

Evaluation Board for Dual High Speed Operational Amplifiers (16-Lead, 4 mm × 4 mm LFCSP with Dedicated Feedback Pin)

FEATURES

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

GENERAL DESCRIPTION

The EB-O16CP44-2Z is designed to aid in the evaluation of dual high speed operational amplifiers. The EB-O16CP44-2Z 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 EB-O16CP44-2Z evaluation board supports any of the Analog Devices, Inc., dual high speed operational amplifiers in 16-lead, 4 mm × 4 mm lead frame chip scale packages (LFCSP) with dedicated feedback pins.

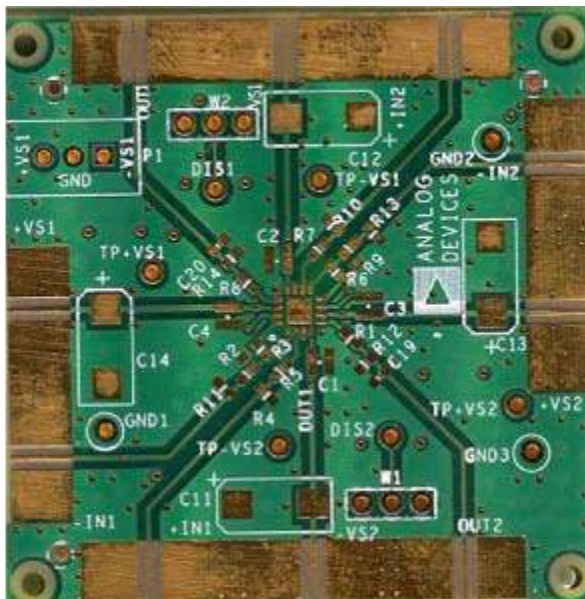
Figure 1 and Figure 2 show the component side and the circuit side of the evaluation board, respectively. Figure 3 shows the evaluation board schematic.

The 4-layer evaluation board accepts edge-mounted 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 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 AND CIRCUIT SIDE DIAGRAMS

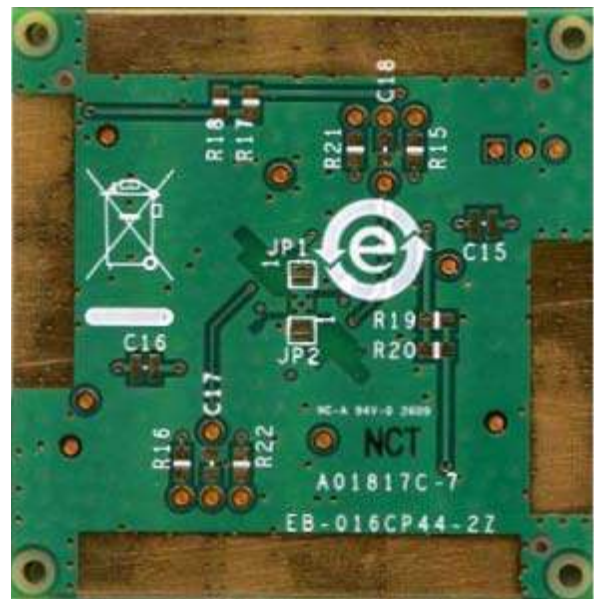


NOTES

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

Figure 1. EB-O16CP44-2Z Component Side of PCB

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NOTES

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Figure 2. EB-O16CP44-2Z Circuit Side of PCB

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TABLE OF CONTENTS

| | | | |
|---|---|---|---|
| Features | 1 | Evaluation Board Schematic | 3 |
| General Description | 1 | Assembly Drawing and Board Layout | 4 |
| Evaluation Board Component and Circuit Side Diagrams..... | 1 | Ordering Information..... | 5 |
| Revision History | 2 | Bill of Materials..... | 5 |

REVISION HISTORY

5/10—Rev. 0 to Rev. A

| | |
|---|---|
| Changes to Figure 1..... | 1 |
| Added Figure 2; Renumbered Sequentially | 1 |
| Added Table 1..... | 5 |

1/10—Revision 0: Initial Version

EVALUATION BOARD SCHEMATIC

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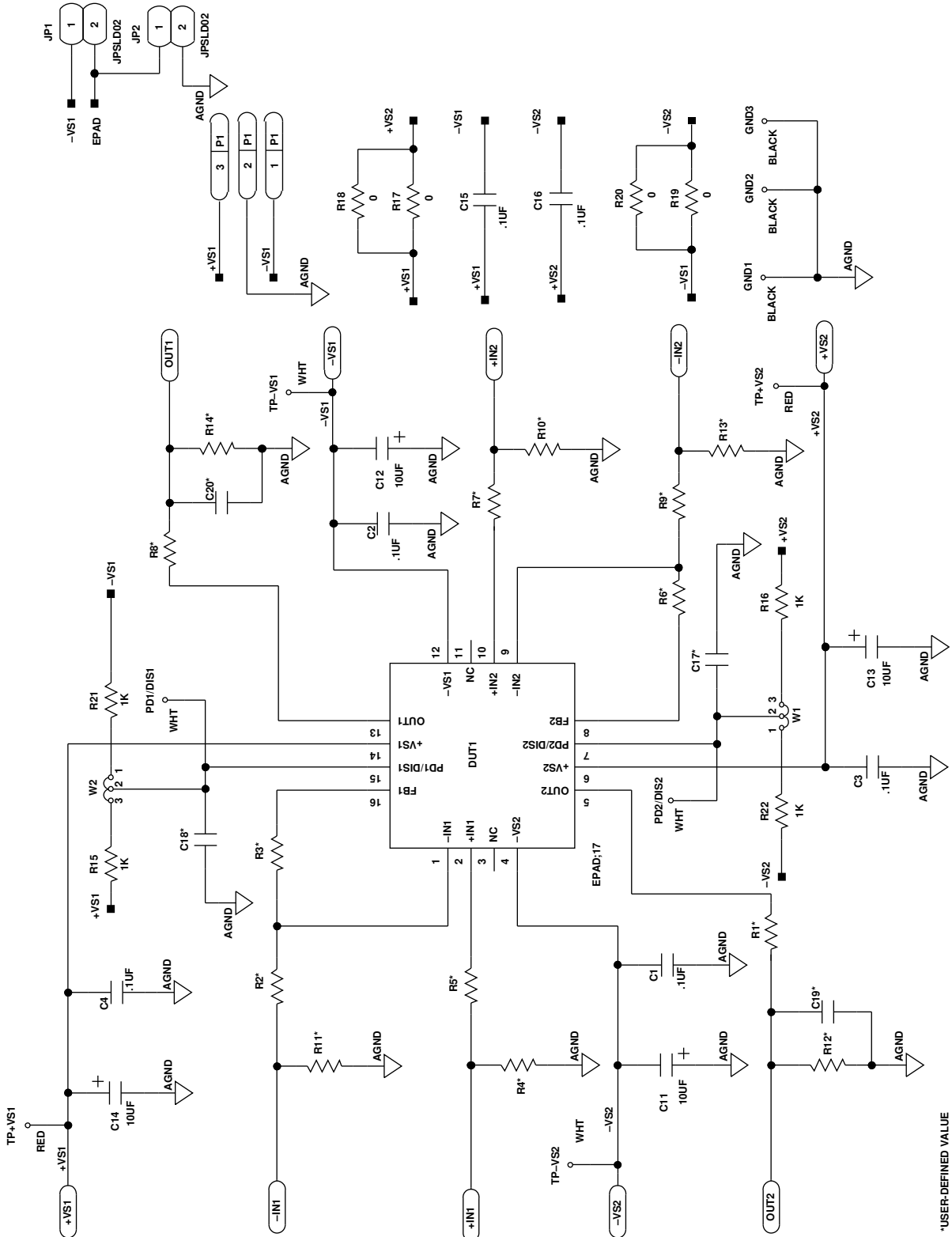


Figure 3. Universal Evaluation Board Schematic

ASSEMBLY DRAWING AND BOARD LAYOUT

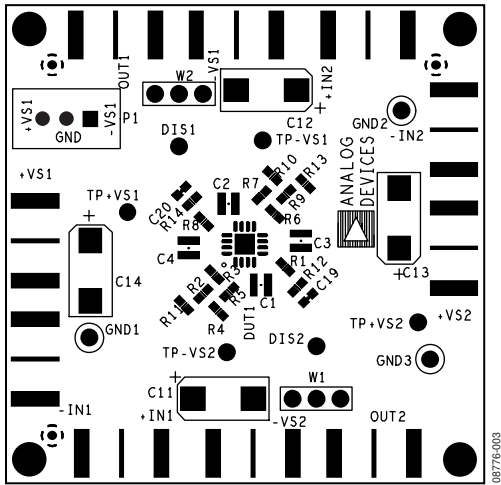


Figure 4. Board Assembly Drawing, Component Side

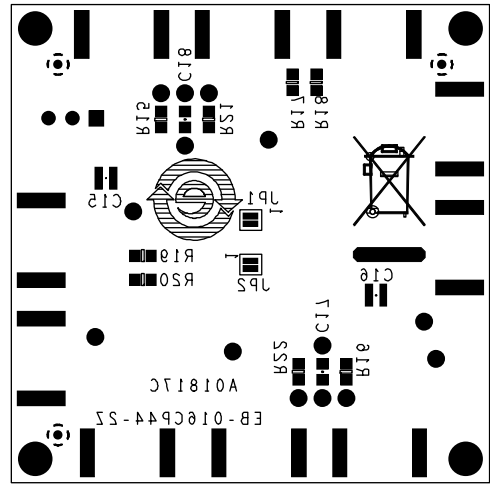


Figure 6. Board Assembly Drawing, Circuit Side

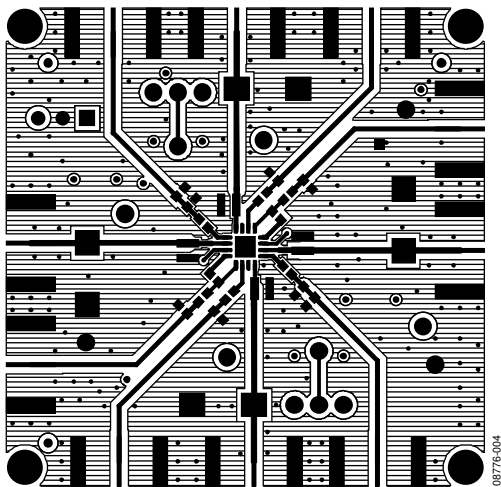


Figure 5. Board Layout Pattern, Component Side

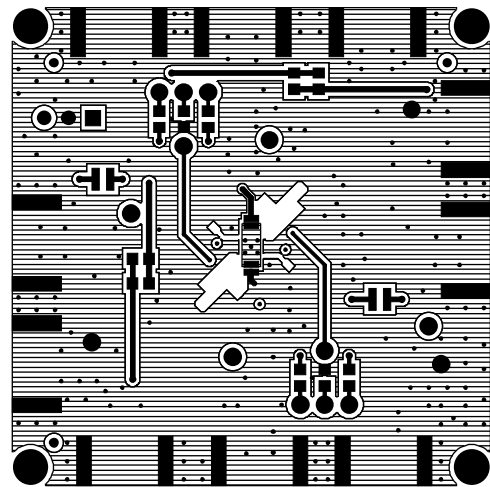


Figure 7. Board Layout Pattern, Circuit Side

ORDERING INFORMATION**BILL OF MATERIALS**

Table 1.

| Quantity | Reference Designator | Description | Package |
|----------|---|--|------------------|
| 6 | +IN1, +IN2, -IN1, -IN2, OUT1, OUT2 | SMA/SMT | SMA/SMT |
| 6 | C1, C2, C3, C4, C15, C16 | 0.1 μ F capacitor | C0508 |
| 2 | C17, C18 | User-defined capacitor | C0603 |
| 2 | C19, C20 | User-defined capacitor | C0402 |
| 4 | C11, C12, C13, C14 | 10 μ F capacitor | C6032 |
| 14 | R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14 | User-defined resistor | R0402 |
| 4 | R17, R18, R19, R20 | 0 Ω , short the two supplies together | R0603 |
| 4 | R15, R16, R21, R22 | 1 k Ω | R0603 |
| 9 | PD1/DIS1, PD2/DIS2, GND1 to GND3, +VS1, -VS1, +VS2, -VS2 | Test point | TP |
| 1 | P1 | Header 3-position | Molex 22-23-2031 |
| 2 | W1, W2 | 3-pin straight header | Molex 22-03-2031 |
| 2 | JP1, JP2 | User-defined jumper | Solder jumper |
| 1 | U1 | Amplifier | SOIC |

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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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