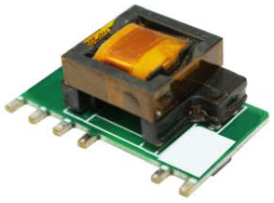
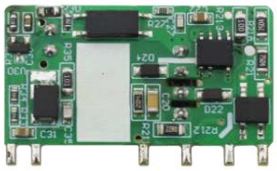
SAW series 10Watt

FEATURES:

- ✓ **Global voltage input (85-528Vac,50/60Hz)**
- ✓ **Dc input (100-745Vdc)**
- ✓ **Low standby power consumption ≤0.05W**
- ✓ **Protection type: Short circuit/overload**
- ✓ **4kV isolated voltage withstand**
- ✓ **100% burn-in test**
- ✓ **3 year warranty**





Model	Input voltage (Vac)	Output voltage (Vdc)	Output current (A)	Efficiency Typ.
SAW10-5	**85-528Vac**	**5V**	**2**	**74%**
SAW10-12	**85-528Vac**	**12V**	**0.83**	**79%**
SAW10-15	**85-528Vac**	**15V**	**0.66**	**79%**
SAW10-24	**85-528Vac**	**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	---	85 100	--	528 745	Vac Vdc
Input frequency	---	47	--	63	Hz
Input current	Vin=115Vac Vin=380Vac	--	300 100	--	mA mA
Inrush current	Cold start, Vin=380Vac Cold start, Vin=115Vac	-- --	40 20	-- --	A A
Leakage current	230Vac/50Hz	--	--	1	mA

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ELECTRICAL

Parameters	Test Conditions / Comment	Min.	Typ.	Max.	Units
Output					
Output voltage accuracy	--	--	--	±2	%
Line regulation	--	--	±1.0	--	%
Load regulation	--	--	±1.5	--	%
Set-up rise time	Full load, Vin =115Vac Full load, Vin =230Vac	--	--	1000 500	ms ms
Hold-up time	Full load, Vin =115Vac Full load, Vin =230Vac	--	30 50	--	ms ms
Ripple	---	--	50	--	mV P-P
Protection					
Overload protection	≥110% load, self-recovery after troubleshooting				
Short circuit protection	Burp type, self-recovery after the fault is removed				
Environment					
Storage	Humidity: 10% RH to 95% RH	-40	--	+85	℃
Ambient operating temperature		-40	--	+85	℃
Operating relative humidity	Non condensing	--	--	85	%
MTBF	Full load, 230Vac input, 25℃ ambient temperature	300	--	--	kHrs
Temperature coefficient	0.03%/ (0~ 50℃)				
Vibration coefficient	10~500Hz, 2G10min./1cycle, 60min.each along X, Y, Z axes				
Dimension(LxWxH)	38*20*11.5mmm(L*W*H)				

1.This part is open frame, at least 6.4mm creepage distance between the primary and secondary external components of the module is needed to meet the safety requirement.

2.Unless otherwise specified, parameters in this datasheet were measured under the condition ofTA=25℃, humidity＜75%, normal input voltage(115Vac and 230Vac) and rated output load.

3.In order to improve the light-loaded conversion efficiency, the module may have weak audio-frequency noise when the module load is less than 30% of the rated load, but it does not affect the performance and reliability of the product.

4.Modules needs to be glued and fixed after installation.

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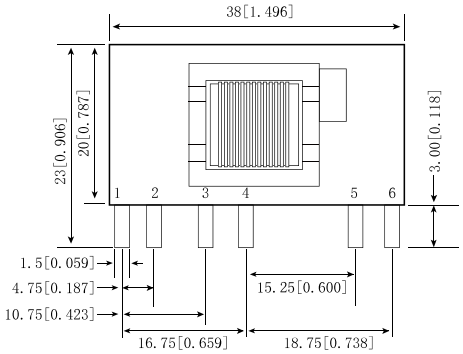
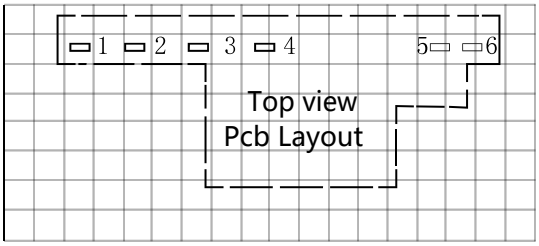
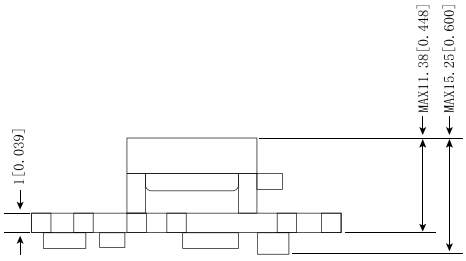
ELECTRICAL

Safety	
Safety standards	EN62368,IEC62368,UL62368
Isolation voltage	I/P-O/P:4000VAC/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 4kV(refer to below application circuit)
Surge	IEC/EN 61000-4-5 level 4 2kV (refer to below application circuit)

MECHANICAL

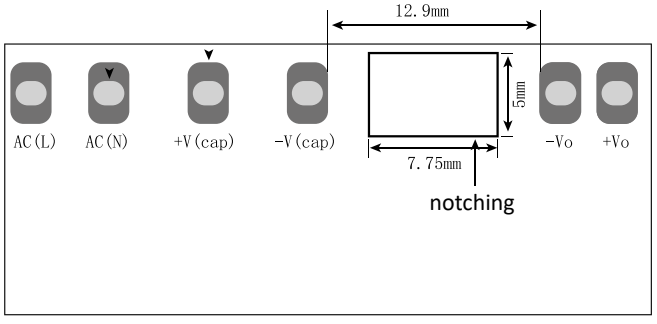






PIN #	define
1	AC(L)
3	AC(N)
3	+V(Cap)
4	-V(Cap)
5	-Vo
6	+Vo

Primary side and secondary side isolation



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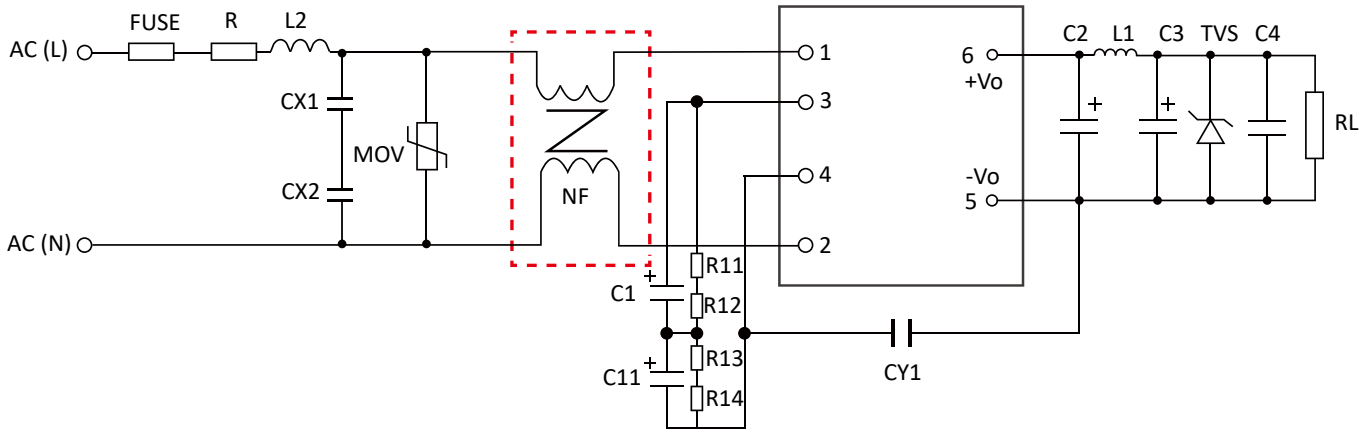
NOTE

RECOMMENDED TEST AND APPLICATION CIRCUIT



1. C1/C11: For AC input, C1/C11 is the input filter electrolytic capacitor (must be external); For DC input, C1/C11 is a large filter capacitor in the EMC filter (must be connected externally); Electrolytic capacitors with ripple current >200MA@100KHZ are recommended. Electrolytic capacitor C1/C11 ESR≤100Ω at low temperature.
2. R11, R12, R13, and R14 are the equalizing resistors of C1 and C11 electrolytic capacitors (must be externally connected), and can be patch resistors.

Typical values for external circuit components

	5VDC	12VDC	15VDC	24VDC
R	10Ω/1W			
CX1,CX2	473K/300V			
MOV	10821			
NF	10-30mH			
C1/c11	47uF/400V			
R11/R12/R13/R14	1MΩ 1206 1/4W			
CY	1nF/400Vac			
C2	820uF/16V	470uF/16V	470uF/25V	470uF/35V
L1	2.2mH 15mΩ max 6.5A			
C3	330uF/16V	330uF/16V	100uF/25V	100uF/35V
C4	0.1uF/50V			
CY1	1nF/50V			
TVS	P6KE7.5A	P6KE16A	P6KE20A	P6KE30A