FCC ID 2AFPAL8G10843

Maximum Permissible Exposure

as specified in Table 1B of 47 CFR 1.1310 – Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure

Frequency range (MHz)	Power density (mW/cm²)
300 – 1,500	f/1500
1,500 – 100,000	1.0

Antenna Gain:
2400 MHz: 5.3 dBi
850 MHz: 2.14 dBi
1900 MHz: 2.14 dBi

Calculations
The output power at antenna input terminal:
2440 MHz: -1.8 dBm
850 MHz: 26.66 dBm (32.68 dBm – 6.02 dBm duty cycle)
1900 MHz: 30.48 dBm (30.48 dBm – 6.02 dBm duty cycle)

Prediction distance **R**:   20 cm
Prediction frequency 1(PF 1):   2440 MHz
Prediction frequency 2(PF 2):   836.6 MHz
Prediction frequency 3(PF 3):   1850.2 MHz

MPE limit **S**:   1 mW/cm²
                             0.558 mW/cm²

Equation OET bulletin 65, page 18, edition 97-01: $S = P*G / (4\pi R^2)$
S = power density
P = power input to the antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the centre of radiation of the antenna (20cm)

Maximum Power density	Limit	Verdict
PF 1: 0.0004 mW/cm²	1.0 mW/cm²	Pass
PF 2: 0.1509 mW/cm²	0.558 mW/cm²	Pass
PF 3: 0.0909 mW/cm²	1.0 mW/cm²	Pass

Note. The calculation was made under the consideration of the duty cycle effect.

Yours sincerely

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Dirk Bratsch, Project Manager