

* Maximum Permissible Exposure(MPE)

1. Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

a) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Times E 2, H 2 or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-10000			5	6

b) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Times E 2, H 2 or S (minutes)
0.3-3.0	614	1.63	(100)*	30
3.0-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-10000			1.0	30

Note : f=frequency in MHz

***=Plane-wave equivalent power density**

2. MPE Calculation Method

S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Predication of MPE limit at a given distance, Equation from OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

3. Calculated Result and Limit

Mode	Frequency (MHz)	Maximum conducted power		Antenna Gain		Distance	Power Density	Limit
		dBm	mW	dBi	mW			
Bluetooth BDR 1Mbps	2402	10.43	11.041	-0.630	0.865	1	0.7600	1
	2442	10.42	11.015	-0.630	0.865	1	0.7582	1
	2480	10.46	11.117	-0.630	0.865	1	0.7652	1
Bluetooth EDR 2Mbps	2402	10.30	10.715	-0.630	0.865	1	0.7375	1
	2442	10.12	10.280	-0.630	0.865	1	0.7076	1
	2480	10.06	10.139	-0.630	0.865	1	0.6979	1
Bluetooth EDR 3Mbps	2402	10.73	11.830	-0.630	0.865	1	0.8143	1
	2442	10.55	11.350	-0.630	0.865	1	0.7812	1
	2480	10.59	11.455	-0.630	0.865	1	0.7885	1
Bluetooth LE 1Mbps	2402	8.03	6.353	-0.630	0.865	1	0.4373	1
	2442	7.92	6.194	-0.630	0.865	1	0.4264	1
	2480	7.96	6.252	-0.630	0.865	1	0.4303	1
Bluetooth LE 2Mbps	2402	8.09	6.442	-0.630	0.865	1	0.4434	1
	2442	7.97	6.266	-0.630	0.865	1	0.4313	1
	2480	8.04	6.368	-0.630	0.865	1	0.4383	1