MPE CALCULATION

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: 902.75-927.25 MHz

Limits for General Population/Uncontrolled Exposure in the band of: 300-1500 MHz

Power Density Limit: 0.62 mW/cm2

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

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

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

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.

Completed By : David Zhang

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