

## Evaluating the **AD8003** Triple, 1.5 GHz Op Amp

### FEATURES

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

### GENERAL DESCRIPTION

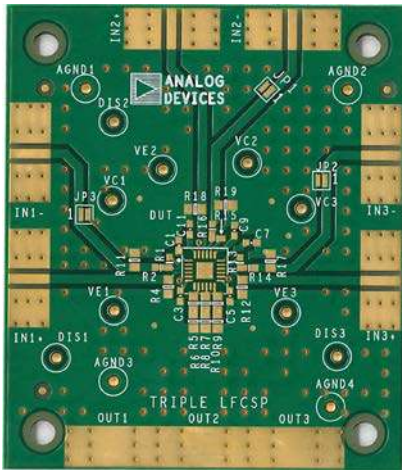
The **AD8003** evaluation board is specifically designed to evaluate the **AD8003**, a triple high speed, current feedback amplifier. The evaluation board is a bare board (that is, there are no components soldered to the board) that enables users to quickly prototype a variety of amplifier circuits, which minimizes risk and reduces time to market.

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

The evaluation board is a 4-layer printed circuit board (PCB) that accepts edge-mounted Subminiature A (SMA) connectors on the inputs and outputs, which allows efficient connection to test equipment and other circuits. The ground plane, component placement, and supply bypassing have been optimized for performance and circuit flexibility. The evaluation board uses a variety of surface-mount technology (SMT) component case sizes: 0402, 0603, and 3528.

Figure 4 and Figure 6 show the component side and circuit side of the evaluation board assembly drawing. The recommended layout pattern for connecting the board to the op amp and to the supporting circuitry is shown in Figure 5 and Figure 7.

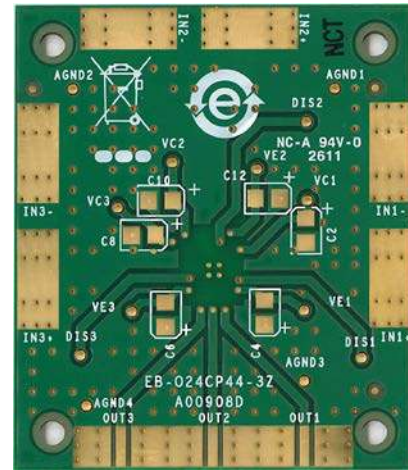
### DIGITAL PICTURES OF THE COMPONENT SIDE AND CIRCUIT SIDE OF THE EVALUATION BOARD



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

08149-006

Figure 1. Component Side of the **AD8003** Evaluation Board



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

08149-008

Figure 2. Circuit Side of the **AD8003** Evaluation Board

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**REVISION HISTORY**

**9/12—Rev. A to Rev. B**

Changes to User Guide Title, General Description Section, and  
Figure 1 ..... 1  
Changes to Figure 2 Caption..... 3  
Changes to Figure 4 to Figure 7 ..... 4  
Added Ordering Information Section, Bill of Materials, and  
Table 1 ..... 5

**2/10—Rev. 0 to Rev. A**

Changes to General Description and Figure 1 ..... 1

**7/09—Revision 0: Initial Version**

EVALUATION BOARD SCHEMATIC

100-69180

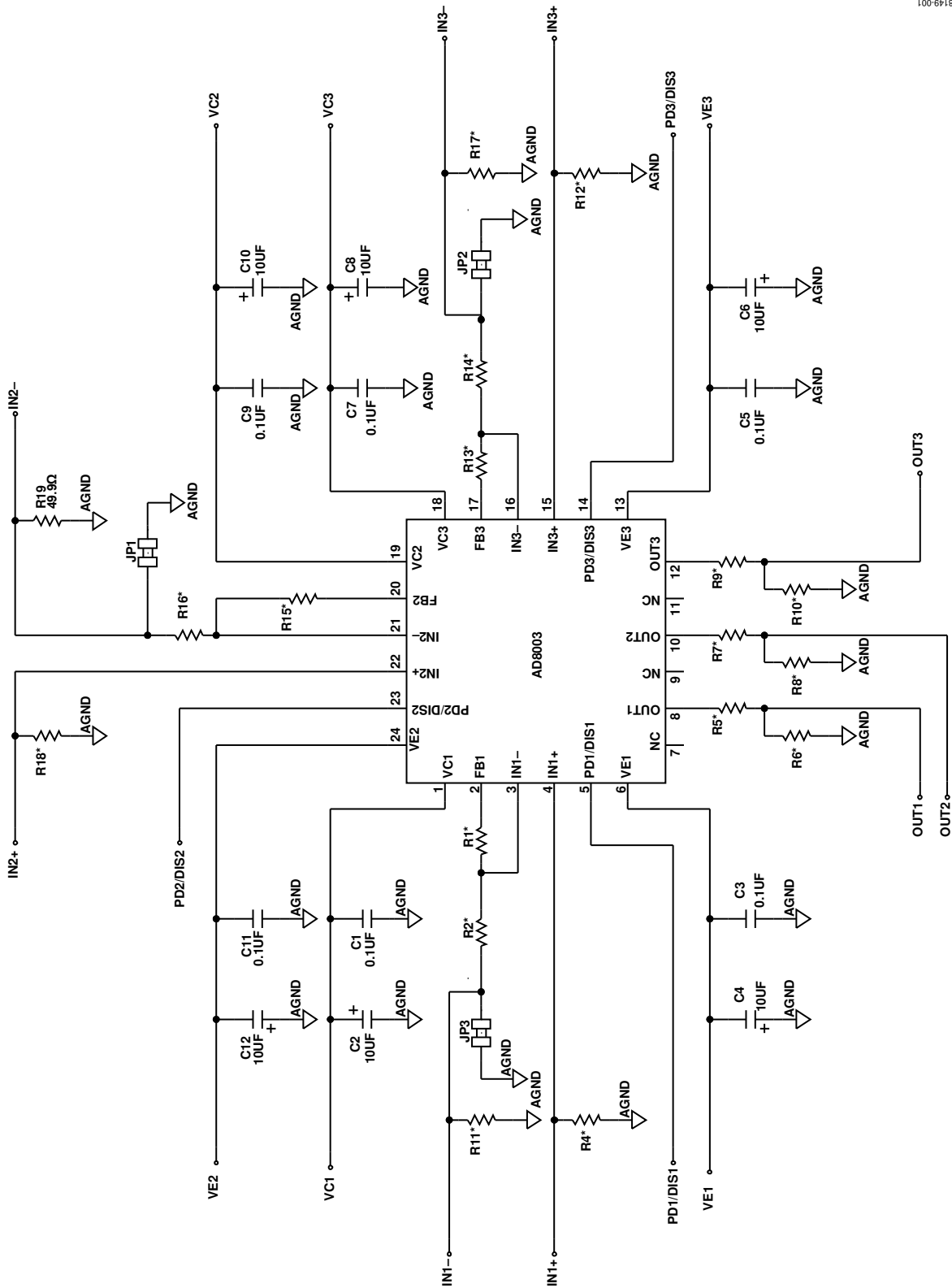


Figure 3. Evaluation Board Schematic

ASSEMBLY DRAWING AND BOARD LAYOUT

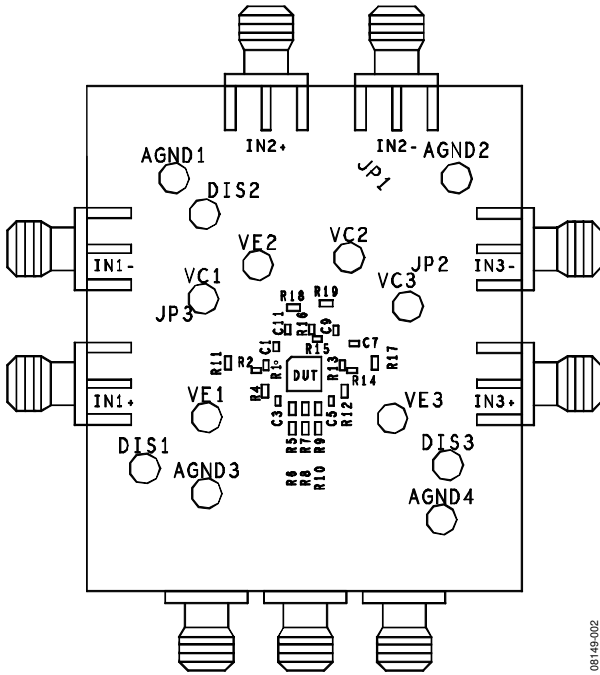


Figure 4. Board Assembly Drawing, Component Side

08149-002

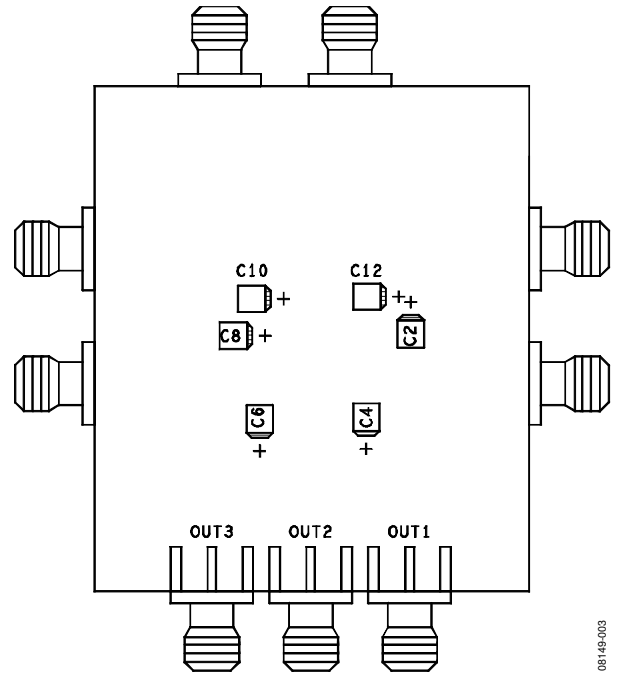


Figure 6. Board Assembly Drawing, Circuit Side

08149-003

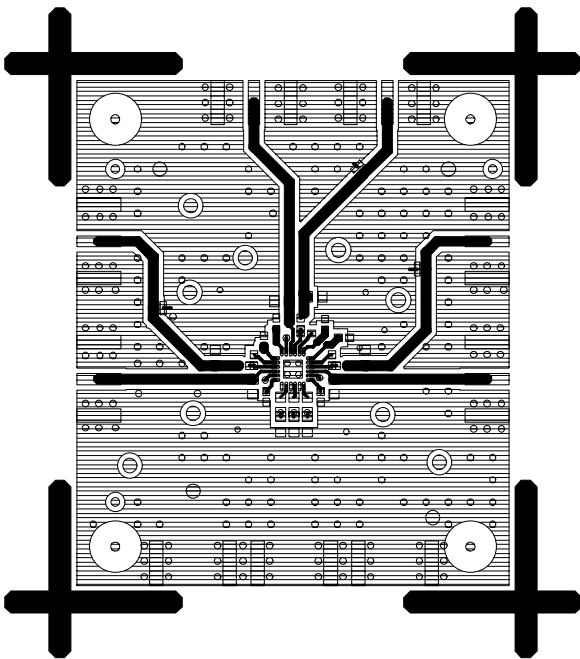


Figure 5. Board Layout Pattern, Component Side

08149-004

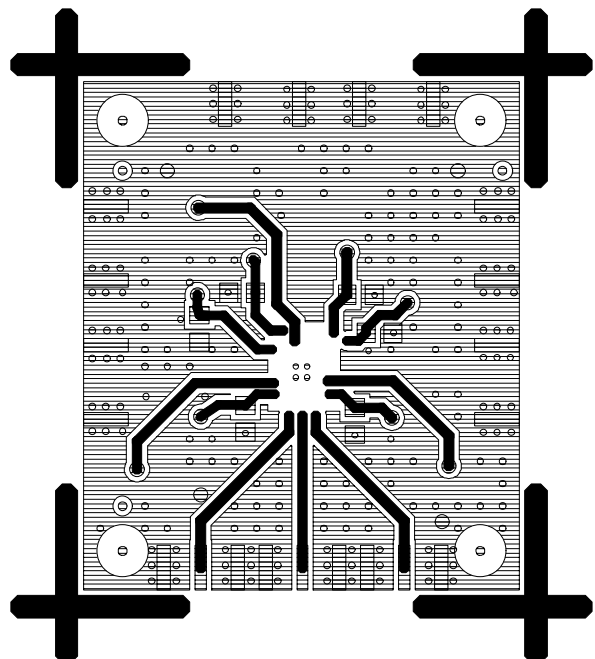


Figure 7. Board Layout Pattern, Circuit Side

08149-005

**ORDERING INFORMATION****BILL OF MATERIALS**

Table 1.

Quantity	Reference Designator	Description	Package
1	PCB	Printed circuit board	
13	VC1 to VC3, VE1 to VE3, PD1/DIS1 to PD3/DIS3, AGND1 to AGND4	CONN-PCB pin vector	CNLOOPTP_D45
6	C1, C3, C5, C7, C9, C11	0.1 $\mu$ F capacitors	0402
6	C2, C4, C6, C8, C10, C12	10 $\mu$ F capacitors	3528
1	DUT	<a href="#">AD8003</a>	QFN24_4X4_PAD2_1X2_1
9	IN1+ to IN3+, -IN1 to -IN3, OUT1 to OUT3	SMA connector	CNJOHNSON142-0701-801
6	R1, R2, R13 to R16	User defined value	0402
3	R6, R8, R10	User defined value	0603
6	R4, R11, R12, R17 to R19	User defined value	0603
3	R5, R7, R9	User defined value	0603

**NOTES**

**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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