

Transmitter Power Output Calculation

Translator W257EI

Channel 257D – 99.3 MHz

0.250 kW ERP – 316 m COR AMSL

Kannapolis, North Carolina

October 2019

Given:

Effective Radiated Power: 0.250 kW

Antenna Gain (Multiplier): 3.2

Transmission Line Efficiency: 73.79%

Connector Efficiency: 99.28%

Jumper Efficiency: 95.6%

Calculation:

0.250 kW Effective Radiated Power \div 3.2 Antenna Gain = 0.078125 kW Antenna Input Power

0.078125 kW Antenna Input Power \div 0.7379 Transmission Line Efficiency \div 0.9928 Connector Efficiency \div 0.956 Jumper Efficiency = 0.112 kW Transmitter Power Output*

* 0.112 kW Transmitter Power Output rounds to 0.110 kW per §73.212(a).