

# Appendix C. Maximum Permissible Exposure

FCC ID: I88P330W Page No. : 1 of 3

Report No.: FR752310-01

### 1. Maximum Permissible Exposure

#### 1.1. Applicable Standard

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 limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

#### (A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)	
0.3-3.0	614	1.63	(100)*	6	
3.0-30	1842 / f	4.89 / f	(900 / f)*	6	
30-300	61.4	0.163	1.0	6	
300-1500			F/300	6	
1500-100,000			5	6	

#### (B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (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	

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

#### 1.2. MPE Calculation Method

E (V/m) 
$$=\frac{\sqrt{30\times P\times G}}{d}$$
 Power Density:  $Pd$  (W/m $^2$ )  $=\frac{E^2}{377}$ 

E = Electric field (V/m)

P = Peak RF output power (W)

**G** = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

FCC ID: I88P330W Page No. : 2 of 3



Report No.: FR752310-01

## 1.3. Calculated Result and Limit

Antenna Type: Dipole Antenna

Max Conducted Power for IEEE 802.11b/g: 19.04dBm

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power ( mW )	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (\$) (mW/cm <sup>2</sup> )	Test Result
2	1.5849	19.0400	80.1678	0.025290	1	Complies

FCC ID: 188P330W Page No. : 3 of 3