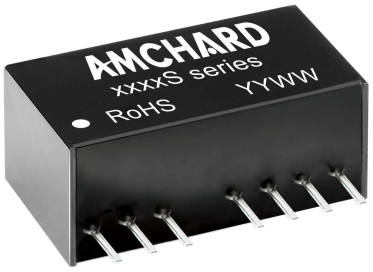
Product Feature



1. Universal Input: 8:1
2. Package Type: SIP8
3. Operating temperature range: -40℃ - +85℃
4. Isolation voltage: 3000VDC
5. High efficiency up to: 79% (Type)
6. Equipped with input undervoltage protection, output short circuit protection, and overcurrent protection mechanisms

RoHS CE 3 years Warranty

Selection Guide

Part No.	Input Voltage (VDC)	Max value	Out Voltage (VDC)	Out Current (mA) MAX	Full Load Efficiency % (Typ.)	Capacitive Load(μF) Max.
ABF1205S-3WR3	12 (4.5-36)	40	5	600	77	1000
ABF1212S-3WR3	12 (4.5-36)	40	12	250	79	330
ABF1215S-3WR3	12 (4.5-36)	40	15	200	79	220
ABE1205S-3WR3	12 (4.5-36)	40	±5	±300	77	#470
ABE1212S-3WR3	12 (4.5-36)	40	±12	±125	79	#220
ABE1215S-3WR3	12 (4.5-36)	40	±15	±100	79	#100

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Current(full load/no load)	12VDC Input	--	306/60	--	mA
Reflected Ripple Current	12VDC Input	--	15	--	
Impulse Voltage	12VDC Input	-0.7	--	25	VDC
Starting Voltage	12VDC Input	3	4	4.5	
Undervoltage Protection	12VDC Input	--	--	4	
Input Filter		Capacitance Filter			
Hot Plug		Unavailable			

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy	0% - 100% Load	--	±1.0	--	%
Linear Regulation	Full load, Input voltage from low limit to high limit	--	±0.3	±0.5	
Load Regulation	10% - 100% Load	--	±0.5	±1.0	
Ripple & Noise	20MHZ Bandwidth	--	50	150	mV
Transient Recovery Time	25% load step change	--	300	500	ms
Transient Response Deviation	25% load step change	--	±3	±5	%

Temperature Coefficient	Full Load	--	±0.01	±0.02	%/°C
Over Current Protection		110	140	--	%
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	3000	--	--	VDC
Insulation Resistance	Input-output, insulated voltage 500VDC	1000	--	--	MΩ
Isolation Capacitance	Input-output, 100KHz/0.1V	--	40	--	pF
Operating Temperature	Derating when operating temperature≥85°C (See Figure 1)	-40	--	85	°C
Storage Temperature		-55	--	125	°C
Storage Humidity	Non-condensing	5	--	95	%RH
Pin welding can withstand the highest temperature	Soldering spot is 1.5mm away from case for 10 seconds	--	--	300	°C
Switching Frequency	Full Load, Nominal Input Voltage	--	300	--	KHz
MTBF	MIL-HDBK-217F@25°C	>1000Kh			

Mechanical Specification

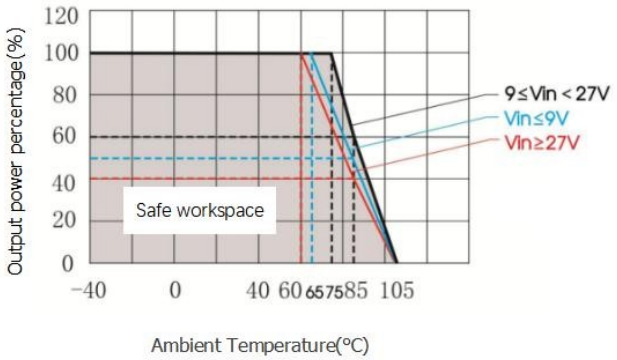
Case Material	Black plastic; flame-retardant and heat-resistant（UL 94V-0 rated）
Package Dimensions	22.00 x 9.50 x 12.00mm
Weight	3.8g（Typ.）
Cooling Method	Free air convection

EMC Specifications

EMI	CE	CISPR32/EN55032 CLASS B （Application circuit 3）
	RE	CISPR32/EN55032 CLASS B （Application circuit 3）
EMS	ESD	IEC/EN61000-4-2 Contact±8KV perf. Criteria B

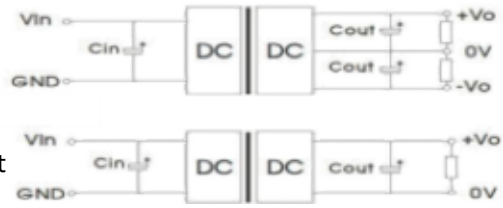
Typical Characteristic Curves

Temperature Derating Curve（ Figure 1）

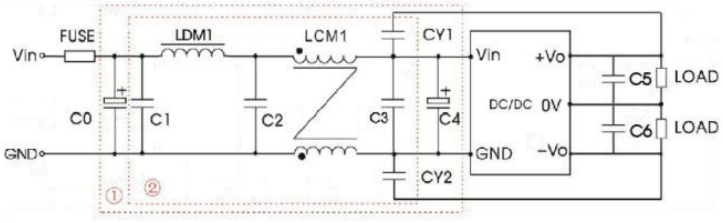


Typical Circuit Design and Application

Application circuit（Figure 2）	Recommended Capacitive Load Value Table	
Dual output / Single output	Vin	12V
	Cin	100uF
	Cout	22uF

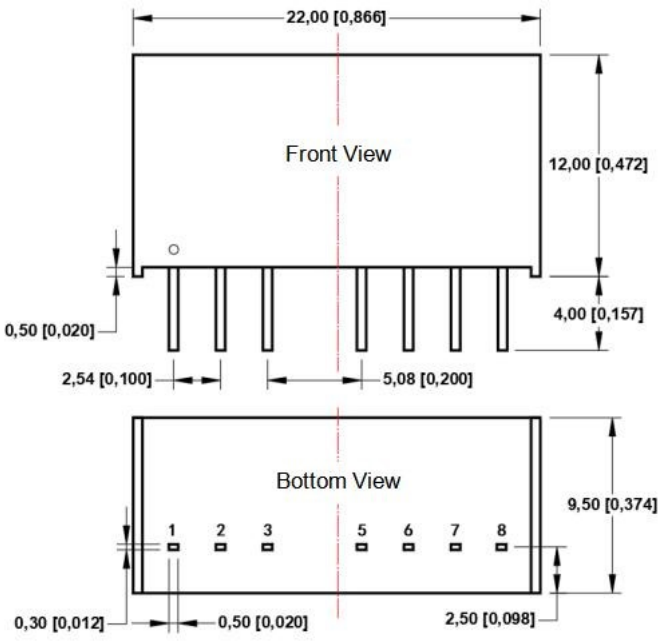


Application circuit（Figure 3）	EMI Recommended Parameter Table	
	Model	Vin： 12V
	FUSE	Select according to the actual input current of the customer
	C0	1000uF/50V
	C4	330uF/50V
	C1/C2/C3	10uF/50V
	LCM1	3.3mH
	LDM1	4.7uH
	CY1/CY2	1nF/3KV
	C5/C6	Refer to the Cout parameters in Figure 2



Dimensions and Recommended Layout

Dimensions



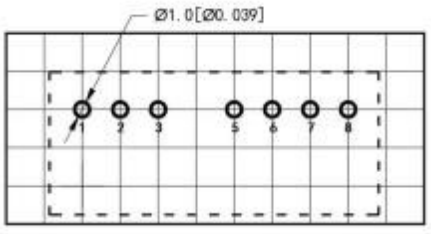
Note:

Unit: mm[inch]

Pin section tolerances:±0.10[±0.004]

General tolerances:±0.50[±0.020]

PCB Printing Layout



The grid distance is 2.54mm x2.54mm

Pin Definition Table		
Pin	Function (single)	Function (double)
1	GND	GND
2	Vin	Vin
3	NC	NC
5	NC	NC
6	+Vo	+Vo
7	-Vo	COM
8	NC	-Vo
NC：Pin to be isolated from circuity		

Note:

1. The input voltage cannot exceed the specified range value, otherwise permanent and irreparable damage may be caused ;
2. 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;
3. The maximum capacitive load is tested under the input voltage range and full load condition;
4. Unless otherwise stated, all indexes in this manual are measured at Ta=25℃, humidity <75%RH, nominal input voltage and rated output load;
5. All index testing methods in this manual are based on the enterprise standards of the company;
6. Our company can provide product customization, specific needs can directly contact our technical staff;