

## FCC §15.247 (i), §1.1307 (b) (1) & §2.1091 - RF EXPOSURE

### Standard Applicable

According to FCC §15.247(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to FCC §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)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

### 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

### MPE Results

Frequency Band	MPE Distance (cm)	Conducted Ant. Output Power (dBm)	Antenna Gain (dBi)	MPE (mw/cm <sup>2</sup> )	MPE Limit (mw/cm <sup>2</sup> )	Result
2.4 GHz	20	10.36	3.0	0.004	1.0	Compliant

The predicted power density level at 20 cm is 0.004 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.