

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

Tx Lte

Fundamental transmit (prediction) frequency: 1850 MHz
Field Strength at 3 m(measured) 125.3 dBuV/m
EIRP 30.07 dBm

Tx On time: 1.000 ms
Tx period time: 1.000 ms
Average factor: 100 %

MPE limit for uncontrolled exposure at prediction frequency: 1 mW/cm²
10 W/m²
Minimum calculated prediction distance for compliance: 9 cm

Typical (declared) distance: 20 cm

Average power density at prediction frequency: 0.202176 mW/cm²
2.02176 W/m²

Margin of Compliance: 6.94270 dB
Maximum allowable antenna gain: 6.94270 dBi
% to limit: 20.21762536 %

Tx WIFI

Fundamental transmit (prediction) frequency: 2462 MHz
Field Strength at 3 m(measured) 114.4 dBuV/m
EIRP 19.17 dBm

Tx On time: 1.000 ms
Tx period time: 1.000 ms
Average factor: 100 %

MPE limit for uncontrolled exposure at prediction frequency: 1 mW/cm²

10 W/m²

Minimum calculated prediction distance for compliance: 3 cm

Typical (declared) distance: 20 cm

Average power density at prediction frequency: 0.016434 mW/cm²
0.16434 W/m²

Margin of Compliance: 17.84270 dB
Maximum allowable antenna gain: 17.84270 dBi
% to limit: 1.643350286 %

% to limit: **21.86097565** % Less than 100%