

RF Exposure Evaluation Declaration

Product Name : 54Mbps Wireless ADSL+ Modem Router
Model No. : DG834GU v5; DG834G v5
FCC ID : PY308200087

Applicant : Netgear Inc.

Address : 4500 Great America Pky, Santa Clara, CA 95054, USA

Date of Receipt : 2008/05/23

Issued Date : 2008/06/16

Report No. : 086S018-RF-US

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by CNLA, NVLAP, NIST or any agency of the Government.

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Test Report Certification

Issued Date : 2008/06/16
Report No. : 086S018-RF-US



Product Name : 54Mbps Wireless ADSL+ Modem Router
 Applicant : Netgear Inc.
 Address : 4500 Great America Pky, Santa Clara, CA 95054, USA
 Manufacturer : Ambit Microsystems (Shanghai) Ltd.
 Address : No. 1925, Nanle Road Songjiang Export Processing
 Zone Shanghai China, Post Code: 201613
 Model No. : DG834GU v5; DG834G v5
 FCC ID : PY308200087
 Rated Voltage : AC 120V/60Hz
 EUT Voltage : AC 100-240 V / 50-60 Hz
 Trade Name : Netgear
 Applicable Standard : FCC OET 65
 Test Result : Complied
 Performed Location : SuZhou EMC laboratory
 No.99 Hongye Rd., Suzhou Industrial Park Loufeng
 Hi-Tech Development Zone., SuZhou, China
 TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
 FCC Registration Number: 800392

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Laboratory Information

We , **Quietek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited by the following accreditation Bodies in compliance with ISO 17025, EN 45001 and Guide 25:

Taiwan R.O.C.	: BSMI, DGT, CNLA
Germany	: TUV Rheinland
Norway	: Nemko, DNV
USA	: FCC, NVLAP
Japan	: VCCI

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site : <http://tw.quietek.com/modules/myalbum/>
 The address and introduction of Quietek Corporation's laboratories can be founded in our Web site : <http://www.quietek.com/>
 If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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1. RF Exposure Evaluation

Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

Test Result of RF Exposure Evaluation

Product	:	54Mbps Wireless ADSL+ Modem Router
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-3
Test Mode	:	Mode 1: Transmitter by 802.11b

Antenna Gain:

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.6 dBi or 1.45 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Channel Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)
01	2412.00	125.8925	0.036202
06	2437.00	125.0259	0.035953
11	2462.00	98.6279	0.028362

Note:

The power density Pd (4th column) at a distance of 20 cm calculated from the Friis transmission formula is far below the limit of 1 mW/cm².

Product	:	54Mbps Wireless ADSL+ Modem Router
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-3
Test Mode	:	Mode 2: Transmitter by 802.11g

Antenna Gain:

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.6 dBi or 1.45 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Channel Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)
01	2412.00	114.8154	0.033016
06	2437.00	109.3956	0.031458
11	2462.00	92.6830	0.026652

Note:

The power density Pd (4th column) at a distance of 20 cm calculated from the Friis transmission formula is far below the limit of 1 mW/cm².