



SPORTON International Inc.

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FCC RADIO TEST REPORT

Applicant's company	NETGEAR, Inc.
Applicant Address	4500 Great America Parkway, Santa Clara, CA 95054, USA
FCC ID	PY305300021
Manufacturer's company	Hong Fu Jin Precision Industry (Shenzhen) Co., Ltd.
Manufacturer Address	No. 2, 2nd Donghuan Road ,10th Industrial DistrictLonghua Town, Bao'an, Shenzhen, P.R. China

Product Name	RangeMax Wireless Router (WPN824v2); RangeMax Wireless Access Point (WPN802v2)
Brand Name	NETGEAR
Model Name	WPN824v2, WPN802v2
Test Rule Part(s)	47 CFR FCC Part 15 Subpart C
Test Freq. Range	2400 ~ 2483.5MHz
Receive Date	Sep. 21, 2005
Test Date	Oct. 18, 2005
Submission Type	Original Equipment



Statement

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 C63.4-2003** and **47 CFR FCC Part 15 Subpart C**.
The test equipment used to perform the test is calibrated and traceable to NML/ROC.

Lab Code: 200079-0



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History of This Test Report

Original Issue Date: Oct. 24, 2005

Report No.: FR592102

- No additional attachment.
- Additional attachment were issued as following record:

Attachment No.	Issue Date	Description

1. CERTIFICATE OF COMPLIANCE

Product Name : RangeMax Wireless Router (WPN824v2); RangeMax Wireless Access Point (WPN802v2)
Brand Name : NETGEAR
Model Name : WPN824v2, WPN802v2
Applicant : NETGEAR, Inc.
Test Rule Part(s) : 47 CFR FCC Part 15 Subpart C

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Sep. 21, 2005 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.



Wayne Hsu / Supervisor
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	13.26 dB
4.2	15.247(b)(3)	Maximum Peak Conducted Output Power	Complies	11.57 dB
4.3	15.247(e)	Power Spectral Density	Complies	16.34 dB
4.4	15.247(a)(2)	6dB Spectrum Bandwidth	Complies	-
4.5	15.247(d)	Radiated Emissions	Complies	3.40 dB
4.6	15.247(d)	Band Edge Emissions	Complies	6.48 dB
4.7	15.203	Antenna Requirements	Complies	-

Test Items	Uncertainty	Remark
AC Power Line Conducted Emissions	±2.26dB	Confidence levels of 95%
Maximum Peak Conducted Output Power	±0.5dB	Confidence levels of 95%
Power Spectral Density	±0.71dB	Confidence levels of 95%
6dB Spectrum Bandwidth	±6.25×10 ⁻⁷	Confidence levels of 95%
Radiated Emissions/ Band Edge Emissions	±3.72dB	Confidence levels of 95%

3. GENERAL INFORMATION

3.1. Product Details

Items	Description
Product Type	RangeMax Wireless Router (WPN824v2); RangeMax Wireless Access Point (WPN802v2)
Radio Type	Intentional Transceiver
Power Type	Power Adapter
Interface Type	RJ-45 (5 ports for WPN824v2; 1 port for WPN802V2)
Modulation	DSSS for IEEE 802.11b ; OFDM for IEEE 802.11g
Data Modulation	DSSS (BPSK / QPSK / CCK) ; OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	DSSS (1/ 2/ 5.5/11) ; OFDM (6/9/12/18/24/36/48/54)
Frequency Range	2400 ~ 2483.5MHz
Channel Number	11
Channel Band Width (99%)	11b: 15.28 MHz ; 11g: 16.48 MHz
Conducted Output Power	11b: 19.37 dBm ; 11g: 19.43 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

3.2. Accessories

Power	Brand	Model	Rating
Adapter 1	NETGEAR	DV-1280-3	Input: 120 VAC Oupput: 12VDC
Adapter 2	NETGEAR	DSA-0131F-12	Input: 100~240 VAC Oupput: 12VDC

3.3. Table for Filed Antenna

Ant.	Antenna Type	Connector	Gain (dBi)
1	Printed Antenna	NA	5.00
2	Printed Antenna	NA	5.00
3	Printed Antenna	NA	5.00
4	Printed Antenna	NA	5.00
5	Printed Antenna	NA	5.00
6	Printed Antenna	NA	5.00
7	Printed Antenna	NA	5.00

Note:

7 printed antennas are printed on PCB with different orientation The EUT could select different one or more antennas as TX/RX antennas based on the communication quality.

3.4. Table for Carrier Frequencies

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

3.5. Table for Test Modes

There are 2 EUT for the project, including RangeMax Wireless Router with model name WPN824v2 and RangeMax Wireless Access Point with model name WPN802v2. Both of the EUT are much similar except that there are 5 RJ45 ports only on RangeMax Wireless Router. After evaluation, only test result of RangeMax Wireless Router was regarded as the worst case and shown in the test report. Besides, there are 7 antennas and 2 adapters for the EUT. 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	Antenna	Adapter
AC Power Line Conducted Emissions	Normal Link	11 Mbps	6	NA	1
					2
Maximum Peak Conducted Output Power	11b/CCK	11 Mbps	1/6/11	NA	2
Power Spectral Density 6dB Spectrum Bandwidth	11g/BPSK	6 Mbps	1/6/11	NA	2
Radiated Emissions 9kHz~1GHz	11g/BPSK	6 Mbps	6	6	1 / 2
				All antenna	1 / 2
Radiated Emissions 1GHz~10 th Harmonic Band Edge Emissions	11b/CCK	11 Mbps	1/6/11	6	2
	11g/BPSK	6 Mbps	1/6/11	All antenna	2

3.6. Table for Testing Locations

Test Site No.	Site Category	Location	FCC Reg. No.	IC File No.	VCCI Reg. No
03CH03-HY	SAC	Hwa Ya	101377	IC 4088	-
CO04-HY	Conduction	Hwa Ya	101377	IC 4088	-
TH01-HY	OVEN Room	Hwa Ya	-	-	-

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

Please refer section 4 for Test Site Address.

3.7. Table for Supporting Units

Support Unit	Brand	Model	FCC ID
Printer	EPSON	LQ-680	DoC
Modem	ACEEX	DM-1414	DoC
Notebook	DELL	D505	DoC

3.8. Table for Parameters of Test Software Setting

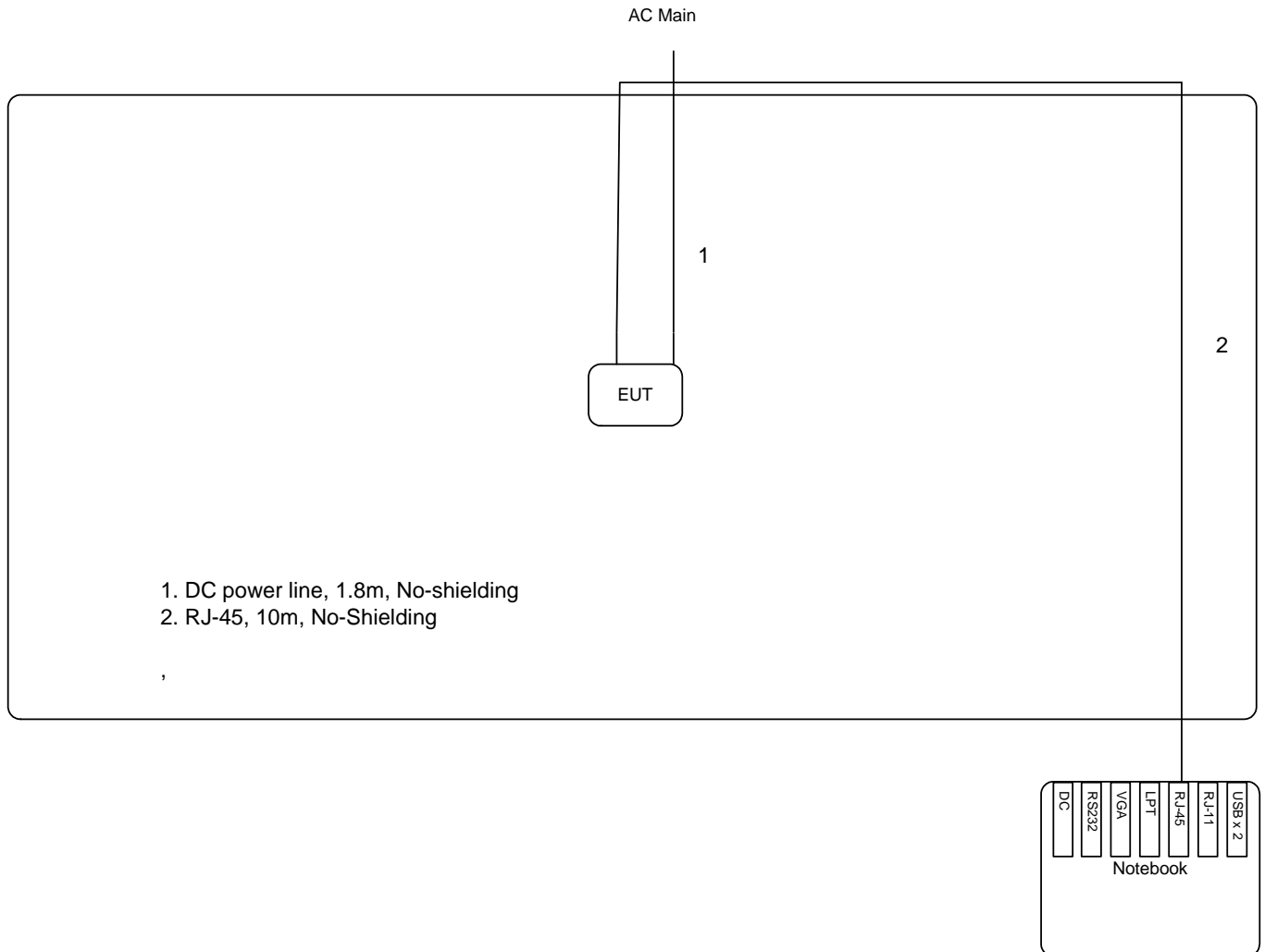
During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final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

Power Parameters of IEEE 802.11b/g

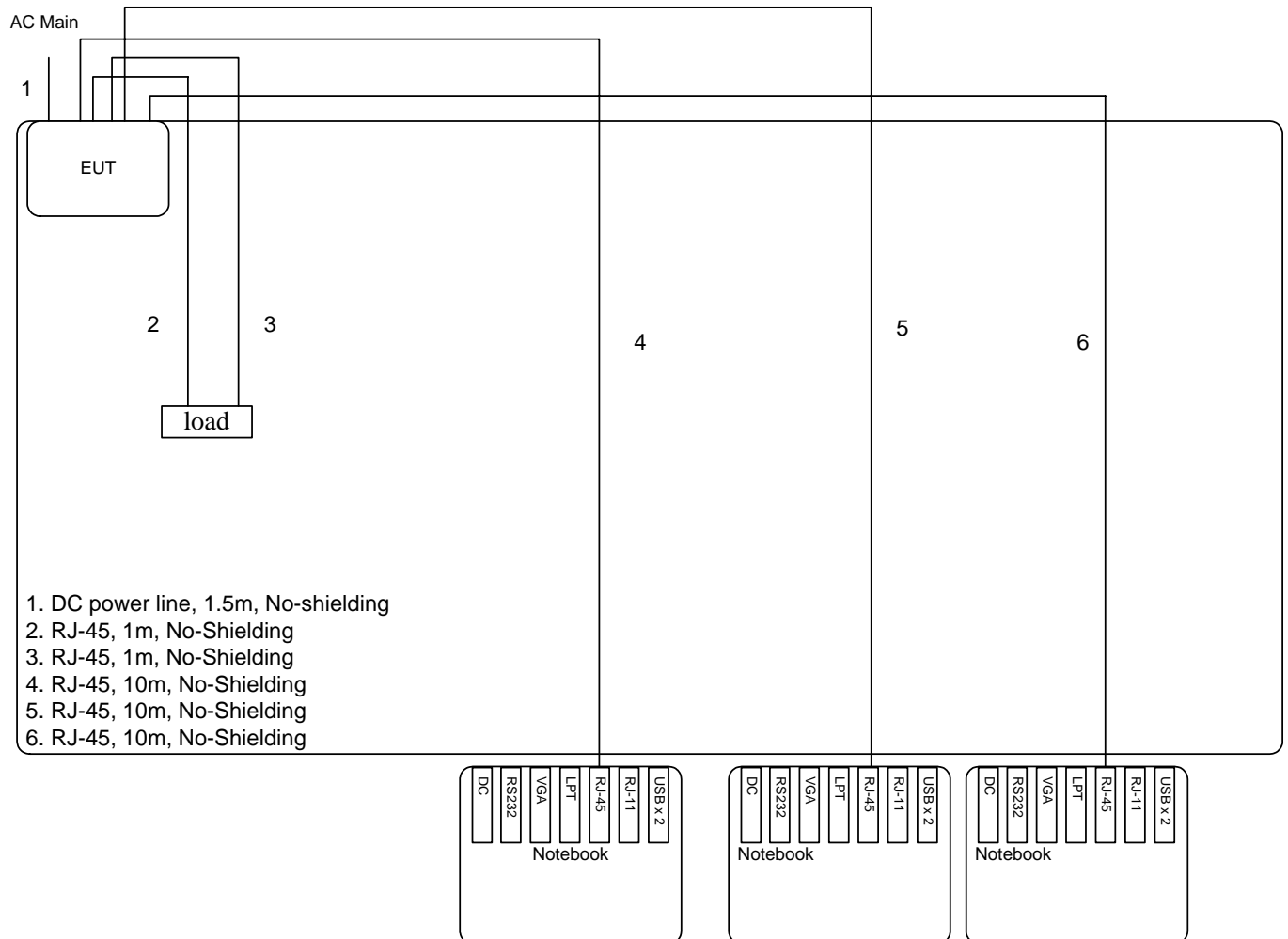
Test Software Version	ART		
Frequency	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	20	20	20
IEEE 802.11g	16	16	14.5

3.9. Test Configurations

3.9.1. Radiation Emissions Test Configuration



3.9.2. AC Power Line Conduction Emissions Test Configuration



4. TEST RESULT

4.1. AC Power Line Conducted Emissions Measurement

4.1.1. Limit

For a Low-power Radio-frequency Device 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

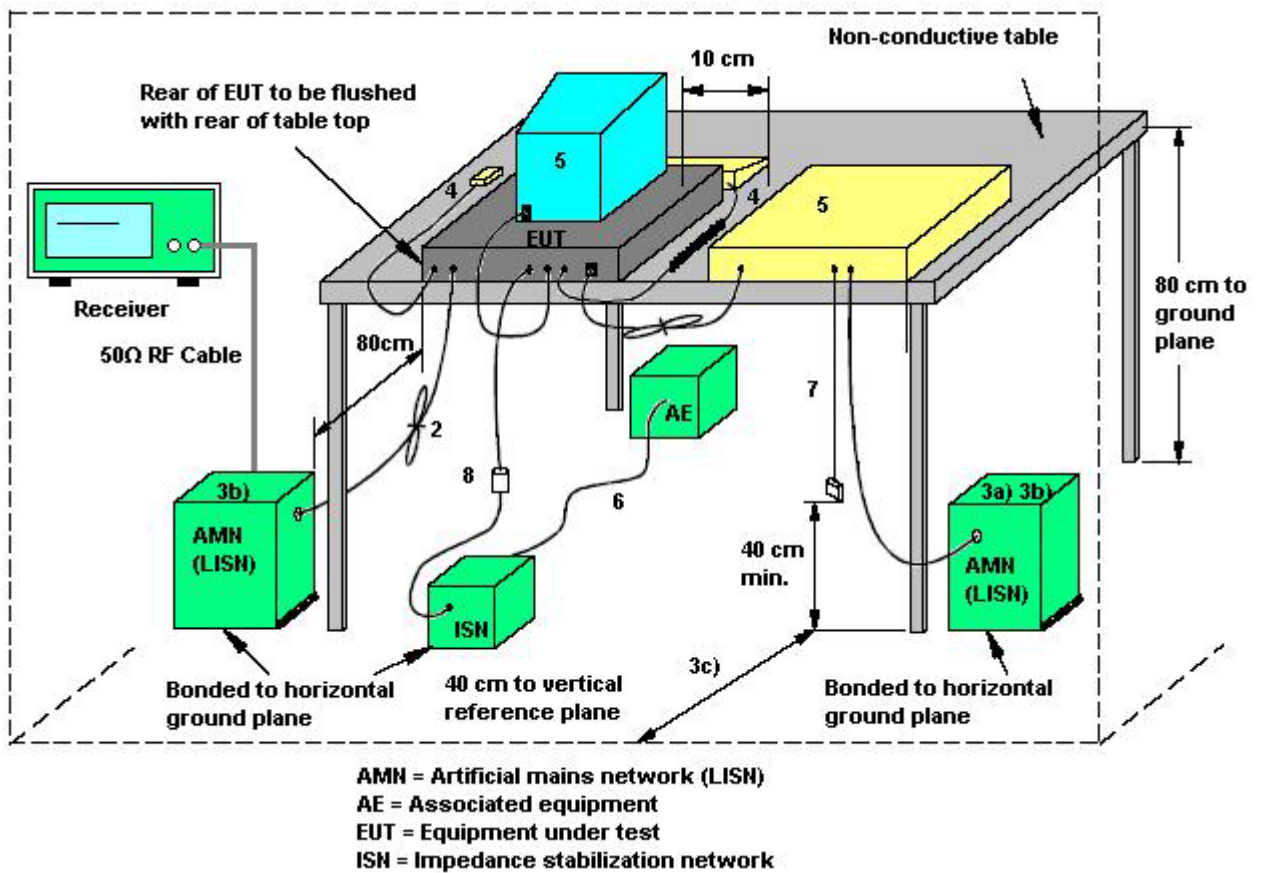
Please refer to section 5 in this report. The following table is the setting of the receiver.

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 C63.4. 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



1. If cables, which hang closer than 40 cm to the horizontal metal groundplane, cannot be shortened to appropriate length, the excess shall be folded back and forth forming a bundle 30 cm to 40 cm long.
2. Excess mains cord shall be bundled in the centre or shortened to appropriate length.
3. EUT is connected to one artificial mains network (AMN). All AMNs and ISNs may alternatively be connected to a vertical reference plane or metal wall.
4. All other units of a system are powered from a second AMN. A multiple outlet strip can be used for multiple mains cords.
5. AMN and ISN are 80 cm from the EUT and at least 80 cm from other units and other metal planes.
6. Mains cords and signal cables shall be positioned for their entire lengths, as far as possible, at 40 cm from the vertical reference plane.
7. Cables of hand operated devices, such as keyboards, mice, etc. shall be placed as for normal usage.
8. Peripherals shall be placed at a distance of 10 cm from each other and from the controller, except for the monitor which, if this is an acceptable installation practice, shall be placed directly on the top of the controller.
9. I/O signal cable intended for external connection.
10. The end of the I/O signal cables which are not connected to an AE may be terminated, if required, using correct terminating impedance.
11. If used, the current probe shall be placed at 0,1 m from the ISN.

4.1.5. Test Deviation

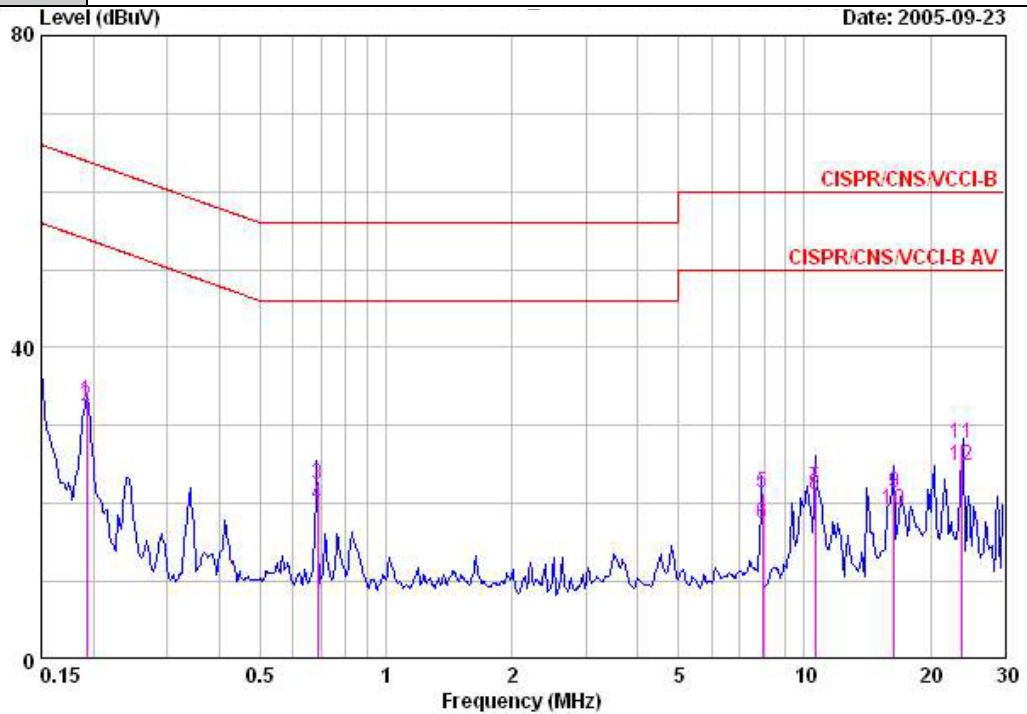
There are no deviations with the original standard.

4.1.6. EUT Operation during Test

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

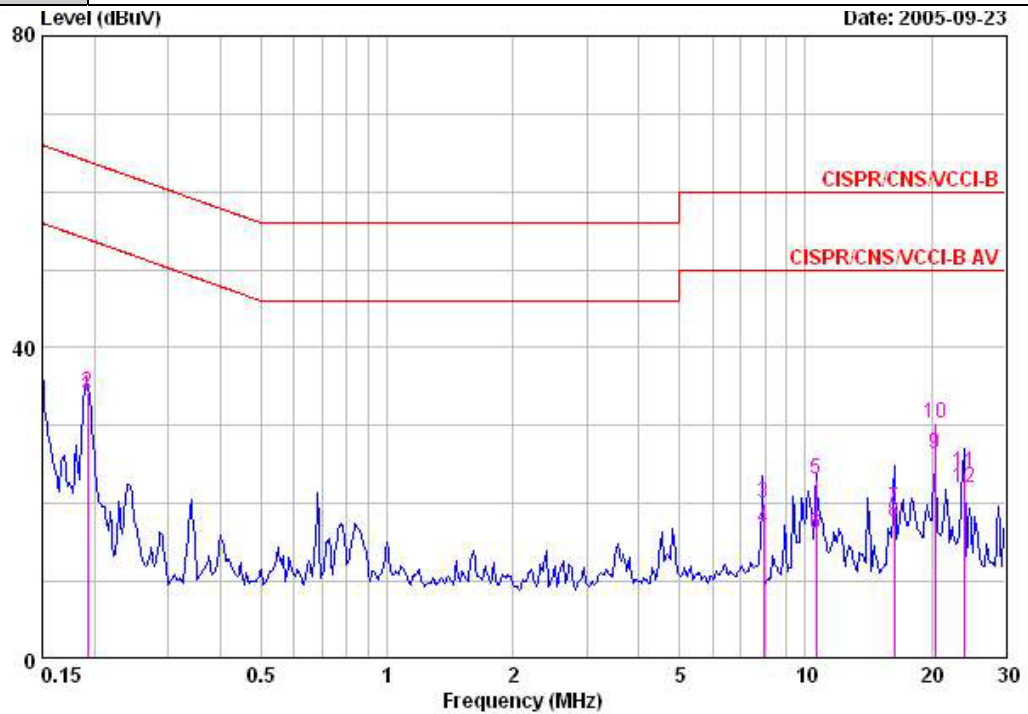
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	20°C	Humidity	70%
Test Engineer	Steven Lu	Phase	Line
Configuration	802.11g / Channel 6 / Adapter 1		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.19242	33.04	-30.89	63.93	31.70	1.14	0.20	QP
2	0.19242	32.42	-21.51	53.93	31.08	1.14	0.20	AVERAGE
3	0.68651	22.44	-33.56	56.00	21.84	0.40	0.20	QP
4	0.68651	19.81	-26.19	46.00	19.21	0.40	0.20	AVERAGE
5	7.928	21.45	-38.55	60.00	20.75	0.30	0.40	QP
6	7.928	17.49	-32.51	50.00	16.79	0.30	0.40	AVERAGE
7	10.609	22.11	-37.89	60.00	21.39	0.32	0.40	QP
8	10.609	21.18	-28.82	50.00	20.46	0.32	0.40	AVERAGE
9	16.353	21.38	-38.62	60.00	20.68	0.30	0.40	QP
10	16.353	19.25	-30.75	50.00	18.55	0.30	0.40	AVERAGE
11	23.859	27.71	-32.30	60.00	26.88	0.33	0.50	QP
12	23.859	24.85	-25.16	50.00	24.02	0.33	0.50	AVERAGE

Temperature	20°C	Humidity	70%
Test Engineer	Steven Lu	Phase	Neutral
Configuration	802.11g / Channel 6 / Adapter 1		

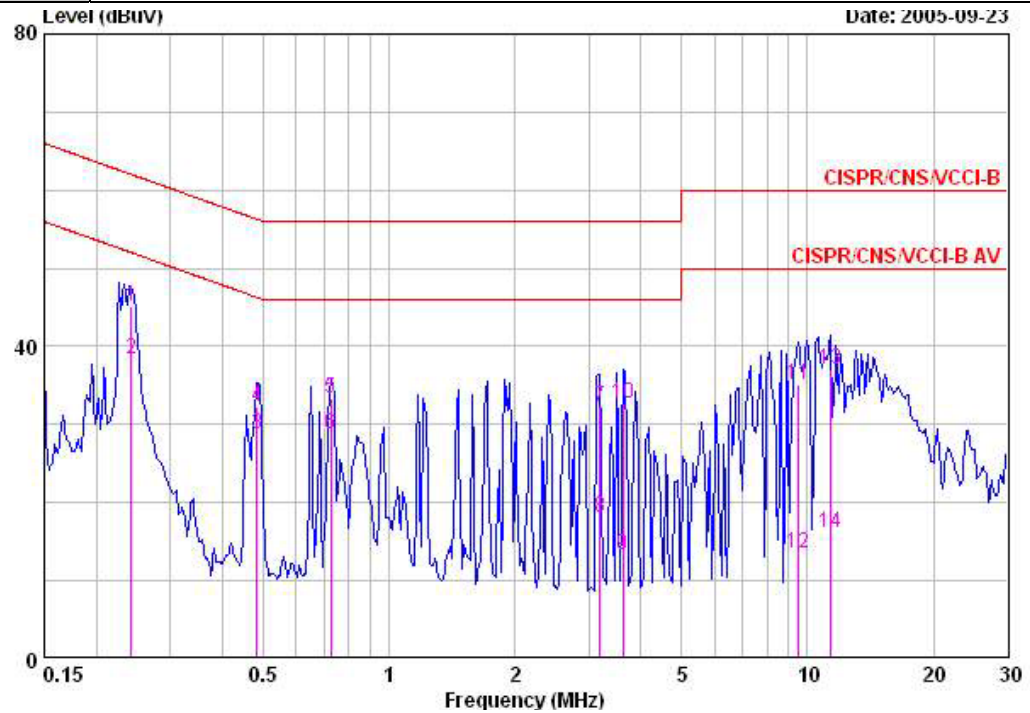


	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.19242	33.75	-30.18	63.93	32.51	1.04	0.20	QP
2	0.19242	34.15	-19.78	53.93	32.91	1.04	0.20	AVERAGE
3	7.931	19.99	-40.01	60.00	19.29	0.30	0.40	QP
4	7.931	16.84	-33.16	50.00	16.14	0.30	0.40	AVERAGE
5	10.612	23.12	-36.88	60.00	22.42	0.30	0.40	QP
6	10.612	16.16	-33.84	50.00	15.46	0.30	0.40	AVERAGE
7	16.274	19.33	-30.67	50.00	18.63	0.30	0.40	AVERAGE
8	16.274	17.72	-42.28	60.00	17.02	0.30	0.40	QP
9	20.379	26.46	-23.54	50.00	25.66	0.30	0.50	AVERAGE
10	20.379	30.20	-29.80	60.00	29.40	0.30	0.50	QP
11	23.863	23.89	-36.12	60.00	23.06	0.33	0.50	QP
12	23.863	22.00	-28.01	50.00	21.17	0.33	0.50	AVERAGE

Note:

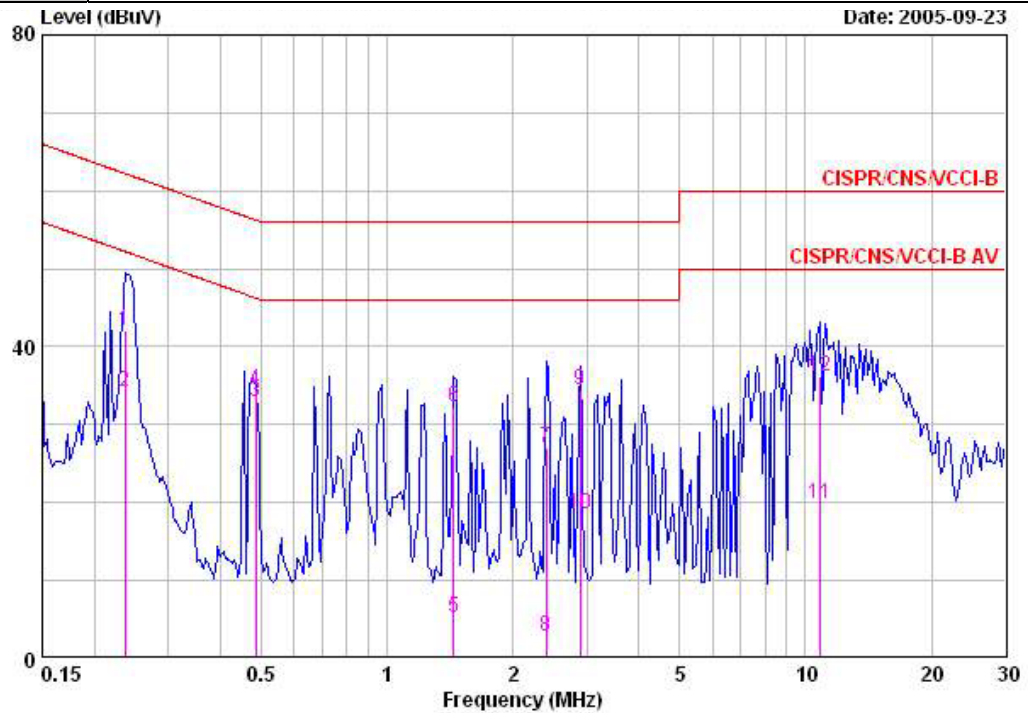
Level = Read Level + LISN Factor + Cable Loss.

Temperature	20°C	Humidity	70%
Test Engineer	Steven Lu	Phase	Line
Configuration	802.11g / Channel 6 / Adapter 2		



	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.24256	45.09	-16.92	62.01	43.92	0.97	0.20	QP
2	0.24256	38.28	-13.73	52.01	37.11	0.97	0.20	AVERAGE
3	0.48375	28.73	-17.54	46.27	28.13	0.50	0.10	AVERAGE
4	0.48375	32.35	-23.92	56.27	31.75	0.50	0.10	QP
5	0.72744	33.38	-22.62	56.00	32.78	0.40	0.20	QP
6	0.72744	28.75	-17.25	46.00	28.15	0.40	0.20	AVERAGE
7	3.190	32.36	-23.64	56.00	31.82	0.30	0.24	QP
8	3.190	18.15	-27.85	46.00	17.61	0.30	0.24	AVERAGE
9	3.623	13.34	-32.66	46.00	12.72	0.32	0.30	AVERAGE
10	3.623	32.64	-23.36	56.00	32.02	0.32	0.30	QP
11	9.502	35.08	-24.92	60.00	34.48	0.30	0.30	QP
12	9.502	13.43	-36.57	50.00	12.83	0.30	0.30	AVERAGE
13	11.317	37.04	-22.96	60.00	36.30	0.34	0.40	QP
14	11.317	16.11	-33.89	50.00	15.37	0.34	0.40	AVERAGE

Temperature	20°C	Humidity	70%
Test Engineer	Steven Lu	Phase	Neutral
Configuration	802.11g / Channel 6 / Adapter 2		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.23658	42.03	-20.19	62.22	40.93	0.90	0.20	QP
2	0.23658	34.24	-17.98	52.22	33.14	0.90	0.20	AVERAGE
3	0.48595	32.98	-13.26	46.24	32.48	0.40	0.10	AVERAGE
4	0.48595	34.51	-21.73	56.24	34.01	0.40	0.10	QP
5	1.441	5.18	-40.82	46.00	4.77	0.30	0.11	AVERAGE
6	1.441	32.27	-23.73	56.00	31.86	0.30	0.11	QP
7	2.396	26.93	-29.07	56.00	26.45	0.28	0.20	QP
8	2.396	2.90	-43.10	46.00	2.42	0.28	0.20	AVERAGE
9	2.900	34.51	-21.49	56.00	34.01	0.30	0.20	QP
10	2.900	18.43	-27.57	46.00	17.93	0.30	0.20	AVERAGE
11	10.790	19.73	-30.27	50.00	19.03	0.30	0.40	AVERAGE
12	10.790	36.23	-23.77	60.00	35.53	0.30	0.40	QP

Note:

Level = Read Level + LISN Factor + Cable Loss.

4.2. Maximum 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

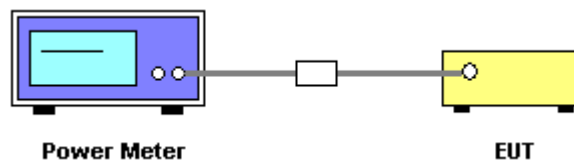
Please refer to section 5 in this report. The following table is the setting of the power meter.

Power Meter Parameter	Setting
Filter No.	Auto
Measurement time	0.135 s ~ 26 s
Used Peak Sensor	NRV-Z32 (model 04)

4.2.3. Test Procedures

1. The transmitter output (antenna port) was connected to the power meter.
2. Turn on the EUT and power meter and then record the peak power value.
3. Repeat above procedures on all channels needed to be tested.

4.2.4. Test Setup Layout



4.2.5. Test Deviation

There are 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 Maximum Peak Output Power

Temperature	20°C	Humidity	70%
Test Engineer	Steven Lu	Configurations	802.11b/g

Configuration IEEE 802.11b

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	19.14	30.00	Complies
6	2437 MHz	19.37	30.00	Complies
11	2462 MHz	19.24	30.00	Complies

Configuration IEEE 802.11g

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	19.35	30.00	Complies
6	2437 MHz	19.43	30.00	Complies
11	2462 MHz	18.62	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

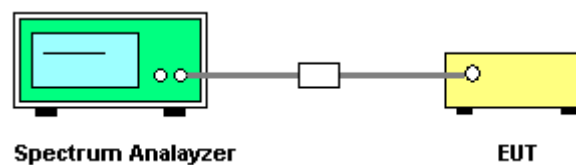
Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	1.5MHz
RB	3 kHz
VB	30 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	500s

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 1.5MHz and the sweep time to 500s and record the maximum peak value.

4.3.4. Test Setup Layout



4.3.5. Test Deviation

There are 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

Temperature	20°C	Humidity	70%
Test Engineer	Steven Lu	Configurations	802.11b/g

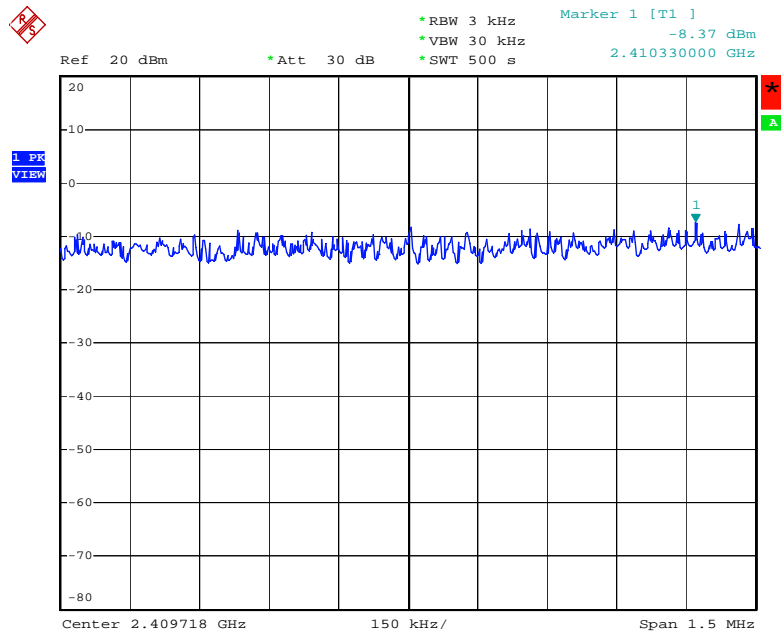
Configuration IEEE 802.11b

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	-8.37	8.00	Complies
6	2437 MHz	-8.34	8.00	Complies
11	2462 MHz	-8.46	8.00	Complies

Configuration IEEE 802.11g

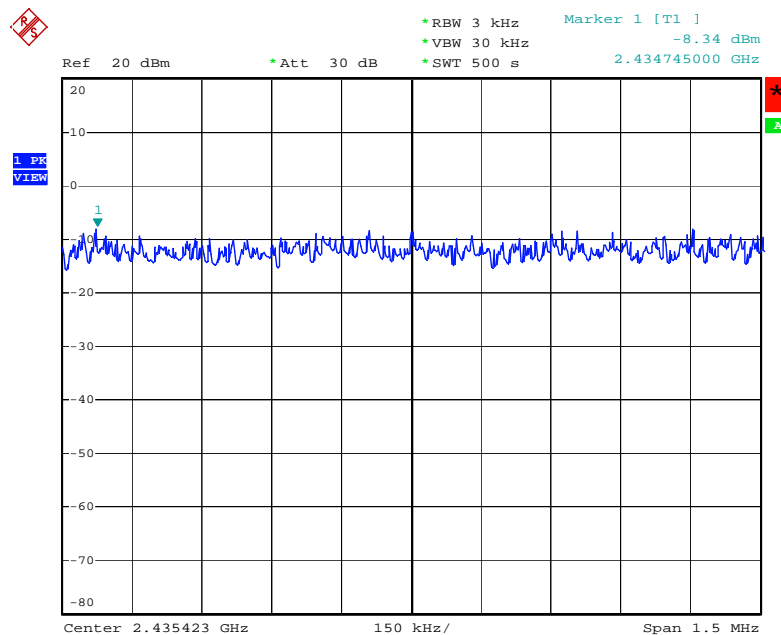
Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
1	2412 MHz	-13.33	8.00	Complies
6	2437 MHz	-13.11	8.00	Complies
11	2462 MHz	-14.80	8.00	Complies

Power Density Plot on Configuration IEEE 802.11b / 2412 MHz



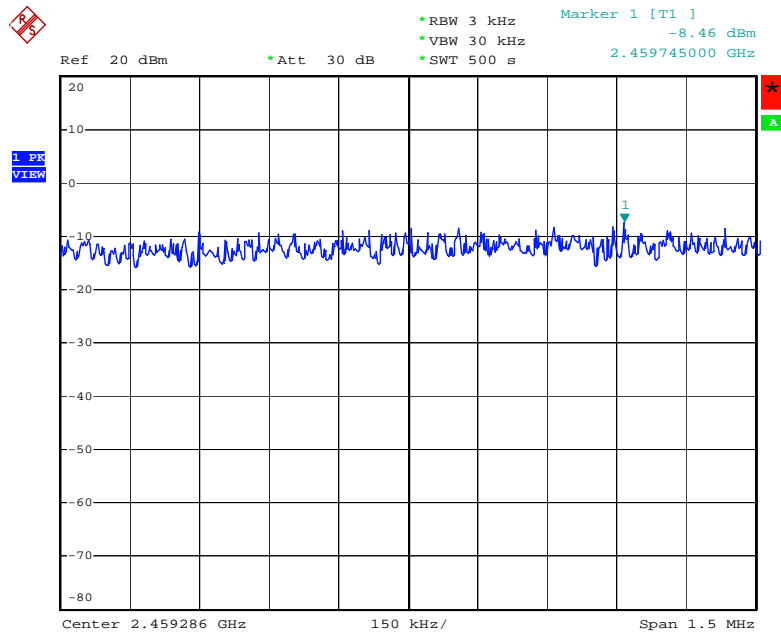
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Power Density Plot on Configuration IEEE 802.11b / 2437 MHz



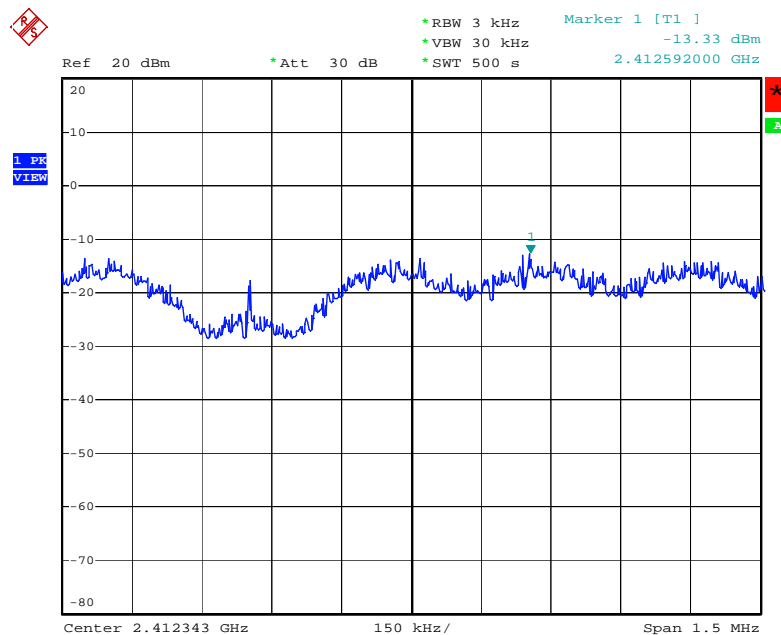
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Power Density Plot on Configuration IEEE 802.11b / 2462 MHz



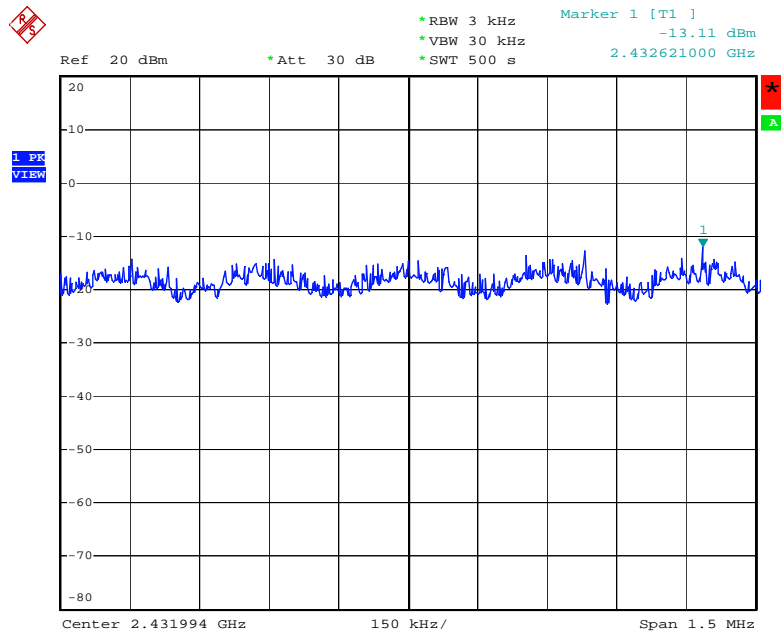
Date: 15.OCT.2005 18:28:56

Power Density Plot on Configuration IEEE 802.11g / 2412 MHz



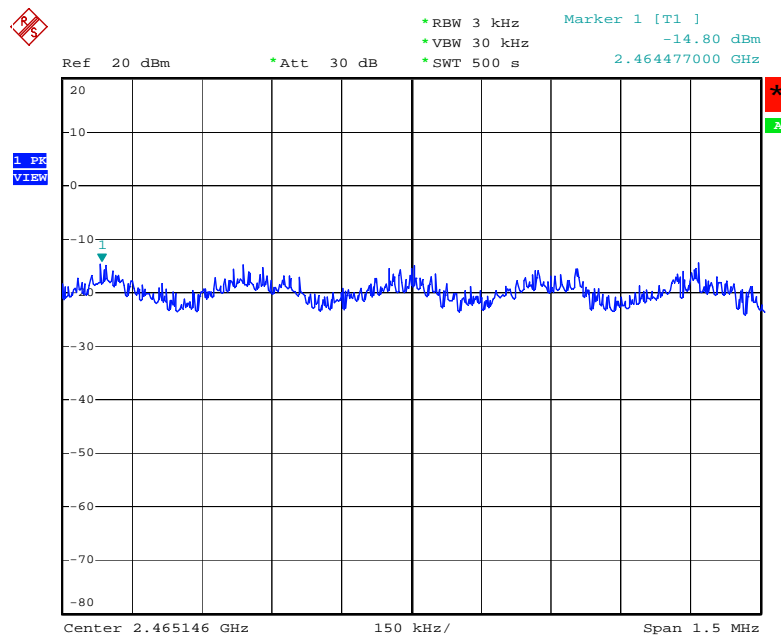
Date: 15.OCT.2005 18:22:03

Power Density Plot on Configuration IEEE 802.11g / 2437 MHz



Date: 15.OCT.2005 18:23:00

Power Density Plot on Configuration IEEE 802.11g / 2462 MHz



Date: 15.OCT.2005 18:23:39

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

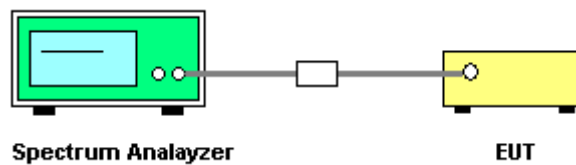
Please refer to section 5 in this report. The following table is the setting of the Spectrum Analyzer.

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 analyser 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 are no deviations 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

Temperature	20°C	Humidity	70%
Test Engineer	Steven Lu	Configurations	802.11b/g

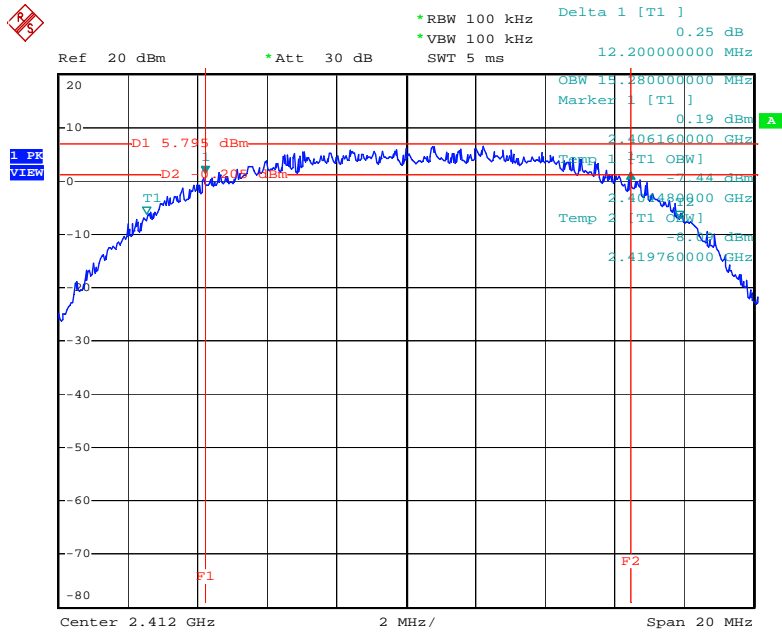
Configuration IEEE 802.11b

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	12.20	15.28	500	Complies
6	2437 MHz	12.28	15.28	500	Complies
11	2462 MHz	11.84	15.28	500	Complies

Configuration IEEE 802.11g

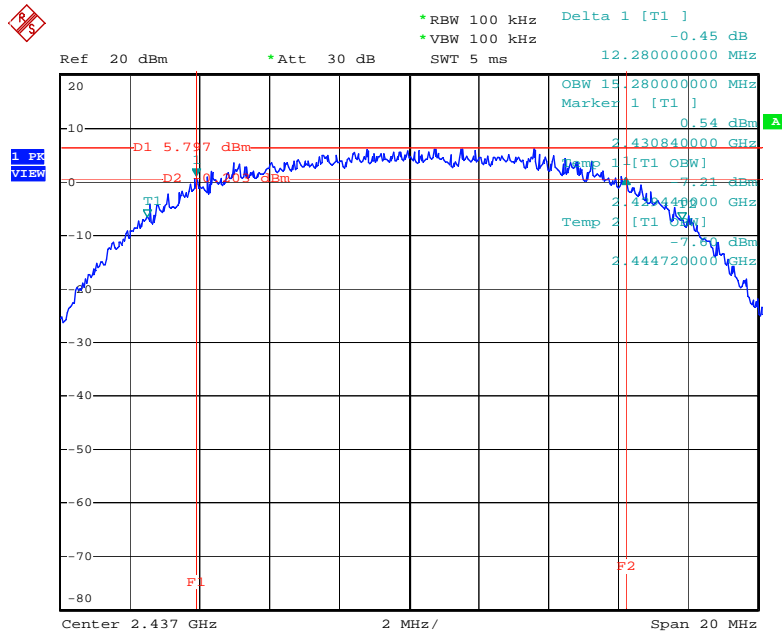
Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
1	2412 MHz	16.36	16.48	500	Complies
6	2437 MHz	16.08	16.48	500	Complies
11	2462 MHz	16.36	16.48	500	Complies

6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2412 MHz



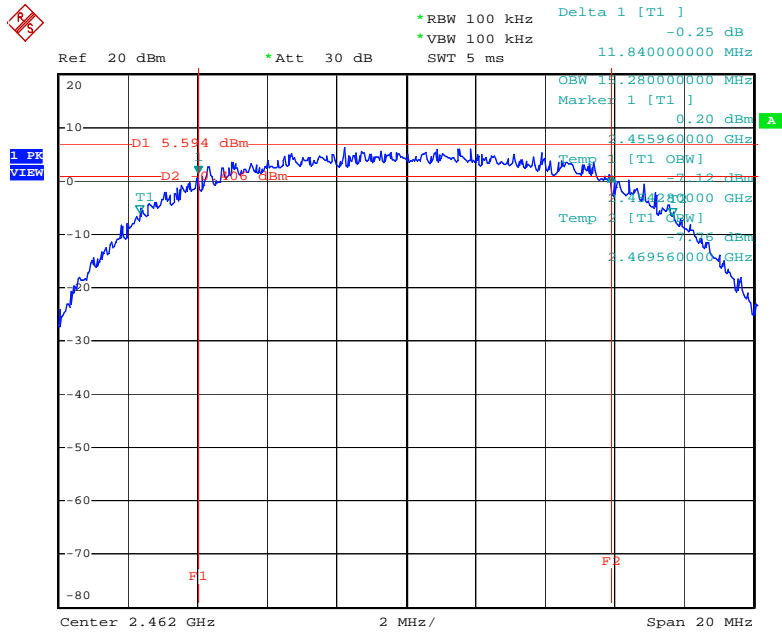
Date: 15.OCT.2005 18:27:11

6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2437 MHz



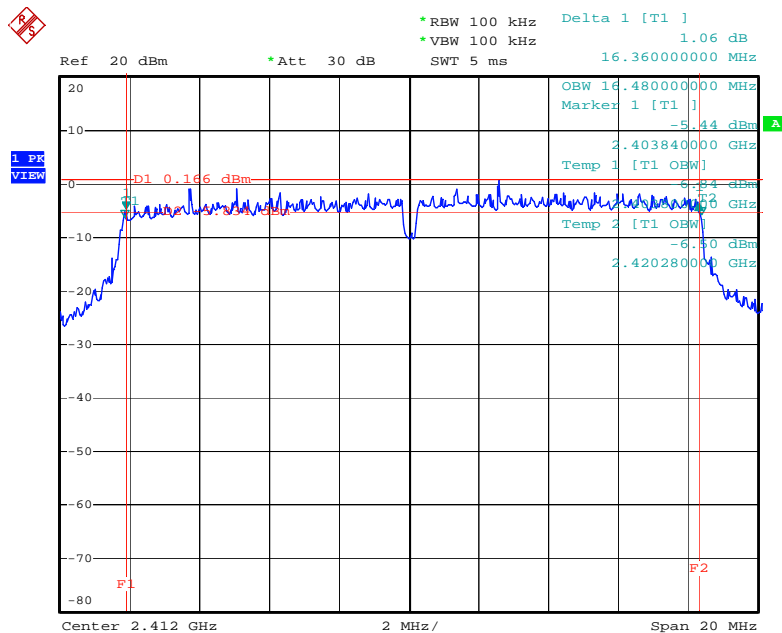
Date: 15.OCT.2005 18:28:05

6 dB Bandwidth Plot on Configuration IEEE 802.11b / 2462 MHz



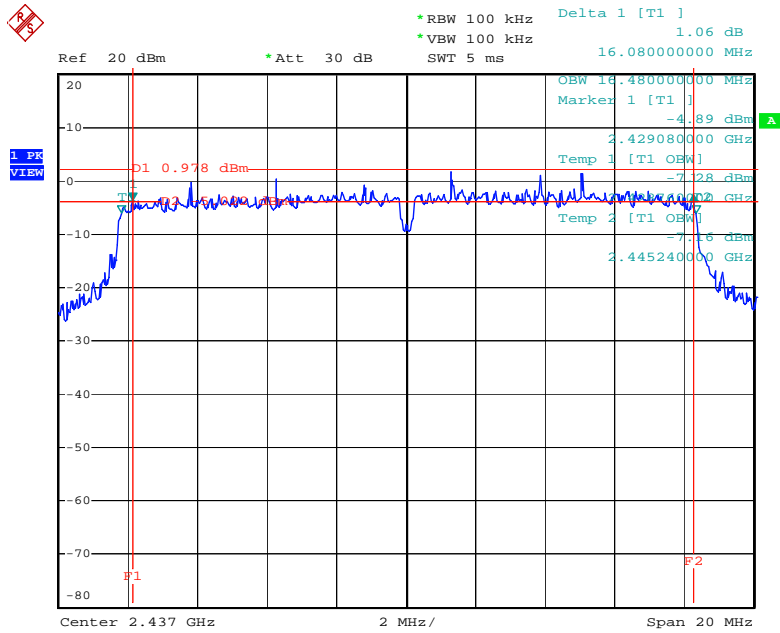
Date: 15.OCT.2005 18:28:40

6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2412 MHz



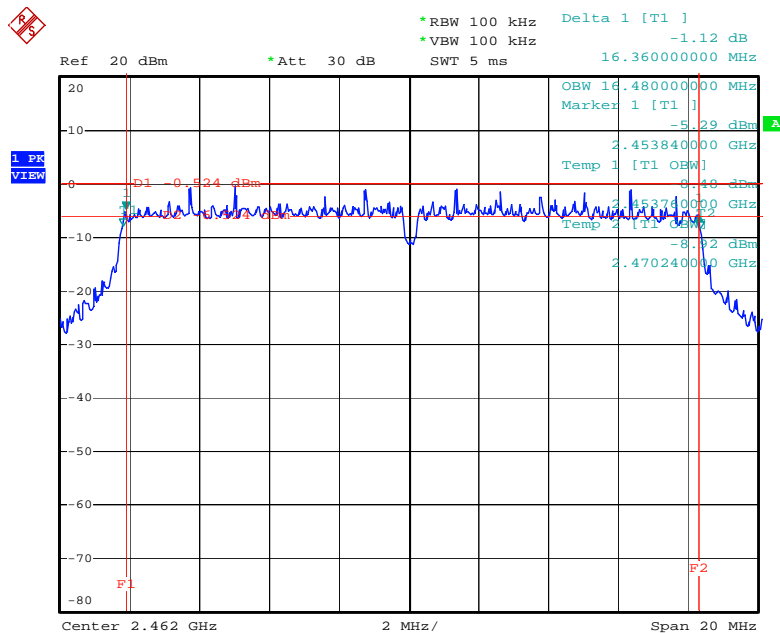
Date: 15.OCT.2005 18:21:38

6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2437 MHz



Date: 15.OCT.2005 18:22:44

6 dB Bandwidth Plot on Configuration IEEE 802.11g / 2462 MHz



Date: 15.OCT.2005 18:23:24

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 (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

4.5.2. Measuring Instruments and Setting

Please refer to section 5 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 (other emission)	100KHz / 100KHz 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