

Transmitter Power Output Calculation

Translator K264DA

Channel 264D – 100.7 MHz

0.250 kW ERP – 511.3 m COR AMSL

Decatur, Arkansas

June 2023

Given:

Effective Radiated Power: 0.250 kW

Antenna Gain (Multiplier): 0.9

Transmission Line Efficiency: 78.52%

Connector Efficiency: 97.83%

Calculation:

$0.250 \text{ kW Effective Radiated Power} \div 0.9 \text{ Antenna Gain} = 0.2777777 \text{ kW Antenna Input Power}$

$0.2777777 \text{ kW Antenna Input Power} \div 0.7852 \text{ Transmission Line Efficiency} \div 0.9783 \text{ Connector Efficiency} = 0.3616 \text{ kW Transmitter Power Output}^*$

* 0.3616 kW rounds to 0.360 kW per §73.212(a)