V-INFINITY
a division of CUI INC

date 11/2008

PART NUMBER: VAD6 series

DESCRIPTION: dc-dc converter

features
- **6W isolated output**
- **efficiency to 82%**
- **regulated outputs**
- **Pi input filter**
- **low ripple and noise**
- **24-Pin DIP package**
- **continuous short circuit protection**

RoHS

model number[1, 2, 3]	input voltage	output voltage	output current	input current no load	input current full load	efficiency
VAD6-D12-S3R3	9-18VDC	3.3VDC	1000mA	7.5mA	393mA	70%
VAD6-D12-S5	9-18VDC	5VDC	1000mA	7.5mA	545mA	76%
VAD6-D12-S12	9-18VDC	12VDC	470mA	7.5mA	585mA	80%
VAD6-D12-S15	9-18VDC	15VDC	400mA	7.5mA	625mA	80%
VAD6-D12-D5	9-18VDC	±5VDC	±500mA	12mA	545mA	76%
VAD6-D12-D12	9-18VDC	±12VDC	±230mA	12mA	575mA	80%
VAD6-D12-D15	9-18VDC	±15VDC	±190mA	12mA	590mA	80%
VAD6-D24-S3R3	18-36VDC	3.3VDC	1000mA	5mA	197mA	70%
VAD6-D24-S5	18-36VDC	5VDC	1000mA	5mA	265mA	78%
VAD6-D24-S12	18-36VDC	12VDC	470mA	5mA	285mA	82%
VAD6-D24-S15	18-36VDC	15VDC	400mA	5mA	305mA	82%
VAD6-D24-D5	18-36VDC	±5VDC	±500mA	7.5mA	265mA	78%
VAD6-D24-D12	18-36VDC	±12VDC	±230mA	7.5mA	285mA	81%
VAD6-D24-D15	18-36VDC	±15VDC	±190mA	7.5mA	295mA	81%
VAD6-D48-S3R3	36-72VDC	3.3VDC	1000mA	2mA	98mA	70%
VAD3-D48-S5	36-72VDC	5VDC	1000mA	2mA	133mA	78%
VAD6-D48-S12	36-72VDC	12VDC	470mA	2mA	145mA	81%
VAD6-D48-S15	36-72VDC	15VDC	400mA	2mA	154mA	81%
VAD6-D48-D5	36-72VDC	±5VDC	±500mA	3mA	133mA	78%
VAD6-D48-D12	36-72VDC	±12VDC	±230mA	3mA	142mA	81%
VAD6-D48-D15	36-72VDC	±15VDC	±190mA	3mA	147mA	81%

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

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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[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 black plastic
suffix “HM” 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

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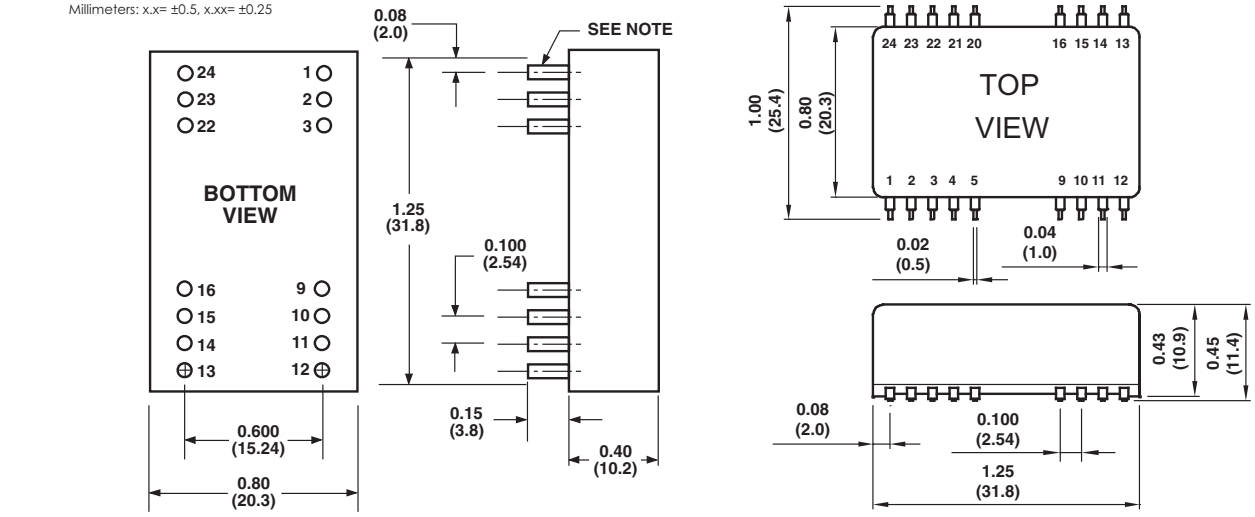
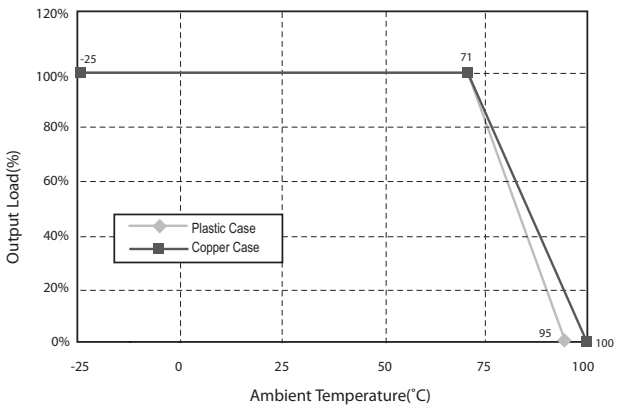
DIMENSIONS (mm)

NOTE:Pin Size is 0.02" Inch (0.5mm) DIA
All Dimensions In Inches(mm)
Tolerance Inches: x.xx= ±0.02, x.xxx= ±0.010
Millimeters: x.x= ±0.5, x.xx= ±0.25



DERATING CURVE



PIN CONNECTIONS

500 VDC					1.5K & 3K VDC				
Pin	Single Output		Dual Output		Pin	Single Output		Dual Output	
	DIP	SMD	DIP	SMD		DIP	SMD	DIP	SMD
1,24	+V Input		+V Input		1,24	NP	NC	NP	NC
2,23	NC		-V Output		2,3	-V Input		-V Input	
3,22	NC		Common		4,5	NP	NC	NP	NC
4	NP	NC	NP	NC	9	NC		Common	
5	NP	NC	NP	NC	10,15	NC		NC	
9	NP	NC	NP	NC	11	NC		-V Output	
10,15	-V Output		Common		12,13	NP	NC	NP	NC
11,14	+V Output		+V Output		14	+V Output		+V Output	
12,13	-V Input		-V Input		16	-V Output		Common	
16	NP	NC	NP	NC	20,21	NP	NC	NP	NC
20,21	NP	NC	NP	NC	22,23	+V Input		+V Input	

*NP-NO PIN

*NC-NO CONNECTION WITH PIN