

March 19, 2009

FCC ID: KNY-1521131FFF

Maximum Permissible Exposure calculations

To whom it may concern,

FreeWave Technologies is submitting a low power output 2400-2483.5 MHz frequency DTS transceiver (FCC ID: KNY-1521131FFF).

The MPE distance will be calculated for the worst case of a 100% transmitter duty cycle.

For an isotropic radiator the surface area of a sphere can be used to determine the area over which the transceiver energy is radiated.

*Surface area of a sphere = $4 * \pi * radius^2$*

In the case where there is an antenna gain, the worst case energy density is increased by the antenna gain. In this case, the exposure level for a controlled environment can be calculated as follows:

*MPE distance = $((output\ power * duty\ cycle * 10 * (antenna\ gain / 10)) / (4 * \pi * Exposure\ Limit\ [mW/cm^2]))^{1/2}$*

In the case of 6 dBi antenna

*MPE distance = $((500\ mW * 1 * 3.98) / (4 * 3.14 * 0.6))^{1/2}$
= 5.139 cm*

Sincerely,



Rich Arment
Engineering Technician