ERP/TPo/Coax Calculator

Instructions: Fill in red values, view results

See "Antenna Gains" sheet for antenna efficiencies

Call sign:	**K269GH**
FIN:	**140501**
City of License:	Nephi, UT
Date:	8/28/2023
Your Name:	Beau Lund

Solve for	**TPo**	
Operating Frequency	**101.7**	MHz
Coax Type	**Eupen 1/2" foam**	
Model	EC4-50	
kW Rating	3.7	(at selected freq)
dB loss per 100'	0.6676	(at selected freq)
Efficiency per 100'	0.8575	(at selected freq)

Tpo	**1.000**	kW
Coax Length	**150.0**	Feet
Filter(s)	**0.863**	
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	0.794	

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

NOTES:

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

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

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