

Features

- Wide voltage input 2:1
- DIP
- Operating temperature range : -40°C~+85°C
- Isolation voltage 1500VDC 0.5mA 1Minute
- Internal SMD design
- Metal shell
- Cooling natural
- 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

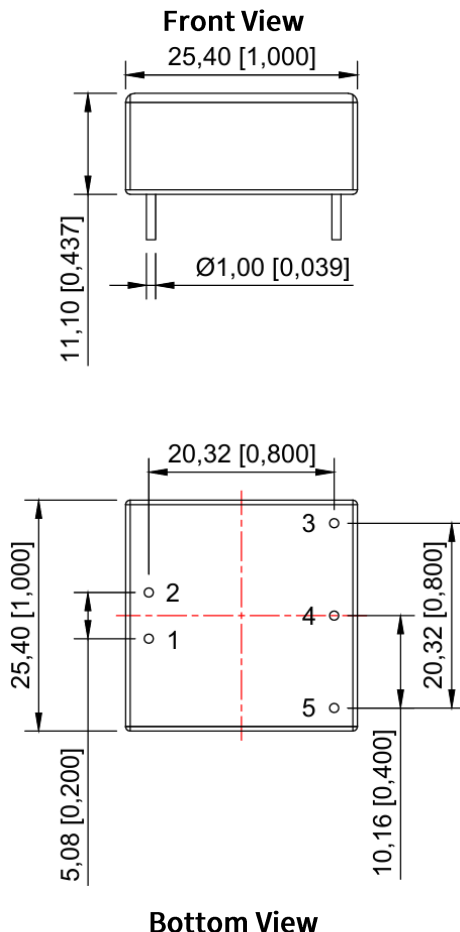


EMC-EN55032
EN55035
LVD-EN62368



Dimensions

WRFD_S(D)_-2WH2 Series Dimensions



Note: The grid distance :2.54*2.54mm

Pin Mode		
Pin	Single	Dual
1	GND	GND
2	Vin	Vin
3	+XXVDC	+XXVDC
4	TRM	COM
5	0V	-XXVDC

Note:

Size unit: mm[inch]

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

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

The device layout is for reference only.

Application

Railway communications, display screens, monitoring equipment, petrochemicals, industrial control, long-distance DC power supply systems, switching systems and other communication equipment, etc.

Selection Guide

Model	Vin (VDC)	Output (Vo±2%)	Current (mA)	Efficiency (%)	Isolation (VDC)
WRFD_S3.3-2WH2	5(4.5~9)	3.3	606	≥77	1500
WRFD_S05-2WH2		5	400	≥79	1500
WRFD_S12-2WH2		12	167	≥79	1500
WRFD_S15-2WH2		15	133	≥79	1500
WRFD_D05-2WH2		±5	±200	≥79	1500
WRFD_D12-2WH2		±12	±84	≥79	1500
WRFD_D15-2WH2		±15	±67	≥79	1500
WRFD_S3.3-2WH2	12(9-18) 24(18-36) 48(36-75)	3.3	606	≥77	1500
WRFD_S05-2WH2		5	400	≥79	1500
WRFD_S12-2WH2		12	167	≥79	1500
WRFD_S15-2WH2		15	133	≥79	1500
WRFD_S24-2WH2		24	83	≥79	1500
WRFD_D05-2WH2		±5	±200	≥79	1500
WRFD_D12-2WH2		±12	±84	≥79	1500
WRFD_D15-2WH2		±15	±67	≥79	1500

Note: Our company customizes module power supplies with any input or output for customers. If you have other output voltage requirements, please contact our company. Unless otherwise specified, the input =Vi. The characteristics of the module power supply should comply with the provisions of Table 1 and be applicable to the full temperature range (-40℃≤Tc≤85℃).

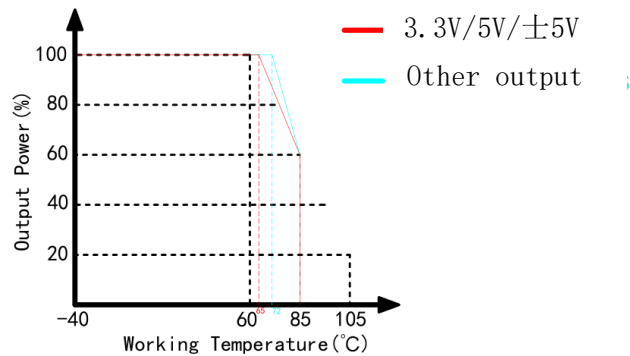
General Characteristics

EMC Specifications	Magnetic Field Sensitivity Test	GB6833.2-87
	Electrostatic Discharge Sensitivity Test	GB6833.3-87
	Radiation Sensitivity Test	GB6833.5-87
	Conductivity Sensitivity Test	GB6833.6-87
Temperature Excursion	≤±0.02%/℃	
Storage Temperature	-40℃~125℃	
Switching Frequency	200KHz- 400KHz	
Humidity	10%-90%RH	
MTBF	>300000H	

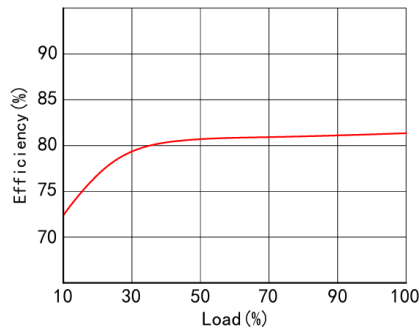
Mechanical Specifications	
Size	25.40 x 25.40 x 11.10 mm

Typical Specifications Curves

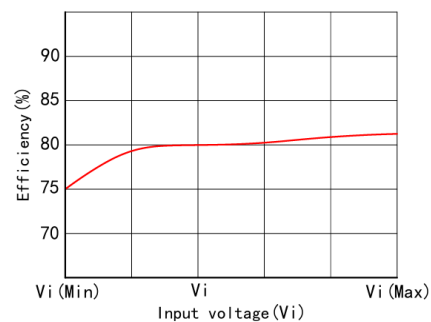
Temperature derating curve



Efficiency/Load Graph

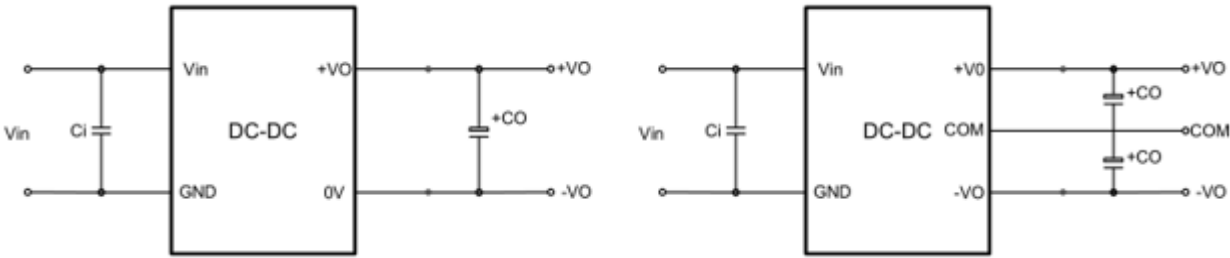


Efficiency/Input Voltage Graph



Typical Application

Recommended Circuit



Recommendation Test

Filtering: In some circuits sensitive to noise and ripple, filtering capacitors can be externally connected to the input and output terminals of the DC/DC converter to reduce the impact of ripple on the system. However, the value of the filtering capacitor should be appropriate. If the capacitor is too large, it may cause startup problems. For each output, under the condition of ensuring safe and reliable operation, the maximum capacitance value of the filtering capacitor can refer to the external capacitance table. In order to obtain very low ripple, an "LC" filtering network can be connected to the input and output terminals of the DC/DC converter, so that the filtering effect will be better. At the same time, attention should be paid to the size of the inductance value and the frequency of the "LC" filtering network itself, which should be staggered with the frequency of the DC/DC module power supply to avoid mutual interference. For each output channel, it is advisable to verify the condition of its external capacitor while ensuring safe and reliable operation. For further details, please refer to Table 1.

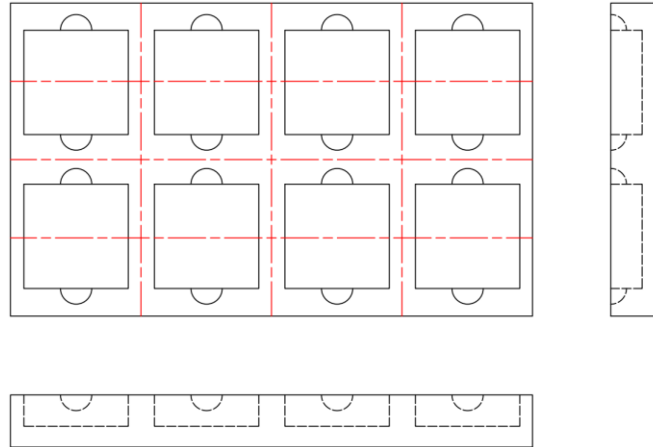
Vin (VDC)	Vout (VDC)	Ci (μF)	Co (μF)
5(4.5~9)	3.3/5	100μF/50V	22μF/16V
	12/15		22μF/25V
	±5/±12		22μF/25V
	±15		22μF/50V
12(9-18) 24(18-36)	3.3/5	100μF/50V	22μF/16V
	12/15		22μF/25V
	24		22μF/50V
	±5/±12		22μF/25V
	±15		22μF/50V
48 (36~75)	3.3/5	47μF/100V	22μF/16V
	12/15		22μF/25V
	24		22μF/50V
	±5/±12		22μF/25V
	±15		22μF/50V

The recommended values for the external filter capacitors are specified in Table 1.

Notice

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 10%~90%, 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.