

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 ²)	Requirement (mW/cm ²)
802.11b	2412.00 ~ 2462.00	6.00	-0.59	5.41	3.476	0.001	1.000
802.11g	2412.00 ~ 2462.00	0.00	-0.59	-0.59	0.873	0.001	1.000
802.11n(HT20)	2412.00 ~ 2462.00	0.50	-0.59	-0.09	0.980	0.001	1.000
802.11n(HT40)	2422.00 ~ 2452.00	-1.00	-0.59	-1.59	0.694	0.001	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.

$$\begin{aligned}
 S &= \text{EIRP} / (4 R^2 \pi) \\
 &= 3.476 / (4 \times 20^2 \times \pi) \\
 &= 0.001 \text{ mW/cm}^2
 \end{aligned}$$

- Note

S= Maximum power density(mW/cm²)

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 ²)	Averaging time (minutes)
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 ~ 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