

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









DEMO MANUAL DC1534A

LTC2637: Octal 12-Bit DAC with Internal Reference

DESCRIPTION

Demonstration circuit DC1534A features the LTC2637 Octal 12-bit DAC. This device has an integrated, high accuracy, low-drift reference. It has a rail-to-rail output buffer and is guaranteed monotonic. This DAC communicates through the simple I^2C compatible interface.

Design files for this circuit board are available at www. linear.com/demo.

7, 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.

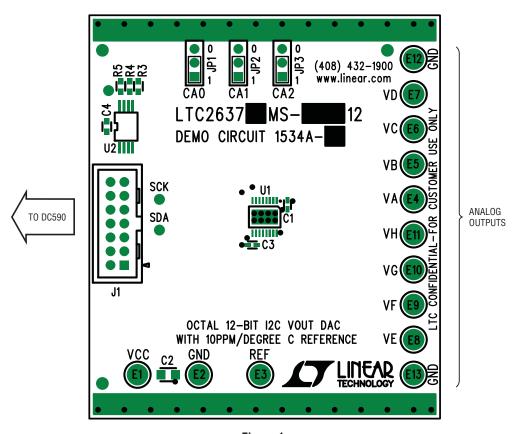


Figure 1.

DEMOBOARD ASSEMBLY	LTC2637 VARIATION	POWER UP	FULL-SCALE DAC OUTPUT (Int. Reference Mode)	
DC1534A-A	LZ	Zero-Scale	2.5V	
DC1534A-B	LMI	Mid-Scale	2.5V	
DC1534A-C	HZ	Zero-Scale	4.096V	
DC1534A-D	HMI	Mid-Scale	4.096V	



QUICK START PROCEDURE

Connect DC1534A to a DC590 USB serial controller using the supplied 14 conductor ribbon cable. Connect DC590 to a host PC with a standard USB A/B cable. Run the evaluation software supplied with DC590 or download it from www.linear.com. The correct control panel will be loaded automatically. Click the COLLECT button to begin outputting codes to the DACs.

Complete software documentation is available from the Help menu item, as features may be added periodically.

HARDWARE SET-UP

Analog Connections

DAC outputs – The eight DAC outputs from the LTC2637 are brought out to turrets labeled V_{OUTA} through V_{OUTH} . These may be connected to external instruments or other circuitry.

NOTE: DAC outputs are not in alphabetical order on the circuit board.

V_{REF}-The REF turret is connected directly to the reference terminals of the LTC2637. When the integrated reference is being used, the reference voltage may be monitored at this point. An external reference may also be applied to this turret after changing the setting in the QuickEval software.

Grounding and Power Connections

Power (V_{CC}) – Normally DC1534A is powered by the DC590 controller. V_{CC} can be supplied to this turret, however the power supply on DC590 must be disabled! Refer to DC590 Quick Start Guide for more details on this mode of operation.

Grounding – Ground turrets as well as 2 grounding strips are provided.

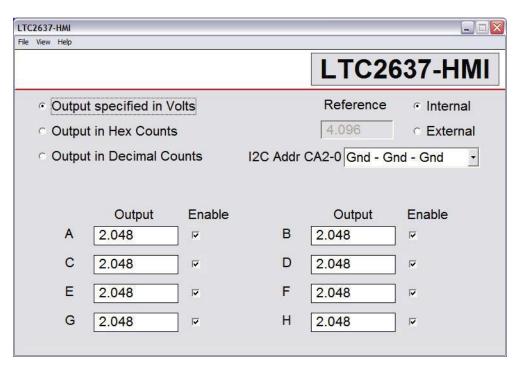


Figure 2.

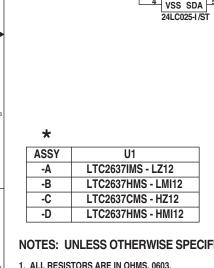


SCHEMATIC DIAGRAM

Information furnished by Linear Technology Corporation is believed to be accurate and reliable. However, no responsibility is assumed for its use. Linear Technology Corporation makes no representation that the interconnection of its circuits as described herein will not infringe on existing patent rights.

DEMO MANUAL DC1534A

VCC J1 ⊸ vcc HD2X7-079-MOLEX E2 - GND V+ 5V SCK SDA SCK/SCL MOSI/SDA MISO E3 - ○ REF



EEVCC EESDA EESCL EEGND

ÄÜX

C4 0.1uF

U2

Α0 VCC

4.99k

WP

SCL

R4 R5 R5 4.99k 4.99k

JP1

CA0

VCC

NOTES: UNLESS OTHERWISE SPECIFIED

- 1. ALL RESISTORS ARE IN OHMS, 0603. ALL CAPACITORS ARE IN MICROFARADS, 0603.
- 2. INSTALL SHUNTS AS SHOWN.

CUSTOMER NOTICE

JP2

CA1

VCC

LINEAR TECHNOLOGY HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE.

THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND

SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.

CONTRACT NO.			• 1	NEA	ħ
APPROVALS			FII		K
DRAWN: KIM T.			IEC	HNOLO	GY
CHECKED:	TITLE:	SCHEMAT	IC	00T4	1 40

DWG NO.

SIZE

Α

DATE:

LTC2637★

SCL

SDA

CA0

CA1

CA2

10

VCC

APPROVED:

DESIGNER:

ENGINEER: LEO C.

CA2

SS

GND gB

9

땲

VOUTA

VOUTB

VOUTC

VOUTD

VOUTE

VOUTF

VOUTG

VOUTH

1630 McCarthy Blvd. Milpitas, CA 95035 Phone: (408)432-1900

Fax: (408)434-0507 LTC Confidential-For Customer Use Only

E12

- GND E4

-⊙ VA

E5 -⊚ VB

-⊚ vc

E7 -⊚ VD

-⊚ VE

E9 -⊚ VF

-⊚ VG

E11 --⊚ VH

E13 --⊚ GND

E10

E8

E6

OCTAL 12-BIT I2C VOUT DAC WITH 10PPM/DEGREE C REFERENCE

REV DC1534A - LTC2637 Α Tuesday, February 24, 2009 SHEET 1 OF 1

dc1534at

DEMO MANUAL DC1534A

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

