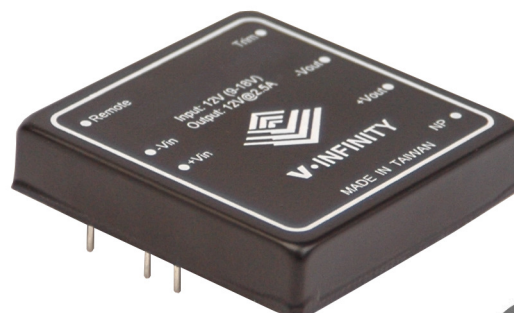


**PART NUMBER:** VCD30 series

**DESCRIPTION:** DC/DC converter

**features**

- 25-30W isolated output
- efficiency to 85%
- 2:1 input range
- six sided shield
- remote on/off control
- output trimming



| model number   | input voltage | output voltage | output current | input current |           | efficiency |
|----------------|---------------|----------------|----------------|---------------|-----------|------------|
|                |               |                |                | no load       | full load |            |
| VCD30-D12-S3R3 | 9-18VDC       | 3.3VDC         | 5000mA         | 30mA          | 1860mA    | 74%        |
| VCD30-D12-S5   | 9-18VDC       | 5VDC           | 5000mA         | 30mA          | 2675mA    | 78%        |
| VCD30-D12-S12  | 9-18VDC       | 12VDC          | 2500mA         | 30mA          | 3050mA    | 82%        |
| VCD30-D12-S15  | 9-18VDC       | 15VDC          | 2000mA         | 30mA          | 3050mA    | 82%        |
| VCD30-D12-D5   | 9-18VDC       | ±5VDC          | ±2500mA        | 35mA          | 2675mA    | 78%        |
| VCD30-D12-D12  | 9-18VDC       | ±12VDC         | ±1250mA        | 35mA          | 3050mA    | 82%        |
| VCD30-D12-D15  | 9-18VDC       | ±15VDC         | ±1000mA        | 35mA          | 3050mA    | 82%        |
| VCD30-D12-T512 | 9-18VDC       | 5/±12VDC       | 3500/±310mA    | 35mA          | 2640mA    | 79%        |
| VCD30-D15-T515 | 9-18VDC       | 5/±15VDC       | 3500/±250mA    | 35mA          | 2640mA    | 79%        |
| VCD30-D24-S3R3 | 18-36VDC      | 3.3VDC         | 5000mA         | 30mA          | 920mA     | 75%        |
| VCD30-D24-S5   | 18-36VDC      | 5VDC           | 5000mA         | 30mA          | 1336mA    | 79%        |
| VCD30-D24-S12  | 18-36VDC      | 12VDC          | 2500mA         | 30mA          | 1525mA    | 82%        |
| VCD30-D24-S15  | 18-36VDC      | 15VDC          | 2000mA         | 30mA          | 1525mA    | 82%        |
| VCD30-D24-D5   | 18-36VDC      | ±5VDC          | ±2500mA        | 30mA          | 1336mA    | 79%        |
| VCD30-D24-D12  | 18-36VDC      | ±12VDC         | ±1250mA        | 30mA          | 1470mA    | 85%        |
| VCD30-D24-D15  | 18-36VDC      | ±15VDC         | ±1000mA        | 30mA          | 1470mA    | 85%        |
| VCD30-D24-T512 | 18-36VDC      | 5/±12VDC       | 3500/±310mA    | 30mA          | 1320mA    | 80%        |
| VCD30-D24-T515 | 18-36VDC      | 5/±15VDC       | 3500/±250mA    | 30mA          | 1320mA    | 80%        |
| VCD30-D48-S3R3 | 36-72VDC      | 3.3VDC         | 5000mA         | 20mA          | 460mA     | 75%        |
| VCD30-D48-S5   | 36-72VDC      | 5VDC           | 5000mA         | 20mA          | 660mA     | 79%        |
| VCD30-D24-S12  | 36-72VDC      | 12VDC          | 2500mA         | 20mA          | 765mA     | 82%        |
| VCD30-D48-S15  | 36-72VDC      | 15VDC          | 2000mA         | 20mA          | 765mA     | 82%        |
| VCD30-D48-D5   | 36-72VDC      | ±5VDC          | ±2500mA        | 25mA          | 660mA     | 79%        |
| VCD30-D48-D12  | 36-72VDC      | ±12VDC         | ±1250mA        | 25mA          | 735mA     | 85%        |
| VCD30-D48-D15  | 36-72VDC      | ±15VDC         | ±1000mA        | 25mA          | 735mA     | 85%        |
| VCD30-D48-T512 | 36-72VDC      | 5/±12VDC       | 3500/±310mA    | 25mA          | 655mA     | 80%        |
| VCD30-D48-T515 | 36-72VDC      | 5/±15VDC       | 3500/±250mA    | 25mA          | 655mA     | 80%        |

**PART NUMBER:** VCD30 series

**DESCRIPTION:** DC/DC converter

## INPUT

|                     |      |         |
|---------------------|------|---------|
| input voltage range | 12V: | 9-18V   |
|                     | 24V: | 18-36V  |
|                     | 48V: | 36-72V  |
|                     |      |         |
| input filter        |      | Pi type |

## OUTPUT

|                              |                                      |                |
|------------------------------|--------------------------------------|----------------|
| voltage accuracy             | single output                        | ±2.0% max.     |
|                              | dual +output                         | ±2.0% max.     |
|                              | -output                              | ±3.0% max.     |
|                              | triple, 5V                           | ±2.0% max.     |
|                              | 12V/15V                              | ±5.0% max.     |
| voltage balance (dual)       |                                      | ±1.0% max      |
| transient response:          | single output: 25% step load change  | <500µS         |
|                              | dual output: FL~1/2L, ±1% error band | <500µS         |
| 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                          | ±0.5% 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> Ohm min.                     |
| switching frequency         | 300KHz, Typical                              |
| case grounding              | connected to output common                   |
| operating temperature range | -25°C to +71°C                               |
| case temperature            | 100°C max.                                   |
| cooling                     | free-air convection                          |
| storage temperature         | -55°C to +105°C                              |
| safety                      | UL 60950-1 file # E222736                    |
| EMI/RFI                     | six sided continuous shield                  |
| dimensions                  | 2x2x0.4 inches                               |
|                             | (50.8x50.8x10.2mm)                           |
| 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

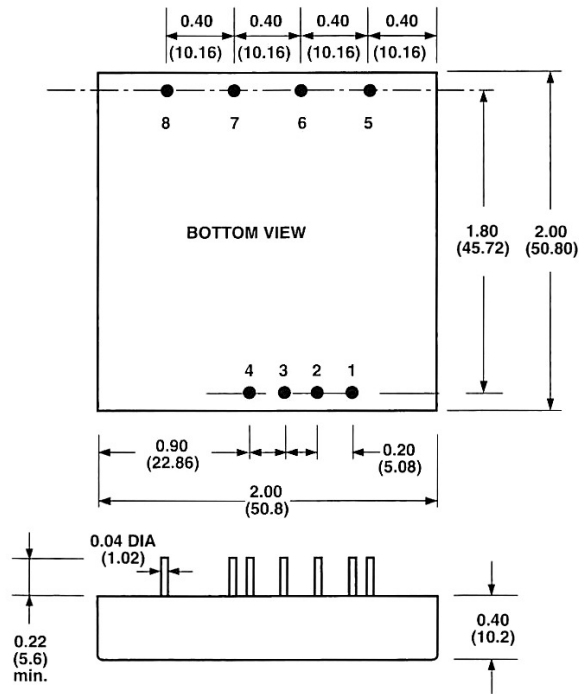


**PART NUMBER:** VCD30 series

**DESCRIPTION:** DC/DC converter

## DIMENSIONS (mm)

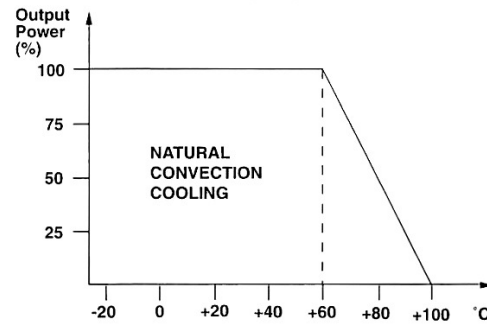
All Dimensions In Inches (mm)  
Tolerance .xx= ±.04, .xxx= ±.010



### 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  |

### OPERATING LIMITS AND OUTPUT POWER RANGE

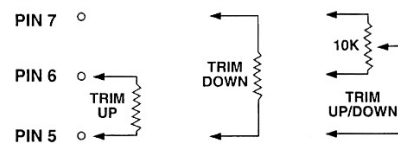


### PIN CONNECTION

| Pin | Single                | Dual   | Triple    |
|-----|-----------------------|--------|-----------|
| 1.  | Remote On/Off Control |        |           |
| 2.  | No Pin                | No Pin | No Pin    |
| 3.  | -Vin                  | -Vin   | -Vin      |
| 4.  | +Vin                  | +Vin   | +Vin      |
| 5.  | Trim                  | Trim   | -Aux. Out |
| 6.  | -Vout                 | -Vout  | Common    |
| 7.  | +Vout                 | Common | +5V out   |
| 8.  | No Pin                | +Vout  | +Aux. Out |

### External Output Trimming

Output may optionally be externally trimmed (±10%) with a fixed resistor or an external trimpot as shown.



## DERATING CURVE

