Features

- Fixed input voltage，Isolated regulated output
- High efficiency
- Working Temperature: -40℃～+85℃
- Isolation 3000VDC 0.5mA 1Minute
- SIP Package
- Highly Flame-retardant Plastic Shell Packaging
- Cooling Nature
- Output short circuit, over current, over voltage protection

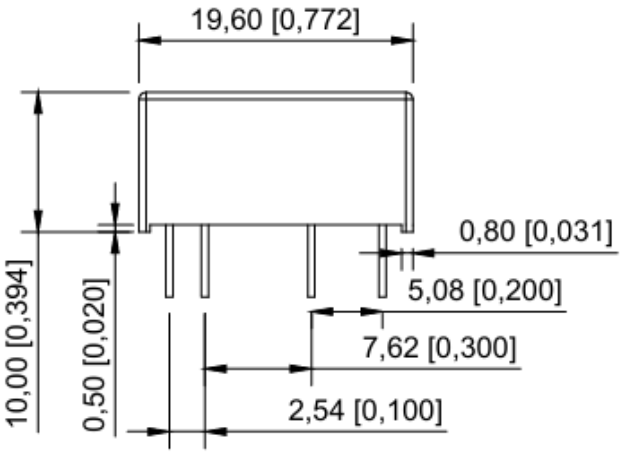
Product Picture

EMC-EN55032
EN55035
LVD-EN62368

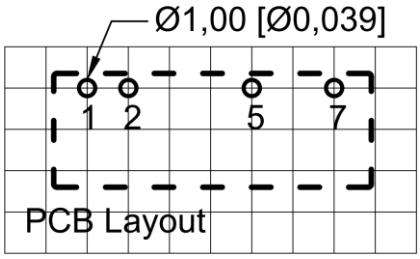
Dimensions

Dimension of S_HIS_-1WH2 Series

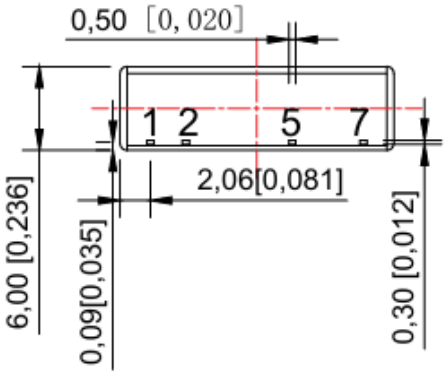
Front View



Top View



Note: The grid distance is 2.54*2.54mm



Bottom View

Pin Mode	
Pin	Function
1	Vin
2	GND
5	0V
7	+XXVDC

Note:
Unit: mm[inch]
Pin Section Tolerance：±0.1[±0.004]
General 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 (V±2%)	Current (mA)	Efficiency (%)	Isolation (VDC)
S_HIS3.3-1WH2	3.3(3.135-3.465) 5(4.75-5.25) 12(11.4-12.6) 15(14.25-15.75) 24(22.8-25.2)	3.3	303	⩾76	3000
S_HIS05-1WH2		5	200	⩾80	3000
S_HIS12-1WH2		12	83	⩾76	3000
S_HIS15-1WH2		15	67	⩾76	3000

Note: Our company can customize any input and output module power supply for customers. If you have special needs, please call our company. Unless otherwise specified, 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℃)

Electrical Characteristics

Characteristics	Symbol	Condition Vi ,-40℃⩽Tc⩽85 (Unless Otherwise Specified)	Min	Max	Unit
Output Voltage	Vo	Full Load	Vo-2%	Vo+2%	V
Output Current	Iomax	—	—	P(Power)/U(Output Voltage)	A
Output Ripple Voltage	Vp-p	Full Load，Vi，BW=20MHz，Normal Temperature	40	80	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 Regulation	Si	Vi，Io=(10%~100%)Iomax	—	⩽±2%	%
Efficiency	η	Vi，Full Load，Normal Temperature	76	—	%
Insulation Resistance	Rl	Input/Output，Test Voltage：500VDC	1000	—	MΩ

General Characteristics

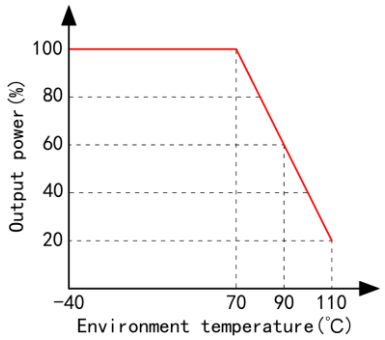
EMC Specifications	Magnetic Field Sensitivity Test	GB-4943
	Electrostatic Discharge Sensitivity Test	GB-4943
	Radiation Sensitivity Test	GB-4943
	Conductivity Sensitivity Test	GB-4943
Temperature Excursion	⩽±0.02%/℃	
Storage Temperature	-40℃~125℃	
Switching Frequency	80KHz~150KHz	
Humidity	10%-90%RH	
MTBF	>500000H	

Mechanical Specifications

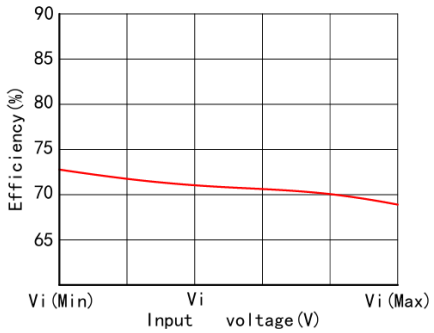
Size	19.60*6.00*10.00 mm

Product Characteristic Curves

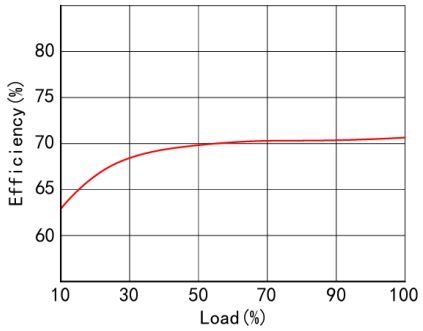
Temperature chart



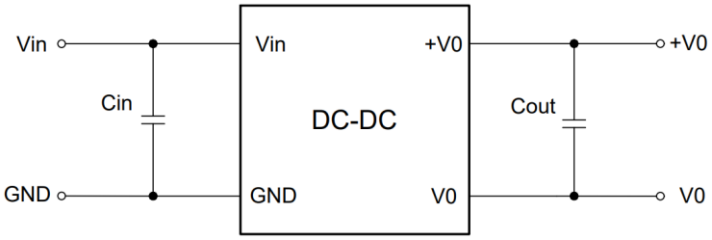
Efficiency/Input voltage graph



Efficiency/Load graph



Typical Application



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, under safe and reliable working conditions, it is recommended that its capacitive load value be detailed in Table 1.

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

Table of recommended capacitive load values (Table 1)

Note: Please note that the grounding of the main output circuit and the grounding of the load carried should be connected to the ground, so that even if there is a problem with the product, it will not cause harm to personnel. The grounding requirement for auxiliary roads is that they are isolated and do not need to be grounded.

Notice

Package

This series of modules are packed with tubes.

Transport

The package is allowed to be transported by any means of transport, which shall avoid direct rain or snow and mechanical damage.

Storage

The module should be stored in a warehouse with an ambient temperature of -40 ° C to 125 ° C, a relative humidity of 10% to 90%, and no acidic, alkaline, or other harmful gases in the surrounding environment.

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