

Transmitter Power Output Calculation

Translator W229DL

Channel 229D – 93.7 MHz

0.250 kW ERP – 299.3 m COR AMSL

China Grove, North Carolina

March 2021

Given:

Effective Radiated Power: 0.250 kW

Antenna Gain (Multiplier): 0.9

Transmission Line Efficiency: 65.31%

Isocoil Efficiency: 81.3% (0.9 dB loss)

6 Connectors (0.05 dB loss each) Efficiency: 93.3%

Calculation:

0.250 kW Effective Radiated Power \div 0.9 Antenna Gain = 0.2778 kW Antenna Input Power

0.2778 kW Antenna Input Power \div 0.6531 Transmission Line Efficiency \div 0.813 Isocoil Efficiency \div 0.933 Connector Efficiency = 0.561 kW Transmitter Power Output*

* 0.561 kW Transmitter Power Output rounds to 0.560 kW per §73.212(a)