www.audera.co
+1 866 883 9506

LHX100 0.1 Amplifier Specifications and Guide

Rev. 1.00
Dec 14, 2010

1. Introduction

Audera Acoustics Inc. has developed a novel, high-efficiency, linear amplifier and a tracking power supply combination that offers:

- Improved signal-to-noise ratio (SNR) with respect to Class D and Class AB
- Reduced electromagnetic interference (EMI) as compared to Class D
- Minimized distortion levels and idle power consumption
- Optimized power supply requirements
- Decreased circuit complexity as compared to other hybrid topologies

All this in turn provide a robust, high-power, cost-competitive audio amplifier perfect for the home audio environment.

2. Features and Benefits

ClassLH™ is a linear-hybrid Class H amplifier, combining a switching power supply with a linear amplifier. Once an audio input signal is applied, the first stage of the system detects the envelope of the audio signal. It then passes a signal to the power supply which generates the positive and the negative rails based on the tracked audio signal. High-performance linear push-pull amplifier stage is placed between the speaker load and the split tracking power supply unit (PSU).

ClassLH™ enables high- power, low-cost amplifier design with:

- FTC 100 W output power
- Low idle power consumption
- Wide dynamic range
- Low distortion and EMI
- Simple, versatile and compact size
- Considerably less heat dissipation resulting in small heat sinks
- High overall system efficiency
- Low system cost in comparison to Class AB or Class D

3. Applications

Audera's ClassLH™ amplifier – a hybrid-linear push-pull drive amplifier, powered by high efficient tracking power supply rails is a perfect fit for applications where cost is the main consideration, but the system performance cannot be compromised

The LHX100 0.1 amplifier system consists of a 100W subwoofer power amplifier channel and tracking power supply on the same board. It can be used in mid-power subwoofer systems.

4. Electrical specifications

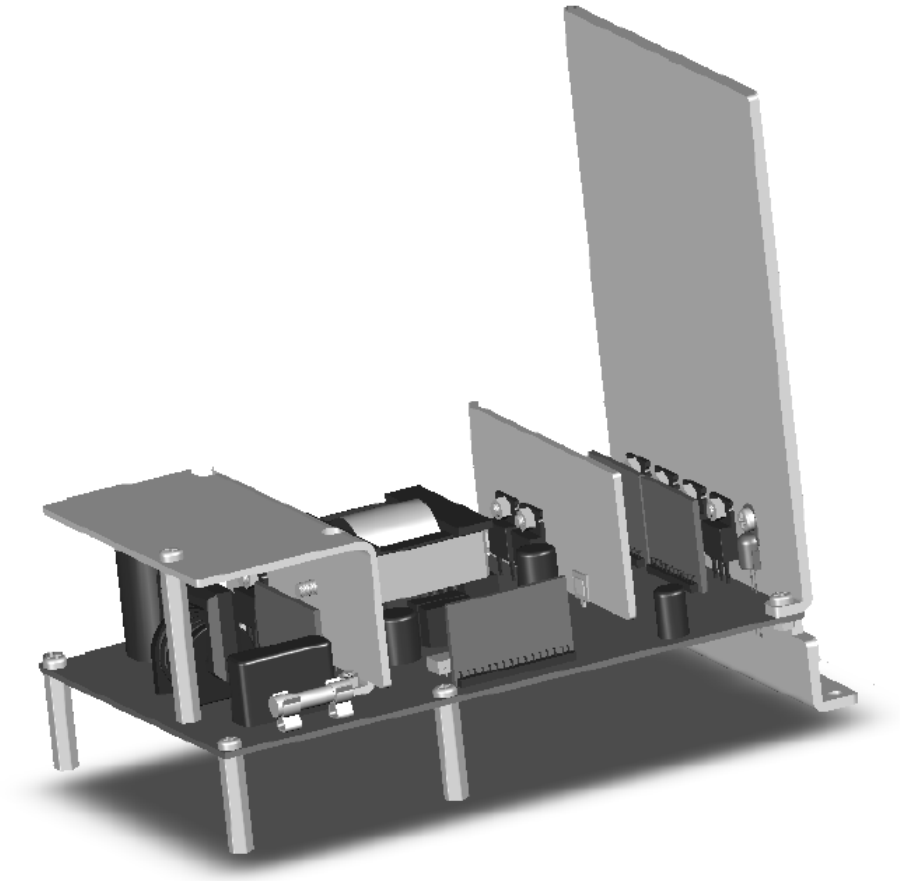
	Value	Comments/Notes
General		
Technology	Class**LH**	
Application	0.1 Subwoofer systems	
Configuration	1 x 100W	
System FTC power rating	100 W	
Low Frequency Channel		
Output Stage	Discrete MOSFET	
FTC Power @ 10% THD	100 W	
Power into 8 ohms 10% THD	100 W	
Maximum voltage swing	+/- 50V pk	
Recommended Load	8 ohm	
Minimum Load DCR	6.4 ohm	
Usable frequency range	10Hz – 1kHz	
THD+N @ 1 W, 100 Hz	TBD	
SNR dBr max output	TBD	
Pre-amp		
Bi-quads	TBD	
Compressor	TBD	
Input impedance, each channel	TBD kOhm	
Drive Level for rated power	TBD Vrms	
Maximum input drive level	TBD V pk	
Control signals		
Inputs	TBD	
Outputs	TBD	
Output supply rails		
Auxiliary Power supply	5V, TBD A	
Standby power supply	+5Vstandby/5mA	
Feature Power supplies	+/-5V/50mA	
Protection		
Over Temperature protection	Yes	
Over Current protection	Yes	
Short Circuit protection	Yes	
AC Input		
Input fuse rating	TBD A	
Standby power consumption	<0.5 W	
Idle power consumption	TBD	

AC Input voltage (rated power)	120 VAC or 230 VAC	
Agency performance		
Meets EMC requirement	EN-61000-4-2 EN-61000-4-3 EN-61000-4-4 EN61000-4-5 EN-61000-4-6 EN-61000-4-11 EN-55013 FCC part 15-B	
Class II insulation (no ground)	Yes	
Meets Safety requirements	IEC-60065	
Meets Energy Star	Yes	

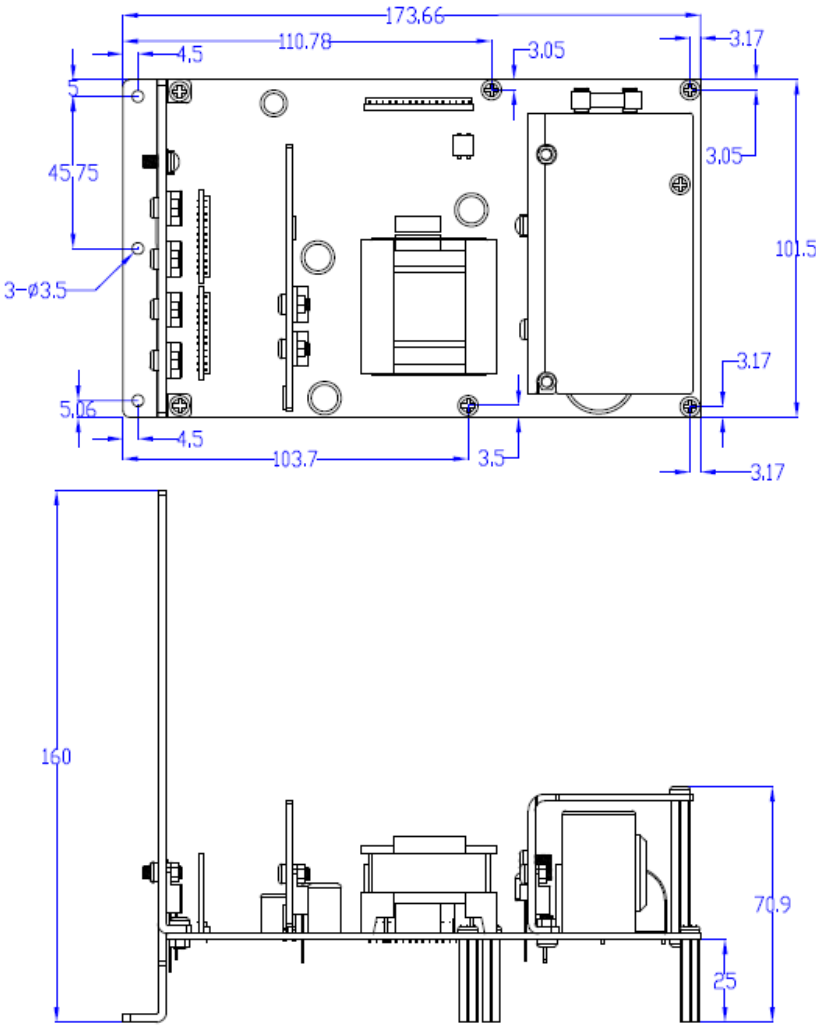
5. Mechanical specifications

Mechanical		
Physical dimensions* L x W x H mm	174 x 101.5 x 160 mm	
Weight	TBD	
Vibration	TBD	

6. Mechanical drawings



Board isometric view



Board assembly drawing