

Prediction of MPE Limit
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Internet at the speed of thought

Equation from page 18

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

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

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 center of radiation of the antenna

Choose

☒ Occupational/Controlled -(BTS)
☐ General Population/Uncontrolled -(MODEM)

ENTER

Tx Frequency: 2360.00 (MHz)
Maximum Peak Power at Antenna Input Terminal: 38.00 (dBm)
Antenna gain (typical): 18.00 (dBi)

S= 5.00 (mW/cm²)
P= 6309.57 (mW)
G= 63.10 (numeric)

R = 79.60 (cm)

NOTE: The following warning must appear in the installation manual.

CAUTION:

This device is intended to be used with an antenna mounted to a fixed, outdoor structure. This device is a radio frequency transmitter. It is required to comply with FCC RF exposure requirements for mobile transmitting devices. A minimum separation distance of 80.00 cm or more must be maintained between the antenna and all persons during device operations to ensure compliance with the FCC's rules for Radio Frequency Exposure. If this minimum distance cannot be maintained, exposure to RF levels that exceed the FCC's limits may result.

80cm calculation is based on the maximum peak power.
Max conducted RMS power to antenna port = +30 dBm
Peak to Average ratio = 8 dB
Antenna gain = 18 dBi

Maximum peak power to antenna terminal = $+30 + 8 \text{ dB(p/A)} = +38 \text{ dBm}$