



## AC-DC ITE Power Module

## VPHCH05 SERIES 5 Watts

## KEY 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 +70°C
- No Load Power Consumption < 0.1W
- Screw Terminal For Optional
- EMC Compliant without External Components
- Safety Approval to UL / IEC / EN 62368-1
- Meet IEC / EN 60335-1
- 3-Year Product Warranty



## ELECTRICAL SPECIFICATIONS

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

Model No. ( Single Output )	VPHCH05-3.3S	XUHCH05-5S	VPHCH05-12S	VPHCH05-24S
Max Output Wattage (W)	5W		5.04W	
Input	Voltage			
	90-305 VAC or 127-430 VDC			
	Frequency (Hz)			
	47-440 Hz			
	Current (Full load)			
150 mA max. (115 VAC) / 90 mA max. (230 VAC)				
Inrush Current (<500us)				
30 A max. (115 VAC) / 60 A max. (230 VAC)				
Leakage Current				
0.25 mA max.				
Output	Voltage (V.DC.)			
	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				
3,500uF	2,200uF	330uF	70uF	
Ripple & Noise (Vp-p) max				
<100mV				
<150mV				
<200mV				
Efficiency (at 115VAC)				
73%	76%	80%	82%	
Hold-up Time (at 230VAC)				
15 ms min.				
Protection	Over Power Protection			
	Hiccup technique, auto-recovery $\geq$ 115% Io			
	Over Voltage Protection			
Zener diode clamp				
Short Circuit Protection				
Hiccup mode, indefinite (automatic recovery)				
Isolation	Input-Output (V.AC)			
4000V				
Environment	Operating Temperature			
	-40°C...+70°C ( with derating )			
	Storage Temperature			
	-40°C...+85°C			
	Temperature Coefficient			
	±0.02%/°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 ±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 / EN 62368-1			
Meet				
IEC / EN 60335-1				
EMC	EMI (Conducted & Radiated Emission)			
	EN 55032 class B			
EMS (Noise Immunity)				
EN 55035				



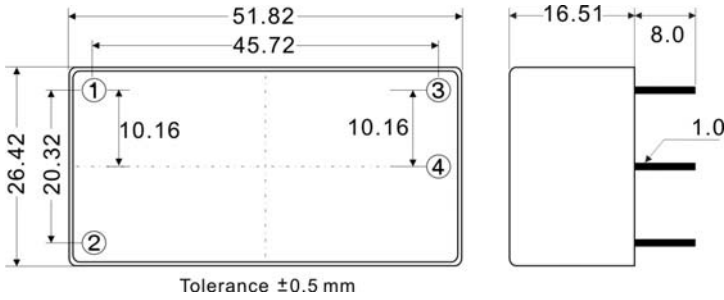
AC-DC ITE Power Module

**VPCH05 SERIES 5 Watts**

**NOTE**

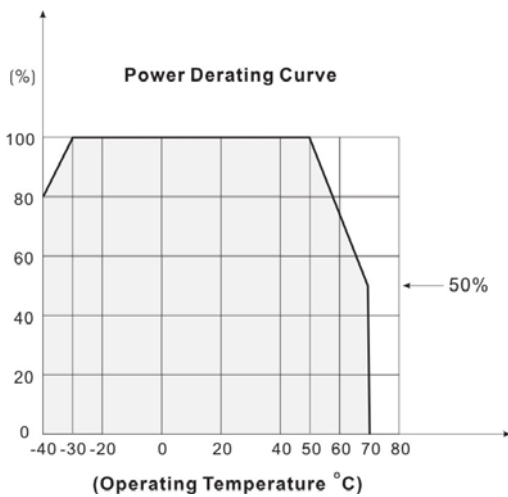
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor. È

**MECHANICAL DIMENSION ( Top View )**



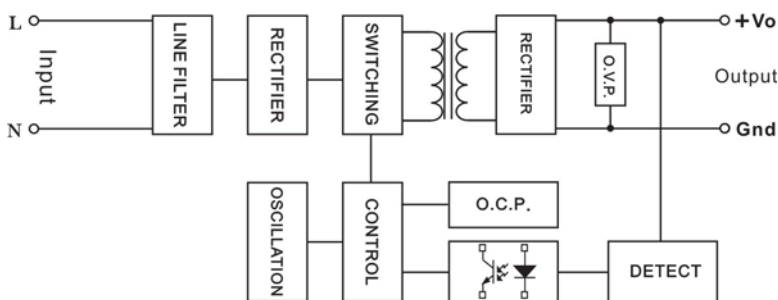
PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	+DC OUT
4	-DC OUT

**DERATING**



**BLOCK DIAGRAM**

Single Output





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**VPCH05 SERIES 5 Watts**

Your Power House  
**VP ELECTRONIQUE**

**SCREW TERMINAL**

**VPCH05-A2**



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

