RF EXPOSURE EVALUATION DECLARATION

Philips Consumer Electronics B.V.

EUT:
Wireless USB Adapter 11g

Model Number:
CPWUA054; CPWUA054/00; CPWUA054/37

Prepared for:

Philips Consumer Electronics B.V.
Building SBP-6, Glaslaan 2, 5616 LW Eindhoven, The Netherlands

Report By : **Global EMC Standard Tech. Corp.**
No.3 Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C.
Tel : (02) 2603-5321
Fax : (02) 2603-5325

1. RF EXPOSURE EVALUATION

1.1. 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: $Pd = (Pout*G)/(4*pi*r^2)$

Where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

Pd id the limit of MPE, 1 mW/cm^2 . 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.

1.2. TEST PROCEDURE

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

1.3. TEST RESULT OF RF EXPOSURE EVALUATION

Date of Test	February 04, 2004	**Temperature**	21 deg/C
EUT	Wireless USB Adapter 11g	**Humidity**	61 %RH
Working Cond.	802.11b		

Antenna Gain

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 0.91 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel No.	Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm^2)
1	2412.00	51.9996	0.0094
6	2437.00	40.9261	0.0074
11	2462.00	37.4973	0.0068

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/cm^2.

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Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel No.	Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm^2)
1	2412.00	55.0808	0.0100
6	2437.00	41.1150	0.0075
11	2462.00	37.6704	0.0068

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/cm^2.