

RF Exposure Evaluation

1. Limits for Maximum Permissible Exposure

According to FCC Part 1.1307, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the commission's guidelines.

According to FCC Part 1.1310 RF exposure is calculated.

Limits for General Population/ Uncontrolled Exposure			
Frequency Range (MHz)	Electric Field Strength(E)(V/m)	Magnetic Field Strength (H)(A/m)	Power Density (S)(mW/cm ²)
0.3-1.34	614	1.63	(100)*
1.34-30	824/f	2.19/f	(180/f ²)*
30-300	27.5	0.073	0.2
300-1500			f/1500
1500-100,000			1.0

$$S = \frac{PG}{4 \pi R^2}$$

Where:

S = power density

P = power input to the antenna in mW

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

2. Test result

Product Type: 4 Port Wireless DSL Router

Maximum peak output power at antenna input terminal(mW):	270
Prediction distance(cm):	20
Predication frequency(MHz):	2437
Antenna Gain (typical) (dBi):	3
Power density at predication frequency at <u>20</u> cm(mW/cm ²):	0.161
MPE limit for RF exposure at prediction frequency(mW/cm ²):	1

3. Conclusion

Test result is passed.