

Specification(FCC): Table 1 to §1.1310(e)(1)—Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure				
Frequency range (MHz)	Electric Field strength (V/m)	Magnetic field strength (A/m)	Power Density (mW/cm ²)	Averaging time (minutes)
0.3 ~ 3.0	614	1.63	*(100)	≤ 6
3.0 ~ 30	1842/f	4.89/ f	*(900/f ²)	< 6
30 ~ 300	61.4	0.163	1.0	< 6
300 ~ 1,500	-	-	f/300	< 6
1,500 ~ 100,000	-	-	5	< 6
(B) Limits for General Population/Uncontrolled Exposure				
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

- MPE Calculations (FCC)

Band(mode)	Frequency range (MHz)	Tune-up Max power (dBm)	Antenna Gain including cable(dBi)	Duty Factor(dB)	Adjusted EIRP to tune-up max(dBm)	Max power density (mW/cm ²)	Requirement (mW/cm ²)
GSM850(GPRS 1TX)	824.2 ~ 848.8	34.00	2.90	-9.03	27.87	0.122	0.549
GSM850(GPRS 2TX)	824.2 ~ 848.8	33.00	2.90	-6.02	29.88	0.194	0.549
GSM1900(GPRS 1TX)	1850.2 ~ 1909.8	31.00	1.86	-9.03	23.83	0.048	1.000
GSM1900(GPRS 2TX)	1850.2 ~ 1909.8	29.50	1.86	-6.02	25.34	0.068	1.000
WCDMA 850	826.4 ~ 846.6	25.00	2.90	NA	27.90	0.123	0.550
WCDMA 1700	1712.4 ~ 1752.6	25.00	1.57	NA	26.57	0.090	1.000
WCDMA 1900	1852.4 ~ 1907.6	25.00	1.86	NA	26.86	0.097	1.000
LTE Band 2	1850.0 ~ 1910.0	26.20	1.86	NA	28.06	0.127	1.000
LTE Band 4	1710.0 ~ 1755.0	26.20	1.57	NA	27.77	0.119	1.000
LTE Band 5	824.0 ~ 849.0	26.20	2.90	NA	29.10	0.162	0.549
LTE Band 13	777.0 ~ 787.0	26.20	2.60	NA	28.80	0.151	0.518
LTE Band 17	704.0 ~ 716.0	26.20	2.60	NA	28.80	0.151	0.469

The MPE calculation for this exposure is shown below.

▪ EIRP(Adjusted EIRP to Tune- up Max) = Tune-up power + Antenna gain including cable + Duty factor

▪ $S = \text{EIRP} / (4\pi R^2)$

Where, S= Maximum power density(mW/cm²)

EIRP= Equivalent Isotropic Radiated Power(mW)

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

- The exposure condition of the device is compliant with FCC Rule.