

80 PLUS Verification and Testing Report

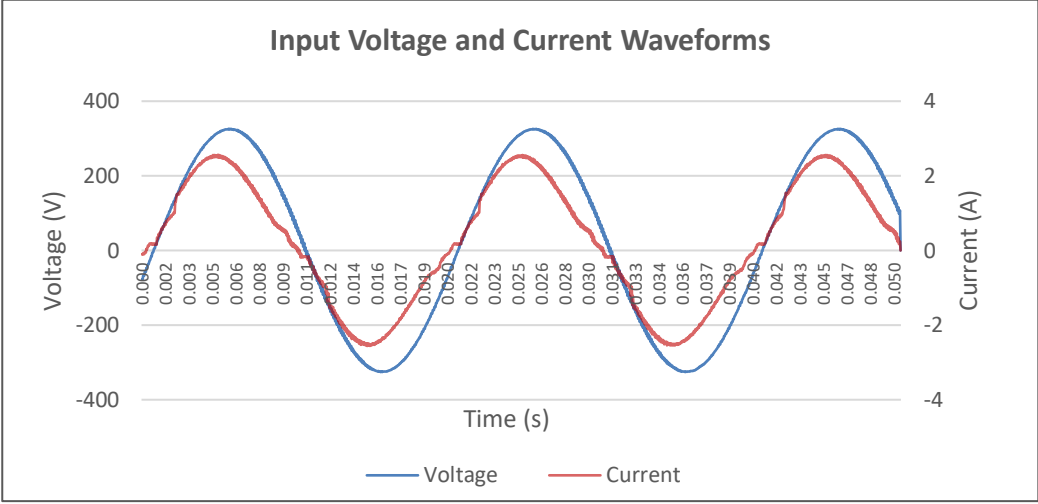
TYPICAL EFFICIENCY (50% Load):	87.45%
AVERAGE EFFICIENCY :	83.73%
80 PLUS COMPLIANT:	Standard



ID Number	EU-1090
Manufacturer	1st Player
Model Number	HA-650AC1
Serial Number	N/A
Type	ATX12V, EPS12V
Test Date	9/3/24

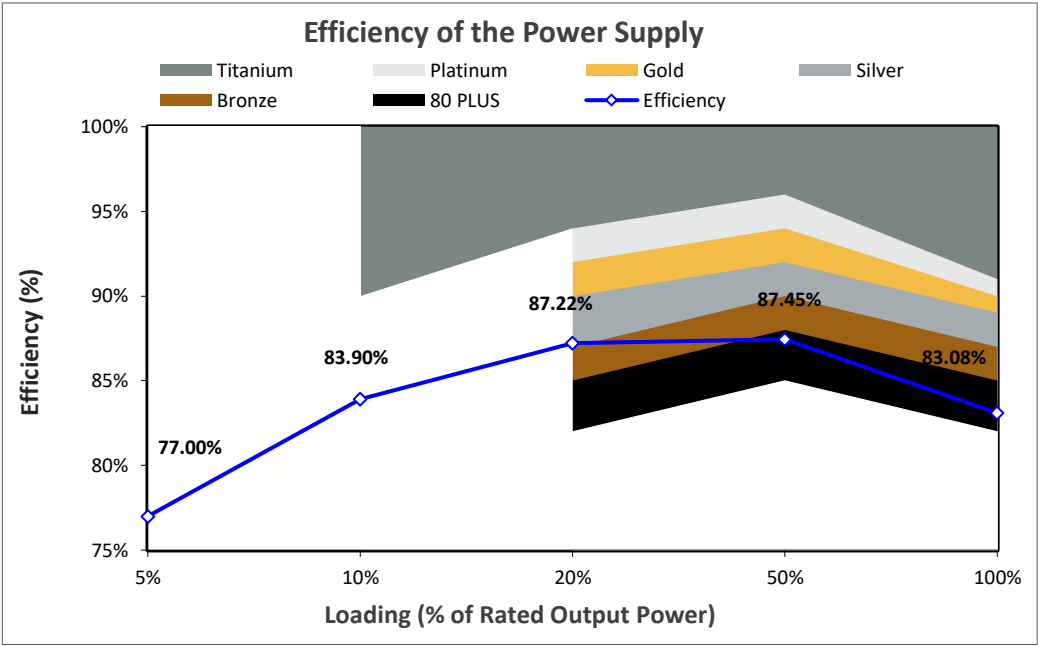
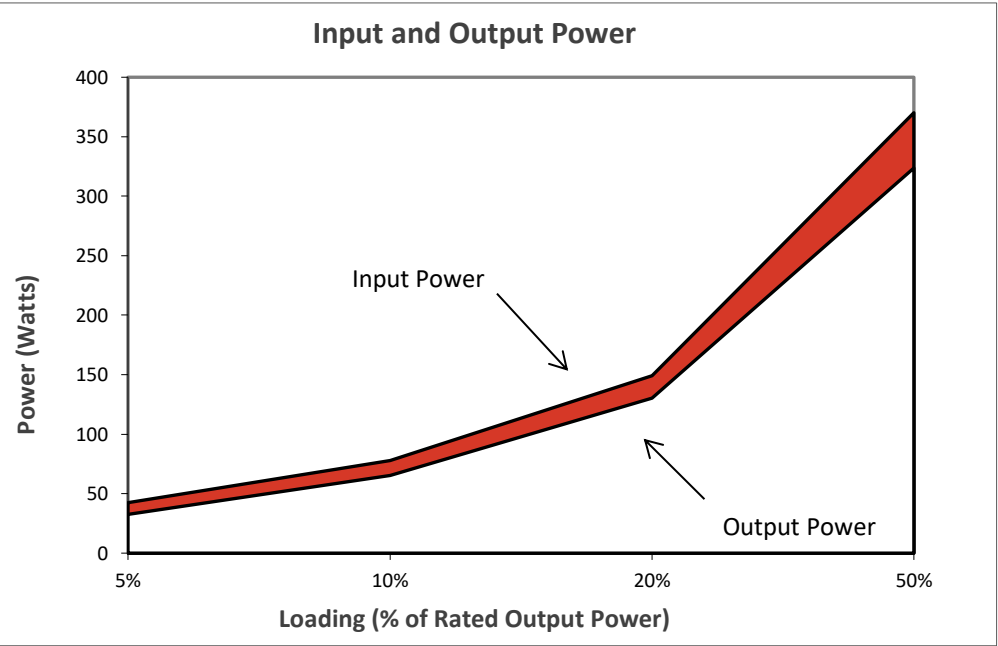
Rated Specifications	Value	Units
Input Voltage	200-240	Volts
Input Current	6.0	Amps
Input Frequency	47-63	Hz
Rated Output Power	650	Watts

Note: All measurements were taken with input voltage at 230 V nominal at 50 Hz.



Input AC Current Waveform (ITHD = 11.31%, 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	5Vstb		
0.135	0.1749	16.95	0%	5.42	No-Load						
0.264	0.6964	20.57	5%	42.30	11.95/2.23	11.89/0.013	3.39/0.64	5.18/0.61	5.04/0.107	32.57	77.00%
0.401	0.8420	17.35	10%	77.68	11.97/4.45	11.93/0.026	3.38/1.27	5.17/1.21	5.03/0.214	65.18	83.90%
0.701	0.9255	15.09	20%	149.27	11.96/8.9	11.96/0.051	3.37/2.55	5.15/2.42	5.01/0.428	130.19	87.22%
1.655	0.9726	11.31	50%	370.16	11.9/22.24	12.02/0.128	3.34/6.37	5.11/6.06	4.96/1.069	323.70	87.45%
3.400	0.9863	7.12	100%	771.31	11.8/44.47	12.16/0.257	3.28/12.73	5.03/12.12	4.88/2.137	640.83	83.08%



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/>