

300 Watts

ALQ25B50

DC Transfromer



Special Features

- High efficiency (96% Typical)
- -40°C to +100°C Ambient Air Operation
- Industry standard package Qtr Brick 1.48" x 2.30" x 0.40"
- High capacitive load limit on start-up
- 12V @ 25A Intermediate Bus Voltage for DPA application
- Regulation to zero load
- Output Enable Pin
- Meets Basic Insulation
- Input UVLO and Overvoltage Protection
- Over Temperature Protection

Environmental

Ambient air operating temperature range:
-40°C to +100°C

Storage temperature: -55°C to +125°C

Overttemperature protection: 115°C typical

MTBF: > 1 million hours

Safety

UL, cUL 60950

TUV EN60950

Total Power: 300W (12V @ 25A)
Input Voltages: 48V
No. of Outputs: Single

Electrical Specs

Input

Input Range¹ 42 to 53 VDC
Efficiency 96%@12V (Typ)
Over Voltage Protection 60V
Input UVLO¹ 39V to 42V

Output

Output Current 0A to 25A max (300W output power)
Line Regulation 10.25V to 13.60V
8.50V to 13.60V (for "-AL" option)
Load Regulation ±3% Vo (Typical)
Noise/Ripple² 100mV (Typical)
Transient Response 200mV typical deviation
50% to 75% Load Change
100µs max recovery time
Over Current Limit¹ 115% I_{O,MAX} typical (latching)
Switching Frequency 800kHz

Control

Enable TTL compatible
(Positive or Negative Enable Logic)

Isolation Voltage

Input to Output 2000Vdc max

* Specifications are subject to change without notice.

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Ordering Information

ALQ25B50

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
42V to 53V	12.0V	25A*	96% Typ	ALQ25B50
42V to 53V	12.0V	25A*	96% Typ	ALQ25B50-6
42V to 53V	12.0V	25A*	96% Typ	ALQ25B50N
42V to 53V	12.0V	25A*	96% Typ	ALQ25B50N-6
36V to 53V	12.0V	25A*	96% Typ	ALQ25B50N-AL

OPTIONS:

Enable Function "N" = negative logic enable
without "N" = positive logic enable (default)

Pin Length Option "-6" = 3.7mm (nominal)
Standard pin length is 5mm nominal

Others "-AL" = Autorecovery mode and lower UVLO range (34V to 36Vdc)

* Derating / airflow required at elevated ambient operating temperature, consult the Technical Reference Notes

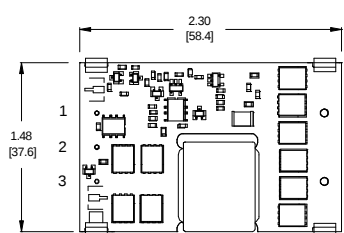
Pin Assignments

Single Output

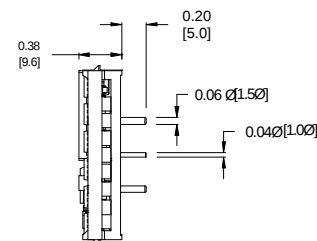
1. + Vin
2. Enable
3. - Vin
4. - Vout
5. + Vout

Notes:

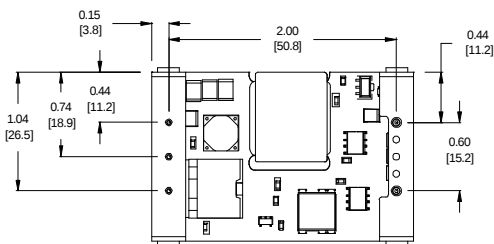
1. Part number suffix "-AL" designates:
 - 36V to 53V Input voltage range
 - lower UVLO range (34V to 36V)
 - Autorecovery mode after fault protection
2. 20MHz BW limited with external 10uF tantalum cap. + 0.1uF ceramic cap across the output. 220uF low ESR cap required across the input pins.
3. Output may need to be derated and airflow added when operating at elevated ambient temperature.
4. All specifications are typical at nominal line, full load and 25°C ambient temp unless otherwise noted.
5. Technical Reference Notes should be consulted for detailed information when available.
6. Warranty: 1yr



PIN SIDE DOWN



SIDE VIEW



PIN SIDE UP

NOTES.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
PIN PLACEMENT TOLERANCE: $\pm 0.005(0.127)$
MECHANICAL TOLERANCE $\pm .002(0.5)$

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. (REV 01: APRIL 7, 2005)

Astec Industry Standard