

Boost Converter Tests

1-)

14uH Inductor	Voltage In	Current In	Voltage Out	Current Out	Power In	Power Out	Efficiency (%)	Step-Up Ratio
1x60W120V Bulb	24.26	2.77	115.60	0.49	67.15	56.64	84.35	4.77
2x60W120V Bulbs	23.09	5.62	113.50	0.99	129.77	112.14	86.42	4.92
3x60W120V Bulbs	22.50	6.83	98.40	1.37	153.68	135.10	87.91	4.37

2-)

14uH Inductor								
After 20 Minutes (3 Bulbs)								
Voltage In	Current In	Voltage Out	Current Out	Power In	Power Out	Efficiency (%)	Temperature	Step-Up Ratio
22.44	6.82	98.5	1.37	153.04	135.34	88.43	40.4C	4.39

3-)

14uH Inductor								
After 30 Minutes (3 Bulbs)								
Voltage In	Current In	Voltage Out	Current Out	Power In	Power Out	Efficiency (%)	Temperature	Step-Up Ratio
22.36	6.86	99.4	1.38	153.39	137.07	89.36	46.6C	4.45

4-)

14uH Inductor								
After 40 Minutes (3 Bulbs)								
Voltage In	Current In	Voltage Out	Current Out	Power In	Power Out	Efficiency (%)	Temperature	Step-Up Ratio
22.32	6.88	99.3	1.38	153.56	136.84	89.11	49.6C	4.45

5-)

7uH Inductor	Voltage In	Current In	Voltage Out	Current Out	Power In	Power Out	Efficiency (%)	Step-Up Ratio
1x60W120V Bulb	24.79	2.93	111.10	0.48	72.63	52.77	72.65	4.48
2x60W120V Bulbs	23.96	5.99	108.60	0.96	143.52	103.71	72.26	4.53
3x60W120V Bulbs	23.07	9.38	108.60	1.44	216.40	155.95	72.07	4.71

6-)

8uH Inductor	Voltage In	Current In	Voltage Out	Current Out	Power In	Power Out	Efficiency (%)	Step-Up Ratio
3x60W120V Bulbs	11.31	7.03	60.00	1.04	79.51	62.40	78.48	5.31
3x60W120V Bulbs + TMM	11.03	8.93	59	1.3	98.50	76.70	77.87	5.35

7-)

8uH Inductor	Voltage In	Current In	Voltage Out	Current Out	Power In	Power Out	Efficiency (%)	Step-Up Ratio
3x60W120V Bulbs	24.70	3.07	62.10	1.06	75.78	65.52	86.46	2.51
3x60W120V Bulbs + TMM	24.49	3.88	61.9	1.33	94.97	82.20	86.55	2.53

TMM = Treadmill Motor

	Bad
	Less Bad
	Good

By: Argenis Bilbao

Sheet1

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