



## Maximum Permissible Exposure (MPE) Evaluation

Applicant : Kenwood Corporation  
Equipment : VHF FM TRANSCEIVER  
Model No. : TK-690H-1  
FCC ID : K44229200

### 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= 29.7 to 37 (MHz)  
Maximum peak power= 50.41 (dBm) (=110W)  
Antenna gain= 2.15 (dBi)

S= 0.20 (mW/cm<sup>2</sup>)  
P= 66000.00 (mW) (=Maximum peak power x 120% x Dutycycle 50%)  
G= 1.64 (numeric)  
R= 207.56 (cm)

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

Calculated minimum separation distance from antenna :

207.56 (cm)