

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

DESCRIPTION

Demonstration circuit 2623A features the [LTC®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®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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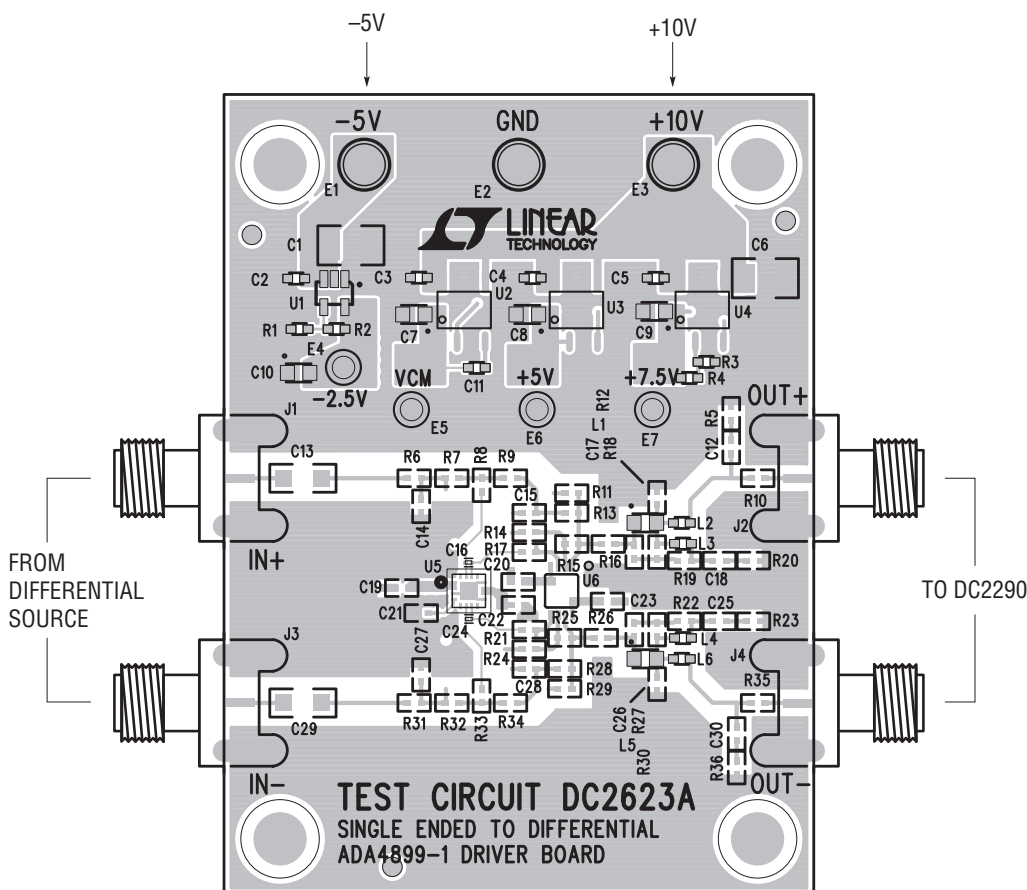


Figure 1. DC2623A Connection Diagram

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

DEMO MANUAL DC2623A

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.

HARDWARE SETUP

SIGNAL CONNECTIONS

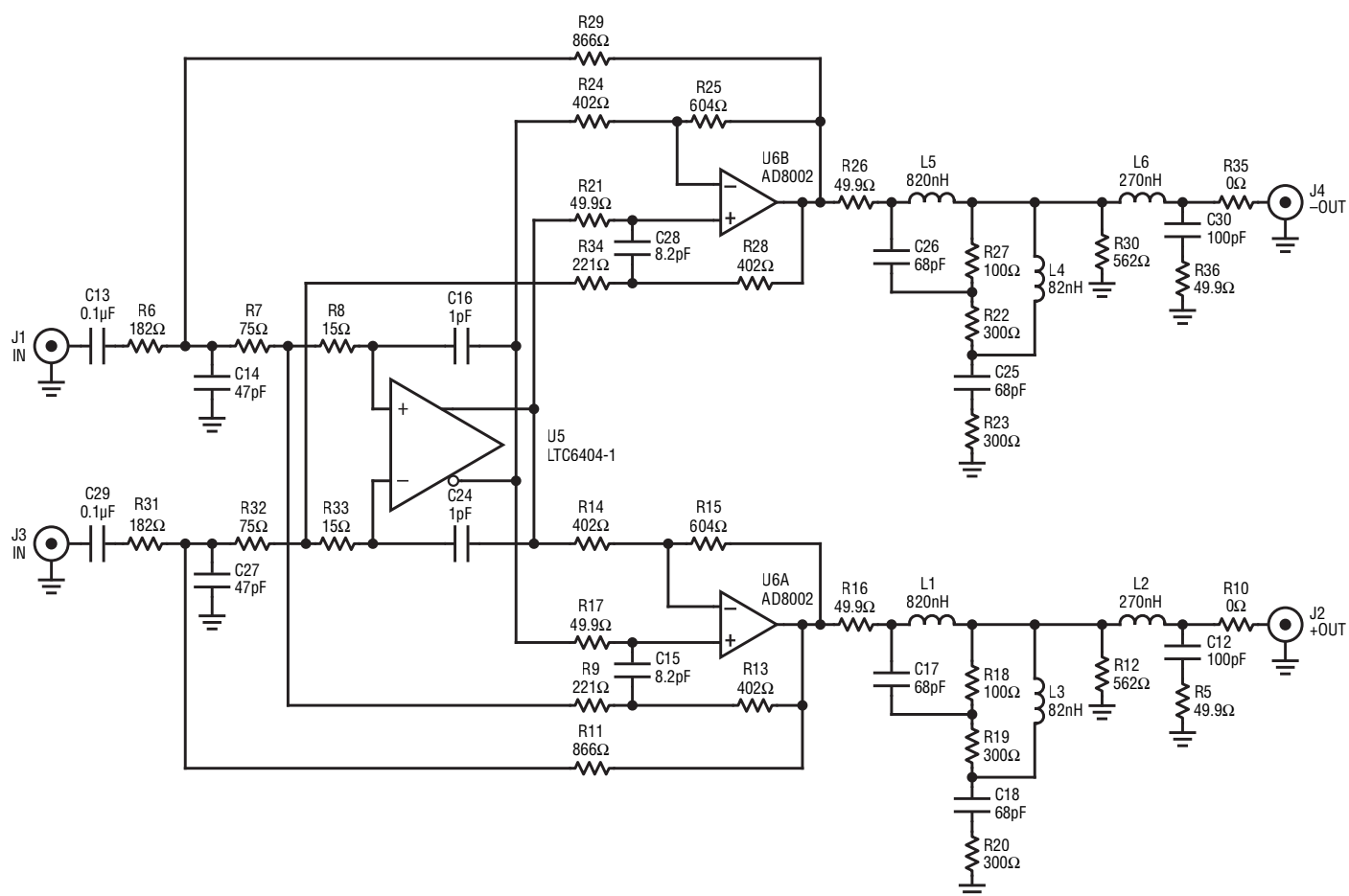
J1 +IN. This is the positive signal input.

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.

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