

**Maximum Public Exposure to RF (MPE) CFR 1.1310 (e)**

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density, **S**, of 0.2 mW/cm<sup>2</sup> at a distance, d, of 20 cm from the EUT.

Therefore, for:

Peak Power (dBm) = -15.75 dBm (rated max output)  
 Peak Power (Watts) = 0.0266 mW  
 Gain of Transmit Antenna = -19.0 dB<sub>i</sub> = 0.0126, numeric  
 d = Distance = 20 cm = 0.2 m

$$S = (PG / 4\pi d^2) = EIRP / 4A = 0.0266 / 4 * \pi * 20^2 = 0.00000529 \text{ mW/cm}^2$$

Which is << less than 0.2 mW/cm<sup>2</sup>

**TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)**

| Frequency range (MHz)                                      | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
| 0.3-1.34   | 614                           | 1.63                          | *100                                | 30                       |
| 1.34-30  | 824/f                         | 2.19/f                        | *180/f <sup>2</sup>                 | 30                       |
| 30-300   | 27.5                          | 0.073                         | 0.2                                 | 30                       |
| 300-1,500  |                               |                               | f/1500                              | 30                       |
| 1,500-100,000  |                               |                               | 1.0                                 | 30                       |

f = frequency in MHz \* = Plane-wave equivalent power density