



## Maximum Permissible Exposure (MPE) Evaluation

Applicant : Kenwood Corporation  
 Equipment : VHF DIGITAL BASE-REPEATER  
 Model No. : NXR-700-K4  
 FCC ID : K44371303  
 IC CN and UPN : 282F-371303

### 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= 150.8 to 154 (MHz) : FCC  
 138 to 144 , 148 to 154 (MHz) : IC  
 Maximum peak power= 36.99 (dBm) (=5W)  
 Antenna gain= 2.15 (dBi)

S= 0.20 (mW/cm<sup>2</sup>)  
 P= 3000.00 (mW) (=Maximum peak power x 120% x Dutycycle 50%)  
 G= 1.64 (numeric)  
 R= 44.25 (cm)

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

Calculated minimum separation distance from antenna :

44.25 (cm)