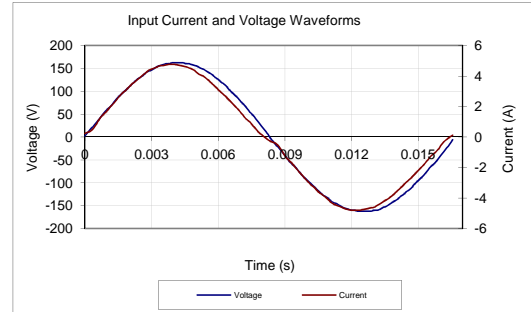


80 PLUS Verification and Testing Report

TYPICAL EFFICIENCY (50% Load):	85.88%
AVERAGE EFFICIENCY :	84.23%
80 PLUS COMPLIANT:	YES



Ecos ID #	4083
Manufacturer	Antec, Inc
Model Number	VPF650
Serial Number	N/A
Year	2014
Type	ATX12V,EPS12V
Test Date	9/17/14

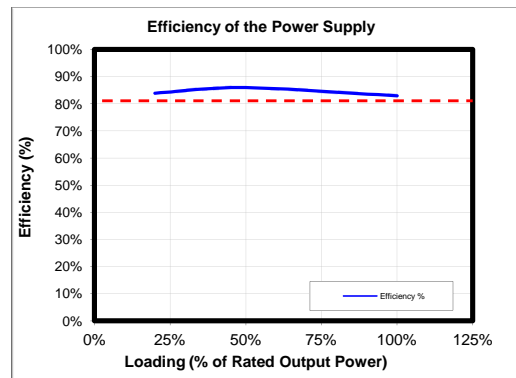
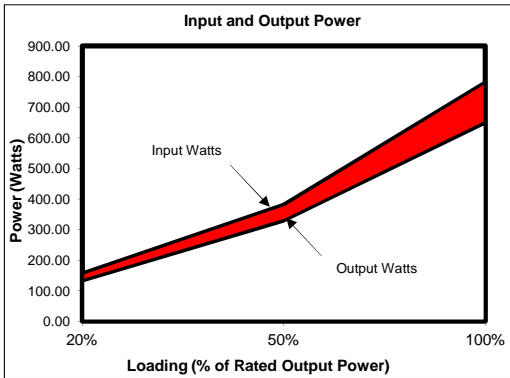


Input AC Current Waveform (ITHD = 5.9%, 50% Load)

Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	10-5	Amps
Input Frequency	47-63	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.)						
0.73	0.99	10.73%	10%	82.50	12.2/4.5	11.9/0	3.4/1.2	5.1/1.2	5.1/0.3	66.25	80.30%
1.39	0.99	11.92%	20%	157.80	12.2/8.9	11.9/0.1	3.3/2.4	5.1/2.4	5.1/0.5	132.40	83.90%
3.34	1.00	5.90%	50%	382.90	12.1/22.3	11.9/0.2	3.3/6	5/5.9	5/1.2	328.82	85.88%
6.82	1.00	4.82%	100%	783.20	12.1/44.4	12/0.4	3.3/11.9	5/11.8	4.9/2.5	649.45	82.92%



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/>

