

Maximum Public Exposure to RF (MPE) CFR 15.247 (i), CFR 1.1310 (e)

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density, **S**, of 1 mW/cm² at a distance, d, of 20 cm from the EUT.

Therefore, for:

Maximum Peak Power (dBm) = 15.4 dBm at 802.11b 2437MHz
Peak Power (Watts) = 0.0347 W
Maximum Gain of Transmit Antenna = 1.5 dBi = 1.41, numeric
d = Distance = 20 cm = 0.2 m

$$\begin{aligned} S &= (PG / 4 \pi d^2) = \text{EIRP} / 4A = 0.0347 * (1.41) / 4 * \pi * 0.2^2 \\ &= 0.0489 / 0.5030 = 0.0972 \text{ W/m}^2 \\ &= (0.0972 \text{ W/m}^2) (1\text{m}^2/\text{W}) (0.1 \text{ mW/cm}^2) \\ &= 0.00972 \text{ mW/cm}^2 \end{aligned}$$

which is << less than 1.0 mW/cm²

The MPE limits are below the threshold as stated in KDB447498 D01 V06 in Section 4.3. The calculations above are presented to show that the EUT meets the exclusion requirements.