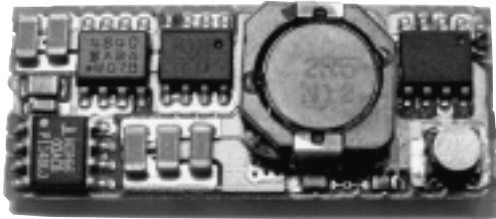


# Non Isolated DC/DC Converters

**XPiQ inc.**

Intelligent Design Quality Product

**6 Amps**  
**JWC006-L Series**



- High Efficiency
- Small Footprint
- Parallelable/Current Sharing
- Single Control Pin
- Safety Approvals UL, cUL, TÜV
- Surface Mount

## Specification

### Input

- **Input Voltage Range** • 3.3 V (3.0 V to 3.6 V) or 5.0 V (4.5 V to 5.5 V)
- **Input Current** • 5.5 A @ 3.3 V, 5.0 A @ 5.0 V
- **Start-Up Time** • <10 ms
- **Remote On/Off** • Open (logic high) = ON, Ground (logic low) = OFF
- **Input Reflected Ripple (I)** • 300 mA pk-pk

### Output

- **Output Voltage Range** • 1.5 V to 3.3 V - See Table
- **Output Voltage Adj.** •  $\pm 10\%$
- **Line Regulation** • See Tables
- **Load Regulation** • See Tables
- **Output Voltage Accuracy** • See Tables
- **Ripple & Noise** • 100 mV pk-pk max for 5.0 V in, 80 mV pk-pk max for 3.3 V in
- **Transient Response** • Max deviation of  $\pm 10\%$  of Vout settling to within 90% nominal in <50  $\mu$ s for 3 A step load change
- **Overcurrent Protection** • Operates at 7.5 to 10.0 A
- **Short Circuit Protection** • Operates in Hic-Up mode

### General

- **Efficiency** • 80-91% typically
- **Isolation Voltage** • Non-Isolated
- **Size** • 1.3" x 0.53" x 0.248"
- **Weight** • 5 g

### Environmental

- **Operating Temperature** • 0 °C to +80 °C (see derating chart) full power to 40°C
- **Cooling** • 100 LFM recommended above 25°C

### Safety

- **Safety Approvals** • Approve to UL 60950, IEC 60950 and CSA 60950

## OUTPUT VOLTAGE & CURRENT RATINGS

JWC006-L

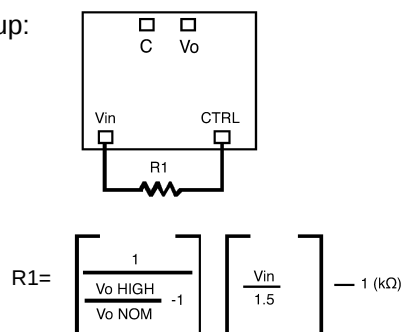
| Input Voltage | Output Voltage |                        |         | Output Current <sup>(2)</sup> |         | Efficiency | Model Number   |
|---------------|----------------|------------------------|---------|-------------------------------|---------|------------|----------------|
|               | Minimum        | Nominal <sup>(1)</sup> | Maximum | Minimum                       | Maximum |            |                |
| 3.3 V         | 1.455 V        | 1.5 V                  | 1.545 V | 0.0 A                         | 6.0 A   | 80%        | JWC00603S1V5-L |
|               | 1.746 V        | 1.8 V                  | 1.854 V |                               |         | 83%        | JWC00603S1V8-L |
|               | 1.940 V        | 2.0 V                  | 2.060 V |                               |         | 85%        | JWC00603S2V0-L |
|               | 2.425 V        | 2.5 V                  | 2.575 V |                               |         | 88%        | JWC00603S2V5-L |
| 5.0 V         | 1.455 V        | 1.5 V                  | 1.545 V | 0.0 A                         | 6.0 A   | 80%        | JWC00605S1V5-L |
|               | 1.746 V        | 1.8 V                  | 1.854 V |                               |         | 82%        | JWC00605S1V8-L |
|               | 1.940 V        | 2.0 V                  | 2.060 V |                               |         | 84%        | JWC00605S2V0-L |
|               | 2.425 V        | 2.5 V                  | 2.575 V |                               |         | 88%        | JWC00605S2V5-L |
|               | 3.200 V        | 3.3 V                  | 3.400 V |                               |         | 91%        | JWC00605S3V3-L |

### Notes

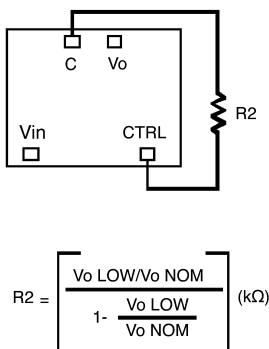
1. Output voltage includes initial setting, input voltage variation, load variation and temperature variation.
2. 100 LFM at 25°C ambient.

## Output Trim ming

To trim up:



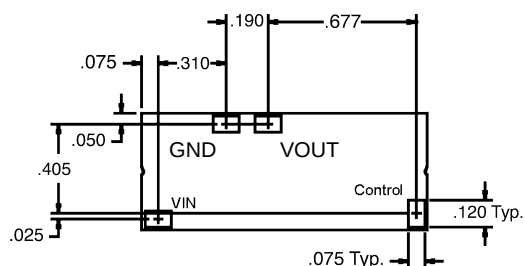
To Trim down:



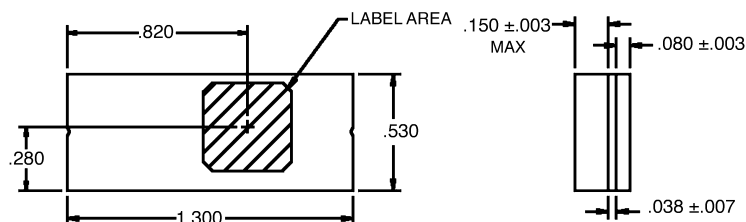
## Safety Specifications

These modules are approved to UL60950 3rd edition, CSA60959 3rd edition and IEC60950. These modules are not provided with an internal fusing. To achieve maximum safety and system protection always use an input line fuse. It is recommended to use a maximum 10 A normal blow fuse on the ungrounded lead.

## Mechanical Details



Bottom View of Board  
(Mating side)



Top View of Board

Derating Chart JWC00605S3V3-L

