

# TPO Calculation Summary

## Main Antenna Operation

Call letters: W268CA  
 City of License: Jackson, MI  
 Frequency: CH268D (101.5 MHz)  
 File No: BNPFT-20130808AAV  
 Facility ID: 147722  
 Applicant: Jackson Radio Works, Inc.

Operating Effective Radiated Power (ERP): 0.250 kW

Antenna Make: Nicom  
 Antenna Model: BKG77-1DA  
 No of Elements: One (1)  
 Antenna COR AGL: 45 meters AGL  
 Antenna COR AMSL: 335 meters AMSL  
 Max Input Power: 2.0 kW  
 Power Gain: 0.498

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain: } -3.028 \text{ dB}$

Calculated Antenna Input Power: 0.502 kW

Transmitter Make/Model: BW-1000

Transmitter Rated Power: 1.000 kW

### System Loss Info:

Description	Component Make/Model	Length	Loss
7/8 Inch End Connector	Generic (1 @ 0.02 dB each)		-0.020 dB
Main Antenna Feedline (Tower)	Andrew 7/8" LDF5-50A (Foam) (0.366 dB/100 ft)	160 ft	-0.586 dB
7/8 Inch End Connector	Generic (1 @ 0.02 dB each)		-0.020 dB
Isocoupler	Kintronic FMC1.5		-0.200 dB
7/8 Inch End Connector	Generic (1 @ 0.02 dB each)		-0.020 dB
Main Antenna Feedline (Ground 1)	Andrew 7/8" LDF5-50A (Foam) (0.366 dB/100 ft)	15 ft	-0.055 dB
7/8 Inch End Connector	Generic (1 @ 0.02 dB each)		-0.020 dB
Diplexer/Combiner	Microwave Filter Custom (Cavity Filter)		-1.630 dB
7/8 Inch End Connector	Generic (1 @ 0.02 dB each)		-0.020 dB
Main Antenna Feedline (Ground 2)	Andrew 7/8" LDF5-50A (Foam) (0.366 dB/100 ft)	15 ft	-0.055 dB
7/8 Inch End Connector	Generic (1 @ 0.02 dB each)		-0.020 dB

TOTAL SYSTEM GAIN/LOSS: -5.673 dB

$1 / [10^{(-5.673/10)}] = \text{CALCULATED TRANSMITTER POWER OUTPUT: } 0.923 \text{ kW}$