

Prediction of MPE Limit
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$$S = \frac{P}{4\pi R^2}$$

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

- 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 center of radiation of the antenna

2.00

Occupational/Controlled
General Population/Uncontrolled

Ratio of Time on vs Total TX Time

850 Band

Tx Frequency:	<input type="text" value="836.52"/>	(MHz)
RF Output Power at Antenna Input Terminal:	<input type="text" value="23.5"/>	(dBm)
Source-Based Time -Average Factor:	<input type="text" value="0.00"/>	(dB)
Source-Based Time-Averaged RF Output Power at Antenna Input Terminal:	<input type="text" value="23.5"/>	(dBm)
Antenna gain:	<input type="text" value="-4.00"/>	(dBi)

S Limit = 0.56 (mW/cm²)
P = 223.8721 (mW)
G = 0.40 (numeric)

R = 3.57 (cm)

S at 20cm: 0.017711664 (mW/cm²)

Ratio of Time on vs Total TX Time 1.00

1900 Band

Tx Frequency: 1880.00 (MHz)
 RF Output Power at Antenna Input Terminal: 24.0 (dBm)
 Source-Based Time -Average Factor: 0.00 (dB)
 Source-Based Time-Averaged RF Output Power at Antenna Input Terminal: 24.0 (dBm)
 Antenna gain: -4.00 (dBi)

S Limit = 1.00 (mW/cm²)
 P = 251.1886 (mW)
 G = 0.40 (numeric)

R = 2.82 (cm)

S at 20cm: 0.019872814 (mW/cm²)

Band / Mode	Power Density Limit	RF Conducted Output Power	Antenna Gain	MPE Distance	Power Density at 20 cm
	mW/cm ²	dBm	dBi	cm	mW/cm ²
850 Band	0.56	23.5	-4.00	3.57	0.017712
1900 Band	1.00	24.0	-4.00	2.82	0.019873