

Evaluation Board for Single, High Speed Operational Amplifiers (8-Lead SOIC)

FEATURES

- Enables quick breadboarding/prototyping**
- User-defined circuit configuration**
- Edge-mounted SMA connector provisions**
- Easy connection to test equipment and other circuits**

GENERAL DESCRIPTION

The [AD8036/AD8037](#) evaluation board is designed to aid in the evaluation of single, high speed operational amplifiers. The [AD8036/AD8037](#) evaluation board is a bare board (that is, there are no components soldered to the board) that enables users to quickly prototype a variety of operational amplifier circuits, which minimizes risk and reduces time to market. The [AD8036/AD8037](#) evaluation board supports Analog Devices, Inc., single, high speed operational amplifiers in an 8-lead SOIC package with output clamps.

Figure 1 shows the component side of the evaluation board, and Figure 2 shows the circuit side of the evaluation board. Figure 3 shows the evaluation board schematic.

The 4-layer evaluation board accepts edge-mounted Subminiature Version A (SMA) connectors on both inputs and outputs, which allows efficient and quick connection to test equipment or other circuitry.

The board ground plane, component placement, and power supply bypassing are optimized for maximum circuit flexibility and performance. The evaluation board uses a variety of surface-mount technology (SMT) component case sizes: 0402, 0508, 0603, and 7343.

Figure 4 and Figure 6 show the evaluation board assembly drawings. Figure 5 and Figure 7 show the metal layout pattern for connecting the board to the op amp and to the supporting circuitry.

EVALUATION BOARD COMPONENT SIDE AND CIRCUIT SIDE DIAGRAMS

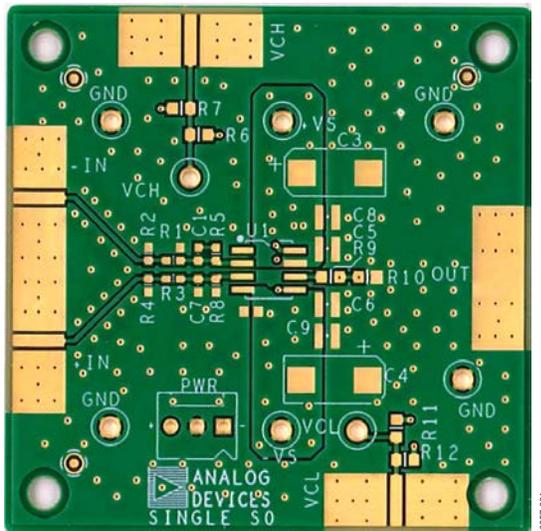


Figure 1. [AD8036/AD8037](#) Evaluation Board Component Side

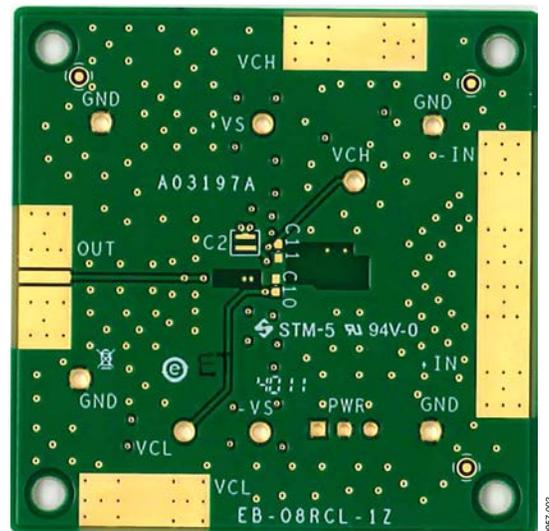


Figure 2. [AD8036/AD8037](#) Evaluation Board Circuit Side

TABLE OF CONTENTS

Features 1
General Description 1
Evaluation Board Component Side and Circuit Side Diagrams 1
Revision History 2

Evaluation Board Schematic, Assembly Drawings, and Board
Layouts3
Noninverting Configuration5
Ordering Information6
 Bill of Materials.....6

REVISION HISTORY

8/12—Revision 0: Initial Version

EVALUATION BOARD SCHEMATIC, ASSEMBLY DRAWINGS, AND BOARD LAYOUTS

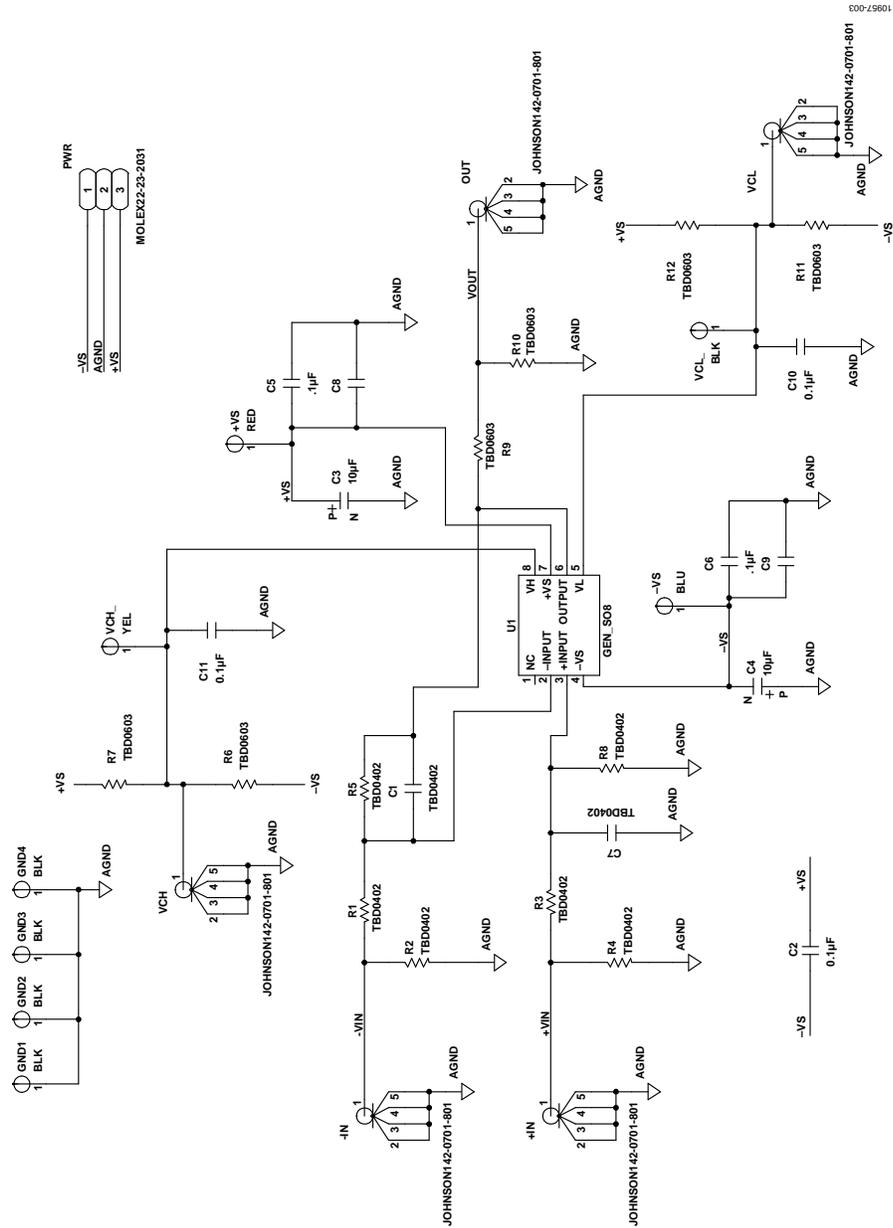


Figure 3. AD8036/AD8037 Evaluation Board Schematic

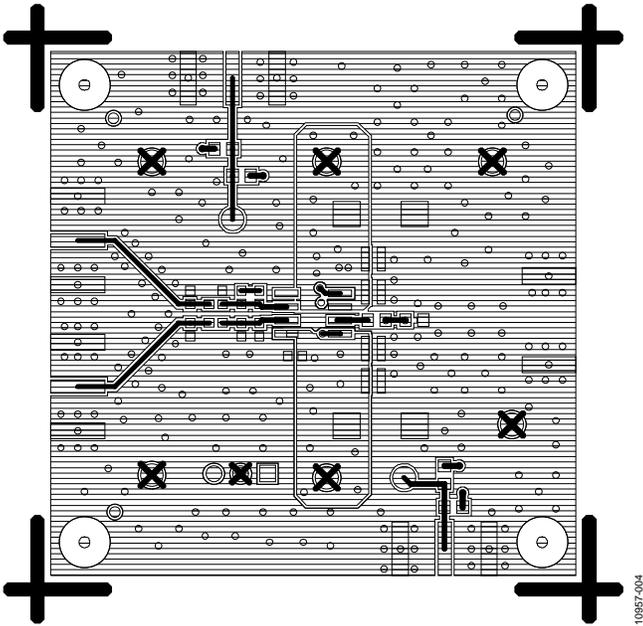


Figure 4. Board Assembly Drawing, Component Side

10857-004

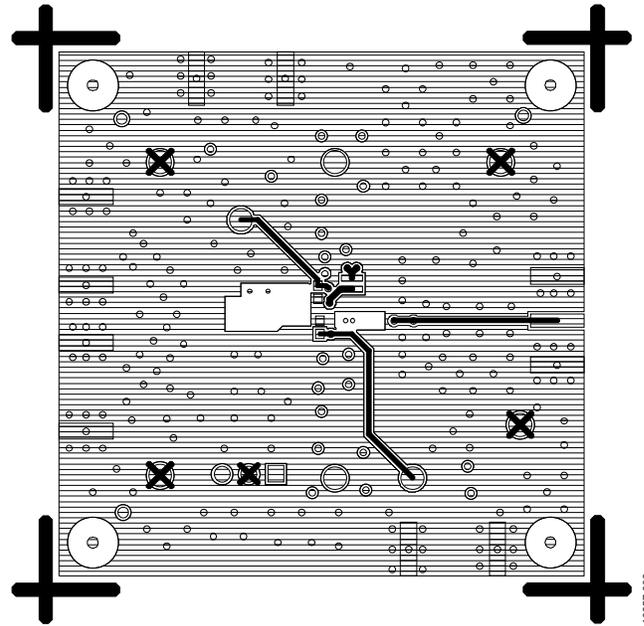


Figure 6. Board Assembly Drawing, Circuit Side

10857-006

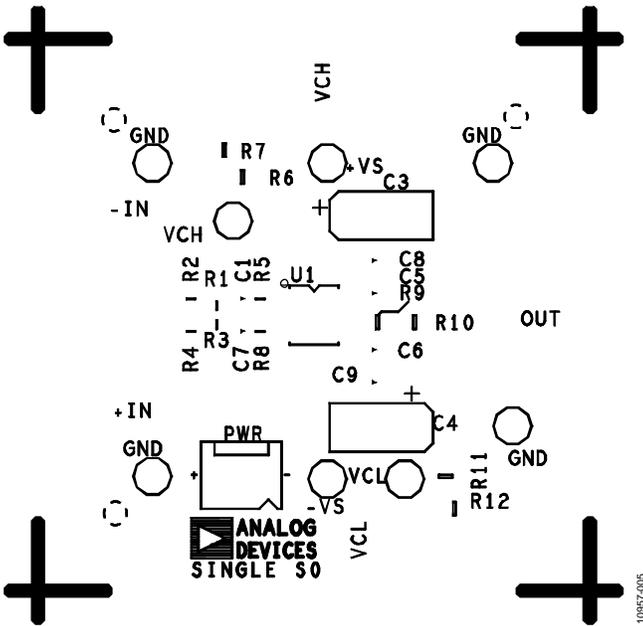


Figure 5. Board Layout Pattern, Component Side

10857-005

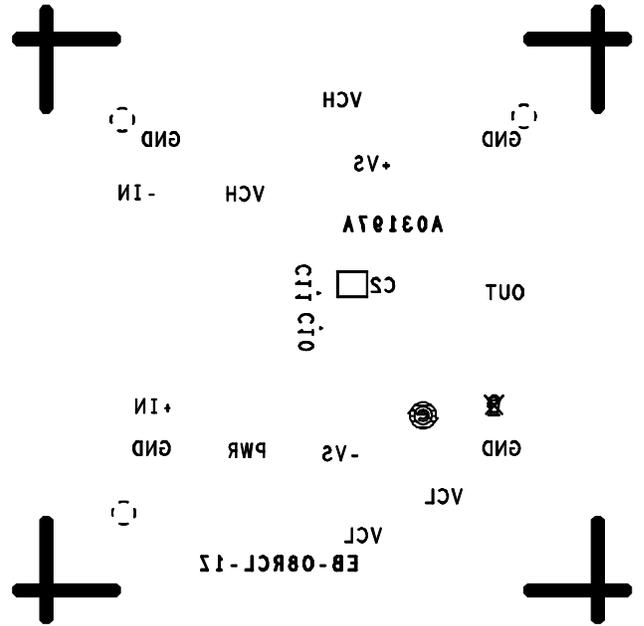


Figure 7. Board Layout Pattern, Circuit Side

10857-007

NONINVERTING CONFIGURATION

When using this board in a noninverting configuration, with a gain larger than 1, there are two recommended ways to place the gain resistor. The first way is to place the gain resistor in the R1 location and use a $0\ \Omega$ resistor for the R2 location to short to ground. The second way is to place the gain resistor between the first pad of R1 and ground, without using a second resistor (see Figure 8).

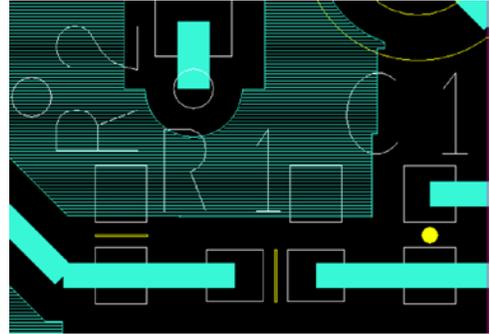


Figure 8. Noninverting Configuration with a Gain of Higher Than 1

ORDERING INFORMATION**BILL OF MATERIALS**

Table 1.

Quantity	Reference Designator	Description	Package
5	+IN, -IN, OUT, VCH, VCL	Subminiature Version A/surface-mount technology	SMA/SMT
4	C1, C7, C10, C11	User-defined capacitors	0402
2	C8, C9	0.01 μ F capacitors	0508
3	C2, C5, C6	0.1 μ F capacitors	0508
2	C3, C4	10 μ F capacitors	6032
6	R1, R2, R3, R4, R5, R8	User-defined resistors	0402
6	R6, R7, R9, R10, R11, R12	User-defined resistors	0603
8	VCH, VCL, GND1, GND2, GND3, GND4, +VS, -VS	Test points	TP
1	PWR	Header, 3 positions	Molex 22-23-2031
1	U1	Amplifier	8-lead SOIC

NOTES

NOTES

**ESD Caution**

ESD (electrostatic discharge) sensitive device. Charged devices and circuit boards can discharge without detection. Although this product features patented or proprietary protection circuitry, damage may occur on devices subjected to high energy ESD. Therefore, proper ESD precautions should be taken to avoid performance degradation or loss of functionality.

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