

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:	2402-2480 MHz, 2412 - 2462 MHz; 5180 - 5825MHz
Limits for General Population/Uncontrolled Exposure in the band of:	1500 - 100,000 MHz
Power Density Limit:	1 mW / cm ² ;

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

Prediction distance 20cm

WLAN (2412 MHz): Power = 12.3dBm, Antenna Gain = 2 dBi, Power density = 0.005355 mW/ cm²

UHF RFID (902.75-927.25 MHz): Power = 28.01dBm, Antenna gain= -15.66dBi, Power density=0.003418 mW/cm²

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

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

Date : Dec 13th, 2013