

80 PLUS Verification and Testing Report

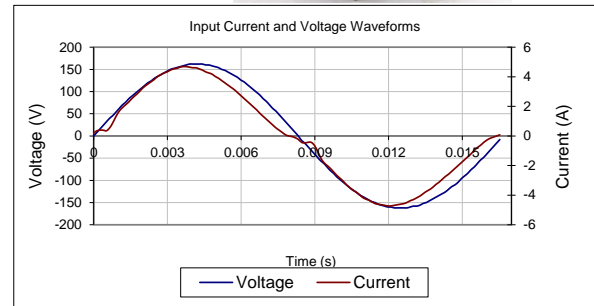
| | |
|---------------------------------------|---------------|
| TYPICAL EFFICIENCY (50% Load): | 90.91% |
| AVERAGE EFFICIENCY : | 89.43% |
| 80 PLUS COMPLIANT: | YES |



| | |
|----------------------|----------|
| Ecos ID # | 4720.2 |
| Manufacturer | CHIEFTEC |
| Model Number | CSN-650C |
| Serial Number | NA |
| Year | 2016 |
| Type | SFX |
| Test Date | 9/21/16 |

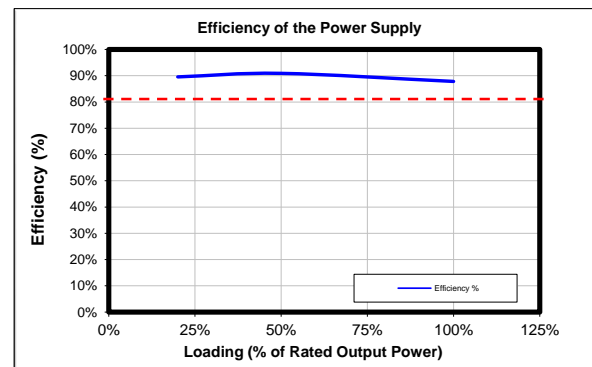
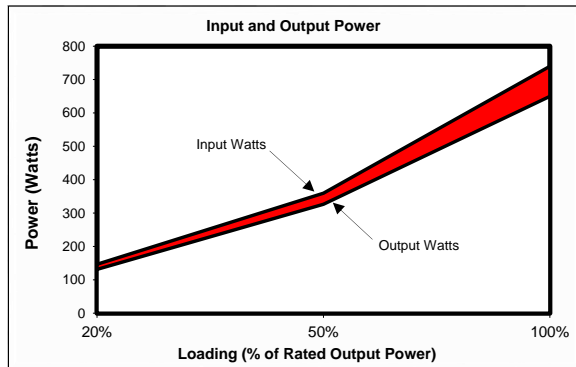
| Rated Specifications | Value | Units |
|---------------------------|------------|--------------|
| Input Voltage | 100-240 | Volts |
| Input Current | 8-4 | Amps |
| Input Frequency | 47-63 | Hz |
| Rated Output Power | 650 | Watts |

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



Input AC Current Waveform (ITHD = 11.5%, 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 | | |
| 0.72 | 0.92 | 14.30% | 10% | 76.33 | 12.1/4.65 | 11.65/0.03 | 3.33/1.04 | 5.06/0.86 | 5.06/0.26 | 65.72 | 86.10% |
| 1.33 | 0.96 | 16.31% | 20% | 146.75 | 12.08/9.32 | 11.67/0.05 | 3.32/2.07 | 5.06/1.73 | 5.05/0.52 | 131.41 | 89.55% |
| 3.17 | 0.99 | 11.50% | 50% | 359.40 | 12.05/23.24 | 11.79/0.13 | 3.3/5.18 | 5.04/4.28 | 5.02/1.29 | 326.72 | 90.91% |
| 6.48 | 0.99 | 9.90% | 100% | 739.90 | 12.03/46.32 | 12.02/0.26 | 3.27/10.34 | 5.01/8.56 | 4.97/2.58 | 649.81 | 87.82% |



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/>

