



## Maximum Permissible Exposure (MPE) Evaluation

Applicant : Kenwood Corporation  
Equipment : UHF DIGITAL BASE-REPEATER  
Model No. : NXR-810-K2  
FCC ID : K44422401  
IC CN and UPN : 282F-422401

### 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= 406.1 to 470 (MHz) : FCC  
406.1 to 430 , 450 to 470 (MHz) : IC  
Maximum peak power= 46.02 (dBm) (=40W)  
Antenna gain= 2.15 (dBi)

S= 0.27 (mW/cm<sup>2</sup>)  
P= 24000.00 (mW) (=Maximum peak power x 120% x Duty cycle 50%)  
G= 1.64 (numeric)  
R= 107.58 (cm)

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

Calculated minimum separation distance from antenna :

107.58 (cm)