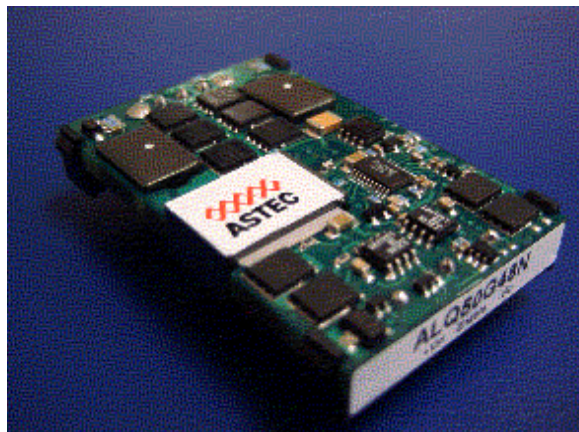


# 50 Amps

## ALQ50

High Efficiency Quarter Brick



### Special Features

- Industry standard Quarter Brick package 1.48" x 2.30" x 0.38"
- Openframe low profile construction
- High capacitive load start-up
- Regulation to zero load
- Fixed frequency switching for EMI predictability
- Industry Standard Features: Input UVLO with hysteresis, Enable, OCP, OCP, OTP, Output Voltage Trim, Differential Remote Sense
- Meets Basic Insulation

### Environmental

Operating Ambient Temperature: -40°C to +85°C

Storage Temperature: -40°C to +125°C

MTBF: > 1 million hours

### Safety

UL, cUL 60950

TUV EN60950

Total Power: 132W  
Input Voltages: 48V  
No. of Outputs: Single

### Electrical Specs

#### Input

Input Range 36 to 75 VDC  
Input Surge 100V /100ms  
Efficiency 3.3V @ 91% (typical)

#### Output

Line / Load Regulation < 0.3% Vo (typical)  
Output Current up to 50A max  
(3.3V at 40A max)  
Noise/Ripple<sup>1</sup> 40mV<sub>PK-PK</sub> (typical)  
Remote sense Up to 10% of Vo  
Transient Response 100mV (typ) deviation  
50% to 75% Load change  
250μs (typ) recovery  
Overvoltage Protection 130% typ for Vo < 3.3V  
125% typ for 3.3V  
Over Current Protection 120% Iout typ (autorecovery)  
Over Temperature Protection 115C average PCB temperature  
(autorecovery)  
Switching Frequency 480kHz  
540kHz (2.5V output)  
Isolation Voltage 1500Vdc

#### Control

Voltage Voltage Trim ±10% V<sub>O,NOM</sub>  
Enable Postive or Negative Logic options

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Fwai Fong, New Territories  
Hong Kong  
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Facsimile: 852-2402-4426



## Ordering Information

| Input Voltage | Output Voltage | Output Current | Efficiency <sup>2</sup> | Model Number |
|---------------|----------------|----------------|-------------------------|--------------|
| 36V to 75V    | 3.3V           | 40A            | 91% Typ                 | ALQ40F48 (N) |
| 36V to 75V    | 2.5V           | 50A            | 90% Typ                 | ALQ50G48(N)  |
| 36V to 75V    | 1.8V           | 50A            | 89% Typ                 | ALQ50Y48 (N) |
| 36V to 75V    | 1.2V           | 50A            | 86% Typ                 | ALQ50K48 (N) |

### OPTIONS:

(N) : "N" = designates Negative Logic Enable (default is Positive Enable with no suffix "N" required)

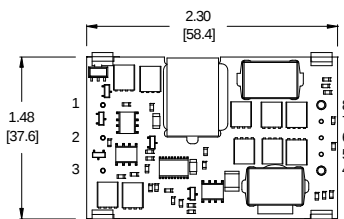
## Pin Assignments

### Single Output

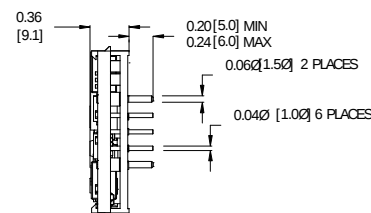
1. +Vin
2. Enable (On/Off)
3. -Vin
4. -Vout
5. -Sense
6. Trim
7. +Sense
8. +Vout

### Notes:

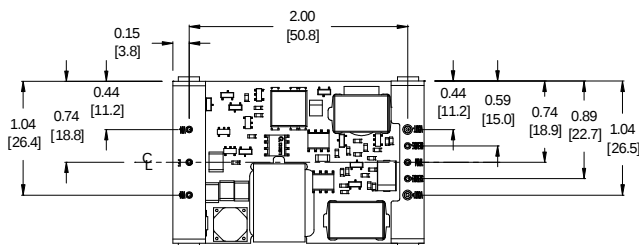
1. 20 MHz bandwidth. External 10 uF tant. capacitor in parallel with 1 uF ceramic capacitor placed across the output and secondary return ground.
2. Efficiency measurements are typical values taken at full load, nominal line and  $T_A = 25^\circ\text{C}$ .
3. All specifications are typical at nominal 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].  $\varnothing = 0.060$ " for Pins 4&8, the rest are  $\varnothing = 0.40$ ".
6. Technical Reference Notes should be consulted for detailed information when available.
7. Warranty 1yr.



PIN SIDE DOWN



SIDE VIEW



PIN SIDE UP

Astec reserves the right to make changes to the information contained herein without notice and assumes no liability as a result of its use and application. (REV 07: OCTOBER 19, 2004)

ALQ50

Astec Industry Standard

# Mouser Electronics

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