



Victor Power Technologies

Global DC/DC Converter Manufacturer



VDA15 Series

15 Watts

15W SINGLE AND DUAL OUTPUT

2:1 INPUT

ISOLATED & REGULATED

SIX SIDE SHIELD

HIGH EFFICIENCY

HIGH DENSITY

DIP PACKAGE STYLE

- 2:1 Input Nominal
12VDC: 9~18VDC
24VDC: 18~36VDC
48VDC: 36~72VDC

- Efficiency up to 85%
- Operating Temperature: -40°C~+85°C
- 1,500VDC Isolation
- Metal Shielding Package
- No Heat Sink Required
- Industry Standard Pin out
- RoHS

Product Program

Part Number	Input Voltage (VDC)		Output Voltage (VDC)	Output Current (mA)	Efficiency (% Typ)	Package Style
	Nominal	Range				
VDA15-12S33	12	9~18	3.3	3000	81	DIP
VDA15-12S05	12	9~18	5	3000	82	DIP
VDA15-12S12	12	9~18	12	1250	83	DIP
VDA15-12S15	12	9~18	15	1000	84	DIP
VDA15-24S33	24	18~36	3.3	3000	81	DIP
VDA15-24S05	24	18~36	5	3000	84	DIP
VDA15-24S12	24	18~36	12	1250	84	DIP
VDA15-24S15	24	18~36	15	1000	84	DIP
VDA15-48S33	48	36~72	3.3	3000	81	DIP
VDA15-48S05	48	36~72	5	3000	84	DIP
VDA15-48S12	48	36~72	12	1250	85	DIP
VDA15-48S15	48	36~72	15	1000	85	DIP
VDA15-12D05	12	9~18	±5	±680	82	DIP
VDA15-12D12	12	9~18	±12	±330	84	DIP
VDA15-12D15	12	9~18	±15	±110	84	DIP
VDA15-24D05	24	18~36	±5	±680	83	DIP
VDA15-24D12	24	18~36	±12	±330	84	DIP
VDA15-24D15	24	18~36	±15	±110	85	DIP
VDA15-48D05	48	36~72	±5	±680	83	DIP
VDA15-48D12	48	36~72	±12	±330	84	DIP
VDA15-48D15	48	36~72	±15	±110	84	DIP

ISOLATION SPECIFICATIONS

Item	Min	Units
Isolation voltage	1500	VDC
Isolation resistance	10 ⁹	Ω
Isolation capacitance	300	pF

COMMON SPECIFICATION

Efficiency			See table
Switching frequency			300KHz, typ
Approvals and standard			IEC60950-1, UL60950-1, EN60950-1
Case material			Metal Case
Base material			Plastic Case
Potting material			Epoxy (UL94-V0)
Dimensions			50.8 X 25.4 X 11.2 mm (2.00 X 1.00 X 0.44 Inch)
Weight			26g (0.91oz)
MTBF			5 x 105 hrs

OUTPUT SPECIFICATION

Output power			15 Watts
Voltage accuracy	Full load and nominal Vin	± 1%	
Minimum load			10%
Line regulation	LL to HL at Full Load	± 0.2%	
Load regulation	10% to 100% FL	Single	± 0.5%
		Dual	± 1%
Cross regulation (Dual)	Asymmetrical load 25% / 100% FL	± 5%	
Ripple and noise	20MHz bandwidth	1%	50mVp-p
Temperature coefficient			±0.02% / °C, max
Transient response recovery time	25% load step change	400uS	
Over voltage protection	12V (9V~18V)	8.5VDC	
	24V (18V~36V)	17VDC	
	48V(36V~72V)	35VDC	
Over load protection	% of FL at nominal input	120%,max	
Short circuit protection			Hiccup, automatics recovery

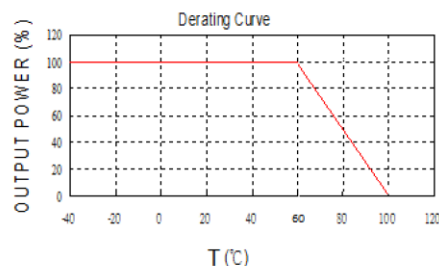
INPUT SPECIFICATION

Input filter			Pi type
Input voltage range	2:1	12V	9~18 VDC
		24V	18~36 VDC
		48V	36~72 VDC
Input reflected ripple	Nominal Vin and full load	30mAp-p	
Start up time	Nominal Vin and constant resistive load	Power up	20mS typ
Remote ON/OF: (Positive logic)	DC-DC ON	Open or 3.5V < Vr < 12v	
	DC-DC OFF	Short or 0v < Vr < 1.2v	
Remote off input current	Nominal Vin	2.0mA	

ENVIRONMENTAL SPECIFICATIONS

Operating temperature range	Standard	-40°C ~ +85°C (with derating)
Storage temperature range	Standard	-40°C ~ +105°C
Relative humidity	5% to 95% RH	

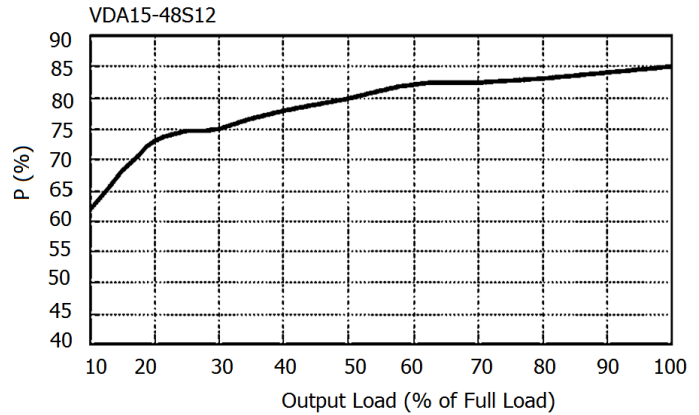
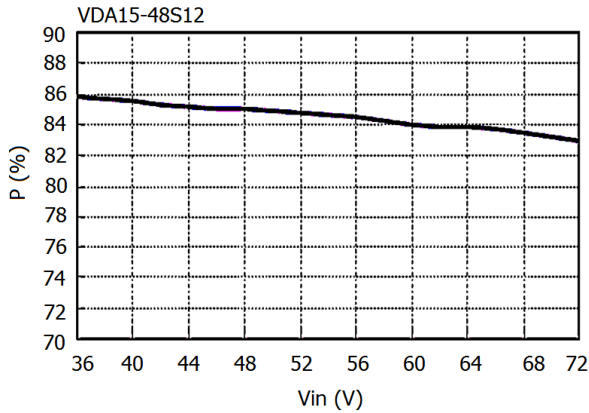
TYPICAL CHARECTERISTICS



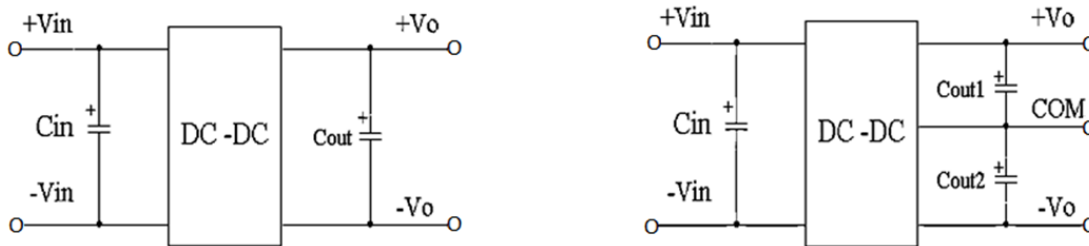
FOOTPRINT DETAILS

PIN	1	2	3	4	5	6
SINGLE	+Vin	-Vin	+Vout	No Pin	-Vout	CTL (Optional)
DUAL	+Vin	-Vin	+Vout	COM	-Vout	CTL (Optional)

EFFICIENCY AND OUTPUT

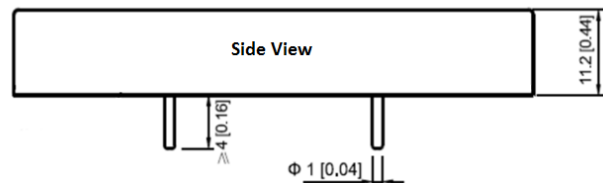
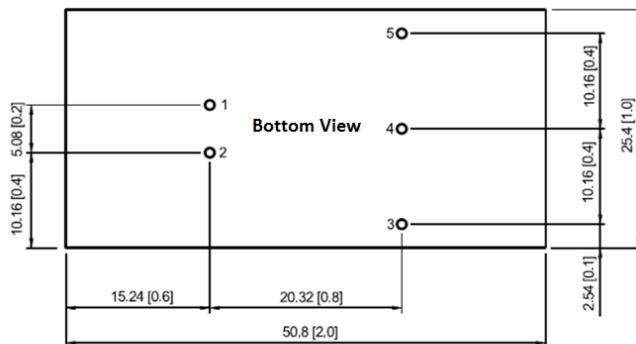


Recommended Circuit



1. An extra capacitor C_{in} (Electrolytic capacitor, 47 μ F ~ 100 μ F) will improve EMC compatibility.
2. Install C_{out} , C_{out1} , C_{out2} at output will improve ripple noise.
3. Need to add C_{out1} , C_{out2} , C_{out3} at output.
4. The value of C_{out1} , C_{out2} , C_{out3} improper will cause output instability or decrease over current protection.
5. The value of C_{out1} , C_{out2} , C_{out3} is 100 μ F/A (A is the output current)

OUTLINE DIMENSIONS & RECOMMENDED FOOTPRINT



Dimensions: mm (Inch)
 Pin tolerance: ± 0.2 (± 0.008)
 Pin pitch tolerance: ± 0.25 (± 0.01)