

LTC6363
Rail-to-Rail SAR ADC
Driver Amplifier

DESCRIPTION

Demonstration circuit 2487A features the LTC®6363 amplifier. The DC2487A is designed to drive the inputs of the DC2290A demo board. The DC2290A features the LTC®2387 18-bit, 15Msps high speed SAR ADC. The linearity and low noise of the LTC6363 make it an ideal candidate to drive

the LTC2387 at frequencies up to 100kHz. See Table 1.

Design files for this circuit board are available at <http://www.linear.com/demo/DC2487A>

LT, LT, LTC, LTM, Linear Technology and the Linear logo are registered trademarks of Linear Technology Corporation. All other trademarks are the property of their respective owners.

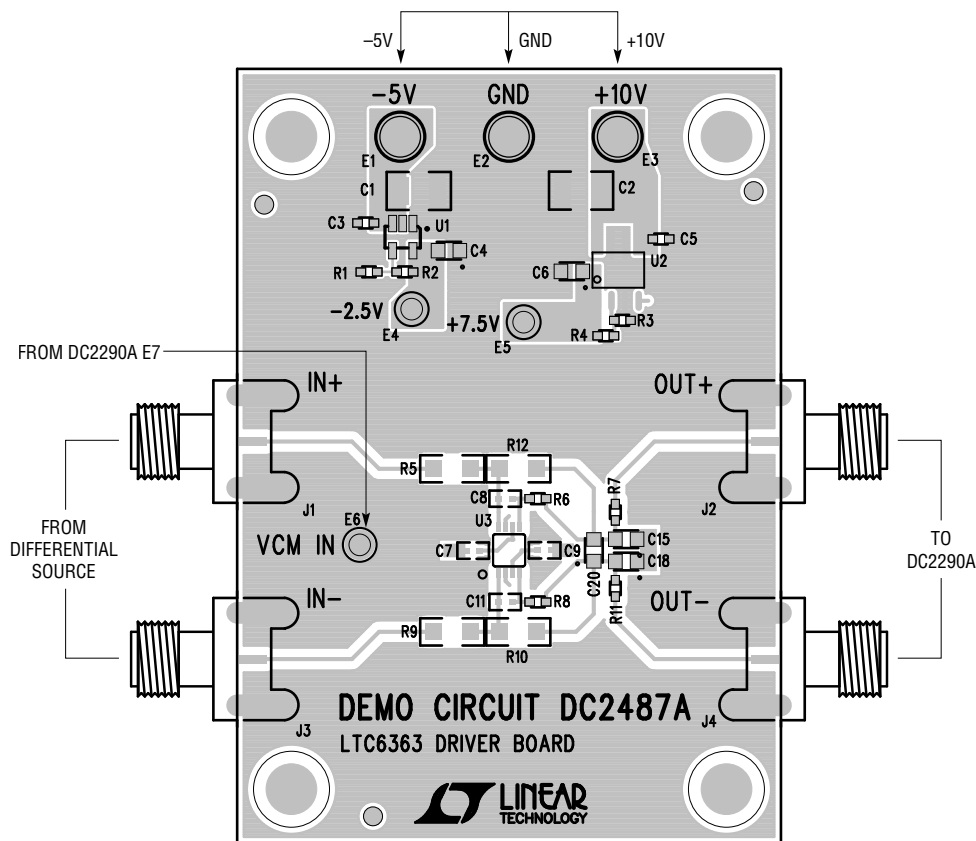


Figure 1. DC2487A Connection Diagram

Table 1. DC2290A (LTC2387 Family) Driver Board

INPUT FREQUENCY	DRIVE BOARD	AMPLIFIER
Up to 10kHz	DC2402	LT6237
Up to 100kHz	DC2487	LTC6363
Up to 1MHz	DC2403	LT6200
>1MHz	Contact Factory	Contact Factory

DEMO MANUAL DC2487A

QUICK START PROCEDURE

Connect the DC2487A to a DC2290A using the two output SMA connectors J2, J4. Connect the +10V and -5V DC supplies to the turrets on the DC2487A. Connect the VCM IN turret to E7 of the DC2290A.

HARDWARE SETUP

SIGNAL CONNECTIONS

J1 +IN. This is the positive signal input.

J3 -IN. This is the negative signal input.

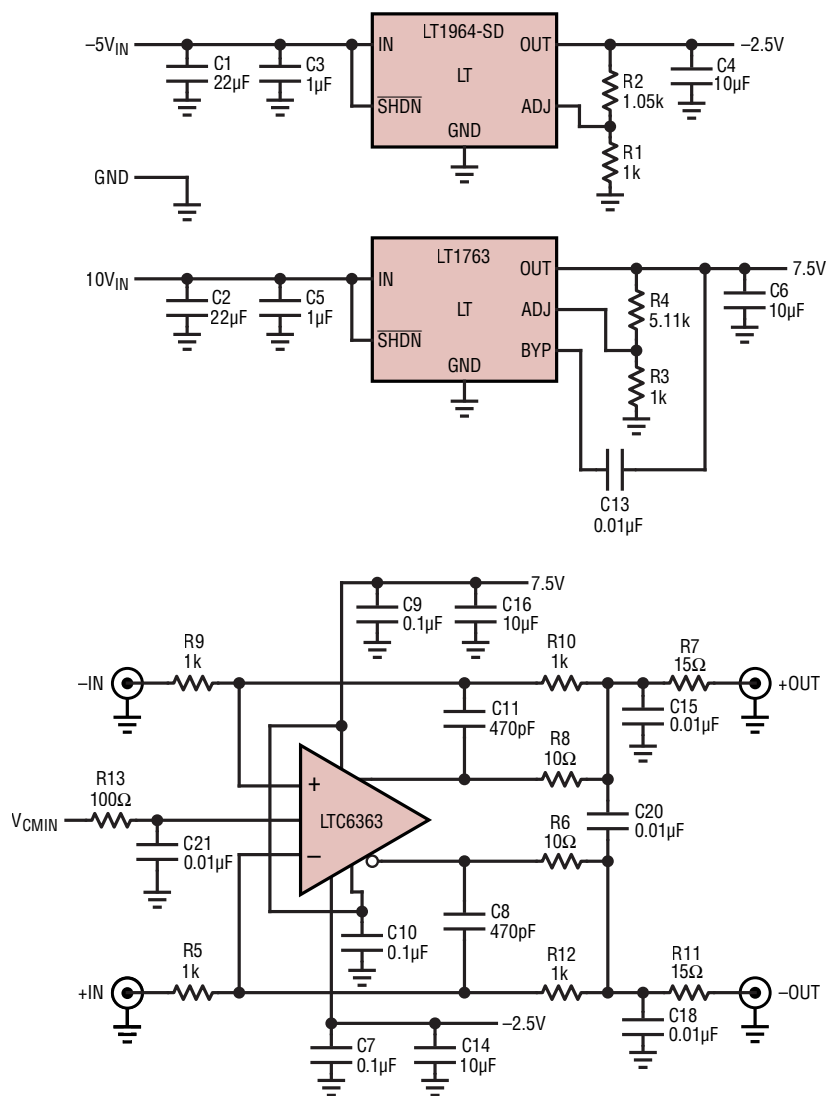
J4 -OUT. This is the negative signal output.

J2 +OUT. This is the positive signal output.

PARTS LIST

ITEM	QTY	REFERENCE	PART DESCRIPTION	MANUFACTURER/PART NUMBER
Required Circuit Components				
3	4	C4, C6, C14, C16	CAP., TANT, 10 μ F, 16V, 20%, 0805	VISHAY, 298D106X0016R2T
4	2	C3, C5	CAP., X5R, 1 μ F, 16V, 10%, 0603	AVX, 0603YD105KAT2A
6	2	C1, C2	CAP., X5R, 22 μ F, 16V 10%, 1210	AVX, 1210YD226KAT2A
8	4	C7, C9, C10, C21	CAP., X5R, 0.1 μ F, 16V 10% 0402	AVX, 0402YD104KAT2A
9	3	C15, C18, C20	CAP., X7R, 0.01 μ F, 10V 10%, 0805	AVX, 0805JC103KAT2A
10	1	C13	CAP., X7R, 0.01 μ F, 16V, 10%, 0402	AVX, 0402YC103KAT2A
11	2	C8, C11	CAP., NPO, 470pF, 50V, 5%, 0402	MURATA, GRM1555C1H471J
13	3	E5, E4, E6	TEST POINT, TURRET, 0.064"	MILL MAX, 2308-2-00-80-00-00-07-0
14	3	E1, E2, E3	TEST POINT, TURRET, 0.094"	MILL-MAX, 2501-2-00-80-00-00-07-0
15	2	J1, J3	CONN, SMA, 50 Ω , EDGE-LAUNCH, FEMALE	E.F. JOHNSON, 142-0701-851
16	2	J2, J4	CONN, SMA, 50 Ω , EDGE-LAUNCH, MALE	E.F. JOHNSON, 142-0801-811
18	2	R7, R11	RES., 15 Ω , 1/10W, 1% 0603	PANASONIC, ERJ-3EKF15R0V
19	2	R6, R8	RES., 10 Ω , 1/10W, 1% 0603	PANASONIC, ERJ-3EKF10R0V
20	1	R13	RES., 100 Ω , 1/10W, 1% 0603	PANASONIC, ERJ-3EKF101V
21	1	R4	RES., 5.11k, 1/10W, 1% 0603	PANASONIC, ERJ-3EF5111V
22	4	R5, R9, R10, R12	RES., 1.00k, 1/10W, 1% 1206	PANASONIC, ERJ-8ENF1001V
22	2	R1, R3	RES., 1.00k, 1/10W, 1% 0603	PANASONIC, ERJ-3EKF1001V
23	1	R2	RES., 1.05k, 1/10W, 1% 0603	PANASONIC, ERJ-3EKF1051V
24	1	U2	IC, MICROPOWER REGULATOR, S08	LINEAR TECH., LT1763CS8#PBF
25	1	U3	IC, 400MHz AMPLIFIER, MS8	LINEAR TECH., LTC6363IMS8#PBF
26	1	U1	IC, MICROPOWER NEG. REGULATOR, SOT-23	LINEAR TECH., LT1964ES5-SD#PBF
27	4	MH1-MH4	STANDOFF, NYLON 0.25"	KEYSTONE, 8831 (SNAP ON)

SCHEMATIC DIAGRAM



DEMO MANUAL DC2487A

DEMONSTRATION BOARD IMPORTANT NOTICE

Linear Technology Corporation (LTC) provides the enclosed product(s) under the following **AS IS** conditions:

This demonstration board (DEMO BOARD) kit being sold or provided by Linear Technology is intended for use for **ENGINEERING DEVELOPMENT OR EVALUATION PURPOSES ONLY** and is not provided by LTC for commercial use. As such, the DEMO BOARD herein may not be complete in terms of required design-, marketing-, and/or manufacturing-related protective considerations, including but not limited to product safety measures typically found in finished commercial goods. As a prototype, this product does not fall within the scope of the European Union directive on electromagnetic compatibility and therefore may or may not meet the technical requirements of the directive, or other regulations.

If this evaluation kit does not meet the specifications recited in the DEMO BOARD manual the kit may be returned within 30 days from the date of delivery for a full refund. **THE FOREGOING WARRANTY IS THE EXCLUSIVE WARRANTY MADE BY THE SELLER TO BUYER AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED, OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. EXCEPT TO THE EXTENT OF THIS INDEMNITY, NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.**

The user assumes all responsibility and liability for proper and safe handling of the goods. Further, the user releases LTC from all claims arising from the handling or use of the goods. Due to the open construction of the product, it is the user's responsibility to take any and all appropriate precautions with regard to electrostatic discharge. Also be aware that the products herein may not be regulatory compliant or agency certified (FCC, UL, CE, etc.).

No License is granted under any patent right or other intellectual property whatsoever. **LTC assumes no liability for applications assistance, customer product design, software performance, or infringement of patents or any other intellectual property rights of any kind.**

LTC currently services a variety of customers for products around the world, and therefore this transaction **is not exclusive**.

Please read the DEMO BOARD manual prior to handling the product. Persons handling this product must have electronics training and observe good laboratory practice standards. **Common sense is encouraged.**

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

Copyright © 2004, Linear Technology Corporation



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.