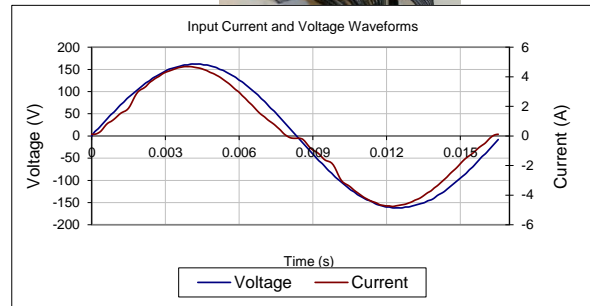


# 80 PLUS Verification and Testing Report

<b>TYPICAL EFFICIENCY (50% Load):</b>	<b>90.90%</b>
<b>AVERAGE EFFICIENCY :</b>	<b>89.56%</b>
<b>80 PLUS COMPLIANT:</b>	<b>YES</b>



Ecos ID #	4649
Manufacturer	SAMA
Model Number	HTX-650-B7
Serial Number	NA
Year	2016
Type	ATX12V
Test Date	7/27/16

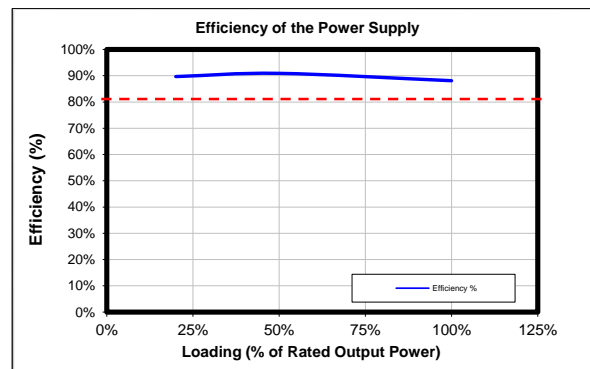
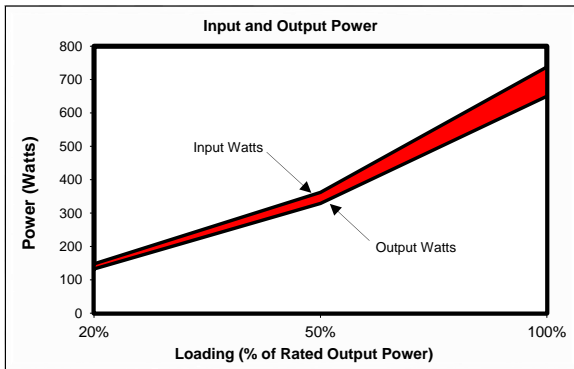


Input AC Current Waveform (ITHD = 11.31%, 50% Load)

Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	12-6	Amps
Input Frequency	47-63	Hz
<b>Rated Output Power</b>	<b>650</b>	<b>Watts</b>

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

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.)						
0.70	0.96	18.94%	10%	77.25	12.21/4.56	-12V	3.3V	5V	5Vsb	66.32	85.85%
1.31	0.98	13.38%	20%	147.68	12.19/9.13	12.04/0.05	3.4/2.72	5.06/1.7	5.1/0.53	132.43	89.67%
3.18	0.99	11.31%	50%	361.90	12.13/22.8	11.76/0.13	3.38/6.81	5.03/4.23	5.05/1.31	328.98	90.90%
6.46	0.99	8.20%	100%	737.80	12.04/45.4	12.02/0.26	3.33/13.58	4.97/8.44	4.96/2.63	650.04	88.11%



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/>

