



## Maximum Permissible Exposure (MPE) Evaluation

Applicant : VERTEX STANDARD CO., LTD.  
Equipment : Rack Mount Repeater  
Model No. : VXR-9000U-A  
FCC ID : K6610444140  
IC : 511B-10444140

### 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= 400 to 430 (MHz)  
Maximum peak power= 46.99 (dBm) (=50W)  
Antenna gain= 2.15 (dBi)

S= 0.27 (mW/cm<sup>2</sup>)  
P= 30000.00 (mW) (=Maximum peak power x 120% x Dutycycle 50%)  
G= 1.64 (numeric)  
R= 121.19 (cm)

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

Calculated minimum separation distance from antenna :

121.19 (cm)