3.7 MPE Calculation

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

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

MPE Limit Calculation: EUT's operating frequencies @ **25011.0 – 252360.0MHz**; highest conducted power = 13.96dBm therefore, Limit for Uncontrolled exposure: 1 mW/cm^2 or 10 W/m^2

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

where, S = Power Density (mW/cm^2)
P = Power Input to antenna (24.88mW)
G = Antenna Gain (52480.75 numeric)

$R = (24.88*52480.75/ 4*3.14*1.0)^{1/2} = (1306171/ 12.56)^{1/2}$ = **322cm**

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 **322 cm** based on continuous exposure of 30 minutes.

