RF Exposure Evaluation declaration

Product Name : CDMA 800MHz Dual Band Selective Repeater

Model No. : L800RDBS

FCC ID URFL800RDBS

Applicant : Longent, LLC

Address : 2112 Duskywing Drive Raleigh, NC 27613

Date of Receipt : Nov. 09, 2006

Date of Declaration : Nov. 24, 2006

Report No. : 06BL044-HP-US-P04V01

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. 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 : CDMA 800MHz Dual Band Selective Repeater
Test Item : RF Exposure Evaluation
Test Site : N/A

Antenna Gain

The peak gain of the antenna measured in fully anechoic chamber is 8dBi.

Output Power Into Antenna & RF Exposure Evaluation Distance (8dBi):

Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 30 cm (mW/cm2)	Limit (mW/cm2)	Result
836.4	230.1442	0.1284	0.5576	PASS
881.4	879.0225	0.4904	0.5876	PASS