DC-DC Converter

S_HD_-2WH2 Series

HenLv

Features

- Fixed voltage input, isolation of unregulated output
- High power density
- Working temperature：-40℃～+85℃
- Isolation 3000VDC 0.5mA 1Minute
- SIP Package
- High flame retardant plastic 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

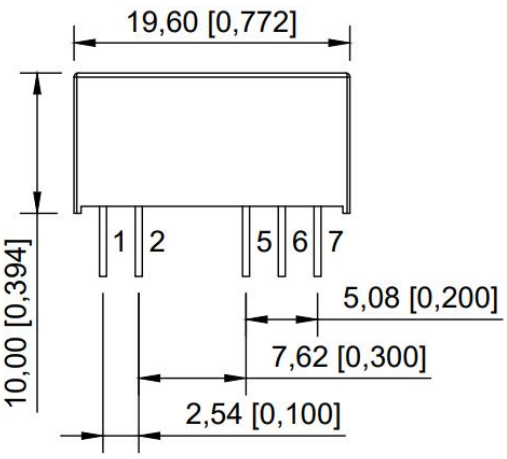
Patent protection

EMC-EN55032
EN55035
LVD-EN62368

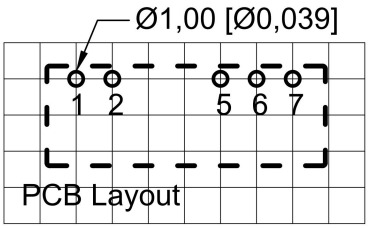
Dimensions

S_HD_-2WH2 Series Dimensions

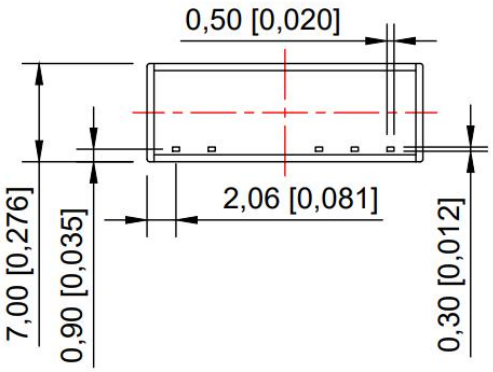
Front view



Top view



Note: The grid distance is 2.54*2.54mm



Bottom view

Pin mode	
Pin	Dual
1	Vin
2	GND
5	-XXVDC
6	COM
7	+XXVDC

Note:
Size unit: mm[inch]
Pin section tolerance: ±0.1[±0.004]
Unmarked tolerance: ±0.25[±0.01]
The device layout is for reference only.

Application

Communication interface converter (RS232/485) Cellular phone, semiconductor laser, operational amplifier power supply, portable instrument automatic control device, etc.

Selection Guide

Model	Vin (V±5%)	Vout (Vo±4%)	Current (mA)	Efficiency(%)	Isolation(VDC)
S_HD05-2WH2	5(4.75-5.25) 12(11.4-12.6) 15(14.25-15.75) 24(22.8-25.2)	±5	±200	⩾76	3000
S_HD12-2WH2		±12	±84	⩾74	3000
S_HD15-2WH2		±15	±67	⩾72	3000
S_HD24-2WH2		±24	±42	⩾74	3000

Note: The company for customers to customize any input and output module power supply, if you have special needs, please call our company, unless otherwise specified, input =Vi, the characteristics of the module power supply should meet the requirements of Table 1, and applicable to the full temperature range (-40°C⩽Tc⩽85°C)

Electrical Characteristics

Characteristic	Symbol	Conditions Vi ,-40°C⩽Tc⩽85 (Unless otherwise specified)	Min	Max	Unit
Output Voltage	Vo	Full load	Vo-4%	Vo+4%	V
Output Current	Iomax	—	—	P(Power)/U(Output voltage)	A
Output Ripple Voltage	Vp-p	Full load，Vi，BW=20MHz，Normal temperature	60	100	mV
Output Noise Voltage	Vp-p	Full load，Vi，BW=20MHz，Normal temperature	80	120	mV
Voltage Regulation	Sv	Vimin、Vi、Vimax，Full load	—	⩽±2%	%
Load Adjustment Rate	Si	Vi，Io=(10%~100%)Iomax	—	⩽±2%	%
Efficiency	η	Vi，Full load，Normal temperature	72	—	%
Insulation Resistance	Rl	Input-output, insulation voltage 500VDC	1000	—	MΩ

General Specifications

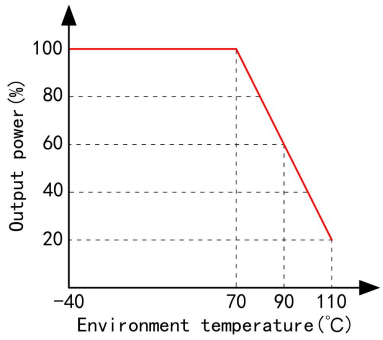
EMC Specifications	Magnetic field sensitivity test	GB-4943
	Electrostatic discharge sensitivity test	GB-4943
	Radiation sensitivity test	GB-4943
	Conduction sensitivity test	GB-4943
Temperature drift	⩽±0.03%/°C	
Storage Temperature	-40°C~125°C	
Input Frequency	80KHz~150KHz	
Humidity	10%~90%RH	
Leakage Current	—	
MTBF	＞500000 H	

Mechanical Specifications

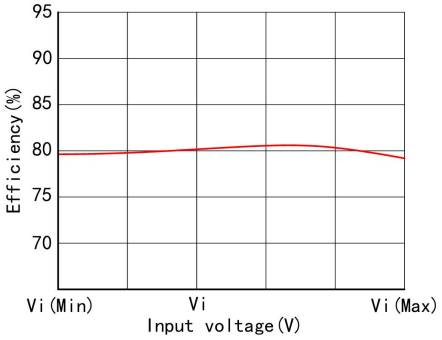
Size	19.60*7.00*10.00 mm

Typical Characteristic Curves

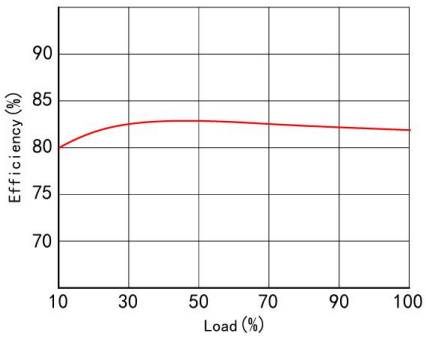
Temperature chart



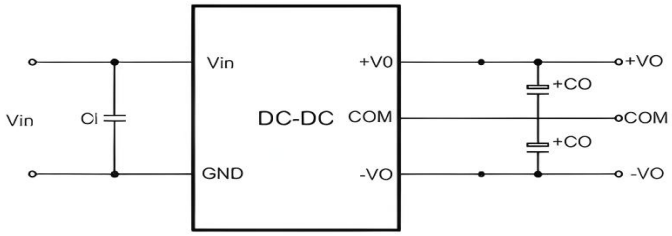
Efficiency/Input voltage graph



Efficiency/Load graph



Typical Application



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).

Input voltage(Vin+)	Input capacitance(Cin)	Output voltage(Vout)	Output capacitance(Cout)
5V	4.7uF/25V	5V	4.7uF/25V
12V	2.2uF/25V	12V	2.2uF/25V
24V	1uF/50v	24V	1uF/50v

Note: Please note that the main grounding of the output and the grounding of the load are connected to the ground, so that even if the product has problems, it will not cause harm to the human body. The ground requirements for the auxiliary roads are isolated and can be grounded without grounding.

Notes

Package

This series module is packaged by packaging tube.

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.

Store

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.