



Prediction of MPE limit at a given distance

Mini-Repeater DEKO 2119 with 13 dBi Directional Antenna (UpLink)

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: 20.30 (dBm)

Maximum peak output power at antenna input terminal: 107.1519305 (mW)

Antenna gain(typical): 13 (dBi)

Maximum antenna gain: 19.95262315 (numeric)

Prediction distance: 25 (cm)

Prediction frequency: 1860 (MHz)

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

Power density at prediction frequency: 0.272214 (mW/cm²)

Maximum allowable antenna gain: 18.65089881 (dBi)

Margin of Compliance: 5.650898814 (dB)