

RF EXPOSURE

FCC section 15.247(b)(5) specifies the transmitter must meet the requirements of 1.1307(b)(1).. 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 ²)	Averaging Time (minute)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	N/A	N/A	f/1500	30
1500-100,000	N/A	N/A	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

Maximum Permissible Exposure (MPE) Prediction

Equation for MPE is from page 18 of 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 (appropriate units, e.g., cm)

Maximum peak output power at antenna input terminal: 18.3 (dBm)

Maximum peak output power at antenna input terminal: 67.6 (mW)

Prediction distance: 20 (cm)

Predication frequency: 2440 (MHz)

Antenna Gain (typical): 3 (dBi)

Antenna Gain: 2 (numeric)

Power density at predication frequency at 20 cm: 0.0269 (mW/cm²)

MPE limit for uncontrolled exposure at prediction frequency: 1.0 (mW/cm²)

Test Result

Since the EUT is a mobile device, the uncontrolled exposure limit is 1 mW/cm² at 2440 MHz.

The power density level from the EUT at 20 cm is 0.0269 mW/cm²