

EXHIBIT 15. MPE CALCULATIONS

The following MPE calculations are based on a circuit board strip antenna, with a measured ERP of 111.4 dBμV/m, at 3 meters, and conducted RF power of +10.28 dBm as presented to the antenna. The calculated gain of this antenna, based on the ERP measurements is 5.94 dB.

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$

where: 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 center of radiation of the antenna

Maximum peak output power at antenna input terminal: 10.28 (dBm)

Maximum peak output power at antenna input terminal: 10.666 (mW)

Antenna gain(typical): 5.94 (dBi)

Maximum antenna gain: 3.926 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 900 (MHz)

MPE limit for uncontrolled exposure at prediction frequency: 0.6 (mW/cm²)

Power density at prediction frequency: 0.008332 (mW/cm²)

Maximum allowable antenna gain: 24.5 (dBi)

Margin of Compliance at 20 cm = 18.6 dB

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