



Monday, September 04, 2006

Strix Systems Inc - Access One Network OWS 2400-10

Maximum Permissible Exposure Calculation

FCC, Part 15 Subpart C §15.247(b)(5)

Calculations for Maximum Permissible Exposure Levels

Power Density = P_d (mW/cm^2) = $\text{EIRP}/(4\pi d^2)$

$\text{EIRP} = P * G$

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

Numeric Gain = $10^{(G \text{ (dBi)}/10)}$

Worst case = **2.4 GHz +28 dBm 12 dBi (15.85 numeric)**

2.4 GHz +26.5 dBm 16.4 dBi (43.65 num.)

5.8 GHz +30 dBm 23 dBi (199.53 num.)

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is $1.0 \text{ mW}/\text{cm}^2$

Freq. Band (GHz)	Antenna Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ $1\text{mW}/\text{cm}^2$ Limit (cm)
2.4	12	15.85	+28.0	631.0	28.2
2.4	16.4	43.65	+26.5	446.7	39.4
5.8	23	199.53	+30.0	1,000	126.0