

RF Exposure Analysis

Maximum Permissible Exposure

Performance Criterion: The human RF exposure limit is 1 mW/cm².

Evaluation Results: Complies

Details: The maximum permissible exposure (MPE) is predicted by using the following equation:

$$S = PG/4\pi R^2$$

where: S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

P = 50.4 mW, G = 2.138 (+3.3 dBi), R = 20 cm

$$S = 0.0214 \text{ mW/cm}^2 = 0.214 \text{ W/m}^2$$