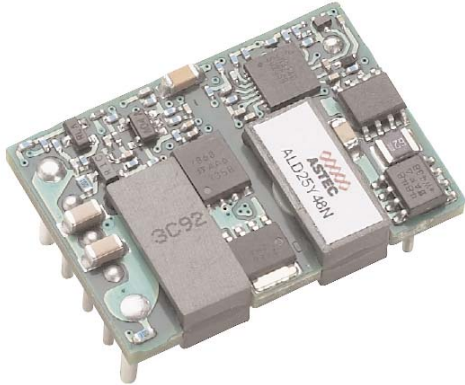


# 25 Amps

## ALD25

Total Power: 60W  
 Input Voltages: 48  
 No. of Outputs: Single



### Special Features

- High Efficiency
- -40°C to +85°C Ambient Air Operation
- 1.30" x 0.9" x 0.35" TH or SMT package
- High capacitive load limit on start-up
- Industry standard feature sets: UVLO, OVP, OCP, OTP, On/Off Enable, Remote Sense, Output Trim
- Basic Insulation
- Regulation to zero load
- Fixed frequency switching
- EU Directive 2002/95/EC compliant for RoHS

### Environmental

Ambient air operating temperature range:  
-40°C to +85°C

Storage temperature: -40°C to +125°C

Overtemperature protection: 115°C PCB  
temperature (Typical)

MTBF: > 1 million hours

### Safety

UL,cUL 60950-1

TUV EN60950-1

### Electrical Specs

#### Input

Input Range	36 to 75 VDC
Input Surge	100V /100ms
Efficiency	88%@1.8V (Typical)

#### Output

Line Regulation	$\pm 0.1\%V_O$
Load Regulation	$\pm 0.1\%V_O$
Noise/Ripple <sup>1</sup>	35mV Typ
Remote sense	Up to 10% of $V_O$
Transient Response	3% $V_O$ (typ) deviation 50% to 75% Load change 80 $\mu$ s settling time (typ)
Overvoltage Protection	125% $V_O$ typ (autorecovery)
Over Current protection	115% $I_O$ typ (autorecovery)
Over Temperature Protection	115°C average PCB temperature (autorecovery)
Switching Frequency	Fixed Frequency
Isolation Voltage	1500 Vdc

#### Control

Voltage Adjust Enable	90 to 110% $V_O$ TTL compatible (Positive or Negative enable options)
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## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency <sup>2</sup>	Model Number
36V to 75V	5.0V	12A	91% Typ	ALD12A48(N) - (6)(S)(L)
36V to 75V	3.3V	18A	90% Typ	ALD18F48(N) - (6)(S)(L)
36V to 75V	2.5V	20A	89% Typ	ALD20G48(N) - (6)(S)(L)
36V to 75V	1.8V	25A	88% Typ	ALD25Y48(N) - (6)(S)(L)
36V to 75V	1.5V	25A	85% Typ	ALD25M48(N) - (6)(S)(L)
36V to 75V	1.2V	25A	83% Typ	ALD25K48(N) - (6)(S)(L)

**NOTES:**

Efficiency values taken at nominal input full load condition, 25°C ambient temperature.

**OPTIONS**

- (N) : "N" = designates Negative Logic Enable (default is Positive Enable with no suffix "N" required)
- (6) : "-6" = 3.7mm nominal pin length (default is 5mm nominal pin length with no suffix "-6" required)
- (S) : "-S" = Surface Mount Termination (default is thru hole termination with no suffix "-S" required)
- (L) : "L" = RoHS compliant (RoHS 6) / "Blank" - RoHS compliant with Lead (PB) in solder exemption (RoHS 5)

## Pin Assignments

Single Output

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

**Notes:**

1. Measured at 20MHz bandwidth with external 10 μF tant. capacitor in parallel with 0.1 μF ceramic capacitor placed across +Vout and -Vout; 33μF e-cap or equivalent placed across +Vin and -Vin.
2. Efficiency measurements taken at full load, nominal line and T<sub>A</sub> = 25 °C.
3. All specifications are typical at nominal line, full load and T<sub>A</sub> = 25 °C unless otherwise noted.
4. Mechanical drawings are for reference only. Dimensions are in inches [millimeters]. Mechanical tolerance: ± 0.002[0.5], recommended surface mount pads: ∅ = 0.11[2.79] ± 0.005 [0.13]; through hole pin diameter (Pins 4 & 8) ∅ = 0.062 [1.57], others ∅ = 0.04 [1.0] (6X).
5. Technical reference Notes should be consulted for detailed information when available.
6. All specifications subject to change without notice.
7. Warranty 1 yr.

Astec reserves the right to make changes to the information contained herein without notice and assumes no liability as a result of its use or application. (REV08: MARCH 05, 2006)

