

Transmitter Power Output Calculation

Translator W290DG

Channel 290D – 105.9 MHz
0.250 kW ERP – 168.2 m COR AMSL
Dothan, Alabama
April 2022

Given:

Effective Radiated Power: 0.250 kW
Antenna Gain (Multiplier): 1.0
Transmission Line Efficiency: 75.55%
Jumper Efficiency: 99.40%

Calculation:

$0.250 \text{ kW Effective Radiated Power} \div 1.0 \text{ Antenna Gain} = 0.250 \text{ kW Antenna Input Power}$

$0.250 \text{ kW Antenna Input Power} \div 0.7555 \text{ Transmission Line Efficiency} \div 0.9940 \text{ Jumper Efficiency} = 0.3329 \text{ kW Transmitter Power Output}^*$

* 0.3329 kW Transmitter Power Output rounds to 0.330 kW per §73.212(a).