

**PART NUMBER:** VEQ15**DESCRIPTION:** dc-dc converter**features**

- 15W isolated output
- 4:1 input range
- six-sided shield
- efficiency to 82%
- 200KHz switching frequency
- remote on/off control



| MODEL           | input voltage | output voltage | output current | input current |           | efficiency |
|-----------------|---------------|----------------|----------------|---------------|-----------|------------|
|                 |               |                |                | no load       | full load |            |
| VEQ15-Q24-S5    | 9-36VDC       | 5VDC           | 3000mA         | 15mA          | 810mA     | 77%        |
| VEQ15-Q24-S12   | 9-36VDC       | 12VDC          | 1250mA         | 15mA          | 780mA     | 80%        |
| VEQ15-Q24-S15   | 9-36VDC       | 15VDC          | 1000mA         | 15mA          | 780mA     | 80%        |
| VEQ15-Q24-D12   | 9-36VDC       | ±12VDC         | ±625mA         | 20mA          | 780mA     | 80%        |
| VEQ15-Q24-D15   | 9-36VDC       | ±15VDC         | ±500mA         | 20mA          | 780mA     | 80%        |
| VEQ15-Q24-T512  | 9-36VDC       | 5/±12VDC       | 1500/±310mA    | 20mA          | 780mA     | 80%        |
| VEQ15-Q24-T515  | 9-36VDC       | 5/±15VDC       | 1500/±250mA    | 20mA          | 780mA     | 80%        |
| VEQ15-Q24-T5125 | 9-36VDC       | +5/+12/-5VDC   | 1500/310/500mA | 20mA          | 715mA     | 80%        |
| VEQ15-Q48-S5    | 18-72VDC      | 5VDC           | 3000mA         | 10mA          | 410mA     | 77%        |
| VEQ15-Q48-S12   | 18-72VDC      | 12VDC          | 1250mA         | 10mA          | 390mA     | 80%        |
| VEQ15-Q48-S15   | 18-72VDC      | 15VDC          | 1000mA         | 10mA          | 390mA     | 80%        |
| VEQ15-Q48-D12   | 18-72VDC      | ±12VDC         | ±625mA         | 15mA          | 380mA     | 82%        |
| VEQ15-Q48-D15   | 18-72VDC      | ±15VDC         | ±500mA         | 15mA          | 380mA     | 82%        |
| VEQ15-Q48-T512  | 18-72VDC      | 5/±12VDC       | 1500/±310mA    | 15mA          | 380mA     | 82%        |
| VEQ15-Q48-T515  | 18-72VDC      | 5/±15VDC       | 1500/±250mA    | 15mA          | 380mA     | 82%        |
| VEQ15-Q48-T5125 | 18-72VDC      | +5/+12/-5VDC   | 1500/310/500mA | 15mA          | 350mA     | 82%        |

**V-INFINITY**  
a division of CUI INC

page 2 of 3

date 04/2009

**PART NUMBER:** VEQ15**DESCRIPTION:** dc-dc converter**INPUT**

|                     |                           |
|---------------------|---------------------------|
| input voltage range | 24V: 9-36V<br>48V: 18-72V |
| input filter        | PI type                   |

**OUTPUT**

|                              |                              |                |
|------------------------------|------------------------------|----------------|
| voltage accuracy             | single output                | ±1.0% max.     |
|                              | dual +output                 | ±1.0% max.     |
|                              | -output                      | ±3.0% max.     |
|                              | triple 5V                    | ±3.0% max.     |
|                              | 12V/15V                      | ±1.0% max.     |
| voltage balance (dual)       |                              | ±1.0% max.     |
| transient response:          | single, 25% step load change | <500µ sec.     |
|                              | dual FL-1/2L ± 1% error band | <500µ sec.     |
| external trim adj. range     |                              | ±10%           |
| ripple & noise               | 20MHz BW                     | 10mV RMS., max |
|                              |                              | 75mV p-p., max |
| temperature coefficient      |                              | ±0.02%/°C      |
| short circuit protection     |                              | continuous     |
| line regulation <sup>1</sup> | single/dual                  | ±0.2% max      |
|                              | triple                       | ±1.0% max      |
| load regulation <sup>2</sup> | single/dual                  | ±1.0% max      |
|                              | triple                       | ±5.0% max      |

**GENERAL SPECIFICATIONS**

|                             |                                              |
|-----------------------------|----------------------------------------------|
| efficiency                  | see table                                    |
| isolation voltage           | 500VDC min.                                  |
| isolation resistance        | 10 <sup>9</sup> Ohms                         |
| switching frequency         | 200KHz, typical                              |
| operating temperature range | -25°C to +71°C                               |
| case temperature            | 100°C max                                    |
| cooling                     | free air convection                          |
| storage temperature range   | -55°C to +105°C                              |
| EMI/RFI                     | six-sided continuous shield                  |
| dimensions                  | 2.56x3.0x0.83 inches                         |
|                             | (65x76.2x21.1mm)                             |
| case material               | black coated copper with non-conductive base |

**NOTES:**

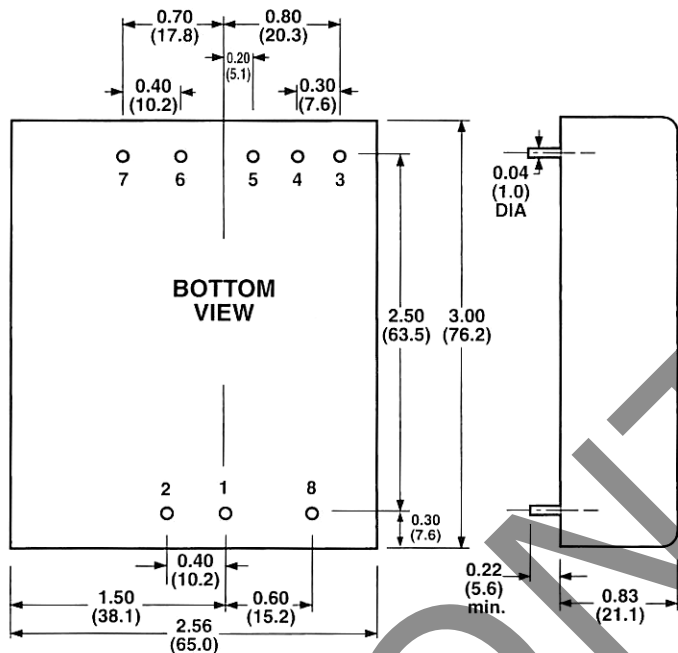
1. measured from high line to low line
2. measured from full load to 1/4 load
3. max. total power from all outputs is limited to 30 watts but no output should be allowed to exceed its max. current
4. min. current on each output is required to maintain specified regulation

**PART NUMBER:** VEQ15

**DESCRIPTION:** dc-dc converter

**DIMENSIONS (mm)**

All Dimensions In Inches(mm)  
Tolerance .xx= ±.04, .xxx= ±.010

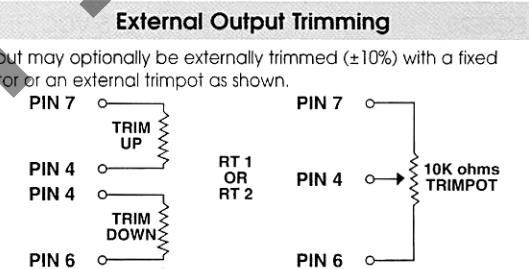


**PIN CONNECTION**

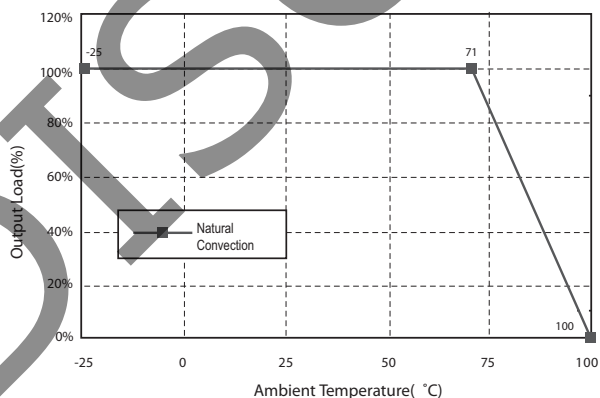
| Pin | Single Output         | Dual Output | Triple Output |
|-----|-----------------------|-------------|---------------|
| 1.  | +Input                | +Input      | +Input        |
| 2.  | -Input                | -Input      | -Input        |
| 3.  | No Pin                | +Output     | +Output       |
| 4.  | Output Trim           | Common      | Common        |
| 5.  | No Pin                | -Output     | -Output       |
| 6.  | +Output               | No Pin      | +5V Output    |
| 7.  | -Output               | No Pin      | No Pin        |
| 8.  | Remote On/Off Control |             |               |

**Remote On/Off Control**

|                       |                            |
|-----------------------|----------------------------|
| Logic Compatibility   | CMOS or Open Collector TTL |
| EC-On                 | >+5.5VDC or Open Circuit   |
| EC-Off                | <1.8 VDC                   |
| Shutdown Idle Current | 10 mA                      |
| Control Common        | Referenced to Input Minus  |



**DERATING CURVE**



**TRIPLE OUTPUT LOADING TABLE<sup>1</sup>**

| Output (Pin No.) | Voltage  | Amperes     |           |
|------------------|----------|-------------|-----------|
|                  |          | Min. (2)    | Nom.      |
| 6                | +5       | 0.25        | 1.5       |
| 3 & 5            | ±12      | 0.10        | 0.31      |
| 3 & 5            | ±15      | 0.10        | 0.25      |
| 3 & 5            | +12 / -5 | 0.10 / 0.10 | 0.31/0.50 |

**NOTE:**  
 1. Maximum total power from all outputs is limited to 15 watts but no output should exceed its maximum current.  
 2. Minimum current on each output is required to maintain specified regulation.