

Transmitter Power Output Calculation

Translator W257DY

Channel 257D – 99.3 MHz

0.250 kW ERP – 528 m COR AMSL

Weston, West Virginia

December 2019

Given:

Effective Radiated Power: 0.250 kW

Antenna Gain (Multiplier): 0.46

Transmission Line Efficiency: 86.50%

Connector Efficiency: 99.28%

Calculation:

$0.250 \text{ kW Effective Radiated Power} \div 0.46 \text{ Antenna Gain} = 0.543 \text{ kW Antenna Input Power}$

$0.543 \text{ kW Antenna Input Power} \div 0.865 \text{ Transmission Line Efficiency} \div 0.9928 \text{ Connector Efficiency} = 0.633 \text{ kW Transmitter Power Output}^*$

* 0.633 kW Transmitter Power Output rounds to 0.630 kW per §73.212(a)