80 PLUS Verification and Testing Report

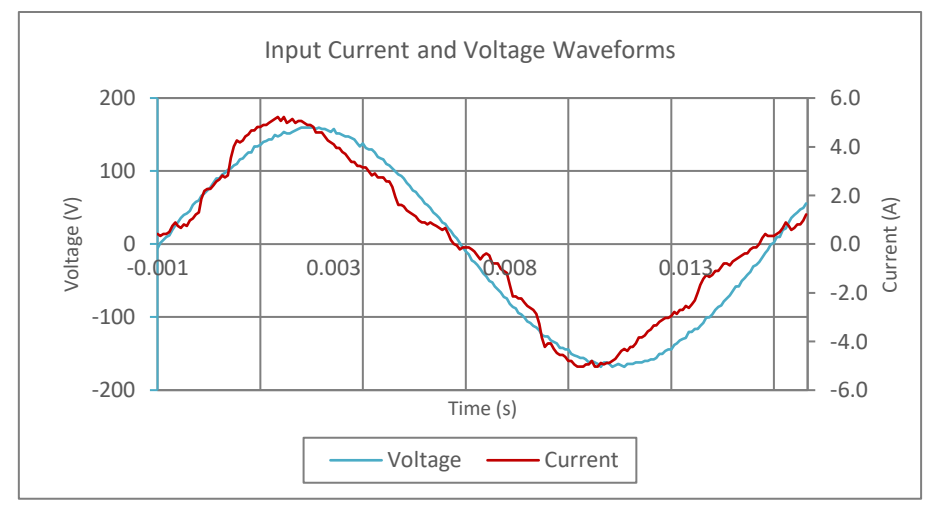
TYPICAL EFFICIENCY (50% Load):	**91.28%**
AVERAGE EFFICIENCY :	**90.08%**
80 PLUS COMPLIANT:	**YES**



ID Number	6557.4
Manufacturer	Micro-Star International Co., Ltd.
Model Number	MAG A650GN
Serial Number	N/A
Year	2021
Type	ATX12V
Test Date	4/22/21

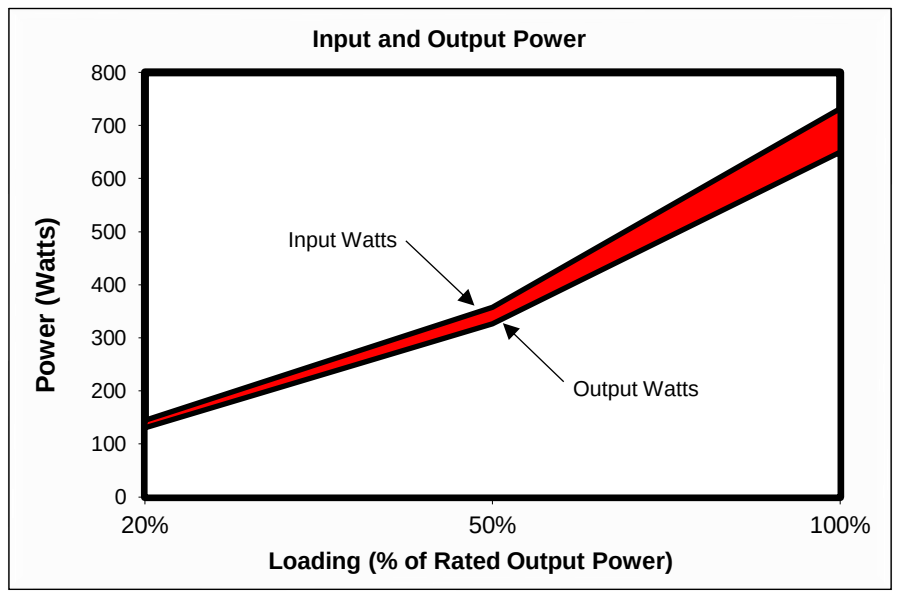
Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	10	Amps
Input Frequency	47-63	Hz
Rated Output Power	**650**	**Watts**

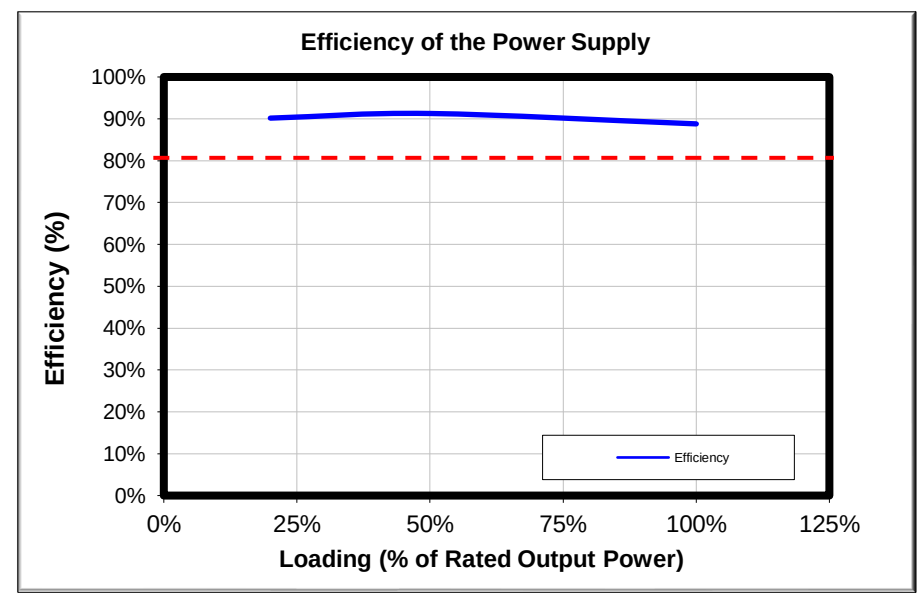
Note: All measurements were taken with input voltage at 115 V nominal at 60 Hz.



Input AC Current Waveform (ITHD = 17.28%, 50% Load)

I_{RMS}	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		
0.69	0.95	22.42%	10%	75.50	12.02/4.58	11.95/0.03	3.3/1.02	5.03/1.02	5.09/0.25	65.21	**86.37%**
1.30	0.97	19.46%	20%	145.00	12.02/9.2	11.94/0.05	3.3/2.04	5.03/2.03	5.08/0.51	130.75	**90.17%**
3.17	0.98	17.28%	50%	357.50	12/23	11.81/0.13	3.31/5.11	5.03/5.07	5.03/1.27	326.33	**91.28%**
6.48	0.98	13.74%	100%	731.70	11.99/45.85	12.1/0.25	3.31/10.23	5.03/10.12	4.95/2.54	649.72	**88.80%**





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/*