

MPE Calculation

RF feature(Mode)	Frequency range (MHz)	Tune-up Max power(dBm)	ANT Gain (dBi)	Cable loss between transmitter and antenna(dB)	Duty Factor(dB)	Adjusted EIRP to tune-up max(dBm)	Maximum power density (mW/cm ²)	Requirement (mW/cm ²)
LTE Band 7	2 500.00 ~ 2 570.00	23.50	1.77	9.04	NA	16.23	0.008 4	1.000 0
LTE Band 5	824.00 ~ 849.00	23.50	1.94	4.35	NA	21.09	0.025 6	0.549 0
WCDMA 850	826.40 ~ 846.60	23.50	1.94	4.35	NA	21.09	0.025 6	0.550 0
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Note1: Please refer to the tune-up procedure for tune-up max.

Note2: EIRP(Adjusted EIRP to Tune- up Max) = Tune-up power(dBm) + Antenna gain(dBi) + Cable loss(dB) + Duty factor(dB)

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.

$$\begin{aligned}
 S &= \text{EIRP} / (4 R^2 \pi) \\
 &= 16.230 / (4 \times 20^2 \times \pi) \\
 &= 0.008 \text{ mW/cm}^2
 \end{aligned}$$

- 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)	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

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