

AC-DC ITE Power Module PAA10 Series



Features:

- Ultra Compact Size 1.46" x 1.08"
- Universal Input Range 90-305VAC, 47-440Hz
- I/O Isolation 4000VAC
- Operating Ambient Temperature Range -40°C to +70°C
- No Load Power Consumption < 0.1W
- High Efficiency up to 86%
- EMC Compliant without External Components
- Safety Approval to UL/IEC/EN 62368-1, IEC/EN 60950, TUV IEC/EN60335-1, and TUV IEC/EN 61558-2-16
- 3-Year Product Warranty



Description:

The PAA10 series of encapsulated AC/DC modules provide up to 10W of continuous output power in a small 1.1" x 1.5" package. These modules operate over a wide range of ambient temperatures and AC input voltages and frequencies, making them suitable for countless global applications.

Model Number	Max Output Wattage	Output Voltage	Output Current (mA) max	Output Line Regulation	Output Load Regulation	Ripple & Noise (mVp-p)	Max Capacitive Load (μ F)	Average Efficiency @ 115VAC
PAA10-5	10W	5V	2000	$\pm 0.2\%$	$\pm 1\%$	<150	3,500	81%
PAA10-12	10W	12V	833	$\pm 0.2\%$	$\pm 1\%$	<150	700	85%
PAA10-13	10W	15V	667	$\pm 0.2\%$	$\pm 0.5\%$	<160	390	86%
PAA10-14	10W	24V	417	$\pm 0.2\%$	$\pm 0.5\%$	1% Vout	180	86%

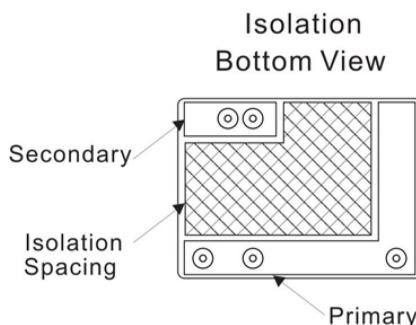
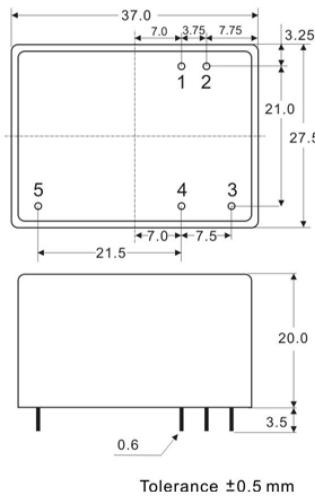
NOTES:

1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. A fuse 300V/2A is directly connected to the input and this fuse is 3.2mm min. away from each polarity.

Specifications	
Input	
Input Voltage	90-305VAC or 127-430VDC (N Connect +Vin; L Connect -Vin) for others 90-264VAC or 127-370VDC (N Connect +Vin; L Connect -Vin) for household
Input Frequency	47-440Hz
Input Current	230mA max. (115VAC) / 140mA max. (230VAC)
Inrush Current	30A max. (115VAC) / 60A max. (230 VAC)
Leakage Current	0.25mA max.
External Fuse (mandatory)	2A slow blow type
Output	
Total Output Power	Up to 10W
Voltage Accuracy	±2%
Line Regulation	±0.2% max
Hold Up Time	30ms min.
Protection	
Overpower Protection	Hiccup mode, auto-recovery
Over Voltage Protection	Zener diode clamp
Short Circuit Protection	Hiccup mode, auto-recovery
Isolation	
Input—Output (VAC)	4000V
Environmental	
Operating Temperature	-40°C +70°C (with derating)
Storage Temperature	-40°C +85°C
Temperature Coefficient	±0.02% /°C
Humidity	95% RH
MTBF	>450,000h at 25°C (MIL-HDBK-217F)
Vibration	IEC60068-2-27 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)
Shock	IEC60068-2-6
General Specifications	
Dimensions	1.46 x 1.08 x 0.79 Inches (37.0 x 27.5 x 20mm) Tolerance ±0.5 mm
Case Material	Plastic resin (flammability to UL 94V-0)
Weight	31g
Cooling Method	Free air convection
Safety	
Agency Approvals	UL/ EC/EN 62368-1, IEC/EN 60950, TUV IEC/EN 60335-1, TUV IEC/EN 61558-2-16
EMC	
EMI (Conducted & Radiated Emissions)	EN 55032 Class B
EMS (Noise Immunity)	EN 55035

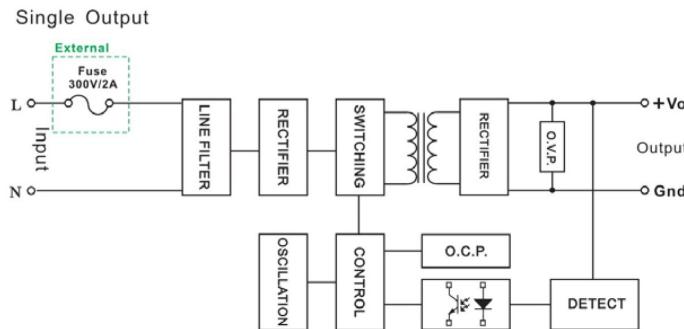
Diagrams

MECHANICAL DIMENSION (Top View)

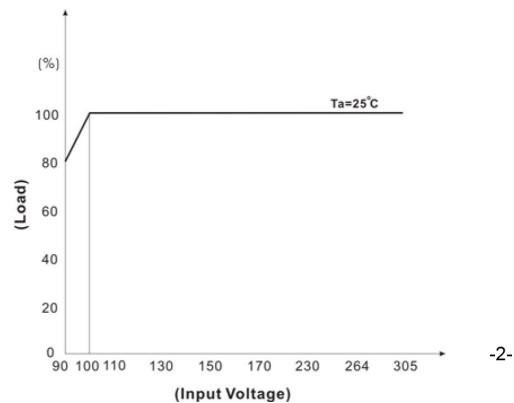
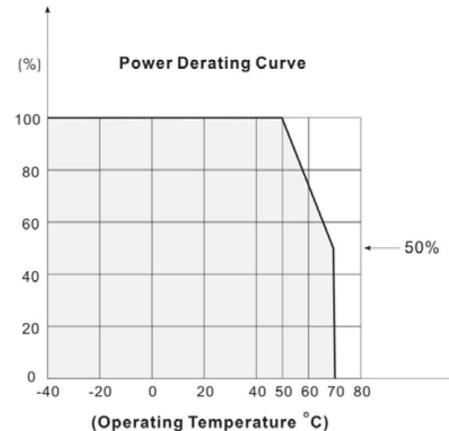


PIN#	Single
1	+Vo
2	GND
3	AC IN (L)
4	AC IN (N)
5	NC CONNECT

BLOCK DIAGRAM



DERATING



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