

AHC-E1 Series

5 W Switching Power Module for PCB Mounting

CoolPower
Solutions

KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC, 47-440 Hz
- Regulated Output and Low Ripple and Low Noise
- Isolation Class II
- Small Size: 2.0 x 1.0 x 0.597 Inches
- Screw Terminal For Optional
- CE, CB and UL Approval
- 3-Years Product Warranty



ELECTRICAL SPECIFICATIONS

Model No.	AHC-3.3S-E1	AHC-5S-E1	AHC-12S-E1	AHC-15S-E1	AHC-24S-E1					
Max Output Wattage (W)	4W	5W	5W	5W	5.5W					
Input	Voltage					90-264 VAC or 120-370 VDC				
	Frequency (Hz)					47-440 Hz				
	Current (Full load)					110 mA max. (115 VAC) / 70 mA max. (230 VAC)				
	Inrush Current (<2ms)					23 A max. (115 VAC) / 46 A max. (230 VAC)				
	Leakage Current					0.75 mA max.				
	External Fuse (recommend)					1.5 A slow blow type				
Output	Voltage (V.DC.)		3.3V	5V	12V	15V	24V			
	Voltage Accuracy		±2%							
	Current (mA) max		1250	1000	420	333	230			
	Line Regulation (LL-HL) (typ.)		±0.3%							
	Load Regulation (5-100%) (typ.)		±0.5%							
	Minimum Load		0%							
	Maximum Capacitive Load		13800 uF	6000 uF	1400 uF	1000 uF	170 uF			
	Ripple		<0.2% Vout +40mV max (Vp-p)							
	Noise		<0.5% Vout +50mV max (Vp-p)							
	Efficiency		68%	71%	75%	75%	77%			
	Hold-up Time		15 ms min.							
Switching Frequency		132 kHz								
Protection	Over Power Protection		Hiccup technique, auto-recovery							
	Over Voltage Protection		Zener diode clamp							
	Short Circuit Protection		Hiccup mode, indefinite (automatic recovery)							
Isolation	Input-Output (V.AC)		3000V							
Environment	Operating Temperature		-40°C... +70°C (with derating)							
	Storage Temperature		-40°C... +85°C							
	Temperature Coefficient		±0.02%/°C							
	Humidity		95% RH							
	MTBF		>360,000 h @ 25°C (MIL-HDBK-217F)							
Physical	Dimension (L x W x H)		2.0 x 1.0 x 0.597 Inches (50.8 x 25.4 x 15.16 mm) Tolerance ±0.5 mm							
	Case Material		Plastic resin with Fiberglass (flammability to UL 94V-0)							
	Weight		30 g							
	Cooling Method		Free air convection							
Safety	Agency Approvals		CE, UL/cUL, CB							
EMC	EMI (Conducted & Radiated Emission)		EN 55022 class B							
	EMS (Noise Immunity)		EN 55024							

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

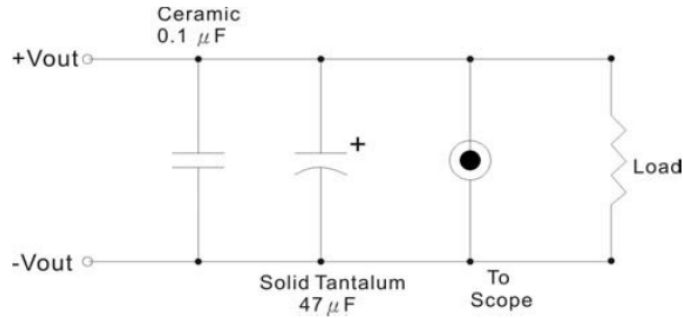
2.Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

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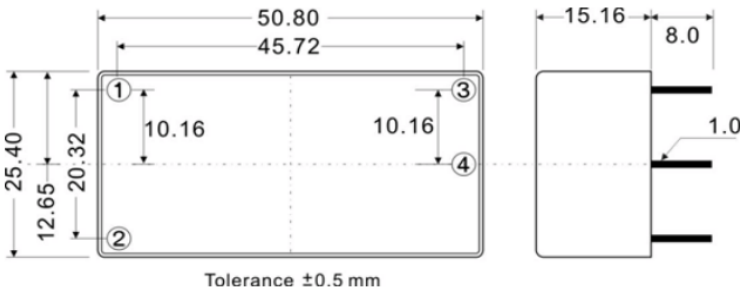
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OUTPUT NOISE

The output noise is measured with 47 μ F tantalum capacitor and 0.1 μ F ceramic capacitor across output.

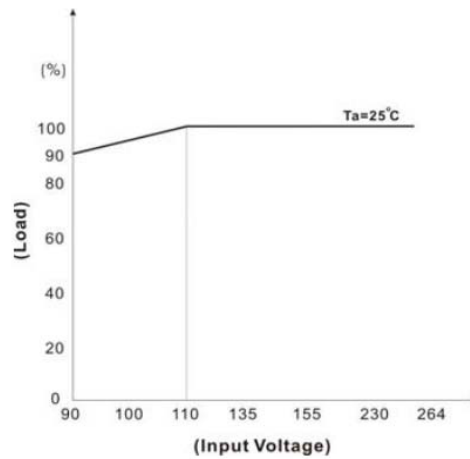
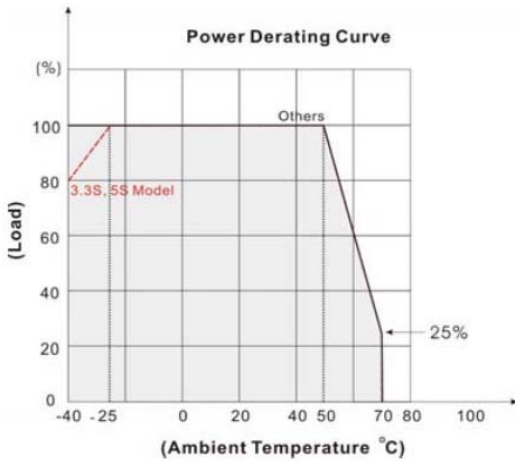


MECHANICAL DIMENSION (Top View)



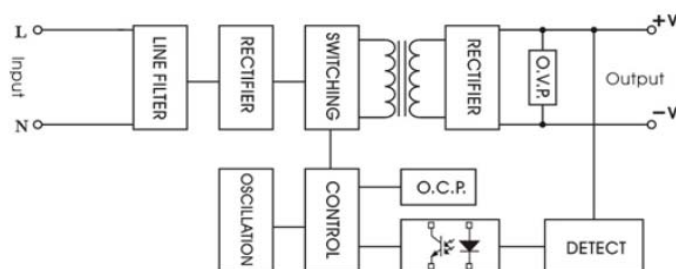
PIN#	SINGLE
1	AC IN (N)
2	AC IN (L)
3	+DC OUT
4	-DC OUT

DERATING



BLOCK DIAGRAM

Single Output



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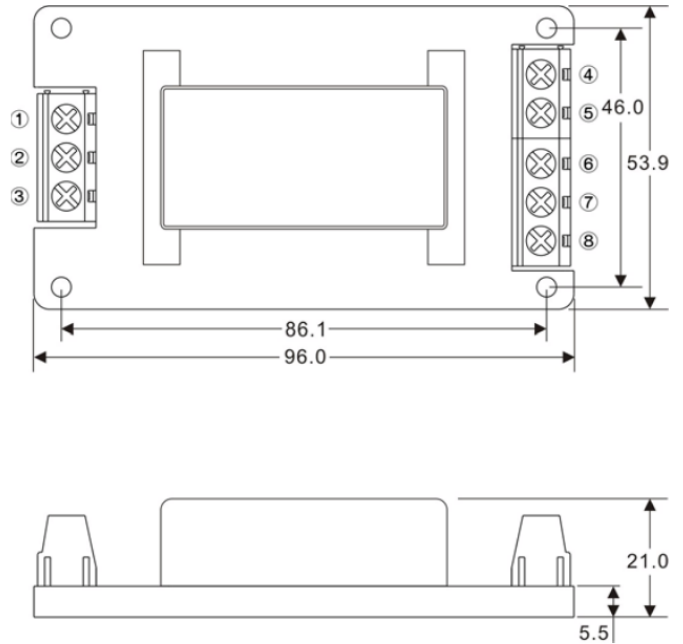
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SCREW TERMINAL

AHC-E1-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



AHC- E1-A5



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

