

TPO Calculation Summary

Main Antenna Operation

Call letters: W231BR
City of License: Manchester, NH
Frequency: CH231D - 94.1 MHz
File No: Special Temporary Authority (STA) Proposal
Facility ID: 140894
Applicant: Saga Communications of New England, LLC

Operating Effective Radiated Power (ERP): 0.170 kW

Antenna Make: Scala
Antenna Model: CLFM(H) -1-Bay DA
No of Elements: one
Antenna COR AGL: 18 meters AGL
Antenna COR AMSL: 411 meters AMSL
Power Gain: 2.755

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain:}$ 7.000 dB

Calculated Antenna Input Power: 0.034 kW

System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
1/2 Inch End Connector(s)	Generic (3@0.02 dB each)		-0.020 dB
Antenna Jumper Cables	RG8 (3 sections of 15 feet) (1.897 dB/100 ft)	45 ft	
1/2 Inch End Connector(s)	Generic (3@0.02 dB each)		
Power Divider	PDL3-333/50 Power Divide (3-way)		
1/2 Inch End Coupler	Generic (1@0.02 dB each)		
Main Antenna Feedline	Andrew 1/2" LDF4-50A (Foam) (0.641 dB/100 ft)	92 ft	
1/2 Inch End Coupler	Generic (1@0.02 dB each)		
Transmitter Jumper Cable	RG8 (1.897 dB/100 ft)	6 ft	
7/8 Inch End Connector	Generic (1@0.02 dB each)		

TOTAL SYSTEM GAIN/LOSS: 6.236 dB

$1 / [10^{(6.236 \text{ dB}/10)}] = \text{CALCULATED TRANSMITTER POWER OUTPUT:}$ 0.040 kW

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