

## Transmitter Power Output Calculation

### Translator K225CS

Channel 225D – 92.9 MHz

0.250 kW ERP – 432 m COR AMSL

Joplin, Missouri

October 2019

#### Given:

Effective Radiated Power: 0.250 kW

Antenna Gain (Multiplier): 0.42

Transmission Line Efficiency: 68.0%

Connector Efficiency: 98.57%

Isocoupler Efficiency: 91.20%

#### Calculation:

0.250 kW Effective Radiated Power  $\div$  0.42 Antenna Gain = 0.595 kW Antenna Input Power

0.595 kW Antenna Input Power  $\div$  0.68 Transmission Line Efficiency  $\div$  0.9857 Connector Efficiency  $\div$  0.912 Isocoupler Efficiency = 0.973 kW Transmitter Power Output\*

\* 0.973 kW Transmitter Power Output rounds to 0.970 kW per §73.212(a).