

## Product Specification

AC-DC ITE Power Module

### Key Product Features

- Ultra Compact Size: 2.04" x 1.04"
- Universal Input Range 90-305VAC, 47-440Hz
- I/O Isolation 4000VAC
- Operating Ambient Temperature Range -40°C to +85°C
- No Load Power Consumption <0.1W
- Screw Terminal Optional
- EMC Compliant w/o External Components
- Safety Approval UL / IEC/EN62368-1
- Meets IEC/EN60335-1 & IEC/EN61558-2-16

## DPAHCH05 Series 5 Watt



### Electrical Specification

#### Input

Model No. (Single Output)	DPAHCH05-3.3S	DPAHCH05-5S	DPAHCH05-12S	DPAHCH05-24S
Max. Output Wattage	5W		5.04W	
Voltage	90-305VAC or 127-430VDC			
Frequency (Hz)	47-440 Hz			
Current (Full Load)	150mA max. (115VAC)/ 90mA max. (230VAC)			
Inrush Current (<2ms)	30A max. (115 VAC)/ 60A max. (230 VAC)			
Leakage Current	0.25 mA max.			

#### Output

Voltage (VDC)	3.3V	5V	12V	24V
Voltage Accuracy	±2%			
Current (mA) max	1515	1000	420	210
Line Regulation (LL-HL) (typ.)	±0.2%			
Load Regulation (0-100%) (typ.)	±1%	±0.5%		
Maximum Capacitive Load	3500uF	2200uF	330uF	70uF
Ripple & Noise (Vp-p) max	<100mV		<150mV	
Efficiency (at 230VAC)	73%	76%	80%	82%
Hold-up Time (at 230 VAC)	15ms min.			

NOTES: All specifications valid at normal input voltage, full load and +25° C after warm-up time unless otherwise stated.

## Protection

Over Power Protection	Hiccup technique, auto-recovery $\geq 115\% I_o$
Over Voltage Protection	Zener diode clamp
Short Circuit Protection	Hiccup mode, indefinite (automatic recovery)

## Isolation

Input-Output (VAC)	4000V
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## Environment

Operating Temperature	-40°C...+85°C (with derating)
Storage Temperature	-40°C...+85°C
Temperature Coefficient	$\pm 0.02\%/^{\circ}\text{C}$
Humidity	95% RH
MTBF	>450,000 h @ 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

## Physical

Dimension (L x W x H)	2.04 x 1.04 x 0.65 inches ( 51.82 x 25.42 x 16.51 mm) Tolerance $\pm 0.5$ mm
Case Material	Plastic resin (flammability to UL 94V-0)
Weight	30 g
Cooling Method	Free air convection

## Safety

Agency Approvals	UL / IEC/EN62368-1
Standards Met	IEC/EN60335-1, IEC/EN61558-2-16

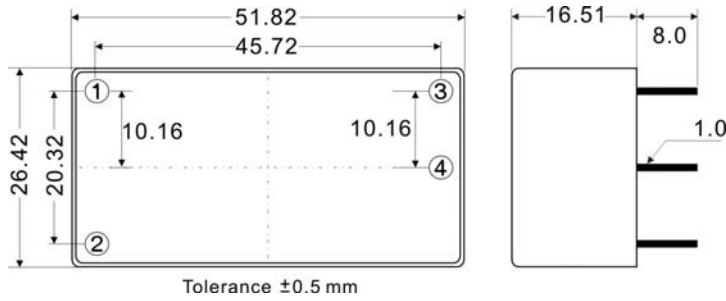
## EMC

EMI (Conducted & Radiated Emission)	EN55032 class B
EMS (Noise Immunity)	EN55035

### NOTES:

1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

**Mechanical Outline (Top View)**

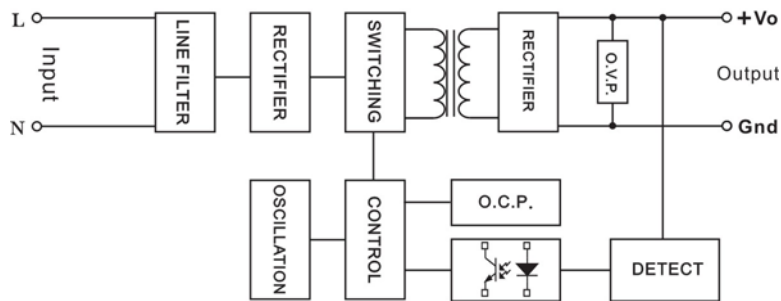


**Outline Pin Assignment**

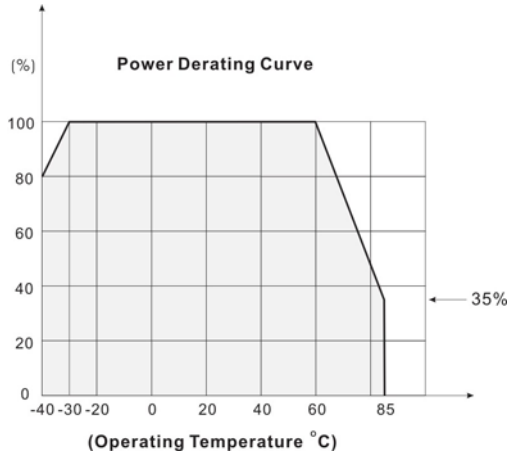
PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	+DC OUT
4	-DC OUT

**Block Diagram**

Single Output

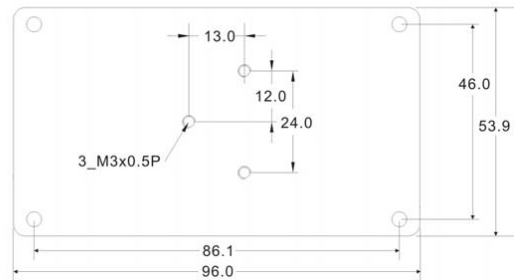
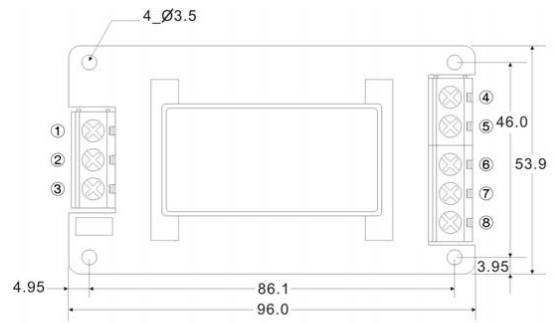


**Power Derating Curve**



**Screw terminal**

DPAHCH05-A2



**Outline Pin Assignmet**

PIN#	Single
1	NO CONNECT
2	AC IN (N)
3	AC IN (L)
4	NO CONNECT
5	+DC OUT
6	-DC OUT
7	NO CONNECT
8	NO CONNECT