

## LTC6404-1 Rail-to-Rail SAR ADC Driver Amplifier

### DESCRIPTION

Demonstration circuit 2623A features the LTC<sup>®</sup>6404-1 amplifier. The DC2623A includes two of these amplifiers and is designed to drive the inputs of the DC2290 demo board. The DC2290 features the LTC<sup>®</sup>2387 18-bit, 15MSPS high speed SAR ADC. The linearity and low noise of the LTC6404-1 make it an ideal candidate to drive the LTC2387 at frequencies above 1MHz. See Table 1.

Note: The DC2623A is configured to provide a voltage gain of 4 from either a single-ended source or a differential one.

**Design files for this circuit board are available at <http://www.linear.com/demo/DC2623A>**

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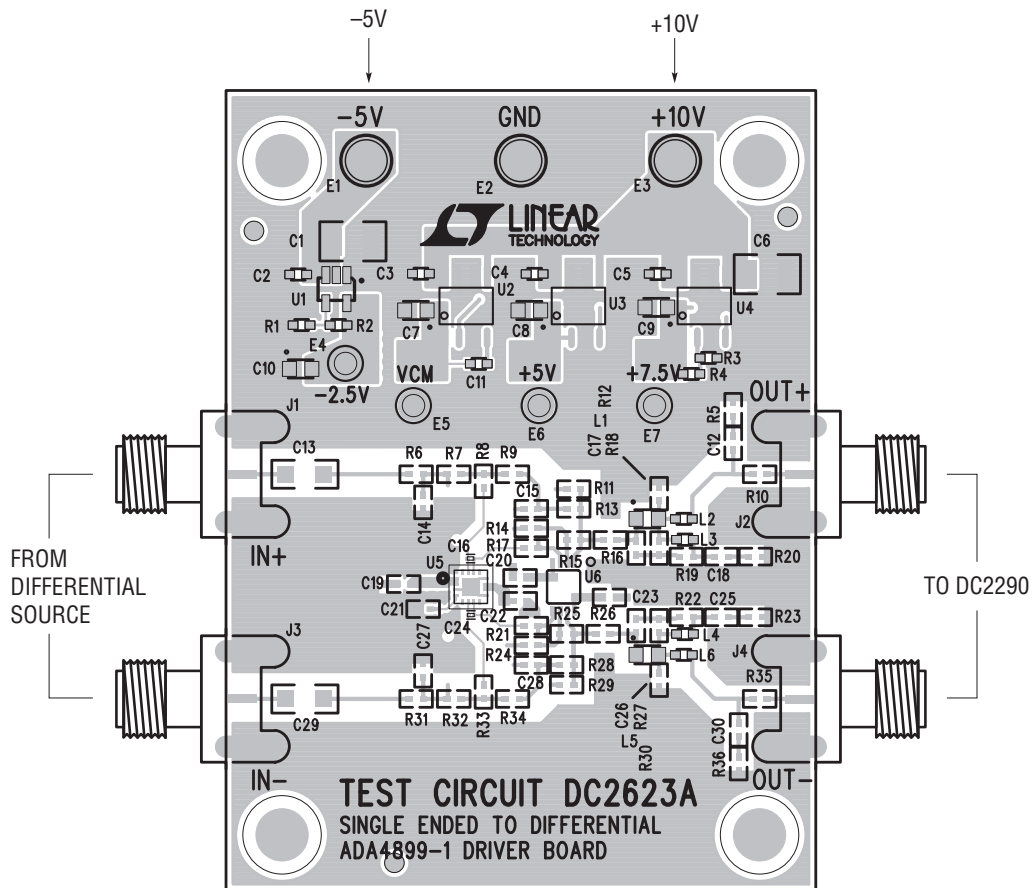


Figure 1. DC2623A Connection Diagram

Table 1. DC2290 (LTC2387 Family) Driver Boards

INPUT FREQUENCY	DRIVER BOARD	AMPLIFIER
Up to 8kHz	DC2402	LT6237
Up to 1MHz	DC2403	LT6200
>1MHz	Lowest Noise: DC2622 Lowest Distortion: DC2623	ADA4899 LTC6404-1 + AD8002

## **QUICK START PROCEDURE**

Connect the DC2623A to a DC2290 using the two output SMA connectors J2, J4. Connect the +10V and -5V DC supplies to the turrets on the DC2623A.

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## **HARDWARE SETUP**

### **SIGNAL CONNECTIONS**

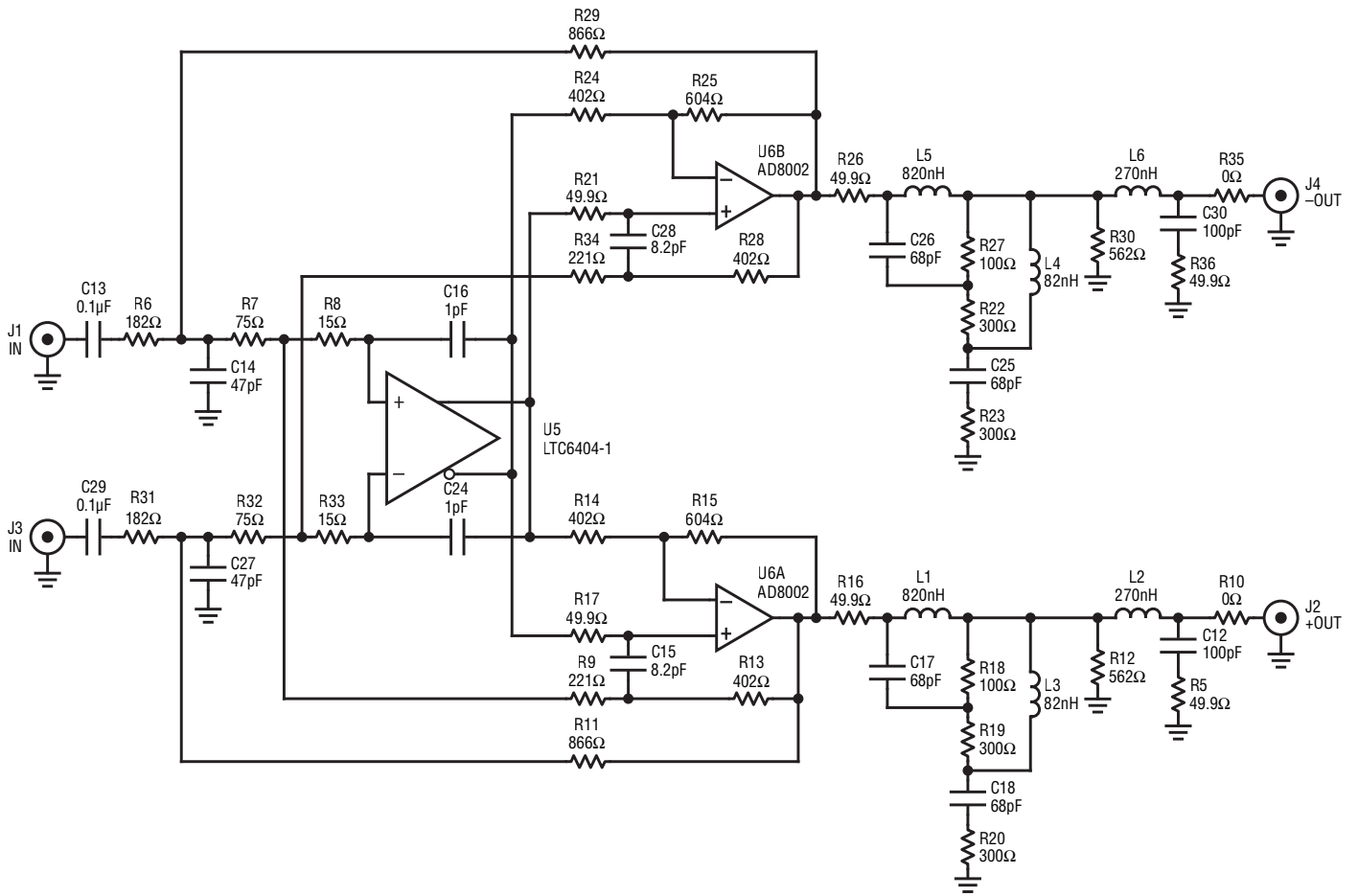
**J1** +IN. This is the positive signal input.

**J3** -IN. This is the negative signal input.

**J4** -OUT. This is the negative signal output.

**J2** +OUT. This is the positive signal output.

**SCHEMATIC DIAGRAM**



# DEMO MANUAL DC2623A

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This notice contains important safety information about temperatures and voltages. For further safety concerns, please contact a LTC application engineer.

Mailing Address:

Linear Technology  
1630 McCarthy Blvd.  
Milpitas, CA 95035

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