VABD3 Series 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

Model Number	Input Voltage	Output Voltage	Output Current	Input Current No Load	Input Current Full Load	Efficiency	Case
VABD3-D12-S5	9-18VDC	5VDC	600mA	7.5mA	340mA	73%	A
VABD3-D12-S12	9-18VDC	12VDC	250mA	7.5mA	320mA	78%	A
VABD3-D12-S15	9-18VDC	15VDC	200mA	7.5mA	329mA	76%	A
VABD3-D12-D5	9-18VDC	±5VDC	±300mA	12mA	340mA	73%	A
VABD3-D12-D12	9-18VDC	±12VDC	±125mA	12mA	329mA	76%	A
VABD3-D12-D15	9-18VDC	±15VDC	±100mA	12mA	333mA	75%	A
VABD3-D12-S3R3	9-18VDC	3.3VDC	600mA	7.5mA	236mA	70%	A
VABD3-D24-S5	18-36VDC	5VDC	600mA	5mA	168mA	74%	A
VABD3-D24-S12	18-36VDC	12VDC	250mA	5mA	156mA	80%	A
VABD3-D24-S15	18-36VDC	15VDC	200mA	5mA	156mA	80%	A
VABD3-D24-D5	18-36VDC	±5VDC	±300mA	7.5mA	168mA	74%	A
VABD3-D24-D12	18-36VDC	±12VDC	±125mA	7.5mA	156mA	80%	A
VABD3-D24-D15	18-36VDC	±15VDC	±100mA	7.5mA	160mA	78%	A
VABD3-D24-S3R3	18-36VDC	3.3VDC	600mA	5mA	113mA	73%	A
VABD3-D48-S5	36-72VDC	5VDC	600mA	2mA	82mA	76%	A
VABD3-D48-S12	36-72VDC	12VDC	250mA	2mA	82mA	77%	A
VABD3-D48-S15	36-72VDC	15VDC	200mA	2mA	82mA	77%	A
VABD3-D48-D5	36-72VDC	±5VDC	±300mA	3mA	82mA	76%	A
VABD3-D48-D12	36-72VDC	±12VDC	±125mA	3mA	82mA	76%	A
VABD3-D48-D15	36-72VDC	±15VDC	±100mA	3mA	82mA	76%	A
VABD3-D48-S3R3	36-72VDC	3.3VDC	600mA	3mA	58mA	71%	A

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[1]	±0.5%
Load Regulation	single[2]	±0.5%
	dual[3]	±1.0%

General Specifications

Efficiency	see table
Isolation Resistance	10^9 Ohms
Switching Frequency	100kHz min.
Isolation Resistance	10^9Ohms
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
3K VDC min[4]	Suffix “H” Models

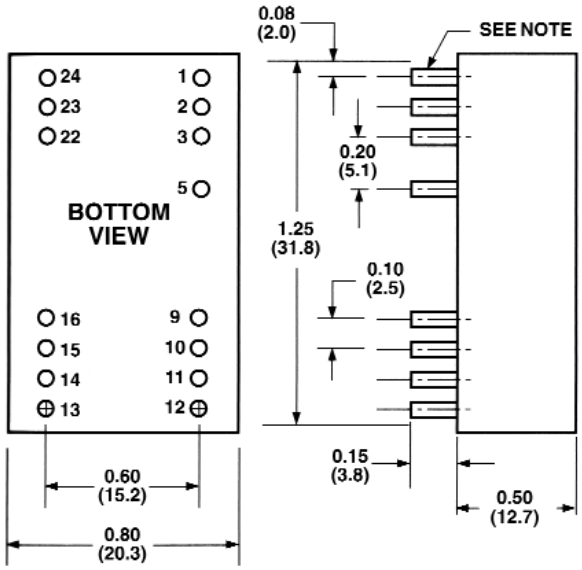
Case Material

Standard models	Non-Conductive Black Plastic
Suffix “M” models[5]	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 “HM” 1.5K VDC instead of 3K VDC isolation.
6. Suffix “T” to the model number with remote on/off for “H”/”HM” versions only

CASE A



PIN CONNECTION

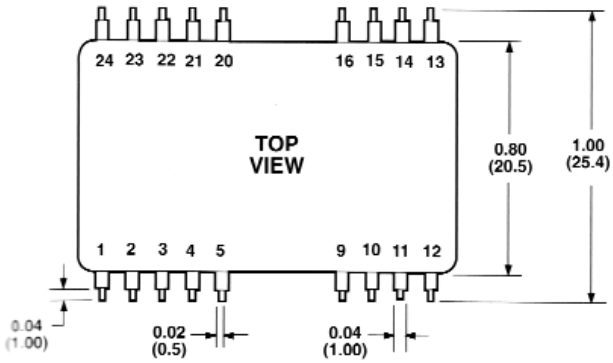
Pin	500 VDC Single Output	500 VDC Dual Output	Pin	1.5K & 3K VDC Single Output	1.5K & 3K VDC Dual Output
1	+V Input	+V Input	1	NP	NP
2	NC	-V Output	2	-V Input	-V Input
3	NC	Common	3	-V Input	-V Input
5	NP	NP	5	NP (Remote On/Off)	
9	NP	NP	9	NC	Common
10	-V Output	Common	10	NC	NC
11	+V Output	+V Output	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

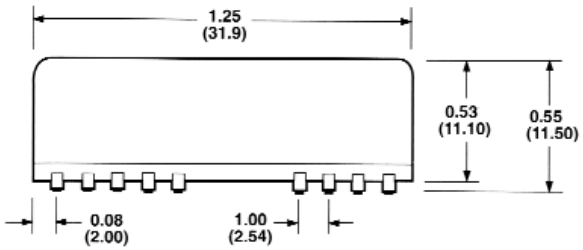
*NP-NO PIN *NC-NO CONNECTION WITH PIN

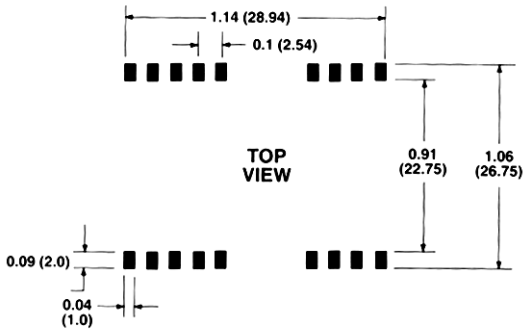
All Specifications Typical At Nominal Line, Full Load and 25˚C Unless Otherwise Noted.

CASE AS

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 Single Output	500 VDC Dual Output	1500 VDC Single Output	1500 VDC Dual Output
1	+V Input	+V Input	NC	NC
2	NC	-V Output	-V Input	-V Input
3	NC	Common	-V Input	-V Input
4	NC	NC	NC	NC
5	NC	NC	NC (or Remote ON/OFF)	
9	NC	NC	NC	Common
10	-V Output	Common	NC	NC
11	+V Output	+V Output	NC	-V Output
12	-V Input	-V Input	NC	NC
13	-V Input	-V Input	NC	NC
14	+V Output	+V Output	+V Output	+V Output
15	-V Output	Common	NC	NC
16	NC	NC	-V Output	Common
20	NC	NC	NC	NC
21	NC	NC	NC	NC
22	NC	Common	+V Input	+V Input
23	NC	-V Output	+V Input	+V Input
24	+V Input	+V Input	NC	NC

*NC-NO CONNECTION WITH PIN