan. 17, 2020

1 Certificate of Conformity

Product:	AIO PC
Brand:	NEC
Test Model:	PC-HA97GRAW
Sample Status:	Mass product
Applicant:	Micro-Star International Co., Ltd.
Test Date:	Dec. 09, 2019 ~ Jan. 05, 2020
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

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

Prepared by : _____ , **Date:** Jan. 17, 2020

Gina Liu / Specialist

Approved by : _____ , **Date:** Jan. 17, 2020

Dylan Chiou / Senior Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	**Test Item**	**Result**	**Remarks**
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -15.5 dB at 0.15225 MHz and 0.15 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 -1.52 dB at 5142.5 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	AIO PC
Brand	NEC
Test Model	PC-HA97GRAW
Status of EUT	Mass product
Power Supply Rating	20.0 Vdc (adapter)
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 300.0 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), 802.11ax (HE20) 2 for 802.11n (HT40), 802.11ax (HE40) 1 for 802.11ac (VHT80), 802.11ax (HE80) 5250 ~ 5320 MHz: 4 for 802.11a, 802.11n (HT20), 802.11ax (HE20) 2 for 802.11n (HT40), 802.11ax (HE40) 1 for 802.11ac (VHT80), 802.11ax (HE80) 1 for 802.11ac (VHT160), 802.11ax (HE160) 5500 ~ 5720 MHz: 11 for 802.11a 12 for 802.11n (HT20), 802.11ax (HE20) 6 for 802.11n (HT40), 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), 802.11ax (HE20) 2 for 802.11n (HT40), 802.11ax (HE40) 1 for 802.11ac (VHT80), 802.11ax (HE80)
Output Power	183.262 mW for 5180 ~ 5240 MHz 176.227 mW for 5250 ~ 5320 MHz 208.241 mW for 5500 ~ 5720 MHz 200.693 mW for 5745 ~ 5825 MHz
Antenna Type	Refer to Note as below
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) / 802.11ax (HE20)	2TX
802.11n (HT40) / 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	ADP-90XD E	I/P: 100-240 Vac, 50-60 Hz, 1.5 A O/P: 20 Vdc, 4.5 A
Keyboard	NEC	KG-1027	3 Vdc, 30 mA
Mouse	NEC	MG-1023	3 Vdc, 50 mA
USB Dongle (for Mouse use)	NEC	RG-1026	5 Vdc, 100 mA
WLAN Module	Intel	AX200NGW	--

3. The antennas information is listed as below.

Antenna Type	Manufacturer	Parts Number	Antenna Gain (dBi)			
			BT / WLAN 2.4 GHz	WLAN 5.15-5.35 GHz	WLAN 5.47-5.725 GHz	WLAN 5.725-5.85 GHz
PIFA	VSO	Tx1 Antenna: 821-101-01211350	-0.36	-0.97	-0.06	-0.22
		Tx2 Antenna: 821-101-01211360	1.52	0.32	-0.19	-0.19

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

3.2 Description of Test Modes

For 5180 ~ 5240 MHz

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

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

2 channels are provided for 802.11n (HT40), 802.11ax (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

11 channels are provided for 802.11a:

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		

12 channels are provided for 802.11a, 802.11n (HT20), 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), 802.11ax (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), 802.11ax (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), 802.11ax (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
-		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	6.5
-		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	13.5
-		802.11ac (VHT80)	42	42	OFDM	BPSK	29.3
-		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
-		802.11n (HT20)	52 to 64	52, 60, 64	OFDM	BPSK	6.5
-		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	13.5
-		802.11ac (VHT80)	58	58	OFDM	BPSK	29.3
-		802.11ac (VHT160)	50	50	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 140	100, 116, 140	OFDM	BPSK	6.0
-		802.11n (HT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
-		802.11n (HT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
-		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	BPSK	29.3
-		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 134	102, 110, 134	OFDMA	BPSK	MCS0
-		802.11ax (HE80)	106 to 122	106, 122	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
-		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
-		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5
-		802.11ac (VHT80)	155	155	OFDM	BPSK	29.3
-		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)
-	5180-5240	802.11ax (HE80)	42	42	OFDMA	BPSK	MCS0

Power Line Conducted Emission Test:

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

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11ax (HE80)	42	42	OFDMA	BPSK	MCS0

Antenna Port Conducted Measurement:

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

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

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	6.5
-		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	13.5
-		802.11ac (VHT80)	42	42	OFDM	BPSK	29.3
-		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
-		802.11n (HT20)	52 to 64	52, 60, 64	OFDM	BPSK	6.5
-		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	13.5
-		802.11ac (VHT80)	58	58	OFDM	BPSK	29.3
-		802.11ac (VHT160)	50	50	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 140	100, 116, 140	OFDM	BPSK	6.0
-		802.11n (HT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
-		802.11n (HT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
-		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	BPSK	29.3
-		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
-		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
-		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5
-		802.11ac (VHT80)	155	155	OFDM	BPSK	29.3
-		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, Karl Lee
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	120 Vac, 60 Hz	Wayne Lin

3.3 Duty Cycle of Test Signal

MODULATION TYPE: BPSK

802.11a: Duty cycle = 2.086/2.14 = 0.975, Duty factor = 10 * log(1/0.975) = 0.11

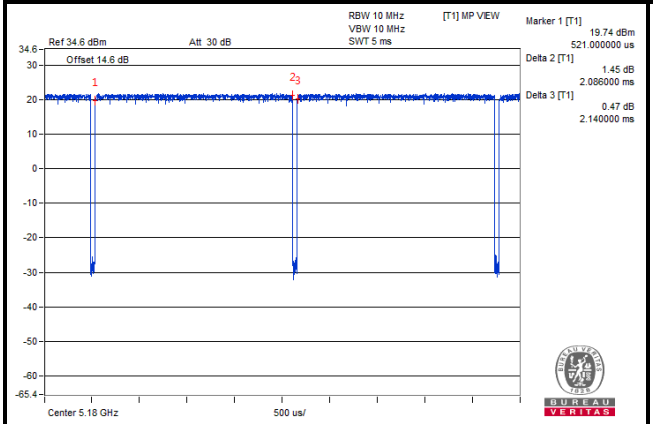
802.11n (HT20): Duty cycle of test signal is ≥ 98 %, duty factor is not required.

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

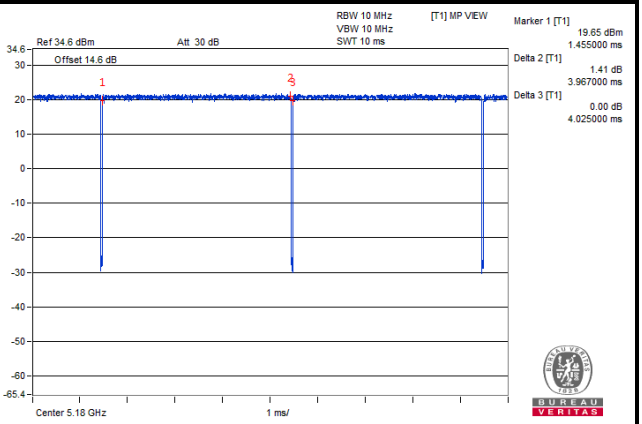
802.11ac (VHT80): Duty cycle of test signal is ≥ 98 %, duty factor is not required.

802.11ac (VHT160): Duty cycle = 2.782/2.874 = 0.968, Duty factor = 10 * log(1/0.968) = 0.14

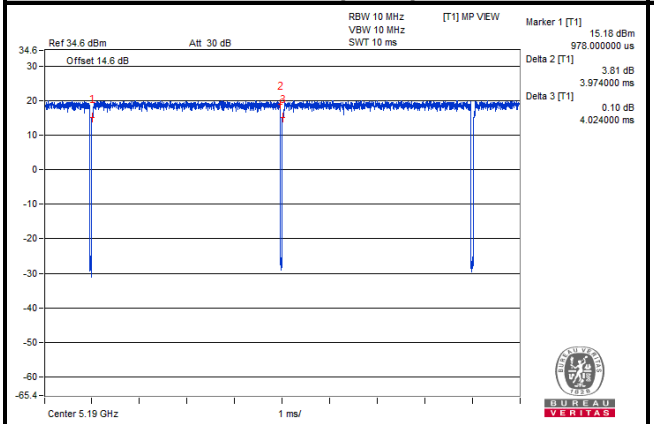
802.11a



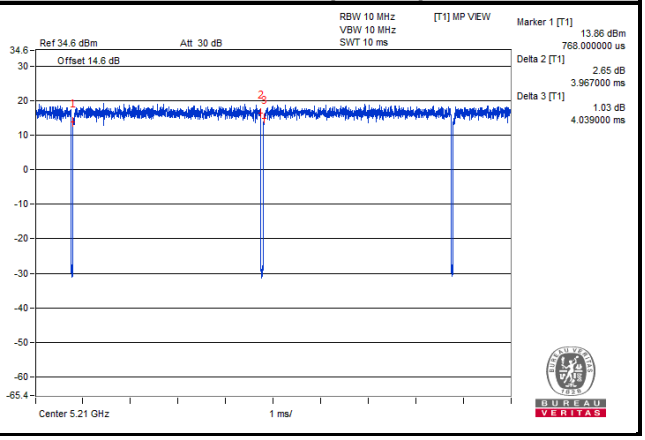
802.11n (HT20)



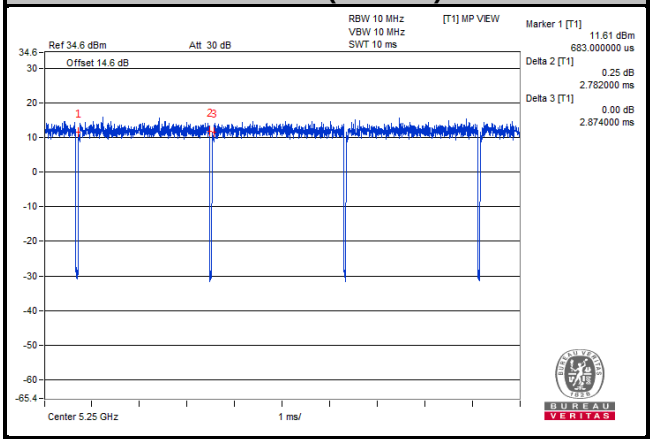
802.11n (HT40)



802.11ac (VHT80)



802.11ac (VHT160)



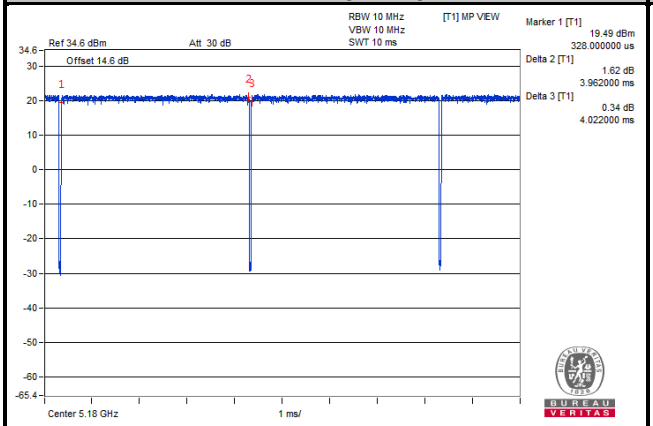
802.11ax (HE20): Duty cycle of test signal is ≥ 98 %, duty factor is not required.

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

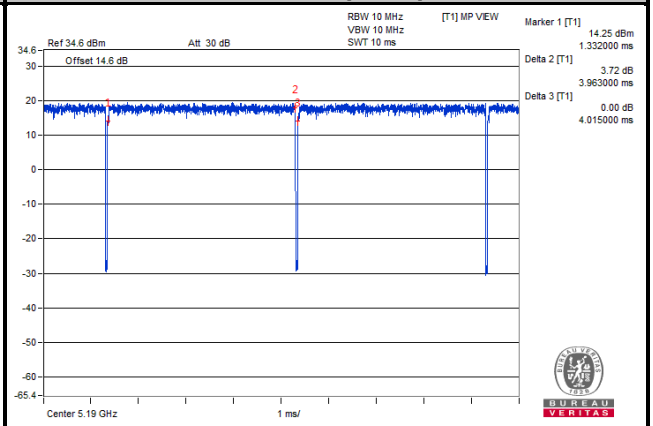
802.11ax (HE80): Duty cycle of test signal is ≥ 98 %, duty factor is not required.

802.11ax (HE160): Duty cycle = 2.782/2.874 = 0.968, Duty factor = 10 * log(1/0.968) = 0.14

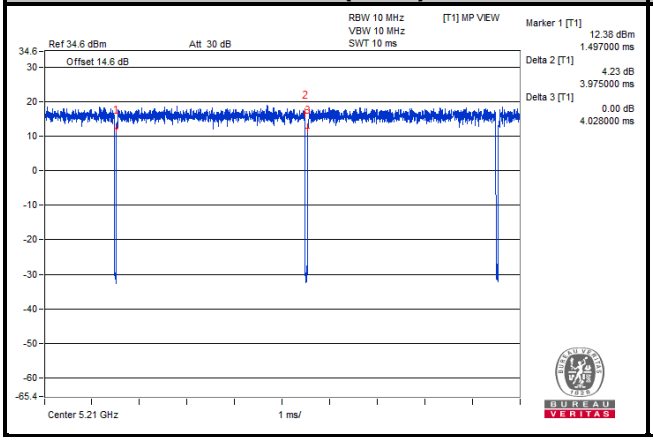
802.11ax (HE20)



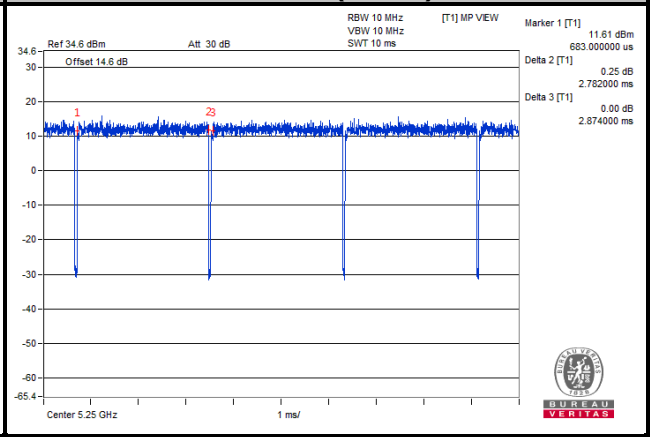
802.11ax (HE40)



802.11ax (HE80)



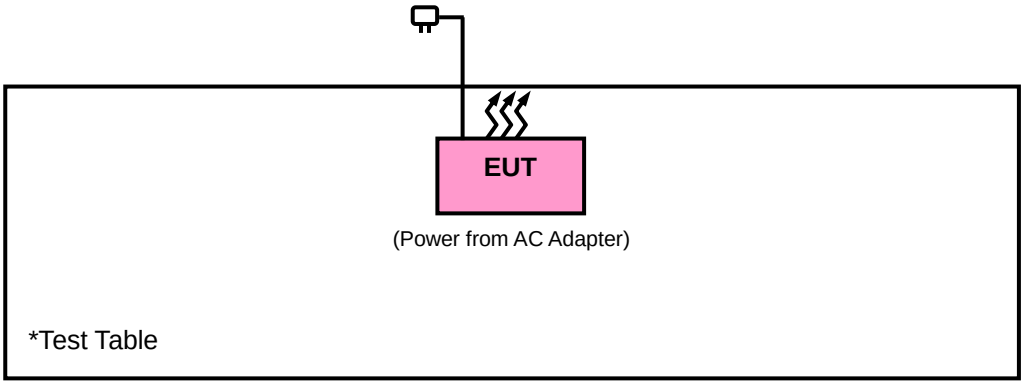
802.11ax (HE160)



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. 12, 2019	Nov. 11, 2020
HORN Antenna ETS-Lindgren	3117	00143293	Nov. 24, 2019	Nov. 23, 2020
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Nov. 24, 2019	Nov. 23, 2020
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:

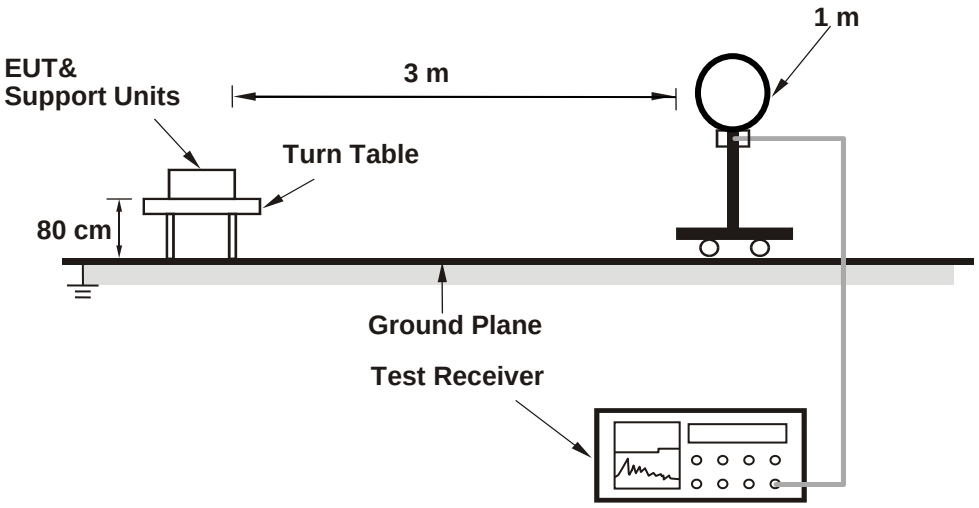
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) 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 ; 802.11n (HT20): RBW = 1 MHz, VBW = 10 Hz ; 802.11n (HT40): RBW = 1 MHz, VBW = 10 Hz; 11ac (VHT80): RBW = 1 MHz, VBW = 10 Hz; 11ac (VHT160): RBW = 1 MHz, VBW = 1 kHz; 11ax (HE20): RBW = 1 MHz, VBW = 10 Hz ; 11ax (HE40): RBW = 1 MHz, VBW = 10 Hz; 11ax (HE80): RBW = 1 MHz, VBW = 10 Hz; 11ax (HE160): RBW = 1 MHz, VBW = 1 kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 Deviation from Test Standard

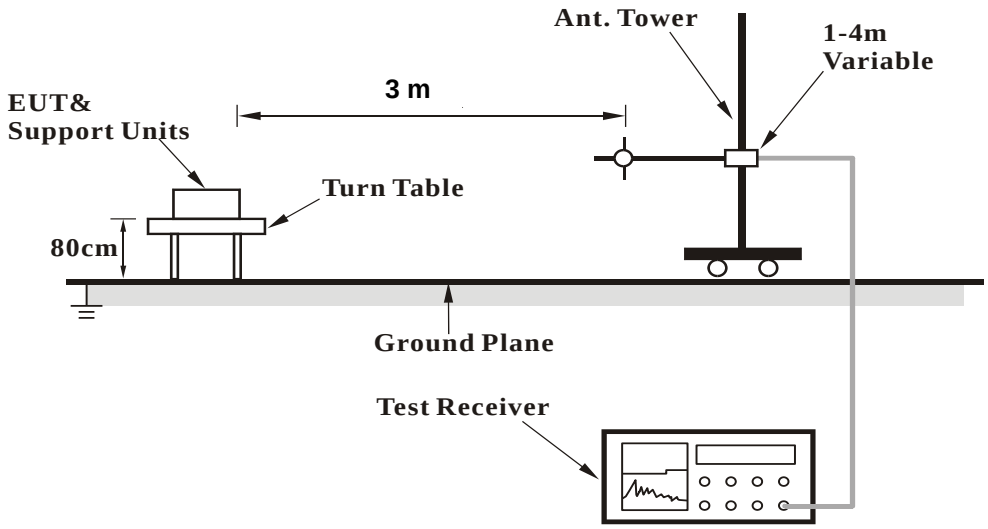
No deviation.

4.1.6 Test Setup

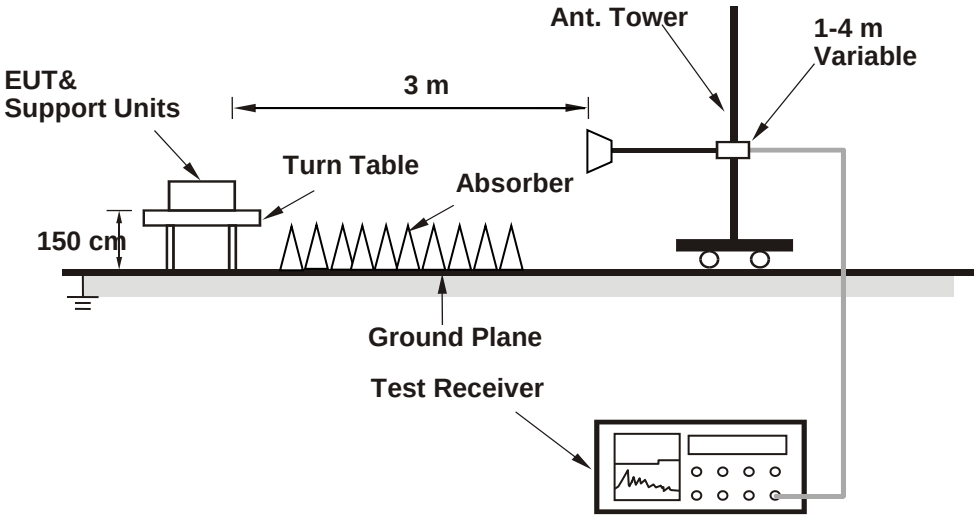
<Radiated Emission below 30 MHz>



<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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5149.7	45.08	35.03	54	-8.92	10.05	195	155	Average
5149.7	55.61	45.56	74	-18.39	10.05	195	155	Peak
5180	101.25	91.13			10.12	195	155	Average
5180	108.53	98.41			10.12	195	155	Peak
*10360	54.65	38.63	68.2	-13.55	16.02	115	345	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	43.26	33.21	54	-10.74	10.05	101	80	Average
5150	52.97	42.92	74	-21.03	10.05	101	80	Peak
5180	97.47	87.35			10.12	101	80	Average
5180	104.5	94.38			10.12	101	80	Peak
*10360	54.47	38.45	68.2	-13.73	16.02	114	174	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5147.75	43.9	33.85	54	-10.1	10.05	195	155	Average
5147.75	54.02	43.97	74	-19.98	10.05	195	155	Peak
5200	103.64	93.48			10.16	195	155	Average
5200	110.47	100.31			10.16	195	155	Peak
5359.02	42.67	32.42	54	-11.33	10.25	195	155	Average
5359.02	52.91	42.66	74	-21.09	10.25	195	155	Peak
*10400	54.91	38.73	68.2	-13.29	16.18	148	114	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5147.6	42.83	32.78	54	-11.17	10.05	101	80	Average
5147.6	53.43	43.38	74	-20.57	10.05	101	80	Peak
5200	99.58	89.42			10.16	101	80	Average
5200	106.71	96.55			10.16	101	80	Peak
5385.2	42.01	31.67	54	-11.99	10.34	101	80	Average
5385.2	52.93	42.59	74	-21.07	10.34	101	80	Peak
*10400	56.12	39.94	68.2	-12.08	16.18	165	336	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	103.67	93.53			10.14	195	155	Average
5240	110.83	100.69			10.14	195	155	Peak
5354.07	42.74	32.51	54	-11.26	10.23	195	155	Average
5354.07	53.15	42.92	74	-20.85	10.23	195	155	Peak
*10480	55.26	39.36	68.2	-12.94	15.9	164	165	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	99.58	89.44			10.14	101	80	Average
5240	106.26	96.12			10.14	101	80	Peak
5362.21	42.33	32.07	54	-11.67	10.26	101	80	Average
5362.21	53.3	43.04	74	-20.7	10.26	101	80	Peak
*10480	55.64	39.74	68.2	-12.56	15.9	117	168	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5143.7	42.67	32.64	54	-11.33	10.03	195	155	Average
5143.7	52.6	42.57	74	-21.4	10.03	195	155	Peak
5260	103.55	93.43			10.12	195	155	Average
5260	110.47	100.35			10.12	195	155	Peak
*10520	55.15	39.27	68.2	-13.05	15.88	100	100	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5144.45	42.23	32.18	54	-11.77	10.05	101	80	Average
5144.45	53.24	43.19	74	-20.76	10.05	101	80	Peak
5260	100.54	90.42			10.12	101	80	Average
5260	107.1	96.98			10.12	101	80	Peak
*10520	55.14	39.26	68.2	-13.06	15.88	155	285	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5135.15	42.46	32.46	54	-11.54	10	195	155	Average
5135.15	52.91	42.91	74	-21.09	10	195	155	Peak
5300	103.64	93.58			10.06	195	155	Average
5300	110.26	100.2			10.06	195	155	Peak
5351.76	44.8	34.57	54	-9.2	10.23	195	155	Average
5351.76	56.13	45.9	74	-17.87	10.23	195	155	Peak
10600	47.39	31.63	54	-6.61	15.76	152	25	Average
10600	55.28	39.52	74	-18.72	15.76	152	25	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5130.5	42.12	32.12	54	-11.88	10	101	80	Average
5130.5	52.68	42.68	74	-21.32	10	101	80	Peak
5300	100.47	90.41			10.06	101	80	Average
5300	107.01	96.95			10.06	101	80	Peak
5350	43.14	32.91	54	-10.86	10.23	101	80	Average
5350	53.49	43.26	74	-20.51	10.23	101	80	Peak
10600	47.21	31.45	54	-6.79	15.76	187	118	Average
10600	56.24	40.48	74	-17.76	15.76	187	118	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	99.87	89.78			10.09	195	155	Average
5320	106.79	96.7			10.09	195	155	Peak
5350.33	46.23	36	54	-7.77	10.23	195	155	Average
5350.33	55.31	45.08	74	-18.69	10.23	195	155	Peak
10640	47.51	31.52	54	-6.49	15.99	165	55	Average
10640	54.66	38.67	74	-19.34	15.99	165	55	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	96.45	86.36			10.09	101	80	Average
5320	103.7	93.61			10.09	101	80	Peak
5350.11	43.54	33.31	54	-10.46	10.23	101	80	Average
5350.11	53.54	43.31	74	-20.46	10.23	101	80	Peak
10640	47.44	31.45	54	-6.56	15.99	134	310	Average
10640	54.69	38.7	74	-19.31	15.99	134	310	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.6	45.84	35.33	54	-8.16	10.51	216	148	Average
5459.6	55.38	44.87	74	-18.62	10.51	216	148	Peak
*5469.52	56.37	45.84	68.2	-11.83	10.53	216	148	Peak
5500	101.47	90.87			10.6	216	148	Average
5500	108.99	98.39			10.6	216	148	Peak
11000	47.65	31.52	54	-6.35	16.13	165	285	Average
11000	55.36	39.23	74	-18.64	16.13	165	285	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.92	43.63	33.12	54	-10.37	10.51	100	123	Average
5459.92	54.25	43.74	74	-19.75	10.51	100	123	Peak
*5469.52	55.61	45.08	68.2	-12.59	10.53	100	123	Peak
5500	99.54	88.94			10.6	100	123	Average
5500	106.22	95.62			10.6	100	123	Peak
11000	47.7	31.57	54	-6.3	16.13	164	174	Average
11000	56.3	40.17	74	-17.7	16.13	164	174	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5450.48	42.29	31.78	54	-11.71	10.51	216	148	Average
5450.48	52.98	42.47	74	-21.02	10.51	216	148	Peak
*5470	51.43	40.9	68.2	-16.77	10.53	216	148	Peak
5580	103.65	92.94			10.71	216	148	Average
5580	110.78	100.07			10.71	216	148	Peak
*5725.64	51.16	40.24	68.2	-17.04	10.92	216	148	Peak
11160	47.99	31.63	54	-6.01	16.36	174	154	Average
11160	57.58	41.22	74	-16.42	16.36	174	154	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5453.68	42.04	31.53	54	-11.96	10.51	100	123	Average
5453.68	53.02	42.51	74	-20.98	10.51	100	123	Peak
*5469.04	50.99	40.46	68.2	-17.21	10.53	100	123	Peak
5580	101.74	91.03			10.71	100	123	Average
5580	108.76	98.05			10.71	100	123	Peak
*5725.08	52.11	41.19	68.2	-16.09	10.92	100	123	Peak
11160	47.9	31.54	54	-6.1	16.36	215	225	Average
11160	56.22	39.86	74	-17.78	16.36	215	225	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	100.57	89.62			10.95	216	148	Average
5700	107.67	96.72			10.95	216	148	Peak
*5725.96	55.46	44.54	68.2	-12.74	10.92	216	148	Peak
11400	47.69	31.5	54	-6.31	16.19	118	274	Average
11400	55.59	39.4	74	-18.41	16.19	118	274	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	98.5	87.55			10.95	100	123	Average
5700	105.36	94.41			10.95	100	123	Peak
*5725	57.68	46.76	68.2	-10.52	10.92	100	123	Peak
11400	47.75	31.56	54	-6.25	16.19	112	274	Average
11400	55.72	39.53	74	-18.28	16.19	112	274	Peak

Remarks:

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

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

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	103.65	92.77			10.88	100	84	Average
5745	110.44	99.56			10.88	100	84	Peak
11490	47.61	31.14	54	-6.39	16.47	189	3	Average
11490	57.57	41.1	74	-16.43	16.47	189	3	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	102.54	91.66			10.88	100	106	Average
5745	109.11	98.23			10.88	100	106	Peak
11490	48.03	31.56	54	-5.97	16.47	125	185	Average
11490	56.92	40.45	74	-17.08	16.47	125	185	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5604.475	52.98	42.23	68.2	-15.22	10.75	100	84	Peak
5655.4	49.82	38.95	72.2	-22.38	10.87	100	84	Peak
5922.625	50.37	39.26	69.96	-19.59	11.11	100	84	Peak
*5963.575	53.63	42.4	68.2	-14.57	11.23	100	84	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5551.45	52.97	42.29	68.2	-15.23	10.68	100	106	Peak
5656.975	52.18	41.31	73.36	-21.18	10.87	100	106	Peak
5916.85	52.11	41.02	74.23	-22.12	11.09	100	106	Peak
*5986.15	52.74	41.45	68.2	-15.46	11.29	100	106	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	103.69	92.88			10.81	100	84	Average
5785	110.79	99.98			10.81	100	84	Peak
11570	48.08	31.59	54	-5.92	16.49	165	25	Average
11570	56.87	40.38	74	-17.13	16.49	165	25	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	102.14	91.33			10.81	100	106	Average
5785	109.2	98.39			10.81	100	106	Peak
11570	47.97	31.48	54	-6.03	16.49	148	44	Average
11570	57.39	40.9	74	-16.61	16.49	148	44	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5609.2	52.88	42.13	68.2	-15.32	10.75	100	84	Peak
5654.35	51.17	40.3	71.42	-20.25	10.87	100	84	Peak
5920	50.45	39.36	71.9	-21.45	11.09	100	84	Peak
*5978.8	52.99	41.73	68.2	-15.21	11.26	100	84	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5580.325	52.75	42.04	68.2	-15.45	10.71	100	106	Peak
5655.4	51.89	41.02	72.2	-20.31	10.87	100	106	Peak
5922.1	50.57	39.46	70.35	-19.78	11.11	100	106	Peak
*5999.8	53.55	42.22	68.2	-14.65	11.33	100	106	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	104.47	93.59			10.88	100	84	Average
5825	111.06	100.18			10.88	100	84	Peak
11650	48.47	31.69	54	-5.53	16.78	184	178	Average
11650	56.95	40.17	74	-17.05	16.78	184	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**
5825	103.52	92.64			10.88	100	106	Average
5825	110.41	99.53			10.88	100	106	Peak
11650	48.27	31.49	54	-5.73	16.78	154	320	Average
11650	56.77	39.99	74	-17.23	16.78	154	320	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5641.225	54.11	43.28	68.2	-14.09	10.83	100	84	Peak
5653.825	51.87	41	71.03	-19.16	10.87	100	84	Peak
5916.325	52.6	41.51	74.62	-22.02	11.09	100	84	Peak
*5956.225	53.51	42.3	68.2	-14.69	11.21	100	84	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5601.85	52.8	42.04	68.2	-15.4	10.76	100	106	Peak
5655.4	51.24	40.37	72.2	-20.96	10.87	100	106	Peak
5915.8	51.72	40.63	75.01	-23.29	11.09	100	106	Peak
*5949.4	52.93	41.75	68.2	-15.27	11.18	100	106	Peak

Remarks:

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

802.11n (HT20)

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148.8	46.62	36.57	54	-7.38	10.05	140	198	Average
5148.8	55.77	45.72	74	-18.23	10.05	140	198	Peak
5180	105.56	95.44			10.12	140	198	Average
5180	112.4	102.28			10.12	140	198	Peak
*10360	55.58	39.56	68.2	-12.62	16.02	186	105	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148.35	43.91	33.86	54	-10.09	10.05	102	238	Average
5148.35	54	43.95	74	-20	10.05	102	238	Peak
5180	100.54	90.42			10.12	102	238	Average
5180	107.61	97.49			10.12	102	238	Peak
*10360	54.77	38.75	68.2	-13.43	16.02	148	217	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148.65	44.27	34.22	54	-9.73	10.05	140	198	Average
5148.65	54.42	44.37	74	-19.58	10.05	140	198	Peak
5200	106.59	96.43			10.16	140	198	Average
5200	113.2	103.04			10.16	140	198	Peak
5355.94	42.77	32.54	54	-11.23	10.23	140	198	Average
5355.94	53.01	42.78	74	-20.99	10.23	140	198	Peak
*10400	54.69	38.51	68.2	-13.51	16.18	190	66	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5144.45	43	32.95	54	-11	10.05	102	238	Average
5144.45	53.26	43.21	74	-20.74	10.05	102	238	Peak
5200	101.49	91.33			10.16	102	238	Average
5200	108.38	98.22			10.16	102	238	Peak
5368.48	42.06	31.8	54	-11.94	10.26	102	238	Average
5368.48	53.1	42.84	74	-20.9	10.26	102	238	Peak
*10400	55.32	39.14	68.2	-12.88	16.18	125	86	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	105.54	95.4			10.14	140	198	Average
5240	112.84	102.7			10.14	140	198	Peak
5351.98	42.9	32.67	54	-11.1	10.23	140	198	Average
5351.98	53.34	43.11	74	-20.66	10.23	140	198	Peak
*10480	54.38	38.48	68.2	-13.82	15.9	135	137	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	100.74	90.6			10.14	102	238	Average
5240	107.57	97.43			10.14	102	238	Peak
5367.6	42.15	31.89	54	-11.85	10.26	102	238	Average
5367.6	53.01	42.75	74	-20.99	10.26	102	238	Peak
*10480	53.57	37.67	68.2	-14.63	15.9	181	243	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5144.3	42.69	32.64	54	-11.31	10.05	139	194	Average
5144.3	53.38	43.33	74	-20.62	10.05	139	194	Peak
5260	105.56	95.44			10.12	139	194	Average
5260	112.54	102.42			10.12	139	194	Peak
*10520	56.12	40.24	68.2	-12.08	15.88	187	7	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5130.95	42.08	32.08	54	-11.92	10	102	238	Average
5130.95	52.66	42.66	74	-21.34	10	102	238	Peak
5260	102.41	92.29			10.12	102	238	Average
5260	109.78	99.66			10.12	102	238	Peak
*10520	54.76	38.88	68.2	-13.44	15.88	118	354	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5140.7	42.46	32.45	54	-11.54	10.01	139	194	Average
5140.7	52.64	42.63	74	-21.36	10.01	139	194	Peak
5300	105.6	95.54			10.06	139	194	Average
5300	112.34	102.28			10.06	139	194	Peak
5350	46.06	35.83	54	-7.94	10.23	139	194	Average
5350	57.27	47.04	74	-16.73	10.23	139	194	Peak
10600	47.32	31.56	54	-6.68	15.76	198	8	Average
10600	55.01	39.25	74	-18.99	15.76	198	8	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5136.95	42.03	32.03	54	-11.97	10	102	238	Average
5136.95	52.62	42.62	74	-21.38	10	102	238	Peak
5300	102.25	92.19			10.06	102	238	Average
5300	109.42	99.36			10.06	102	238	Peak
5350	42.81	32.58	54	-11.19	10.23	102	238	Average
5350	52.67	42.44	74	-21.33	10.23	102	238	Peak
10600	47.21	31.45	54	-6.79	15.76	113	198	Average
10600	54.59	38.83	74	-19.41	15.76	113	198	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	103.35	93.26			10.09	139	194	Average
5320	110.78	100.69			10.09	139	194	Peak
5350.11	46.67	36.44	54	-7.33	10.23	139	194	Average
5350.11	54.23	44	74	-19.77	10.23	139	194	Peak
10640	47.58	31.59	54	-6.42	15.99	118	164	Average
10640	55	39.01	74	-19	15.99	118	164	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	99.3	89.21			10.09	102	238	Average
5320	106.42	96.33			10.09	102	238	Peak
5351.21	44.28	34.05	54	-9.72	10.23	102	238	Average
5351.21	53.14	42.91	74	-20.86	10.23	102	238	Peak
10640	47.57	31.58	54	-6.43	15.99	115	310	Average
10640	55.18	39.19	74	-18.82	15.99	115	310	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5458.64	45.5	34.99	54	-8.5	10.51	192	187	Average
5458.64	55.68	45.17	74	-18.32	10.51	192	187	Peak
*5469.52	54.41	43.88	68.2	-13.79	10.53	192	187	Peak
5500	104.7	94.1			10.6	192	187	Average
5500	112.54	101.94			10.6	192	187	Peak
11000	45.21	29.08	54	-8.79	16.13	134	86	Average
11000	54.62	38.49	74	-19.38	16.13	134	86	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.76	44.4	33.89	54	-9.6	10.51	127	233	Average
5459.76	53.19	42.68	74	-20.81	10.51	127	233	Peak
*5469.36	54.23	43.7	68.2	-13.97	10.53	127	233	Peak
5500	102.84	92.24			10.6	127	233	Average
5500	110.42	99.82			10.6	127	233	Peak
11000	45.26	29.13	54	-8.74	16.13	125	81	Average
11000	54.72	38.59	74	-19.28	16.13	125	81	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.76	43.91	33.4	54	-10.09	10.51	172	190	Average
5459.76	53.46	42.95	74	-20.54	10.51	172	190	Peak
*5469.68	52.33	41.8	68.2	-15.87	10.53	172	190	Peak
5580	108.01	97.3			10.71	172	190	Average
5580	115.34	104.63			10.71	172	190	Peak
*5725.8	52.4	41.48	68.2	-15.8	10.92	172	190	Peak
11160	46.83	30.47	54	-7.17	16.36	139	357	Average
11160	56.59	40.23	74	-17.41	16.36	139	357	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5450.16	43.15	32.64	54	-10.85	10.51	127	233	Average
5450.16	53.18	42.67	74	-20.82	10.51	127	233	Peak
*5469.04	50.79	40.26	68.2	-17.41	10.53	127	233	Peak
5580	103.51	92.8			10.71	127	233	Average
5580	110.68	99.97			10.71	127	233	Peak
*5725	51.89	40.97	68.2	-16.31	10.92	127	233	Peak
11160	46.79	30.43	54	-7.21	16.36	130	46	Average
11160	56.45	40.09	74	-17.55	16.36	130	46	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	105.18	94.23			10.95	232	190	Average
5700	112.81	101.86			10.95	232	190	Peak
*5725.32	60.84	49.92	68.2	-7.36	10.92	232	190	Peak
11400	45.84	29.65	54	-8.16	16.19	173	325	Average
11400	55.67	39.48	74	-18.33	16.19	173	325	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	99.83	88.88			10.95	127	233	Average
5700	108.67	97.72			10.95	127	233	Peak
*5725	55.95	45.03	68.2	-12.25	10.92	127	233	Peak
11400	45.37	29.18	54	-8.63	16.19	136	221	Average
11400	55.07	38.88	74	-18.93	16.19	136	221	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5434.32	42.98	32.5	54	-11.02	10.48	232	190	Average
5434.32	52.93	42.45	74	-21.07	10.48	232	190	Peak
*5469.36	50.59	40.06	68.2	-17.61	10.53	232	190	Peak
5720	105.58	94.66			10.92	232	190	Average
5720	112.66	101.74			10.92	232	190	Peak
11440	46.23	29.94	54	-7.77	16.29	183	224	Average
11440	55.89	39.6	74	-18.11	16.29	183	224	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5448.56	42.96	32.47	54	-11.04	10.49	127	233	Average
5448.56	53.07	42.58	74	-20.93	10.49	127	233	Peak
*5470	50.94	40.41	68.2	-17.26	10.53	127	233	Peak
5720	101.68	90.76			10.92	127	233	Average
5720	108.78	97.86			10.92	127	233	Peak
11440	46.32	30.03	54	-7.68	16.29	105	83	Average
11440	55.93	39.64	74	-18.07	16.29	105	83	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	106.65	95.77			10.88	100	251	Average
5745	113.8	102.92			10.88	100	251	Peak
11490	47.91	31.44	54	-6.09	16.47	164	2	Average
11490	54.79	38.32	74	-19.21	16.47	164	2	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	104.48	93.6			10.88	100	243	Average
5745	111.94	101.06			10.88	100	243	Peak
11490	48.03	31.56	54	-5.97	16.47	174	185	Average
11490	55.23	38.76	74	-18.77	16.47	174	185	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5588.2	53.25	42.52	68.2	-14.95	10.73	100	251	Peak
5651.2	51.94	41.07	69.09	-17.15	10.87	100	251	Peak
5920.525	51.96	40.87	71.51	-19.55	11.09	100	251	Peak
*5937.85	52.54	41.38	68.2	-15.66	11.16	100	251	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5639.125	53.41	42.58	68.2	-14.79	10.83	100	243	Peak
5654.35	51.62	40.75	71.42	-19.8	10.87	100	243	Peak
5920.525	49.43	38.34	71.51	-22.08	11.09	100	243	Peak
*6004.525	52.52	41.19	68.2	-15.68	11.33	100	243	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	106.64	95.83			10.81	100	251	Average
5785	113	102.19			10.81	100	251	Peak
11570	48.02	31.53	54	-5.98	16.49	164	4	Average
11570	54.6	38.11	74	-19.4	16.49	164	4	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	104.64	93.83			10.81	100	243	Average
5785	111.19	100.38			10.81	100	243	Peak
11570	48.02	31.53	54	-5.98	16.49	164	44	Average
11570	55.03	38.54	74	-18.97	16.49	164	44	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5612.875	53.9	43.13	68.2	-14.3	10.77	100	251	Peak
5654.35	53.23	42.36	71.42	-18.19	10.87	100	251	Peak
5916.325	51.26	40.17	74.62	-23.36	11.09	100	251	Peak
*5925.25	52.63	41.52	68.2	-15.57	11.11	100	251	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5576.65	52.87	42.14	68.2	-15.33	10.73	100	243	Peak
5657.5	49.65	38.78	73.75	-24.1	10.87	100	243	Peak
5920.525	50.21	39.12	71.51	-21.3	11.09	100	243	Peak
*6005.05	53.12	41.79	68.2	-15.08	11.33	100	243	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	106.64	95.76			10.88	100	251	Average
5825	113.47	102.59			10.88	100	251	Peak
11650	48.42	31.64	54	-5.58	16.78	116	66	Average
11650	55.32	38.54	74	-18.68	16.78	116	66	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	104.48	93.6			10.88	100	243	Average
5825	111.38	100.5			10.88	100	243	Peak
11650	48.32	31.54	54	-5.68	16.78	164	285	Average
11650	54.93	38.15	74	-19.07	16.78	164	285	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5577.7	53.38	42.67	68.2	-14.82	10.71	100	251	Peak
5659.075	53.77	42.9	74.92	-21.15	10.87	100	251	Peak
5917.9	53.14	42.05	73.45	-20.31	11.09	100	251	Peak
*5983	53.2	41.94	68.2	-15	11.26	100	251	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5637.55	54.18	43.35	68.2	-14.02	10.83	100	243	Peak
5660.65	53.71	42.84	76.08	-22.37	10.87	100	243	Peak
5918.425	52.58	41.49	73.07	-20.49	11.09	100	243	Peak
*5959.375	52.69	41.48	68.2	-15.51	11.21	100	243	Peak

Remarks:

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

802.11n (HT40)

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148.2	49.4	39.35	54	-4.6	10.05	140	198	Average
5148.2	58.96	48.91	74	-15.04	10.05	140	198	Peak
5190	101.26	91.14			10.12	140	198	Average
5190	108.04	97.92			10.12	140	198	Peak
5354.29	43.08	32.85	54	-10.92	10.23	140	198	Average
5354.29	53.68	43.45	74	-20.32	10.23	140	198	Peak
*10380	54.95	38.85	68.2	-13.25	16.1	151	82	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148.5	45.83	35.78	54	-8.17	10.05	102	238	Average
5148.5	56.09	46.04	74	-17.91	10.05	102	238	Peak
5190	96.58	86.46			10.12	102	238	Average
5190	103.79	93.67			10.12	102	238	Peak
5368.04	42.05	31.79	54	-11.95	10.26	102	238	Average
5368.04	53.19	42.93	74	-20.81	10.26	102	238	Peak
*10380	54.59	38.49	68.2	-13.61	16.1	185	326	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5149.1	47.05	37	54	-6.95	10.05	140	198	Average
5149.1	57.34	47.29	74	-16.66	10.05	140	198	Peak
5230	102.58	92.44			10.14	140	198	Average
5230	109.49	99.35			10.14	140	198	Peak
5350.77	43.53	33.3	54	-10.47	10.23	140	198	Average
5350.77	53.2	42.97	74	-20.8	10.23	140	198	Peak
*10460	54.12	38.12	68.2	-14.08	16	139	56	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	44.36	34.31	54	-9.64	10.05	102	238	Average
5150	54.56	44.51	74	-19.44	10.05	102	238	Peak
5230	97.58	87.44			10.14	102	238	Average
5230	104.31	94.17			10.14	102	238	Peak
5359.35	42.27	32.02	54	-11.73	10.25	102	238	Average
5359.35	52.71	42.46	74	-21.29	10.25	102	238	Peak
*10460	54.01	38.01	68.2	-14.19	16	146	24	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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5142.8	42.72	32.69	54	-11.28	10.03	139	194	Average
5142.8	53.23	43.2	74	-20.77	10.03	139	194	Peak
5270	101.44	91.32			10.12	139	194	Average
5270	108.65	98.53			10.12	139	194	Peak
5350.44	46.58	36.35	54	-7.42	10.23	139	194	Average
5350.44	56.56	46.33	74	-17.44	10.23	139	194	Peak
*10540	54.63	38.8	68.2	-13.57	15.83	165	3	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5109.95	42.37	32.41	54	-11.63	9.96	102	238	Average
5109.95	52.92	42.96	74	-21.08	9.96	102	238	Peak
5270	98.59	88.47			10.12	102	238	Average
5270	105.88	95.76			10.12	102	238	Peak
5351.1	43.54	33.31	54	-10.46	10.23	102	238	Average
5351.1	54.02	43.79	74	-19.98	10.23	102	238	Peak
*10540	54.55	38.72	68.2	-13.65	15.83	187	227	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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5126.6	42.18	32.18	54	-11.82	10	139	194	Average
5126.6	52.43	42.43	74	-21.57	10	139	194	Peak
5310	98.55	88.46			10.09	139	194	Average
5310	105.64	95.55			10.09	139	194	Peak
5350.66	46.22	35.99	54	-7.78	10.23	139	194	Average
5350.66	54.35	44.12	74	-19.65	10.23	139	194	Peak
10620	47.46	31.58	54	-6.54	15.88	187	199	Average
10620	53.97	38.09	74	-20.03	15.88	187	199	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5104.55	41.97	32.04	54	-12.03	9.93	102	253	Average
5104.55	52.87	42.94	74	-21.13	9.93	102	253	Peak
5310	95.49	85.4			10.09	102	253	Average
5310	102.58	92.49			10.09	102	253	Peak
5351.32	43.79	33.56	54	-10.21	10.23	102	253	Average
5351.32	54.1	43.87	74	-19.9	10.23	102	253	Peak
10620	47.51	31.63	54	-6.49	15.88	165	111	Average
10620	54.9	39.02	74	-19.1	15.88	165	111	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	46.73	36.22	54	-7.27	10.51	158	190	Average
5460	58.76	48.25	74	-15.24	10.51	158	190	Peak
*5469.36	57.27	46.74	68.2	-10.93	10.53	158	190	Peak
5510	102.4	91.8			10.6	158	190	Average
5510	109.52	98.92			10.6	158	190	Peak
*5725.08	52.61	41.69	68.2	-15.59	10.92	158	190	Peak
11020	45.26	29.1	54	-8.74	16.16	163	217	Average
11020	54.75	38.59	74	-19.25	16.16	163	217	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	45.22	34.71	54	-8.78	10.51	127	233	Average
5460	54.38	43.87	74	-19.62	10.51	127	233	Peak
*5469.84	54.52	43.99	68.2	-13.68	10.53	127	233	Peak
5510	98.19	87.59			10.6	127	233	Average
5510	105.48	94.88			10.6	127	233	Peak
*5725.24	52.77	41.85	68.2	-15.43	10.92	127	233	Peak
11020	44.89	28.73	54	-9.11	16.16	157	240	Average
11020	54.61	38.45	74	-19.39	16.16	157	240	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.92	49	38.49	54	-5	10.51	172	190	Average
5459.92	58.74	48.23	74	-15.26	10.51	172	190	Peak
*5469.36	57.67	47.14	68.2	-10.53	10.53	172	190	Peak
5550	104.71	94.03			10.68	172	190	Average
5550	111.53	100.85			10.68	172	190	Peak
*5725.08	52.84	41.92	68.2	-15.36	10.92	172	190	Peak
11100	45.69	29.42	54	-8.31	16.27	136	238	Average
11100	55.24	38.97	74	-18.76	16.27	136	238	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.6	46.15	35.64	54	-7.85	10.51	127	233	Average
5459.6	54.44	43.93	74	-19.56	10.51	127	233	Peak
*5469.04	56.42	45.89	68.2	-11.78	10.53	127	233	Peak
5550	101.97	91.29			10.68	127	233	Average
5550	108.49	97.81			10.68	127	233	Peak
*5725.48	51.46	40.54	68.2	-16.74	10.92	127	233	Peak
11100	45.27	29	54	-8.73	16.27	128	265	Average
11100	54.81	38.54	74	-19.19	16.27	128	265	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5440.08	43.19	32.71	54	-10.81	10.48	232	190	Average
5440.08	52.65	42.17	74	-21.35	10.48	232	190	Peak
*5469.84	51.95	41.42	68.2	-16.25	10.53	232	190	Peak
5670	102.32	91.42			10.9	232	190	Average
5670	109.15	98.25			10.9	232	190	Peak
*5725.64	59.54	48.62	68.2	-8.66	10.92	232	190	Peak
11340	45.99	29.57	54	-8.01	16.42	147	268	Average
11340	55.69	39.27	74	-18.31	16.42	147	268	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5445.84	42.96	32.47	54	-11.04	10.49	127	233	Average
5445.84	52.27	41.78	74	-21.73	10.49	127	233	Peak
*5469.68	52.47	41.94	68.2	-15.73	10.53	127	233	Peak
5670	98.09	87.19			10.9	127	233	Average
5670	104.95	94.05			10.9	127	233	Peak
*5725.64	56.18	45.26	68.2	-12.02	10.92	127	233	Peak
11340	45.79	29.37	54	-8.21	16.42	182	112	Average
11340	55.55	39.13	74	-18.45	16.42	182	112	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5455.12	43.05	32.54	54	-10.95	10.51	232	190	Average
5455.12	52.33	41.82	74	-21.67	10.51	232	190	Peak
*5469.52	51.39	40.86	68.2	-16.81	10.53	232	190	Peak
5710	103.7	92.79			10.91	232	190	Average
5710	110.78	99.87			10.91	232	190	Peak
11420	45.84	29.58	54	-8.16	16.26	181	336	Average
11420	55.47	39.21	74	-18.53	16.26	181	336	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.6	43.02	32.51	54	-10.98	10.51	127	233	Average
5459.6	52.56	42.05	74	-21.44	10.51	127	233	Peak
*5469.2	50.84	40.31	68.2	-17.36	10.53	127	233	Peak
5710	99.4	88.49			10.91	127	233	Average
5710	106.61	95.7			10.91	127	233	Peak
11420	45.68	29.42	54	-8.32	16.26	169	307	Average
11420	55.26	39	74	-18.74	16.26	169	307	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**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5755	103.66	92.76			10.9	100	251	Average
5755	110.93	100.03			10.9	100	251	Peak
11510	48.03	31.52	54	-5.97	16.51	174	185	Average
11510	55.27	38.76	74	-18.73	16.51	174	185	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5755	101.26	90.36			10.9	100	243	Average
5755	108.95	98.05			10.9	100	243	Peak
11510	48.05	31.54	54	-5.95	16.51	164	285	Average
11510	55.35	38.84	74	-18.65	16.51	164	285	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5649.1	57.79	46.94	68.2	-10.41	10.85	100	251	Peak
5659.075	61.05	50.18	74.92	-13.87	10.87	100	251	Peak
5916.325	53.2	42.11	74.62	-21.42	11.09	100	251	Peak
*5948.35	52.74	41.56	68.2	-15.46	11.18	100	251	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5650.15	56.07	45.2	68.31	-12.24	10.87	100	243	Peak
5660.125	58.83	47.96	75.69	-16.86	10.87	100	243	Peak
5915.275	52.4	41.31	75.4	-23	11.09	100	243	Peak
*6010.3	52.81	41.46	68.2	-15.39	11.35	100	243	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**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5795	103.48	92.66			10.82	100	251	Average
5795	110.86	100.04			10.82	100	251	Peak
11590	47.95	31.44	54	-6.05	16.51	124	210	Average
11590	55.21	38.7	74	-18.79	16.51	124	210	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5795	101.58	90.76			10.82	100	243	Average
5795	108.96	98.14			10.82	100	243	Peak
11590	48	31.49	54	-6	16.51	141	134	Average
11590	56.16	39.65	74	-17.84	16.51	141	134	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5627.05	52.73	41.94	68.2	-15.47	10.79	100	251	Peak
5652.25	53.93	43.06	69.86	-15.93	10.87	100	251	Peak
5914.75	54.78	43.71	75.78	-21	11.07	100	251	Peak
*5926.825	54.46	43.35	68.2	-13.74	11.11	100	251	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5639.65	53	42.17	68.2	-15.2	10.83	100	243	Peak
5656.975	52.54	41.67	73.36	-20.82	10.87	100	243	Peak
5922.1	52.73	41.62	70.35	-17.62	11.11	100	243	Peak
*5958.85	53.9	42.69	68.2	-14.3	11.21	100	243	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5133.65	50.45	40.45	54	-3.55	10	140	199	Average
5133.65	63.41	53.41	74	-10.59	10	140	199	Peak
5210	98.59	88.42			10.17	140	198	Average
5210	105.38	95.21			10.17	140	198	Peak
5350.44	44.09	33.86	54	-9.91	10.23	140	198	Average
5350.44	55.16	44.93	74	-18.84	10.23	140	198	Peak
*10420	55.32	39.16	68.2	-12.88	16.16	113	67	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5130.95	46.87	36.87	54	-7.13	10	102	238	Average
5130.95	60.58	50.58	74	-13.42	10	102	238	Peak
5210	93.66	83.49			10.17	102	238	Average
5210	100.25	90.08			10.17	102	238	Peak
5358.25	42.67	32.42	54	-11.33	10.25	102	238	Average
5358.25	53.1	42.85	74	-20.9	10.25	102	238	Peak
*10420	55.79	39.63	68.2	-12.41	16.16	127	341	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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148.5	42.53	32.48	54	-11.47	10.05	139	194	Average
5148.5	53.18	43.13	74	-20.82	10.05	139	194	Peak
5290	96.64	86.54			10.1	139	194	Average
5290	103.41	93.31			10.1	139	194	Peak
5350	49.47	39.24	54	-4.53	10.23	139	194	Average
5350	59.15	48.92	74	-14.85	10.23	139	194	Peak
*10580	54.84	39.13	68.2	-13.36	15.71	164	177	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5147.3	42.14	32.09	54	-11.86	10.05	102	253	Average
5147.3	53.04	42.99	74	-20.96	10.05	102	253	Peak
5290	93.64	83.54			10.1	102	253	Average
5290	100.63	90.53			10.1	102	253	Peak
5350.44	46.6	36.37	54	-7.4	10.23	102	253	Average
5350.44	55.93	45.7	74	-18.07	10.23	102	253	Peak
*10580	55.1	39.39	68.2	-13.1	15.71	116	195	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.12	50.51	40	54	-3.49	10.51	158	190	Average
5459.12	63.71	53.2	74	-10.29	10.51	158	190	Peak
*5469.04	60.59	50.06	68.2	-7.61	10.53	158	190	Peak
5530	98.26	87.63			10.63	158	190	Average
5530	105.3	94.67			10.63	158	190	Peak
*5725	53.19	42.27	68.2	-15.01	10.92	158	190	Peak
11060	46.17	29.94	54	-7.83	16.23	121	75	Average
11060	55.62	39.39	74	-18.38	16.23	121	75	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.44	46.37	35.86	54	-7.63	10.51	127	233	Average
5459.44	59.46	48.95	74	-14.54	10.51	127	233	Peak
*5470	58.49	47.96	68.2	-9.71	10.53	127	233	Peak
5530	94.75	52.41			10.63	127	233	Average
5530	101.77	59.43			10.63	127	233	Peak
*5725.4	51.18	40.26	68.2	-17.02	10.92	127	233	Peak
11060	45.63	29.4	54	-8.37	16.23	154	281	Average
11060	55.09	38.86	74	-18.91	16.23	154	281	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5458.64	47.09	36.58	54	-6.91	10.51	172	190	Average
5458.64	56.9	46.39	74	-17.1	10.51	172	190	Peak
*5469.2	55.81	45.28	68.2	-12.39	10.53	172	190	Peak
5610	98.54	87.77			10.77	172	190	Average
5610	107.6	96.83			10.77	172	190	Peak
*5725	62.29	51.37	68.2	-5.91	10.92	172	190	Peak
11220	47.35	30.93	54	-6.65	16.42	106	37	Average
11220	57.06	40.64	74	-16.94	16.42	106	37	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5458.64	44.67	34.16	54	-9.33	10.51	127	233	Average
5458.64	54	43.49	74	-20	10.51	127	233	Peak
*5469.04	54.43	43.9	68.2	-13.77	10.53	127	233	Peak
5610	94.99	84.22			10.77	127	233	Average
5610	103.34	92.57			10.77	127	233	Peak
*5725.96	57.75	46.83	68.2	-10.45	10.92	127	233	Peak
11220	48.31	31.89	54	-5.69	16.42	139	326	Average
11220	57.97	41.55	74	-16.03	16.42	139	326	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5458.16	44.22	33.71	54	-9.78	10.51	232	190	Average
5458.16	53.83	43.32	74	-20.17	10.51	232	190	Peak
*5469.2	54.28	43.75	68.2	-13.92	10.53	232	190	Peak
5690	101.52	90.59			10.93	232	190	Average
5690	108.88	97.95			10.93	232	190	Peak
11380	47.14	30.87	54	-6.86	16.27	190	242	Average
11380	56.9	40.63	74	-17.1	16.27	190	242	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.92	42.61	32.1	54	-11.39	10.51	127	233	Average
5459.92	52.94	42.43	74	-21.06	10.51	127	233	Peak
*5469.2	51.67	41.14	68.2	-16.53	10.53	127	233	Peak
5690	97.26	86.33			10.93	127	233	Average
5690	104.85	93.92			10.93	127	233	Peak
11380	46.57	30.3	54	-7.43	16.27	185	324	Average
11380	56.26	39.99	74	-17.74	16.27	185	324	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**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5775	99.64	88.77			10.87	100	251	Average
5775	106.98	96.11			10.87	100	251	Peak
11550	47.98	31.48	54	-6.02	16.5	189	36	Average
11550	54.94	38.44	74	-19.06	16.5	189	36	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5775	97.58	86.71			10.87	100	243	Average
5775	104.11	93.24			10.87	100	243	Peak
11550	48.08	31.58	54	-5.92	16.5	137	155	Average
11550	55.34	38.84	74	-18.66	16.5	137	155	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5644.9	56.72	45.89	68.2	-11.48	10.83	100	251	Peak
5656.45	56.74	45.87	72.97	-16.23	10.87	100	251	Peak
5918.425	56.09	45	73.07	-16.98	11.09	100	251	Peak
*5935.225	55.27	44.11	68.2	-12.93	11.16	100	251	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5646.475	55.08	44.23	68.2	-13.12	10.85	100	243	Peak
5654.35	56.31	45.44	71.42	-15.11	10.87	100	243	Peak
5921.575	54.93	43.82	70.73	-15.8	11.11	100	243	Peak
*5931.025	55.15	44.04	68.2	-13.05	11.11	100	243	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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5139.35	46.16	36.16	54	-7.84	10	139	194	Average
5139.35	56.99	46.99	74	-17.01	10	139	194	Peak
5250	91.84	81.74			10.1	139	194	Average
5250	98.24	88.14			10.1	139	194	Peak
5402.36	51.16	40.76	54	-2.84	10.4	140	190	Average
5402.36	62.51	52.11	74	-11.49	10.4	140	190	Peak
*10500	55.98	40.15	68.2	-12.22	15.83	140	186	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	43.63	33.58	54	-10.37	10.05	102	253	Average
5150	55.15	45.1	74	-18.85	10.05	102	253	Peak
5250	88.8	78.7			10.1	102	253	Average
5250	95.25	85.15			10.1	102	253	Peak
5382.45	48.94	38.6	54	-5.06	10.34	102	253	Average
5382.45	58	47.66	74	-16	10.34	102	253	Peak
*10500	54.78	38.95	68.2	-13.42	15.83	117	185	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5456.24	47.47	36.96	54	-6.53	10.51	215	190	Average
5456.24	56.88	46.37	74	-17.12	10.51	215	190	Peak
*5469.68	55.46	44.93	68.2	-12.74	10.53	215	190	Peak
5570	91.41	80.71			10.7	215	190	Average
5570	99.05	88.35			10.7	215	190	Peak
*5725.48	61.08	50.16	68.2	-7.12	10.92	215	190	Peak
11140	47.65	31.31	54	-6.35	16.34	196	165	Average
11140	57.22	40.88	74	-16.78	16.34	196	165	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.6	45.15	34.64	54	-8.85	10.51	127	233	Average
5459.6	54.1	43.59	74	-19.9	10.51	127	233	Peak
*5469.52	53.41	42.88	68.2	-14.79	10.53	127	233	Peak
5570	87.68	76.98			10.7	127	233	Average
5570	95.91	85.21			10.7	127	233	Peak
*5725.4	55.75	44.83	68.2	-12.45	10.92	127	233	Peak
11140	47.25	30.91	54	-6.75	16.34	138	253	Average
11140	57.77	41.43	74	-16.23	16.34	138	253	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5149.7	47.01	36.96	54	-6.99	10.05	139	198	Average
5149.7	54.93	44.88	74	-19.07	10.05	139	198	Peak
5180	105.12	95			10.12	139	198	Average
5180	113.26	103.14			10.12	139	198	Peak
*10360	55.05	39.03	68.2	-13.15	16.02	169	314	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	44.57	34.52	54	-9.43	10.05	102	238	Average
5150	55.13	45.08	74	-18.87	10.05	102	238	Peak
5180	101.1	90.98			10.12	102	238	Average
5180	109.53	99.41			10.12	102	238	Peak
*10360	55.03	39.01	68.2	-13.17	16.02	126	148	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	45.31	35.26	54	-8.69	10.05	139	198	Average
5150	53.69	43.64	74	-20.31	10.05	139	198	Peak
5200	106.69	96.53			10.16	139	198	Average
5200	114.34	104.18			10.16	139	198	Peak
5360.67	42.95	32.69	54	-11.05	10.26	139	198	Average
5360.67	53.32	43.06	74	-20.68	10.26	139	198	Peak
*10400	54.92	38.74	68.2	-13.28	16.18	167	236	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5149.25	44.02	33.97	54	-9.98	10.05	102	238	Average
5149.25	52.88	42.83	74	-21.12	10.05	102	238	Peak
5200	101.99	91.83			10.16	102	238	Average
5200	110.5	100.34			10.16	102	238	Peak
5350.11	43.16	32.93	54	-10.84	10.23	102	238	Average
5350.11	52.87	42.64	74	-21.13	10.23	102	238	Peak
*10400	54.72	38.54	68.2	-13.48	16.18	158	124	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	106	95.86			10.14	139	198	Average
5240	111.07	100.93			10.14	139	198	Peak
5353.19	43.86	33.63	54	-10.14	10.23	139	198	Average
5353.19	53.8	43.57	74	-20.2	10.23	139	198	Peak
*10480	55.03	39.13	68.2	-13.17	15.9	145	176	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	106.55	96.41			10.14	102	238	Average
5240	114.7	104.56			10.14	102	238	Peak
5360.89	43.29	33.03	54	-10.71	10.26	102	238	Average
5360.89	53.36	43.1	74	-20.64	10.26	102	238	Peak
*10480	54.98	39.08	68.2	-13.22	15.9	116	79	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5109.8	42.58	32.62	54	-11.42	9.96	139	194	Average
5109.8	53.68	43.72	74	-20.32	9.96	139	194	Peak
5260	104.44	94.32			10.12	139	194	Average
5260	111.17	101.05			10.12	139	194	Peak
*10520	56.09	40.21	68.2	-12.11	15.88	164	118	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5111.6	42.14	32.18	54	-11.86	9.96	102	253	Average
5111.6	52.7	42.74	74	-21.3	9.96	102	253	Peak
5260	101.16	91.04			10.12	102	253	Average
5260	108.02	97.9			10.12	102	253	Peak
*10520	55.88	40	68.2	-12.32	15.88	113	325	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5121.35	42.45	32.48	54	-11.55	9.97	139	194	Average
5121.35	54.58	44.61	74	-19.42	9.97	139	194	Peak
5300	104.36	94.3			10.06	139	194	Average
5300	111.22	101.16			10.06	139	194	Peak
5350.44	44.79	34.56	54	-9.21	10.23	139	194	Average
5350.44	54.92	44.69	74	-19.08	10.23	139	194	Peak
10600	47.33	31.57	54	-6.67	15.76	118	64	Average
10600	55.35	39.59	74	-18.65	15.76	118	64	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5139.2	42.09	32.09	54	-11.91	10	102	253	Average
5139.2	53.11	43.11	74	-20.89	10	102	253	Peak
5300	101.34	91.28			10.06	102	253	Average
5300	108.13	98.07			10.06	102	253	Peak
5351.32	43.68	33.45	54	-10.32	10.23	102	253	Average
5351.32	54.18	43.95	74	-19.82	10.23	102	253	Peak
10600	47.28	31.52	54	-6.72	15.76	117	185	Average
10600	55.46	39.7	74	-18.54	15.76	117	185	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	100.33	90.24			10.09	139	194	Average
5320	107.58	97.49			10.09	139	194	Peak
5350.11	46.08	35.85	54	-7.92	10.23	139	194	Average
5350.11	55.85	45.62	74	-18.15	10.23	139	194	Peak
10640	47.48	31.49	54	-6.52	15.99	144	174	Average
10640	55.46	39.47	74	-18.54	15.99	144	174	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	97.74	87.65			10.09	102	253	Average
5320	104.89	94.8			10.09	102	253	Peak
5350.88	44.24	34.01	54	-9.76	10.23	102	253	Average
5350.88	53.79	43.56	74	-20.21	10.23	102	253	Peak
10640	47.61	31.62	54	-6.39	15.99	185	247	Average
10640	55.19	39.2	74	-18.81	15.99	185	247	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	45.79	35.28	54	-8.21	10.51	192	187	Average
5460	54.41	43.9	74	-19.59	10.51	192	187	Peak
*5469.2	55.98	45.45	68.2	-12.22	10.53	192	187	Peak
5500	104.29	93.69			10.6	192	187	Average
5500	114.38	103.78			10.6	192	187	Peak
11000	44.87	28.74	54	-9.13	16.13	171	352	Average
11000	54.52	38.39	74	-19.48	16.13	171	352	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	44.37	33.86	54	-9.63	10.51	127	233	Average
5460	53.07	42.56	74	-20.93	10.51	127	233	Peak
*5469.84	53.83	43.3	68.2	-14.37	10.53	127	233	Peak
5500	102.01	91.41			10.6	127	233	Average
5500	110.92	100.32			10.6	127	233	Peak
11000	45.13	29	54	-8.87	16.13	165	217	Average
11000	54.48	38.35	74	-19.52	16.13	165	217	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5449.04	44.75	34.26	54	-9.25	10.49	172	190	Average
5449.04	53.45	42.96	74	-20.55	10.49	172	190	Peak
*5469.04	52.68	42.15	68.2	-15.52	10.53	172	190	Peak
5580	105.44	94.73			10.71	172	190	Average
5580	114.99	104.28			10.71	172	190	Peak
*5725.8	53.17	42.25	68.2	-15.03	10.92	172	190	Peak
11160	47.36	31	54	-6.64	16.36	127	235	Average
11160	57.14	40.78	74	-16.86	16.36	127	235	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5447.28	42.22	31.73	54	-11.78	10.49	127	233	Average
5447.28	52.86	42.37	74	-21.14	10.49	127	233	Peak
*5469.36	51.19	40.66	68.2	-17.01	10.53	127	233	Peak
5580	101.05	90.34			10.71	127	233	Average
5580	111.08	100.37			10.71	127	233	Peak
*5725.32	51.95	41.03	68.2	-16.25	10.92	127	233	Peak
11160	47.85	31.49	54	-6.15	16.36	132	167	Average
11160	57.48	41.12	74	-16.52	16.36	132	167	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	104.74	62.02			42.72	232	190	Average
5700	113.88	71.16			42.72	232	190	Peak
*5725.56	65.59	54.67	68.2	-2.61	10.92	232	190	Peak
11400	46.12	29.93	54	-7.88	16.19	129	353	Average
11400	55.85	39.66	74	-18.15	16.19	129	353	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	100.46	89.51			42.72	127	233	Average
5700	109.33	98.38			42.72	127	233	Peak
*5725.08	58.69	47.77	68.2	-9.51	10.92	127	233	Peak
11400	45.76	29.57	54	-8.24	16.19	158	243	Average
11400	55.43	39.24	74	-18.57	16.19	158	243	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5453.04	43.13	32.62	54	-10.87	10.51	232	190	Average
5453.04	52.63	42.12	74	-21.37	10.51	232	190	Peak
*5469.52	51.38	40.85	68.2	-16.82	10.53	232	190	Peak
5720	105.06	94.14			10.92	232	190	Average
5720	114.49	103.57			10.92	232	190	Peak
11440	47.68	31.39	54	-6.32	16.29	159	227	Average
11440	57.22	40.93	74	-16.78	16.29	159	227	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5448.08	43	32.51	54	-11	10.49	127	233	Average
5448.08	52.1	41.61	74	-21.9	10.49	127	233	Peak
*5469.68	50.85	40.32	68.2	-17.35	10.53	127	233	Peak
5720	101.97	91.05			10.92	127	233	Average
5720	111.03	100.11			10.92	127	233	Peak
11440	45.68	29.39	54	-8.32	16.29	164	203	Average
11440	55.37	39.08	74	-18.63	16.29	164	203	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	105.55	94.67			10.88	100	251	Average
5745	112.83	101.95			10.88	100	251	Peak
11490	48.1	31.63	54	-5.9	16.47	187	144	Average
11490	56.59	40.12	74	-17.41	16.47	187	144	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	103.56	92.68			10.88	100	243	Average
5745	110.11	99.23			10.88	100	243	Peak
11490	48	31.53	54	-6	16.47	324	114	Average
11490	56.16	39.69	74	-17.84	16.47	324	114	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5543.05	53.88	43.22	68.2	-14.32	10.66	100	251	Peak
5656.45	51.73	40.86	72.97	-21.24	10.87	100	251	Peak
5920.525	51.29	40.2	71.51	-20.22	11.09	100	251	Peak
*5948.35	52.94	41.76	68.2	-15.26	11.18	100	251	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5534.65	53.28	42.64	68.2	-14.92	10.64	100	243	Peak
5653.825	50.52	39.65	71.03	-20.51	10.87	100	243	Peak
5920.525	50.29	39.2	71.51	-21.22	11.09	100	243	Peak
*5956.75	52.75	41.54	68.2	-15.45	11.21	100	243	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	105.69	94.88			10.81	100	251	Average
5785	112.03	101.22			10.81	100	251	Peak
11570	47.92	31.43	54	-6.08	16.49	195	6	Average
11570	56.44	39.95	74	-17.56	16.49	195	6	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	103.65	60.84			10.81	100	243	Average
5785	110.17	67.36			10.81	100	243	Peak
11570	47.97	31.48	54	-6.03	16.49	134	177	Average
11570	55.97	39.48	74	-18.03	16.49	134	177	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5642.275	53.79	42.96	68.2	-14.41	10.83	100	251	Peak
5658.025	52.25	41.38	74.14	-21.89	10.87	100	251	Peak
5922.625	50.65	39.54	69.96	-19.31	11.11	100	251	Peak
*5935.75	53.2	42.04	68.2	-15	11.16	100	251	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5650.15	52.87	42	68.31	-15.44	10.87	100	243	Peak
5661.175	54.43	43.56	76.47	-22.04	10.87	100	243	Peak
5918.95	52.29	41.2	72.68	-20.39	11.09	100	243	Peak
*6004.525	53.12	41.79	68.2	-15.08	11.33	100	243	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	105.58	94.7			10.88	100	251	Average
5825	112.98	102.1			10.88	100	251	Peak
11650	48.24	31.46	54	-5.76	16.78	174	119	Average
11650	56.36	39.58	74	-17.64	16.78	174	119	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	103.67	92.79			10.88	100	243	Average
5825	110.17	99.29			10.88	100	243	Peak
11650	48.26	31.48	54	-5.74	16.78	134	355	Average
11650	56.78	40	74	-17.22	16.78	134	355	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5646.475	53.38	42.53	68.2	-14.82	10.85	100	251	Peak
5663.275	52.95	42.08	78.02	-25.07	10.87	100	251	Peak
5918.95	51.92	40.83	72.68	-20.76	11.09	100	251	Peak
*5984.575	53.46	42.2	68.2	-14.74	11.26	100	251	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5649.1	53.38	42.53	68.2	-14.82	10.85	100	243	Peak
5656.45	51.62	40.75	72.97	-21.35	10.87	100	243	Peak
5921.575	50.6	39.49	70.73	-20.13	11.11	100	243	Peak
*5959.9	52.88	41.65	68.2	-15.32	11.23	100	243	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	50	39.95	54	-4	10.05	140	198	Average
5150	59.7	49.65	74	-14.3	10.05	140	198	Peak
5190	101.03	90.91			10.12	140	198	Average
5190	110.31	100.19			10.12	140	198	Peak
5353.52	43.9	33.67	54	-10.1	10.23	140	198	Average
5353.52	53.31	43.08	74	-20.69	10.23	140	198	Peak
*10380	56.79	40.69	68.2	-11.41	16.1	184	215	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148.05	47.39	37.34	54	-6.61	10.05	102	238	Average
5148.05	56.07	46.02	74	-17.93	10.05	102	238	Peak
5190	96.99	86.87			10.12	102	238	Average
5190	106.39	96.27			10.12	102	238	Peak
5350.44	42.36	32.13	54	-11.64	10.23	102	238	Average
5350.44	52.75	42.52	74	-21.25	10.23	102	238	Peak
*10380	55.11	39.01	68.2	-13.09	16.1	148	134	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5149.85	48.06	38.01	54	-5.94	10.05	140	198	Average
5149.85	59.32	49.27	74	-14.68	10.05	140	198	Peak
5230	104.1	93.96			10.14	140	198	Average
5230	112.13	101.99			10.14	140	198	Peak
5351.76	44.33	34.1	54	-9.67	10.23	140	198	Average
5351.76	53.56	43.33	74	-20.44	10.23	140	198	Peak
*10460	54.96	38.96	68.2	-13.24	16	163	297	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5149.25	45.42	35.37	54	-8.58	10.05	102	238	Average
5149.25	55.42	45.37	74	-18.58	10.05	102	238	Peak
5230	98.93	88.79			10.14	102	238	Average
5230	108.16	98.02			10.14	102	238	Peak
5359.79	43.39	33.14	54	-10.61	10.25	102	238	Average
5359.79	53.51	43.26	74	-20.49	10.25	102	238	Peak
*10460	54.75	38.75	68.2	-13.45	16	125	87	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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5149.55	42.75	32.7	54	-11.25	10.05	139	194	Average
5149.55	54.53	44.48	74	-19.47	10.05	139	194	Peak
5270	100.29	90.17			10.12	139	194	Average
5270	107.6	97.48			10.12	139	194	Peak
5350	46.72	36.49	54	-7.28	10.23	139	194	Average
5350	55.18	44.95	74	-18.82	10.23	139	194	Peak
*10540	54.86	39.03	68.2	-13.34	15.83	135	263	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5149.4	42.21	32.16	54	-11.79	10.05	102	253	Average
5149.4	52.72	42.67	74	-21.28	10.05	102	253	Peak
5270	97.94	87.82			10.12	102	253	Average
5270	104.46	94.34			10.12	102	253	Peak
5351.32	44.47	34.24	54	-9.53	10.23	102	253	Average
5351.32	53.88	43.65	74	-20.12	10.23	102	253	Peak
*10540	55.49	39.66	68.2	-12.71	15.83	187	118	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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5122.25	42.18	32.21	54	-11.82	9.97	139	194	Average
5122.25	53.17	43.2	74	-20.83	9.97	139	194	Peak
5310	97.66	87.57			10.09	139	194	Average
5310	104.68	94.59			10.09	139	194	Peak
5359.68	44.59	34.34	54	-9.41	10.25	139	194	Average
5359.68	53.92	43.67	74	-20.08	10.25	139	194	Peak
10620	47.72	31.84	54	-6.28	15.88	137	118	Average
10620	55.16	39.28	74	-18.84	15.88	137	118	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5125.25	41.92	31.92	54	-12.08	10	102	253	Average
5125.25	52.43	42.43	74	-21.57	10	102	253	Peak
5310	94.41	84.32			10.09	102	253	Average
5310	101.91	91.82			10.09	102	253	Peak
5356.93	43	32.77	54	-11	10.23	102	253	Average
5356.93	53.34	43.11	74	-20.66	10.23	102	253	Peak
10620	47.64	31.76	54	-6.36	15.88	154	245	Average
10620	54.82	38.94	74	-19.18	15.88	154	245	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.92	48.88	38.37	54	-5.12	10.51	158	190	Average
5459.92	58.9	48.39	74	-15.1	10.51	158	190	Peak
*5469.84	60.6	50.07	68.2	-7.6	10.53	158	190	Peak
5510	101.8	91.2			10.6	158	190	Average
5510	111.04	100.44			10.6	158	190	Peak
*5725.56	51.8	40.88	68.2	-16.4	10.92	158	190	Peak
11020	45.23	29.07	54	-8.77	16.16	162	112	Average
11020	54.79	38.63	74	-19.21	16.16	162	112	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.44	46.07	35.56	54	-7.93	10.51	127	233	Average
5459.44	54.97	44.46	74	-19.03	10.51	127	233	Peak
*5469.68	57.48	46.95	68.2	-10.72	10.53	127	233	Peak
5510	98.71	88.11			10.6	127	233	Average
5510	108.48	97.88			10.6	127	233	Peak
*5725.32	51.92	41	68.2	-16.28	10.92	127	233	Peak
11020	44.8	28.64	54	-9.2	16.16	134	88	Average
11020	54.5	38.34	74	-19.5	16.16	134	88	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.76	48.24	37.73	54	-5.76	10.51	172	190	Average
5459.76	57.85	47.34	74	-16.15	10.51	172	190	Peak
*5469.36	59.74	49.21	68.2	-8.46	10.53	172	190	Peak
5550	101.71	91.03			10.68	172	190	Average
5550	110.84	100.16			10.68	172	190	Peak
*5725.56	52.81	41.89	68.2	-15.39	10.92	172	190	Peak
11100	45.41	29.14	54	-8.59	16.27	148	133	Average
11100	55.1	38.83	74	-18.9	16.27	148	133	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.92	46.44	35.93	54	-7.56	10.51	127	233	Average
5459.92	55.16	44.65	74	-18.84	10.51	127	233	Peak
*5469.2	56.12	45.59	68.2	-12.08	10.53	127	233	Peak
5550	98.86	88.18			10.68	127	233	Average
5550	107.95	97.27			10.68	127	233	Peak
*5725.16	51.67	40.75	68.2	-16.53	10.92	127	233	Peak
11100	44.69	28.42	54	-9.31	16.27	158	131	Average
11100	54.49	38.22	74	-19.51	16.27	158	131	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5452.56	43.16	32.65	54	-10.84	10.51	232	190	Average
5452.56	52.99	42.48	74	-21.01	10.51	232	190	Peak
*5470	51.43	40.9	68.2	-16.77	10.53	232	190	Peak
5670	102.02	59.36			42.66	232	190	Average
5670	111.85	69.19			42.66	232	190	Peak
*5725	60.8	49.88	68.2	-7.4	10.92	232	190	Peak
11340	46.57	30.15	54	-7.43	16.42	180	54	Average
11340	56.15	39.73	74	-17.85	16.42	180	54	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5448.08	42.92	32.43	54	-11.08	10.49	127	233	Average
5448.08	52.37	41.88	74	-21.63	10.49	127	233	Peak
*5469.84	51.4	40.87	68.2	-16.8	10.53	127	233	Peak
5670	98.89	87.99			10.9	127	233	Average
5670	107.67	96.77			10.9	127	233	Peak
*5725.16	56.54	45.62	68.2	-11.66	10.92	127	233	Peak
11340	45.73	29.31	54	-8.27	16.42	128	49	Average
11340	55.55	39.13	74	-18.45	16.42	128	49	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.92	43.09	32.58	54	-10.91	10.51	232	190	Average
5459.92	52.53	42.02	74	-21.47	10.51	232	190	Peak
*5469.52	52.12	41.59	68.2	-16.08	10.53	232	190	Peak
5710	103.04	92.13			10.91	232	190	Average
5710	111.98	101.07			10.91	232	190	Peak
11420	46.48	30.22	54	-7.52	16.26	136	237	Average
11420	56.06	39.8	74	-17.94	16.26	136	237	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5444.08	42.96	32.48	54	-11.04	10.48	127	233	Average
5444.08	53.16	42.68	74	-20.84	10.48	127	233	Peak
*5469.68	51.46	40.93	68.2	-16.74	10.53	127	233	Peak
5710	98.06	87.15			10.91	127	233	Average
5710	107.39	96.48			10.91	127	233	Peak
11420	46.27	30.01	54	-7.73	16.26	135	79	Average
11420	55.61	39.35	74	-18.39	16.26	135	79	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**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5755	103.65	92.75			10.9	100	251	Average
5755	110.43	99.53			10.9	100	251	Peak
11510	48.04	31.53	54	-5.96	16.51	199	25	Average
11510	55.41	38.9	74	-18.59	16.51	199	25	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5755	101.4	90.5			10.9	100	243	Average
5755	108.88	97.98			10.9	100	243	Peak
11510	48.05	31.54	54	-5.95	16.51	174	154	Average
11510	56.38	39.87	74	-17.62	16.51	174	154	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5640.175	55.62	44.79	68.2	-12.58	10.83	100	251	Peak
5658.55	58.59	47.72	74.53	-15.94	10.87	100	251	Peak
5915.8	52.79	41.7	75.01	-22.22	11.09	100	251	Peak
*5944.675	53.36	42.18	68.2	-14.84	11.18	100	251	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5648.575	53.77	42.92	68.2	-14.43	10.85	100	243	Peak
5654.875	55.33	44.46	71.81	-16.48	10.87	100	243	Peak
5916.325	51.55	40.46	74.62	-23.07	11.09	100	243	Peak
*5975.65	52.98	41.72	68.2	-15.22	11.26	100	243	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**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5795	102.65	91.83			10.82	100	251	Average
5795	109.59	98.77			10.82	100	251	Peak
11590	48.14	31.63	54	-5.86	16.51	164	188	Average
11590	56.31	39.8	74	-17.69	16.51	164	188	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5795	100.58	89.76	54		10.82	100	243	Average
5795	107.46	96.64	74		10.82	100	243	Peak
11590	48.21	31.7	54	-5.79	16.51	124	349	Average
11590	56.19	39.68	74	-17.81	16.51	124	349	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5650.15	53.84	42.97	68.31	-14.47	10.87	100	251	Peak
5662.225	54.17	43.3	77.25	-23.08	10.87	100	251	Peak
5917.9	53.75	42.66	73.45	-19.7	11.09	100	251	Peak
*5925.775	53.68	42.57	68.2	-14.52	11.11	100	251	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5636.5	53.95	43.12	68.2	-14.25	10.83	100	243	Peak
5655.4	51.78	40.91	72.2	-20.42	10.87	100	243	Peak
5919.475	50.69	39.6	72.29	-21.6	11.09	100	243	Peak
*6010.825	53.41	42.06	68.2	-14.79	11.35	100	243	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5142.5	52.48	42.45	54	-1.52	10.03	139	198	Average
5142.5	60.67	50.64	74	-13.33	10.03	139	198	Peak
5210	97.95	87.78			10.17	139	198	Average
5210	107.27	97.1			10.17	139	198	Peak
5350	45.3	35.07	54	-8.7	10.23	139	198	Average
5350	54.76	44.53	74	-19.24	10.23	139	198	Peak
*10420	55.23	39.07	68.2	-12.97	16.16	145	273	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5131.85	49.36	39.36	54	-4.64	10	102	238	Average
5137.85	59.03	49.03	74	-14.97	10	102	238	Peak
5210	94	83.83			10.17	102	238	Average
5210	103.63	93.46			10.17	102	238	Peak
5352.31	44.24	34.01	54	-9.76	10.23	102	238	Average
5352.31	53.77	43.54	74	-20.23	10.23	102	238	Peak
*10420	56.02	39.86	68.2	-12.18	16.16	175	131	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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5141.3	42.45	32.44	54	-11.55	10.01	139	194	Average
5141.3	53.65	43.64	74	-20.35	10.01	139	194	Peak
5290	95.58	85.48			10.1	139	194	Average
5290	102.62	92.52			10.1	139	194	Peak
5350.11	48.24	38.01	54	-5.76	10.23	139	194	Average
5350.11	56.17	45.94	74	-17.83	10.23	139	194	Peak
*10580	55.3	39.59	68.2	-12.9	15.71	119	346	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5149.25	42.1	32.05	54	-11.9	10.05	102	253	Average
5149.25	52.9	42.85	74	-21.1	10.05	102	253	Peak
5290	92.8	82.7			10.1	102	253	Average
5290	99.48	89.38			10.1	102	253	Peak
5350.33	45.78	35.55	54	-8.22	10.23	102	253	Average
5350.33	55.37	45.14	74	-18.63	10.23	102	253	Peak
*10580	55.31	39.6	68.2	-12.89	15.71	137	185	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.28	50.42	39.91	54	-3.58	10.51	158	190	Average
5459.28	62.45	51.94	74	-11.55	10.51	158	190	Peak
*5469.52	60.03	49.5	68.2	-8.17	10.53	158	190	Peak
5530	96.83	86.2			10.63	158	190	Average
5530	106.76	96.13			10.63	158	190	Peak
*5725.24	52.42	41.5	68.2	-15.78	10.92	158	190	Peak
11060	45.64	29.41	54	-8.36	16.23	126	98	Average
11060	55.22	38.99	74	-18.78	16.23	126	98	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	47.08	36.57	54	-6.92	10.51	127	233	Average
5460	56.84	46.33	74	-17.16	10.51	127	233	Peak
*5469.2	57.74	47.21	68.2	-10.46	10.53	127	233	Peak
5530	93.46	82.83			10.63	127	233	Average
5530	103.17	92.54			10.63	127	233	Peak
*5725.64	51.54	40.62	68.2	-16.66	10.92	127	233	Peak
11060	45.23	29	54	-8.77	16.23	135	175	Average
11060	54.7	38.47	74	-19.3	16.23	135	175	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.92	47.59	37.08	54	-6.41	10.51	172	190	Average
5459.92	56.59	46.08	74	-17.41	10.51	172	190	Peak
*5469.84	55.93	45.4	68.2	-12.27	10.53	172	190	Peak
5610	97.58	86.81			10.77	172	190	Average
5610	107.37	96.6			10.77	172	190	Peak
*5725.96	61.04	50.12	68.2	-7.16	10.92	172	190	Peak
11220	47.54	31.12	54	-6.46	16.42	153	236	Average
11220	57.21	40.79	74	-16.79	16.42	153	236	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.92	45.05	34.54	54	-8.95	10.51	127	233	Average
5459.92	54.16	43.65	74	-19.84	10.51	127	233	Peak
*5469.36	53.78	43.25	68.2	-14.42	10.53	127	233	Peak
5610	94.31	83.54			10.77	127	233	Average
5610	103.3	92.53			10.77	127	233	Peak
*5725	56.8	45.88	68.2	-11.4	10.92	127	233	Peak
11220	47.21	30.79	54	-6.79	16.42	153	208	Average
11220	56.66	40.24	74	-17.34	16.42	153	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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.92	44.24	33.73	54	-9.76	10.51	232	190	Average
5459.92	54	43.49	74	-20	10.51	232	190	Peak
5469.36	53.85	43.32	68.2	-14.35	10.53	232	190	Peak
5690	99.29	88.36			10.93	232	190	Average
5690	108.4	97.47			10.93	232	190	Peak
11380	45.86	29.59	54	-8.14	16.27	128	57	Average
11380	55.71	39.44	74	-18.29	16.27	128	57	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.76	43.6	33.09	54	-10.4	10.51	127	233	Average
5459.76	52.74	42.23	74	-21.26	10.51	127	233	Peak
5469.04	52.19	41.66	68.2	-16.01	10.53	127	233	Peak
5690	95.58	84.65			10.93	127	233	Average
5690	104.66	93.73			10.93	127	233	Peak
11380	45.96	29.69	54	-8.04	16.27	158	214	Average
11380	55.46	39.19	74	-18.54	16.27	158	214	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**	Charles Hsiao

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5775	99.5	56.69			42.81	100	251	Average
5775	106.88	64.07			42.81	100	251	Peak
11550	47.96	31.46	54	-6.04	16.5	174	4	Average
11550	55.31	38.81	74	-18.69	16.5	174	4	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5775	97.68	86.81			10.87	100	243	Average
5775	104.9	94.03			10.87	100	243	Peak
11550	48.05	31.55	54	-5.95	16.5	174	165	Average
11550	55.72	39.22	74	-18.28	16.5	174	165	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5650.15	55.27	44.4	68.31	-13.04	10.87	100	251	Peak
5664.325	58.14	47.25	78.8	-20.66	10.89	100	251	Peak
5917.375	57.87	46.78	73.84	-15.97	11.09	100	251	Peak
*5931.025	54.5	43.39	68.2	-13.7	11.11	100	251	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5611.825	56.05	45.28	68.2	-12.15	10.77	100	243	Peak
5651.2	54.02	43.15	69.09	-15.07	10.87	100	243	Peak
5922.1	53.94	42.83	70.35	-16.41	11.11	100	243	Peak
*5976.175	53.64	42.38	68.2	-14.56	11.26	100	243	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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5141.3	45.33	35.32	54	-8.67	10.01	139	194	Average
5141.3	54.88	44.87	74	-19.12	10.01	139	194	Peak
5250	90.4	80.3			10.1	139	194	Average
5250	97.65	87.55			10.1	139	194	Peak
5402.25	50.87	40.47	54	-3.13	10.4	140	190	Average
5402.25	61.44	51.04	74	-12.56	10.4	140	190	Peak
*10500	55.45	39.62	68.2	-12.75	15.83	185	3	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	42.91	32.86	54	-11.09	10.05	102	253	Average
5150	54.19	44.14	74	-19.81	10.05	102	253	Peak
5250	87.88	77.78			10.1	102	253	Average
5250	94.29	84.19			10.1	102	253	Peak
5402.69	45.95	35.55	54	-8.05	10.4	102	253	Average
5402.69	56.44	46.04	74	-17.56	10.4	102	253	Peak
*10500	55.1	39.27	68.2	-13.1	15.83	174	214	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**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5457.36	47.19	36.68	54	-6.81	10.51	215	190	Average
5457.36	56.26	45.75	74	-17.74	10.51	215	190	Peak
*5469.04	57.32	46.79	68.2	-10.88	10.53	215	190	Peak
5570	90.25	79.55			10.7	215	190	Average
5570	99.37	88.67			10.7	215	190	Peak
*5725.8	58.84	47.92	68.2	-9.36	10.92	215	190	Peak
11140	47.04	30.7	54	-6.96	16.34	106	312	Average
11140	56.81	40.47	74	-17.19	16.34	106	312	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.6	45.05	34.54	54	-8.95	10.51	127	233	Average
5459.6	53.22	42.71	74	-20.78	10.51	127	233	Peak
*5469.68	53.42	42.89	68.2	-14.78	10.53	127	233	Peak
5570	86.66	75.96			10.7	127	233	Average
5570	96.05	85.35			10.7	127	233	Peak
*5725	55.65	44.73	68.2	-12.55	10.92	127	233	Peak
11140	46.95	30.61	54	-7.05	16.34	161	183	Average
11140	56.57	40.23	74	-17.43	16.34	161	183	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:

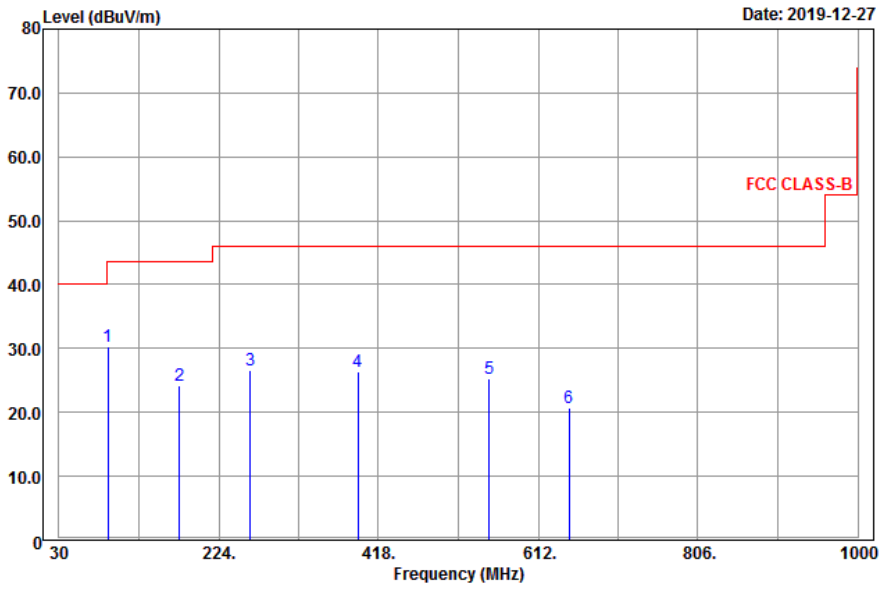
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

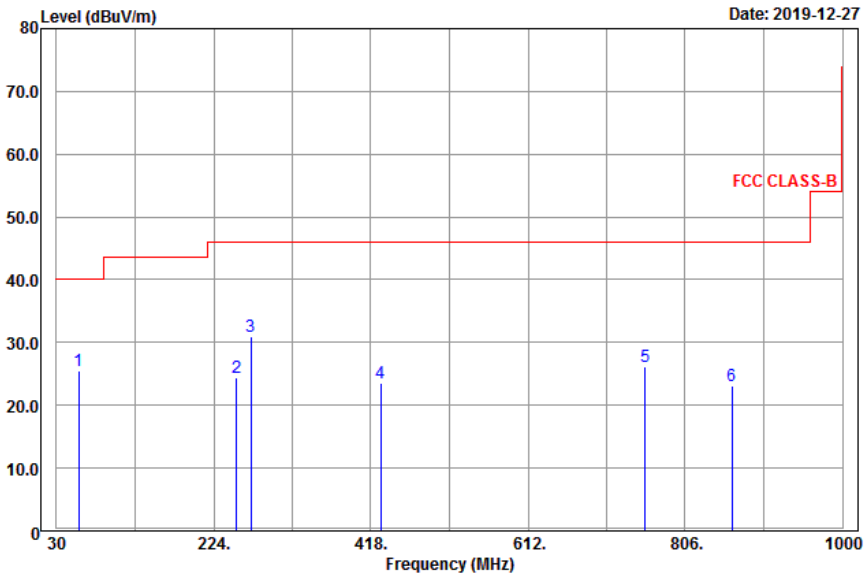
802.11ax (HE80)

EUT Test Condition		Measurement Detail	
Channel	Channel 42	**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)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
89.4	30.2	49.49	43.5	-13.3	-19.29	134	302	Peak
176.34	24.17	44.07	43.5	-19.33	-19.9	165	352	Peak
262.2	26.56	43.21	46	-19.44	-16.65	124	154	Peak
393.1	26.39	40.45	46	-19.61	-14.06	131	145	Peak
552.7	25.18	36.7	46	-20.82	-11.52	181	14	Peak
649.3	20.79	30.89	46	-25.21	-10.1	180	256	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Factor (dB/m)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
57.27	25.49	41.21	40	-14.51	-15.72	134	144	Peak
251.94	24.33	41.14	46	-21.67	-16.81	105	252	Peak
269.76	30.93	47.46	46	-15.07	-16.53	164	195	Peak
430.2	23.58	37.1	46	-22.42	-13.52	124	240	Peak
756.4	26.2	34.56	46	-19.8	-8.36	185	19	Peak
863.5	23.03	29.53	46	-22.97	-6.5	105	32	Peak

Remarks:

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESR3	102412	Feb. 14, 2019	Feb. 13, 2020
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 05, 2019	Sep. 04, 2020
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Jan. 30, 2019	Jan. 29, 2020
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 13, 2019	Aug. 12, 2020
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

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

4.2.3 Test Procedures

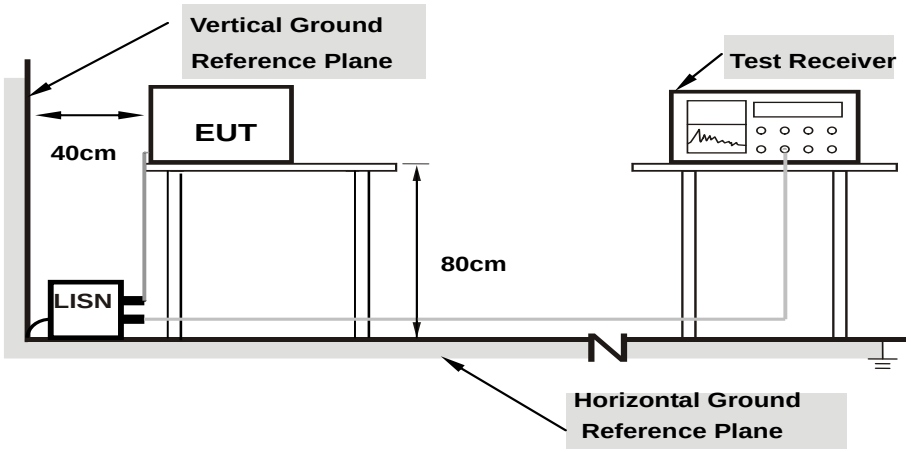
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

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

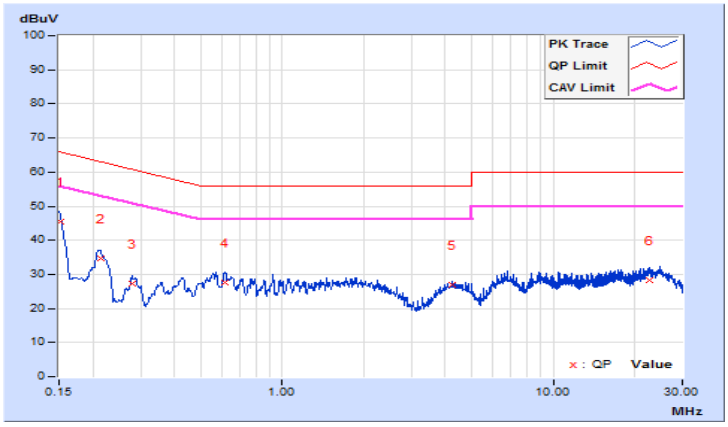
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Jisyong Wang	Test Date	2020/1/5

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	**0.15225**	**10.11**	**35.36**	**30.27**	**45.47**	**40.38**	**65.88**	**55.88**	**-20.41**	**-15.50**
2	0.21300	10.12	24.72	21.95	34.84	32.07	63.09	53.09	-28.25	-21.02
3	0.27825	10.14	17.06	14.24	27.20	24.38	60.87	50.87	-33.67	-26.49
4	0.61350	10.18	17.34	14.40	27.52	24.58	56.00	46.00	-28.48	-21.42
5	4.23375	10.35	16.71	14.96	27.06	25.31	56.00	46.00	-28.94	-20.69
6	22.63425	10.58	17.62	14.26	28.20	24.84	60.00	50.00	-31.80	-25.16

Remarks:

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

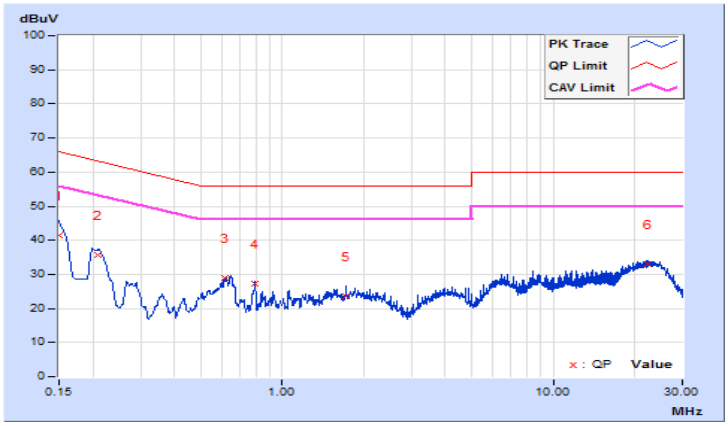


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Jisyong Wang	Test Date	2020/1/5

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.15000**	**10.16**	**31.37**	**30.34**	**41.53**	**40.50**	**66.00**	**56.00**	**-24.47**	**-15.50**
2	0.20956	10.18	25.61	23.19	35.79	33.37	63.22	53.22	-27.43	-19.85
3	0.61350	10.24	18.65	16.81	28.89	27.05	56.00	46.00	-27.11	-18.95
4	0.79293	10.26	17.09	15.11	27.35	25.37	56.00	46.00	-28.65	-20.63
5	1.72050	10.31	13.13	11.90	23.44	22.21	56.00	46.00	-32.56	-23.79
6	22.30800	10.73	22.17	20.05	32.90	30.78	60.00	50.00	-27.10	-19.22

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 $N_{ANT} \leq 4$;

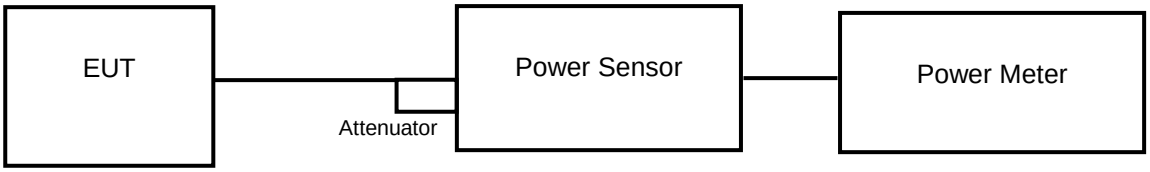
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};

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

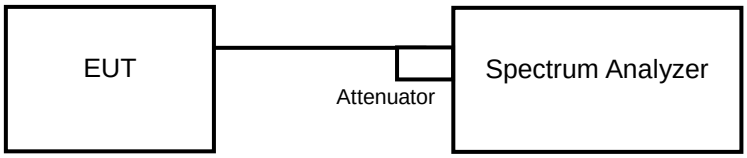
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

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

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.

For channel aggregation (channel 138, 142, 144) measurement refer to KDB 789033 D02 Section III. CHANNEL AGGREGATION.

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	73.961	18.69	24	Pass
40	5200	118.032	20.72	24	Pass
48	5240	122.18	20.87	24	Pass
52	5260	123.88	20.93	24	Pass
60	5300	121.339	20.84	24	Pass
64	5320	65.464	18.16	24	Pass
100	5500	77.804	18.91	24	Pass
116	5580	121.619	20.85	24	Pass
140	5700	75.683	18.79	24	Pass
149	5745	124.165	20.94	30	Pass
157	5785	123.027	20.90	30	Pass
165	5825	127.057	21.04	30	Pass

Note:

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

1. 11 dBm + 10log (25.28) = 25.03 dBm > 24 dBm.
2. 11 dBm + 10log (26.25) = 25.19 dBm > 24 dBm.
3. 11 dBm + 10log (25.13) = 25.00 dBm > 24 dBm.
4. 11 dBm + 10log (24.10) = 24.82 dBm > 24 dBm.
5. 11 dBm + 10log (24.74) = 24.93 dBm > 24 dBm.
6. 11 dBm + 10log (24.09) = 24.82 dBm > 24 dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	18.06	18.05	127.799	21.07	24	Pass
40	5200	19.42	19.38	174.194	22.41	24	Pass
48	5240	19.50	19.62	180.747	22.57	24	Pass
52	5260	19.53	19.33	175.447	22.44	24	Pass
60	5300	19.51	19.39	176.227	22.46	24	Pass
64	5320	16.63	16.72	93.015	19.69	24	Pass
100	5500	17.97	18.02	126.048	21.01	24	Pass
116	5580	19.64	20.12	194.847	22.90	24	Pass
140	5700	16.79	18.61	120.364	20.80	24	Pass
144	5720 (U-NII-2C)	16.55	16.29	87.746	19.43	23.47	Pass
144	5720 (U-NII-3)	16.55	16.29	87.746	19.43	30	Pass
149	5745	19.96	19.78	194.143	22.88	30	Pass
157	5785	19.99	19.86	196.598	22.94	30	Pass
165	5825	20.02	19.85	197.067	22.95	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (24.93) = 24.97 dBm > 24 dBm.
2. 11 dBm + 10log (25.21) = 25.02 dBm > 24 dBm.
3. 11 dBm + 10log (25.09) = 25.00 dBm > 24 dBm.
4. 11 dBm + 10log (25.30) = 25.03 dBm > 24 dBm.
5. 11 dBm + 10log (24.65) = 24.92 dBm > 24 dBm.
6. 11 dBm + 10log (25.33) = 25.04 dBm > 24 dBm.
7. 11 dBm + 10log (17.65) = 23.47 dBm < 24 dBm.

Chain 1

1. 11 dBm + 10log (25.32) = 25.03 dBm > 24 dBm.
2. 11 dBm + 10log (24.89) = 24.96 dBm > 24 dBm.
3. 11 dBm + 10log (24.80) = 24.94 dBm > 24 dBm.
4. 11 dBm + 10log (25.17) = 25.01 dBm > 24 dBm.
5. 11 dBm + 10log (24.24) = 24.85 dBm > 24 dBm.
6. 11 dBm + 10log (24.77) = 24.94 dBm > 24 dBm.
7. 11 dBm + 10log (17.34) = 23.39 dBm < 24 dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	17.12	17.27	104.856	20.21	24	Pass
46	5230	19.16	19.00	161.847	22.09	24	Pass
54	5270	18.77	18.66	148.787	21.73	24	Pass
62	5310	14.21	14.52	54.677	17.38	24	Pass
102	5510	17.80	17.72	119.412	20.77	24	Pass
110	5550	20.23	20.12	208.241	23.19	24	Pass
134	5670	18.47	19.13	152.153	21.82	24	Pass
142	5710 (U-NII-2C)	18.83	17.98	139.19	21.44	24	Pass
142	5710 (U-NII-3)	18.83	17.98	139.19	21.44	30	Pass
151	5755	20.23	19.58	196.221	22.93	30	Pass
159	5795	20.06	19.67	194.074	22.88	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (44.91) = 27.52 dBm > 24 dBm.
2. 11 dBm + 10log (44.97) = 27.53 dBm > 24 dBm.
3. 11 dBm + 10log (44.61) = 27.49 dBm > 24 dBm.
4. 11 dBm + 10log (46.09) = 27.64 dBm > 24 dBm.
5. 11 dBm + 10log (45.35) = 27.57 dBm > 24 dBm.
6. 11 dBm + 10log (38.62) = 26.87 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (44.88) = 27.52 dBm > 24 dBm.
2. 11 dBm + 10log (44.69) = 27.50 dBm > 24 dBm.
3. 11 dBm + 10log (44.36) = 27.47 dBm > 24 dBm.
4. 11 dBm + 10log (45.34) = 27.56 dBm > 24 dBm.
5. 11 dBm + 10log (45.91) = 27.62 dBm > 24 dBm.
6. 11 dBm + 10log (38.14) = 26.81 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	17.09	17.11	102.572	20.11	24	Pass
58	5290	15.81	15.68	75.09	18.76	24	Pass
106	5530	17.63	17.60	115.487	20.63	24	Pass
122	5610	18.77	18.89	152.782	21.84	24	Pass
138	5690 (U-NII-2C)	18.65	18.94	151.625	21.81	24	Pass
138	5690 (U-NII-3)	18.65	18.94	151.625	21.81	30	Pass
155	5775	17.92	18.06	125.917	21.00	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (86.64) = 30.38 dBm > 24 dBm.
2. 11 dBm + 10log (86.36) = 30.36 dBm > 24 dBm.
3. 11 dBm + 10log (87.13) = 30.40 dBm > 24 dBm.
4. 11 dBm + 10log (78.61) = 29.95 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (86.62) = 30.38 dBm > 24 dBm.
2. 11 dBm + 10log (86.06) = 30.35 dBm > 24 dBm.
3. 11 dBm + 10log (84.13) = 30.25 dBm > 24 dBm.
4. 11 dBm + 10log (79.61) = 30.01 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	13.20	13.15	41.547	16.19	24	Pass
114	5570	13.21	14.25	47.548	16.77	24	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (164.46) = 33.16 dBm > 24 dBm.
2. 11 dBm + 10log (165.22) = 33.18 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (164.78) = 33.17 dBm > 24 dBm.
2. 11 dBm + 10log (162.97) = 33.12 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	18.17	18.14	130.778	21.17	24	Pass
40	5200	19.58	19.49	179.702	22.55	24	Pass
48	5240	19.68	19.56	183.262	22.63	24	Pass
52	5260	19.34	19.53	175.644	22.45	24	Pass
60	5300	19.33	19.42	173.202	22.39	24	Pass
64	5320	16.77	16.85	95.951	19.82	24	Pass
100	5500	17.88	17.96	123.893	20.93	24	Pass
116	5580	19.82	19.99	195.71	22.92	24	Pass
140	5700	16.39	18.59	115.828	20.64	24	Pass
144	5720 (U-NII-2C)	15.97	15.44	74.532	18.72	23.78	Pass
144	5720 (U-NII-3)	15.97	15.44	74.532	18.72	30	Pass
149	5745	20.03	19.92	198.868	22.99	30	Pass
157	5785	20.00	20.03	200.693	23.03	30	Pass
165	5825	19.92	19.89	195.674	22.92	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (25.77) = 25.11 dBm > 24 dBm.
2. 11 dBm + 10log (25.97) = 25.14 dBm > 24 dBm.
3. 11 dBm + 10log (26.05) = 25.16 dBm > 24 dBm.
4. 11 dBm + 10log (25.95) = 25.14 dBm > 24 dBm.
5. 11 dBm + 10log (25.56) = 25.08 dBm > 24 dBm.
6. 11 dBm + 10log (26.04) = 25.16 dBm > 24 dBm.
7. 11 dBm + 10log (18.95) = 23.78 dBm < 24 dBm.

Chain 1

1. 11 dBm + 10log (26.38) = 25.21 dBm > 24 dBm.
2. 11 dBm + 10log (25.42) = 25.05 dBm > 24 dBm.
3. 11 dBm + 10log (25.73) = 25.10 dBm > 24 dBm.
4. 11 dBm + 10log (25.48) = 25.06 dBm > 24 dBm.
5. 11 dBm + 10log (26.45) = 25.22 dBm > 24 dBm.
6. 11 dBm + 10log (26.20) = 25.18 dBm > 24 dBm.
7. 11 dBm + 10log (18.12) = 23.58 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	17.09	17.19	103.528	20.15	24	Pass
46	5230	19.07	19.04	160.892	22.07	24	Pass
54	5270	18.66	18.61	146.062	21.65	24	Pass
62	5310	14.96	15.04	63.248	18.01	24	Pass
102	5510	17.75	17.75	119.132	20.76	24	Pass
110	5550	19.95	19.99	198.625	22.98	24	Pass
134	5670	18.32	18.64	141.034	21.49	24	Pass
142	5710 (U-NII-2C)	18.76	17.75	134.728	21.29	24	Pass
142	5710 (U-NII-3)	18.76	17.75	134.728	21.29	30	Pass
151	5755	19.21	19.07	164.092	22.15	30	Pass
159	5795	19.76	19.58	185.406	22.68	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (45.81) = 27.61 dBm > 24 dBm.
2. 11 dBm + 10log (46.01) = 27.63 dBm > 24 dBm.
3. 11 dBm + 10log (47.46) = 27.76 dBm > 24 dBm.
4. 11 dBm + 10log (47.99) = 27.81 dBm > 24 dBm.
5. 11 dBm + 10log (47.22) = 27.74 dBm > 24 dBm.
6. 11 dBm + 10log (37.51) = 26.74 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (45.91) = 27.62 dBm > 24 dBm.
2. 11 dBm + 10log (46.92) = 27.71 dBm > 24 dBm.
3. 11 dBm + 10log (47.11) = 27.73 dBm > 24 dBm.
4. 11 dBm + 10log (45.75) = 27.60 dBm > 24 dBm.
5. 11 dBm + 10log (45.37) = 27.57 dBm > 24 dBm.
6. 11 dBm + 10log (37.09) = 26.69 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	17.15	17.07	102.813	20.12	24	Pass
58	5290	16.03	16.27	82.451	19.16	24	Pass
106	5530	17.53	17.66	114.969	20.61	24	Pass
122	5610	18.53	18.90	148.91	21.73	24	Pass
138	5690 (U-NII-2C)	18.40	18.27	136.326	21.35	24	Pass
138	5690 (U-NII-3)	18.40	18.27	136.326	21.35	30	Pass
155	5775	17.59	17.62	115.222	20.62	30	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (86.34) = 30.36 dBm > 24 dBm.
2. 11 dBm + 10log (86.23) = 30.36 dBm > 24 dBm.
3. 11 dBm + 10log (86.03) = 30.35 dBm > 24 dBm.
4. 11 dBm + 10log (78.68) = 29.96 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (89.50) = 30.52 dBm > 24 dBm.
2. 11 dBm + 10log (86.58) = 30.37 dBm > 24 dBm.
3. 11 dBm + 10log (85.45) = 30.32 dBm > 24 dBm.
4. 11 dBm + 10log (79.99) = 30.03 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	13.04	13.09	40.507	16.08	24	Pass
114	5570	13.23	14.37	48.391	16.85	24	Pass

Note:

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

Chain 0

1. 11 dBm + 10log (162.85) = 33.12 dBm > 24 dBm.
2. 11 dBm + 10log (163.06) = 33.12 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (163.41) = 33.13 dBm > 24 dBm.
2. 11 dBm + 10log (163.02) = 33.12 dBm > 24 dBm.

26 dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
36	5180	24.24
40	5200	25.09
48	5240	25.35
52	5260	25.28
60	5300	26.25
64	5320	25.13
100	5500	24.10
116	5580	24.74
140	5700	24.09

802.11n (HT20)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	24.73	24.38
40	5200	24.72	24.57
48	5240	25.46	25.10
52	5260	24.93	25.32
60	5300	25.21	24.89
64	5320	25.09	24.80
100	5500	25.30	25.17
116	5580	24.65	24.24
140	5700	25.33	24.77
144	5720 (U-NII-2C)	17.65	17.34
144	5720 (U-NII-3)	7.19	7.08

802.11n (HT40)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	44.49	44.96
46	5230	45.53	45.25
54	5270	44.91	44.88
62	5310	44.97	44.69
102	5510	44.61	44.36
110	5550	46.09	45.34
134	5670	45.35	45.91
142	5710 (U-NII-2C)	38.62	38.14
142	5710 (U-NII-3)	7.99	6.79

802.11ac (VHT80)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	87.10	85.29
58	5290	86.64	86.62
106	5530	86.36	86.06
122	5610	87.13	84.13
138	5690 (U-NII-2C)	78.61	79.61
138	5690 (U-NII-3)	7.12	8.30

802.11ac (VHT160)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
50	5250	164.46	164.78
114	5570	165.22	162.97

802.11ax (HE20)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	25.94	24.97
40	5200	26.17	23.74
48	5240	26.10	24.34
52	5260	25.77	26.38
60	5300	25.97	25.42
64	5320	26.05	25.73
100	5500	25.95	25.48
116	5580	25.56	26.45
140	5700	26.04	26.20
144	5720 (U-NII-2C)	18.95	18.12
144	5720 (U-NII-3)	8.05	8.20

802.11ax (HE40)

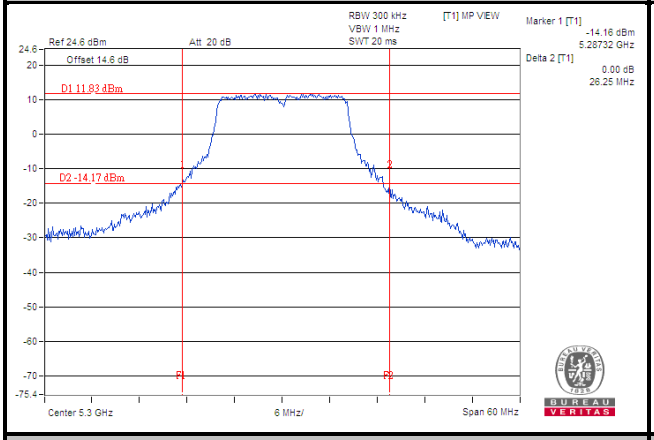
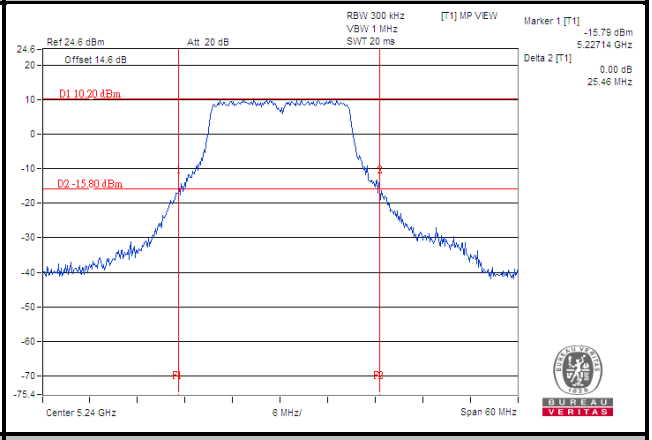
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	46.26	46.32
46	5230	47.60	47.94
54	5270	45.81	45.91
62	5310	46.01	46.92
102	5510	47.46	47.11
110	5550	47.99	45.75
134	5670	47.22	45.37
142	5710 (U-NII-2C)	37.51	37.09
142	5710 (U-NII-3)	7.62	6.89

802.11ac (VHT80)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	87.34	87.87
58	5290	86.34	89.50
106	5530	86.23	86.58
122	5610	86.03	85.45
138	5690 (U-NII-2C)	78.68	79.99
138	5690 (U-NII-3)	8.18	9.39

802.11ac (VHT160)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
50	5250	162.85	163.41
114	5570	163.06	163.02

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
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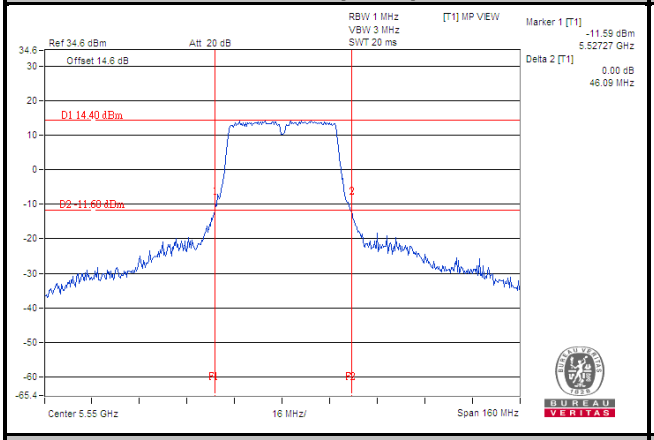	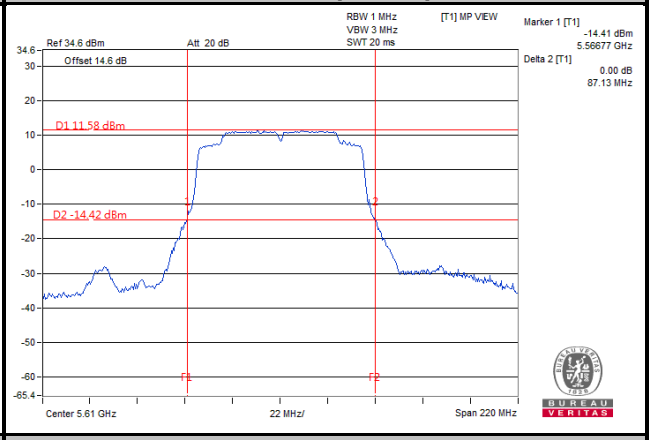
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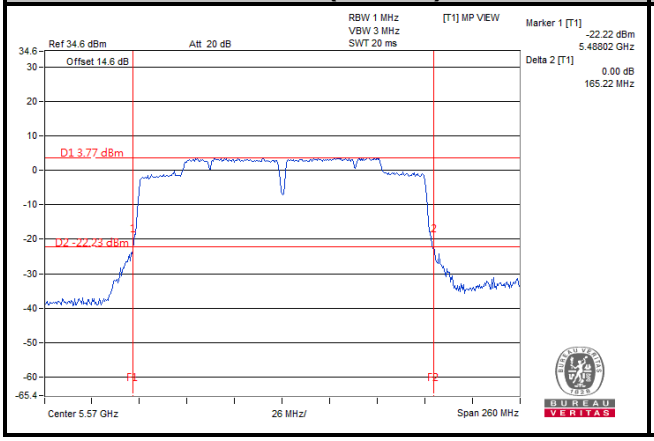
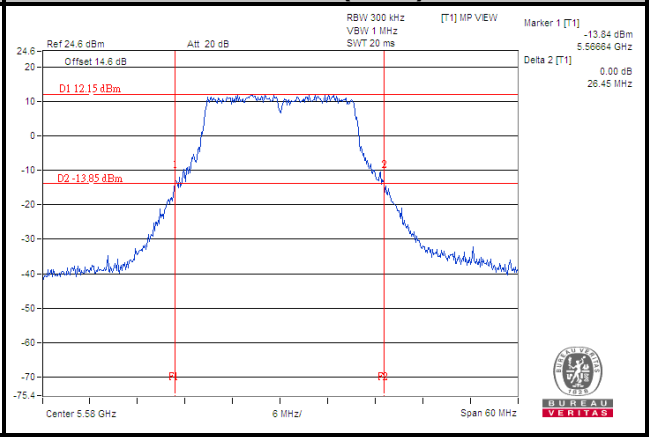
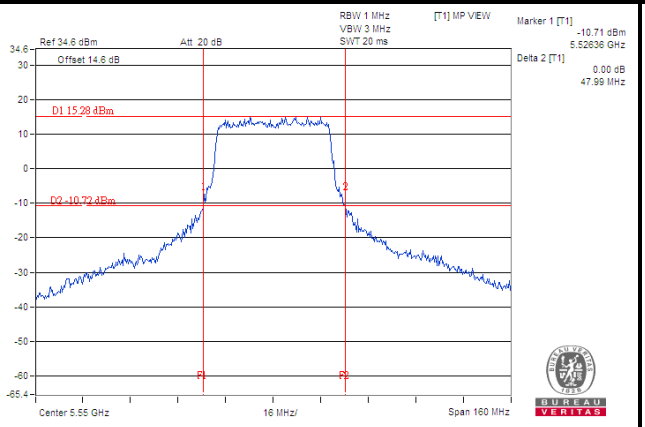
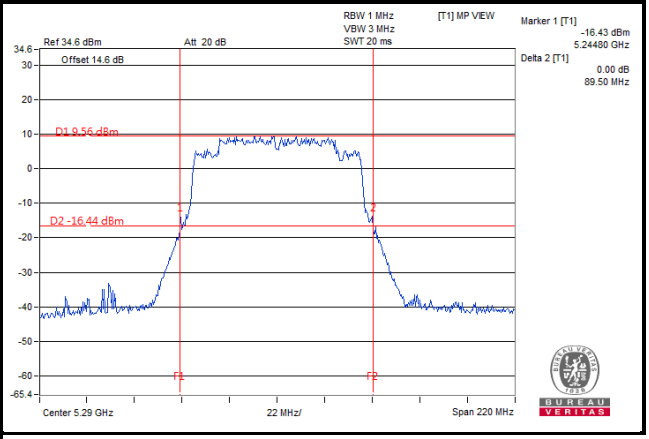
	

Spectrum Plot of Worst Value

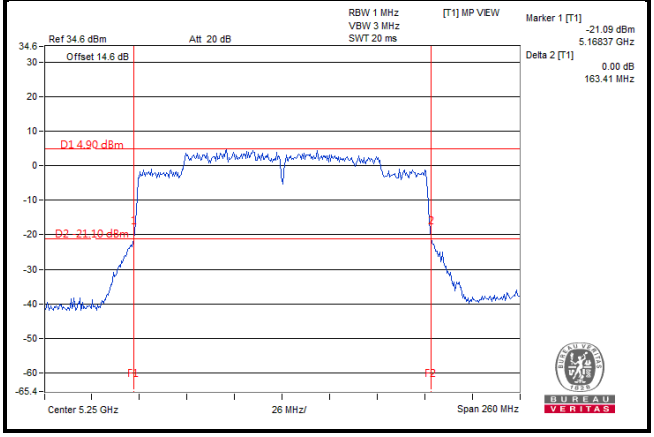
802.11ax (HE40)



802.11ax (HE80)

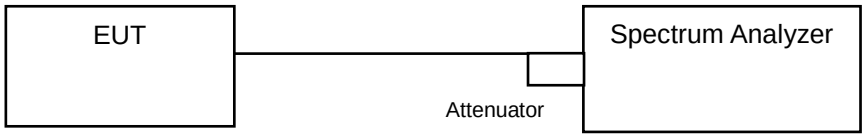


802.11ax (HE160)



4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.3 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	16.92
48	5240	17.04
52	5260	17.16
60	5300	17.04
64	5320	16.92
100	5500	16.92
116	5580	16.92
140	5700	16.92
149	5745	17.21
157	5785	17.31
165	5825	17.50

802.11n (HT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.00	18.12
40	5200	18.12	18.12
48	5240	18.12	17.88
52	5260	18.00	18.00
60	5300	18.12	18.12
64	5320	18.12	18.12
100	5500	18.24	18.00
116	5580	18.00	18.00
140	5700	18.12	18.00
144	5720 (U-NII-2C)	14.00	14.00
144	5720 (U-NII-3)	3.88	3.88
149	5745	18.17	18.17
157	5785	18.27	18.17
165	5825	18.26	18.08

802.11n (HT40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.84	36.84
46	5230	36.84	36.96
54	5270	36.84	36.72
62	5310	36.84	36.72
102	5510	36.96	36.84
110	5550	36.84	36.96
134	5670	36.72	36.96
142	5710 (U-NII-2C)	33.48	33.60
142	5710 (U-NII-3)	3.36	3.24
151	5755	36.96	37.08
159	5795	36.96	36.84

802.11ac (VHT80)

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

802.11ac (VHT160)

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

802.11ax (HE20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	19.08	19.08
40	5200	19.20	19.08
48	5240	19.08	19.08
52	5260	19.20	19.08
60	5300	19.08	19.20
64	5320	19.08	19.08
100	5500	19.20	19.08
116	5580	19.20	19.08
140	5700	19.08	19.08
144	5720 (U-NII-2C)	14.60	14.60
144	5720 (U-NII-3)	4.48	4.48
149	5745	19.14	19.14
157	5785	19.14	19.14
165	5825	19.24	19.14

802.11ax (HE40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	38.40	38.28
46	5230	38.40	38.28
54	5270	38.40	38.28
62	5310	38.28	38.40
102	5510	38.40	38.40
110	5550	38.40	38.40
134	5670	38.40	38.28
142	5710 (U-NII-2C)	34.20	34.20
142	5710 (U-NII-3)	4.08	3.96
151	5755	38.40	38.28
159	5795	38.40	38.16

802.11ax (HE80)

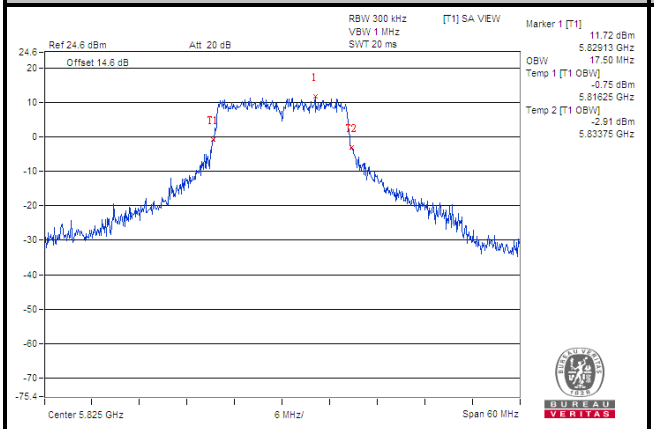
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
42	5210	76.80	76.80
58	5290	76.80	76.80
106	5530	77.04	76.80
122	5610	75.12	76.80
138	5690 (U-NII-2C)	72.68	73.64
138	5690 (U-NII-3)	2.44	3.16
155	5775	75.36	76.80

802.11ax (HE160)

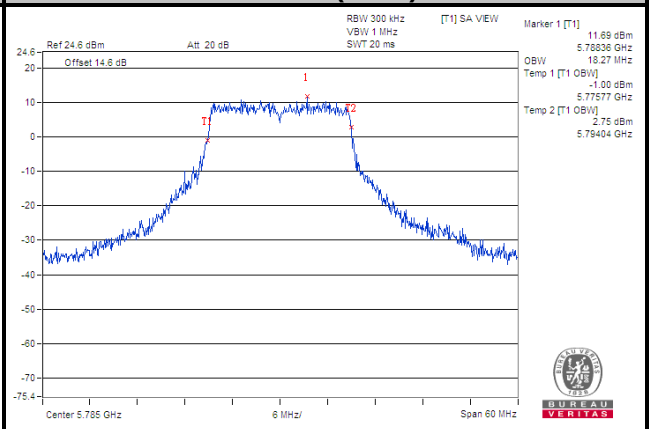
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
50	5250	154.80	155.20
114	5570	155.20	154.80

Spectrum Plot of Worst Value

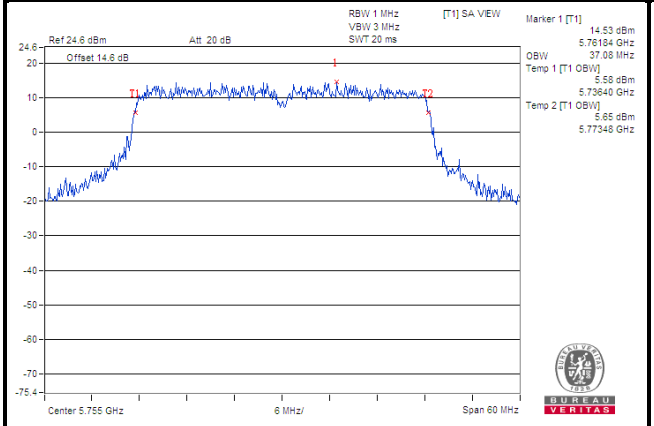
802.11a



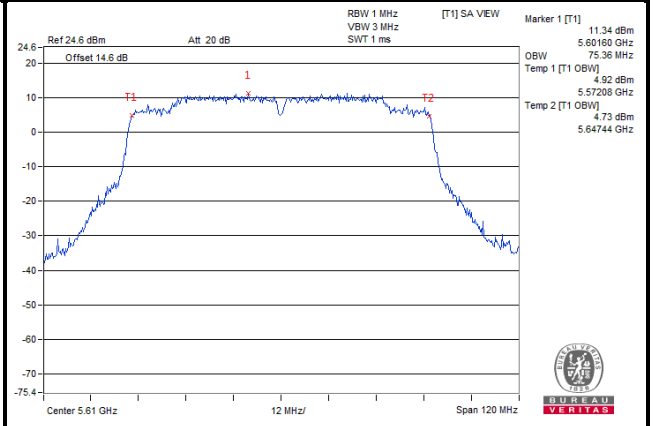
802.11n (HT20)



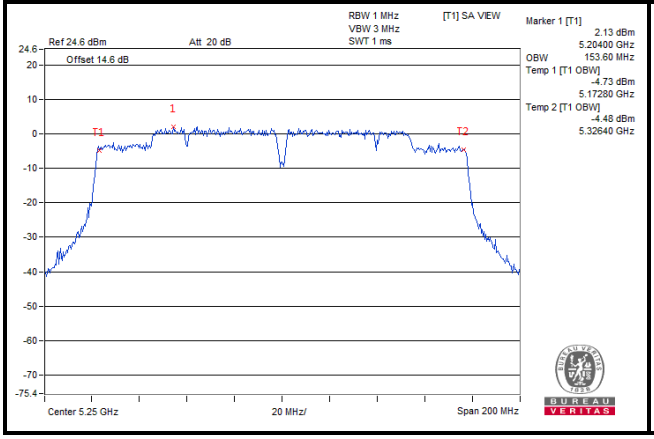
802.11n (HT40)



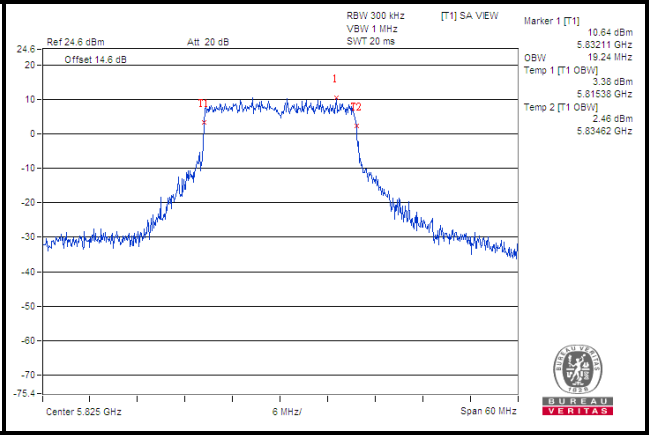
802.11ac (VHT80)



802.11ac (VHT160)

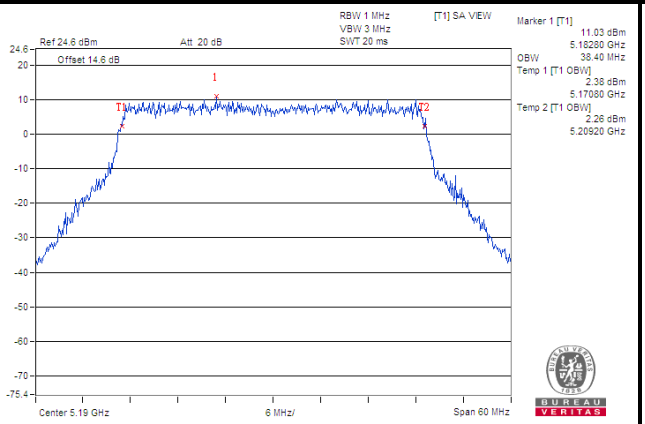


802.11ax (HE20)

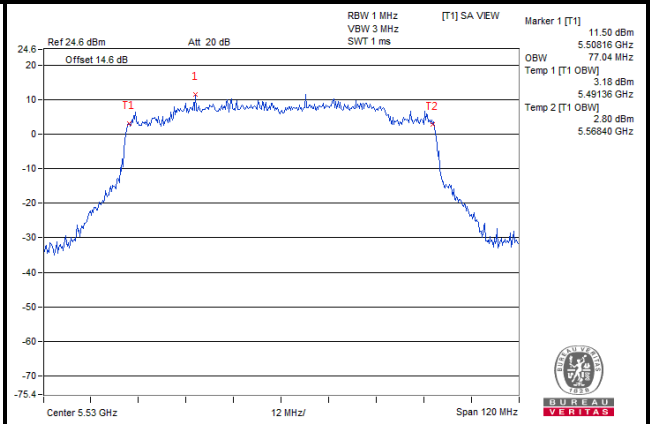


Spectrum Plot of Worst Value

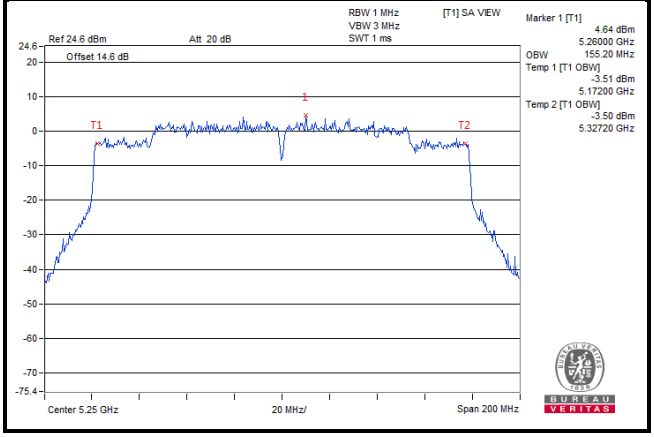
802.11ax (HE40)



802.11ax (HE80)



802.11ax (HE160)

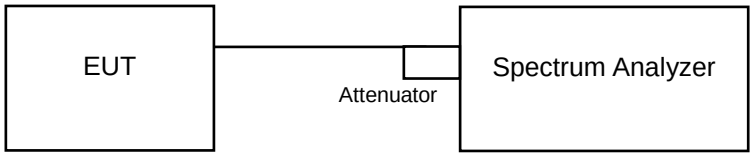


4.5 Peak Power Spectral Density Measurement

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	4.61	0.11	4.72	11	Pass
40	5200	6.96	0.11	7.07	11	Pass
48	5240	6.66	0.11	6.77	11	Pass
52	5260	6.69	0.11	6.80	11	Pass
60	5300	6.70	0.11	6.81	11	Pass
64	5320	3.53	0.11	3.64	11	Pass
100	5500	5.32	0.11	5.43	11	Pass
116	5580	6.69	0.11	6.80	11	Pass
140	5700	4.55	0.11	4.66	11	Pass

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

802.11n (HT20)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
36	5180	3.73	3.46	6.61	11	Pass
40	5200	4.94	5.13	8.05	11	Pass
48	5240	4.73	5.14	7.95	11	Pass
52	5260	4.55	5.50	8.06	11	Pass
60	5300	4.90	4.81	7.87	11	Pass
64	5320	1.70	2.16	4.95	11	Pass
100	5500	3.96	4.46	7.23	11	Pass
116	5580	5.90	5.73	8.83	11	Pass
140	5700	3.26	5.43	7.49	11	Pass
144	5720 (U-NII-2C)	6.81	6.50	9.67	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:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.71 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2A:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.22 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.89 < 6$ dBi, so the limit no need to be reduced.

802.11n (HT40)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
38	5190	0.51	0.40	3.47	11	Pass
46	5230	1.64	1.19	4.43	11	Pass
54	5270	0.91	0.83	3.88	11	Pass
62	5310	-2.95	-2.65	0.21	11	Pass
102	5510	0.70	0.38	3.55	11	Pass
110	5550	3.00	2.83	5.93	11	Pass
134	5670	1.82	3.48	5.74	11	Pass
142	5710 (U-NII-2C)	5.09	4.68	7.90	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:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.71 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2A:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.22 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.89 < 6$ dBi, so the limit no need to be reduced.

802.11ac (VHT80)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
42	5210	0.49	-0.10	3.22	11	Pass
58	5290	-1.07	-1.67	1.65	11	Pass
106	5530	1.24	0.45	3.87	11	Pass
122	5610	1.54	1.57	4.57	11	Pass
138	5690 (U-NII-2C)	2.13	2.28	5.22	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:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.71 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2A:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.22 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.89 < 6$ dBi, so the limit no need to be reduced.

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	-6.90	-6.98	0.14	-3.79	11	Pass
114	5570	-5.50	-6.02	0.14	-2.60	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:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.71 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2A:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.22 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.89 < 6$ 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	2.63	3.19	5.93	11	Pass
40	5200	4.33	4.84	7.60	11	Pass
48	5240	3.53	4.39	6.99	11	Pass
52	5260	3.58	4.09	6.85	11	Pass
60	5300	3.64	4.00	6.83	11	Pass
64	5320	0.61	1.24	3.95	11	Pass
100	5500	2.99	3.62	6.33	11	Pass
116	5580	4.97	4.92	7.96	11	Pass
140	5700	2.33	4.59	6.62	11	Pass
144	5720 (U-NII-2C)	5.89	5.25	8.59	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:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.71 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2A:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.22 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.89 < 6$ dBi, so the limit no need to be reduced.

802.11ax (HE40)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
38	5190	-0.80	-0.92	2.15	11	Pass
46	5230	0.27	0.62	3.46	11	Pass
54	5270	-0.45	-0.20	2.69	11	Pass
62	5310	-4.07	-3.80	-0.92	11	Pass
102	5510	-0.76	-0.07	2.61	11	Pass
110	5550	2.03	1.64	4.85	11	Pass
134	5670	1.11	1.44	4.29	11	Pass
142	5710 (U-NII-2C)	4.52	3.48	7.04	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:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.71 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2A:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.22 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.89 < 6$ dBi, so the limit no need to be reduced.

802.11ax (HE80)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1			
42	5210	-0.84	-0.56	2.31	11	Pass
58	5290	-2.24	-1.72	1.04	11	Pass
106	5530	-0.12	0.30	3.11	11	Pass
122	5610	1.15	1.69	4.44	11	Pass
138	5690 (U-NII-2C)	2.47	2.25	5.37	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:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.71 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2A:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.22 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.89 < 6$ dBi, so the limit no need to be reduced.

802.11ax (HE160)

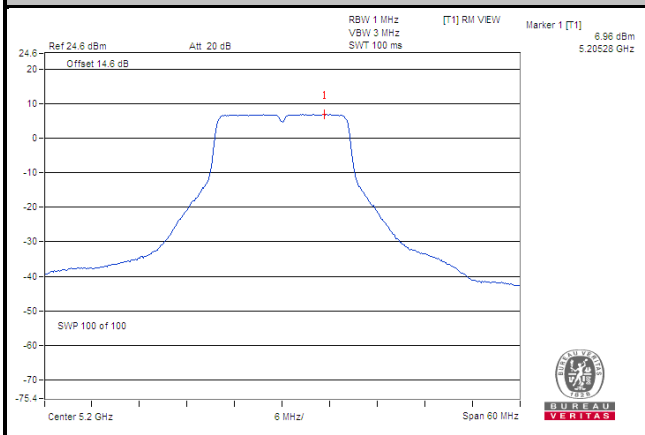
Channel	Frequency (MHz)	PSD (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
50	5250	-7.36	-7.27	0.14	-4.16	11	Pass
114	5570	-6.52	-6.37	0.14	-3.29	11	Pass

Note:

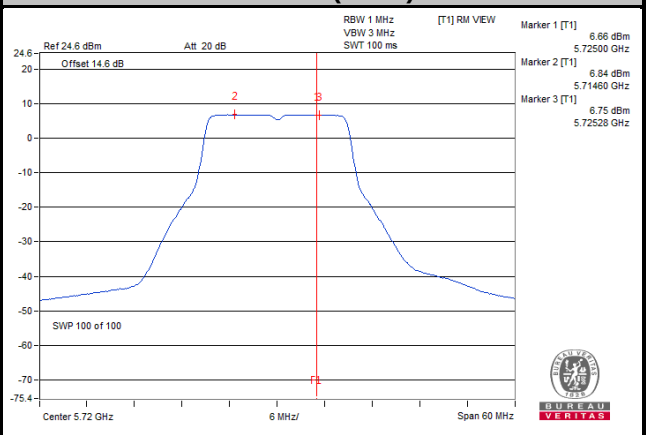
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.71 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2A:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.22 < 6$ dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.89 < 6$ 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

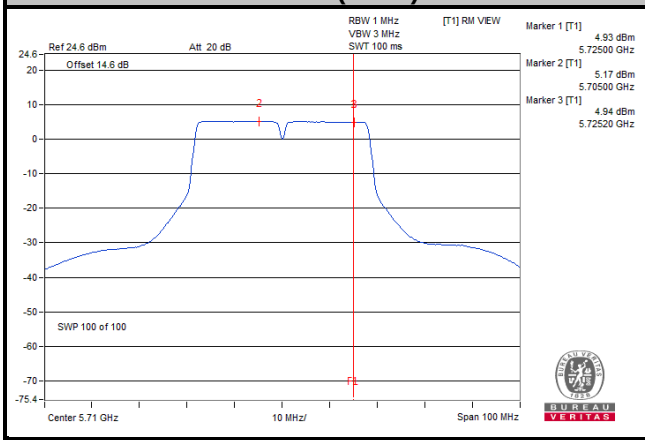
802.11a



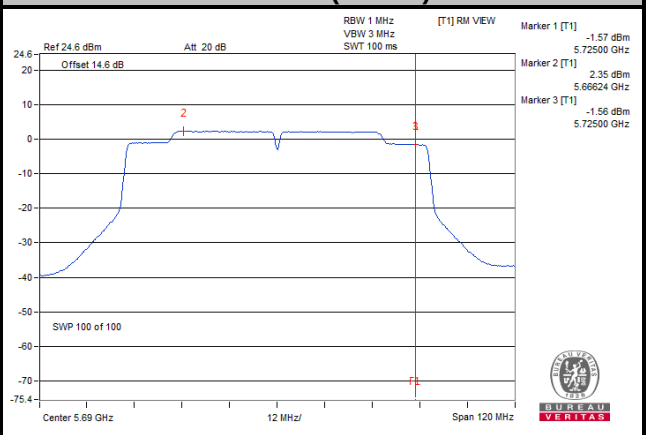
802.11n (HT20)



802.11n (HT40)

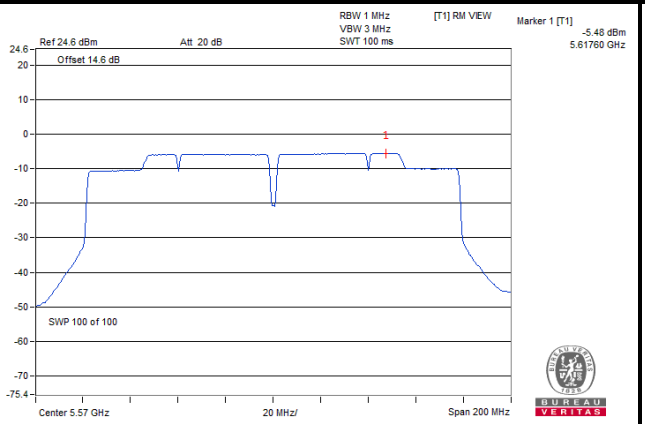


802.11ac (VHT80)

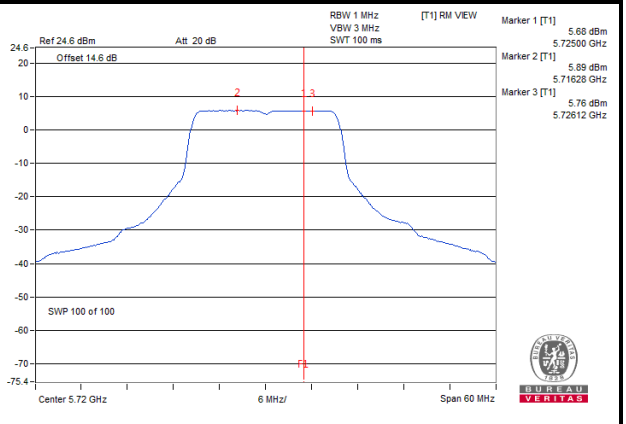


Spectrum Plot of Worst Value

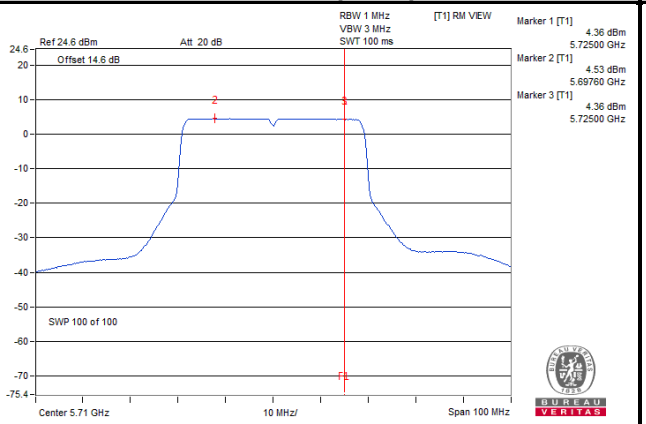
802.11ac (VHT160)



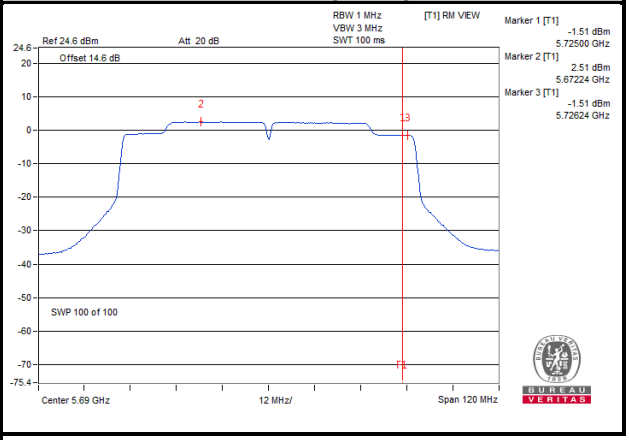
802.11ax (HE20)



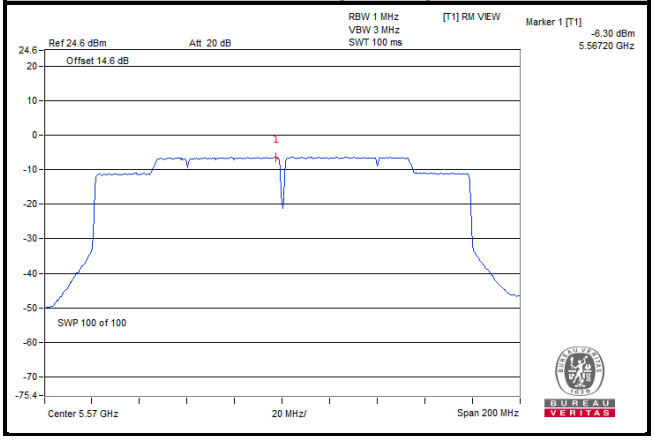
802.11ax (HE40)



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)				
149	5745	-0.60	1.62	0.11	1.73	30	Pass
157	5785	-0.46	1.76	0.11	1.87	30	Pass
165	5825	-0.81	1.41	0.11	1.52	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)	1.45	3.67	3.01	6.68	30	Pass
	149	5745	-2.31	-0.09	3.01	2.92	30	Pass
	157	5785	-1.54	0.68	3.01	3.69	30	Pass
	165	5825	-2.03	0.19	3.01	3.20	30	Pass
1	144	5720 (U-NII-3)	0.81	3.03	3.01	6.04	30	Pass
	149	5745	-1.93	0.29	3.01	3.30	30	Pass
	157	5785	-1.89	0.33	3.01	3.34	30	Pass
	165	5825	-2.16	0.06	3.01	3.07	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 = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.81 < 6$ dBi, so the limit no need to be reduced.

802.11n (HT40)

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)	-0.19	2.03	3.01	5.04	30	Pass
	151	5755	-5.04	-2.82	3.01	0.19	30	Pass
	159	5795	-4.70	-2.48	3.01	0.53	30	Pass
1	142	5710 (U-NII-3)	-2.43	-0.21	3.01	2.80	30	Pass
	151	5755	-4.88	-2.66	3.01	0.35	30	Pass
	159	5795	-4.33	-2.11	3.01	0.90	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 = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.81 < 6$ dBi, so the limit no need to be reduced.

802.11ac (VHT80)

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	138	5690 (U-NII-3)	-7.11	-4.89	3.01	-1.88	30	Pass
	155	5775	-4.61	-2.39	3.01	0.62	30	Pass
1	138	5690 (U-NII-3)	-6.70	-4.48	3.01	-1.47	30	Pass
	155	5775	-4.37	-2.15	3.01	0.86	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 = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.81 < 6$ dBi, so the limit no need to be reduced.

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)	0.43	2.65	3.01	5.66	30	Pass
	149	5745	-4.01	-1.79	3.01	1.22	30	Pass
	157	5785	-3.60	-1.38	3.01	1.63	30	Pass
	165	5825	-3.85	-1.63	3.01	1.38	30	Pass
1	144	5720 (U-NII-3)	-0.05	2.17	3.01	5.18	30	Pass
	149	5745	-3.72	-1.50	3.01	1.51	30	Pass
	157	5785	-4.25	-2.03	3.01	0.98	30	Pass
	165	5825	-4.22	-2.00	3.01	1.01	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 = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.81 < 6$ dBi, so the limit no need to be reduced.

802.11ax (HE40)

TX Chain	Channel	Freq. (MHz)	PSD		PSD	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/300 kHz)				
0	142	5710 (U-NII-3)	-0.73	1.49	3.01	4.50	30	Pass
	151	5755	-6.81	-4.59	3.01	-1.58	30	Pass
	159	5795	-6.44	-4.22	3.01	-1.21	30	Pass
1	142	5710 (U-NII-3)	-1.82	0.40	3.01	3.41	30	Pass
	151	5755	-7.39	-5.17	3.01	-2.16	30	Pass
	159	5795	-6.89	-4.67	3.01	-1.66	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 = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.81 < 6$ dBi, so the limit no need to be reduced.

802.11ax (HE80)

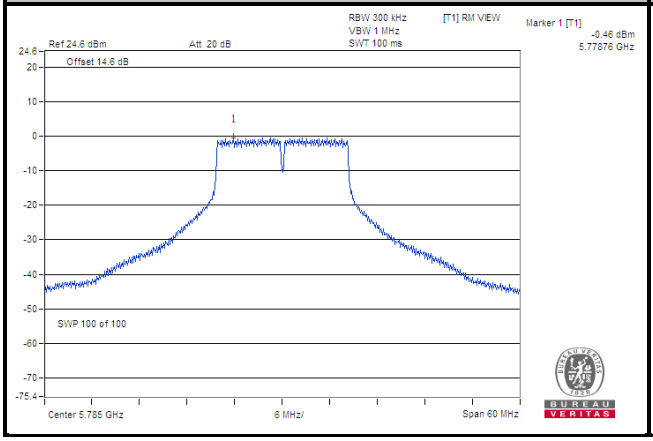
TX Chain	Channel	Freq. (MHz)	PSD		10 log (N=2) dB	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)				
0	138	5690 (U-NII-3)	-7.42	-5.20	3.01	-2.19	30	Pass
	155	5775	-5.18	-2.96	3.01	0.05	30	Pass
1	138	5690 (U-NII-3)	-6.80	-4.58	3.01	-1.57	30	Pass
	155	5775	-4.72	-2.50	3.01	0.51	30	Pass

Note:

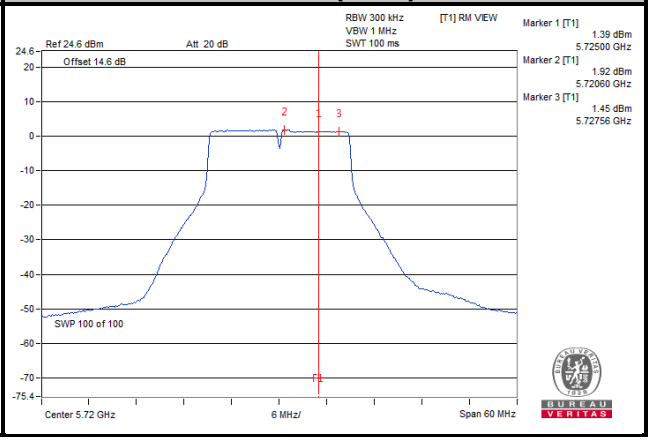
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 2.81 < 6$ dBi, so the limit no need to be reduced.

Spectrum Plot of Worst Value

802.11a

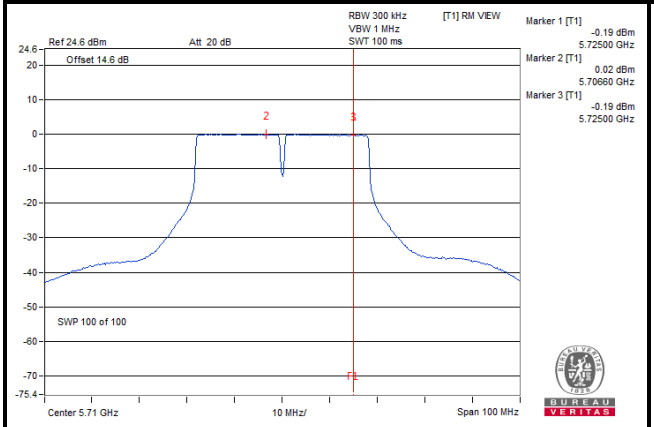


802.11n (HT20)

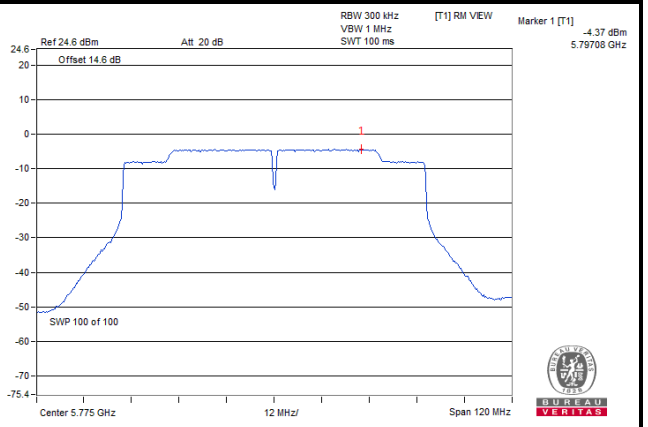


Spectrum Plot of Worst Value

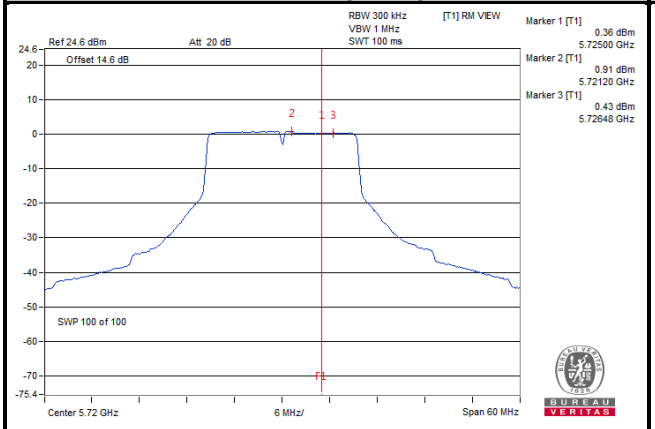
802.11n (HT40)



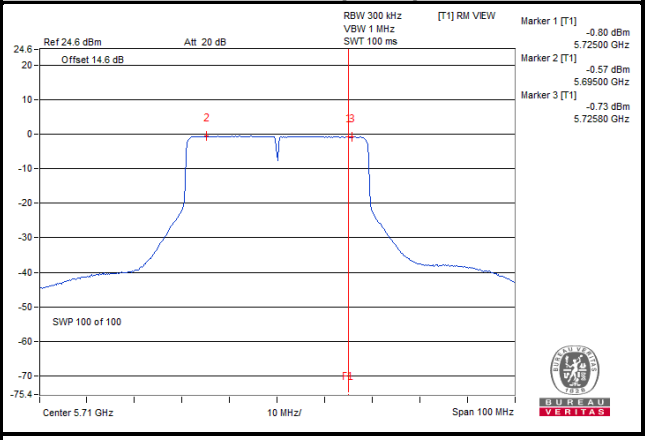
802.11ac (VHT80)



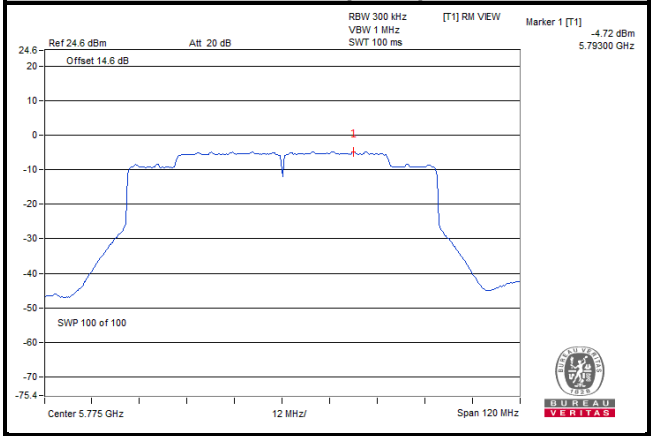
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)

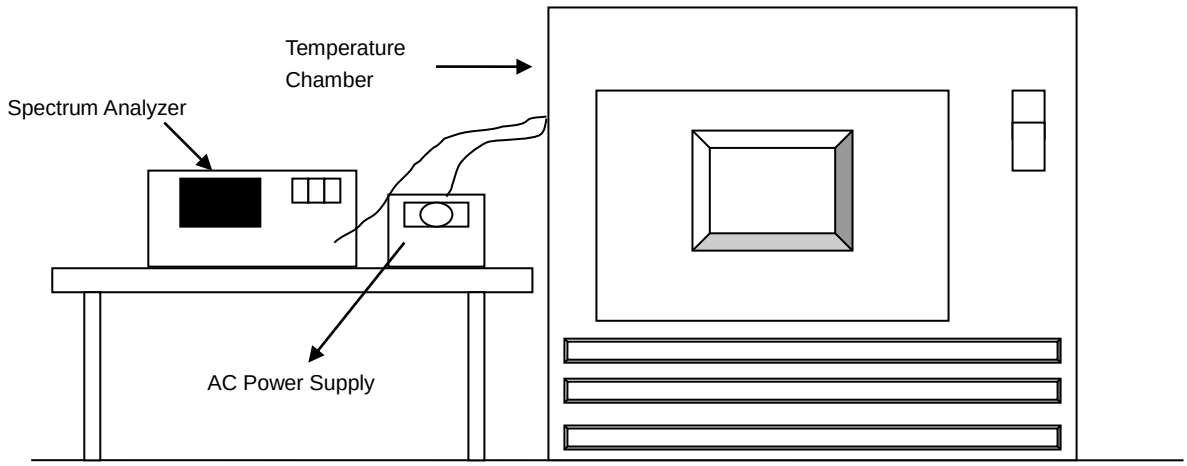


4.6 Frequency Stability

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 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	5180.027	PASS	5180.0258	PASS	5180.0266	PASS	5180.0255	PASS
30	120	5179.9997	PASS	5180.0003	PASS	5180.0006	PASS	5179.998	PASS
20	120	5179.9794	PASS	5179.9839	PASS	5179.9803	PASS	5179.9834	PASS
10	120	5180.0248	PASS	5180.0266	PASS	5180.0241	PASS	5180.0252	PASS

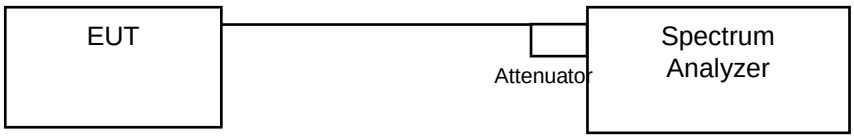
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	138	5179.979	PASS	5179.9849	PASS	5179.9809	PASS	5179.983	PASS
	120	5179.9794	PASS	5179.9839	PASS	5179.9803	PASS	5179.9834	PASS
	102	5179.9785	PASS	5179.9836	PASS	5179.9803	PASS	5179.9834	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
149	5745	16.39	0.5	Pass
157	5785	16.39	0.5	Pass
165	5825	16.41	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144	5720 (U-NII-3)	3.81	3.82	0.5	Pass
149	5745	17.61	17.65	0.5	Pass
157	5785	17.62	17.65	0.5	Pass
165	5825	17.65	17.65	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
142	5710 (U-NII-3)	3.24	2.63	0.5	Pass
151	5755	36.48	36.48	0.5	Pass
159	5795	36.50	36.48	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)	2.60	1.40	0.5	Pass
155	5775	75.20	75.16	0.5	Pass

802.11ax (HE20)

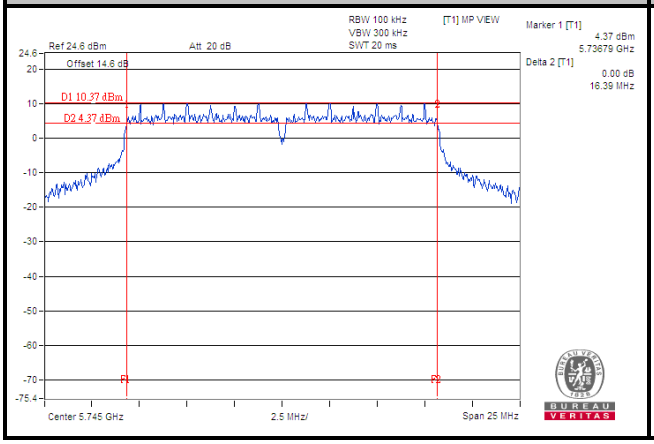
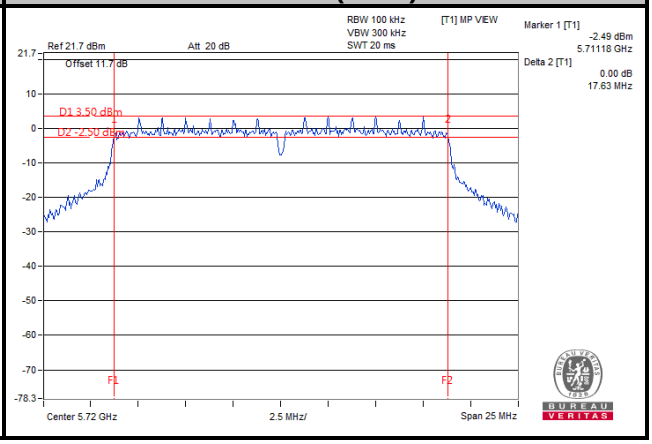
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144	5720 (U-NII-3)	4.42	4.22	0.5	Pass
149	5745	18.93	18.82	0.5	Pass
157	5785	18.94	18.78	0.5	Pass
165	5825	18.83	18.82	0.5	Pass

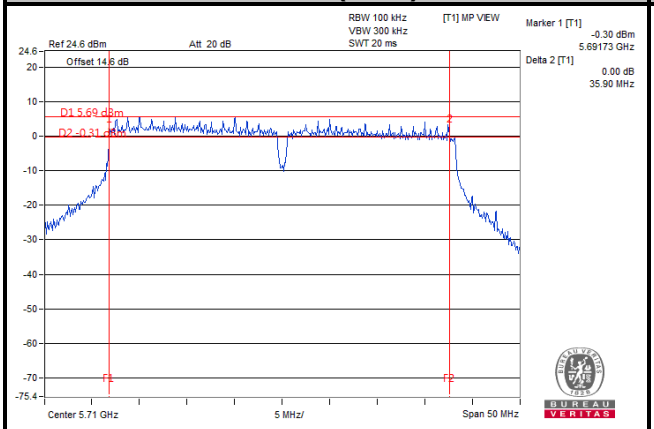
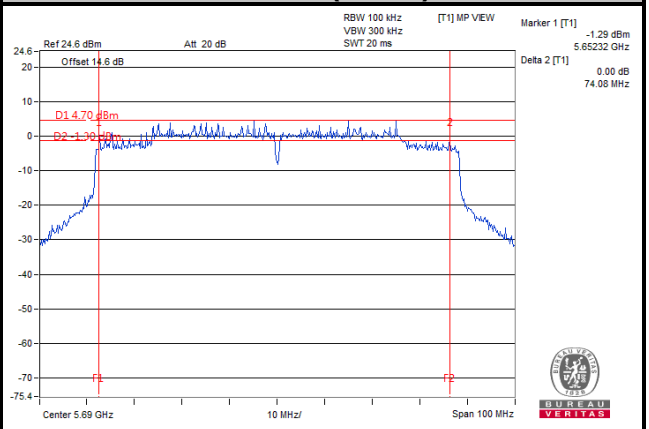
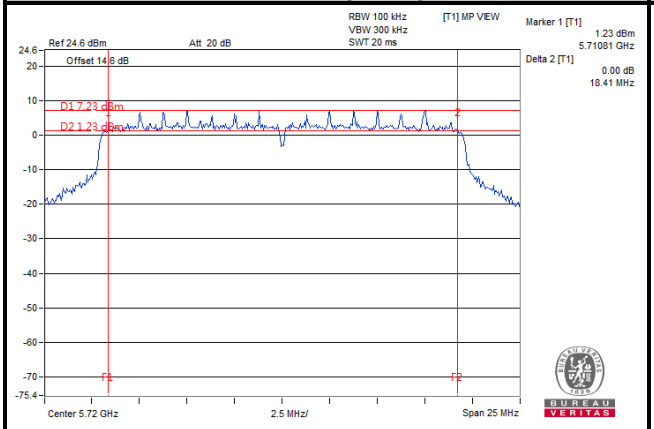
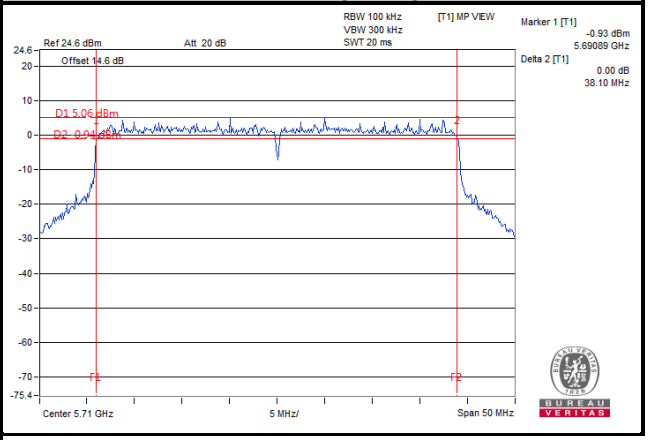
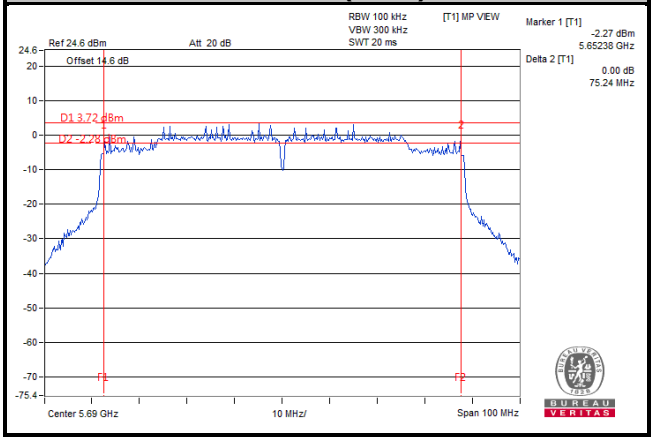
802.11ax (HE40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
142	5710 (U-NII-3)	4.04	3.99	0.5	Pass
151	5755	37.86	37.68	0.5	Pass
159	5795	37.93	37.66	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)	2.62	2.62	0.5	Pass
155	5775	64.43	71.39	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	

Spectrum Plot of Worst Value	
802.11n (HT40)	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

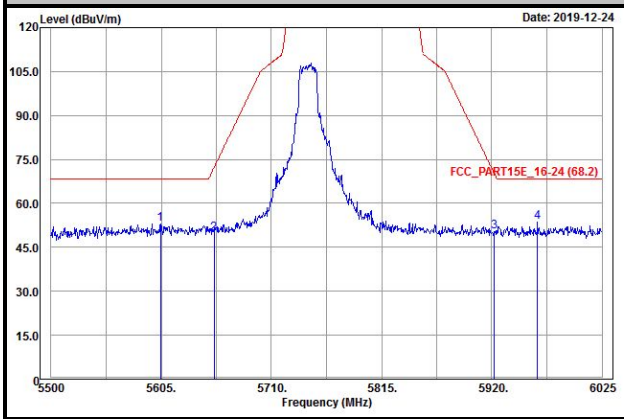
Please refer to the attached file (Test Setup Photo).

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

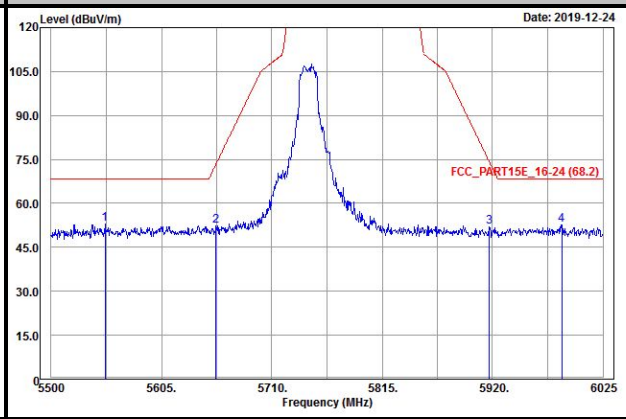
802.11a

Ch 149

Horizontal

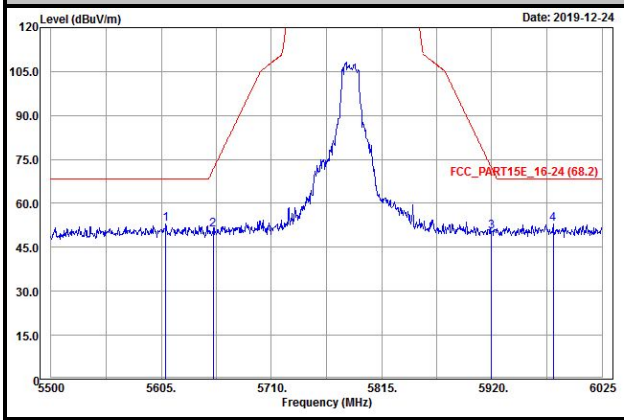


Vertical

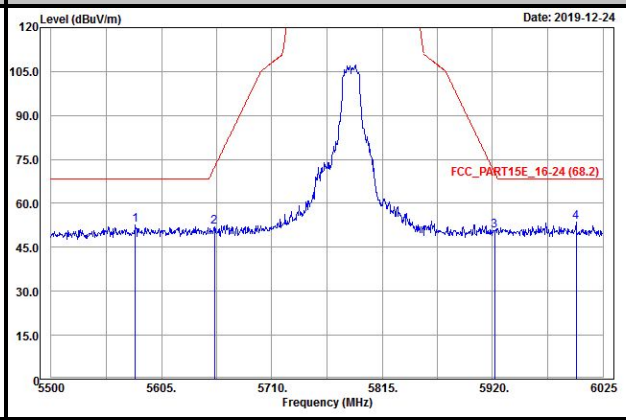


Ch 157

Horizontal

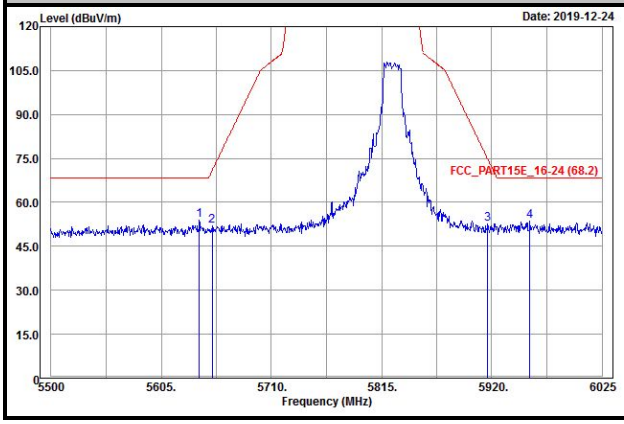


Vertical

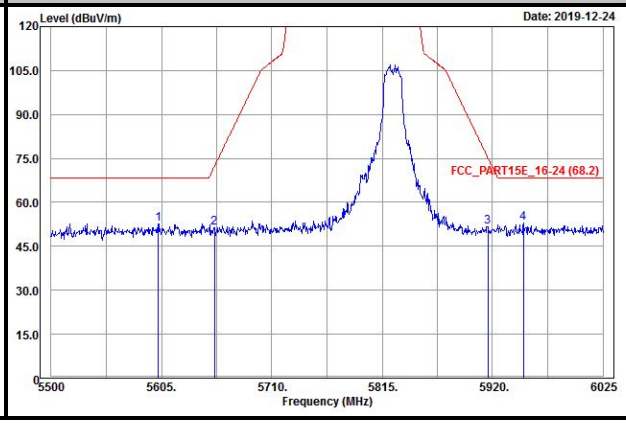


Ch 165

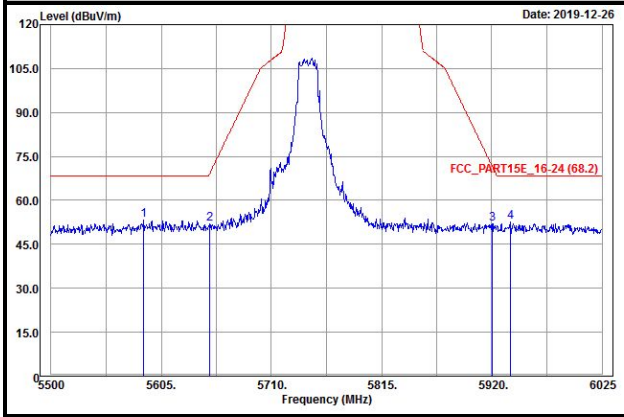
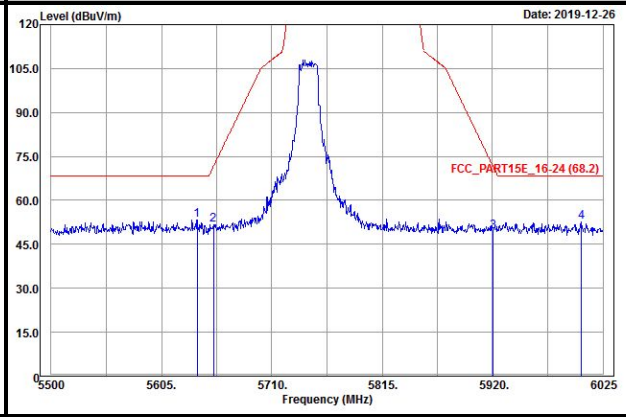
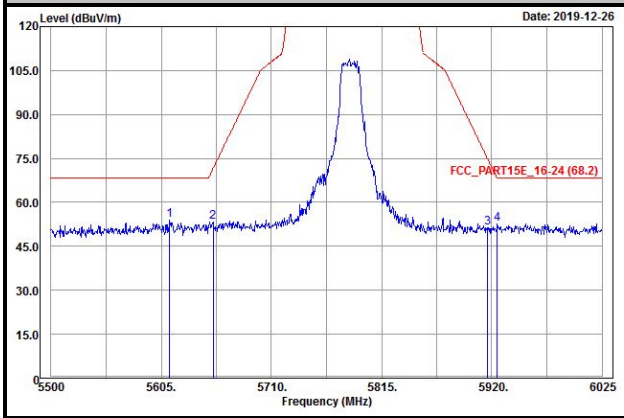
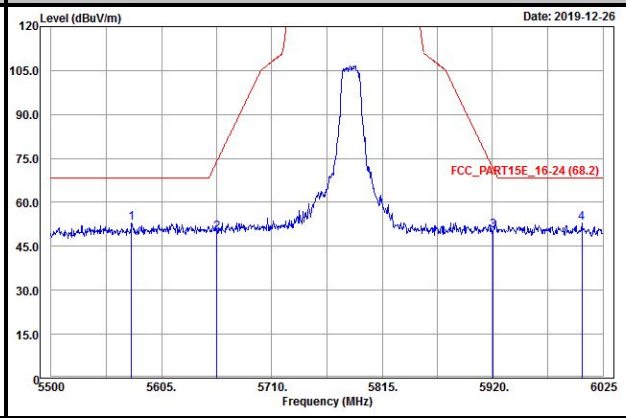
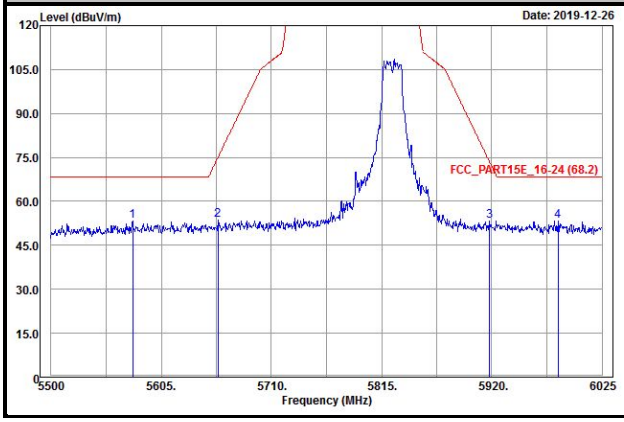
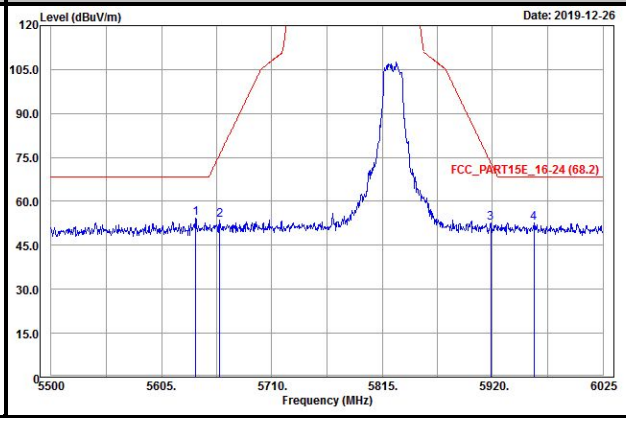
Horizontal



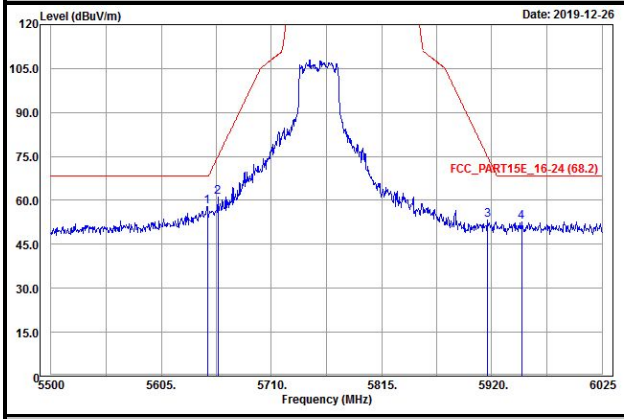
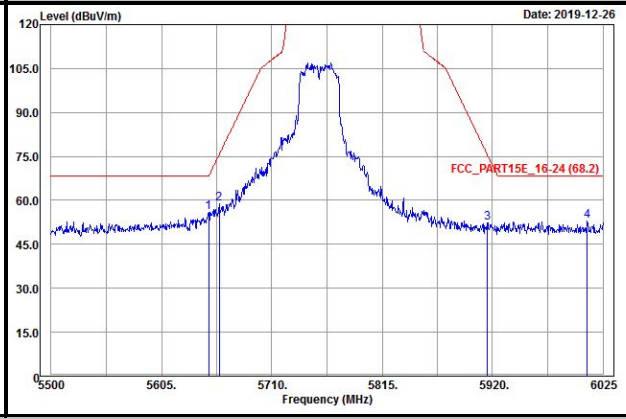
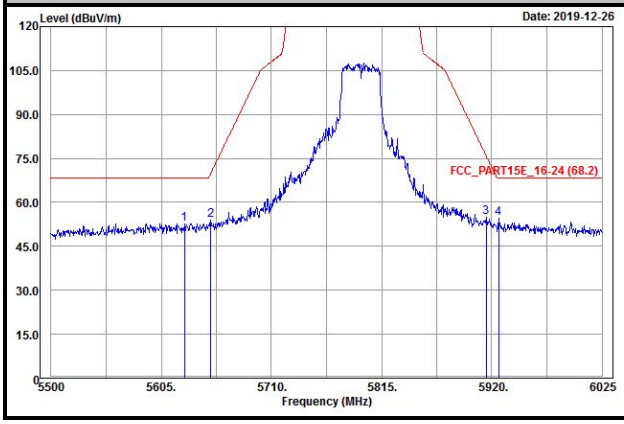
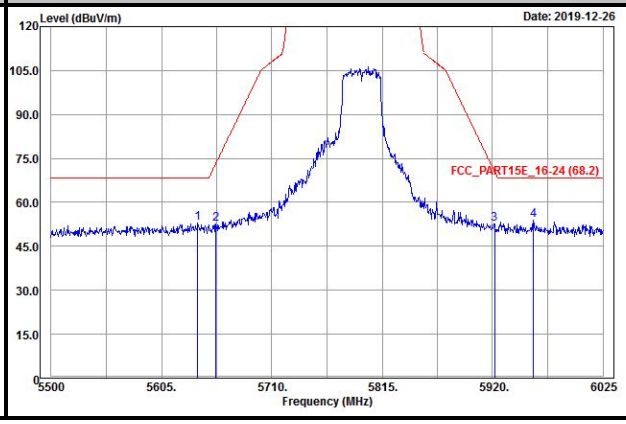
Vertical



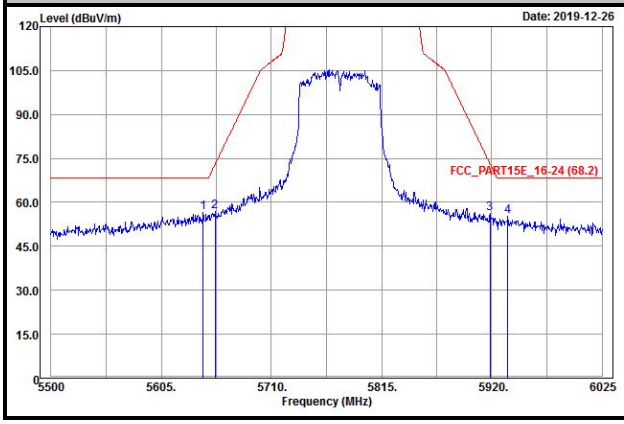
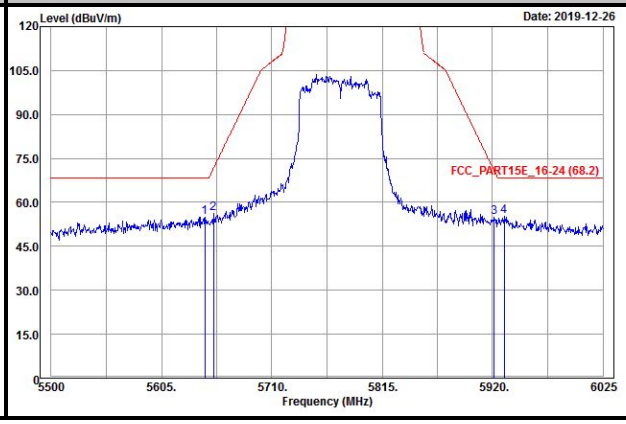
802.11n (HT20)

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

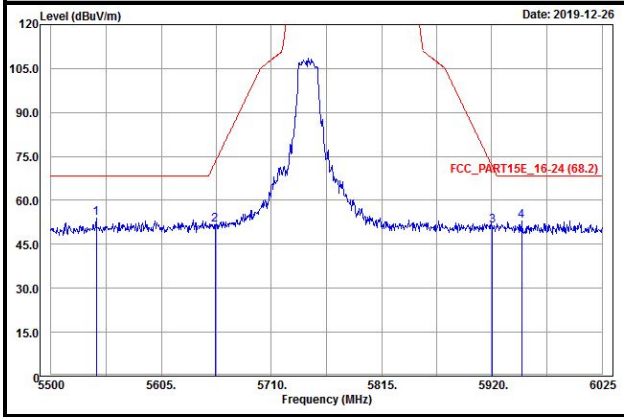
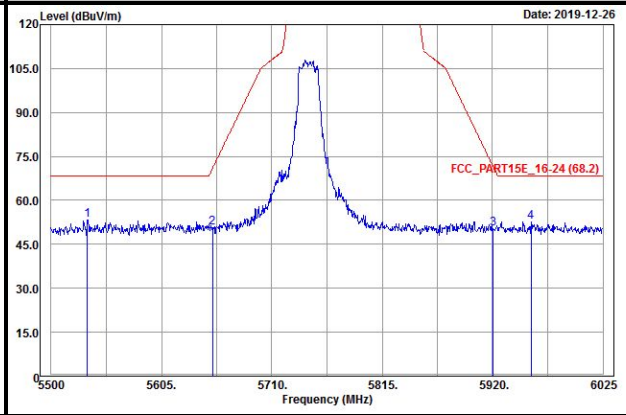
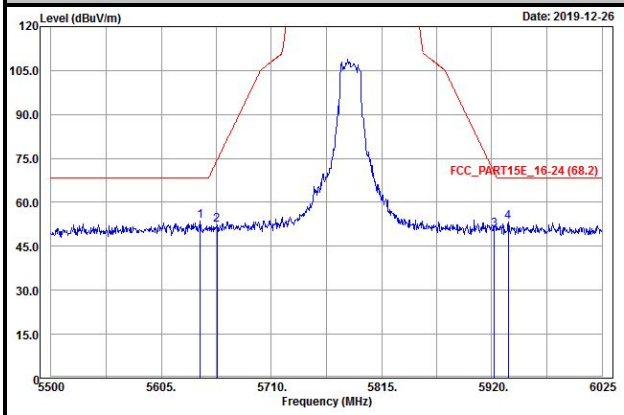
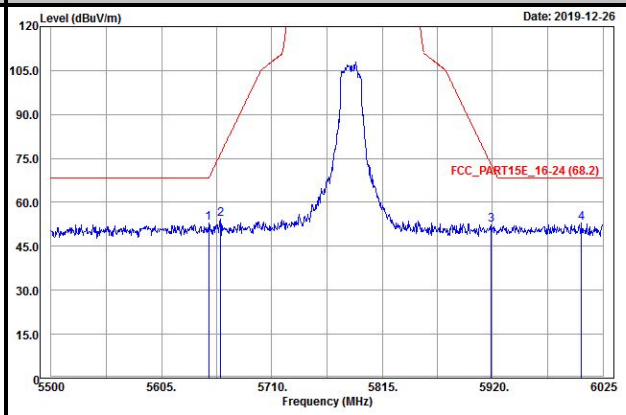
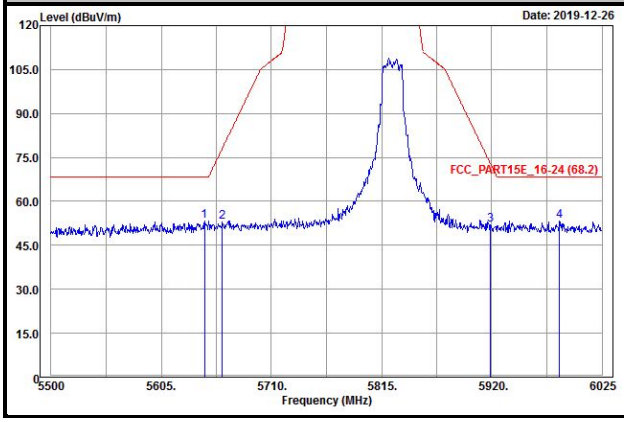
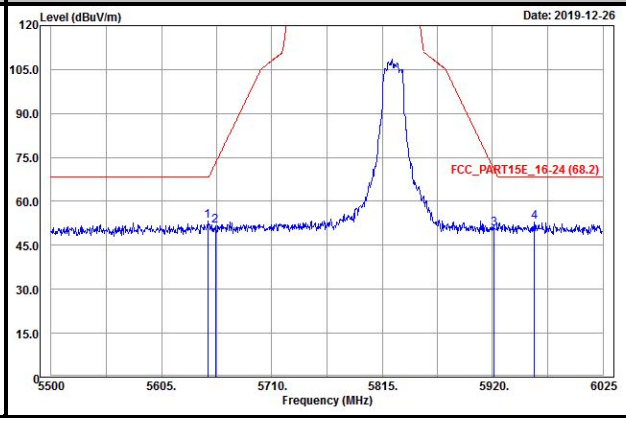
802.11n (HT40)

Ch 151	
Horizontal	Vertical
	
Ch 159	
Horizontal	Vertical
	

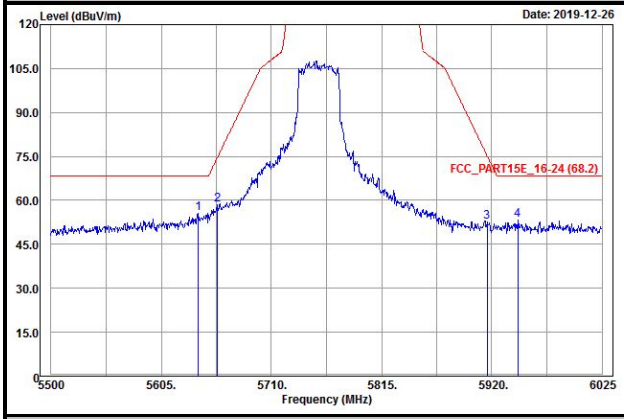
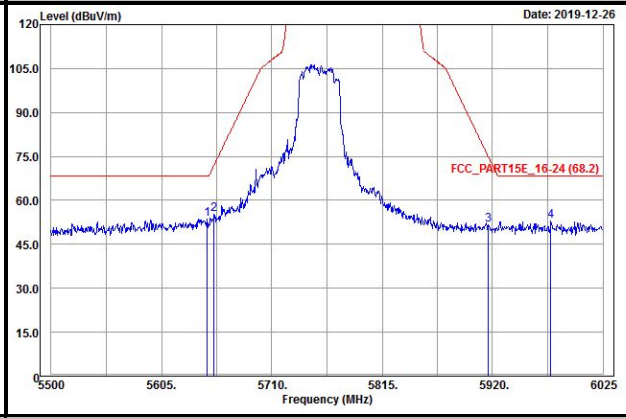
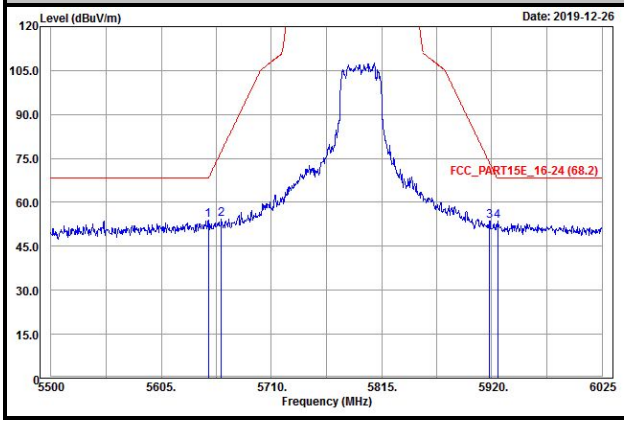
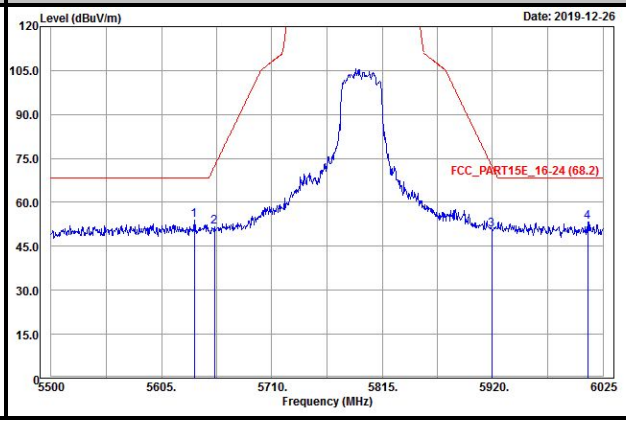
802.11ac (VHT80)

Ch 155	
Horizontal	Vertical
	

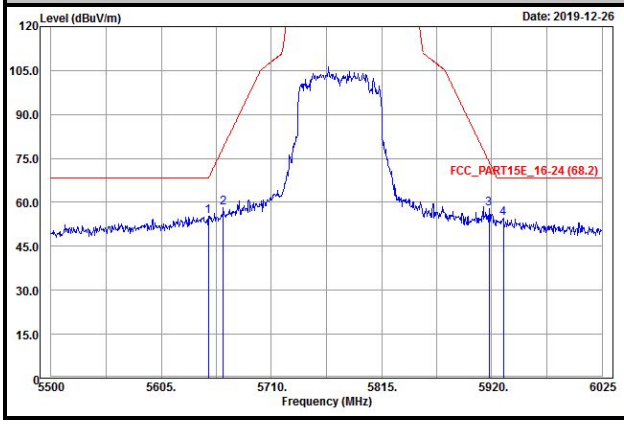
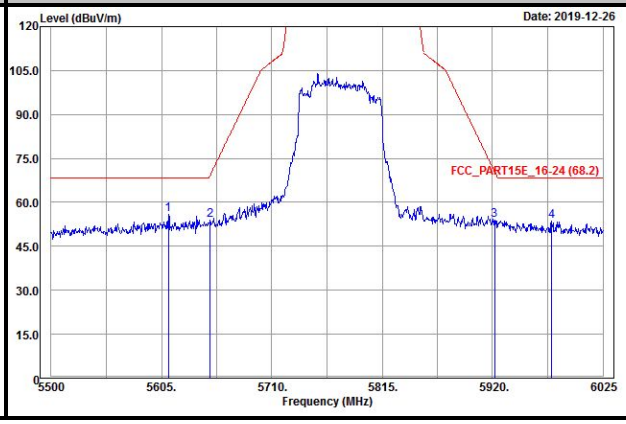
802.11ax (HE20)

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.

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Web Site: www.bureauveritas-adt.com

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

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