

# DC/DC Product Specification

Embedded Power for  
Business-Critical Continuity

- 1/8<sup>th</sup> brick fully regulated DCDC converter.

## AVO100B-48S3V3

### 1/8<sup>th</sup> brick

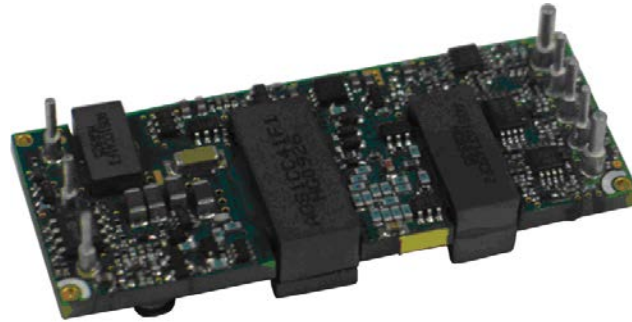
Input voltage: 36-75V  
Single Output: 3.3V  
Rated power: 99W

## Special Features

- 2:1 Wide input range
- Optimised for High density, small space applications
- Low ripple and noise
- Fixed switching frequency
- High efficiency
- High capacitive load capability
- Basic insulation system
- Through hole termination
- Open frame structure with Base-plate option

## Safety

- UL, cUL: UL60950
- TUV/CE: IEC/EN60950



Rev 09/07/2012  
AVO100B series  
Page 1 of 2

## Product Description

The AVO100B-48S3V3 is the latest high efficiency 1/8<sup>th</sup> brick. It operates from a wide input range of 36Vdc to 75Vdc and provides a regulated output voltage of 3.3Vdc. The output is rated to a power level up to 99Watts maximum. Its protection features include Non-latching OCP, OTP and OVP. It also has an enable pin on the primary side of the converter. The unit is an open frame design with base-plate option that is optimised for either contact-cooled applications or forced airflow applications.

## Specifications

Feature	
Output power:	99W
Super high efficiency:	92%(3.3V)
Functions:	Remote control, trim function, Sense; Input LVP, output OVP and OCP, OTP Open frame structure with base plate option.
Insulation:	Basic Insulation
Safety	
UL:	UL60950
TUV/CE:	IEC/EN60950
Input specification	
Input range	36Vdc to 75Vdc
Input Surge	100V for 100mSec
Control specification	
Enable	TTL compatible Positive or Negative enable
Output specification	
Output Voltage	3.3V dc
Trim range	+10% to -20% Vout
Output Current	30A
Ripple and noise	60mV pk-pk
Regulation	Load regulation = 20mV, Line regulation =10mV
Switching Frequency	Fixed switching frequency 310Khz
Isolation Voltage	1500Vdc
Transient response.	75mV deviation 100µs recovery (25%-50% Iout)

## Environmental Specification

Storage Temperature	-55 to +125 deg C
Ambient operating temp	-40 to +85 deg C
MTBF at 25degC	2 Million hours (48V, Io=20A)
OTP	115 deg C (baseplate version) 120 deg C (open frame version)

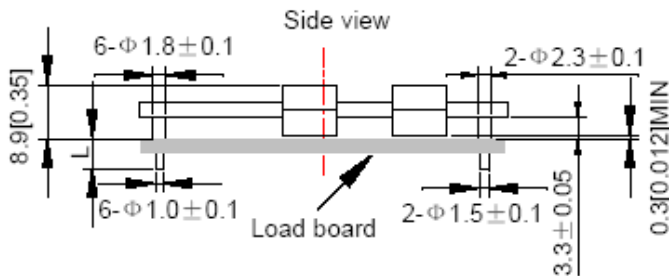
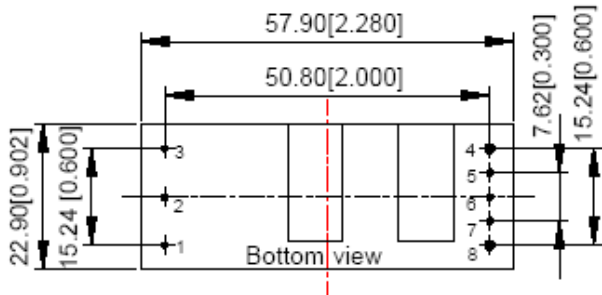
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## Mechanical

Rev 09/07/2012  
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Page 2 of 2



Unit: mm[inch] Bottom view: pin on upside

Tolerance: X.Xmm ± 0.4mm [X.X in. ± 0.02in.]

X.XXmm ± 0.25mm [X.XX in. ± 0.01in.]

### Pin Assignments

Pin #	Function
1	+V in
2	Enable
3	-V in
4	-V out
5	- Sense
6	Trim
7	+Sense
8	+V out

## Ordering information

Input voltage	Output voltage	Output current	Efficiency	Part number
48V	3.3V	30A	92%	AVO100B-48S3V3-6L
48V	3.3V	30A	92%	AVO100B-48S3V3P-6L
48V	3.3V	30A	92%	AVO100B-48S3V3SL
48V	3.3V	30A	92%	AVO100B-48S3V3-6Y
48V	3.3V	30A	92%	AVO100B-48S3V3P-6Y
48V	3.3V	30A	92%	AVO100B-48S3V3B-6Y
48V	3.3V	30A	92%	AVO100B-48S3V3PB-6Y

### Notes

- Standard converter is Negative enable
- 'P' = Positive enable
- 'B' = Base-plate
- '-S' = Surface mount
- '-6' = 3.8mm pin length.
- '-Y' = RoHS-5 compliant.
- '-L' = RoHS-6 compliant.

### Notes,

- 1\ 20Mhz bandwidth. External 10uF tantalum capacitor placed across +Vout and -Vout; 33 uF e-cap or equivalent placed across +Vin and -Vin.
- 2\ Efficiency measurements taken at full load and nominal line and Tamb = 25degC
- 3\ All specifications taken at nominal line, full load and Tamb = 25degC unless otherwise noted
- 4\ Mechanical dimensions are for reference only. Dimensions are in MM. Mechanical tolerance = +/- 0.5mm
- 5\ Technical reference notes should be consulted for detailed information when available.
- 6\ All specifications subject to change without notice
- 7\ Warranty 2 years
- 8\ The through-hole terminated modules are intended for wave-soldering process – special request for other manufacturing processes to be made to Emerson

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