



Total Quality. Assured.

## Maximum Permissible Exposure (MPE) Evaluation

Applicant : JVC KENWOOD Corporation  
 Equipment : UHF DIGITAL BASE-REPEATER  
 Model No. : NX-800H-K, NX-800-K, TK5820-K  
 FCC ID : K44378704  
 IC CN and UPN : 282F-378704

### 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=	450 to 512	(MHz)	: FCC
Maximum peak power=	46.63	(dBm)	(=46W)
Antenna gain=	2.15	(dBi)	
S=	0.30	(mW/cm <sup>2</sup> )	
P=	23000.00	(mW)	(=Maximum peak power x Duty cycle 50%)
G=	1.64	(numeric)	
R=	100.05	(cm)	

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

Calculated minimum separation distance from antenna : 100.05 (cm)