



FCC 47 CFR PART 15 SUBPART C

for

600M Powerline Adapter with WiFi

Model: PW5002,PW5003,PW5006,PW**(* from 0 to
9),HT-ND003**

Brand: AMTC, HOOTOO

Test Report Number:

C160330Z01-RP1

Issued Date: May 27, 2016

Issued for

Shen Zhen MTC Co., LTD

**MTC Industry Park, 1st Lilang Road, Xialilang community,
Nanwan street, Longgang district, Shenzhen, China**

Issued by:

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TESTING CERT #2861.01

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	May 27, 2016	Initial Issue	ALL	Amzula Chen



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1 TEST CERTIFICATION

Product	600M Powerline Adapter with WiFi
Model	PW5002,PW5003,PW5006,PW****(* from 0 to 9),HT-ND003
Brand	AMTC, HOOTOO
Tested	March 30~May 27, 2016
Applicant	Shen Zhen MTC Co., LTD MTC Industry Park, 1st Lilang Road, Xialilang community, Nanwan street, Longgang district, Shenzhen, China
Manufacturer	Shen Zhen MTC Co., LTD MTC Industry Park, 1st Lilang Road, Xialilang community, Nanwan street, Longgang district, Shenzhen, China

APPLICABLE STANDARDS

Standard	Test Type	Standard	Test Type
15.207(a)	Power Line Conducted Emissions	15.247(d) 15.209(a)	● Spurious Emissions ● Conducted Measurement ● Radiated Emissions
15.247(a)(2)	6dB Bandwidth Measurement	15.247(b)(3) 15.247(b)(4)	Peak Power Measurement
15.247(d)	Band Edges Measurement	15.247(e)	Peak Power Spectral Density

We hereby certify that:

The above equipment was tested by Compliance Certification Services (Shenzhen) Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in **ANSI C63.10: 2013** and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247.

The test results of this report relate only to the tested sample EUT identified in this report.

Approved by:

Sunday Hu
Supervisor of EMC Dept.
Compliance Certification Services
(Shenzhen) Inc.

Reviewed by:

Ruby Zhang
Supervisor of Report Dept.
Compliance Certification Services
(Shenzhen) Inc.



2 TEST RESULT SUMMARY

APPLICABLE STANDARDS			
Standard	Test Type	Result	Remark
15.247(a)(2)	6dB Bandwidth Measurement	Pass	Meet the requirement of limit.
15.247(b)(3) 15.247(b)(4)	Peak Power Measurement	Pass	Meet the requirement of limit.
15.247(d)	Band Edges Measurement	Pass	Meet the requirement of limit.
15.247(e)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.247(d) 15.209(a)	● Spurious Emissions ● Conducted Measurement ● Radiated Emissions	Pass	Meet the requirement of limit.
15.207(a)	Power line Conducted Emissions	Pass	Meet the requirement of limit.

Note: 1. The statements of test result on the above are decided by the request of test standard only; the measurement uncertainties are not factored into this compliance determination.
2. The information of measurement uncertainty is available upon the customer's request.



3 EUT DESCRIPTION

Product	600M Powerline Adapter with WiFi
Model Number	PW5002,PW5003,PW5006,PW****(* from 0 to 9),HT-ND003
Brand	AMTC, HOO TOO
Model Discrepancy	All models are identical to each other except the appearance, trade name and model designation for trading purpose. (Please see model list below for details)
Identify Number	C160330Z01-RP1
Power Supply	Input: 100-240V~, 50/60 Hz, 0.15A; Class II apparatus.
Transmit Power	IEEE 802.11b mode: 16.11dBm (Antenna 1) IEEE 802.11b mode: 13.32dBm (Antenna 2) IEEE 802.11g mode: 19.32dBm (Antenna 1) IEEE 802.11g mode: 20.36dBm (Antenna 2) IEEE 802.11n HT20 MHz mode: 22.18dBm(Combine with Antenna 1 and Antenna 2) IEEE 802.11n HT40 MHz mode: 21.47dBm(Combine with Antenna 1 and Antenna 2)
Modulation Technique	IEEE 802.11b mode: DSSS(CCK,QPSK, BPSK) IEEE 802.11g mode: OFDM (BPSK/QPSK/16QAM/64QAM) IEEE 802.11n HT20 MHz mode: OFDM (BPSK/QPSK/16QAM/64QAM) IEEE 802.11n HT40 MHz mode: OFDM (BPSK/QPSK/16QAM/64QAM)
Transmit Data Rate	IEEE 802.11b: 11Mbps(CCK) with fall back rates of 5.5/2/1Mbps IEEE 802.11g: 54Mbps with fall back rates of 48/36/24/18/12/9 /6Mbps IEEE 802.11n HT20: 130Mbps with fall back rates of 130/117/104/ 78/52/39/26/13Mbps IEEE 802.11n HT40: 270Mbps with fall back rates of 270/243/216/ 162/108/81/54/27Mbps
Number of Channels	IEEE 802.11b mode: 11 Channels IEEE 802.11g mode: 11 Channels IEEE 802.11n HT20 MHz mode: 11 Channels IEEE 802.11n HT40 MHz mode: 7 Channels
Antenna Specification	Antenna 1: PCB Antenna with 3.0dBi gain (Max) Antenna 1: Rubber Antenna with 3.0dBi gain (Max)
Channels Spacing	IEEE 802.11b/g ,802.11n HT20/HT40 : 5MHz
Temperature Range	0°C ~ +40°C
Hardware Version	PW5002-ZC01-01
Software Version	PW5002H012V001R001CXXBXXX_XX (‘X’ mean number of client_ ‘X’ mean default language, the ‘X’ can be variable.)

Note: 1. The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.

2. This submittal(s) (test report) is intended for FCC ID: **2AHVHPW5002** filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.



4 TEST METHODOLOGY

4.1. DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

Software used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

Test Item	Test mode	Worse mode
Conducted Emission	Mode 1: Normal	Mode 1
Radiated Emission	Mode 1: TX	Mode 1

After verification, all tests were carried out with the worst case test modes as shown below except radiated spurious emission below 1GHz, which worst case was in normal link mode only, and power line conducted emission below 30MHz, which worst case was in normal link mode.

IEEE802.11b mode: Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 1Mbps data rate were chosen for full testing.

IEEE802.11g mode: Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 6Mbps data rate were chosen for full testing.

IEEE 802.11n HT20 MHz mode: Channel Low (2412MHz), Channel Mid(2437MHz) and Channel High (2462MHz) with 13Mbps data rate were chosen for full testing.

IEEE 802.11n HT40 MHz mode: Channel Low (2422MHz), Channel Mid (2437MHz) and Channel High (2452MHz) with 27Mbps data rate were chosen for full testing.



5 SETUP OF EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF SUPPORT UNITS

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

No.	Equipment	Model No.	Serial No.	FCC ID	Brand	Data Cable	Power Cord
1	Notebook	E335	R9-WN1EF	DoC	Thinkpad	N/A	N/A

Note:

Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

5.2. CONFIGURATION OF SYSTEM UNDER TEST

See test photographs attached in Appendix II for the actual connections between EUT and support equipment.



6 FACILITIES AND ACCREDITATIONS

6.1. FACILITIES

All measurement facilities used to collect the measurement data are located at
**No.10-1 Mingkeda Logistics park, No.18, Huanguan South Rd., Guan Lan Town,
Baoan District, Shenzhen, China**

The sites are constructed in conformance with the requirements of ANSI C63.10, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

6.2. ACCREDITATIONS

Our laboratories are accredited and approved by the following accreditation body according to ISO/IEC 17025.

USA
China

A2LA
CNAS

USA
Japan
Canada

FCC
VCCI(C-4815,R-4320,T-2317, G-10624)
INDUSTRY CANADA

Copies of granted accreditation certificates are available for downloading from our web site, <http://www.ccssz.com>

6.3. 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:

Parameter	Uncertainty
Radiated Emission, 30 to 200 MHz Test Site : 966(2)	+/-3.6880dB
Radiated Emission, 200 to 1000 MHz Test Site : 966(2)	+/-3.6695dB
Radiated Emission, 1 to 8 GHz	+/-5.1782dB
Radiated Emission, 8 to 18 GHz	+/-5.2173dB
Conducted Emissions	+/-3.6836dB
Band Width	178kHz
Peak Output Power MU	+/-1.906dB
Band Edge MU	+/-0.182dB
Channel Separation MU	416.178Hz
Duty Cycle MU	0.054ms
Frequency Stability MU	226Hz

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

The measured result is above (below) the specification limit by a margin less than the measurement uncertainty; it is therefore not possible to state compliance based on the 95% level of confidence. However, the result indicates that compliance (non-compliance) is more probable than non-compliance) with the specification limit.



7 FCC PART 15.247 REQUIREMENTS

7.1. POWER LINE CONDUCTED EMISSIONS MEASUREMENT

7.1.1. LIMITS OF CONDUCTED EMISSIONS MEASUREMENT

According to §15.207(a), except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency Range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	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.
- (3) All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

7.1.2. TEST INSTRUMENTS

Conducted Emission Test Site					
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	02/21/2016	02/20/2017
LISN(EUT)	ROHDE&SCHWARZ	ENV216	101543-WX	02/21/2016	02/20/2017
LISN	EMCO	3825/2	8901-1459	02/21/2016	02/20/2017
Temp. / Humidity Meter	VICTOR	HTC-1	N/A	02/21/2016	02/20/2017
Test S/W	FARAD	EZ-EMC/ CCS-3A1-CE			

- 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. N.C.R = No Calibration Request.

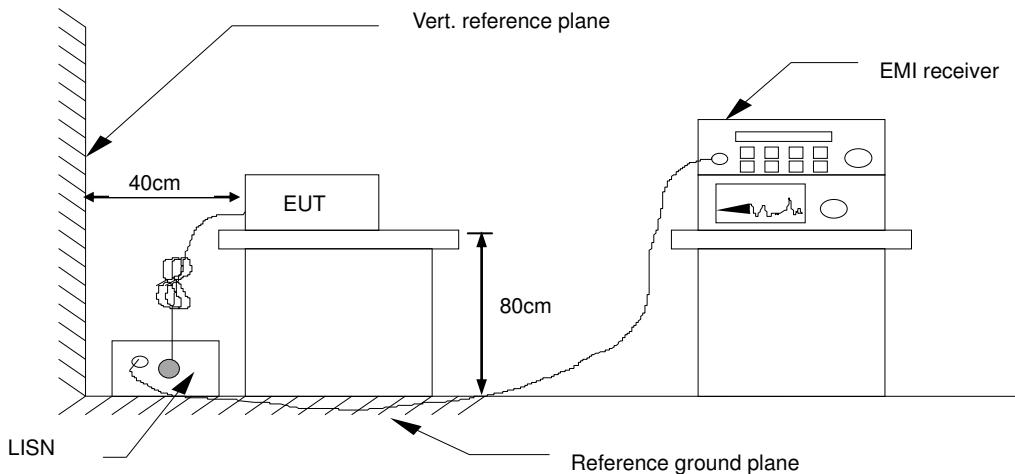


7.1.3. TEST PROCEDURES (please refer to measurement standard)

- The EUT and Support equipment, if needed, was placed on a non-conducted table, which is 0.8m above the ground plane and 0.4m away from the conducted wall.
- The test equipment EUT installed received AC main power, through a Line Impedance Stabilization Network (LISN), which supplied power source and was grounded to the ground plane. All support equipment power received from a second LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- The EUT test program was started. Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.
- The frequency range from 150 kHz to 30 MHz was searched. The test data of the worst-case condition(s) was recorded. Emission levels under limit 20dB were not recorded.



7.1.4. TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

7.1.5. DATA SAMPLE

Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)
X.XXXX	32.69	25.65	11.52	44.21	37.17	65.78	55.79	-21.57	-18.62	Pass

Factor = Insertion loss of LISN + Cable Loss

Result = Quasi-peak Reading/ Average Reading + Factor

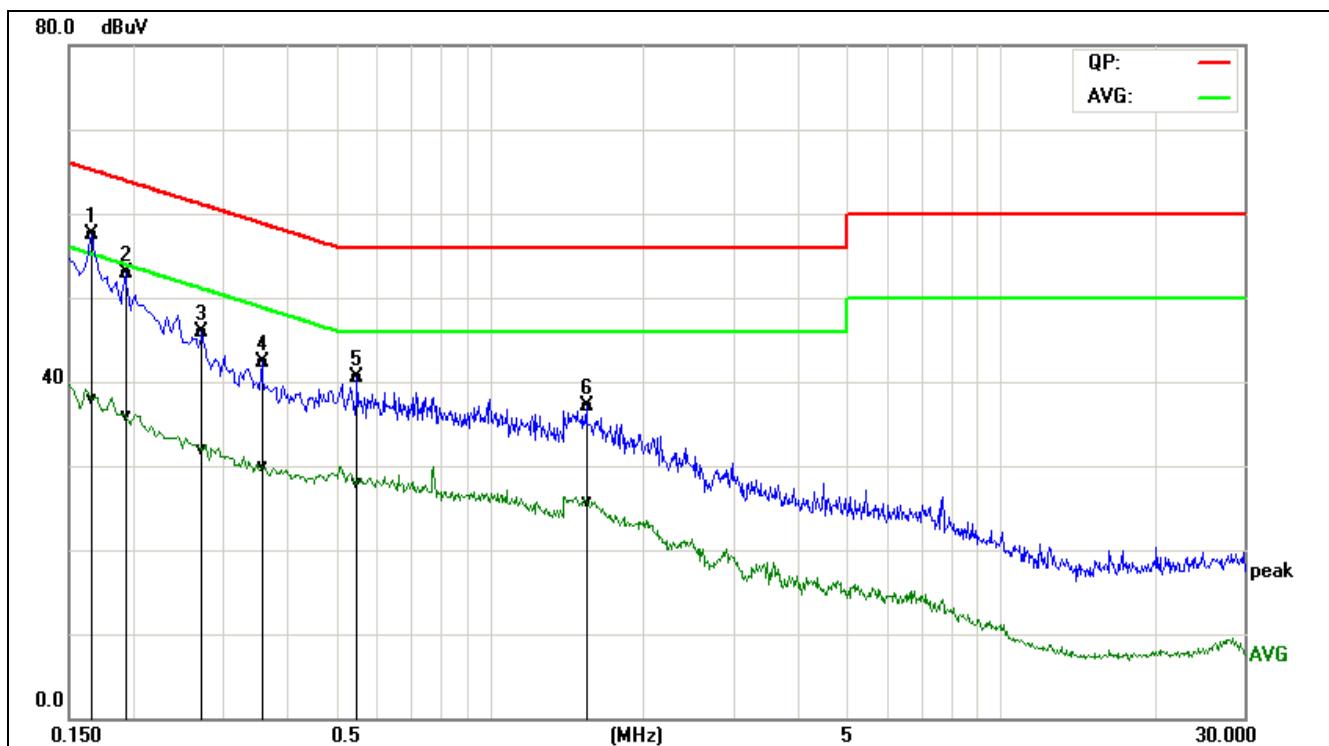
Limit = Limit stated in standard

Margin = Result (dBuV) – Limit (dBuV)



7.1.6. TEST RESULTS

Model No.	PW5002	RBW,VBW	9 kHz
Environmental Conditions	22°C, 45% RH	Test Mode	Mode 1
Tested by	Jackson Luo	Line	L1
Test Date	May 9, 2016		

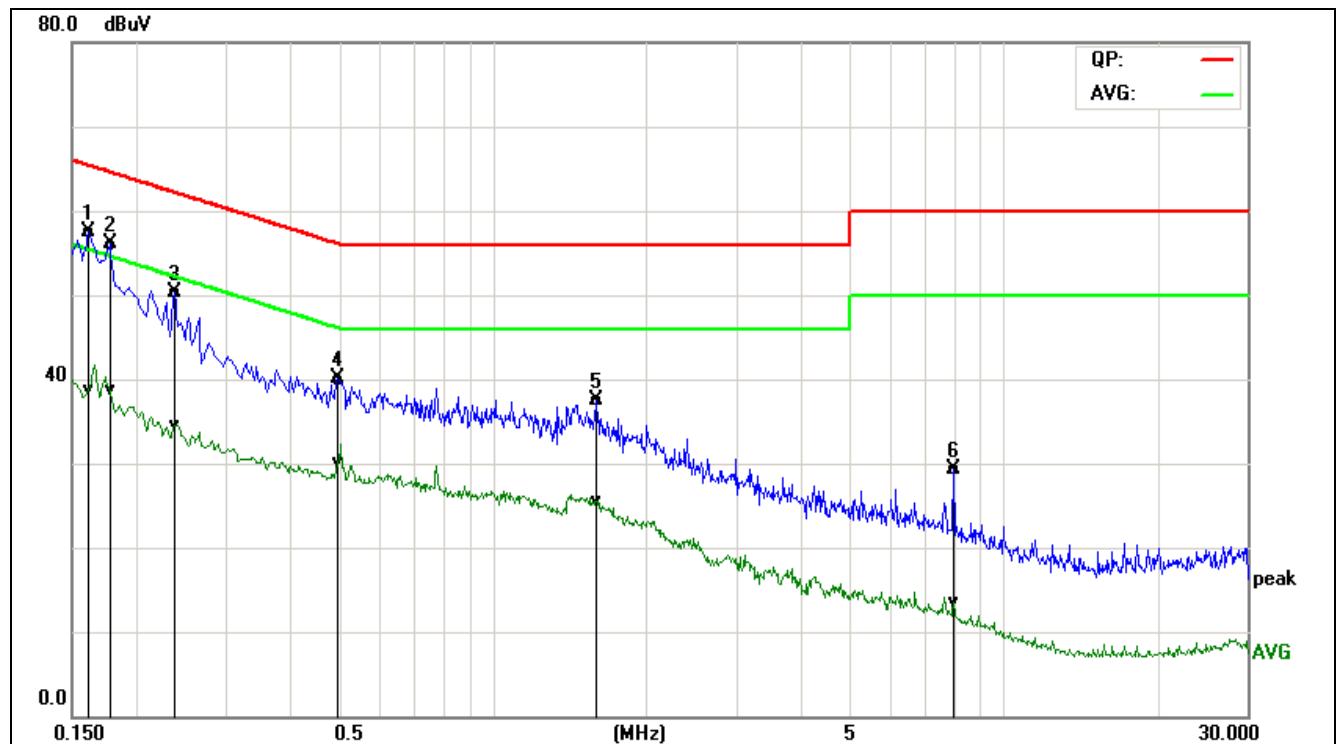


Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)	Line (L1/L2)
0.1660	47.70	28.22	9.78	57.48	38.00	65.15	55.16	-7.67	-17.16	Pass	L1
0.1940	43.08	26.12	9.79	52.87	35.91	63.86	53.86	-10.99	-17.95	Pass	L1
0.2740	36.10	22.05	9.81	45.91	31.86	60.99	51.00	-15.08	-19.14	Pass	L1
0.3580	32.43	20.13	9.83	42.26	29.96	58.77	48.77	-16.51	-18.81	Pass	L1
0.5500	30.54	17.96	9.88	40.42	27.84	56.00	46.00	-15.58	-18.16	Pass	L1
1.5500	27.25	15.74	9.92	37.17	25.66	56.00	46.00	-18.83	-20.34	Pass	L1

REMARKS: L1 = Line One (Live Line)



Model No.	PW5002	RBW,VBW	9 kHz
Environmental Conditions	22°C, 45% RH	Test Mode	Mode 1
Tested by	Jacksan Luo	Line	L1
Test Date	May 9, 2016		



Frequency (MHz)	QuasiPeak Reading (dBuV)	Average Reading (dBuV)	Correction Factor (dB)	QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Average Margin (dB)	Remark (Pass/Fail)	Line (L1/L2)
0.1620	47.54	28.85	9.88	57.42	38.73	65.36	55.36	-7.94	-16.63	Pass	L2
0.1780	46.11	28.79	9.89	56.00	38.68	64.57	54.58	-8.57	-15.90	Pass	L2
0.2380	40.50	24.63	9.89	50.39	34.52	62.16	52.17	-11.77	-17.65	Pass	L2
0.4980	30.12	20.17	9.88	40.00	30.05	56.03	46.03	-16.03	-15.98	Pass	L2
1.5980	27.56	15.51	9.92	37.48	25.43	56.00	46.00	-18.52	-20.57	Pass	L2
8.0020	19.32	3.44	10.08	29.40	13.52	60.00	50.00	-30.60	-36.48	Pass	L2

REMARKS: L2 = Line Two (Neutral Line)



7.2. SPURIOUS EMISSIONS MEASUREMENT

7.2.1. CONDUCTED EMISSIONS MEASUREMENT

7.2.1.1. LIMITS OF CONDUCTED EMISSIONS MEASUREMENT

§15.247(d) specifies that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions:

If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to 15.247(b)(3) requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to 15.247(b)(3) requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a) (see Section 15.205(c)).

7.2.1.2. TEST INSTRUMENTS

Name of Equipment	Manufacturer	Model	Serial Number	Last Calibration	Due Calibration
Spectrum Analyzer	Agilent	N9010A	MY52221469	02/21/2016	02/20/2017

7.2.1.3. TEST PROCEDURE (please refer to measurement standard)

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

Measurements are made over the 10MHz to 26GHz range with the transmitter set to the lowest, middle, and highest channels.

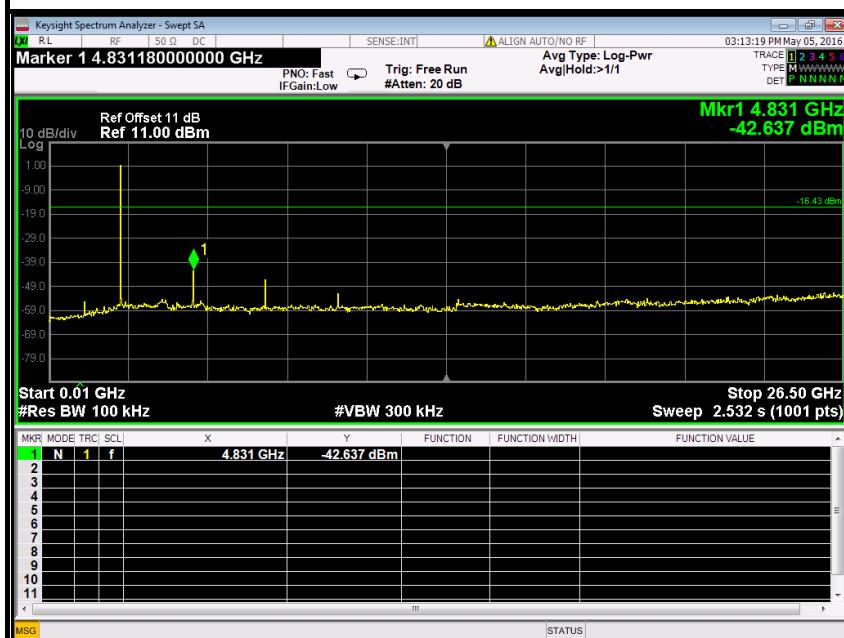


7.2.1.4. TEST RESULTS

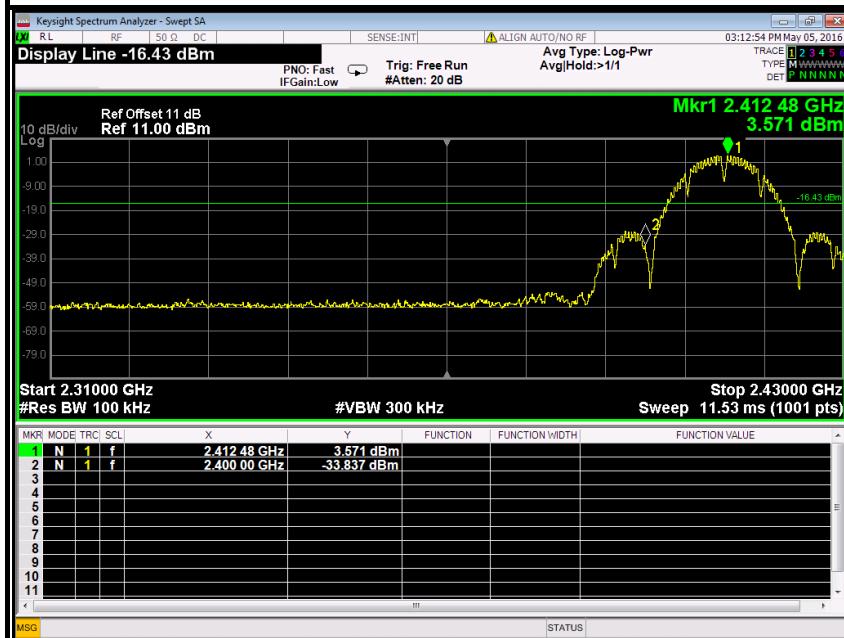
Test Plot

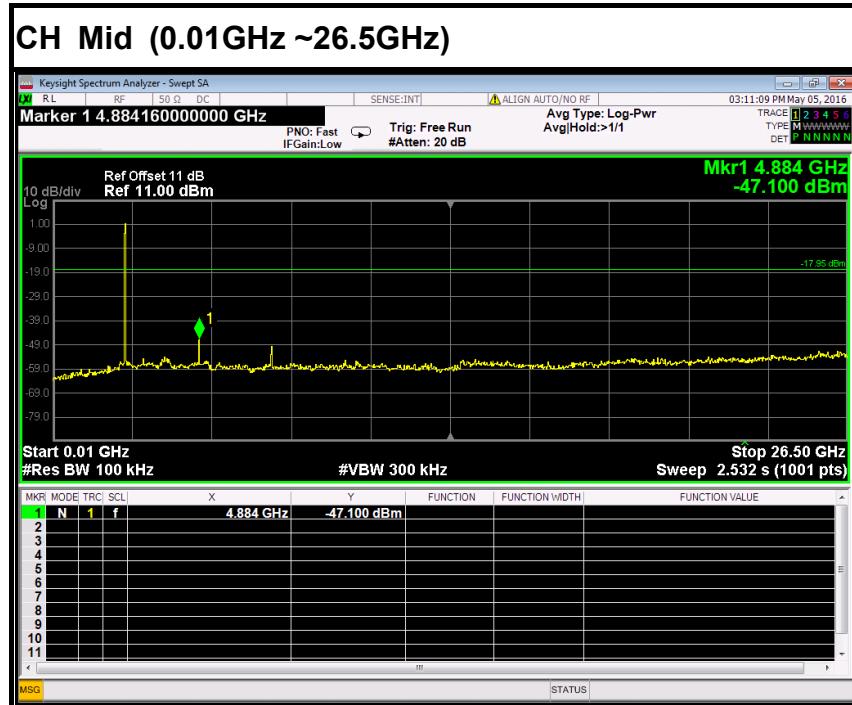
IEEE 802.11b mode (Antenna 1)

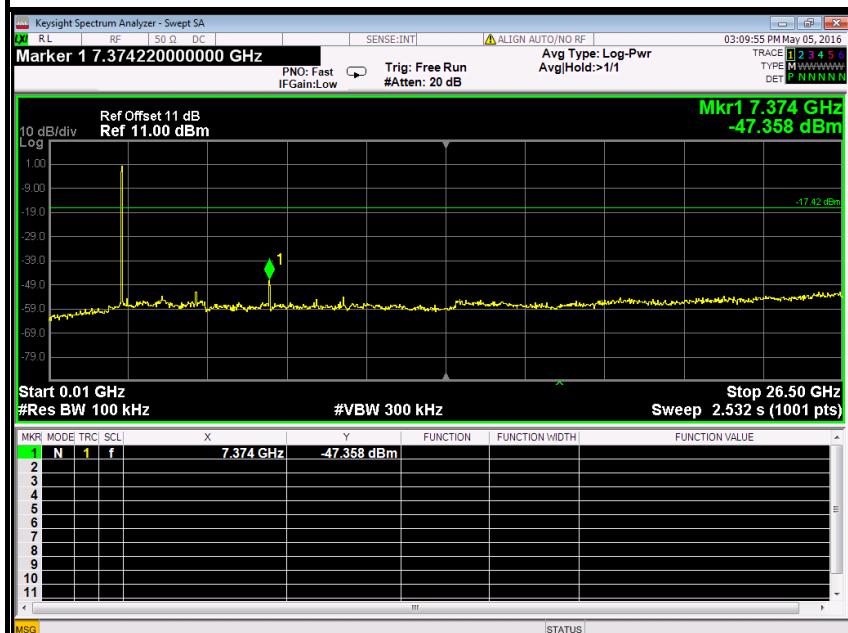
CH Low (0.01GHz ~26.5GHz)



CH Low (2.31GHz ~2.43GHz)



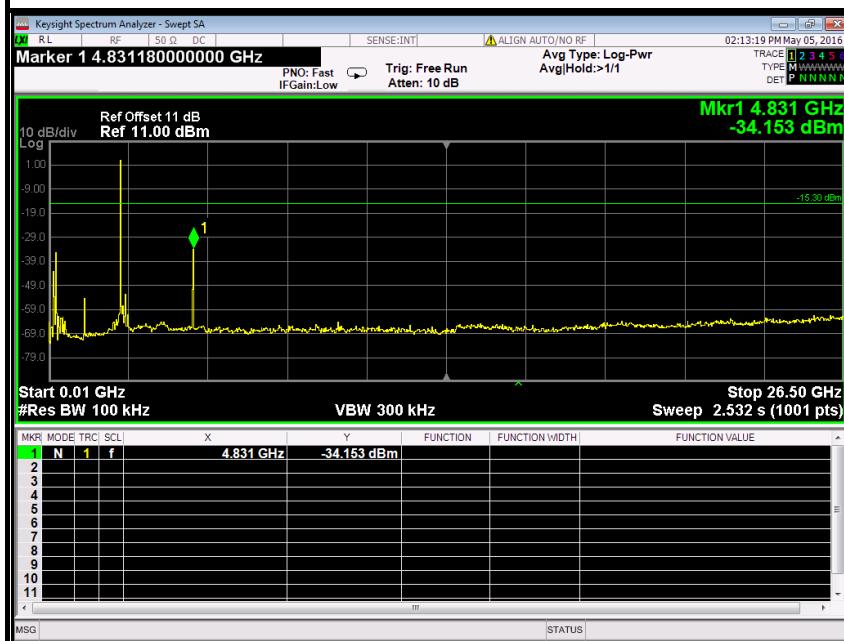


**CH High (0.01GHz ~26.5GHz)****CH High (2.45GHz ~2.5GHz)**

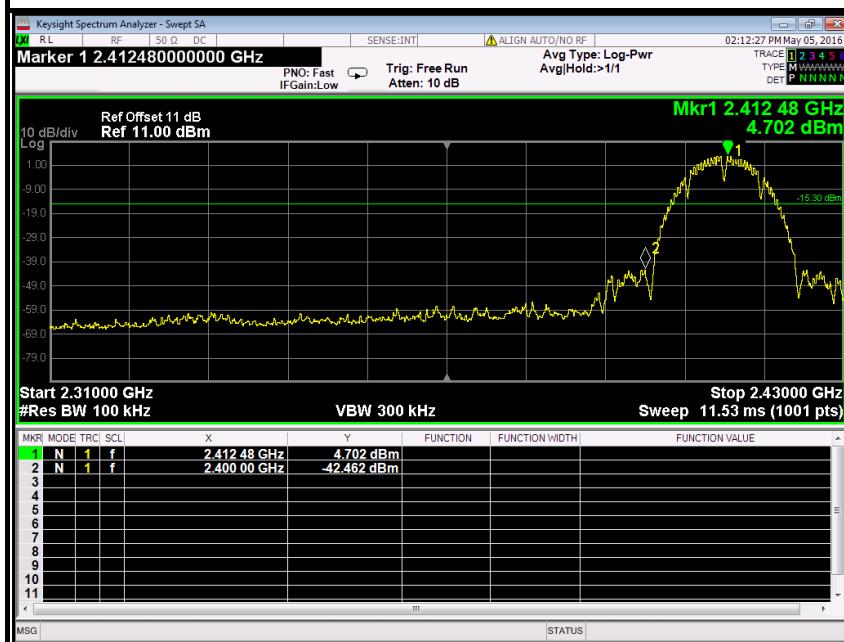


IEEE 802.11b mode (Antenna 2)

CH Low (0.01GHz ~26.5GHz)

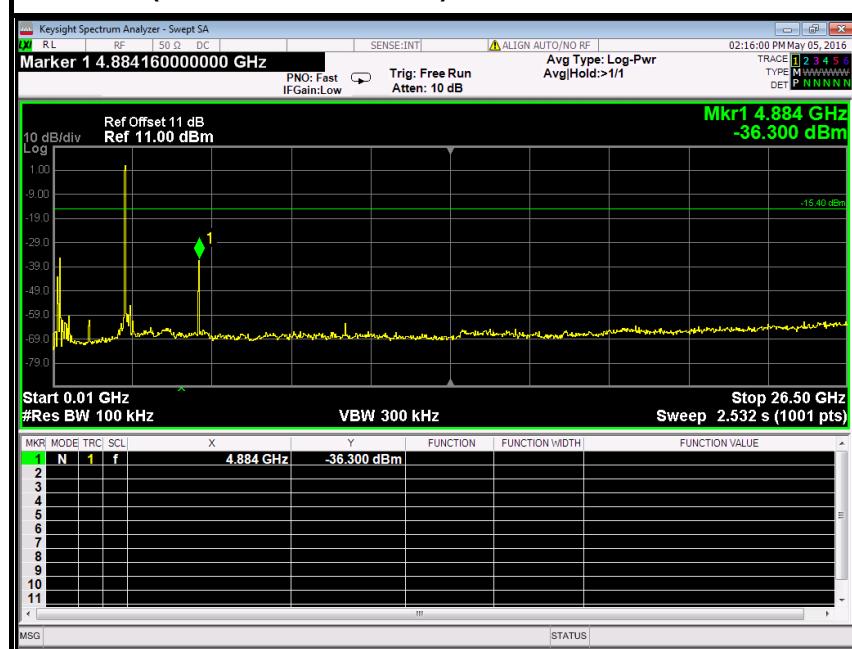


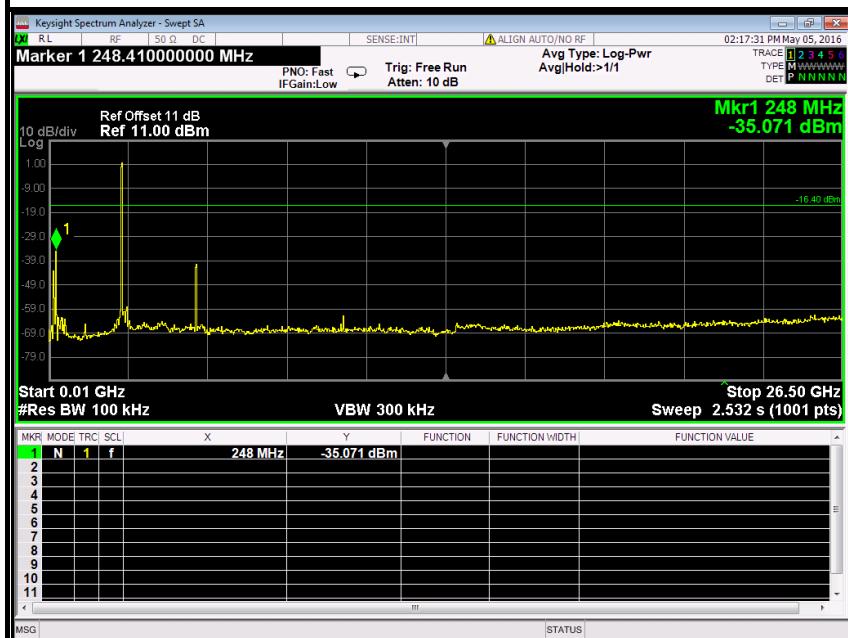
CH Low (2.31GHz ~2.43GHz)





CH Mid (0.01GHz ~26.5GHz)

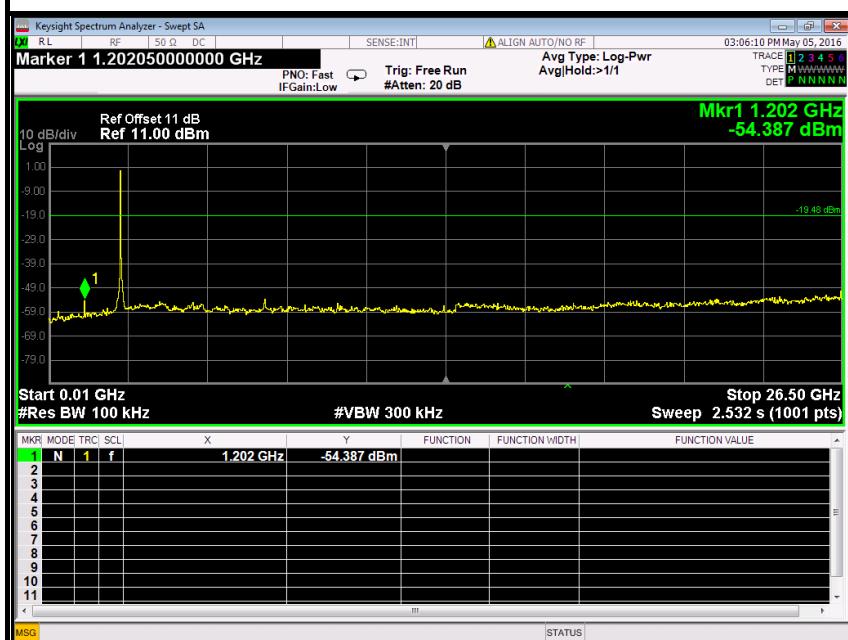


**CH High (0.01GHz ~26.5GHz)****CH High (2.45GHz ~2.5GHz)**

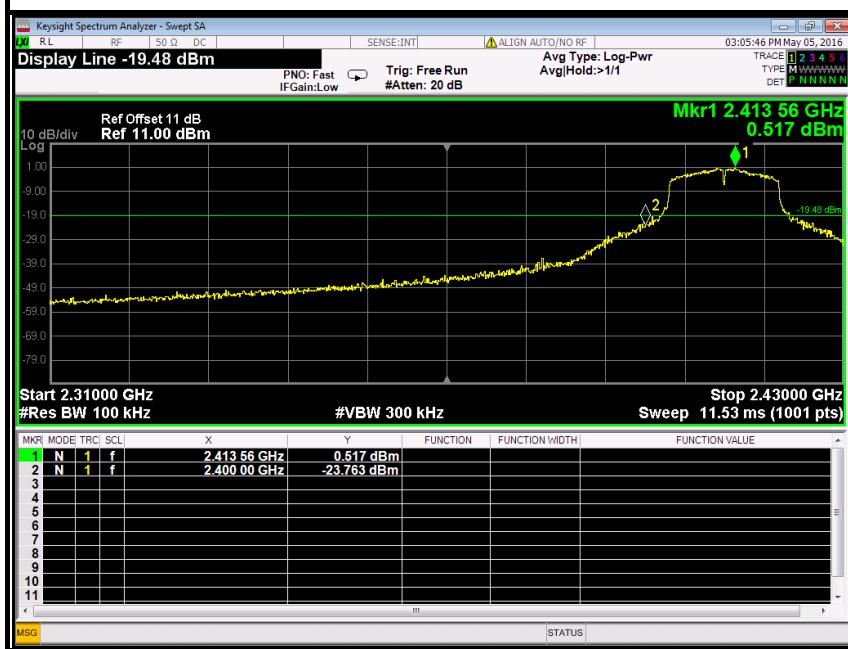


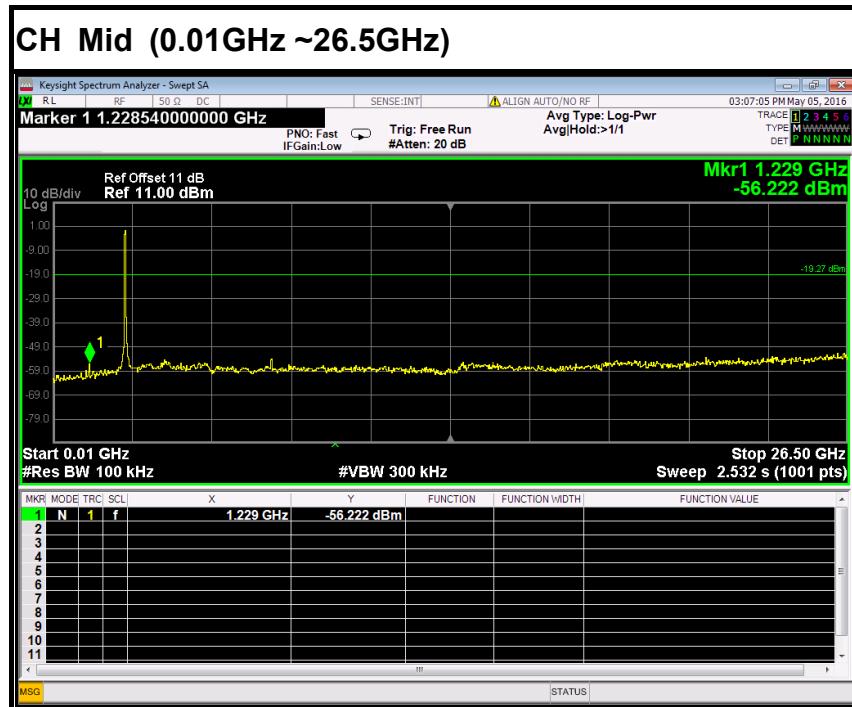
IEEE 802.11q mode (Antenna 1)

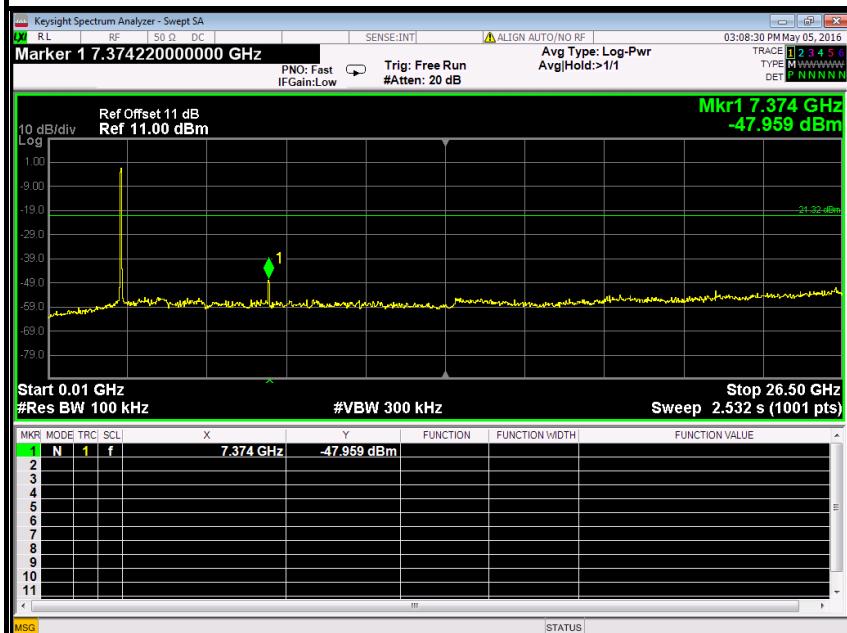
CH Low (0.01GHz ~26.5GHz)

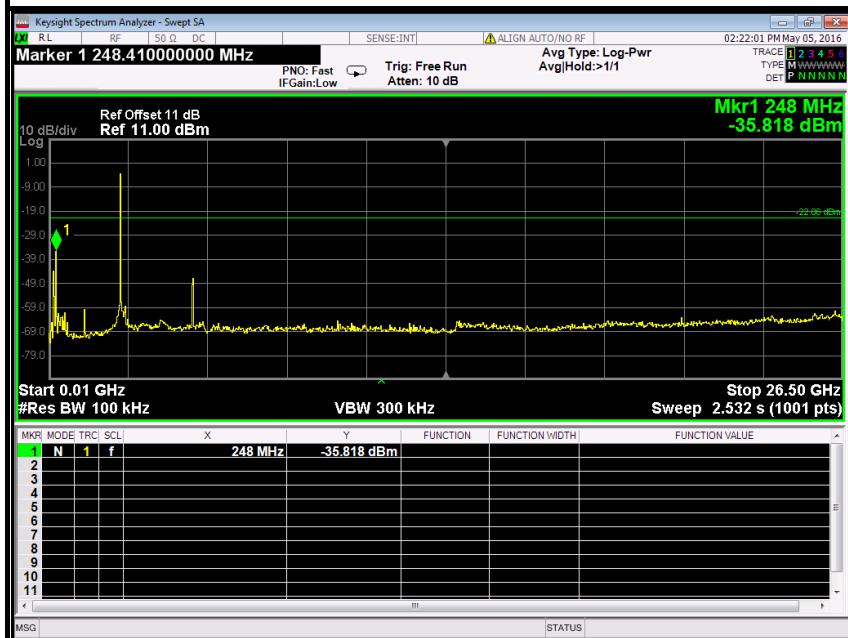
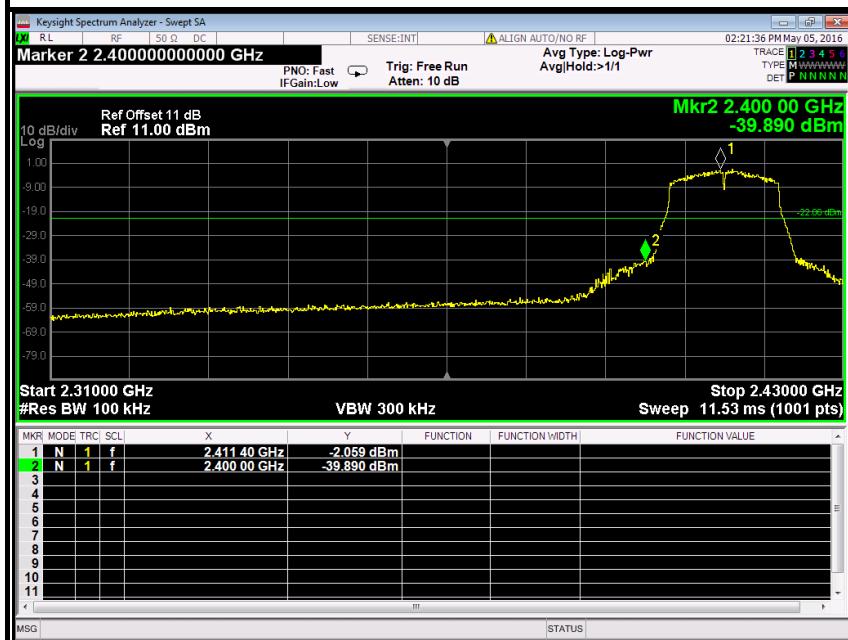


CH Low (2.31GHz ~2.43GHz)



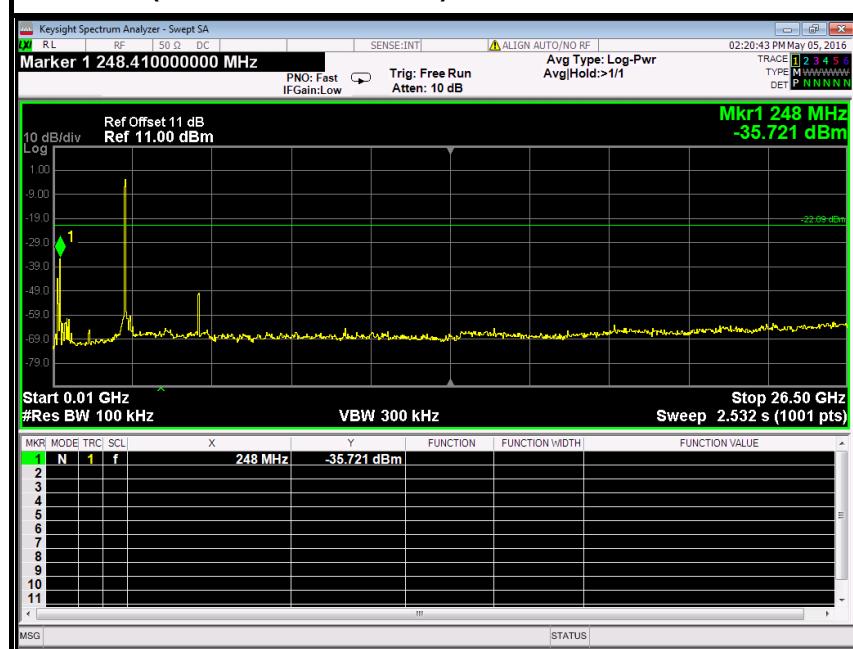


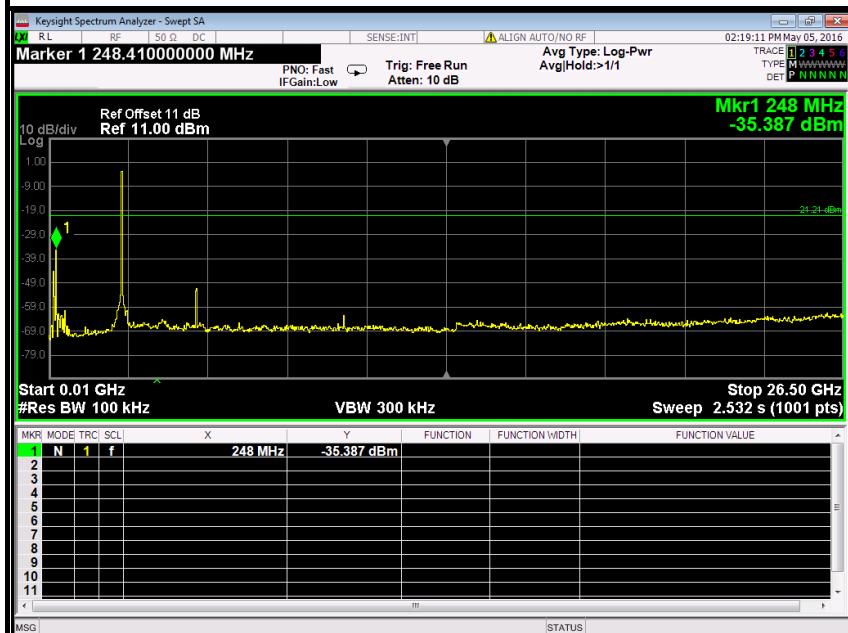
**CH High (0.01GHz ~26.5GHz)****CH High (2.45GHz ~2.5GHz)**

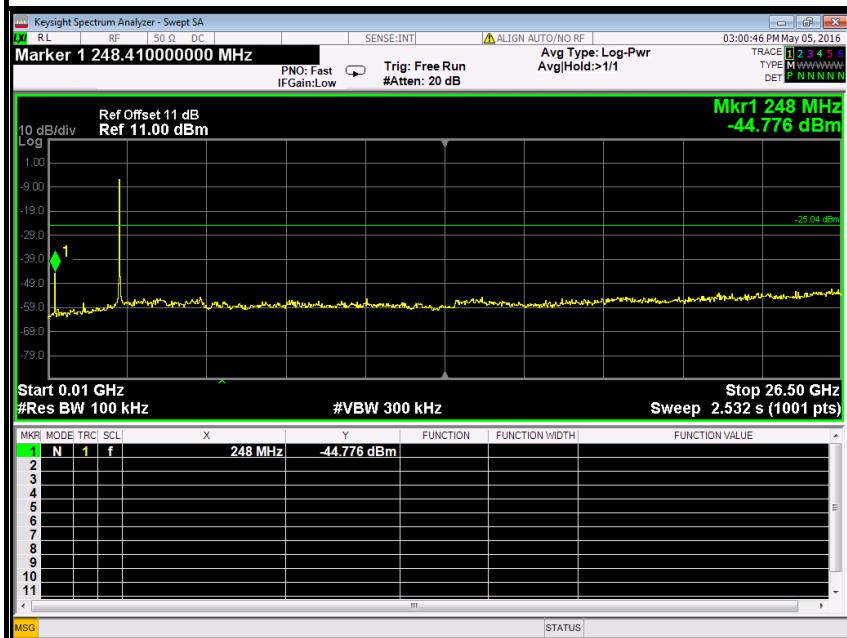
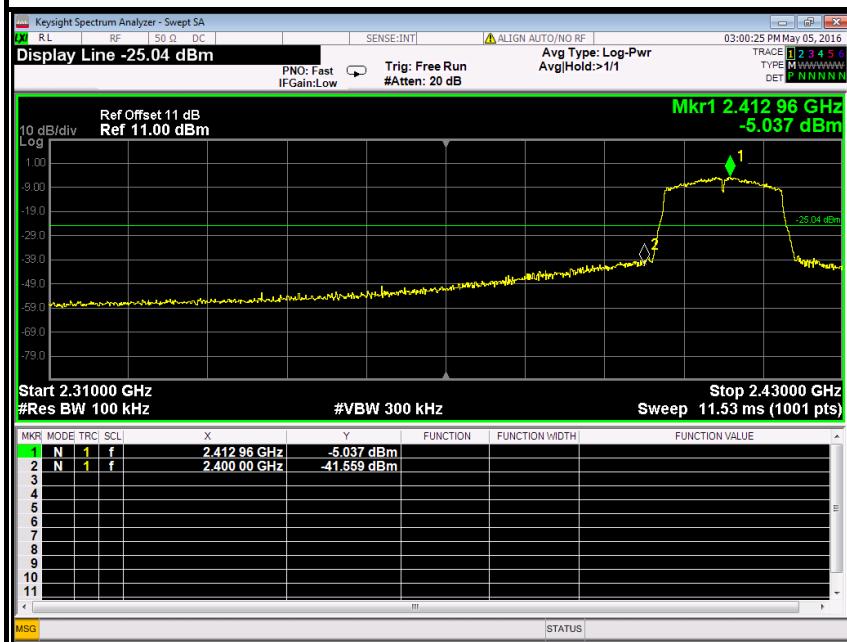
**IEEE 802.11g mode (Antenna 2)****CH Low (0.01GHz ~26.5GHz)****CH Low (2.31GHz ~2.43GHz)**



CH Mid (0.01GHz ~26.5GHz)

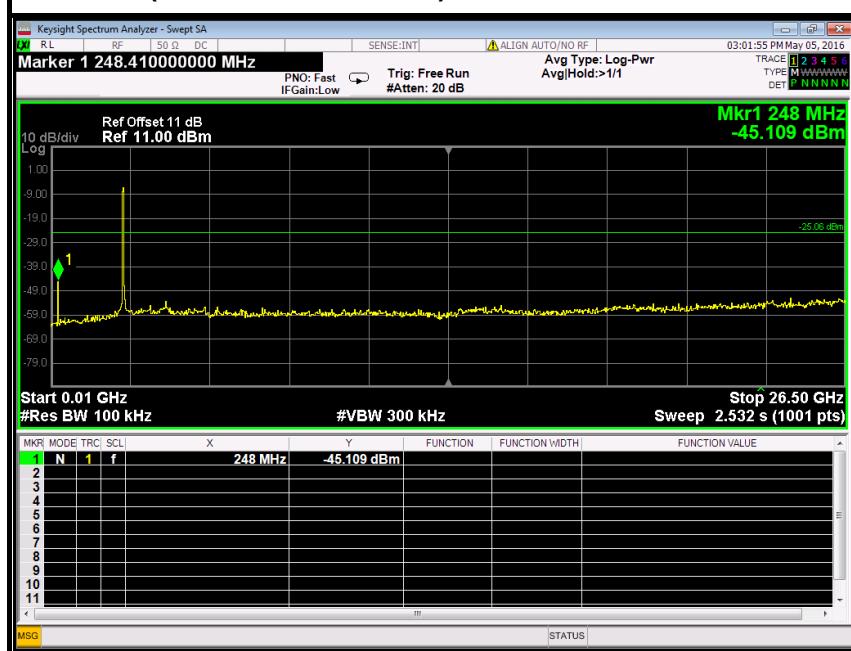


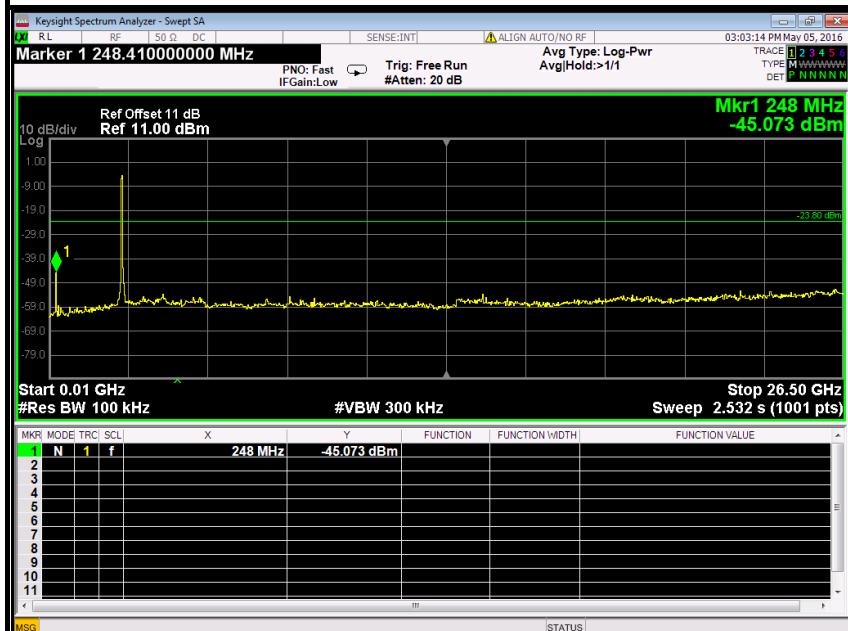
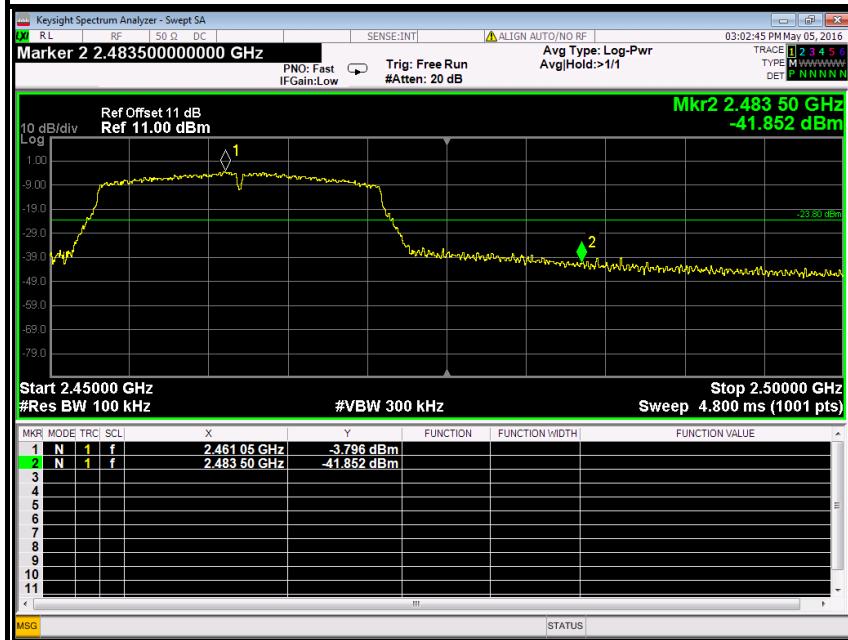
**CH High (0.01GHz ~26.5GHz)****CH High (2.45GHz ~2.5GHz)**

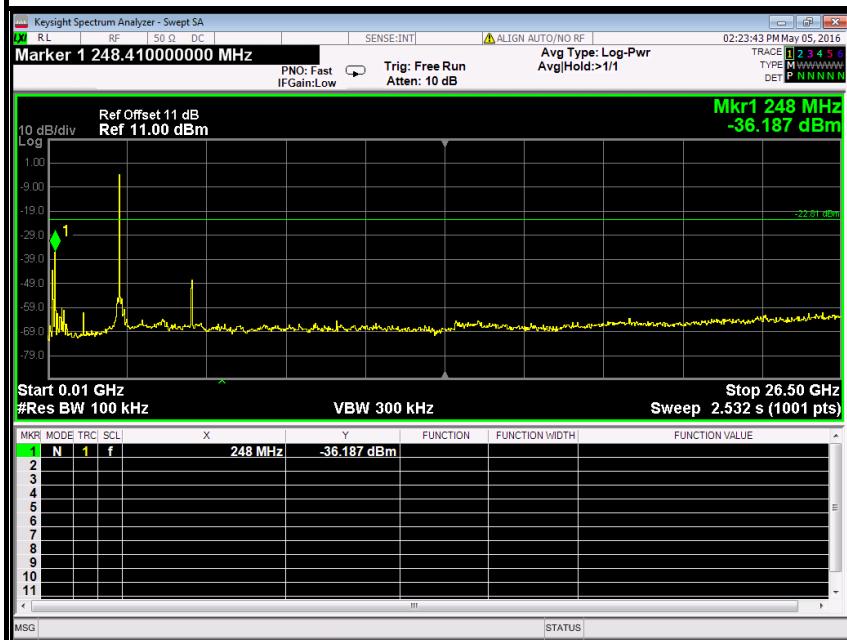
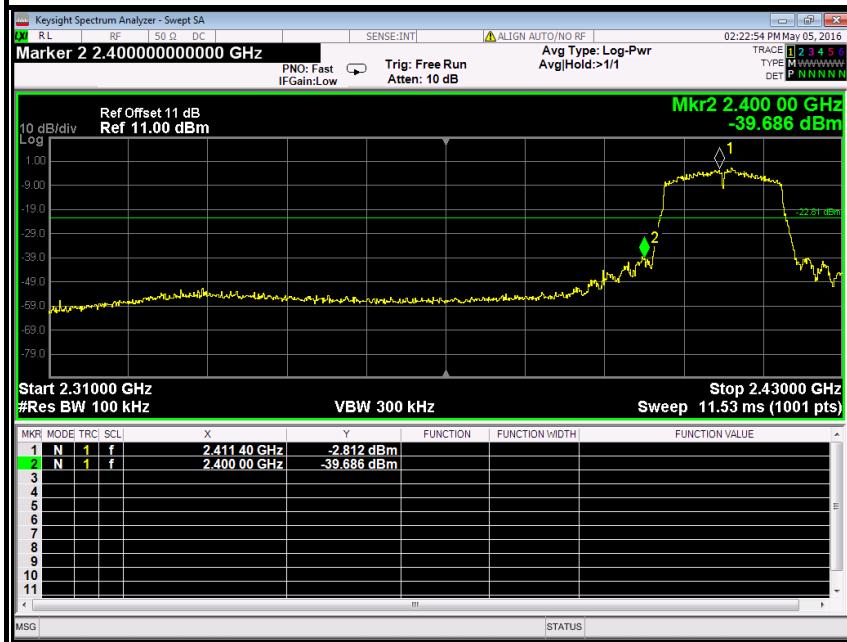
**IEEE 802.11n HT20 MHz mode (Antenna 1)****CH Low (0.01GHz ~26.5GHz)****CH Low (2.31GHz ~2.43GHz)**



CH Mid (0.01GHz ~26.5GHz)

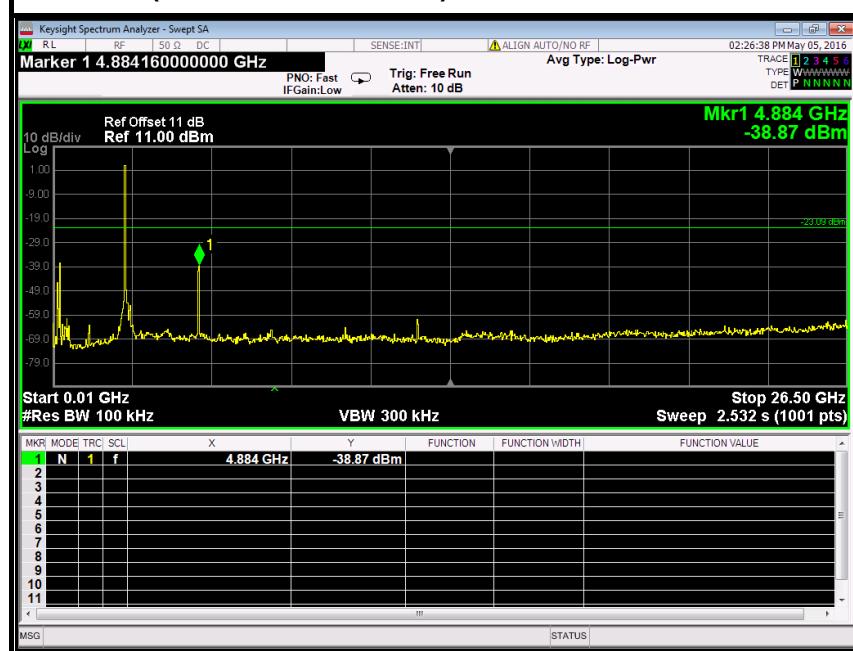


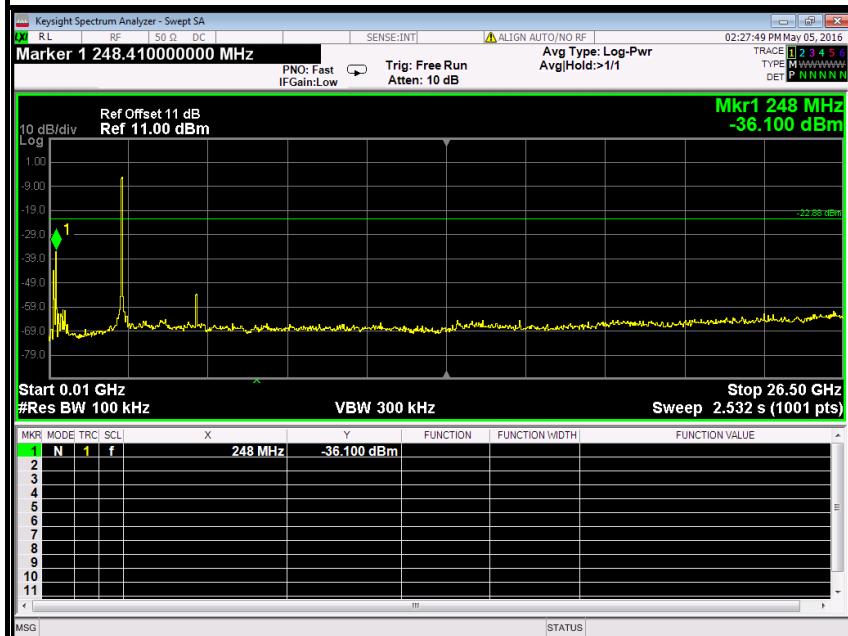
**CH High (0.01GHz ~26.5GHz)****CH High (2.45GHz ~2.5GHz)**

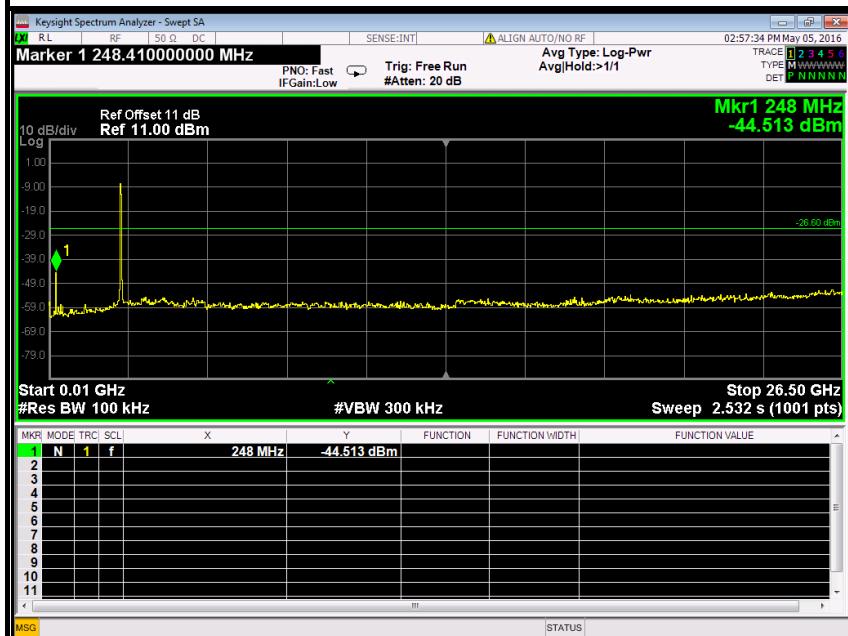
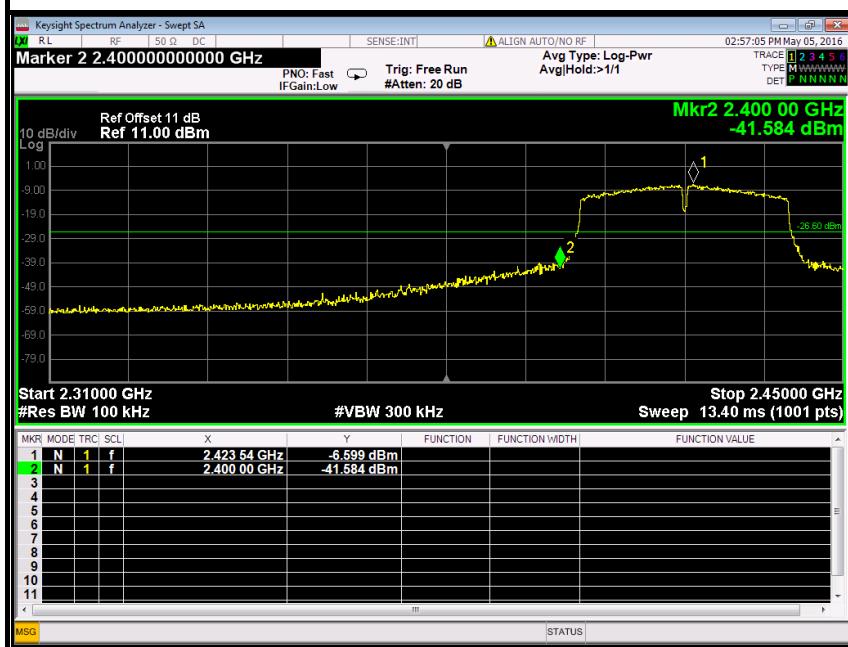
**IEEE 802.11n HT20 MHz mode (Antenna 2)****CH Low (0.01GHz ~26.5GHz)****CH Low (2.31GHz ~2.43GHz)**



CH Mid (0.01GHz ~26.5GHz)

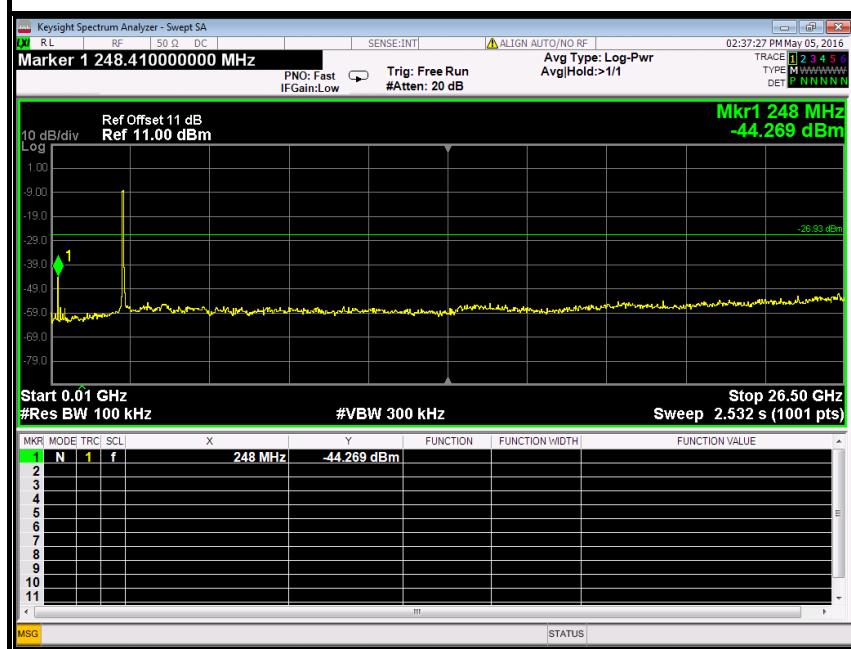


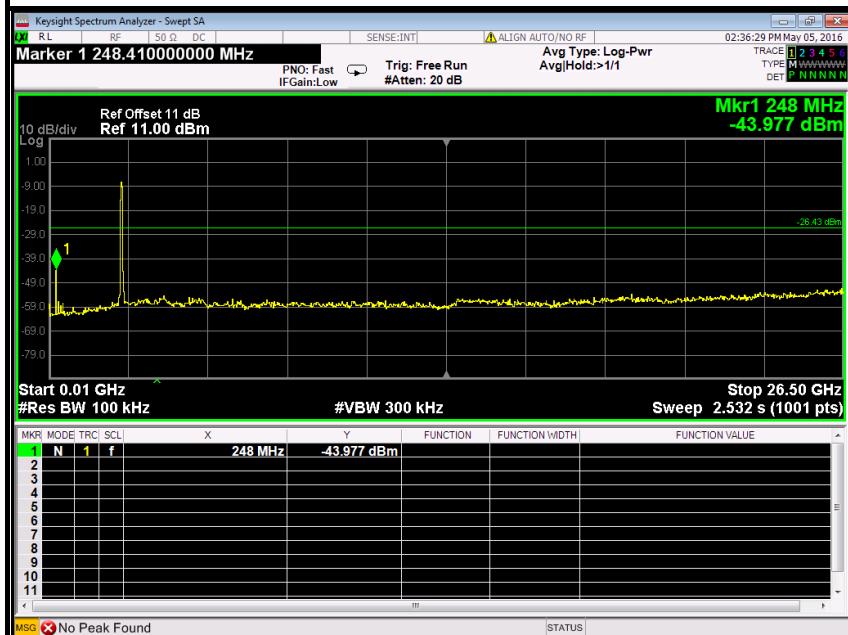
**CH High (0.01GHz ~26.5GHz)****CH High (2.45GHz ~2.5GHz)**

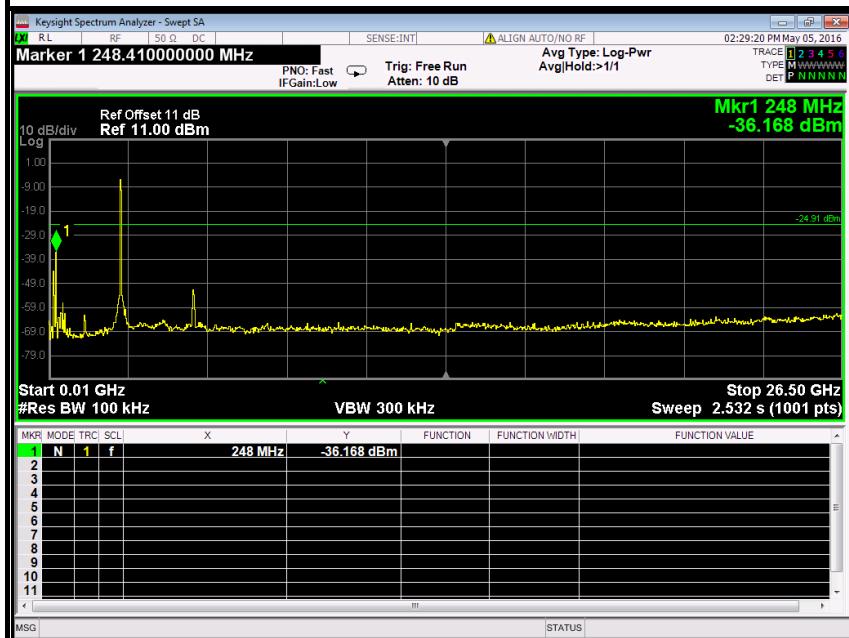
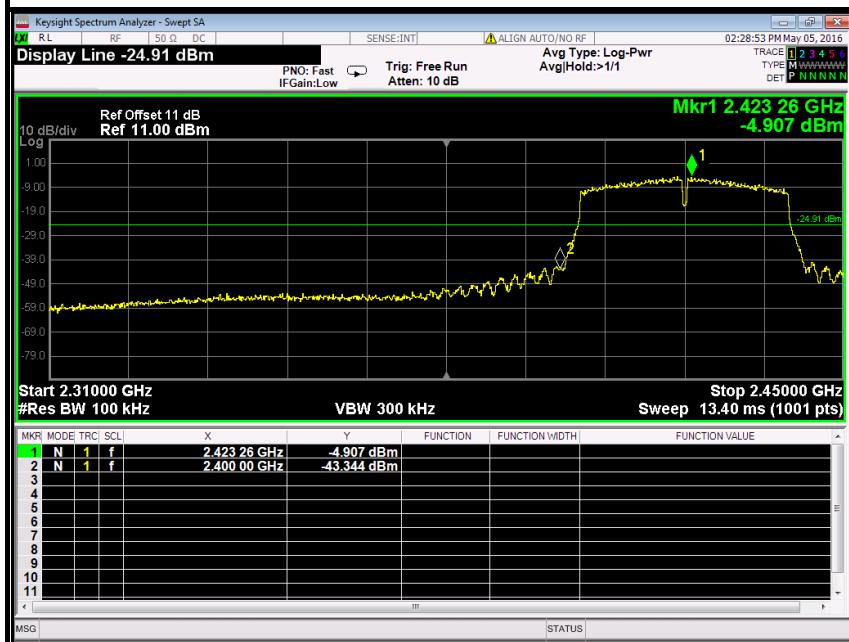
**IEEE 802.11n HT40 MHz mode (Antenna 1)****CH Low (0.01GHz ~26.5GHz)****CH Low (2.31GHz ~2.45GHz)**



CH Mid (0.01GHz ~26.5GHz)

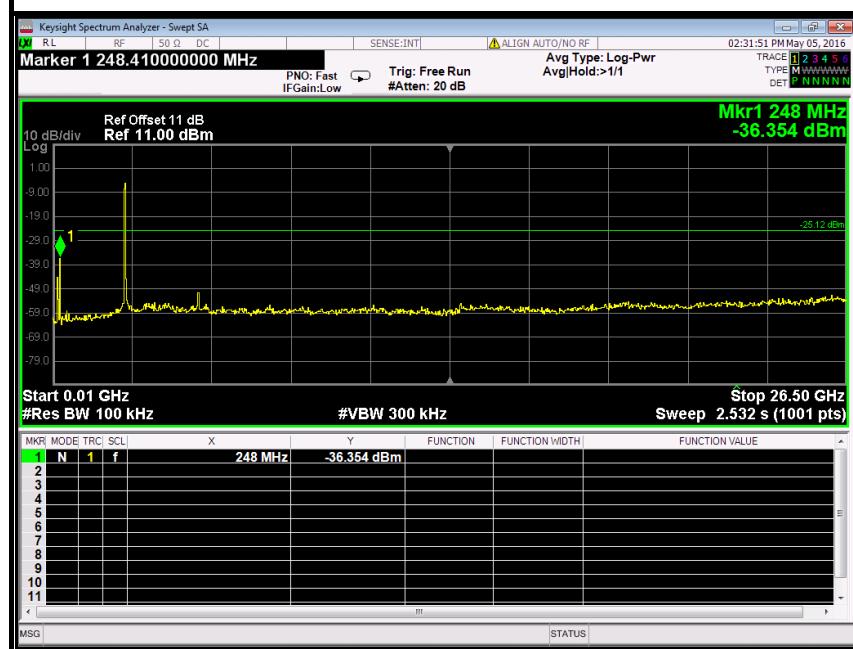


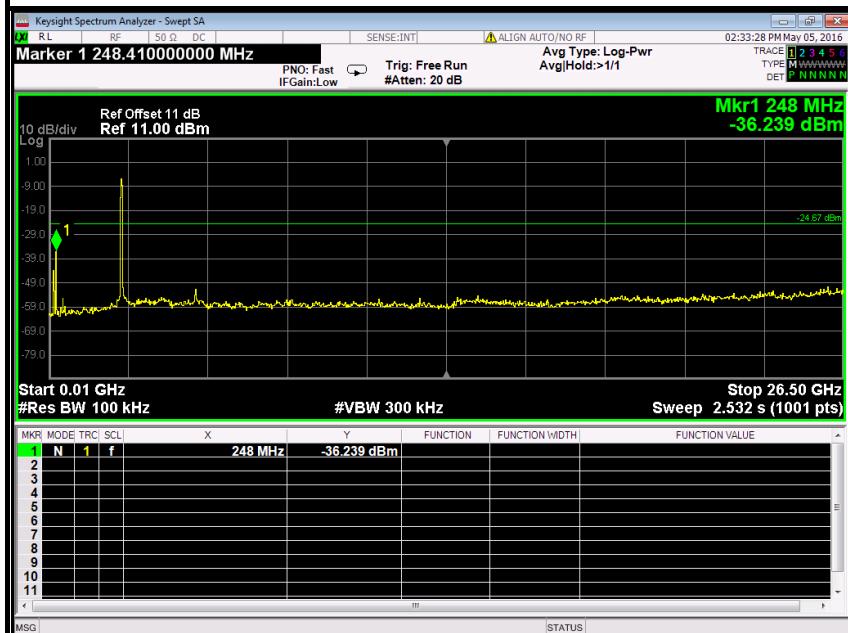
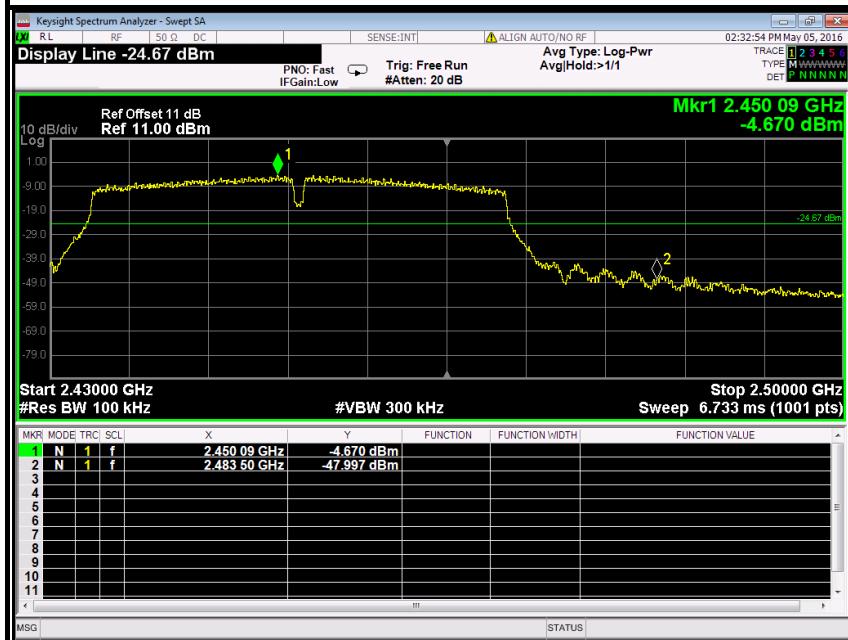
**CH High (0.01GHz ~26.5GHz)****CH High (2.43GHz ~2.5GHz)**

**IEEE 802.11n HT40 MHz mode (Antenna 2)****CH Low (0.01GHz ~26.5GHz)****CH Low (2.31GHz ~2.45GHz)**



CH Mid (0.01GHz ~26.5GHz)



**CH High (0.01GHz ~26.5GHz)****CH High (2.43GHz ~2.5GHz)**



7.2.2. RADIATED EMISSIONS MEASUREMENT

7.2.2.1. LIMITS OF RADIATED EMISSIONS MEASUREMENT

According to §15.209(a), except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (mV/m)	Measurement Distance (m)
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

Remark: Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

1. In the emission table above, the tighter limit applies at the band edges.

Frequency (MHz)	Field Strength (μ V/m at 3-meter)	Field Strength (dB μ V/m at 3-meter)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

NOTE:(1) The lower limit shall apply at the transition frequencies.

(2) Emission level (dB μ V/m) = 20 log Emission level (μ V/m).



7.2.2.2. TEST INSTRUMENTS

Radiated Emission Test Site 966 (2)					
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
PSA Series Spectrum Analyzer	Agilent	E4446A	US44300399	02/21/2016	02/20/2017
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	02/21/2016	02/20/2017
Amplifier	EMEC	EM330	060661	03/18/2016	03/17/2017
High Noise Amplifier	Agilent	8449B	3008A01838	02/21/2016	02/20/2017
Loop Antenna	COM-POWER	AL-130	121044	09/25/2015	09/24/2016
Bilog Antenna	SCHAFFNER	CBL6143	5082	02/21/2016	02/20/2017
Horn Antenna	SCHWARZBECK	BBHA9120	D286	02/28/2016	02/27/2017
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170-497	02/28/2016	02/27/2017
Turn Table	N/A	N/A	N/A	N.C.R	N.C.R
Controller	Sunol Sciences	SC104V	022310-1	N.C.R	N.C.R
Controller	CT	N/A	N/A	N.C.R	N.C.R
Temp. / Humidity Meter	Anymetre	JR913	N/A	02/21/2016	02/20/2017
Antenna Tower	SUNOL	TLT2	N/A	N.C.R	N.C.R
Test S/W	FARAD	LZ-RF / CCS-SZ-3A2			

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 FCC Site Registration number is 101879.

3. N.C.R = No Calibration Required.

**7.2.2.3. TEST PROCEDURE** (please refer to measurement standard)

1. The EUT is placed on a turntable, which is 0.8m or 1.5m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:

Below 1GHz:

RBW=100kHz / VBW=300kHz / Sweep=AUTO

Above 1GHz:

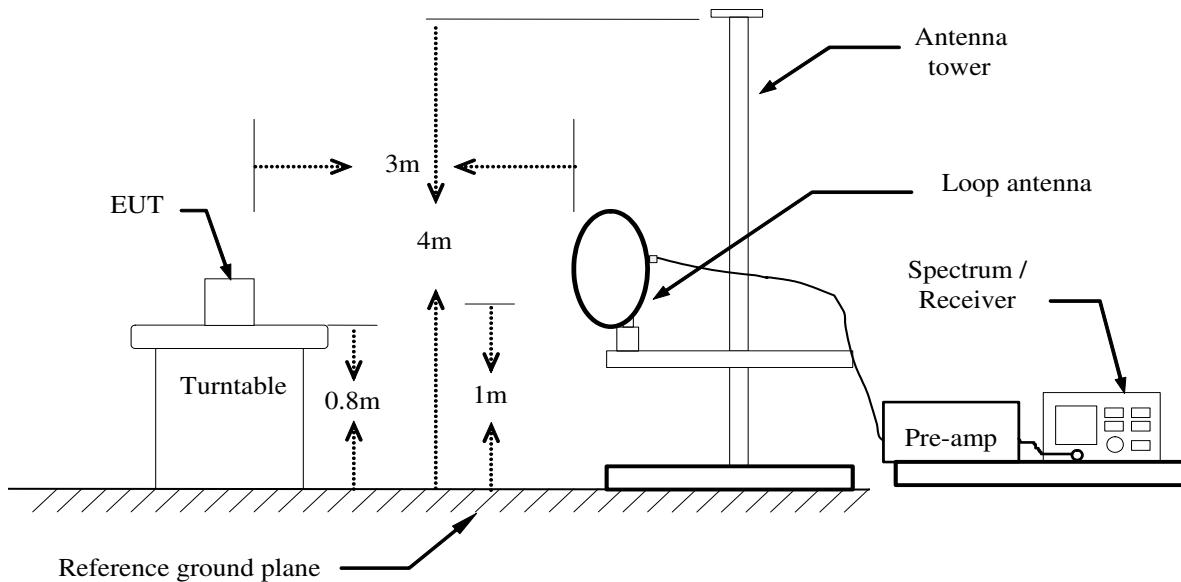
(a) PEAK: RBW=1MHz,VBW=3MHz / Sweep=AUTO

(b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

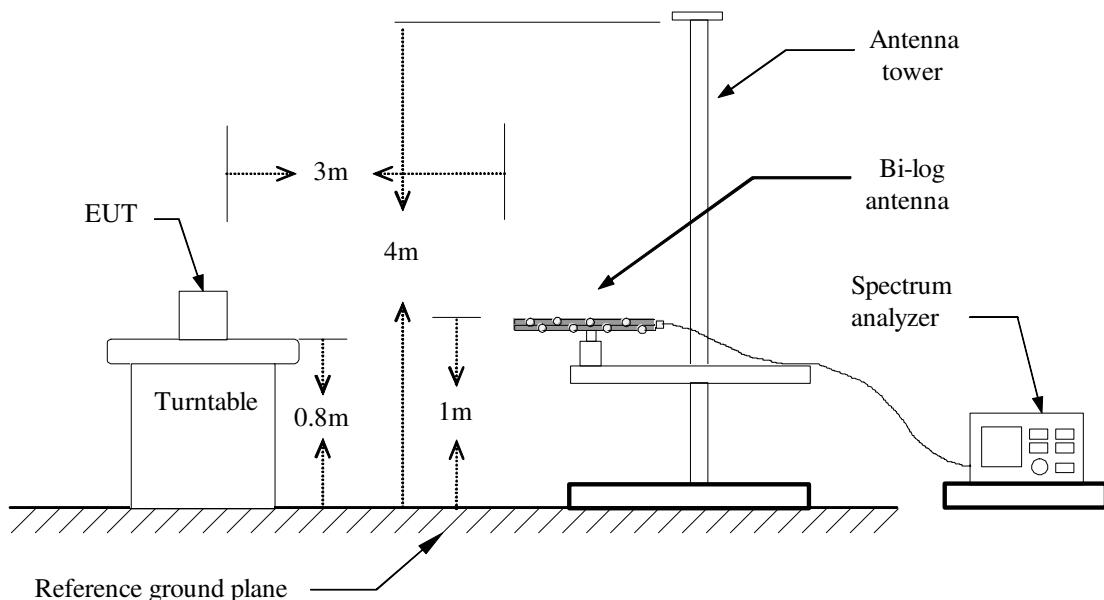
7. Repeat above procedures until the measurements for all frequencies
8. are complete.

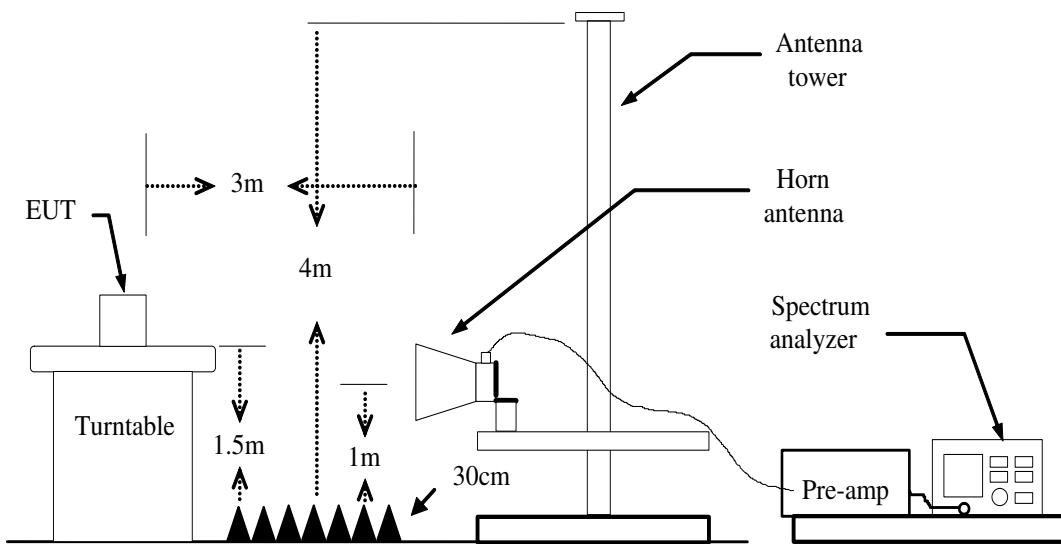
7.2.2.4. TEST SETUP

Below 30MHz



Below 1 GHz



Above 1 GHz

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.



7.2.2.5. DATA SAMPLE

Below 1GHz

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
XXX.XXXX	36.37	-12.20	24.17	40.00	-15.83	V	QP

Frequency (MHz) = Emission frequency in MHz
Reading (dBuV) = Uncorrected Analyzer / Receiver reading
Correct Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain
Result (dBuV/m) = Reading (dBuV) + Corr. Factor (dB/m)
Limit (dBuV/m) = Limit stated in standard
Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)
Q.P. = Quasi-peak Reading

Above 1GHz

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
XXXX.XXXX	62.09	-11.42	50.67	74.00	-23.33	V	Peak
XXXX.XXXX	49.78	-11.42	38.36	54.00	-15.64	V	AVG

Frequency (MHz) = Emission frequency in MHz
Reading (dBuV) = Uncorrected Analyzer / Receiver reading
Correction Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain
Result (dBuV/m) = Reading (dBuV) + Corr. Factor (dB/m)
Limit (dBuV/m) = Limit stated in standard
Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)
Peak = Peak Reading
AVG = Average Reading

Calculation Formula

Margin (dB) = Result (dBuV/m) – Limits (dBuV/m)
Result (dBuV/m) = Reading (dBuV) + Correction Factor



7.2.2.6. TEST RESULTS

Below 1 GHz

Model: PW5002

Test Mode: TX

Tested by: Jack Chen

Ambient temperature: 24 °C

Relative humidity: 52% RH

Date: May 2, 2016

Frequency (MHz)	Reading (dB μ V)	Correction Factor (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna Pole (V/H)	Remark
34.8500	45.75	-14.50	31.25	40.00	-8.75	V	QP
210.4200	51.29	-21.46	29.83	43.50	-13.67	V	QP
480.0800	48.30	-14.36	33.94	46.00	-12.06	V	QP
570.2900	48.95	-13.02	35.93	46.00	-10.07	V	QP
630.4300	47.65	-12.50	35.15	46.00	-10.85	V	QP
755.5600	43.33	-11.10	32.23	46.00	-13.77	V	QP
37.7600	46.41	-15.48	30.93	40.00	-9.07	H	QP
335.5500	48.52	-18.26	30.26	46.00	-15.74	H	QP
480.0800	45.42	-14.36	31.06	46.00	-14.94	H	QP
599.3900	45.86	-12.88	32.98	46.00	-13.02	H	QP
864.2000	44.10	-10.49	33.61	46.00	-12.39	H	QP
888.4500	40.95	-9.91	31.04	46.00	-14.96	H	QP

**Remark: No emission found between lowest internal used/generated frequency to 30MHz.

Notes:

1. Radiated emissions measured in frequency range from 9kHz to 1GHz were made with an instrument using Quasi-peak detector mode.
2. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
3. The IF bandwidth of Receiver between 30MHz to 1GHz was 120kHz.
4. Frequency (MHz).
Reading (dB μ V/m)
Correction Factor (dB)
Limit (dB μ V/m)
Margin (dB)
Antenna Pole(H/V) = Emission frequency in MHz
= Receiver reading
= Antenna factor + Cable loss – Amplifier gain
= Limit stated in standard
= Measured (dB μ V/m) – Limits (dB μ V/m)
= Current carrying line of reading

**Model: PW5003****Test Mode: TX****Tested by: Jack Chen****Ambient temperature: 24 °C****Relative humidity: 52% RH****Date: May 2, 2016**

Frequency (MHz)	Reading (dB μ V)	Correction Factor (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna Pole (V/H)	Remark
68.8000	59.10	-25.49	33.61	40.00	-6.39	V	QP
167.7400	57.10	-22.83	34.27	43.50	-9.23	V	QP
286.0800	53.82	-20.44	33.38	46.00	-12.62	V	QP
446.1300	49.04	-15.55	33.49	46.00	-12.51	V	QP
600.3600	48.45	-12.86	35.59	46.00	-10.41	V	QP
831.2200	46.34	-10.60	35.74	46.00	-10.26	V	QP
65.8900	59.27	-24.99	34.28	40.00	-5.72	H	QP
384.0500	50.31	-16.45	33.86	46.00	-12.14	H	QP
480.0800	49.42	-14.36	35.06	46.00	-10.94	H	QP
494.6300	47.24	-14.36	32.88	46.00	-13.12	H	QP
719.6700	48.30	-11.86	36.44	46.00	-9.56	H	QP
768.1700	45.88	-11.11	34.77	46.00	-11.23	H	QP

****Remark:** No emission found between lowest internal used/generated frequency to 30MHz.**Notes:**

1. Radiated emissions measured in frequency range from 9kHz to 1GHz were made with an instrument using Quasi-peak detector mode.
2. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
3. The IF bandwidth of Receiver between 30MHz to 1GHz was 120kHz.
4. Frequency (MHz).
Reading (dB μ V/m)
Correction Factor (dB)
Limit (dB μ V/m)
Margin (dB)
Antenna Pol e(H/V) = Emission frequency in MHz
= Receiver reading
= Antenna factor + Cable loss – Amplifier gain
= Limit stated in standard
= Measured (dB μ V/m) – Limits (dB μ V/m)
= Current carrying line of reading

**Above 1 GHz****Antenna 1****Model: PW5002****Test Mode: TX / IEEE 802.11b(CH Low)****Tested by: Jack Chen****Ambient temperature: 24°C Relative humidity: 52% RH Date: May 2, 2016**

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
3730.000	43.75	0.45	44.20	74.00	-29.80	V	peak
4405.000	41.69	3.02	44.71	74.00	-29.29	V	peak
4825.000	48.92	4.41	53.33	74.00	-20.67	V	peak
4825.000	46.59	4.41	51.00	54.00	-3.00	V	AVG
5485.000	41.83	5.84	47.67	74.00	-26.33	V	peak
7240.000	44.10	8.17	52.27	74.00	-21.73	V	peak
7240.000	41.18	8.17	49.35	54.00	-4.65	V	AVG
9760.000	42.46	11.29	53.75	74.00	-20.25	V	peak
9760.000	39.46	11.29	50.75	54.00	-3.25	V	AVG
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4825.000	51.89	4.41	56.30	74.00	-17.70	H	Peak
4825.000	46.85	4.41	51.26	54.00	-2.74	H	AVG
5770.000	41.26	5.98	47.24	74.00	-26.76	H	Peak
6031.000	41.97	6.13	48.10	74.00	-25.90	H	peak
6418.000	42.08	6.76	48.84	74.00	-25.16	H	peak
7237.000	41.76	8.16	49.92	74.00	-24.08	H	peak
7732.000	42.37	9.13	51.50	74.00	-22.50	H	peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11b (CH Mid)**Tested by:** Jack Chen**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1774.000	52.61	-6.33	46.28	74.00	-27.72	V	Peak
4870.000	43.96	4.56	48.52	74.00	-25.48	V	Peak
6238.000	41.45	6.47	47.92	74.00	-26.08	V	Peak
6769.000	41.71	7.33	49.04	74.00	-24.96	V	Peak
7777.000	41.36	9.22	50.58	74.00	-23.42	V	Peak
8956.000	42.88	9.12	52.00	74.00	-22.00	V	Peak
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4870.000	50.70	4.56	55.26	74.00	-18.74	H	Peak
4870.000	46.64	4.56	51.20	54.00	-2.80	H	AVG
6094.000	41.98	6.23	48.21	74.00	-25.79	H	Peak
6940.000	41.96	7.60	49.56	74.00	-24.44	H	Peak
7309.000	41.31	8.30	49.61	74.00	-24.39	H	Peak
7768.000	41.43	9.20	50.63	74.00	-23.37	H	Peak
9748.000	45.74	11.25	56.99	74.00	-17.01	H	Peak
9748.000	40.07	11.25	51.32	54.00	-2.68	H	AVG

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11b (CH High)**Tested by:** Jack Chen**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	54.56	-6.35	48.21	74.00	-25.79	V	Peak
2845.000	45.62	-1.64	43.98	74.00	-30.02	V	Peak
4924.000	45.08	4.73	49.81	74.00	-24.19	V	Peak
7390.000	40.79	8.46	49.25	74.00	-24.75	V	Peak
7714.000	41.79	9.09	50.88	74.00	-23.12	V	Peak
9847.000	44.21	11.54	55.75	74.00	-18.25	V	Peak
9847.000	38.83	11.54	50.37	54.00	-3.63	V	AVG
<hr/>							
4222.000	41.85	2.37	44.22	74.00	-29.78	H	Peak
4924.000	51.46	4.73	56.19	74.00	-17.81	H	Peak
4924.000	46.97	4.73	51.70	54.00	-2.30	H	AVG
6337.000	41.65	6.63	48.28	74.00	-25.72	H	Peak
6985.000	41.78	7.68	49.46	74.00	-24.54	H	Peak
7939.000	41.27	9.53	50.80	74.00	-23.20	H	Peak
9847.000	43.82	11.54	55.36	74.00	-18.64	H	Peak
9847.000	39.73	11.54	51.27	54.00	-2.73	H	AVG

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Model: PW5003****Test Mode: TX / IEEE 802.11b(CH Low)****Tested by: Jack Chen****Ambient temperature: 24°C Relative humidity: 52% RH****Date: May 2, 2016**

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4402.000	41.99	3.01	45.00	74.00	-29.00	V	peak
4825.000	43.77	4.41	48.18	74.00	-25.82	V	peak
5401.000	41.38	5.69	47.07	74.00	-26.93	V	peak
6310.000	40.37	6.58	46.95	74.00	-27.05	V	peak
7237.000	42.71	8.16	50.87	74.00	-23.13	V	peak
7795.000	41.83	9.25	51.08	74.00	-22.92	V	peak
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4825.000	43.62	4.41	48.03	74.00	-25.97	H	Peak
5563.000	41.03	5.90	46.93	74.00	-27.07	H	Peak
6949.000	40.98	7.62	48.60	74.00	-25.40	H	Peak
7237.000	41.19	8.16	49.35	74.00	-24.65	H	Peak
7768.000	40.75	9.20	49.95	74.00	-24.05	H	peak
8533.000	40.63	9.36	49.99	74.00	-24.01	H	peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11b (CH Mid)**Tested by:** Jack Chen**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
3898.000	42.90	1.16	44.06	74.00	-29.94	V	Peak
4870.000	45.23	4.56	49.79	74.00	-24.21	V	Peak
5329.000	42.15	5.57	47.72	74.00	-26.28	V	Peak
6886.000	42.17	7.52	49.69	74.00	-24.31	V	Peak
7309.000	43.35	8.30	51.65	74.00	-22.35	V	Peak
7750.000	41.36	9.16	50.52	74.00	-23.48	V	Peak
1747.000	54.61	-6.38	48.23	74.00	-25.77	H	Peak
4348.000	43.47	2.81	46.28	74.00	-27.72	H	Peak
4870.000	43.46	4.56	48.02	74.00	-25.98	H	Peak
6094.000	42.12	6.23	48.35	74.00	-25.65	H	Peak
6580.000	41.71	7.02	48.73	74.00	-25.27	H	Peak
7723.000	42.90	9.11	52.01	74.00	-21.99	H	Peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11b (CH High)**Tested by:** Jack Chen**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1747.000	57.28	-6.38	50.90	74.00	-23.10	V	Peak
4924.000	44.27	4.73	49.00	74.00	-25.00	V	Peak
6661.000	41.17	7.15	48.32	74.00	-25.68	V	Peak
7390.000	43.97	8.46	52.43	74.00	-21.57	V	Peak
8209.000	41.18	9.54	50.72	74.00	-23.28	V	Peak
9847.000	42.43	11.54	53.97	74.00	-20.03	V	Peak
1747.000	57.84	-6.38	51.46	74.00	-22.54	H	Peak
4924.000	42.13	4.73	46.86	74.00	-27.14	H	Peak
6454.000	40.70	6.82	47.52	74.00	-26.48	H	Peak
7381.000	41.43	8.44	49.87	74.00	-24.13	H	Peak
7732.000	41.27	9.13	50.40	74.00	-23.60	H	Peak
9802.000	43.29	11.41	54.70	74.00	-19.30	H	Peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average li

**Antenna 2****Model: PW5002****Test Mode: TX / IEEE 802.11b(CH Low)****Tested by: Jack Chen****Ambient temperature: 24 °C****Relative humidity: 52% RH****Date: May 2, 2016**

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4825.000	46.79	4.41	51.20	74.00	-22.80	V	peak
6292.000	41.17	6.55	47.72	74.00	-26.28	V	peak
6949.000	41.62	7.62	49.24	74.00	-24.76	V	peak
7723.000	40.84	9.11	49.95	74.00	-24.05	V	peak
8011.000	40.89	9.64	50.53	74.00	-23.47	V	peak
9631.000	42.04	10.92	52.96	74.00	-21.04	V	peak
9631.000	29.20	10.92	40.12	54.00	-13.88	V	AVG
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4825.000	50.92	4.41	55.33	74.00	-18.67	H	Peak
4825.000	46.73	4.41	51.14	54.00	-2.86	H	Peak
5770.000	41.82	5.98	47.80	74.00	-26.20	H	Peak
6283.000	41.56	6.54	48.10	74.00	-25.90	H	peak
7237.000	43.01	8.16	51.17	74.00	-22.83	H	peak
8254.000	41.39	9.51	50.90	74.00	-23.10	H	peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11b (CH Mid)**Tested by:** Jack Chen**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	54.01	-6.35	47.66	74.00	-26.34	V	Peak
4870.000	45.60	4.56	50.16	74.00	-23.84	V	Peak
7633.000	42.21	8.93	51.14	74.00	-22.86	V	Peak
8218.000	41.62	9.53	51.15	74.00	-22.85	V	Peak
8677.000	41.85	9.28	51.13	74.00	-22.87	V	Peak
9694.000	42.53	11.10	53.63	74.00	-20.37	V	Peak
9694.000	30.90	11.10	42.00	54.00	-12.00	V	AVG
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3961.000	42.99	1.43	44.42	74.00	-29.58	H	Peak
4870.000	46.88	4.56	51.44	74.00	-22.56	H	Peak
6094.000	42.09	6.23	48.32	74.00	-25.68	H	Peak
7084.000	41.66	7.86	49.52	74.00	-24.48	H	Peak
7759.000	41.52	9.18	50.70	74.00	-23.30	H	Peak
8218.000	41.10	9.53	50.63	74.00	-23.37	H	Peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11b (CH High)**Tested by:** Jack Chen**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	53.41	-6.35	47.06	74.00	-26.94	V	Peak
4933.000	43.76	4.76	48.52	74.00	-25.48	V	Peak
6238.000	41.05	6.47	47.52	74.00	-26.48	V	Peak
6931.000	42.71	7.59	50.30	74.00	-23.70	V	Peak
7381.000	42.00	8.44	50.44	74.00	-23.56	V	Peak
8443.000	41.37	9.41	50.78	74.00	-23.22	V	Peak
4924.000	51.15	4.73	55.88	74.00	-18.12	H	Peak
4924.000	39.59	4.73	44.32	54.00	-9.68	H	AVG
6166.000	41.68	6.35	48.03	74.00	-25.97	H	Peak
6499.000	41.39	6.89	48.28	74.00	-25.72	H	Peak
7390.000	41.80	8.46	50.26	74.00	-23.74	H	Peak
8785.000	42.05	9.22	51.27	74.00	-22.73	H	Peak
9847.000	45.01	11.54	56.55	74.00	-17.45	H	Peak
9847.000	40.01	11.54	51.55	54.00	-2.45	H	AVG

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Model: PW5003****Test Mode: TX / IEEE 802.11b(CH Low)****Tested by: Jack Chen****Ambient temperature: 24 °C****Relative humidity: 52% RH****Date: May 2, 2016**

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4825.000	49.94	4.41	54.35	74.00	-19.65	V	peak
4825.000	47.15	4.41	51.56	54.00	-2.44	V	AVG
6166.000	41.88	6.35	48.23	74.00	-25.77	V	peak
6940.000	41.38	7.60	48.98	74.00	-25.02	V	peak
7732.000	41.48	9.13	50.61	74.00	-23.39	V	peak
8281.000	41.26	9.50	50.76	74.00	-23.24	V	peak
9649.000	43.81	10.97	54.78	74.00	-19.22	V	peak
9649.000	40.36	10.97	51.33	54.00	-2.67	V	AVG
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4825.000	46.47	4.41	50.88	74.00	-23.12	H	Peak
6229.000	41.29	6.45	47.74	74.00	-26.26	H	Peak
6751.000	42.23	7.30	49.53	74.00	-24.47	H	Peak
7759.000	41.99	9.18	51.17	74.00	-22.83	H	peak
8344.000	41.40	9.46	50.86	74.00	-23.14	H	peak
9649.000	43.47	10.97	54.44	74.00	-19.56	H	peak
9649.000	39.36	10.97	50.33	54.00	-3.67	H	AVG

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11b (CH Mid)**Tested by:** Jack Chen**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4159.000	42.81	2.15	44.96	74.00	-29.04	V	Peak
4870.000	49.72	4.56	54.28	74.00	-19.72	V	Peak
4870.000	46.76	4.56	51.32	54.00	-2.68	V	AVG
6391.000	40.77	6.71	47.48	74.00	-26.52	V	Peak
6778.000	41.89	7.34	49.23	74.00	-24.77	V	Peak
7714.000	41.01	9.09	50.10	74.00	-23.90	V	Peak
9748.000	43.45	11.25	54.70	74.00	-19.30	V	peak
9748.000	39.98	11.25	51.23	54.00	-2.77	V	AVG
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4870.000	46.73	4.56	51.29	74.00	-22.71	H	Peak
5779.000	40.88	5.99	46.87	74.00	-27.13	H	Peak
7444.000	41.19	8.57	49.76	74.00	-24.24	H	Peak
7750.000	40.92	9.16	50.08	74.00	-23.92	H	Peak
8659.000	40.96	9.29	50.25	74.00	-23.75	H	Peak
9748.000	45.96	11.25	57.21	74.00	-16.79	H	Peak
9748.000	38.98	11.25	50.23	54.00	-3.77	H	AVG

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11b (CH High)**Tested by:** Jack Chen**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4924.000	50.90	4.73	55.63	74.00	-18.37	V	Peak
4924.000	46.89	4.73	51.62	54.00	-2.38	V	AVG
6301.000	40.92	6.57	47.49	74.00	-26.51	V	Peak
6949.000	41.58	7.62	49.20	74.00	-24.80	V	Peak
7732.000	41.25	9.13	50.38	74.00	-23.62	V	Peak
8839.000	41.78	9.19	50.97	74.00	-23.03	V	peak
9847.000	46.67	11.54	58.21	74.00	-15.79	V	peak
9847.000	40.24	11.54	51.78	54.00	-2.22	V	AVG
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4924.000	46.90	4.73	51.63	74.00	-22.37	H	Peak
4924.000	46.90	4.73	51.63	74.00	-22.37	H	Peak
6292.000	41.86	6.55	48.41	74.00	-25.59	H	Peak
7381.000	41.16	8.44	49.60	74.00	-24.40	H	Peak
7687.000	41.48	9.04	50.52	74.00	-23.48	H	Peak
8524.000	41.05	9.36	50.41	74.00	-23.59	H	Peak
9847.000	44.92	11.54	56.46	74.00	-17.54	H	peak
9847.000	40.08	11.54	51.62	54.00	-2.38	H	AVG

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Antenna 1****Model: PW5002****Test Mode: TX / IEEE 802.11g(CH Low)****Tested by: Jack Chen****Ambient temperature: 24 °C****Relative humidity: 52% RH****Date: May 2, 2016**

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4825.000	51.21	4.41	55.62	74.00	-18.38	V	Peak
4825.000	38.88	4.41	43.29	54.00	-10.71	V	AVG
5266.000	42.58	5.45	48.03	74.00	-25.97	V	Peak
6589.000	40.76	7.03	47.79	74.00	-26.21	V	Peak
7237.000	49.28	8.16	57.44	74.00	-16.56	V	Peak
7237.000	34.02	8.16	42.18	54.00	-11.82	V	AVG
8740.000	42.49	9.24	51.73	74.00	-22.27	V	Peak
9649.000	43.40	10.97	54.37	74.00	-19.63	V	Peak
9649.000	29.41	10.97	40.38	54.00	-13.62	V	AVG
4825.000	55.47	4.41	59.88	74.00	-14.12	H	Peak
4825.000	42.77	4.41	47.18	54.00	-6.82	H	AVG
6238.000	41.23	6.47	47.70	74.00	-26.30	H	Peak
8344.000	40.84	9.46	50.30	74.00	-23.70	H	Peak
9163.000	41.50	9.57	51.07	74.00	-22.93	H	Peak
9649.000	42.56	10.97	53.53	74.00	-20.47	H	Peak
9649.000	29.16	10.97	40.13	54.00	-13.87	H	AVG
9856.000	42.20	11.57	53.77	74.00	-20.23	H	Peak
9856.000	28.65	11.57	40.22	54.00	-13.78	H	AVG

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11g (CH Mid)**Tested by:** Jack Chen**Ambient temperature:** 24 °C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4042.000	42.11	1.74	43.85	74.00	-30.15	V	Peak
4951.000	41.74	4.82	46.56	74.00	-27.44	V	Peak
6094.000	41.73	6.23	47.96	74.00	-26.04	V	Peak
7210.000	40.97	8.11	49.08	74.00	-24.92	V	Peak
7705.000	41.79	9.07	50.86	74.00	-23.14	V	Peak
8407.000	41.57	9.43	51.00	74.00	-23.00	V	Peak
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4222.000	41.90	2.37	44.27	74.00	-29.73	H	Peak
4870.000	47.43	4.56	51.99	74.00	-22.01	H	Peak
6193.000	41.13	6.39	47.52	74.00	-26.48	H	Peak
7309.000	43.94	8.30	52.24	74.00	-21.76	H	Peak
7309.000	32.03	8.30	40.33	54.00	-13.67	H	AVG
7723.000	42.17	9.11	51.28	74.00	-22.72	H	Peak
7930.000	41.27	9.51	50.78	74.00	-23.22	H	Peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11g (CH High)**Tested by:** Jack Chen**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4915.000	52.67	4.70	57.37	74.00	-16.63	V	Peak
4915.000	39.68	4.70	44.38	54.00	-9.62	V	AVG
6283.000	41.41	6.54	47.95	74.00	-26.05	V	Peak
7381.000	42.97	8.44	51.41	74.00	-22.59	V	Peak
8326.000	41.42	9.47	50.89	74.00	-23.11	V	Peak
9613.000	41.46	10.87	52.33	74.00	-21.67	V	Peak
9847.000	42.70	11.54	54.24	74.00	-19.76	V	Peak
9847.000	31.07	11.54	42.61	54.00	-11.39	V	AVG
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4924.000	54.15	4.73	58.88	74.00	-15.12	H	Peak
4924.000	41.67	4.73	46.40	54.00	-7.60	H	AVG
6805.000	40.90	7.38	48.28	74.00	-25.72	H	Peak
7390.000	41.94	8.46	50.40	74.00	-23.60	H	Peak
7642.000	41.51	8.95	50.46	74.00	-23.54	H	Peak
8839.000	41.40	9.19	50.59	74.00	-23.41	H	Peak
9847.000	43.01	11.54	54.55	74.00	-19.45	H	Peak
9847.000	30.04	11.54	41.58	54.00	-12.42	H	AVG

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Model: PW5003****Test Mode: TX / IEEE 802.11g(CH Low)****Tested by: Jack Chen****Ambient temperature: 24 °C Relative humidity: 52% RH Date: May 2, 2016**

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4825.000	44.30	4.41	48.71	74.00	-25.29	V	Peak
5896.000	40.80	6.04	46.84	74.00	-27.16	V	Peak
6787.000	40.89	7.35	48.24	74.00	-25.76	V	Peak
6940.000	41.83	7.60	49.43	74.00	-24.57	V	Peak
7750.000	40.88	9.16	50.04	74.00	-23.96	V	Peak
8353.000	41.45	9.46	50.91	74.00	-23.09	V	Peak
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3889.000	43.19	1.12	44.31	74.00	-29.69	H	Peak
4267.000	42.91	2.53	45.44	74.00	-28.56	H	Peak
4825.000	43.86	4.41	48.27	74.00	-25.73	H	Peak
6328.000	41.88	6.61	48.49	74.00	-25.51	H	Peak
7237.000	45.55	8.16	53.71	74.00	-20.29	H	Peak
7237.000	39.20	8.16	47.36	54.00	-6.64	H	AVG
8425.000	40.91	9.42	50.33	74.00	-23.67	H	Peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11g (CH Mid)**Tested by:** Jack Chen**Ambient temperature:** 24 °C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4879.000	43.73	4.59	48.32	74.00	-25.68	V	Peak
6850.000	42.17	7.46	49.63	74.00	-24.37	V	Peak
7309.000	43.99	8.30	52.29	74.00	-21.71	V	Peak
7309.000	37.82	8.30	46.12	54.00	-7.88	V	AVG
7678.000	42.61	9.02	51.63	74.00	-22.37	V	Peak
8290.000	41.25	9.49	50.74	74.00	-23.26	V	Peak
9307.000	41.35	9.98	51.33	74.00	-22.67	V	Peak
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4825.000	42.35	4.41	46.76	74.00	-27.24	H	Peak
6067.000	40.94	6.19	47.13	74.00	-26.87	H	Peak
6778.000	42.05	7.34	49.39	74.00	-24.61	H	Peak
7237.000	41.48	8.16	49.64	74.00	-24.36	H	Peak
7750.000	41.43	9.16	50.59	74.00	-23.41	H	Peak
8767.000	41.51	9.23	50.74	74.00	-23.26	H	Peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11g (CH High)**Tested by:** Jack Chen**Ambient temperature:** 24 °C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4546.000	42.23	3.50	45.73	74.00	-28.27	V	Peak
4933.000	46.24	4.76	51.00	74.00	-23.00	V	Peak
6157.000	42.78	6.33	49.11	74.00	-24.89	V	Peak
6967.000	42.17	7.65	49.82	74.00	-24.18	V	Peak
7390.000	44.41	8.46	52.87	74.00	-21.13	V	Peak
7390.000	37.75	8.46	46.21	54.00	-7.79	V	AVG
8191.000	40.91	9.54	50.45	74.00	-23.55	V	Peak
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4213.000	42.48	2.34	44.82	74.00	-29.18	H	Peak
4924.000	42.29	4.73	47.02	74.00	-26.98	H	Peak
5626.000	41.88	5.92	47.80	74.00	-26.20	H	Peak
6157.000	41.35	6.33	47.68	74.00	-26.32	H	Peak
6922.000	41.88	7.57	49.45	74.00	-24.55	H	Peak
7390.000	42.61	8.46	51.07	74.00	-22.93	H	Peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Antenna 2****Model: PW5002****Test Mode: TX / IEEE 802.11g(CH Low)****Tested by: Jack Chen****Ambient temperature: 24 °C****Relative humidity: 52% RH****Date: May 2, 2016**

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4051.000	43.57	1.77	45.34	74.00	-28.66	V	Peak
4825.000	47.29	4.41	51.70	74.00	-22.30	V	Peak
5338.000	41.16	5.58	46.74	74.00	-27.26	V	Peak
6184.000	41.20	6.38	47.58	74.00	-26.42	V	Peak
7237.000	42.72	8.16	50.88	74.00	-23.12	V	Peak
8380.000	41.96	9.44	51.40	74.00	-22.60	V	Peak
4096.000	42.60	1.93	44.53	74.00	-29.47	H	Peak
4825.000	48.58	4.41	52.99	74.00	-21.01	H	Peak
4825.000	38.71	4.41	43.12	54.00	-10.88	H	AVG
6031.000	41.57	6.13	47.70	74.00	-26.30	H	Peak
7228.000	43.49	8.14	51.63	74.00	-22.37	H	Peak
8344.000	41.31	9.46	50.77	74.00	-23.23	H	Peak
9613.000	42.62	10.87	53.49	74.00	-20.51	H	Peak
9613.000	30.37	10.87	41.24	54.00	-12.76	H	AVG

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11g (CH Mid)**Tested by:** Jack Chen**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4870.000	47.85	4.56	52.41	74.00	-21.59	V	Peak
4870.000	41.22	4.56	45.78	54.00	-8.22	V	AVG
6256.000	41.06	6.49	47.55	74.00	-26.45	V	Peak
6742.000	41.92	7.28	49.20	74.00	-24.80	V	Peak
7750.000	40.95	9.16	50.11	74.00	-23.89	V	Peak
8119.000	41.73	9.58	51.31	74.00	-22.69	V	Peak
9667.000	42.58	11.02	53.60	74.00	-20.40	V	Peak
9667.000	28.10	11.02	39.12	54.00	-14.88	V	AVG
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4879.000	50.01	4.59	54.60	74.00	-19.40	H	Peak
4879.000	41.69	4.59	46.28	54.00	-7.72	H	AVG
6094.000	42.24	6.23	48.47	74.00	-25.53	H	Peak
6562.000	41.49	6.99	48.48	74.00	-25.52	H	Peak
7318.000	42.16	8.32	50.48	74.00	-23.52	H	Peak
8236.000	41.05	9.52	50.57	74.00	-23.43	H	Peak
8956.000	41.49	9.12	50.61	74.00	-23.39	H	AVG

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11g (CH High)**Tested by:** Jack Chen**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	52.74	-6.35	46.39	74.00	-27.61	V	Peak
4924.000	48.92	4.73	53.65	74.00	-20.35	V	Peak
4924.000	42.05	4.73	46.78	54.00	-7.22	V	AVG
6733.000	41.45	7.27	48.72	74.00	-25.28	V	Peak
7390.000	43.44	8.46	51.90	74.00	-22.10	V	Peak
8434.000	41.58	9.41	50.99	74.00	-23.01	V	Peak
9811.000	42.22	11.44	53.66	74.00	-20.34	V	Peak
9811.000	29.83	11.44	41.27	54.00	-12.73	V	AVG
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1765.000	54.31	-6.35	47.96	74.00	-26.04	H	Peak
4924.000	49.33	4.73	54.06	74.00	-19.94	H	Peak
4924.000	40.50	4.73	45.23	54.00	-8.77	H	AVG
7381.000	44.32	8.44	52.76	74.00	-21.24	H	Peak
7948.000	40.96	9.55	50.51	74.00	-23.49	H	Peak
9388.000	43.06	10.22	53.28	74.00	-20.72	H	Peak
9388.000	25.45	10.22	35.67	54.00	-18.33	H	AVG
9838.000	41.99	11.51	53.50	74.00	-20.50	H	Peak
9838.000	24.77	11.51	36.28	54.00	-17.72	H	AVG

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Model: PW5003****Test Mode: TX / IEEE 802.11g(CH Low)****Tested by: Jack Chen****Ambient temperature: 24 °C****Relative humidity: 52% RH****Date: May 2, 2016**

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1954.000	53.63	-5.29	48.34	74.00	-25.66	V	Peak
4834.000	52.19	4.44	56.63	74.00	-17.37	V	Peak
4834.000	41.78	4.44	46.22	54.00	-7.78	V	AVG
6148.000	41.94	6.32	48.26	74.00	-25.74	V	Peak
7237.000	42.76	8.16	50.92	74.00	-23.08	V	Peak
8146.000	42.39	9.57	51.96	74.00	-22.04	V	Peak
9676.000	43.04	11.05	54.09	74.00	-19.91	V	Peak
9676.000	32.22	11.05	43.27	54.00	-10.73	V	AVG
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2017.000	48.70	-4.91	43.79	74.00	-30.21	H	Peak
4825.000	49.71	4.41	54.12	74.00	-19.88	H	Peak
4825.000	38.73	4.41	43.14	54.00	-10.86	H	AVG
6949.000	42.53	7.62	50.15	74.00	-23.85	H	Peak
7237.000	42.74	8.16	50.90	74.00	-23.10	H	Peak
7750.000	42.43	9.16	51.59	74.00	-22.41	H	Peak
7957.000	42.16	9.57	51.73	74.00	-22.27	H	Peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11g (CH Mid)**Tested by:** Jack Chen**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 2, 2016

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
4870.000	54.64	4.56	59.20	74.00	-14.80	V	Peak
4870.000	43.97	4.56	48.53	54.00	-5.47	V	AVG
6166.000	42.98	6.35	49.33	74.00	-24.67	V	Peak
7750.000	41.45	9.16	50.61	74.00	-23.39	V	Peak
8704.000	42.52	9.26	51.78	74.00	-22.22	V	Peak
9244.000	41.14	9.80	50.94	74.00	-23.06	V	Peak
9748.000	42.94	11.25	54.19	74.00	-19.81	V	Peak
9748.000	32.64	11.25	43.89	54.00	-10.11	V	AVG
4870.000	54.64	4.56	59.20	74.00	-14.80	V	Peak
3898.000	43.21	1.16	44.37	74.00	-29.63	H	Peak
4879.000	50.60	4.59	55.19	74.00	-18.81	H	Peak
4879.000	38.99	4.59	43.58	54.00	-10.42	H	AVG
5626.000	42.57	5.92	48.49	74.00	-25.51	H	Peak
7309.000	43.83	8.30	52.13	74.00	-21.87	H	Peak
8470.000	42.16	9.39	51.55	74.00	-22.45	H	Peak
9739.000	43.35	11.23	54.58	74.00	-19.42	H	Peak
9739.000	31.98	11.23	43.21	54.00	-10.79	H	AVG
3898.000	43.21	1.16	44.37	74.00	-29.63	H	Peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).