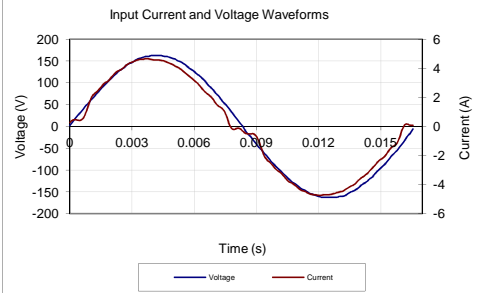


80 PLUS Verification and Testing Report

TYPICAL EFFICIENCY (50% Load):	87.07%
AVERAGE EFFICIENCY :	85.37%
80 PLUS COMPLIANT:	YES



Ecos ID #	3307
Manufacturer	Powercool
Model Number	PCB-650BKMOD
Serial Number	N/A
Year	2012
Type	ATX12V
Test Date	10/15/12

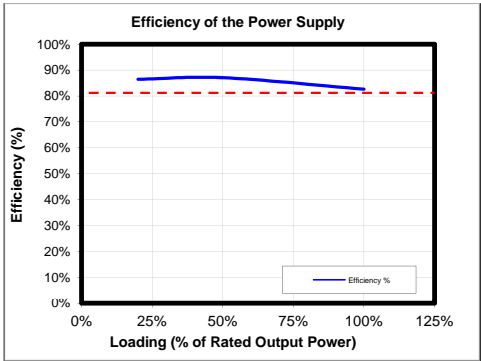
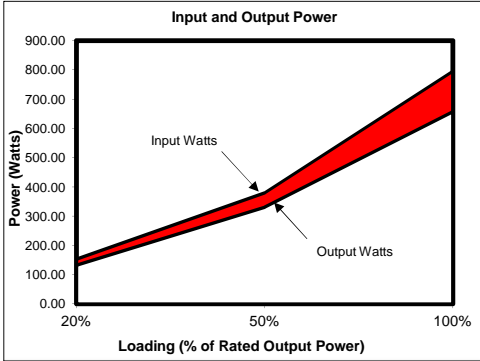


Input AC Current Waveform (ITHD = 7.8%, 50% Load)

Rated Specifications	Value	Units
Input Voltage	110/220	Volts
Input Current	N/A	Amps
Input Frequency	60/50	Hz
Rated Output Power	650	Watts

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

I _{RMS} A	PF	I _{THD} (%)	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
0.72	0.98	9.13%	10%	80.70	12.2/4.3	11.6/0	3.4/1.4	5.1/1.4	5.1/0.2	66.54	82.45%
1.37	0.97	19.93%	20%	153.55	12.2/8.6	11.6/0.1	3.4/2.8	5.1/2.8	5.1/0.5	132.71	86.43%
3.32	0.99	7.80%	50%	380.00	12.2/21.6	11.6/0.2	3.4/7	5/7	5.1/1.1	330.87	87.07%
6.94	1.00	6.92%	100%	796.20	12.1/43.2	11.7/0.5	3.4/14	5/13.9	5/2.2	657.66	82.60%



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/>

