

80 PLUS Verification and Testing Report

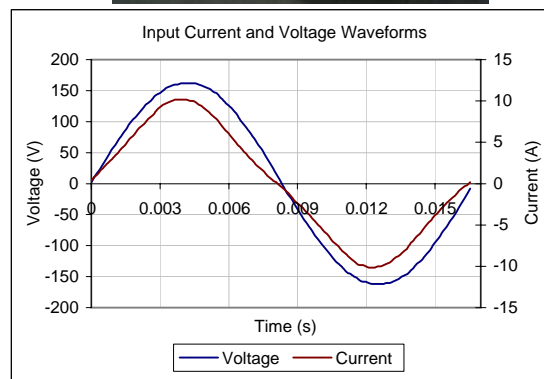
TYPICAL EFFICIENCY (50% Load):	86.96%
AVERAGE EFFICIENCY :	85.19%
80 PLUS COMPLIANT:	YES



Ecos ID #	929
Manufacturer	THERMALTAKE
Model Number	W0104 Toughpower 650 AP
Serial Number	NA
Year	2008
Type	ATX12V & EPS12V
Test Date	7/11/2008

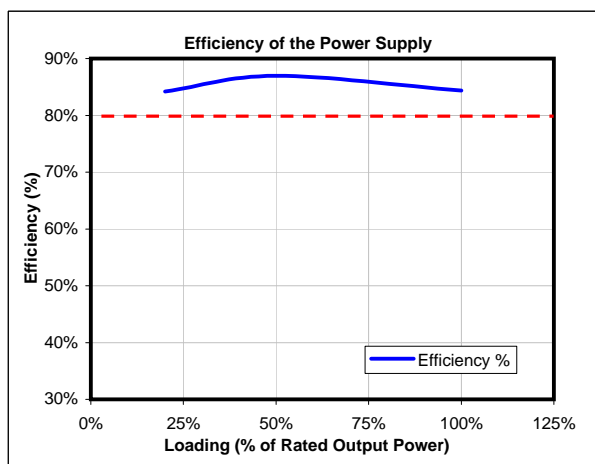
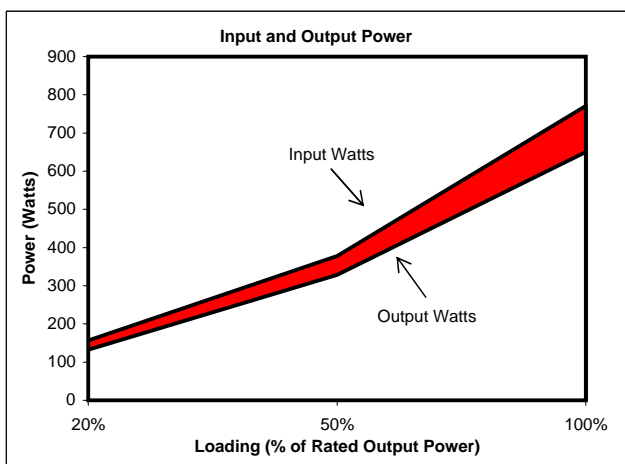
Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	8	Amps
Input Frequency	47-63	Hz
Rated Output Power	650	Watts

Note: All measurements were taken with input voltage at 115 V nominal and 60 Hz.



Input AC Current Waveform (ITHD = 11.29%, 50% Load)

I _{RMS} A	PF	I _{THD} (%)	Load (%)	Fraction of Load	Input Watts	DC Terminal Voltage (V)/ DC Load Current (A)					Output Watts	Efficiency %
						12V (cumulative of 12V1, 12V2, etc.)	-12V	3.3V	5V*	5VSB		
1.41	0.97	14.0%	20%	Light	157	12.2/8.8	12.2/0.1	3.3/2.7	5.2/2.6	5.1/0.4	132	84.22%
3.32	0.99	11.3%	50%	Typical	378	12.1/22	12.3/0.2	3.3/6.9	5.1/6.4	5.1/0.9	328	86.96%
6.74	0.99	9.9%	100%	Full	771	12/43.9	12.4/0.5	3.2/13.7	5/12.8	5/1.8	650	84.38%



These tests were conducted by a third party independent testing firm on behalf of the 80 PLUS® Program. 80 PLUS is a certification program to promote highly-efficient power supplies (greater than 80% efficiency in the active mode) in technology applications. <http://www.80plus.org/>

