

TPO Calculation Summary

Main Antenna Operation

Call letters: W222CC (formerly W276CM)
City of License: Mansfield, OH
Frequency: CH222D (92.3 MHz)
File No: BMPFT-20151002AAE
Facility ID: 142508
Applicant: Franklin Communications, Inc.

Operating Effective Radiated Power (ERP): 0.250 kW

Antenna Make: Kathrein USA

Antenna Model: CA2-FM (Vertical Only)

No of Elements: One (1)

Antenna COR AGL: 65 meters AGL

Antenna COR AMSL: 415 meters AMSL

Max Input Power: 0.3 kW

Power Gain: 2.51

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain: } 3.997 \text{ dB}$

Calculated Antenna Input Power: 0.100 kW

System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
7/8 Inch End Connector	Generic (1@0.02 dB each)		-0.020 dB
Main Feedline	Andrew 7/8" LDF5-50A (7/8" Foam)	(0.349 dB/100 ft) 225 ft	-0.785 dB
7/8 Inch End Connector	Generic (1@0.02 dB each)		-0.020 dB
Transmitter Side Jumper	RG-214 (Foam)	(2.100 dB/100 ft) 10 ft	-0.210 dB
7/8 Inch End Connector	Generic (1@0.02 dB each)		-0.020 dB

TOTAL SYSTEM GAIN/LOSS: 2.94 dB

$1 / [10^{(2.94/10)}] = \text{CALCULATED TRANSMITTER POWER OUTPUT: } 0.127 \text{ kW}$