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LT6200  
 Rail-to-Rail SAR ADC  
 Driver Amplifier

## DESCRIPTION

Demonstration circuit 2403A features the **LT<sup>®</sup>6200** amplifier. The DC2403A includes two of these amplifiers and is designed to drive the inputs of the DC2290A demo board. The DC2290A features the **LTC<sup>®</sup>2387** 18-bit, 15MSPS high speed SAR ADC. The linearity and low noise of the

LT6200 make it an ideal candidate to drive the LTC2387 at frequencies up to 1MHz. See Table 1.

**Design files for this circuit board are available at <http://www.linear.com/demo/DC2403A>**

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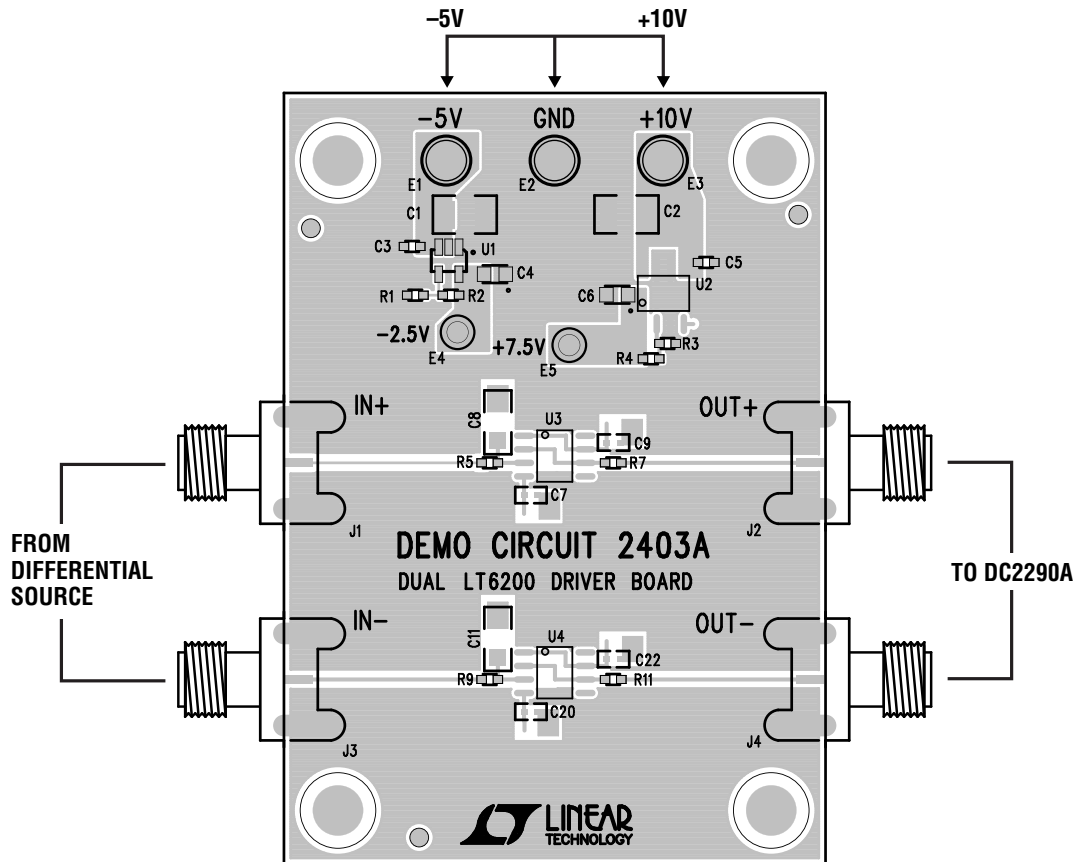


Figure 1. DC2403A Connection Diagram

Table 1. DC2290A (LTC2387 Family) Driver Board

INPUT FREQUENCY	DRIVE BOARD	AMPLIFIER
Up to 8kHz	DC2402	LT6237
Up to 1MHz	DC2403	LT6200
>1MHz	Contact Factory	Contact Factory

dc2403afa

# DEMO MANUAL DC2403A

## QUICK START PROCEDURE

Connect the DC2403A to a DC2290A using the two output SMA connectors J2, J4. Connect the +10V and -5V DC supplies to the turrets on the DC2403A.

## HARDWARE SETUP

### SIGNAL CONNECTIONS

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

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

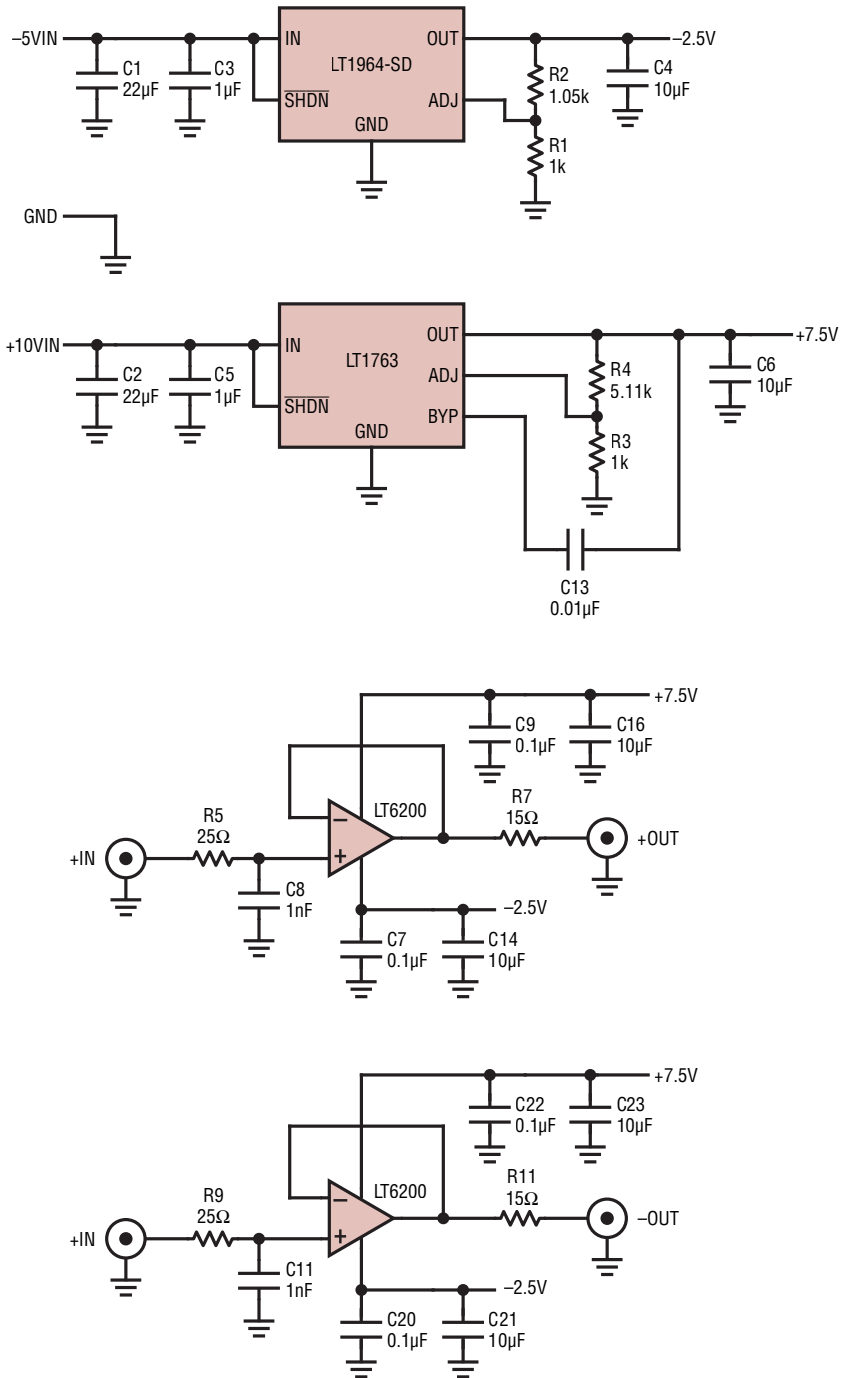
**J4** -OUT. This is the negative signal output.

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

## PARTS LIST

ITEM	QTY	REFERENCE	PART DESCRIPTION	MANUFACTURER/PART NUMBER
1	6	C4, C6, C14, C16, C21, C23	CAP., TANT, 10 $\mu$ F, 16V, 20%, 0805	VISHAY, 298D106X0016R2T
2	2	C3, C5	CAP., X5R, 1 $\mu$ F, 16V, 10%, 0603	AVX, 0603YD105KAT2A
3	2	C1, C2	CAP., X5R, 22 $\mu$ F, 16V 10%, 1210	AVX, 1210YD226KAT2A
4	4	C7, C9, C20, C22	CAP., X5R, 0.1 $\mu$ F, 16V 10% 0402	AVX, 0402YD104KAT2A
5	1	C13	CAP., X7R, 0.01 $\mu$ F, 6.3V 10%, 0603	MURATA, GRM188R70J103KA01D
6	2	C8, C11	CAP., NPO, 1000pF, 16V, 5%, 1206	AVX, 1206YA102JAT2A
7	2	E4, E5	TEST POINT, TURRET, .064"	MILL MAX, 2308-2-00-80-00-00-07-0
8	3	E1, E2, E3	TEST POINT, TURRET, .094"	MILL-MAX, 2501-2-00-80-00-00-07-0
9	2	J1, J3	CONN, SMA, 50 $\Omega$ , EDGE-LAUNCH, FEMALE	E.F. JOHNSON, 142-0701-851
10	2	J2, J4	CONN, SMA, 50 $\Omega$ , EDGE-LAUNCH, MALE	E.F. JOHNSON, 142-0801-811
11	2	R5, R9	RES., 24.9 $\Omega$ , 1/10W, 1% 0603	PANASONIC, ERJ-3EKF24R9V
12	2	R7, R11	RES., 15.0 $\Omega$ , 1/10W, 1% 0603	PANASONIC, ERJ-3EKF15R0V
13	1	R4	RES., 5.11k $\Omega$ , 1/10W, 1% 0603	PANASONIC, ERJ-3EKF5111V
14	2	R1, R3	RES., 1.00k $\Omega$ , 1/10W, 1% 0603	PANASONIC, ERJ-3EKF1001V
15	1	R2	RES., 1.05k $\Omega$ , 1/10W, 1% 0603	PANASONIC, ERJ-3EKF1051V
16	1	U2	IC, MICROPOWER REGULATOR, S08	LINEAR TECH., LT1763CS8#PBF
17	2	U3, U4	IC, 400MHz AMPLIFIER, MS8	LINEAR TECH., LT6200CS8#PBF
18	1	U1	IC, MICROPOWER NEG. REGULATOR, SOT-23	LINEAR TECH., LT1964ES5-SD#PBF

**SCHEMATIC DIAGRAM**



# DEMO MANUAL DC2403A

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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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