



Maximum Permissible Exposure (MPE) Evaluation

Applicant : JVC KENWOOD Corporation
Equipment : VHF DIGITAL BASE-REPEATER
Model No. : NXR-5700-K
FCC ID : K44474500
IC CN and UPN : 282F-47500

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/cm²)

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 to 174	(MHz)	: FCC
	138 to 144 , 148 to 174	(MHz)	: IC
Maximum peak power=	43.98	(dBm) (=25W)	
Antenna gain=	2.15	(dBi)	
S=	0.13	(mW/cm ²)	
P=	30000.00	(mW) (=Maximum peak power x 120% x Duty cycle 100%)	
G=	1.64	(numeric)	
R=	174.18	(cm)	

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

Calculated minimum separation distance from antenna : 174.18 (cm)