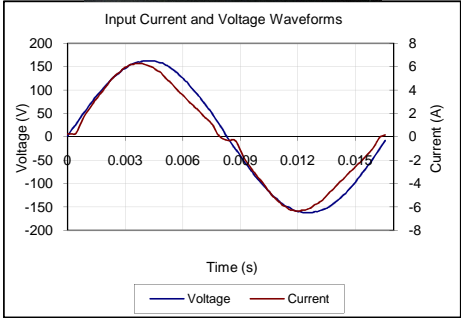


80 PLUS Verification and Testing Report

TYPICAL EFFICIENCY (50% Load):	86.15%
AVERAGE EFFICIENCY :	84.47%
80 PLUS COMPLIANT:	YES



Ecos ID #	1537
Manufacturer	IN WIN DEVELOPMENT INC.
Model Number	IP-S450EQ3-2
Serial Number	66195017300092
Year	2009
Type	ATX12V
Test Date	7/7/2009

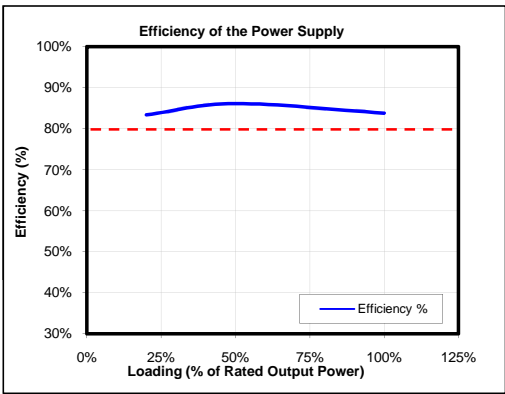
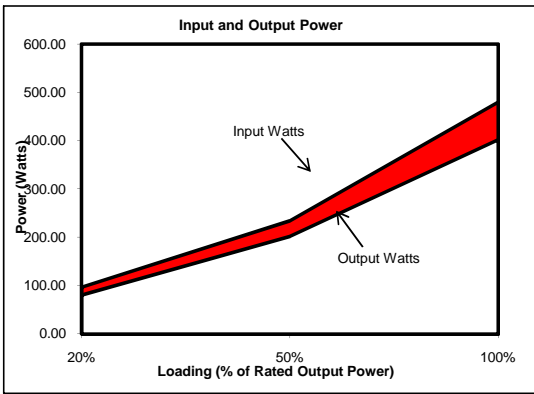


Input AC Current Waveform (I_{THD} = 11.9%, 50% Load)

Rated Specifications	Value	Units
Input Voltage	115-230	Volts
Input Current	8	Amps
Input Frequency	60/50	Hz
Rated Output Power	450	Watts

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

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		
0.87	0.9653	24.45%	20%	Light	96.90	12.1/4.6	12/0.1	3.3/3.4	5.1/2.1	5/0.5	80.83	83.41%
2.06	0.9901	11.90%	50%	Typical	234.53	12.1/11.5	12/0.1	3.3/8.5	5/5.3	5/1.2	202.05	86.15%
4.21	0.9909	10.64%	100%	Full	480.20	12.1/23	12/0.3	3.3/17	5/10.7	5/2.3	402.60	83.84%



These tests were conducted as a part of the 80 PLUS program. 80 PLUS is a computer buy-down program to promote high-efficiency power supplies (greater than 80% efficiency in the active mode) in desktop computers and desktop-derived servers.



Tested by Electric Power Research Institute, Knoxville, TN.