Chassis Mount

PCB Mount

PCB Size: 1in x 1in x 0.64in (25.4 x 25.4 x 16.3mm)
Chassis Size: 1.65in x 1.02in x 0.76in (42 x 26 x 19.3mm)

FEATURES

- Input Voltage Range of 85-264VAC
- Fully Encapsulated Plastic Case for PCB and Chassis Mount Versions
- No Load Min. Load Requirement
- RoHS & REACH Compliant
- High Efficiency
- Over Voltage and Short Circuit Protection
- Protection Class II as per IEC/EN 60536
- I/O Isolation 3000VAC with Reinforced Insulation
- UL/cUL/IEC/EN 60950-1, TUV IEC/EN 60335-1 & CE Marking

DESCRIPTION

The PSACB05 series of AC/DC PCB mount power supplies offers up to 5 watts of output power in a compact PCB or Chassis mount package. This series consists of single output models with 85-264VAC input and no minimum load requirement. Each model in this series is RoHS & REACH compliant, has over load and short circuit protection, and has I/O isolation 3000VAC with reinforced insulation. This series has UL/cUL/IEC/EN 60950-1, TUV IEC/EN 60335-1 & CE marking.

MODEL SELECTION TABLE

PCB Mount Models

Model Number	Input Voltage Range	Output Voltage	Output Current		Ripple & Noise[3]	Input Current	Maximum Capacitive Load	Efficiency	Output Power
			Max Load	Peak Load[2]					
PSABC05-S03	85~264VAC (120-370VDC)	3.3VDC	1515mA	1970mA	60mVp-p	117mA	2200µF	74%	5W
PSABC05-S05		5VDC	1000mA	1300mA	60mVp-p	108mA	1000µF	80%	
PSABC05-S09		9VDC	555mA	721mA	1%Vp-p	106mA	300µF	82%	
PSABC05-S12		12VDC	416mA	540mA	1%Vp-p	106mA	160µF	82%	
PSABC05-S15		15VDC	333mA	433mA	1%Vp-p	104mA	100µF	83%	
PSABC05-S24		24VDC	208mA	270mA	1%Vp-p	104mA	43µF	83%	
PSABC05-S48		48VDC	104mA	135mA	1%Vp-p	102mA	10µF	85%	

MODEL SELECTION TABLE

Chassis Mount Models

Model Number	Input Voltage Range	Output Voltage	Output Current		Ripple & Noise[3]	Input Current	Maximum Capacitive Load	Efficiency	Output Power
			Max Load	Peak Load[2]					
PSABC05-S03C	85~264VAC (120-370VDC)	3.3VDC	1515mA	1970mA	60mVp-p	117mA	2200µF	74%	5W
PSABC05-S05C		5VDC	1000mA	1300mA	60mVp-p	108mA	1000µF	80%	
PSABC05-S09C		9VDC	555mA	721mA	1%Vp-p	106mA	300µF	82%	
PSABC05-S12C		12VDC	416mA	540mA	1%Vp-p	106mA	160µF	82%	
PSABC05-S15C		15VDC	333mA	433mA	1%Vp-p	104mA	100µF	83%	
PSABC05-S24C		24VDC	208mA	270mA	1%Vp-p	104mA	43µF	83%	
PSABC05-S48C		48VDC	104mA	135mA	1%Vp-p	102mA	10µF	85%	

SPECIFICATIONS

All specifications are typical based on 25°C, resistive load, 115VAC, 60Hz, and after warm-up time rated output current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
INPUT SPECIFICATIONS						
Input Voltage Range			85		264	VAC
			120		370	VDC
Input Frequency Range			47		63	Hz
Inrush Current	Cold start At 25ºC	@115VAC			20	A
		@230VAC			40	
No Load Power Consumption					300	mW
OUTPUT SPECIFICATIONS						
Output Voltage			See Table			
Voltage Accuracy					±2.0	%Vnom.
Line Regulation	Vin=Min. to Max. @Full Load				±1.0	%
Load Regulation	Io=0% to 100%				±1.0	%
Overshoot					5	%Vout
Minimum Load			No Minimum Load Requirement			
Output Power			See Table			
Output Current			See Table			
Input Current	@Max Load.		See Table			
Maximum Capacitive Load			See Table			
Ripple & Noise (20MHz bandwidth)	0-20MHz Bandwidth	3.3V and 5V Models			60	mVp-p
		Other Output Models			1	%Vp-p
Current Limitation	Foldback, Automatic-Recovery					
	(Long term overload condition may cause damage)		135	150		%Inom.
Hold-Up Time	@115VAC, Full Load			8		mS
	@230VAC, Full Load			40		
Temperature Coefficient					±0.05	%/ºC
PROTECTION						
Short Circuit Protection			Hiccup Mode, Automatic Recovery			
Over Voltage Protection	Zener Diode Clamp			125	190	% of Vo
ENVIRONMENTAL SPECIFICATIONS						
Operating Ambient Temperature	Natural Convection		-25		+70	ºC
Storage Temperature			-40		+85	ºC
Power Derating	+50ºC to +70ºC			0.125		W/ºC
Humidity	Non-Condensing				95	%RH
Lead Temperature	1.5mm from case for 10Sec.				260	ºC
Cooling			Natural Convection[6]			
MTBF	Calculated per MIL-HDBK-217F @25ºC, Ground Benign		628,000			Hours
GENERAL SPECIFICATIONS						
Efficiency	@Max. Load		See Table			
Switching Frequency				65		KHz
Isolation Voltage	60 Seconds		3000			VACrms
Isolation Resistance	500VDC		100			MΩ
PHYSICAL SPECIFICATIONS						
Weight	PCB Mount		0.69oz (19.7g)			
	Chassis Mount		0.84oz (23.9g)			
Dimensions (L x W x H)	PCB Mount		1in x 1in x 0.64in (25.4mm x 25.4mm x 16.3mm)			
	Chassis Mount		1.62in x 1.02in x 0.76in (42mm x 26mm x 19.3mm)			
Case Material	(Flammability to UL94V-0 Rated)		Plastic Resin			
Pin Material	PCB Mount		Tinned Copper			
SAFETY CHARACTERISTICS						
Safety Approvals	UL/cUL 60950-1 recognition (UL Certificate)[7], IEC/EN 60950-1 (CB Report) IEC/EN 60335-1 Recognition (CB Report, TUV Certificate)					
EMI	Conduction and Radiation, EN55011, EN55014-1, EN55022, FCC Part 15					Class B
ESD	EN61000-4-2	Air ±8kV, Contact ±4kV				A
Radiated Immunity	EN61000-4-3	10V/m				A
Fast Transient	EN61000-4-4	±2kV				A
Surge	EN61000-4-5	±1kV				A
Conducted Immunity	EN61000-4-6	10Vrms				A
PFMF	EN61000-4-8	30A/m				A
Dips	EN61000-4-11	30% 10ms				A
Interruptions	EN61000-4-11	>95% 5000ms				A
Protection Class	According IEC/EN 60536					Class II

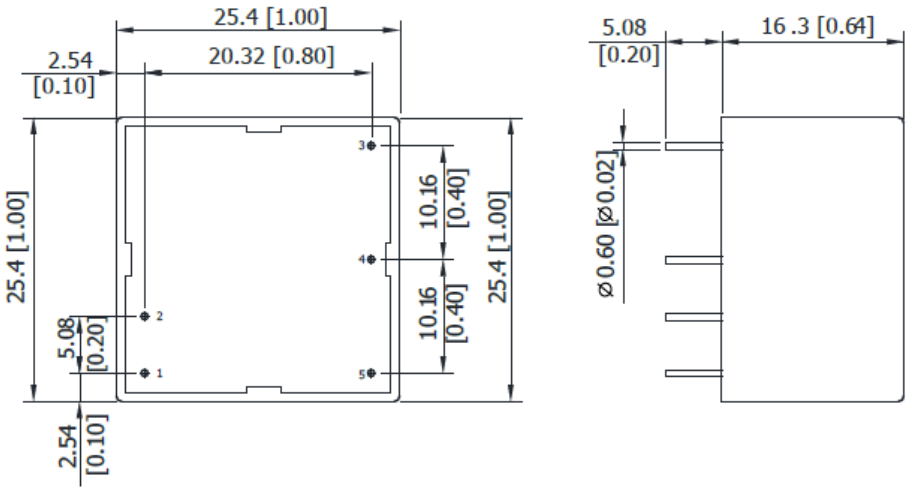
NOTES

1. PCB mount is standard. To indicate chassis mount add C to end of model number.
2. Peak load lasts <30S with maximum duty cycle of 10%, average output power should not exceed maximum power.
3. Ripple & Noise of PCB mounting type measured with a 1µF/50V MLCC.
4. It is recommended to protect the converter by a slow blow fuse in the input supply line.
5. Other inputs and outputs may be available, please contact factory.
6. "Natural convection" is about 20LFM but is not equal to still air (0 LFM).
7. This product is Listed to applicable standards and requirements by UL.

**Due to advances in technology, specifications subject to change without notice.*

MECHANICAL DRAWINGS

PCB Mount



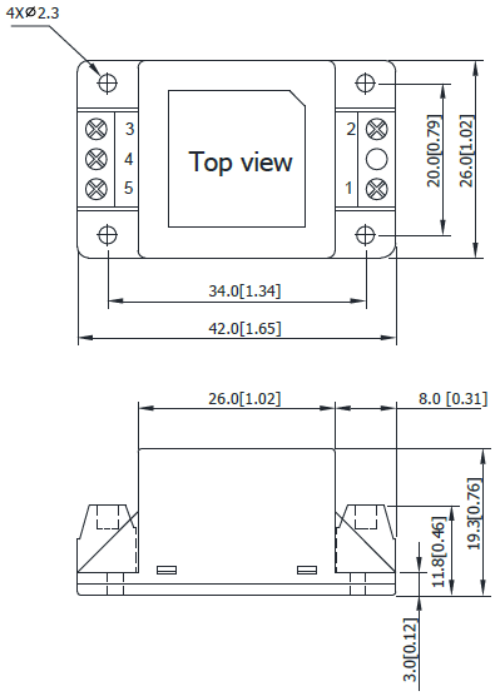
Pin Connections

Pin	Function
1	AC (N)
2	AC (L)
3	NC
4	-Vout
5	+Vout

NC: No Connections

Notes:
All dimensions in mm (inches)
Tolerance: ±0.5 (±0.02)
Pin Diameter Ø 0.6±0.1 (0.02±0.004)

Chassis Mount



Connections

Pin	Function
1	AC (N)
2	AC (L)
3	NC
4	-Vout
5	+Vout

Notes:
All dimensions in mm (inches)
Tolerance: ±0.5 (±0.02)

MODEL NUMBER SETUP

PSABC	05	-	S	05	C
Series Name	Output Power		Number of Outputs	Output Voltage	Mounting Option
	05: 5 Watts		**S:** Single Output	**03:** 3.3VDC **05:** 5VDC **09:** 9VDC **12:** 12VDC **15:** 15VDC **24:** 24VDC **48:** 48VDC	**None:** PCB Mount **C:** Chassis Mount

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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