

Maximum Permissive 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 Equation (3) of Section 2 of FCC OET Bulletin 65, Edition 97-01:

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

where: $S = power density (in appropriate units, e.g. <math>mW/cm^2$)

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)

$$P = 3.7239 \text{ mW}, G = 1.5849 (2 \text{ dBi}), R = 20 \text{ cm}$$

$$S = 0.0012 \text{ mW/cm}^2 = 0.012 \text{ W/m}^2$$

MPE limit for uncontrolled exposure at prediction frequency: 1 mW/cm² Maximum allowable antenna gain: 31.3 dBi

Margin of Compliance at 20 cm = 29.3 dB

Minimal antenna-to-user separation distance:

$$P = 3.7239 \text{ mW}, G = 1.5849 (2 \text{ dBi}), S = 1 \text{ mW/cm}^2$$

$$R = 0.4697 \text{ cm}$$

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