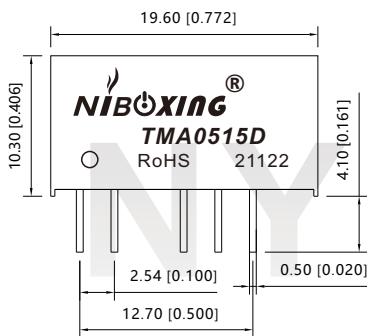
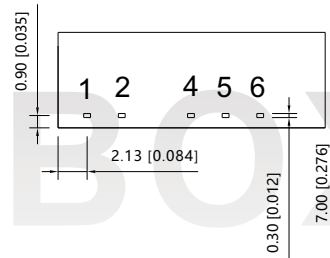


1W DC/DC Module power supply
DESCRIPTION


- ★ Small SIP package
- ★ Output short-circuit protection, self-healing
- ★ Isolation withstand voltage 1500VDC
- ★ High efficiency, high power density, low ripple noise
- ★ The no-load input current is as low as 8mA
- ★ Operating temperature range : -40~+85°C

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

Diagram of package dimensions

Front view

Bottom view

PIN	Pin function
1	+Vi
2	-Vi
4	-Vo
5	GND
6	+Vo

remark: Dimension units: mm[inch]
 Pin section tolerances: ±0.15[0.06]
 Other dimensional tolerances : ±0.3[0.012]

Product selection

Model	Rated input voltage (V)		Rated output voltage (V)	Rated output current (mA)	Typical efficiency (%)
	Nominal	range			
TMA0505D			±5V	±100mA	81%
TMA0509D			±9V	±56mA	82%
TMA0512D	5V	4.5~5.5V	±12V	±42mA	82%
TMA0515D			±15V	±33mA	83%
TMA0524D			±24V	±21mA	83%
TMA1205D			±5V	±100mA	82%
TMA1209D			±9V	±56mA	82%
TMA1212D	12V	10.8~13.2V	±12V	±42mA	83%
TMA1215D			±15V	±33mA	84%
TMA1224D			±24V	±21mA	80%
TMA1505D	15V	13.5~16.5V	±5V	±100mA	78%
TMA1509D			±9V	±56mA	79%

TMA1512D			±12V	±42mA	79%
TMA1515D	15V	13.5~16.5V	±15V	±33mA	79%
TMA1524D			±24V	±21mA	80%
TMA2405D			±5V	±100mA	83%
TMA2409D			±9V	±56mA	83%
TMA2412D	24V	21.6~26.4V	±12V	±42mA	85%
TMA2415D			±15V	±33mA	84%
TMA2424D			±24V	±21mA	82%

Output characteristic

project	going	Min	Typ	Max
output power		0.2W	--	1 W
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)	--	100mV	--
Output short circuit protection	Long-term short-circuit, self-recovery			
Temperature drift coefficient	Nominal voltage input, 100% load, -40°C ~ + 85°C	--	--	±0.03%/°C

* 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	--	1500VDC	--
working temperature		-40°C	--	+85°C
Storage temperature		-55°C		+125°C
Store humidity		--	--	95%RH
switching frequency		--	100KHz	--
MTBF	MIL-HDBK-217F, 25°C		3500,000h	
Module shell material	Black flame retardant heat resistant plastic (UL 94-V0)			

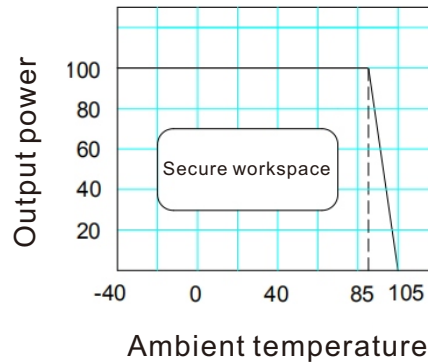
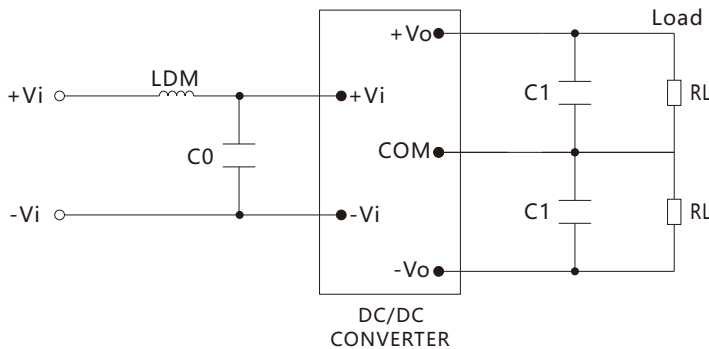
Product performance curves
Temperature graph

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

Input voltage	5V	12V	15V	24V
C0	4.7μF	2.2μF	2.2μF	1μF

Oteputt Voltagui	±5V	±9V	±12V	±15V	±24V
C1	4.7μF	2.2μF	1μF	0.47μF	0.47μF

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 Ta=25°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).