

Transmitter Power Output Calculation

KLRC (FM) Auxiliary Antenna

Channel 215C1 – 90.9 MHz
4.1 kW ERP – 455.0 m COR AMSL
Tahlequah, Oklahoma
July 2020

Given:

Effective Radiated Power: 4.1 kW
Antenna Gain (Multiplier): 2.1
Transmission Line Efficiency: 82.04%
Connector Efficiency: 98.55%

Calculation:

4.1 kW Effective Radiated Power \div 2.1 Antenna Gain = 1.9524 kW Antenna Input Power

1.9524 kW Antenna Input Power \div 0.8204 Transmission Line Efficiency \div 0.9855 Connector Efficiency = 2.41 kW Transmitter Power Output*

* 2.41 kW rounds to 2.40 kW per §73.212(a)