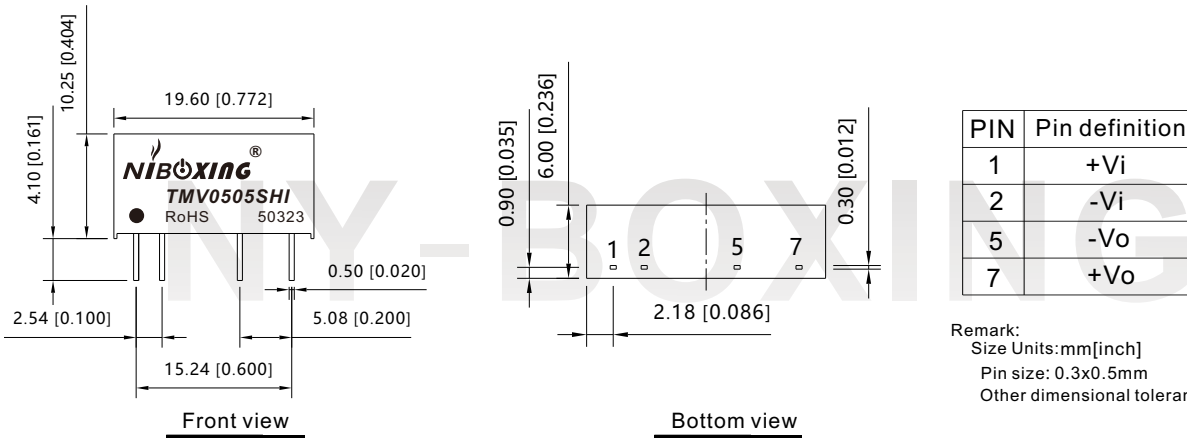


1W DC/DC Module power supply
Product performance


- ★ Small SIP package
- ★ Sustainable short-circuit protection, self-healing
- ★ Isolation withstand voltage 3000VDC
- ★ High efficiency, high power density, low ripple noise
- ★ Industrial-grade product design, small size
- ★ Operating temperature range: -40~+85°C

TMVxxxxSHI series-----It is a customer of Niboxing for applications that generate a set of input/output isolation for on-board power requirements. The product is widely used in pure digital circuits, general low-frequency analog circuits, relay drive circuits, data switching circuits and so on. The voltage of the input power supply is required to be relatively stable, and the input and output are required to be isolated, and the output voltage accuracy of the power supply is not high.

Diagram of package dimensions

Product selection

model	input voltage range	Nominal output voltage / electricity (Vo / Io)	productiveness (Typ)	minimum output current	Maximum capacity load
TMV0303 SHI		3.3V/300mA	81%	30mA	10uF
TMV0305 SHI	2.97~3.63V	5V/200mA	81%	20mA	10uF
TMV0312 SHI	(Nominal: 12VDC)	12V/83mA	82%	9mA	4.7uF
TMV0315 SHI	3.3VDC)	15V/67mA	78%	7mA	2.2uF
TMV0324 SHI		24V/42mA	82%	4mA	1uF
TMV0503 SHI		3.3V/300mA	81%	30mA	10uF
TMV0505 SHI	4.5~5.5V	5V/200mA	81%	20mA	10uF
TMV0512 SHI	(Nominal: 12VDC)	12V/83mA	82%	9mA	4.7uF
TMV0515 SHI	5VDC)	15V/67mA	78%	7mA	2.2uF
TMV0524 SHI		24V/42mA	82%	4mA	1uF
TMV1203 SHI		3.3V/300mA	81%	30mA	10uF
TMV1205 SHI	10.8~13.2V	5V/200mA	83%	20mA	10uF
TMV1212 SHI	(Nominal: 12VDC)	12V/83mA	79%	9mA	4.7uF
TMV1215 SHI	12VDC)	15V/67mA	80%	7mA	2.2uF
TMV1224 SHI		24V/42mA	81%	4mA	1uF

TMV1503 SHI		3.3V/300mA	81%	30mA	10uF
TMV1505 SHI	13.5~16.5V	5V/200mA	79%	20mA	10uF
TMV1512 SHI	(Nominal: 15VDC)	12V/83mA	83%	9mA	4.7uF
TMV1515 SHI		15V/67mA	82%	7mA	2.2uF
TMV1524 SHI		24V/42mA	79%	4mA	1uF
TMV2403 SHI		3.3V/300mA	81%	30mA	10uF
TMV2405 SHI	21.6~26.4V	5V/200mA	80%	20mA	10uF
TMV2412 SHI	(Nominal: 24VDC)	12V/83mA	81%	9mA	4.7uF
TMV2415 SHI		15V/67mA	82%	7mA	2.2uF
TMV2424 SHI		24V/42mA	80%	4mA	1uF

Output characteristics

project	going	Min	Typ	Max
output power		0.1W	--	--
Output voltage accuracy	Input voltage range, 100% load	--	±15%	--
voltage regulation	Under rated load, input voltage voltage ± 1%	--	±1.5%	--
load regulation	10% to 100% load	--	15%	20%
Output ripple noise ^①	20 MHz bandwidth (peak-peak)	--	75mV	100mV
Temperature drift coefficient	Nominal voltage input, 100% load, -40°C ~ + 85°C	--	--	±0.03%/°C
Output short circuit protection	Long-term short-circuit, self-recovery			

* pour:①The test method of ripple noise adopts the parallel line test method, and please refer to the "DC-DC Module Power Supply Application Guide" for the specific operation method.

General characteristics

project	going	Min	Typ	Max
Insulation and pressure resistance	Input-output, with a test time of 60s	3000VDC	--	--
working temperature		-40°C	--	+85°C
Storage temperature		-40°C	--	+125°C
Store humidity		--	--	95%RH
switching frequency		--	100 KHz	--
MTBF	MIL-HDBK-217F, 25°C		3500,000h	
Module shell material	Black flame retardant heat resistant plastic (UL 94-V0)			

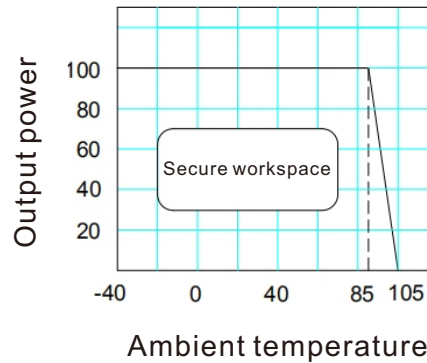
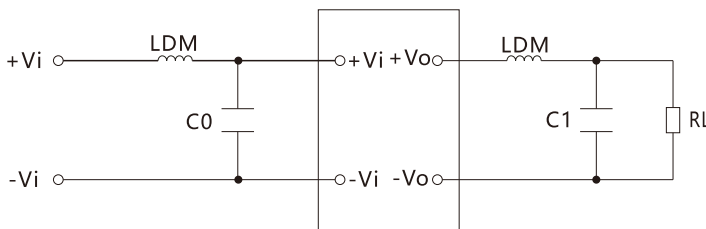
Product performance curves
Temperature graph

Reference scheme
1 Typical application circuit diagram


Figure [1] shows a typical application circuit

Notes (Figure 1)

- a. It is recommended to use ceramic capacitors or electrolytic capacitors for the external capacitors at the input or output of the product, and it is not recommended to use tantalum capacitors, otherwise there is a certain risk of failure.
- b. The product does not support output parallel power or hot-swappable use

输入电压	3.3V	5V	12V	15V	24V
C0	4.7μF	4.7μF	2.2μF	2.2μF	1μF

输出电压	3.3V	5V	12V	15V	24V
C1	10μF	10μF	4.7μF	2.2μF	1μF

LDM	6.8μH
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Safety precautions

1. If the product is not operated within the required load range, the product performance cannot be guaranteed to comply with all parameters in the datasheet;
2. Unless otherwise specified, parameters in this datasheet were measured under the conditions of $T_a=25^{\circ}\text{C}$, humidity<75% with nominal input voltage and rated output load;
3. All index testing methods in this datasheet are based on our Company's corporate standards;
4. We can provide product customization service, please contact our technicians directly for specific information;
5. For more product information, please visit our official website (www.gzny-boxing.com) or email us (sales@gzny-boxing.com).