

# MPE Calculation

FCC ID: **QV3DMN81901**

RF function or Mode	Frequency range (MHz)	Max Target Power (dBm)	ANT Gain (dBi)	Maximum EIRP (dBm)	Maximum EIRP (mW)	Maximum power density (mW/cm <sup>2</sup> )	Requirement (mW/cm <sup>2</sup> )
Bluetooth(1Mbps)	2402.00 ~ 2480.00	0.50	0.50	1.00	1.259	0.00026	1.000
Bluetooth(2,3Mbps)	2402.00 ~ 2480.00	1.00	0.50	1.50	1.413	0.00029	1.000
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Note: Please refer to the operation description for Max tune-up 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.

$$\begin{aligned}
 S &= \text{EIRP} / (4 R^2 \pi) \\
 &= 1.259 / (4 \times 20^2 \times \pi) \\
 &= 0.00026 \text{ mW/cm}^2
 \end{aligned}$$

**- Note**  
 S= Maximum power density(mW/cm<sup>2</sup>)  
 EIRP= Equivalent Isotropic Radiated Power(mW)  
 R= Distance to the center of the radiation of the antenna

**▪ Limits for Maximum Permissible Exposure (MPE)**

Frequency range (MHz)	Electric Field strength (V/m)	Magnetic field strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging time (minutes)
0.3 ~ 1.34	614	1.63	*100	30
1.34 ~ 30	824/f	2.19 / f	*180 / f <sup>2</sup>	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**