

# **SECTION 7**

## **RF EXPOSURE INFORMATION**

## 7.1 RF Exposure Information

### Power Output

The EUT's maximum expected output power as shown in section 2.7 is

| Frequency of Fundamental (MHz) | Measurement (dBm)* | Measurement (Watt)* | FCC Limit (Watt) |
|--------------------------------|--------------------|---------------------|------------------|
| 2400.0                         | 27.1               | 0.512               | 1.0              |
| 2440.0                         | 24.1               | 0.257               | 1.0              |
| 2483.5                         | 23.9               | 0.245               | 1.0              |

Therefore the maximum EIRP may be expected to be

$$27.1 \text{ dBm} + 2.0 \text{ dBi} = 29.1 \text{ dBm}$$

$$\text{Antilog}(29.1 \text{ dBm}/10) = 812.8 \text{ mW}$$

### Source Based Time Averaging

Source Based Time Averaging was not applied for MPE calculations.

### MPE Calculations

The limits for this unit (uncontrolled exposure) are  $1.0 \text{ mW/cm}^2$ . Taking the RF Density Field Equation:

$$S = (\text{EIRP in mW})/(4\pi R^2) \text{ and solving for Distance R}$$

$$R = \text{SQRT}(\text{EIRP in mW})/(S4\pi)$$

Solving the above equation yields

$$R \text{ (cm)} = \text{SQRT}(812.8(\text{mw})/(1.0(\text{mW/cm}^2)*4*\pi) = 8.0 \text{ cm}$$

Since the EUT is designed only for mobile applications (where the expected separation distance between antenna and humans is greater than 20 cm), all manual instructions have specified 20 cm as the minimum exposure distance (see page 26 of Chapter 3).