

# MPE Calculations : (Bluetooth)

- Frequency range : 2402 MHz ~ 2480 MHz
- Measured RF output power : 2.24 dBm
- Target Power & Tolerance : 1.00 dBm  $\pm$  1.5 dB ( Max. 2.5 dBm & Min. -0.5 dBm )
- Maximum antenna peak gain : -0.50 dBi
- **Maximum output power for the calculation** 2.50 dBm

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the device. The MPE calculation for this exposure is shown below.

$  \begin{aligned}  \text{▪ EIRP} &= P + G \\  &= 2.50 \text{ dBm} + -0.50 \text{ dBi} \\  &= \text{2.00 dBm} = \text{1.585 mW}  \end{aligned}  $	<b>- Note</b> P = Power input to the antenna(dBm) G = Power gain of the antenna(dBi)
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## - Power density at the specific separation

$  \begin{aligned}  \text{▪ S} &= \text{EIRP} / ( 4 R^2 \pi ) \\  &= \text{1.585} / ( 4 \times 20^2 \times \pi ) \\  &= \text{0.000316 mW/cm}^2  \end{aligned}  $	<b>- Note</b> 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(20cm)
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## Conclusion : The exposure condition of this device is compliant with FCC rules.

The maximum permissible exposure(MPE) of the general population/Uncontrolled for this device is 1.0 mW/cm<sup>2</sup>.