

MPE Calculations : (Zigbee)

- Frequency range : 2425 MHz ~ 2475 MHz
- Measured RF output power : 2.67 dBm
- Target Power & Tolerance : 3.00 dBm \pm 1 dB (Max. 4 dBm & Min. 2 dBm)
- Maximum antenna peak gain : 4.40 dBi
- **Maximum output power for the calculation : 4.00 dBm**

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the

The MPE calculation for this exposure is shown below.

<ul style="list-style-type: none"> ▪ EIRP = P + G = 4.00 dBm + 4.40 dBi = 8.40 dBm = 6.919 mW 	<ul style="list-style-type: none"> - Note P = Power input to the antenna(dBm) G = Power gain of the antenna(dBi)
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- Power density at the specific separation

<ul style="list-style-type: none"> ▪ S = $EIRP / (4 R^2 \pi)$ = 6.919 / (4 X 20² X π) = 0.001377 mW/cm² 	<ul style="list-style-type: none"> - 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)
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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/cm².