

## Evaluation Kit

### APPLICABLE PARTS (SOLD SEPARATELY)

- PA162DK

### INTRODUCTION

Fast and easy breadboarding of circuits using the PA162DK is possible with the EK68 evaluation kit. The EK68 includes the EVAL68 board. The use of EVAL68 allows for a large area of breadboarding space to work with while allowing for the surface mount installation of PA162DK. The PA162DK amplifier may be mounted directly to the EVAL68. The EK68 is designed for mounting of the PA162DK without the need to solder attach the device terminals. The HS33 heat sink is designed to hold the part in place while providing thermal control and electrical contact simultaneously. The obvious advantage is the ease of removal and replacement of the PA162DK as required. External connection to the evaluation board can be made via the terminals at the edge of the circuit board.

**Figure 1: PCB Layout**

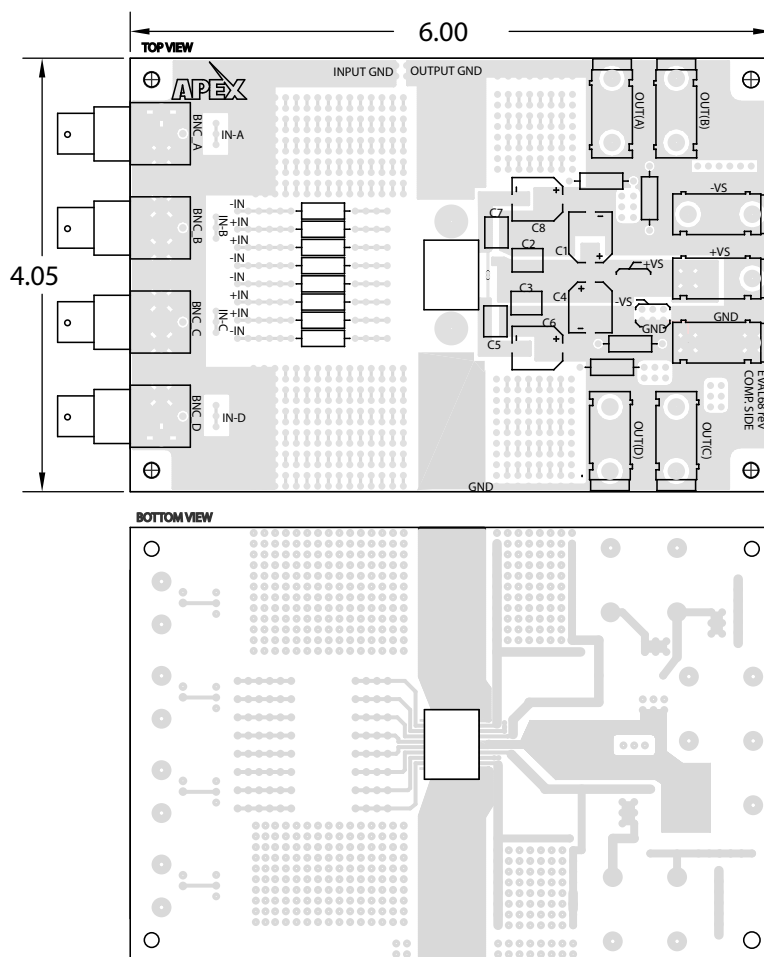
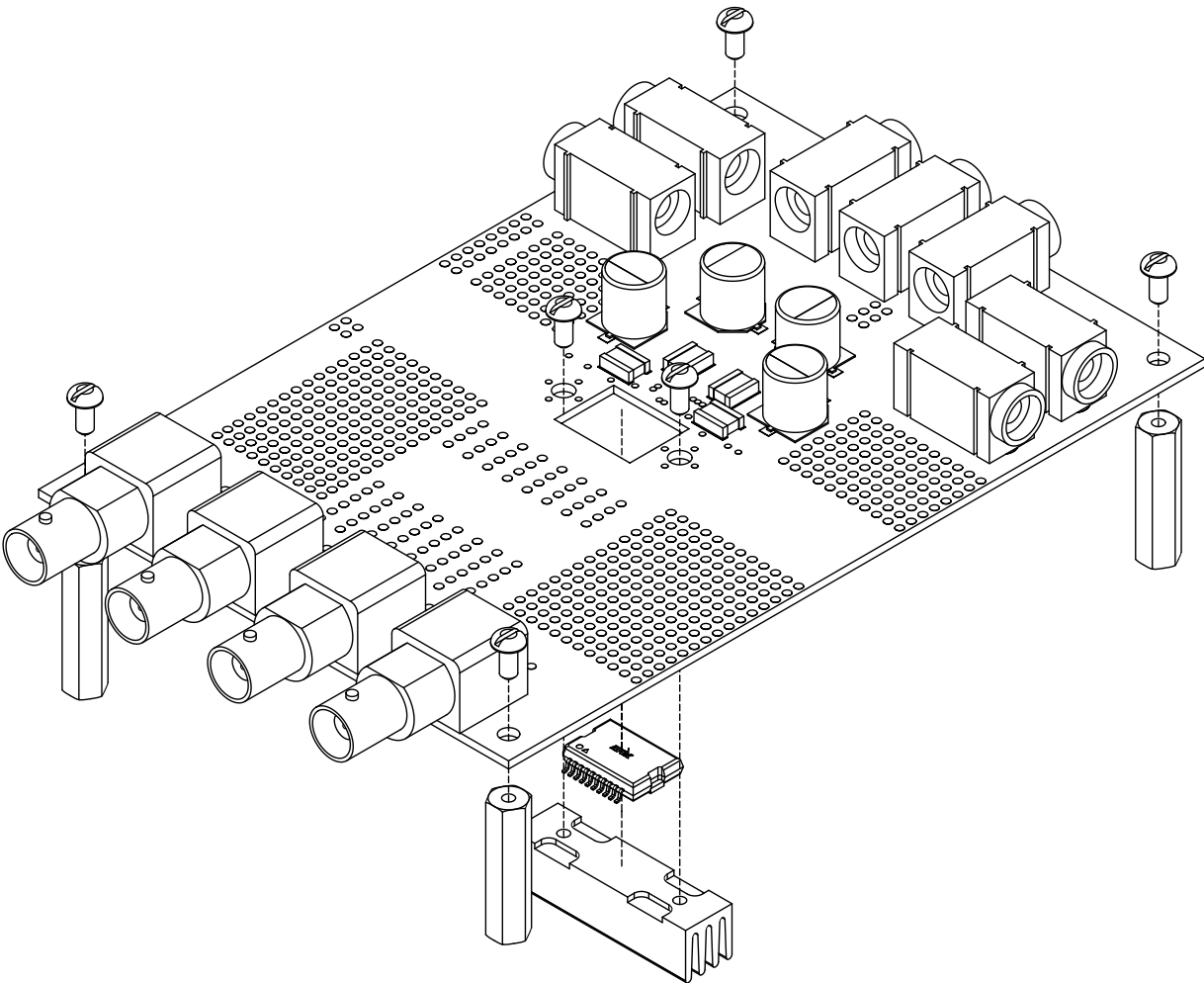


Figure 2: Assembly Diagram for EK68



**PARTS LIST**

Reference	Part #	Description	QTY
	EVAL68	Evaluation Board, PA162DK	1
C <sub>1</sub> , C <sub>4</sub> , C <sub>8</sub> , C <sub>6</sub>	PCE3927CT-ND	CAP, 47uF, 50V	4
C <sub>2</sub> , C <sub>3</sub> , C <sub>5</sub> , C <sub>7</sub>	1825B105K201NX	Cap, 200V, 1uF, Ceramic	4
	HS33	Heat Sink	1
	146510CJ	BNC Jacks	4
	571-0100	Banana Jacks	4
	571-0500	Banana Jacks	3
	MS06	Mating Socket	4

Required #4 hardware and thermal grease not included.

## BEFORE YOU GET STARTED

- All Apex amplifiers should be handled using ESD precaution.
- Review the Apex product datasheet and operating conditions.
- Always provide the appropriate heat sinking. Power dissipation must be considered to ensure maximum junction temperature ( $T_j$ ) is not exceeded.
- Always use adequate power supply bypass capacitors, Apex recommends at least 10 $\mu$ F per amp of output current, as well as a 0.1 to 1 $\mu$ F high-quality ceramic capacitor between the power supplies and ground.
- Do not change connections while the circuit is powered
- In case -Vs is disconnected before +Vs, a diode between -Vs and ground is recommended to avoid damage.
- Initially set all power supplies to the minimum operating levels allowed in the product datasheet.
- Check for oscillations.

## ASSEMBLY

The PA162DK and capacitors are surface mount components and should be assembled to the EVAL68 using surface mount processes. Solder paste may be dispensed or screen-printed on the DUT pads. If a solder reflow furnace is not available, a heat plate capable of solder reflow temperatures may be used. The heat slug on the back of the PA162DK provides maximum heat dissipation capabilities when in direct contact to the heat sink. Thermal grease should be used when mounting the heat sink to the evaluation board. Mating sockets strips are provided to facilitate adding additional components as required. Please use care when handling and assembling the PA162DK. Make certain that the package pin to pad alignment is correct and that the pins are seated on each pad. The PA162DK heat slug and heat sink must be electrically connected to the most negative power supply potential (-Vs).

**Note:** All grounds must be tied together on the EVAL68 board.

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## NEED TECHNICAL HELP? CONTACT APEX SUPPORT!

For all Apex Microtechnology product questions and inquiries, call toll free 800-546-2739 in North America. For inquiries via email, please contact [apex.support@apexanalog.com](mailto:apex.support@apexanalog.com). International customers can also request support by contacting their local Apex Microtechnology Sales Representative. To find the one nearest to you, go to [www.apexanalog.com](http://www.apexanalog.com)

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