

5W, AC-DC Converter

SWAC0512W

FEATURES:

- Small sizeDIP package
- Wide voltage input :AC85-265V
- Operating temperature range: -20C~+85C
- Good temperature characteristics
- Internal chip design
- International standard pin mode
- No additional element
- Comply with RoHS directive

COMMON APPLICATIONS:

The SWAC0512W series is specifically designed for power applications where a distributed power supply system on a circuit board requires a wide voltage input power supply. The product is suitable for:

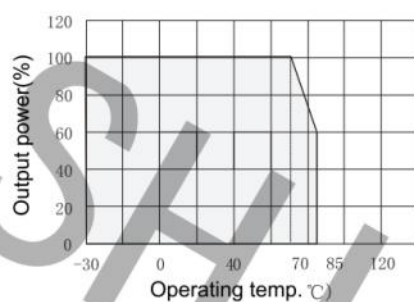
- 1) Voltage change of input power supply AC85-265V;
- 2) High requirements for output voltage stability and output ripple noise.

Product									
Part No.	Input voltage (VAC)		Output voltage (VAC)	Output current (A)		Input current (mA)(Typ.)		Efficiency @ Full load	
	Nom.	Range		Max.	Min.	AC220	AC100	AC220	AC100
SWAC0512W	100	90-110	12.0±0.12	0.425	0%	0	0	0	0
	220	200-240							
					50%			>82.1	>80.5
					100%	<61	<115	>83.5	>82.7
						AC280		AC280	
					100%	<52		>81.5	

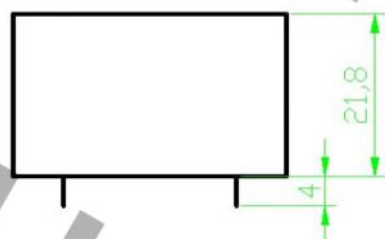
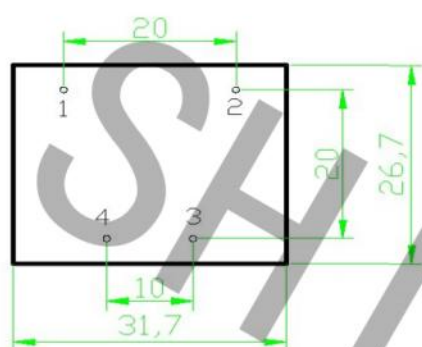
Product characteristic

item	Working condition	Min.	Typ.	Max.	Unit
Linear regulation	Input voltage variation $\pm 5\%$	--	--	± 0.5	%
Load regulation ratio	10% ~ 100% Load	--	± 0.5	± 1	
Output voltage accuracy	100% Load	--	± 1	± 2	
Temperature drift coefficient	100% Load	--	--	0.03	%/°C
Output ripple	20MHz bandwidth	--	75	100	mVp-p
Output noise	20MHz bandwidth		75	100	
Storage Hum.		--	--	80	%
Operating temperature		-25	--	85	°C
Storage temperature		-45	--	125	
Temperature rise of case	Ta=25°C	--	40	60	
Welding temperature		--	--	300	
Cooling	Breeze of nature	Air cooling			
Case		-----			
Short circuit protection		Sustainable, self-healing			
Switching frequency	100% Load ,Rated input voltage	--	100	300	KHz
Mean time without failure	MIL-HDBK-217F@25°C	3500	--	--	K hours
Weight		--	---	--	g

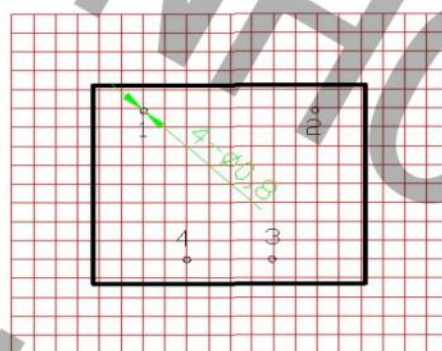
Temperature curve



Size



2.54*2.54mm



Lead pins	
No	Definition
1	AC1
2	AC2
3	+V _o
4	-V _o

Unit: mm

Tolerance +/-0.5 not indicated

Note 1

1. Output load requirements

In order to ensure that the module can work efficiently and reliably, the minimum output load cannot be less than 10% of the rated load when used. If the power you require is really small, please parallel a resistor at the output, and the recommended resistance is equivalent to 10% of the rated power.

2. Recommended test and application circuits

If it is required to further reduce the input and output ripple, an "LC" filter network can be connected at the input and output terminals, as shown in the application circuit (Figure 1).



Figure 1

3. Overload protection

Under normal working conditions, the output circuit of the product has no protection against overload. The easiest way to do this is to connect the input in series - a self-restoring fuse, or add a circuit breaker to the circuit.

4. Input overvoltage protection circuit

The simplest device for input overvoltage protection is a linear regulator with overheat protection in series at its input end (see Figure 2).



Figure 2

5. When the ambient temperature is higher than 71°C, this series of products should be derated to 60% of the rated output power.

6. The product does not support parallel power output or hot swap

Note 2

1. If the product works below the minimum required load, it cannot be guaranteed that the performance of the product meets all performance indicators in this manual;
2. The maximum capacitive load is tested in the input voltage range and under full load conditions;
3. Unless otherwise specified, all data in this paper are in Ta=25°C, humidity < 75%, measured when input nominal voltage and output rated load;
4. All index test methods in this paper are based on the company's enterprise standards;
5. The above are the performance indicators of the product models listed in this manual, some indicators of non-standard products will exceed the above requirements, the specific situation can directly contact our technical personnel;
6. We can provide product customization;
7. Product specifications are subject to change without notice.