

**PART NUMBER:** VBD7R5 series

**DESCRIPTION:** DC/DC converter

**features**

- 7.5W isolated output
- efficiency to 82%
- 2:1 input range
- continuous short circuit protection
- regulated outputs
- Pi input filter



model number	input voltage	output voltage	output current	input current		efficiency
				no load	full load	
VBD7R5-D12-S3R3	9-18VDC	3.3VDC	1500mA	7.5mA	557mA	74%
VBD7R5-D12-S5	9-18VDC	5VDC	1500mA	7.5mA	820mA	76%
VBD7R5-D12-S12	9-18VDC	12VDC	625mA	7.5mA	780mA	80%
VBD7R5-D12-S15	9-18VDC	15VDC	500mA	7.5mA	780mA	80%
VBD7R5-D12-D12	9-18VDC	±12VDC	±310mA	12mA	775mA	80%
VBD7R5-D12-D15	9-18VDC	±15VDC	±250mA	12mA	780mA	80%
VBD7R5-D12-D5	9-18VDC	±5VDC	±750mA	7.5mA	820mA	76%
VBD7R5-D24-S3R3	18-36VDC	3.3VDC	1500mA	5mA	271mA	76%
VBD7R5-D24-S5	18-36VDC	5VDC	1500mA	5mA	400mA	78%
VBD7R5-D24-S12	18-36VDC	12VDC	625mA	5mA	380mA	82%
VBD7R5-D24-S15	18-36VDC	15VDC	500mA	5mA	380mA	82%
VBD7R5-D24-D12	18-36VDC	±12VDC	±310mA	7.5mA	385mA	81%
VBD7R5-D24-D15	18-36VDC	±15VDC	±250mA	7.5mA	385mA	81%
VBD7R5-D24-D5	18-36VDC	±5VDC	±750mA	7.5mA	400mA	78%
VBD7R5-D48-S3R3	36-72VDC	3.3VDC	1500mA	3mA	136mA	76%
VBD7R5-D48-S5	36-72VDC	5VDC	1500mA	2mA	200mA	78%
VBD7R5-D48-S12	36-72VDC	12VDC	625mA	2mA	192mA	81%
VBD7R5-D48-S15	36-72VDC	15VDC	500mA	2mA	192mA	81%
VBD7R5-D48-D12	36-72VDC	±12VDC	±310mA	3mA	192mA	81%
VBD7R5-D48-D15	36-72VDC	±15VDC	±250mA	3mA	192mA	81%
VBD7R5-D48-D5	36-72VDC	±5VDC	±750mA	3mA	200mA	78%

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### INPUT

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

### OUTPUT

voltage accuracy	±2.0% max.	
voltage balance (dual)	±1.0% max.	
ripple & noise, 20MHz BW,	3.3V/5V	100mV p-p., max
	12V/15V	1% p-p., max
temperature coefficient	±0.05%/°C	
short circuit protection	continuous	
line regulation <sup>1</sup>	single/dual output	±0.5%
load regulation <sup>2</sup>	single output	±0.5%
	dual output	±1.0%

### GENERAL SPECIFICATIONS

efficiency	see table
isolation voltage	1500VDC min.
isolation resistance	10 <sup>9</sup> ohms min
switching frequency	100KHz, type
operating temperature range	-25°C to +71°C
extended temperature model	-30°C to +85°C
case temperature	100°C max.
cooling	free-air convection
storage temperature range	-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:**

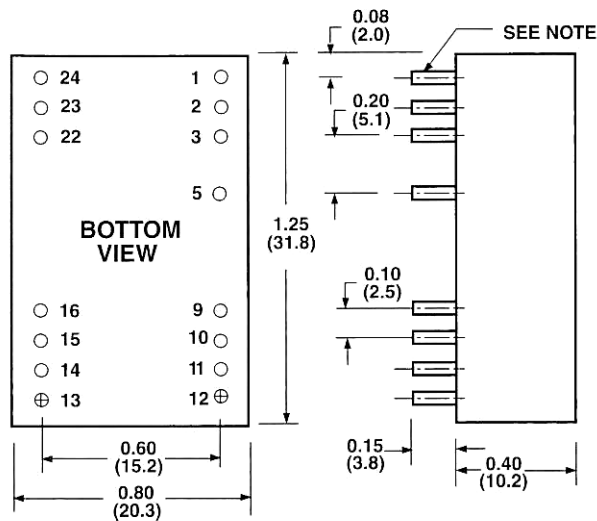
1. measured from high line to low line
2. measured from full load to 1/4 load

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## 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

