

# MPE CALCULATION

MPE Limit Calculation: EUT's operating frequencies @ 5250-5350 MHz, 5470-5725 MHz; highest conducted power = 23.9 dBm (peak) therefore, **Limit for Uncontrolled exposure: 1 mW/cm<sup>2</sup> or 10 W/m<sup>2</sup>**

EUT maximum antenna gain = 23 dBi.

Equation from page 18 of OET 65, Edition 97-01

## **EUT with 23dBi Antenna**

$$S = PG / 4\pi R^2 \quad \text{or} \quad R = \sqrt{PG / 4\pi S}$$

where,        S = Power Density (1 mW/cm<sup>2</sup>)  
                  P = Power Input to antenna (245.4mW)  
                  G = Antenna Gain (199.5 numeric)

$$R = (48963.7/4*3.14)^{1/2} = (48963.7/12.56)^{1/2} = \mathbf{62.4 \text{ cm}}$$

in order to comply with 1 mW/cm<sup>2</sup>