

DOWN LINK 851-869 MHZ INDOOR ANTENNA

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: 33.00 (dBm)

Maximum peak output power at antenna input terminal: 1995.262315 (mW)

Antenna gain(typical): 2 (dBi)

Maximum antenna gain: 1.584893192 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 851-869 (MHz)

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

Power density at prediction frequency: 0.629115 (mW/cm²)

Maximum allowable antenna gain: 1.794211057 (dBi)

Margin of Compliance: -0.205788943

Note: Cable and splitter insertion loss has not been accounted for in this calculation.