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MEASUREMENT REPORT of WIFI MODULE

Applicant: PEGATRON CORPORATION

EUT : WIFI module

Model : AWM6018-P

FCC ID : VUIAWM6018P

Tested by:

Training Research Co., Ltd.

TEL: 886-2-26935155 FAX: 886-2-26934440

No. 255, Nanyang Street, Shijr, Taipei Hsien 221, Taiwan, R.O.C.

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CERTIFICATION

We here by verify that:

The test data, data evaluation, test procedures and equipment configurations shown in this report were made mainly in accordance with the procedures given in ANSI C63.4 (2003) as a reference. All test were conducted by *Training Research Co., Ltd.*, 255 Nanyang Street, Shijr, Taipei Hsien 221, Taiwan, R.O.C. Also, we attest to the accuracy of each.

We further submit that the energy emitted by the sample EUT tested as described in the report is **in compliance with** the technical requirements set forth in the FCC Rules Part 15 Subpart C Section 15.247.

Applicant: PEGATRON CORPORATION

Applicant Address: 5F, NO. 76, LIGONG ST., BEITOU DISTRICT,

TAIPEI CITY, Taiwan

FCC ID : VUIAWM6018P

Report No. : P5515080173

Test Date : August 07, 2008

Prepared by:

Jack Tsai

Approved by:

Frank Tsai

Conditions of issue:

- (1) This test report shall not be reproduced except in full, without written approval of TRC. And the test result contained within this report only relate to the sample submitted for testing.
- (2) This report must not be used by the client to claim product endorsement by NVLAP or any agency of U.S. Government.
- (3) This test report, measurements made by TRC are traceable to the NIST only Conducted and Radiated Method.



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I. GENERAL

1.1 Introduction

The following measurement report is submitted on behalf of applicant in support that the certification in accordance with Part 2 Subpart J and Part 15 Subpart A, and C of the Commission's Rules and Regulations.

1.2 Description of EUT

Product Name: Wireless Module

Model Name : AWM6018-P

FCC ID : VUIAWM6018P

Frequency Range : 2.412 GHz ~ 2.462GHz

Support Channel: 11 Channels

Channel Spacing: 5MHz

Modulation Skill : DBPSK, DQPSK, CCK, OFDM

Power Type : Powered by Mini-PCI interface of client's device

1.3 Test method

- 1. Insert the EUT into the mini-PCI interface of the test fixture (which is transferred from PCMCIA to mini-PCI interface).
- 2. Using the computer and software provided by the manufacturer to control EUT. The software is operated under the Windows to control the EUT in the mode of continuous transmission; the test is performed under the specific conditions.
- 3. Set different channel and data rate being tested and repeat the procedures above.
 - (a) Conduction test and Radiated for Intentional test: making EUT to the mode of continuous transmission

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1.4 Description of Support Equipment

In order to construct the minimum testing, following equipment were used as the support units.

PC : HP, IBM 8434

Model No. : Pavilion t1000; IVG

Serial No. : TWL3320051; 99CCZA3

FCC ID : DoC (Declaration of Confirmation) Approved

BSMI : R33001; R33026

Power type : $100 \sim 127 \text{VAC/6A}, 200 \sim 240 \text{VAC/3A}, 50 \sim 60 \text{Hz}$, Switching

Power cord : Non-shielded, 1.8m length, Plastic hood, No ferrite core

Monitor : HP 15' Color Monitor

Model No. : D8894A

 Serial No.
 : CN02364355

 FCC ID
 : ARSCM356N

 BSMI
 : 3882A031

Power type : $100 \sim 240 \text{ VAC} / 1.5 \text{A}, 50 \sim 60 \text{ Hz}, \text{ Switching}$

Power cord : Non-shielded, 1.80m length, Plastic hood, No ferrite core

Data cable : Shielded, 1.50m length, Plastic hood, with ferrite core

PS/2 Mouse : HP

Model No. : M-UR89, M-S69

Serial No. : LZS21750238, 334684-002 323614-001

FCC ID : DoC Approved
BSMI : 3892D767, R41126

Power type : By PC

Power cord : Shielded, 1.90m length, No ferrite core

PS/2 Keyboard : HP

Model No. : 5187-0343, KB0133

Serial No. : 265987-AB1 Tch 323686-AB1, B69360MGAPW0HF

FCC ID : DoC Approved
BSMI : 3892C981, R31310

Power type : By PC

Data cable : Shielded, 1.85m length, no ferrite core

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PCMCIA to Mini PCI:PEGATRON CORPORATION

Model No. : Test Fixture

Power type : By PC

PCMCIA to PCI adapter: Ean Digital Systems Ltd.

Model No. : 119-1622

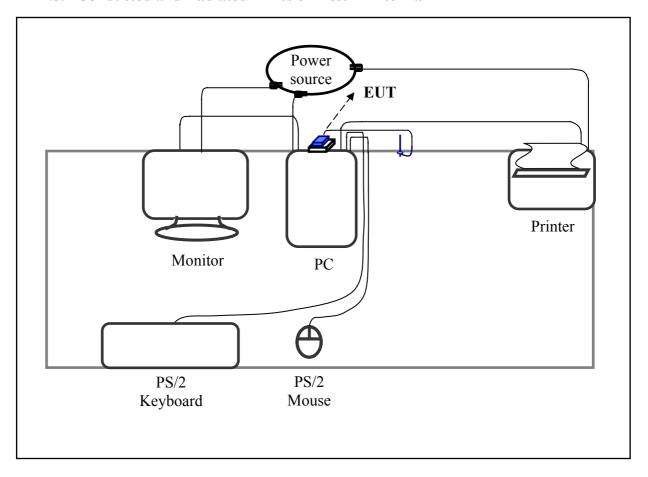
Serial No. : P16013700089089 FCC ID : DoC Approved

Power type : By PC

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1.5 Configuration of System Under Test

1.5.1 Conducted and Radiated Emission Test – Antenna#1



Connections of Equipment

PC: *VGA Port a monitor

*PS/2-key Port a PS/2 keyboard

*PS/2-mouse Port a PS/2 mouse

*Parallel Port a printer

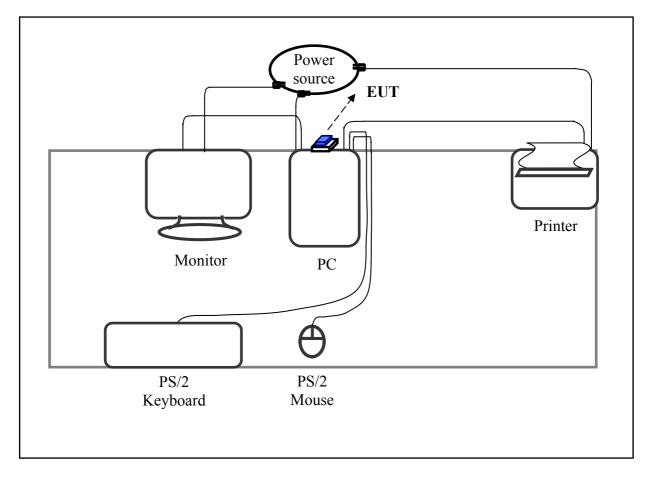
*Mini-PCI Port EUT

The tests below are carried with the EUT transmitter set at high power in TDD mode. The EUT is forced to select of output power level and channel number by PCMCIA interface of PC.

The setting up procedure was recorded in 1.3 test method.

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1.5.2 Conducted and Radiated Emission Test – Antenna#2



Connections of Equipment

PC: *VGA Port a monitor

*PS/2-key Port a PS/2 keyboard

*PS/2-mouse Port a PS/2 mouse

*Parallel Port a printer

*Mini-PCI Port EUT

1.6 Verify the Frequency and Channel

Channel	Frequency (GHz)
1	2.412
2	2.417
3	2.422
4	2.427
5	2.432
6	2.437
7	2.442
8	2.447
9	2.452
10	2.457
11	2.462

Note:

- 1. This is for confirming that all frequencies are in 2.412GHz to 2.462GHz.
- Section 15.31(m): Measurements on intentional radiators or receivers shall be performed at three frequencies for operating frequency range over 10 MHz.
 (The locations of these frequencies one near the top, one near the middle and one near the bottom.)
- 3. After test, the EUT operating frequencies are in 2.412GHz to 2.462GHz. So all the items as followed in testing report are need to test these three frequencies:
 - Top: Channel -1; Middle: Channel -6; Bottom: Channel -11.

1.7 Test Procedure

All measurements contained in this report were performed mainly according to the techniques described in ANSI C63.4 (2003) and the pre-setup was written on 1.3 test method, the detail setup was written on each test item.

1.8 Location of the Test Site

The radiated emissions measurements required by the rules were performed on the **three-meter**, **Semi-anechoic Chamber (FCC Registration Number: 93906)** maintained by *Training Research Co., Ltd.* 1F, No. 255 Nanyang Street, Shijr, Taipei Hsien 221, Taiwan, R.O.C. Complete description and measurement data have been placed on file with the commission. The conducted power line emissions tests and other test items were performed in a anechoic chamber also located at Training Research Co., Ltd.

No. 255 Nanyang Street, Shijr, Taipei Hsien 221, Taiwan, R.O.C. *Training Research Co., Ltd.* is listed by the FCC as a facility available to do measurement work for others on a contract basis.

1.9 General Test Condition

The conditions under which the EUT operates were varied to determine their effect on the equipment's emission characteristics. The final configuration of the test system and the mode of operation used during these tests were chosen as that which produced the highest emission levels. However, only those conditions, which the EUT was considered likely to encounter in normal use were investigated.

In test, they were set in high power and continuously transmitting mode that controlled by computer. The ch01, ch06 and ch11 of EUT were all tested. The setting up procedure is recorded on 1.3 test method.

II. Section 15.203: Antenna requirement

The EUT can be equipped with detachable antenna. The external antenna is affixed to the EUT using a unique connector. The antenna requirement stated in Section15.203 is inapplicable to this EUT.

The antenna specification of list as follows,

Antenna No.	Antenna Manufacturer	Model	Connector	Antenna Type	Antenna Gain (Max.)
Antenna#1	WHA YU GROUP	C660S510211-A	SMA Plug Reverse (I-PEX)	Dipole	4.14dBi
Antenna#2	PEGATRON	NONE (On PCB)	NONE (On PCB)	Printed	2.24dBi

Note:

1) For more detailed features description, please reference to the Antenna Specifications. (Please reference to RF Exposure Information)

III. Section 15.207: Power Line Conducted Emissions for AC Powered Units

3.1 Test Condition & Setup

The power line conducted emission measurements were performed in an anechoic chamber. The EUT was assembled on a wooden table, which is 80 centimeters high, was placed 40 centimeters from the backwall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and Line Impedance Stabilization Networks (LISNs). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer (or EMI receiver) was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak and average detection mode. The analyzer's 6 dB bandwidth was set to 9KHz. No post-detector video filter was used.

The spectrum was scanned from 150KHz to 30MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 4.3.

There is a test condition apply in this test item, the test procedure description as <1.3>. Three channels were tested, one in the top (CH01), one in the middle (CH06) and the other in bottom (CH11).

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3.2 List of Test Instruments

Calibration Date

				Cambration Date
Instrument Name	Model	Brand	Serial No.	Next time
EMI Receiver	8546A	НР	3520A00242	09/05/08
RF Filter Section	85460A	НР	3448A00217	09/05/08
LISN (EUT)	LISN-01	TRC	99-05	08/10/08
LISN (Support E.)	LISN-01	TRC	9912-03, 04	09/22/08
Pre-amplifier	15542 ZFL-500	Mini – Circuits	0 0117	11/04/08
6dB	MCL BW-S6W2	Mini –	9915 –	10/10/08
Attenuator		Circuits	Conducted	
10dB	A5542 VAT010	Mini –	0215 -	10/10/08
Attenuator		Circuits	Conducted	
Coaxial Cable (2.0 meter)	A30A30-0058-50FS-2M	Jyebao	SMA-08	10/10/08
Coaxial Cable (1.1 meter)	A30A30-0058-50FS-1M	Jyebao	SMA-09	10/10/08
Coaxial Cable (20 meter)	RG-214/U	Jyebao	NP-01	10/10/08
Coaxial Cable (20 meter)	RG-214/U	Jyebao	NP-02	10/10/08
Auto Switch Box (< 30MHz)	ASB-01	TRC	9904-01	10/10/08

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3.3 Test Result of Power Line Conducted Emissions

The following table shows a summary of the highest emissions of power line conducted emissions on the LIVE and NETURAL conductors of the EUT power cord. Show as follows.

Test Conditions: Temperature: 25 °C Humidity: 73 % RH

Test mode: IEEE 802.11b Channel 1, Antenna#1

Po	ver Conne	ected 1	Emissions	S		Class B	
Conductor	Frequency	Peak	QP	Average	QP-limit	AVG-limit	Margin
	(KHz)	(dBµV)	(dBµV)	(dBµV)	(dBµV)	(dBµV)	(dB)
	184.755	53.60	50.50	44.27	65.06	55.06	-10.79
	366.000	36.26			59.83	49.83	-13.57
	426.000	33.31			58.11	48.11	-14.80
Line 1	610.000	33.18			56.00	46.00	-12.82
	876.000	31.07			56.00	46.00	-14.93
	1208.000	31.23			56.00	46.00	-14.77
	182.000	48.03			65.09	55.09	-7.06
	305.000	34.81			61.57	51.57	-16.76
	366.000	36.09			59.83	49.83	-13.74
Line 2	426.000	32.44			58.11	48.11	-15.67
	674.000	29.31			56.00	46.00	-16.69
	23350.000	38.79			60.00	50.00	-11.21

NOTE:

⁽¹⁾Margin = Peak Amplitude – Limit, *The reading amplitudes are all under limit*.

⁽²⁾A "+" sign in the margin column means the emission is OVER the Class B Limit, and "-" sign of means UNDER the Class B limit

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Test mode: IEEE 802.11b Channel 6, Antenna#1

Por	ver Conne		Class B				
Conductor	Frequency	Peak	QP	Average	QP-limit	AVG-limit	Margin
	(KHz)	(dBµV)	(dBµV)	(dBµV)	$(dB\mu V)$	(dBµV)	(dB)
	183.000	51.65			65.06	55.06	-3.41
	366.000	36.02			59.83	49.83	-13.81
	426.000	33.63			58.11	48.11	-14.48
Line 1	610.000	31.90			56.00	46.00	-14.10
	13100.000	35.75			60.00	50.00	-14.25
	23350.000	37.43			60.00	50.00	-12.57
	182.000	47.28			65.09	55.09	-7.81
	302.000	35.55			61.66	51.66	-16.11
	366.000	36.38			59.83	49.83	-13.45
Line 2	876.000	30.95			56.00	46.00	-15.05
	13100.000	35.08			60.00	50.00	-14.92
	23350.000	38.72			60.00	50.00	-11.28

Test mode: IEEE 802.11b Channel 11, Antenna#1

Por	ver Conne	cted	Emissions	S		Class B	
Conductor	Frequency	Peak	QP	Average	QP-limit	AVG-limit	Margin
	(KHz)	(dBµV)	(dBµV)	(dBµV)	$(dB\mu V)$	(dBµV)	(dB)
	183.690	53.60	50.65	44.43	65.14	55.14	-10.71
	366.000	36.23			59.83	49.83	-13.60
	668.000	31.93			56.00	46.00	-14.07
Line 1	876.000	33.97			56.00	46.00	-12.03
	1308.000	30.23			56.00	46.00	-15.77
	23350.000	39.96			60.00	50.00	-10.04
	183.000	47.84			65.06	55.06	-7.22
	366.000	36.80			59.83	49.83	-13.03
	426.000	32.71			58.11	48.11	-15.40
Line 2	610.000	31.17			56.00	46.00	-14.83
	867.000	30.15			56.00	46.00	-15.85
	23350.000	39.23			60.00	50.00	-10.77

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Test mode: IEEE 802.11g Channel 1, Antenna#1

Por	Power Connected Emissions					Class B	
Conductor	Frequency	Peak	QP	Average	QP-limit	AVG-limit	Margin
	(KHz)	(dBµV)	(dBµV)	(dBµV)	$(dB\mu V)$	(dBµV)	(dB)
	183.630	53.57	50.48	44.32	65.06	55.06	-10.74
	366.000	36.56			59.83	49.83	-13.27
	426.000	34.01			58.11	48.11	-14.10
Line 1	703.000	42.39	-		56.00	46.00	-3.61
	9010.000	33.76	-		60.00	50.00	-16.24
	24320.000	35.43			60.00	50.00	-14.57
	182.000	48.40			65.09	55.09	-6.69
	302.000	35.48			61.66	51.66	-16.18
	366.000	36.52			59.83	49.83	-13.31
Line 2	1219.000	29.35			56.00	46.00	-16.65
	13100.000	32.84			60.00	50.00	-17.16
	23350.000	39.57			60.00	50.00	-10.43

Test mode: IEEE 802.11g Channel 6, Antenna#1

Por	ver Conne	ected	Emissions	S		Class B	
Conductor	Frequency	Peak	QP	Average	QP-limit	AVG-limit	Margin
	(KHz)	(dBµV)	(dBµV)	(dBµV)	$(dB\mu V)$	(dBµV)	(dB)
	182.855	53.57	52.65	44.16	65.09	55.09	-10.93
	305.000	35.94			61.57	51.57	-15.63
	366.000	36.23			59.83	49.83	-13.60
Line 1	426.000	33.42			58.11	48.11	-14.69
	1219.000	31.68			56.00	46.00	-14.32
	23350.000	39.16			60.00	50.00	-10.84
	183.000	47.52			65.06	55.06	-7.54
	305.000	35.08			61.57	51.57	-16.49
	366.000	36.21			59.83	49.83	-13.62
Line 2	610.000	30.28			56.00	46.00	-15.72
	13100.000	32.77			60.00	50.00	-17.23
	23350.000	39.36			60.00	50.00	-10.64

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Test mode: IEEE 802.11g Channel 11, Antenna#1

Por	Power Connected Emissions						В
Conductor	Frequency	Peak	QP	Average	QP-limit	AVG-limit	Margin
	(KHz)	(dBµV)	(dBµV)	(dBµV)	$(dB\mu V)$	(dBµV)	(dB)
	184.395	53.14	50.19	44.32	65.06	55.06	-10.74
	366.000	36.23			59.83	49.83	-13.60
	610.000	32.31			56.00	46.00	-13.69
Line 1	668.000	32.19			56.00	46.00	-13.81
	1219.000	30.76			56.00	46.00	-15.24
	24560.000	36.34			60.00	50.00	-13.66
	185.000	48.55			65.00	55.00	-6.45
	302.000	36.61			61.66	51.66	-15.05
	366.000	36.14			59.83	49.83	-13.69
Line 2	426.000	32.44			58.11	48.11	-15.67
	610.000	29.84			56.00	46.00	-16.16
	2350.000	37.68			60.00	50.00	-12.32

Test mode: IEEE 802.11b Channel 1, Antenna#2

Pov	ver Conne	ected 1	Emissions	S		Class B	
Conductor	Frequency	Peak	QP	Average	QP-limit	AVG-limit	Margin
	(KHz)	(dBµV)	(dBµV)	(dBµV)	$(dB\mu V)$	(dBµV)	(dB)
	150.000	45.95			66.00	56.00	-10.05
	201.000	48.62			64.54	54.54	-5.92
	269.000	46.08			62.60	52.60	-6.52
Line 1	394.000	38.53			59.03	49.03	-10.50
	461.000	37.19			57.11	47.11	-9.92
	12680.000	39.74			60.00	50.00	-10.26
	152.000	45.99			65.94	55.94	-9.95
	197.000	52.45			64.66	54.66	-2.21
	341.000	43.54			60.54	50.54	-7.00
Line 2	394.000	38.00			59.03	49.03	-11.03
	461.000	34.29			57.11	47.11	-12.82
	12860.000	38.73			60.00	50.00	-11.27

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Test mode: IEEE 802.11b Channel 6, Antenna#2

Por	ver Conne	ected	Emissions	5	Class B		
Conductor	Frequency	Peak	QP	Average	QP-limit	AVG-limit	Margin
	(KHz)	(dBµV)	(dBµV)	(dBµV)	$(dB\mu V)$	(dBµV)	(dB)
	152.000	49.32			65.94	55.94	-6.62
	197.000	51.31			64.66	54.66	-3.35
	394.000	38.20			59.03	49.03	-10.83
Line 1	461.000	37.35			57.11	47.11	-9.76
	724.000	33.90			56.00	46.00	-12.10
	12740.000	39.26			60.00	50.00	-10.74
	155.000	46.66			65.86	55.86	-9.20
	199.000	52.64			64.60	54.60	-1.96
	305.000	41.43			61.57	51.57	-10.14
Line 2	394.000	37.02			59.03	49.03	-12.01
	461.000	34.57			57.11	47.11	-12.54
	12740.000	38.63			60.00	50.00	-11.37

Test mode: IEEE 802.11b Channel 11, Antenna#2

Por	ver Conne	ected	Emissions	S	Class B		
Conductor	Frequency	Peak	QP	Average	QP-limit	AVG-limit	Margin
	(KHz)	(dBµV)	(dBµV)	(dBµV)	$(dB\mu V)$	(dBµV)	(dB)
	150.000	46.39			66.00	56.00	-9.61
	197.000	52.11			64.66	54.66	-2.55
	323.000	44.59			61.06	51.06	-6.47
Line 1	394.000	38.15			59.03	49.03	-10.88
	461.000	37.05			57.11	47.11	-10.06
	12620.000	39.32			60.00	50.00	-10.68
	150.000	47.79			66.00	56.00	-8.21
	199.000	52.59			64.60	54.60	-2.01
	398.000	34.51			58.91	48.91	-14.40
Line 2	461.000	34.08			57.11	47.11	-13.03
	12800.000	38.97			60.00	50.00	-11.03
	23230.000	35.10			60.00	50.00	-14.90

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Test mode: IEEE 802.11g Channel 1, Antenna#2

Por	ver Conne	ected	Emissions	S		Class B	
Conductor	Frequency	Peak	QP	Average	QP-limit	AVG-limit	Margin
	(KHz)	(dBµV)	(dBµV)	(dBµV)	$(dB\mu V)$	(dBµV)	(dB)
	150.000	50.06			66.00	56.00	-5.94
	197.000	53.04			64.66	54.66	-1.62
	394.000	38.51			59.03	49.03	-10.52
Line 1	461.000	36.87			57.11	47.11	-10.24
	724.000	33.76			56.00	46.00	-12.24
	12680.000	39.01			60.00	50.00	-10.99
	199.000	52.08			64.60	54.60	-2.52
	461.000	34.93			57.11	47.11	-12.18
	989.000	32.35			56.00	46.00	-13.65
Line 2	5770.000	40.53			60.00	50.00	-9.47
	12800.000	39.32			60.00	50.00	-10.68
	23230.000	37.48			60.00	50.00	-12.52

Test mode: IEEE 802.11g Channel 6, Antenna#2

Por	ver Conne	ected 1	Emissions	S		Class B	
Conductor	Frequency	Peak	QP	Average	QP-limit	AVG-limit	Margin
	(KHz)	(dBµV)	(dBµV)	(dBµV)	(dBµV)	(dBµV)	(dB)
	153.000	47.74			65.91	55.91	-8.17
	199.000	51.52			64.60	54.60	-3.08
	394.000	38.34			59.03	49.03	-10.69
Line 1	461.000	37.51			57.11	47.11	-9.60
	5410.000	36.93			60.00	50.00	-13.07
	12620.000	38.79			60.00	50.00	-11.21
	199.000	52.07			64.60	54.60	-2.53
	331.000	36.42			60.83	50.83	-14.41
	394.000	38.02			59.03	49.03	-11.01
Line 2	461.000	34.25			57.11	47.11	-12.86
	919.000	31.18			56.00	46.00	-14.82
	12800.000	39.08			60.00	50.00	-10.92

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Test mode: IEEE 802.11g Channel 11, Antenna#2

Por	ver Conne	ected	Emissions	S	FC	C Class	В
Conductor	Frequency	Peak	QP	Average	QP-limit	AVG-limit	Margin
	(KHz)	(dBµV)	(dBµV)	(dBµV)	$(dB\mu V)$	(dBµV)	(dB)
	155.000	47.34			65.86	55.86	-8.52
	197.000	51.64			64.66	54.66	-3.02
	398.000	38.14			58.91	48.91	-10.77
Line 1	461.000	37.14			57.11	47.11	-9.97
	724.000	33.64			56.00	46.00	-12.36
	12860.000	39.00			60.00	50.00	-11.00
	150.000	43.99			66.00	56.00	-12.01
	199.000	50.13			64.60	54.60	-4.47
	394.000	37.46			59.03	49.03	-11.57
Line 2	461.000	36.18			57.11	47.11	-10.93
	724.000	32.99			56.00	46.00	-13.01
	12920.000	38.49			60.00	50.00	-11.51

VI. Section 15.247 (a): Technical description of the EUT

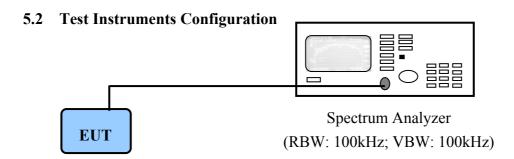
Direct Sequence System is a spread spectrum system in which the carrier has been modulated by a high speed spreading code and an information data stream. The high speed code sequence dominates the "modulating function" and is the direct cause of the wide spreading of the transmitted signal. In the operational description demonstrates the operation principles of the Baseband processor employed by the EUT, shows that which is a complete DSSS baseband processor and meets the definition of the direct sequence spread spectrum system.

Test Report ----- 23/67

V. Section 15.247(a)(2): Bandwidth for Direct Sequence System.

5.1 Test Condition & Setup

The transmitter bandwidth measurements were performed by the contact manner. The EUT was set to transmit continuously, also various channels were investigated to find the maximum occupied bandwidth. The output of the EUT was connected to the spectrum analyzer. The bandwidth of the fundamental frequency is observed by the spectrum analyzer with 100kHz RBW and 100kHz VBW.



PC to control the EUT at maximal power output and channel number and set antenna kit

5.3 List of Test Instruments

Instrument Name	Model No.	Brand	Serial No.	Next time
Spectrum Analyzer	MS2665C	ANRITSU	6200175476	12/19/08

5.4 Test Result of Bandwidth

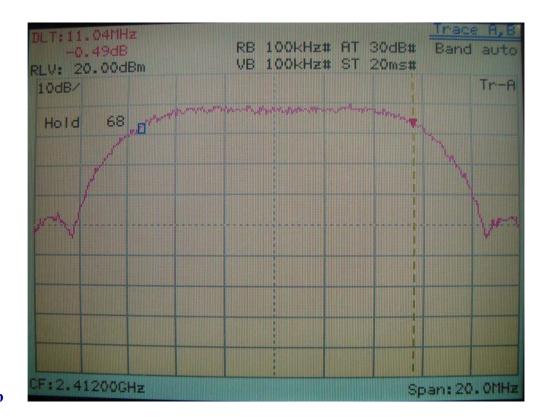
Channel	802.11b	802.11g
01	11.04 MHz	16.72 MHz
06	11.08 MHz	16.76 MHz
11	11.04 MHz	16.76 MHz

- Note: 1. The data in the above table are summarizing the following attachment spectrum analyzer hard copy. According to the guidance, we'd made the measurement with the spectrum analyzer's resolution bandwidth (RBW)=100kHz and set the span>>RBW. The results show the measured 6dB bandwidth comply with the minimum 500kHz requirement.
 - 2. The attachments show these on the following pages.

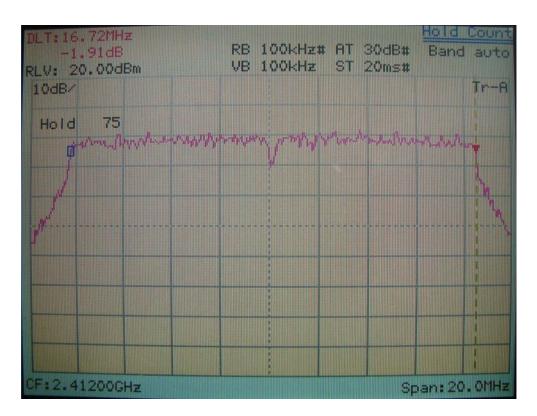
Report No.: P5515080173, FCC Part 15.247

Test Report ------ 24/67

6dB Bandwidth of Channel 1 (The minimum 6dB BW at least 500kHz)



IEEE 802.11b

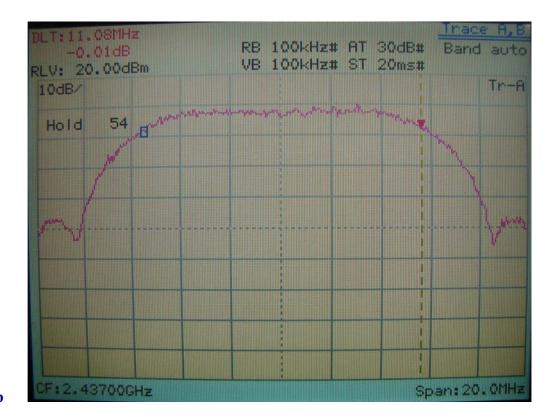


IEEE 802.11g

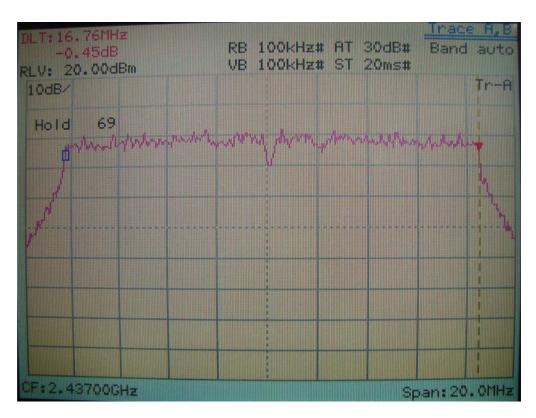
Report No.: P5515080173, FCC Part 15.247

Test Report ------ 25/67

6dB Bandwidth of Channel 6 (The minimum 6dB BW at least 500kHz)



IEEE 802.11b

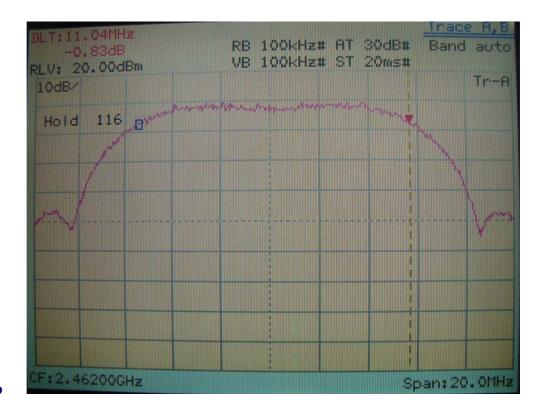


IEEE 802.11g

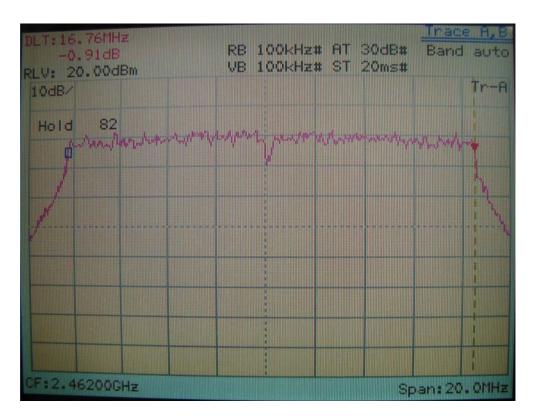
Report No.: P5515080173, FCC Part 15.247

Test Report ------ 26/67

6dB Bandwidth of Channel 11 (The minimum 6dB BW at least 500kHz)



IEEE 802.11b



IEEE 802.11g

Test Report ----- 27/67

VI. Section 15.247(b): Power Output

6.1 Test Condition & Setup BOONTON 4532 RF Power Meter

- 1. The output of the transmitter is connected to the BOONTON RF Power Meter.
- 2. The calibration is performed before every test. The values of the output power of the EUT will shown in the dBm directly are the transmitter output peak power. Recording as follows.

6.2 List of Test Instruments

Instrument Name	Model	Brand	Serial No.	Next time
RF Power Meter	4532	BOONTON	117501	09/11/08
Peak Power Sensor	57340	BOONTON	2696	09/11/08

6.3 Test Result

Formula:

RF Output of EUT + |Cable Loss| = Output Peak Power

Channel	RF Output	Cable Loss	Output Pe	ak Power
	dBm	dBm	dBm	mW
802.11b CH01	18.02	6.70	24.72	296.48
802.11b CH06	17.81	6.70	24.51	282.49
802.11b CH11	17.78	6.70	24.48	280.54
802.11g CH01	17.96	6.70	24.66	292.42
802.11g CH06	17.89	6.70	24.59	287.74
802.11g CH11	18.25	6.70	24.95	312.61

Report No.: P5515080173, FCC Part 15.247

VII. Section 15.247 (C): Spurious Emissions (Radiated)

7.1 Test Condition & Setup

We'd performed the test by the *radiated emission* skill: The EUT was placed in an semi-anechoic chamber, and set the EUT transmitting continuously and scanned at 3-meter distance to determine its emission characteristics. The physical arrangement of the EUT was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude, directivity, and frequency. The exact system configuration, which produced the highest emissions was noted so it could be reproduced later during the final tests. For the measurement above 1GHz, according to the guidance we'd set the spectrum analyzer's 6dB bandwidth RBW to 1MHz.

This was done to ensure that the final measurements would demonstrate the worst-case interference potential of the EUT.

Final radiation measurements were made on a three-meter, semi-anechoic chamber. The EUT system was placed on a nonconductive turntable, which is 0.8 meters height, top surface 1.0×1.5 meter.

The spectrum was examined from 30 MHz to 1000 MHz using an Hewlett Packard 85460A EMI Receiver, SCHWARZECK whole range Small Biconical Antenna (Model No.: UBAA9114 & BBVU9135) is used to measure frequency from 30 MHz to 1GHz. The final test is used the HP 85460A spectrum and 8564E spectrum was examined from 1GHz to 25GHz using an Hewlett Packard Spectrum Analyzer, EMCO/HP Horn Antenna (Model 3115 / 84125-80008) for 1G - 25GHz.

At each frequency, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. There are two spectrum analyzers use on this testing, HP 85460A for frequency 30MHz to 1000MHz, and 8564E for frequency 1GHz to 25GHz. No post-detector video filters were used in the test. The spectrum analyzer's 6dB bandwidth was set to 120KHz (spectrum was examined from 30 MHz to 1000 MHz), the spectrum analyzer's 6 dB bandwidth was set to 1 MHz (spectrum was examined from 1GHz to 25GHz) and the analyzer was operated in the maximum hold mode. There is a test condition applies in this test item, the test procedure description as the following:

Three channels were tested, one in the top (CH01), one in the middle (CH06) and the other in bottom (CH11). The setting up procedure is recorded on <1.3>

Test Report ----- 29/67

With the transmitter operating from a AC source and using the internal of EUT, radiates spurious emissions falling within the restricted bands of 15.209 were measured at operating frequencies corresponding to upper, middle and bottom channels in the $2400 \sim 2483.5$ MHz band.

The actual field intensity in decibels referenced to 1 microvolt per meter ($dB\mu V/m$) is determined by algebraically adding the measured reading in $dB\mu V$, the antenna factor (dB), and cable loss (dB) at the appropriate frequency. Since the EUT was set to transmit continuously, no *duty cycle* is present.

For frequency between 30MHz to 1000MHz

FIa $(dBuV/m) = FIr (dB\mu V) + Correction Factors$

FIa: Actual Field Intensity

FIr : Reading of the Field Intensity

Correction Factors = Antenna Factor + (Cable Loss – Amplitude Gain) + Switching Box Loss

For frequency between 1GHz to 25GHz

FIa $(dB\mu V/m)$ = FIr $(dB\mu V)$ + Correction Factor

FIa: Actual Field Intensity

FIr : Reading of the Field Intensity

Correction Factors = Antenna Factor + (Cable Loss – Amplitude Gain) + Switching Box Loss

Test Report ----- 30/67

7.2 List of Test Instruments

Calibration Date

				Calibration Da
Instrument Name	Model	Brand	Serial No.	Next time
EMI Receiver	8546A	НР	3520A00242	09/05/08
RF Filter Section	85460A	НР	3448A00217	09/05/08
Small Biconical Antenna	UBAA9114 & BBVU9135	SCHWARZECK	127	09/07/08
Pre-amplifier	PA1F	TRC	1FAC	08/08/08
Auto Switch Box (>30MHz)	ASB-01	TRC	9904-01	08/08/08
Coaxial Cable (Double shielded, 15 meter)	A30A30-0058-50FS-15M	JYEBAO	SMA-01	08/08/08
Coaxial Cable (1.1 meter)	A30A30-0058-50FS-1M	JYEBAO	SMA-02	03/17/09
Spectrum Analyzer	8564E	HP	3720A00840	11/07/08
Microwave Preamplifier	84125C	НР	US36433002	11/05/08
Horn Antenna	3115	EMCO	9104-3668	12/14/08
Horn Antenna	1196E (3115)	HP (EMCO)	9704-5178	12/14/08
Standard Guide Horn Antenna	84125-80008	НР	18-26.5GHz	08/12/08
Standard Guide Horn Antenna	84125-80001	HP	26.5-40GHz	10/10/08
Pre-amplifier	PA2F	TRC	2F1GZ	10/10/08
Coaxial Cable (3 miter)	A30A30-0058-50FST118	JYEBAO	MSA-05	10/10/08
Coaxial Cable (1 meter)	A30A30-0058-50FST118	JYEBAO	MSA-04	09/05/08

Test Report ----- 31/67

7.3 Test Result of Spurious Radiated Emissions

The highest peak values of radiated emissions form the EUT at various antenna heights, antenna polarizations, EUT orientation, etc. are recorded on the following.

Test Conditions: Temperature: 25 ° C Humidity: 73 % RH

Test mode: IEEE 802.11b CH01 for 30MHz to 1GHz, Antenna#1 [Horizontal]

	Radiated Emission		Correction Factors	Corrected Amplitude	Clas		
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
236.12	37.58	1.00	248	-3.77	33.81	46.00	-12.19
368.29	35.41	1.00	200	-1.83	33.58	46.00	-12.42
501.66	37.73	1.00	278	1.85	39.58	46.00	-6.42
528.34	35.62	1.00	277	3.62	39.24	46.00	-6.76
598.66	30.67	1.00	273	6.42	37.09	46.00	-8.91
765.99	25.25	1.00	149	10.55	35.80	46.00	-10.20

Test mode: IEEE 802.11b CH01 for 30MHz to 1GHz, Antenna#1 [Vertical]

Radiated Emission			Correction Factors	Corrected Amplitude	Clas		
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
38.49	23.05	1.00	75	5.43	28.48	40.00	-11.52
73.65	28.46	1.00	265	1.07	29.53	40.00	-10.47
141.55	38.67	1.00	78	-3.60	35.07	43.50	-8.43
236.12	39.05	1.00	343	-3.77	35.28	46.00	-10.72
528.34	37.39	1.00	291	3.62	41.01	46.00	-4.99
804.79	28.79	1.00	66	11.79	40.58	46.00	-5.42

Note:

- 1. Margin = Amplitude limit, if margin is minus means under limit.
- 2. Corrected Amplitude = Reading Amplitude + Correction Factors
- 3. Correction factor = Antenna factor + (Cable Loss Amplitude gain) + Switching Box Loss

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Test mode: IEEE 802.11b CH01 for 1GHz to 25GHz, Antenna#1 [Horizontal]

Frequency	Ant.	Table	Amplitude		Correction	Corrected		Limit		Margin
	Н.		Peak .	/Ave.	Factor	Amplitude Peak / Ave.		Peak / Ave.		
МНг	m	degree	dB	μV	dB/m	dΒμ	dBμV/m		dBμV/m	
1608.33	1.00	89	35.33		14.20	49.53		73.96	53.96	-4.43
2150.00	1.00	313	39.67		8.51	48.18		73.96	53.96	-5.78
12061.04	1.00	316	38.60		9.81	48.41		73.96	53.96	-5.55
21708.12	1.00	141	45.33		2.87	48.20		73.96	53.96	-5.76
24120.00	1.00	197	45.55		3.40	48.95		73.96	53.96	-5.01

Test mode: IEEE 802.11b CH01 for 1GHz to 25GHz, Antenna#1 | IVertical|

	0.50 11000				1 10114 10 230			įverii		
Frequency	Ant.	Table	Ampl	mplitude Correction Corrected		Limit		Margin		
	Н.				Factor	Ampl	Amplitude			
			Peak .	/Ave.		Peak	/Ave.	Peak	/ Ave.	
МН	m	degree	dB	μV	dB/m	dΒμ	vV/m	dΒμ	vV/m	dB
1608.33	1.00	282	36.00		14.20	50.20		73.96	53.96	-3.76
1652.65	1.00	242	39.35	30.50	13.51	52.86	44.01	73.96	53.96	-9.95
2265.62	1.00	207	44.35	31.17	8.83	53.18	40.00	73.96	53.96	-13.96
3216.67	1.00	72	38.00	-	11.47	49.47		73.96	53.96	-4.49
12061.04	1.00	264	38.44		9.81	48.25		73.96	53.96	-5.71
24120.00	1.00	208	45.14		3.40	48.54		73.96	53.96	-5.42

Note:

- 1. Margin = Corrected Limit.
- 2. The EUT utilizes a *permanently attached antenna*. In addition the spurious RF radiated emissions levels do comply with the *20dBc limit* both at its bandedges and other spurious emissions.
- 3. As stated in Section 15.35(b), for any frequencies above 1000MHz, radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. As the results of our test, the peak amplitudes are already below the FCC limit. Thus the average amplitudes of the rest are omitted.

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Test mode: IEEE 802.11b CH06 for 30MHz to 1GHz, Antenna#1 [Horizontal]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
174.29	37.10	1.00	68	-4.05	33.05	43.50	-10.45
234.91	39.07	1.00	275	-3.79	35.28	46.00	-10.72
368.29	35.72	1.00	207	-1.83	33.89	46.00	-12.11
502.87	37.23	1.00	282	1.93	39.16	46.00	-6.84
528.34	36.06	1.00	283	3.62	39.68	46.00	-6.32
773.26	25.89	1.00	154	10.78	36.67	46.00	-9.33

Test mode: IEEE 802.11b CH06 for 30MHz to 1GHz, Antenna#1 [Vertical]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas (3)	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)	$(dB) \qquad (dB\mu V/m)$		Limit (dBµV/m)	Margin (dB)
97.90	33.22	1.00	81	-0.42	32.80	43.50	-10.70
141.55	37.66	1.00	67	-3.60	34.06	43.50	-9.44
174.29	37.31	1.00	7	-4.05	33.26	43.50	-10.24
236.12	41.81	1.00	303	-3.77	38.04	46.00	-7.96
528.34	36.48	1.00	287	3.62	40.10	46.00	-5.90
804.79	28.65	1.00	66	11.79	40.44	46.00	-5.56

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Test mode: IEEE 802.11b CH06 for 1GHz to 25GHz, Antenna#1 [Horizontal]

Frequency	Ant. H.	Table	Ampl	mplitude Correct Facto		Corrected Amplitude		Limit		Margin
			Peak .	/Ave.		Peak / Ave.		Peak / Ave.		
MHz	m	degree	dB	μV	dB/m	dBμV/m		dBμV/m		dB
1625.00	1.00	233	36.83		13.94	50.77		73.96	53.96	-3.19
2156.25	1.00	325	41.50		8.53	50.03		73.96	53.96	-3.93
12187.92	1.00	346	39.27		9.74	49.01		73.96	53.96	-4.95
21934.79	1.00	36	45.64		3.09	48.73		73.96	53.96	-5.23
24371.46	1.00	115	45.29		3.26	48.55		73.96	53.96	-5.41

Test mode: IEEE 802.11b CH06 for 1GHz to 25GHz, Antenna#1 [Vertical]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit		Margin
			Peak .	/Ave.		Peak	/Ave.	Peak	/Ave.	
MHz	m	degree	dB	μV	dB/m	dΒμ	vV/m	dBμV/m		dB
1698.69	1.00	282	42.35	30.67	12.79	55.14	43.46	73.96	53.96	-10.50
2153.23	1.00	157	44.33	27.83	8.52	52.85	36.35	73.96	53.96	-17.61
2278.70	1.00	88	44.17	31.83	8.87	53.04	40.70	73.96	53.96	-13.26
2525.70	1.00	173	45.50	32.50	9.54	55.04	42.04	73.96	53.96	-11.92
12187.92	1.00	250	38.27		9.74	48.01		73.96	53.96	-5.95
21934.79	1.00	18	45.38		3.09	48.47		73.96	53.96	-5.49

Test Report ----- 35/67

Test mode: IEEE 802.11b CH11 for 30MHz to 1GHz, Antenna#1 [Horizontal]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas	· · -
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)	(dB)	$(dB) \qquad (dB\mu V/m)$		Margin (dB)
171.86	32.97	1.00	92	-4.09	28.88	43.50	-14.62
234.91	39.42	1.00	258	-3.79	35.63	46.00	-10.37
367.07	35.74	1.00	197	-1.86	33.88	46.00	-12.12
499.24	37.32	1.00	275	1.73	39.05	46.00	-6.95
897.45	30.57	1.00	273	6.39	36.96	46.00	-9.04
767.20	27.37	1.00	161	10.59	37.96	46.00	-8.04

Test mode: IEEE 802.11b CH11 for 30MHz to 1GHz, Antenna#1 [Vertical]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas (3)	
Frequency (MHz)	Amplitude (dBµV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
73.65	27.15	1.00	258	1.07	28.22	40.00	-11.78
97.90	31.97	1.00	95	-0.42	31.55	43.50	-11.95
141.55	38.43	1.00	41	-3.60	34.83	43.50	-8.67
160.95	37.76	1.00	329	-4.06	33.70	43.50	-9.80
234.91	40.05	1.00	319	-3.79	36.26	46.00	-9.74
825.34	38.05	1.00	219	3.62	41.67	46.00	-4.33

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Test mode: IEEE 802.11b CH11 for 1GHz to 25GHz, Antenna#1 [Horizontal]

Frequency	Ant. H.	Table	Ampl	litude	Correction Factor	Corrected Amplitude		Limit		Margin
			Peak .	/Ave.		Peak / Ave.		Peak / Ave.		
MHz	m	degree	dB	μV	dB/m	dΒμ	ıV/m	dBμV/m		dB
1641.67	1.00	263	37.67		13.68	51.35		73.96	53.96	-2.61
2291.67	1.00	91	40.16		8.91	49.07		73.96	53.96	-4.89
3283.33	1.00	139	38.67		11.79	50.46		73.96	53.96	-3.50
7384.79	1.00	203	39.78		10.42	50.20		73.96	53.96	-3.76
24619.37	1.00	235	45.50		3.01	48.51		73.96	53.96	-5.45

Test mode: IEEE 802.11b CH11 for 1GHz to 25GHz, Antenna#1 [Vertical]

Frequency	Ant.	Table	Amplitude		Correction	Corr	ected	Limit		Margin
	Н.				Factor	Ampl	litude			
			Peak ,	/Ave.		Peak	/ Ave.	Peak	/ Ave.	
МН	m	degree	dB	μV	dB/m	dΒμ	vV/m	dBμV/m		dB
1739.30	1.00	262	41.33	31.00	12.16	53.49	43.16	73.96	53.96	-10.80
2152.20	1.00	275	46.01	29.67	8.52	54.53	38.19	73.96	53.96	-15.77
2359.98	1.00	108	46.30	33.50	9.10	55.40	42.60	73.96	53.96	-11.36
2532.93	1.00	122	44.00	32.00	9.55	53.55	41.55	73.96	53.96	-12.41
9849.79	1.00	106	35.94		11.93	47.87		73.96	53.96	-6.09
24619.37	1.00	251	45.19		3.01	48.20		73.96	53.96	-5.76

Report No.: P5515080173, FCC Part 15.247

Test Report ----- 37/67

Test mode: IEEE 802.11g CH01 for 30MHz to 1GHz, Antenna#1 [Horizontal]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
194.90	33.55	1.00	93	-3.52	30.03	43.50	-13.47
236.12	36.80	1.00	65	-3.77	33.03	46.00	-12.97
402.24	37.96	1.00	69	-0.98	36.98	46.00	-9.02
499.24	38.88	1.00	295	1.73	40.61	46.00	-5.39
528.34	36.17	1.00	254	3.62	39.79	46.00	-6.21
598.66	31.32	1.00	270	6.42	37.74	46.00	-8.26

Test mode: IEEE 802.11g CH01 for 30MHz to 1GHz, Antenna#1 [Vertical]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas (3	
Frequency (MHz)	Amplitude (dBµV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
141.55	38.13	1.00	329	-3.60	34.53	43.50	-8.97
234.91	39.35	1.00	299	-3.79	35.56	46.00	-10.44
502.87	37.04	1.00	207	1.93	38.97	46.00	-7.03
528.34	36.15	1.00	298	3.62	39.77	46.00	-6.23
696.87	29.34	1.00	190	9.44	38.78	46.00	-7.22
720.55	27.75	1.00	87	12.30	40.05	46.00	-5.95

Report No.: P5515080173, FCC Part 15.247

Test Report ----- 38/67

Test mode: IEEE 802.11g CH01 for 1GHz to 25GHz, Antenna#1 [Horizontal]

Frequency	Ant. H.	Table	Ampl	litude	Correction Corrected Factor Amplitude		Limit		Margin	
			Peak ,	/ Ave.		Peak / Ave.		Peak / Ave.		
MHz	m	degree	dB	μV	dB/m	dΒμ	vV/m	dΒμ	ıV/m	dB
1608.33	1.00	332	34.33		14.20	48.53		73.96	53.96	-5.43
2151.59	1.00	321	45.35	30.83	8.51	53.86	39.34	73.96	53.96	-14.62
12061.04	1.00	314	36.60		9.81	46.41		73.96	53.96	-7.55
21708.12	1.00	142	45.51		2.87	48.38		73.96	53.96	-5.58
24120.00	1.00	187	45.18		3.40	48.58		73.96	53.96	-5.38

Test mode: IEEE 802.11g CH01 for 1GHz to 25GHz, Antenna#1 [Vertical]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit		Margin
			Peak .	/ Ave.		Peak / Ave.		Peak / Ave.		
MHz	m	degree	dBμV		dB/m	dΒμ	vV/m	dΒμ	ıV/m	dB
2154.18	1.00	140	44.00	29.83	8.52	52.52	38.35	73.96	53.96	-15.61
2552.08	1.00	144	41.50		9.59	51.09		73.96	53.96	-2.87
3216.67	1.00	119	37.67		11.47	49.14		73.96	53.96	-4.82
12061.04	1.00	305	37.27		9.81	47.08		73.96	53.96	-6.88
24120.00	1.00	191	45.37		3.40	48.77		73.96	53.96	-5.19

Test Report ----- 39/67

Test mode: IEEE 802.11g CH06 for 30MHz to 1GHz, Antenna#1 [Horizontal]

	Radiated Emission				Corrected Amplitude	Clas	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table ()	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
173.07	32.14	1.00	266	-4.07	28.07	43.50	-15.43
196.11	35.22	1.00	256	-3.47	31.75	43.50	-11.75
234.91	38.07	1.00	71	-3.79	34.28	46.00	-11.72
501.66	38.83	1.00	273	1.85	40.68	46.00	-5.32
528.34	35.97	1.00	276	3.62	39.59	46.00	-6.41
590.17	31.37	1.00	273	6.18	37.55	46.00	-8.45

Test mode: IEEE 802.11g CH06 for 30MHz to 1GHz, Antenna#1 [Vertical]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas (3	
Frequency (MHz)	Amplitude (dBµV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
140.34	37.58	1.00	41	-3.49	34.09	43.50	-9.41
160.95	37.92	1.00	7	-4.06	33.86	43.50	-9.64
233.70	39.12	1.00	319	-3.80	35.32	46.00	-10.68
528.34	39.80	1.00	291	3.62	43.42	46.00	-2.58
666.56	30.95	1.00	190	8.51	39.46	46.00	-6.54
696.87	30.43	1.00	197	9.44	39.87	46.00	-6.13

Report No.: P5515080173, FCC Part 15.247

Test Report ------ 40/67

Test mode: IEEE 802.11g CH06 for 1GHz to 25GHz, Antenna#1 [Horizontal]

Frequency	Ant.	Table	Amplitude		Correction	Corrected		Limit		Margin
	Н.				Factor	Ampl	litude			
			Peak .	/Ave.		Peak .	/ Ave.	Peak	/ Ave.	
MHz	m	degree	$dB\mu V$		dB/m	dΒμ	V/m	dBμV/m		dB
1625.00	1.00	241	35.17		13.94	49.11		73.96	53.96	-4.85
12187.92	1.00	159	39.94	-	9.74	49.68		73.96	53.96	-4.28
19494.58	1.00	102	46.48		1.69	48.17		73.96	53.96	-5.79
21934.79	1.00	34	45.71		3.09	48.80		73.96	53.96	-5.16
24371.46	1.00	114	45.46		3.26	48.72		73.96	53.96	-5.24

Test mode: IEEE 802.11g CH06 for 1GHz to 25GHz, Antenna#1 [Vertical]

Frequency	Ant. H.	Table	Ampl	litude	Correction Factor	Corrected Amplitude		Limit		Margin
			Peak .	/Ave.		Peak / Ave.		Peak / Ave.		
MHz	m	degree	$dB\mu V$		dB/m	dΒμ	V/m	dΒμ	ιV/m	dB
2362.26	1.00	169	43.49	27.17	9.10	52.59	36.27	73.96	53.96	-17.69
2547.92	1.00	126	42.33		9.58	51.91		73.96	53.96	-2.05
3250.00	1.00	39	38.17		11.63	49.80		73.96	53.96	-4.16
12187.92	1.00	247	39.27		9.74	49.01		73.96	53.96	-4.95
21934.79	1.00	28	45.56		3.09	48.65		73.96	53.96	-5.31

Report No.: P5515080173, FCC Part 15.247

Test Report ------ 41/67

Test mode: IEEE 802.11g CH11 for 30MHz to 1GHz, Antenna#1 [Horizontal]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Class B (3 m)	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table ()	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
174.29	34.05	1.00	78	-4.05	30.00	43.50	-13.50
234.91	37.26	1.00	82	-3.79	33.47	46.00	-12.53
436.19	36.00	1.00	61	0.56	36.56	46.00	-9.44
502.87	38.48	1.00	278	1.93	40.41	46.00	-5.59
664.14	27.83	1.00	189	8.44	36.27	46.00	-9.73
773.26	25.89	1.00	217	10.78	36.67	46.00	-9.33

Test mode: IEEE 802.11g CH11 for 30MHz to 1GHz, Antenna#1 [Vertical]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas (3	
Frequency (MHz)	Amplitude (dBµV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
72.44	27.55	1.00	240	1.15	28.70	40.00	-11.30
142.76	36.69	1.00	89	-3.72	32.97	43.50	-10.53
173.07	38.06	1.00	345	-4.07	33.99	43.50	-9.51
234.91	38.77	1.00	321	-3.79	34.98	46.00	-11.02
528.34	36.27	1.00	276	3.62	39.89	46.00	-6.11
664.14	30.87	1.00	184	8.44	39.31	46.00	-6.69

Report No.: P5515080173, FCC Part 15.247

Test Report ------ 42/67

Test mode: IEEE 802.11g CH11 for 1GHz to 25GHz, Antenna#1 [Horizontal]

Frequency	Ant. H.	Table	Ampl	itude	Correction Factor	Corrected Amplitude		Limit		Margin
			Peak .	/Ave.		Peak.	/ Ave.	Peak	/Ave.	
MHz	m	degree	$dB\mu V$		dB/m	dΒμ	V/m	dBμV/m		dB
1641.67	1.00	241	37.17		13.68	50.85		73.96	53.96	-3.11
12308.75	1.00	0	37.77		9.56	47.33		73.96	53.96	-6.63
19696.46	1.00	245	45.96		1.81	47.77		73.96	53.96	-6.19
22157.92	1.00	236	44.51		3.25	47.76		73.96	53.96	-6.20
24619.37	1.00	228	45.25		3.01	48.26		73.96	53.96	-5.70

Test mode: IEEE 802.11g CH11 for 1GHz to 25GHz, Antenna#1 [Vertical]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit		Margin
			Peak .	/ Ave.		Peak / Ave.		Peak / Ave.		
MHz	m	degree	dB	μV	dB/m	dΒμ	vV/m	dBμV/m		dB
2335.42	1.00	97	42.50		9.03	51.53		73.96	53.96	-2.43
2564.58	1.00	180	40.00		9.61	49.61		73.96	53.96	-4.35
3283.33	1.00	32	38.17		11.79	49.96		73.96	53.96	-4.00
9849.79	1.00	154	35.28		11.93	47.21		73.96	53.96	-6.75
24619.37	1.00	253	45.76		3.01	48.77		73.96	53.96	-5.19

Test Report ------ 43/67

Test mode: IEEE 802.11b CH01 for 30MHz to 1GHz, Antenna#2 [Horizontal]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
236.12	44.19	1.00	91	-3.77	40.42	46.00	-5.58
301.60	40.11	1.00	34	-2.88	37.23	46.00	-8.77
416.79	41.63	1.00	273	-0.32	41.31	46.00	-4.69
448.31	41.45	1.00	286	1.11	42.56	46.00	-3.44
631.40	34.88	1.00	28	7.43	42.31	46.00	-3.69
895.72	27.42	1.00	178	15.00	42.42	46.00	-3.58

Test mode: IEEE 802.11b CH01 for 30MHz to 1GHz, Antenna#2 [Vertical]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas (3	
Frequency (MHz)	Amplitude (dBµV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
153.68	38.62	1.00	41	-4.27	34.35	43.50	-9.15
234.91	45.01	1.00	353	-3.79	41.22	46.00	-4.78
301.60	40.64	1.00	282	-2.88	37.76	46.00	-8.24
434.97	39.53	1.00	190	0.51	40.04	46.00	-5.96
567.14	35.23	1.00	156	5.54	40.77	46.00	-5.23
633.83	34.55	1.00	197	7.51	42.06	46.00	-3.94

Report No.: P5515080173, FCC Part 15.247

Test mode: IEEE 802.11b CH01 for 1GHz to 25GHz, Antenna#2 [Horizontal]

Frequency	Ant.	Table	Amplitude		Correction		ected	Limit		Margin
	Н.				Factor	Ampi	litude			
			Peak .	/Ave.		Peak	/ Ave.	Peak	/ Ave.	
МН	m	degree	$dB\mu V$		dB/m	dΒμ	V/m	dBμV/m		dB
1607.99	1.00	324	40.49	37.33	14.21	54.70	51.54	73.96	53.96	-2.42
2495.83	1.00	158	40.66		9.48	50.14		73.96	53.96	-3.82
12061.04	1.00	258	36.77		9.81	46.58		73.96	53.96	-7.38
21934.79	1.00	29	46.49		3.09	49.58		73.96	53.96	-4.38
24371.46	1.00	309	45.58		3.26	48.84		73.96	53.96	-5.12

Test mode: IEEE 802.11b CH01 for 1GHz to 25GHz, Antenna#2 [Vertical]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit		Margin
			Peak ,	/ Ave.		Peak .	/Ave.	Peak	/ Ave.	
MHz	m	degree	dB	μV	dB/m	dΒμ	vV/m	dBμV/m		dB
1608.33	1.00	306	35.67		14.20	49.87		73.96	53.96	-4.09
12061.04	1.00	321	35.77		9.81	45.58		73.96	53.96	-8.38
19494.58	1.00	97	47.03		1.69	48.72		73.96	53.96	-5.24
21934.79	1.00	56	46.35		3.09	49.44		73.96	53.96	-4.52
24371.46	1.00	316	45.64		3.26	48.90		73.96	53.96	-5.06

Test Report ------ 45/67

Test mode: IEEE 802.11b CH06 for 30MHz to 1GHz, Antenna#2 [Horizontal]

	Radiat Emissi		•	Correction Factors	Corrected Amplitude	Clas	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
233.70	41.57	1.00	92	-3.80	37.77	46.00	-8.23
301.60	40.30	1.00	44	-2.88	37.42	46.00	-8.58
368.29	39.87	1.00	58	-1.83	38.04	46.00	-7.96
436.19	39.60	1.00	48	0.56	40.16	46.00	-5.84
633.83	35.82	1.00	28	7.51	43.33	46.00	-2.67
895.72	27.49	1.00	185	15.00	42.49	46.00	-3.51

Test mode: IEEE 802.11b CH06 for 30MHz to 1GHz, Antenna#2 [Vertical]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas (3	
Frequency (MHz)	Amplitude (dBµV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
153.68	38.71	1.00	65	-4.27	34.44	43.50	-9.06
233.70	43.46	1.00	20	-3.80	39.66	46.00	-6.34
302.81	39.83	1.00	272	-2.86	36.97	46.00	-9.03
439.82	39.59	1.00	24	0.73	40.32	46.00	-5.68
501.66	38.63	1.00	204	1.85	40.48	46.00	-5.52
633.83	35.20	1.00	182	7.51	42.71	46.00	-3.29

Report No.: P5515080173, FCC Part 15.247

Test Report ------ 46/67

Test mode: IEEE 802.11b CH06 for 1GHz to 25GHz, Antenna#2 [Horizontal]

Frequency	Ant. H.	Table	Amplitude		Correction Factor		Corrected Amplitude		Limit	
			Peak .	/ Ave.		Peak / Ave.		Peak / Ave.		
MHz	m	degree	dBμV		dB/m	dΒμ	ıV/m	dBμV/m		dB
1624.66	1.00	284	40.66	37.17	13.95	54.61	51.12	73.96	53.96	-2.84
2277.08	1.00	19	42.16		8.87	51.03		73.96	53.96	-2.93
2520.83	1.00	161	38.83		9.53	48.36		73.96	53.96	-5.60
12187.92	1.00	53	38.27		9.74	48.01		73.96	53.96	-5.95
24371.46	1.00	218	47.37		3.26	50.63		73.96	53.96	-3.33

Test mode: IEEE 802.11b CH06 for 1GHz to 25GHz, Antenna#2 [Vertical]

Frequency	Ant. H.	Table	Ampl	litude	Correction Factor			Limit		Margin
			Peak .	/Ave.		Peak .	/Ave.	Peak	/ Ave.	
MHz	m	degree	dB	μV	dB/m	dΒμ	V/m	dBμV/m		dB
1614.58	1.00	169	35.84		14.10	49.94		73.96	53.96	-4.02
9747.08	1.00	182	35.10		11.89	46.99		73.96	53.96	-6.97
19494.58	1.00	358	47.37		1.69	49.06		73.96	53.96	-4.90
21934.79	1.00	26	45.38		3.09	48.47		73.96	53.96	-5.49
24371.46	1.00	229	47.25		3.26	50.51		73.96	53.96	-3.45

Test Report ------ 47/67

Test mode: IEEE 802.11b CH11 for 30MHz to 1GHz, Antenna#2 [Horizontal]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
194.90	34.47	1.00	92	-3.52	30.95	43.50	-12.55
237.34	43.71	1.00	78	-3.76	39.95	46.00	-6.05
302.81	40.38	1.00	44	-2.86	37.52	46.00	-8.48
393.75	43.03	1.00	71	-1.23	41.80	46.00	-4.20
433.40	40.10	1.00	295	0.45	40.55	46.00	-5.45
631.40	34.54	1.00	31	7.43	41.97	46.00	-4.03

Test mode: IEEE 802.11b CH11 for 30MHz to 1GHz, Antenna#2 [Vertical]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
162.16	37.82	1.00	0	-4.07	33.75	43.50	-9.75
236.12	44.24	1.00	31	-3.77	40.47	46.00	-5.53
302.81	40.34	1.00	275	-2.86	37.48	46.00	-8.52
434.97	39.32	1.00	194	0.51	39.83	46.00	-6.17
564.71	34.73	1.00	163	5.47	40.20	46.00	-5.80
633.83	35.80	1.00	190	7.51	43.31	46.00	-2.69

Report No.: P5515080173, FCC Part 15.247

Test Report ------ 48/67

Test mode: IEEE 802.11b CH11 for 1GHz to 25GHz, Antenna#2 [Horizontal]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit		Margin
			Peak .	/ Ave.	1 40007	Peak / Ave.		Peak / Ave.		
MHz	m	degree	dBμV		dB/m	dΒμ	ıV/m	dBμV/m		dB
1641.33	1.00	74	40.49	38.00	13.69	54.18	51.69	73.96	53.96	-2.27
2270.83	1.00	286	40.83		8.85	49.68		73.96	53.96	-4.28
7384.79	1.00	57	37.28		10.42	47.70		73.96	53.96	-6.26
22157.92	1.00	292	45.54		3.25	48.79		73.96	53.96	-5.17
24619.37	1.00	7	47.24		3.01	50.25		73.96	53.96	-3.71

Test mode: IEEE 802.11b CH11 for 1GHz to 25GHz, Antenna#2 [Vertical]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit		Margin
			Peak ,	/ Ave.		Peak	/ Ave.	Peak / Ave.		
МН	m	degree	dB	μV	dB/m	dΒμ	vV/m	dBμV/m		dB
2254.17	1.00	31	36.50		8.80	45.30		73.96	53.96	-8.66
7384.79	1.00	109	35.44		10.42	45.86		73.96	53.96	-8.10
9849.79	1.00	107	36.11		11.93	48.04		73.96	53.96	-5.92
22157.92	1.00	285	45.82		3.25	49.07		73.96	53.96	-4.89
24619.37	1.00	15	47.45		3.01	50.46		73.96	53.96	-3.50

Test Report ------ 49/67

Test mode: IEEE 802.11g CH01 for 30MHz to 1GHz, Antenna#2 [Horizontal]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas (3	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table ()	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
233.70	42.01	1.00	82	-3.80	38.21	46.00	-7.79
367.07	41.79	1.00	61	-1.86	39.93	46.00	-6.07
432.55	39.45	1.00	265	0.40	39.85	46.00	-6.15
567.14	34.70	1.00	280	5.54	40.24	46.00	-5.76
765.99	30.37	1.00	128	10.55	40.92	46.00	-5.08

Test mode: IEEE 802.11g CH01 for 30MHz to 1GHz, Antenna#2 [Vertical]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas (3	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
162.16	38.17	1.00	0	-4.07	34.10	43.50	-9.40
234.91	44.49	1.00	31	-3.79	40.70	46.00	-5.30
368.29	37.60	1.00	262	-1.83	35.77	46.00	-10.23
434.97	36.06	1.00	190	0.51	36.57	46.00	-9.43
567.14	36.20	1.00	161	5.54	41.74	46.00	-4.26
765.99	28.75	1.00	350	10.55	39.30	46.00	-6.70

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Test mode: IEEE 802.11g CH01 for 1GHz to 25GHz, Antenna#2 [Horizontal]

Frequency	Ant.	Table	Amplitude		Correction	Corr	ected	Limit		Margin
	Н.				Factor	Ampl	litude			
			Peak .	/Ave.		Peak	/Ave.	Peak	/Ave.	
MHz	m	degree	dBμV		dB/m	dΒμ	vV/m	dΒμ	dBμV/m	
1607.99	1.00	257	40.49	37.83	14.21	54.70	52.04	73.96	53.96	-1.92
9650.42	1.00	85	35.11		11.47	46.58		73.96	53.96	-7.38
19494.58	1.00	101	46.58		1.69	48.27		73.96	53.96	-5.69
21934.79	1.00	46	46.22		3.09	49.31		73.96	53.96	-4.65
24371.46	1.00	315	45.64		3.26	48.90		73.96	53.96	-5.06

Test mode: IEEE 802.11g CH01 for 1GHz to 25GHz, Antenna#2 [Vertical]

Frequency	Ant. H.	Table	Amplitude		Correction Factor	Corrected Amplitude		Limit		Margin
			Peak .	/ Ave.		Peak	/Ave.	Peak	/ Ave.	
МН	m	degree	dB	μV	dB/m	dΒμ	vV/m	dBμV/m		dB
2791.67	1.00	88	34.17		10.04	44.21		73.96	53.96	-9.75
12061.04	1.00	198	36.27		9.81	46.08		73.96	53.96	-7.88
19494.58	1.00	121	46.58		1.69	48.27		73.96	53.96	-5.69
21934.79	1.00	35	46.26		3.09	49.35		73.96	53.96	-4.61
24371.46	1.00	292	45.62		3.26	48.88		73.96	53.96	-5.08

Test Report ----- 51/67

Test mode: IEEE 802.11g CH06 for 30MHz to 1GHz, Antenna#2 [Horizontal]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas (3	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table ()	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
234.91	43.58	1.00	91	-3.79	39.79	46.00	-6.21
367.07	40.47	1.00	71	-1.86	38.61	46.00	-7.39
567.14	34.67	1.00	287	5.54	40.21	46.00	-5.79
633.83	32.27	1.00	35	7.51	39.78	46.00	-6.22
767.20	29.17	1.00	126	10.59	39.76	46.00	-6.24

Test mode: IEEE 802.11g CH06 for 30MHz to 1GHz, Antenna#2 [Vertical]

	Radiat Emissi			Correction Factors	Corrected Amplitude		Class B (3 m)	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)	
154.89	38.11	1.00	340	-4.22	33.89	43.50	-9.61	
236.12	44.61	1.00	340	-3.77	40.84	46.00	-5.16	
433.76	35.54	1.00	190	0.45	35.99	46.00	-10.01	
528.34	37.28	1.00	201	3.62	40.90	46.00	-5.10	
567.14	35.90	1.00	170	5.54	41.44	46.00	-4.56	
767.20	27.62	1.00	350	10.59	38.21	46.00	-7.79	

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Test mode: IEEE 802.11g CH06 for 1GHz to 25GHz, Antenna#2 [Horizontal]

Frequency	Ant. H.	Table	Amplitude		Correction Factor		Corrected Amplitude		Limit	
			Peak .	/ Ave.		Peak / Ave.		Peak / Ave.		
MHz	m	degree	dBμV		dB/m	dΒμ	vV/m	dΒμ	dBμV/m	
1624.65	1.00	319	41.16	37.33	13.95	55.11	51.28	73.96	53.96	-2.68
9747.08	1.00	37	35.60		11.89	47.49		73.96	53.96	-6.47
19494.58	1.00	344	47.43		1.69	49.12		73.96	53.96	-4.84
21934.79	1.00	50	45.93		3.09	49.02		73.96	53.96	-4.94
24371.46	1.00	219	47.66		3.26	50.92		73.96	53.96	-3.04

Test mode: IEEE 802.11g CH06 for 1GHz to 25GHz, Antenna#2 [Vertical]

Frequency	Ant. H.	Table	Ampl	litude	Correction Factor			Limit		Margin
			Peak .	/Ave.		Peak.	/ Ave.	Peak	/Ave.	
MHz	m	degree	dB	μV	dB/m	dΒμ	V/m	dBμV/m		dB
2156.25	1.00	61	35.50		8.53	44.03		73.96	53.96	-9.93
9747.08	1.00	226	35.94		11.89	47.83		73.96	53.96	-6.13
19494.58	1.00	333	47.14		1.69	48.83		73.96	53.96	-5.13
21934.79	1.00	28	45.93		3.09	49.02		73.96	53.96	-4.94
24371.46	1.00	212	47.62		3.26	50.88		73.96	53.96	-3.08

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Test mode: IEEE 802.11g CH11 for 30MHz to 1GHz, Antenna#2 [Horizontal]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas	-
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table ()	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
236.12	41.57	1.00	81	-3.77	37.80	46.00	-8.20
369.50	40.96	1.00	71	-1.81	39.15	46.00	-6.85
434.97	37.69	1.00	71	0.51	38.20	46.00	-7.80
567.14	35.37	1.00	280	5.54	40.91	46.00	-5.09
765.99	29.78	1.00	196	10.55	40.33	46.00	-5.67

Test mode: IEEE 802.11g CH11 for 30MHz to 1GHz, Antenna#2 [Vertical]

	Radiat Emissi			Correction Factors	Corrected Amplitude	Clas	
Frequency (MHz)	Amplitude (dBμV)	Ant. H. (m)	Table (°)	(dB)	(dBµV/m)	Limit (dBµV/m)	Margin (dB)
160.95	37.89	1.00	13	-4.06	33.83	43.50	-9.67
236.12	45.29	1.00	50	-3.77	41.52	46.00	-4.48
432.55	35.75	1.00	195	0.40	36.15	46.00	-9.85
528.34	36.93	1.00	213	3.62	40.55	46.00	-5.45
567.14	38.91	1.00	168	5.54	44.45	46.00	-1.55

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Test mode: IEEE 802.11g CH11 for 1GHz to 25GHz, Antenna#2 [Horizontal]

Frequency	Ant. H.	Table	Ampl	itude	Correction Factor		Corrected Amplitude		Limit	
			Peak .	/Ave.		Peak / Ave.		Peak / Ave.		
MHz	m	degree	$dB\mu V$		dB/m	dΒμ	ıV/m	dBμV/m		dB
1641.32	1.00	293	41.16	38.50	13.69	54.85	52.19	73.96	53.96	-1.77
9849.79	1.00	97	34.94		11.93	46.87		73.96	53.96	-7.09
19696.46	1.00	203	46.64		1.81	48.45		73.96	53.96	-5.51
22157.92	1.00	279	45.83		3.25	49.08		73.96	53.96	-4.88
24619.37	1.00	11	47.02		3.01	50.03		73.96	53.96	-3.93

Test mode: IEEE 802.11g CH11 for 1GHz to 25GHz, Antenna#2 [Vertical]

Frequency	Ant. H.	Table	Amplitude		Correction Factor		ected litude	Limit		Margin
			Peak .	/Ave.		Peak	/Ave.	Peak	/ Ave.	
MHz	m	degree	dBμV		dB/m	dΒμ	vV/m	dBμV/m		dB
2614.58	1.00	257	34.83		9.71	44.54		73.96	53.96	-9.42
12308.75	1.00	0	37.11		9.56	46.67		73.96	53.96	-7.29
19696.46	1.00	220	46.62		1.81	48.43		73.96	53.96	-5.53
22157.92	1.00	277	45.97		3.25	49.22		73.96	53.96	-4.74
24619.37	1.00	12	47.24		3.01	50.25		73.96	53.96	-3.71

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7.4 Test Result of the Bandedge

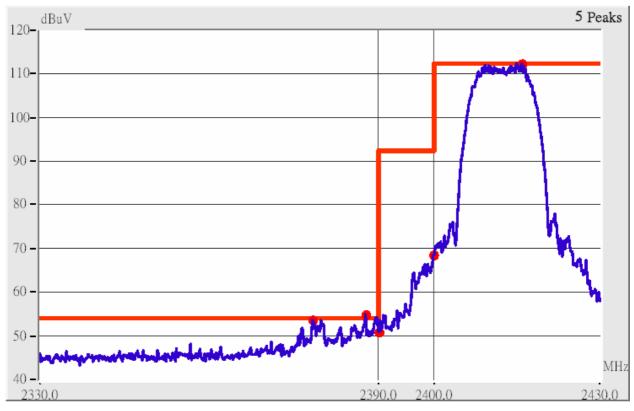
If any 100 kHz bandwidth outside these frequency bands, the radio frequency power that is produced by the modulation products of the spreading sequence, the information sequence and the carrier frequency shall be either at least 20 dB below that in any 100 kHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified id §15.209(a),

We'd made the observation up to 10th harmonics and the criterion is all the harmonic/spurious emissions must be 20dB below the highest emission level measured. If the emissions fall in the restricted bands stated in the Part 15.205(a) must also comply with the radiated emission limits specified in Part 15.209(a). (Peak mode: RBW=VBW=1MHz, Average mode: RBW=1MHz; VBW=10Hz)

The following pages show our observations referring to the channel 1 and 11 respectively. Test Condition & Setup: same as < 8.1 >

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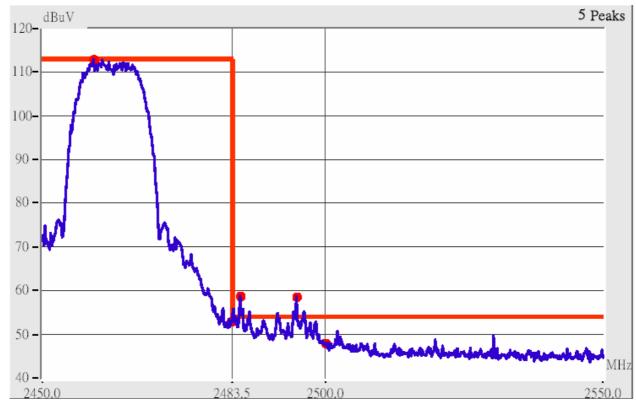
This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 1.

- 1. The lobe left by the fundamental side is already 20dB below the highest emission level.
- 2. The emissions recorded in the restricted band is do comply with the Part 15.209(a) as below.

	Radiated Emission					Corrected Amplitude		Class B (3m)		
Frequency	Ant.	Ant. H.	Angle	e Factors (dBμV/m) Limit (dBμV/m)		(dBµV/m)		BμV/m)	Margin	
(MHz)	Р.	(m)	()	(dB)	Peak Average		Peak	Ave.	(dB)	
2379.13	Hor	1.00	165	9.15	51.15		73.96	53.96	-2.81	
2390.02	Hor	1.00	146	9.18	51.18		73.96	53.96	-2.78	
2379.49	Ver	1.00	114	9.15	61.32	46.82	73.96	53.96	-7.14	
2390.71	Ver	1.00	112	9.18	61.68	48.18	73.96	53.96	-5.78	

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This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 11.

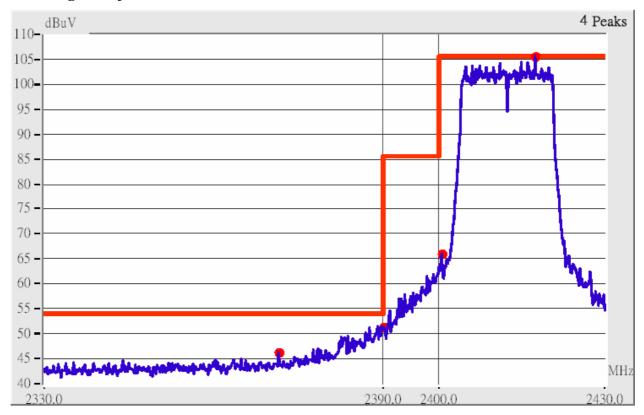
- 3. The lobe right by the fundamental side is already 20dB below the highest emission level.
- 4. The emissions recorded in the restricted band is do comply with the Part 15.209(a) as below

Radiated Emission					Corrected Amplitude		Class B (3m)			
Frequency	Ant.	Ant. H.	Ant. H. Angle		$(dB\mu V/m)$		Limit (d	BμV/m)	Margin	
(MHz)	Р.	(m)	()	(dB)	Peak Average		Peak	Ave.	(dB)	
2483.49	Hor	1.00	187	9.44	56.11	43.11	73.96	53.96	-10.85	
2494.47	Hor	1.00	187	9.47	55.98	42.47	73.96	53.96	-11.49	
2500.01	Hor	1.00	60	9.49	48.66		73.96	53.96	-5.30	
2506.37	Hor	1.00	187	9.50	49.50		73.96	53.96	-4.46	
2483.95	Ver	1.00	276	9.45	64.11	49.12	73.96	53.96	-4.84	
2494.60	Ver	1.00	245	9.47	64.31	48.64	73.96	53.96	-5.32	
2499.68	Ver	1.00	277	9.49	57.16	44.49	73.96	53.96	-9.47	
2505.58	Ver	1.00	237	9.50	57.33	43.50	73.96	53.96	-10.46	

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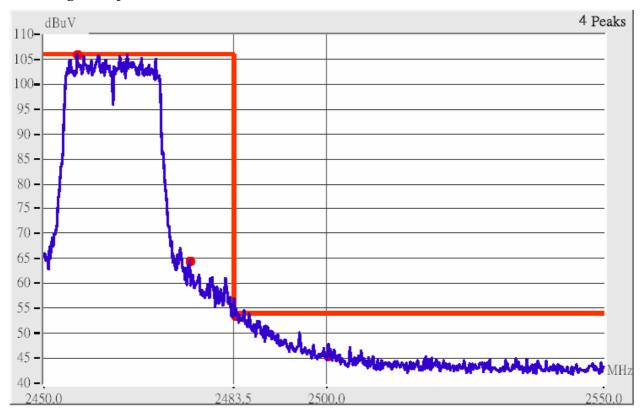
This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 1.

- 5. The lobe left by the fundamental side is already 20dB below the highest emission level.
- 6. The emissions recorded in the restricted band is do comply with the Part 15.209(a) as below.

	Radiated Emission					Corrected Amplitude		Class B (3m)		
Frequency	Ant.	Ant. H.	Angle	ngle Factors (dB\(\mu\text{V/m}\) Limit (dB\(\mu\text{V/m}\)		(dBµV/m)		BμV/m)	Margin	
(MHz)	Р.	(m)	()	(dB)	Peak Average		Peak	Ave.	(dB)	
2384.83	Hor	1.00	84	9.17	58.67	36.34	73.96	53.96	-15.29	
2390.46	Hor	1.00	82	9.18	59.68	38.18	73.96	53.96	-14.28	
2384.85	Ver	1.00	154	9.17	63.17	38.67	73.96	53.96	-10.79	
2389.77	Ver	1.00	200	9.18	65.18	40.35	73.96	53.96	-8.78	

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This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 11.

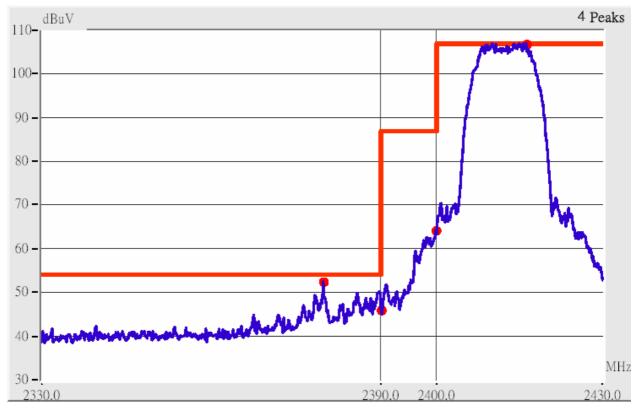
- 7. The lobe right by the fundamental side is already 20dB below the highest emission level.
- 8. The emissions recorded in the restricted band is do comply with the Part 15.209(a) as below

Radiated Emission					Corrected Amplitude		Class B (3m)		
Frequency	Ant.	Ant. H.	Angle	Factors	$(dB\mu V/m)$		Limit (d	BμV/m)	Margin
(MHz)	Р.	(m)	()	(dB)	Peak	Average	Peak	Ave.	(dB)
2483.22	Hor	1.00	225	9.44	60.78	38.44	73.96	53.96	-13.18
2484.99	Hor	1.00	226	9.45	59.28	37.62	73.96	53.96	-14.68
2500.01	Hor	1.00	230	9.49	45.66		73.96	53.96	-8.30
2510.10	Hor	1.00	183	9.51	48.01		73.96	53.96	-5.95
2483.25	Ver	1.00	280	9.44	69.44	42.27	73.96	53.96	-4.52
2488.55	Ver	1.00	256	9.46	63.96	40.29	73.96	53.96	-10.00
2499.83	Ver	1.00	281	9.49	56.16	38.16	73.96	53.96	-15.80
2503.28	Ver	1.00	261	9.50	58.50	37.17	73.96	53.96	-15.46

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This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 1.

- 1. The lobe left by the fundamental side is already 20dB below the highest emission level.
- 2. The emissions recorded in the restricted band is do comply with the Part 15.209(a) as below.

	Radiated Emission					Corrected Amplitude		Class B (3m)		
Frequency	Ant.	Ant. H.	Angle	e Factors (dBμV/m) Limit (dBμV/m)		(dBµV/m)		BμV/m)	Margin	
(MHz)	Р.	(m)	()	(dB)	Peak Average		Peak	Ave.	(dB)	
2378.02	Hor	1.00	236	9.15	57.65	42.48	73.96	53.96	-11.48	
2390.52	Hor	1.00	225	9.18	58.85	43.85	73.96	53.96	-10.11	
2378.59	Ver	1.00	66	9.15	51.15		73.96	53.96	-2.81	
2389.96	Ver	1.00	58	9.18	49.52		73.96	53.96	-4.44	

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This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 11.

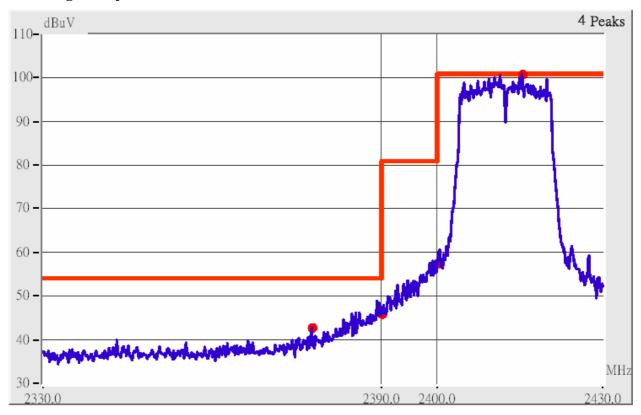
- 3. The lobe right by the fundamental side is already 20dB below the highest emission level.
- 4. The emissions recorded in the restricted band is do comply with the Part 15.209(a) as below

Radiated Emission					Corrected Amplitude		Class B (3m)		
Frequency	Ant.	Ant. H.	Angle	Factors	(dBµV/m) Peak Average		Limit (d	BμV/m)	Margin
(MHz)	Р.	(m)	()	(dB)			Peak	Ave.	(dB)
2483.53	Hor	1.00	342	9.44	56.94	43.27	73.96	53.96	-10.69
2494.56	Hor	1.00	340	9.47	56.14	41.97	73.96	53.96	-11.99
2499.53	Hor	1.00	300	9.49	51.49	38.32	73.96	53.96	-15.64
2513.48	Hor	1.00	180	9.52	50.52		73.96	53.96	-3.44
2483.68	Ver	1.00	133	9.44	48.61		73.96	53.96	-5.35
2485.78	Ver	1.00	133	9.45	49.28		73.96	53.96	-4.68
2500.01	Ver	1.00	156	9.49	43.99		73.96	53.96	-9.97
2520.95	Ver	1.00	181	9.53	44.86		73.96	53.96	-9.10

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This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 1.

- 5. The lobe left by the fundamental side is already 20dB below the highest emission level.
- 6. The emissions recorded in the restricted band is do comply with the Part 15.209(a) as below.

Radiated Emission						ected litude	Class B (3m)			
Frequency	Ant.	Ant. H.	Angle	Factors	(dBµ	BμV/m) Lin		BμV/m)	Margin	
(MHz)	Р.	(m)	()	(dB)	Peak Average		Peak	Ave.	(dB)	
2382.90	Hor	1.00	71	9.16	58.50	33.49	73.96	53.96	-15.46	
2389.79	Hor	1.00	217	9.18	61.02	34.68	73.96	53.96	-12.94	
2385.79	Ver	1.00	72	9.17	50.67		73.96	53.96	-3.29	
2390.48	Ver	1.00	80	9.18	54.85	33.35	73.96	53.96	-19.11	

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This is the hard copy of our bandedge measurement generated by our bandedge testing program. The plot shown above is the bandedge of channel 11.

- 7. The lobe right by the fundamental side is already 20dB below the highest emission level.
- 8. The emissions recorded in the restricted band is do comply with the Part 15.209(a) as below

Radiated Emission					Corrected Amplitude		Class B (3m)		
Frequency	Ant.	Ant. H.	Angle	Factors	$(dB\mu V/m)$		Limit (d	BμV/m)	Margin
(MHz)	Р.	(m)	()	(dB)	Peak	Average	Peak	Ave.	(dB)
2483.22	Hor	1.00	340	9.44	62.94	35.27	73.96	53.96	-11.02
2488.22	Hor	1.00	335	9.46	60.62	34.46	73.96	53.96	-13.34
2500.01	Hor	1.00	153	9.49	47.66		73.96	53.96	-6.30
2513.31	Hor	1.00	296	9.52	47.68		73.96	53.96	-6.28
2483.79	Ver	1.00	214	9.44	51.44		73.96	53.96	-2.52
2490.27	Ver	1.00	214	9.46	49.13		73.96	53.96	-4.83
2500.01	Ver	1.00	168	9.49	42.82		73.96	53.96	-11.14
2511.62	Ver	1.00	184	9.51	45.35		73.96	53.96	-8.61

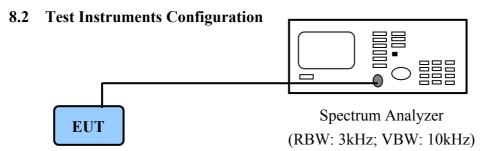
Report No.: P5515080173, FCC Part 15.247

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VIII. Section 15.247(d): Power Spectral Density

8.1 Test Condition & Setup

The tests below are running with the EUT transmitter set at high power in TDD mode. The EUT is needed to force selection of output power level and channel number. While testing, the EUT was set to transmit continuously and to be tested by the contact manner with the spectrum analyzer.



PC to control the EUT at maximal power output and channel number and set antenna kit

8.3 List of Test Instruments

Instrument Name	Model No.	Brand	Serial No.	Next time
Spectrum Analyzer	MS2665C	ANRITSU	6200175476	12/19/08

8.4 Test Result of Power spectral density

The following table shows a summary of the test results of the Power Spectral Density.

Channel	Ppr (dBm)	Cable Loss (dB)	Ppq (dBm)	Limit (dB)	Margin (dB)
	(иын)	(<i>uD</i>)	(идт)	(<i>u</i> D)	(#11)
802.11b CH01	-2.98	0.70	-2.28	8.00	-10.28
802.11b CH06	-4.22	0.70	-3.52	8.00	-11.52
802.11b CH11	-3.98	0.70	-3.28	8.00	-11.28
802.11g CH01	-10.66	0.70	-9.96	8.00	-17.96
802.11g CH06	-11.46	0.70	-10.76	8.00	-18.76
802.11g CH11	-10.19	0.70	-9.49	8.00	-17.49

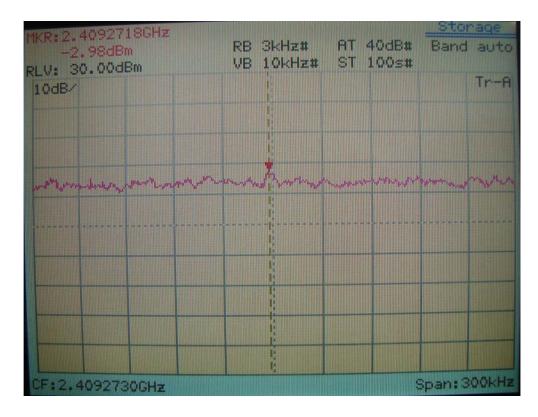
Note:

- 1. The following pages show the results of spectrum reading.
- 2. Ppr: spectrum read power density (using peak search mode), Ppq: actual peak power density in the spread spectrum band.
- 3. Ppq = Ppr + |Cable Loss|

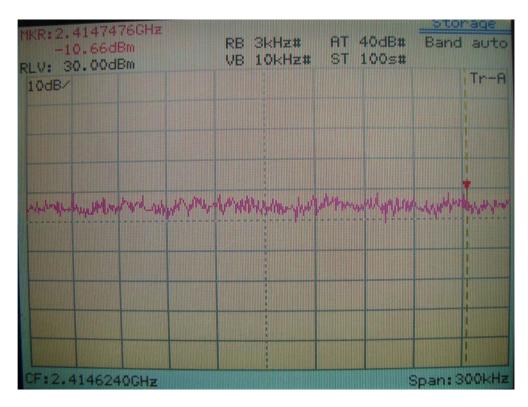
Report No.: P5515080173, FCC Part 15.247

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Power Spectral Density of Channel 01



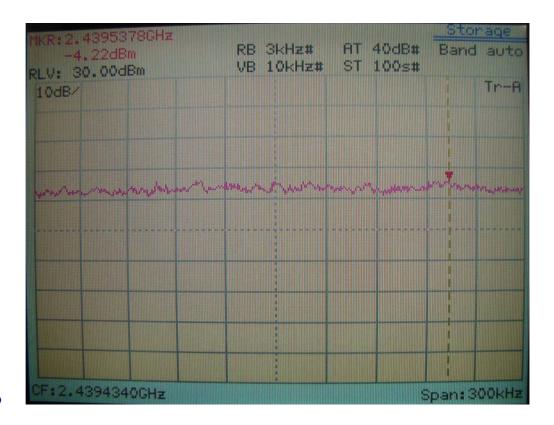
IEEE 802.11b



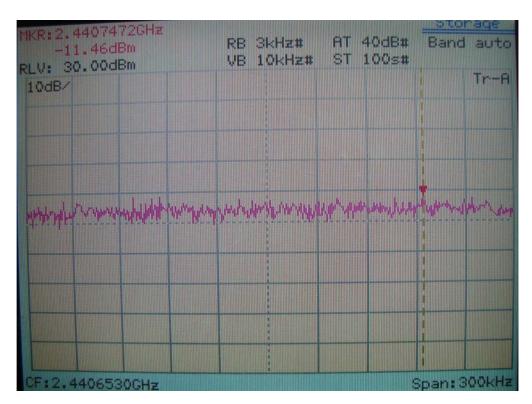
IEEE 802.11g

Test Report ----- 66/67

Power Spectral Density of Channel 06



IEEE 802.11b

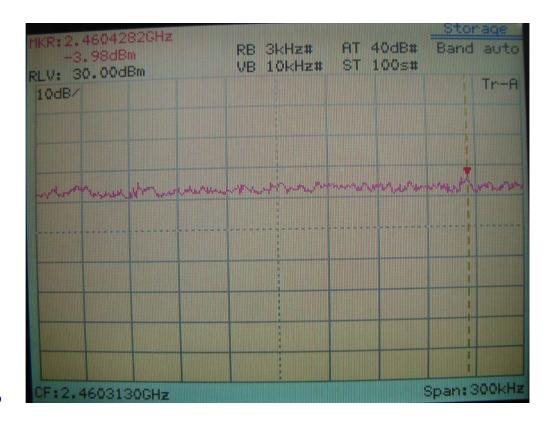


IEEE 802.11g

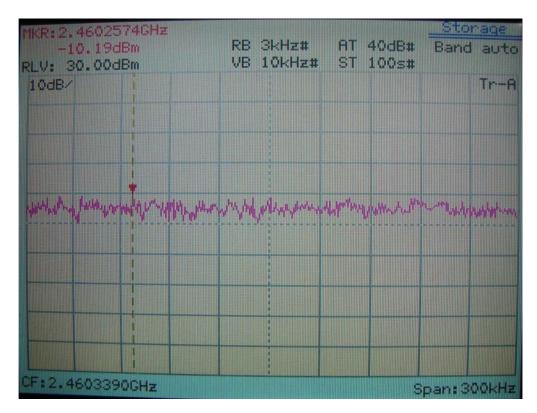
Report No.: P5515080173, FCC Part 15.247

Test Report ----- 67/67

Power Spectral Density of Channel 11



IEEE 802.11b



IEEE 802.11g

Report No.: P5515080173, FCC Part 15.247