

**SERIES:** VOF-10 | **DESCRIPTION:** AC-DC POWER SUPPLY

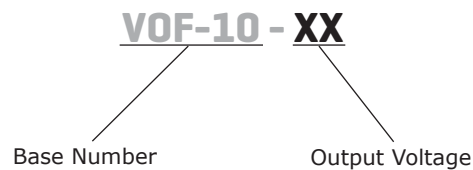
**FEATURES**

- up to 10 W continuous power
- compact size
- universal input (85~264 Vac / 120~375 Vdc)
- single output from 3.3~48 V
- no minimum load required
- 3000 V isolation
- over current, over voltage, and short circuit protections
- UL/cUL and TUV 60950-1 safety approvals
- no load power consumption < 0.5 W
- efficiency up to 78%



| MODEL      | output voltage | output current<br>max | output power<br>max | ripple <sup>1</sup><br>and noise<br>max | efficiency |
|------------|----------------|-----------------------|---------------------|-----------------------------------------|------------|
|            | (Vdc)          | (A)                   | (W)                 | (mVp-p)                                 | typ (%)    |
| VOF-10-3.3 | 3.3            | 2.4                   | 8                   | 100                                     | 70         |
| VOF-10-5   | 5              | 2.0                   | 10                  | 100                                     | 75         |
| VOF-10-9   | 9              | 1.11                  | 10                  | 120                                     | 75         |
| VOF-10-12  | 12             | 0.83                  | 10                  | 120                                     | 75         |
| VOF-10-15  | 15             | 0.67                  | 10                  | 150                                     | 75         |
| VOF-10-24  | 24             | 0.42                  | 10                  | 240                                     | 78         |
| VOF-10-48  | 48             | 0.21                  | 10                  | 480                                     | 78         |

Notes: 1. Ripple & noise are measured at 20 MHz BW with 47  $\mu$ F ceramic and 100 nF 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  |                                                                  |           |     | 0.6        | A          |
| inrush current | 110 Vac, full load, cold start<br>220 Vac, full load, cold start |           |     | 15<br>30   | A<br>A     |
| input fuse     | built-in, non-user serviceable                                   |           |     |            |            |

## OUTPUT

| parameter                 | conditions/description            | min | typ          | max        | units  |
|---------------------------|-----------------------------------|-----|--------------|------------|--------|
| line regulation           | 3.3 V model<br>all other models   |     | ±0.6<br>±0.5 |            | %<br>% |
| load regulation           | 3.3 V model<br>all other models   |     | ±1.2<br>±1   |            | %<br>% |
| temperature coefficient   |                                   |     | ±0.05        |            | %/°C   |
| hold-up time              | 115 Vac at full load              |     | 16           |            | ms     |
| adjustability             | adjustable with built-in trim pot | -5  |              | 5          | %      |
| switching frequency       |                                   |     | 100          |            | kHz    |
| no load power consumption | all other models<br>48 V model    |     |              | 0.5<br>0.7 | W<br>W |

## PROTECTIONS

| parameter                | conditions/description                                    | min | typ | max | units |
|--------------------------|-----------------------------------------------------------|-----|-----|-----|-------|
| over voltage protection  | clamped by TVS                                            |     |     |     |       |
| over current protection  | automatically recovers                                    |     | 105 |     | %     |
| short circuit protection | protected, long term short circuit may reduce reliability |     |     |     |       |

## SAFETY & COMPLIANCE

| parameter            | conditions/description             | min     | typ   | max  | units |
|----------------------|------------------------------------|---------|-------|------|-------|
| isolation voltage    | at 10 mA for 1 minute              |         | 3,000 |      | Vac   |
| isolation resistance | input to output at 500 Vdc at 25°C | 50      |       |      | MΩ    |
| safety approvals     | TUV EN 60950, UL/cUL 60950-1       |         |       |      |       |
| EMI/EMC              | FCC class B, EN 55022 class B, CE  |         |       |      |       |
| leakage current      |                                    |         |       | 0.25 | mA    |
| RoHS compliant       | yes                                |         |       |      |       |
| MTBF                 | according to MIL-HDBK-217F         | 250,000 |       |      | hours |

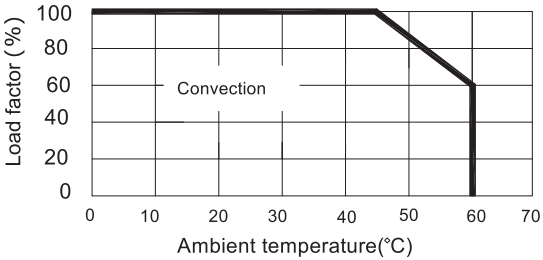
## ENVIRONMENTAL

| 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  |     | 90  | %     |

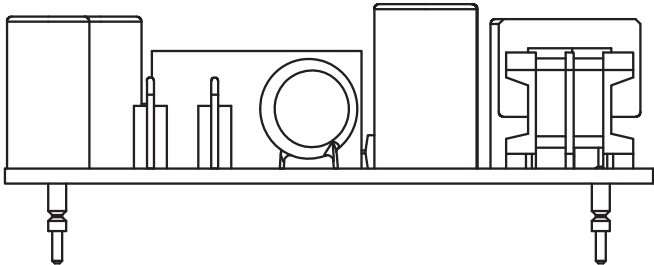
MECHANICAL

| parameter      | conditions/description                         | min | typ | max | units |
|----------------|------------------------------------------------|-----|-----|-----|-------|
| dimensions     | 2.56 x 1.77 x 1.04 (65 x 45 x 26.5 mm)         |     |     |     | inch  |
| cooling method | free air convection (see derating curve below) |     |     |     |       |

DERATING CURVES



MOUNTING METHOD

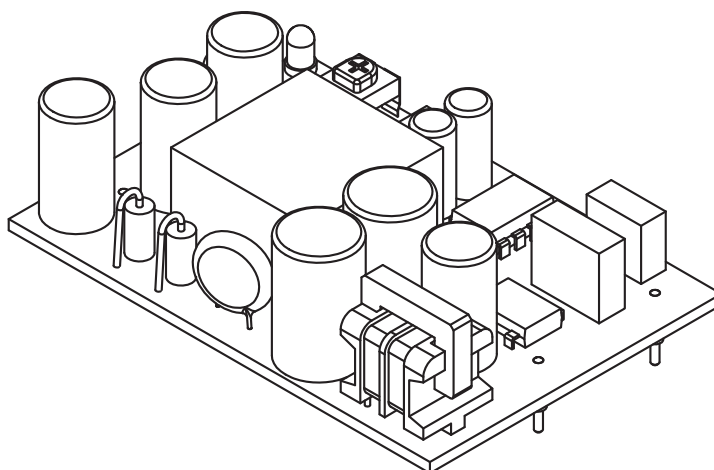
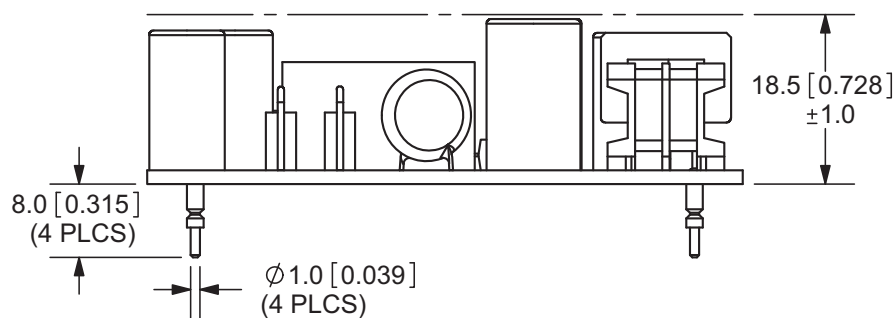
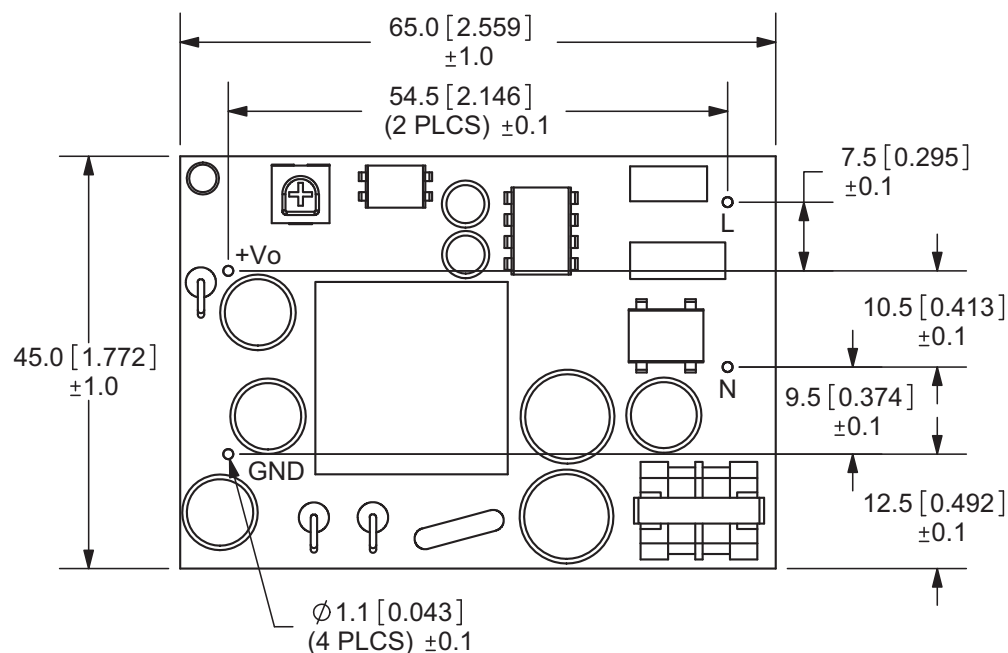


Horizontal

(performance evaluations conducted under this mounting method)

## MECHANICAL DRAWING

units: mm [inches]

tolerance:  $\pm 0.3$  [ $\pm 0.01$ ]

## REVISION HISTORY

| rev. | description                 | date       |
|------|-----------------------------|------------|
| 1.0  | initial release             | 03/18/2010 |
| 1.01 | new template applied        | 05/13/2011 |
| 1.02 | added MTBF data             | 09/20/2011 |
| 1.03 | V-Infinity branding removed | 08/21/2012 |

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

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