

## DOWN LINK 1945-1975 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: 1945-1975 (MHz)

MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm<sup>2</sup>)

Power density at prediction frequency: 0.629115 (mW/cm<sup>2</sup>)

Maximum allowable antenna gain: 4.012698554 (dBi)

Margin of Compliance: 2.012698554

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