

RF Exposure Requirements – 1.1307(b)(2); 1.1310

Specification: **Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's Guidelines.**

EUT meets the requirements of these sections.

MPE CALCULATION

MPE Limit Calculation: EUT's lowest frequency channel @ 824.04 MHz;
therefore, $f/1500$ = Power Density (mW/cm^2), where f = frequency (MHz)
Limit for Uncontrolled exposure: $0.54936 \text{ mW}/\text{cm}^2$ or $5.4936 \text{ W}/\text{m}^2$

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

$$S = PG / 4\pi R^2 = 1.26\text{W} * 2.15\text{dBi} / 4 * 3.14 * (0.2\text{m})^2 = 2.709\text{W} / 0.5026\text{m}^2 = 5.39 \text{ W}/\text{m}^2$$

where, S = Power Density (W/m^2)
 P = Power Input to antenna (1.26 Watts)
 G = Antenna Gain (2.15 dBi)
 R = distance to the center of radiation of the antenna (20 cm or 0.2 m)

The power density @ 20cm = $5.39 \text{ W}/\text{m}^2$, therefore EUT meets the Uncontrolled exposure limit.