

### MPE Calculation : WLAN(2.4GHz)

RF function or Mode	Frequency range (MHz)	Max. Target Power (dBm)	ANT Gain (dBi)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Maximum power density (mW/cm <sup>2</sup> )	Requirment (mW/cm <sup>2</sup> )
802.11b	2412.00 ~ 2462.00	14.00	0.80	14.80	30.200	0.007	1.000
802.11g	2412.00 ~ 2462.00	11.00	0.80	11.80	15.136	0.004	1.000
802.11n(HT20)	2412.00 ~ 2462.00	11.00	0.80	11.80	15.136	0.004	1.000
802.11n(HT40)	2422.00 ~ 2452.00	10.00	0.80	10.80	12.023	0.003	1.000
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The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.

The MPE sample calculation for this exposure is shown below.

$$\begin{aligned}
 S &= \text{EIRP} / (4 R^2 \pi) \\
 &= 30.2 / (4 \times 20^2 \times \pi) \\
 &= 0.007 \text{ mW/cm}^2
 \end{aligned}$$

**- Note**

S= Maximum power density(mW/cm<sup>2</sup>)

EIRP= Equivalent Isotropic Radiated Power(mW)

R= Distance to the center of the radiation of the antenn

**▪ Limits for General Population/Uncontrolled Exposure**

Frequency range (MHz)	Electric Field strength (V/m)	Magnetic field strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averageing time (minutes)
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

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

**Conclusion : The exposure condition of this device is compliant with FCC**