

# FCC Radio Test Report FCC ID: PXPAP2010

This report concerns (check one) : Original Grant Class I Change

**Issued Date** : Oct. 01, 2009 **Project No.** : R0906015

**Equipment**: Professional Outdoor 2.4Ghz 802.11b/g,

AP/Bridge/Repeater.

Model Name: AP-2010

Applicant : RFNet Technologies Pte Ltd

Address: 801 Lorong 7 Toa Payoh # 05-02

Wearnes Technology Building Singapore

319 319

Tested by:

Neutron Engineering Inc. EMC Laboratory

Date of Test:

Sep. 11, 2009 ~ Sep. 24, 2009

Testing Engineer

Technical Manager

Authorized Signatory

🚺 (Andy Chiu

(Jeff Yang)

**Neutron Engineering Inc.** 

B1, No. 37, Lane 365, YangGuang St., NeiHu District 114, Taipei, Taiwan.

TEL: +886-2-2657-3299 FAX: +886-2-2657-3331









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**Neutron** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.** 

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#### Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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# 1. CERTIFICATION

Equipment: Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.

Brand Name: RFNet Model Name: AP-2010

Applicant: RFNet Technologies Pte Ltd Date of Test: Sep. 11, 2009 ~ Sep. 24, 2009

Standards: FCC Part15, Subpart C / ANCI C63.4: 2003

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-R0906015) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and TAF according to the ISO-17025 quality assessment standard and technical standard(s).

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# 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

	FCC Part15, Subpart C					
Standard Section	Test Item	Judgment	Remark			
15.207	Conducted Emission	PASS				
15.247 (c)	Antenna conducted Spurious Emission	PASS				
15.247 (a)(2)	6dB Bandwidth	PASS				
15.247 (b)	Peak Output Power	PASS				
15.247 (c)	Radiated Spurious Emission	PASS				
15.247 (d)	Power Spectral Density	PASS				
15.203	Antenna Requirement	PASS				
1.1307 1.1310 2.1091 2.1093	RF Exposure Compliance	PASS				

# NOTE:

- (1)" N/A" denotes test is not applicable in this Test Report
- (2)This test report covers EUT radio function only. Its receive function testing is covered in another DOC test report: NEI-FCCE-1-R0906015.

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#### 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **CB08(FCC R.N.: 614388)** at the location of 1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

#### 2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %  $\circ$ 

#### A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U,(dB)	NOTE
C01	ANSI	150 KHz ~ 30MHz	1.94	

#### B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)	NOTE
OS-01	ANSI	30MHz ~ 200MHz	V	2.86	
		30MHz ~ 200MHz	Н	2.56	
		200MHz ~ 1,000MHz	V	2.88	
		200MHz ~ 1,000MHz	Η	2.98	
OS-02	ANSI	30MHz ~ 200MHz	V	2.48	
		30MHz ~ 200MHz	Η	2.16	
		200MHz ~ 1,000MHz	V	2.50	
		200MHz ~ 1,000MHz	Н	2.66	

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# 3. GENERAL INFORMATION

# 3.1 GENERAL DESCRIPTION OF EUT

Equipment	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.			
Brand Name	RFNet			
Model Name	AP-2010			
OEM Brand/Model Name	N/A			
Model Difference	Please refer to the Not	e 2.		
	The EUT is a Profession AP/Bridge/Repeater. (I Operation Frequency:			
	Modulation Type:	802.11b:CCK, DQPSK, DBPSK 802.11g:OFDM		
	Bit Rate of Transmitter:	802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps		
	Number Of Channel:	Please see Note 2.		
Product Description	Antenna Designation:	Please see Note 3.		
Product Description	Antenna Gain(Peak):	Please see Note 3.		
	Output Power: (Max):	802.11b: 13.17 dBm (Max.) 802.11g: 16.20 dBm (Max.) Antenna (External): 802.11b: 17.78 dBm (Max.) 802.11g: 19.38 dBm (Max.)		
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.			
Channel List	Please refer to the Note 2.			
Power Source	DC Voltage supplied from PoE.			
Power Rating	I/P DC 48V			
Connecting I/O Port(s)	Please refer to the User's Manual			
Products Covered	N/A			

# Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

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2.

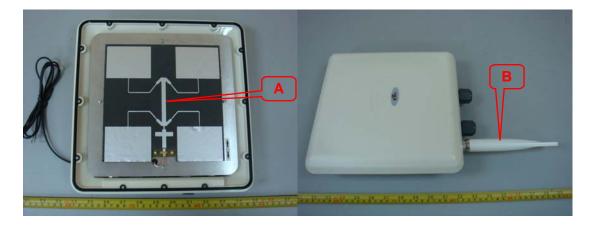
	Channel List						
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)		
01	2412	05	2432	09	2452		
02	2417	06	2437	10	2457		
03	2422	07	2442	11	2462		
04	2427	08	2447				

#### 3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
Α	N/A	N/A	Patch	Build In	14
В	RFNET	ANTD-OD4/7	Dipole	N.	4.5

# The Peak Output Power test requirement:

Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.



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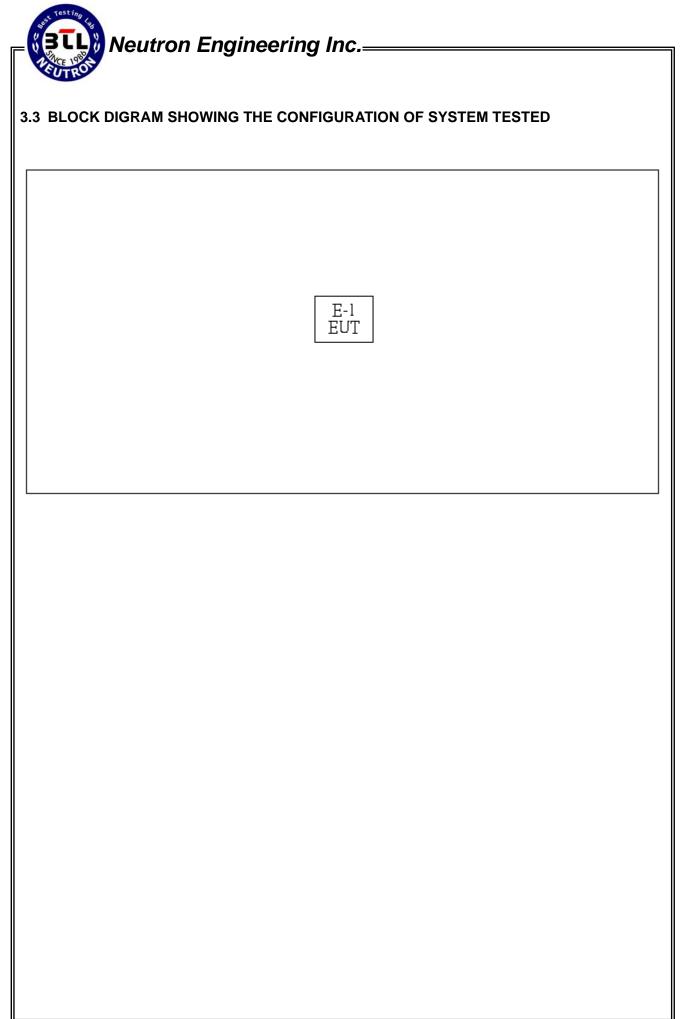
# 3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Test Mode	Description		
Mode 1	802.11b/CH01, CH06, CH11 (Antenna A)		
Mode 2	802.11b/CH01, CH06, CH11 (Antenna B)		
Mode 3	802.11g/CH01, CH06, CH11 (Antenna A)		
Mode 4	802.11g/CH01, CH06, CH11 (Antenna B)		

For Radiated Test					
Final Test Mode	Description				
Mode 1	802.11b/CH01, CH06, CH11 (Antenna A)				
Mode 2	802.11b/CH01, CH06, CH11 (Antenna B)				
Mode 3	802.11g/CH01, CH06, CH11 (Antenna A)				
Mode 4	802.11g/CH01, CH06, CH11 (Antenna B)				

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# 3.4 DESCRIPTION OF SUPPORT UNITS

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

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	RFNet	AP-2010	PXPAP2010	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
N/A	N/A	N/A	N/A	

#### Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in <code>"Length"</code> column.

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# 4. EMC EMISSION TEST

# 4.1 RADIATED EMISSION MEASUREMENT

# 4.1.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies	Field Strength	Measurement Distance
(MHz)	(micorvolts/meter)	(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

# LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBu	ıV/m) (at 3m)	Class B (dBuV/m) (at 3m)		
PREQUENCT (MHZ)	PEAK	AVERAGE	PEAK	AVERAGE	
Above 1000	80	60	74	54	

#### Notes:

- (1) The limit for radiated test was performed according to FCC PART 15B.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

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#### 4.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LogBicon Ant	Schwarzbeck	VULB9168-3 52	9168-352	Jun. 17, 2010
2	Test Cable	N/A	966_12M	1(12M)	Jun. 18, 2010
3	Test Cable	N/A	966_3M	1(10M)	Jun. 18, 2010
4	Pre-Amplifier	EMC	EMC-330	980001	Jun. 04, 2010
5	Spectrum Analyzer	R&S	FSP30	100854	Apr. 16, 2010
6	EMI Measuring Receiver	SHCAFFNER	SCR 3501	408	Nov. 24.2009
7	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010
8	Horn Ant	Schwarzbeck	BBHA-9120	D-546	Jun. 17, 2010
9	Pre-Amplifier	Agilent	8449B	3008A01714	Apr. 20, 2010
10	Microflex Cable	N/A	1M	N/A	May. 20, 2010
11	Microflex Cable	AISI	S104-SMAP- 1	S104-SMAP-1	Aug. 23, 2010
12	Microflex Cable	N/A	3M	3M	Aug. 23, 2010

Remark: "N/A" denotes No Model Name / Serial No. and No Calibration specified.

## **4.1.3 TEST PROCEDURE**

- a. The measuring distance of at 10 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m or 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

### 4.1.4 DEVIATION FROM TEST STANDARD

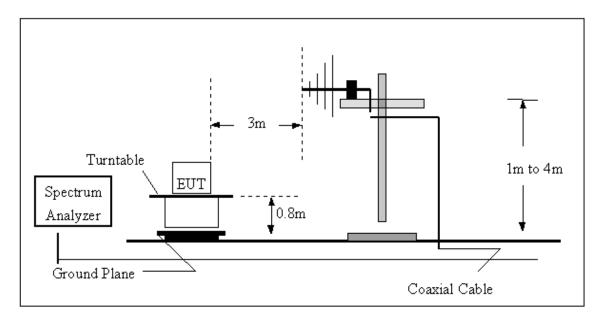
No deviation

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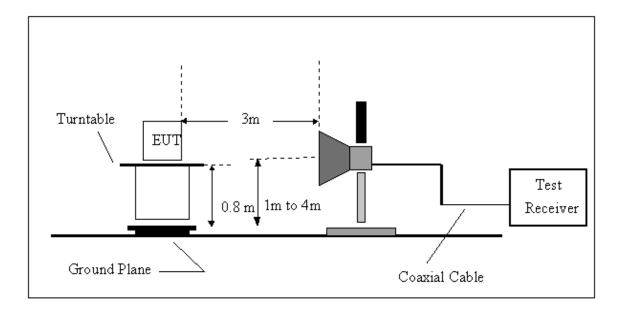


# 4.1.5 TEST SETUP

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



#### **4.1.6 EUT OPERATING CONDITIONS**

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

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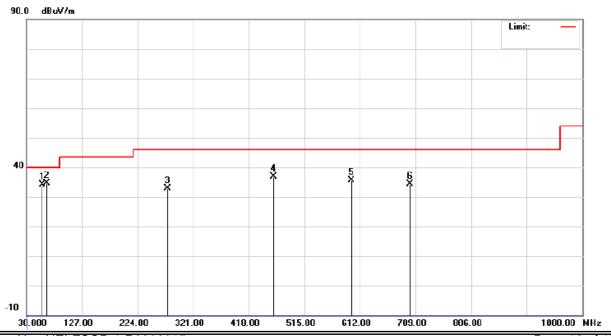
# 4.1.7 TEST RESULTS-BETWEEN 30MHZ - 1000MHZ

EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010		
Temperature:	25°C	Relative Humidity:	43%		
Test Voltage:	DC 48V				
Test Mode :	802.11b/CH06 (Antenna A)				

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	H/V	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	11010
57.16	V	50.22	-16.21	34.01	40.00	- 5.99	
64.92	V	51.87	-17.35	34.52	40.00	- 5.48	
276.38	V	48.89	-16.12	32.77	46.00	- 13.23	
460.68	V	48.51	-11.73	36.78	46.00	- 9.22	
596.48	V	44.70	-9.09	35.61	46.00	- 10.39	
699.30	V	42.11	-7.64	34.47	46.00	- 11.53	

#### Remark:

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ∘
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ° "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (4) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission •
- (5) 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.

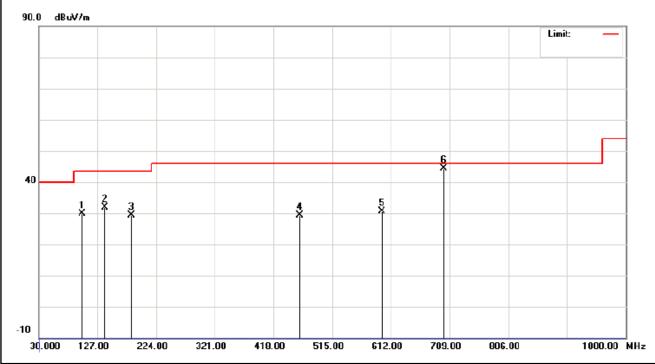


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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010		
Temperature:	25°C	Relative Humidity:	43%		
Test Voltage:	DC 48V				
Test Mode :	802.11b/CH06 (Antenna A)				

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	H/V	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	11010
101.78	Ι	48.54	-18.66	29.88	43.50	- 13.62	
138.64	Ι	47.32	-15.38	31.94	43.50	- 11.56	
183.26	Н	46.89	-17.42	29.47	43.50	- 14.03	
460.68	Н	41.22	-11.73	29.49	46.00	- 16.51	
596.48	Н	39.77	-9.10	30.67	46.00	- 15.33	
699.30	Η	52.14	-7.64	44.50	46.00	- 1.50	(QP)

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency  $\circ$  "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (4) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission •
- (5) 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.

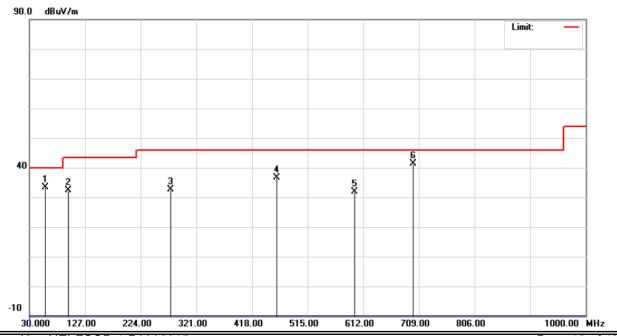


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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010		
Temperature:	25°C	Relative Humidity:	43%		
Test Voltage:	DC 48V				
Test Mode :	802.11b/CH06 (Antenna B)				

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	H/V	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	14010
57.16	V	49.49	-16.21	33.28	40.00	- 6.72	
97.90	V	51.35	-19.01	32.34	43.50	- 11.16	
276.38	V	48.70	-16.12	32.58	46.00	- 13.42	
460.68	V	48.36	-11.73	36.63	46.00	- 9.37	
596.48	V	40.96	-9.09	31.87	46.00	- 14.13	
699.30	V	49.08	-7.64	41.44	46.00	- 4.56	

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ∘
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency  $\circ$  "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (4) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission o
- (5) 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.

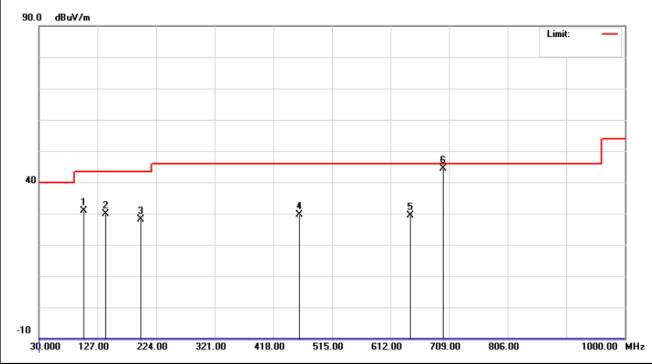


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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH06 (Antenna B)		

Freq.	Ant.	Reading(RA)	Corr.Factor(CF)	Measured(FS)	Limits(QP)	Margin	Note
(MHz)	H/V	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	11010
103.72	Η	49.23	-18.47	30.76	43.50	- 12.74	
140.58	Н	45.22	-15.22	30.00	43.50	- 13.50	
198.78	Н	46.88	-18.66	28.22	43.50	- 15.28	
460.68	Н	41.35	-11.73	29.62	46.00	- 16.38	
644.98	Н	37.83	-8.37	29.46	46.00	- 16.54	
699.30	Н	52.14	-7.64	44.50	46.00	- 1.50	(QP)

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  ${}_{\circ}$
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency  $\circ$  "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (4) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission •
- (5) 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.



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# 4.1.8 TEST RESULTS - ABOVE 1000MHZ

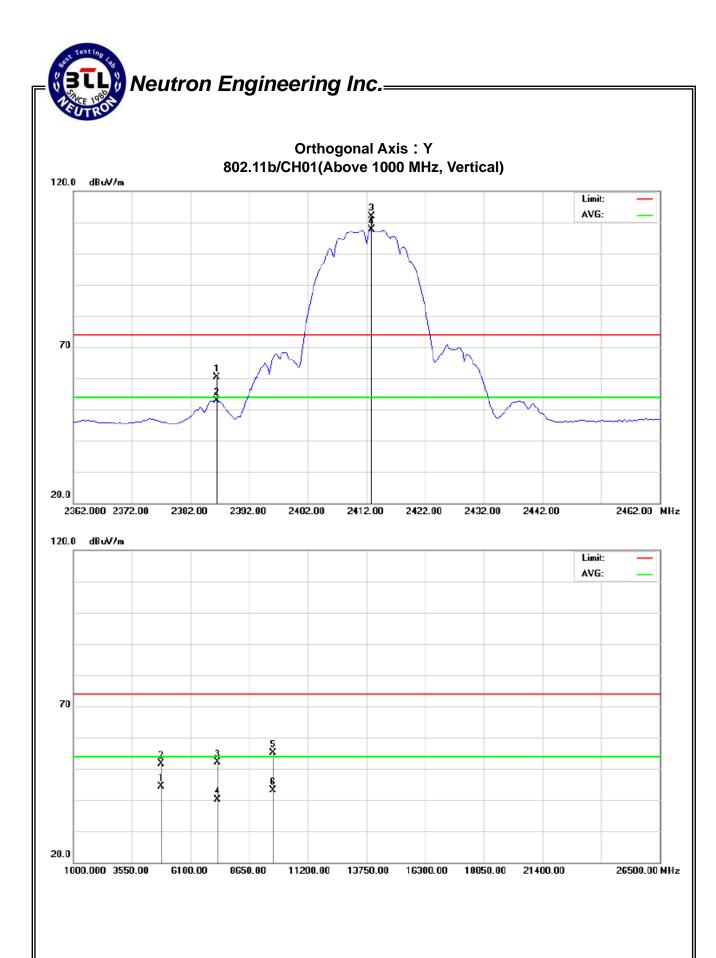
EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010		
Temperature:	25°C	Relative Humidity:	43%		
Test Voltage:	DC 48V				
Test Mode :	802.11b/CH01 (Antenna A)				

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2386.40	V	28.38	21.04	31.91	60.29	52.95	74.00	54.00	Y/H
2412.80	V	79.75	75.51	32.02	111.77	107.53			Y/F
4824.01	V	47.76	40.52	3.75	51.51	44.27	74.00	54.00	Y/H
7236.02	V	42.99	31.04	9.02	52.01	40.06	74.00	54.00	Y/H
9647.97	V	43.25	31.27	11.96	55.21	43.23	74.00	54.00	Y/H

#### Remark:

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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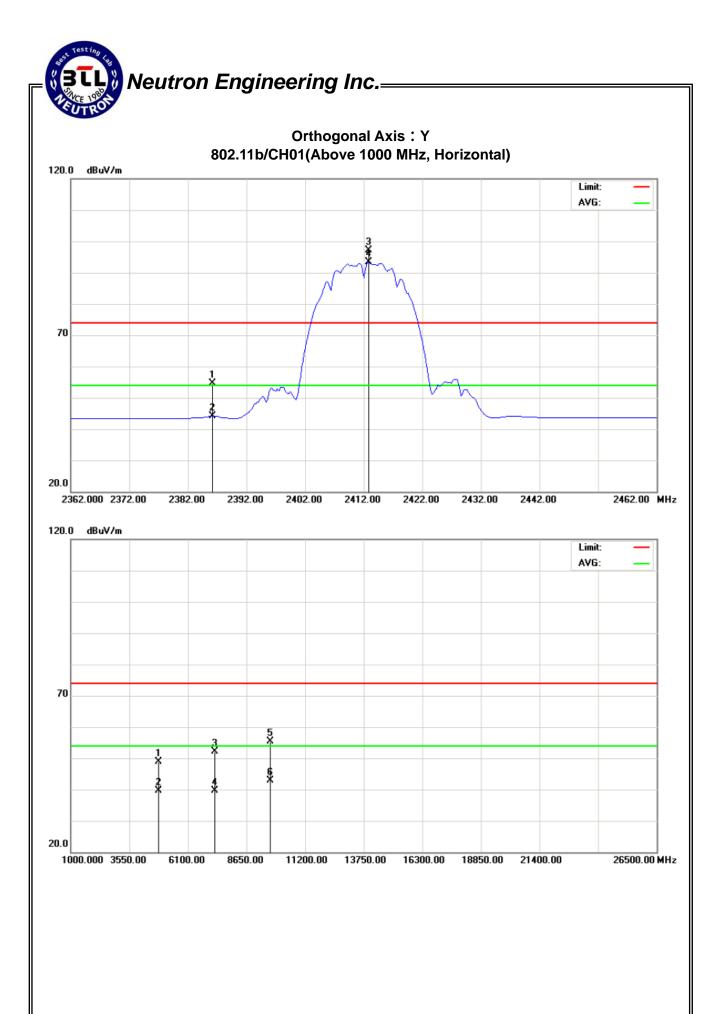


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25 °C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH01 (Antenna A)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2386.20	Н	22.79	12.20	31.91	54.70	44.11	74.00	54.00	Y/H
2412.80	Н	65.22	61.36	32.02	97.24	93.38			Y/F
4824.01	Н	45.18	35.99	3.75	48.93	39.74	74.00	54.00	Y/H
7236.04	Н	43.02	30.69	9.02	52.04	39.71	74.00	54.00	Y/H
9648.18	Н	43.35	31.02	11.96	55.31	42.98	74.00	54.00	Y/H

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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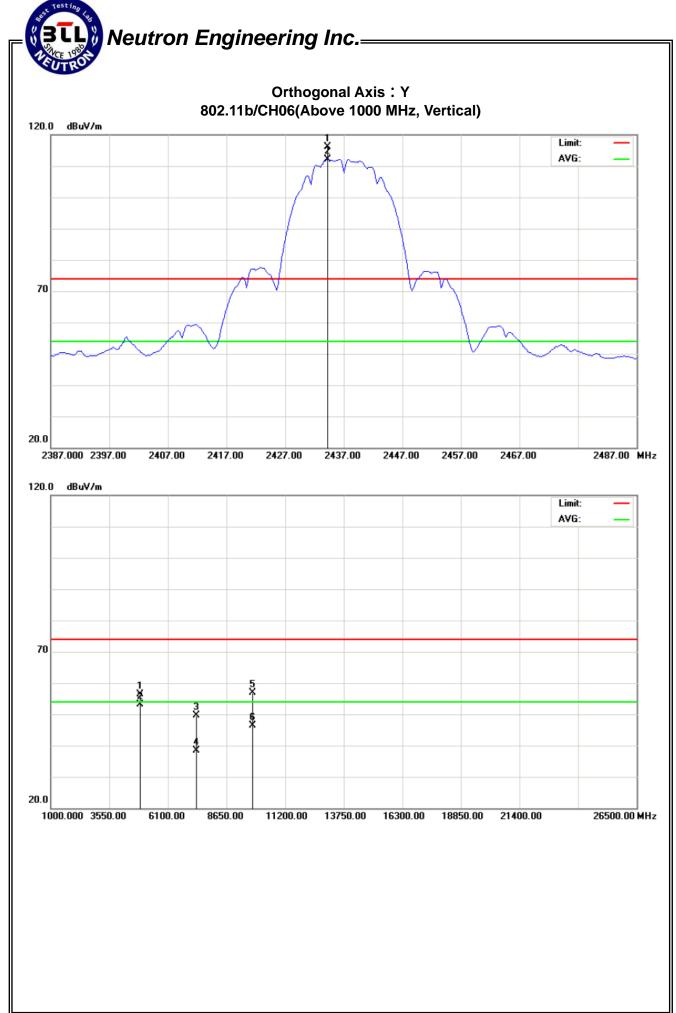


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH06 (Antenna A)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2434.20	V	83.92	80.12	32.10	116.02	112.22			Y/F
4874.01	V	52.47	49.25	3.90	56.37	53.15	74.00	54.00	Y/H
7308.50	V	40.40	29.19	9.14	49.54	38.33	74.00	54.00	Y/H
9747.89	V	44.71	34.38	12.11	56.82	46.49	74.00	54.00	Y/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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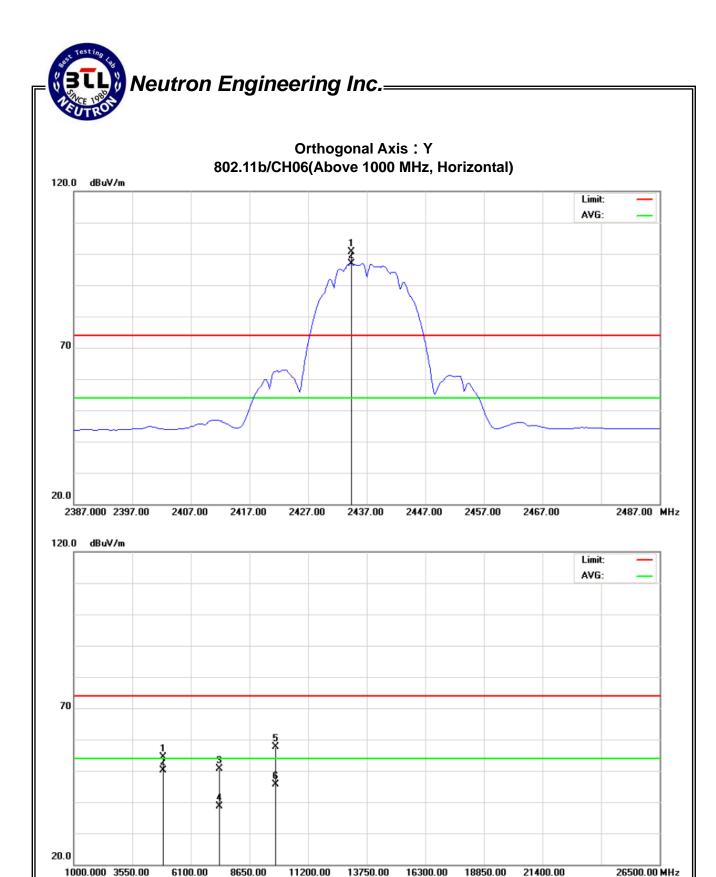
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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH06 (Antenna A)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2434.40	Н	68.62	64.89	32.10	100.72	96.99			Y/F
4874.03	Н	50.50	46.12	3.90	54.40	50.02	74.00	54.00	Y/F
7310.96	Н	41.41	29.45	9.14	50.55	38.59	74.00	54.00	Y/F
9748.03	Н	45.43	33.40	12.11	57.54	45.51	74.00	54.00	Y/F

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ∘
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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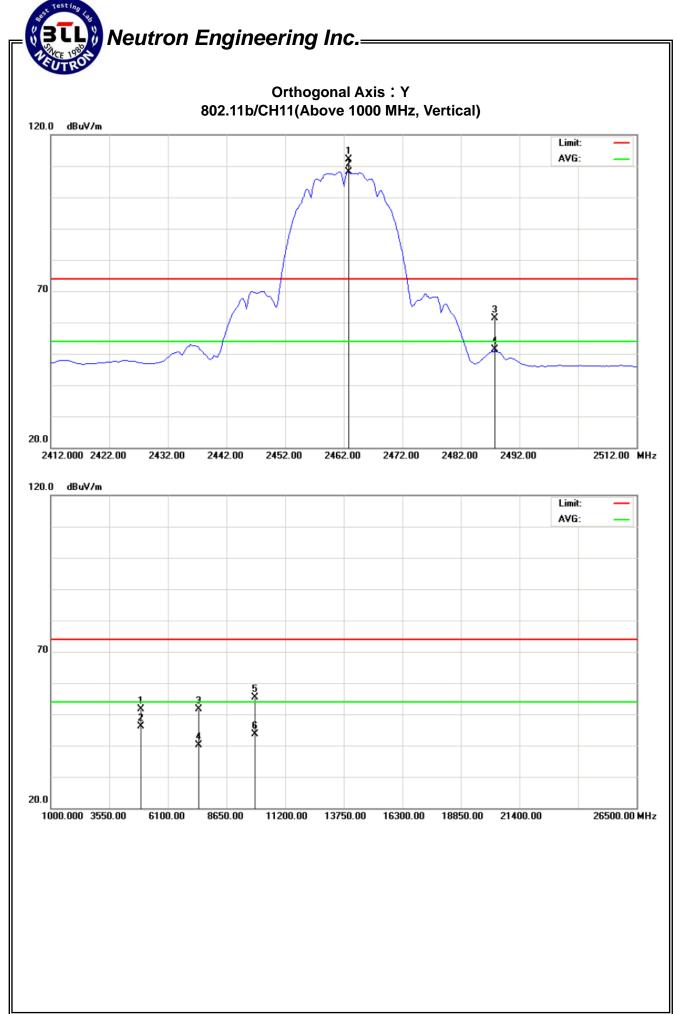
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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010				
Temperature:	25°C	Relative Humidity:	43%				
Test Voltage:	DC 48V						
Test Mode :	802.11b/CH11 (Antenna A)						

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2462.80	V	79.95	75.99	32.21	112.16	108.20			Y/F
2487.70	V	29.04	18.97	32.30	61.34	51.27	74.00	54.00	Y/H
4924.03	V	47.53	42.15	4.06	51.59	46.21	74.00	54.00	Y/H
7385.91	V	42.35	30.86	9.27	51.62	40.13	74.00	54.00	Y/H
9848.08	V	43.18	31.39	12.27	55.45	43.66	74.00	54.00	Y/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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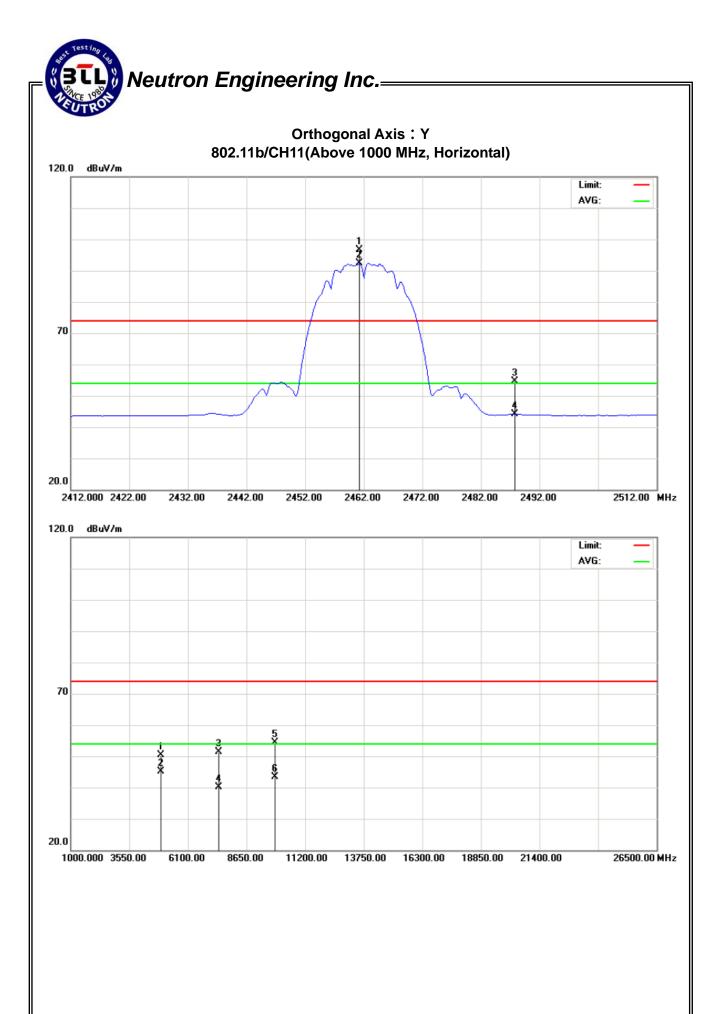
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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH11 (Antenna A)		

Freq.	Ant.Pol.	Reading		Ant./CF	A	Act.		Limit	
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2461.20	Н	64.42	60.15	32.20	96.62	92.35			Y/F
2487.70	Н	22.37	11.83	32.30	54.67	44.13	74.00	54.00	Y/H
4824.01	Н	46.21	41.17	4.06	50.27	45.23	74.00	54.00	Y/H
7385.93	Н	42.13	30.81	9.27	51.40	40.08	74.00	54.00	Y/H
9848.06	Н	42.21	31.10	12.27	54.48	43.37	74.00	54.00	Y/H

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\,^{\circ}$
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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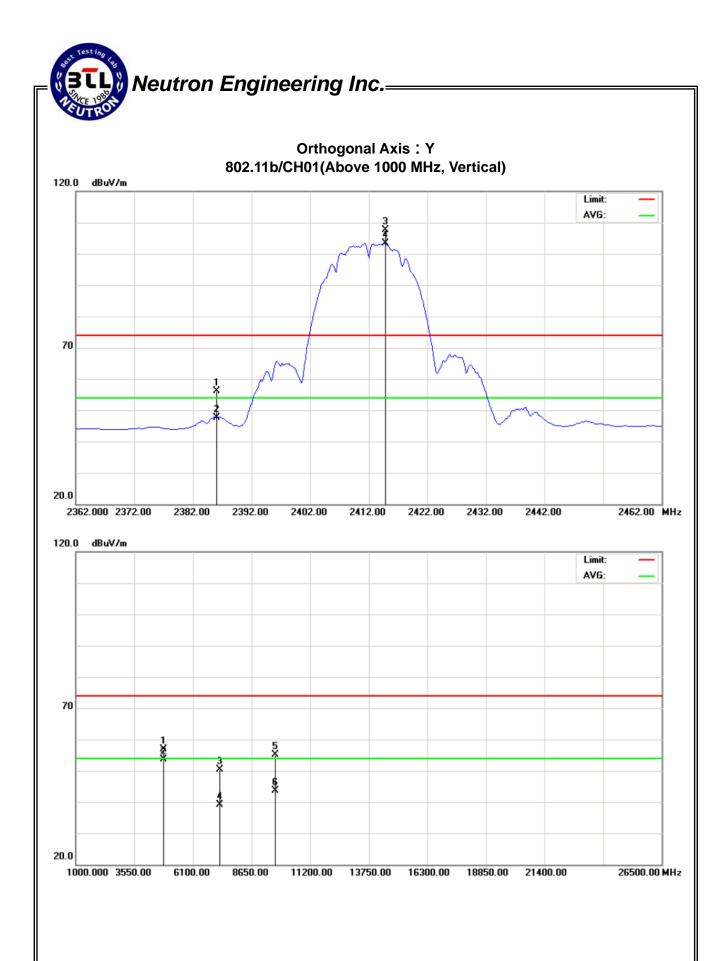


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH01 (Antenna B)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2386.00	V	24.23	15.69	31.91	56.14	47.60	74.00	54.00	Y/H
2414.80	V	75.51	71.43	32.02	107.53	103.45			Y/F
4823.95	V	53.25	49.93	4.04	57.29	53.97	74.00	54.00	Y/H
7235.70	V	41.37	30.20	9.02	50.39	39.22	74.00	54.00	Y/H
9647.70	V	43.19	31.70	11.96	55.15	43.66	74.00	54.00	Y/H

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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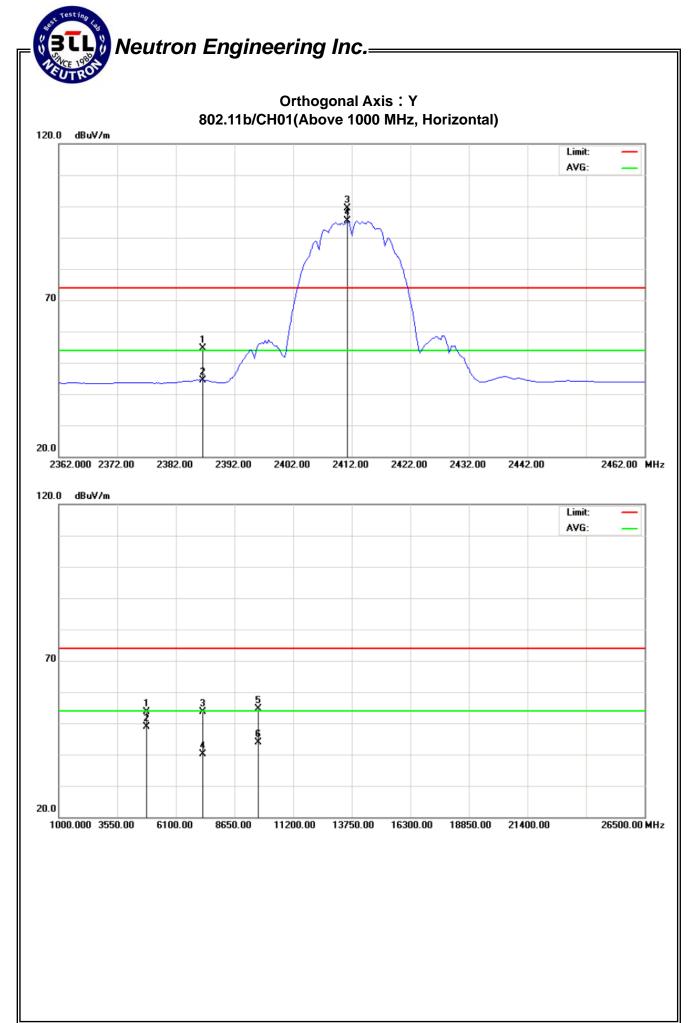


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH01 (Antenna B)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2386.60	Н	22.64	12.58	31.91	54.55	44.49	74.00	54.00	Y/H
2411.20	Н	67.35	63.30	32.01	99.36	95.31			Y/F
4823.91	Н	49.86	45.24	3.75	53.61	48.99	74.00	54.00	Y/H
7235.70	Н	44.51	31.20	9.02	53.53	40.22	74.00	54.00	Y/H
9647.93	Н	42.75	31.85	11.96	54.71	43.81	74.00	54.00	Y/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ∘
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- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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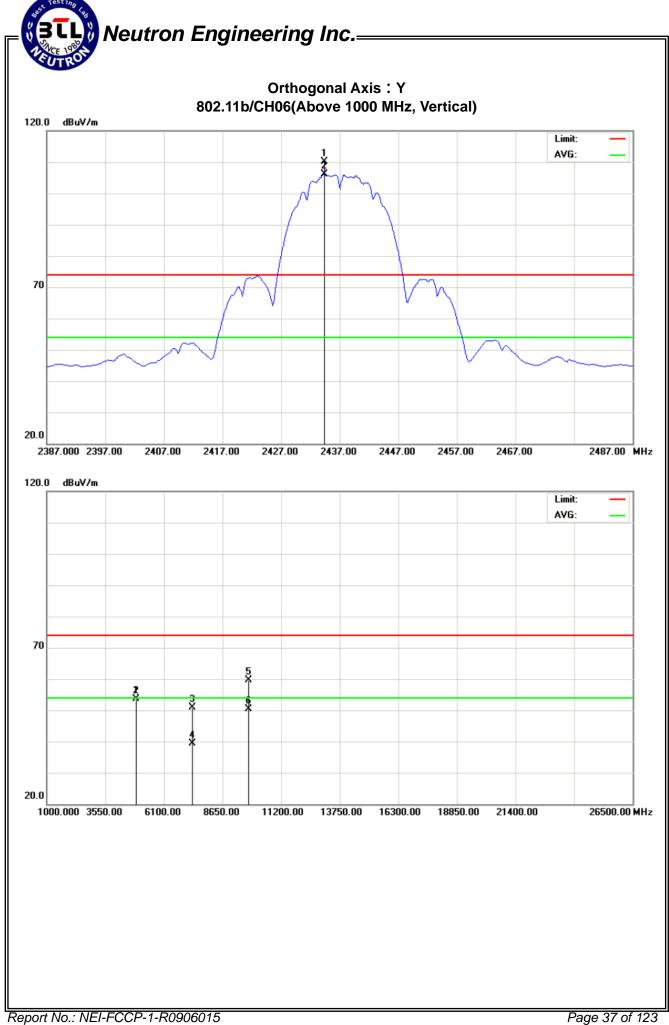


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH06 (Antenna B)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2434.40	V	78.03	73.96	32.10	110.13	106.06			Y/F
4874.01	V	49.61	49.63	3.90	53.51	53.53	74.00	54.00	Y/H
7311.08	V	41.75	30.28	9.14	50.89	39.42	74.00	54.00	Y/H
9747.97	V	47.54	38.23	12.11	59.65	50.34	74.00	54.00	Y/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
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- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
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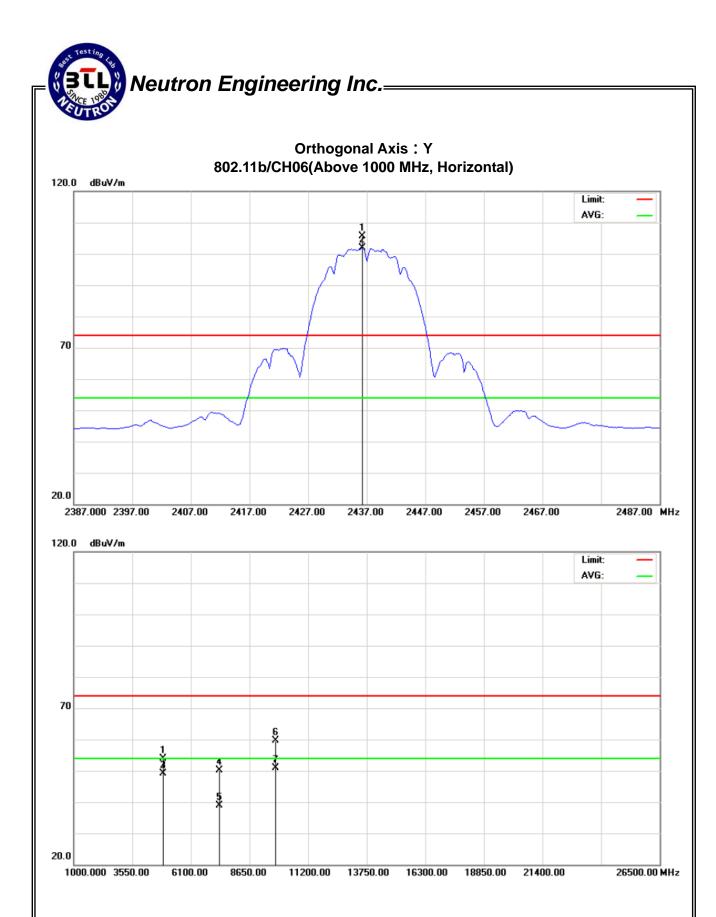
Report No.: NEI-FCCP-1-R0906015

EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25 °C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH06 (Antenna B)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2436.20	Н	73.56	69.78	32.11	105.67	101.89			Y/F
4874.01	Н	50.01	45.29	3.90	53.91	49.19	74.00	54.00	Y/H
7310.96	Н	40.94	29.77	9.14	50.08	38.91	74.00	54.00	Y/H
9748.03	Н	47.50	38.87	12.11	59.61	50.98	74.00	54.00	Y/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
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- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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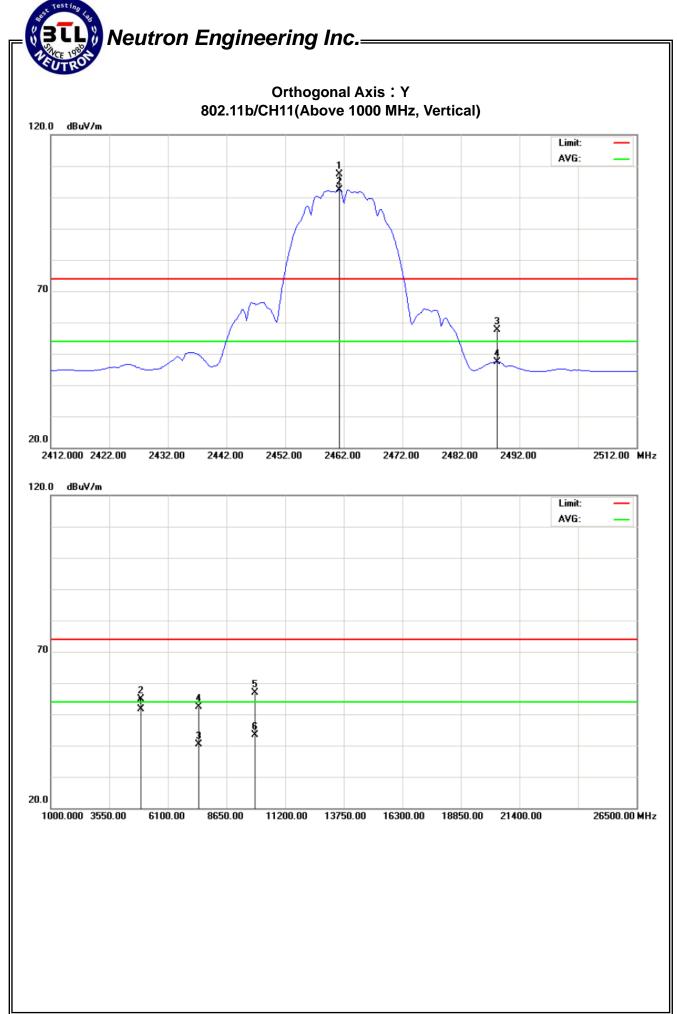


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH11 (Antenna B)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2461.20	V	75.11	70.15	32.20	107.31	102.35			Y/F
2488.10	V	25.33	15.07	32.30	57.63	47.37	74.00	54.00	Y/H
4924.01	V	50.79	47.69	4.06	54.85	51.75	74.00	54.00	Y/H
7385.90	V	43.02	31.12	9.27	52.29	40.39	74.00	54.00	Y/H
9848.11	V	44.65	31.22	12.27	56.92	43.49	74.00	54.00	Y/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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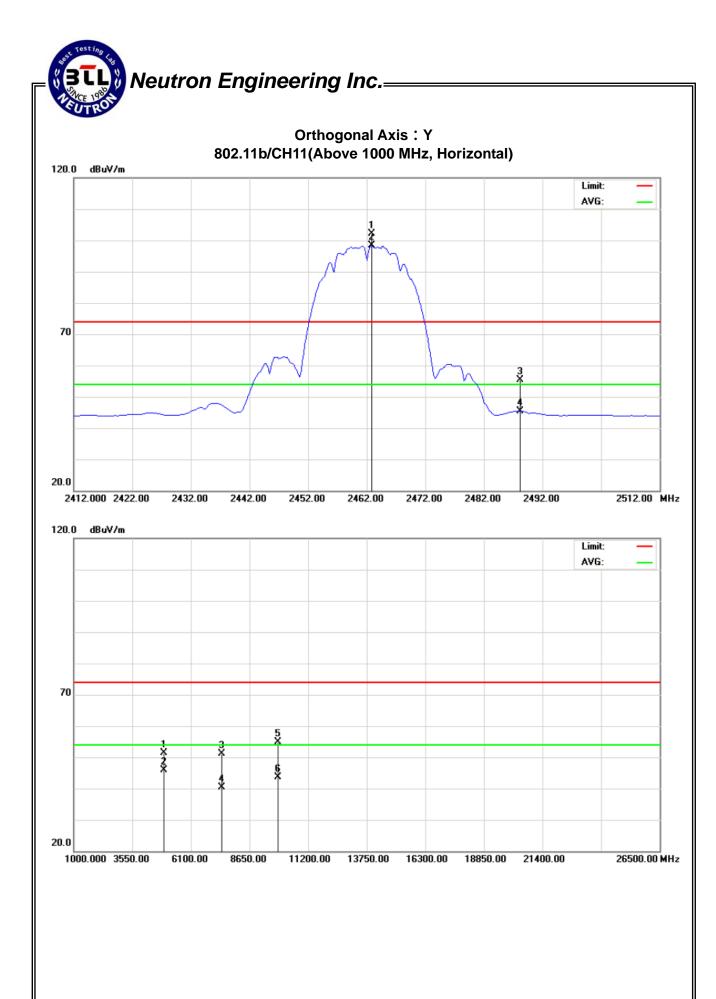
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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH11 (Antenna B)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2462.80	Н	69.86	66.05	32.21	102.07	98.26			Y/F
2488.10	Н	23.10	13.20	32.30	55.40	45.50	74.00	54.00	Y/H
4924.01	Н	47.24	41.80	4.06	51.30	45.86	74.00	54.00	Y/H
7386.07	Н	41.79	31.07	9.27	51.06	40.34	74.00	54.00	Y/H
9848.05	Н	42.71	31.26	12.27	54.98	43.53	74.00	54.00	Y/H

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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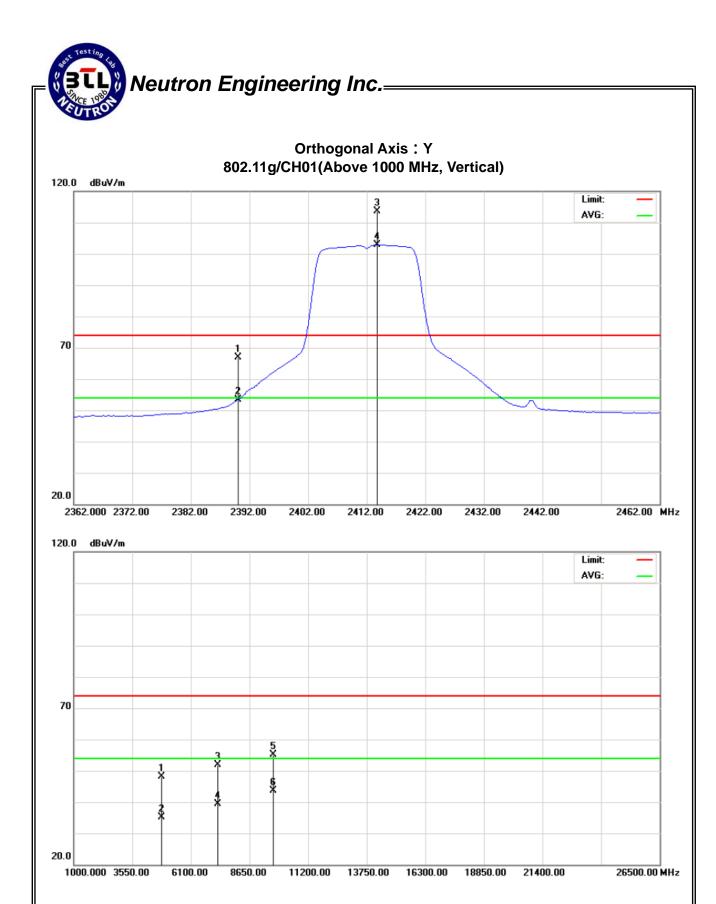


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH01 (Antenna A)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	35.06	21.50	31.93	66.99	53.43	74.00	54.00	Y/H
2413.80	V	81.67	70.82	32.02	113.69	102.84			Y/F
4824.60	V	44.28	31.35	3.75	48.03	35.10	74.00	54.00	Y/H
7236.60	V	42.74	30.28	9.02	51.76	39.30	74.00	54.00	Y/H
9647.70	V	43.08	31.55	11.96	55.04	43.51	74.00	54.00	Y/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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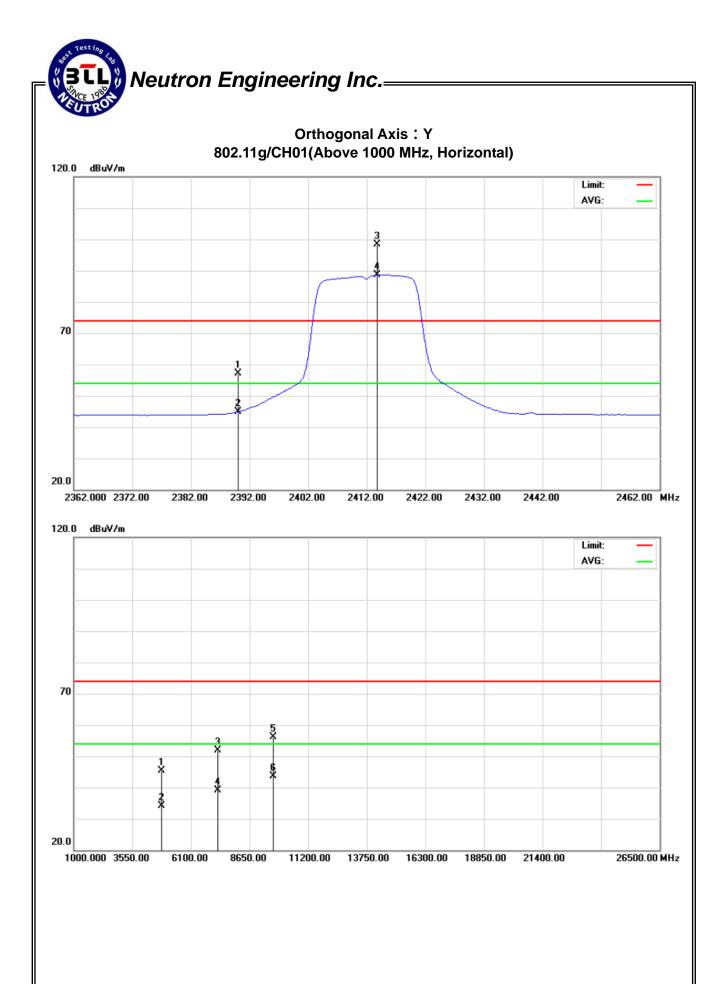


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH01 (Antenna A)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Liı		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	25.24	12.92	31.93	57.17	44.85	74.00	54.00	Y/H
2413.80	Н	66.24	56.66	32.02	98.26	88.68			Y/F
4823.60	Н	41.73	30.32	3.75	45.48	34.07	74.00	54.00	Y/H
7235.80	Н	42.78	30.06	9.02	51.80	39.08	74.00	54.00	Y/H
9647.60	Н	44.12	31.60	11.96	56.08	43.56	74.00	54.00	Y/H

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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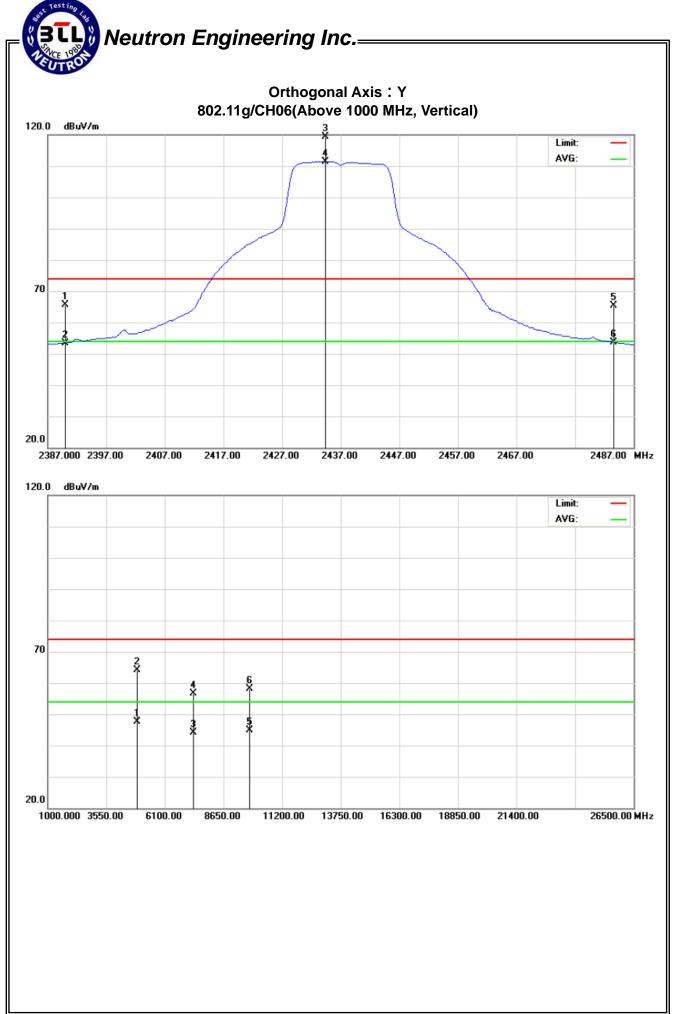


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH06 (Antenna A)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	33.77	21.57	31.93	65.70	53.50	74.00	54.00	Y/E
2434.40	V	87.40	79.33	32.10	119.50	111.43			Y/F
2483.50	V	33.18	21.46	32.29	65.47	53.75	74.00	54.00	Y/H
4873.70	V	60.25	43.79	3.90	64.15	47.69	74.00	54.00	Y/H
7311.10	V	47.53	34.97	9.14	56.67	44.11	74.00	54.00	Y/H
9748.80	V	46.05	32.73	12.11	58.16	44.84	74.00	54.00	Y/H

- (1) Spectrum Setting : 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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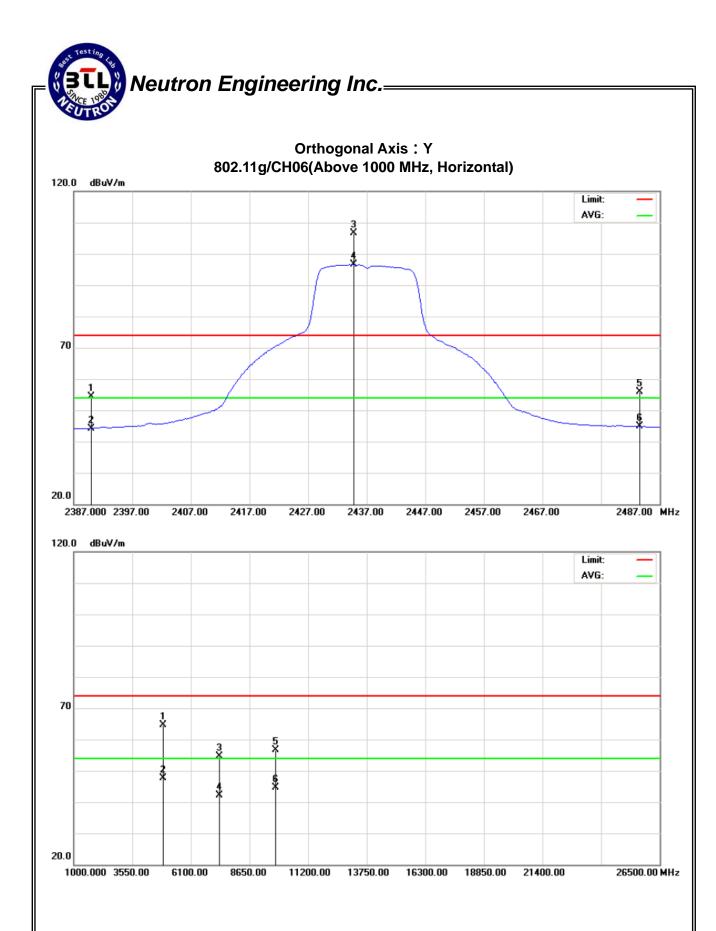


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH06 (Antenna A)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	22.41	12.32	31.93	54.34	44.25	74.00	54.00	Y/E
2434.80	Н	74.65	65.44	32.10	106.75	97.54			Y/F
2483.50	Н	23.71	12.50	32.29	56.00	44.79	74.00	54.00	Y/H
4874.40	Н	60.65	43.72	3.91	64.56	47.63	74.00	54.00	Y/H
7311.60	Н	45.43	33.01	9.14	54.57	42.15	74.00	54.00	Y/H
9749.50	Н	44.63	32.56	12.11	56.74	44.67	74.00	54.00	Y/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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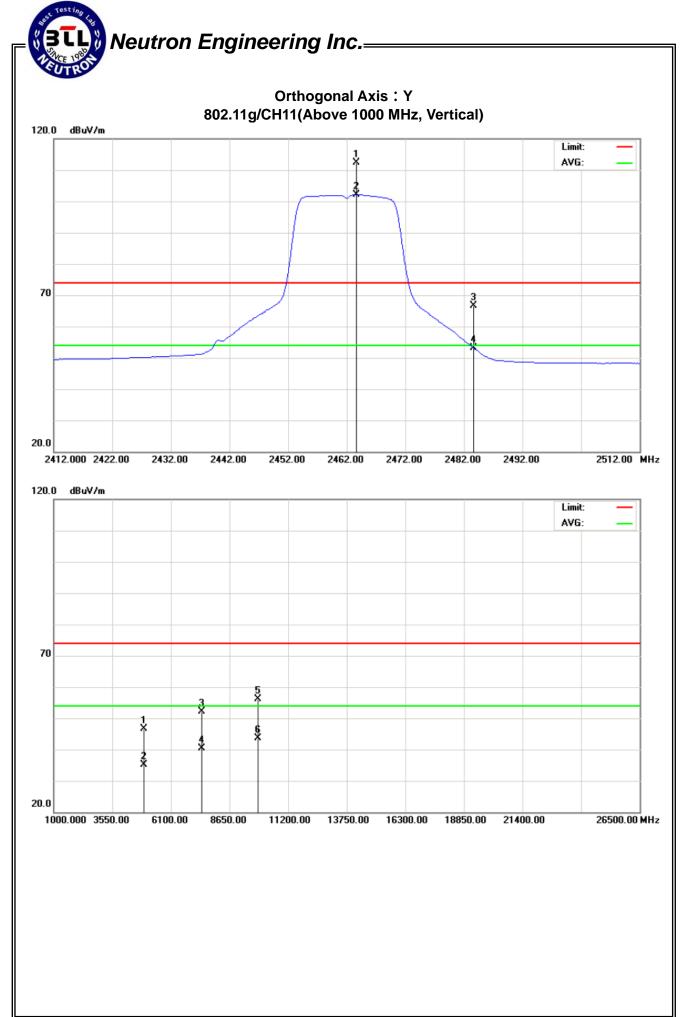


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH11 (Antenna A)		

Freq.	Ant.Pol.	Reading		Ant./CF	A	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)		
2463.60	V	80.27	69.94	32.21	112.48	102.15			Y/F	
2483.50	V	34.27	20.92	32.29	66.56	53.21	74.00	54.00	Y/E	
4924.00	V	42.64	31.17	4.06	46.70	35.23	74.00	54.00	Y/H	
7385.30	V	42.76	31.22	9.26	52.02	40.48	74.00	54.00	Y/H	
9848.50	V	43.81	31.45	12.27	56.08	43.72	74.00	54.00	Y/H	

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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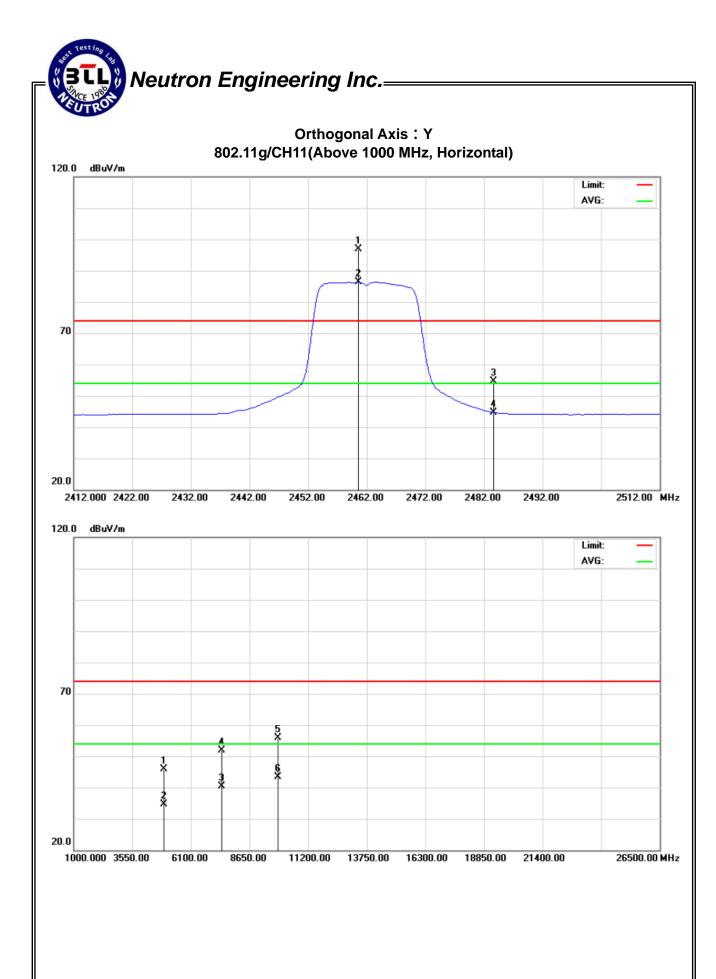


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25 °C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH11 (Antenna A)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2460.60	Н	64.57	54.14	32.20	96.77	86.34			Y/F
2483.50	Н	22.32	12.43	32.29	54.61	44.72	74.00	54.00	Y/E
4923.70	Н	41.88	30.46	4.06	45.94	34.52	74.00	54.00	Y/H
7385.60	Н	42.70	31.04	9.27	51.97	40.31	74.00	54.00	Y/H
9847.50	Н	43.69	31.21	12.27	55.96	43.48	74.00	54.00	Y/H

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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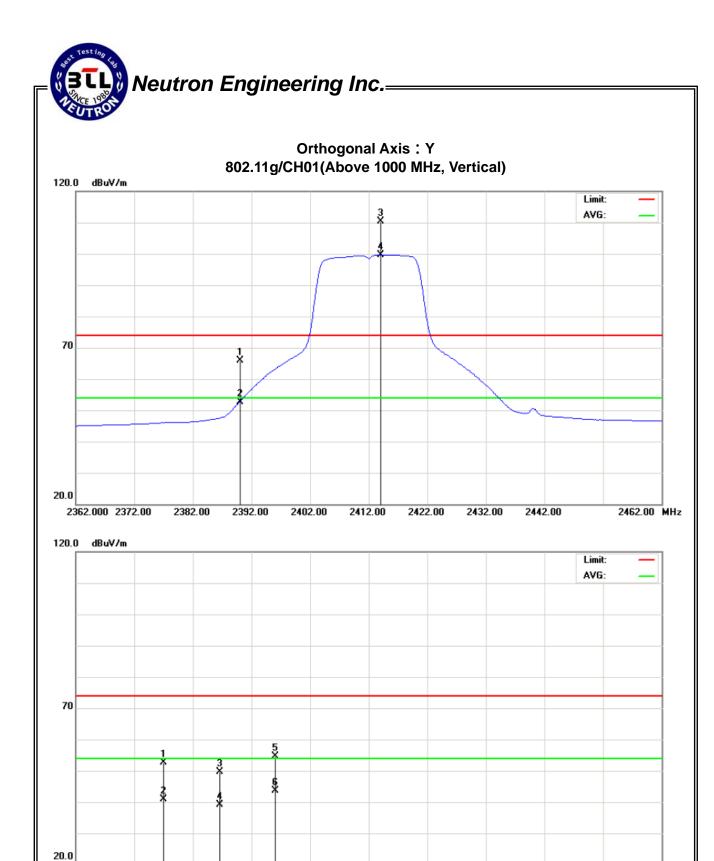


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH01 (Antenna B)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	33.89	20.82	31.93	65.82	52.75	74.00	54.00	Y/E
2414.00	V	78.43	67.72	32.02	110.45	99.74			Y/F
4824.40	V	48.89	37.25	3.75	52.64	41.00	74.00	54.00	Y/H
7235.60	V	40.71	29.99	9.02	49.73	39.01	74.00	54.00	Y/H
9648.80	V	42.67	31.56	11.96	54.63	43.52	74.00	54.00	Y/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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11200.00 13750.00 16300.00 18850.00 21400.00

26500.00 MHz

1000.000 3550.00

6100.00

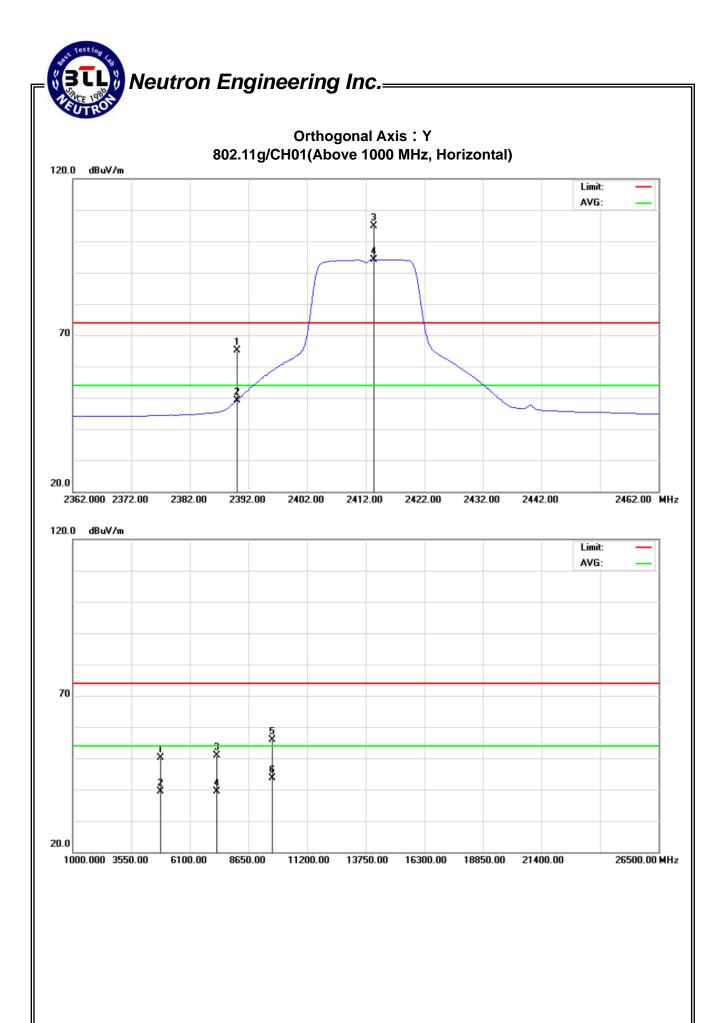
8650.00

EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH01 (Antenna B)		

Freq.	Ant.Pol.	Reading		Ant./CF	A	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)		
2390.00	Н	33.22	17.28	31.93	65.15	49.21	74.00	54.00	Y/E	
2413.40	Н	72.78	62.23	32.02	104.80	94.25			Y/F	
4823.60	Н	46.49	35.56	3.75	50.24	39.31	74.00	54.00	Y/H	
7236.60	Н	41.74	30.25	9.02	50.76	39.27	74.00	54.00	Y/H	
9647.40	Н	43.94	31.66	11.96	55.90	43.62	74.00	54.00	Y/H	

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\,^{\circ}$
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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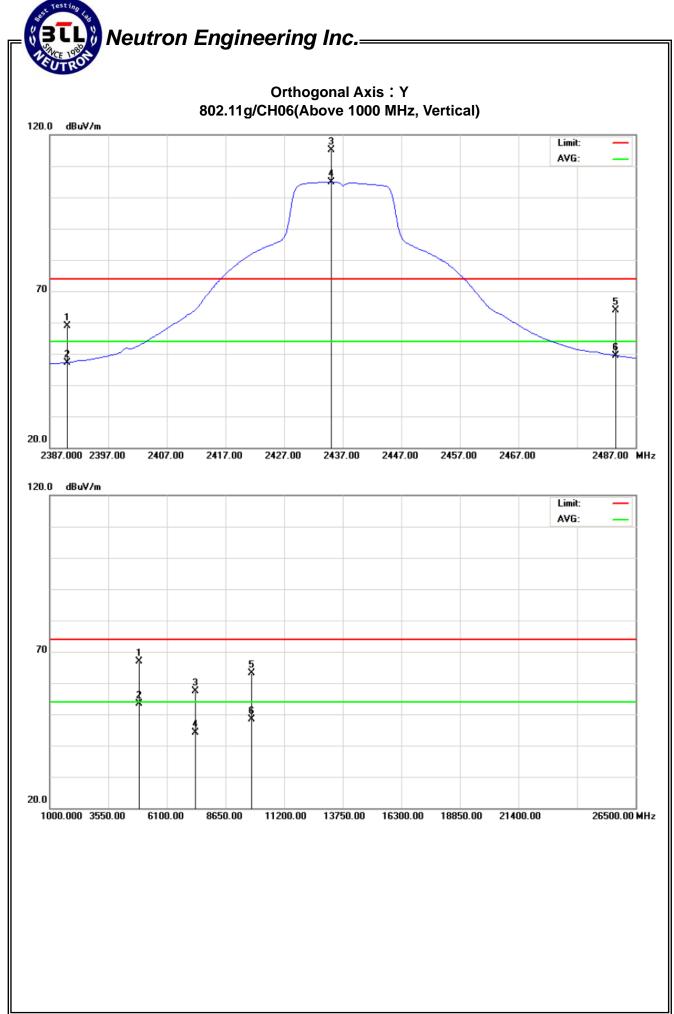


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH06 (Antenna B)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	26.99	15.28	31.93	58.92	47.21	74.00	54.00	Y/E
2435.00	V	83.02	72.81	32.10	115.12	104.91			Y/F
2483.50	V	31.69	17.19	32.29	63.98	49.48	74.00	54.00	Y/H
4874.60	V	62.91	49.51	3.91	66.82	53.42	74.00	54.00	Y/H
7308.80	V	48.22	35.03	9.14	57.36	44.17	74.00	54.00	Y/H
9749.00	V	51.11	36.32	12.11	63.22	48.43	74.00	54.00	Y/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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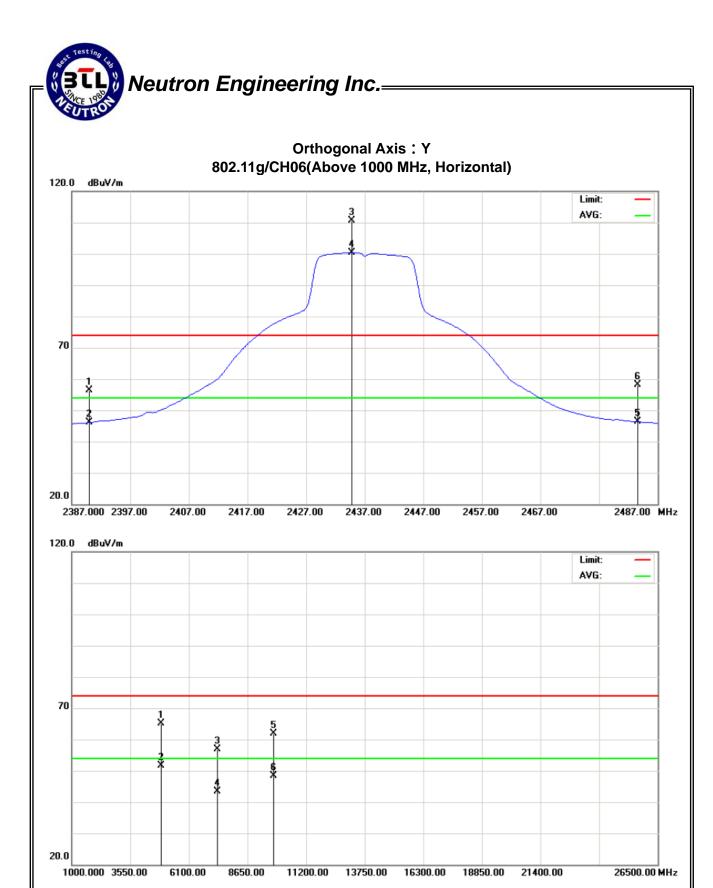


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH06 (Antenna B)		

Freq.	Ant.Pol.	Read	Reading		Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	24.43	14.14	31.93	56.36	46.07	74.00	54.00	Y/E
2434.80	Н	78.42	68.28	32.10	110.52	100.38			Y/F
2483.50	Н	25.74	14.04	32.29	58.03	46.33	74.00	54.00	Y/H
4873.60	Н	61.26	47.66	3.90	65.16	51.56	74.00	54.00	Y/H
7313.60	Н	47.63	34.35	9.15	56.78	43.50	74.00	54.00	Y/H
9748.20	Н	49.68	36.22	12.11	61.79	48.33	74.00	54.00	Y/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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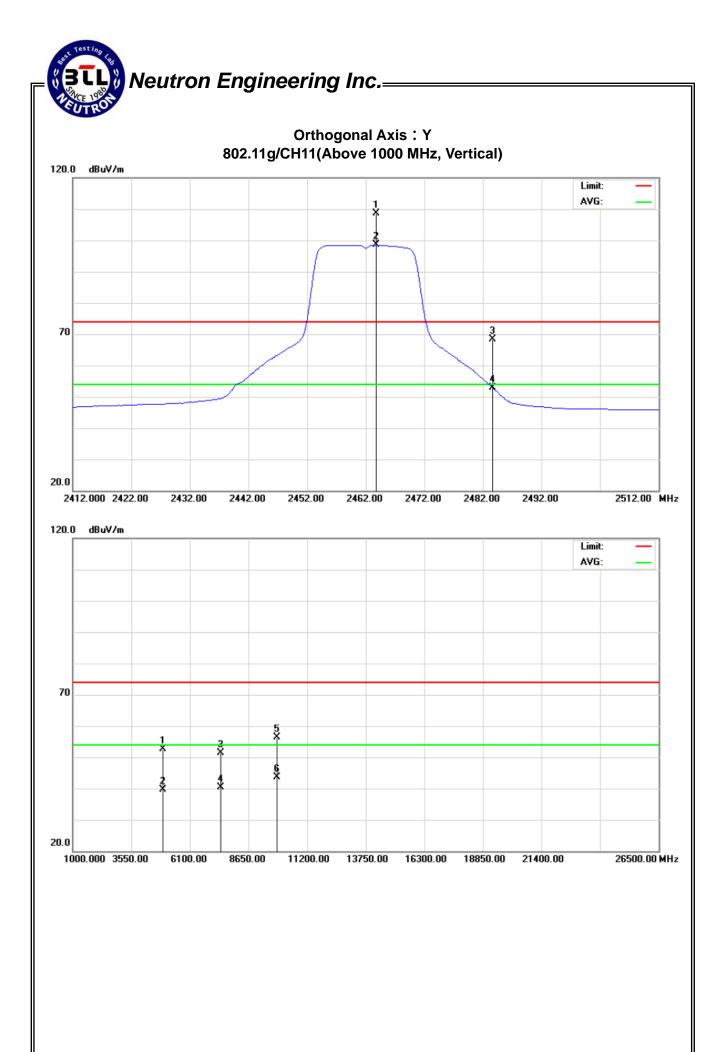


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH11 (Antenna B)		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2463.80	V	76.43	66.30	32.21	108.64	98.51			Y/F
2483.50	V	36.12	20.66	32.29	68.41	52.95	74.00	54.00	Y/E
4924.50	V	48.61	35.67	4.06	52.67	39.73	74.00	54.00	Y/H
7385.50	V	42.03	31.13	9.26	51.29	40.39	74.00	54.00	Y/H
9848.00	V	44.18	31.25	12.27	56.45	43.52	74.00	54.00	Y/H

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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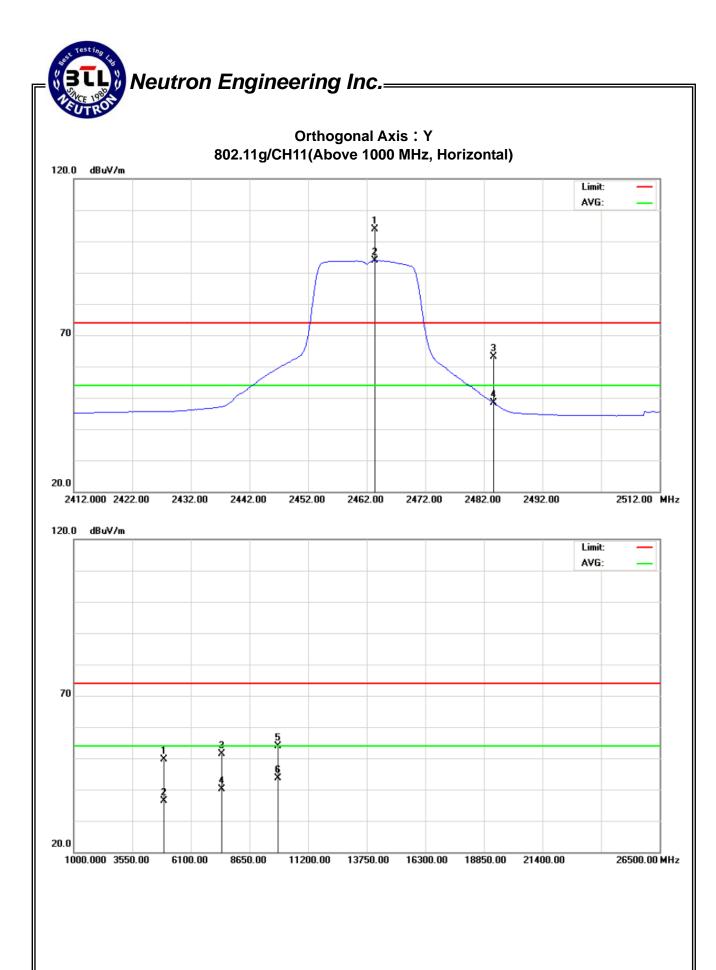


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH11 (Antenna B)		

Freq.	Ant.Pol.	Reading		Ant./CF	A	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)		
2463.40	Н	71.77	61.66	32.21	103.98	93.87			Y/F	
2483.50	Н	30.96	16.05	32.29	63.25	48.34	74.00	54.00	Y/E	
4924.50	Н	45.68	32.26	4.06	49.74	36.32	74.00	54.00	Y/H	
7385.80	Н	42.05	30.91	9.26	51.31	40.17	74.00	54.00	Y/H	
9848.70	Н	41.63	31.27	12.27	53.90	43.54	74.00	54.00	Y/H	

- (1) Spectrum Setting : 30MHz 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (5) 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.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

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# 4.1.9 TEST RESULTS-RESTRICTED BANDS REQUIREMENTS

EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010						
Temperature:	25°C	Relative Humidity:	43%						
Test Voltage:	DC 48V	OC 48V							
Test Mode :	802.11b (Antenna A) (Vertical)	302.11b (Antenna A) (Vertical)							
Note:	The emission of the carrier radi (Peak and AV) as following:  1. The transmitter was then cor to transmit at the lowest charmasured at 2310-2390 MHz  2. The transmitter was configur transmit at the highest chanrameasured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to						

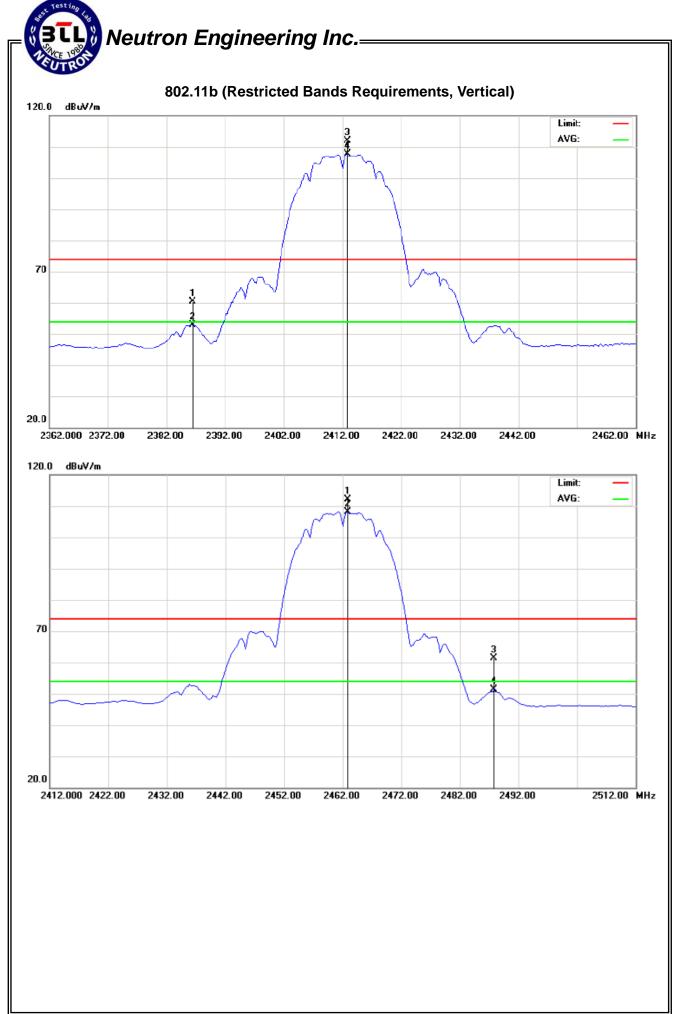
Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2386.40	V	28.38	21.04	31.91	60.29	52.95	74.00	54.00	Υ
2487.70	V	29.04	18.97	32.30	61.34	51.27	74.00	54.00	Υ

# Remark:

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

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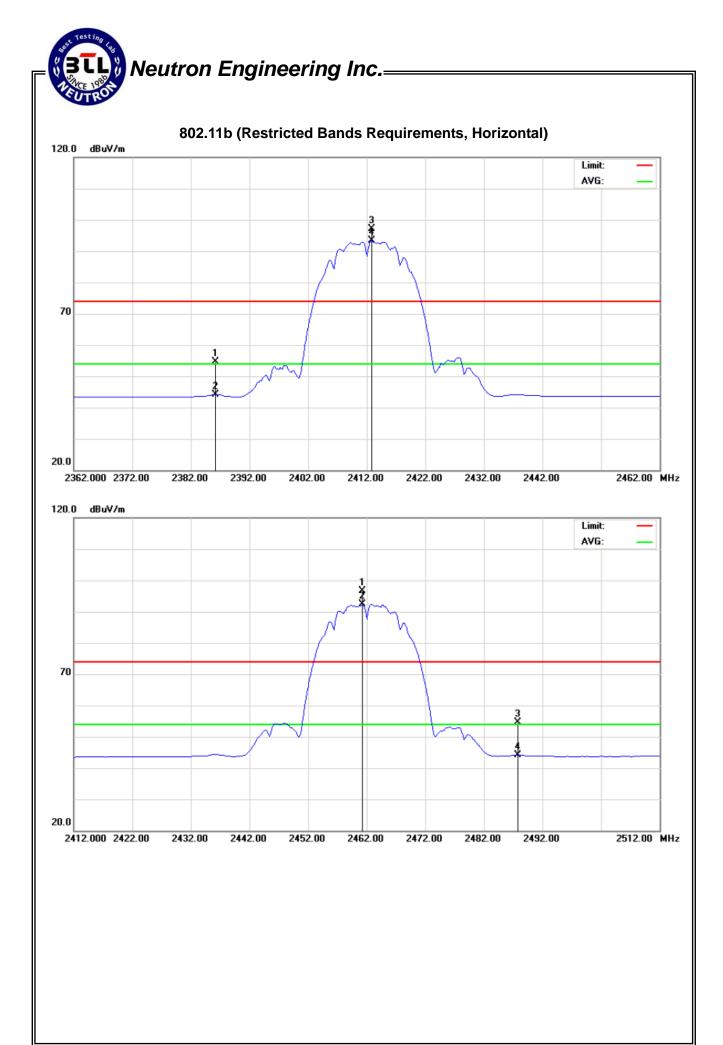
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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010					
Temperature:	25 °C	Relative Humidity:	43%					
Test Voltage:	DC 48V							
Test Mode :	802.11b (Antenna A) (Horizontal)							
Note:	The emission of the carrier rad (Peak and AV) as following:  1. The transmitter was then conto transmit at the lowest chameasured at 2310-2390 MH:  2. The transmitter was configur transmit at the highest chanrameasured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to					

Freq.	Ant.Pol.	Rea	Reading		Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2386.20	Н	22.79	12.20	31.91	54.70	44.11	74.00	54.00	Υ
2487.70	Н	22.37	11.83	32.30	54.67	44.13	74.00	54.00	Υ

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand

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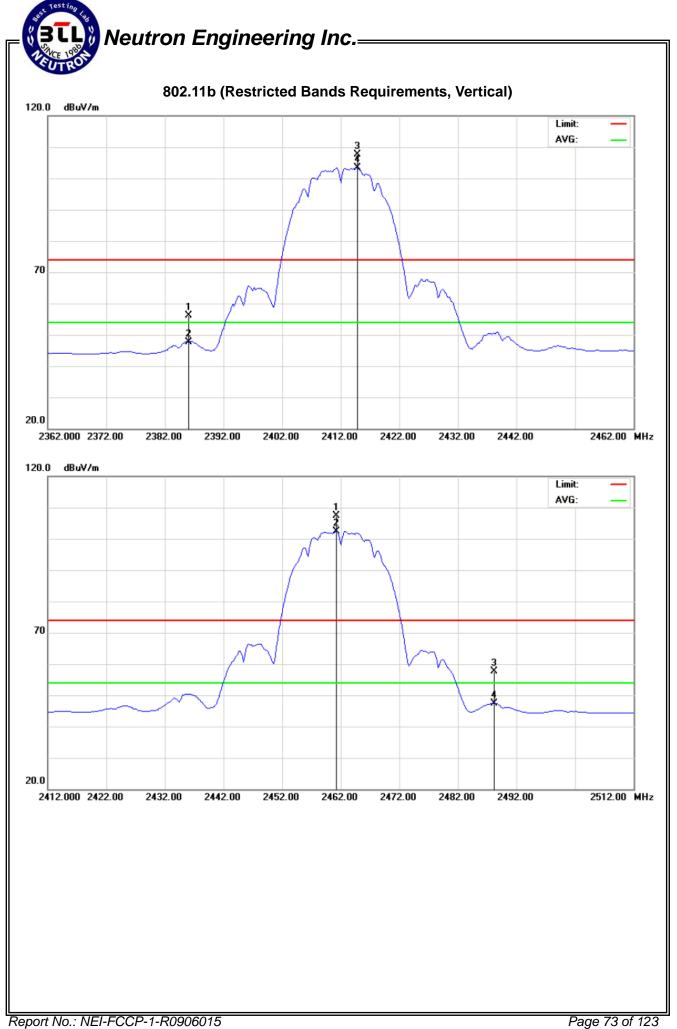
EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010							
Temperature:	25°C	Relative Humidity:	43%							
Test Voltage:	DC 48V	OC 48V								
Test Mode :	802.11b (Antenna B) (Vertical)	802.11b (Antenna B) (Vertical)								
Note:	The emission of the carrier radi (Peak and AV) as following:  1. The transmitter was then cor to transmit at the lowest char measured at 2310-2390 MH:  2. The transmitter was configur transmit at the highest chanr measured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to							

Freq.	Ant.Pol.	Rea	Reading		Act.		Lir		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2386.00	V	24.23	15.69	31.91	56.14	47.60	74.00	54.00	Υ
2488.10	V	25.33	15.07	32.30	57.63	47.37	74.00	54.00	Υ

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

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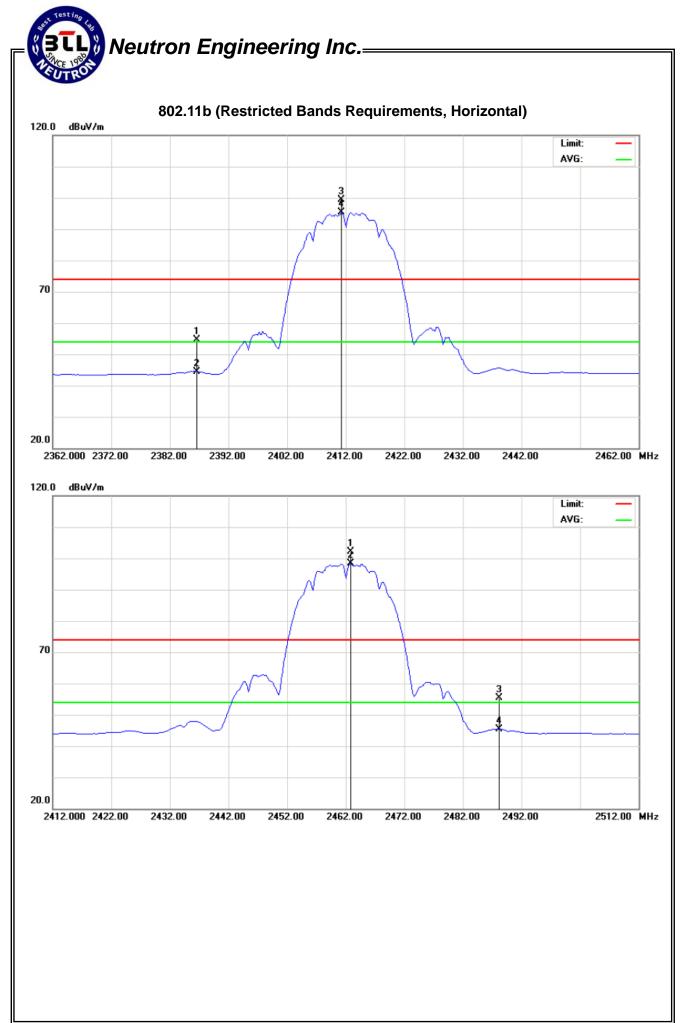
Report No.: NEI-FCCP-1-R0906015

EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010					
Temperature:	25°C	Relative Humidity:	43%					
Test Voltage:	DC 48V							
Test Mode :	802.11b (Antenna B) (Horizonta	802.11b (Antenna B) (Horizontal)						
Note:	The emission of the carrier rad (Peak and AV) as following:  1. The transmitter was then conto transmit at the lowest chameasured at 2310-2390 MH:  2. The transmitter was configur transmit at the highest chanrasured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to					

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Î
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2386.60	Н	22.64	12.58	31.91	54.55	44.49	74.00	54.00	Υ
2488.10	Н	23.10	13.20	32.30	55.40	45.50	74.00	54.00	Υ

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand

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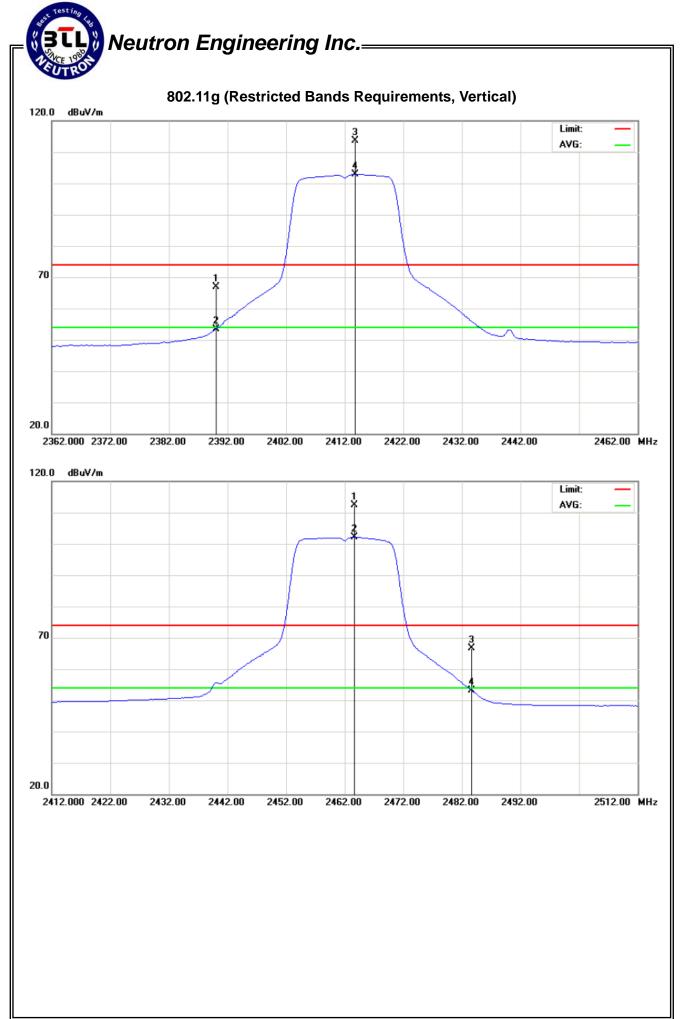
EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010					
Temperature:	25°C	Relative Humidity:	43%					
Test Voltage:	DC 48V							
Test Mode :	802.11g (Antenna A) (Vertical)	802.11g (Antenna A) (Vertical)						
Note:	The emission of the carrier rad (Peak and AV) as following:  1. The transmitter was then core to transmit at the lowest char measured at 2310-2390 MH.  2. The transmitter was configure transmit at the highest charred at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to					

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	35.06	21.50	31.93	66.99	53.43	74.00	54.00	Υ
2483.50	V	34.27	20.92	32.29	66.56	53.21	74.00	54.00	Υ

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

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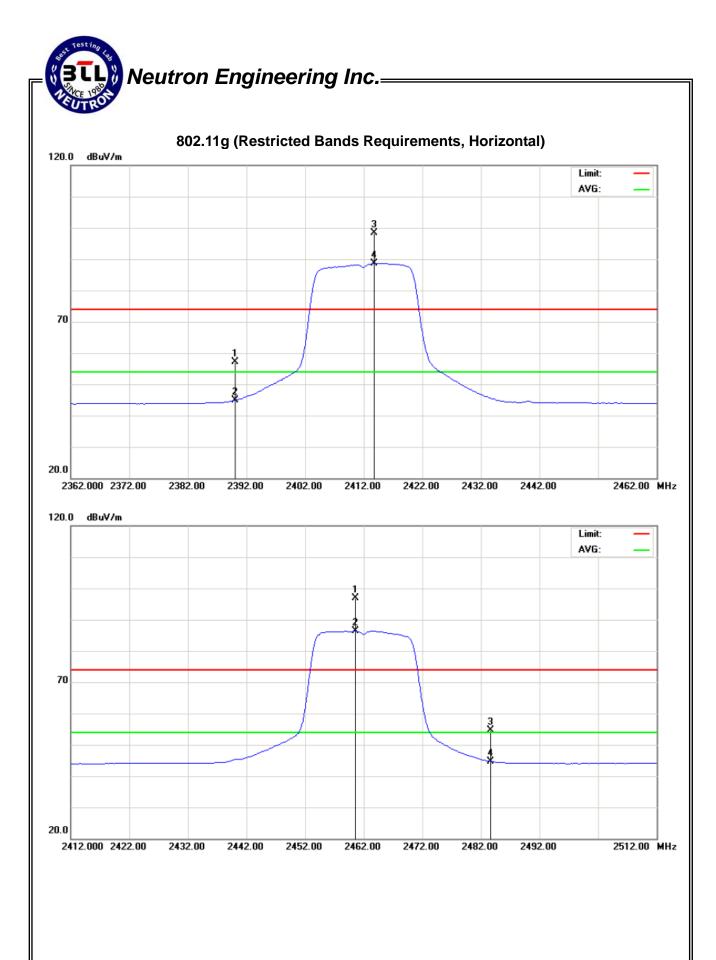


EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25 °C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g (Antenna A) (Horizonta	al)	
Note:	The emission of the carrier rad (Peak and AV) as following:  1. The transmitter was then cor to transmit at the lowest cha measured at 2310-2390 MH.  2. The transmitter was configur transmit at the highest chanr measured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	25.24	12.92	31.93	57.17	44.85	74.00	54.00	Υ
2483.50	Н	22.32	12.43	32.29	54.61	44.72	74.00	54.00	Υ

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand

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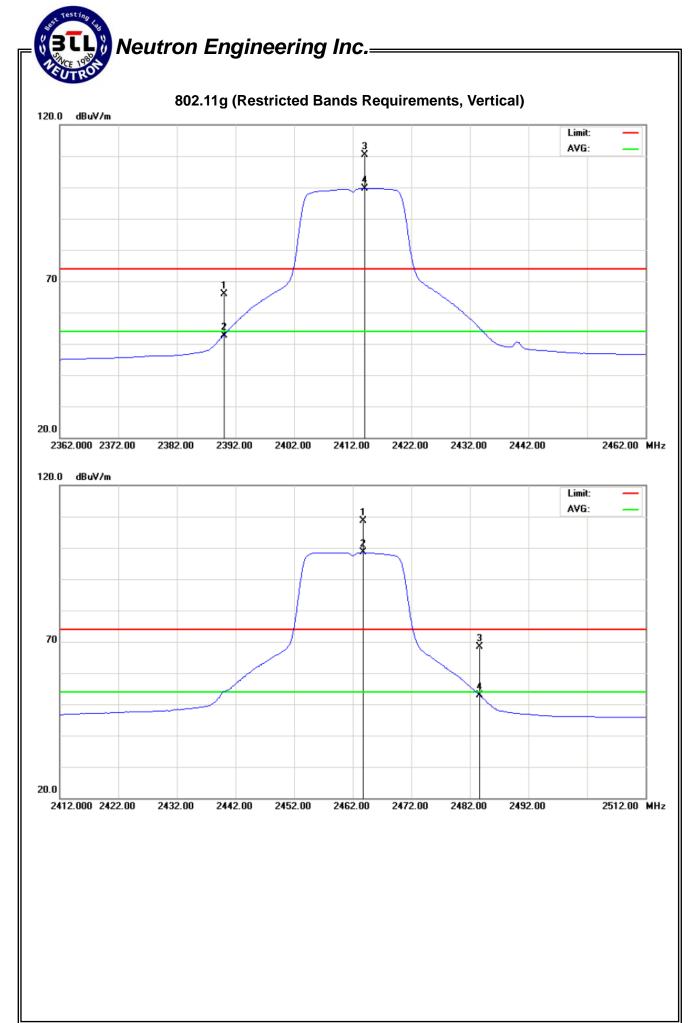
EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25 °C	Relative Humidity:	43%
Test Voltage :	DC 48V		
Test Mode :	802.11g (Antenna B) (Vertical)		
Note:	The emission of the carrier rad (Peak and AV) as following:  1. The transmitter was then cor to transmit at the lowest cha measured at 2310-2390 MH.  2. The transmitter was configur transmit at the highest chanr measured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	V	33.89	20.82	31.93	65.82	52.75	74.00	54.00	Υ
2483.50	V	36.12	20.66	32.29	68.41	52.95	74.00	54.00	Υ

- (1) Spectrum Setting : 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

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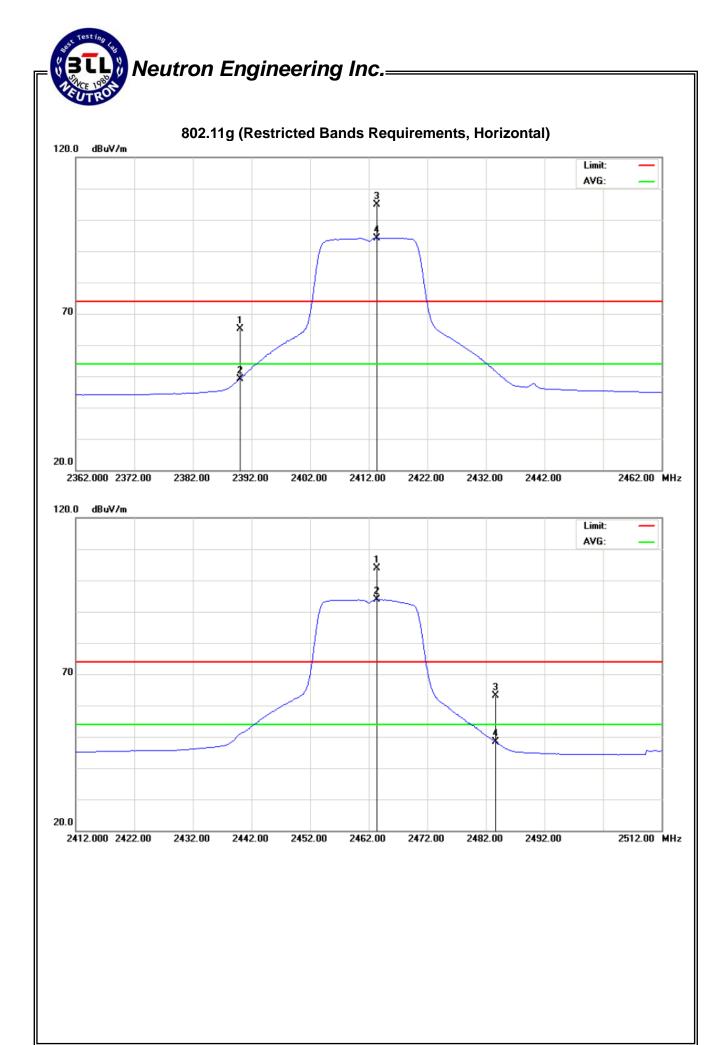
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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	25°C	Relative Humidity:	43%
Test Voltage:	DC 48V		
Test Mode :	802.11g (Antenna B) (Horizonta	al)	
Note:	The emission of the carrier rad (Peak and AV) as following:  1. The transmitter was then cor to transmit at the lowest cha measured at 2310-2390 MH:  2. The transmitter was configur transmit at the highest chanr measured at 2483.5-2500 M	nfigured with the wor nnel (CH01). Then th z. red with the worst can nel (CH11). Then the	st case antenna and setup ne field strength was se antenna and setup to

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		
		Peak	AV		Peak	AV	Peak	AV	Note
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
2390.00	Н	33.22	17.28	31.93	65.15	49.21	74.00	54.00	Υ
2483.50	Н	30.96	16.05	32.29	63.25	48.34	74.00	54.00	Υ

- (1) Spectrum Setting: 30MHz 1000MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission  $\circ$
- (3) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand

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#### 5. BANDWITH TEST

#### 5.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C						
Test Item	Limit	Frequency Range (MHz)	Result			
Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS			

#### **5.1.1 MEASUREMENT INSTRUMENTS LIST**

Iten	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010

Remark: "N/A" denotes No Model Name, Serial No. or No Calibration specified.

#### **5.1.2 TEST PROCEDURE**

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

#### **5.1.3 DEVIATION FROM STANDARD**

No deviation.

#### 5.1.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

#### **5.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

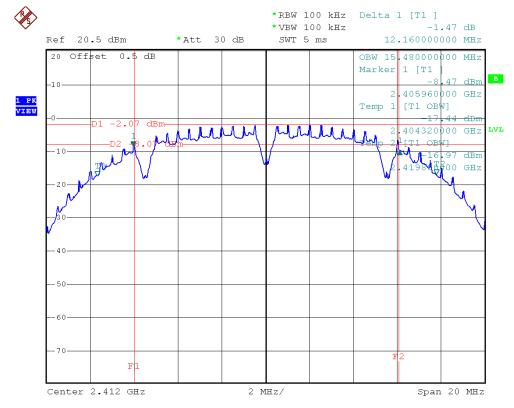
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#### **5.1.6 TEST RESULTS**

EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	13 ℃	Relative Humidity:	64 %
Test Voltage:	DC 48V		
Test Mode :	302.11b/CH01, CH06, CH11 (Antenna A)		

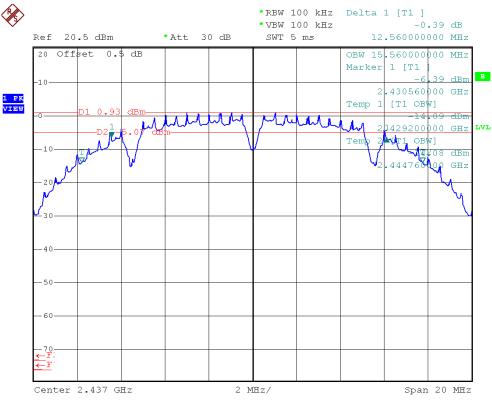
Test Channel	Frequency (MHz)	Bandwidth (MHz)	LIMIT (MHz)
CH01	2412	12.16	>=500KHz
CH06	2437	12.56	>=500KHz
CH11	2462	12.08	>=500KHz

#### CH01

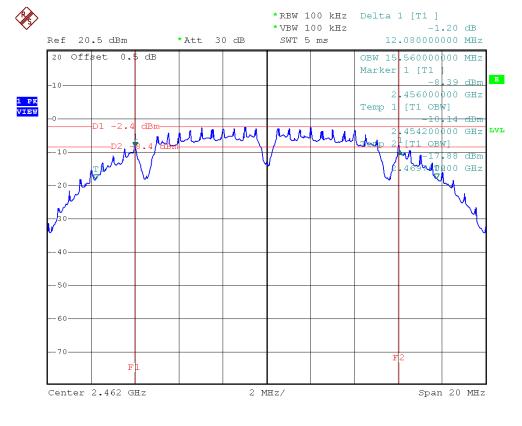


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# Neutron Engineering Inc.= CH06 \* RB \* VB Ref 20.5 dBm \* Att 30 dB SW 20 Offset 0.5 dB



#### **CH11**



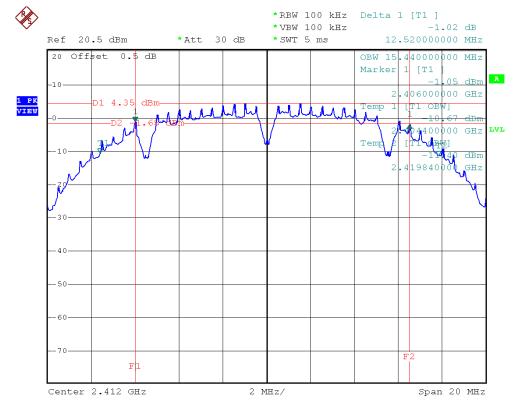
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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	13 ℃	Relative Humidity:	64 %
Test Voltage:	DC 48V		
Test Mode :	302.11b/CH01, CH06, CH11 (Antenna B)		

Test Channel	Frequency (MHz)	Bandwidth (MHz)	LIMIT (MHz)
CH01	2412	12.52	>=500KHz
CH06	2437	12.00	>=500KHz
CH11	2462	12.08	>=500KHz

#### CH01



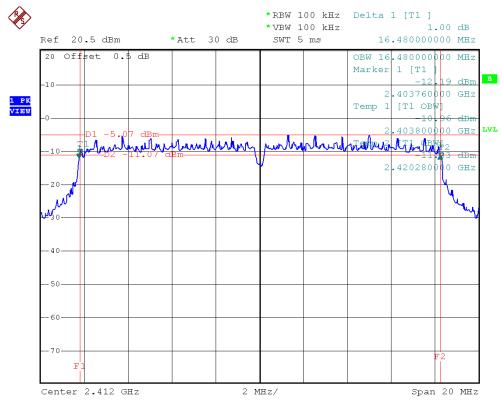
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### Neutron Engineering Inc. **CH06** \*RBW 100 kHz Delta 1 [T1 ] \*VBW 100 kHz -0.93 dB Ref 20.5 dBm \*Att 30 dB \*SWT 5 ms 12.000000000 MHz 20 Offset 0.5 dB OBW 15.600000000 MHz Marker 1 [T1 2.431000000 GHz MMun 1 PK VIEW Temp 1 [T1 OBV] 489294200 GHZ LVL .444800000**√**⊊Hz Span 20 MHz Center 2.437 GHz 2 MHz/ **CH11** \*RBW 100 kHz Delta 1 [T1 ] \*VBW 100 kHz 1.13 dB Ref 20.5 dBm \*Att 30 dB \*SWT 5 ms 12.080000000 MHz 20 Offset 0.5 dB OBW 15.560000000 MHz 1 [T1 Marker 39 dBm .455920000 GHz 1 PK VIEW [T1 OBW 54120000 GHz LVL Center 2.462 GHz Span 20 MHz 2 MHz/

EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	13 ℃	Relative Humidity:	64 %
Test Voltage:	DC 48V		
Test Mode :	302.11g/CH01, CH06, CH11 (Antenna A)		

Test Channel	Frequency (MHz)	Bandwidth (MHz)	LIMIT (MHz)
CH01	2412	16.48	>=500KHz
CH06	2437	16.52	>=500KHz
CH11	2462	16.48	>=500KHz

#### CH01



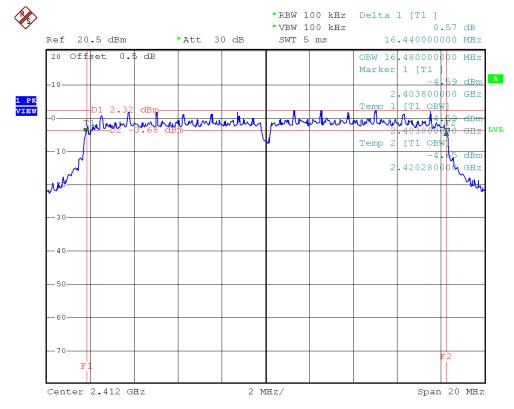
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## Neutron Engineering Inc. **CH06** \*RBW 100 kHz Delta 1 [T1 ] \*RBW 100 kHz \*VBW 100 kHz -0.1/ cm 16.520000000 MHz Ref 20.5 dBm \*Att 30 dB 20 Offset 0.5 dB OBW 16.560000000 MHz Marker 1 [T1 2.428760000 GHz 1 PK VIEW Temp 2 [T1 OBW 2.445280 00 GHZ Span 20 MHz Center 2.437 GHz 2 MHz/ **CH11** \*RBW 100 kHz Delta 1 [T1 ] \*VBW 100 kHz 0.01 dB Ref 20.5 dBm \*Att 30 dB SWT 5 ms 16.480000000 MHz 20 Offset 0.5 dB OBW 16.520000000 MHz Marker 1 [T1 -13 dBm 2.453760000 GHz 1 PK VIEW Temp 1 [T1 OBW] 453760000 GHz LVL Center 2.462 GHz 2 MHz/ Span 20 MHz

EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010	
Temperature:	13 ℃	Relative Humidity:	64 %	
Test Voltage:	DC 48V			
Test Mode :	802.11g/CH01, CH06, CH11 (Antenna B)			

Test Channel	Frequency (MHz)	Bandwidth (MHz)	LIMIT (MHz)
CH01	2412	16.44	>=500KHz
CH06	2437	16.44	>=500KHz
CH11	2462	16.44	>=500KHz

#### CH01



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#### 6. PEAK OUTPUT POWER TEST

#### **6.1 APPLIED PROCEDURES / LIMIT**

FCC Part15, Subpart C			
Test Item	Limit	Frequency Range (MHz)	Result
Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

#### **6.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	Feb. 10, 2010
2	Power Meter Sensor	Anritsu	MA2491A	34138	Feb. 10, 2010

Remark: "N/A" denotes No Model Name, Serial No. or No Calibration specified.

#### **6.1.2 TEST PROCEDURE**

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 1MHz, VBW= 1MHz, Sweep time = Auto.

#### **6.1.3 DEVIATION FROM STANDARD**

No deviation.

#### 6.1.4 TEST SETUP

EUT	Power Meter
EUI	rower Meter

#### **6.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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#### 6.1.6 TEST RESULTS

EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010	
Temperature:	13 ℃	Relative Humidity:	64 %	
Test Voltage:	DC 48V			
Test Mode :	802.11b/CH01, CH06, CH11 (Antenna A)			

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412	8.98	28.00	0.1585
CH06	2437	13.17	28.00	0.1585
CH11	2462	8.98	28.00	0.1585

#### Remark:

(1) The Peak Output Power test requirement:

Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

(2) Antenna A Ğain = 14.00dBi. Antenna B Gain = 4.5dBi.

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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010	
Temperature:	13 ℃	Relative Humidity:	64 %	
Test Voltage:	DC 48V			
Test Mode :	802.11b/CH01, CH06, CH11 (Antenna B)			

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412	14.77	30.00	1.0000
CH06	2437	17.78	30.00	1.0000
CH11	2462	14.31	30.00	1.0000

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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010	
Temperature:	<b>13</b> ℃	Relative Humidity:	64 %	
Test Voltage:	DC 48V			
Test Mode :	802.11g/CH01, CH06, CH11 (Antenna A)			

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412	7.42	28.00	0.1585
CH06	2437	16.20	28.00	0.1585
CH11	2462	5.44	28.00	0.1585

(1) The Peak Output Power test requirement:

Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

(2) Antenna A Gain = 14.00dBi. Antenna B Gain = 4.5dBi.

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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010	
Temperature:	13 ℃	Relative Humidity:	64 %	
Test Voltage:	DC 48V			
Test Mode :	802.11g/CH01, CH06, CH11 (Antenna B)			

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH01	2412	14.70	30.00	1.0000
CH06	2437	19.38	30.00	1.0000
CH11	2462	12.93	30.00	1.0000

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#### 7. ANTENNA CONDUCTED SPURIOUS EMISSION

#### 7.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C					
Test Item	Limit	Frequency Range (MHz)	Result		
Antenna conducted Spurious Emission	20dB less than the peak value of fundamental frequency	30-25000	PASS		

#### 7.1.1 MEASUREMENT INSTRUMENTS LIST

Ite	m Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
,	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010

Remark: "N/A" denotes No Model Name, Serial No. or No Calibration specified.

#### 7.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

#### 7.1.3 DEVIATION FROM STANDARD

No deviation.

#### 7.1.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

#### 7.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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#### 7.1.6 TEST RESULTS

EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010	
Temperature:	13 ℃	Relative Humidity:	64 %	
Test Voltage:	DC 48V			
Test Mode :	802.11b/CH01, CH11 (Antenna A)			

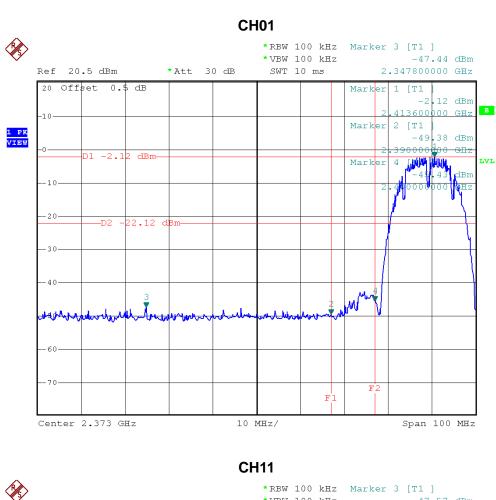
Channel of Worst Data: CH1,CH11				
The max. radio frequency power in any 100kHz bandwidth outside the frequency band bandwidth within the frequency band.				
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)	
2347.8 -47.44 2489.6 -47.57				
Docult				

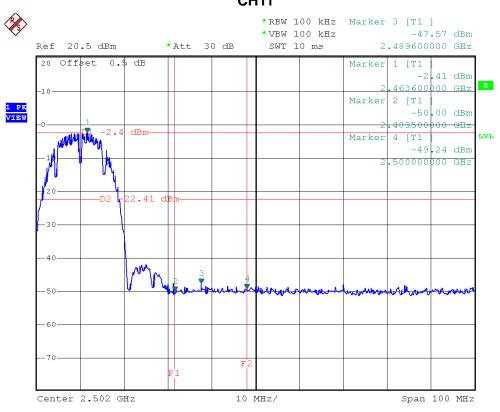
#### Result

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	13 ℃	Relative Humidity:	64 %
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH01, CH11 (Antenna B)		

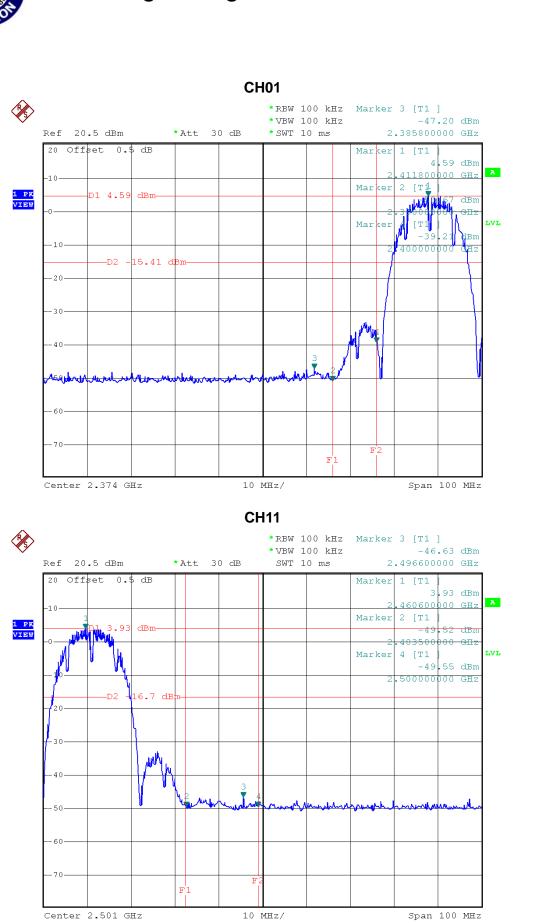
Channel of Worst Data: CH1,CH11				
The max. radio frequency power in any 100kHz bandwidth outside the frequency band bandwidth within the frequency band.				
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)	
2385.8 -47.20 2496.6 -46.63				
Popult				

#### Result

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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10 MHz/

Span 100 MHz



EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010	
Temperature:	13 ℃	Relative Humidity:	64 %	
Test Voltage:	DC 48V			
Test Mode :	802.11g/CH01, CH11 (Antenna A)			

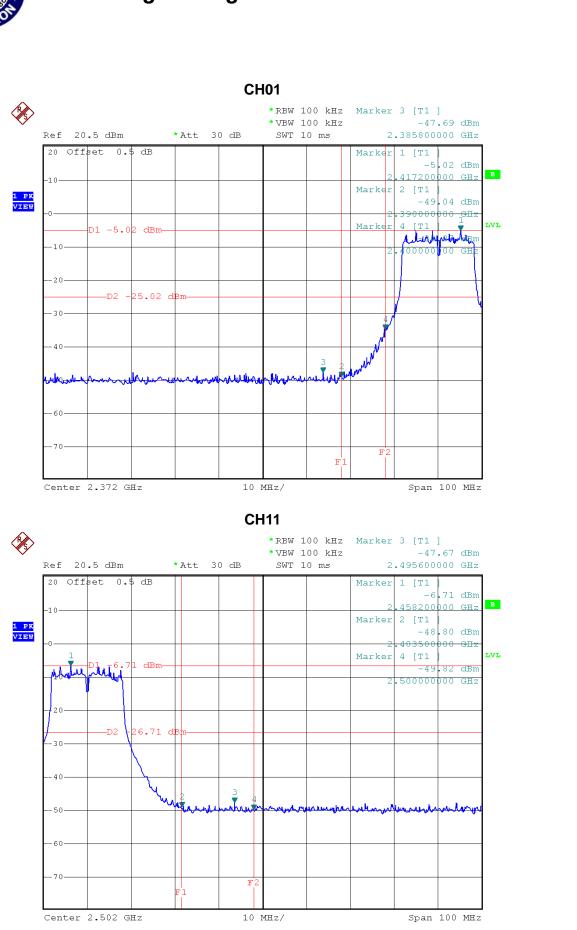
Channel of Worst Data: CH1,CH11				
The max. radio frequency power in any 100kHz bandwidth outside the frequency band bandwidth within the frequency band.				
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)	
2385.8 -47.69 2495.6 -47.67				
Popult				

#### Result

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	13 ℃	Relative Humidity:	64 %
Test Voltage:	DC 48V		
Test Mode :	802.11g/CH01, CH11 (Antenna B)		

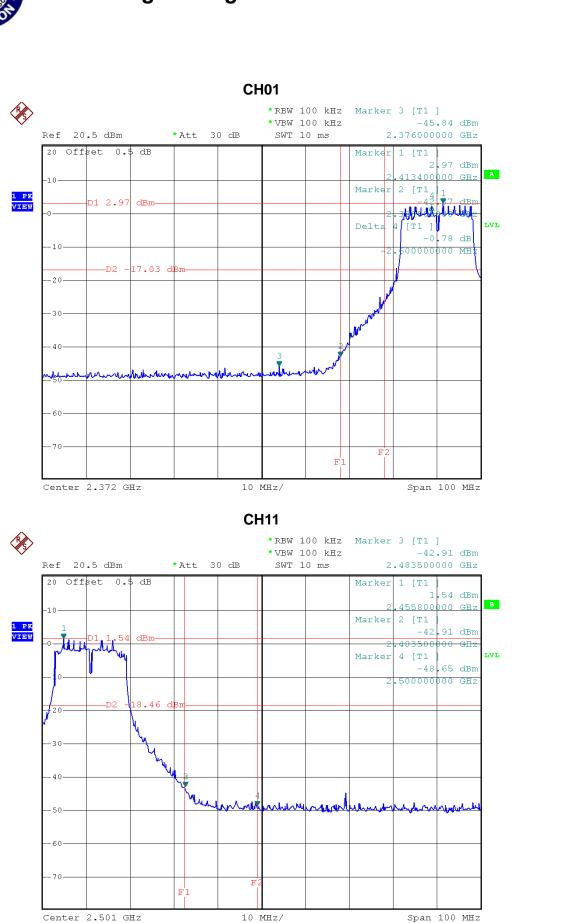
Channel of Worst Data: CH1,CH11				
The max. radio frequency power in any 100kHz bandwidth outside the frequency band bandwidth within the frequency band.				
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)	
2376.0 -45.84 2483.5 -42.91				
Popult				

#### Result

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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#### 8. POWER SPECTRAL DENSITY TEST

#### 8.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C			
Test Item	Limit	Frequency Range (MHz)	Result
Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

#### **8.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010

Remark: "N/A" denotes No Model Name, Serial No. or No Calibration specified.

#### **8.1.2 TEST PROCEDURE**

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW=3KHz, VBW=30KHz, Sweep time = 500s.

#### 8.1.3 DEVIATION FROM STANDARD

No deviation.

#### 8.1.4 TEST SETUP



#### **8.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

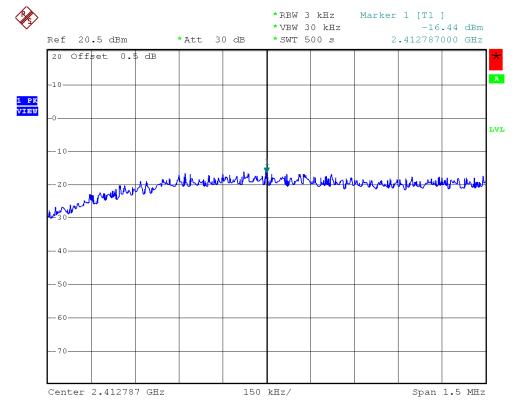
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#### 8.1.6 TEST RESULTS

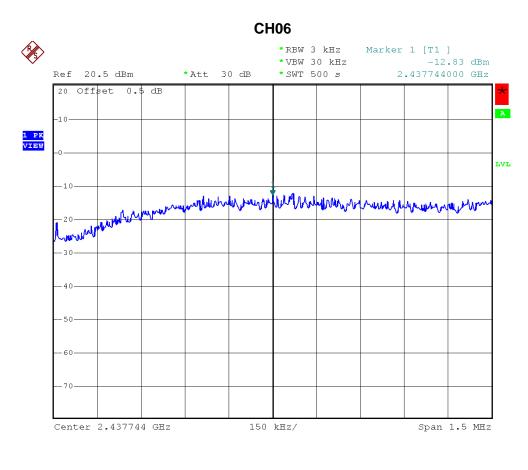
EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	13 ℃	Relative Humidity:	64 %
Test Voltage:	DC 48V		
Test Mode :	802.11b/CH01, CH06, CH11 (Antenna A)		

Test Channel	Frequency	Power Density	LIMIT
rest orialine	(MHz)	(dBm)	(dBm)
CH01	2412	-16.44	8
CH06	2437	-12.83	8
CH11	2462	-17.49	8

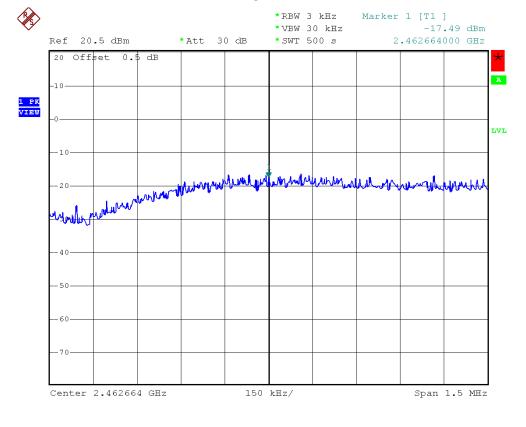
#### CH01



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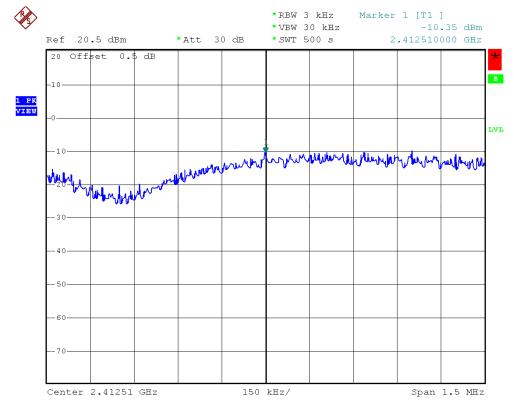
#### **CH11**



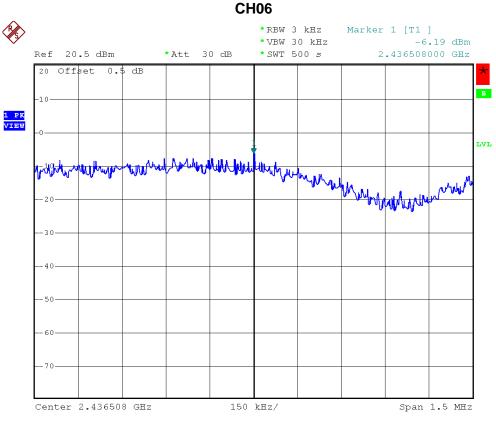
EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010	
Temperature:	13 ℃	Relative Humidity:	64 %	
Test Voltage:	DC 48V			
Test Mode :	302.11b/CH01, CH06, CH11 (Antenna B)			

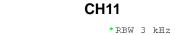
Test Channel	Frequency	Power Density	LIMIT
	(MHz)	(dBm)	(dBm)
CH01	2412	-10.35	8
CH06	2437	-6.19	8
CH11	2462	-9.47	8

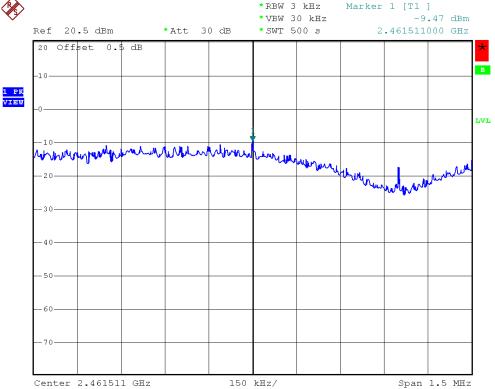
#### CH01



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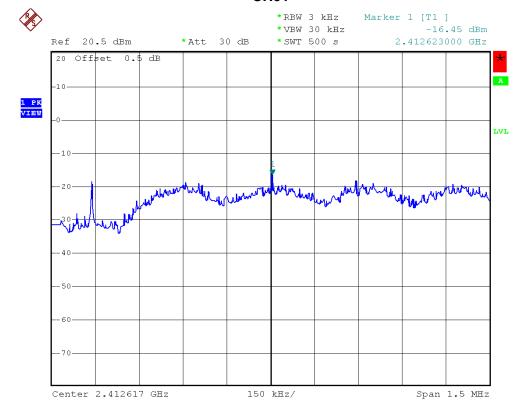




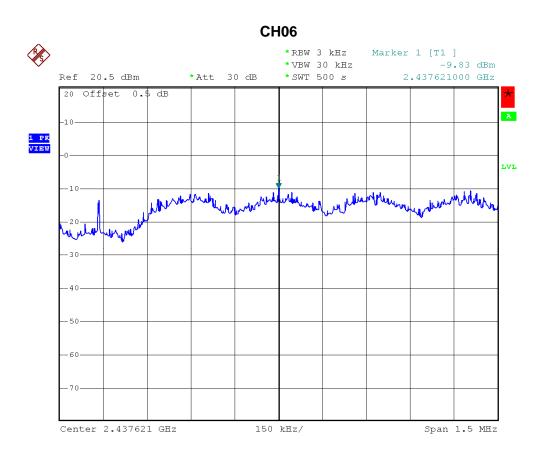
EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010	
Temperature:	13 ℃	Relative Humidity:	64 %	
Test Voltage:	DC 48V			
Test Mode :	802.11g/CH01, CH06, CH11 (Antenna A)			

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412	-16.45	8
CH06	2437	-9.83	8
CH11	2462	-19.44	8

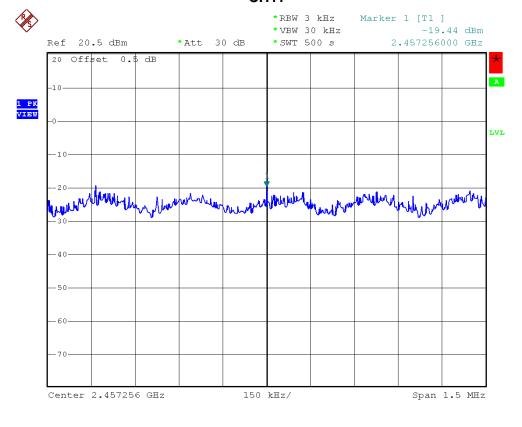
#### CH01



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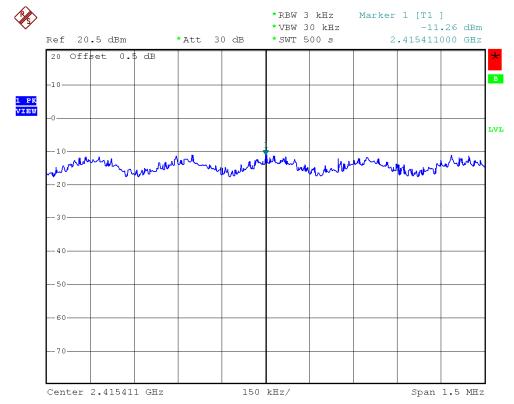
#### **CH11**



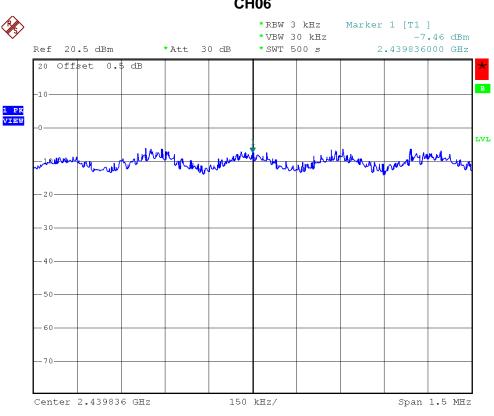
EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010	
Temperature:	13 ℃	Relative Humidity:	64 %	
Test Voltage:	DC 48V			
Test Mode :	802.11g/CH01, CH06, CH11 (Antenna B)			

Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH01	2412	-11.26	8
CH06	2437	-7.46	8
CH11	2462	-12.56	8

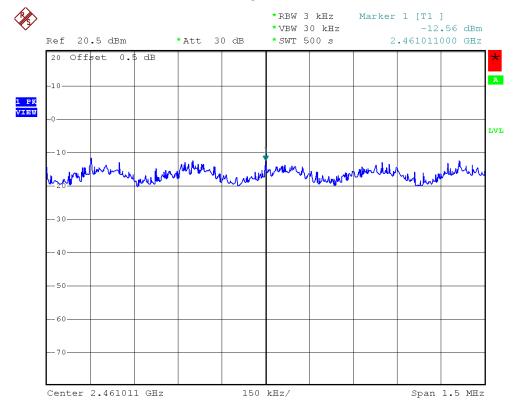
#### CH01



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#### **CH11**



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#### 9. RF EXPOSURE TEST

#### 9.1 APPLIED PROCEDURES / LIMIT

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	rength (H) (mW/ cm²)	
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

#### (B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz; \*Plane-wave equivalent power density

#### 9.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	Feb. 10, 2010
2	Power Meter Sensor	Anritsu	MA2491A	34138	Feb. 10, 2010

Remark: "N/A" denotes No Model Name, Serial No. or No Calibration specified.

#### 9.1.2 MPE CALCULATION METHOD

E (V/m) 
$$=\frac{\sqrt{30 \times P \times G}}{d}$$
 Power Density:  $Pd$  (W/m²)  $=\frac{E^2}{377}$ 

**E** = Electric field (V/m)

**P** = Peak RF output power (W)

**G** = EUT Antenna numeric gain (numeric)

**d** = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

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#### 9.1.4 TEST SETUP

EUT	SPECTRUM
	ANALYZER

#### 9.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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#### 9.1.6 TEST RESULTS

EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	13 ℃	Relative Humidity:	64 %
Test Voltage:	DC 48V		
Test Mode :	802.11b (Antenna A)		

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm²)
2412	14.00	25.1189	8.9800	7.9068	0.039532	1
2437	14.00	25.1189	13.1700	20.7491	0.103741	1
2462	14.00	25.1189	8.9800	7.9068	0.039532	1

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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010		
Temperature:	13 ℃	Relative Humidity:	64 %		
Test Voltage:	DC 48V				
Test Mode :	802.11b (Antenna B)				

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm²)
2412	4.50	2.8184	14.7700	29.9916	0.016825	1
2437	4.50	2.8184	17.7800	59.9791	0.033647	1
2462	4.50	2.8184	14.3100	26.9774	0.015134	1

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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010	
Temperature:	13 ℃	Relative Humidity:	64 %	
Test Voltage:	DC 48V			
Test Mode :	802.11g (Antenna A)			

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm²)
2412	14.00	25.1189	7.4200	5.5208	0.027603	1
2437	14.00	25.1189	16.2000	41.6869	0.208425	1
2462	14.00	25.1189	5.4400	3.4995	0.017496	1

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EUT:	Professional Outdoor 2.4Ghz 802.11b/g, AP/Bridge/Repeater.	Model Name :	AP-2010
Temperature:	13 ℃	Relative Humidity:	64 %
Test Voltage:	DC 48V		
Test Mode :	802.11g (Antenna B)		

Frequency (MHz)	Antenna Gain (dBi)				Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm²)
2412	4.50	2.8184	14.7000	29.5121	0.016556	1
2437	4.50	2.8184	19.3800	86.6962	0.048635	1
2462	4.50	2.8184	12.9300	19.6336	0.011014	1

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