



Maximum Permissible Exposure (MPE) Evaluation

Applicant :Kenwood Corporation
Equipment :UHF DIGITAL REPEATER
Model No. :TKR-5800
FCCID :K4437144110

MPE Calculations

According to the OET Bulletin 65 (Edition 97-01)

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

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

Where:

S=Power density (in appropriate units, e.g. mW/cm²)

P=Power input to 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)

Tx Frequency= 450 to 483 (MHz)
Maximum peak power= 36.99 (dBm) (=5W)
Antenna gain= 2.15 (dBi)

S= 0.30 (mW/cm²)
P= 3000.00 (mW) (=Maximum peak power x 120% x Duty cycle 50%)
G= 1.64 (numeric)
R= 36.13 (cm)

P = Value calculated according to CFR Part 90.205(q)

Calculated minimum separation distance from antenna : 36.13 (cm)