

# 80 PLUS Verification and Testing Report

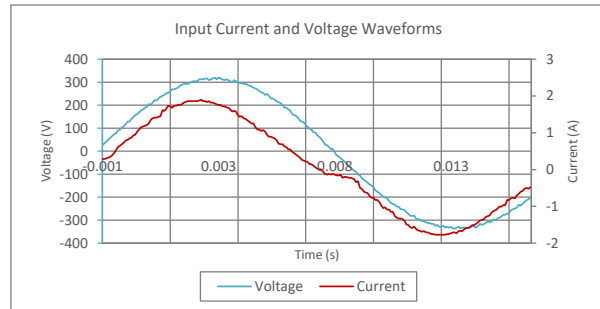
|                                       |               |
|---------------------------------------|---------------|
| <b>TYPICAL EFFICIENCY (50% Load):</b> | <b>86.05%</b> |
| <b>AVERAGE EFFICIENCY :</b>           | <b>84.19%</b> |
| <b>80 PLUS COMPLIANT:</b>             | <b>YES</b>    |



|                      |                |
|----------------------|----------------|
| <b>ID Number</b>     | EU-314.1       |
| <b>Manufacturer</b>  | Cooler Master  |
| <b>Model Number</b>  | MPW-4502-ACABW |
| <b>Serial Number</b> | N/A            |
| <b>Year</b>          | 2017           |
| <b>Type</b>          | ATX12V         |
| <b>Test Date</b>     | 5/9/17         |

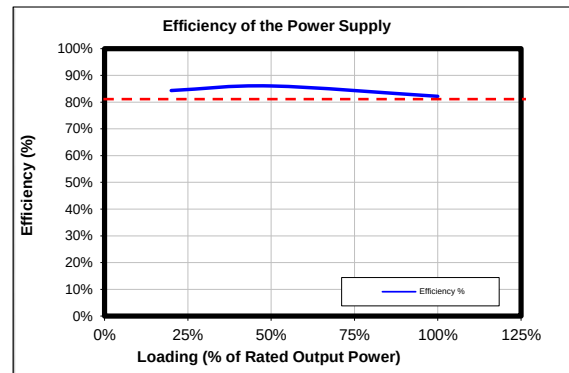
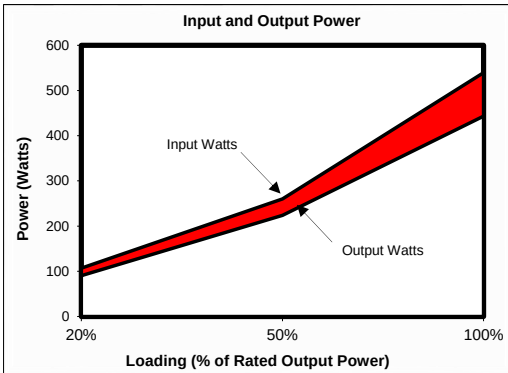
| Rated Specifications      | Value      | Units        |
|---------------------------|------------|--------------|
| Input Voltage             | 200-240    | Volts        |
| Input Current             | 3.5        | Amps         |
| Input Frequency           | 47-63      | Hz           |
| <b>Rated Output Power</b> | <b>450</b> | <b>Watts</b> |

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



Input AC Current Waveform (ITHD = 13.28%, 50% Load)

| I <sub>RMS</sub><br>A | PF   | I <sub>THD</sub> (%) | Load<br>(%) | Input<br>Watts | DC Terminal Voltage (V)/ DC Load Current (A) |            |           |            |           | Output<br>Watts | Efficiency<br>% |
|-----------------------|------|----------------------|-------------|----------------|----------------------------------------------|------------|-----------|------------|-----------|-----------------|-----------------|
|                       |      |                      |             |                | 12V (cumulative of 12V1, 12V2, etc.)         | -12V       | 3.3V      | 5V         | 5Vsb      |                 |                 |
| 0.29                  | 0.86 | 23.57%               | 10%         | 57.08          | 11.95/2.91                                   | 11.62/0.03 | 3.38/1.07 | 5.09/1.01  | 5.09/0.21 | 44.96           | 78.78%          |
| 0.50                  | 0.93 | 19.15%               | 20%         | 106.86         | 11.95/5.85                                   | 11.67/0.05 | 3.37/2.14 | 5.07/2.01  | 5.07/0.43 | 90.12           | 84.34%          |
| 1.16                  | 0.98 | 13.28%               | 50%         | 260.30         | 11.92/14.61                                  | 11.82/0.13 | 3.33/5.35 | 5.03/5.01  | 5.03/1.07 | 224.00          | 86.05%          |
| 2.37                  | 0.99 | 11.05%               | 100%        | 539.40         | 11.85/29.08                                  | 12.09/0.26 | 3.3/10.71 | 4.95/10.01 | 4.95/2.15 | 443.25          | 82.17%          |



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/>

