

3.8 RF Exposure Compliance

The maximum measured antenna conducted power, P is 24.8dBm

The antenna gain, G is -8.8dBi

The maximum EIRP power is $24.8 - 8.8 = 16\text{dBm}$, or 0.04W

The limits for Maximum Permissible Exposure (MPE) for transmitter operating at 902-928MHz, MPE is $928/300 = 3.093\text{mW/cm}^2$, or 31W/m^2

The Power Density, S is related to EIRP with the equation:

$S = \text{EIRP} / 4\pi D^2$, where D is the safe separation distance and = 0.2m, or 20cm

$S = 0.04 / 4\pi 0.2^2$

$S = 0.08\text{mW/cm}^2$, or below the Maximum Permissible Exposure (MPE)