

W230DG - Waite Park, MN
FacID# 202293 -- 93.9MHz
Effective Radiated Power = 225W
Exhibit #4 - TPO Calculation

<u>System Component</u>	<u>Length (ft)</u>	<u>Loss/100'</u>	<u>Gain/Loss</u>	<u>Units</u>
Antenna Shively 6832-2 -- Numeric Power Gain = .858			-0.66	dB
Transmission Line FLC-158-50J	460	-0.369	-1.70	dB
Kintronics Isolation Coil FMC-1.5			-0.20	dB
Transmission Line FLC-78-50J	28	-0.349	-0.10	dB
Transmission Line FSJ4-50B	15	-1.038	-0.16	dB
Kintronics Combiner FMC700W1.2K2K3C4C			-0.95	dB
Total system gain (loss)			-3.76	dB
Required TPO to achieve ERP	TPO = 225W/(antilog(-3.76/10))			<u>540 W</u>