

**SERIES:** VOF-25 | **DESCRIPTION:** AC-DC POWER SUPPLY

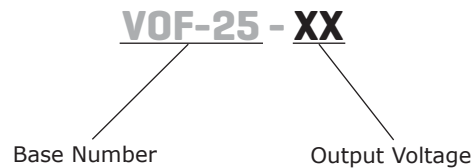
**FEATURES**

- Up to 25 W continuous power
- Compact size
- Universal input (85~264 Vac)
- Single output from 3.3~24 V
- User trimmable output voltage
- 3000 V isolation
- Over current, over voltage, and short circuit protections
- UL/cUL and TUV 60950-1 safety approvals
- Efficiency up to 82%


**V-Infinity**


MODEL	output voltage	output current	output power	ripple <sup>1</sup> and noise	efficiency
	(Vdc)	max (A)	max (W)	max (mVp-p)	typ (%)
VOF-25-3.3	3.3	4.4	15	50	70
VOF-25-5	5	4.4	22	50	73
VOF-25-7.5	7.5	3.0	23	75	73
VOF-25-9	9	2.7	24	90	77
VOF-25-12	12	2.0	24	120	80
VOF-25-15	15	1.6	24	150	80
VOF-25-24	24	1.0	24	240	82

Notes: 1. Ripple & noise are measured at 20 MHz BW with 0.1  $\mu$ F ceramic cap and a 10  $\mu$ F 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		85		264	Vac
		120		375	Vdc
frequency		47		63	Hz
input current	110 Vac		0.7		A
	220 Vac		0.35		A
inrush current	110 Vac, full load, cold start			20	A
	220 Vac, full load, cold start			40	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	16			ms
adjustability	adjustable with built-in trim pot	-5		+5	%
switching frequency		45	50	55	kHz

**PROTECTIONS**

parameter	conditions/description	min	typ	max	units
over voltage protection	clamped by TVS			115	%
over current protection	automatically recovers		105		%Io
short circuit protection	protected, long term short circuit may reduce reliability				

**SAFETY & COMPLIANCE**

parameter	conditions/description	min	nom	max	units
isolation voltage	primary to secondary for 1 minute	3,000			Vac
	primary to transformer core for 1 minute	1,500			Vac
	primary to ground for 1 minute	1,500			Vac
isolation resistance	input to output at 500 Vdc at 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**

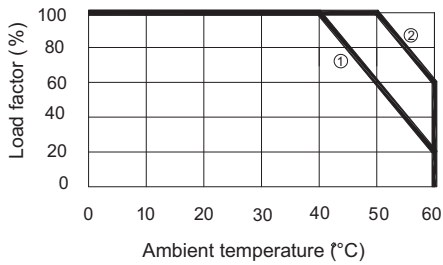
parameter	conditions/description	min	nom	max	units
operating temperature	see derating curve	0		60	°C
storage temperature		-20		85	°C
operating humidity	non-condensing	20		90	%
storage humidity	non-condensing	20		95	%
operating altitude			10,000		ft
			3,000		m
storage altitude			30,000		ft
			9,000	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

## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	3.5 x 2 x 0.98 (88.9 x 51 x 24.9 mm)				inch
weight				0.09	kg
cooling method	free air convection or forced air (see derating curves below)				

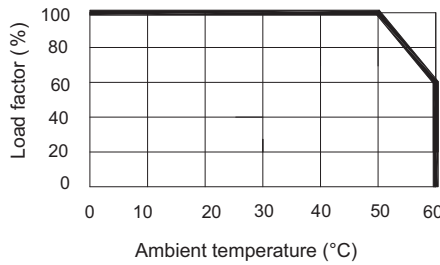
## DERATING CURVES

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



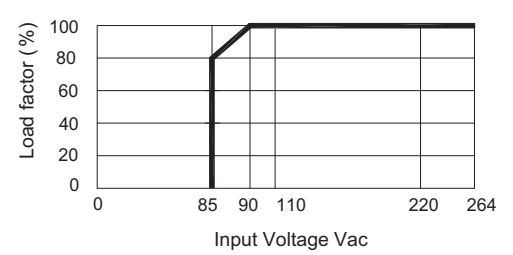
- ① Convection
- ② Forced air (0.5m<sup>3</sup>/min) (18 CFM)

b. all other models



- ① Forced air (0.5m<sup>3</sup>/min) (18 CFM)

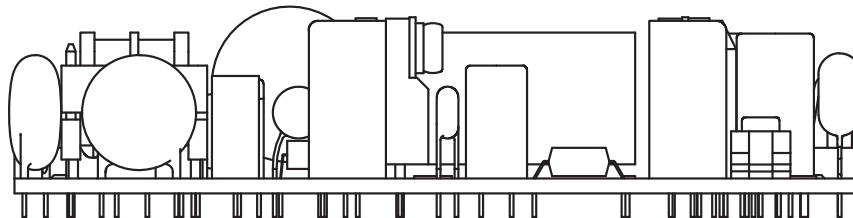
2. output power vs. input voltage  
all models



## MATING CONNECTORS

parameter	conditions/description
ac input (CN1)	mates with Molex housing 09-50-3031 with Molex 2878 series crimp contact
dc output (CN2)	mates with Molex housing 09-50-3041 with Molex 2878 series crimp contact

## MOUNTING METHOD



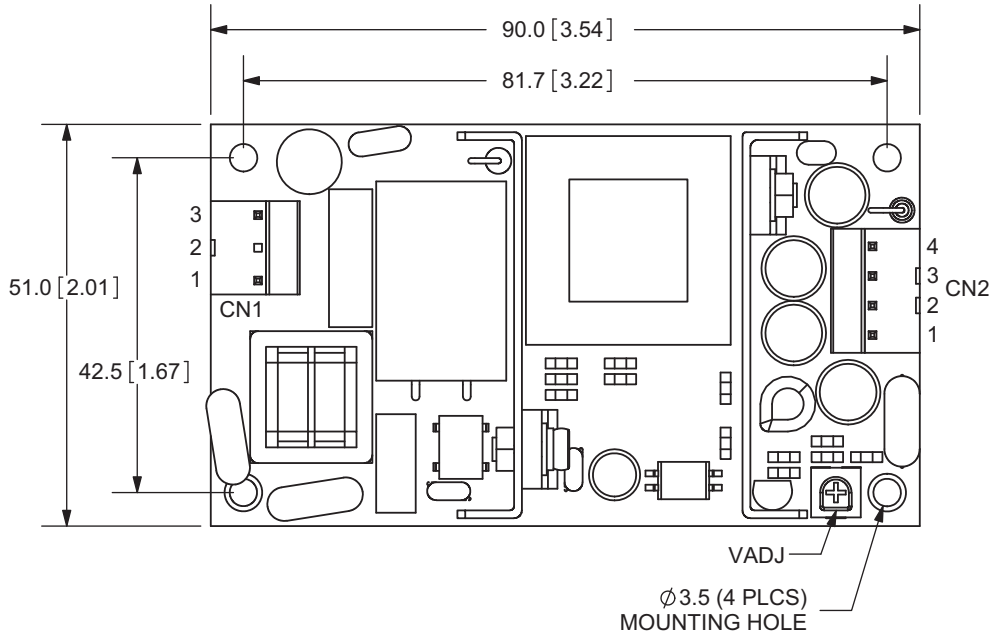
### Horizontal

(performance evaluations conducted under this mounting method)

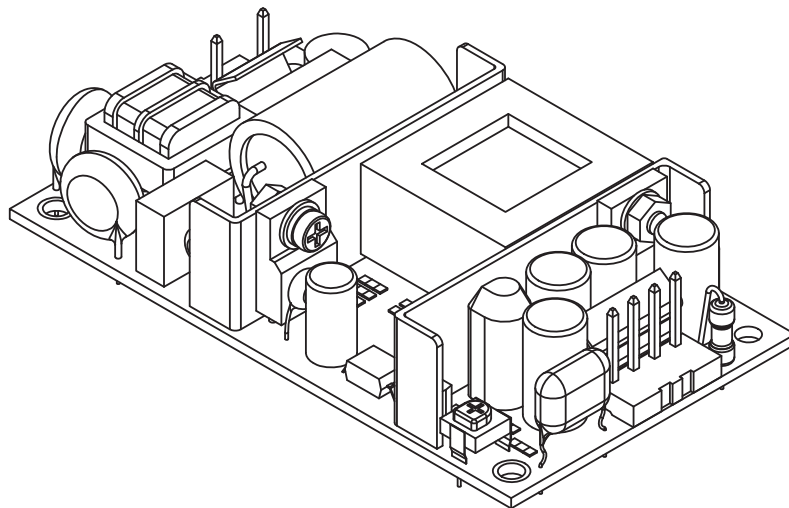
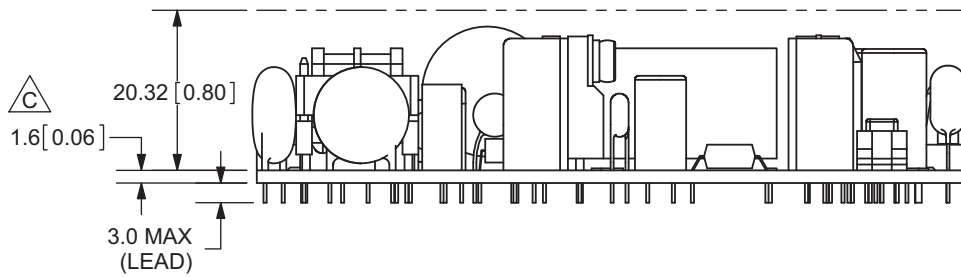
## MECHANICAL DRAWING

tolerance:  
±0.3mm unless otherwise specified

CN1	
1	L
2	no pin
3	N



CN2	
1	-Vo
2	-Vo
3	+Vo
4	+Vo



## REVISION HISTORY

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rev.	description	date
1.0	initial release	04/03/2009
1.01	corrected CN1 connector designation on mech drawing	02/16/2010
1.02	dimension added to drawing	05/02/2011
1.03	applied new spec template	05/13/2011
1.04	added MTBF data	09/20/2011

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

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