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## SYSTEM POWER ANALYSIS

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**W229DE**

**93.7 MHz.**

**Fond du Lac, WI**

### TRANSMISSION SYSTEM:

#### VERTICAL RUN:

**Type:** Andrew AVA5-50J 7/8 in. Foam Line  
**Length:** 100 feet  
**Attenuation:** 0.3306 dB/100-feet  
**Loss this section:** 0.331 dB

#### HORIZONTAL RUN:

**Type:** Andrew AVA5-50J 7/8 in. Foam Line  
**Length:** 90 feet  
**Attenuation:** 0.3306 dB/100 Feet  
**Loss this section:** 0.298 dB

### TOTAL TRANSMISSION SYSTEM:

**Total Attenuation:** 0.63 dB  
**Coax Efficiency:** 86.53% %  
**Coax Power Rating:** 7.94 kW  
**\*Coax Safety Factor:** 11.02 dB \*

### OTHER LOSSES AND DERATING INFO:

**Filter Loss:** 0.00 dB  
**Connector Loss:** 0.1 dB  
**Antenna Height AMSL:** 0 Ft  
**Ambient Temperature:** 68 °F  
**Derated for 1.3:1 VSWR** 6.11 kW  
**Derated for Elevation** 6.11 kW  
**Derated for Temperature** 6.11 kW  
**Safety Amount (Derate-TPO)** 5.48 kW \*\*

### STATION ERP:

**kW:** 0.25  
**dBk:** -6.02

### ANTENNA DETAIL

**Brand** Shively  
**Bays** 1  
**Spacing** 1

### ANTENNA POWER GAIN:

**Numeric:** 0.460  
**dBd:** -0.362

### ANTENNA INPUT POWER:

**kW:** 0.543  
**dBk:** -2.648

### Total System Losses:

**dBk:** 0.728

### TRANSMITTER POWER OUTPUT:

**kW:** 0.643  
**dBk:** -1.920

**Date:** 22-Aug-2018

Provided by Bobgroome.us who is not responsible for errors of any kind

\* Not including altitude, temperature and VSWR safety margin.

\*\* The kW Difference number should be over 0 to allow for a VSWR of 1.3:1 at the load.

The antenna gains are approximate; Not all makes have gains for all configurations.

This program does not check for the correct connectors nor antenna input power rating.

Errors occur for non logical arrays; ie: one bay half wave is not possible

\* & \*\* If cell/value is red, coax not large enough