

Features

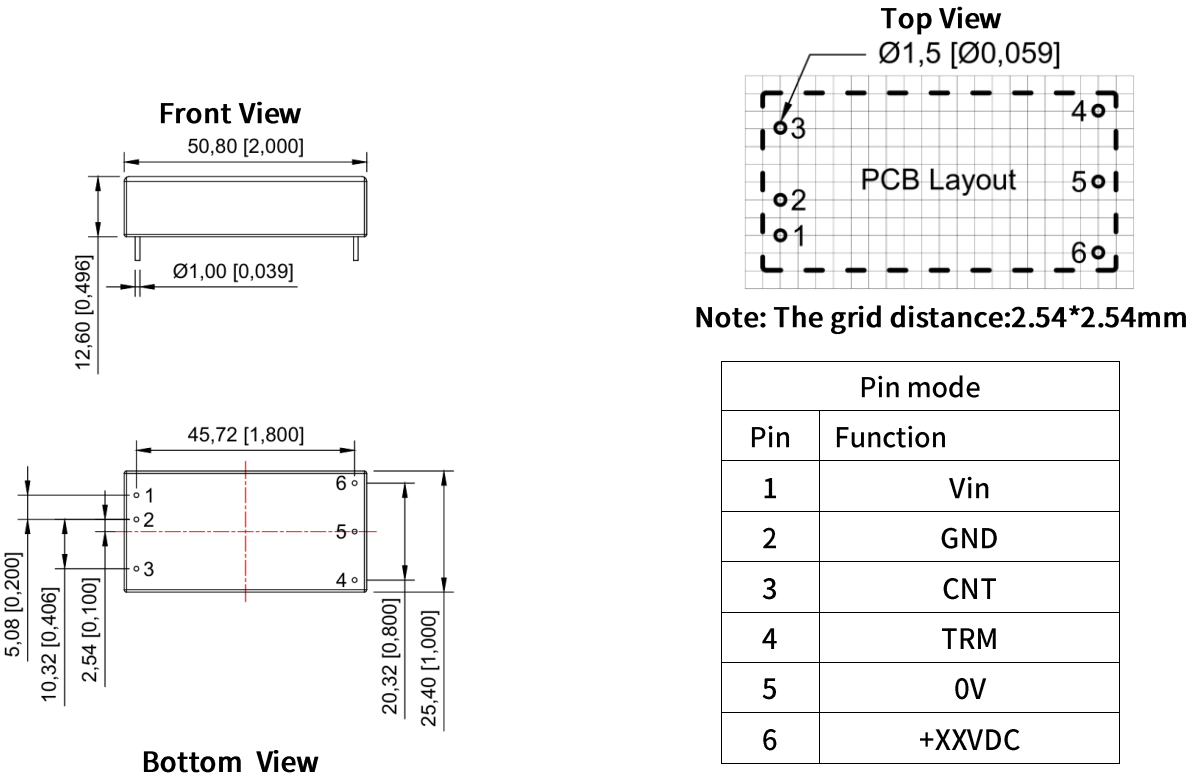
- Wide voltage input 2:1/4:1
- DIP
- Operating temperature range: $-40^{\circ}\text{C}\sim+85^{\circ}\text{C}$
- Isolation voltage 1500VDC 0.5mA 1Minute
- Internal SMD design
- Metal shell packaging
- Heat dissipation mode: natural air cooling
- It has good shielding anti-interference performance and electromagnetic compatibility, lightning protection, output over current, short circuit protection, overheat protection, self-recovery and other functions

Product Picture



Dimensions

W(U)RD_S_50W Series Dimensions



Note:

Size unit: mm[inch]

Unmarked tolerance: $\pm 0.25[\pm 0.01]$

Pin section tolerance: $\pm 0.1[\pm 0.004]$

The device layout is for reference only.

Application

Railway communication, display, monitoring equipment, petrochemical, industrial control, remote DC power supply system, switching system and other communication equipment.

Selection Guide

Model	Input(VDC)	Output (Vo±2%)	Current (mA)	Efficiency(%)	Isolation (VDC)
WRD__S05-50W	12(9-18) 24(18-36) 48(36-75)	5	10000	≥87	1500
WRD__S12-50W		12	4166	≥87	1500
WRD__S15-50W		15	3333	≥87	1500
WRD__S24-50W		24	2083	≥87	1500
URD__S05-50W	24(9-36) 48(18-75)	5	10000	≥87	1500
URD__S12-50W		12	4166	≥87	1500
URD__S15-50W		15	3333	≥87	1500
URD__S24-50W		24	2083	≥87	1500

Note: Our company can customize the module power supply with any input and output for customers. If you have special needs, please call our company. Unless otherwise specified, the input = Vi. The specifications of the module power supply should comply with the provisions of Table 1 and be applicable to the full temperature range (-40°C≤Tc≤85°C)

Electrical Specifications

Specifications	Symbol	Conditions Vi, -40°C≤Tc≤85 (Unless otherwise specified)	Min	Max	Unit
Output Voltage	Vo	Full Load	—	Vo+2%	V
Output Current	Iomax	—	—	P(Power)/ U(Output voltage)	A
Output Ripple voltage	Vp-p	Full Load, Vi, BW=20MHz, Normal Temperature	—	500±10%	mV
Voltage Regulation	Sv	Vimin、Vi、Vimax, Full Load	—	±2	%
Load Adjustment	Si	Vi, Io=(10%~100%),5V	—	±5	%
		Vi, Io=(10% to 100%), other outputs		±2	
Efficiency	η	Vi, Full Load, Normal Temperature	80	—	%
Insulation Resistance	RI	Input-output, Insulation Voltage 500VDC	100	—	MΩ

Mechanical Specifications

Size	50.80x 25.40 x 12.60 mm
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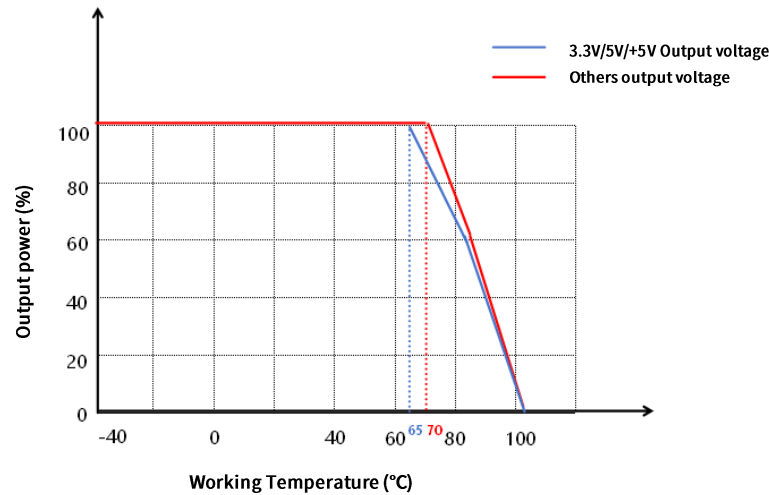
General Specifications

EMC Specifications	Magnetic Field Sensitivity Test	GB6833.2-87
	Electrostatic Discharge Sensitivity Test	GB6833.3-87
	Radiation Sensitivity Test	GB6833.5-87
	Conduction Sensitivity Test	GB6833.6-87
Temperature Drift	≤0.02%/°C	
Frequency	200KHZ~400KHZ(MAX)	

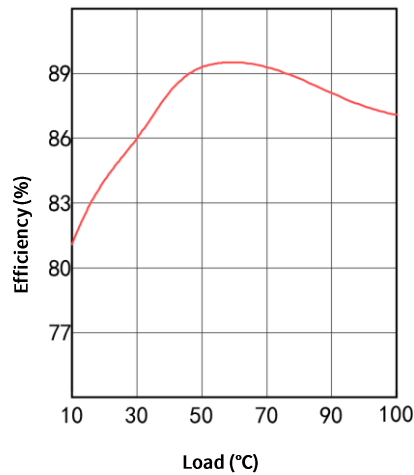
Humidity	90%(max)
MTBF	>500000H

Typical Specifications Curves

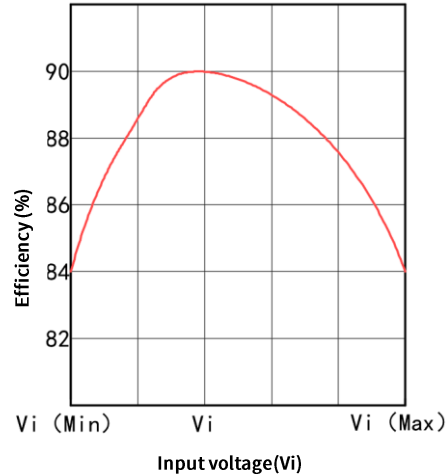
Temperature Curve



Efficiency/Load Curve

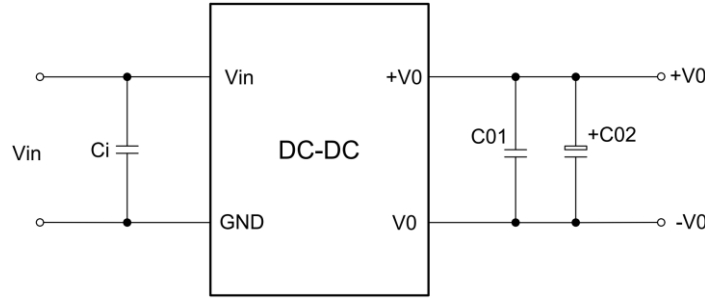


Efficiency/Input Voltage Curve



Typical Application

Design Reference



Recommendation Test

Filter: In some circuits that are sensitive to noise and ripple, an external filter capacitor can be connected to the DC/DC input and output terminals to reduce the impact of ripple on the system, but the value of the filter capacitor should be appropriate, if the capacitor is too large, it is likely to cause startup problems, for each output, under the condition of ensuring safe and reliable operation, the maximum capacitance of the filter capacitor can be referred to the external capacitance table. In order to obtain very low ripple, an "LC" filter network can be connected to the input and output end of the DC/DC converter, so that the filtering effect will be better, and it should be noted that the size of the inductance value and the frequency of the "LC" filter network should be staggered from the frequency of the DC/DC module power supply to avoid mutual interference. For each output, under safe and reliable working conditions, the recommended capacitive load value is shown in (Table 1).

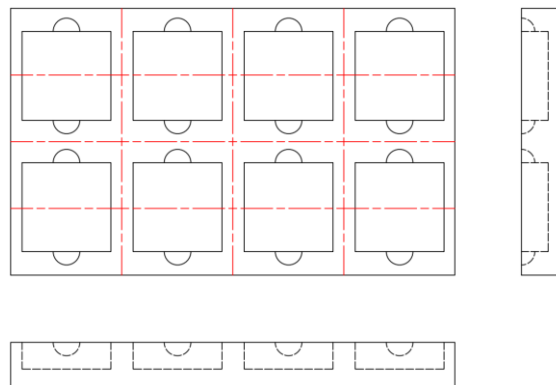
Single Input	Cout	Dual Vout	Cout
5-12VDC	22-68uF	± 5 - ± 12 VDC	4.7-22uF
24-48VDC	10-47uF	± 24 - ± 48 VDC	4.7-10uF

Recommended output max capacitive load value table (Table 1)

Precautions

Package

This series of modules are packed in shockproof and anti-static foam.



Transport

The package containing the module is allowed to be transported by any means of transport, which should avoid direct rain and snow and mechanical damage.

Storage

The module should be stored in a warehouse where the ambient temperature is -40 degrees ~ 125 degrees, the relative humidity is 20%~95%, and the surrounding environment is free from acidic, alkaline and other harmful gases.

Note: The above are the performance indicators of the product series listed in this manual. Some indicators of non-standard products may exceed the above requirements, so if there is any inconsistency between the manual and the product specification documents, please refer to the specification documents. If you have special needs, please contact us directly.