Victor Power Technologies

Global DC/DC Converter Manufacturer

VDF10 (W) Series

10 Watts

- 10W SINGLE AND DUAL OUTPUT
- 4:1 INPUT 24VDC: 9 ~ 36 VDC
  48VDC: 18 ~ 72 VDC
- ISOLATED & REGULATED
- SHORT LEAD TIME
- INDUSTRIAL STANDARD
- EFFICIENCY UP TO 88%
- RoHS
- 1.5KVDC Isolation
- Metal Shielding Package
- No Heat Sink Required
- Short Circuit Protection
- Over Voltage Protection
- Over Current Protection
- MTBF>500,000 hours

Product Program

Part Number	Input Voltage (VDC)		Output Voltage (VDC)	Output Current (mA)	Efficiency (%, Typ)	Package Style
	Nominal	Range				
VDF10-24S33W	24	9~36	3.3	2400	78	DIP
VDF10-24S05W	24	9~36	5	2000	88	DIP
VDF10-24S12W	24	9~36	12	833	88	DIP
VDF10-24S15W	24	9~36	15	667	88	DIP
VDF10-24S24W	24	9~36	24	416	88	DIP
VDF10-48S33W	48	18~72	3.3	2400	78	DIP
VDF10-48S05W	48	18~72	5	2000	82	DIP
VDF10-48S12W	48	18~72	12	833	86	DIP
VDF10-48S15W	48	18~72	15	667	86	DIP
VDF10-48S24W	48	18~72	24	416	87	DIP
VDF10-24D05W	24	9~36	±5	±1000	82	DIP
VDF10-24D12W	24	9~36	±12	±416	86	DIP
VDF10-24D15W	24	9~36	±15	±333	86	DIP
VDF10-24D24W	24	9~36	±24	±208	86	DIP
VDF10-48D05W	48	18~72	±5	±1000	82	DIP
VDF10-48D12W	48	18~72	±12	±416	86	DIP
VDF10-48D15W	48	18~72	±15	±333	86	DIP
VDF10-48D24W	48	18~72	±24	±208	86	DIP

ISOLATION SPECIFICATIONS

Item	Test conditions	Min	Typ	Max	Units
Isolation voltage	Tested for 1 minute		1500		VDC
Isolation resistance	Test at 500VDC	1000			MΩ

COMMON SPECIFICATION

Output Short Circuit Protection	Continuous
Temperature Rise at Full Load	40°C (typ)
Cooling	Free Air Convection
Operating Temperature Range	-40°C~+85°C (with derating)
Storage Temperature Range	-55°C ~+125°C
Lead Temperature(1.5mm from case for 10 seconds)	300°C (1.5mm from case for 10 seconds)
Storage Humidity Range	≤ 95%
Case Material	Metal
Dimensions	25.4 x 25.4 x 10.16 mm (1.0 x 1.0 x 0.4 inch)
MTBF	>500,000 hours

INPUT SPECIFICATION

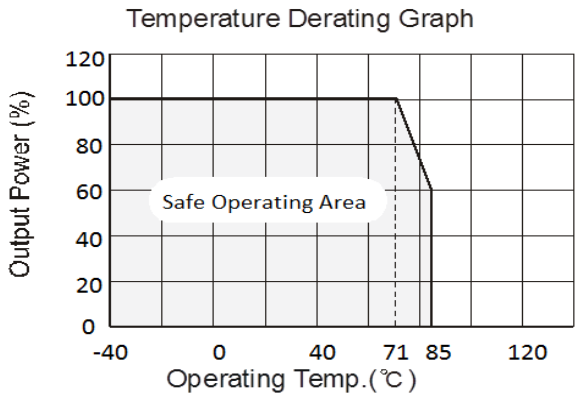
Input voltage range	4:1	24V	9~36 VDC
		48V	18~72 VDC
Input reflected ripple	Nominal Vin and full load		
Start up time	Nominal Vin and constant resistive load	Power up	10mS typ
Remote ON/OF:	DC-DC ON	Open or 3.5V<Vr< 12v	Remote ON/OF:
(Positive logic)	DC-DC OFF	Short or 0v <Vr < 1.2v	(Positive logic)
Input current when switched off	Nominal Vin		6mA

OUTPUT SPECIFICATION

Item	Test conditions	MIN	TYP	MAX	Units
10W output power	See below products program			10	W
Output Voltage accuracy	Refer to recommended circuit			±1	%
Load regulation	From 10% to 100% load			±0.5	
Line regulation	Input Voltage From Low to High			±0.2	
Temperature drift (Vout)	Refer to recommended circuit			±0.02	%/°C
Ripple & Noise	20Hz-300KHz bandwidth			40~80	mV
Switching Frequency			350		KHz
Transient Response	25% Load Step Change			300	µs

Note:
1. All specifications measured at TA=25°C, humidity<75%, nominal input voltage and rated output load unless otherwise specifi ed.
2. See below recommended circuits for more details.

TYPICAL CHARECTERISTICS

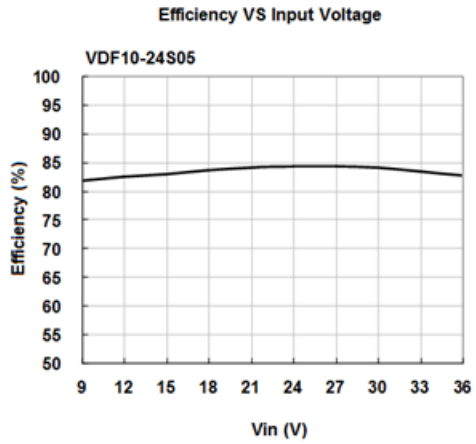


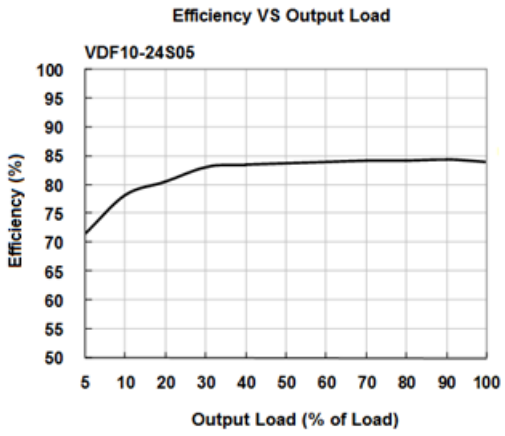
FOOTPRINT DETAILS

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

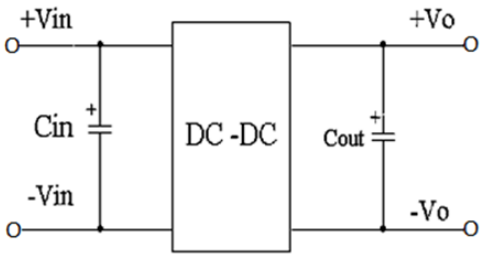
Note: All Pins on 2.54mm pitch; All Pin diameters are 0.50 mm(Tolerance: ±0.50); All dimensions in mm.

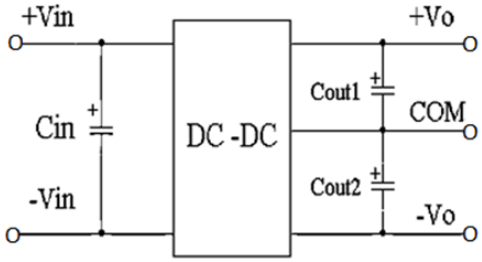
EFFICIENCY AND OUTPUT





Recommended Circuit





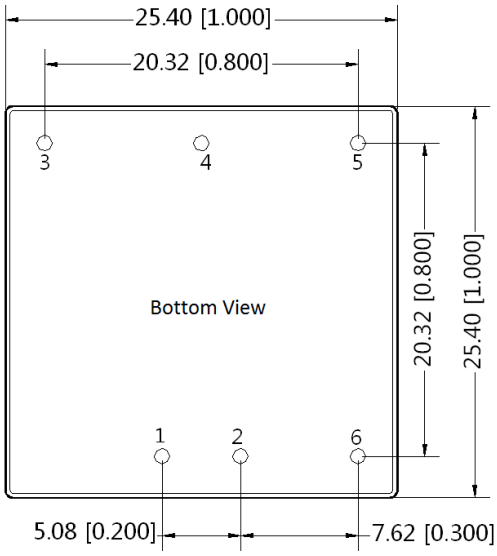
【Matters need attention】

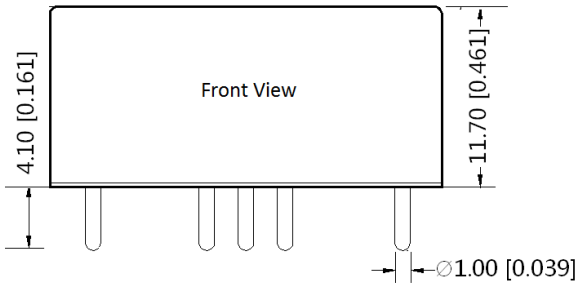
The module in the state of the input reverse polarity, will cause irreversible damage.

The long-term work in the case of overload will cause irreversible damage

If Module operates over the maximum input voltage, it will cause irreversible damage.

OUTLINE DIMENSIONS & RECOMMENDED FOOTPRINT





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