



## Maximum Permissible Exposure (MPE) Evaluation

Applicant : Kenwood Corporation  
Equipment : UHF DIGITAL BASE-REPEATER  
Model No. : NXR-800-K2  
FCC ID : K44371401

### 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/cm<sup>2</sup>)

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= 477 to 512 (MHz) : FCC

Maximum peak power= 36.99 (dBm) (=5W)

Antenna gain= 2.15 (dBi)

S= 0.32 (mW/cm<sup>2</sup>)

P= 3000.00 (mW) (=Maximum peak power x 120% x Dutycycle 50%)

G= 1.64 (numeric)

R= 35.09 (cm)

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

Calculated minimum separation distance from antenna :

35.09 (cm)