Victor Power Technologies

Global Power Supply Manufacturer

VDC15 Series 15 Watts

15W SINGLE & DUAL OUTPUT
2:1 INPUT
12VDC: 9 ~ 18 VDC
24VDC: 18 ~ 36 VDC
48VDC: 36 ~ 72 VDC
ISOLATED & REGULATED
METAL CASE SHIELDING

- Efficiency up to 85%
- Operating Temperature: -40°C~+85°C
- 1,500VDC Isolation
- Over Current, Over Voltage, Short Circuit Protection
- Industry Standard Pin out
- RoHS

PRODUCT PROGRAM

Part Number	Input Voltage (VDC)		Output Voltage (VDC)	Output Current (mA)	Efficiency (%, Typ)	Package Style
	Nominal	Range				
VDC15-12S03	12	9~18	3.3	3000	81	DIP
VDC15-12S05	12	9~18	5	3000	82	DIP
VDC15-12S12	12	9~18	12	1250	83	DIP
VDC15-12S15	12	9~18	15	1000	84	DIP
VDC15-12S24	12	9~18	24	625	84	DIP
VDC15-24S03	24	18~36	3.3	3000	81	DIP
VDC15-24S05	24	18~36	5	3000	84	DIP
VDC15-24S12	24	18~36	12	1250	84	DIP
VDC15-24S15	24	18~36	15	1000	84	DIP
VDC15-24S24	24	18~36	24	625	85	DIP
VDC15-48S03	48	36~72	3.3	3000	81	DIP
VDC15-48S05	48	36~72	5	3000	84	DIP
VDC15-48S12	48	36~72	12	1250	85	DIP
VDC15-48S15	48	36~72	15	1000	85	DIP
VDC15-48S24	48	36~72	24	625	85	DIP
VDC15-12D05	12	9~18	±5	±1500	82	DIP
VDC15-12D12	12	9~18	±12	±630	84	DIP
VDC15-12D15	12	9~18	±15	±500	84	DIP
VDC15-24D05	24	18~36	±5	±1500	83	DIP
VDC15-24D12	24	18~36	±12	±630	84	DIP
VDC15-24D15	24	18~36	±15	±500	84	DIP
VDC15-48D05	48	36~72	±5	±1500	83	DIP
VDC15-48D12	48	36~72	±12	±630	84	DIP
VDC15-48D15	48	36~72	±15	±500	84	DIP

ISOLATION SPECIFICATIONS

Item	Min	Units
Isolation voltage	1500	VDC
Isolation resistance	100M	Ω

OUTPUT SPECIFICATION

Output power			15 Watts
Voltage accuracy	Full load and nominal Vin		± 1%
Line regulation	LL to HL at Full Load		± 0.2%
Load regulation	10% to 100% FL		± 0.5%
Over current protection	Vin min < Vi < Vi max		120%
Over current protection mode	Hiccup, automatic recovery		
Ripple and noise	20MHz bandwidth	3.3V & 5V	50mVp-p
Temperature coefficient			±0.02% / ºC
Start time			100mS
Transient response recovery time	25% load step change		400uS
Over voltage protection	3.3V output		4.2V
	5V output		6.2V
	12V output		14V
	15V output		17V
Over load protection	% of FL at nominal input		120%,max
Short circuit protection			Hiccup, automatics recovery

INPUT SPECIFICATION

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	No Load	Power up	100mS
Remote Control (CTL)	DC-DC ON	CTL Open (Control Mode 12V-40V)	
	DC-DC OFF	CTL Connect -Vin	
Remote off input current	Nominal Vin		2.0mA

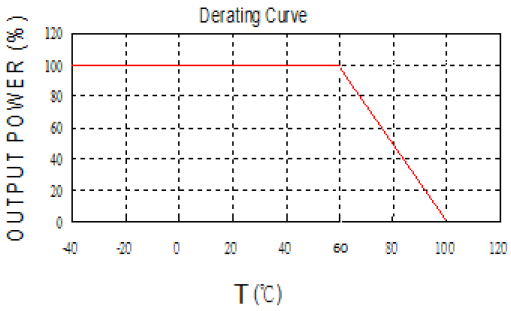
COMMON SPECIFICATION

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 12.7 mm (2.00 X 1.00 X 0.5 Inch)
Weight	25g (0.87 oz)
MTBF	5 x 10^5

ENVIRONMENTAL SPECIFICATIONS SPECIFICATIONS

Operating temperature range	Standard	-25ºC ~ +85ºC (with derating)
Maximum case temperature		+105ºC
Storage temperature range		-40ºC ~ +105ºC
Cooling		Nature cooling
Thermal shock		MIL-STD-810D
Vibration	10~55Hz (30minutes along X,Y and Z)	5G
Relative humidity		5% to 90% RH

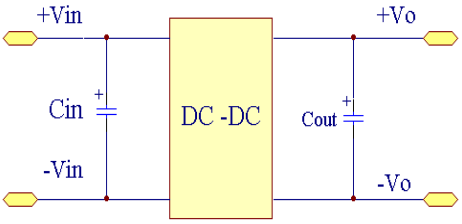
TYPICAL CHARECTERISTICS

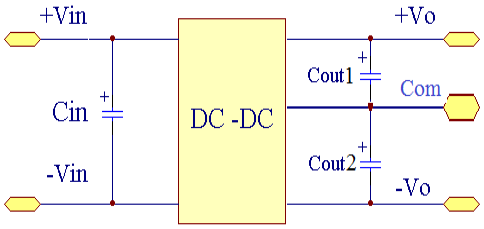


FOOTPRINT DETAILS

PIN	1	2	3	4	5	6
SINGLE	+Vin	-Vin	CTL	Trim	-Vout	+Vout
DUAL	+Vin	-Vin	CTL	-Vout	COMMON	+Vout

RECOMMENDED CIRCUIT





1. An extra capacitor Cin (Electrolytic capacitor, 47uF ~ 100uF) will improve EMC compatibility.
2. Install Cout, Cout1, Cout2 at output will improve ripple noise.
3. Need to add Cout1, Cout2, Cout3 at output.
4. The value of Cout1, Cout2, Cout3 improper will cause output instability or decrease over current protection.
5. The value of Cout1, Cout2, Cout3 is 100uF/A (A is the output current).

OUTLINE DIMENSIONS & RECOMMENDED FOOTPRINT