

TPO Calculation Summary

Main Antenna Operation

Call letters: W284DF
City of License: Petosky, MI
Frequency: 284 (104.7 MHz)
File No: BNPFT-20171201ADF
Facility ID: 200459
Applicant: Macdonald Garber Broadcasting, Inc.

Operating Effective Radiated Power (ERP): 0.250 kW

Antenna Make: Nicom
Antenna Model: BKG77
No of Elements: 1
Antenna COR AGL: 144 meters AGL
Antenna COR AMSL: 524 meters AMSL
Power Gain: 0.47

Log[power gain]*10 = Antenna Gain: -3.279 dBd
Calculated Antenna Input Power: 0.532 kW

System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
Type N End Connector	Generic (5@0.02 dB each)		-0.100 dBd
Main Feedline (Tower)	RFS LCF114(1-1/4") (0.256 dB/100 ft)	472 ft	-1.208 dBd
Filter Loss	Generic (.3 dB)		-0.200 dBd
Main Feedline (Ground 1)	RFS LCF114(1-1/4") (0.256 dB/100 ft)	30 ft	-0.077 dBd

TOTAL SYSTEM GAIN/LOSS: -4.86 dBd
 $1 / [10^{(-4.86/10)}] =$ CALCULATED TRANSMITTER POWER OUTPUT: 0.766 kW

Munn-Reese
Broadcast Engineering Consultants
Coldwater, MI 49036