

PART NUMBER: VBED15

DESCRIPTION: dc-dc converter

Features

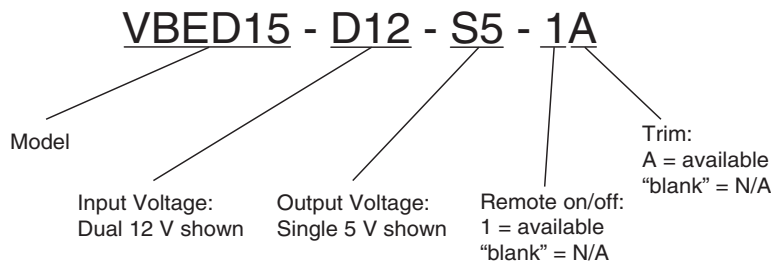
- 15W Isolated Output
- Efficiency to 83%
- 2:1 Input Range
- Continuous Short Circuit Protection
- Remote On/Off Control
- Meets EN55022 Class A, Conducted



| MODEL | Input Voltage | Output Voltage | Output Current | Input Current | | Efficiency |
|-----------------|---------------|----------------|----------------|---------------|-----------|------------|
| | | | | No Load | Full Load | |
| VBED15-D12-S5 | 9-18VDC | 5VDC | 3000mA | 20mA | 1602mA | 78% |
| VBED15-D12-S12 | 9-18VDC | 12VDC | 1250mA | 20mA | 1524mA | 82% |
| VBED15-D12-S 15 | 9-18VDC | 15VDC | 1000mA | 20mA | 1524mA | 82% |
| VBED15-D12-D12 | 9-18VDC | ±12VDC | ±625mA | 30mA | 1506mA | 83% |
| VBED15-D12-D15 | 9-18VDC | ±15VDC | ±500mA | 30mA | 1506mA | 83% |
| VBED15-D12-D5 | 9-18VDC | ±5VDC | ±1500mA | 30mA | 1563mA | 80% |
| VBED15-D12-S3R3 | 9-18VDC | 3.3VDC | 3000mA | 20mA | 1086mA | 76% |
| VBED15-D24-S5 | 18-36VDC | 5VDC | 3000mA | 20mA | 780mA | 80% |
| VBED15-D24-S12 | 18-36VDC | 12VDC | 1250mA | 20mA | 762mA | 82% |
| VBED15-D24-S15 | 18-36VDC | 15VDC | 1000mA | 20mA | 762mA | 82% |
| VBED15-D24-D12 | 18-36VDC | ±12VDC | ±625mA | 25mA | 755mA | 83% |
| VBED15-D24-D15 | 18-36VDC | ±15VDC | ±500mA | 25mA | 755mA | 83% |
| VBED15-D24-D5 | 18-36VDC | ±5VDC | ±1500mA | 25mA | 772mA | 81% |
| VBED15-D24-S3R3 | 18-36VDC | 3.3VDC | 3000mA | 20mA | 543mA | 76% |
| VBED15-D48-S5 | 36-72VDC | 5VDC | 3000mA | 15mA | 391mA | 80% |
| VBED15-D48-S12 | 36-72VDC | 12VDC | 1250mA | 15mA | 377mA | 83% |
| VBED15-D48-S15 | 36-72VDC | 15VDC | 1000mA | 15mA | 377mA | 83% |
| VBED15-D48-D12 | 36-72VDC | ±12VDC | ±625mA | 20mA | 377mA | 83% |
| VBED15-D48-D15 | 36-72VDC | ±15VDC | ±500mA | 20mA | 377mA | 83% |
| VBED15-D48-D5 | 36-72VDC | ±5VDC | ±1500mA | 20mA | 381mA | 82% |
| VBED15-D48-S3R3 | 36-72VDC | 3.3VDC | 3000mA | 15mA | 271mA | 76% |

NOTE:
add suffix "-1" to the part number for remote on/off option

PART NUMBER KEY



**PART NUMBER:** VBED15**DESCRIPTION:** dc-dc converter**INPUT**

| parameter | conditions/description | min | nom | max | units |
|---------------------|------------------------|-----|-----|-----|-------|
| input voltage range | 12 V | 9 | | 18 | V |
| | 24 V | 18 | | 36 | V |
| | 48 V | 36 | | 72 | V |
| input filter | pi type | | | | |

OUTPUT

| parameter | conditions/description | min | nom | max | units |
|---------------------------|-------------------------------------|-----|-------|-----|--------|
| voltage accuracy | | | ±1 | | % |
| voltage balance (dual) | | | ±1 | | % |
| temperature coefficient | | | ±0.02 | | %/°C |
| transient response | single: 25% step load change | 500 | | | μ sec. |
| | dual: FL-122L, ±1% error band | 500 | | | μ sec. |
| ripple & noise, 20 MHz BW | 0.1 μF capacitor on output | | | 75 | mVp-p |
| short circuit protection | continuous | | | | |
| line regulation | measured from high line to low line | | ±0.2 | | % |
| load regulation | measured from full load to 1/4 load | | ±0.1 | | % |

GENERAL SPECIFICATIONS

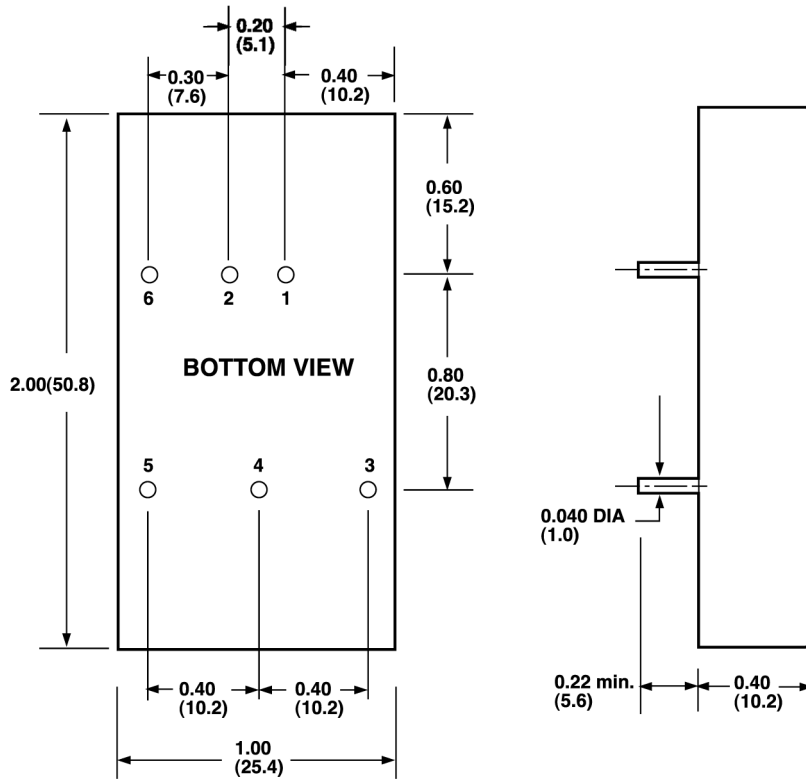
| parameter | conditions/description | min | nom | max | units |
|-----------------------------|--|-----|-----------------|-----|-------|
| efficiency | see table | | | | |
| isolation voltage | | 500 | | | V dc |
| isolation resistance | | | 10 ⁸ | | Ω |
| switching frequency | | | 300 | | kHz |
| operating temperature range | | -25 | | +71 | °C |
| case temperature | | | | 100 | °C |
| cooling | free-air convection | | | | |
| storage temperature range | | -40 | | 100 | °C |
| EMI/RFI | conductive EMI meet EN55022 class B | | | | |
| safety | approved to UL60950 (E222736) | | | | |
| dimensions | 2 x 1 x 0.4 inches (50.8 x 25.4 x 10.2 mm) | | | | |
| case material | black coated copper with non-conductive base | | | | |
| weight | | | | 32 | g |

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DIMENSIONS (mm)

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

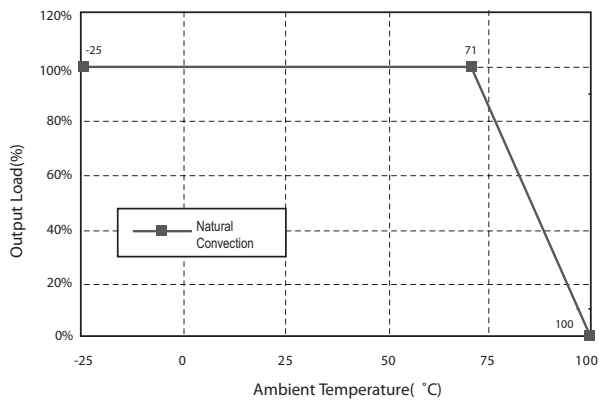


PIN CONNECTION

| Pin | Function |
|-----|-------------------------|
| 1. | +V Input |
| 2. | -V Input |
| 3. | +V Output |
| 4. | Common/NP/Trim (Option) |
| 5. | -V Output |
| 6. | NP/Remote (Option) |

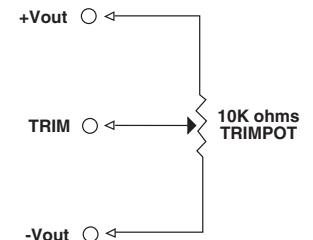
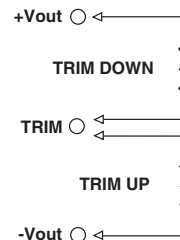
NP*-NO PIN ON SINGLE OUTPUT

DERATING CURVE



EXTERNAL TRIM OUTPUT

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



NOTE:
add suffix "A" to the part number for external trim option