

MPE CALCULATION

FCC ID: KA359WAN1

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:	5860-5920 MHz
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

MPE calculation with 16dBi antenna: Power = 7.76 dBm, antenna gain = 16 dBi, Power density= 0.047286 mW/cm²
Maximum MPE = 0.047286 mW/cm², which is less than 1 mW/cm².

MPE calculation with 20dBi antenna: Power = 7.76 dBm, antenna gain = 20 dBi, Power density= 0.118776 mW/cm²
Maximum MPE = 0.118776 mW/cm², which is less than 1 mW/cm².

MPE calculation with 23dBi antenna: Power = 7.76 dBm, antenna gain = 16 dBi, Power density= 0.23699 mW/cm²
Maximum MPE = 0.23699 mW/cm², which is less than 1 mW/cm².

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

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