

MPE Calculation : WCDMA

RF function or Mode	Frequency range (MHz)		Max Target Power (dBm)	ANT Gain (dBi)	Calculated EIRP(dBm)	Measured EIRP(dBm)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Maximum power density (mW/cm ²)	Requirement (mW/cm ²)
WCDMA850	826.40	~ 846.60	22.00	-3.48	18.52	20.74	20.74	118.577	0.024	0.550
WCDMA1900	1852.40	~ 1907.60	22.00	1.18	23.18	19.87	23.18	207.970	0.042	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.

$$\begin{aligned}
 S &= \text{EIRP} / (4 R^2 \pi) \\
 &= 118.577 / (4 \times 20^2 \times \pi) \\
 &= 0.024 \text{ mW/cm}^2
 \end{aligned}$$

- Note

S= Maximum power density(mW/cm²)

EIRP= Equivalent Isotropic Radiated Power

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

▪ 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