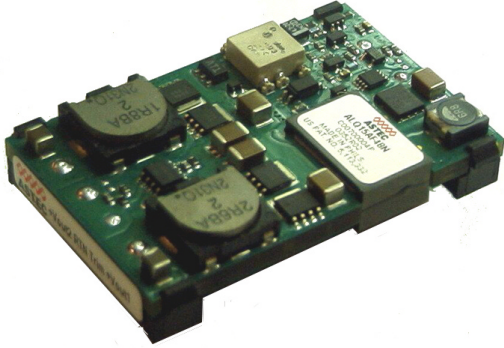


# 60 Watts

## ALQ15-Dual

High Efficiency



Total Power: 60 Watts  
 Input Voltages: 48V  
 No. of Outputs: Dual

### Special Features

- Industry standard Dual O/p 1/4 Brick Footprint
- Open Frame Construction
- Low Ripple and Noise<sup>1</sup> < 30mV<sub>PK-PK</sub>
- Regulation to zero load
- High Capacitive Load start-up
- Fixed Frequency Switching for EMI predictability
- Industry Standard features: OVP, OCP, OTP, Input UVLO, Enable, Trim
- Input Under Voltage Lockout with hysteresis
- Output Voltage Adjustability
- Meets Basic Insulation

### Environmental

Operating Ambient Temperature -40°C to +85°C  
 Storage temperature: -55°C to +125°C  
 MTBF: > 1 Million Hrs

### Safety

UL, cUL 60950 Recognized  
 TUV EN60950 Licensed  
 CB Test Certificate

### Electrical Specs

#### Input

|                         |   |
|-------------------------|---|
| Input Range             | 36 to 75 VDC  |
| Input Surge             | 100V /100ms   |
| Efficiency <sup>2</sup> | 5.0V/3.3V @ 89.5% (typ at 60W)<br>3.3V/2.5V @ 87.7%<br>3.3V/1.8V @ 86.5%<br>2.5V/1.5V @ 84.0% |

#### Output

|                             |  |
|-----------------------------|--|
| Line / Load Regulation      | < 1% V <sub>o</sub>  |
| Load Current                | 15A max per channel (60W max)<br>12A max for 5V rail                                       |
| Noise/Ripple <sup>1</sup>   | 30mV <sub>PK-PK</sub>  |
| Transient Response          | 2% V <sub>o</sub> deviation (typ)<br>(50% to 75% Step Load)<br>< 300μs settling time (typ) |
| Over Voltage Protection     | 130% V <sub>o</sub> Typ (latching)   |
| Over Current Protection     | 130% I <sub>O,max</sub> Typ (autorecovery)   |
| Over Temperature Protection | 115°C average PCB temperature (autorecovery)   |
| Switching Frequency         | 350kHz (typ)   |
| Isolation Voltage           | 1500Vdc  |

#### Control

|                |  |
|----------------|--|
| Voltage Adjust | ±10% V <sub>O,NOM</sub>                          |
| Enable         | TTL compatible<br>(Positive or Negative options) |

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  
 Tower 1, Metroplaza  
 223, Hing Fong Road  
 Fwai Fong, New Territories  
 Hong Kong  
 Telephone: 852-2437-9662  
 Facsimile: 852-2402-4426



## Ordering Information

| Input Voltage | Output Voltage |      | Output Current |     | Efficiency <sup>2</sup> | Model Number       |
|---------------|----------------|------|----------------|-----|-------------------------|--------------------|
|               | Vo1            | Vo2  | Io1            | Io2 |                         |                    |
| 36V to 75V    | 5V             | 3.3V | 12A            | 15A | 89.5%                   | ALQ15AF48(N) - (6) |
| 36V to 75V    | 3.3V           | 2.5V | 15A            | 15A | 87.7%                   | ALQ15FG48(N) - (6) |
| 36V to 75V    | 3.3V           | 1.8V | 15A            | 15A | 86.5%                   | ALQ15FY48(N) - (6) |
| 36V to 75V    | 2.5V           | 1.5V | 15A            | 15A | 84.0%                   | ALQ15GM48(N) - (6) |

\* Total power both outputs combined not to exceed 60 Watts

OPTIONS:

Enable Function "N" = Negative Logic Enable (default is Positive Logic Enable - no suffix "N")

Pin Length "-6" = 3.7mm nominal pin length (default is 5mm nominal - no suffix "6")

## Pin Assignment

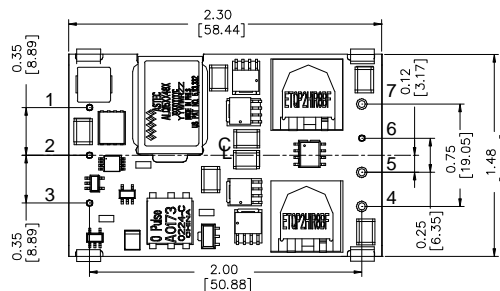
### Dual Output

1. +Vin
2. Enable (On/Off)
3. -Vin
4. +V<sub>O2</sub>
5. Secondary Return/Ground
6. Trim
7. +V<sub>O1</sub>

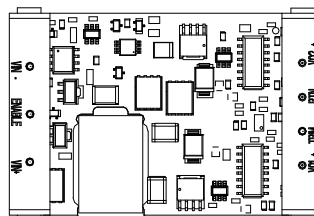
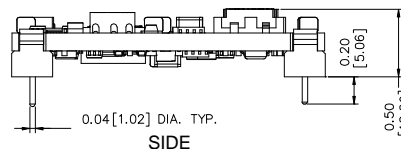
Notes:

1. 20 MHz bandwidth. External 10 uF tant. capacitor in parallel with 1 uF ceramic capacitor placed output and secondary return ground.
2. Efficiency measurements taken at full load - balanced output load current, 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. All specifications subject to change without notice. Mechanical drawings are for reference only
5. Technical Reference Notes should be consulted for detailed information when available
6. Warranty 1yr.

### Mechanical Outline



### PIN SIDE DOWN



### PIN SIDE UP

The information on this data sheet are believed to be accurate at the time of its release. 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.  
 (REV01: FEB 23, 2004)

Dimensions are in inches [millimeters]  
 Pin placement Tolerance ± 0.005 [0.127]  
 Mechanical Tolerance ± 0.02 [0.5]