

**PART NUMBER:** VABD3 series

**DESCRIPTION:** DC/DC converter

**features**

- 3W Isolated output
- efficiency to 80%
- 2:1 input range
- regulated outputs
- Pi input filter
- low ripple and noise
- 24-Pin DIP package
- continuous short circuit protection
- meets EN55022 Class B, conducted
- remote ON/OFF option
- single output



model number <sup>1, 2, 3, 4</sup>	input voltage	output voltage	output current	input current		efficiency
				no load	full load	
VABD3-D12-S3R3	9-18VDC	3.3VDC	600mA	7.5mA	236mA	70%
VABD3-D12-S5	9-18VDC	5VDC	600mA	7.5mA	340mA	73%
VABD3-D12-S12	9-18VDC	12VDC	250mA	7.5mA	320mA	78%
VABD3-D12-S15	9-18VDC	15VDC	200mA	7.5mA	329mA	76%
VABD3-D12-D5	9-18VDC	±5VDC	±300mA	12mA	340mA	73%
VABD3-D12-D12	9-18VDC	±12VDC	±125mA	12mA	329mA	76%
VABD3-D12-D15	9-18VDC	±15VDC	±100mA	12mA	333mA	75%
VABD3-D24-S3R3	18-36VDC	3.3VDC	600mA	5mA	113mA	73%
VABD3-D24-S5	18-36VDC	5VDC	600mA	5mA	168mA	74%
VABD3-D24-S12	18-36VDC	12VDC	250mA	5mA	156mA	80%
VABD3-D24-S15	18-36VDC	15VDC	200mA	5mA	156mA	80%
VABD3-D24-D5	18-36VDC	±5VDC	±300mA	7.5mA	168mA	74%
VABD3-D24-D12	18-36VDC	±12VDC	±125mA	7.5mA	156mA	80%
VABD3-D24-D15	18-36VDC	±15VDC	±100mA	7.5mA	160mA	78%
VABD3-D48-S3R3	36-72VDC	3.3VDC	600mA	3mA	58mA	71%
VABD3-D48-S5	36-72VDC	5VDC	600mA	2mA	82mA	76%
VABD3-D48-S12	36-72VDC	12VDC	250mA	2mA	82mA	77%
VABD3-D48-S15	36-72VDC	15VDC	200mA	2mA	82mA	77%
VABD3-D48-D5	36-72VDC	±5VDC	±300mA	3mA	82mA	76%
VABD3-D48-D12	36-72VDC	±12VDC	±125mA	3mA	82mA	76%
VABD3-D48-D15	36-72VDC	±15VDC	±100mA	3mA	82mA	76%

**NOTES:**

1. suffix "HM" for 1.5K Vdc isolation
2. suffix "H" for 3K Vdc isolation
3. suffix "-SMT" for SMT case style
4. suffix "-1" for on/off control option

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### INPUT

input voltage range	12V	9-18V
	24V	18-36
	48V	36-72
input filter		Pi Type

### OUTPUT

voltage accuracy		±2.0% max.
voltage balance (dual)		±1.0% max.
temperature coefficient		±0.05% / °C max.
ripple and noise, 20MHz BW	3.3V / 5V	100mV p-p max.
	12V / 15V	1% p-p max.
short circuit protection		continuous
line regulation	single/dual <sup>1</sup>	±0.5%
load regulation	single <sup>2</sup>	±0.5%
	dual <sup>3</sup>	±1.0%

### GENERAL SPECIFICATIONS

efficiency		see table
isolation resistance		10 <sup>9</sup> Ohms
switching frequency		100kHz min.
isolation resistance		10 <sup>9</sup> Ohms
operating temperature range		-25°C to +71°C
storage temperature		-40°C to +100°C
case Temp.(plastic case)		95°Cmax.
	(copper case)	100°Cmax.
cooling		free air convection
EMI/RFI		conductive EMI Meet EN55022 Class B
dimensions		1.25x0.8x0.5 inches (31.8x20.3x12.7mm)

### ISOLATION VOLTAGE

500 VDC min	standard models
1.5K VDC mon	suffix "HM" models
3K VDC min <sup>4</sup>	suffix "H" models

### CASE MATERIAL

standard models	non-conductive black plastic
suffix "M" models <sup>5</sup>	black coated copper with non-conductive base

**NOTES:**

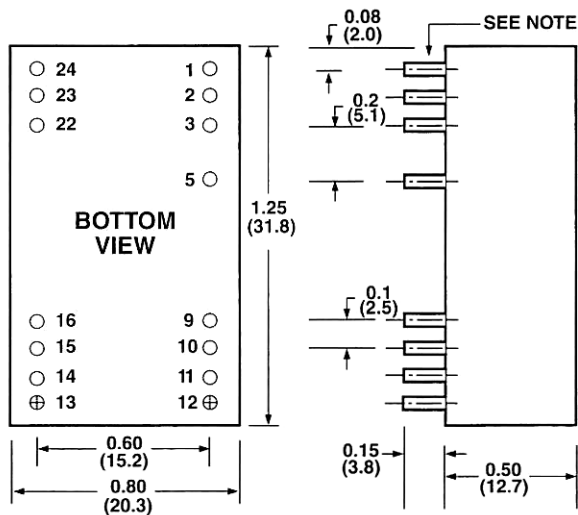
1. measured from high line to low line
2. measured from full load to 10% load
3. measured from full load to 1/4 load
4. non-conductive black plastic only
5. suffix "-1" to the model number with remote on/off for "H"/"HM" versions only

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## DIMENSIONS (mm)

NOTE: Pin Size is 0.02" Inch (0.5mm) DIA  
All Dimensions In Inches(mm)  
Tolerance .xx= ±.02, .xxx= ±.010



### Remote On/Off Control

Logic Compatibility	CMOS or Open Collector TTL
Ec-On	>+5.5 VDC or Open Circuit
Ec-Off	<1.8 VDC
Shutdown Idle Current	10mA
Control Common	Referenced to Input Minus

### PIN CONNECTION

Pin	500 VDC		Pin	1.5K & 3K VDC	
	Single Output	Dual Output		Single Output	Dual Output
1	+V Input	+V Input	1	NP	NP
2	NC	-V Output	2	-V Input	-V Input
3	NC	Common	3	-V Input	-V Input
5	NP	NP	5	NP (Remote On/Off)	
9	NP	NP	9	NC	Common
10	-V Output	Common	10	NC	NC
11	+V Output	+V Output	11	NC	-V Output
12	-V Input	-V Input	12	NP	NP
13	-V Input	-V Input	13	NP	NP
14	+V Output	+V Output	14	+V Output	+V Output
15	-V Output	Common	15	NC	NC
16	NP	NP	16	-V Output	Common
22	NC	Common	22	+V Input	+V Input
23	NC	-V Output	23	+V Input	+V Input
24	+V Input	+V Input	24	NP	NP

\*NP-NO PIN

\*NC-NO CONNECTION WITH PIN

## DERATING CURVE

