

## 2.19 Maximum Public Exposure to RF Radiation (MPE) CFR 15.247 (i)

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density,  $S$ , of  $1 \text{ mW/cm}^2$  at a distance,  $d$ , of 20 cm from the EUT.

Therefore, for :

Peak Power (Watts) = 0.00066 (from Table 12, herein)  
Gain of Transmit Antenna =  $14 \text{ dB}_i = 25.1$  numeric (from Table 3, herein)  
Distance,  $r = 20 \text{ cm}$

$$S = (PG / 4\pi r^2) = \text{EIRP} / 4A$$

Where:  $A =$  the area of a circle with radius,  $r = 20\text{cm}$ .

Therefore,

$$S = 0.016 \times 1 / 4 \times 3.1416 \times (20)^2 = 0.016 / 1600\pi = 3.3 \text{ } \mu\text{W/cm}^2$$