



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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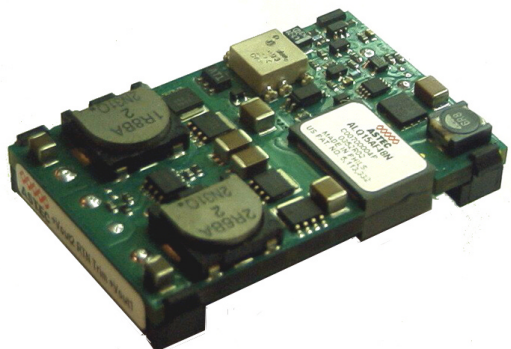
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# 60 Watts

## ALQ15-Dual

High Efficiency



### 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

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

### 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) 3.3V/2.5V @ 87.7% 3.3V/1.8V @ 86.5% 2.5V/1.5V @ 84.0%

#### Output

Line / Load Regulation	< 1% Vo
Load Current	15A max per channel (60W max) 12A max for 5V rail
Noise/Ripple <sup>1</sup>	30mV <sub>PK-PK</sub>
Transient Response	2% Vo deviation (typ) (50% to 75% Step Load) < 300μs settling time (typ)
Over Voltage Protection	130% Vo 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 (Positive or Negative options)



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## 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

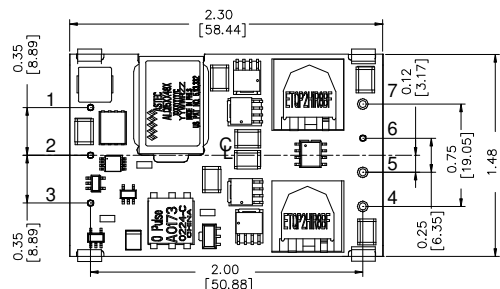
### Dual Output

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

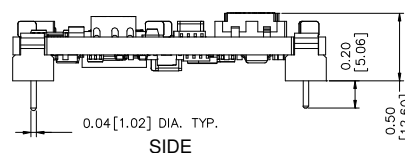
### Notes:

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.

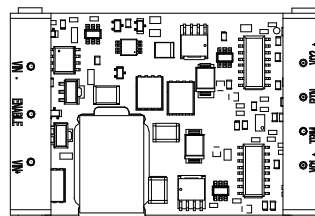
### Mechanical Outline



### 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  $\pm 0.005$  [0.127]  
Mechanical Tolerance  $\pm 0.02$  [0.5]