TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart E (Section 15.407)**
Report No.:	RFBIBJ-WTW-P22110693-2
FCC ID:	HBW-VKP1
Product:	SMART GARAGE VIDEO KEYPAD
Brand:	myQ
Model No.:	VKP1-MYQ MC, VKP1-LM MC, VKP1-RJO MC
Received Date:	2022/12/2
Test Date:	2022/12/5 ~ 2022/12/14
Issued Date:	2023/3/13
Applicant:	The Chamberlain Group Inc
Address:	300 Windsor Drive Oakbrook, IL 60523
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., Kewi Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number(1):	788550 / TW0003
Test Location (2):	No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
FCC Registration / Designation Number(2):	281270 / TW0032

Approved by: Jeremy Lin , **Date:** **2023/3/13**

Jeremy Lin / Project Engineer

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Prepared by : Pettie Chen / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBIBJ-WTW-P22110693-2	Original release.	2023/3/13

1 Certificate

Product:	SMART GARAGE VIDEO KEYPAD
Brand:	myQ
Test Model:	VKP1-MYQ MC, VKP1-LM MC, VKP1-RJO MC
Sample Status:	Engineering sample
Applicant:	The Chamberlain Group Inc
Test Date:	2022/12/5 ~ 2022/12/14
Standard:	47 CFR FCC Part 15, Subpart E (Section 15.407)
Measurement procedure:	ANSI C63.10-2013 KDB 789033 D02 General UNII Test Procedure New Rules v02r01

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.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(1/2/3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	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)
---	Occupied Bandwidth	-	Reference only.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -17.58 dB at 0.26200 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -11.5 dB at 80.61 MHz
15.407(b) (1/2/3/4(i)/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -1.0 dB at 5150.00 MHz
15.203	Antenna Requirement	Pass	Antenna connector is IPEX not a standard connector.

Note: 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	Specification	Expanded Uncertainty (k=2) (±)
Occupied Bandwidth	-	491.896 Hz
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.99 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3 dB
	30 MHz ~ 1 GHz	2.93 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	1.76 dB
	18 GHz ~ 40 GHz	1.77 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	SMART GARAGE VIDEO KEYPAD
Brand	myQ
Test Model	VKP1-MYQ MC, VKP1-LM MC, VKP1-RJO MC
Model Difference	Marketing purpose
Status of EUT	Engineering sample
Power Supply Rating	3.7Vdc (From battery)
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	OFDM
Transfer Rate	Up to 72.2 Mbps
Operating Frequency	5180 ~ 5240MHz, 5745 ~ 5825 MHz
Number of Channel	802.11a, 802.11n (HT20): 9
Output Power	5180 ~ 5240 MHz: 54.075 mW (17.33 dBm) 5745 ~ 5825 MHz: 149.968 mW (21.76 dBm)
EUT Category	Client device

Note:

1. The EUT uses following accessory.

Battery		
Brand	Model	Specification
myQ	18650MH1-1S2P	Power Rating : 3.7V

2. The EUT is not capable of simultaneous transmission.
3. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Ant. No.	P/N	Gain (dBi)						Antenna Type	Connector Type
		2400 MHz	2450 MHz	2500 MHz	5150 MHz	5500 MHz	5850 MHz		
1	RFPCA391704IMLB301	1.99	2.54	2.52	5.46	4.51	5.08	PCB	IPEX
2	RFPCA391707IMLB302	2.09	2.69	2.34	4.12	5.15	5.35	PCB	IPEX

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.
* For U-NII-1, Ant. 1 with the maximum gain was for the final tests.
  For U-NII-3, Ant. 2 with the maximum gain was for the final tests.

2. The EUT provides 1 completed transmitter and 1 receiver.

5 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11a	1TX (Diversity)	1RX
802.11n (HT20)	1TX (Diversity)	1RX

3.3 Channel List

FOR 5180 ~ 5240 MHz

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

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

FOR 5745 ~ 5825 MHz:

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

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

3.4 Test Mode Applicability and Tested Channel Detail

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

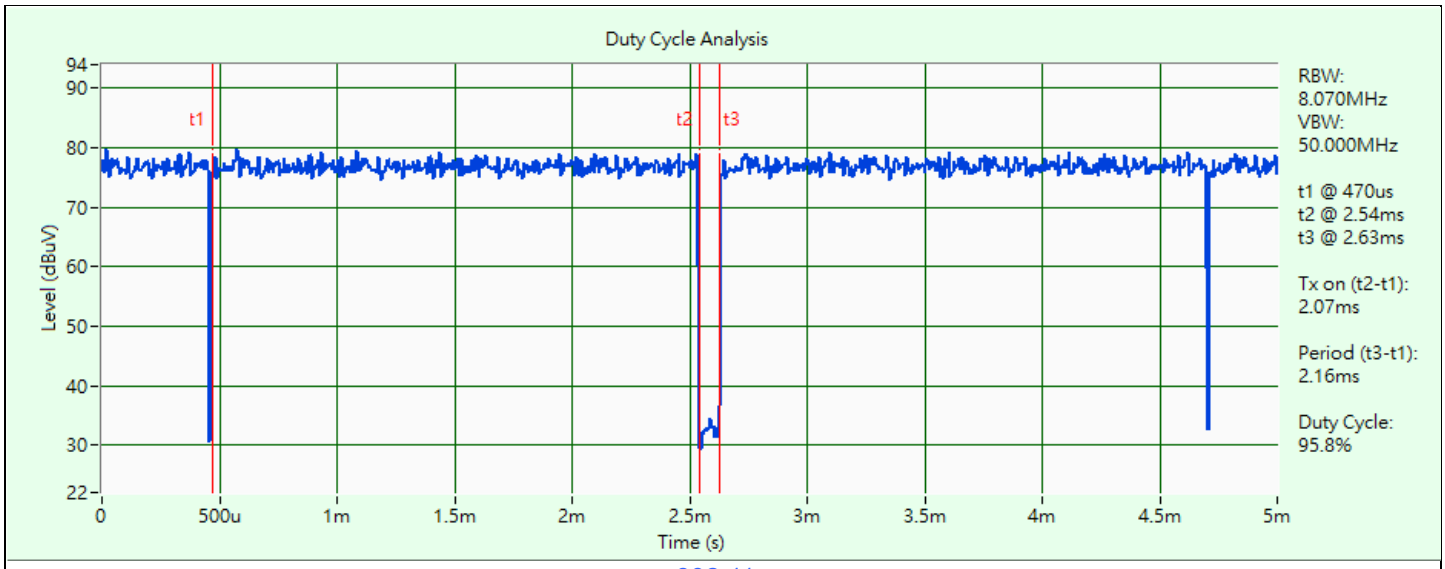
Test Item	Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power / Power Spectral Density	802.11a	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
	802.11n (HT20)	36, 40, 48, 149, 157, 165	BPSK	MCS0
6 dB Bandwidth	802.11a	149, 157, 165	BPSK	6Mb/s
	802.11n (HT20)	149, 157, 165	BPSK	MCS0
Occupied Bandwidth	802.11a	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
	802.11n (HT20)	36, 40, 48, 149, 157, 165	BPSK	MCS0
Frequency Stability	802.11a	36	un-modulation	-
AC Power Conducted Emissions (Note)	Battery Charge	-	-	-
Unwanted Emissions below 1 GHz	802.11a	48	BPSK	6Mb/s
Unwanted Emissions above 1 GHz	802.11a	36, 40, 48, 149, 157, 165	BPSK	6Mb/s
	802.11n (HT20)	36, 40, 48, 149, 157, 165	BPSK	MCS0

* The EUT is designed to be positioned on the Z-plane only.

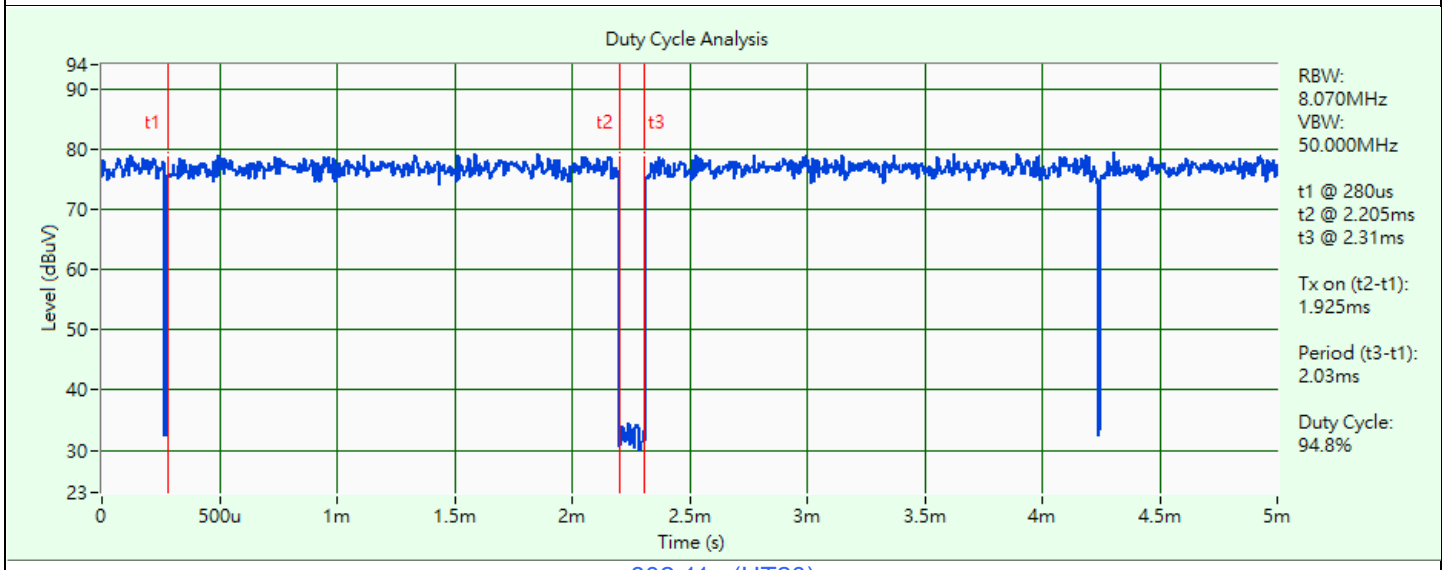
Note: Battery Charging mode only be performing under AC Power Conducted Emission Test as the EUT has no AC input port.

3.5 Duty Cycle of Test Signal

802.11a: Duty cycle = 2.07 ms / 2.16 ms x 100% = 95.8%, duty factor = 10 * log (1/Duty cycle) = 0.18 dB
802.11n (HT20): Duty cycle = 1.925 ms / 2.03 ms x 100% = 94.8%, duty factor = 10 * log (1/Duty cycle) = 0.23 dB



802.11a



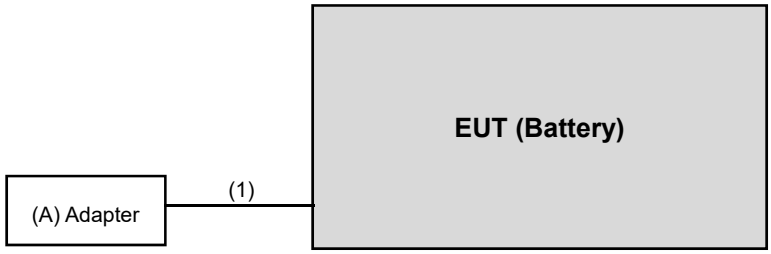
802.11n (HT20)

3.6 Test Program Used and Operation Descriptions

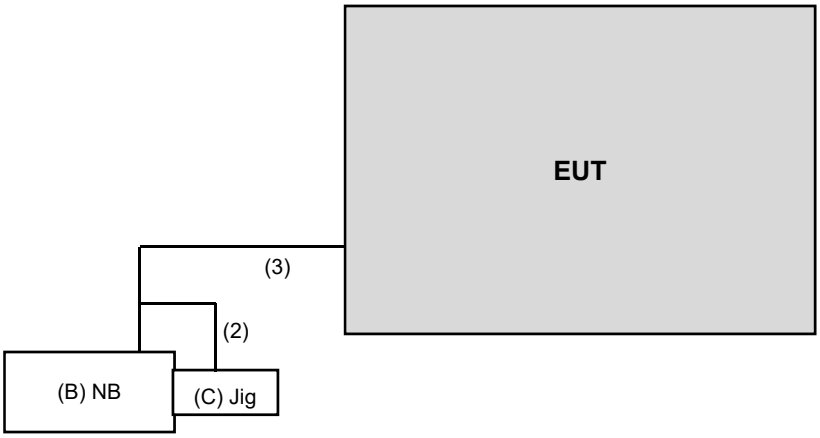
Controlling software AmebaPro2_mptool_1V9.6 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

AC Power Conducted Emissions



Unwanted Emissions Test



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Adapter	ASUS	AD827M	NA	NA	Provided by Lab
B	Notebook	Lenovo	L440	R9-0GFJKK	NA	Provided by Lab
C	Jig	NA	NA	NA	NA	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	USB Cable	1	1	Yes	0	Provided by Lab
2	Singal Cable	1	0.1	No	0	Supplied by applicant
3	USB Cable	1	0.1	No	0	Supplied by applicant

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Peak Power Analyzer KEYSIGHT	8990B	MY51000485	2022/1/18	2023/1/17
Power sensor KEYSIGHT	U2021XA	MY55380009	2022/3/23	2023/3/22
Wideband Power Sensor KEYSIGHT	N1923A	MY58020002	2022/1/17	2023/1/16

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/12/10

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer ROHDE & SCHWARZ	FSV40	100979	2022/3/25	2023/3/24

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/12/10

4.3 6 dB Bandwidth

Refer to section 4.2 to get information of the instruments.

4.4 Occupied Bandwidth

Refer to section 4.2 to get information of the instruments.

4.5 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
3-channel DC power supply JIN YIH Technology	ODP3033	ODP30332128138	N/A	N/A
Digital Multimeter Fluke	87-III	70360742	2022/6/23	2023/6/22
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer ROHDE & SCHWARZ	FSV40	100979	2022/3/25	2023/3/24
Temperature & Humidity Chamber TERCHY	HRM-120RF	931022	2022/1/3	2023/1/2

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2022/12/14

4.6 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	2022/9/12	2023/9/11
LISN ROHDE & SCHWARZ	ENV216	101826	2022/3/14	2023/3/13
Receiver ROHDE & SCHWARZ	ESCI	100412	2022/8/22	2023/8/21
RF Coaxial Cable WOKEN	5D-FB	Cable-cond1-01	2022/1/15	2023/1/14
Software BVADT	BVADT_Cond_ V7.3.7.4	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2022/8/31	2023/8/30

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2022/12/6

4.7 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Bi-log Broadband Antenna Schwarzbeck	VULB9168	9168-1213	2022/10/20	2023/10/19
Loop Antenna EMCI	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2022/7/27	2023/7/26
Pre-amplifier EMCI	EMC001340	980201	2022/9/23	2023/9/22
Pre_Amplifier EMCI	EMC330N	980782	2022/1/17	2023/1/16
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2022/1/15	2023/1/14
	EMCCFD400-NM-NM-500	201233	2022/1/17	2023/1/16
	EMCCFD400-NM-NM-3000	201235	2022/1/17	2023/1/16
	EMCCFD400-NM-NM-9000	201236	2022/1/17	2023/1/16
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer ROHDE & SCHWARZ	FSW43	101866	2022/1/14	2023/1/13
Test Receiver ROHDE & SCHWARZ	ESR3+	102782	2021/12/10	2022/12/9
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2022/12/6

4.8 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Horn Antenna RFSPIN	DRH18-E	210103A18E	2022/11/13	2023/11/12
Horn Antenna Schwarzbeck	BBHA 9170	9170-1049	2022/11/13	2023/11/12
Pre_Amplifier EMCI	EMC118A45SE	980808	2021/12/30	2022/12/29
	EMC184045SE	980788	2022/1/17	2023/1/16
RF Coaxial Cable EMCI	EMC101G-KM-KM-2000	201254	2022/1/17	2023/1/16
	EMC101G-KM-KM-3000	201257	2022/1/17	2023/1/16
	EMC101G-KM-KM-5000	201260	2022/1/17	2023/1/16
	EMC104-SM-SM-1000	210102	2022/1/17	2023/1/16
	EMC104-SM-SM-3000	201231	2022/1/17	2023/1/16
	EMC104-SM-SM-9000	201243	2022/1/17	2023/1/16
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer ROHDE & SCHWARZ	FSW43	101866	2022/1/14	2023/1/13
Test Receiver ROHDE & SCHWARZ	ESR3+	102782	2021/12/10	2022/12/9
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2022/12/5 ~ 2022/12/6

5 Limits of Test Items

5.1 RF Output Power

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(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)

Operation Band	Limit
U-NII-3	1 Watt (30 dBm)

5.2 Power Spectral Density

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

Operation Band	Limit
U-NII-3	30 dBm/ 500 kHz

5.3 6 dB Bandwidth

Within the 5.725-5.850 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

5.4 Occupied Bandwidth

The results are for reference only.

5.5 Frequency Stability

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

5.6 AC Power Conducted Emissions

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

Notes:

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.

5.7 Unwanted Emissions below 1 GHz

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

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

5.8 Unwanted Emissions above 1 GHz

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)
Above 960	500	3

Notes:

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

Limits of unwanted emission out of the restricted bands

Applicable To	Limit	
789033 D02 General UNII Test Procedure New Rules v02r01	Field Strength at 3 m	
	PK: 74 (dBµV/m)	AV: 54 (dBµV/m)

For transmitters operating in the 5.15-5.25 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)

For transmitters operating in the 5.725-5.850 GHz band:

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(4)(i)	PK: -27 (dBm/MHz) *1 PK: 10 (dBm/MHz) *2 PK: 15.6 (dBm/MHz) *3 PK: 27 (dBm/MHz) *4	PK: 68.2 (dBµV/m) *1 PK: 105.2 (dBµV/m) *2 PK: 110.8 (dBµV/m) *3 PK: 122.2 (dBµV/m) *4
*1 beyond 75 MHz or more above of the band edge. *2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. *3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. *4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.		

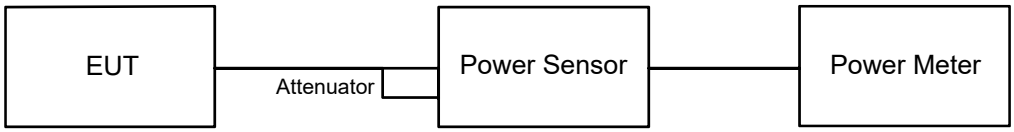
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup

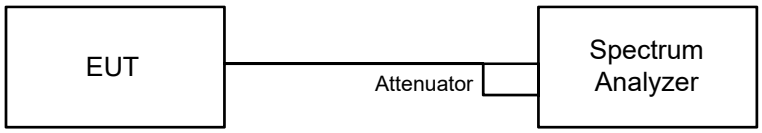


6.1.2 Test Procedure

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 and set the detector to average. Duty factor is not added to measured value.

6.2 Power Spectral Density

6.2.1 Test Setup



6.2.2 Test Procedure

For specified measurement bandwidth 1 MHz:
Method SA-2

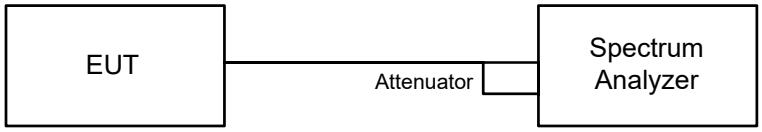
a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
c. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
d. Sweep time = auto, trigger set to “free run”.
e. Trace average at least 100 traces in power averaging mode.
f. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
g. Record the max value and add 10 log (1/duty cycle).

For specified measurement bandwidth 500 kHz:
Method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
c. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300 kHz)
d. Sweep points ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so that narrowband signals are not lost between frequency bins.)
e. Sweep time = auto, trigger set to “free run”.
f. Trace average at least 100 traces in power averaging mode.
g. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
h. Record the max value and add 10 log (1/duty cycle).

6.3 6 dB Bandwidth

6.3.1 Test Setup

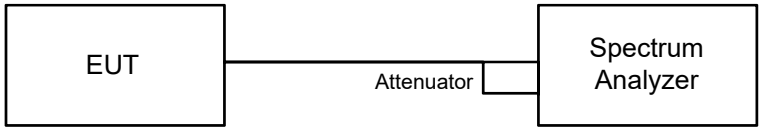


6.3.2 Test Procedure

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.

6.4 Occupied Bandwidth

6.4.1 Test Setup

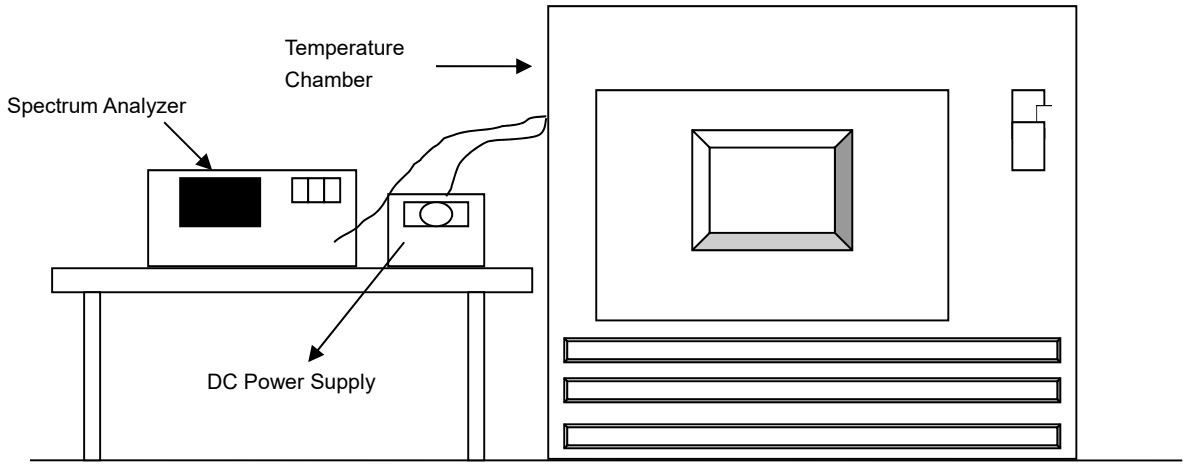


6.4.2 Test Procedure

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 Sampling. 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.

6.5 Frequency Stability

6.5.1 Test Setup

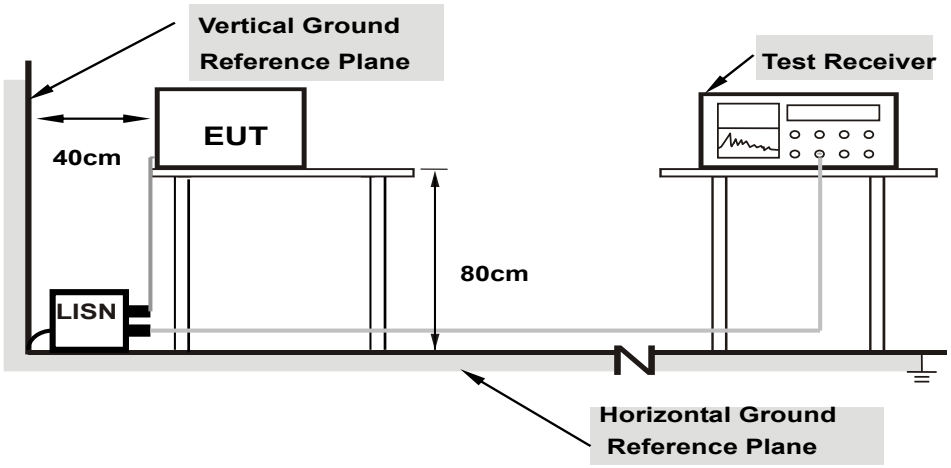


6.5.2 Test Procedure

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

6.6 AC Power Conducted Emissions

6.6.1 Test Setup



Note: 1.Support units were connected to second LISN.

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

6.6.2 Test Procedure

a. The EUT was placed on a 0.8 meter to the top of table and 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/ 50 uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

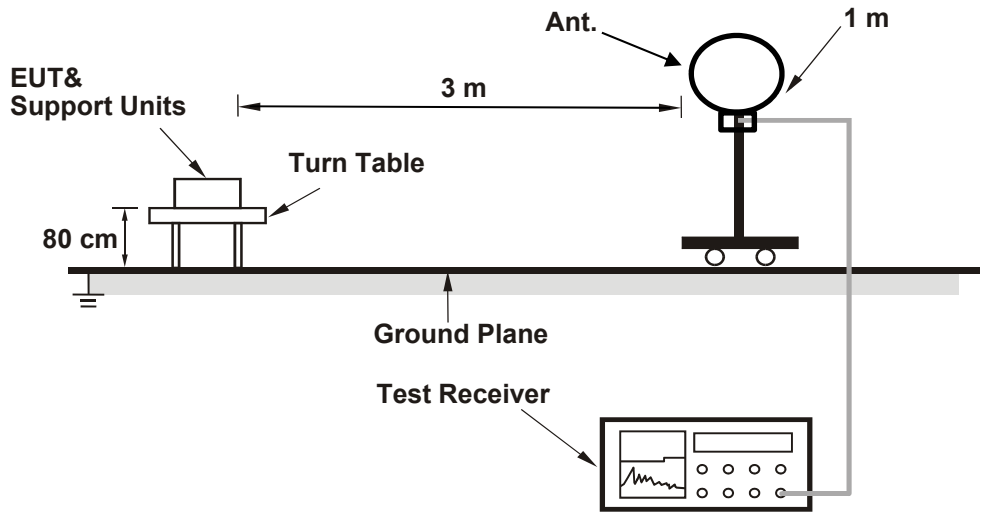
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz-30 MHz.

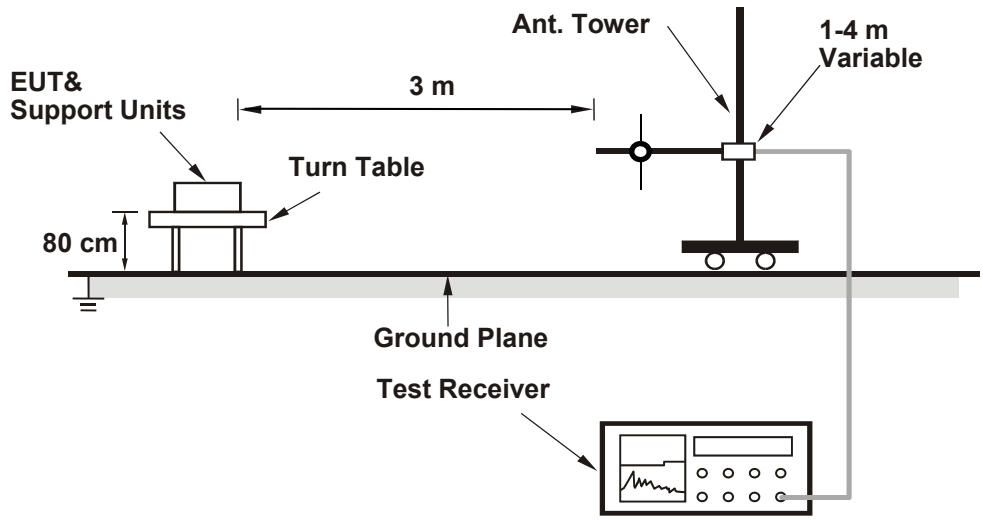
6.7 Unwanted Emissions below 1 GHz

6.7.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.7.2 Test Procedure

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 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. 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, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters 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.

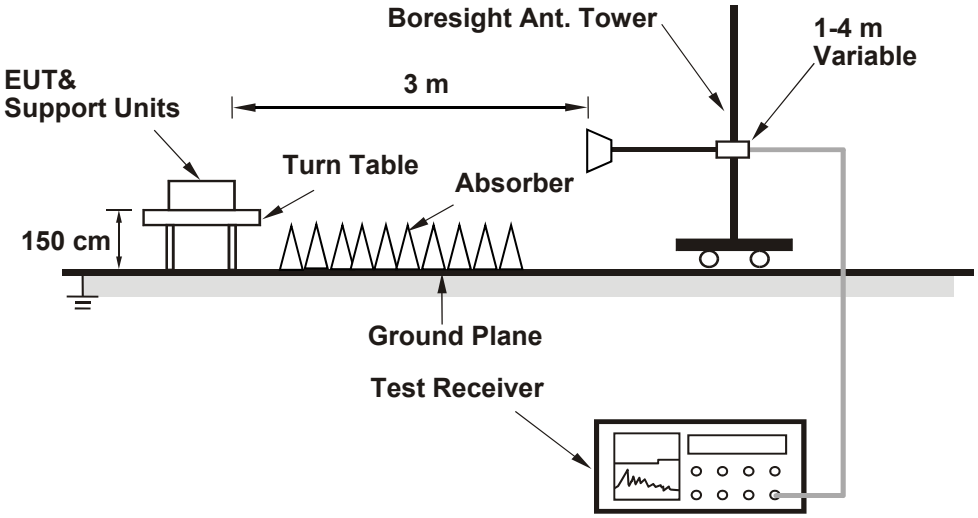
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

6.8 Unwanted Emissions above 1 GHz

6.8.1 Test Setup



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

6.8.2 Test Procedure

a. The EUT was placed on the top of a rotating table 1.5 meters 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 peak and average detects 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.

Notes:

1. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
2. For fundamental and harmonic signal measurement, 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.
3. All modes of operation were investigated and the worst-case emissions are reported.

7 Test Results of Test Item

7.1 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Chris Lin

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	53.703	17.30	24	Pass
40	5200	53.211	17.26	24	Pass
48	5240	52.481	17.20	24	Pass
149	5745	143.549	21.57	30	Pass
157	5785	149.968	21.76	30	Pass
165	5825	148.594	21.72	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 5.46 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 5.35 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	52.966	17.24	24	Pass
40	5200	53.58	17.29	24	Pass
48	5240	54.075	17.33	24	Pass
149	5745	138.995	21.43	30	Pass
157	5785	146.893	21.67	30	Pass
165	5825	137.088	21.37	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 5.46 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-3, the antenna gain is 5.35 dBi < 6 dBi, so the output power limit shall not be reduced.

7.2 Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Chris Lin

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
36	5180	4.17	0.18	4.35	11.00	Pass
40	5200	4.02	0.18	4.20	11.00	Pass
48	5240	3.84	0.18	4.02	11.00	Pass

Note: For U-NII-1, the antenna gain is 5.46 dBi < 6dBi, so the power density limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD (dBm/MHz)	Max. PSD Limit (dBm/MHz)	Test Result
36	5180	3.99	0.23	4.22	11.00	Pass
40	5200	3.96	0.23	4.19	11.00	Pass
48	5240	3.89	0.23	4.12	11.00	Pass

Note: For U-NII-1, the antenna gain is 5.46 dBi < 6dBi, so the power density limit shall not be reduced.

802.11a

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
149	5745	2.56	0.18	4.96	30	Pass
157	5785	2.56	0.18	4.96	30	Pass
165	5825	2.72	0.18	5.12	30	Pass

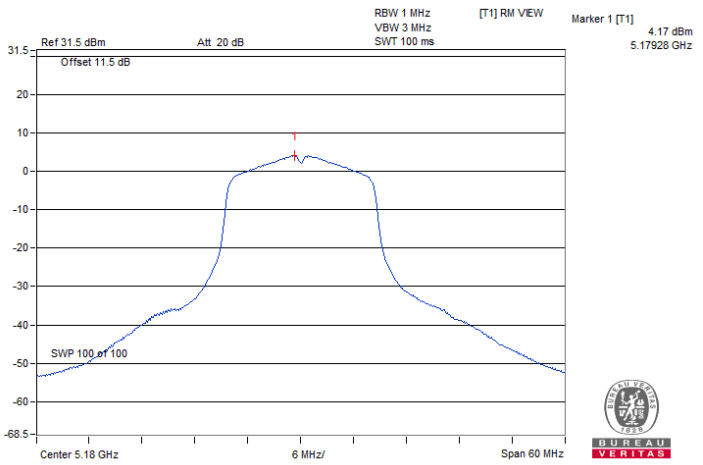
Note: For U-NII-3, the antenna gain is 5.35 dBi < 6 dBi, so the power density limit shall not be reduced.

802.11n (HT20)

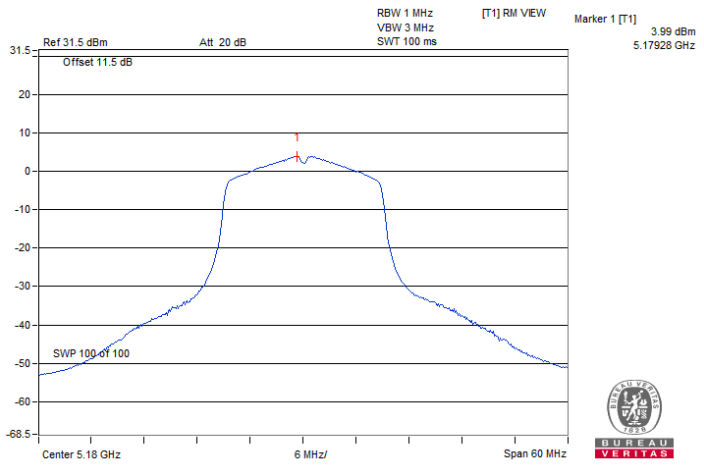
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/300kHz)	Duty Factor (dB)	PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)	Test Result
149	5745	2.24	0.23	4.69	30	Pass
157	5785	2.1	0.23	4.55	30	Pass
165	5825	2.07	0.23	4.52	30	Pass

Note: For U-NII-3, the antenna gain is 5.35 dBi < 6 dBi, so the power density limit shall not be reduced.

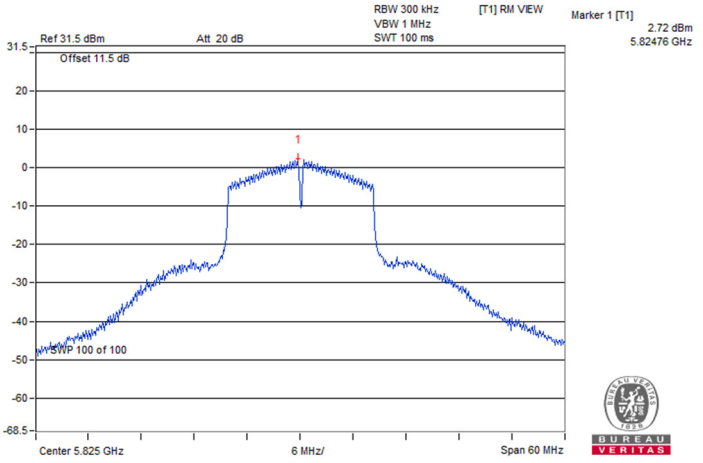
Spectrum Plot of Maximum Value



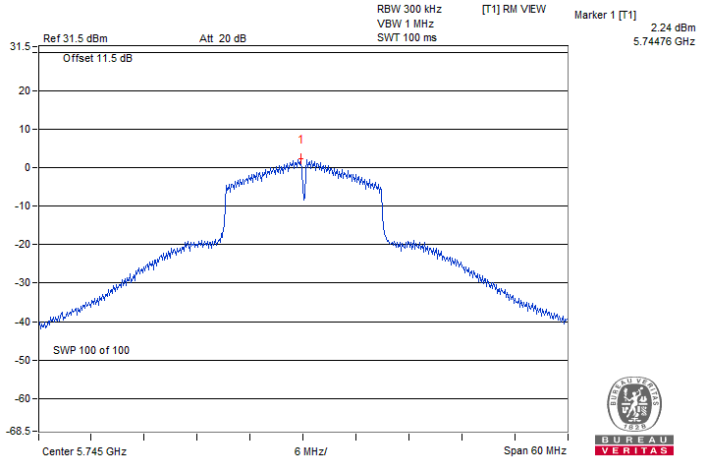
802.11a : CH 36



802.11n (HT20) : CH 36



802.11a : CH 165



802.11n (HT20) : CH 149

7.3 6 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Chris Lin

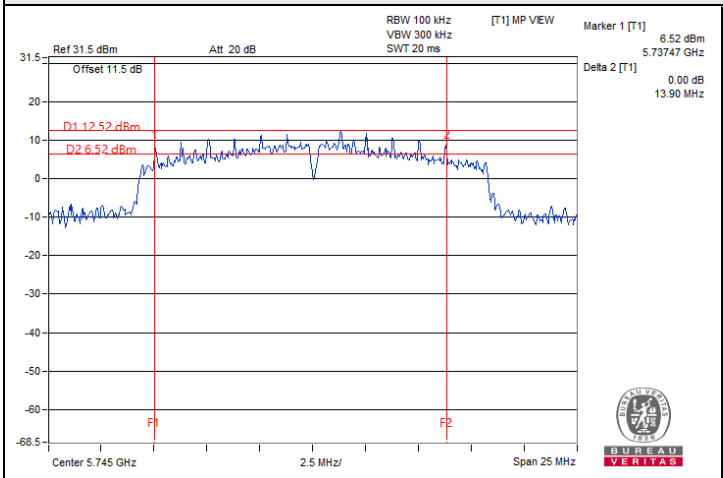
802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
149	5745	13.9	0.5	Pass
157	5785	15.13	0.5	Pass
165	5825	15.09	0.5	Pass

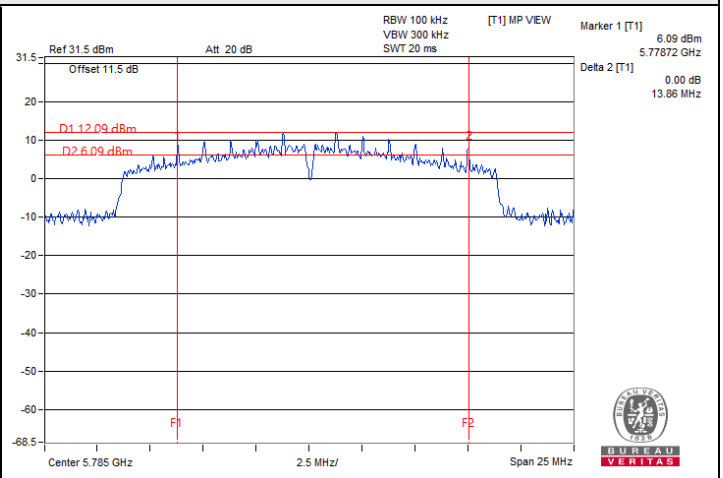
802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
149	5745	15.08	0.5	Pass
157	5785	13.86	0.5	Pass
165	5825	15.14	0.5	Pass

Spectrum Plot of Minimum Value



802.11a : CH 149



802.11n (HT20) : CH 157

7.4 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Chris Lin

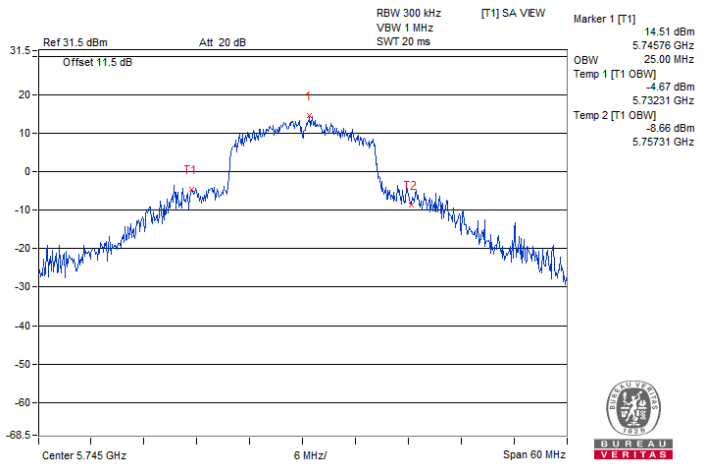
802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.44
40	5200	16.44
48	5240	16.32
149	5745	25
157	5785	16.92
165	5825	17.59

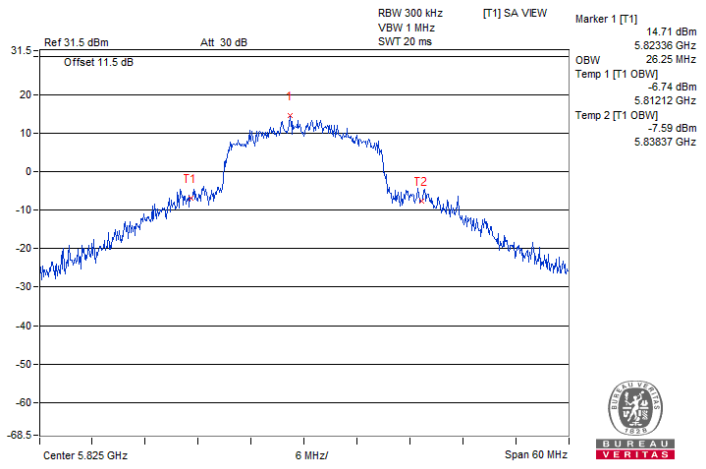
802.11n (HT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	17.52
40	5200	17.52
48	5240	17.64
149	5745	24.62
157	5785	24.52
165	5825	26.25

Spectrum Plot of Maximum Value



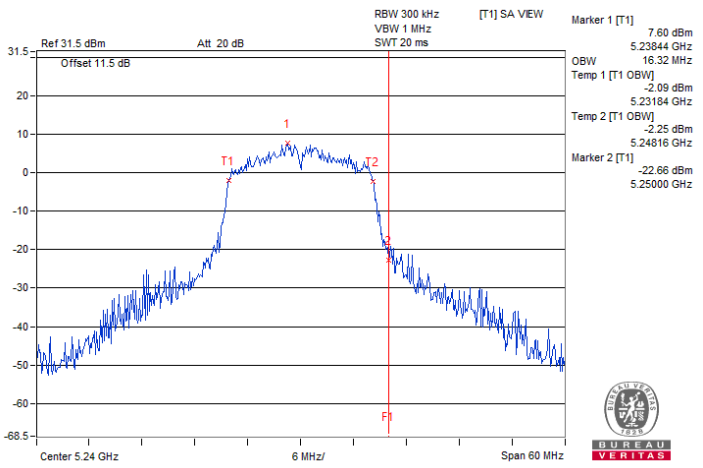
802.11a : CH 149



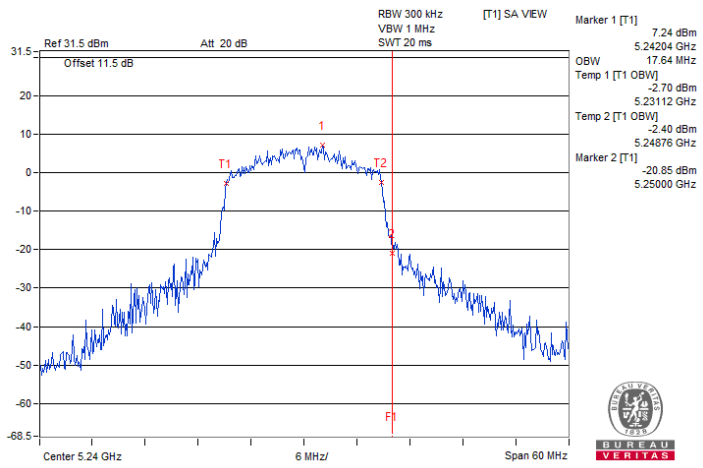
802.11n (HT20) : CH 165

Spectrum Plot for nearby DFS band

(DFS is required, if 99% OCP straddle into U-NII-2A)



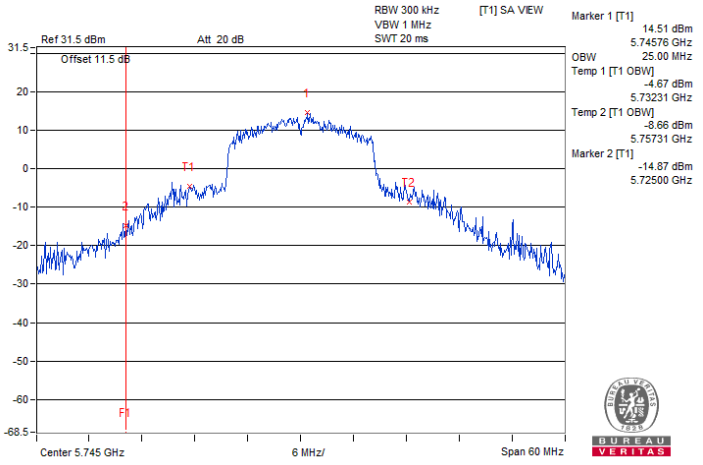
802.11a : CH 48



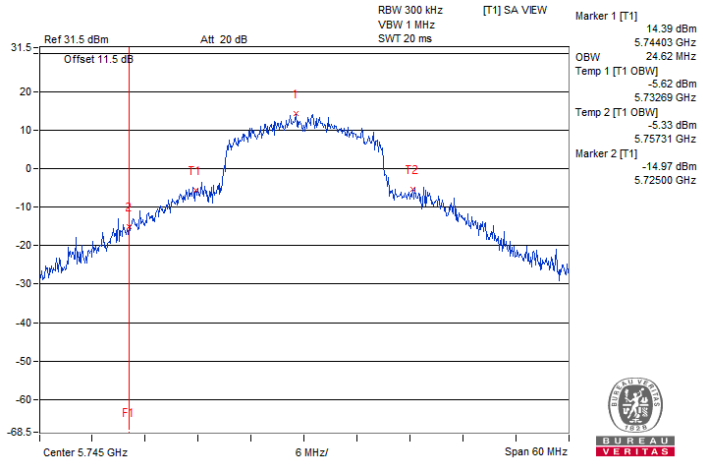
802.11n (HT20) : CH 48

Spectrum Plot for nearby DFS band

(DFS is required, if 99% OCP straddle into U-NII-2C)



802.11a : CH 149



802.11n (HT20) : CH 149

7.5 Frequency Stability

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Chris Lin

802.11a

Frequency Stability Versus Temperature									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
50	3.7	5179.999	Pass	5179.9979	Pass	5179.9999	Pass	5179.9996	Pass
40	3.7	5179.9925	Pass	5179.9935	Pass	5179.9918	Pass	5179.9918	Pass
30	3.7	5179.9882	Pass	5179.9857	Pass	5179.988	Pass	5179.984	Pass
20	3.7	5179.9943	Pass	5179.9952	Pass	5179.9989	Pass	5179.9942	Pass
10	3.7	5180.0015	Pass	5180.0012	Pass	5180.0006	Pass	5180.0031	Pass
0	3.7	5180.0012	Pass	5180.0033	Pass	5180.0058	Pass	5180.0012	Pass
-10	3.7	5180.0211	Pass	5180.0214	Pass	5180.0229	Pass	5180.025	Pass
-20	3.7	5180.0215	Pass	5180.0256	Pass	5180.0251	Pass	5180.0228	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	4.255	5179.996	Pass	5179.998	Pass	5179.9999	Pass	5179.9993	Pass
	3.7	5179.9943	Pass	5179.9952	Pass	5179.9989	Pass	5179.9942	Pass
	3.145	5179.9923	Pass	5179.9932	Pass	5179.9932	Pass	5179.9937	Pass

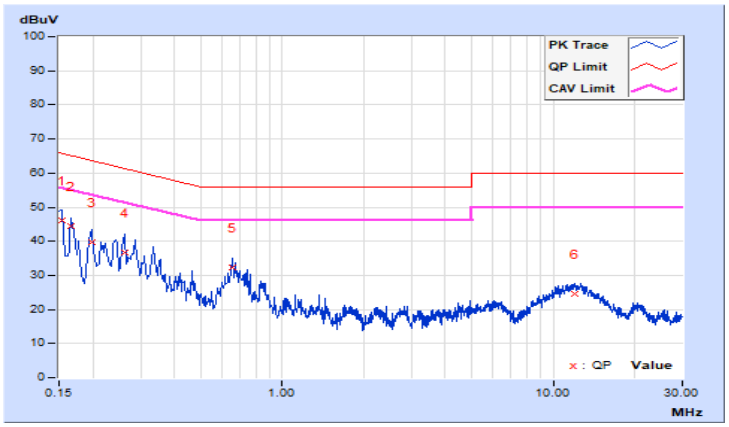
7.6 AC Power Conducted Emissions

Test Mode	Battery Charge	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Frequency Range	150 kHz ~ 30 MHz	**Input Power**	120 Vac, 60 Hz
Tested By	Edison Lee	**Environmental Conditions**	25°C, 75% RH

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	0.15400	9.68	36.55	19.83	46.23	29.51	65.78	55.78	-19.55	-26.27
2	0.16600	9.69	34.89	18.23	44.58	27.92	65.16	55.16	-20.58	-27.24
3	0.19780	9.72	30.00	12.97	39.72	22.69	63.70	53.70	-23.98	-31.01
4	**0.26200**	**9.74**	**26.96**	**24.05**	**36.70**	**33.79**	**61.37**	**51.37**	**-24.67**	**-17.58**
5	0.65800	9.82	22.61	17.83	32.43	27.65	56.00	46.00	-23.57	-18.35
6	11.99800	10.08	14.36	10.24	24.44	20.32	60.00	50.00	-35.56	-29.68

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

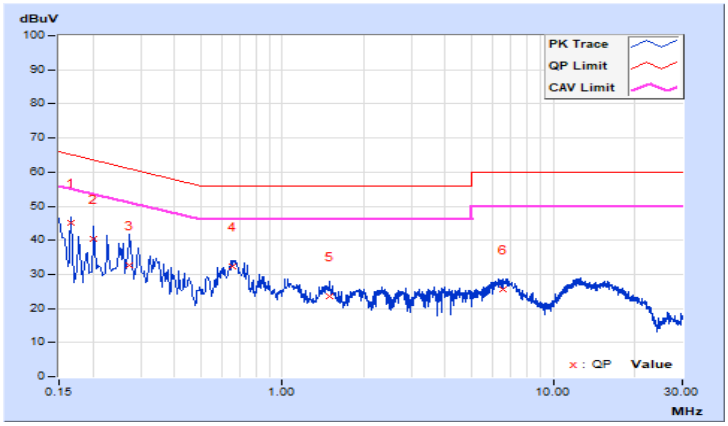


Test Mode	Battery Charge	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Frequency Range	150 kHz ~ 30 MHz	**Input Power**	120 Vac, 60 Hz
Tested By	Edison Lee	**Environmental Conditions**	25°C, 75% RH

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	0.16600	9.69	35.32	17.76	45.01	27.45	65.16	55.16	-20.15	-27.71
2	0.20200	9.72	30.80	14.43	40.52	24.15	63.53	53.53	-23.01	-29.38
3	0.27400	9.75	22.89	12.43	32.64	22.18	61.00	51.00	-28.36	-28.82
4	0.65800	9.83	22.50	16.59	32.33	26.42	56.00	46.00	-23.67	-19.58
5	1.49400	9.89	13.64	8.13	23.53	18.02	56.00	46.00	-32.47	-27.98
6	6.53400	10.01	15.65	10.24	25.66	20.25	60.00	50.00	-34.34	-29.75

Remarks:

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



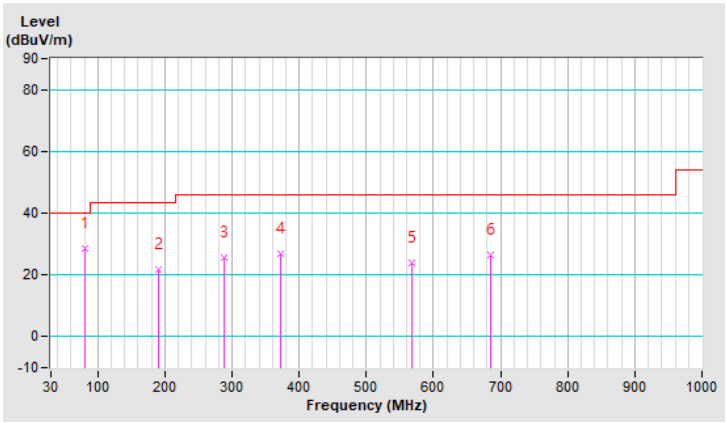
7.7 Unwanted Emissions below 1 GHz

RF Mode	802.11a	**Channel**	CH 48：5240 MHz
Frequency Range	9 kHz ~ 1 GHz	**Detector Function & Bandwidth**	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	**Environmental Conditions**	20.9°C, 72.3% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	**80.61**	**28.5 QP**	**40.0**	**-11.5**	**1.00 H**	**238**	**46.8**	**-18.3**
2	190.26	21.9 QP	43.5	-21.6	1.50 H	123	37.8	-15.9
3	287.26	25.4 QP	46.0	-20.6	1.50 H	81	38.3	-12.9
4	371.61	26.7 QP	46.0	-19.3	2.00 H	8	37.5	-10.8
5	568.42	24.1 QP	46.0	-21.9	2.00 H	308	30.5	-6.4
6	685.10	26.3 QP	46.0	-19.7	2.00 H	149	30.6	-4.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

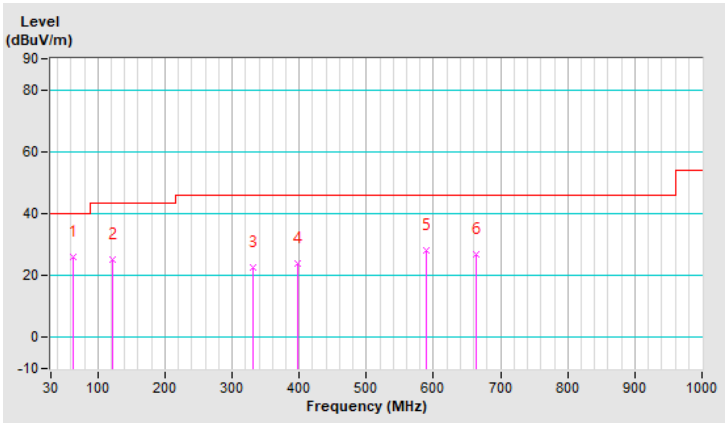


RF Mode	802.11a	Channel	CH 48：5240 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	20.9°C, 72.3% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	63.74	26.1 QP	40.0	-13.9	1.50 V	20	40.7	-14.6
2	121.38	25.1 QP	43.5	-18.4	1.00 V	233	40.2	-15.1
3	330.84	22.8 QP	46.0	-23.2	1.50 V	185	34.4	-11.6
4	396.91	23.9 QP	46.0	-22.1	1.00 V	174	34.0	-10.1
5	589.51	28.2 QP	46.0	-17.8	2.00 V	99	33.8	-5.6
6	664.01	26.7 QP	46.0	-19.3	2.00 V	269	31.2	-4.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



7.8 Unwanted Emissions above 1 GHz

RF Mode	802.11a	Channel	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.6 PK	74.0	-7.4	1.08 H	137	64.0	2.6
2	5150.00	51.0 AV	54.0	-3.0	1.08 H	137	48.4	2.6
3	*5180.00	107.4 PK			1.08 H	137	66.9	40.5
4	*5180.00	100.6 AV			1.08 H	137	60.1	40.5
5	#10360.00	54.0 PK	68.2	-14.2	1.63 H	68	45.6	8.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	69.8 PK	74.0	-4.2	1.41 V	322	67.2	2.6
2	5150.00	52.9 AV	54.0	-1.1	1.41 V	322	50.3	2.6
3	*5180.00	112.8 PK			1.41 V	322	72.3	40.5
4	*5180.00	106.7 AV			1.41 V	322	66.2	40.5
5	#10360.00	54.6 PK	68.2	-13.6	1.50 V	336	46.2	8.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	Channel	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	62.8 PK	74.0	-11.2	1.14 H	137	60.2	2.6
2	5150.00	49.7 AV	54.0	-4.3	1.14 H	137	47.1	2.6
3	*5200.00	109.7 PK			1.14 H	137	69.3	40.4
4	*5200.00	103.0 AV			1.14 H	137	62.6	40.4
5	#10400.00	54.1 PK	68.2	-14.1	1.66 H	73	45.8	8.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	65.8 PK	74.0	-8.2	1.15 V	343	63.2	2.6
2	**5150.00**	**53.0 AV**	**54.0**	**-1.0**	**1.15 V**	**343**	**50.4**	**2.6**
3	*5200.00	116.2 PK			1.15 V	343	75.8	40.4
4	*5200.00	110.2 AV			1.15 V	343	69.8	40.4
5	#10400.00	54.5 PK	68.2	-13.7	1.55 V	321	46.2	8.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	Channel	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	111.9 PK			1.08 H	117	71.6	40.3
2	*5240.00	105.6 AV			1.08 H	117	65.3	40.3
3	5350.00	56.5 PK	74.0	-17.5	1.08 H	117	54.2	2.3
4	5350.00	47.8 AV	54.0	-6.2	1.08 H	117	45.5	2.3
5	#10480.00	54.4 PK	68.2	-13.8	1.59 H	70	46.0	8.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	117.8 PK			1.08 V	322	77.5	40.3
2	*5240.00	111.4 AV			1.08 V	322	71.1	40.3
3	5350.00	56.5 PK	74.0	-17.5	1.08 V	322	54.2	2.3
4	5350.00	48.0 AV	54.0	-6.0	1.08 V	322	45.7	2.3
5	#10480.00	54.5 PK	68.2	-13.7	1.56 V	317	46.1	8.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5635.60	60.1 PK	68.2	-8.1	2.29 H	256	56.5	3.6
2	*5745.00	116.0 PK			2.29 H	256	73.9	42.1
3	*5745.00	109.4 AV			2.29 H	256	67.3	42.1
4	#5978.00	60.6 PK	68.2	-7.6	2.29 H	256	56.3	4.3
5	11490.00	56.0 PK	74.0	-18.0	1.72 H	79	46.4	9.6
6	11490.00	46.9 AV	54.0	-7.1	1.72 H	79	37.3	9.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5636.00	60.7 PK	68.2	-7.5	2.58 V	292	57.1	3.6
2	*5745.00	122.2 PK			2.58 V	292	80.1	42.1
3	*5745.00	115.8 AV			2.58 V	292	73.7	42.1
4	#5980.40	61.8 PK	68.2	-6.4	2.58 V	292	57.5	4.3
5	11490.00	56.9 PK	74.0	-17.1	1.43 V	336	47.3	9.6
6	11490.00	48.0 AV	54.0	-6.0	1.43 V	336	38.4	9.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11a	Channel	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5642.40	59.5 PK	68.2	-8.7	2.37 H	266	55.9	3.6
2	*5785.00	116.1 PK			2.37 H	266	74.1	42.0
3	*5785.00	109.4 AV			2.37 H	266	67.4	42.0
4	#5997.60	61.2 PK	68.2	-7.0	2.37 H	266	56.8	4.4
5	11570.00	56.2 PK	74.0	-17.8	1.67 H	74	46.6	9.6
6	11570.00	47.3 AV	54.0	-6.7	1.67 H	74	37.7	9.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5643.20	61.2 PK	68.2	-7.0	2.55 V	292	57.6	3.6
2	*5785.00	122.4 PK			2.55 V	292	80.4	42.0
3	*5785.00	115.8 AV			2.55 V	292	73.8	42.0
4	#5942.40	61.9 PK	68.2	-6.3	2.55 V	292	57.8	4.1
5	11570.00	57.0 PK	74.0	-17.0	1.38 V	324	47.4	9.6
6	11570.00	48.2 AV	54.0	-5.8	1.38 V	324	38.6	9.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11a	Channel	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5635.20	57.1 PK	68.2	-11.1	2.29 H	268	53.5	3.6
2	*5825.00	116.6 PK			2.29 H	268	74.5	42.1
3	*5825.00	109.9 AV			2.29 H	268	67.8	42.1
4	#5926.00	58.8 PK	68.2	-9.4	2.29 H	268	54.7	4.1
5	11650.00	55.9 PK	74.0	-18.1	1.65 H	73	46.4	9.5
6	11650.00	46.7 AV	54.0	-7.3	1.65 H	73	37.2	9.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5634.00	59.0 PK	68.2	-9.2	2.59 V	290	55.4	3.6
2	*5825.00	123.0 PK			2.59 V	290	80.9	42.1
3	*5825.00	116.3 AV			2.59 V	290	74.2	42.1
4	#5926.40	61.5 PK	68.2	-6.7	2.59 V	290	57.4	4.1
5	11650.00	56.8 PK	74.0	-17.2	1.46 V	331	47.3	9.5
6	11650.00	47.8 AV	54.0	-6.2	1.46 V	331	38.3	9.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	Channel	CH 36：5180 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	62.6 PK	74.0	-11.4	1.00 H	138	60.0	2.6
2	5150.00	49.7 AV	54.0	-4.3	1.00 H	138	47.1	2.6
3	*5180.00	106.6 PK			1.07 H	138	66.1	40.5
4	*5180.00	100.3 AV			1.07 H	138	59.8	40.5
5	#10360.00	54.1 PK	68.2	-14.1	1.69 H	69	45.7	8.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	67.8 PK	74.0	-6.2	1.41 V	322	65.2	2.6
2	**5150.00**	**53.0 AV**	**54.0**	**-1.0**	**1.41 V**	**322**	**50.4**	**2.6**
3	*5180.00	113.3 PK			1.41 V	322	72.8	40.5
4	*5180.00	106.7 AV			1.41 V	322	66.2	40.5
5	#10360.00	54.3 PK	68.2	-13.9	1.49 V	333	45.9	8.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	Channel	CH 40：5200 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.1 PK	74.0	-15.9	1.13 H	119	55.5	2.6
2	5150.00	48.7 AV	54.0	-5.3	1.13 H	119	46.1	2.6
3	*5200.00	109.4 PK			1.13 H	119	69.0	40.4
4	*5200.00	103.4 AV			1.13 H	119	63.0	40.4
5	#10400.00	54.3 PK	68.2	-13.9	1.66 H	68	46.0	8.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	64.3 PK	74.0	-9.7	1.16 V	323	61.7	2.6
2	5150.00	52.7 AV	54.0	-1.3	1.16 V	323	50.1	2.6
3	*5200.00	116.4 PK			1.16 V	323	76.0	40.4
4	*5200.00	109.8 AV			1.16 V	323	69.4	40.4
5	#10400.00	54.8 PK	68.2	-13.4	1.51 V	321	46.5	8.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	Channel	CH 48：5240 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	111.7 PK			1.08 H	129	71.4	40.3
2	*5240.00	105.2 AV			1.08 H	129	64.9	40.3
3	5350.00	54.9 PK	74.0	-19.1	1.08 H	129	52.6	2.3
4	5350.00	46.4 AV	54.0	-7.6	1.08 H	129	44.1	2.3
5	#10480.00	54.2 PK	68.2	-14.0	1.61 H	71	45.8	8.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	116.9 PK			1.48 V	321	76.6	40.3
2	*5240.00	110.5 AV			1.48 V	321	70.2	40.3
3	5350.00	55.8 PK	74.0	-18.2	1.48 V	321	53.5	2.3
4	5350.00	47.4 AV	54.0	-6.6	1.48 V	321	45.1	2.3
5	#10480.00	54.7 PK	68.2	-13.5	1.53 V	329	46.3	8.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	Channel	CH 149：5745 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5628.00	58.1 PK	68.2	-10.1	2.35 H	264	54.6	3.5
2	*5745.00	116.7 PK			2.35 H	264	74.6	42.1
3	*5745.00	109.5 AV			2.35 H	264	67.4	42.1
4	#5994.80	58.5 PK	68.2	-9.7	2.35 H	264	54.1	4.4
5	11490.00	55.8 PK	74.0	-18.2	1.74 H	86	46.2	9.6
6	11490.00	46.9 AV	54.0	-7.1	1.74 H	86	37.3	9.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5644.80	59.9 PK	68.2	-8.3	2.59 V	288	56.3	3.6
2	*5745.00	122.7 PK			2.59 V	288	80.6	42.1
3	*5745.00	115.4 AV			2.59 V	288	73.3	42.1
4	#5995.20	60.0 PK	68.2	-8.2	2.59 V	288	55.6	4.4
5	11490.00	56.8 PK	74.0	-17.2	1.53 V	342	47.2	9.6
6	11490.00	47.8 AV	54.0	-6.2	1.53 V	342	38.2	9.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	802.11n (HT20)	Channel	CH 157：5785 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5644.80	60.6 PK	68.2	-7.6	2.30 H	255	57.0	3.6
2	*5785.00	116.3 PK			2.30 H	255	74.3	42.0
3	*5785.00	109.1 AV			2.30 H	255	67.1	42.0
4	#5982.40	61.1 PK	68.2	-7.1	2.30 H	255	56.8	4.3
5	11570.00	55.8 PK	74.0	-18.2	1.64 H	85	46.2	9.6
6	11570.00	46.7 AV	54.0	-7.3	1.64 H	85	37.1	9.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5634.80	60.5 PK	68.2	-7.7	2.58 V	293	56.9	3.6
2	*5785.00	122.7 PK			2.58 V	293	80.7	42.0
3	*5785.00	115.4 AV			2.58 V	293	73.4	42.0
4	#5930.40	61.4 PK	68.2	-6.8	2.58 V	293	57.3	4.1
5	11650.00	56.6 PK	74.0	-17.4	1.36 V	325	47.1	9.5
6	11650.00	47.4 AV	54.0	-6.6	1.36 V	325	37.9	9.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

RF Mode	802.11n (HT20)	Channel	CH 165：5825 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	21°C, 68% RH
Tested By	Edison Lee		

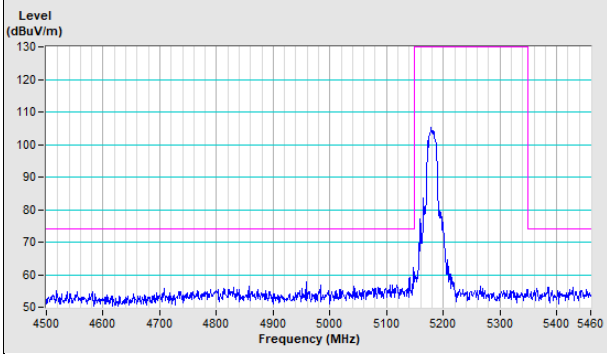
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5600.00	59.5 PK	68.2	-8.7	2.28 H	261	56.1	3.4
2	*5825.00	116.2 PK			2.28 H	261	74.1	42.1
3	*5825.00	108.9 AV			2.28 H	261	66.8	42.1
4	#5997.20	60.8 PK	68.2	-7.4	2.28 H	261	56.4	4.4
5	11650.00	55.4 PK	74.0	-18.6	1.74 H	79	45.9	9.5
6	11650.00	46.3 AV	54.0	-7.7	1.74 H	79	36.8	9.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5614.40	60.6 PK	68.2	-7.6	2.60 V	290	57.2	3.4
2	*5825.00	123.2 PK			2.60 V	290	81.1	42.1
3	*5825.00	115.8 AV			2.60 V	290	73.7	42.1
4	#5930.40	61.8 PK	68.2	-6.4	2.60 V	290	57.7	4.1
5	11650.00	56.8 PK	74.0	-17.2	1.38 V	326	47.3	9.5
6	11650.00	47.8 AV	54.0	-6.2	1.38 V	326	38.3	9.5

Remarks:

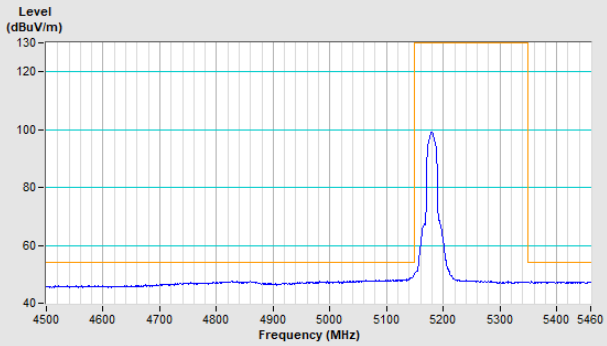
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

802.11a Channel 36

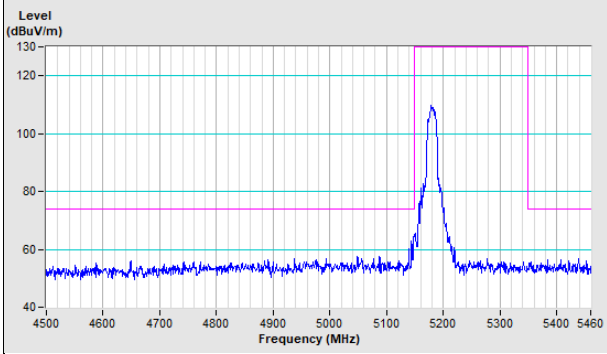
Horizontal (Peak)



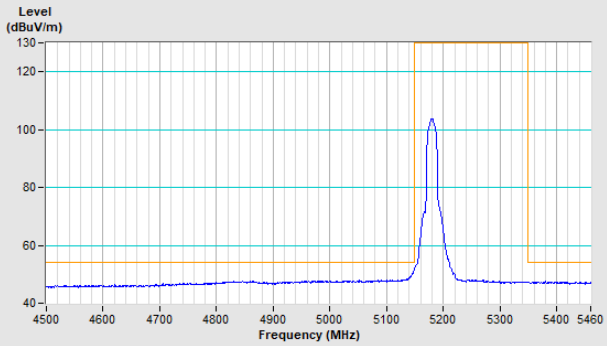
Horizontal (Average)



Vertical (Peak)

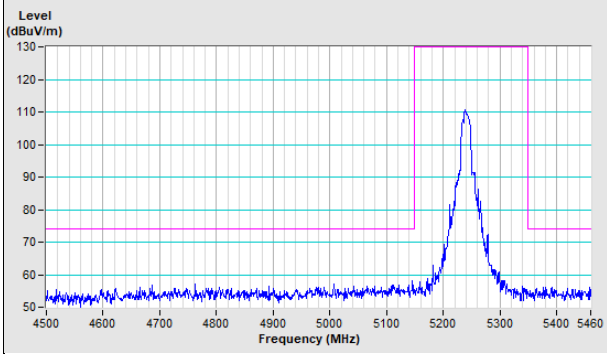


Vertical (Average)

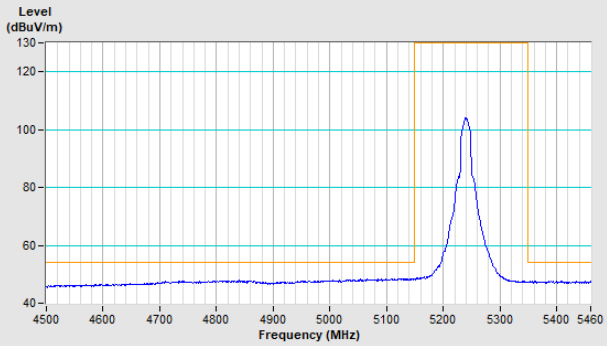


802.11a Channel 64

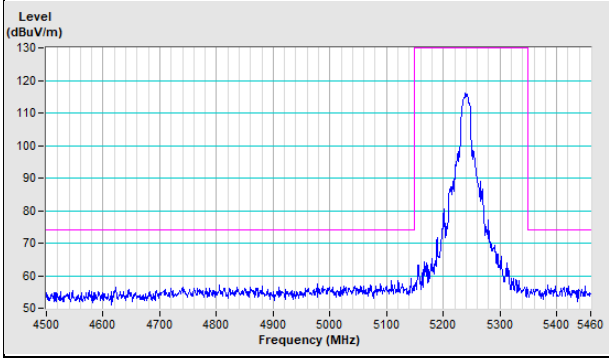
Horizontal (Peak)



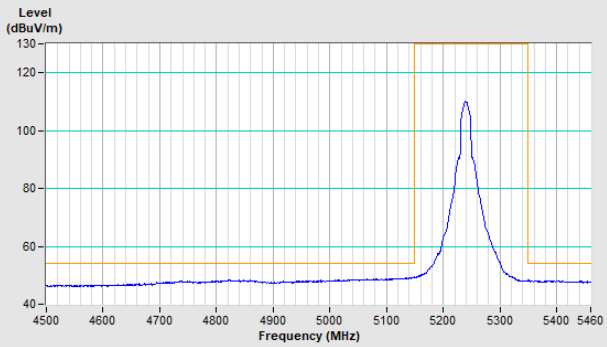
Horizontal (Average)

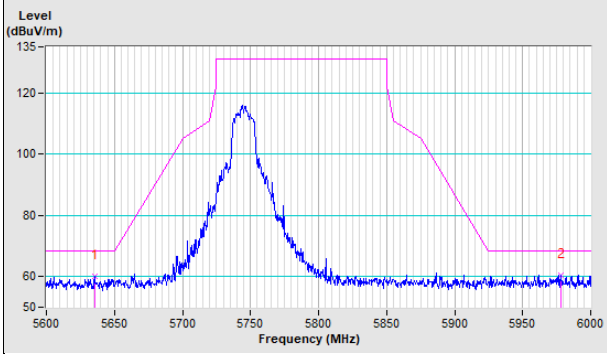
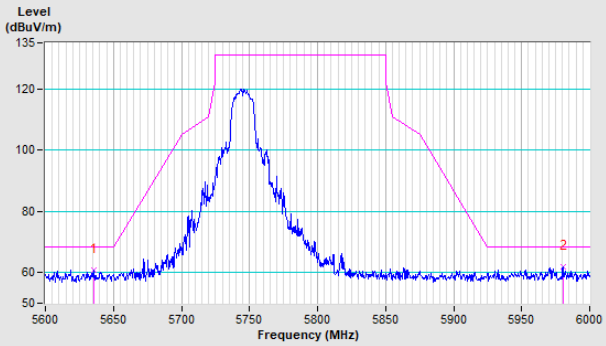


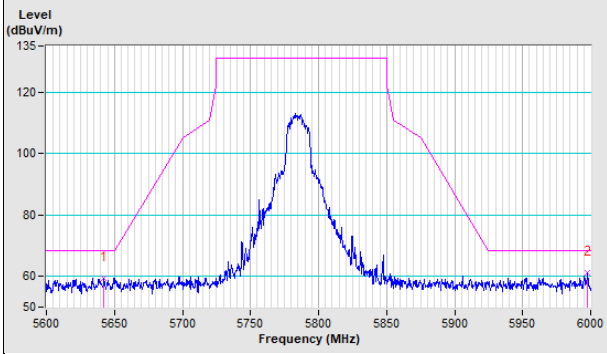
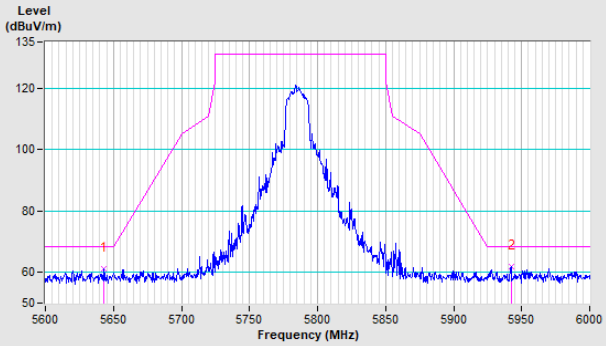
Vertical (Peak)

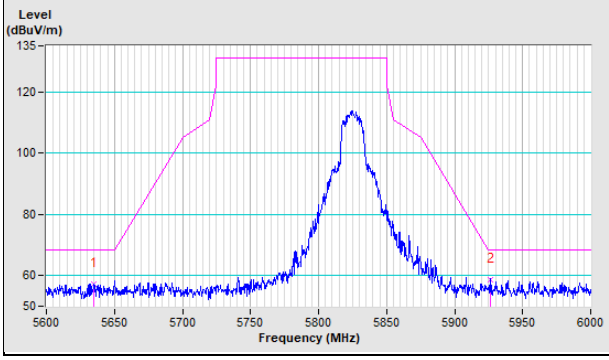
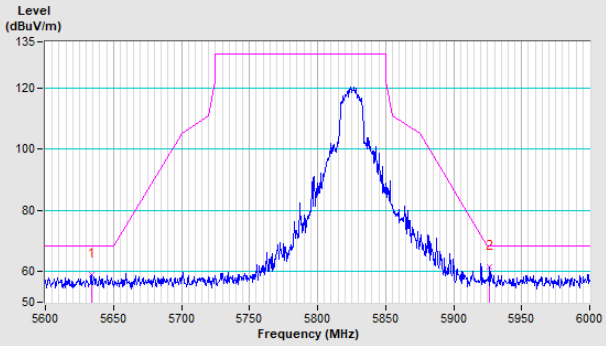


Vertical (Average)



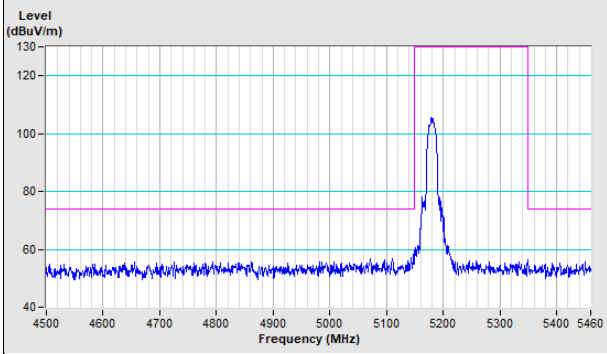
802.11a Channel 149	
Horizontal (Peak)	Vertical (Peak)
	

802.11a Channel 157	
Horizontal (Peak)	Vertical (Peak)
	

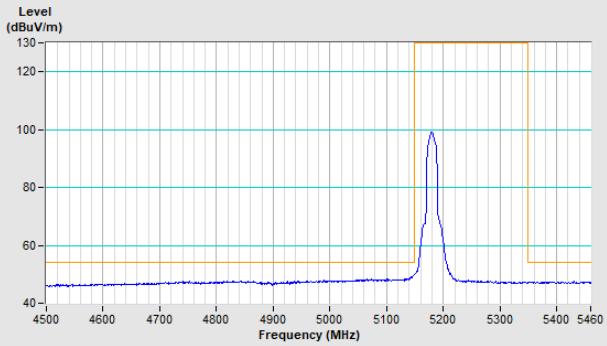
802.11a Channel 165	
Horizontal (Peak)	Vertical (Peak)
	

802.11n (HT20) Channel 36

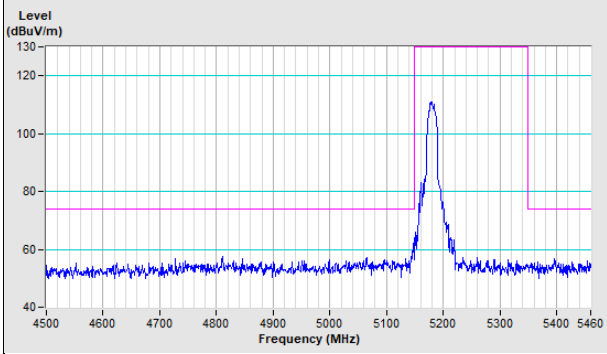
Horizontal (Peak)



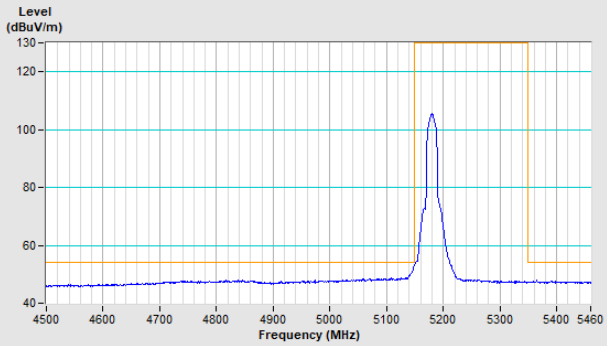
Horizontal (Average)



Vertical (Peak)

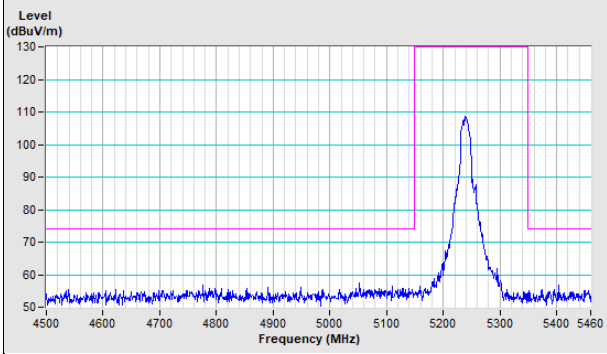


Vertical (Average)

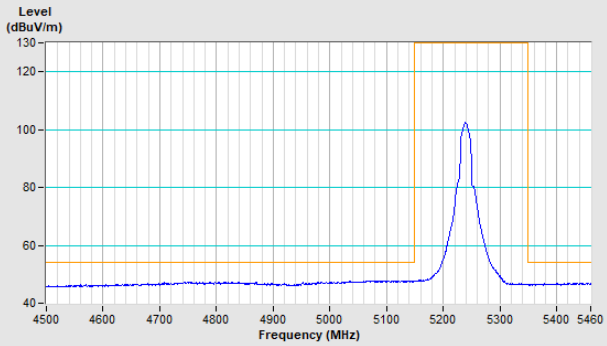


802.11n (HT20) Channel 48

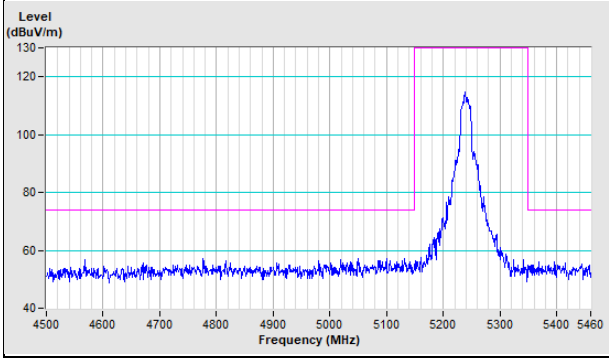
Horizontal (Peak)



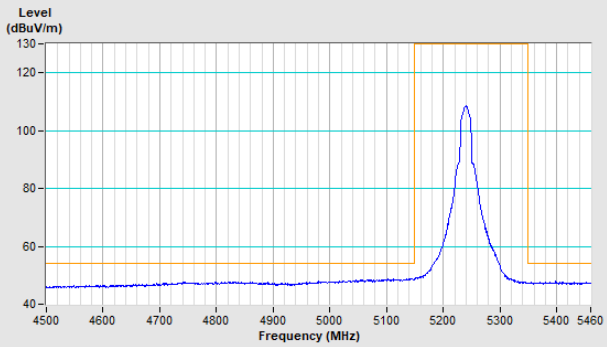
Horizontal (Average)

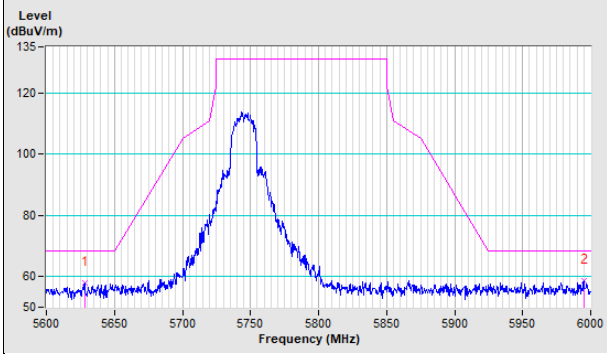
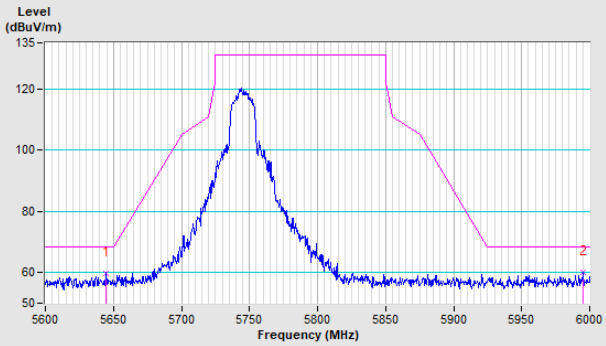


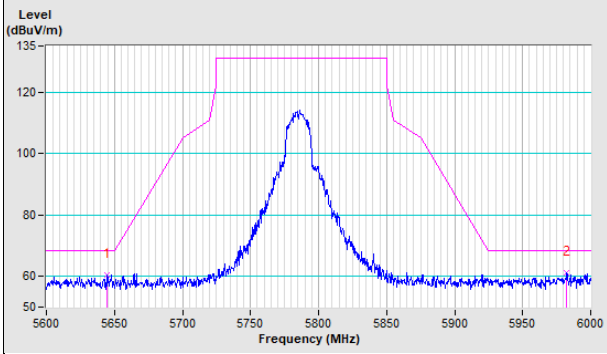
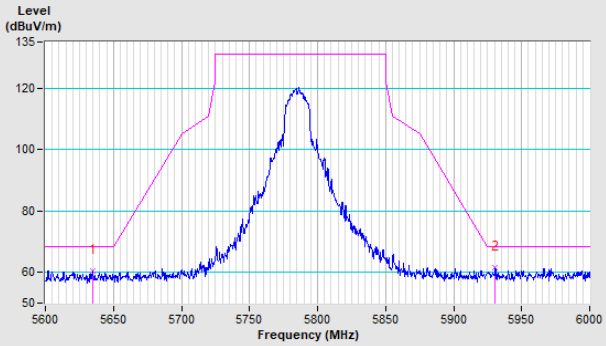
Vertical (Peak)

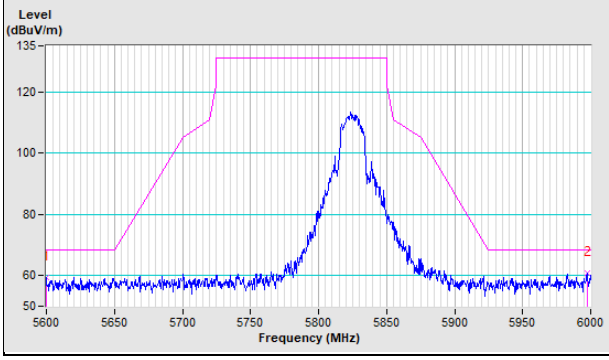
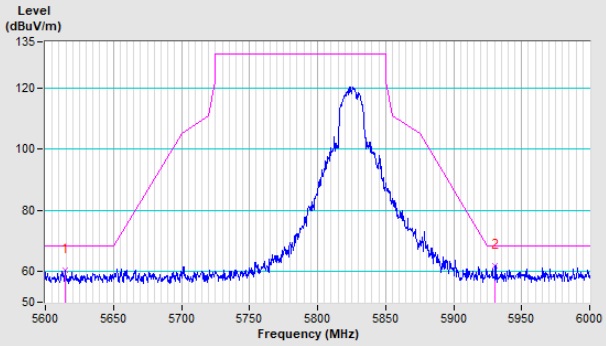


Vertical (Average)



802.11n (HT20) Channel 149	
Horizontal (Peak)	Vertical (Peak)
	

802.11n (HT20) Channel 157	
Horizontal (Peak)	Vertical (Peak)
	

802.11n (HT20) Channel 165	
Horizontal (Peak)	Vertical (Peak)
	

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

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

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

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Web Site: http://ee.bureauveritas.com.tw

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

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