

## MPE Estimates

The MPE estimate is calculated below:

$P_t := 103.7 \text{ mW}$  maximum power measured from Wireless Adapter

$$G := 10^{\frac{1}{10}}$$

$G = 1.259$  maximum antenna gain equals 1dBi

$r := 20 \text{ cm}$  distance between antenna and user

$$P_d := \frac{P_t \cdot G}{4 \cdot \pi \cdot r^2} \quad \text{formula for calculation of power density}$$

$$P_d = 0.026 \frac{\text{mW}}{\text{cm}^2} \quad \text{maximum power density}$$

The 0.026 mW maximum power density of the Cricut Wireless Adapter is below the 1.0mW allowable maximum power density.