

K298CN - Boise, ID
 FacID #142206, 107.5 MHz
 Transmission System Gain-Structure Computations
 Prepared May 2017 by Martin Stabbert, CPBE

Licensed ERP: **.099kW**

<u>System Component</u>		<u>Length</u>	<u>Loss/100'</u>	<u>Gain/Loss</u>	<u>Units</u>	<u>Notes</u>
Antenna (PSI FML-1A-HR-DA)	PG = 1.53			1.84	dB	spec from PSI
AVA5-50		140	-0.368	-0.5152	dB	spec
LDF4-50A		30	-0.688	-0.2064	dB	spec
Jumpers 1/2" Superflex - 3 at 3' each		9	-1.081	-0.09729	dB	spec
EMR BP Filter				-1.97	dB	measured
EMR Isolator				-0.53	dB	measured
Total Transmission Line Loss				-3.31889	dB	
Transmission Line Efficiency	Efficiency = $100 * (\text{antilog}(\text{loss}/10))$			46.6	%	
Total system gain				-1.47889	dB	
Required TPO to achieve proposed ERP	TPO = $.099\text{kW}/(\text{antilog}(-1.47889/10))$			139.2	W	