



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

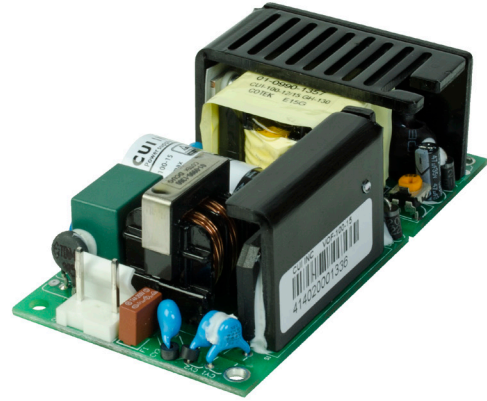
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



SERIES: VOF-100 | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

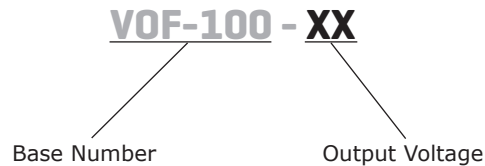
- up to 100 W continuous power
- compact size
- universal input (90~277 Vac)
- single output from 12~48 Vdc
- user trimmable output voltage option
- no load power consumption <0.25W
- 3000 Vac isolation
- over current, over voltage, and short circuit protections
- UL/cUL and TUV 60950-1 safety approvals
- efficiency up to 87.5%



| MODEL | output voltage | output current | output power ¹ | ripple and noise ² | efficiency |
|------------|----------------|----------------|---------------------------|-------------------------------|------------|
| | (Vdc) | max (A) | max (W) | max (mVp-p) | typ (%) |
| VOF-100-12 | 12 | 8.4 | 100 | 120 | 85 |
| VOF-100-15 | 15 | 6.7 | 100 | 150 | 86 |
| VOF-100-24 | 24 | 4.2 | 100 | 240 | 87 |
| VOF-100-48 | 48 | 2.1 | 100 | 480 | 87.5 |

Notes: 1. Total continuous output power will not exceed 100W with forced air 6.7 CFM external fan, 85W without fan
 2. Ripple & noise are measured at 20 MHz BW with 0.1 µF ceramic cap and a 10 µF electrolytic capacitors on the output and the two earth ground pads are connected to input earth ground.

PART NUMBER KEY



INPUT

| parameter | conditions/description | min | typ | max | units |
|---------------------------|--|-----|------------|--------------|--------|
| voltage | | 90 | | 277 | Vac |
| frequency | | 47 | | 63 | Hz |
| input current | at 115 Vac, full load at 230 Vac, full load | | 2.0 1.4 | | A A |
| inrush current | at 230 Vac, cold start | | 60 | | A |
| leakage current | at 277 Vac | | | 3.5 | mA |
| no load power consumption | at 110 Vac at 230 Vac | | | 0.25 0.35 | W W |
| input fuse | 4 A/250V time delay fuse (included) | | | | |

OUTPUT

| parameter | conditions/description | min | typ | max | units |
|----------------------------|---|-----|------------------------------|-----|----------------------------------|
| line regulation | low line to high line | | ±0.5 | | % |
| load regulation | full load to 10% load | | ±1 | | % |
| initial set point accuracy | | | ±3 | | % |
| transient response | 1 kHz, 10~100% load VOF-100-12 VOF-100-15 VOF-100-24 VOF-100-48 | | 1200 1500 2400 4800 | | mVp-p mVp-p mVp-p mVp-p |
| hold-up time | at 115 Vac, full load | 8 | | | ms |
| start-up time | at 115 Vac, full load | | 50 | | ms |
| start-up delay | at 115 Vac, full load | | 1000 | | ms |
| adjustability | built in trim pot | | ±5 | | % |
| switching frequency | | 61 | 65 | 69 | kHz |
| temperature coefficient | | | ±0.03 | | %/°C |
| fan drive | 12 Vdc/100 mA for external fan | | | | |

PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|--------------------------|------------------------|-----|-----|-----|-------|
| short circuit protection | hiccup, auto recovery | 110 | | | % |
| over current protection | hiccup, auto recovery | 110 | | | % |
| over voltage protection | clamped by TVS | | | | |

SAFETY & COMPLIANCE

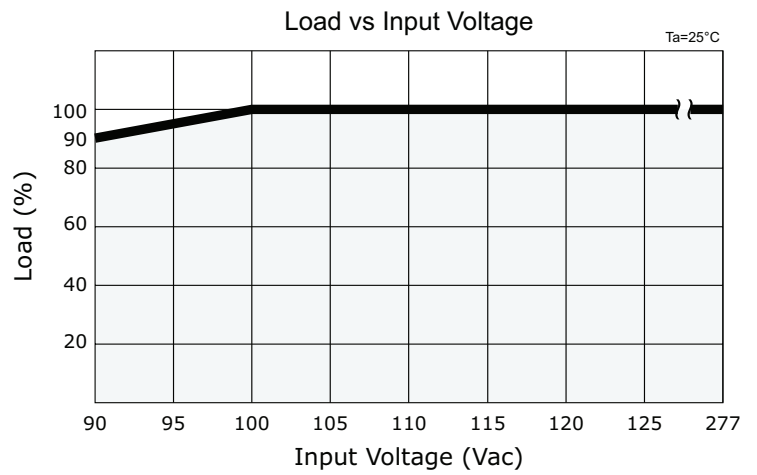
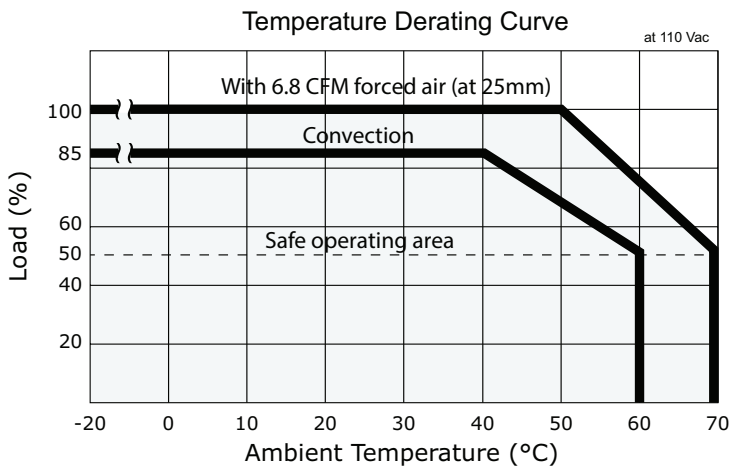
| parameter | conditions/description | min | typ | max | units |
|----------------------|---|-------------------------|-----|-----|-------------------|
| isolation voltage | input to output input to ground output to ground | 3,000 1,500 1,500 | | | Vac Vac Vac |
| safety approvals | UL60950-1, EN60950-1 | | | | |
| EMI/EMC ¹ | EN 55022: 2010 Class B, EN 61204-3:2000, EN 61000-6-3: 2007 +A1: 2011, EN 61000-3-2: 2006 +A2: 2009, EN 61000-3-3: 2008, EN 55024: 2010, EN 61000-6-1: 2007, ENV 50204: 1995, CE, FCC | | | | |
| class | class II | | | | |
| MTBF | as per MIL-HDBK-217F at 25 °C, full load | 250,000 | | | hours |
| RoHS | 2011/65/EU | | | | |

Notes: 1. The power supply is considered a component which will be installed into final equipment. The final equipment still must be tested to meet the necessary EMC directives.

ENVIRONMENTAL

| parameter | conditions/description | min | typ | max | units |
|-----------------------|--|-----|------|-----|-------|
| operating temperature | see derating curves | -20 | | 70 | °C |
| storage temperature | | -40 | | 85 | °C |
| operating humidity | non-condensing | 20 | | 90 | % |
| storage humidity | non-condensing | 20 | | 90 | % |
| operating altitude | | | 2000 | | m |
| vibration & shock | 10~3000Hz, 10 minutes per cycle, for 1 hour along each of the X, Y, and Z axes | | 2 | | G |

DERATING CURVES



MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|----------------|---|-----|-----|-----|-------|
| dimensions | 101.6 x 50.8 x 33.6 (4.00 x 2.00 x 1.32 inch) | | | | mm |
| weight | | | 173 | | g |
| cooling method | 6.8 CFM external fan at 25mm (not included) | | | | |

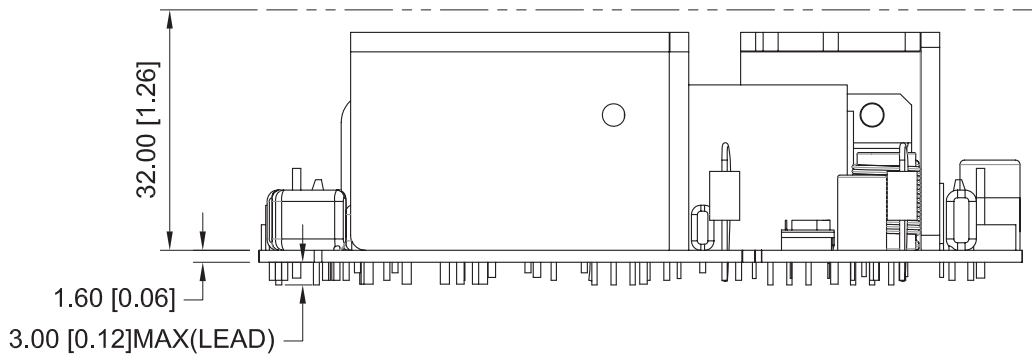
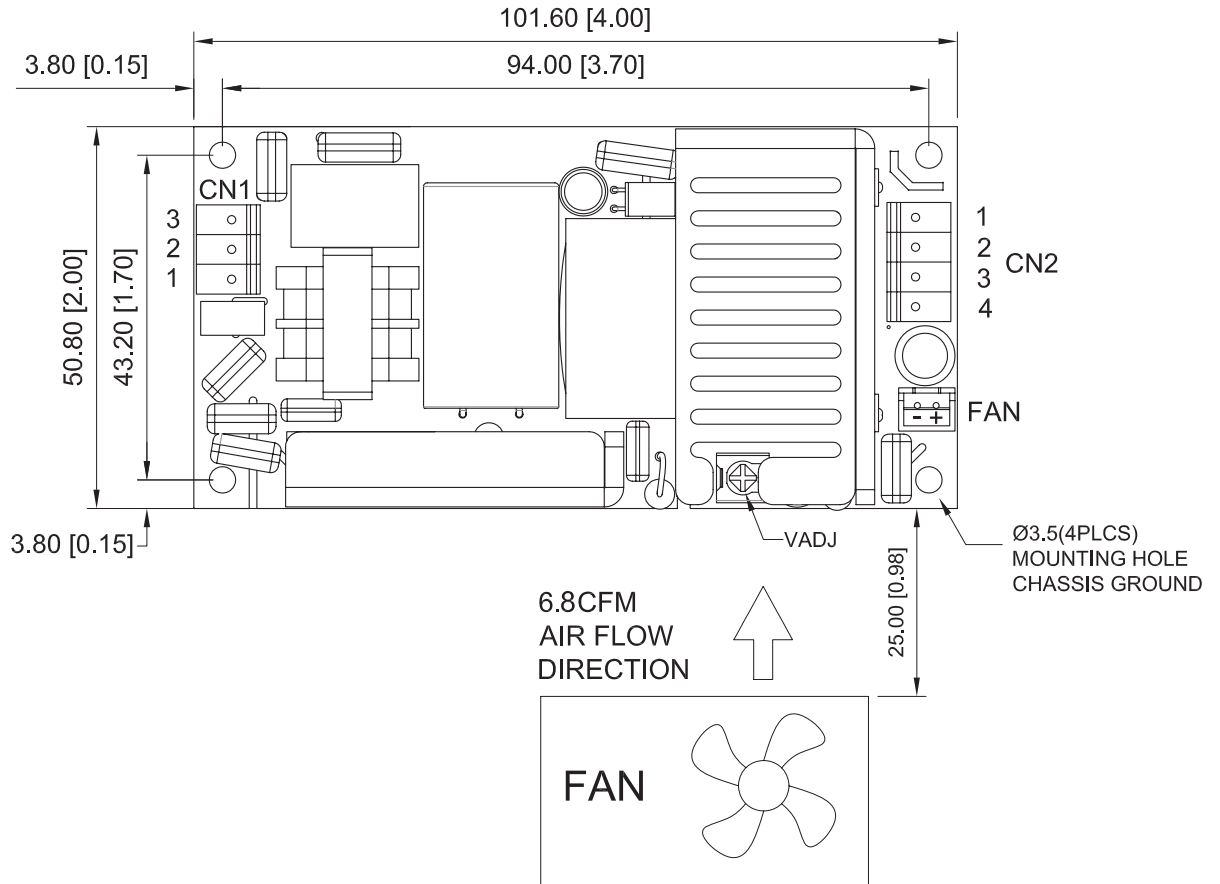
MECHANICAL DRAWING

units: mm[inch]
tolerance: ±0.30

| CN1 | |
|-----|----------|
| PIN | Function |
| 1 | L |
| 2 | NP |
| 3 | N |

| CN2 | |
|-----|----------|
| PIN | Function |
| 1 | +Vo |
| 2 | +Vo |
| 3 | -Vo |
| 4 | -Vo |

| Fan | |
|-----|----------|
| PIN | Function |
| 1 | +FAN |
| 2 | -FAN |



- Notes:
1. CN1 mates with Molex housing 09-50-3031 with Molex 2478 series crimp contact or equivalent.
 2. CN2 mates with Molex housing 09-50-3041 with Molex 2478 series crimp contact or equivalent.
 3. Fan connector mates with JST housing XHP-2 with JST SXH-001T-P0.6 crimp contact or equivalent.
 4. All specifications are measured at Ta=25°C, 230 Vac input voltage, and rated output load unless otherwise specified.

REVISION HISTORY

| rev. | description | date |
|------|---|------------|
| 1.0 | initial release | 04/08/2014 |
| 1.01 | updated datasheet | 05/09/2014 |
| 1.02 | updated derating curve, updated datasheet | 06/10/2014 |
| 1.03 | updated datasheet | 07/22/2014 |
| 1.04 | updated derating curve | 11/03/2014 |

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



Headquarters
20050 SW 112th Ave.
Tualatin, OR 97062
800.275.4899

Fax 503.612.2383
cui.com
techsupport@cui.com

CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

CUI reserves the right to make changes to the product at any time without notice. Information provided by CUI is believed to be accurate and reliable. However, no responsibility is assumed by CUI for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.