

Transmitter Power Output Calculation

KLAB (FM) Auxiliary Antenna

Channel 266C3 – 101.1 MHz
5.1 kW ERP – 455.0 m COR AMSL
Siloam Springs, Arkansas
July 2020

Given:

Effective Radiated Power: 5.1 kW
Antenna Gain (Multiplier): 2.1
Transmission Line Efficiency: 82.99%
Connector Efficiency: 98.62%

Calculation:

5.1 kW Effective Radiated Power \div 2.1 Antenna Gain = 2.4286 kW Antenna Input Power

2.4286 kW Antenna Input Power \div 0.8299 Transmission Line Efficiency \div 0.9862 Connector Efficiency = 2.97 kW Transmitter Power Output*

* 2.97 kW rounds to 3.0 kW per §73.212(a)