

Prediction of MPE limit at a given distance

1W-CBDA-SMR-10W80-PS8, Uplink Outdoor Donar Antenna

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: 15.01 (dBm)

Maximum peak output power at antenna input terminal: 31.69567463 (mW)

Antenna gain(typical): 20 (dBi)

Maximum antenna gain: 100 (numeric)

Prediction distance: 45 (cm)

Prediction frequency: 5745 (MHz)

MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm²)

Power density at prediction frequency: **0.124556** (mW/cm²)

Maximum allowable antenna gain: **29.04634892** (dBi)

Margin of Compliance: 9.046348916

Combine power density of 2.4 GHz and 5.8 GHz: 0.130+0.124=0.254 mW/cm² < 1mW/cm²