

TPO Calculation Summary

Main Antenna Operation

Call letters: WZTC(FM)
City of License: Traverse City, MI
Frequency: CH283A (104.5 MHz)
File No: BPH-19941020MH
Facility ID: 65931
Applicant: The MacDonald Broadcasting Company

ANTENNA INFO

Operating Effective Radiated Power (ERP): 1.75 kW

Antenna Make: SWR Inc.
Antenna Model: FM1-R4
No of Elements: Four (4)
Antenna COR AGL: 91 meters AGL
Antenna COR AMSL: 419 meters AMSL
Power Gain: 2.1

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain: } 3.22 \text{ dB}$

System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
Generic End Connector	1 at 0.02 dB each		-0.02 dB
Main Transmission Line	Andrew 1 5/8" AVA7-50 (0.201 dB/100 ft)	380 ft	-0.764 dB
Generic End Connector	1 at 0.02 dB each		-0.02 dB

TOTAL SYSTEM GAIN/LOSS: 2.416 dB
 $1 / [10^{(2.416/10)} / \text{ERP}] = \text{CALCULATED TRANSMITTER POWER OUTPUT: } 1.003 \text{ kW}$

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