

16. MPE Calculations

***The MPE calculations are based on the
Johnson Technology Brand antenna, part number: 2450AT18A100
Ceramic Chip 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:	20.80 (dBm)
Maximum peak output power at antenna input terminal:	120.226 (mW)
Antenna gain(typical):	0.5 (dBi)
Maximum antenna gain:	1.122 (numeric)
Prediction distance:	20 (cm)
Prediction frequency:	2400 (MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1 (mW/cm ²)
Power density at prediction frequency:	0.026837 (mW/cm ²)
Maximum allowable antenna gain:	16.2 (dBi)
Margin of Compliance at 20 cm =	15.7 dB