

TPO Calculation Summary

Main Antenna Operation

Call letters: CH229D (formerly K230AT)
City of License: Winterset, IA
Frequency: CH229D (93.7 MHz)
File No: BMPFT-20150416AAF
Facility ID: 151706
Applicant: Saga Communications of Iowa, LLC

Operating Effective Radiated Power (ERP): 0.250 kW

Antenna Make: Nicom USA Inc.

Antenna Model: BKY3/P-1(NDA)

No of Elements: One (1)

Antenna COR AGL: 12 meters AGL

Antenna COR AMSL: 311 meters AMSL

Max Input Power: 1.0 kW

Power Gain: 2.81

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain: } 4.5 \text{ dB}$

Calculated Antenna Input Power: 0.089 kW

System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
1/2 Inch End Connector	AMP-822021006 (1 @ 0.02 dB each)		-0.020 dB
Main Antenna Feedline	Belden 9913 (RG8/U foam) (1.400 dB/100 ft)	50 ft	-0.700 dB
1/2 Inch End Connector	AMP-822021006 (1 @ 0.02 dB each)		-0.020 dB

TOTAL SYSTEM GAIN/LOSS: 3.747 dB

$1 / [10^{(3.747/10)}] = \text{CALCULATED TRANSMITTER POWER OUTPUT: } 0.105 \text{ kW}$