

MPE CALCULATION

FCC ID: B5DM534

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: 1920-1930 MHz 1921.536 MHz-1928.448 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

EUT: Roameo Access Point, model: AP-1800

(1920-1930 MHz Band): Power = 19.75 dBm, Antenna Gain = 3 dBi, Power density = 0.047 mW/cm²

Type	CH Freq (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Tune-Up Tolerance	Tolerance Max Power (dBm)	Measurement Distance (cm)	Calculated MPE (mW/cm ²)	MPE Limit (mW/cm ²)	Pass/Fail
1920-1930 MHz DECT	1928.448	19.75	3	±1dB	20.75	20	0.047	1	Pass

The duty cycle for the radio is 4.16%, so the final result should be $0.047 * 4.16\% = 0.00188$ mW/cm².

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

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