

## SAB series 10Watt

### FEATURES:

- ✓ Global voltage input (85-305Vac,50/60Hz)
- ✓ Dc input (100-430Vdc)
- ✓ Low ripple noise
- ✓ Standby power consumption  $\leq 30\text{mW}$
- ✓ Multiple protection
- ✓ 100% burn-in test
- ✓ 3 year warranty



Model	Input voltage (Vac)	Output voltage (Vdc)	Output current (A)	Efficiency Typ.
SAB10-S05R3	85-305Vac	5V	2	76%
SAB10-S12R3	85-305Vac	12V	0.83	78%
SAB10-S15R3	85-305Vac	15V	0.66	82%
SAB10-S24R3	85-305Vac	24V	0.42	83%

Note: other input and output models may available on request;

## ELECTRICAL

### Input

Parameters	Test Conditions / Comment	Min.	Typ.	Max.	Units
Input voltage	---	85	--	305	Vac
		100	--	430	Vdc
Input frequency	---	47	--	63	Hz
Input current	Vin=115Vac	--	300	--	mA
	Vin=230Vac	--	130	--	mA
Inrush current	Cold start, Vin=230Vac	--	--	40	A
Leakage current	230Vac/50Hz	--	--	1	mA

### Output

Parameters	Test Conditions / Comment	Min.	Typ.	Max.	Units
Output voltage accuracy	--	--	--	$\pm 3$	%
Line regulation	--	--	$\pm 1.0$	--	%
Load regulation	--	--	$\pm 1.0$	--	%
Set-up rise time	Full load, Vin =230Vac	--	1500	--	ms
Hold-up time	Full load, Vin =230Vac	--	50	--	ms
Ripple	---	--	50	--	mV P-P

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ELECTRICAL						
<b>Protection</b>						
<b>Parameters</b>	<b>Test Conditions / Comment</b>					
Over current	≥ 110% load, can self recover after troubleshooting					
Over voltage	Output shutdown	5Vdc ≤7.5Vdc	12Vdc ≤16Vdc	15Vdc ≤20Vdc	24Vdc ≤30Vdc	
Short circuit	Hiccup mode, it will auto-recovery after fault condition is removed					
<b>Environment</b>						
<b>Parameters</b>	<b>Test Conditions / Comment</b>	<b>Min.</b>	<b>Typ.</b>	<b>Max.</b>	<b>Units</b>	
Storage	Humidity: 10% RH to 95% RH	-40	--	+85	°C	
Ambient operating temperature		-40	--	+85	°C	
Operating relative humidity	Non condensing	--	--	85	%	
<b>Other</b>						
<b>Parameters</b>	<b>Test Conditions / Comment</b>					
MTBF	300K hrs min. MIL-HDBK-217F(25 °C)					
Temperature coefficient	0.03%/ (0~ 50°C)					
Vibration coefficient	10~500Hz, 2G10min./1cycle, 60min.each along X, Y, Z axes					
Dimension(LxWxH)	32*20*15mmm(L*W*H)					
<b>Safety</b>						
<b>Parameters</b>	<b>Test Conditions / Comment</b>					
Safety standards	EN62368,IEC62368,UL62368					
Isolation voltage	I/P-O/P:3000VAC/60S					
Insulation Resistance	I/P-O/P>100M Ohms/500VDC 25°C 70% RH					
EMI / EMC	EN55011,EN55032(CISPR32)Class B (refer to below application circuit)					
ESD	IEC/EN 61000-4-2 level 4 Contact ±8kV/Air ±15kV(refer to below application circuit)					
RF Immunity	IEC/EN 61000-4-3 level 4 (refer to below application circuit)					
Electrical Fast Transient	IEC/EN 61000-4-4 level 4 (refer to below application circuit)					
Surge	IEC/EN 61000-4-5 level 4 2kV (refer to below application circuit)					
harmonic current	EN61000-3-2					

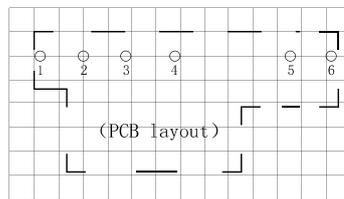
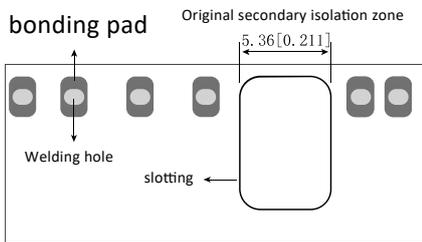
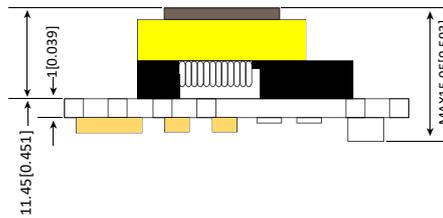
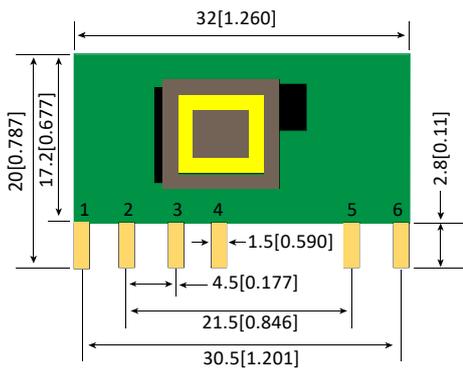
1. Unless otherwise specified, the above data were measured at TA=25oC, humidity<75%, input nominal voltage 230VAC, and output rated load.
2. Ripple and noise measurement method: parallel line testing method is used, and a 0.1uF high-frequency ceramic capacitor and a 47uF electrolytic capacitor are connected in parallel at the terminal in the 20MHz band Measure under the width and connect according to the "typical application diagram", and measure under the same component parameters as in the table.
- 3.The power supply is considered a component within the system and needs to be confirmed for electromagnetic compatibility in conjunction with the terminal equipment.
- 4.This series of overvoltage protection uses TVS tubes added to the periphery to protect the downstream circuit in case of module abnormalities.
- 5.This model is a bare board type, and in order to meet safety requirements, a safety distance of at least 6.4mm needs to be maintained between the primary and secondary peripheral components of the module

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6. In order to improve the conversion efficiency of light loads, when the module load is less than 30% of the rated load, there may be slight audio noise in the module, but it does not affect the performance and usability of the product Relying on sex.

7. After module assembly, it needs to be fixed with glue.

### DIMENSION

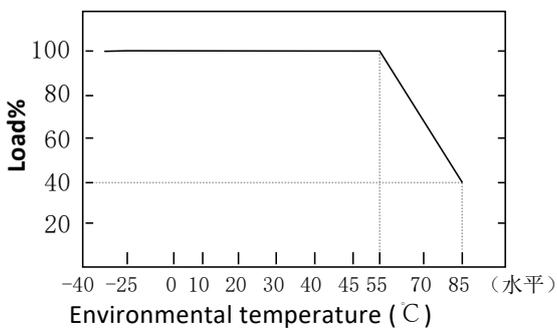


Note: Grille size 2.54 \* 2.54mm

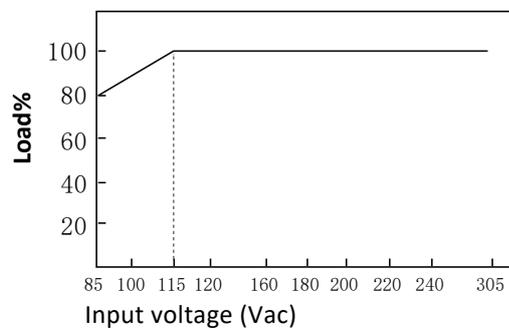
PIN #	define
1	AC(L)
2	AC(N)
3	+V(Cap)
4	-V(Cap)
5	-Vo
6	+Vo

### DERATING CURVE CHART

Temperature Derating Curve



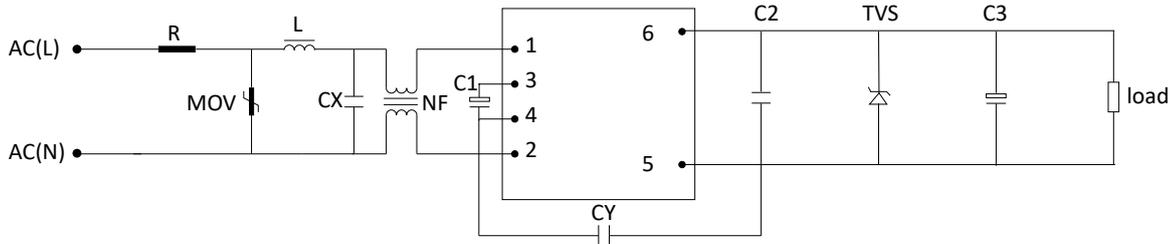
Input voltage derating curve



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NOTE

RECOMMENDED TEST AND APPLICATION CIRCUIT



1. C2 is a ceramic capacitor, used for filtering high frequency noise. C3 is the high frequency and low ESR electrolytic capacitor. A suppressor diode (TVS) is recommended to protect the application in case of the converter failure.
2. In general applications, the common mode choke NF in the dotted lines box do not have to be used, the common mode choke L=30mH, this inductance needs to be added when higher EMC requirements need to be met.
3. If you need any technical support, please contact us.

EMC RECOMMENDED APPLICATION CIRCUIT

	5VDC	12VDC	15VDC	24VDC
R		10Ω/1W		
MOV		10D561K		
L		1mH		
C1		22uF/450V		
C2		104K/50V		
CX		104K/275Vac		
CY		1nF/400Vac		
C3	2200uF/16V	1000uF/16V	1000uF/25V	680uF/35V
TVS	P6KE7.5A	P6KE16A	P6KE20A	P6KE30A