## Maximum Public Exposure to RF (MPE) CFR 15.247 (i), CFR 1.1310 (e)

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density, **S** as per the respective limits in Table 1 below, at a distance, d, of 20 cm (Mobile condition) from the EUT.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

## TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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

Therefore, for:

## MPE for 2400 MHz – 2483.5 MHz for WiFi:

Limit: 1.0 mW/cm<sup>2</sup> Peak Power (dBm) = 15.15 dBm Peak Power (Watts) = 0.033 W Gain of Transmit Antenna = -6.16 dB<sub>i</sub> = 0.242 , numeric d = Distance = 20 cm = 0.2 m

> **S** = (**PG**/ $4\pi d^2$ ) = EIRP/4A = 0.033(0.242)/4\* $\pi$ \*0.2\*0.2 =0.0079/0.5030 = 0.0157 W/m<sup>2</sup> = (0.0157 W/m<sup>2</sup>) (1m<sup>2</sup>/W) (0.1 mW/cm<sup>2</sup>) = 0.00157 mW/cm<sup>2</sup>

which is << less than S = 1.0 mW/cm<sup>2</sup>