

Transmitter Power Output Calculation KTGW (FM)

Channel 219C3 – 91.7 MHz

12 kW ERP – 116 m HAAT

Fruitland, New Mexico

September 2019

Given:

Effective Radiated Power: 12 kW

Antenna Gain (Multiplier): 6.37

Transmission Line Efficiency: 94.62%

Combiner Efficiency: 92.05% (0.36 dB Loss)

Calculation:

12 kW Effective Radiated Power \div 6.37 Antenna Gain = 1.884 kW Antenna Input Power

1.884 kW Antenna Input Power \div 0.9462 Transmission Line Efficiency \div 0.9205 Combiner Efficiency = 2.16 kW Transmitter Power Output*

* 2.16 kW Transmitter Power Output rounds to 2.15 kW per §73.212(a).