

### K222GK TPO Calculation

$$\text{ERP} = 0.099 \text{ kW } (-10.04 \text{ dBk})$$

$$\text{Antenna Gain} = -0.60 \text{ dBd}$$

$$\text{Coaxial Line Model} = \text{LDF4-50A Helix}$$

$$\text{Line Attenuation}/100 \text{ feet} = 0.63 \text{ dB}$$

$$\text{Line Length} = 190 \text{ feet}$$

$$\text{Total Line Loss} = \left( \frac{0.63 \text{ dB}}{100 \text{ feet}} \right) \times (190 \text{ feet}) = 1.20 \text{ dB}$$

$$\text{TPO (dBk)} = \text{ERP (dBk)} - \text{Antenna Gain (dBd)} + \text{Line Loss (dB)}$$

$$= -10.04 - (-0.60) + 1.20$$

$$= -8.24 \text{ dBk}$$

$$\text{TPO (kW)} = 10^{\frac{-8.24}{10}}$$

$$= \underline{\underline{0.150 \text{ kW}}}$$