

MPE Calculation : LTE, WCDMA

RF function or Mode	Frequency range (MHz)			Tune-up Max Conducted power(dBm) ^{Note 1}	Measured Conducted power(dBm)	Measured EIRP(dBm)	Adjusted EIRP to tune-up Max(dBm) ^{Note 2}	Maximum power density (mW/cm ²)	Requiriment (mW/cm ²)
LTE Band 2	1850.0	~	1910.0	24.50	22.48	25.74	27.76	0.1188	1.000
LTE Band 4	1710.0	~	1755.0	24.50	24.04	25.02	25.48	0.0703	1.000
LTE Band 12	699.0	~	716.0	24.50	23.49	20.22	21.23	0.0265	0.466
LTE Band 26(5)	824.0	~	849.0	24.00	22.61	24.28	25.67	0.0735	0.549
LTE Band 26	814.0	~	824.0	24.00	22.73	24.59	25.86	0.0767	0.542
WCDMA 850	826.4	~	846.6	24.00	23.55	23.96	24.41	0.0550	0.550
WCDMA 1700	1712.4	~	1752.6	24.00	23.96	22.78	22.82	0.0381	1.000
WCDMA 1900	1852.4	~	1907.6	24.00	23.94	22.49	22.55	0.0358	1.000
-		~							
-		~							

Note1: Please refer to the tune-up procedure for the max target 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.

$$\begin{aligned}
 S &= \text{EIRP} / (4 R^2 \pi) \\
 &= 27.76 / (4 \times 20^2 \times \pi) \\
 &= 0.1188 \text{ mW/cm}^2
 \end{aligned}$$

- Note

S= Maximum power density(mW/cm²)

EIRP= Equivalent Isotropic Radiated Power(mW)

R= Distance to the center of the radiation of the antenna(20cm)

▪ 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