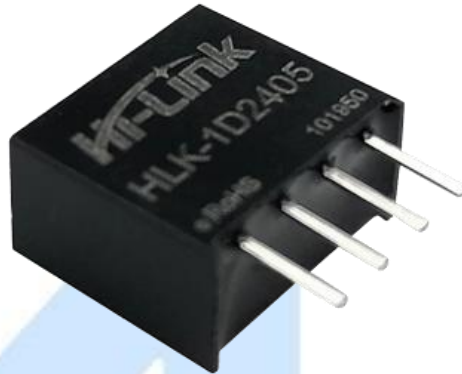


HLK-1D2405

MODULO DC-DC 24V A 5V 1W



A variety of specifications of power modules to choose

MULTIPLE SPECIFICATIONS AVAILABLE

1W constant pressure 24V(soil 10% Vin) input/isolated unregulated output

MODEL	POWER	VOLTAGE	CURRENT
HLK-1D2405	1W	5V	200mA
HLK-1D2412	1W	12V	84mA
HLK-1D2415	1W	15V	67mA
HLK-1D2424	1W	24V	42mA

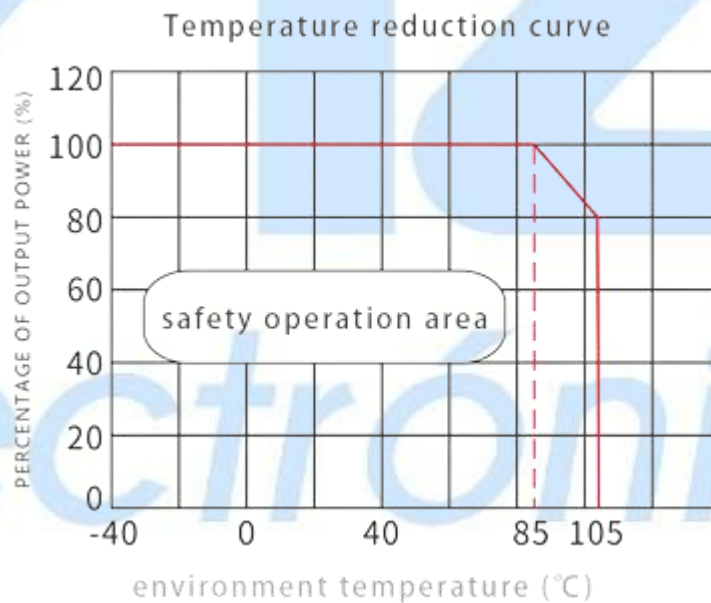
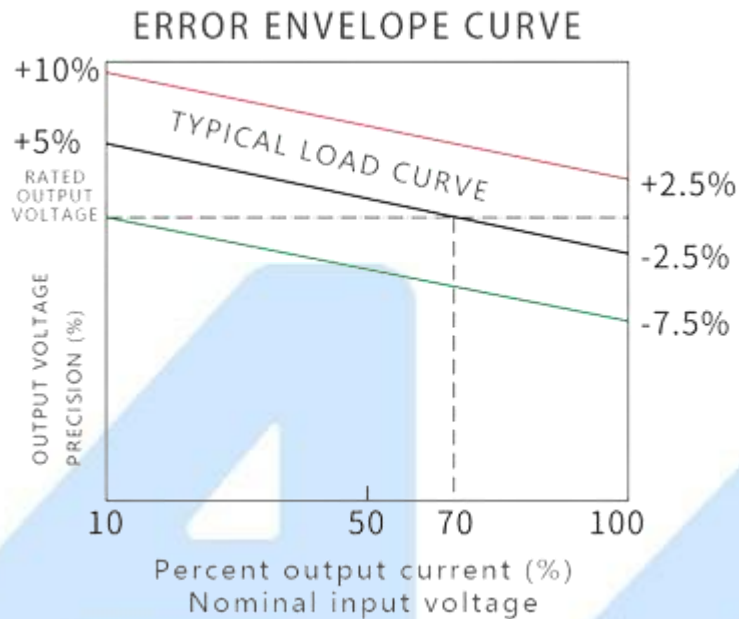
*The same type of power module wind package size is consistent

*International standard pin size 11.5×10×6mm

Product features

- Ultra-miniature standard package SIP package and standard pins
- Constant voltage input, isolated unregulated single output, 1W
- Input and output isolation withstand voltage 1500VDC
- Low ripple/noise (20MH bandwidth) < 100mVp-p
- High efficiency, conversion efficiency up to 80% (Typ)
- Operating temperature range: -40°C~+85°C
- High reliability, long life design, MTBF≥3500000H
- Potting and sealing with high-quality environmentally friendly waterproof and thermal conductive glue, dustproof, moistureproof, shockproof and flame retardant
- Meet UL/CE/EMC and safety testing requirements
- Can be used in medical, industrial control, electric power, instrumentation, communication, railway and other fields

Product characteristic curve

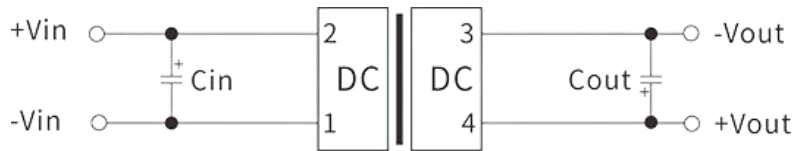


Typical application circuit

Recommended test circuit

If it is required to further reduce the input and output ripple, a capacitor filter network can be connected to the input and output ends. The application circuit is shown in the figure.

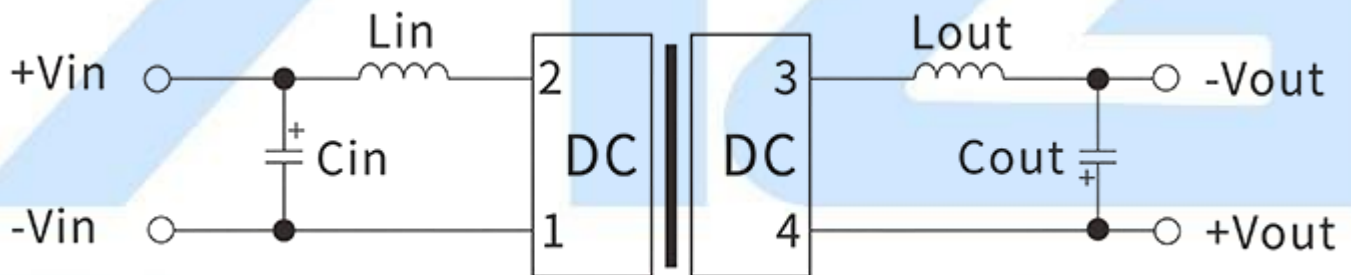
But care should be taken to select a suitable filter capacitor. If the capacitance is too large, it may cause startup problems. For each output, under the condition of ensuring safe and reliable operation, the recommended capacitive load value is shown in the attached table.



Vin (Vdc)	3.3/5/12/15/24
Cin	4.7u F/50V
Cout	Reference list 1
Lin	4.7uH
Lout	4.7uH

Refer to the recommended capacitive load values (Table 1)

EMI typical application circuit



Recommended parameters:

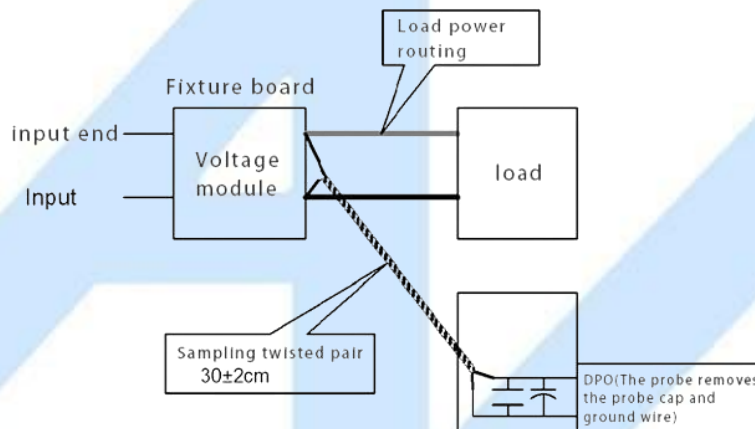
Vin (Vdc)	3.3/5/12/15/24
Cin	4.7u F/50V
Cout	Reference list 1
Lin	4.7uH
Lout	4.7uH

Details of recommended EMI reference circuit values (Table 2)

Output load requirement

In order to ensure that the module can work efficiently and reliably, when in use, its minimum output load cannot be less than 10% of the rated load. If the power you need is really small, please connect a resistor in parallel between the positive and negative poles of the output (the sum of the actual power used by the resistors is greater than or equal to 10% of the rated power and the rated power of the selected resistor must be greater than 5 times the actual power used. , Otherwise the temperature of the resistor will be higher).

Ripple & noise test: twisted pair method 20MHz bandwidth




testing method:

1. Ripple noise is connected using 12# twisted pair, the oscilloscope bandwidth is set to 20MHz, 100M bandwidth probe, and 0.1uF polypropylene capacitor and 47uF high frequency low resistance electrolytic capacitor are connected in parallel to the probe end, and the oscilloscope sampling uses Sample sampling mode .

2. Connect the power input terminal to the input power supply, and the power output is connected to the electronic load through the fixture board. For testing, use a 30cm±2cm sampling line to sample directly from the power output port. The power line selects the corresponding wire diameter wire with insulation according to the output current.

(As shown in FIG)

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ACOTACIÓN: N/A	http://www.agelectronica.com	ESCALA: N/A	REALIZO: OGJ REV: JFRR
TOLERANCIA: N/A	MODULO DC-DC 24V A 5V 1W		
TOLERANCIA: N/A	Fecha: 18/05/2022	No. Parte: HLK-1D2405	