

## Evaluation Board for Single, High Speed Operational Amplifiers (8-Lead SOIC with Dedicated Feedback Pin and Exposed Paddle)

### 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 8-lead standard small outline package (SOIC), with a dedicated feedback pin and an exposed paddle, evaluation board is designed to aid in the evaluation of single, high speed operational amplifiers. 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 operational amplifier circuits, which minimizes risk and reduces time to market. The evaluation board supports any of the Analog Devices, Inc., single, high speed operational amplifiers in an 8-lead SOIC package with a dedicated feedback pin and an exposed paddle.

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. 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.

### EVALUATION BOARD COMPONENT SIDE AND CIRCUIT SIDE DIAGRAMS

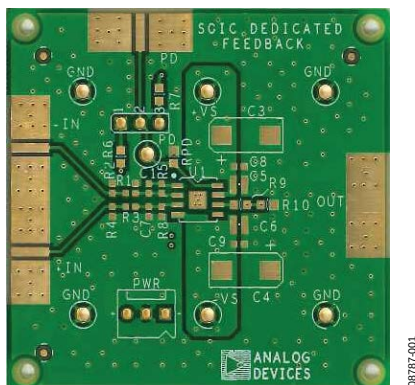


Figure 1. Component Side of the Evaluation Board

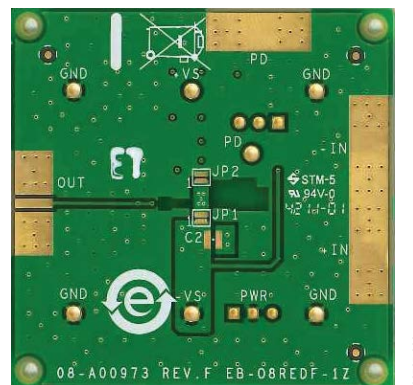


Figure 2. Circuit Side of the Evaluation Board

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REVISION HISTORY

|                                                              |            |
|--------------------------------------------------------------|------------|
| <b>12/12—Rev. A to Rev. B</b>                                |            |
| Changes to General Description, Figure 1, and Figure 2 ..... | 1          |
| Changes to Figure 4 to Figure 7 .....                        | 4          |
| <b>3/10—Rev. 0 to Rev. A</b>                                 |            |
| Changed EB-O8RE-1Z to EB-O8REDF-1Z .....                     | Throughout |
| Added Noninverting Configuration Section .....               | 5          |
| Added Ordering Information Section .....                     | 6          |
| <b>2/10—Revision 0: Initial Version</b>                      |            |

## 818-003

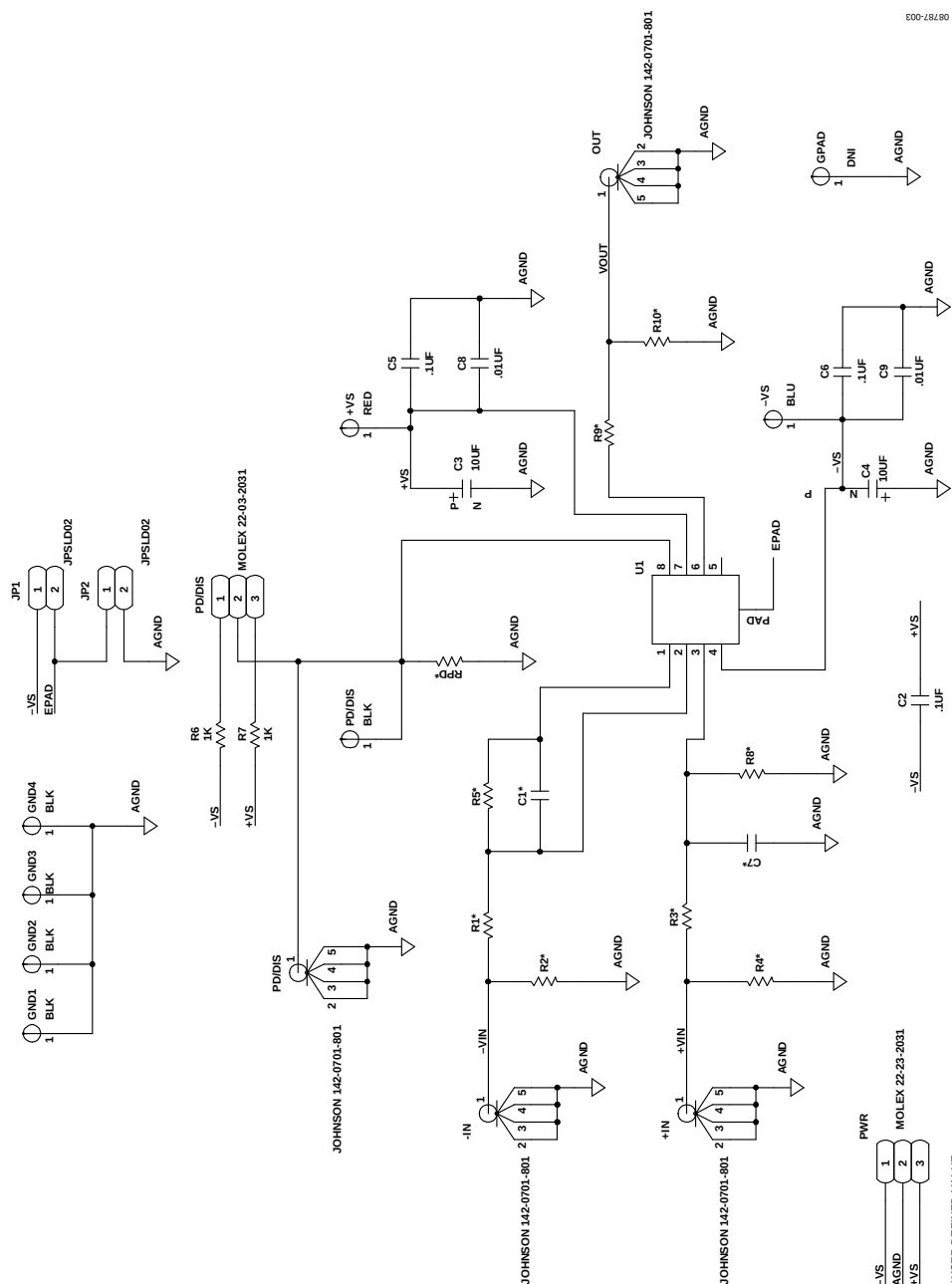


Figure 3. Evaluation Board Schematic

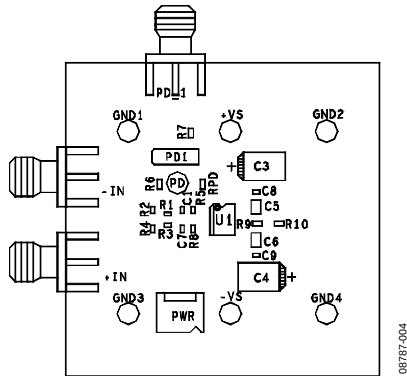


Figure 4. Board Assembly Drawing, Component Side

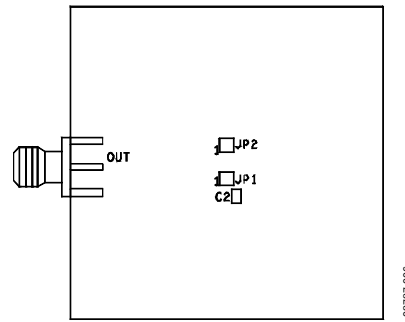


Figure 6. Board Assembly Drawing, Circuit Side

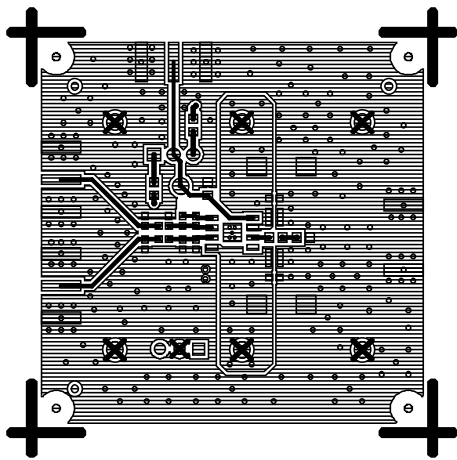


Figure 5. Board Layout Pattern, Component Side

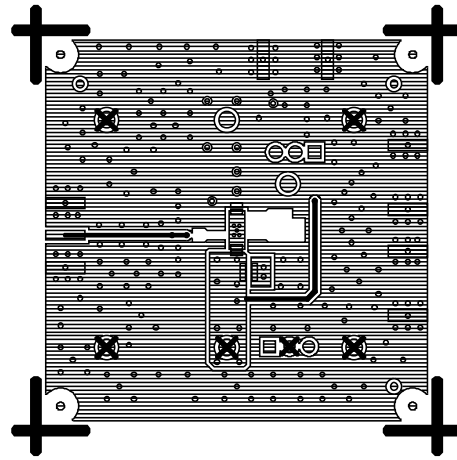


Figure 7. Board Layout Pattern, Circuit Side



## ORDERING INFORMATION

### BILL OF MATERIALS

Table 1.

| Quantity | Reference Designator                     | Description                                     | Package          |
|----------|------------------------------------------|-------------------------------------------------|------------------|
| 3        | +IN, –IN, OUT                            | Subminiature Version A/surface-mount technology | SMA/SMT          |
| 2        | C1, C7                                   | User-defined capacitors                         | C0402            |
| 2        | C8, C9                                   | 0.01 $\mu$ F capacitors                         | C0402            |
| 3        | C2, C5, C6                               | 0.1 $\mu$ F capacitors                          | C0508            |
| 2        | C3, C4                                   | 10 $\mu$ F capacitors                           | C6032            |
| 6        | R1, R2, R3, R4, R5, R8                   | User-defined resistors                          | R0402            |
| 3        | R9, R10, RPD                             | User-defined resistors                          | R0603            |
| 2        | R6, R7                                   | 1 k $\Omega$ resistors                          | R0603            |
| 7        | PD/DIS, GND1, GND2, GND3, GND4, +VS, –VS | Test points                                     | TP               |
| 1        | PWR                                      | Header 3 POS                                    | Molex 22-23-2031 |
| 1        | PD/DIS                                   | 3-pin straight header                           | Molex 22-03-2031 |
| 2        | JP1, JP2                                 | User-defined jumpers                            | Solder jumper    |
| 1        | U1                                       | Amplifier                                       | 8-lead SOIC      |

## NOTES

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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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