

TPO Calculation Summary

Main Antenna Operation

Call letters: W277AK
City of License: Fort Wayne, IN
Frequency: CH277D (103.3 MHz)
File No: BPFT-20140515AFM
Facility ID: 83637
Applicant: Adams Radio of Fort Wayne, LLC

Operating Effective Radiated Power (ERP): 0.250 kW

Antenna Make: Nicom USA Inc.
Antenna Model: BKG77/1
No of Elements: One (1)
Antenna COR AGL: 96 meters AGL
Antenna COR AMSL: 330 meters AMSL
Power Gain: 0.47

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain: } -3.279 \text{ dB}$
Calculated Antenna Input Power: 0.532 kW

System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
7/8 Inch End Connector/Adaptor	Generic (1@0.02 dB each)		-0.020 dB
Main Antenna Feedline (Tower)	Andrew 7/8" AVA5-50 (Vitual Air) (0.344 dB/100 ft)	350 ft	-1.204 dB
7/8 Inch End Connector/Adaptor	Generic (1@0.02 dB each)		-0.020 dB
Diplexer Side Jumper	Andrew 1/2" LDF4-50A (Foam) (0.672 dB/100 ft)	6 ft	-0.040 dB
1/2 Inch End Connector	Generic (1@0.02 dB each)		-0.020 dB
Diplexer	BEXT FDCSDC2 Diplexer		-0.280 dB
1/2 Inch End Connector	Generic (1@0.02 dB each)		-0.020 dB
Transmitter Side Jumper	Andrew 1/2" LDF4-50A (Foam) (0.672 dB/100 ft)	6 ft	-0.040 dB
1/2 Inch End Connector	Generic (1@0.02 dB each)		-0.020 dB

TOTAL SYSTEM GAIN/LOSS: -4.944 dB

$1 / [10^{(dB/10)/ERP}] = \text{CALCULATED TRANSMITTER POWER OUTPUT: } 0.780 \text{ kW}$