

TPO Calculation Summary

Main Antenna Operation

Call letters: WYXL(FM)
 City of License: Ithaca, NY
 Frequency: CH247B (97.3 MHz)
 File No: License Modification
 Facility ID: 18051
 Applicant: Saga Communications of New England, LLC

Operating Effective Radiated Power (ERP): 26.000 kW

Antenna Make: Dielectric
 Antenna Model: SKM-4CR
 No of Elements: Four (4)
 Antenna COR AGL: 102 meters AGL
 Antenna COR AMSL: 644 meters AMSL
 Max Input Power: 18.0 kW
 Power Gain: 2.039
 $\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain: } 3.094 \text{ dB}$
 Calculated Antenna Input Power: 12.751 kW

System Loss Info:

Description	Component Make/Model	Length	Loss
3 Inch End Connector	Generic (1@0.01 dB each)		-0.010 dB
Main Antenna Feedline (Tower)	Andrew 3" HJ8-50B (Air) (0.142 dB/100 ft)	375 ft	-0.533 dB
3 Inch End Connector	Generic (1@0.01 dB each)		-0.010 dB
Antenna Switch	Dielectric 3 1/8" DC 60000-300 Series		-0.100 dB
3 Inch End Connector	Generic (1@0.01 dB each)		-0.010 dB
Wattmeter Line Section	Bird™ BPM-E3(3 1/8" Flanged) (BPME 3MVM)		-0.050 dB
3 Inch End Connector	Generic (1@0.01 dB each)		-0.010 dB
90 Degree Mitre Elbow	3 1/8" DIE Part #375-017		-0.010 dB
3 Inch End Connector	Generic (1@0.01 dB each)		-0.010 dB
Main Antenna Feedline (Ground)	Andrew 3" HJ8-50B (Air) (0.142 dB/100 ft)	10 ft	-0.014 dB
3 Inch End Connector	Generic (1@0.01 dB each)		-0.010 dB

TOTAL SYSTEM GAIN/LOSS: 2.327 dB
 $1 / [10^{(2.327/10)}] = \text{CALCULATED TRANSMITTER POWER OUTPUT: } 15.213 \text{ kW}$