

# DC/DC Product Specification

Embedded Power for  
Business-Critical Continuity

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

## AVO100-48S05B

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

Input voltage: 36-75V  
Single Output: 5V  
Rated power: 100W

## 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
- Pre-bias start-up capability
- Through hole or SMT termination
- Open frame structure with Base-plate option

## Safety

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



Rev 06/07/2012  
AVO100 series  
Page 1 of 2

## Product Description

The AVO100-48S05B is the latest high efficiency 1/8<sup>th</sup> brick series. It operates from a wide input range of 36Vdc to 75Vdc and provides a regulated output voltage of 5Vdc. The output is rated to a power level up to 100Watts. 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 a base-plate design option that is optimised for either contact-cooled applications or forced airflow applications.

## Specifications

Feature	
Output power:	100W
Efficiency:	92.8%(5V)
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	5Vdc.
Trim range	+10% to -20% Vout
Output Current	20A
Ripple and noise	90mV pk-pk
Regulation	Load regulation =10mV, Line regulation = 5mV
Switching Frequency	Fixed switching frequency 310Khz
Isolation Voltage	2250Vdc
Transient response.	230mV deviation 100µs recovery (50%-75% Iout)

## Environmental Specification

Storage Temperature	-55 to +125 deg C
Ambient operating temp	-40 to +85 deg C
MTBF at 25degC	1.5 Million hours
OTP	130deg C

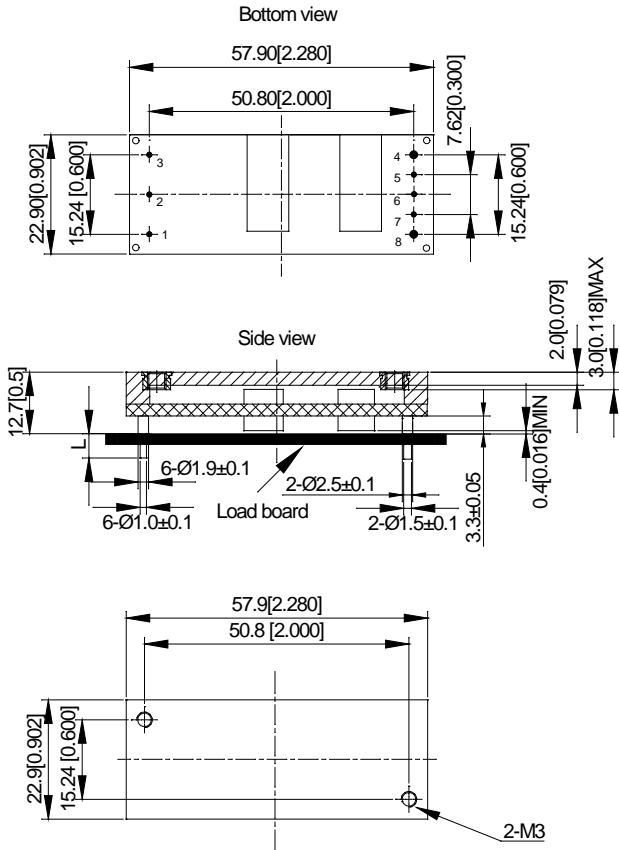
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Page 2 of 2

## Mechanical



Unit: mm [inch] Bottom view: pin on upside  
Tolerance: X.Xmm ± 0.5mm [X.X in. ± 0.02in.]

### Pin Assignments

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

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## Ordering information

Input voltage	Output voltage	Output current	Efficiency	Part number
48V	5.0V	20A	92.8%	AVO100-48S05B-6L
48V	5.0V	20A	92.8%	AVO100-48S05PB-6L

### Notes

- Standard converter is Negative enable
- '-6' = 3.8mm pin length.
- '-P' = Positive remote control ,
- '-L' = RoHS-6 compliant.
- '-Y' = RoHS-5 compliant.
- '-B' = Baseplate version

### 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