

Prediction of Distance for a specific MPE Limit

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

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

$$R = \sqrt{\frac{PG}{4\pi S}}$$

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 centre of radiation of the antenna

Source Based "Time Averaged Power with duty cycle correction"¹

Max Antenna gain

Prediction Freq

MPE limit for uncontrolled exposure at prediction frequency

10.77	dBm	11.94
1	dBi	1.26
2.480	GHz	2.480E+09
1	mW/cm ²	0.4217

Permitted distance at MPE limit (1 mW/cm²) in cm

1.09*

Application is for a mobile device manufacturer is recommending 20cm min distance.

¹ Based upon 10% Source Based "Time Averaged Power with duty cycle correction (see Support letter and Test report)