

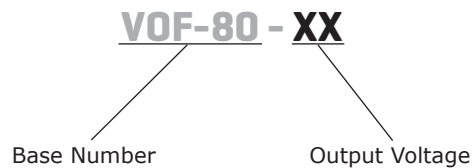
**SERIES: VOF-80 | DESCRIPTION: AC-DC POWER SUPPLY**
**FEATURES**

- up to 80 W continuous power
- <0.5W no load power consumption
- industry standard footprint
- universal input (85-264 Vac)
- single output from 3.3 to 48V
- user trimmable output voltage
- 3000V isolation
- over current, over voltage, and short circuit protections
- UL/cUL and TUV 60950-1 safety approvals
- efficiency up to 89%



| MODEL      | output voltage | output current max | output power max | ripple <sup>1</sup> and noise max | efficiency |
|------------|----------------|--------------------|------------------|-----------------------------------|------------|
|            | (Vdc)          | (A)                | (W)              | (mVp-p)                           | typ (%)    |
| VOF-80-3.3 | 3.3            | 10                 | 33               | 120                               | 75         |
| VOF-80-5   | 5              | 10                 | 50               | 120                               | 76         |
| VOF-80-12  | 12             | 6.66               | 80               | 120                               | 85         |
| VOF-80-15  | 15             | 5.33               | 80               | 150                               | 86         |
| VOF-80-24  | 24             | 3.33               | 80               | 240                               | 87         |
| VOF-80-48  | 48             | 1.66               | 80               | 480                               | 89         |

Notes: 1. Ripple & noise are measured at 20 MHz BW with 0.1  $\mu$ F ceramic and 10  $\mu$ F electrolytic capacitors on the output

**PART NUMBER KEY**


## INPUT

| parameter      | conditions/description                                           | min       | typ        | max        | units      |
|----------------|------------------------------------------------------------------|-----------|------------|------------|------------|
| voltage        |                                                                  | 85<br>120 |            | 264<br>375 | Vac<br>Vdc |
| frequency      |                                                                  | 47        |            | 63         | Hz         |
| input current  | 110 Vac<br>220 Vac                                               |           | 1.5<br>0.8 |            | A<br>A     |
| inrush current | 115 Vac, full load, cold start<br>220 Vac, full load, cold start |           |            | 25<br>50   | A<br>A     |
| input fuse     | built-in, non-user serviceable                                   |           |            |            |            |

## OUTPUT

| parameter               | conditions/description             | min | typ   | max | units |
|-------------------------|------------------------------------|-----|-------|-----|-------|
| line regulation         | high line to low line at full load |     | ±0.5  |     | %     |
| load regulation         | full load to 10% load              |     | ±1    |     | %     |
| temperature coefficient |                                    |     | ±0.05 |     | %/°C  |
| hold-up time            | 115 Vac at full load               | 8   |       |     | ms    |
| adjustability           | adjustable with built-in trim pot  | -10 |       | +5  | %     |
| switching frequency     |                                    |     | 65    |     | kHz   |

## PROTECTIONS

| parameter                | conditions/description                                     | min | typ | max        | units  |
|--------------------------|------------------------------------------------------------|-----|-----|------------|--------|
| over voltage protection  | clamped by TVS<br>3.3 and 5 V models<br>all other models   |     |     | 6.8<br>135 | V<br>% |
| over current protection  | automatically recovers                                     |     | 105 |            | %Io    |
| short circuit protection | continuous, long term short circuit may reduce reliability |     |     |            |        |

## SAFETY & COMPLIANCE

| parameter            | conditions/description                                                                                          | min                     | typ | max | units             |
|----------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------|-----|-----|-------------------|
| isolation voltage    | primary to secondary for 1 minute<br>primary to transformer core for 1 minute<br>primary to ground for 1 minute | 3,000<br>1,500<br>1,500 |     |     | Vac<br>Vac<br>Vac |
| isolation resistance | input to output at 500 Vdc @ 25°C                                                                               | 50                      |     |     | MΩ                |
| safety approvals     | TUV EN60950, CE, UL/cUL 60950-1                                                                                 |                         |     |     |                   |
| EMI/EMC              | FCC class B, EN55022 class B                                                                                    |                         |     |     |                   |
| leakage current      |                                                                                                                 |                         |     | 1.5 | mA                |
| RoHS compliant       | yes                                                                                                             |                         |     |     |                   |
| MTBF                 | according to MIL-HDBK-217F                                                                                      | 250,000                 |     |     | hours             |

## ENVIRONMENTAL

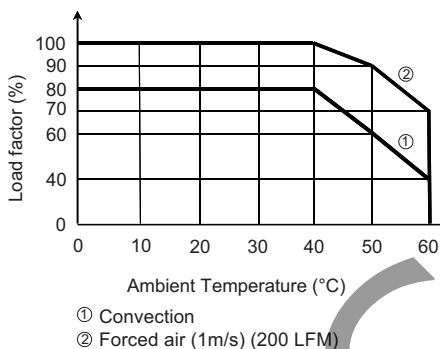
| parameter             | conditions/description | min | typ             | max | units   |
|-----------------------|------------------------|-----|-----------------|-----|---------|
| operating temperature | see derating curve     | 0   |                 | 60  | °C      |
| storage temperature   |                        | -20 |                 | 85  | °C      |
| operating humidity    | non-condensing         | 20  |                 | 90  | %       |
| storage humidity      | non-condensing         | 20  |                 | 95  | %       |
| operating altitude    |                        |     | 10,000<br>3,000 |     | ft<br>m |
| storage altitude      |                        |     | 30,000<br>9,000 |     | ft<br>m |

## MECHANICAL

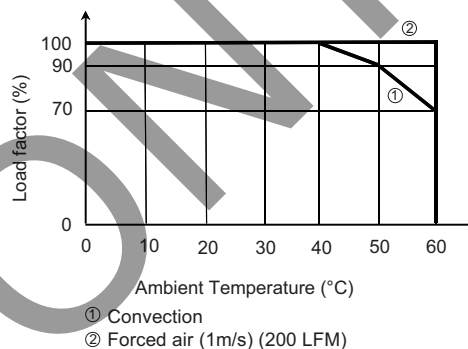
| parameter      | conditions/description                                           | min | typ | max | units |
|----------------|------------------------------------------------------------------|-----|-----|-----|-------|
| dimensions     | 4 x 2 x 1.40 (102 x 51 x 35.6 mm)                                |     |     |     | inch  |
| weight         |                                                                  |     | 0.2 |     | kg    |
| cooling method | free air convection or forced air<br>(see derating curves below) |     |     |     |       |

## DERATING CURVES

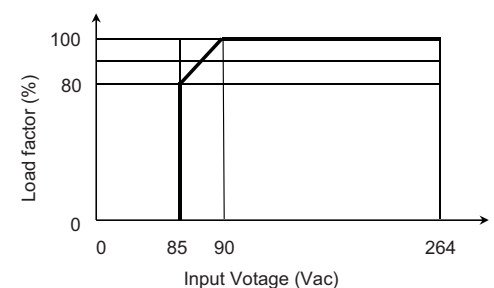
1. output power vs. ambient temperature  
a. 3.3, 5 V models



b. all other models



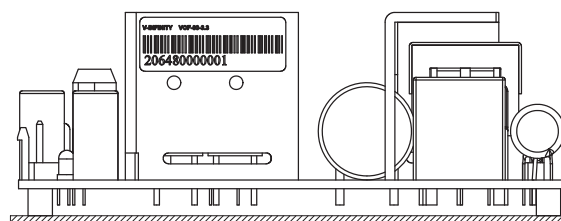
2. output power vs. input voltage  
all models



## MATING CONNECTORS

| parameter       | conditions/description                                                   |
|-----------------|--------------------------------------------------------------------------|
| ac input (CN1)  | mates with Molex housing 09-50-7031 with Molex 2878 series crimp contact |
| dc output (CN2) | mates with Molex housing 09-50-7061 with Molex 2878 series crimp contact |

## MOUNTING METHOD



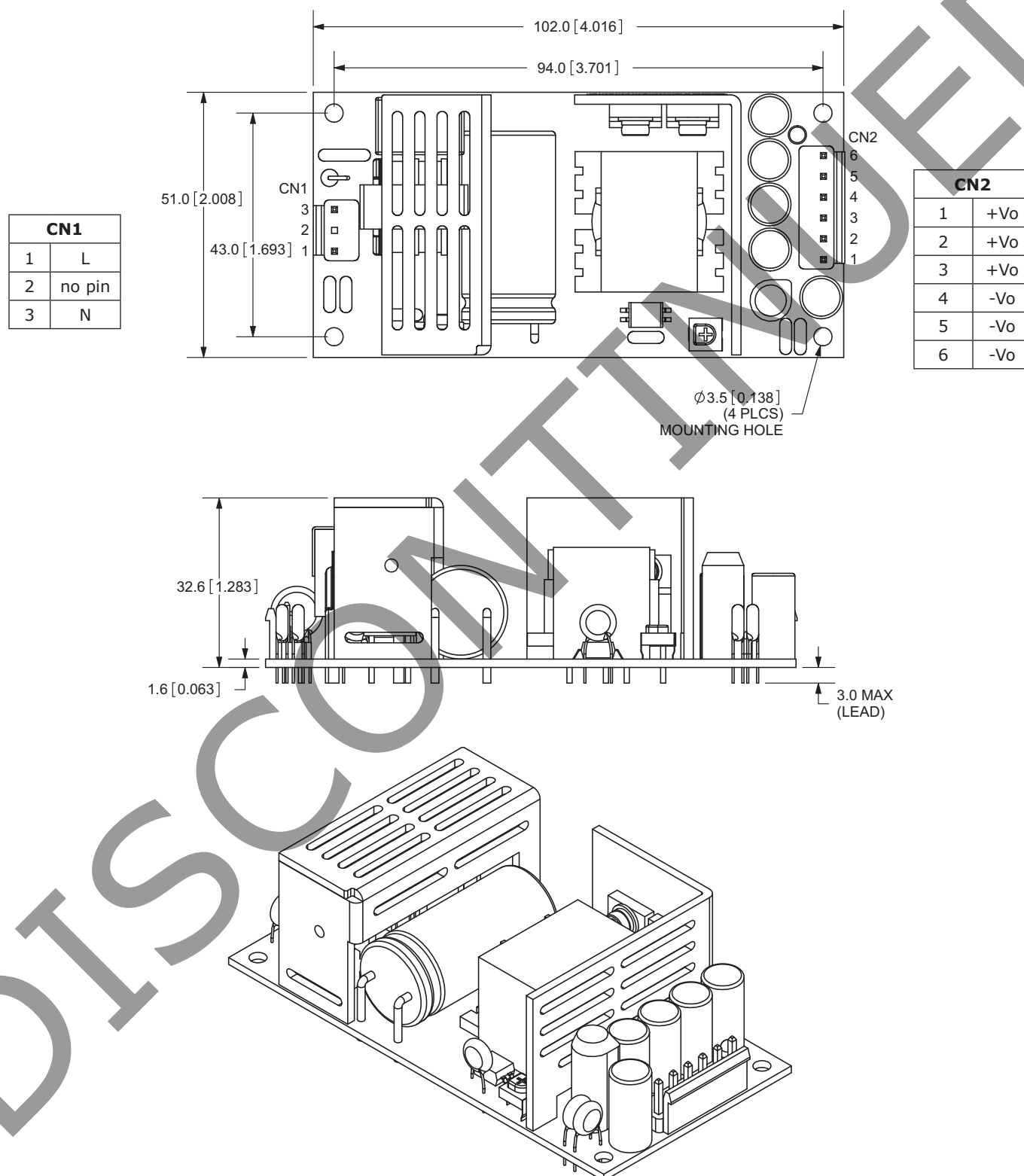
### Horizontal

(performance evaluations conducted under this mounting method)

## MECHANICAL DRAWING

tolerance:

±1.0mm unless otherwise specified



## REVISION HISTORY

| rev. | description                                                                  | date       |
|------|------------------------------------------------------------------------------|------------|
| 1.0  | initial release                                                              | 03/13/2009 |
| 1.01 | updated pin designation                                                      | 04/01/2010 |
| 1.02 | updated derating curves and mechanical drawing and applied new spec template | 05/02/2011 |
| 1.03 | V-Infinity branding removed                                                  | 08/16/2012 |

The revision history provided is for informational purposes only and is believed to be accurate.



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