

MPE CALCULATION

FCC ID: 2ABZJ-100-00014PS

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:

5150-5825 , 4950-4980 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

| Antenna Gain (dBi): | 0 | Distance (cm): | 100 |
|--|-----------------|---|-------------------------------|
| Frequency band | Max Power (dBm) | MPE (power density) (mW / cm ²) | Limit (mW / cm ²) |
| 4.9GHz | 32 | 0.0126 | 1 |
| 5.1GHz | 29.8 | 0.0076 | 1 |
| 5.2GHz | 23.54 | 0.0018 | 1 |
| 5.4GHz | 23.66 | 0.0018 | 1 |
| 5.8GHz | 29.85 | 0.0077 | 1 |
| EUT can support two frequency bands transmit at the same time. | | | |
| Total MPE when 2 radios transmit at the same time = | | 0.0203 | |

| Antenna Gain (dBi): | 25 | Distance (cm): | 100 |
|---|-----------------|---|-------------------------------|
| Frequency band | Max Power (dBm) | MPE (power density) (mW / cm ²) | Limit (mW / cm ²) |
| 4.9GHz | 3 | 0.0050 | 1 |
| 5.1GHz | 17.25* | 0.1336 | 1 |
| 5.2GHz | 4.89 | 0.0078 | 1 |
| 5.4GHz | 4.88 | 0.0077 | 1 |
| 5.8GHz | 21.9* | 0.3898 | 1 |
| EUT can support two frequency bands transmit at the same time. | | | |
| Total MPE when 2 radios transmit at the same time = | | 0.5234 | |
| *Average power -Peak to average ratio is 7dB , 5.1G peak power is 24.25dBm , 5.8G peak power is 28.9dBm | | | |

The Above Result had shown that the device complied with MPE requirement at a prediction distance of 100cm .

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