

## 4 FCC §15.247 (i) & § 2.1091 - RF Exposure

### 4.1 Applicable Standard

According to §15.247(i) and §1.1307(b)(1), 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 level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

#### Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minutes)
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
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

\* = Plane-wave equivalent power density

### 4.2 MPE Prediction

Predication of MPE limit at a given distance, Equation from OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where: S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

### 4.3 MPE Results

Mode	Frequency Band	MPE Distance (cm)	Output Power (dBm)	Antenna Gain (dBi)	Power Density (mw/cm <sup>2</sup> )	Result
WLAN	2.4 GHz	20	23.19	5	0.14	Compliance

The predicted power density level at 20 cm is 0.14 mw/cm<sup>2</sup> which is below the uncontrolled exposure limit of 1.0 mW/cm<sup>2</sup>. The EUT is used at least 20 cm away from user's body. It is determined as mobile equipment and complies with the MPE limit.