

SAB series 5Watt

FEATURES:

- ✓ Global voltage input (85-305Vac,50/60Hz)
- ✓ Dc input (100-430Vdc)
- ✓ Low ripple noise
- ✓ Multiple protection
- ✓ 100% burn-in test
- ✓ 3 year warranty



Model	Input voltage (Vac)	Output voltage (Vdc)	Output current (A)	Efficiency Typ.
SAB10-S03R3	85-305Vac	3.3V	1	72%
SAB10-S05R3	85-305Vac	5V	0.8	72%
SAB10-S12R3	85-305Vac	12V	0.42	78%
SAB10-S12V5R3	85-305Vac	12.5V	0.4	78%
SAB10-S15R3	85-305Vac	15V	0.33	78%
SAB10-S24R3	85-305Vac	24V	0.21	80%

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	--	120	--	mA
	Vin=230Vac	--	70	--	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	--	--	--	±5	%
Line regulation	--	--	±1.5	--	%
Load regulation	--	--	±3.0	--	%
Set-up rise time	Full load, Vin =230Vac	--	1000	--	ms
Hold-up time	Full load, Vin =230Vac	--	50	--	ms
Ripple	---	--	100	--	mV P-P

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ELECTRICAL							
Protection							
Parameters		Test Conditions / Comment					
Over current		≥ 110% load, can self recover after troubleshooting					
Over voltage		Output shutdown	3.3/5Vdc	12Vdc	15Vdc	24Vdc	
			≤7.5Vdc	≤16Vdc	≤20Vdc	≤30Vdc	
Environment							
Parameters		Test Conditions / Comment		Min.	Typ.	Max.	Units
Storage		Humidity: 10% RH to 95% RH		-40	--	+85	℃
Ambient operating temperature				-40	--	+85	℃
Operating relative humidity		Non condensing		--	--	85	%
Other							
Parameters		Test Conditions / Comment					
MTBF		300K hrs min. MIL-HDBK-217F(25℃)					
Temperature coefficient		0.03%/ (0~ 50℃)					
Vibration coefficient		10~500Hz, 2G10min./1cycle, 60min.each along X, Y, Z axes					
Dimension(LxWxH)		26.5*13.5*11.5mm(L*W*H)					
weight		8g					
Safety							
Parameters		Test Conditions / Comment					
Safety standards		EN62368,IEC62368,UL62368					
Isolation voltage		I/P-O/P:3000VAC/60S					
Insulation Resistance		I/P-O/P>100M Ohms/500VDC 25℃ 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					

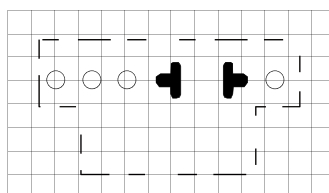
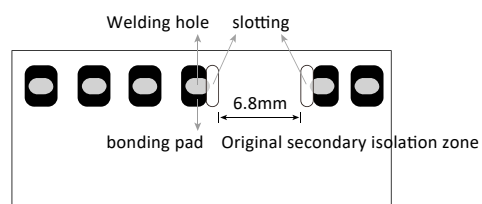
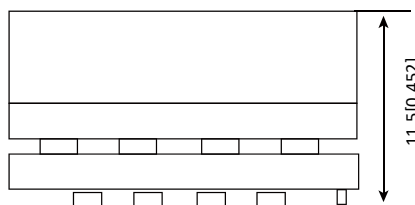
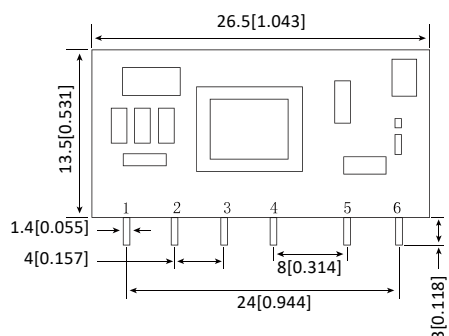
1. Unless otherwise specified, the above data were measured at TA=25oC, humidity<75%, input nominal voltage 230VAC, and output rated load.
2. Ripple and noise measurement method: parallel line testing method is used, and a 0.1uF high-frequency ceramic capacitor and a 47uF electrolytic capacitor are connected 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

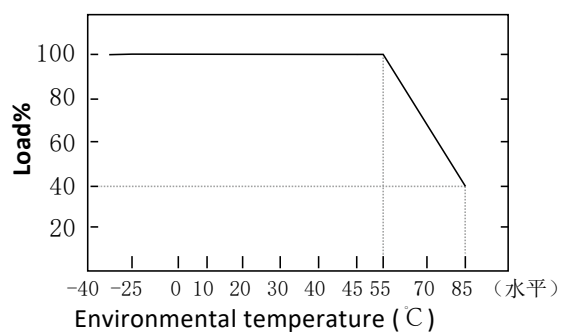


Note: Grille size 2.54 * 2.54mm

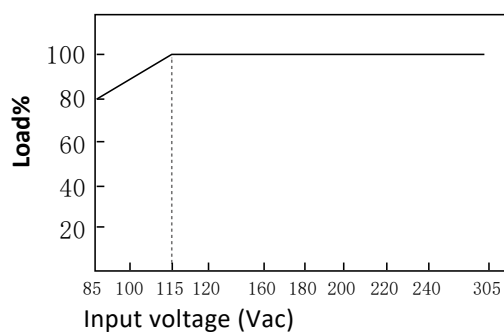
PIN #	define
1	AC(L)
2	AC(N)
3	+V(Cap)
4	-V(Cap)
5	-Vo
6	+Vo

DERATING CURVE CHART

Temperature Derating Curve



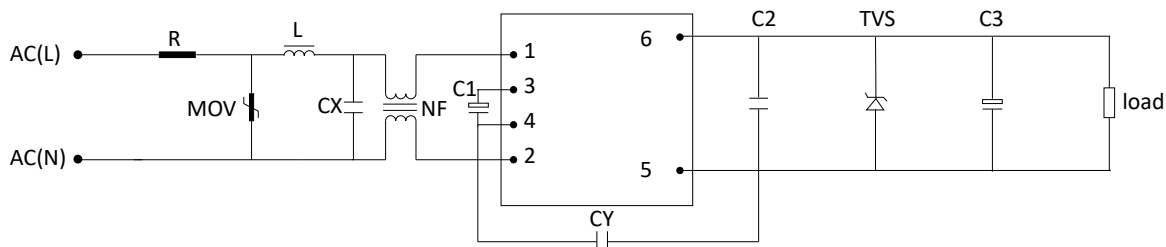
Input voltage derating curve



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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

	3.3VDC	5VDC	12VDC	12.5VDC	15VDC	24VDC
R			10Ω/1W			
MOV			10D561K			
L			1mH			
C1			10uF/450V			
C2			104K/50V			
CX			104K/275Vac			
CY			1nF/400Vac			
C3	1000uF/16V	1000uF/16V	470uF/16V	470uF/16V	470uF/25V	220uF/35V
TVS	P6KE7.5A	P6KE7.5A	P6KE16A	P6KE16A	P6KE20A	P6KE30A