

DC/DC Product Specification

Embedded Power for
Business-Critical Continuity

- 1/16th brick fully regulated DCDC converter.

AVD85-48S3V3B

1/16th brick

Input voltage: 36-75V
Single Output: 3.3V
Rated power: 82.5W

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
- Pre-bias start-up capability
- Basic insulation system
- Through hole or SMT termination
- Openframe structure with Baseplate option

Safety

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



Rev 30.08.2012
AVD85 series
1 of 2

Product Description

The AVD85-48S3v3B is the latest high efficiency 1/16th 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 82.5Watts 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 baseplate option that is optimised for either contact-cooled applications or forced airflow applications.

Specifications

Feature	
Output power:	82.5W
Super high efficiency:	91.5%(3.3V)
Functions:	Remote control, trim function, Sense; Input LVP, output OVP and OCP, OTP Open frame structure with base plate option.
Isolation:	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	25A
Ripple and noise	70mV pk-pk
Regulation	Load regulation = 16.5mV, Line regulation = 6.6mV
Switching Frequency	Fixed switching frequency 250Khz
Isolation Voltage	1500Vdc
Transient response.	100mV deviation 300mS recovery (25%-75% 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	125 deg C (baseplate version) 135 deg C (open frame version)

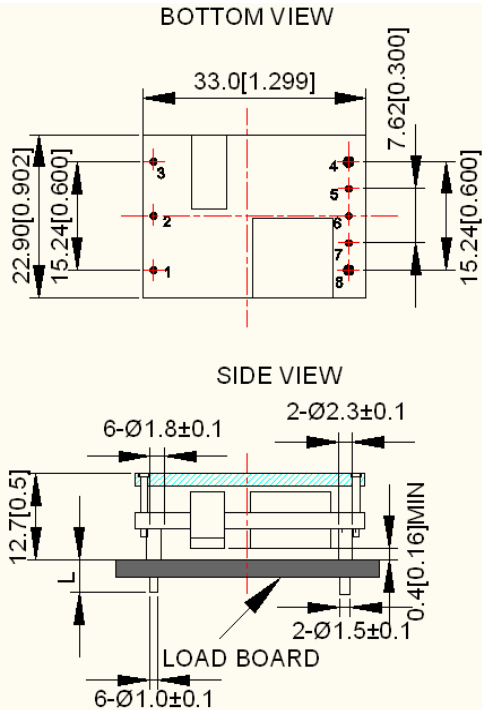
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Mechanical



UNIT: mm[inch] BOTTOM VIEW: pin on u

TOLERANCE: X.Xmm±0.5mm[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

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Ordering information

Input voltage	Output voltage	Output current	Efficiency	Part number
48V	3.3V	25A	91.5%	AVD85-48S3V3TL
48V	3.3V	25A	91.5%	AVD85-48S3V3-6L
48V	3.3V	25A	91.5%	AVD85-48S3V3B-6L

Notes

- Standard converter is Negative enable
- B = Baseplate (without B is open-frame)
- '-6' = 3.8mm pin length.
- '-T' = Surface mount, reel tape package
- '-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