

July 14, 2008

MLWI01– A6 – Meshlinx Multi-Radio Access Point MWI5000

Maximum Permissible Exposure Calculations

FCC, Part 15 Subpart C §15.247(i)
Industry Canada RSS-Gen §5.5

Calculations for Maximum Permissible Exposure Levels
$$\text{Power Density} = P_d \text{ (mW/cm}^2\text{)} = \text{EIRP}/(4\pi d^2)$$
$$\text{EIRP} = P * G$$
$$P = \text{Peak output power (mW)}$$
$$G = \text{Antenna numeric gain (numeric)}$$
$$d = \text{Separation distance (cm)}$$
$$\text{Numeric Gain} = 10^{(G \text{ (dBi)}/10)}$$

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is 1.0 mW/cm²

Freq. Band (GHz)	Antenna Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm ² Limit (cm)
2.4b	+7.5	5.63	+18.45	69.99	5.6*
2.4g	+7.5	5.63	+24.19	262.43	10.9*
5.8	+9.0	7.95	+23.54	225.95	12.0*

*Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

Specification**Maximum Permissible Exposure Limits**

§15.247(i) 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 levels in excess of the Commission's guidelines.

Limit S = 1mW / cm² from 1.310 Table 1

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

RSS-Gen §5.5 Before equipment certification is granted, the applicable requirements of RSS-102 shall be met.