

Evaluation Board for the **ADA4830-1**, High Speed Difference Amplifier Offered in 8-Lead LFCSP

FEATURES

- Enables quick breadboarding/prototyping
- Edge-mounted SMA connector provisions
- Easy connection to test equipment and other circuits

GENERAL DESCRIPTION

The **ADA4830-1BCP-EBZ** evaluation board makes it easy for designers to quickly observe the performance of the **ADA4830-1** difference amplifier in real-world applications. Input signals are applied through SMA jacks (INP, INN), and the output is taken from SMA Jack VOUT. Power is applied through the red +VS pin. The black GND pin should be grounded.

The **ADA4830-1BCP-EBZ** inputs can be driven by either a balanced (differential) or unbalanced (single-ended) source. For unbalanced signals, connect the unused input (INN) to ground at the signal source. The evaluation board is shipped with a 75 Ω differential input termination at R5. The **ADA4830-1BCP-EBZ** board is configured with a 75 Ω series resistor, R6, installed at the output. This can be changed to match the actual

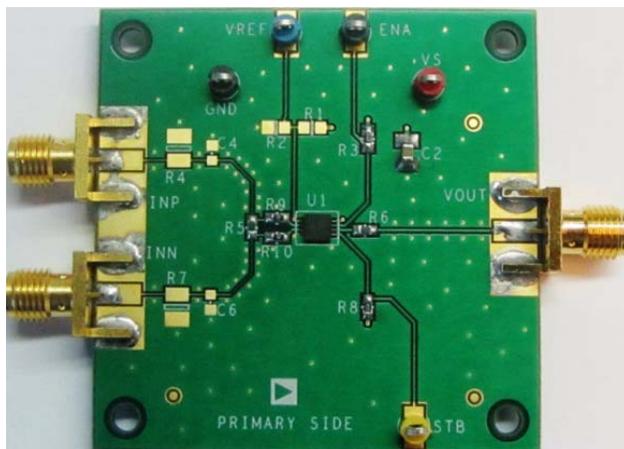
load impedance. The VREF pin at the upper left of the board can be used to set the output bias voltage. It is internally biased to +VS/2 when this pin is floating. Resistors R1 and R2 are provided as an option to force a new bias level at VREF.

The **ADA4830-1** can be powered down (disabled) by grounding the ENA pin at the top right of the evaluation board. On the evaluation board, this pin can be pulled up to +VS through Resistor R3 or left floating for normal operation.

In normal operation, the open-drain short-to-battery output flag (STB) is held at a logic high, connected to +VS through Resistor R8. During a short-to-battery condition (9.5 V to 18 V on either input), it is driven to a logic low state. The STB pin (lower right of the evaluation board) can be used to monitor the short-to-battery indicator function.

Figure 1 shows the bare evaluation board, component side and circuit side. Figure 2 shows the evaluation board schematic. The PCB layout pattern for the PCB is shown in Figure 3 and Figure 4.

DIGITAL PICTURE OF EVALUATION BOARD



PRIMARY SIDE



SECONDARY SIDE

NOTES

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

Figure 1. **ADA4830-1BCP-EBZ** Component Side (Primary) and Circuit Side (Secondary) of PCB

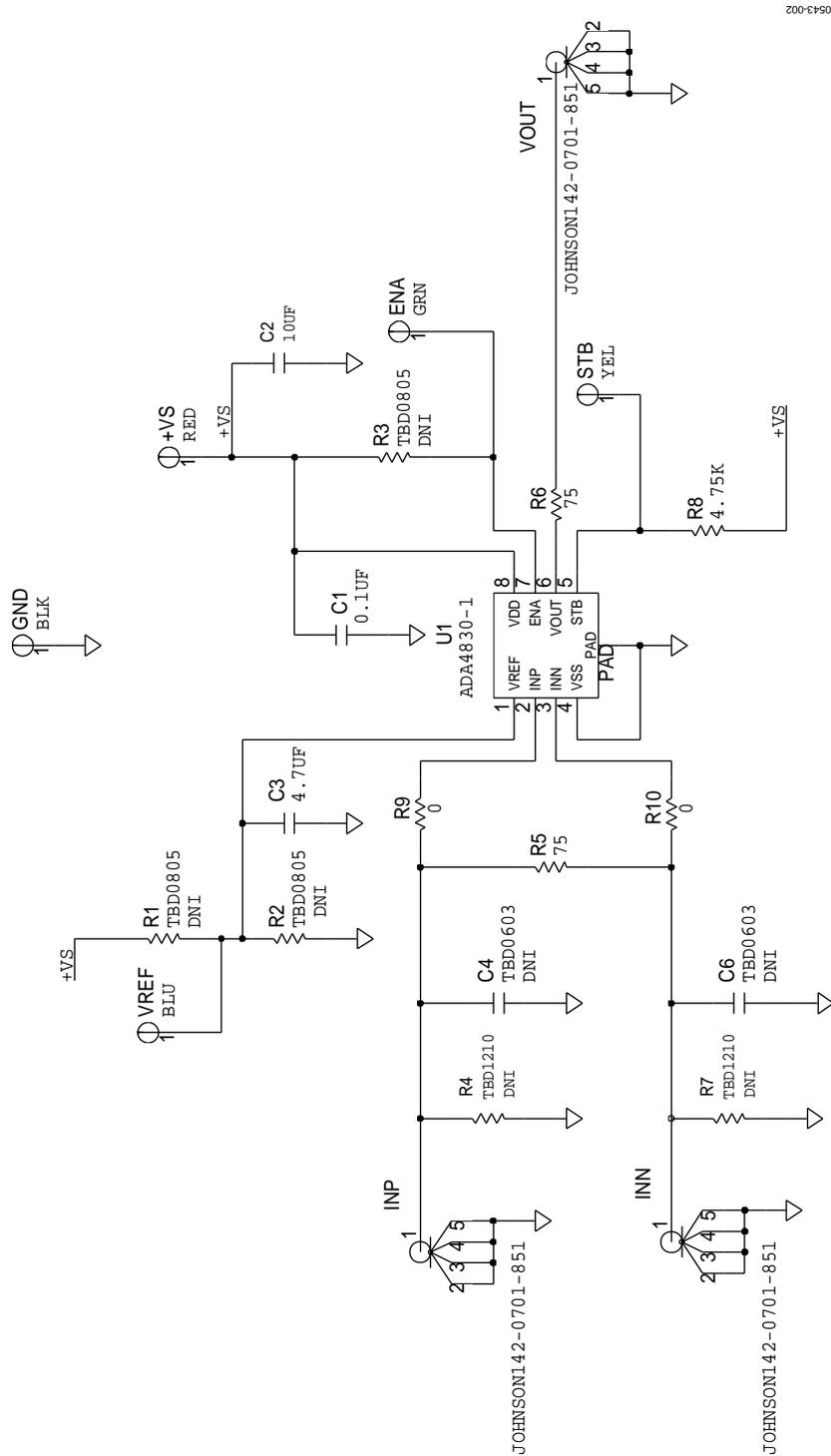
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REVISION HISTORY

2/12—Revision 0: Initial Version

EVALUATION BOARD SCHEMATIC AND ARTWORK



10943-002

Figure 2. ADA4830-1BCP-EBZ Board

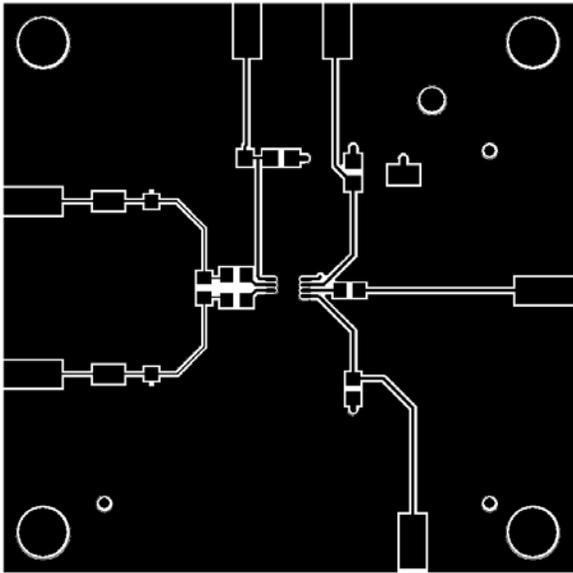


Figure 3. ADA4830-1BCP-EBZ Board Layout Pattern, Primary Side

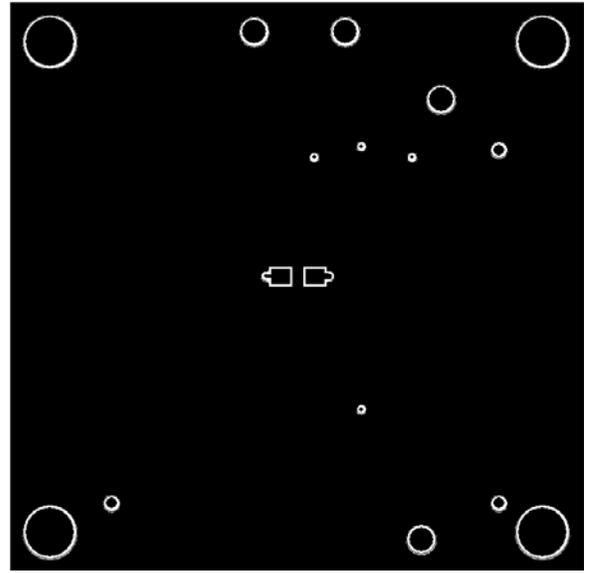


Figure 4. ADA4830-1BCP-EBZ Board Layout Pattern, Secondary Side

ORDERING INFORMATION**BILL OF MATERIALS**

Table 1.

Quantity	Reference Designator	Description	Package
1	U1	ADA4830-1	8-lead LFCSP
1	+Vs	Red test point loop connector	TP1
1	C1	0.1 μ F chip capacitor	0805
1	C2	10 μ F chip capacitor	1210
1	C3	4.7 μ F chip capacitor	0805
1	ENA	Green test point loop connector	TP1
1	GND	Black test point loop connector	TP1
3	INN, INP, VOUT	SMA coaxial end launch connector	
2	R9, R10	0 Ω resistor	0603
2	R5, R6	75 Ω resistor	0603
1	R8	4.99 k Ω resistor	0603
1	STB	Yellow test point loop connector	TP1
1	VREF	Blue test point loop connector	TP1
3	R1, R2, R3	Do not install resistors	0805
2	C4, C6	Do not install capacitors	0603
2	R4, R7	Do not install resistors	1210

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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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