

ADA4899-1 Rail-to-Rail SAR ADC Driver Amplifier

DESCRIPTION

Demonstration circuit 2622A features the ADA4899-1 amplifier. The DC2622A 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 ADA4899-1 make it an ideal candidate to drive the LTC2387 at frequencies above 1MHz. See Table 1.

The DC2622A is configured to accept a single-ended input signal and provide unity gain. The board can provide voltage gain if several component values are changed. For

example, a voltage gain of two will result if the following changes are made:

- Change R23 to 309Ω
- Install 309Ω at R27
- Install 100pF at C28
- Change R18 to 287Ω

Design files for this circuit board are available at
<http://www.linear.com/demo/DC2622A>

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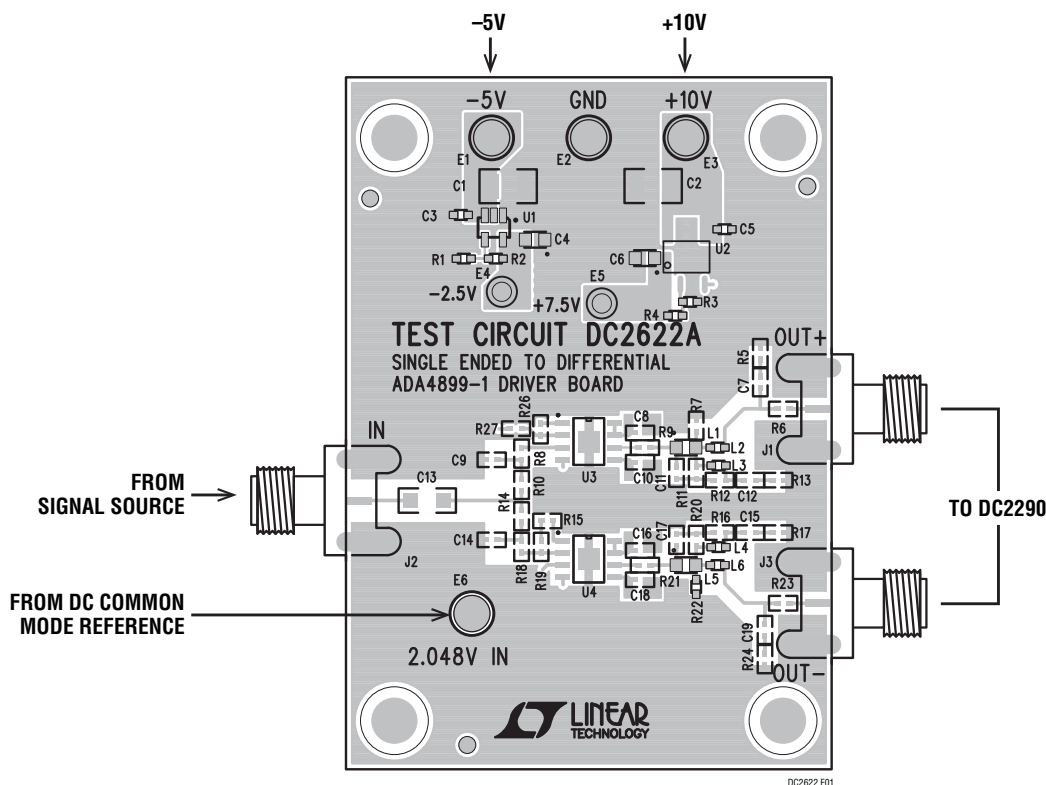


Figure 1. DC2622A Connection Diagram

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	ADA4899-1 LTC6404-1 + AD8002

DEMO MANUAL DC2622A

QUICK START PROCEDURE

Connect the DC2622A to a DC2290A using the two output SMA connectors J1, J3. Connect the +10V and –5V DC supplies to the turrets on the DC2622A. Apply a 2.048V

DC voltage, preferably from E7 of the DC2290A, to 2.048V in turret of the DC2622A.

HARDWARE SETUP

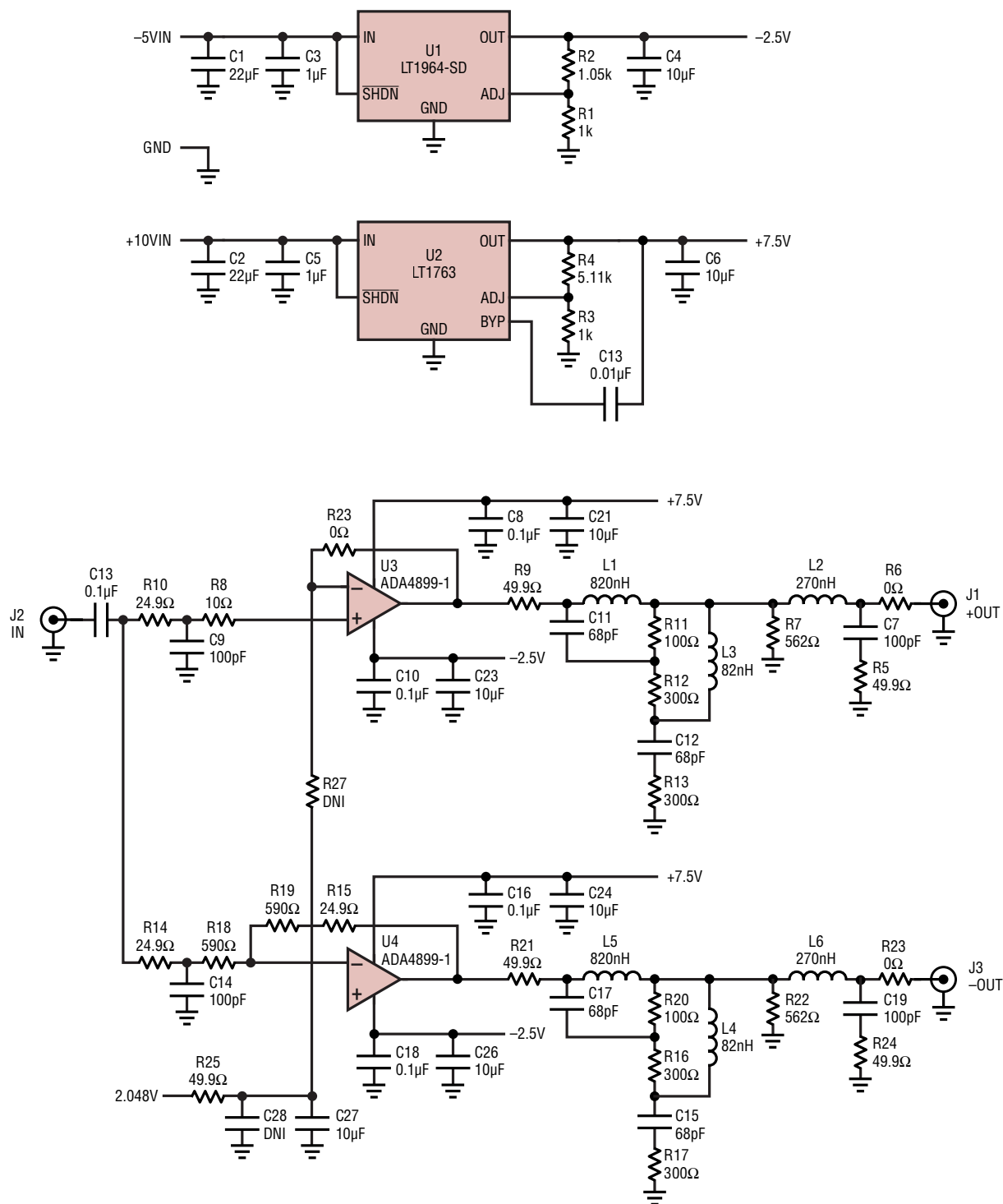
SIGNAL CONNECTIONS

J2 IN. This is the signal input.

J3 –OUT. This is the negative signal output.

J1 +OUT. This is the positive signal output.

SCHEMATIC DIAGRAM



DEMO MANUAL DC2622A

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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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