

MPE CALCULATION

FCC ID: 2AG9N-BFLY1 / IC ID: 21091-BFLY1

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

Prediction distance 20cm

(Bluetooth LE): Power = 0.335 dBm, Antenna Gain = 2.5 dBi, Power density = 0.000382 mW/cm²

(WLAN 2.4GHz): Power = 13.79 dBm, Antenna Gain = 3.8 dBi, Power density = 0.0114mW/cm²

Mode	Prediction Distance (cm)	Target power (dBm)	Max. Antenna Gain (dBi)	Power Density (mW/cm ²)
Bluetooth LE	20	0.335	2.5	0.000382
WLAN 2.4GHz	20	13.79	3.8	0.0114

If Bluetooth LE and WLAN (2.4) transmit simultaneously.

Total MPE= 0.000382 + 0.0114 = 0.011782 mW/cm²

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

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