

## MPE CALCULATION

<b>RF Exposure Requirements:</b>	47 CFR §1.1307(b)
<b>RF Radiation Exposure Limits:</b>	47 CFR §1.1310
<b>RF Radiation Exposure Guidelines:</b>	FCC OST/OET Bulletin Number 65
<b>EUT Frequency Band:</b>	2402-2480 MHz, 2412 - 2462 MHz; 5180 - 5825MHz
<b>Limits for General Population/Uncontrolled Exposure in the band of:</b>	1500 - 100,000 MHz
<b>Power Density Limit:</b>	1 mW / cm <sup>2</sup> ;

**Equation:**  $S = PG / 4\pi R^2$  or  $R = \sqrt{PG / 4\pi S}$

Where, S = Power Density

P = Power Input to Antenna

G = Antenna Gain

R = distance to the center of radiated antenna

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Prediction distance 20cm

WLAN (2412 MHz): Power = 12.3dBm, Antenna Gain = 2 dBi, Power density = 0.005355 mW/ cm<sup>2</sup>

UHF RFID (902.75-927.25 MHz): Power = 28.01dBm, Antenna gain= -15.66dBi, Power density=0.003418 mW/cm<sup>2</sup>

Total Ratio=  $(P_{RFID}/0.62)+(P_{N\ Radio}/1)= 0.003418+0.005355= 0.008773$

Total Ratio is 0.008773, which is less than 1;

The Above Result had shown that Device complied with MPE requirement.

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