

## MPE CALCULATION

FCC ID: 7280B-120502

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RF Exposure Requirements: 47 CFR §1. 1307(b)

RF Radiation Exposure Limits: 47 CFR §1. 1310

RF Radiation Exposure Guidelines: FCC OST/OET Bulletin Number 65

EUT Frequency Band: 802.11a: 5180-5320MHz; 5500-5700MHz; 5745-5825MHz  
802.11n-20M: 5180-5320MHz; 5500-5700MHz; 5745-5825MHz  
802.11n-40M: 5190-5310MHz; 5510-5670MHz; 5755-5795MHz  
802.11ac-80M: 5210MHz, 5290MHz, 5530MHz, 5775MHz

Limits for General Population/Uncontrolled Exposure in the band of: 1500 - 100,000 MHz

Power Density Limit: 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  
Target power = 20.00 dBm  
Tune up power tolerance = 1.05dBm  
Max Tune up power = 21.05 dBm

MPE calculation: Max Tune up Power = 21.05 dBm, Directional antenna gain = 8.764 dBi, Power density= 0.1906 mW/cm<sup>2</sup>

Maximum MPE = 0.1906 mW/cm<sup>2</sup>, which is less than 1 mW/cm<sup>2</sup>.

The Above Result had shown that the device complied with MPE requirement.

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