

# TPO Calculation Summary

## Main Antenna Operation

**Call letters:** W296AW.CP  
**City of License:** Mangonia Park, FL  
**Frequency:** CH296D (107.1 MHz)  
**File No:** BMPFT-20140306AHP  
**Facility ID:** 82621  
**Applicant:** Black Media Works, Inc.

**Operating Effective Radiated Power (ERP):** 0.250 kW

**Antenna Make:** Propagation Systems, Inc. (PSI)

**Antenna Model:** PSIFML-1A-DA

**No of Elements:** One (1)

**Antenna COR AGL:** 154 meters AGL

**Antenna COR AMSL:** 159 meters AMSL

**Max Input Power:** 1.5 kW

**Power Gain:** 0.53

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain:}$  -2.757 dBd

**Calculated Antenna Input Power:** 0.472 kW

### System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
1/2 Inch End Connector	Generic (1@0.02 dB each)		-0.020 dBd
Main Feedline (Upper Section)	Andrew LDF4-50A (1/2" Foam) (0.685 dB/100 ft)	148 ft	-1.014 dBd
1/2 Inch End Connector/Flange	Generic (1@0.02 dB each)		-0.020 dBd
1 1/4 Inch End Connector/Flange	Generic (1@0.02 dB each)		-0.020 dBd
Main Feedline (Lower Section)	RFS LCFS114-50JA-AO (1 1/4" Foam) (0.259 dB/100 ft)	597 ft	-1.546 dBd
1 1/4 Inch End Connector/Flange	Generic (1@0.02 dB each)		-0.020 dBd
1/2 Inch End Connector/Flange	Generic (1@0.02 dB each)		-0.020 dBd
Shivley Bandpass Filter	Shivley Model 2604-3A		-0.500 dBd
1/2 Inch End Connector/Flange	Generic (1@0.02 dB each)		-0.020 dBd
7/8 Inch End Connector/Flange	Generic (1@0.02 dB each)		-0.020 dBd
Transmitter Side Jumper	Andrew LDF5-50A (7/8" Foam) (0.380 dB/100 ft)	3 ft	-0.011 dBd
7/8 Inch End Connector/Flange	Generic (1@0.02 dB each)		-0.020 dBd

**TOTAL SYSTEM GAIN/LOSS:** -5.99 dBd

$1 / [10^{(-5.99/10)}] = \text{CALCULATED TRANSMITTER POWER OUTPUT:}$  0.993 kW