PART NUMBER: VAD3 series

DESCRIPTION: DC/DC converter

features
- **3W isolated output**
- **efficiency to 80%**
- **regulated outputs**
- **Pi input filter**
- **low ripple and noise**
- **24-Pin DIP package**
- **continuous short circuit protection**

model number[1, 2, 3]	input voltage	output voltage	output current	input current no load	input current full load	efficiency
VAD3-D5-S3R3	4.5-6.0VDC	3.3VDC	600mA	15mA	619mA	64%
VAD3-D5-S5	4.5-6.0VDC	5VDC	600mA	15 mA	850 mA	70%
VAD3-D5-S12	4.5-6.0VDC	12VDC	250mA	15mA	800mA	75%
VAD3-D5-S15	4.5-6.0VDC	15VDC	200mA	15mA	800mA	75%
VAD3-D5-D5	4.5-6.0VDC	±5VDC	±300mA	25mA	850mA	70%
VAD3-D5-D12	4.5-6.0VDC	±12VDC	±125mA	25mA	800mA	75%
VAD3-D5-D15	4.5-6.0VDC	±15VDC	±100mA	25mA	800mA	75%
VAD3-D12-S3R3	9-18VDC	3.3VDC	600mA	7.5mA	236mA	70%
VAD3-D12-S5	9-18VDC	5VDC	600mA	7.5mA	340mA	73%
VAD3-D12-S12	9-18VDC	12VDC	250mA	7.5mA	320mA	78%
VAD3-D12-S15	9-18VDC	15VDC	200mA	7.5mA	320mA	78%
VAD3-D12-D5	9-18VDC	±5VDC	±300mA	12mA	340mA	73%
VAD3-D12-D12	9-18VDC	±12VDC	±125mA	12mA	320mA	78%
VAD3-D12-D15	9-18VDC	±15VDC	±100mA	12mA	320mA	78%
VAD3-D24-S3R3	18-36VDC	3.3VDC	600mA	5mA	113mA	73%
VAD3-D24-S5	18-36VDC	5VDC	600mA	5mA	168mA	74%
VAD3-D24-S12	18-36VDC	12VDC	250mA	5mA	156mA	80%
VAD3-D24-S15	18-36VDC	15VDC	200mA	5mA	156mA	80%
VAD3-D24-D5	18-36VDC	±5VDC	±300mA	7.5mA	168mA	74%
VAD3-D24-D12	18-36VDC	±12VDC	±125mA	7.5mA	156mA	80%
VAD3-D24-D15	18-36VDC	±15VDC	±100mA	7.5mA	156mA	80%
VAD3-D48-S3R3	36-72VDC	3.3VDC	600mA	3mA	58mA	71%
VAD3-D48-S5	36-72VDC	5VDC	600mA	2mA	82mA	76%
VAD3-D48-S12	36-72VDC	12VDC	250mA	2mA	78mA	80%
VAD3-D48-S15	36-72VDC	15VDC	200mA	2mA	78mA	80%
VAD3-D48-D5	36-72VDC	±5VDC	±300mA	3mA	82mA	76%
VAD3-D48-D12	36-72VDC	±12VDC	±125mA	3mA	80mA	78%
VAD3-D48-D15	36-72VDC	±15VDC	±100mA	3mA	80mA	78%

NOTES:

1. Suffix “HM” for 1.5K Vdc isolation
2. Suffix “H” for 3K Vdc isolation
3. Suffix “-SMT” for SMT case style

PART NUMBER: VAD3 series DESCRIPTION: DC/DC converter

INPUT

input voltage range	5V	4.5-6V
	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°C max.
(copper case)	100°C max.
cooling	free air convection
dimensions	1.25x0.8x0.4 inches (31.8x20.3x10.2mm)

ISOLATION VOLTAGE

500 VDC min	standard models
1.5K VDC min	suffix “HM” models
3K VDC min[4]	suffix “H” models

CASE MATERIAL

standard models	non-conductive back plastic
suffix “M” models	black coated copper with non-conductive base

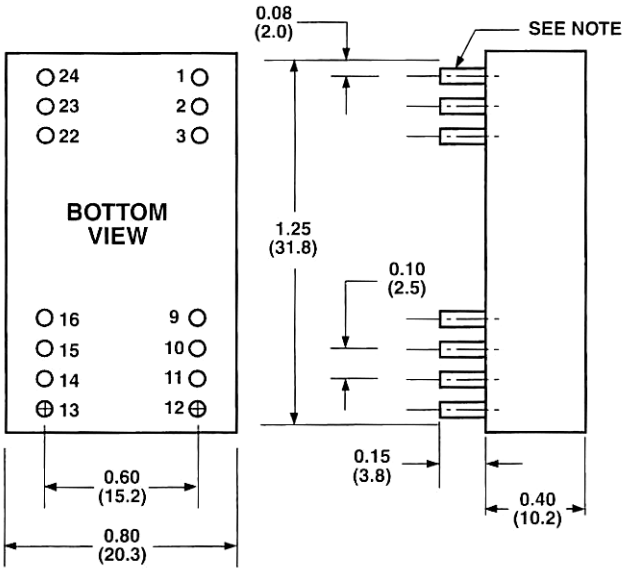
NOTES:
1. measured from high line to low line
2. measured from full load to 10% load
3. measured from full load to 1/4 load
4. non-conductive black plastic only

PART NUMBER: VAD3 series

DESCRIPTION: DC/DC converter

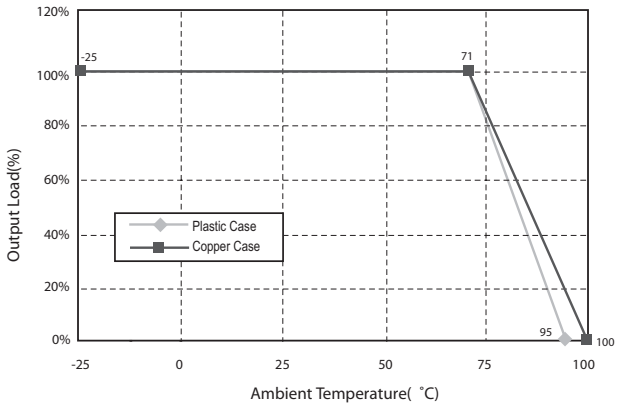
DIMENSIONS (mm)

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



PIN CONNECTION

	500 VDC			1.5K & 3K VDC	
Pin	Single Output	Dual Output	Pin	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
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