

MPE CALCULATION

FCC ID: S9GE510

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: 2.4GHz

2412-2462 MHz

EUT Frequency Band: 5 GHz

5180- 5320MHz, 5500-5720MHz, 5745-5825MHz
5210-5290MHz, 5530-5610MHz, 5690-5775MHz

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

EUT: E510 Access Point, Model No.: E510

(2.4GHz Band): Power = 24.89 dBm, Antenna Gain = 3 dBi, Power density = 0.154 mW/ cm²

(5 GHz Band): Power = 25.22 dBm, Antenna Gain = 3.5 dBi, Power density = 0.186 mW/ cm²

Type	CH Freq (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Directional Gain (dBi)	Tune-Up Tolerance	Tolerance Max Power (dBm)	Measurement Distance (cm)	Calculated MPE (mW/cm ²)	MPE Limit (mW/cm ²)	Pass/Fail
2.4 GHz WLAN	2412	24.89	3	3	±1dB	25.89	20	0.154	1	Pass
5 GHz WLAN	5755	25.22	3.5	3.5	±1dB	26.22	20	0.186	1	Pass

If 2.4GHz and 5GHz transmit simultaneously.

Total MPE=0.154 + 0.186 = 0.340 mW/cm²

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

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