

Evaluation Board for Single High Speed Selectable Gain Differential Amplifiers (16-Lead, 3 mm × 3 mm LFCSP)

FEATURES

Enables quick breadboarding/prototyping

Selectable gain of 1, 2, or 3

Edge-mounted SMA connector provisions

Easy connection to test equipment and other circuits

GENERAL DESCRIPTION

The 16-lead, 3 mm × 3 mm lead frame chip scale package (LFCSP) evaluation board is designed to aid in the evaluation of single, high speed, selectable gain differential amplifiers. It has the flexibility to choose between a gain of 1, 2, or 3. The 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 differential amplifier circuits, which minimizes risk and reduces time to market. The evaluation board supports any of Analog Devices, Inc., single, high speed differential amplifiers in 3 mm × 3 mm LFCSP packages.

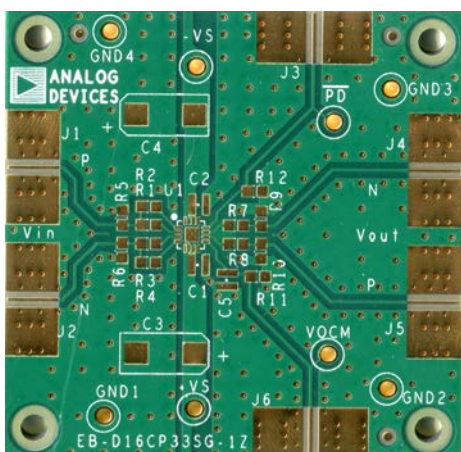
Figure 1 and Figure 2 show the component side and circuit side of the evaluation board. Figure 3 shows the evaluation board schematic.

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 have been optimized for maximum circuit flexibility and performance. The evaluation board uses a variety of surface-mount technology (SMT) component case sizes: 0508, 0603, and 7343.

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

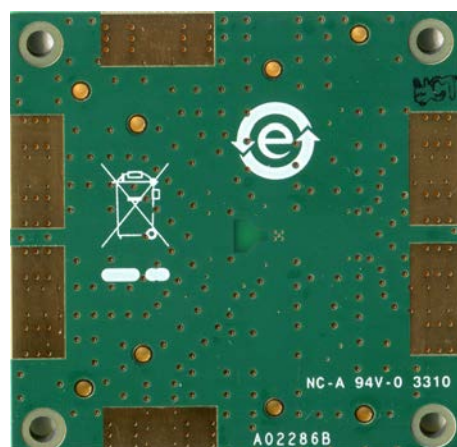
DIGITAL PICTURES OF THE EVALUATION BOARD



NOTES

1. THE EVALUATION BOARD SILKSREEN PART NUMBER LABELING ON YOUR BOARD MAY BE DIFFERENT FROM WHAT IS SHOWN HERE.

Figure 1. Component Side of the Evaluation Board



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Figure 2. Circuit Side of the Evaluation Board

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REVISION HISTORY

| | |
|--|---|
| 9/12—Rev. 0 to Rev. A | |
| Changes to General Description Section, Figure 1, and Figure 2..... | 1 |
| Changes to Figure 3 Caption | 3 |
| Changes to Figure 4, Figure 5, and Figure 7..... | 4 |
| Added Ordering Information Section and Bill of Materials Section..... | 5 |
| 4/10—Revision 0: Initial Version | |

EVALUATION BOARD SCHEMATIC

Z00-98880

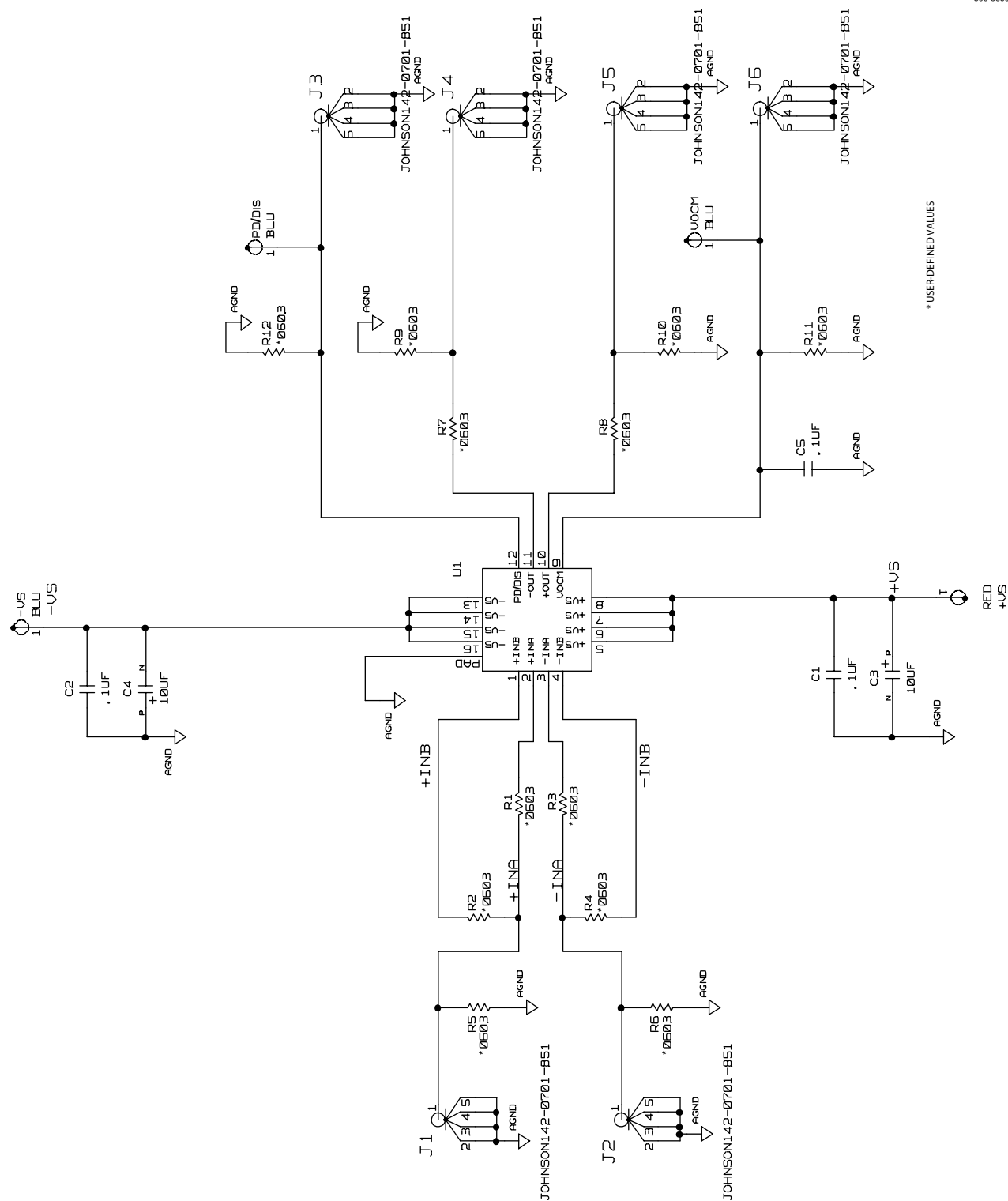


Figure 3. Single Differential Amplifier Evaluation Board Schematic

ASSEMBLY DRAWINGS AND BOARD LAYOUTS

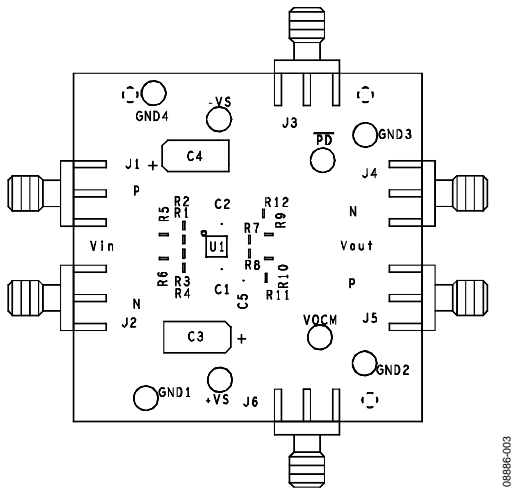


Figure 4. Board Assembly Drawing, Component Side

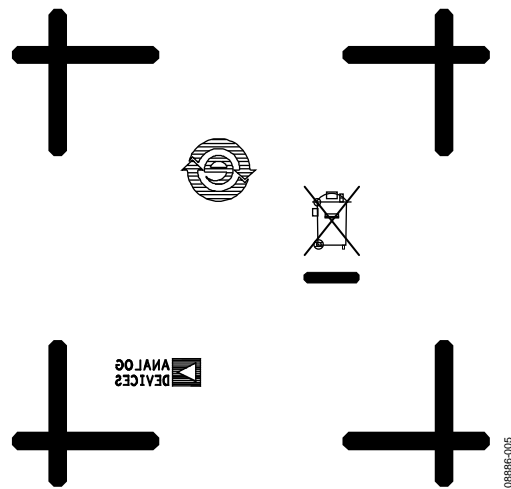


Figure 6. Board Assembly Drawing, Circuit Side

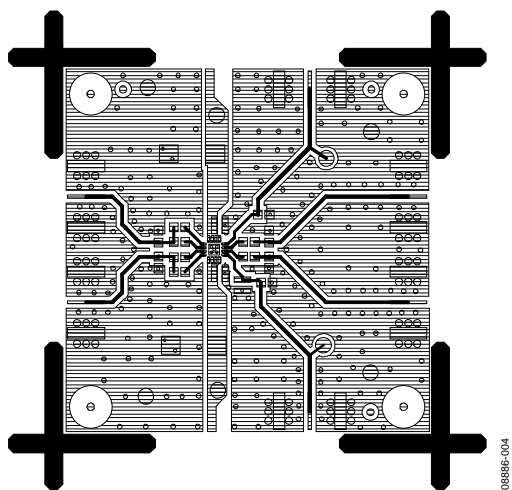


Figure 5. Board Layout Pattern, Component Side

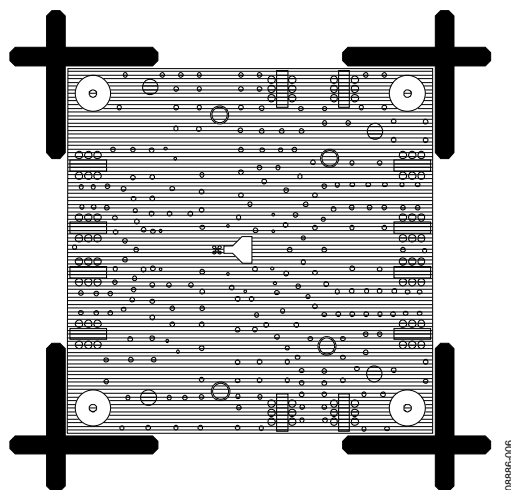


Figure 7. Board Layout Pattern, Circuit Side

ORDERING INFORMATION

BILL OF MATERIALS

Table 1.

| Quantity | Reference Designator | Description | Package |
|----------|----------------------|----------------------------------|----------------------|
| 4 | +VS, PD, -VS, VOCM | CONN-PCB test point blue | CNLOOPTP |
| 3 | C1, C2, C5 | 0.1 μ F capacitors | 0508 |
| 2 | C3, C4 | 10 μ F capacitors | 7343 |
| 4 | GND1 to GND4 | CONN-PCB test point black | CNLOOPTP |
| 6 | J1 to J6 | CONN jack end launch PC gold SMA | JOHNSON142-0701-851 |
| 12 | R1 to R12 | User-defined resistors | 0603 |
| 1 | U1 | GEN_QFN16_3x3_PAD1_5x1_5 | QFN16_3X3_PAD1_5X1_5 |
| 1 | PCB | Printed circuit board | |

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**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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