Product Feature
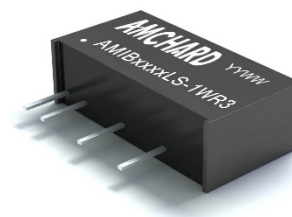
1. Package Type：SIP6
2. Operating temperature range：-40℃ - +85℃
3. Isolation voltage：1500VDC
4. High efficiency up to：82%,
5. Compliant with standard： International standard pin method
6. Fields of application： power, industrial control, etc

RoHS CE 3 years Warranty

Selection Guide

Product model	Input Voltage(VDC)	Output (VDC)		Full Load Efficiency(%)	Capacitive Load
	Nominal (Range)	Voltage (VDC)	Current (m A) Max./Min.	Min./Typ.	(μF)
AMIB0503LS-1WR3	5VDC (4.75-5.25)	3.3	250/25	63/67	2400
AMIB0505LS-1WR3		5	200/20	66/70	2400
AMIB0509LS-1WR3		9	2011/11	67/71	1000
AMIB0512LS-1WR3		12	83/8	68/72	560
AMIB0515LS-1WR3		15	67/6	69/73	560
AMIB0524LS-1WR3		24	42/4	69/73	100
AMIB0909LS-1WR3	9 (8.55-9.45)	9	111/0	68/72	1000
AMIB1203LS-1WR3	12VDC (11.4-12.6)	3.3	250/25	63/67	2400
AMIB1205LS-1WR3		5	200/20	69/73	2400
AMIB1209LS-1WR3		9	2011/11	69/73	1000
AMIB1212LS-1WR3		12	83/8	69/73	560
AMIB1215LS-1WR3		15	67/6	71/75	560
AMIB1503LS-1WR3	15VDC (14.25-15.75)	5	200/20	69/73	2400
AMIB1515LS-1WR3		15	67/6	71/75	560
AMIB2403LS-1WR3	24VDC (22.8-25.2)	3.3	250/25	65/71	2400
AMIB2405LS-1WR3		5	200/20	67/73	2400
AMIB2409LS-1WR3		9	2011/11	67/73	1000
AMIB2412LS-1WR3		12	83/8	67/73	560
AMIB2415LS-1WR3		15	67/6	67/73	560

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Current(full load/no load)	5VDC Input	--	286/15	305/--	mA
	9VDC Input	--	153/12	170/--	
	12VDC Input	--	115/8	121/--	
	24VDC Input	--	59/4	65/--	
Reflected Ripple Current		--	15	--	
Input Filter	Capacitance Filter				
Hot Plug	Unavailable				

Output Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Output Voltage Accuracy			--	--	±3	%
Linear Regulation Rate	Input Voltage Variation ±1%		--	--	±0.25	
Load Regulation Rate	10% - 100% load	3.3VDC output	--	--	±3	%
		Others output	--	--	±2	
Ripple & Noise	20MHz Bandwidth(peak-peak)	24VDC output	--	50	120	mV
		Others output		30	80	
Temperature Drift Coefficient	100% load		--	±0.02	--	%/°C
Short-Circuit Protection			Continuous, Self-Recovery			

General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Insulation Voltage	Input-output, test time 1 minute, leakage current less than 1mA	1500	--	--	VDC
Insulation Resistance	Input-output, insulated voltage 500VDC	1000	--	--	MΩ
Isolation Capacitance	Input-output, 100KHz/0.1V	--	20	--	pF
Operating Temperature	Derating when operating temperature≥85°C (See Figure 2)	-40	--	85	°C
Storage Temperature		-55	--	125	°C
Case Temperature Rise	Ta=25°C, nominal input, output load	--	25	--	°C
Storage Humidity	Non-condensing	--	--	95	%RH
Pin welding can withstand the highest temperature	Non-condensing	--	--	300	°C
Switching Frequency	Full Load, Nominal Input Voltage	--	220	--	KHz
MTBF	MIL-HDBK-217F@25°C	>3500Kh			

Mechanical Specification

Case Material	Black plastic; flame-retardant and heat-resistant（UL94V-0 rated）
Package Dimensions	19.60 x 6.00 x 10.16 mm
Weight	2.1g(Typ.)
Cooling Method	Free air convection

EMC Specifications

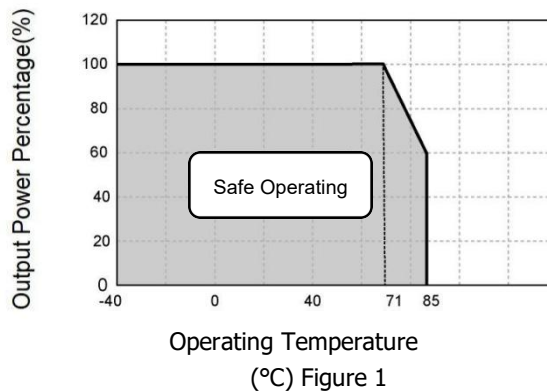| EMI	CE	CISPR32/EN55032 CLASS B（The recommended circuit is shown in Figure 3）
	RE	CISPR32/EN55032 CLASS B（The recommended circuit is shown in Figure 3）
EMS	ESD	IEC/EN61000-4-2 Contact ±6KV Air ±8KV perf. Criteria B

Typical Characteristic Curves

Efficiency VS Input Voltage Curve(full load)	Efficiency VS Output Load（Vin=5V）

Efficiency Vs Input Voltage (Full Load)

AMIB0505LS-1WR3

Efficiency Vs Output Load (Vin=5V)

AMIB0505LS-1WR3

Temperature Derating Curve

Safe Operating
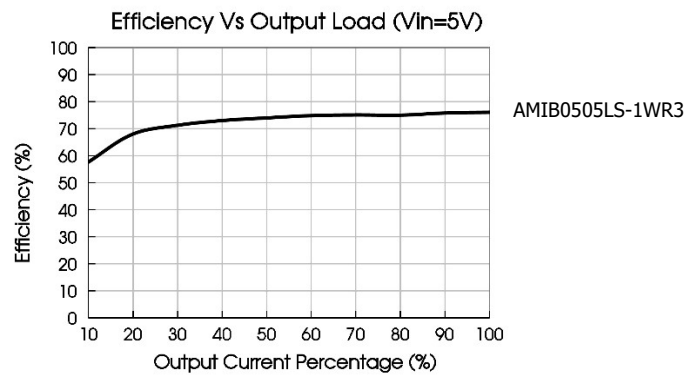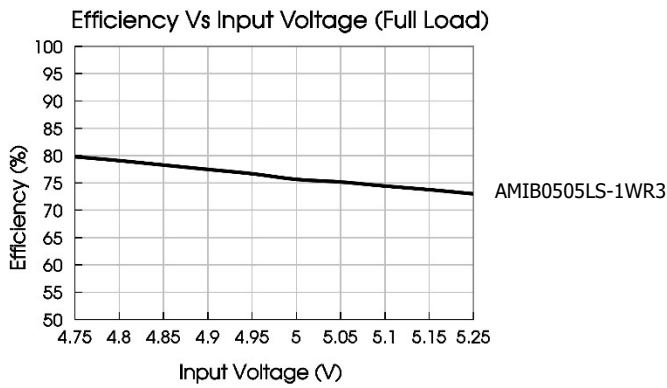
Operating Temperature
(°C) Figure 1

Typical Circuit Design and Application

Application circuit（Figure 2）	Recommended Capacitive Load Value Table			
	Vin(VDC)	Cin(µF)	Vo(VDC)	Cout(µF)
	5VDC	4.7uF16V	3.3/15	10
	12/15VDC	2.2	9/12	2.2
	24VDC	1.0	15/24	1.0

Application circuit（Figure 3）	EMI Recommended Parameter Table			
	Output Voltage（VDC）		5/9/12/15	24
	Input Voltage 5VDC	EMI	C1/C2	4.7µF /50V
			CY	--	1nF/2KV
			C3	Refer to the Cout parameter in Figure2
			LDM	6.8µH

1. Typical applications

To further reduce input and output ripple, a capacitor filtering network can be connected at the input and output terminals.The application circuit is shown in Figure 2.However, care should be taken to select a suitable filter capacitor. If the capacitance is too large, it is likely to cause start-up problems. For each output, the recommended capacitive load values are shown in "Recommended Capacitive Load Value Table" for safe and reliable operation.

2. EMC typical recommended circuit

See Figure 3

3. Output load requirements

In order to ensure that the module can work efficiently and reliably, the minimum output load should not be less than 10% of the rated load when used. If the power required is really small, connect a resistor in parallel to the output end (the sum of the power consumed by the resistance and the power actually used is greater than or equal to 10% of the rated power).

Dimensions and Recommended Layout
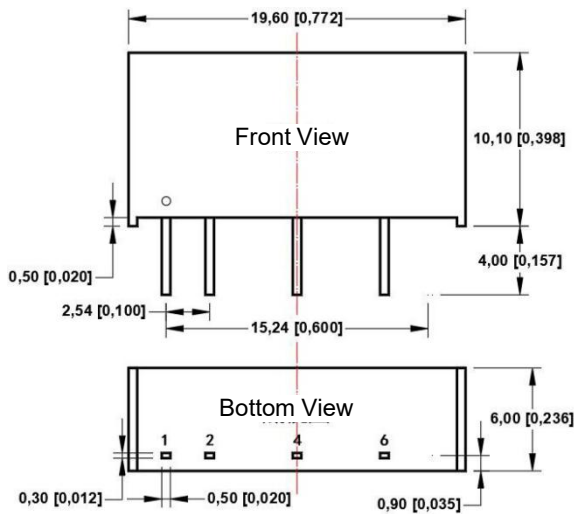
Dimensions	PCB Printing Layout & Pin Definition Table

Front View

Bottom View
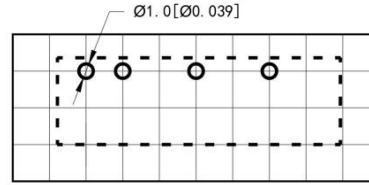
Note: The grid distance is 2.54*2.54 mm

Note:

  Unit：mm[inch]

  Pin section tolerances：±0.10[±0.004]

  General tolerances：±0.50[±0.020]

Pin Definition Table	
Pin	Function
1	Vin
2	GND
4	-Vo
6	+Vo

Note：

1. The input voltage should not exceed the specified range value, otherwise it may cause permanent and irreparable damage;
2. It is recommended to use at a load of over 5%. If the load is below 5%, the ripple index of the product may exceed the specifications, but it does not affect the reliability of the product;
3. The maximum capacitive load is tested within the input voltage range and under full load conditions;
4. Unless otherwise specified, all indicators in this manual are measured at Ta=25 ℃, humidity<75% RH, nominal input voltage, and output rated load;
5. All indicator testing methods in this manual are based on our company's corporate standards;
6. Our company can provide product customization, and specific requirements can be directly contacted by our technical personnel;
7. Product specifications are subject to change without prior notice.