

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 (Pending)

TUV EN60950 (Pending)

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

Electrical Specs

Input

Input Range	42 to 53 VDC
Efficiency	96%@12V (Typ)
Over Voltage Protection	60V
Input UVLO	Standard feature

Output

Output Current	0A to 25A max (300W output power)
Line Regulation	10.25V to 13.60V
Load Regulation	±3% Vo (Typical)
Noise/Ripple ¹	120mV (Typical)
Transient Response	200mV typical deviation
	50% to 750% Load Change
	100µs recovery time
Current Limit	115% I _{O,MAX} (Typ)
Switching Frequency	800kHz

Control

Enable	TTL compatible (Positive or Negative Enable Logic)
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* Specifications are subject to change without notice.

AMERICAS

5810 Van Allen Way
Carlsbad, CA 92008
Telephone: 760-930-4600
Facsimile: 760-930-0698

EUROPE

Astec House, Waterfront Business Park
Merry Hill, Dudley
West Midlands, DY5 1LX, UK
Telephone: 44 (1384) 842-211
Facsimile: 44 (1384) 843-355

ASIA

Units 2111-2116, Level 21
Tower1, Metroplaza
223, Hing Fong Road
Fwai Fong, New Territories
Hong Kong
Telephone: 852-2437-9662
Facsimile: 852-2402-4426



ALQ25B50

Ordering Information

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

NOTES:

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

* Derating required at higher ambient operating temperature.

Pin Assignments

Single Output

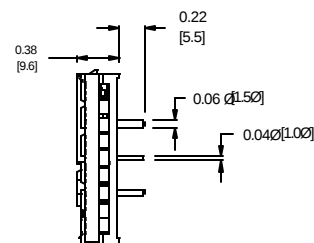
1. + Vin
2. Enable
3. - Vin
4. - Vout
5. + Vout

Notes:

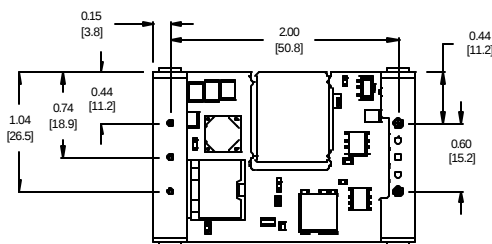
1. 20MHz BW limited with external 10uF tantalum cap. + 0.1uF ceramic cap across the output. 220uF low ESR cap required across the input pins.
2. All specifications are typical at nominal line, full load and 25°C ambient temp unless otherwise noted.
4. Technical Reference Notes should be consulted for detailed information when available.
5. Warranty: 1yr



PIN SIDE DOWN



SIDE VIEW



PIN SIDE UP

NOTES:

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

* This is a Preliminary Data Sheet. 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 B: MARCH 10, 2003)

Astec Industry Standard