

# FCC 15C§2.1091 – RF Exposure

### FCC ID: 2AD99B001D

#### Applied procedures / limit

According to FCC §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.

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				

#### Note: *f* is frequency in MHz

\* = Power density limit is applicable at frequencies greater than 100 MHz

### 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/ cm²)	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



## 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,R=20cm

π =3.142

## Test Result of RF Exposure Evaluation

	Target power W/ tolerance (dBm)	Max tune up power tolerance (dBm)	Total Output power to antenna (mW)	Antenna Gain(dBi)	Antenna Gain Numeric	Total Power Density at R=20cm (mW/cm <sup>2</sup> )	Limit (mW/cm²)	Result
802.11b	14±1.0	15	31.62	1	1.26	0.00793	1.000	Pass