



3.7 MPE Calculation

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

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

MPE Limit Calculation: EUT's operating frequencies @ **25011.0 – 252360.0MHz**; highest conducted power = 13.90dBm therefore, Limit for Uncontrolled exposure: 1 mW/cm² or 10 W/m²

EUT maximum antenna gain = **47.2 dBi**.

where, S = Power Density (mW/cm²)
P = Power Input to antenna (0.024W)
G = Antenna Gain (52480.75 numeric)

$$R = (0.024 * 52480.75 / 4 * 3.14 * 1.0)^{1/2} = (1288250 / 12.56)^{1/2} = \mathbf{320.26cm}$$

Notice in the User manual

FCC Radio-Frequency Exposure Statement:

This equipment generates and radiates radio-frequency energy. In order to comply with FCC radio-frequency radiation exposure guidelines for an uncontrolled environment, this equipment has to be installed and operated while maintaining a minimum body to antenna distance of **320 cm** based on continuous exposure of 30 minutes.