

## AED/ALD13B50

### 1/16th Brick IBC Series

**Total Power:** 150 Watts  
**Input Voltage:** 38 - 60 Vdc  
**Output Voltage:** 12 Vdc



### Special Features

- Intermediate Bus Converter for Front End (DPA) Distributed Power Architecture application
- High efficiency (95% Typical)
- Industry standard package 16th Brick 0.90" x 1.30"
- High capacitive load limit on start-up
- Output Enable Pin
- Undervoltage lockout
- Over Temperature Protection
- Meets Basic Insulation
- EU directive 2002/95/EC compliant for RoHS

### Safety

- UL, cUL: 60950
- TUV: EN60950

## Electrical Specifications

### Input

Input range:	38 V to 60 V
Efficiency:	95%@ 12 V (typical)
Over Voltage Protection:	67 V typical
Input UVLO:	33 V to 38 V

### Output

Output current:	13 A max
Output Voltage over line, load and temperature:	8.7 V to 15 V
Noise/ripple <sup>1</sup> :	180 mV (typical)
Over current limit:	Auto-restart
Over temperature protection:	110 °C minimum (autorecovery)
Switching frequency:	165 kHz

### Control

Enable:	TTL compatible (positive or negative enable logic)
Isolation Voltage:	
Input to Output:	2000 Vdc max

## Environmental Specifications

Operating ambient temperature range:	-40 °C to +85 °C ambient
Storage temperature:	-55 °C to +125 °C
MTBF:	> 1 million hours

## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency <sup>2</sup>	Model Number
38 - 60V	12 V	13 A	95% Typ	A(X)D13B50(N)-(6)(L)

Options:

- (X) : "L" = Open Frame / Low Profile  
"E" = Heatplate Construction
- (N) : "N" = Designates Negative Logic Enable (default is Positive Enable with no suffix "N" required)
- (6) : "-6" = 3.7 mm nominal pin length (default is 5 mm nominal pin length with no suffix "-6" required)
- (L) : "L" = RoHS Compliant (RoHS 6)

## Pin Connections

### Single Output

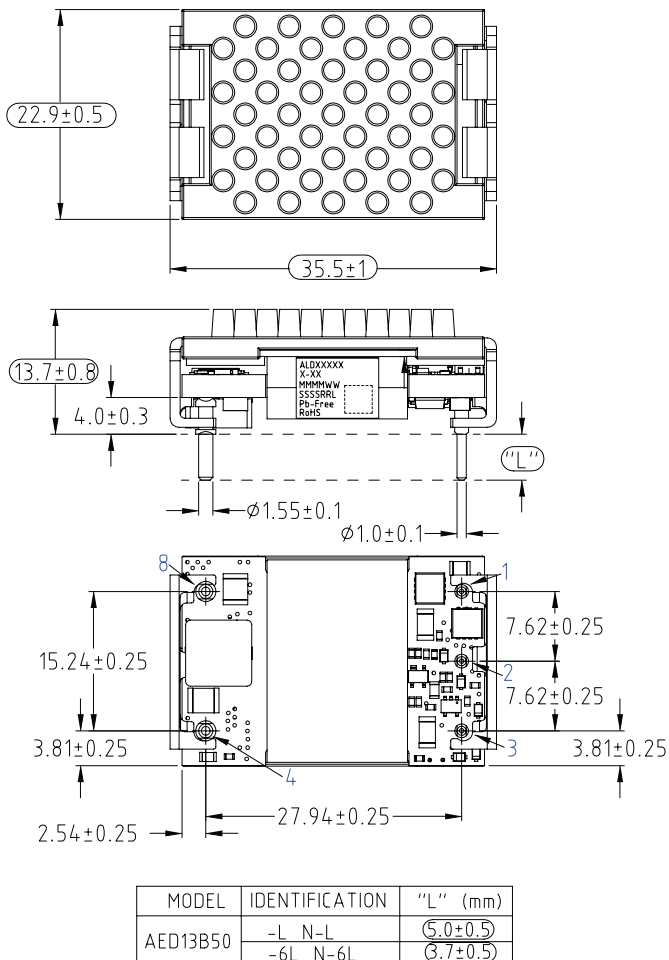
1. +Vin
2. Enable
3. -Vin
4. -Vout
5. Blank
6. Blank
7. Blank
8. +Vout

### Notes:

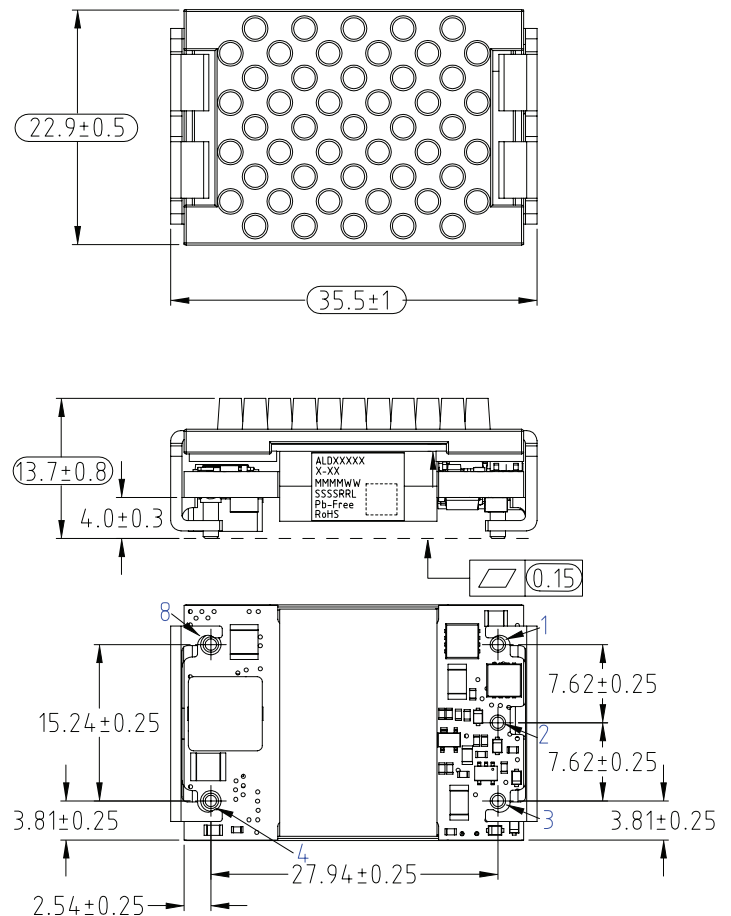
1. 20 MHz bandwidth. External 10 uF tant. capacitor in parallel with 1 uF ceramic capacitor placed across the output and secondary return ground.
2. Efficiency measurements are typical values taken at 48 V input, nominal output, full load and  $T_A = 25^\circ\text{C}$ .
3. All specifications are typical at nominal line, full load and  $T_A = 25^\circ\text{C}$  unless otherwise noted.
4. All specifications subject to change without notice.
5. Mechanical drawings are for reference only. Dimensions are in inches [millimeters]. Pin placement tolerance  $\pm 0.005$  [0.127]. Mechanical Tolerance  $\pm 0.02$  [0.5]. Pin diameter,  $\varnothing = 0.06$ " for Pin 4 (-Vout) and Pin 8 (+Vout), the rest of the pins are  $\varnothing = 0.04$ ".
6. Technical Reference Notes should be consulted for detailed information when available.
7. Warranty 1yr.

## Mechanical Drawings

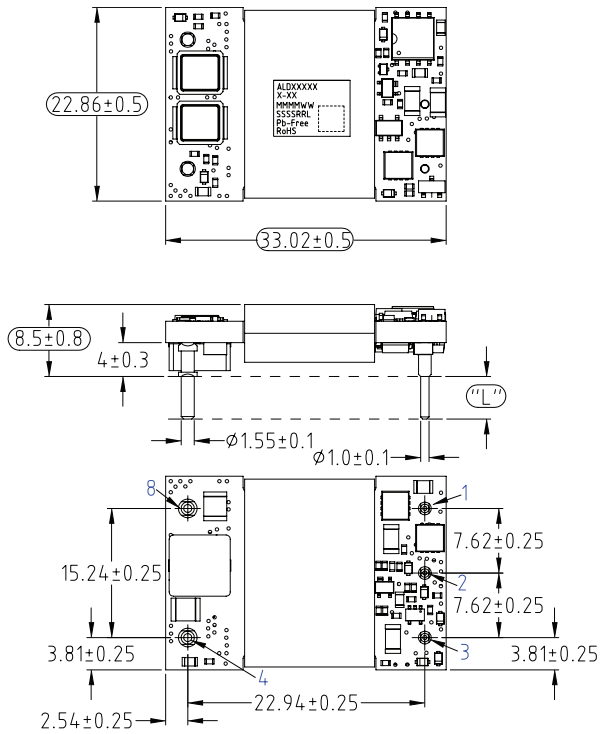
### AED13B50-L



### AED13B50-SL

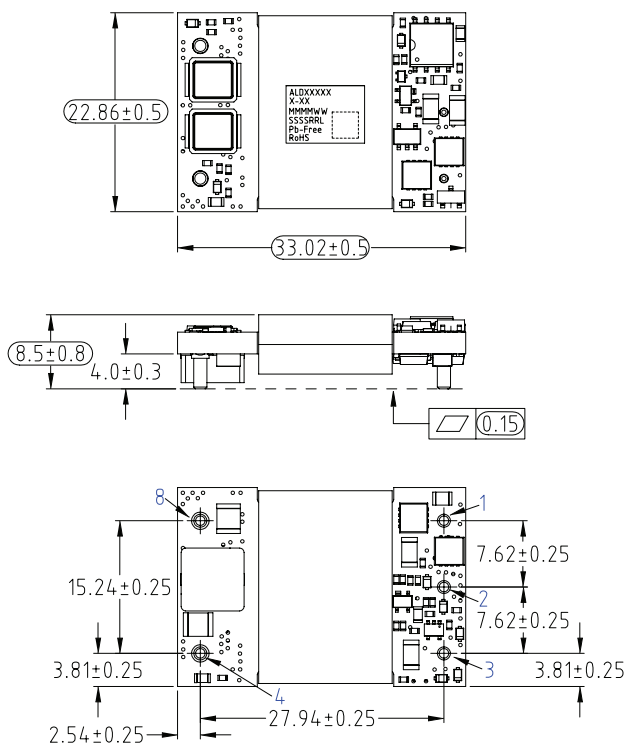


## ALD13B50-L



MODEL	IDENTIFICATION	"L" (mm)
ALD13B50	-L N-L	5.0±0.5
	-6L N-6L	3.7±0.5

## ALD13B50-SL



### Americas

5810 Van Allen Way  
Carlsbad, CA 92008  
USA  
Telephone: +1 760 930 4600  
Facsimile: +1 760 930 0698

### Europe (UK)

Waterfront Business Park  
Merry Hill, Dudley  
West Midlands, DY5 1LX  
United Kingdom  
Telephone: +44 (0) 1384 842 211  
Facsimile: +44 (0) 1384 843 355

### Asia (HK)

14/F, Lu Plaza  
2 Wing Yip Street  
Kwun Tong, Kowloon  
Hong Kong  
Telephone: +852 2176 3333  
Facsimile: +852 2176 3888

For global contact, visit:

[www.PowerConversion.com](http://www.PowerConversion.com)  
[techsupport.embeddedpower@emerson.com](mailto:techsupport.embeddedpower@emerson.com)

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