



RF Exposure Compliance Requirement

1. Standard requirement

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 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 0.2m normally can be maintained between the user and the device.

(a) Limits for Occupational / Controlled Exposure

Table with 5 columns: Frequency Range (MHz), Electric Field Strength (E) (V/m), Magnetic Field Strength (H) (A/m), Power Density (S)(mW/cm²), Averaging Times |E|², |H|² or S (minutes). Rows include frequency ranges from 0.3-3.0 to 1500-100000.

(b) Limits for General Population / Uncontrolled Exposure

Table with 5 columns: Frequency Range (MHz), Electric Field Strength (E) (V/m), Magnetic Field Strength (H) (A/m), Power Density (S)(mW/cm²), Averaging Times |E|², |H|² or S (minutes). Rows include frequency ranges from 0.3-1.34 to 1500-100000.

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



2. MPE Calculation Method

E (V/m)=(30*P*G)^0.5/d Power Density: Pd(W/m^2)=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= (30*P*G)/(377*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.

3. Calculated Result and Limit

(1) Normal mode:

Table with 7 columns: Frequency (MHz), Antenna Gain (Numeric), Peak Output Power (dBm), Peak Output Power (mW), Power Density (S) (mW/cm^2), Limit of Power Density (S) (mW/cm^2), Test Result. Rows for 2402, 2441, and 2480 MHz.

(2) EDR mode:

Table with 7 columns: Frequency (MHz), Antenna Gain (Numeric), Peak Output Power (dBm), Peak Output Power (mW), Power Density (S) (mW/cm^2), Limit of Power Density (S) (mW/cm^2), Test Result. Rows for 2402, 2441, and 2480 MHz.