



SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, TaoYuan Hsien, Taiwan, R.O.C.
Ph: 886-3-327-3456 / FAX: 886-3-327-0973 / www.sporton.com.tw

FCC RADIO TEST REPORT

Applicant's company	Ralink Technology Corporation
Applicant Address	5F., No.5, Taiyuan 1st St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.
FCC ID	VQF-RT3290
Manufacturer's company	Ralink Technology Corporation
Manufacturer Address	5F., No.5, Taiyuan 1st St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.

Product Name	802.11b/g/n 1T1R Combo Card
Brand Name	Ralink
Model Name	RT3290
Test Rule	47 CFR FCC Part 15 Subpart C § 15.247
Test Freq. Range	2400 ~ 2483.5MHz
Received Date	Jan. 27, 2011
Final Test Date	Apr. 20, 2011
Submission Type	Original Equipment



Statement

Test result included in this report is for the IEEE 802.11n and IEEE 802.11b/g part of the product.

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.10-2009** and **47 CFR FCC Part 15 Subpart C**.

The test equipment used to perform the test is calibrated and traceable to NML/ROC.



Table of Contents

1. CERTIFICATE OF COMPLIANCE.....	1
2. SUMMARY OF THE TEST RESULT	2
3. GENERAL INFORMATION.....	3
3.1. Product Details	3
3.2. Accessories	5
3.3. Table for Filed Antenna	5
3.4. Table for Carrier Frequencies	6
3.5. Table for Test Modes	7
3.6. Table for Testing Locations.....	9
3.7. Table for Supporting Units	9
3.8. Table for Parameters of Test Software Setting	10
3.9. Test Configurations.....	11
4. TEST RESULT.....	15
4.1. AC Power Line Conducted Emissions Measurement	15
4.2. Peak Output Power Measurement	19
4.3. Power Spectral Density Measurement.....	24
4.4. 6dB Spectrum Bandwidth Measurement	35
4.5. Radiated Emissions Measurement.....	46
4.6. Band Edge Emissions Measurement.....	118
4.7. Antenna Requirements	183
5. LIST OF MEASURING EQUIPMENTS	184
6. TEST LOCATION.....	186
7. TAF CERTIFICATE OF ACCREDITATION.....	187
APPENDIX A. TEST PHOTOS.....	A1 ~ A10
APPENDIX B. MAXIMUM PERMISSIBLE EXPOSURE	B1 ~B3
APPENDIX C. CO-LOCATION REPORT	C1 ~ C5

History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR112725AA	Rev. 01	Initial issue of report	Apr. 18, 2011

1. CERTIFICATE OF COMPLIANCE

Product Name : 802.11b/g/n 1T1R Combo Card
Brand Name : Ralink
Model Name : RT3290
Applicant : Ralink Technology Corporation
Test Rule Part(s) : 47 CFR FCC Part 15 Subpart C § 15.247

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Jan. 27, 2011 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.

Jordan Hsiao 2011.4.22

Jordan Hsiao

SPORTON INTERNATIONAL INC.

2. SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart C				
Part	Rule Section	Description of Test	Result	Under Limit
4.1	15.207	AC Power Line Conducted Emissions	Complies	12.38 dB
4.2	15.247(b)(3)	Peak Output Power	Complies	4.35 dB
4.3	15.247(e)	Power Spectral Density	Complies	15.67 dB
4.4	15.247(a)(2)	6dB Spectrum Bandwidth	Complies	-
4.5	15.247(d)	Radiated Emissions	Complies	0.19 dB
4.6	15.247(d)	Band Edge Emissions	Complies	0.12 dB
4.7	15.203	Antenna Requirements	Complies	-

Test Items	Uncertainty	Remark
AC Power Line Conducted Emissions	±2.3dB	Confidence levels of 95%
Maximum Conducted Output Power	±0.8dB	Confidence levels of 95%
Power Spectral Density	±0.5dB	Confidence levels of 95%
6dB Spectrum Bandwidth	±8.5×10 ⁻⁸	Confidence levels of 95%
Radiated Emissions (9kHz~30MHz)	±0.8dB	Confidence levels of 95%
Radiated Emissions (30MHz~1000MHz)	±1.9dB	Confidence levels of 95%
Radiated / Band Edge Emissions (1GHz~18GHz)	±1.9dB	Confidence levels of 95%
Radiated Emissions (18GHz~40GHz)	±1.9dB	Confidence levels of 95%
Temperature	±0.7°C	Confidence levels of 95%
Humidity	±3.2%	Confidence levels of 95%
DC / AC Power Source	±1.4%	Confidence levels of 95%

3. GENERAL INFORMATION

3.1. Product Details

Items	Description
Product Type	WLAN (1TX, 1RX)
Radio Type	Intentional Transceiver
Power Type	From host system
Modulation	IEEE 802.11b: DSSS; IEEE 802.11g: OFDM; IEEE 802.11n: see the below table
Data Modulation	IEEE 802.11b: DSSS (BPSK / QPSK / CCK) IEEE 802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	IEEE 802.11b: DSSS (1/ 2/ 5.5/11) IEEE 802.11g: OFDM (6/9/12/18/24/36/48/54) IEEE 802.11n: see the below table for IEEE 802.11n
Frequency Range	2400 ~ 2483.5MHz
Channel Number	IEEE 802.11b/g: 11 IEEE 802.11n: 11 for 20MHz bandwidth ; 7 for 40MHz bandwidth
Channel Band Width (99%)	For Ant. 1: 11n MCS0 (20MHz): 17.56 MHz ; 11n MCS0 (40MHz): 35.84 MHz 11b: 14.76 MHz ; 11g: 16.44 MHz For Ant. 2: 11n MCS0 (20MHz): 17.56 MHz ; 11n MCS0 (40MHz): 35.84 MHz 11b: 14.76 MHz ; 11g: 16.44 MHz
Conducted Output Power	For Ant. 1: 11n MCS0 (20MHz): 25.33 dBm ; 11n MCS0 (40MHz): 22.86 dBm 11b: 20.45 dBm ; 11g: 25.65 dBm For Ant. 2: 11n MCS0 (20MHz): 25.55 dBm ; 11n MCS0 (40MHz): 23.25 dBm 11b: 19.81 dBm ; 11g: 25.65 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

Antenna & Band width

Antenna	Single (TX)	
Band width Mode	20 MHz	40 MHz
IEEE 802.11b	V	X
IEEE 802.11g	V	X
IEEE 802.11n	V	V

IEEE 802.11n spec

MCS Index	Nss	Modulation	R	NBPSC	NCBPS		NDBPS		Datarate(Mbps)			
									800nsGI		400nsGI	
					20MHz	40MHz	20MHz	40MHz	20MHz	40MHz	20MHz	40MHz
0	1	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.200	15
1	1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.400	30
2	1	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.700	45
3	1	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.900	60
4	1	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.300	90
5	1	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.800	120
6	1	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.000	135
7	1	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.200	150
8	2	BPSK	1/2	1	104	216	52	108	13.0	27.0	14.444	30
9	2	QPSK	1/2	2	208	432	104	216	26.0	54.0	28.889	60
10	2	QPSK	3/4	2	208	432	156	324	39.0	81.0	43.333	90
11	2	16-QAM	1/2	4	416	864	208	432	52.0	108.0	57.778	120
12	2	16-QAM	3/4	4	416	864	312	648	78.0	162.0	86.667	180
13	2	64-QAM	2/3	6	624	1296	416	864	104.0	216.0	115.556	240
14	2	64-QAM	3/4	6	624	1296	468	972	117.0	243.0	130.000	270
15	2	64-QAM	5/6	6	624	1296	520	1080	130.0	270.0	144.444	300

Symbol	Explanation
NSS	Number of spatial streams
R	Code rate
NBPSC	Number of coded bits per single carrier
NCBPS	Number of coded bits per symbol
NDBPS	Number of data bits per symbol
GI	guard interval

3.2. Accessories

N/A

3.3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Remark
1	ACON	APP6P-700119	PIFA Antenna	I-PEX	3.5	TX/RX
2	JOYMAX	IWX-1451RSXX-999	Dipole Antenna	Reversed-SMA	3.7	TX/RX

Note 1: There are six configurations of EUT.

RT3290 V24 Configuration (The same homologation for 6 configuration)		Antenna connector	antenna diversity	Features
Config.1	Dual Path Dual Transmit, with SW reg, 2-con	2 con.	WLAN/Bluetooth	WLAN/Bluetooth antenna diversity, with RF switch. With DC power switch regulator, low power consumption
Config. 2	Dual Path Dual Transmit, without SW reg, 2-con	2 con.	WLAN/Bluetooth	WLAN/Bluetooth antenna diversity, with RF switch.. Without DC power switch regulator, without low power consumption
Config. 3	Dual Path Single Transmit , without SW reg, 2-con	2 con.	N/A	Without antenna diversity, one path for WLAN the other for BT. Without DC power switch regulator, without low power consumption
Config. 4	Dual Path Single Transmit; with SW reg, 2-con	2 con.	N/A	Without antenna diversity, one path for WLAN the other for BT. With DC power switch regulator, low power consumption
Config. 5	Single Path Dual Transmit; without SW reg, 1-con	1 con.	WLAN/Bluetooth	Single antenna for WLAN and Bluetooth use Without DC power switch regulator, without low power consumption
Config. 6	Single Path Dual Transmit; with SW reg, 1-con	1 con.	WLAN/Bluetooth	Single antenna for WLAN and Bluetooth use With DC power switch regulator, low power consumption

After pretest, Configuration 2 has been evaluated to be the worst case, so it was performed for RF test items in the report.

Note 2: The EUT has two types of antenna.

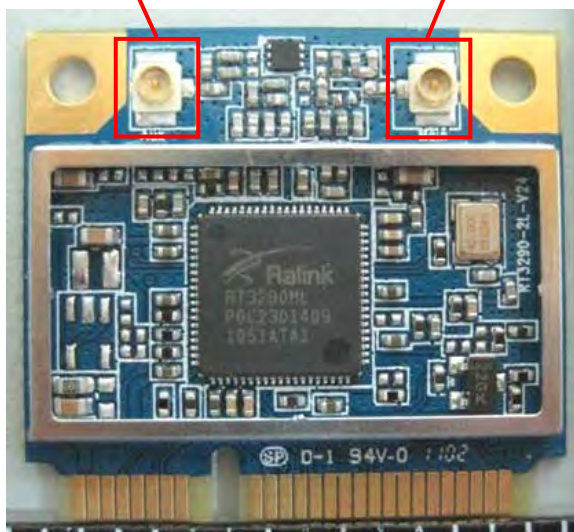
Both of Ant. 1 and Ant. 2 can be used as Bluetooth / WLAN antenna.

The EUT supports the antenna with TX/RX diversity function for WLAN and Bluetooth.

Due to Connector 2 generated higher output power than Connector 1, so all tests were base on this setting and recorded in this report.

Connector 2: TX/RX (AUX port)

Connector 1: TX/RX (Main port)



3.4. Table for Carrier Frequencies

There are two bandwidth systems for IEEE 802.11n.

For both 20MHz bandwidth systems, use Channel 1~Channel 11.

For both 40MHz bandwidth systems, use Channel 3~Channel 9.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400~2483.5MHz	1	2412 MHz	7	2442 MHz
	2	2417 MHz	8	2447 MHz
	3	2422 MHz	9	2452 MHz
	4	2427 MHz	10	2457 MHz
	5	2432 MHz	11	2462 MHz
	6	2437 MHz	-	-

3.5. Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Channel	Connector
AC Power Line Conducted Emissions	Normal Link	-	-	-
Peak Output Power	MCS0/20MHz	6.5 Mbps	1/6/11	2
	MCS0/40MHz	13.5 Mbps	3/6/9	2
	11b/BPSK	1 Mbps	1/6/11	2
	11g/BPSK	6 Mbps	1/6/11	2
Power Spectral Density 6dB Spectrum Bandwidth	MCS0/20MHz	6.5 Mbps	1/6/11	2
	MCS0/40MHz	13.5 Mbps	3/6/9	2
	11b/BPSK	1 Mbps	1/6/11	2
	11g/BPSK	6 Mbps	1/6/11	2
Radiated Emissions 9kHz~1GHz	Normal Link	-	-	-
Radiated Emissions 1GHz~10 th Harmonic	MCS0/20MHz	6.5 Mbps	1/6/11	2
	MCS0/40MHz	13.5 Mbps	3/6/9	2
	11b/BPSK	1 Mbps	1/6/11	2
	11g/BPSK	6 Mbps	1/6/11	2
Band Edge Emissions	MCS0/20MHz	6.5 Mbps	1/11	2
	MCS0/40MHz	13.5 Mbps	3/9	2
	11b/BPSK	1 Mbps	1/11	2
	11g/BPSK	6 Mbps	1/11	2

The following test modes were performed for all tests:

For Conducted Emission test:

The EUT was performed at Ant. 1 (PIFA antenna) and Ant. 2 (Dipole antenna) and the worst-case was found at Ant. 2 (Dipole antenna), thus measurement will follow this same test mode.

Mode 1. Configuration 1. DPDT type → Two Antenna Ports → Bluetooth / WLAN Diversity (With Power Switch)

Mode 2. Configuration 3. Fixed type → Two Antenna Ports → Main port is only for WLAN function; Aux port is only for Bluetooth function. (With power switch)

Mode 3. Configuration 5. SPDT type → One Antenna Port → Bluetooth / WLAN Function control by User (With power switch)

Mode 3 has been evaluated to be the worst case, thus measurement will follow this same test mode.

Mode 4. Configuration 6. SPDT type → One Antenna Port → Bluetooth / WLAN Function control by

User (Without power switch)

Due to Mode 3 generated the worst test result, so it was recorded in this report.

Mode 3 was performed for WLAN function and Bluetooth function and the worst-case was found at WLAN function, so it was recorded in the report.

Note: The different types of antenna will not affect the test result of Conducted Emission test.

For Radiated Emission test below 1GHz:

Mode 1. Configuration 1. DPDT type → Two Antenna Ports → Bluetooth / WLAN Diversity (With Power Switch)

Mode 2. Configuration 3. Fixed type → Two Antenna Ports → Main port is only for WLAN function; Aux port is only for Bluetooth function. (With power switch)

Mode 3. Configuration 5. SPDT type → One Antenna Port → Bluetooth / WLAN Function control by User (With power switch)

Mode 1 has been evaluated to be the worst case, thus measurement will follow this same test mode.

Mode 4. Configuration 2. DPDT type → Two Antenna Ports → Bluetooth / WLAN Diversity (Without Power Switch)

Due to Mode 1 generated the worst test result, so it was performed at Ant. 1 (PIFA antenna) / Ant. 2 (Dipole antenna) and recorded in this report.

For Radiated Emission test above 1GHz:

Mode 1. Configuration 1. DPDT type → Two Antenna Ports → Bluetooth / WLAN Diversity (With Power Switch)

Mode 2. Configuration 2. DPDT type → Two Antenna Ports → Bluetooth / WLAN Diversity (Without Power Switch)

Mode 3. Configuration 3. Fixed type → Two Antenna Ports → Main port is only for WLAN function; Aux port is only for Bluetooth function. (With power switch)

Mode 4. Configuration 4. Fixed type → Two Antenna Ports → Main port is only for WLAN function; Aux port is only for Bluetooth function. (Without power switch)

Mode 5. Configuration 5. SPDT type → One Antenna Port → Bluetooth / WLAN Function control by User (With power switch)

Mode 6. Configuration 6. SPDT type → One Antenna Port → Bluetooth / WLAN Function control by User (Without power switch)

After pretest, Mode 2 has been evaluated to be the worst case, so it was recorded in the report.

For other modes, only middle channel has been tested and recorded in the report.

<For MPE and Co-location Test>:

The EUT could be applied with WLAN and Bluetooth function; therefore Maximum Permissible Exposure (Please refer to Appendix C) and Co-location (please refer to Appendix D) tests are added for simultaneously transmit between Bluetooth and wireless LAN function.

3.6. Table for Testing Locations

Test Site No.	Site Category	Location	FCC Reg. No.	IC File No.	VCCI Reg. No
03CH01-CB	SAC	Hsin Chu	187376	IC 4086D	-
CO01-CB	Conduction	Hsin Chu	187376	IC 4086D	-
TH01-CB	OVEN Room	Hsin Chu	-	-	-

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC); Fully Anechoic Chamber (FAC).

Please refer section 6 for Test Site Address.

3.7. Table for Supporting Units

Support Unit	Brand	Model	FCC ID
Notebook	DELL	M1330	E2KWM3945ABG
Modem	ACEEX	DM1414	IFAXDM1414
Mouse	FIRST PRICE	FP-M02	DoC
Wireless AP	Planex	GW-AP54SGX	N/A
Notebook	DELL	D400	E2K24GBRL

3.8. Table for Parameters of Test Software Setting

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

<Configuration 2 with Ant. 1 (PIFA Antenna)>

Power Parameters of IEEE 802.11n

Test Software Version	QA 1.0.1.3		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11n MCS0 20MHz	1F	27	1F
Frequency	2422 MHz	2437 MHz	2452 MHz
IEEE 802.11n MCS0 40MHz	1B	1D	18

Power Parameters of IEEE 802.11b/g

Test Software Version	QA 1.0.1.3		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	1C	1E	1C
IEEE 802.11g	23	27	1D

<Configuration 2 with Ant. 2 (Dipole Antenna)>

Power Parameters of IEEE 802.11n

Test Software Version	QA 1.0.1.3		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11n MCS0 20MHz	1D	27	1E
Frequency	2422 MHz	2437 MHz	2452 MHz
IEEE 802.11n MCS0 40MHz	15	1E	17

Power Parameters of IEEE 802.11b/g

Test Software Version	QA 1.0.1.3		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	1A	1B	1D
IEEE 802.11g	21	27	1F

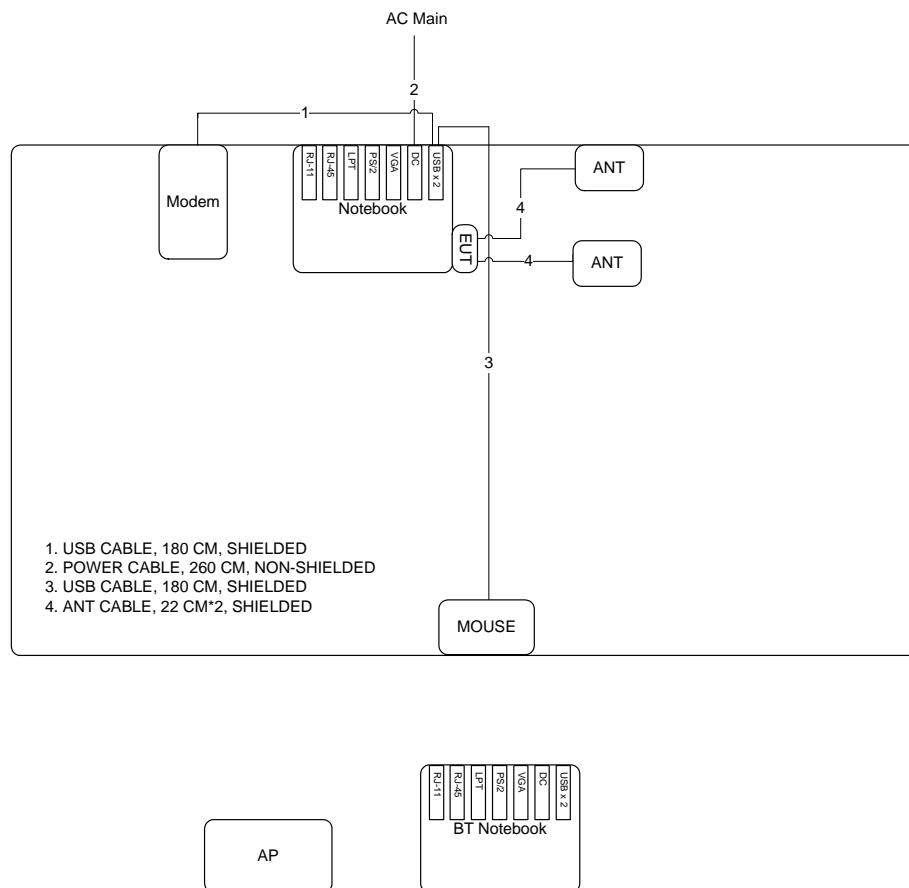
During the test, "QA 1.0.1.3" under WIN XP was executed the test program to control the EUT continuously transmit RF signal.

3.9. Test Configurations

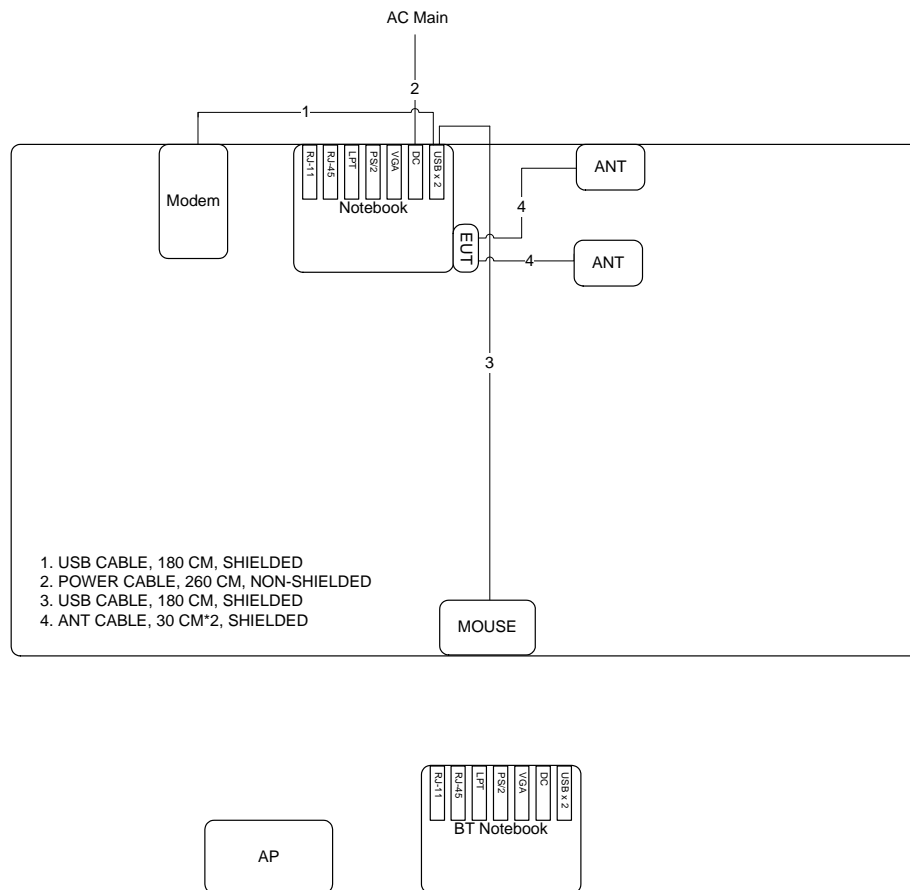
3.9.1. Radiation Emissions Test Configuration

Test Configuration: 30MHz~1GHz

Test Mode: Mode 1 with Ant. 1 (PIFA Antenna)

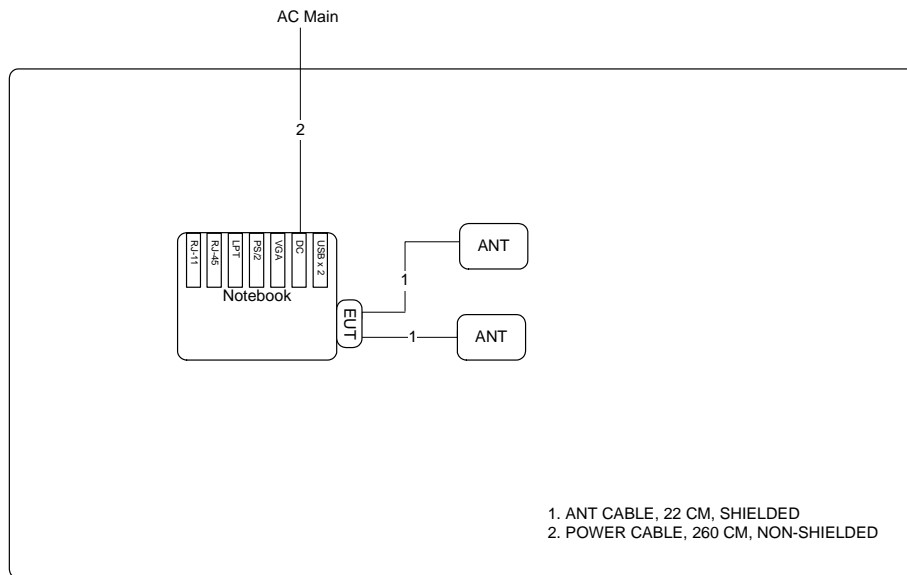


Test Mode: Mode 1 with Ant. 2 (Dipole Antenna)

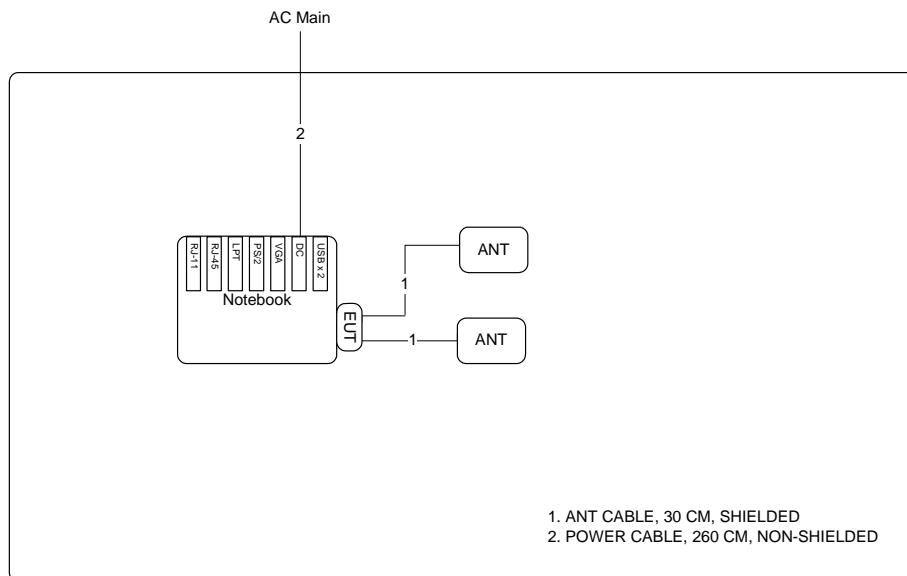


Test Configuration: above 1GHz

<Configuration 2 with Ant. 1 (PIFA Antenna)>

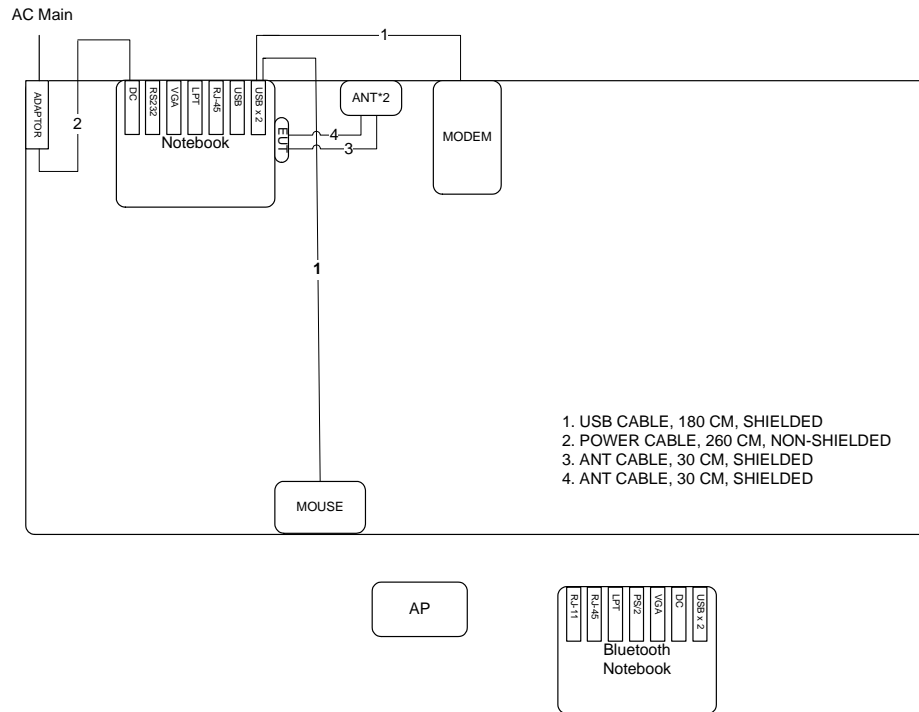


<Configuration 2 with Ant. 2 (Dipole Antenna)>



3.9.2. AC Power Line Conduction Emissions Test Configuration

Test Mode: Mode 3



4. TEST RESULT

4.1. AC Power Line Conducted Emissions Measurement

4.1.1. Limit

For this product which is designed to be connected to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

4.1.2. Measuring Instruments and Setting

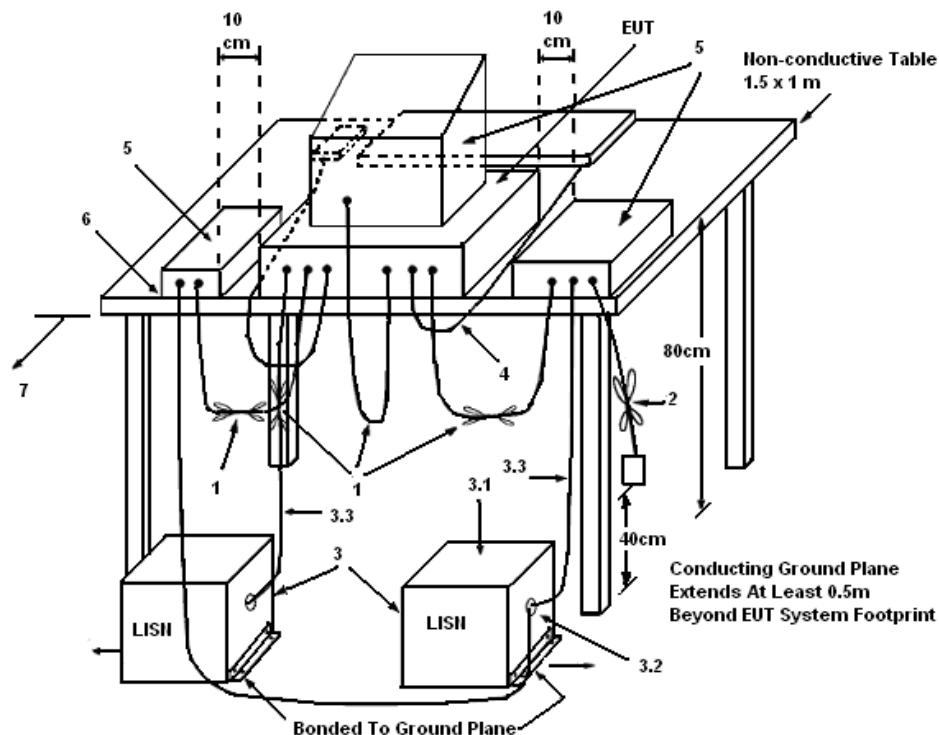
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

4.1.3. Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 KHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

4.1.4. Test Setup Layout



LEGEND:

- (1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- (2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- (3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω . LISN can be placed on top of, or immediately beneath, reference ground plane.
- (3.1) All other equipment powered from additional LISN(s).
- (3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.
- (3.3) LISN at least 80 cm from nearest part of EUT chassis.
- (4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.
- (5) Non-EUT components of EUT system being tested.
- (6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.
- (7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

4.1.5. Test Deviation

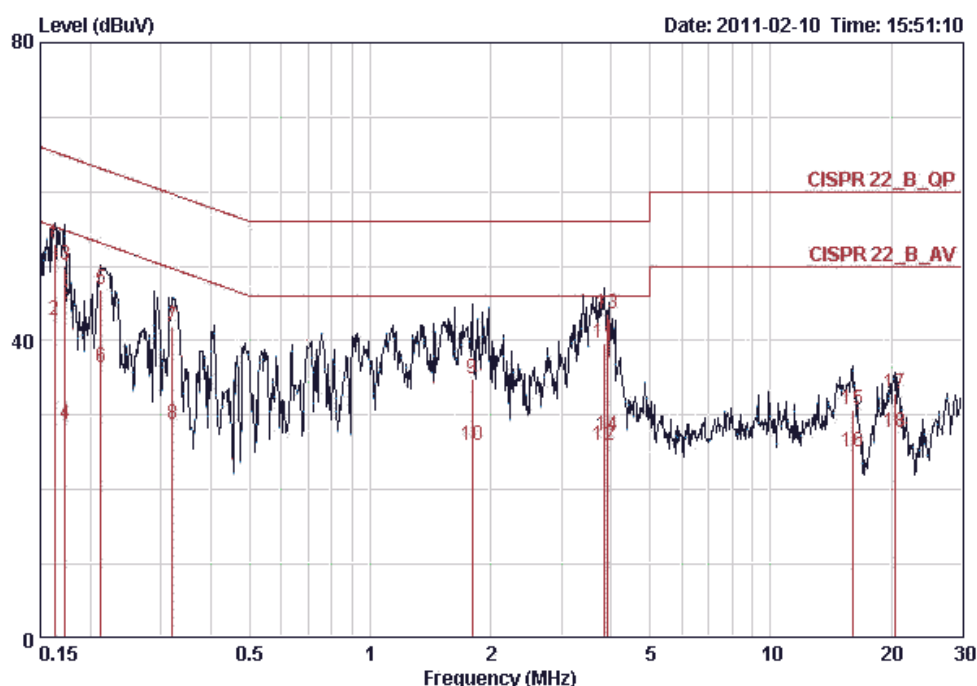
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

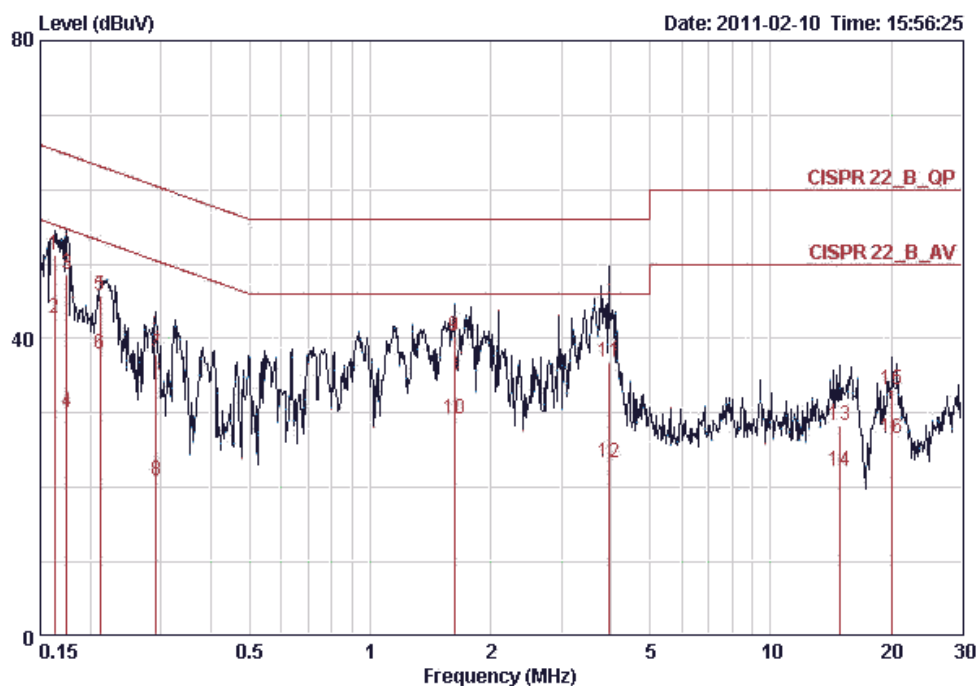
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	21°C	Humidity	61%
Test Engineer	Peter Wu	Phase	Line
Configuration	WLAN	Test Mode	Mode 3



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.16241	52.96	-12.38	65.34	52.69	0.07	0.20	QP
2	0.16241	42.73	-12.61	55.34	42.46	0.07	0.20	AVERAGE
3	0.17307	50.04	-14.77	64.81	49.78	0.06	0.20	QP
4	0.17307	28.69	-26.12	54.81	28.43	0.06	0.20	AVERAGE
5	0.21279	46.79	-16.31	63.10	46.54	0.05	0.20	QP
6	0.21279	36.51	-16.59	53.10	36.26	0.05	0.20	AVERAGE
7	0.31999	41.94	-17.77	59.71	41.70	0.04	0.20	QP
8	0.31999	28.69	-21.02	49.71	28.45	0.04	0.20	AVERAGE
9	1.800	34.91	-21.09	56.00	34.70	0.05	0.16	QP
10	1.800	26.01	-19.99	46.00	25.80	0.05	0.16	AVERAGE
11	3.840	39.62	-16.38	56.00	39.22	0.10	0.30	QP
12	3.840	26.04	-19.96	46.00	25.64	0.10	0.30	AVERAGE
13	3.927	43.62	-12.38	56.00	43.22	0.10	0.30	QP
14	3.927	27.25	-18.75	46.00	26.85	0.10	0.30	AVERAGE
15	15.970	30.75	-29.25	60.00	29.74	0.61	0.40	QP
16	15.970	25.04	-24.96	50.00	24.03	0.61	0.40	AVERAGE
17	20.377	33.02	-26.98	60.00	31.67	0.85	0.50	QP
18	20.377	27.69	-22.31	50.00	26.34	0.85	0.50	AVERAGE

Temperature	21°C	Humidity	61%
Test Engineer	Peter Wu	Phase	Neutral
Configuration	WLAN	Test Mode	Mode 3



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.16241	51.15	-14.19	65.34	50.85	0.10	0.20	QP
2	0.16241	42.63	-12.71	55.34	42.33	0.10	0.20	AVERAGE
3	0.17491	48.67	-16.05	64.72	48.38	0.09	0.20	QP
4	0.17491	30.16	-24.56	54.72	29.87	0.09	0.20	AVERAGE
5	0.21167	45.73	-17.41	63.14	45.45	0.08	0.20	QP
6	0.21167	37.98	-15.16	53.14	37.70	0.08	0.20	AVERAGE
7	0.29243	37.87	-22.58	60.46	37.60	0.07	0.20	QP
8	0.29243	20.87	-29.58	50.46	20.60	0.07	0.20	AVERAGE
9	1.619	40.38	-15.62	56.00	40.17	0.08	0.13	QP
10	1.619	29.14	-16.86	46.00	28.93	0.08	0.13	AVERAGE
11	3.943	36.82	-19.18	56.00	36.38	0.14	0.30	QP
12	3.943	23.33	-22.67	46.00	22.89	0.14	0.30	AVERAGE
13	14.828	28.30	-31.70	60.00	27.33	0.57	0.40	QP
14	14.828	22.30	-27.70	50.00	21.33	0.57	0.40	AVERAGE
15	20.162	33.22	-26.78	60.00	31.91	0.81	0.50	QP
16	20.162	26.50	-23.50	50.00	25.19	0.81	0.50	AVERAGE

Note: Level = Read Level + LISN Factor + Cable Loss.

4.2. Peak Output Power Measurement

4.2.1. Limit

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. The limited has to be reduced by the amount in dB that the gain of the antenna exceed 6dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

4.2.2. Measuring Instruments and Setting

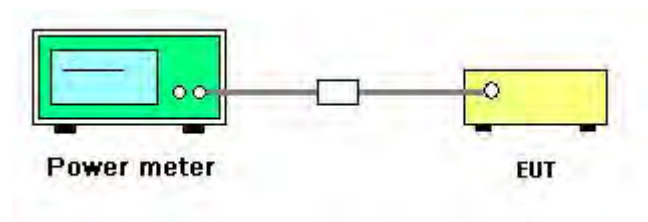
Please refer to section 5 of equipments list in this report. The following table is the setting of the peak power meter.

Power Meter Parameter	Setting
Bandwidth	50MHz bandwidth is greater than the EUT emission bandwidth
Detector	Peak

4.2.3. Test Procedures

Spectrum Parameter	Setting
RF Output Power Method	<input checked="" type="checkbox"/> ANSI C63.10 clause 6.10.2.1 (a) power meter method
RF Output Power Method	<input type="checkbox"/> ANSI C63.10 clause 6.10.2.1 (b) channel integration method
RF Output Power Method	<input type="checkbox"/> ANSI C63.10 clause 6.10.3.1 Method 1 - spectral trace averaging
RF Output Power Method	<input type="checkbox"/> ANSI C63.10 clause 6.10.3.2 Method 2 - zero-span mode with trace averaging

4.2.4. Test Setup Layout



4.2.5. Test Deviation

There is no deviation with the original standard.

4.2.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.2.7. Test Result of Peak Output Power

<Configuration 2 with Ant. 1 (PIFA Antenna)>

Temperature	25°C	Humidity	63%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n / Ant. 1
Test Date	Feb. 17, 2011		

Configuration IEEE 802.11n MCS0 20MHz Connector 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	24.98	30.00	Complies
6	2437 MHz	25.33	30.00	Complies
11	2462 MHz	22.99	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Connector 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
3	2422 MHz	22.86	30.00	Complies
6	2437 MHz	22.73	30.00	Complies
9	2452 MHz	20.75	30.00	Complies

Temperature	25°C	Humidity	63%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b/g / Ant. 1
Test Date	Feb. 17, 2011		

Configuration IEEE 802.11b Connector 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	20.33	30.00	Complies
6	2437 MHz	20.45	30.00	Complies
11	2462 MHz	19.00	30.00	Complies

Configuration IEEE 802.11g Connector 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	25.48	30.00	Complies
6	2437 MHz	25.65	30.00	Complies
11	2462 MHz	23.38	30.00	Complies

<Configuration 2 with Ant. 2 (Dipole Antenna)>

Temperature	25°C	Humidity	63%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n / Ant. 2
Test Date	Feb. 17, 2011		

Configuration IEEE 802.11n MCS0 20MHz Connector 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	24.05	30.00	Complies
6	2437 MHz	25.55	30.00	Complies
11	2462 MHz	23.80	30.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Connector 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
3	2422 MHz	20.45	30.00	Complies
6	2437 MHz	23.25	30.00	Complies
9	2452 MHz	20.85	30.00	Complies

Temperature	25°C	Humidity	63%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b/g / Ant. 2
Test Date	Feb. 17, 2011		

Configuration IEEE 802.11b Connector 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	19.81	30.00	Complies
6	2437 MHz	19.65	30.00	Complies
11	2462 MHz	19.67	30.00	Complies

Configuration IEEE 802.11g Connector 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	25.55	30.00	Complies
6	2437 MHz	25.65	30.00	Complies
11	2462 MHz	24.03	30.00	Complies

4.3. Power Spectral Density Measurement

4.3.1. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

4.3.2. Measuring Instruments and Setting

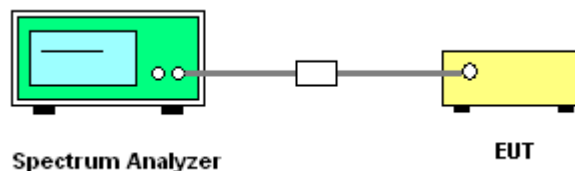
Please refer to section 5 of equipments list in this report. The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	30 kHz
RB	3 kHz
VB	30 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	10s

4.3.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Set RBW of spectrum analyzer to 3kHz and VBW to 30kHz. Set Detector to Peak, Trace to Max Hold.
3. Mark the frequency with maximum peak power as the center of the display of the spectrum.
4. Set the span to 30kHz and the sweep time to 10s and record the maximum peak value.

4.3.4. Test Setup Layout



4.3.5. Test Deviation

There is no deviation with the original standard.

4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.3.7. Test Result of Power Spectral Density

<Configuration 2 with Ant. 1 (PIFA Antenna)>

Temperature	25°C	Humidity	63%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n / Ant. 1

Configuration IEEE 802.11n MCS0 20MHz Connector 2

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-9.68	8.00	Complies
6	2437 MHz	-7.78	8.00	Complies
11	2462 MHz	-10.75	8.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Connector 2

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
3	2422 MHz	-12.13	8.00	Complies
6	2437 MHz	-10.75	8.00	Complies
9	2452 MHz	-12.54	8.00	Complies

Temperature	25°C	Humidity	63%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b/g / Ant. 1

Configuration IEEE 802.11b Connector 2

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-11.09	8.00	Complies
6	2437 MHz	-11.67	8.00	Complies
11	2462 MHz	-12.23	8.00	Complies

Configuration IEEE 802.11g Connector 2

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-8.64	8.00	Complies
6	2437 MHz	-7.67	8.00	Complies
11	2462 MHz	-10.77	8.00	Complies

Note: All the test values were listed in the report.

For plots, only the worse case of DSSS and OFDM modulation were listed in the report.

<Configuration 2 with Ant. 2 (Dipole Antenna)>

Temperature	25°C	Humidity	63%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n / Ant. 2

Configuration IEEE 802.11n MCS0 20MHz Connector 2

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-9.87	8.00	Complies
6	2437 MHz	-7.78	8.00	Complies
11	2462 MHz	-10.68	8.00	Complies

Configuration IEEE 802.11n MCS0 40MHz Connector 2

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
3	2422 MHz	-13.52	8.00	Complies
6	2437 MHz	-10.67	8.00	Complies
9	2452 MHz	-14.02	8.00	Complies

Temperature	25°C	Humidity	63%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b/g / Ant. 2

Configuration IEEE 802.11b Connector 2

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-12.56	8.00	Complies
6	2437 MHz	-13.13	8.00	Complies
11	2462 MHz	-12.39	8.00	Complies

Configuration IEEE 802.11g Connector 2

Channel	Frequency	Power Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
1	2412 MHz	-8.59	8.00	Complies
6	2437 MHz	-7.67	8.00	Complies
11	2462 MHz	-10.74	8.00	Complies

Note: All the test values were listed in the report.

For plots, only the worse case of DSSS and OFDM modulation were listed in the report.

<Configuration 2 with Ant. 1 (PIFA Antenna)>

Power Density Plot on Configuration IEEE 802.11b Connector 2 / Ant. 1 / 2412 MHz



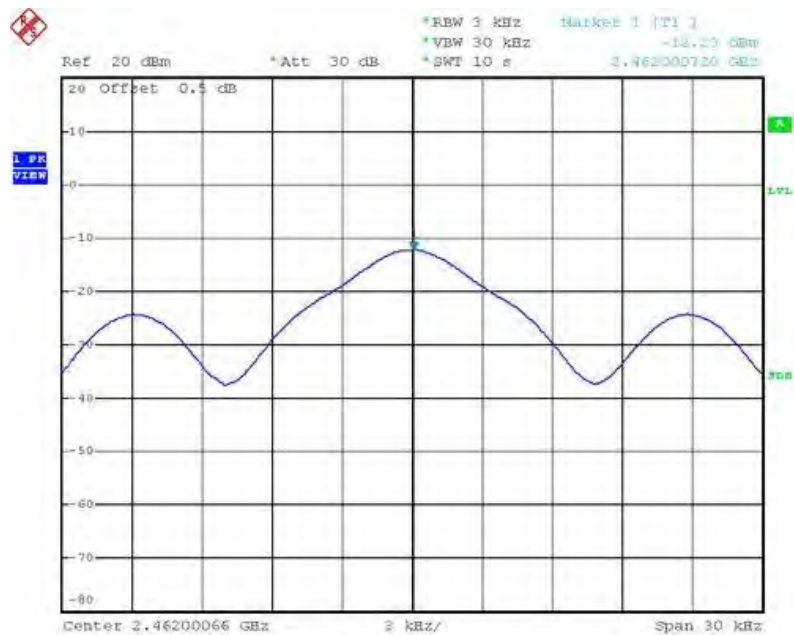
Date: 17.FEB.2011 14:40:13

Power Density Plot on Configuration IEEE 802.11b Connector 2 / Ant. 1 / 2437 MHz



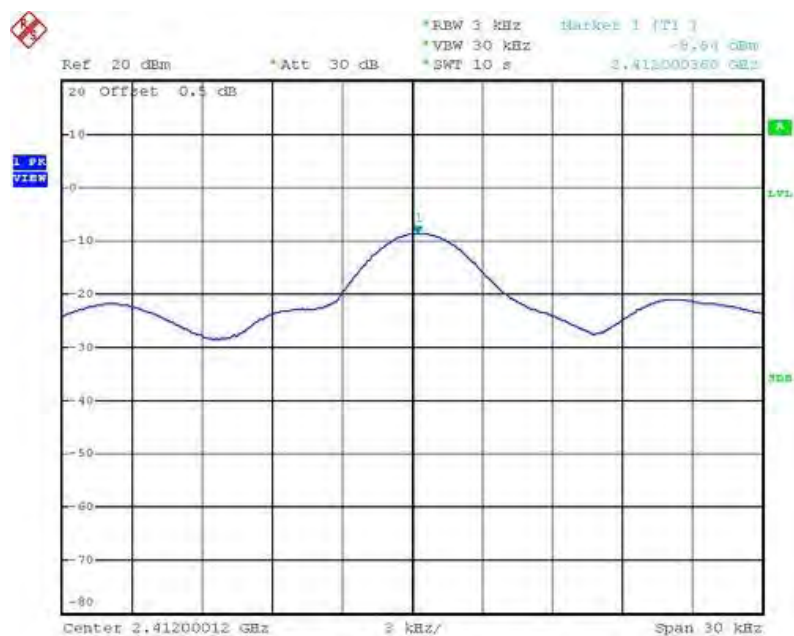
Date: 17.FEB.2011 14:42:27

Power Density Plot on Configuration IEEE 802.11b Connector 2 / Ant. 1 / 2462 MHz



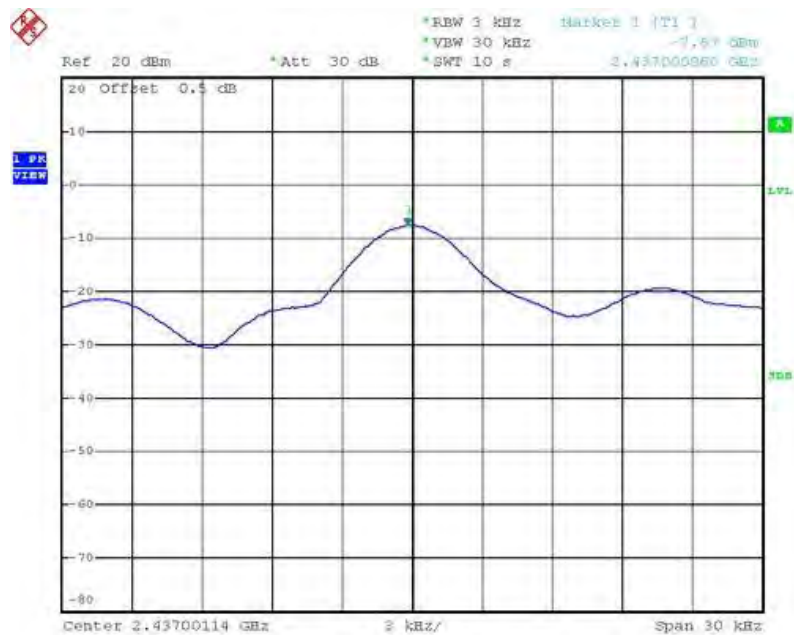
Date: 17.FEB.2011 14:48:45

Power Density Plot on Configuration IEEE 802.11g Connector 2 / Ant. 1 / 2412 MHz



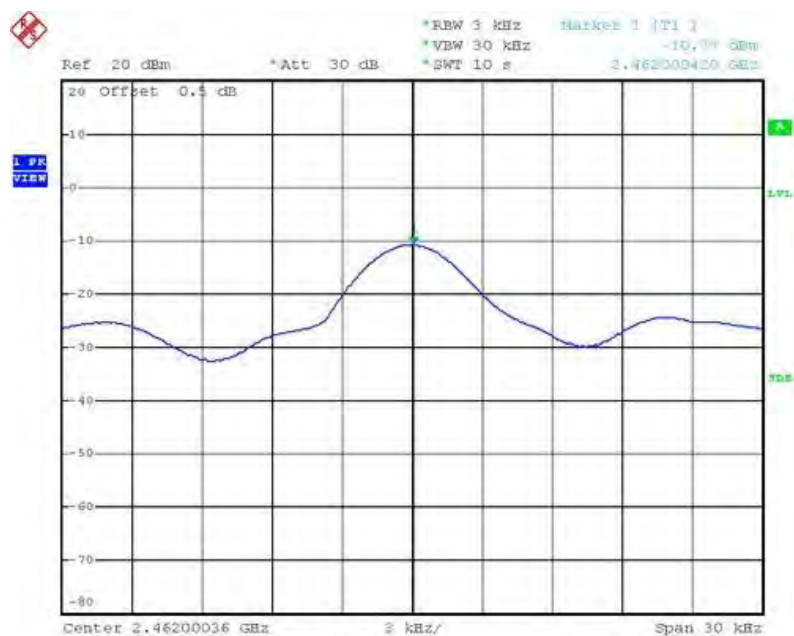
Date: 17.FEB.2011 14:51:11

Power Density Plot on Configuration IEEE 802.11g Connector 2 / Ant. 1 / 2437 MHz



Date: 17.FEB.2011 14:56:59

Power Density Plot on Configuration IEEE 802.11g Connector 2 / Ant. 1 / 2462 MHz



Date: 17.FEB.2011 15:03:19

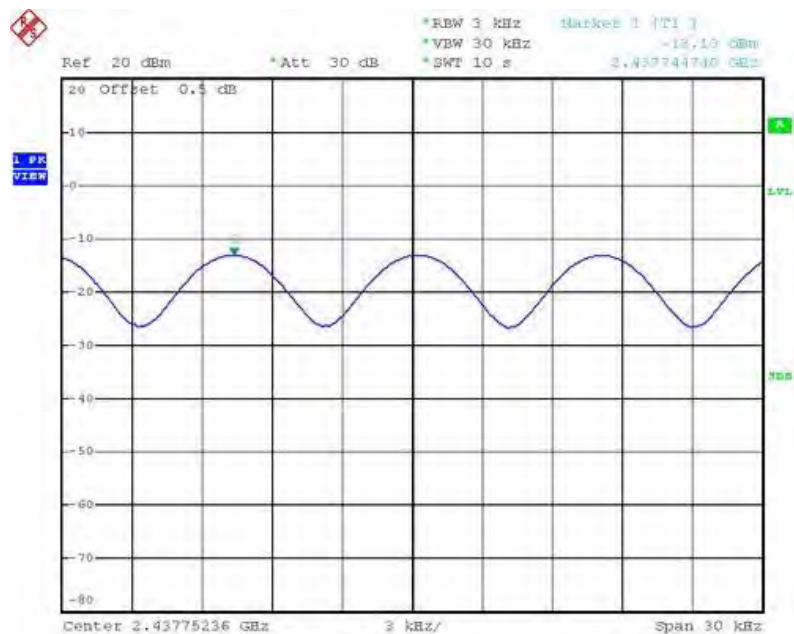
<Configuration 2 with Ant. 2 (Dipole Antenna)>

Power Density Plot on Configuration IEEE 802.11b Connector 2 / Ant. 2 / 2412 MHz



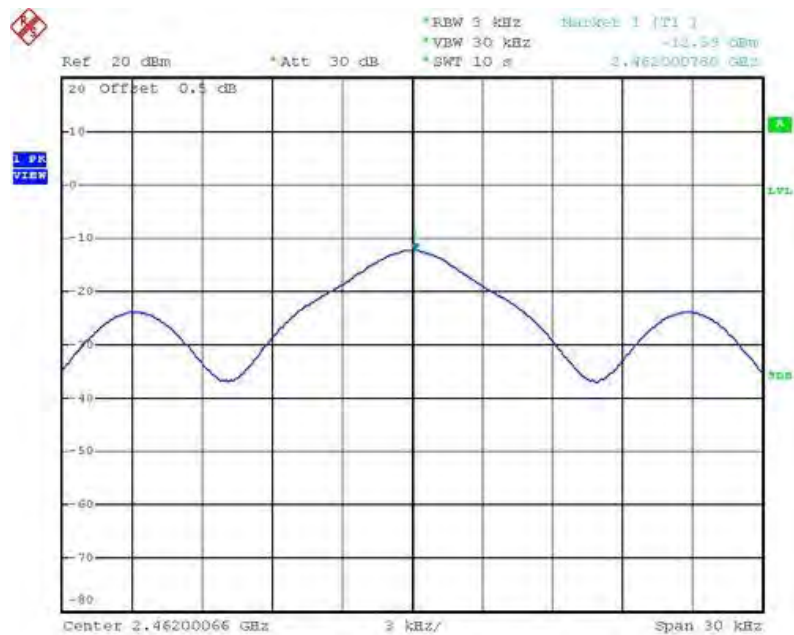
Date: 17.FEB.2011 14:37:58

Power Density Plot on Configuration IEEE 802.11b Connector 2 / Ant. 2 / 2437 MHz



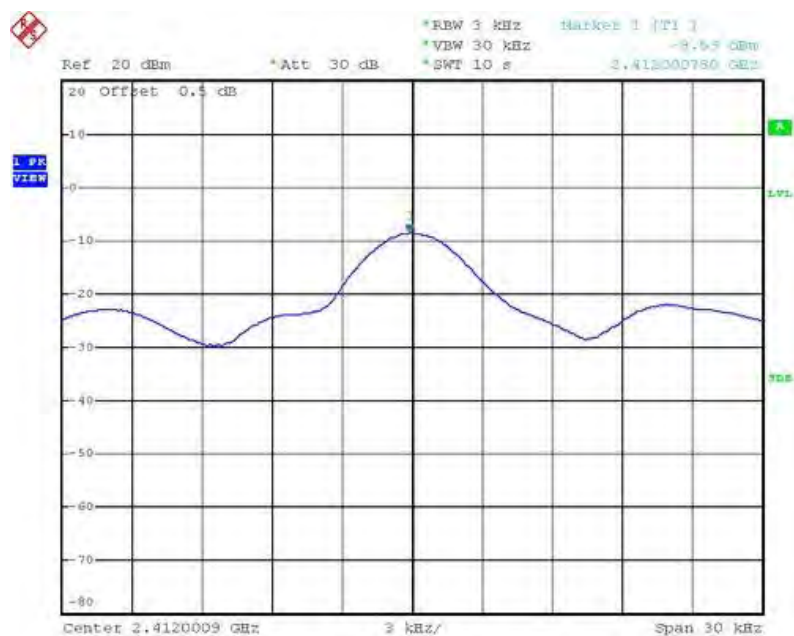
Date: 17.FEB.2011 14:44:42

Power Density Plot on Configuration IEEE 802.11b Connector 2 / Ant. 2 / 2462 MHz



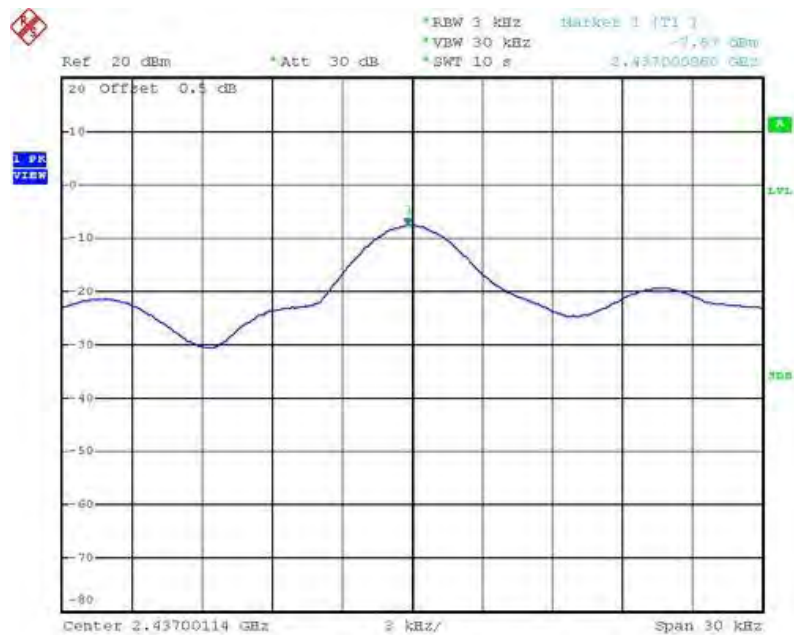
Date: 17.FEB.2011 14:46:43

Power Density Plot on Configuration IEEE 802.11g Connector 2 / Ant. 2 / 2412 MHz



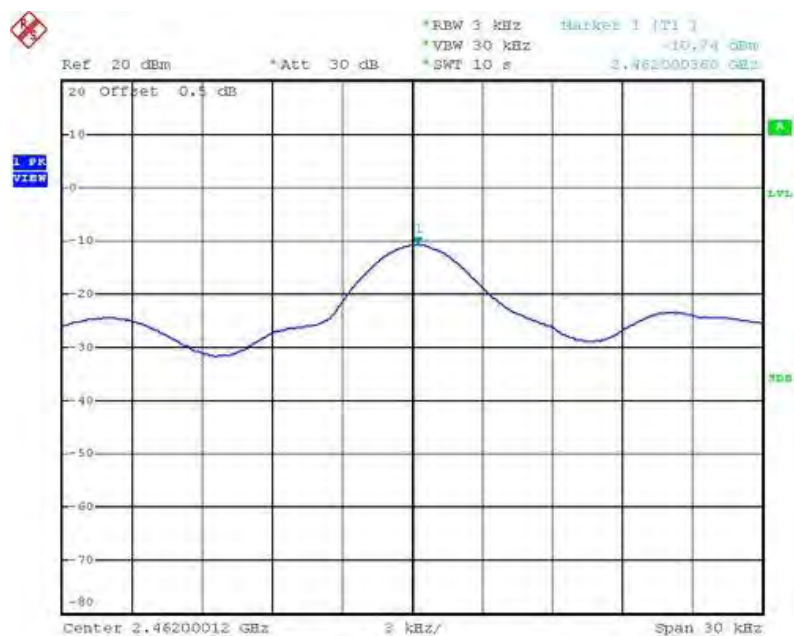
Date: 17.FEB.2011 14:53:53

Power Density Plot on Configuration IEEE 802.11g Connector 2 / Ant. 2 / 2437 MHz



Date: 17.FEB.2011 14:56:59

Power Density Plot on Configuration IEEE 802.11g Connector 2 / Ant. 2 / 2462 MHz



Date: 17.FEB.2011 15:01:00

4.4. 6dB Spectrum Bandwidth Measurement

4.4.1. Limit

For digital modulation systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

4.4.2. Measuring Instruments and Setting

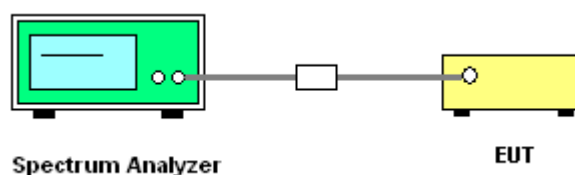
Please refer to section 5 of equipments list in this report. The following table is the setting of the Spectrum Analyzer.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 6dB Bandwidth
RB	100 kHz
VB	100 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.4.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer in peak hold mode.
2. The resolution bandwidth of 100 kHz and the video bandwidth of 100 kHz were used.
3. Measured the spectrum width with power higher than 6dB below carrier.

4.4.4. Test Setup Layout



4.4.5. Test Deviation

There is no deviation with the original standard.

4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.4.7. Test Result of 6dB Spectrum Bandwidth

<Configuration 2 with Ant. 1 (PIFA Antenna)>

Temperature	25°C	Humidity	62%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n / Ant. 1

Configuration IEEE 802.11n MCS0 20MHz Connector 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.64	17.56	500	Complies
6	2437 MHz	17.60	17.56	500	Complies
11	2462 MHz	17.60	17.52	500	Complies

Configuration IEEE 802.11n MCS0 40MHz Connector 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	36.32	35.84	500	Complies
6	2437 MHz	36.32	35.76	500	Complies
9	2452 MHz	36.08	35.84	500	Complies

Temperature	25°C	Humidity	63%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b/g / Ant. 1

Configuration IEEE 802.11b Connector 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	12.08	14.76	500	Complies
6	2437 MHz	12.08	14.76	500	Complies
11	2462 MHz	12.08	14.68	500	Complies

Configuration IEEE 802.11g Connector 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.48	16.40	500	Complies
6	2437 MHz	16.40	16.44	500	Complies
11	2462 MHz	16.48	16.44	500	Complies

Note: All the test values were listed in the report.

For plots, only the worse case of DSSS and OFDM modulation were listed in the report.

<Configuration 2 with Ant. 2 (Dipole Antenna)>

Temperature	25°C	Humidity	62%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n / Ant. 2

Configuration IEEE 802.11n MCS0 20MHz Connector 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	17.60	17.56	500	Complies
6	2437 MHz	17.60	17.56	500	Complies
11	2462 MHz	17.60	17.52	500	Complies

Configuration IEEE 802.11n MCS0 40MHz Connector 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
3	2422 MHz	36.08	35.84	500	Complies
6	2437 MHz	36.32	35.84	500	Complies
9	2452 MHz	36.08	35.84	500	Complies

Temperature	25°C	Humidity	63%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11b/g / Ant. 2

Configuration IEEE 802.11b Connector 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	12.08	14.76	500	Complies
6	2437 MHz	12.12	14.68	500	Complies
11	2462 MHz	12.08	14.68	500	Complies

Configuration IEEE 802.11g Connector 2

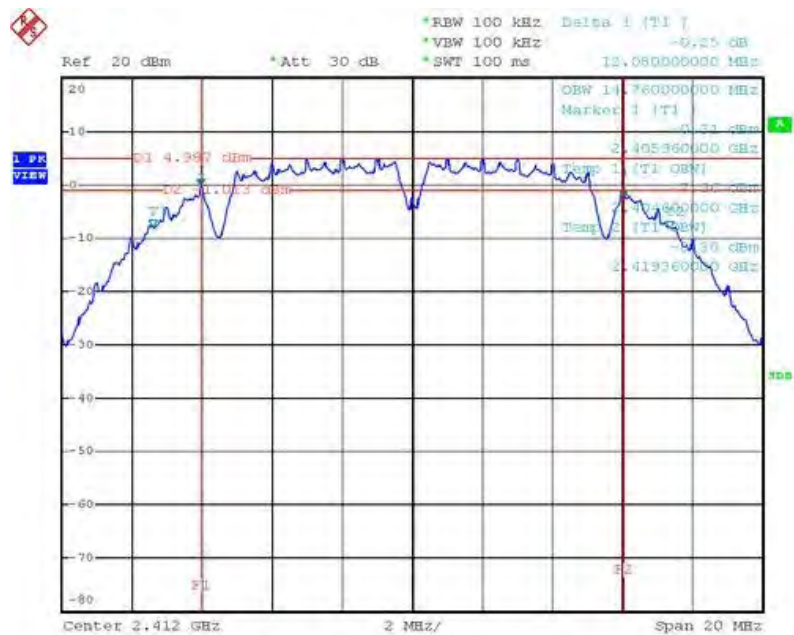
Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.52	16.40	500	Complies
6	2437 MHz	16.40	16.44	500	Complies
11	2462 MHz	16.48	16.44	500	Complies

Note: All the test values were listed in the report.

For plots, only the worse case of DSSS and OFDM modulation were listed in the report.

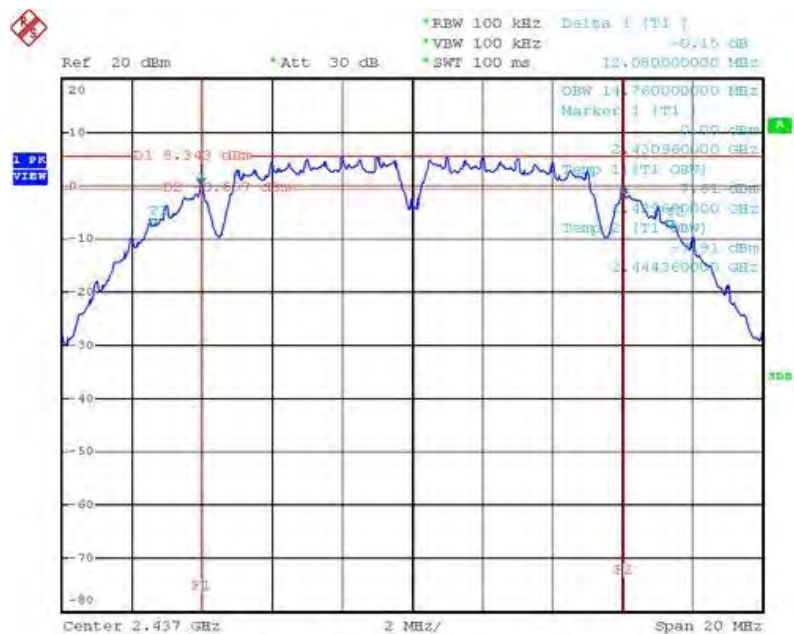
<Configuration 2 with Ant. 1 (PIFA Antenna)>

6 dB Bandwidth Plot on Configuration IEEE 802.11b Connector 2 / Ant. 1 / 2412 MHz



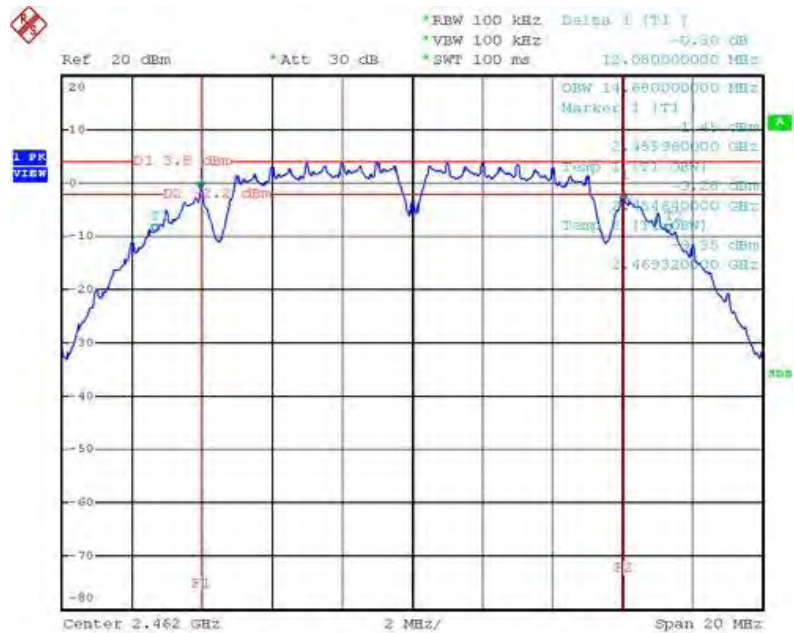
Date: 17.FEB.2011 14:38:44

6 dB Bandwidth Plot on Configuration IEEE 802.11b Connector 2 / Ant. 1 / 2437 MHz



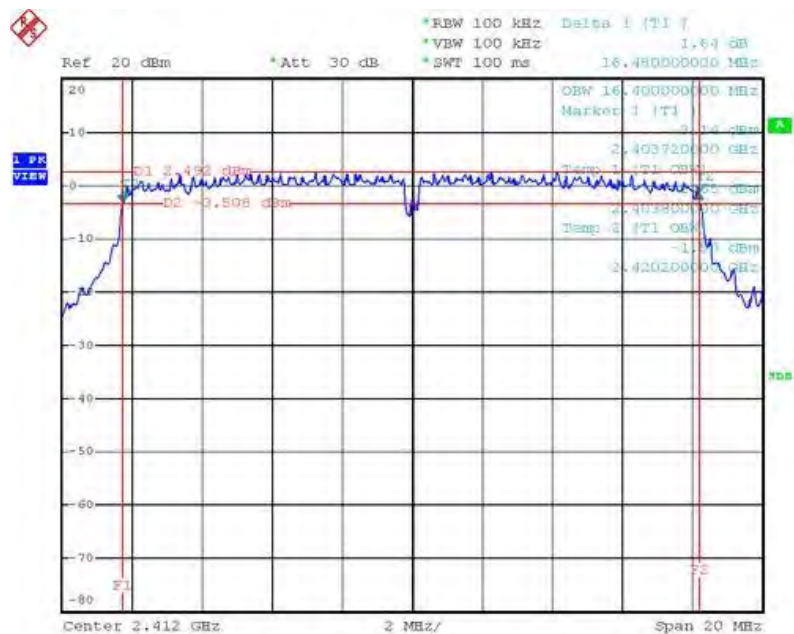
Date: 17.FEB.2011 14:40:56

6 dB Bandwidth Plot on Configuration IEEE 802.11b Connector 2 / Ant. 1 / 2462 MHz



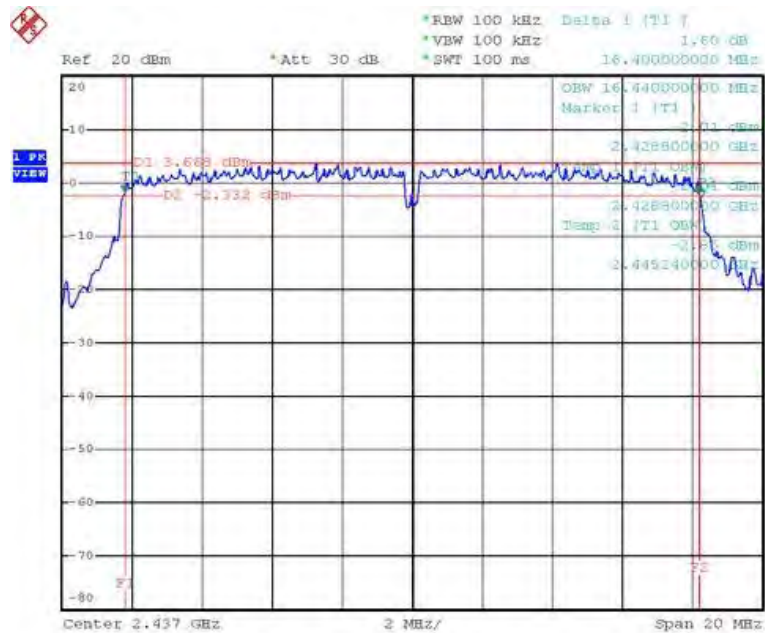
Date: 17.FEB.2011 14:47:15

6 dB Bandwidth Plot on Configuration IEEE 802.11g Connector 2 / Ant. 1 / 2412 MHz



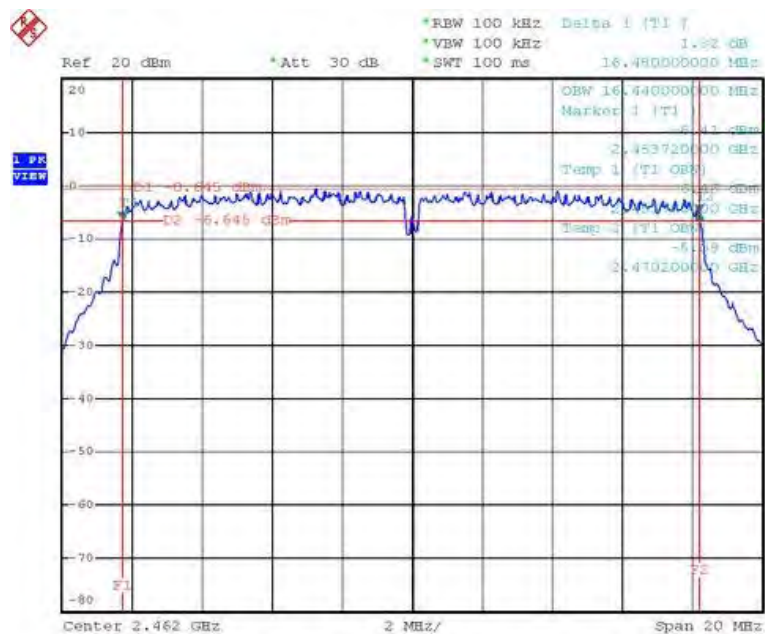
Date: 17.FEB.2011 14:49:42

6 dB Bandwidth Plot on Configuration IEEE 802.11g Connector 2 / Ant. 1 / 2437 MHz



Date: 17.FEB.2011 14:55:28

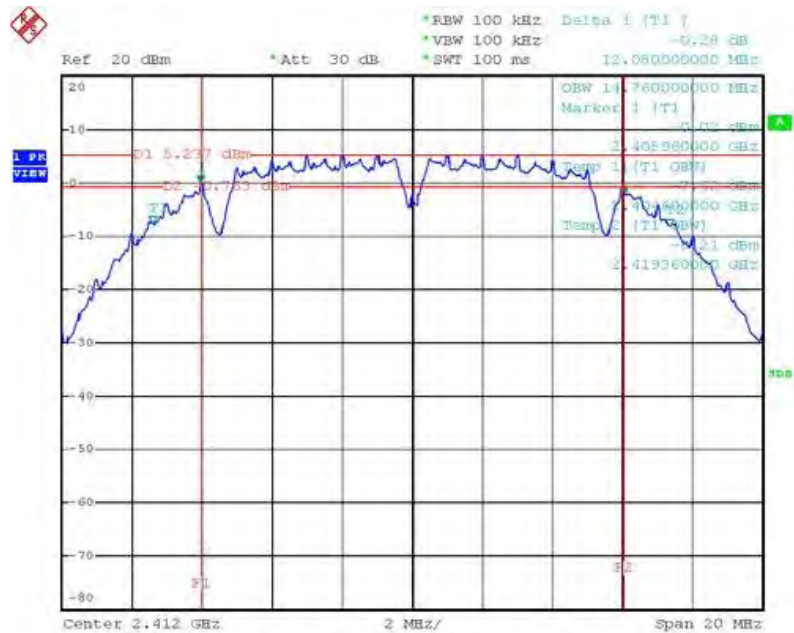
6 dB Bandwidth Plot on Configuration IEEE 802.11g Connector 2 / Ant. 1 / 2462 MHz



Date: 17.FEB.2011 15:01:49

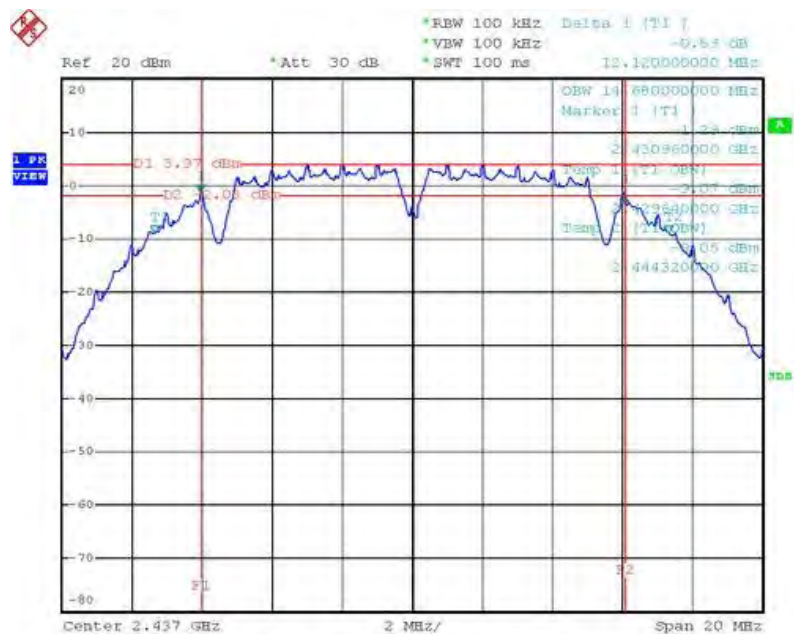
<Configuration 2 with Ant. 2 (Dipole Antenna)>

6 dB Bandwidth Plot on Configuration IEEE 802.11b Connector 2 / Ant. 2 / 2412 MHz



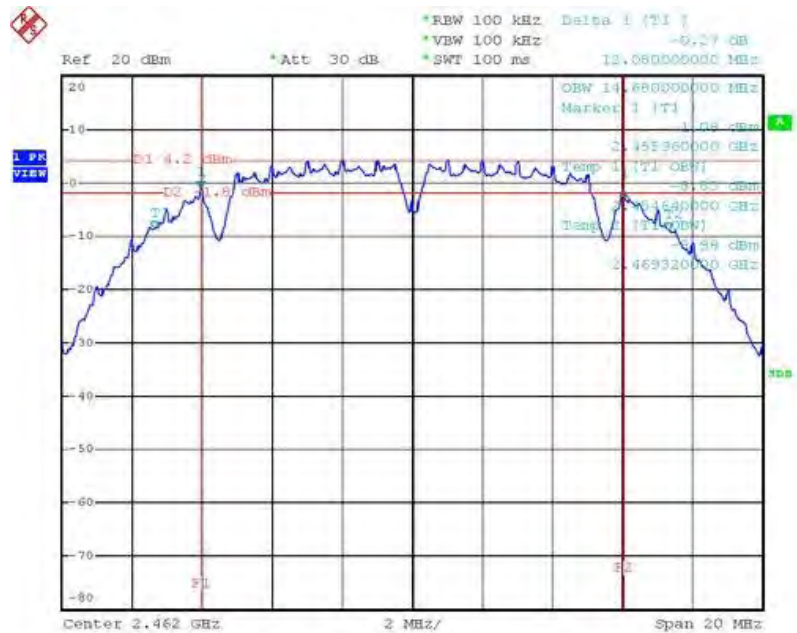
Date: 17.FEB.2011 14:36:28

6 dB Bandwidth Plot on Configuration IEEE 802.11b Connector 2 / Ant. 2 / 2437 MHz



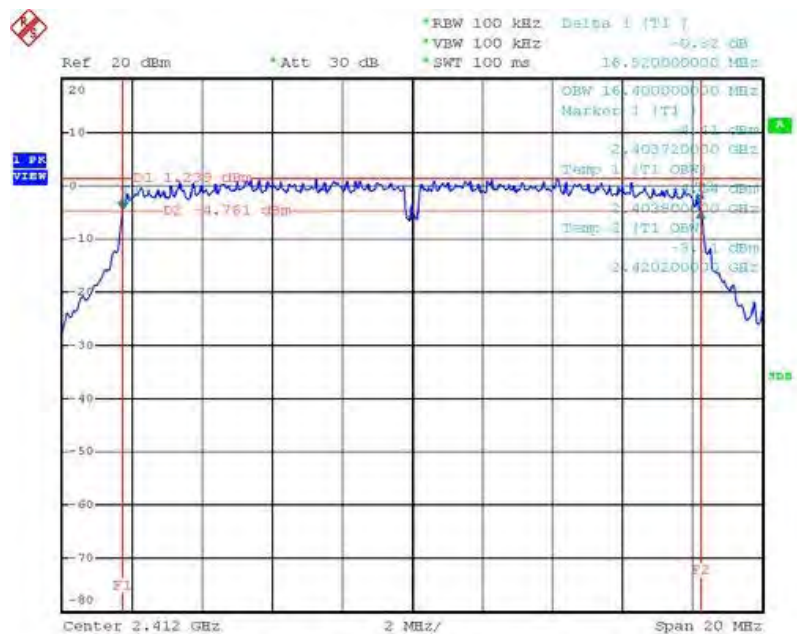
Date: 17.FEB.2011 14:43:11

6 dB Bandwidth Plot on Configuration IEEE 802.11b Connector 2 / Ant. 2 / 2462 MHz



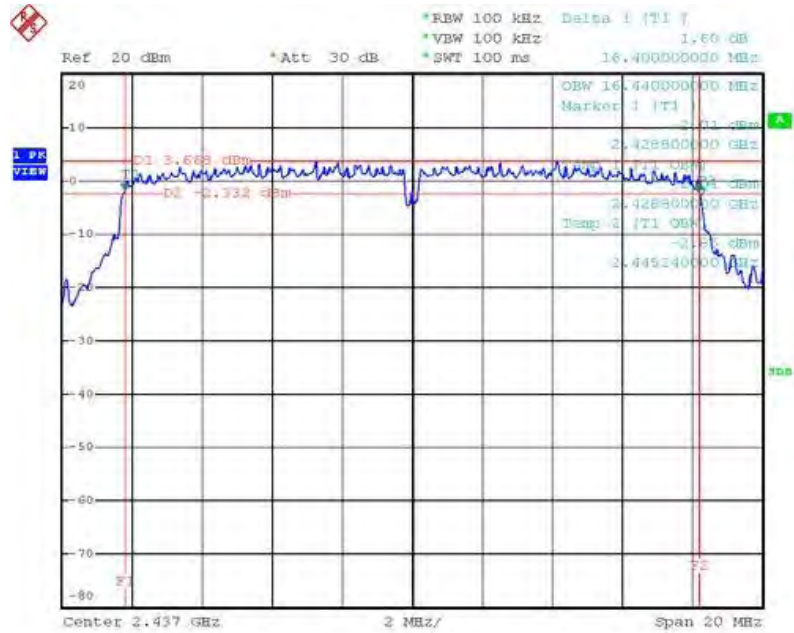
Date: 17.FEB.2011 14:45:14

6 dB Bandwidth Plot on Configuration IEEE 802.11g Connector 2 / Ant. 2 / 2412 MHz



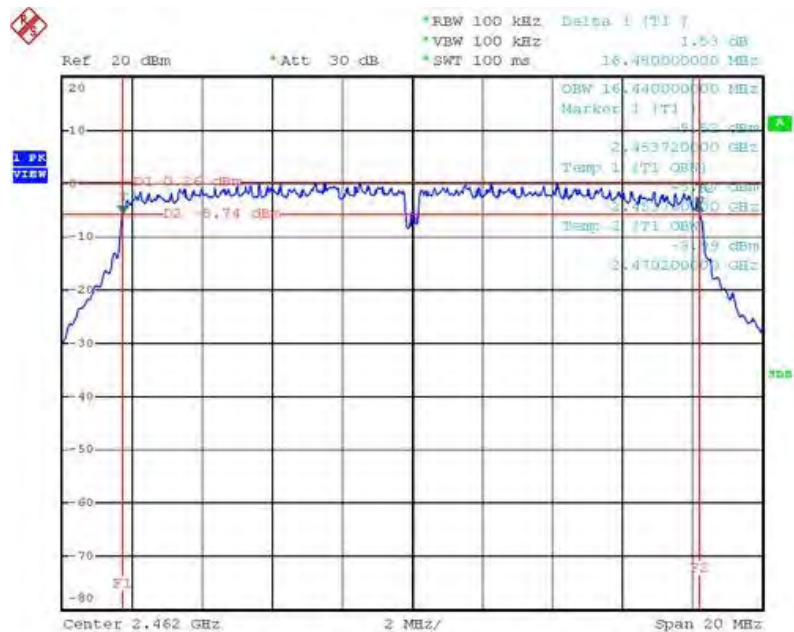
Date: 17.FEB.2011 14:52:23

6 dB Bandwidth Plot on Configuration IEEE 802.11g Connector 2 / Ant. 2 / 2437 MHz



Date: 17.FEB.2011 14:55:28

6 dB Bandwidth Plot on Configuration IEEE 802.11g Connector 2 / Ant. 2 / 2462 MHz



Date: 17.FEB.2011 14:59:30

4.5. Radiated Emissions Measurement

4.5.1. Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micровolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.5.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for peak

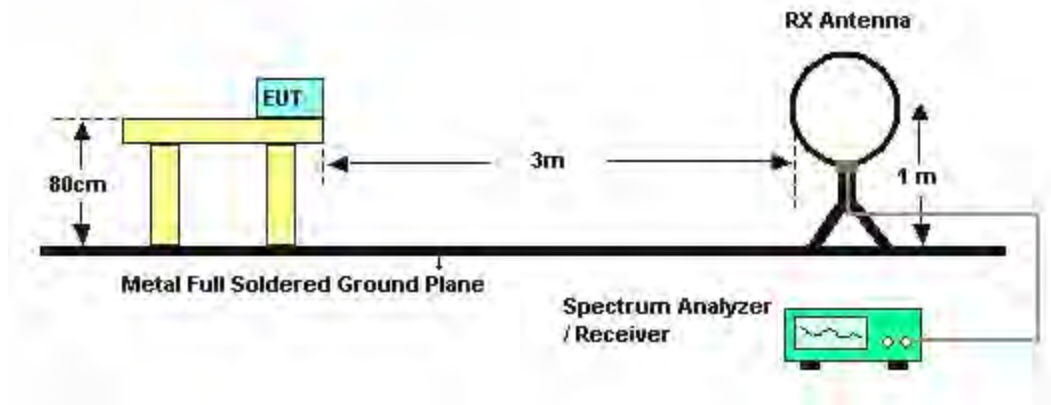
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.5.3. Test Procedures

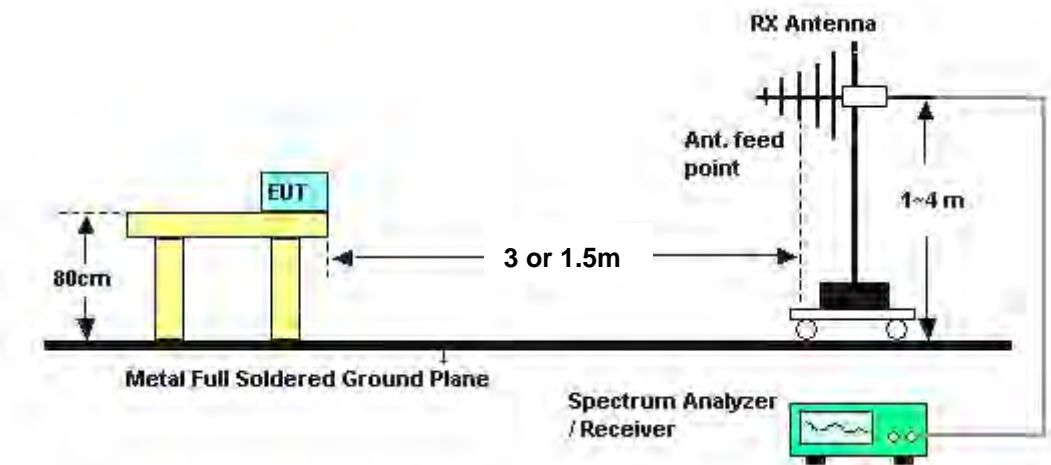
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 m to 4 m) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

4.5.4. Test Setup Layout

For radiated emissions below 30MHz



For radiated emissions above 30MHz



Above 10 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1.5m.

Distance extrapolation factor = $20 \log (\text{specific distance [3m]} / \text{test distance [1.5m]})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

4.5.5. Test Deviation

There is no deviation with the original standard.

4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.5.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	Normal Link
Test Date	Apr. 20, 2011		

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);

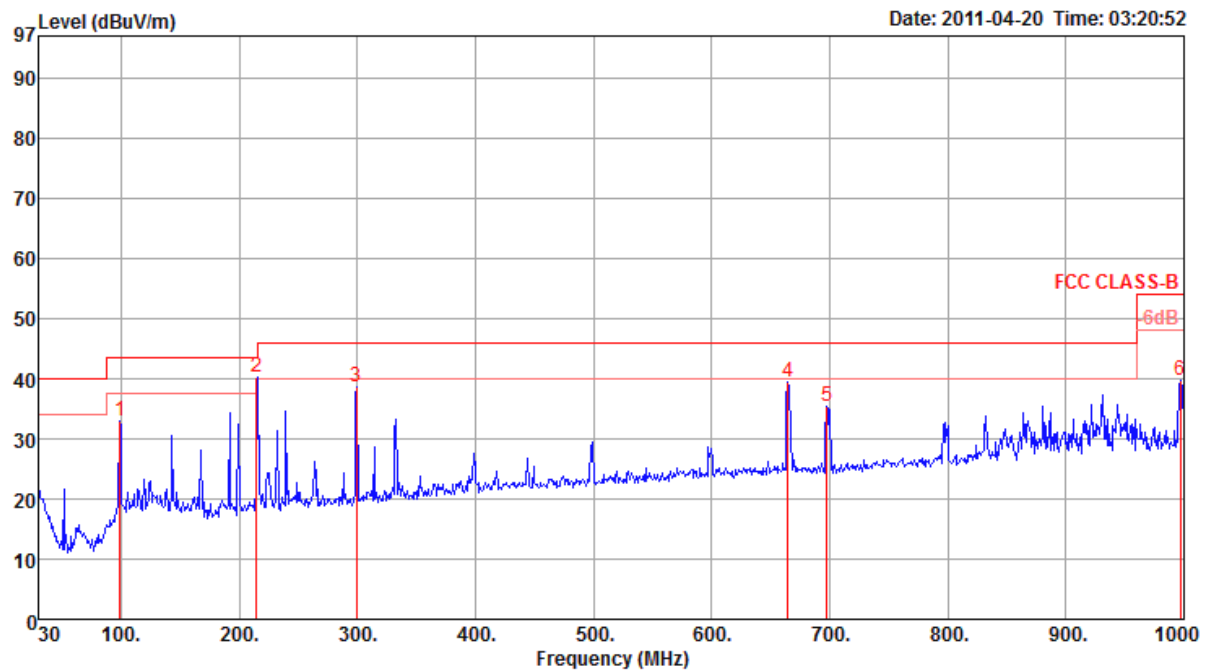
Limit line = specific limits (dBuV) + distance extrapolation factor.

4.5.8. Results of Radiated Emissions (30MHz~1GHz)

<Mode 1. Configuration 1 with Ant. 1 (PIFA Antenna)>

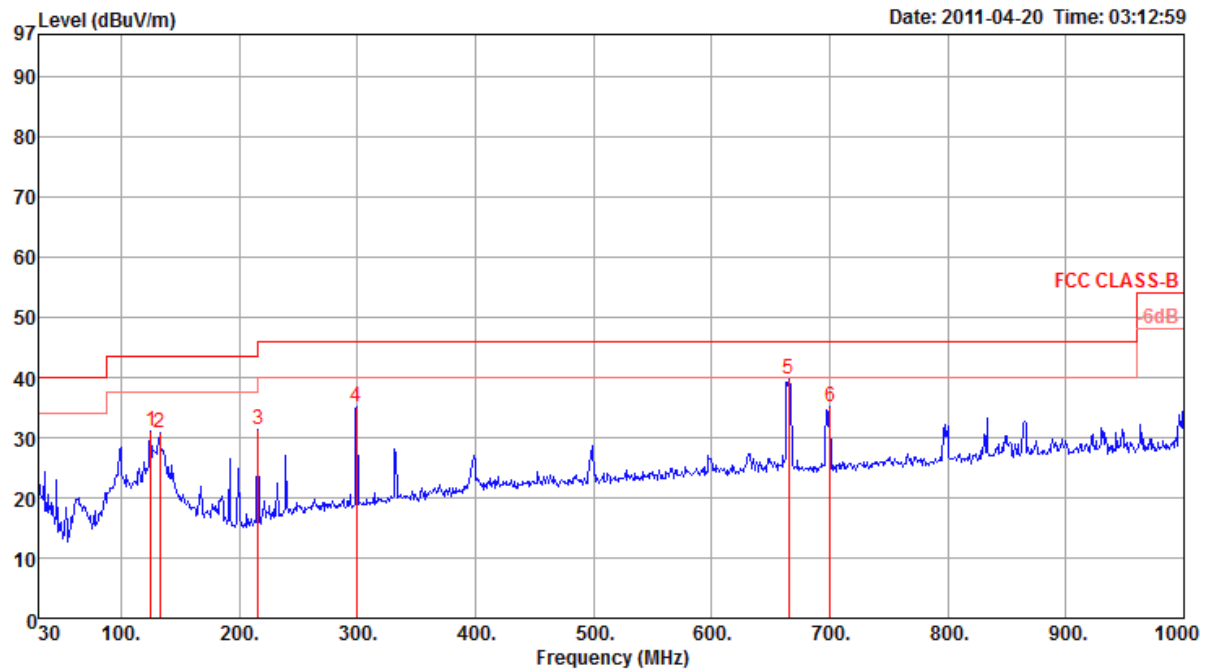
Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	Normal Link / Mode 1 / Ant. 1

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	98.87	32.85	43.50	-10.65	48.67	1.18	27.61	10.61	0	100	Peak	HORIZONTAL
2	215.00	40.30	43.50	-3.20	55.20	1.76	27.07	10.41	0	100	Peak	HORIZONTAL
3	299.66	38.65	46.00	-7.35	49.99	2.10	26.90	13.46	0	100	Peak	HORIZONTAL
4	664.38	39.53	46.00	-6.47	45.14	3.44	28.04	18.99	0	100	Peak	HORIZONTAL
5	697.36	35.44	46.00	-10.56	41.05	3.31	28.00	19.08	0	100	Peak	HORIZONTAL
6	997.09	39.70	54.00	-14.30	41.40	3.69	27.02	21.63	0	100	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	125.06	31.11	43.50	-12.39	45.03	1.25	27.48	12.31	0	400	Peak	VERTICAL
2	132.82	30.81	43.50	-12.69	45.09	1.33	27.43	11.82	0	400	Peak	VERTICAL
3	216.24	31.29	46.00	-14.71	46.12	1.77	27.07	10.47	0	400	Peak	VERTICAL
4	299.66	35.20	46.00	-10.80	46.54	2.10	26.90	13.46	0	400	Peak	VERTICAL
5	665.35	39.71	46.00	-6.29	45.30	3.44	28.03	19.00	0	400	Peak	VERTICAL
6	700.27	35.09	46.00	-10.91	40.69	3.30	27.99	19.09	0	400	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

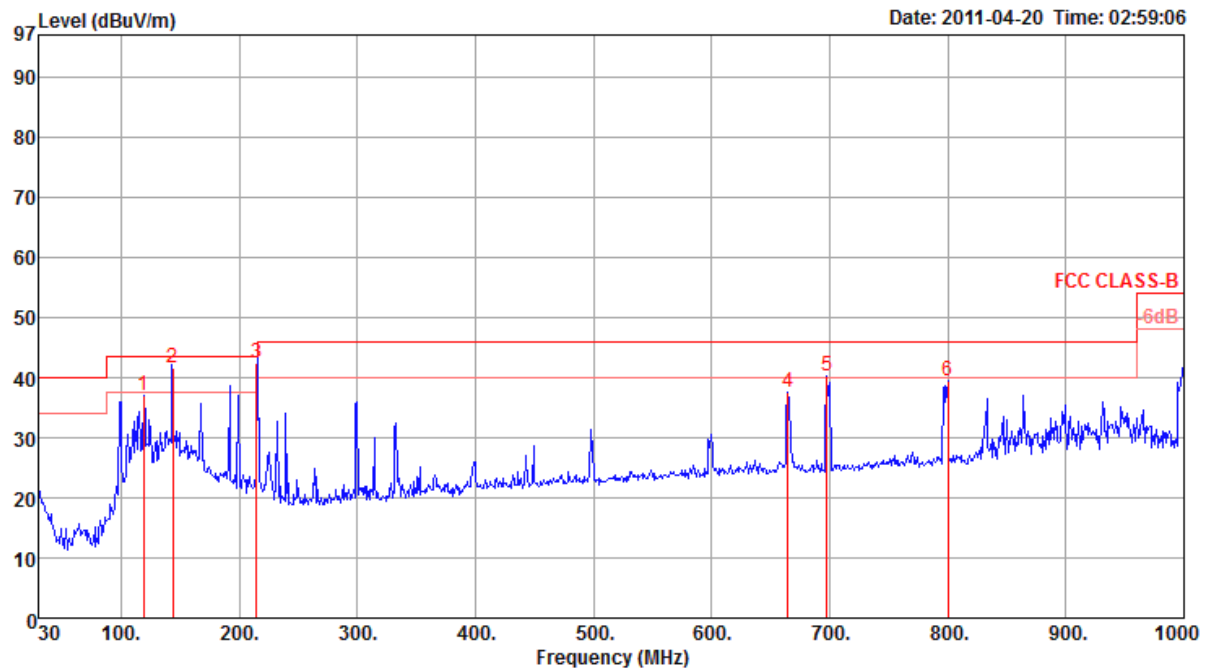
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Mode 1. Configuration 1 with Ant. 2 (Dipole Antenna)>

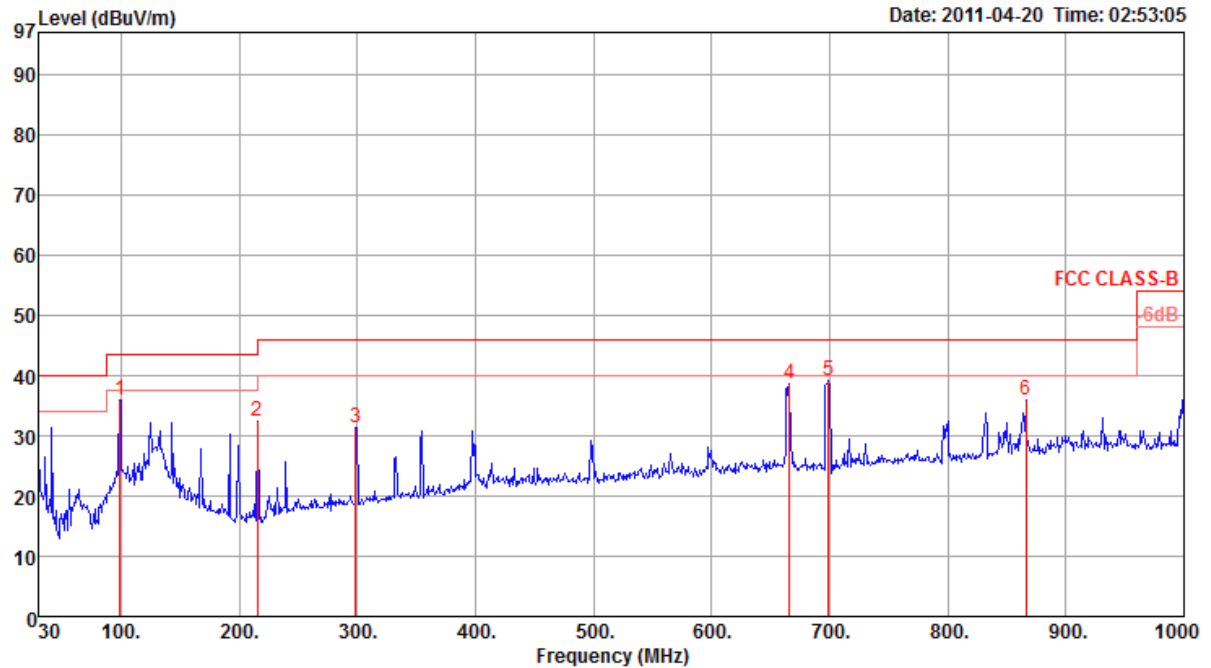
Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	Normal Link / Mode 1 / Ant. 2

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	119.24	37.06	43.50	-6.44	51.01	1.20	27.50	12.35	0	100	Peak	HORIZONTAL
2	144.00	41.65	43.50	-1.85	56.56	1.42	27.38	11.05	265	176	QP	HORIZONTAL
3	215.00	42.39	43.50	-1.11	57.29	1.76	27.07	10.41	270	178	QP	HORIZONTAL
4	664.38	37.68	46.00	-8.32	43.29	3.44	28.04	18.99	0	100	Peak	HORIZONTAL
5	697.36	40.16	46.00	-5.84	45.77	3.31	28.00	19.08	0	100	Peak	HORIZONTAL
6	800.18	39.39	46.00	-6.61	43.42	3.30	27.60	20.27	0	100	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	98.87	35.84	43.50	-7.66	51.66	1.18	27.61	10.61	0	400	Peak	VERTICAL
2	215.27	32.54	43.50	-10.96	47.44	1.76	27.07	10.41	0	400	Peak	VERTICAL
3	298.69	31.33	46.00	-14.67	42.69	2.10	26.90	13.44	0	400	Peak	VERTICAL
4	666.32	38.73	46.00	-7.27	44.33	3.43	28.03	19.00	0	400	Peak	VERTICAL
5 p	699.30	39.06	46.00	-6.94	44.67	3.30	28.00	19.09	0	400	Peak	VERTICAL
6	866.14	35.85	46.00	-10.15	38.98	3.47	27.47	20.87	0	400	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.5.9. Results for Radiated Emissions (1GHz~10th Harmonic)

<Configuration 1 with Ant. 1 (PIFA Antenna)>

Temperature	21°C	Humidity	60%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.62	52.52	74.00	-21.48	49.91	4.33	35.20	33.48	151	100	Peak	HORIZONTAL
2 a	4874.01	37.80	54.00	-16.20	35.19	4.33	35.20	33.48	151	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.56	56.19	74.00	-17.81	53.58	4.33	35.20	33.48	172	136	Peak	VERTICAL
2 a	4873.70	40.97	54.00	-13.03	38.36	4.33	35.20	33.48	172	136	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.69	31.24	54.00	-22.76	28.63	4.33	35.20	33.48	223	150	Average	HORIZONTAL
2 p	4874.15	45.30	74.00	-28.70	42.69	4.33	35.20	33.48	223	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.09	31.14	54.00	-22.86	28.53	4.33	35.20	33.48	176	125	Average	VERTICAL
2 p	4875.65	45.59	74.00	-28.41	42.98	4.33	35.20	33.48	176	125	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 1 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.96	48.62	74.00	-25.38	46.01	4.33	35.20	33.48	166	102	Peak	HORIZONTAL
2 a	4873.98	43.98	54.00	-10.02	41.37	4.33	35.20	33.48	166	102	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.93	52.93	74.00	-21.07	50.32	4.33	35.20	33.48	268	174	Peak	VERTICAL
2 a	4873.97	50.33	54.00	-3.67	47.72	4.33	35.20	33.48	268	174	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 1 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Horizontal

		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4874.15	40.02	54.00	-13.98	37.41	4.33	35.20	33.48	187	104	Average	HORIZONTAL
2	p	4874.38	53.47	74.00	-20.53	50.86	4.33	35.20	33.48	187	104	Peak	HORIZONTAL

Vertical

		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4874.23	42.28	54.00	-11.72	39.67	4.33	35.20	33.48	172	137	Average	VERTICAL
2	p	4874.48	56.32	74.00	-17.68	53.71	4.33	35.20	33.48	172	137	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 1 with Ant. 2 (Dipole Antenna)>

Temperature	21°C	Humidity	60%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4872.96	50.71	74.00	-23.29	48.10	4.33	35.20	33.48	175	144	Peak	HORIZONTAL
2 a	4873.76	34.40	54.00	-19.60	31.79	4.33	35.20	33.48	175	144	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.28	52.96	74.00	-21.04	50.35	4.33	35.20	33.48	284	100	Peak	VERTICAL
2 a	4873.84	36.86	54.00	-17.14	34.25	4.33	35.20	33.48	284	100	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Horizontal

		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4875.60	30.90	54.00	-23.10	28.29	4.33	35.20	33.48	328	100	Average	HORIZONTAL
2	p	4878.96	44.30	74.00	-29.70	41.69	4.33	35.20	33.48	328	100	Peak	HORIZONTAL

Vertical

		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	p	4872.64	46.08	74.00	-27.92	43.47	4.33	35.20	33.48	139	100	Peak	VERTICAL
2	a	4873.92	32.95	54.00	-21.05	30.34	4.33	35.20	33.48	139	100	Average	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 2 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.96	49.01	54.00	-4.99	46.40	4.33	35.20	33.48	216	140	Average	HORIZONTAL
2 p	4873.97	52.07	74.00	-21.93	49.46	4.33	35.20	33.48	216	140	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.96	52.59	54.00	-1.41	49.98	4.33	35.20	33.48	226	100	Average	VERTICAL
2 p	4873.97	54.63	74.00	-19.37	52.02	4.33	35.20	33.48	226	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 2 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.08	36.63	54.00	-17.37	34.02	4.33	35.20	33.48	178	150	Average	HORIZONTAL
2 p	4875.88	51.23	74.00	-22.77	48.62	4.33	35.20	33.48	178	150	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4872.90	40.19	54.00	-13.81	37.58	4.33	35.20	33.48	281	100	Average	VERTICAL
2 p	4875.94	53.65	74.00	-20.35	51.04	4.33	35.20	33.48	281	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 2 with Ant. 1 (PIFA Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 21, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4823.87	32.91	54.00	-21.09	31.57	3.31	33.06	35.03	124	100	Average	HORIZONTAL
2	4823.93	45.77	74.00	-28.23	44.43	3.31	33.06	35.03	124	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4822.99	53.34	74.00	-20.66	52.00	3.31	33.06	35.03	197	113	Peak	VERTICAL
2	4823.07	36.73	54.00	-17.27	35.39	3.31	33.06	35.03	197	113	Average	VERTICAL

Temperature	21°C	Humidity	60%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.16	54.25	74.00	-19.75	52.79	3.33	33.16	35.03	13	100	Peak	HORIZONTAL
2	4873.50	39.91	54.00	-14.09	38.45	3.33	33.16	35.03	13	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.32	57.19	74.00	-16.81	55.73	3.33	33.16	35.03	337	140	Peak	VERTICAL
2	4873.80	42.26	54.00	-11.74	40.80	3.33	33.16	35.03	337	140	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch11 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamplifier Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.90	36.04	54.00	-17.96	34.44	3.35	33.26	35.01	345	115	Average	HORIZONTAL
2	4924.23	49.86	74.00	-24.14	48.26	3.35	33.26	35.01	345	115	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamplifier Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.25	50.39	74.00	-23.61	48.79	3.35	33.26	35.01	110	100	Peak	VERTICAL
2	4923.85	35.23	54.00	-18.77	33.63	3.35	33.26	35.01	110	100	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 3 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4843.94	33.24	54.00	-20.76	31.86	3.32	33.09	35.03	16	100	Average	HORIZONTAL
2	4850.37	44.66	74.00	-29.34	43.28	3.32	33.09	35.03	16	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4844.13	33.98	54.00	-20.02	32.60	3.32	33.09	35.03	174	100	Average	VERTICAL
2	4844.48	46.10	74.00	-27.90	44.72	3.32	33.09	35.03	174	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4886.40	29.83	54.00	-24.17	28.37	3.33	33.16	35.03	153	100	Average	HORIZONTAL
2	4886.82	42.57	74.00	-31.43	41.11	3.33	33.16	35.03	153	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4874.00	46.49	74.00	-27.51	45.03	3.33	33.16	35.03	178	100	Peak	VERTICAL
2	4874.16	34.08	54.00	-19.92	32.62	3.33	33.16	35.03	178	100	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 9 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4903.83	30.31	54.00	-23.69	28.80	3.34	33.19	35.02	188	100	Average	HORIZONTAL
2	4912.16	42.30	74.00	-31.70	40.75	3.34	33.23	35.02	188	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4907.36	42.03	74.00	-31.97	40.48	3.34	33.23	35.02	221	100	Peak	VERTICAL
2	4913.20	30.41	54.00	-23.59	28.86	3.34	33.23	35.02	221	100	Average	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 1 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 09, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4824.00	50.56	74.00	-23.44	50.36	3.00	35.26	32.46	183	172	Peak	HORIZONTAL
2 a	4824.01	46.88	54.00	-7.12	46.68	3.00	35.26	32.46	183	172	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4824.01	53.81	54.00	-0.19	53.61	3.00	35.26	32.46	178	123	Average	VERTICAL
2 p	4824.02	55.73	74.00	-18.27	55.53	3.00	35.26	32.46	178	123	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.99	53.27	54.00	-0.73	51.81	3.33	33.16	35.03	12	100	Average	HORIZONTAL
2	4874.02	54.99	74.00	-19.01	53.53	3.33	33.16	35.03	12	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Limit	Level	Loss	Factor	Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.99	51.77	54.00	-2.23	50.31	3.33	33.16	35.03	184	100	Average	VERTICAL
2	4874.03	53.86	74.00	-20.14	52.40	3.33	33.16	35.03	184	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 11 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.97	54.59	74.00	-19.41	52.99	3.35	33.26	35.01	342	128	Peak	HORIZONTAL
2	4923.99	53.08	54.00	-0.92	51.48	3.35	33.26	35.01	342	128	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamplifier	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.99	51.81	54.00	-2.19	50.21	3.35	33.26	35.01	112	117	Average	VERTICAL
2	4924.03	53.81	74.00	-20.19	52.21	3.35	33.26	35.01	112	117	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 1 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 09, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4823.99	48.22	74.00	-25.78	48.02	3.00	35.26	32.46	207	100	Peak	HORIZONTAL
2 a	4824.01	35.56	54.00	-18.44	35.36	3.00	35.26	32.46	207	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4823.99	39.17	54.00	-14.83	38.97	3.00	35.26	32.46	0	100	Average	VERTICAL
2 p	4824.01	51.63	74.00	-22.37	51.43	3.00	35.26	32.46	0	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4874.08	40.25	54.00	-13.75	38.79	3.33	33.16	35.03	12	100	Average	HORIZONTAL
2	4874.57	53.47	74.00	-20.53	52.01	3.33	33.16	35.03	12	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4874.10	42.87	54.00	-11.13	41.41	3.33	33.16	35.03	336	141	Average	VERTICAL
2	4874.50	56.08	74.00	-17.92	54.62	3.33	33.16	35.03	336	141	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 11 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4924.07	35.79	54.00	-18.21	34.19	3.35	33.26	35.01	345	100	Average	HORIZONTAL
2	4924.45	49.00	74.00	-25.00	47.40	3.35	33.26	35.01	345	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.86	35.09	54.00	-18.91	33.49	3.35	33.26	35.01	110	100	Average	VERTICAL
2	4924.21	48.20	74.00	-25.80	46.60	3.35	33.26	35.01	110	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 2 with Ant. 2 (Dipole Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4823.87	31.91	54.00	-22.09	30.57	3.31	33.06	35.03	124	100	Average	HORIZONTAL
2	4823.93	45.77	74.00	-28.23	44.43	3.31	33.06	35.03	124	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4822.99	53.34	74.00	-20.66	52.00	3.31	33.06	35.03	197	113	Peak	VERTICAL
2	4823.07	36.97	54.00	-17.03	35.63	3.31	33.06	35.03	197	113	Average	VERTICAL

Temperature	21°C	Humidity	60%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.70	48.75	74.00	-25.25	47.29	3.33	33.16	35.03	138	100	Peak	HORIZONTAL
2	4873.99	34.86	54.00	-19.14	33.40	3.33	33.16	35.03	138	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.51	55.90	74.00	-18.10	54.44	3.33	33.16	35.03	285	131	Peak	VERTICAL
2	4873.80	41.28	54.00	-12.72	39.82	3.33	33.16	35.03	285	131	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch11 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.85	45.84	74.00	-28.16	44.24	3.35	33.26	35.01	346	135	Peak	HORIZONTAL
2	4923.89	31.88	54.00	-22.12	30.28	3.35	33.26	35.01	346	135	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.80	48.73	74.00	-25.27	47.13	3.35	33.26	35.01	29	100	Peak	VERTICAL
2	4923.98	35.20	54.00	-18.80	33.60	3.35	33.26	35.01	29	100	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 3 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4842.72	41.28	74.00	-32.72	39.90	3.32	33.09	35.03	218	100	Peak	HORIZONTAL
2	4851.12	29.31	54.00	-24.69	27.93	3.32	33.09	35.03	218	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4843.84	44.16	74.00	-29.84	42.78	3.32	33.09	35.03	284	100	Peak	VERTICAL
2	4844.24	32.45	54.00	-21.55	31.07	3.32	33.09	35.03	284	100	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4874.32	42.69	74.00	-31.31	41.23	3.33	33.16	35.03	117	100	Peak	HORIZONTAL
2	4874.34	29.64	54.00	-24.36	28.18	3.33	33.16	35.03	117	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4874.17	48.18	74.00	-25.82	46.72	3.33	33.16	35.03	279	100	Peak	VERTICAL
2	4874.18	36.17	54.00	-17.83	34.71	3.33	33.16	35.03	279	100	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 9 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4896.08	42.02	74.00	-31.98	40.51	3.34	33.19	35.02	162	100	Peak	HORIZONTAL
2	4913.76	29.50	54.00	-24.50	27.95	3.34	33.23	35.02	162	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4904.16	31.85	54.00	-22.15	30.34	3.34	33.19	35.02	217	100	Average	VERTICAL
2	4913.08	43.99	74.00	-30.01	42.44	3.34	33.23	35.02	217	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 1 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4823.91	49.73	74.00	-24.27	48.39	3.31	33.06	35.03	122	100	Peak	HORIZONTAL
2	4823.99	45.93	54.00	-8.07	44.59	3.31	33.06	35.03	122	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4823.99	53.62	54.00	-0.38	52.28	3.31	33.06	35.03	158	100	Average	VERTICAL
2	4824.00	55.29	74.00	-18.71	53.95	3.31	33.06	35.03	158	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.99	48.42	74.00	-25.58	46.96	3.33	33.16	35.03	135	160	Peak	HORIZONTAL
2	4874.00	44.84	54.00	-9.16	43.38	3.33	33.16	35.03	135	160	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.99	53.41	54.00	-0.59	51.95	3.33	33.16	35.03	104	100	Average	VERTICAL
2	4874.02	55.04	74.00	-18.96	53.58	3.33	33.16	35.03	104	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 11 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4924.00	47.38	54.00	-6.62	45.78	3.35	33.26	35.01	135	126	Average	HORIZONTAL
2	4924.03	50.43	74.00	-23.57	48.83	3.35	33.26	35.01	135	126	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4923.99	53.56	54.00	-0.44	51.96	3.35	33.26	35.01	264	118	Average	VERTICAL
2	4924.06	55.11	74.00	-18.89	53.51	3.35	33.26	35.01	264	118	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 1 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4824.08	33.97	54.00	-20.03	32.63	3.31	33.06	35.03	124	104	Average	HORIZONTAL
2	4824.26	48.14	74.00	-25.86	46.80	3.31	33.06	35.03	124	104	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4824.10	40.61	54.00	-13.39	39.27	3.31	33.06	35.03	333	100	Average	VERTICAL
2	4824.90	53.89	74.00	-20.11	52.55	3.31	33.06	35.03	333	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4876.01	49.18	74.00	-24.82	47.72	3.33	33.16	35.03	12	101	Peak	HORIZONTAL
2	4876.04	34.79	54.00	-19.21	33.33	3.33	33.16	35.03	12	101	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4873.92	42.66	54.00	-11.34	41.20	3.33	33.16	35.03	278	101	Average	VERTICAL
2	4874.40	55.28	74.00	-18.72	53.82	3.33	33.16	35.03	278	101	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 11 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4924.30	32.61	54.00	-21.39	31.01	3.35	33.26	35.01	137	100	Average	HORIZONTAL
2	4924.45	45.25	74.00	-28.75	43.65	3.35	33.26	35.01	137	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	4924.01	36.44	54.00	-17.56	34.84	3.35	33.26	35.01	44	100	Average	VERTICAL
2	4924.08	48.87	74.00	-25.13	47.27	3.35	33.26	35.01	44	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 3 with Ant. 1 (PIFA Antenna)>

Temperature	21°C	Humidity	60%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.66	47.41	74.00	-26.59	44.80	4.33	35.20	33.48	177	164	Peak	HORIZONTAL
2 a	4874.23	33.05	54.00	-20.95	30.44	4.33	35.20	33.48	177	164	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.53	36.66	54.00	-17.34	34.05	4.33	35.20	33.48	265	113	Average	VERTICAL
2 p	4874.16	51.22	74.00	-22.78	48.61	4.33	35.20	33.48	265	113	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.72	31.81	54.00	-22.19	29.20	4.33	35.20	33.48	145	100	Average	HORIZONTAL
2 p	4874.34	45.35	74.00	-28.65	42.74	4.33	35.20	33.48	145	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4874.42	43.22	74.00	-30.78	40.61	4.33	35.20	33.48	244	100	Peak	VERTICAL
2 a	4874.50	30.53	54.00	-23.47	27.92	4.33	35.20	33.48	244	100	Average	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 1 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.97	45.50	54.00	-8.50	42.89	4.33	35.20	33.48	19	100	Average	HORIZONTAL
2 p	4874.07	49.17	74.00	-24.83	46.56	4.33	35.20	33.48	19	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.97	52.56	74.00	-21.44	49.95	4.33	35.20	33.48	266	100	Peak	VERTICAL
2 a	4873.97	49.95	54.00	-4.05	47.34	4.33	35.20	33.48	266	100	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 1 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.32	40.15	54.00	-13.85	37.54	4.33	35.20	33.48	152	151	Average	HORIZONTAL
2 p	4874.41	53.71	74.00	-20.29	51.10	4.33	35.20	33.48	152	151	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.89	34.22	54.00	-19.78	31.61	4.33	35.20	33.48	180	117	Average	VERTICAL
2 p	4874.46	47.66	74.00	-26.34	45.05	4.33	35.20	33.48	180	117	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 3 with Ant. 2 (Dipole Antenna)>

Temperature	21°C	Humidity	60%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4877.30	43.69	74.00	-30.31	41.08	4.33	35.20	33.48	116	100	Peak	HORIZONTAL
2 a	4877.30	30.75	54.00	-23.25	28.14	4.33	35.20	33.48	116	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.80	34.35	54.00	-19.65	31.74	4.33	35.20	33.48	37	100	Average	VERTICAL
2 p	4874.70	48.42	74.00	-25.58	45.81	4.33	35.20	33.48	37	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4858.40	43.97	74.00	-30.03	41.43	4.29	35.20	33.45	356	100	Peak	HORIZONTAL
2 a	4878.00	29.75	54.00	-24.25	27.14	4.33	35.20	33.48	356	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4869.20	44.63	74.00	-29.37	42.05	4.33	35.20	33.45	34	100	Peak	VERTICAL
2 a	4873.80	30.66	54.00	-23.34	28.05	4.33	35.20	33.48	34	100	Average	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 2 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Horizontal

		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4873.99	42.17	54.00	-11.83	39.56	4.33	35.20	33.48	117	127	Average	HORIZONTAL
2	p	4874.06	47.91	74.00	-26.09	45.30	4.33	35.20	33.48	117	127	Peak	HORIZONTAL

Vertical

		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4873.97	47.21	54.00	-6.79	44.60	4.33	35.20	33.48	4	100	Average	VERTICAL
2	p	4874.05	51.01	74.00	-22.99	48.40	4.33	35.20	33.48	4	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 2 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4871.89	30.58	54.00	-23.42	27.97	4.33	35.20	33.48	115	113	Average	HORIZONTAL
2 p	4873.21	44.64	74.00	-29.36	42.03	4.33	35.20	33.48	115	113	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.09	34.88	54.00	-19.12	32.27	4.33	35.20	33.48	37	100	Average	VERTICAL
2 p	4874.60	48.89	74.00	-25.11	46.28	4.33	35.20	33.48	37	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 4 with Ant. 1 (PIFA Antenna)>

Temperature	21°C	Humidity	60%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.86	32.47	54.00	-21.53	29.86	4.33	35.20	33.48	177	101	Average	HORIZONTAL
2 p	4874.16	45.48	74.00	-28.52	42.87	4.33	35.20	33.48	177	101	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.66	35.17	54.00	-18.83	32.56	4.33	35.20	33.48	265	113	Average	VERTICAL
2 p	4873.85	48.72	74.00	-25.28	46.11	4.33	35.20	33.48	265	113	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Horizontal

		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4874.01	30.39	54.00	-23.61	27.78	4.33	35.20	33.48	139	100	Average	HORIZONTAL
2	p	4874.16	42.71	74.00	-31.29	40.10	4.33	35.20	33.48	139	100	Peak	HORIZONTAL

Vertical

		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4873.59	31.07	54.00	-22.93	28.46	4.33	35.20	33.48	222	100	Average	VERTICAL
2	p	4874.32	43.58	74.00	-30.42	40.97	4.33	35.20	33.48	222	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 1 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.94	47.00	54.00	-7.00	44.39	4.33	35.20	33.48	179	101	Average	HORIZONTAL
2 p	4874.01	50.61	74.00	-23.39	48.00	4.33	35.20	33.48	179	101	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.96	51.61	74.00	-22.39	49.00	4.33	35.20	33.48	266	125	Peak	VERTICAL
2 a	4873.99	49.89	54.00	-4.11	47.28	4.33	35.20	33.48	266	125	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 1 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.26	32.76	54.00	-21.24	30.15	4.33	35.20	33.48	178	100	Average	HORIZONTAL
2 p	4874.30	47.97	74.00	-26.03	45.36	4.33	35.20	33.48	178	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.35	35.55	54.00	-18.45	32.94	4.33	35.20	33.48	265	100	Average	VERTICAL
2 p	4874.49	48.89	74.00	-25.11	46.28	4.33	35.20	33.48	265	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 4 with Ant. 2 (Dipole Antenna)>

Temperature	21°C	Humidity	60%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.48	42.87	74.00	-31.13	40.26	4.33	35.20	33.48	59	100	Peak	HORIZONTAL
2 a	4875.24	29.64	54.00	-24.36	27.03	4.33	35.20	33.48	59	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4872.96	50.14	74.00	-23.86	47.53	4.33	35.20	33.48	276	100	Peak	VERTICAL
2 a	4874.04	35.24	54.00	-18.76	32.63	4.33	35.20	33.48	276	100	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.88	43.84	74.00	-30.16	41.23	4.33	35.20	33.48	47	100	Peak	HORIZONTAL
2 a	4876.76	29.65	54.00	-24.35	27.04	4.33	35.20	33.48	47	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.72	30.19	54.00	-23.81	27.58	4.33	35.20	33.48	138	100	Average	VERTICAL
2 p	4882.96	43.80	74.00	-30.20	41.19	4.33	35.20	33.48	138	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 2 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.91	47.28	74.00	-26.72	44.67	4.33	35.20	33.48	111	100	Peak	HORIZONTAL
2 a	4873.95	41.57	54.00	-12.43	38.96	4.33	35.20	33.48	111	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.97	48.64	54.00	-5.36	46.03	4.33	35.20	33.48	202	100	Average	VERTICAL
2 p	4873.99	56.64	74.00	-17.36	54.03	4.33	35.20	33.48	202	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 2 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4872.76	43.06	74.00	-30.94	40.45	4.33	35.20	33.48	180	100	Peak	HORIZONTAL
2 a	4884.00	29.83	54.00	-24.17	27.22	4.33	35.20	33.48	180	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4871.48	49.54	74.00	-24.46	46.93	4.33	35.20	33.48	275	128	Peak	VERTICAL
2 a	4871.56	36.13	54.00	-17.87	33.52	4.33	35.20	33.48	275	128	Average	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 5 with Ant. 1 (PIFA Antenna)>

Temperature	21°C	Humidity	60%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.53	57.23	74.00	-16.77	54.62	4.33	35.20	33.48	158	134	Peak	HORIZONTAL
2 a	4873.60	41.96	54.00	-12.04	39.35	4.33	35.20	33.48	158	134	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.50	57.17	74.00	-16.83	54.56	4.33	35.20	33.48	158	134	Peak	VERTICAL
2 a	4873.71	42.10	54.00	-11.90	39.49	4.33	35.20	33.48	158	134	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.67	43.05	74.00	-30.95	40.44	4.33	35.20	33.48	354	100	Peak	HORIZONTAL
2 a	4874.46	31.16	54.00	-22.84	28.55	4.33	35.20	33.48	354	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.91	32.75	54.00	-21.25	30.14	4.33	35.20	33.48	162	100	Average	VERTICAL
2 p	4874.04	45.62	74.00	-28.38	43.01	4.33	35.20	33.48	162	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 1 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.97	48.40	74.00	-25.60	45.79	4.33	35.20	33.48	230	111	Peak	HORIZONTAL
2 a	4874.00	43.06	54.00	-10.94	40.45	4.33	35.20	33.48	230	111	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.93	55.96	74.00	-18.04	53.35	4.33	35.20	33.48	164	187	Peak	VERTICAL
2 a	4873.97	52.85	54.00	-1.15	50.24	4.33	35.20	33.48	164	187	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 1 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.21	38.41	54.00	-15.59	35.80	4.33	35.20	33.48	182	115	Average	HORIZONTAL
2 p	4874.30	51.92	74.00	-22.08	49.31	4.33	35.20	33.48	182	115	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.16	42.67	54.00	-11.33	40.06	4.33	35.20	33.48	157	134	Average	VERTICAL
2 p	4874.32	56.17	74.00	-17.83	53.56	4.33	35.20	33.48	157	134	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 5 with Ant. 2 (Dipole Antenna)>

Temperature	21°C	Humidity	60%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.92	32.06	54.00	-21.94	29.45	4.33	35.20	33.48	114	100	Average	HORIZONTAL
2 p	4877.56	46.89	74.00	-27.11	44.28	4.33	35.20	33.48	114	100	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.96	34.69	54.00	-19.31	32.08	4.33	35.20	33.48	37	100	Average	VERTICAL
2 p	4874.72	48.98	74.00	-25.02	46.37	4.33	35.20	33.48	37	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.24	40.99	74.00	-33.01	38.38	4.33	35.20	33.48	324	100	Peak	HORIZONTAL
2 a	4877.44	29.66	54.00	-24.34	27.05	4.33	35.20	33.48	324	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4870.52	44.45	74.00	-29.55	41.87	4.33	35.20	33.45	191	100	Peak	VERTICAL
2 a	4883.24	30.69	54.00	-23.31	28.08	4.33	35.20	33.48	191	100	Average	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 2 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.32	64.84	74.00	-9.16	62.23	4.33	35.20	33.48	114	127	Peak	HORIZONTAL
2 a	4873.97	44.84	54.00	-9.16	42.23	4.33	35.20	33.48	114	127	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4873.97	50.75	54.00	-3.25	48.14	4.33	35.20	33.48	37	100	Average	VERTICAL
2 p	4874.02	53.27	74.00	-20.73	50.66	4.33	35.20	33.48	37	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 2 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Horizontal

		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4874.12	32.46	54.00	-21.54	29.85	4.33	35.20	33.48	117	100	Average	HORIZONTAL
2	p	4874.56	48.46	74.00	-25.54	45.85	4.33	35.20	33.48	117	100	Peak	HORIZONTAL

Vertical

		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4871.60	35.57	54.00	-18.43	32.96	4.33	35.20	33.48	74	100	Average	VERTICAL
2	p	4871.84	63.57	74.00	-10.43	60.96	4.33	35.20	33.48	74	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 6 with Ant. 1 (PIFA Antenna)>

Temperature	21°C	Humidity	60%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.51	52.19	74.00	-21.81	49.58	4.33	35.20	33.48	166	115	Peak	HORIZONTAL
2 a	4873.94	35.78	54.00	-18.22	33.17	4.33	35.20	33.48	166	115	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.57	55.41	74.00	-18.59	52.80	4.33	35.20	33.48	177	150	Peak	VERTICAL
2 a	4873.76	40.42	54.00	-13.58	37.81	4.33	35.20	33.48	177	150	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Horizontal

		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4874.09	30.67	54.00	-23.33	28.06	4.33	35.20	33.48	188	100	Average	HORIZONTAL
2	p	4874.34	43.81	74.00	-30.19	41.20	4.33	35.20	33.48	188	100	Peak	HORIZONTAL

Vertical

		Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4873.86	31.40	54.00	-22.60	28.79	4.33	35.20	33.48	130	100	Average	VERTICAL
2	p	4874.33	44.70	74.00	-29.30	42.09	4.33	35.20	33.48	130	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 1 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.95	50.56	74.00	-23.44	47.95	4.33	35.20	33.48	180	116	Peak	HORIZONTAL
2 a	4873.97	46.73	54.00	-7.27	44.12	4.33	35.20	33.48	180	116	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.88	54.64	74.00	-19.36	52.03	4.33	35.20	33.48	172	138	Peak	VERTICAL
2 a	4873.98	51.96	54.00	-2.04	49.35	4.33	35.20	33.48	172	138	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 1 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4874.22	53.69	74.00	-20.31	51.08	4.33	35.20	33.48	156	109	Peak	HORIZONTAL
2 a	4874.27	39.78	54.00	-14.22	37.17	4.33	35.20	33.48	156	109	Average	HORIZONTAL

Vertical

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4872.04	37.61	54.00	-16.39	35.00	4.33	35.20	33.48	148	110	Average	VERTICAL
2 p	4872.40	51.22	74.00	-22.78	48.61	4.33	35.20	33.48	148	110	Peak	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 6 with Ant. 2 (Dipole Antenna)>

Temperature	21°C	Humidity	60%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4870.12	44.34	74.00	-29.66	41.76	4.33	35.20	33.45	102	100	Peak	HORIZONTAL
2 a	4873.88	30.78	54.00	-23.22	28.17	4.33	35.20	33.48	102	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.20	51.00	74.00	-23.00	48.39	4.33	35.20	33.48	268	100	Peak	VERTICAL
2 a	4873.92	36.29	54.00	-17.71	33.68	4.33	35.20	33.48	268	100	Average	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4873.32	43.10	74.00	-30.90	40.49	4.33	35.20	33.48	172	100	Peak	HORIZONTAL
2 a	4875.15	29.52	54.00	-24.48	26.91	4.33	35.20	33.48	172	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 a	4874.24	31.83	54.00	-22.17	29.22	4.33	35.20	33.48	284	100	Average	VERTICAL
2 p	4875.52	45.22	74.00	-28.78	42.61	4.33	35.20	33.48	284	100	Peak	VERTICAL

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 2 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Horizontal

		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4873.97	44.13	54.00	-9.87	41.52	4.33	35.20	33.48	113	100	Average	HORIZONTAL
2	p	4874.06	48.97	74.00	-25.03	46.36	4.33	35.20	33.48	113	100	Peak	HORIZONTAL

Vertical

		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	a	4873.97	51.38	54.00	-2.62	48.77	4.33	35.20	33.48	282	100	Average	VERTICAL
2	p	4873.99	53.73	74.00	-20.27	51.12	4.33	35.20	33.48	282	100	Peak	VERTICAL

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 2 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4868.20	43.07	74.00	-30.93	40.49	4.33	35.20	33.45	149	100	Peak	HORIZONTAL
2 a	4878.00	29.64	54.00	-24.36	27.03	4.33	35.20	33.48	149	100	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	4870.24	50.26	74.00	-23.74	47.68	4.33	35.20	33.45	267	100	Peak	VERTICAL
2 a	4874.24	36.84	54.00	-17.16	34.23	4.33	35.20	33.48	267	100	Average	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.6. Band Edge Emissions Measurement

4.6.1. Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.6.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	100 KHz /100 KHz for Peak

4.6.3. Test Procedures

1. The test procedure is the same as section 4.5.3, only the frequency range investigated is limited to 100MHz around bandedges.
2. In case the emission is fail due to the used RB/VB is too wide, marker-delta method of FCC Public Notice DA00-705 will be followed.

4.6.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.5.4.

4.6.5. Test Deviation

There is no deviation with the original standard.

4.6.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.6.7. Test Result of Band Edge and Fundamental Emissions

<Configuration 1 with Ant. 1 (PIFA Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2385.20	46.34	54.00	-7.66	15.43	2.86	0.00	28.05	340	155	Average	HORIZONTAL
2	2390.00	59.47	74.00	-14.53	28.54	2.88	0.00	28.05	340	155	Peak	HORIZONTAL
3 a	2435.40	97.96	54.00			2.89	0.00	28.18	340	155	Average	HORIZONTAL
4 p	2436.20	107.78	74.00			2.89	0.00	28.18	340	155	Peak	HORIZONTAL
5	2483.50	66.66	74.00	-7.34	35.47	2.93	0.00	28.26	340	155	Peak	HORIZONTAL
6 !	2483.50	49.99	54.00	-4.01	18.80	2.93	0.00	28.26	340	155	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2380.00	55.34	74.00	-18.66	24.47	2.86	0.00	28.01	197	183	Peak	HORIZONTAL
2	2390.00	43.41	54.00	-10.59	12.48	2.88	0.00	28.05	197	183	Average	HORIZONTAL
3 a	2446.20	91.70	54.00			2.91	0.00	28.18	197	183	Average	HORIZONTAL
4 p	2447.40	101.56	74.00			2.91	0.00	28.18	197	183	Peak	HORIZONTAL
5	2483.50	66.58	74.00	-7.42	35.39	2.93	0.00	28.26	197	183	Peak	HORIZONTAL
6 !	2483.50	50.39	54.00	-3.61	19.20	2.93	0.00	28.26	197	183	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 1 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2356.00	46.16	54.00	-7.84	15.34	2.85	0.00	27.97	339	196	Average	HORIZONTAL
2	2357.20	56.43	74.00	-17.57	25.61	2.85	0.00	27.97	339	196	Peak	HORIZONTAL
3 a	2435.40	98.07	54.00			2.89	0.00	28.18	339	196	Average	HORIZONTAL
4 p	2436.20	101.55	74.00			2.89	0.00	28.18	339	196	Peak	HORIZONTAL
5	2483.50	54.24	74.00	-19.76	23.05	2.93	0.00	28.26	339	196	Peak	HORIZONTAL
6	2483.50	42.90	54.00	-11.10	11.71	2.93	0.00	28.26	339	196	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 1 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2384.40	57.48	74.00	-16.52	26.57	2.86	0.00	28.05	336	184	Peak	HORIZONTAL
2	2384.40	45.80	54.00	-8.20	14.89	2.86	0.00	28.05	336	184	Average	HORIZONTAL
3 p	2433.00	106.43	74.00			2.89	0.00	28.13	336	184	Peak	HORIZONTAL
4 a	2435.00	97.32	54.00			2.89	0.00	28.18	336	184	Average	HORIZONTAL
5 !	2483.50	50.48	54.00	-3.52	19.29	2.93	0.00	28.26	336	184	Average	HORIZONTAL
6	2487.90	67.92	74.00	-6.08	36.69	2.93	0.00	28.30	336	184	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 1 with Ant. 2 (Dipole Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 !	2384.80	49.91	54.00	-4.09	19.00	2.86	0.00	28.05	282	100	Average	VERTICAL
2	2385.60	61.90	74.00	-12.10	30.99	2.86	0.00	28.05	282	100	Peak	VERTICAL
3 a	2435.40	100.57	54.00			2.89	0.00	28.18	282	100	Average	VERTICAL
4 p	2436.20	109.89	74.00			2.89	0.00	28.18	282	100	Peak	VERTICAL
5	2488.70	60.42	74.00	-13.58	29.19	2.93	0.00	28.30	282	100	Peak	VERTICAL
6 !	2488.70	48.42	54.00	-5.58	17.19	2.93	0.00	28.30	282	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2389.20	62.13	74.00	-11.87	31.22	2.86	0.00	28.05	267	100	Peak	VERTICAL
2	2390.00	47.66	54.00	-6.34	16.73	2.88	0.00	28.05	267	100	Average	VERTICAL
3 p	2435.00	104.75	74.00			2.89	0.00	28.18	267	100	Peak	VERTICAL
4 a	2435.00	94.83	54.00			2.89	0.00	28.18	267	100	Average	VERTICAL
5 !	2483.50	49.36	54.00	-4.64	18.17	2.93	0.00	28.26	267	100	Average	VERTICAL
6	2483.90	63.61	74.00	-10.39	32.42	2.93	0.00	28.26	267	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 2 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	deg	cm		
1	2358.60	48.70	54.00	-5.30	17.88	2.85	0.00	27.97	149	100	Average	VERTICAL
2	2359.00	58.60	74.00	-15.40	27.78	2.85	0.00	27.97	149	100	Peak	VERTICAL
3	2437.80	105.50	74.00			2.89	0.00	28.18	149	100	Peak	VERTICAL
4	2438.60	101.98	54.00			2.89	0.00	28.18	149	100	Average	VERTICAL
5	2483.50	54.91	74.00	-19.09	23.72	2.93	0.00	28.26	0	100	Peak	VERTICAL
6	2483.50	43.36	54.00	-10.64	12.17	2.93	0.00	28.26	0	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 2 / Connector 2 / Configuration 1
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2384.80	58.10	74.00	-15.90	27.19	2.86	0.00	28.05	214	100	Peak	VERTICAL
2	2384.80	47.04	54.00	-6.96	16.13	2.86	0.00	28.05	214	100	Average	VERTICAL
3 a	2438.20	101.89	54.00			2.89	0.00	28.18	214	100	Average	VERTICAL
4 p	2439.80	111.20	74.00			2.89	0.00	28.18	214	100	Peak	VERTICAL
5	2484.70	63.56	74.00	-10.44	32.37	2.93	0.00	28.26	214	100	Peak	VERTICAL
6 !	2489.50	49.22	54.00	-4.78	17.99	2.93	0.00	28.30	214	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 2 with Ant. 1 (PIFA Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 21, 2011		

Channel 1

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2389.80	72.88	74.00	-1.12	42.49	2.22	28.17	0.00	198	161	Peak	HORIZONTAL
2	2390.00	53.80	54.00	-0.20	23.41	2.22	28.17	0.00	198	161	Average	HORIZONTAL
3	2415.20	109.40	74.00			2.22	28.21	0.00	198	161	Peak	HORIZONTAL
4	2417.40	100.19	54.00			2.23	28.25	0.00	198	161	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2384.40	60.61	74.00	-13.39	30.23	2.21	28.17	0.00	29	158	Peak	HORIZONTAL
2	2385.20	49.34	54.00	-4.66	18.96	2.21	28.17	0.00	29	158	Average	HORIZONTAL
3	2435.40	101.99	54.00			2.23	28.29	0.00	29	158	Average	HORIZONTAL
4	2436.20	111.54	74.00			2.23	28.29	0.00	29	158	Peak	HORIZONTAL
5	2483.50	68.52	74.00	-5.48	37.88	2.26	28.38	0.00	29	158	Peak	HORIZONTAL
6	2488.70	51.47	54.00	-2.53	20.79	2.26	28.42	0.00	29	158	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 11 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 14, 2011		

Channel 11

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	deg	cm		
1	2456.60	95.04	54.00			2.24	28.33	0.00	140	192	Average	HORIZONTAL
2	2457.20	104.87	74.00			2.24	28.33	0.00	140	192	Peak	HORIZONTAL
3	2483.50	53.88	54.00	-0.12	23.24	2.26	28.38	0.00	140	192	Average	HORIZONTAL
4	2483.50	73.19	74.00	-0.81	42.55	2.26	28.38	0.00	140	192	Peak	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 3 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 14, 2011		

Channel 3

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2389.20	70.74	74.00	-3.26	40.36	2.21	28.17	0.00	294	100	Peak	VERTICAL
2	2390.00	53.64	54.00	-0.36	23.25	2.22	28.17	0.00	294	100	Average	VERTICAL
3	2410.00	91.19	54.00			2.22	28.21	0.00	294	100	Average	VERTICAL
4	2410.80	100.69	74.00			2.22	28.21	0.00	294	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2390.00	46.73	54.00	-7.27	16.34	2.22	28.17	0.00	187	152	Average	HORIZONTAL
2	2390.00	57.34	74.00	-16.66	26.95	2.22	28.17	0.00	187	152	Peak	HORIZONTAL
3	2427.40	93.75	54.00			2.23	28.25	0.00	187	152	Average	HORIZONTAL
4	2429.40	103.03	74.00			2.23	28.25	0.00	187	152	Peak	HORIZONTAL
5	2483.50	53.67	54.00	-0.33	23.03	2.26	28.38	0.00	187	152	Average	HORIZONTAL
6	2483.50	69.57	74.00	-4.43	38.93	2.26	28.38	0.00	187	152	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 9 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 9

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2442.40	89.21	54.00			2.24	28.29	0.00	194	188	Average	HORIZONTAL
2	2444.40	98.79	74.00			2.24	28.29	0.00	194	188	Peak	HORIZONTAL
3	2483.50	53.13	54.00	-0.87	22.49	2.26	28.38	0.00	194	188	Average	HORIZONTAL
4	2485.90	69.91	74.00	-4.09	39.23	2.26	28.42	0.00	194	188	Peak	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2452 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 1 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamplifier Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2355.20	49.01	54.00	-4.99	18.72	2.19	28.10	0.00	31	104	Average	VERTICAL
2	2355.60	58.31	74.00	-15.69	28.02	2.19	28.10	0.00	31	104	Peak	VERTICAL
3	2438.20	106.87	74.00			2.23	28.29	0.00	31	104	Peak	VERTICAL
4	2438.60	103.34	54.00			2.23	28.29	0.00	31	104	Average	VERTICAL
5	2483.50	44.11	54.00	-9.89	13.48	2.26	28.37	0.00	31	104	Average	VERTICAL
6	2487.10	54.19	74.00	-19.81	23.52	2.26	28.41	0.00	31	104	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 09, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamplifier Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 p	2413.20	104.35	74.00			2.05	0.00	27.84	15	190	Peak	HORIZONTAL
2 a	2413.60	100.91	54.00			2.05	0.00	27.84	15	190	Average	HORIZONTAL
3	2492.70	57.80	74.00	-16.20	27.99	2.11	0.00	27.70	15	190	Peak	HORIZONTAL
4 !	2494.70	48.40	54.00	-5.60	18.59	2.11	0.00	27.70	15	190	Average	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 11 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 11

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2459.20	101.43	54.00			2.24	28.33	0.00	27	148	Average	HORIZONTAL
2	2459.60	105.03	74.00			2.24	28.33	0.00	27	148	Peak	HORIZONTAL
3	2483.50	48.69	54.00	-5.31	18.05	2.26	28.38	0.00	27	148	Average	HORIZONTAL
4	2483.50	57.73	74.00	-16.27	27.09	2.26	28.38	0.00	27	148	Peak	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 1 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 09, 2011		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1 !	2390.00	70.85	74.00	-3.15	40.93	2.05	0.00	27.87	271	168	Peak	VERTICAL
2 !	2390.00	53.61	54.00	-0.39	23.69	2.05	0.00	27.87	271	168	Average	VERTICAL
3 a	2407.20	97.50	54.00			2.05	0.00	27.84	271	168	Average	VERTICAL
4 p	2408.00	106.48	74.00			2.05	0.00	27.84	271	168	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2382.40	56.83	74.00	-17.17	26.49	2.21	28.13	0.00	29	152	Peak	HORIZONTAL
2	2384.00	47.46	54.00	-6.54	17.08	2.21	28.17	0.00	29	152	Average	HORIZONTAL
3	2440.20	110.95	74.00			2.23	28.29	0.00	29	152	Peak	HORIZONTAL
4	2441.00	101.54	54.00			2.24	28.29	0.00	29	152	Average	HORIZONTAL
5	2483.90	66.30	74.00	-7.70	35.66	2.26	28.38	0.00	29	152	Peak	HORIZONTAL
6	2489.50	51.97	54.00	-2.03	21.29	2.26	28.42	0.00	29	152	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 11 / Ant. 1 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 11

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2467.00	96.54	54.00			2.26	28.33	0.00	33	189	Average	HORIZONTAL
2	2467.60	105.44	74.00			2.26	28.33	0.00	33	189	Peak	HORIZONTAL
3	2483.50	52.97	54.00	-1.03	22.33	2.26	28.38	0.00	33	189	Average	HORIZONTAL
4	2483.50	67.38	74.00	-6.62	36.74	2.26	28.38	0.00	33	189	Peak	HORIZONTAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 2 with Ant. 2 (Dipole Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 1 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2389.80	72.37	74.00	-1.63	41.98	2.22	28.17	0.00	212	100	Peak	VERTICAL
2	2390.00	53.50	54.00	-0.50	23.11	2.22	28.17	0.00	212	100	Average	VERTICAL
3	2415.20	97.03	54.00			2.22	28.21	0.00	212	100	Average	VERTICAL
4	2415.20	106.50	74.00			2.22	28.21	0.00	212	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2385.20	50.53	54.00	-3.47	20.15	2.21	28.17	0.00	285	100	Average	VERTICAL
2	2390.00	59.14	74.00	-14.86	28.75	2.22	28.17	0.00	285	100	Peak	VERTICAL
3	2432.20	111.40	74.00			2.23	28.25	0.00	285	100	Peak	VERTICAL
4	2433.80	101.88	54.00			2.23	28.25	0.00	285	100	Average	VERTICAL
5	2483.90	66.86	74.00	-7.14	36.23	2.26	28.37	0.00	285	100	Peak	VERTICAL
6	2488.70	51.33	54.00	-2.67	20.66	2.26	28.41	0.00	285	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 11 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 11

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2467.00	107.15	74.00			2.26	28.33	0.00	285	100	Peak	VERTICAL
2	2467.20	97.76	54.00			2.26	28.33	0.00	285	100	Average	VERTICAL
3	2483.50	53.54	54.00	-0.46	22.91	2.26	28.37	0.00	285	100	Average	VERTICAL
4	2483.50	72.00	74.00	-2.00	41.37	2.26	28.37	0.00	285	100	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 3, 6, 9 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 3

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2390.00	53.19	54.00	-0.81	22.80	2.22	28.17	0.00	214	100	Average	VERTICAL
2	2390.00	66.99	74.00	-7.01	36.60	2.22	28.17	0.00	214	100	Peak	VERTICAL
3	2414.40	99.57	74.00			2.22	28.21	0.00	214	100	Peak	VERTICAL
4	2416.40	90.01	54.00			2.23	28.21	0.00	214	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2422 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 3, 6, 9 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2390.00	50.08	54.00	-3.92	19.69	2.22	28.17	0.00	286	100	Average	VERTICAL
2	2390.00	62.68	74.00	-11.32	32.29	2.22	28.17	0.00	286	100	Peak	VERTICAL
3	2427.00	105.05	74.00			2.23	28.25	0.00	286	100	Peak	VERTICAL
4	2427.40	95.69	54.00			2.23	28.25	0.00	286	100	Average	VERTICAL
5	2483.50	53.15	54.00	-0.85	22.52	2.26	28.37	0.00	286	100	Average	VERTICAL
6	2483.50	67.85	74.00	-6.15	37.22	2.26	28.37	0.00	286	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 3, 6, 9 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 9

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2440.00	92.40	54.00			2.23	28.29	0.00	286	100	Average	VERTICAL
2	2462.40	102.07	74.00			2.24	28.33	0.00	286	100	Peak	VERTICAL
3	2483.50	53.47	54.00	-0.53	22.84	2.26	28.37	0.00	286	100	Average	VERTICAL
4	2487.90	68.18	74.00	-5.82	37.51	2.26	28.41	0.00	286	100	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2452 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 1 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2374.00	56.89	74.00	-17.11	26.55	2.21	28.13	0.00	205	100	Peak	VERTICAL
2	2374.60	46.58	54.00	-7.42	16.24	2.21	28.13	0.00	205	100	Average	VERTICAL
3	2413.80	98.14	54.00			2.22	28.21	0.00	205	100	Average	VERTICAL
4	2414.60	101.67	74.00			2.22	28.21	0.00	205	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2355.20	48.16	54.00	-5.84	17.87	2.19	28.10	0.00	174	100	Average	VERTICAL
2	2355.20	57.52	74.00	-16.48	27.23	2.19	28.10	0.00	174	100	Peak	VERTICAL
3	2438.60	95.88	54.00			2.23	28.29	0.00	174	100	Average	VERTICAL
4	2439.80	99.43	74.00			2.23	28.29	0.00	174	100	Peak	VERTICAL
5	2483.50	43.00	54.00	-11.00	12.37	2.26	28.37	0.00	174	100	Average	VERTICAL
6	2483.50	53.06	74.00	-20.94	22.43	2.26	28.37	0.00	174	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 11 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 11

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	deg	cm		
1	2459.60	106.12	74.00			2.24	28.33	0.00	285	100	Peak	VERTICAL
2	2460.20	102.59	54.00			2.24	28.33	0.00	285	100	Average	VERTICAL
3	2483.50	48.55	54.00	-5.45	17.92	2.26	28.37	0.00	285	100	Average	VERTICAL
4	2483.50	58.17	74.00	-15.83	27.54	2.26	28.37	0.00	285	100	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 1 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 1

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2390.00	53.08	54.00	-0.92	22.69	2.22	28.17	0.00	42	100	Average	VERTICAL
2	2390.00	69.91	74.00	-4.09	39.52	2.22	28.17	0.00	42	100	Peak	VERTICAL
3	2406.60	98.94	54.00			2.22	28.21	0.00	42	100	Average	VERTICAL
4	2407.60	108.11	74.00			2.22	28.21	0.00	42	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2412 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2384.40	59.54	74.00	-14.46	29.16	2.21	28.17	0.00	284	100	Peak	VERTICAL
2	2384.80	49.50	54.00	-4.50	19.12	2.21	28.17	0.00	284	100	Average	VERTICAL
3	2434.60	111.92	74.00			2.23	28.29	0.00	284	100	Peak	VERTICAL
4	2438.60	104.30	54.00			2.23	28.29	0.00	284	100	Average	VERTICAL
5	2487.90	64.11	74.00	-9.89	33.44	2.26	28.41	0.00	284	100	Peak	VERTICAL
6	2489.50	50.55	54.00	-3.45	19.88	2.26	28.41	0.00	284	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 11 / Ant. 2 / Connector 2 / Configuration 2
Test Date	Feb. 15, 2011		

Channel 11

	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	deg	cm		
1	2466.60	107.28	74.00			2.26	28.33	0.00	285	100	Peak	VERTICAL
2	2467.00	98.10	54.00			2.26	28.33	0.00	285	100	Average	VERTICAL
3	2483.50	53.65	54.00	-0.35	23.02	2.26	28.37	0.00	285	100	Average	VERTICAL
4	2483.50	72.32	74.00	-1.68	41.69	2.26	28.37	0.00	285	100	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2462 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 3 with Ant. 1 (PIFA Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2362.00	45.96	54.00	-8.04	15.14	2.85	0.00	27.97	337	191	Average	HORIZONTAL
2	2390.00	56.67	74.00	-17.33	25.74	2.88	0.00	28.05	337	191	Peak	HORIZONTAL
3 p	2440.20	104.70	74.00			2.89	0.00	28.18	337	191	Peak	HORIZONTAL
4 a	2442.20	95.45	54.00			2.91	0.00	28.18	337	191	Average	HORIZONTAL
5	2483.50	54.77	74.00	-19.23	23.58	2.93	0.00	28.26	337	191	Peak	HORIZONTAL
6	2488.70	45.02	54.00	-8.98	13.79	2.93	0.00	28.30	337	191	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2388.80	56.34	74.00	-17.66	25.43	2.86	0.00	28.05	339	155	Peak	HORIZONTAL
2	2390.00	44.55	54.00	-9.45	13.62	2.88	0.00	28.05	339	155	Average	HORIZONTAL
3 a	2438.60	90.21	54.00			2.89	0.00	28.18	339	155	Average	HORIZONTAL
4 p	2447.40	100.12	74.00			2.91	0.00	28.18	339	155	Peak	HORIZONTAL
5	2483.50	44.48	54.00	-9.52	13.29	2.93	0.00	28.26	339	155	Average	HORIZONTAL
6	2484.70	57.71	74.00	-16.29	26.52	2.93	0.00	28.26	339	155	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 1 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2357.60	56.50	74.00	-17.50	25.68	2.85	0.00	27.97	344	162	Peak	HORIZONTAL
2	2358.40	46.42	54.00	-7.58	15.60	2.85	0.00	27.97	344	162	Average	HORIZONTAL
3 a	2435.40	100.62	54.00			2.89	0.00	28.18	344	162	Average	HORIZONTAL
4 p	2436.20	104.28	74.00			2.89	0.00	28.18	344	162	Peak	HORIZONTAL
5	2483.50	54.61	74.00	-19.39	23.42	2.93	0.00	28.26	344	162	Peak	HORIZONTAL
6	2483.50	43.23	54.00	-10.77	12.04	2.93	0.00	28.26	344	162	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 1 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2384.80	57.03	74.00	-16.97	26.12	2.86	0.00	28.05	340	188	Peak	HORIZONTAL
2	2384.80	45.53	54.00	-8.47	14.62	2.86	0.00	28.05	340	188	Average	HORIZONTAL
3 a	2435.00	96.39	54.00			2.89	0.00	28.18	340	188	Average	HORIZONTAL
4 p	2435.40	105.80	74.00			2.89	0.00	28.18	340	188	Peak	HORIZONTAL
5	2489.50	45.90	54.00	-8.10	14.67	2.93	0.00	28.30	340	188	Average	HORIZONTAL
6	2489.90	56.63	74.00	-17.37	25.40	2.93	0.00	28.30	340	188	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 3 with Ant. 2 (Dipole Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2384.80	56.81	74.00	-17.19	25.90	2.86	0.00	28.05	213	100	Peak	VERTICAL
2	2385.20	46.68	54.00	-7.32	15.77	2.86	0.00	28.05	213	100	Average	VERTICAL
3 p	2437.40	109.95	74.00			2.89	0.00	28.18	213	100	Peak	VERTICAL
4 a	2439.00	100.19	54.00			2.89	0.00	28.18	213	100	Average	VERTICAL
5	2484.70	59.14	74.00	-14.86	27.95	2.93	0.00	28.26	213	100	Peak	VERTICAL
6 !	2488.70	48.28	54.00	-5.72	17.05	2.93	0.00	28.30	213	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2390.00	59.34	74.00	-14.66	28.41	2.88	0.00	28.05	212	100	Peak	VERTICAL
2	2390.00	45.38	54.00	-8.62	14.45	2.88	0.00	28.05	212	100	Average	VERTICAL
3 p	2435.00	103.09	74.00			2.89	0.00	28.18	212	100	Peak	VERTICAL
4 a	2438.60	93.37	54.00			2.89	0.00	28.18	212	100	Average	VERTICAL
5	2483.50	60.77	74.00	-13.23	29.58	2.93	0.00	28.26	212	100	Peak	VERTICAL
6	2483.50	46.90	54.00	-7.10	15.71	2.93	0.00	28.26	212	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 2 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2353.20	58.73	74.00	-15.27	27.91	2.85	0.00	27.97	31	100	Peak	VERTICAL
2	2358.40	47.56	54.00	-6.44	16.74	2.85	0.00	27.97	31	31	Average	VERTICAL
3 a	2435.40	99.41	54.00			2.89	0.00	28.18	31	100	Average	VERTICAL
4 p	2436.20	102.93	74.00			2.89	0.00	28.18	31	100	Peak	VERTICAL
5	2483.50	42.97	54.00	-11.03	11.78	2.93	0.00	28.26	31	100	Average	VERTICAL
6	2496.30	55.09	74.00	-18.91	23.85	2.94	0.00	28.30	31	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 2 / Connector 2 / Configuration 3
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2384.00	56.08	74.00	-17.92	25.17	2.86	0.00	28.05	144	100	Peak	VERTICAL
2	2384.40	45.50	54.00	-8.50	14.59	2.86	0.00	28.05	144	100	Average	VERTICAL
3 a	2435.00	97.72	54.00			2.89	0.00	28.18	144	100	Average	VERTICAL
4 p	2439.80	106.95	74.00			2.89	0.00	28.18	144	100	Peak	VERTICAL
5	2489.10	58.84	74.00	-15.16	27.61	2.93	0.00	28.30	144	100	Peak	VERTICAL
6 !	2489.10	48.53	54.00	-5.47	17.30	2.93	0.00	28.30	144	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 4 with Ant. 1 (PIFA Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2361.60	56.66	74.00	-17.34	25.84	2.85	0.00	27.97	324	132	Peak	HORIZONTAL
2	2385.20	45.37	54.00	-8.63	14.46	2.86	0.00	28.05	324	132	Average	HORIZONTAL
3 a	2435.40	93.51	54.00			2.89	0.00	28.18	324	132	Average	HORIZONTAL
4 p	2437.40	102.99	74.00			2.89	0.00	28.18	324	132	Peak	HORIZONTAL
5	2483.90	56.13	74.00	-17.87	24.94	2.93	0.00	28.26	324	132	Peak	HORIZONTAL
6	2489.10	44.15	54.00	-9.85	12.92	2.93	0.00	28.30	324	132	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2390.00	55.97	74.00	-18.03	25.04	2.88	0.00	28.05	336	157	Peak	HORIZONTAL
2	2390.00	44.29	54.00	-9.71	13.36	2.88	0.00	28.05	336	157	Average	HORIZONTAL
3 a	2438.60	89.60	54.00			2.89	0.00	28.18	336	157	Average	HORIZONTAL
4 p	2447.40	99.35	74.00			2.91	0.00	28.18	336	157	Peak	HORIZONTAL
5	2483.50	56.89	74.00	-17.11	25.70	2.93	0.00	28.26	336	157	Peak	HORIZONTAL
6	2483.50	44.96	54.00	-9.04	13.77	2.93	0.00	28.26	336	157	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 1 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2354.80	45.20	54.00	-8.80	14.38	2.85	0.00	27.97	160	128	Average	HORIZONTAL
2	2356.00	55.78	74.00	-18.22	24.96	2.85	0.00	27.97	160	128	Peak	HORIZONTAL
3 a	2435.40	95.10	54.00			2.89	0.00	28.18	160	128	Average	HORIZONTAL
4 p	2436.20	98.73	74.00			2.89	0.00	28.18	160	128	Peak	HORIZONTAL
5	2483.50	42.70	54.00	-11.30	11.51	2.93	0.00	28.26	160	128	Average	HORIZONTAL
6	2512.70	55.08	74.00	-18.92	23.79	2.94	0.00	28.35	160	128	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 1 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2350.00	59.33	74.00	-14.67	28.51	2.85	0.00	27.97	339	129	Peak	HORIZONTAL
2	2352.00	46.51	54.00	-7.49	15.69	2.85	0.00	27.97	339	129	Average	HORIZONTAL
3 a	2433.40	94.76	54.00			2.89	0.00	28.13	339	129	Average	HORIZONTAL
4 p	2435.40	104.04	74.00			2.89	0.00	28.18	339	129	Peak	HORIZONTAL
5	2485.10	57.75	74.00	-16.25	26.52	2.93	0.00	28.30	339	129	Peak	HORIZONTAL
6	2489.10	45.55	54.00	-8.45	14.32	2.93	0.00	28.30	339	129	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 4 with Ant. 2 (Dipole Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2384.00	55.47	74.00	-18.53	24.56	2.86	0.00	28.05	142	100	Peak	VERTICAL
2	2385.20	45.43	54.00	-8.57	14.52	2.86	0.00	28.05	142	100	Average	VERTICAL
3 p	2435.00	106.96	74.00			2.89	0.00	28.18	142	100	Peak	VERTICAL
4 a	2435.40	97.41	54.00			2.89	0.00	28.18	142	100	Average	VERTICAL
5 !	2488.70	48.90	54.00	-5.10	17.67	2.93	0.00	28.30	142	100	Average	VERTICAL
6	2489.10	60.00	74.00	-14.00	28.77	2.93	0.00	28.30	142	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2390.00	60.20	74.00	-13.80	29.27	2.88	0.00	28.05	283	100	Peak	VERTICAL
2	2390.00	47.39	54.00	-6.61	16.46	2.88	0.00	28.05	283	100	Average	VERTICAL
3 p	2443.80	103.25	74.00			2.91	0.00	28.18	283	100	Peak	VERTICAL
4 a	2446.20	93.50	54.00			2.91	0.00	28.18	283	100	Average	VERTICAL
5	2483.50	58.89	74.00	-15.11	27.70	2.93	0.00	28.26	283	100	Peak	VERTICAL
6	2483.50	46.50	54.00	-7.50	15.31	2.93	0.00	28.26	283	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 2 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2355.60	47.77	54.00	-6.23	16.95	2.85	0.00	27.97	28	100	Average	VERTICAL
2	2358.80	57.95	74.00	-16.05	27.13	2.85	0.00	27.97	28	100	Peak	VERTICAL
3 p	2436.20	103.63	74.00			2.89	0.00	28.18	28	100	Peak	VERTICAL
4 a	2438.60	100.14	54.00			2.89	0.00	28.18	28	100	Average	VERTICAL
5	2483.50	43.07	54.00	-10.93	11.88	2.93	0.00	28.26	28	100	Average	VERTICAL
6	2485.10	53.66	74.00	-20.34	22.43	2.93	0.00	28.30	28	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 2 / Connector 2 / Configuration 4
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2384.40	48.92	54.00	-5.08	18.01	2.86	0.00	28.05	283	100	Average	VERTICAL
2	2385.00	60.09	74.00	-13.91	29.18	2.86	0.00	28.05	283	100	Peak	VERTICAL
3	2435.00	100.00	54.00			2.89	0.00	28.18	283	100	Average	VERTICAL
4	2435.40	109.09	74.00			2.89	0.00	28.18	283	100	Peak	VERTICAL
5	2489.50	46.79	54.00	-7.21	15.56	2.93	0.00	28.30	283	100	Average	VERTICAL
6	2489.90	57.93	74.00	-16.07	26.70	2.93	0.00	28.30	283	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 5 with Ant. 1 (PIFA Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2385.20	55.27	74.00	-18.73	24.36	2.86	0.00	28.05	358	131	Peak	HORIZONTAL
2	2385.20	44.62	54.00	-9.38	13.71	2.86	0.00	28.05	358	131	Average	HORIZONTAL
3 a	2433.80	96.03	54.00			2.89	0.00	28.13	358	131	Average	HORIZONTAL
4 p	2434.20	105.72	74.00			2.89	0.00	28.18	358	131	Peak	HORIZONTAL
5 !	2483.50	48.65	54.00	-5.35	17.46	2.93	0.00	28.26	358	131	Average	HORIZONTAL
6	2484.70	67.00	74.00	-7.00	35.81	2.93	0.00	28.26	358	131	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2386.80	54.34	74.00	-19.66	23.43	2.86	0.00	28.05	354	154	Peak	HORIZONTAL
2	2388.80	43.74	54.00	-10.26	12.83	2.86	0.00	28.05	354	154	Average	HORIZONTAL
3 a	2446.20	89.93	54.00			2.91	0.00	28.18	354	154	Average	HORIZONTAL
4 p	2447.40	100.07	74.00			2.91	0.00	28.18	354	154	Peak	HORIZONTAL
5	2483.50	63.61	74.00	-10.39	32.42	2.93	0.00	28.26	354	154	Peak	HORIZONTAL
6	2483.50	47.95	54.00	-6.05	16.76	2.93	0.00	28.26	354	154	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 1 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2354.00	55.92	74.00	-18.08	25.10	2.85	0.00	27.97	179	162	Peak	HORIZONTAL
2	2354.80	46.00	54.00	-8.00	15.18	2.85	0.00	27.97	179	162	Average	HORIZONTAL
3 p	2436.20	102.28	74.00			2.89	0.00	28.18	179	162	Peak	HORIZONTAL
4 a	2436.20	98.73	54.00			2.89	0.00	28.18	179	162	Average	HORIZONTAL
5	2483.50	43.15	54.00	-10.85	11.96	2.93	0.00	28.26	179	162	Average	HORIZONTAL
6	2489.10	54.28	74.00	-19.72	23.05	2.93	0.00	28.30	179	162	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 1 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2356.00	45.16	54.00	-8.84	14.34	2.85	0.00	27.97	358	130	Average	HORIZONTAL
2	2381.20	56.51	74.00	-17.49	25.64	2.86	0.00	28.01	358	130	Peak	HORIZONTAL
3 p	2432.60	105.93	74.00			2.89	0.00	28.13	358	130	Peak	HORIZONTAL
4 a	2433.80	96.46	54.00			2.89	0.00	28.13	358	130	Average	HORIZONTAL
5 !	2483.50	49.12	54.00	-4.88	17.93	2.93	0.00	28.26	358	130	Average	HORIZONTAL
6	2486.30	65.76	74.00	-8.24	34.53	2.93	0.00	28.30	358	130	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 5 with Ant. 2 (Dipole Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2385.20	60.47	74.00	-13.53	29.56	2.86	0.00	28.05	208	100	Peak	VERTICAL
2	2385.20	48.65	54.00	-5.35	17.74	2.86	0.00	28.05	208	100	Average	VERTICAL
3	2431.80	97.70	54.00			2.89	0.00	28.13	208	100	Average	VERTICAL
4	2432.20	107.40	74.00			2.89	0.00	28.13	208	100	Peak	VERTICAL
5	2489.10	46.31	54.00	-7.69	15.08	2.93	0.00	28.30	208	100	Average	VERTICAL
6	2489.50	56.43	74.00	-17.57	25.20	2.93	0.00	28.30	208	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2389.20	65.70	74.00	-8.30	34.79	2.86	0.00	28.05	259	100	Peak	VERTICAL
2	2390.00	49.13	54.00	-4.87	18.20	2.88	0.00	28.05	259	100	Average	VERTICAL
3	2430.20	103.66	74.00			2.89	0.00	28.13	259	100	Peak	VERTICAL
4	2437.40	93.36	54.00			2.89	0.00	28.18	259	100	Average	VERTICAL
5	2483.50	59.93	74.00	-14.07	28.74	2.93	0.00	28.26	259	100	Peak	VERTICAL
6	2483.50	46.49	54.00	-7.51	15.30	2.93	0.00	28.26	259	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 2 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2356.00	49.22	54.00	-4.78	18.40	2.85	0.00	27.97	260	100	Average	VERTICAL
2	2356.40	59.42	74.00	-14.58	28.60	2.85	0.00	27.97	260	100	Peak	VERTICAL
3	2437.80	107.04	74.00			2.89	0.00	28.18	260	100	Peak	VERTICAL
4	2438.60	103.37	54.00			2.89	0.00	28.18	260	100	Average	VERTICAL
5	2483.50	55.37	74.00	-18.63	24.18	2.93	0.00	28.26	260	100	Peak	VERTICAL
6	2483.50	44.10	54.00	-9.90	12.91	2.93	0.00	28.26	260	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 2 / Connector 2 / Configuration 5
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2383.60	59.17	74.00	-14.83	28.26	2.86	0.00	28.05	209	100	Peak	VERTICAL
2	2384.80	48.10	54.00	-5.90	17.19	2.86	0.00	28.05	209	100	Average	VERTICAL
3	2432.20	97.96	54.00			2.89	0.00	28.13	209	100	Average	VERTICAL
4	2433.00	107.34	74.00			2.89	0.00	28.13	209	100	Peak	VERTICAL
5	2489.10	45.86	54.00	-8.14	14.63	2.93	0.00	28.30	209	100	Average	VERTICAL
6	2511.10	57.29	74.00	-16.71	26.00	2.94	0.00	28.35	209	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 6 with Ant. 1 (PIFA Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2354.00	55.82	74.00	-18.18	25.00	2.85	0.00	27.97	184	129	Peak	HORIZONTAL
2	2355.20	43.96	54.00	-10.04	13.14	2.85	0.00	27.97	184	129	Average	HORIZONTAL
3 a	2433.80	93.60	54.00			2.89	0.00	28.13	184	129	Average	HORIZONTAL
4 p	2434.60	103.66	74.00			2.89	0.00	28.18	184	129	Peak	HORIZONTAL
5	2483.50	47.32	54.00	-6.68	16.13	2.93	0.00	28.26	184	129	Average	HORIZONTAL
6	2483.90	64.69	74.00	-9.31	33.50	2.93	0.00	28.26	184	129	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 1 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2357.60	43.21	54.00	-10.79	12.39	2.85	0.00	27.97	183	126	Average	HORIZONTAL
2	2366.40	54.91	74.00	-19.09	24.04	2.86	0.00	28.01	183	126	Peak	HORIZONTAL
3 a	2445.40	87.69	54.00			2.91	0.00	28.18	183	126	Average	HORIZONTAL
4 p	2447.40	97.52	74.00			2.91	0.00	28.18	183	126	Peak	HORIZONTAL
5	2483.50	64.70	74.00	-9.30	33.51	2.93	0.00	28.26	183	126	Peak	HORIZONTAL
6	2483.50	47.79	54.00	-6.21	16.60	2.93	0.00	28.26	183	126	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 1 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2353.20	55.73	74.00	-18.27	24.91	2.85	0.00	27.97	276	144	Peak	VERTICAL
2	2354.80	45.26	54.00	-8.74	14.44	2.85	0.00	27.97	276	144	Average	VERTICAL
3 a	2435.40	94.89	54.00			2.89	0.00	28.18	276	144	Average	VERTICAL
4 p	2436.20	98.42	74.00			2.89	0.00	28.18	276	144	Peak	VERTICAL
5	2483.50	53.96	74.00	-20.04	22.77	2.93	0.00	28.26	276	144	Peak	VERTICAL
6	2483.50	42.77	54.00	-11.23	11.58	2.93	0.00	28.26	276	144	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 1 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2354.80	57.13	74.00	-16.87	26.31	2.85	0.00	27.97	180	149	Peak	HORIZONTAL
2	2355.60	45.53	54.00	-8.47	14.71	2.85	0.00	27.97	180	149	Average	HORIZONTAL
3 a	2432.20	95.49	54.00			2.89	0.00	28.13	180	149	Average	HORIZONTAL
4 p	2432.60	105.01	74.00			2.89	0.00	28.13	180	149	Peak	HORIZONTAL
5	2483.50	47.69	54.00	-6.31	16.50	2.93	0.00	28.26	180	149	Average	HORIZONTAL
6	2487.50	64.34	74.00	-9.66	33.11	2.93	0.00	28.30	180	149	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

<Configuration 6 with Ant. 2 (Dipole Antenna)>

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 20MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2384.80	59.98	74.00	-14.02	29.07	2.86	0.00	28.05	262	100	Peak	VERTICAL
2	2385.20	48.84	54.00	-5.16	17.93	2.86	0.00	28.05	262	100	Average	VERTICAL
3	2434.20	106.81	74.00			2.89	0.00	28.18	262	100	Peak	VERTICAL
4	2440.20	97.75	54.00			2.89	0.00	28.18	262	100	Average	VERTICAL
5	2488.70	47.21	54.00	-6.79	15.98	2.93	0.00	28.30	262	100	Average	VERTICAL
6	2489.10	57.37	74.00	-16.63	26.14	2.93	0.00	28.30	262	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11n MCS0 40MHz Ch 6 / Ant. 2 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2390.00	60.06	74.00	-13.94	29.13	2.88	0.00	28.05	260	100	Peak	VERTICAL
2	2390.00	46.95	54.00	-7.05	16.02	2.88	0.00	28.05	260	100	Average	VERTICAL
3 a	2431.40	93.37	54.00			2.89	0.00	28.13	260	100	Average	VERTICAL
4 p	2444.60	102.31	74.00			2.91	0.00	28.18	260	100	Peak	VERTICAL
5	2483.50	62.14	74.00	-11.86	30.95	2.93	0.00	28.26	260	100	Peak	VERTICAL
6 !	2483.50	48.70	54.00	-5.30	17.51	2.93	0.00	28.26	260	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11b CH 6 / Ant. 2 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2357.60	59.50	74.00	-14.50	28.68	2.85	0.00	27.97	276	100	Peak	VERTICAL
2	2358.40	49.56	54.00	-4.44	18.74	2.85	0.00	27.97	276	100	Average	VERTICAL
3	2438.20	105.40	74.00			2.89	0.00	28.18	276	100	Peak	VERTICAL
4	2438.60	101.83	54.00			2.89	0.00	28.18	276	100	Average	VERTICAL
5	2483.50	44.32	54.00	-9.68	13.13	2.93	0.00	28.26	276	100	Average	VERTICAL
6	2488.70	55.84	74.00	-18.16	24.61	2.93	0.00	28.30	276	100	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2437MHz.

Temperature	21°C	Humidity	61%
Test Engineer	Magic Lai	Configurations	IEEE 802.11g CH 6 / Ant. 2 / Connector 2 / Configuration 6
Test Date	Feb. 28, 2011		

Channel 6

	Freq	Level	Limit	Over	Read	Cable	Preamp	Antenna	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	2384.00	59.95	74.00	-14.05	29.04	2.86	0.00	28.05	261	100	Peak	VERTICAL
2	2384.40	48.68	54.00	-5.32	17.77	2.86	0.00	28.05	261	100	Average	VERTICAL
3	2438.20	98.61	54.00			2.89	0.00	28.18	261	100	Average	VERTICAL
4	2439.80	108.06	74.00			2.89	0.00	28.18	261	100	Peak	VERTICAL
5	2489.90	57.04	74.00	-16.96	25.81	2.93	0.00	28.30	261	100	Peak	VERTICAL
6	2489.90	47.14	54.00	-6.86	15.91	2.93	0.00	28.30	261	100	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2437 MHz.

Note:

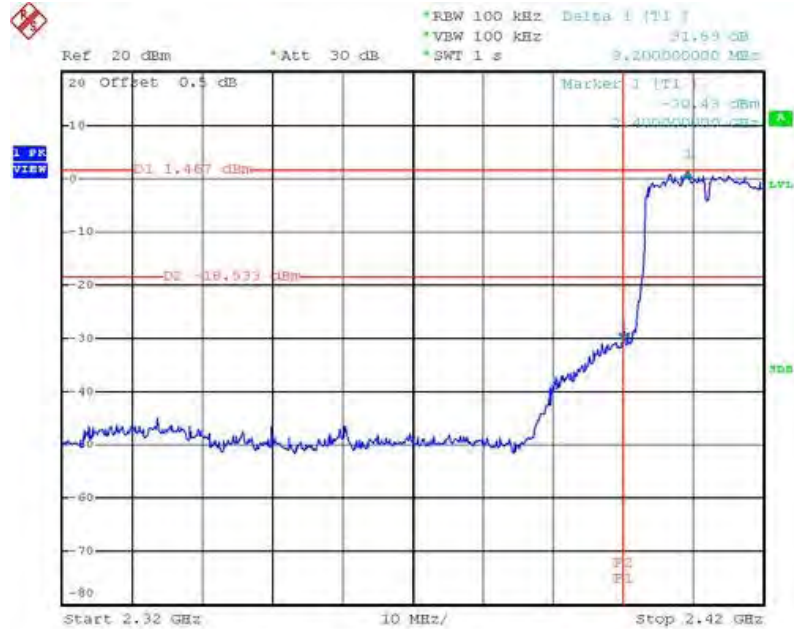
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

For Emission not in Restricted Band

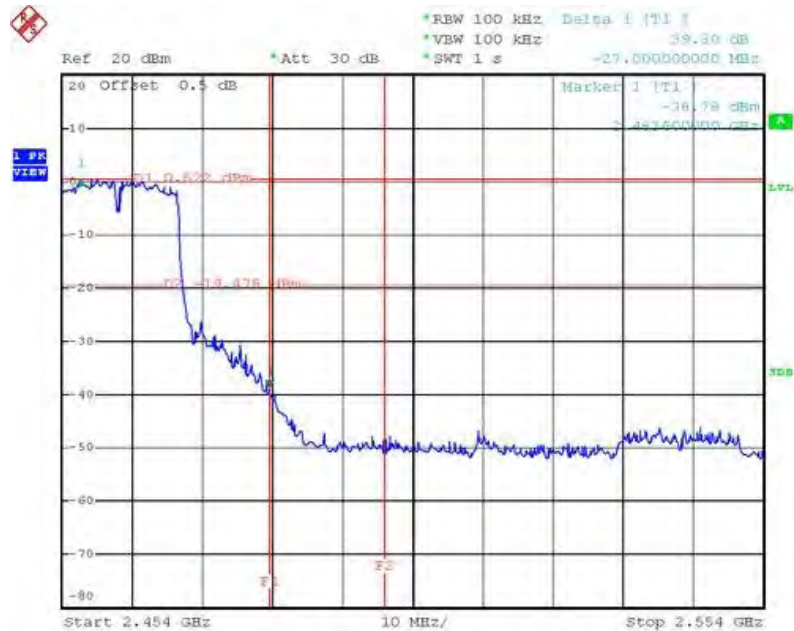
<Configuration 2 / PIFA Antenna>

Low Band Edge Plot on Configuration IEEE 802.11n MCS0 20MHz Connector 2 / Ant. 1 / 2412 MHz



Date: 17.FEB.2011 15:07:57

High Band Edge Plot on Configuration IEEE 802.11n MCS0 20MHz Connector 2 / Ant. 1 / 2462 MHz

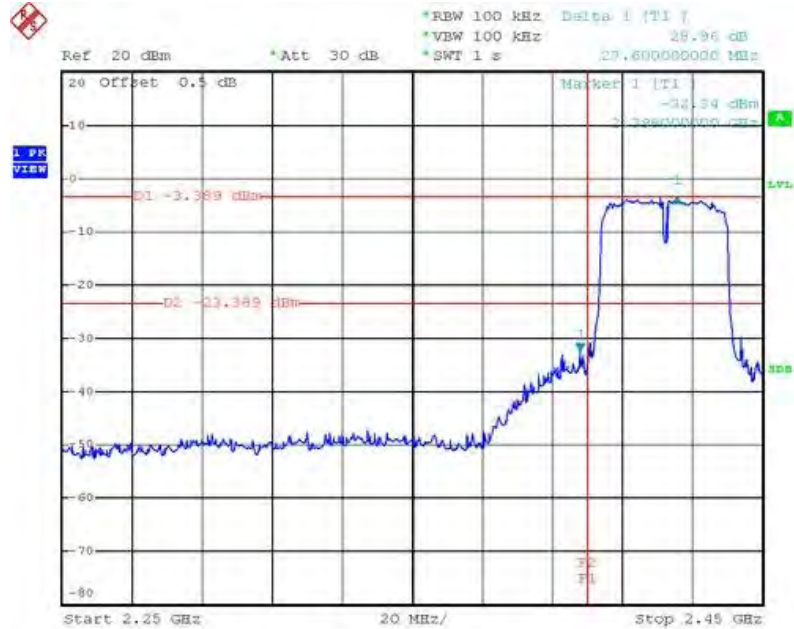


Date: 17.FEB.2011 15:17:21

For Emission not in Restricted Band

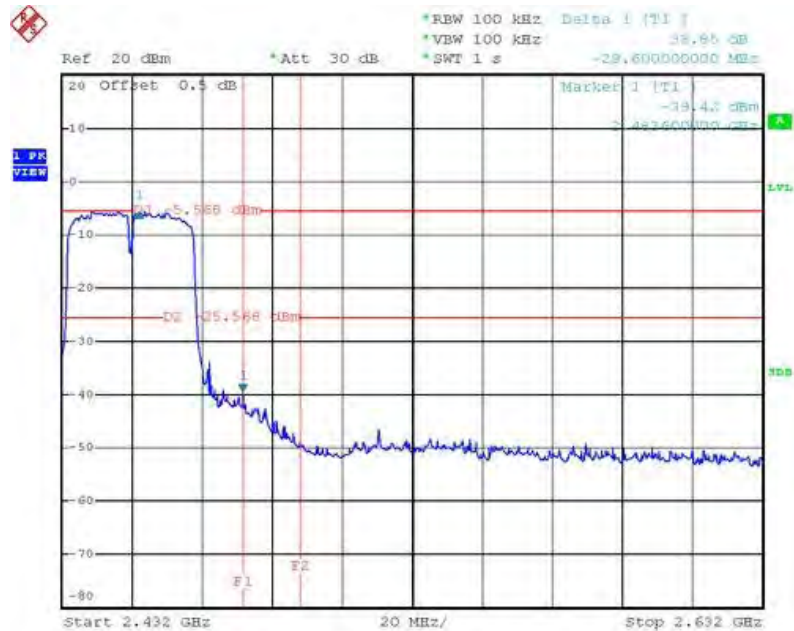
<Configuration 2 / PIFA Antenna>

Low Band Edge Plot on Configuration IEEE 802.11n MCS0 40MHz Connector 2 / Ant. 1 / 2422 MHz



Date: 17.FEB.2011 15:28:32

High Band Edge Plot on Configuration IEEE 802.11n MCS0 40MHz Connector 2 / Ant. 1 / 2452 MHz



Date: 17.FEB.2011 15:35:13



Low Band Edge Plot on Configuration IEEE 802.11b Connector 2 / Ant. 1 / 2412 MHz

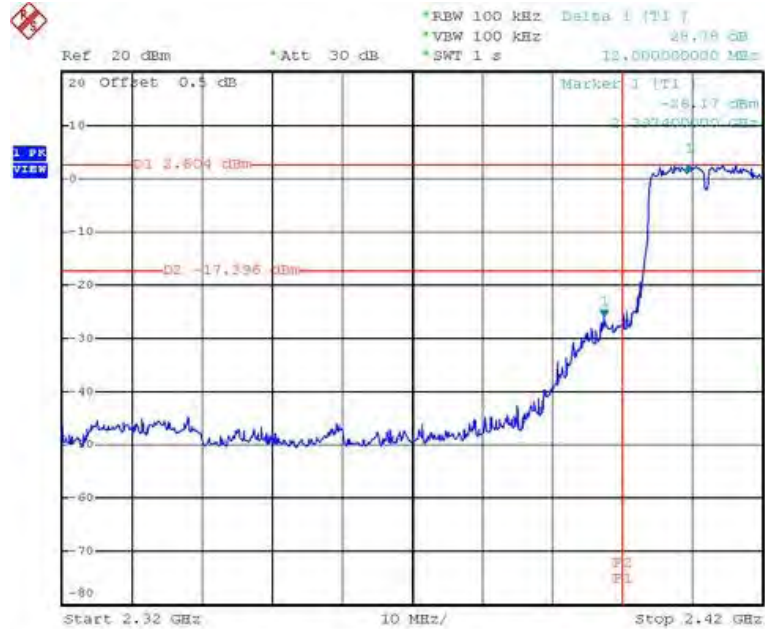


Date: 17.FEB.2011 14:48:55

For Emission not in Restricted Band

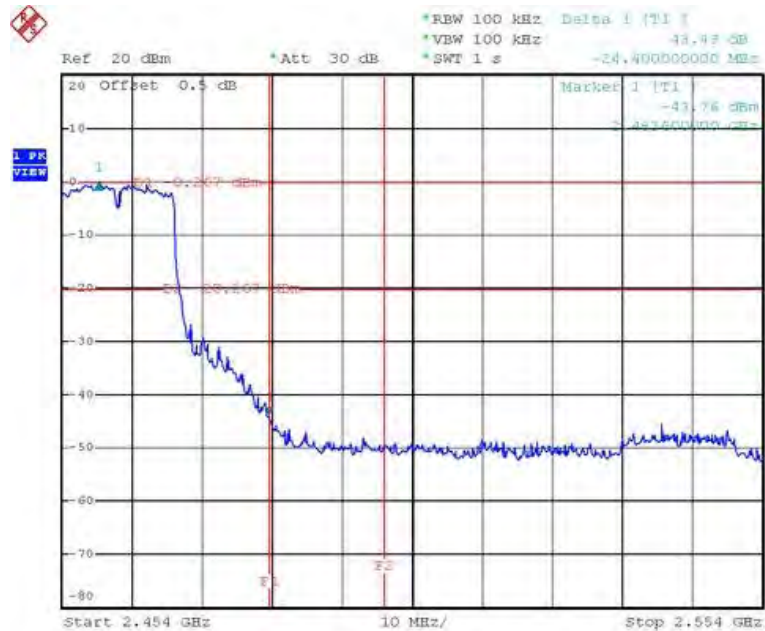
<Configuration 2 / PIFA Antenna>

Low Band Edge Plot on Configuration IEEE 802.11g Connector 2 / Ant. 1 / 2412 MHz



Date: 17.FEB.2011 14:51:22

High Band Edge Plot on Configuration IEEE 802.11g Connector 2 / Ant. 1 / 2462 MHz

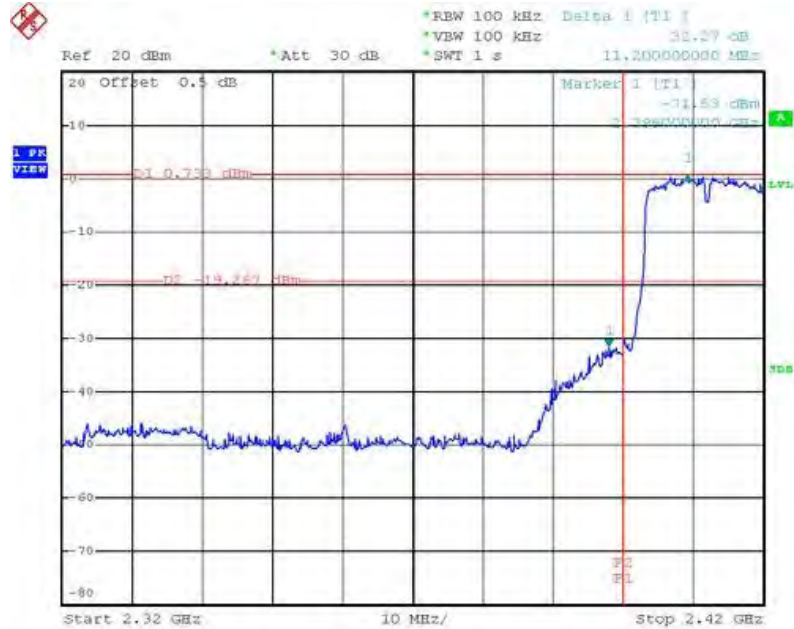


Date: 17.FEB.2011 15:03:29

For Emission not in Restricted Band

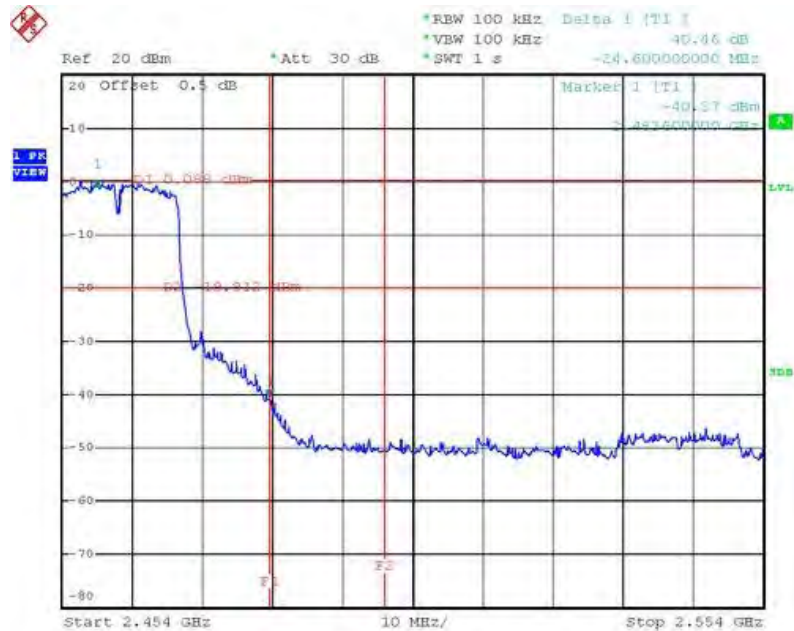
<Configuration 2 / Dipole Antenna>

Low Band Edge Plot on Configuration IEEE 802.11n MCS0 20MHz Connector 2 / Ant. 2 / 2412 MHz



Date: 17.FEB.2011 15:10:56

High Band Edge Plot on Configuration IEEE 802.11n MCS0 20MHz Connector 2 / Ant. 2 / 2462 MHz

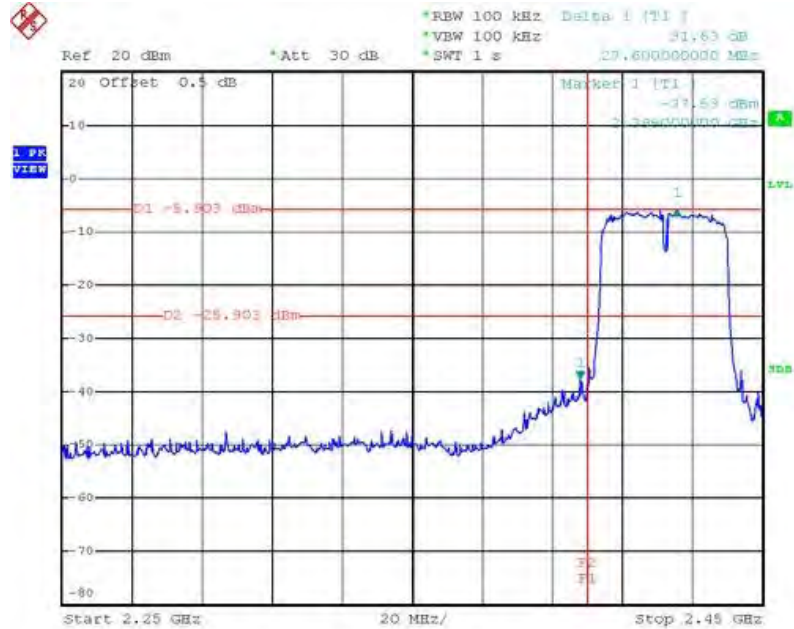


Date: 17.FEB.2011 15:19:35

For Emission not in Restricted Band

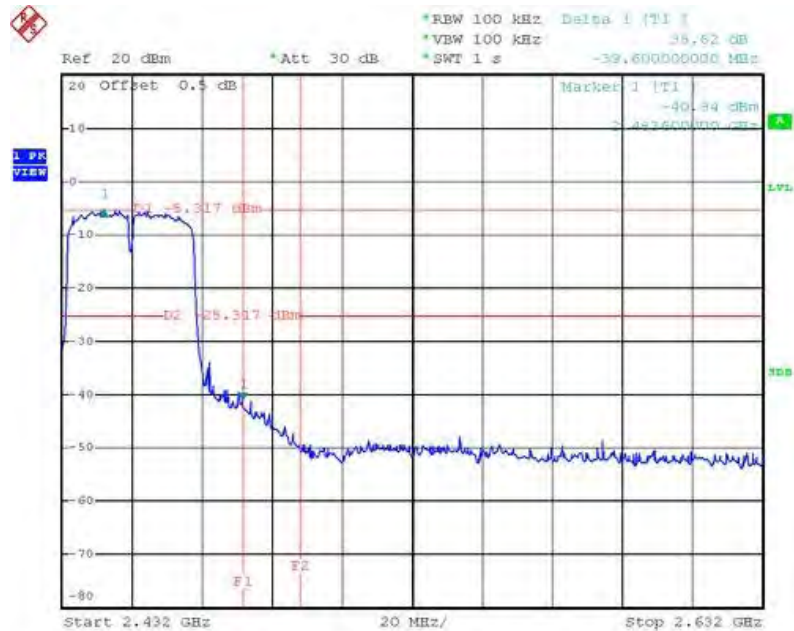
<Configuration 2 / Dipole Antenna>

Low Band Edge Plot on Configuration IEEE 802.11n MCS0 40MHz Connector 2 / Ant. 2 / 2422 MHz



Date: 17.FEB.2011 15:26:09

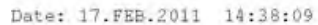
High Band Edge Plot on Configuration IEEE 802.11n MCS0 40MHz Connector 2 / Ant. 2 / 2452 MHz



Date: 17.FEB.2011 15:37:47



Low Band Edge Plot on Configuration IEEE 802.11b Connector 2 / Ant. 2 / 2412 MHz

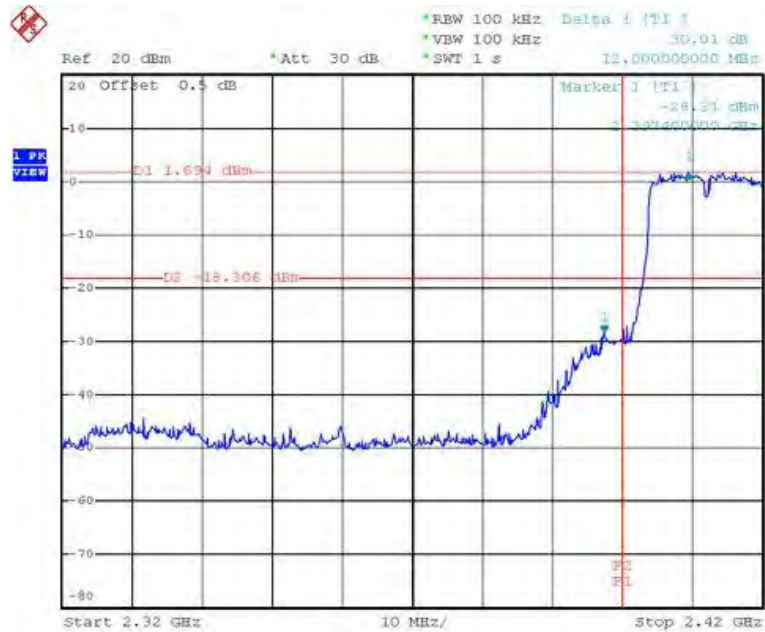


Date: 17.FEB.2011 14:46:54

For Emission not in Restricted Band

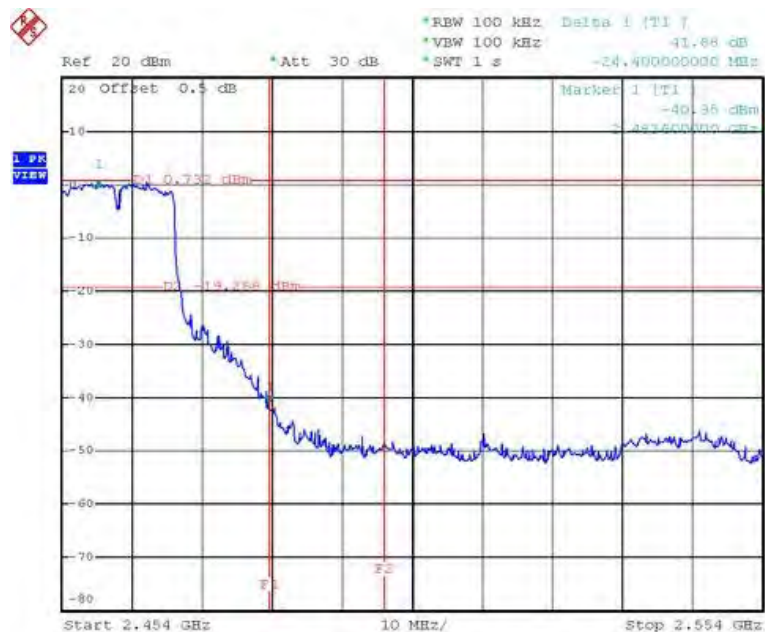
<Configuration 2 / Dipole Antenna>

Low Band Edge Plot on Configuration IEEE 802.11g Connector 2 / Ant. 2 / 2412 MHz



Date: 17.FEB.2011 14:54:03

High Band Edge Plot on Configuration IEEE 802.11g Connector 2 / Ant. 2 / 2462 MHz



Date: 17.FEB.2011 15:01:10

4.7. Antenna Requirements

4.7.1. Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

4.7.2. Antenna Connector Construction

Please refer to section 3.3 in this test report; antenna connector complied with the requirements.

5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Test Receiver	R&S	ESCS 30	100377	9kHz ~ 2.75GHz	Sep. 01, 2010	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Oct. 28, 2010	Conduction (CO01-CB)
V- LISN	Schwarzbeck	NSLK 8127	8127-478	9K ~ 30MHz	Nov. 16, 2010	Conduction (CO01-CB)
PULSE LIMITER	R&S	ESH3-Z2	100430	9K~30MHz	Jan. 04, 2011	Conduction (CO01-CB)
COND Cable	-	Cable	-	0.15MHz~30MHz	Dec. 04, 2010	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	22021	20MHz ~ 2GHz	Oct. 17, 2010	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz~18GHz	Nov. 22, 2010	Radiation (03CH01-CB)
Horn Antenna	SCHWARZBEAK	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Oct. 08, 2010	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Nov. 17, 2010	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Nov. 23, 2010	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26.5GHz ~ 40GHz	Nov. 17, 2010	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP	100304	9kHz ~ 40GHz	Nov. 22, 2010	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS 30	100355	9KHz ~ 2.75GHz	Mar. 22, 2010	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS 30	100355	9KHz ~ 2.75GHz	Mar. 22, 2011	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9 kHz - 30 MHz	Sep. 09, 2010*	Radiation (03CH01-CB)
Turn Table	INN CO	CO 2000	N/A	0 ~ 360 degree	N/A	Radiation (03CH01-CB)
Antenna Mast	INN CO	CO2000	N/A	1 m - 4 m	N/A	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz - 1 GHz	Nov. 17, 2010	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-1	N/A	1 GHz ~ 26.5 GHz	Nov. 17, 2010	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-2	N/A	1 GHz ~ 26.5 GHz	Nov. 17, 2010	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-3	N/A	1 GHz - 40 GHz	Nov. 17, 2010	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-4	N/A	1 GHz - 40 GHz	Nov. 17, 2010	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP30	100023	9KHz~30GHz	Mar. 15, 2011	Conducted (TH01-CB)
Spectrum analyzer	R&S	FSV30	101026	9KHz~30GHz	Jul. 23, 2010	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	May 21, 2010	Conducted (TH01-CB)
Thermo-Hygro Meter	N/A	HC 520	#1	15~70 degree	Nov. 02, 2010	Conducted (TH01-CB)
Signal Generator	R&S	SMR40	100302	10MHz~40GHz	Nov. 19, 2010	Conducted (TH01-CB)
RF Power Divider	HP	11636A	00306	2GHz ~ 18GHz	N/A	Conducted (TH01-CB)
RF Power Splitter	Anaren	44100	1839	2GHz ~ 18GHz	N/A	Conducted (TH01-CB)
RF Power Splitter	Anaren	42100	17930	2GHz ~ 18GHz	N/A	Conducted (TH01-CB)
Signal generator	R&S	SMU200A	102782	10MHz~40GHz	Mar. 09, 2010	Conducted (TH01-CB)
Horn Antenna	COM-POWER	AH-118	071187	1GHz ~ 18GHz	Mar. 18, 2010	Conducted (TH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Horn Antenna	COM-POWER	AH-118	071042	1GHz – 18GHz	Oct. 14, 2010	Radiation (05CH01-CB)
RF Cable-high	Woken	High Cable-7	-	1 GHz – 26.5 GHz	Nov. 17, 2010	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-8	-	1 GHz – 26.5 GHz	Nov. 17, 2010	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-9	-	1 GHz – 26.5 GHz	Nov. 17, 2010	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-10	-	1 GHz – 26.5 GHz	Nov. 17, 2010	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-11	-	1 GHz – 26.5 GHz	Nov. 17, 2010	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-12	-	1 GHz – 26.5 GHz	Nov. 17, 2010	Conducted (TH01-CB)
RF Cable-high	Woken	High Cable-13	-	1 GHz – 26.5 GHz	Nov. 17, 2010	Conducted (TH01-CB)
Power Sensor	Anritsu	MA2411B	0917223	300MHz~40GHz	Sep. 13, 2010	Conducted (TH01-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Sep. 08, 2010	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

Note: *Calibration Interval of instruments listed above is two years.

6. TEST LOCATION

SHIJR	ADD : 6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C. TEL : 886-2-2696-2468 FAX : 886-2-2696-2255
HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-318-0055
LINKOU	ADD : No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C TEL : 886-2-2601-1640 FAX : 886-2-2601-1695
DUNGHU	ADD : No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C. TEL : 886-2-2631-4739 FAX : 886-2-2631-9740
JUNGHE	ADD : 7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C. TEL : 886-2-8227-2020 FAX : 886-2-8227-2626
NEIHU	ADD : 4Fl., No. 339, Hsin Hu 2 nd Rd., Taipei 114, Taiwan, R.O.C. TEL : 886-2-2794-8886 FAX : 886-2-2794-9777
JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

7. TAF CERTIFICATE OF ACCREDITATION



Certificate No. : L1190-091230

財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

This is to certify that

Sporton International Inc.
EMC & Wireless Communications Laboratory
No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien,
Taiwan, R.O.C.

is accredited in respect of laboratory

Accreditation Criteria	: ISO/IEC 17025:2005
Accreditation Number	: 1190
Originally Accredited	: December 15, 2003
Effective Period	: January 10, 2010 to January 09, 2013
Accredited Scope	: Testing Field, see described in the Appendix
Specific Accreditation Program	: Accreditation Program for Designated Testing Laboratory for Commodities Inspection Accreditation Program for Telecommunication Equipment Testing Laboratory Accreditation Program for BSMI Mutual Recognition Arrangement with Foreign Authorities



Jay-San Chen
President, Taiwan Accreditation Foundation
Date : December 30, 2009

P1, total 22 pages

The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix