

# TPO Calculation Summary

## Main Antenna Operation - w/addition of Bandpass filter

Call letters: W262DM  
City of License: Elyria, OH  
Frequency: CH262D (100.3 MHz)  
File No:  
Facility ID: 202991  
Applicant: Elyria-Lorain Broadcasting Co.

Operating Effective Radiated Power (ERP): 0.025 kW

Antenna Make: Nicom  
Antenna Model: BKG77-2  
No of Elements: 2  
Antenna COR AGL: 200 meters AGL  
Antenna COR AMSL: 455 meters AMSL  
Power Gain: 0.9

Log[power gain]\*10 = Antenna Gain: -0.458 dBd  
Calculated Antenna Input Power: 0.028 kW

### System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
Jumper to Antenna	Andrew 1/2" Foam (1.038 dB/100 ft)	6 ft	-0.062 dBd
Connector	Generic (2@0.02db/ea)		-0.040 dBd
Feedline	RFS 7/8" Cellfelx (0.345 dB/100 ft)	938 ft	-3.236 dBd
Connector	Generic (2@0.02db/ea)		-0.040 dBd
Jumper to Polyphasor	Andrew 7/8" Superflex (0.345 dB/100 ft)	6 ft	-0.021 dBd
Polyphasor	IS -50NX-CO-MA		-0.100 dBd
Connector	Generic (2@0.02db/ea)		-0.040 dBd
Jumper to Transmitter	Andrew 7/8" Superflex (0.345 dB/100 ft)	10 ft	-0.035 dBd
Connector	RFS 7/8" to N Connector (2 @ .05 db ea)		-0.100 dBd
Connector	Generic (4@0.02db/ea)		-0.080 dBd
Band Pass Filter			-0.650 dBd
Jumpers	Andrew 1/2" Foam (1.038 dB/100 ft)	20 ft	-0.208 dBd

TOTAL SYSTEM GAIN/LOSS: -5.069 dBd  
 $1 / [10^{(-5.069/10)} / \text{ERP}] =$  CALCULATED TRANSMITTER POWER OUTPUT: 0.080 kW