

Maximum Permissible Exposure (MPE) Evaluation

Applicant : JVCKENWOOD Corporation
Equipment : UHF REPEATER
Model No. : NXR-1800-E
FCC ID : K44513200

MPE Calculations

FCC Part 1.1310

$$S = \frac{PG}{4\pi R^2}$$

$$R = \sqrt{\frac{PG}{4\pi S}}$$

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=	450 to 512	(MHz)	: FCC
Maximum peak power=	46.07	(dBm) (=40.5W)	
Antenna gain=	2.15	(dBi)	
S=	0.30	(mW/cm ²)	(Uncontrolled Environment)
P=	20250.00	(mW)	(=Maximum peak power x Dutycycle50%)
G=	1.64	(numeric)	
R=	93.87	(cm)	

Calculated minimum separation distance from antenna : 93.87 (cm)