SERIES: VBED15 | DESCRIPTION: DC-DC CONVERTER

FEATURES

- up to 15 W isolated output
- 2:1 input range
- single and dual regulated outputs
- 500 V isolation
- short circuit protection
- remote on/off
- efficiency up to 83%



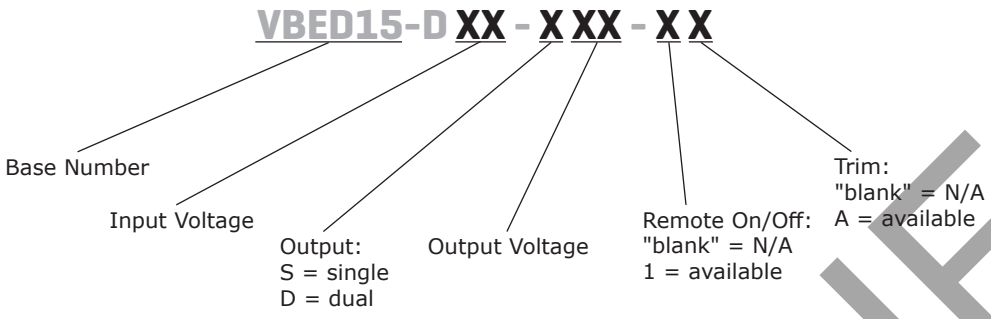
DISCONTINUED

MODEL	input voltage range (Vdc)	output voltage (Vdc)	output current max (mA)	output power max (W)	ripple and noise[1] max (mVp-p)	efficiency typ (%)
VBED15-D12-S3R3	9~18	3.3	3,000	10	75	78
VBED15-D12-S5	9~18	5	3,000	15	75	82
VBED15-D12-S12	9~18	12	1,250	15	75	82
VBED15-D12-S15	9~18	15	1,000	15	75	83
VBED15-D12-D5	9~18	±5	±1,500	15	75	83
VBED15-D12-D12	9~18	±12	±625	15	75	80
VBED15-D12-D15	9~18	±15	±500	15	75	76
VBED15-D24-S3R3*	18~36	3.3	3,000	10	75	80
VBED15-D24-S5*	18~36	5	3,000	15	75	82
VBED15-D24-S12*	18~36	12	1,250	15	75	82
VBED15-D24-S15*	18~36	15	1,000	15	75	83
VBED15-D24-D5	18~36	±5	±1,500	15	75	83
VBED15-D24-D12	18~36	±12	±625	15	75	81
VBED15-D24-D15	18~36	±15	±500	15	75	76
VBED15-D48-S3R3	36~72	3.3	3,000	10	75	80
VBED15-D48-S5	36~72	5	3,000	15	75	83
VBED15-D48-S12	36~72	12	1,250	15	75	83
VBED15-D48-S15	36~72	15	1,000	15	75	83
VBED15-D48-D5	36~72	±5	±1,500	15	75	83
VBED15-D48-D12	36~72	±12	±625	15	75	82
VBED15-D48-D15	36~72	±15	±500	15	75	76

Notes: 1. ripple & noise are measured at 20 MHz BW with 0.1 µF capacitor on the output
2. * Discontinued model.

Please read our datasheet & drawing disclaimer here.

PART NUMBER KEY



INPUT

parameter	conditions/description	min	typ	max	units
operating input voltage		9 18 36	12 24 48	18 36 72	Vdc Vdc Vdc
remote on/off[1]					
filter	PI type				

Notes: 1. logic compatibility, COMS or Open Collector TTL
Module ON, >5.5 Vdc or open circuit
Module OFF, <1.8 Vdc

OUTPUT

parameter	conditions/description		min	typ	max	units
line regulation	measured from high line to low line				±0.2	%
load regulation	measured from 100% load to 25% load				±0.1	%
voltage accuracy					±1.0	%
voltage balance	dual output models				±1.0	%
transient response	single output models dual output models	25% step load change full load to ½ load, ±1% error band			500 500	µs µs
adjustability				±10		%
switching frequency				300		kHz
temperature coefficient					±0.02	%/°C

PROTECTIONS

parameter	conditions/description	min	typ	max	units
short circuit protection	continuous				

SAFETY AND COMPLIANCE

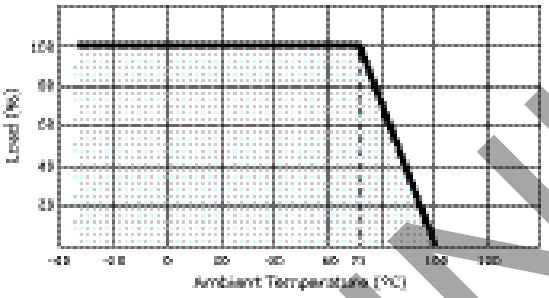
parameter	conditions/description	min	typ	max	units
isolation voltage		500			Vdc
insulation resistance		1,000			MΩ
safety approvals	UL 60950-1				
EMI/EMC	EN 55022 class B				
RoHS compliant	yes				

DISCONTINUED

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature		-25		71	°C
case temperature				100	°C
storage temperature		-40		100	°C

DERATING CURVES

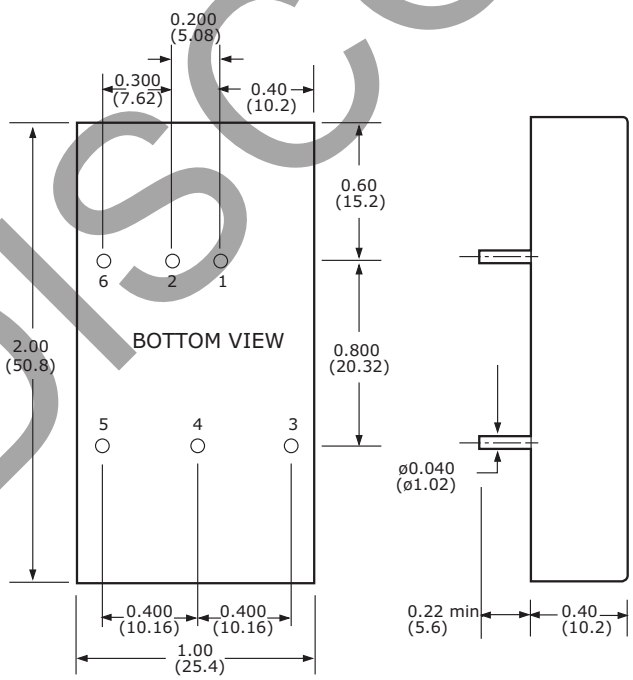


MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	2 x 1 x 0.4 (50.8 x 25.4 x 10.2 mm)				inch
case material	black coated copper with non-conductive base				
weight				32	g

MECHANICAL DRAWING

units: inches (mm)
tolerance: x.xx = ±0.04, x.xxx = ±0.010

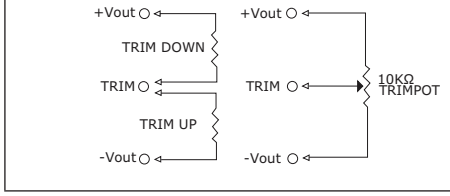


PIN CONNECTIONS	
PIN	FUNCTION
1	+Vin
2	-Vin
3	+Vo
4	common/NP/Trim (optional)
5	-Vo
6	NP/remote (optional)

NP = No Pin on single output

EXTERNAL OUTPUT TRIMMING

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



DISCONTINUED

REVISION HISTORY

rev.	description	date
1.0	initial release	10/10/2008
1.01	layout update	05/29/2009
1.02	layout update, added part number key, updated load regulation	09/28/2009
1.03	new template applied	07/25/2012
1.04	discontinued models VBED15-D24-S3, VBED15-D24-S5, VBED15-D24-S12 & VBED15-D24-S15	04/05/2024

The revision history provided is for informational purposes only and is believed to be accurate.

DISCONTINUED

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