

## AUDIO PSU ALP0050

AUDIO LINE, SWITCH MODE POWER SUPPLY, 55W CONTINUOUS - 110W PEAK

# Features:

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- Designed for Class D Amplifier solutions
- Up to 55 Watts continuous for minimum 5 minutes (FTC requirements)
- High peak wattage capability, up to 110W
- Universal input range 90 - 265VAC
- Low ripple on HV rails
- Compact size
- Convection cooled
- Graceful Protection and Auto Recovery
- Designed for compliance with FCC, UL, CSA and CE requirements
- RoHS compliant



The unique audio line switch mode power supply, designed specifically for use with digital audio amplifiers.

# Overview:

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#### Ensure your amplifier act stable!

The ALP0050 is designed to meet the high requirements from manufacturers of state-of-the-art consumer and professional electronics where audio performance is a critical selling point. The ALP0050 works intelligently in conjunction with digital audio amplifiers to provide system-level performance and efficiencies that hardly can be obtained with other solutions. The ALP0050 has low ripple which is critical for low distortion in any open-loop amplifier design, digital and analog.

The ALP0050 is capable of not only delivering dynamic power on demand for your digital audio amplifier, but has the capability to efficiently deliver a continuous output power of 55W for crucial tests, such as EIA/CEA-490-A or FTC where the products channels are continuously driven into full power for a gruelling 5 minutes. Naturally, this audio line PSU is certified to meet EMI and safety standards for audio applications.

#### Output Model Selection:

Model	Output (V)	Output (I cont)	Output (I peak, 5 min)	Output (I peak, 10 ms)	Ripple (mVp-p)	Mechanical
ALP0050-0000	V1 25V $\pm$ 3%	1.00A	2.20A	4.00A	100mV 50mV	Open frame
	V2 5V $\pm$ 3%	1.50A				
ALP0050-2500	V1 +25V $\pm$ 3%	1.00A	2.20A	4.00A	50mV 50mV	Open frame
	V2 +5V $\pm$ 3%	1.50A				
ALP0050-5000	V1 50V $\pm$ 3%	0.50A	1.10A	2.00A	100mV 50mV	Open frame
	V2 12V $\pm$ 3%	0.63A				

### Input specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage – operating range	Universal input	90		264	VAC
Input frequency	45-63 Hz				
Short circuit protected	Fuse on both outputs				
Over Temperature protection	Power shut down by trafo over temperature, automatic recovery				

### Output specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
Output voltage	See model selection chart				
Output tolerance	See model selection chart				
Output power	Typ for 5 min		55	110	W
Line regulation I	110V to 230V AC at full load			1	%
Load regulation, V1	0 to 2.2A load change at min 105VAC to 230VAC line voltage			1	%
Transient response, V1	50% to 100% load change. 100A/ms max				ms
Transient output deviation, V1	50% to 100% load change				V
Rise time/soft start V1				1,5	V/mS
Output current	See model selection chart				

### General specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Ambient		0		50	°C
Storage temperature		-40		85	°C
Humidity	RH non condensing	5		95	%RH
Life Time	10 years				
MTBF	100 000 hrs				
Efficiency			85		%
Dimensions (L x W x H)	Open frame: 96 x 64 x 34 mm				
Standby power consumption*	< 0.3W V1 = V2 = 0A at 90-264Vac < 0.5W V1 = 0A, V2 < 30mA at 230Vac/115Vac < 1.0W V1 = 0A, V2 < 90mA at 230Vac/115Vac				
Encapsulation	Optional				
Cooling	Convection cooling. Unit must be thermally connected to chassis or external heatsink absorbing heat when units is used at max. Load. Max chassis temperature 100°C				
Manufacturing	According to workmanship std IPC-A-610, Revision D. RoHS compliant				

### Approvals

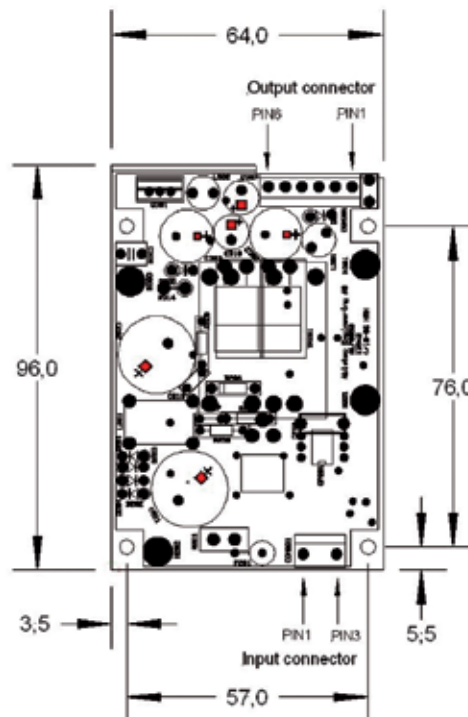
Parameter	Conditions	Comments
EMC	EMI	EN61000-6-3, FCC part 15, class B (FTC test conditions)
	EMS	EN61000-6-1
SAFETY	CE	EN/IEC 60065 and EN/IEC 60950
	UL	CSA/UL 60065 and CSA/UL 60950

\* ALP0050-2500

This data sheet is believed to be correct at time of publication and ABLETEC takes no responsibility for consequences from printing error or inaccuracies. Specifications are subject to change without notice.

## Mechanical outline

### Single HV rail



## Connectors and pinout

Model nr.	Connector	Type	P1	P2	P3	P4	P5	P6
ALP0050-0000 and	Input connector	AMP 3-pole round pin header 0-0640388-3	AC_L	NC	AC_N			
ALP0050-5000	Output connectors	AMP 6 pole round pin header 0-0640388-6	NC	NC	+V1	+V2	0V	0V