



MPE calculate procedure:

According to the formula $S = \frac{PG}{4\pi R^2}$

Where: S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., 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 (appropriate units, e.g., cm)
the antenna is generally less than 5dBi Omni-antenna in the actual use. 6dB logarithmic terms convert to numeric result is nearly 3.

When the R=0.02m,

1)In the 802.11b mode, the max P is 15.6dBm, convert to W is 0.036W.

The max value of $S = \frac{0.036 * 3}{4 * 3.14 * 0.2^2} = 0.21W/m^2 = 0.021mW/cm^2$

2)In the 802.11g mode, the max P is 14.8dBm, convert to W is 0.03W.

The max value of $S = \frac{0.03 * 3}{4 * 3.14 * 0.2^2} = 0.18W/m^2 = 0.018mW/cm^2$

According to the FCC part 2.1091, the S value is less than the limit, so the product will not meet the requirement of FCC.