Product Feature

1. Ultra-wide voltage input range: 2:1
2. Operating temperature range: -40℃ ~ + 85℃
3. Isolation voltage of 1500VDC
4. Short-circuit protection (self-recovery)
5. Six-sided metal shielding, DIP packaging
6. Compliance with RoHS

Selection Guide

Model	Output Power(W)	Output Voltage Range	Output Voltage(V)	Output Current(mA)	Efficiency(TYP)
GTB2405LD-40WR3	40W	18-36 VDC	5	8000	88%
GTB2412LD-40WR3			12	3333	87%
GTB2415LD-40WR3			15	2667	88%
GTB4805LD-40WR3		36-72 VDC	5	8000	86%
GTB4812LD-40WR3			12	3333	88%
GTB4815LD-40WR3			15	2667	89%
GTB4824LD-40WR3			24	1667	90%
GTA2405LD-40WR3*		18-36 VDC	±5V	±4000	86%
GTA2412LD-40WR3*			±12V	±1667	87%
GTA2415LD-40WR3*			±15V	±1333	89%
GTA4805LD-40WR3*		36-72 VDC	±5V	±4000	86%
GTA4812LD-40WR3*			±12V	±1667	88%
GTA4815LD-40WR3*			±15V	±1333	89%

Note: * is an development product. If you need other specifications and models, you can contact us directly.

Input Specifications

Item	test condition	Min	Typ	Max	unit
Shut down the voltage	18-36VDC		16		VDC
	36-72VDC		32		
Input maximum voltage *	18-36VDC			50	
	36-72VDC			90	
Input filter	PI filter				
Starting time			20		mS

* The input voltage shall be within the specification range beyond this maximum and may cause damage or damage to the product.

Output Specifications

Item	test condition	Min	Typ	Max	unit
Output voltage accuracy	Input voltage range, 100% load (main circuit)		±1	±2	%
load regulation	Load from 10% to 100% (main road)		±0.5	±0.75	
voltage regulation	input voltage range		±0.2	±0.75	
Output short-circuit protection	Continuous, Self-Recovery				
Ripple & noise	20 MHz bandwidth, nominal voltage input, 100% load			100	mVp-p
switching frequency	Input voltage range, 100% load	120		350	KHz
temperature coefficient	Nominal voltage input, 100% load, -40℃ to + 55℃			±0.03	%/℃

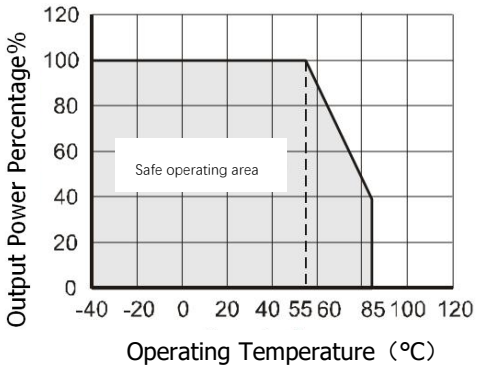
General Specifications

Item	test condition	Min	Typ	Max	unit
Storage humidity				95	%
Working temperature	Comply with the product's safe workspace	-40		85	℃
Storage temperature		-50		125	
Case heating	Nominal voltage input, 100% load		15		
Pin resistant to welding temperature	The solder joint is 1.5mm from the shell edge in 10 seconds			300	
insulation strength	The test time was 1 minute, and the leakage current was less than 0.5mA	1500			VDC
insulation resistance	Insulation voltage of 500VDC	1000			MΩ
MTBF	MIL-HDBK-217F@25℃	>1000			Kh

Mechanical Specifications

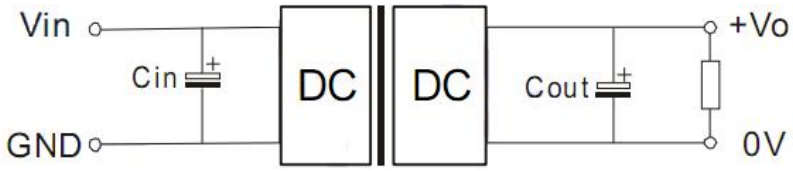
Case Material	Aluminum alloy
Dimensions	50.8*25.4*11.8
Weight	25.0g
Cooling Method	Free air convection

Typical Characteristic Curves



Typical Circuit Design And Application

Single



Dual

Attention in Operation：

1.**Input Power Requirements**

The input terminal of the product must be connected to a low impedance voltage source. If the impedance of the voltage source is too high or the connection line between the voltage source and the input terminal of the product is too long, the product will be unstable. Connecting a low ESR capacitor to the input terminal of the product (as close as possible to the input pin of product) can effectively solve this problem. For example, a 24V input product can be connected to a 22μF capacitor.

2. **Reduce Output Ripple**

If requirement need to further reduce the output ripple, a suitable filter capacitor or an "LC" filter network can be parallel connected to output end. But it should be noted that the external capacitance of the output terminal cannot be too large, otherwise it may cause startup problems,so please refer to the product's maximum output capacitive loading requirements for details. The bandwidth of the "LC" filter network should be faraway from the working frequency range of the product. In general, a low ESR filter capacitor can be connected to the output end to meet the requirement which is usually Co=100uF.

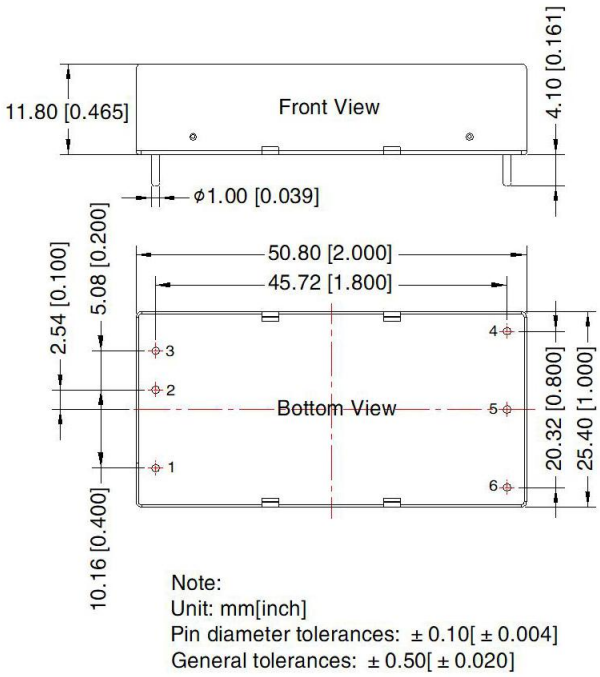
3. **Input Current**

When input power voltage is unstable, please ensure that its output voltage fluctuation range meets the input requirements of the product; the output current of the input power supply must be sufficient to bear the product's instantaneous starting current Ip, generally: Ip =2-4*Iin-max.

4.**This product cannot be used in parallel or hot-plugging.**

Dimensions and Recommended Layout

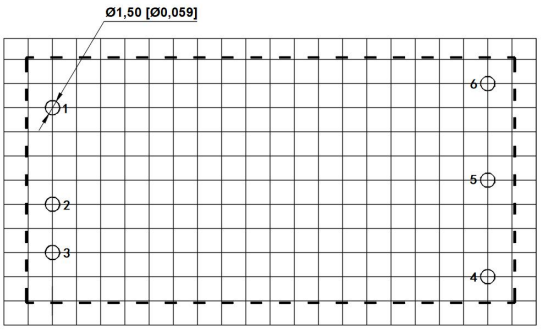
Dimensions



Note:
Unit: mm[inch]
Pin diameter tolerances: ± 0.10[± 0.004]
General tolerances: ± 0.50[± 0.020]

Note:
Unit: mm[inch]
Pin section tolerances:±0.10[±0.004]
General tolerances:±0.50[±0.020]

PCB Printing Layout & Pin Definition Table



Note：The grid distance is 2.54*2.54mm

Pin function table		
Pin	**Single**	**Dual**
1	GND	GND
2	Vin	Vin
3	+Vo	+Vo
4	No Pin	0V
5	0V	-Vo

Note:

1. If the product works under the minimum required load, it cannot guarantee that the performance of the product complies with all the performance indicators in this manual;
2. The maximum capacitive load is tested under the input voltage range and full load condition;
3. Unless otherwise stated, all indexes in this manual are measured at Ta=25℃, humidity <75%RH, nominal input voltage and rated output load;
4. All index testing methods in this manual are based on the enterprise standards of the company;
5. Our company can provide product customization, specific needs can directly contact our technical staff;