

PV10 SERIES

----10W HIGH VOLTAGE , DC-DC MODULE POWER SUPPLY



PRODUCT FEATURES

- Ultra-wide voltage input range: 100-1000VDC
- Working temperature range: -40 to +70°C
- Complete protection functions (output short circuit, output overvoltage)
- High isolation voltage: 4000VDC
- Flame retardant packaging, meet UL94-V0 requirements
- Industrial design, high reliability

APPLIED RANGE

It is widely used in photovoltaic power generation, junction box, wind and solar power generation supporting equipment and high voltage inverter and other high voltage occasions.

PRODUCT MODEL

Model	Input Voltage V_{in}	Output Voltage/Current (V_o/I_o)	Efficiency (TYP)
PV10-27B05R2	100-1000 VDC	5V / 2000mA	75%
PV10-27B12R2	100-1000 VDC	12V / 833mA	77%
PV10-27B15R2	100-1000 VDC	15V / 666mA	78%
PV10-27B24R2	100-1000 VDC	24V / 416mA	79%

* IF YOU NEED OTHER SPECIFICATIONS AND MODELS, PLEASE CONTACT US DIRECTLY.

INPUT CHARACTERISTICS

Item	Test Condition	Min	Typ	Max	Unit
Minimum input voltage			100	100	%
Maximum input voltage *				1000	
Standby power consumption	Input voltage range			0.5	
Input filtering		Capacitor type			
Start time				500	mS
Input current on	Nominal 500VDC input		24		mA

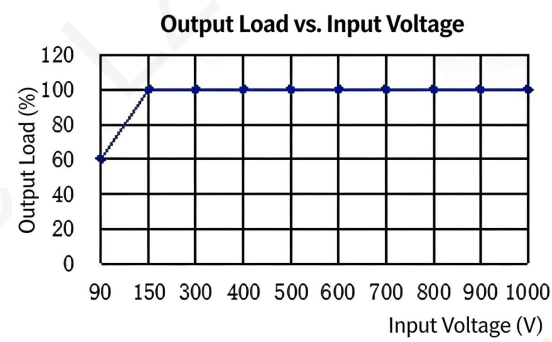
Input anti-reverse protection	Built-In			
Fuse	2A Slow Decay, Built-In			
OUTPUT CHARACTERISTIC				
Output Ppower	See output power VS input voltage	0.75	10	W
Output Voltage Accuracy	Input voltage range, 100% load	±1	±3	
Load Regulation	Nominal input, from 10% to 100% load	±0.5	±1	%
Voltage regulation	Input voltage range	±0.2	±0.5	
Output overcurrent protection		130		%Io
Output short circuit protection	Sustainable, self-recovering			
Output overvoltage protection		110	140	%Vo
Transient response bias	25% load step change	±2	±5	%Vo
Instantaneous response time	20MHz bandwidth, nominal voltage input 100% load	1	2	mS
Ripples & Noise	Frequency modulation mode	100	250	mVp-p
Switching frequency	Rated voltage input 100% load, -40°C	60		KHz
Temperature coefficient	See output power VS input voltage		0.03	%Vo/°C
GENERAL CHARACTERISTIC				
Isolation voltage	Input VS output, input output VS housing	4000		VDC
Insulation resistance	500VDC test, 45-70%RH, 25°C		100	MΩ
Isolation capacitance		2200		pF
MTBF	MIL-HDBK-217F@25°C	200		KHr
Thermal resistance	Device to housing (25°C)		5	°C/W
Shell material	Fire retardant heat resistant plastic, compliant with UL94V-0			
Weight		100		g
Install	PCB			
ENVIRONMENTAL CHARACTERISTICS				
Working temperature	See product operating temperature derating curve	-40	+70	°C
Storage temperature		-40	90	
Humidity		5	95	%RH
Operating altitude	5-85%RH, no condensation and icing phenomenon		5000	m

Maximum case temperature during operation		95	°C
Soldering temperature	The weld point is 1.5mm from the shell, 10 seconds	300	
Cooling method	Natural air cooling		
Vibrate	GB/T2423.10-2008		
Shock	GB/T2423.5-1995		

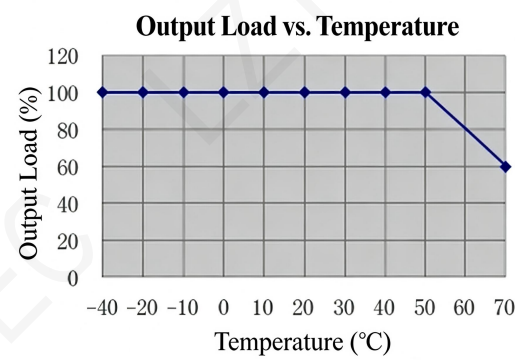
Note:

1. The above data are measured under the condition of $T_A=25^{\circ}\text{C}$ and humidity $<75\%$, unless otherwise specified;
2. Output ripple noise reference parallel line test method.

PRODUCT FEATURE CURVE

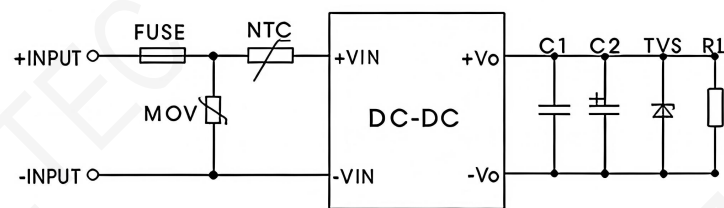


Output Load vs. Input Voltage Curve



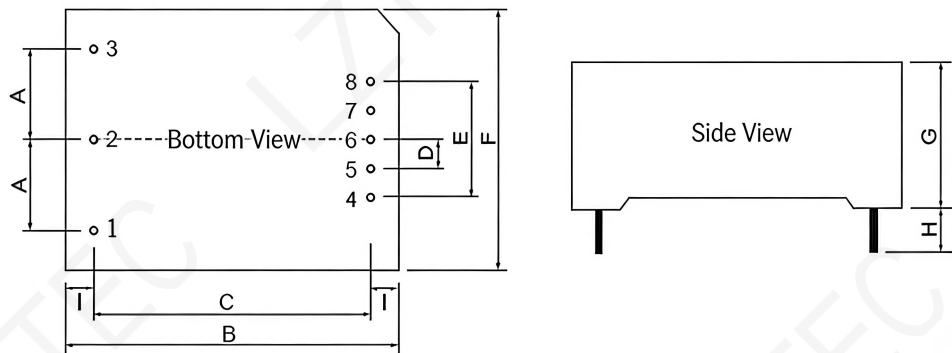
Operating Temperature Derating Curve

PRODUCT FEATURE CURVE



Model	FUSE	MOV	NTC	C1(μF)	TVS Diode
5V Output	2A/1500VDC	14D142K	10D-11 (10Ω)	1uF/45V	SMBJ7.0A
12V Output				1uF/16V	1uF/16V
15V Output				TVS Diode	220uF/16V
24V Output					SMBJ7.0A

APPEARANCE AND SIZE



Shell Size (Unit: mm

A	B	C	D	E	F	G	H	I
20.0	70.0	62.0	5.75	23.0	48	23.5	4.0	4.0

Note: Terminal section diameter: 1.0mm Terminal tolerance: 0.1mm Other tolerances: ±0.5mm

Pin Definitions

Pin	1	2	3	4	5	6	7	8
Definition	NO PIN	-Vin	+Vin	-Vo	NO PIN	NO PIN	NO PIN	+Vo

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