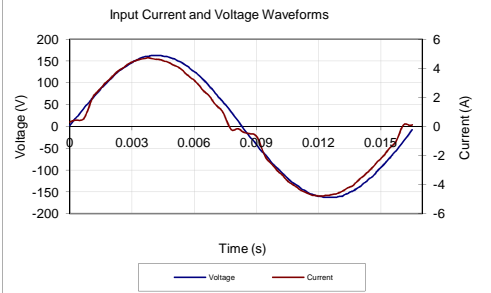


80 PLUS Verification and Testing Report

TYPICAL EFFICIENCY (50% Load):	87.27%
AVERAGE EFFICIENCY :	85.58%
80 PLUS COMPLIANT:	YES



Ecos ID #	3306
Manufacturer	Powercool
Model Number	PCB-650BK
Serial Number	NA
Year	2012
Type	ATX12V
Test Date	10/12/12

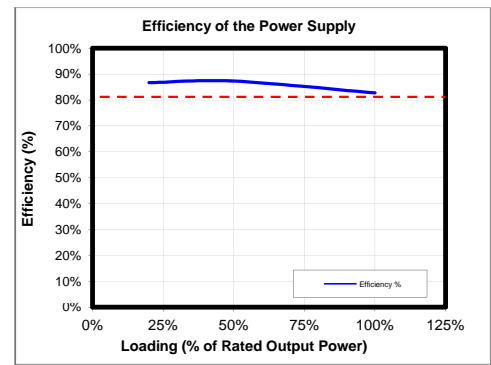
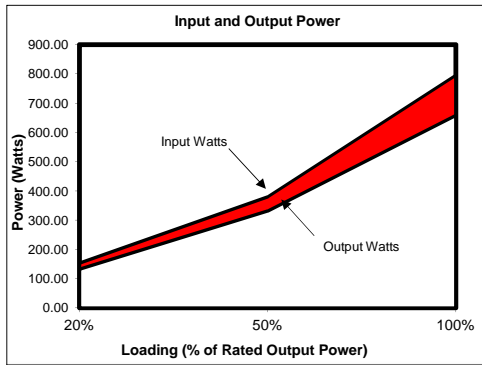


Rated Specifications	Value	Units
Input Voltage	110-220	Volts
Input Current	NA	Amps
Input Frequency	60/50	Hz
Rated Output Power	650	Watts

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

Input AC Current Waveform (ITHD = 9.08%, 50% Load)

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
0.71	0.98	6.87%	10%	80.43	12.2/4.3	11.6/0	3.4/1.4	5.1/1.4	5.1/0.2	66.61	82.81%
1.37	0.97	19.19%	20%	153.32	12.2/8.6	11.6/0.1	3.4/2.8	5.1/2.8	5.1/0.5	132.90	86.68%
3.32	0.99	9.08%	50%	379.80	12.2/21.6	11.6/0.2	3.4/7	5.1/7	5.1/1.1	331.44	87.27%
6.95	1.00	7.90%	100%	796.00	12.2/43.2	11.6/0.5	3.4/14	5/13.9	5/2.2	658.91	82.78%



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/>

