RF Exposure Evaluation declaration

Product Name : Bluetooth Dongle V2.0 Class 2+EDR

Model No.　　 : BDC220

FCC ID　　　　 TX3BDC220

Applicant : CHANT SINCERE CO.,LTD

Address　 : 7F-2, No.188, Sec. 3, TaTung Road, HsiChih City Taipei.

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Date of Receipt　 : Dec. 16, 2005

Date of Declaration : Jan. 27, 2006

Report No.　　　 : 05CL094-RF-US-P06V01

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.

The temperature and related humidity: 18℃ and 78％ RH.

1.3.   Test Result of RF Exposure Evaluation

Product   :   Bluetooth Dongle V2.0 Class 2+EDR
Test Item   :   RF Exposure Evaluation
Test Site   :   No.3 OATS

Antenna Gain

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 0 dBi in linear scale.

Bluetooth

Output Power Into Antenna & RF Exposure Evaluation Distance (0 dBi):

Channel	Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 2.5 cm (mW/cm^2)
00	2402.00	1.1324	0.0144
39	2441.00	1.0375	0.0132
78	2480.00	1.1272	0.0144

The distance r (4th column) calculated from the Fries transmission formula is far shorter than 2.5 cm separation requirement.