

TPO Calculation Summary

Main Antenna Operation

Call letters: K283CC
City of License: Des Moines, IA
Frequency: CH283D (104.5 MHz)
File No: BPFT-20160314ABJ
Facility ID: 140930
Applicant: Saga Communications of Iowa, LLC

Operating Effective Radiated Power (ERP): 0.250 kW

Antenna Make: Nicom USA, Inc. (NIC)

Antenna Model: BKG77/1L(NDA)

No of Elements: One (1)

Antenna COR AGL: 270 meters AGL

Antenna COR AMSL: 561 meters AMSL

Max Input Power: 1.0 kW

Power Gain: 0.47

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain: } -3.279 \text{ dBd}$

Calculated Antenna Input Power: 0.532 kW

System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
Main Feedline (Tower)	Andrew LCF78-50JA (7/8" foam) (0.350 dB/100 ft)	916 ft	-3.206 dBd

TOTAL SYSTEM GAIN/LOSS: -6.49 dBd

$1 / [10^{(-6.49/10)}] = \text{CALCULATED TRANSMITTER POWER OUTPUT: } 1.113 \text{ kW}$