

PART NUMBER: VBD10 Series**DESCRIPTION:** DC/DC Converter**features**

- 10W isolated output
- 2:1 input range
- efficiency to 82%
- Pi input filter
- continuous short circuit protection
- meets EN55022 class A, conducted



| model number | input voltage | output voltage | output current | | input current | | efficiency |
|---------------|---------------|----------------|----------------|---------|---------------|-----------|------------|
| | | | min. | max. | no load | full load | |
| VBD10-D12-S5 | 9-18VDC | 5VDC | 100mA | 2000mA | 30mA | 1100mA | 76% |
| VBD10-D12-S12 | 9-18VDC | 12VDC | 45mA | 830mA | 30mA | 1065mA | 78% |
| VBD10-D12-S15 | 9-18VDC | 15VDC | 35mA | 666mA | 30mA | 1065mA | 78% |
| VBD10-D12-D12 | 9-18VDC | ±12VDC | ±25mA | ±415mA | 40mA | 1065mA | 78% |
| VBD10-D12-D15 | 9-18VDC | ±15VDC | ±20mA | ±333mA | 40mA | 1065mA | 78% |
| VBD10-D12-D5 | 9-18VDC | ±5VDC | ±50mA | ±1000mA | 40mA | 1065mA | 78% |
| VBD10-D24-S5 | 18-36VDC | 5VDC | 100mA | 2000mA | 20mA | 535mA | 78% |
| VBD10-D24-S12 | 18-36VDC | 12VDC | 45mA | 830mA | 20mA | 520mA | 80% |
| VBD10-D24-S15 | 18-36VDC | 15VDC | 35mA | 666mA | 20mA | 520mA | 80% |
| VBD10-D24-D12 | 18-36VDC | ±12VDC | ±25mA | ±415mA | 20mA | 520mA | 80% |
| VBD10-D24-D15 | 18-36VDC | ±15VDC | ±20mA | ±333mA | 20mA | 520mA | 80% |
| VBD10-D24-D5 | 18-36VDC | ±5VDC | ±50mA | ±1000mA | 20mA | 520mA | 80% |
| VBD10-D48-S5 | 36-72VDC | 5VDC | 100mA | 2000mA | 10mA | 260mA | 80% |
| VBD10-D48-S12 | 36-72VDC | 12VDC | 45mA | 830mA | 10mA | 254mA | 82% |
| VBD10-D48-S15 | 36-72VDC | 15VDC | 35mA | 666mA | 10mA | 254mA | 82% |
| VBD10-D48-D12 | 36-72VDC | ±12VDC | ±25mA | ±415mA | 10mA | 254mA | 82% |
| VBD10-D48-D15 | 36-72VDC | ±15VDC | ±20mA | ±333mA | 10mA | 254mA | 82% |
| VBD10-D48-D5 | 36-72VDC | ±5VDC | ±50mA | ±1000mA | 10mA | 254mA | 82% |
| VBD10-D5-S5 | 4.7-9VDC | 5VDC | 0mA | 1600mA | 15mA | 2130mA | 75% |
| VBD10-D5-S12 | 4.7-9VDC | 12VDC | 0mA | 666mA | 15mA | 2100mA | 76% |
| VBD10-D5-S15 | 4.7-9VDC | 15VDC | 0mA | 533mA | 15mA | 2100mA | 76% |
| VBD10-D5-D12 | 4.7-9VDC | ±12VDC | 0mA | ±333mA | 15mA | 2100mA | 76% |
| VBD10-D5-D15 | 4.7-9VDC | ±15VDC | 0mA | ±266mA | 15mA | 2100mA | 76% |
| VBD10-D5-D5 | 4.7-9VDC | ±5VDC | 0mA | ±800mA | 15mA | 2100mA | 76% |

**PART NUMBER:** VBD10 Series**DESCRIPTION:** DC/DC Converter**INPUT**

| | | |
|---------------------|---------|--------|
| input voltage range | 5V | 4.7-9V |
| | 12V | 9-18V |
| | 24V | 18-36V |
| | 48V | 36-72V |
| input filter type | PI type | |

OUTPUT

| | | |
|---|-----------------------------|-----------------|
| voltage accuracy | ±1.0% max. | |
| transient response | single 25% step load change | <500µ sec. |
| minimum output current | 10% full load | |
| ripple & noise | 20MHz BW, | 100mV p-p., max |
| temperature coefficient | ±0.02%/°C | |
| short circuit protection | continuous | |
| line regulation ¹ | single output | ±0.2% max |
| load regulation ² | single output | ±1.0% max |
| current limit threshold range, % Io rated | 110%~140% | |

GENERAL SPECIFICATIONS

| | | |
|-----------------------------|--|--|
| efficiency | see table | |
| isolation voltage | 500VDC min. | |
| isolation resistance | 10 ⁹ ohms min | |
| switching frequency | 200KHz, type | |
| operating temperature range | -25°C to +71°C | |
| case temperature | 100°C max. | |
| storage temperature | -40°C to +100°C | |
| EMI/RFI | six sided continuous shield | |
| dimensions | 2.0x1.0x0.4 inches (50.8x25.4x10.2mm) | |
| case material | black coated copper with | |
| non-conductive base | | |

NOTES:

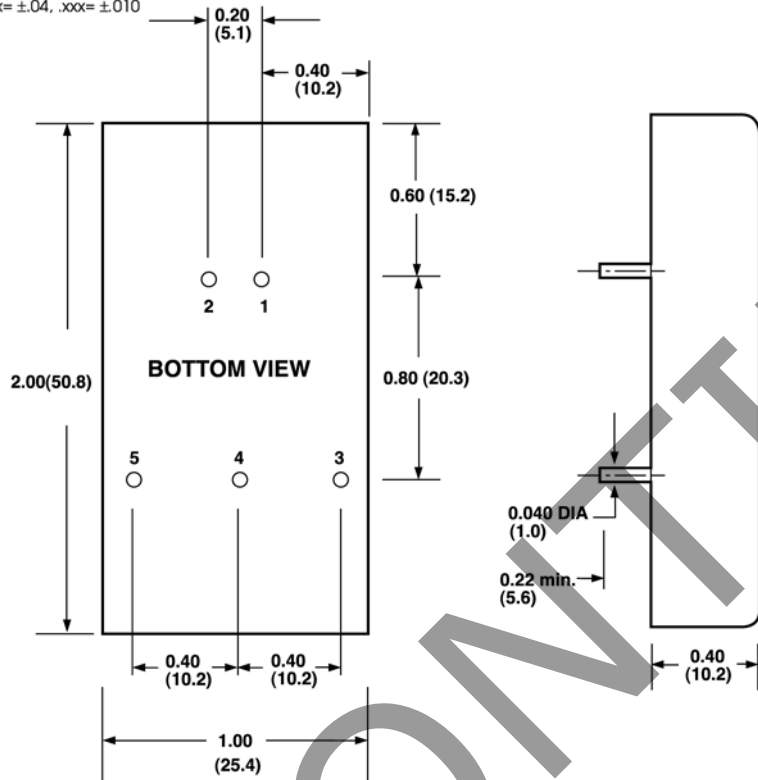
1. Measured from high line to low line
2. Measured from full load to 1/4 load

PART NUMBER: VBD10 Series

DESCRIPTION: DC/DC Converter

DIMENSIONS (mm)

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



| PIN CONNECTION | |
|----------------|-----------|
| Pin | Function |
| 1. | +Input |
| 2. | -Input |
| 3. | +Output |
| 4. | Common/NP |
| 5. | -Output |

NP*-NO PIN ON SINGLE OUTPUT

All Specifications Typical At Nominal Line, Full Load and 25°C Unless Otherwise Noted.