

## 80 PLUS Verification and Testing Report

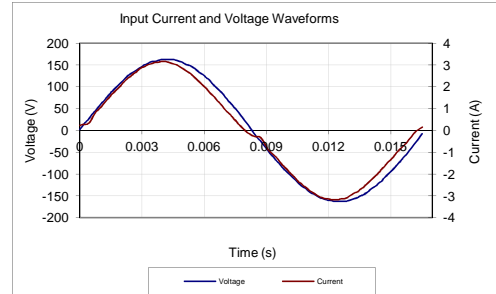
TYPICAL EFFICIENCY (50% Load):	90.48%
AVERAGE EFFICIENCY :	89.40%
80 PLUS COMPLIANT:	YES



Ecos ID #	3659
Manufacturer	FSP TECHNOLOGY INC.
Model Number	AS-450
Serial Number	NA
Year	2013
Type	ATX12V,EPS12V
Test Date	7/30/13

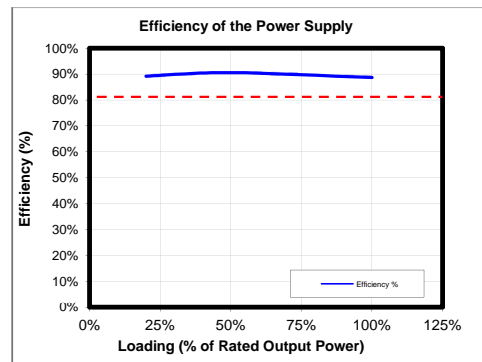
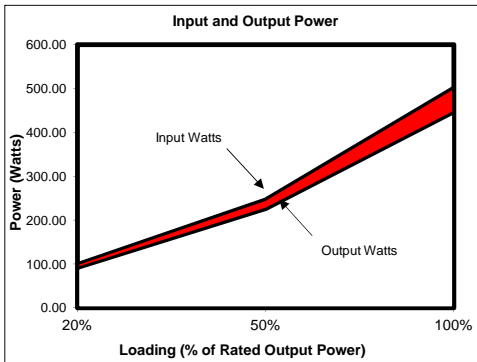
Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	6-3	Amps
Input Frequency	50-60	Hz
Rated Output Power	450	Watts

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



Input AC Current Waveform (ITHD = 8.28%, 50% Load)

I <sub>RMS</sub> A	PF	I <sub>THD</sub> (%)	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		
0.49	0.95	27.96%	10%	53.05	12/2.9	11.4/0	3.3/1.5	5.1/0.9	5/0.2	45.17	85.15%
0.90	0.98	19.94%	20%	101.14	12/5.7	11.4/0.1	3.3/2.9	5.1/1.8	5/0.5	90.14	89.12%
2.17	0.99	8.28%	50%	248.40	11.9/14.2	11.4/0.1	3.3/7.4	5.1/4.6	5/1.2	224.75	90.48%
4.38	1.00	5.44%	100%	503.30	11.9/28.4	11.4/0.2	3.3/14.7	5/9.1	4.9/2.4	445.98	88.61%



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/>

