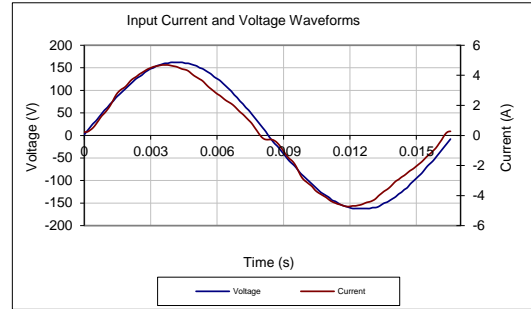


80 PLUS Verification and Testing Report

TYPICAL EFFICIENCY (50% Load):	87.22%
AVERAGE EFFICIENCY :	85.30%
80 PLUS COMPLIANT:	YES



ID #	3536.9
Manufacturer	Micro-Star International Co., Ltd.
Model Number	MAG A650BN
Serial Number	N/A
Year	2013
Type	ATX12V
Test Date	4/10/13

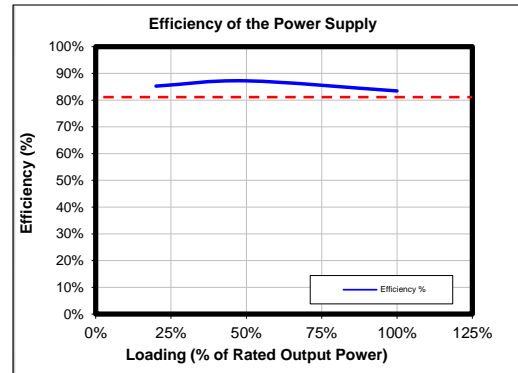
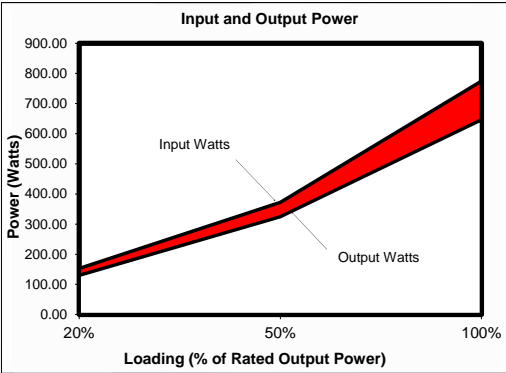


Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	10	Amps
Input Frequency	47-63	Hz
Rated Output Power	650	Watts

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

Input AC Current Waveform (ITHD = 8.41%, 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		
0.73	0.97	14.24%	10%	81.86	11.9/4.4	11.6/0	3.4/1.4	5.1/1.2	5.1/0.2	65.03	79.44%
1.34	0.99	10.21%	20%	152.59	11.9/8.9	11.6/0.1	3.4/2.8	5.1/2.4	5.1/0.4	130.08	85.25%
3.26	0.99	8.41%	50%	372.50	11.9/22.2	12/0.1	3.4/7	5.1/5.9	5/1.1	324.90	87.22%
6.78	0.99	6.18%	100%	774.50	11.9/44.3	11.7/0.3	3.3/14	5.1/11.8	4.9/2.2	646.26	83.44%



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/>