

# 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 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 kW