

## 80 PLUS Verification and Testing Report

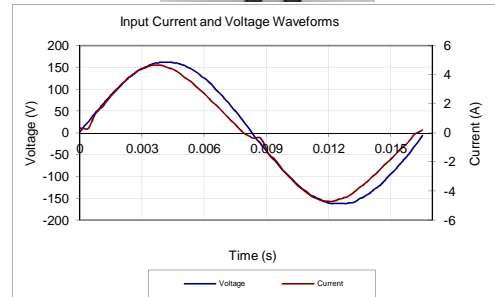
<b>TYPICAL EFFICIENCY (50% Load):</b>	<b>90.96%</b>
<b>AVERAGE EFFICIENCY :</b>	<b>89.46%</b>
<b>80 PLUS COMPLIANT:</b>	<b>YES</b>



<b>Ecos ID #</b>	3890
<b>Manufacturer</b>	Thermaltake Technology Co., Ltd.
<b>Model Number</b>	TPD-0650M Toughpower 650W GOLD
<b>Serial Number</b>	PSTPD0650MPCGEU1HU000001
<b>Year</b>	2014
<b>Type</b>	ATX12V
<b>Test Date</b>	2/19/14

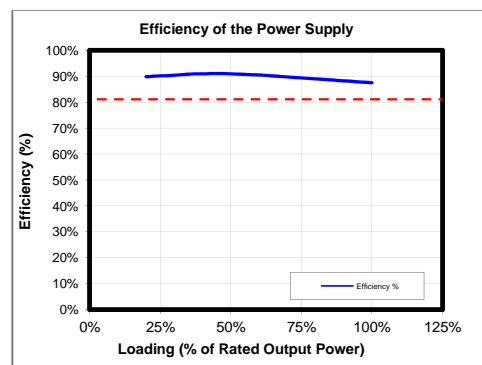
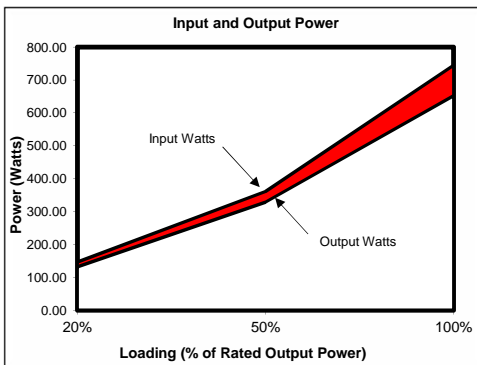
Rated Specifications	Value	Units
Input Voltage	100-240	Volts
Input Current	10	Amps
Input Frequency	47-63	Hz
<b>Rated Output Power</b>	<b>650</b>	<b>Watts</b>

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



Input AC Current Waveform (ITHD = 9.75%, 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	5Vs.b		
0.69	0.97	20.38%	10%	77.26	12.1/4.6		11.6/0.1	3.3/1	5/1.1	5.1/0.3	66.10	85.55%
1.31	0.97	16.21%	20%	146.26	12.1/9.1		11.6/0.1	3.3/2	5/1.2	5.1/0.5	131.48	89.89%
3.17	0.99	9.75%	50%	360.90	12.1/22.8		11.6/0.3	3.3/5.1	5/1.5	5.1/1.3	328.28	90.96%
6.50	1.00	5.71%	100%	745.00	12/45.5		11.6/0.7	3.3/10.1	5/10.1	5/2.5	652.10	87.53%



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/>

