

R.F Exposure/Safety Calculation for Lunar 200DTG3

The E.U.T. is a dual technology outdoor detector. The “worst case” distance between the E.U.T. and the general population is 1m.

Calculation of Maximum Permissible Exposure (MPE)
Based on Section 1.1307(b)(1) Requirements

(a) FCC limits at 10525.00 MHz is: $1 \frac{mW}{cm^2}$

Using table 1 of Section 1.1310 limit for general population/uncontrolled exposures, the above level is an average over 30 minutes.

(b) The power density produced by the E.U.T. is

$$S = \frac{P_t G_t}{4\pi R^2}$$

P_t - Transmitted Power 1.23 mW, 0.91 dBm (Peak).

G_T - Antenna Gain is included in the Transmitted Power measurement

R- Distance from Transmitter using 1 m worst case

(c) Peak power density:

$$S_{AV} = \frac{1.23}{4\pi(1)^2} = 0.098 \frac{mW}{cm^2}$$