

ERP/TPo/Coax Calculator

Instructions: Fill in **red** values, view **results**
See "Antenna Gains" sheet for antenna efficiencies

Call sign:	K251BV
FIN:	140453
City of License:	Nephi, UT
Date:	8/28/2023
Your Name:	Beau Lund

Solve for	TPo	
Operating Frequency	98.1	MHz
Coax Type	Eupen 1/2" foam	
Model	EC4-50	
kW Rating	3.7	(at selected freq)
dB loss per 100'	0.6545	(at selected freq)
Efficiency per 100'	0.8601	(at selected freq)

Tpo	1.000	kW
Coax Length	150.0	Feet
Filter(s)	0.859	
Other Efficiency factors	0.991	(jumpers, etc)
Antenna Gain	0.900	(efficiency)
ERP	0.015	kW
Power at antenna input	0.017	kW
Overall coax efficiency	0.798	

Result: TPo = **0.025 kW**

Est TPo for -20 dBc HD	0.027 kW
Est TPo for -14 dBc HD	0.027 kW
Est TPo for -10 dBc HD	0.033 kW

Overall Transmitter Efficiency	72.0%	
Power voltage	120	VAC
Power factor	0.9	(typ TX is ≈ 0.9)
Phases	1	
Transmitter Power Draw	0.03	kW
Transmitter Power Draw	0.32	Amps
Transmitter Power Draw	0.04	KVA
Transmitter Heat Output	33	BTU
Transmitter Heat Output	0.00	AC Tons

TPo Percentages

90%	0.022 kW	101%	0.025 kW
92%	0.023 kW	102%	0.025 kW
94%	0.023 kW	103%	0.025 kW
96%	0.024 kW	104%	0.026 kW
98%	0.024 kW	105%	0.026 kW

NOTES:

Bext FDCSDC03
6 Ft, 1/2 Jumper
Nicom BKG77/2M
CP