

MPE Calculation : WCDMA, LTE

RF function or Mode	Frequency range (MHz)	Tune-up Max Conducted power(dBm)	Measured Conducted power(dBm)	Measured EIRP (dBm)	Adjusted EIRP to tune-up Max(dBm)	Maximum power density (mW/cm ²)	Requirment (mW/cm ²)
WCDMA850	826.40 ~ 846.60	24.00	22.77	23.17	24.40	0.0548	0.550
LTE Band 5	824.00 ~ 849.00	23.00	21.61	23.20	24.59	0.0573	0.549
LTE Band 7	2500.00 ~ 2570.00	23.00	22.08	23.65	24.57	0.0570	1.000
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Note1: Please refer to the operation description for Max tune-up power.

Note2: Adjusted EIRP to tune-up Max = Measured EIRP + (Tune-up Max. Conducted power - Measured Conducted power)

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.

$$\begin{aligned}
 S &= \text{EIRP} / (4 R^2 \pi) \\
 &= 24.4 / (4 \times 20^2 \times \pi) \\
 &= 0.0548 \text{ mW/cm}^2
 \end{aligned}$$

- 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 Maximum Permissible Exposure (MPE)

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

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