

Radiofrequency Radiation Exposure Limits (CFR 47 §1.1310)

Prediction of MPE at a given distance can be calculated by the equation from FCC OET Bulletin 65 Edition 97-01, August 1997

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

where: S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

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 (appropriate units, e.g., cm)

For this device,

Peak output power at the antenna terminal = 20.68dBm

Antenna gain = 2dBi

Frequency = 467.75MHz

Prediction distance = 20cm

Limit = 467.75/1500 = 0.312 (per CFR 47 §1.1310)

By solving the equation for this device,

Power density at 20cm = 0.037mW/cm²

Therefore device complies with FCC RF radiation exposure limits for general population in mobile exposure category (distance > 20cm).