

**PART NUMBER:** VAD7R5 series**DESCRIPTION:** DC/DC converter**features**

- 7.5W isolated output
- efficiency to 83%
- regulated outputs
- continuous short circuit protection
- 24-Pin DIP package
- 2:1 input range
- Pi input filter



| model number    | input voltage | output voltage | output current | input current |           | efficiency |
|-----------------|---------------|----------------|----------------|---------------|-----------|------------|
|                 |               |                |                | no load       | full load |            |
| VAD7R5-D12-S3R3 | 9-18VDC       | 3.3VDC         | 1500mA         | 25mA          | 557mA     | 74%        |
| VAD7R5-D12-S5   | 9-18VDC       | 5VDC           | 1500mA         | 25mA          | 801mA     | 78%        |
| VAD7R5-D12-S12  | 9-18VDC       | 12VDC          | 625mA          | 25mA          | 762mA     | 82%        |
| VAD7R5-D12-S15  | 9-18VDC       | 15VDC          | 500mA          | 25mA          | 762mA     | 82%        |
| VAD7R5-D12-D5   | 9-18VDC       | ±5VDC          | ±750mA         | 30mA          | 791mA     | 79%        |
| VAD7R5-D12-D12  | 9-18VDC       | ±12VDC         | ±310mA         | 30mA          | 753mA     | 83%        |
| VAD7R5-D12-D15  | 9-18VDC       | ±15VDC         | ±250mA         | 30mA          | 753mA     | 83%        |
| VAD7R5-D24-S3R3 | 18-36VDC      | 3.3VDC         | 1500mA         | 20mA          | 271mA     | 76%        |
| VAD7R5-D24-S5   | 18-36VDC      | 5VDC           | 1500mA         | 20mA          | 396mA     | 79%        |
| VAD7R5-D24-S12  | 18-36VDC      | 12VDC          | 625mA          | 20mA          | 381mA     | 82%        |
| VAD7R5-D24-S15  | 18-36VDC      | 15VDC          | 500mA          | 20mA          | 381mA     | 82%        |
| VAD7R5-D24-D5   | 18-36VDC      | ±5VDC          | ±750mA         | 25mA          | 386mA     | 81%        |
| VAD7R5-D24-D12  | 18-36VDC      | ±12VDC         | ±310mA         | 25mA          | 377mA     | 83%        |
| VAD7R5-D24-D15  | 18-36VDC      | ±15VDC         | ±250mA         | 25mA          | 377mA     | 83%        |
| VAD7R5-D48-S3R3 | 36-72VDC      | 3.3VDC         | 1500mA         | 10mA          | 136mA     | 76%        |
| VAD7R5-D48-S5   | 36-72VDC      | 5VDC           | 1500mA         | 10mA          | 195mA     | 80%        |
| VAD7R5-D48-S12  | 36-72VDC      | 12VDC          | 625mA          | 10mA          | 190mA     | 82%        |
| VAD7R5-D48-S15  | 36-72VDC      | 15VDC          | 500mA          | 10mA          | 190mA     | 82%        |
| VAD7R5-D48-D5   | 36-72VDC      | ±5VDC          | ±750mA         | 15mA          | 193mA     | 81%        |
| VAD7R5-D48-D12  | 36-72VDC      | ±12VDC         | ±310mA         | 15mA          | 188mA     | 83%        |
| VAD7R5-D48-D15  | 36-72VDC      | ±15VDC         | ±250mA         | 15mA          | 188mA     | 83%        |

**NOTE:**

1. suffix "-SMT" for SMT case style

**PART NUMBER:** VAD7R5 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         | ±2.0% max.     |            |
| voltage balance (dual)   | ±1.0% max.     |            |
| ripple & noise, 20MHz BW | 100mV p-p max. |            |
| temperature coefficient  | ±0.05%/°C      |            |
| short circuit protection | continuous     |            |
| line regulation          | single/dual    | ±0.2% max. |
| load regulation          | single         | ±0.5% max. |
|                          | dual           | ±1.0% max. |

**GENERAL SPECIFICATIONS**

|                             |  |  |
|-----------------------------|--|--|
| efficiency                  | see table                                    |  |
| isolation voltage           | 1500VDC min.                                 |  |
| isolation resistance        | 10 <sup>9</sup> Ohm                          |  |
| switching frequency         | 300KHz, typical                              |  |
| operating temperature range | -25°C to +71°C                               |  |
| case temperature            | 100°C max.                                   |  |
| cooling                     | free-air convection                          |  |
| storage temperature range   | -40°C to +100°C                              |  |
| dimensions                  | 1.25x0.8x0.4 inches<br>(31.8x20.3x10.2mm)    |  |
| case material               | black coated copper with non-conductive base |  |

**NOTES:**

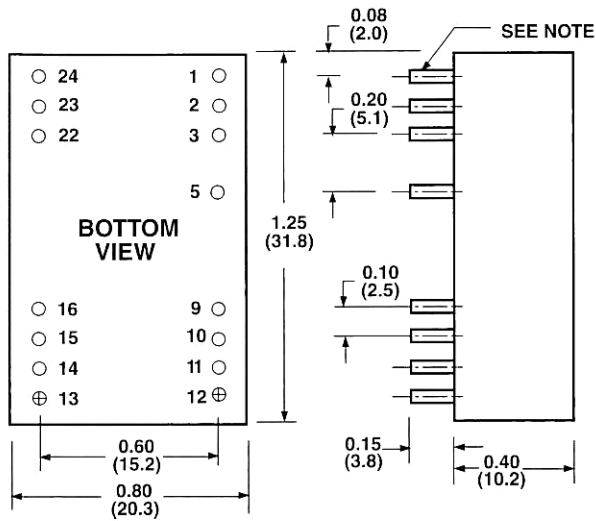
1. measured from high line to low line
2. measured from full load to 10% load
3. measured from full load to 1/4 load

**PART NUMBER:** VAD7R5 series

**DESCRIPTION:** DC/DC converter

## DIMENSIONS (mm)

NOTE: Pin Size is 0.020" Inch (0.5mm) DIA  
All Dimensions In Inches(mm)  
Tolerance .xx= ±.02, .xxx= ±.010



### PIN CONNECTION

1500 VDC

| Pin | Single Output | Dual Output |
|-----|---------------|-------------|
| 1   | NP            | NP          |
| 2   | -V Input      | -V Input    |
| 3   | -V Input      | -V Input    |
| 5   | NP            | NP          |
| 9   | NC            | Common      |
| 10  | NC            | NC          |
| 11  | NC            | -V Output   |
| 12  | NP            | NP          |
| 13  | NP            | NP          |
| 14  | +V Output     | +V Output   |
| 15  | NC            | NC          |
| 16  | -V Output     | Common      |
| 22  | +V Input      | +V Input    |
| 23  | +V Input      | +V Input    |
| 24  | NP            | NP          |

\*NP-NO PIN

\*NC-NO CONNECTION WITH PIN

## DERATING CURVE

