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LTC2323/LTC2321
Dual 16-Bit/14-Bit/12-Bit,
5Msps/2Msps, Serial,
High Speed SAR ADCs

DESCRIPTION

Demonstration circuit 1996A features the LTC®2323 family. With up to 5Msps, these differential, dual channel, 16-bit, serial, high speed successive approximation register (SAR) ADCs are available in a 28-lead QFN package. The LTC2323 family has an internal 20ppm/°C reference and an SPI-compatible serial interface that supports CMOS and LVDS logic. Note the demo board is configured for CMOS operation by default; see the note under JP3 for LVDS operation. The following text refers to the LTC2323, but applies to all members of the family, the only difference being the sample rate and the number of bits. The

DC1996A demonstrates the DC and AC performance of the LTC2323 in conjunction with the DC890 PScope™ data collection board. Alternatively, by connecting the DC1996A into a customer application, the performance of the LTC2323 can be evaluated directly in that circuit.

Design files for this circuit board are available at http://www.linear.com/demo
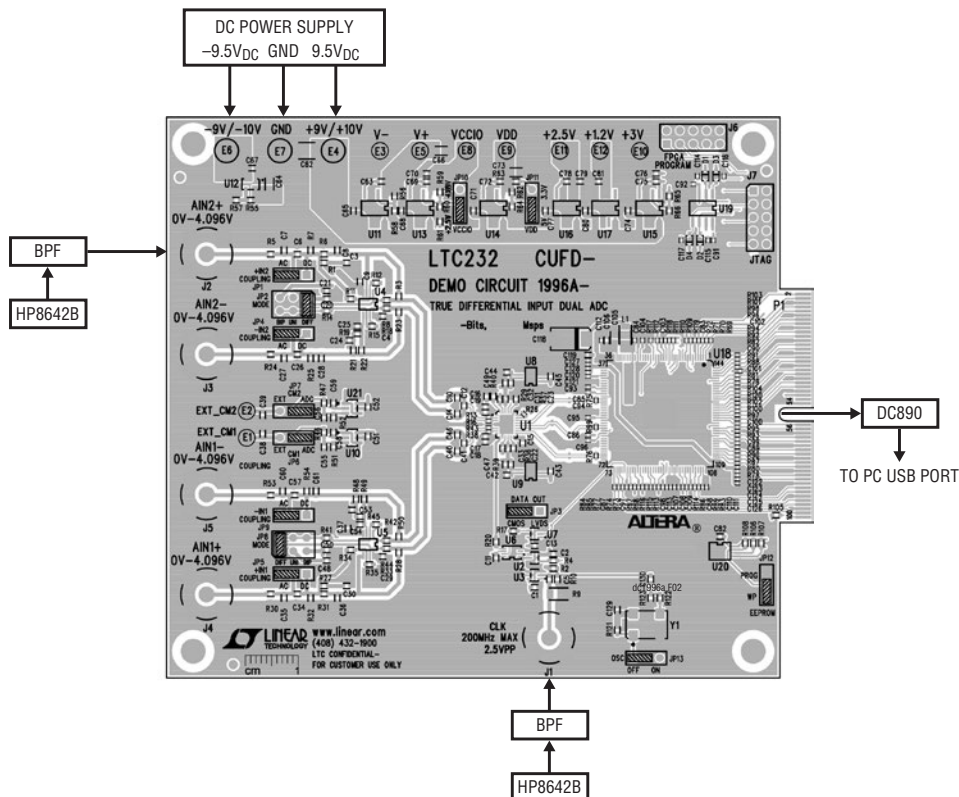
BOARD PHOTO

Figure 1. DC1996A Connection Diagram

ASSEMBLY OPTIONS

Table 1. DC1996A Assembly Options

| VERSION	U1 PART NUMBER	MAX CONVERSION RATE	# OF BITS	MAX CLOCK FREQUENCY
DC1996A-A	LTC2323CUFD-16#PBF	5Msps	16	110MHz
DC1996A-B	LTC2321CUFD-16#PBF	2Msps	16	64MHz
DC1996A-C	LTC2323CUFD-14#PBF	5Msps	14	110MHz
DC1996A-D	LTC2321CUFD-14#PBF	2Msps	14	62MHz
DC1996A-E	LTC2323CUFD-12 #PBF	5Msps	12	95MHz
DC1996A-F	LTC2321CUFD-12#PBF	2Msps	12	58MHz

QUICK START PROCEDURE

Demonstration circuit 1996A is easy to set up and evaluate for performance. Refer to Figure 1 and follow the procedure below.

- Connect the DC1996A to a DC890 USB high speed data collection board using edge connector P1.

- Connect the DC890 to a host PC with a standard USB A/B cable.

- Apply a low jitter signal source to J2 to test channel 2, or to J4 to test channel 1. Note that the DC1996A is capable of accepting a differential input signal as well as a single-ended signal. See the Hardware Setup section for the jumper positions that correspond to these configurations.

- As a clock source, apply a low jitter 10dBm sine wave or square wave to connector J1. See Table 1 for maximum clock frequencies. Note that J1 has a 50Ω termination resistor to ground.

- Run the PScope software (Pscope.exe version K73, or later) supplied with the DC890 or download it from www.linear.com/software. Complete software documentation is available from the Help menu. Updates can be downloaded from the Tools menu. Check for updates periodically, as new features may be added.

The PScope software should recognize the DC1996A and configure itself automatically.

- Click the Collect button (Figure 2) to begin acquiring data. The Collect button then changes to Pause, which can be used to stop data acquisition.
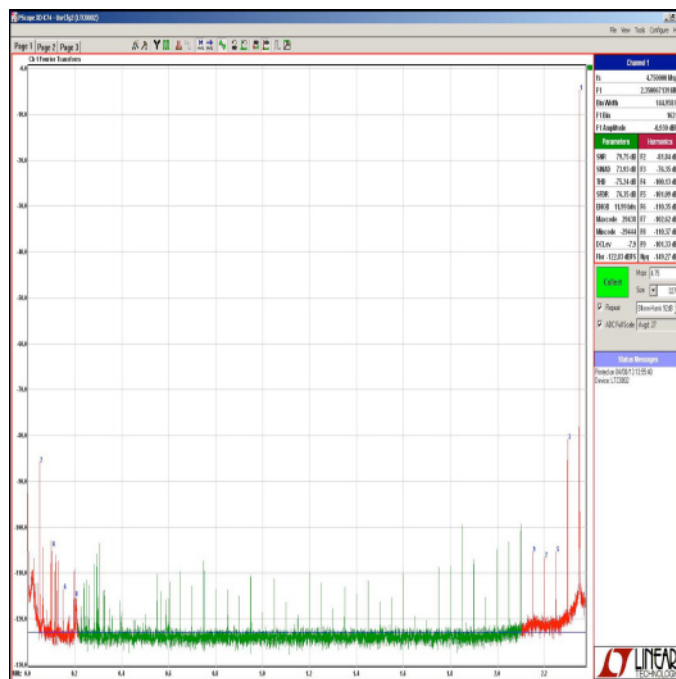
Figure 2. DC1996A PScope Screenshot

dc1996afb

HARDWARE SETUP

SIGNAL CONNECTIONS

J1 CLK IN: This input has a 50Ω termination resistor, and is intended to be driven by a low jitter 10dBm sine or square wave. To achieve the full AC performance of this part, the clock jitter should be kept under 2ps. This input is capacitively coupled so that the input clock can be either 0V to 3.3V or ±1.65V. This eliminates the need for level shifting. To run at the maximum conversion rate, apply the frequency specified in the Table 1.

J2 Ch2+ Input: In the single-ended configuration, this is the channel 2 signal input. For differential operation, this serves as the positive channel 2 signal input.

J3 Ch2– Input: This input is used only for differential operation. It serves as the negative channel 2 signal input.

J4 Ch1+ Input: In the single-ended configuration, this is the channel 1 signal input. For differential operation, this serves as the positive channel 1 signal input.

J5 Ch1– Input: This input is used only for differential operation. It serves as the negative channel 1 signal input.

J6 FPGA Program: Factory use only.

J7 JTAG: Factory use only.

JP1 +IN2 Coupling: Use this jumper to select AC- or DC-coupling of the signal applied to J2. The default setting is **DC**. At very low input frequencies, using AC-coupling may degrade the distortion performance.

JP2 Mode: Use this jumper to select the signal input mode for the channel 2 input of the LTC2323. The default setting is **Diff**. The **Diff** setting accepts a single-ended signal from J2 and applies it as a differential signal to channel 2 of the LTC2323. The **Bip** setting accepts a single-ended signal from J2 and applies it as a single-ended bipolar signal to channel 2 of the LTC2323. The **Uni** setting also accepts a single-ended signal from J2, but applies it as a unipolar signal to channel 2 of the LTC2323.

JP3 Data Out: Use this jumper to select the data output format from the LTC2323. The default setting is **CMOS**. The output data will not be valid if the jumper is moved to the **LVDS** position unless the following changes have been made:

Install 100Ω S0402 resistors at R26, 75, 76, 99

Reprogram the CPLD through J6 using the programming file LTC2323.pof found at:

http://www.linear.com/demo/DC1996A

Move JP3 to the **LVDS** position.

JP4 –IN2 Coupling: Use this jumper to select AC- or DC-coupling of the signal applied to J3. The default setting is **DC**. At very low input frequencies, using AC-coupling may degrade the distortion performance.

JP5 +IN1 Coupling: Use this jumper to select AC- or DC-coupling of the signal applied to J4. The default setting is **DC**. At very low input frequencies, using AC-coupling may degrade the distortion performance.

JP6 CM1: Use this jumper to set the DC bias point for the signal applied to J4 when JP5 (+IN1 coupling) is in the AC position. The default setting is **ADC**. The **EXT** setting allows the use of an externally applied common mode voltage applied at E1 (EXT_CM1).

JP7 CM2: Use this jumper to set the DC bias point for the signal applied to J2 when JP1 (+IN2 coupling) is in the AC position. The default setting is **ADC**. The **EXT** setting allows the use of an externally applied common mode voltage applied at E2 (EXT_CM2).

JP8 Mode: Use this jumper to select the signal input mode for the channel 1 input of the LTC2323. The default setting is **Diff.** The **Diff** setting accepts a single-ended signal from J4 and applies it as a differential signal to channel 1 of the LTC2323. The **Bip** setting accepts a single-ended signal from J4 and applies it as a single-ended bipolar signal to channel 1 of the LTC2323. The **Uni** setting also accepts a single-ended signal from J4, but applies it as a unipolar signal to channel 1 of the LTC2323.

HARDWARE SETUP

JP9 –IN1 Coupling: Use this jumper to select AC- or DC-coupling of the signal applied to J5. The default setting is **DC**. At very low input frequencies, using AC-coupling may degrade the distortion performance.

JP10 VCCIO: Use this jumper to select the VCCIO supply voltage. The default setting is **2.5V**. The **1.8V** setting selects a 1.8V supply voltage.

JP11 VDD: Use this jumper to select the VDD supply voltage. The default setting is **5V**. The **3.3V** setting selects a 3.3V supply voltage.

JP12 EEPROM: Factory use only.

JP13 OSC: Use this jumper to enable the onboard encode clock source. The default setting is **OFF**. The **ON** setting energizes this source. Refer to the DC1996A schematic for additional passive elements required to use the onboard source.

PARTS LIST

ITEM	QTY	REFERENCE	PART DESCRIPTION	MANUFACTURER/PART NUMBER
Required Circuit Components				
1	20	C1, C2, C4, C5, C9, C11, C13, C18, C19, C22, C23, C29, C37, C51, C52, C58, C59, C82, C129, C130	CAP., X7R, 0.1µF, 16V, 10%, 0603	NIC, NMC0603X7R104K16TRPF
2	24	C3, C6, C16, C17, C20, C21, C24-C26, C28, C30, C34, C47-C50, C53, C54, C57, C61, C70, C76, C79, C81	CAP., X5R, 10µF, 6.3V, 20%, 0603	NIC, NMC0603X5R106M6.3TRPF4KF
3	0	C7, C8, C10, C14, C27, C35, C36, C40, C41, C60	CAP., 0603	OPT
4	2	C12, C41	CAP., NPO, 200pF, 16V, 5%, 0603	MURAA, GRM1885C1H201JA01D
5	12	C15, C32, C38, C39, C43, C45, C65, C67, C68, C71, C74, C77	CAP., X7R, 1µF, 25V, 10%, 0603	TDK, C1608X7R1E105K
6	6	C31, C33, C55, C56, C106, C119	CAP., X5R, 4.7µF, 6.3V, 10%, 0603	AVX, 06036D475KAT2A
7	2	C42, C44	CAP., X5R, 2.2µF, 10V, 10%, 0603	MURATA, GRM188R61A225KE34D
8	1	C62	CAP., X7R, 47µF, 10V, 10%, 1210	MURATA, GRM32ER71A476KE15L
9	5	C63, C69, C72, C75, C78	CAP., X7R, 0.01µF, 6.3V, 10%, 0603	MURATA, GRM188R70J103KA01D
10	3	C64, C66, C73	CAP., X7R, 10µF, 10V, 10%, 0805	MURATA, GRM21BR71A106KE51L
11	1	C80	CAP., X5R, 3.3µF, 6.3V, 10%, 0603	AVX, 06036D335KAT2A
12	28	C83-C104, C108, C122-C126	CAP., X7R, 0.1µF, 16V, 10%, 0402	NIC, NMC0402X7R104K16TRPF
13	1	C105	CAP., X5R, 47µF, 6.3V, 20%, 0805	TAIYO YUDEN, JMK212BJ476MG-T
14	3	C107, C120, C121	CAP., X7R, 0.01µF, 16V, 10%, 0402	NIC, NMC0402X7R103K16TRPF
15	1	C109	CAP., X7R, 1nF, 16V, 10%, 0402	AVX, 0402YC102KAT2A
16	3	C110, C111, C112	CAP., X7R, 22nF, 16V, 10%, 0402	AVX, 0402YC223KAT2A
17	2	C113, C128	CAP., X7R, 4.7nF, 16V, 10%, 0402	AVX, 0402YC472KAT2A
18	4	C114, C115, C116, C117	CAP., NP0, 10pF, 16V, 10%, 0402	AVX, 0402YA100KAT2A
19	1	C118	CAP., TANT, 470µF 10V, 20%, 7343	AVX, TPSE477M010R0050
20	1	C127	CAP., X7R, 2.2nF, 16V, 10%, 0402	AVX, 0402YC222KAT2A
21	4	D1, D2, D3, D4	DIODE, SCHOTTKY, 30V, 200mW SOD-323	DIODE INC., BAT54WS-7-F
22	9	E1-E3, E5, E8-E12	TEST POINT, TURRET, 0.064"	MILL-MAX, 2308-2-00-80-00-00-07-0
23	3	E4, E6, E7	TEST POINT, TURRET, 0.094"	MILL-MAX, 2501-2-00-80-00-00-07-0

PARTS LIST

ITEM	QTY	REFERENCE	PART DESCRIPTION	MANUFACTURER/PART NUMBER
24	11	JP1, JP3-JP7, JP9-JP11, JP13, JP15	HEADER, 1×3, 0.100"	SAMTEC, TSW-103-07-L-S
25	2	JP2, JP8	HEADER, 2×3, 0.100"	SAMTEC, TSW-103-07-L-D
26	2	J6, J7	HEADER, 2×5, 0.100"	SAMTEC, TSW-105-07-L-D
27	5	J1, J2, J3, J4, J5	CONN BNC FEM JACK PC MNT STRGHT	AMPHENOL CONNEX, 112404
28	1	L1	IND, FERRITE CHIP, 390Ω, 2000mA, 1206	MURATA, BLM31PG391SN1L
29	15	R1, R2, R10, R21, R27, R46-R48, R51, R52, R57, R58, R60, R64, R66	RES., CHIP, 1k, 1/10W, 1%, 0603	PANASONIC, ERJ-3EKF1001V
30	0	R3, R7, R11, R22, R23, R25, R28, R29, R32, R34, R36, R37, R49, R50, R54, R123	RES., CHIP, 0603	OPT
31	2	R4, R17	RES., CHIP, 33Ω, 1/10W, 5%, 0603	PANASONIC, ERJ-3GEYJ330V
32	11	R5, R6, R12, R20, R24, R30, R31, R35, R39, R40, R53	RES., CHIP, 0Ω, 1/10W, 0603	PANASONIC, ERJ-3GEY0R00V
33	4	R8, R18, R33, R44	RES., CHIP, 49.9Ω, 1/10W, 1%, 0603	PANASONIC, ERJ-3EKF49R9V
34	1	R9	RES., CHIP, 49.9Ω, 1/4W, 1%, 1206	PANASONIC, ERJ-8ENF49R9V,
35	4	R13, R16, R38, R43	RES., CHIP, 0Ω, 1/16W, 0402	PANASONIC, ERJ-2GE0R00X
36	4	R14, R15, R41, R42	RES., CHIP, 301, 1/10W, 1%, 0603	PANASONIC, ERJ-3EKF3010V
37	2	R19, R45	RES., CHIP, 150, 1/10W, 1%, 0603	PANASONIC, ERJ-3EKF1500V
38	0	R26, R75, R76, R99	RES., CHIP, 0402	
39	2	R55, R56	RES., CHIP, 3.92k, 1/10W, 1%, 0603	PANASONIC, ERJ-3EKF3921V
40	1	R59	RES., CHIP, 499Ω, 1/10W, 1%, 0603	PANASONIC, ERJ-3EKF4990V
41	1	R61	RES., CHIP, 866Ω, 1/10W, 1%, 0603	PANASONIC, ERJ-3EKF8660V
42	1	R62	RES., CHIP, 3.09k, 1/10W, 1%, 0603	PANASONIC, ERJ-3EKF3091V
43	1	R63	RES., CHIP, 4.02k, 1/10W, 1%, 0603	PANASONIC, ERJ-3EKF4021V
44	1	R65	RES., CHIP, 1.43k, 1/10W, 1%, 0603	PANASONIC, ERJ-3EKF1431V
45	33	R69-R72, R77-R98, R100-R104, R119, R120	RES., CHIP, 33Ω, 1/16W, 5%, 0402	PANASONIC, ERJ-2GEJ330X
46	1	R118	RES., CHIP, 1k, 1/16W, 1%, 0402	PANASONIC, ERJ-2EKF1001V
47	4	R105, R106, R107, R108	RES., CHIP, 4.99k, 1/10W, 1%, 0603	PANASONIC, ERJ-3EKF4991V
48	9	R109-R117	RES., CHIP, 10k, 1/16W, 5%, 0402	PANASONIC, ERJ-2GEYJ103V
49	1	R121	RES., CHIP, 10k, 1/16W, 5%, 0603	PANASONIC, ERJ-3GEYJ103V
50	1	R122	RES., CHIP, 100Ω, 1/10W, 1%, 0603	PANASONIC, ERJ-3EKF1000V
51	3	U2, U3, U7	IC, INVERTER, UHS, SINGLE, SC70-5	FAIRCHILD, NC7SZ04P5X
52	2	U4, U5	IC, 400MHz, AMPLIFIER, MS8	LINEAR TECHNOLOGY, LT1819CMS8#PBF
53	1	U6	IC, FLIP FLOP, D-TYPE LOG, US8	ON SEMI., NL17SZ74USG
54	2	U8, U9	IC, VOLTAGE REFERENCE, MSOP8	LINEAR TECHNOLOGY, LTC6655BHMS8-4.096#PBF
55	2	U10, U21	IC, OP-AMP, MS8	LINEAR TECHNOLOGY, LT6202CS5#PBF
56	4	U11, U13, U14, U15	IC, MICROPOWER REGULATOR, SO8	LINEAR TECHNOLOGY, LT1763CS8#PBF
57	1	U12	IC, MICROPOWER NEG. REGULATOR, SOT-23	LINEAR TECHNOLOGY, LT1964ES5-SD#PBF
58	1	U16	IC, MICROPOWER REGULATOR, SO8	LINEAR TECHNOLOGY, LT1763CS8-2.5#PBF
59	1	U17	IC, LINEAR REGULATOR, SO8	LINEAR TECHNOLOGY, LT3021ES8-1.2#PBF

PARTS LIST

ITEM	QTY	REFERENCE	PART DESCRIPTION	MANUFACTURER/PART NUMBER
60	1	U18	IC, EQFP, CYCLONE3, WIRE BOND, EQFP144	ALTERA, EP3C5E144C7
61	1	U19	IC, 4-BIT, FLASH MEMORY, SO8	ALTERA, EPCS4SI8
62	1	U20	IC, EEPROM, 2kBIT, 400kHz, 8TSSOP	MICROCHIP, 24LC024-I/ST
63	1	Y1	OSCILLATOR, 106.2500MHz, 3.3V, SMD	CTS-FREQUENCY CONTROLS, CB3LV-3I-106M2500
64	12	SHOWN ON ASSY DWG	SHUNT, 0.100", 2POS	SAMTEC, SNT-100-BK-G
65	4	MH1-MH4	STANDOFF, NYLON, 0.25"	KEYSTONE, 8831 (SNAP-ON)

DC1996A-A Required Circuit Components

ITEM	QTY	REFERENCE	PART DESCRIPTION	MANUFACTURER/PART NUMBER
1	1		DC1996A GENERAL BOM	
2	2	R67, R73	RES., CHIP, 1k, 1/16W, 5%, 0402	PANASONIC, ERJ-2EKF1001V
3	1	U1	I.C., DUAL SAR ADC, QFN28UFD-4X5	LINEAR TECHNOLOGY, LTC2323CUFD-16#PBF

DC1996A-B Required Circuit Components

ITEM	QTY	REFERENCE	PART DESCRIPTION	MANUFACTURER/PART NUMBER
1	1		DC1996A GENERAL BOM	
2	2	R67, R73	RES., CHIP, 1k, 1/16W, 5%, 0402	PANASONIC, ERJ-2EKF1001V
3	1	U1	I.C., DUAL SAR ADC, QFN28UFD-4X5	LINEAR TECHNOLOGY, LTC2321CUFD-16#PBF

DC1996A-C Required Circuit Components

ITEM	QTY	REFERENCE	PART DESCRIPTION	MANUFACTURER/PART NUMBER
1	1		DC1996A GENERAL BOM	
2	2	R68, R73	RES., CHIP, 1k, 1/16W, 5%, 0402	PANASONIC, ERJ-2EKF1001V
3	1	U1	I.C., DUAL SAR ADC, QFN28UFD-4X5	LINEAR TECHNOLOGY, LTC2323CUFD-14#PBF

DC1996A-D Required Circuit Components

ITEM	QTY	REFERENCE	PART DESCRIPTION	MANUFACTURER/PART NUMBER
1	1		DC1996A GENERAL BOM	
2	2	R68, R73	RES., CHIP, 1k, 1/16W, 5%, 0402	PANASONIC, ERJ-2EKF1001V
3	1	U1	I.C., DUAL SAR ADC, QFN28UFD-4X5	LINEAR TECHNOLOGY, LTC2321CUFD-14#PBF

DC1996A-E Required Circuit Components

| ITEM	QTY	REFERENCE	PART DESCRIPTION	MANUFACTURER/PART NUMBER
1	1		DC1996A GENERAL BOM	
2	2	R67, R74	RES., CHIP, 1k, 1/16W, 5%, 0402	PANASONIC, ERJ-2EKF1001V
3	1	U1	I.C., DUAL SAR ADC, QFN28UFD-4X5	LINEAR TECHNOLOGY, LTC2323CUFD-12#PBF

DC1996A-F Required Circuit Components

ITEM	QTY	REFERENCE	PART DESCRIPTION	MANUFACTURER/PART NUMBER
1	1		DC1996A GENERAL BOM	
2	2	R67, R74	RES., CHIP, 1k, 1/16W, 5%, 0402	PANASONIC, ERJ-2EKF1001V
3	1	U1	I.C., DUAL SAR ADC, QFN28UFD-4X5	LINEAR TECHNOLOGY, LTC2321CUFD-12#PBF
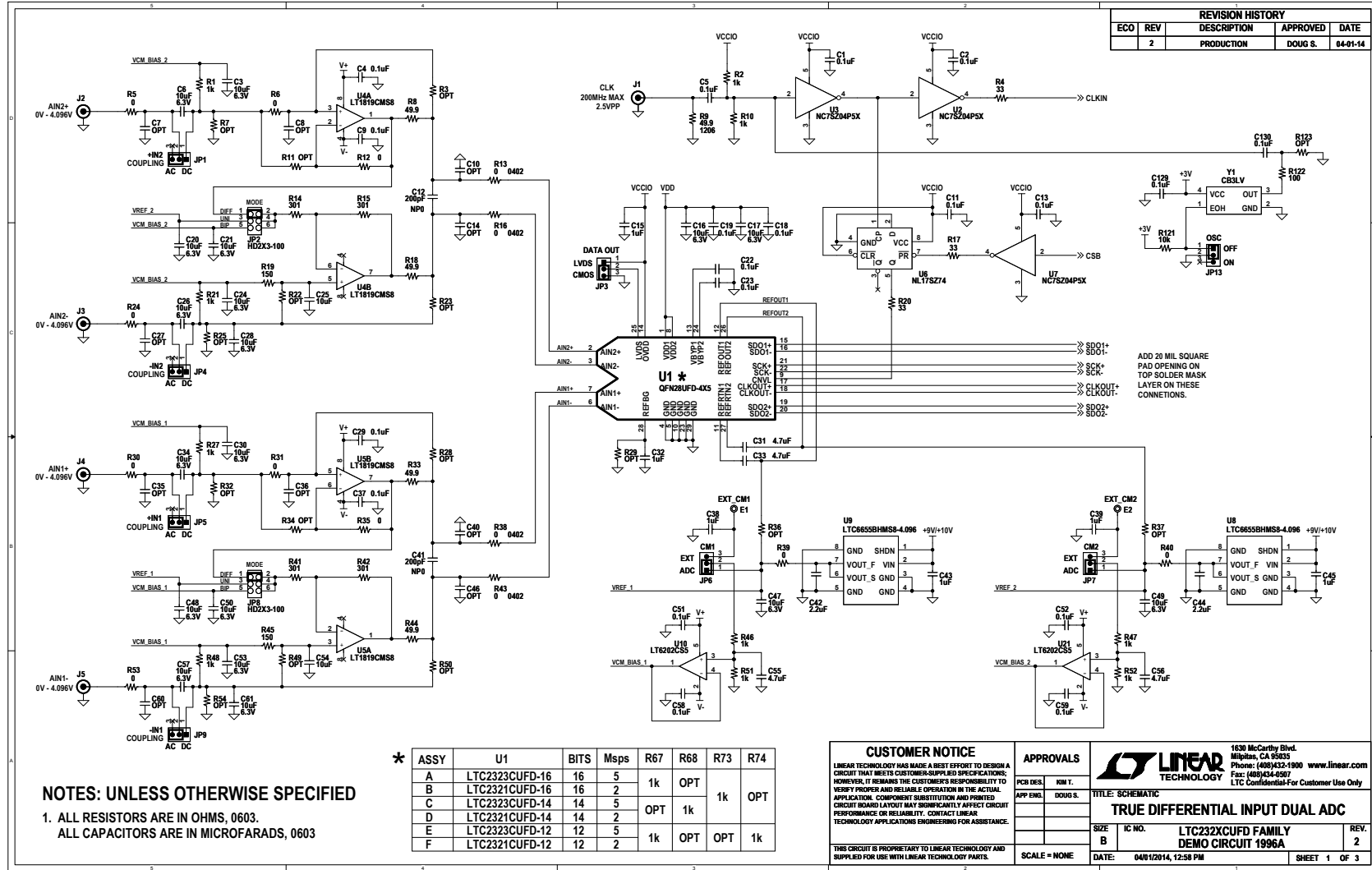
REVISION HISTORY

ECO	REV	DESCRIPTION	APPROVED	DATE
	2	PRODUCTION	DOUG S.	04-01-14

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL RESISTORS ARE IN OHMS, 0603.
   ALL CAPACITORS ARE IN MICROFARADS, 0603

ADD 20 MIL SQUARE
PAD OPENING ON
TOP SOLDER MASK
LAYER ON THESE
CONNETIONS.

ASSY	U1	BITS	Msps	R67	R68	R73	R74
A	LTC2323CUFD-16	16	5	1k	OPT		
B	LTC2321CUFD-16	16	2				
C	LTC2323CUFD-14	14	5	OPT	1k	1k	OPT
D	LTC2321CUFD-14	14	2				
E	LTC2323CUFD-12	12	5	1k	OPT	OPT	1k
F	LTC2321CUFD-12	12	2				

APPROVALS	
PCB DES.	KIM T.
APP ENG.	DOUG S.

LINEAR TECHNOLOGY

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TITLE: SCHEMATIC

TRUE DIFFERENTIAL INPUT DUAL ADC

SIZE	IC NO.		REV.
B		LTC232XCUFD FAMILY DEMO CIRCUIT 1996A	2

SCALE = NONE

DATE: 04/01/2014, 12:58 PM

SHEET 1 OF 3

DEMO MANUAL DC1996A

+9V/+10V
E4
E7
GND

+9V/+10V

C62
47uF
16V
1210

C65
1uF
16V

U11
LT1763CS8
IN   OUT
      SEN
SHDN BYP
GND
GND

C63
0.01uF

R56
3.92k

R58
1k

V+
E5
C66
10uF
10V
0805

V+

C68
1uF
16V

U13
LT1763CS8
IN   OUT
      SEN
SHDN BYP
GND
GND

C69
0.01uF

R59
499

VCCIO
1.8V
2.5V
JP10

R60
1k

R61
866

VCCIO
E8
C70
10uF
6.3V

VCCIO

C71
1uF
16V

U14
LT1763CS8
IN   OUT
      SEN
SHDN BYP
GND
GND

C72
0.01uF

R62
3.09k

R63
4.02k

VDD
3.3V
5V
JP11

R64
1k

VDD
E9
C73
10uF
10V
0805

VDD

C74
1uF
16V

U15
LT1763CS8
IN   OUT
      SEN
SHDN BYP
GND
GND

C75
0.01uF

R65
1.43k

R66
1k

+3V
E10
C76
10uF
6.3V

+3V

C77
1uF
16V

U16
LT1763CS8-2.5
IN   OUT
      SEN
SHDN BYP
GND
GND

C78
0.01uF

+2.5V
E11
C79
10uF
6.3V

+2.5V

C80
3.3uF
16V

U17
LT3021ES8-1.2
IN   OUT
SHDN GND   SEN
AGND

VCCINT

+1.2V
E12
C81
10uF
6.3V

+1.2V

-9V/-10V
E6

-9V/-10V

C67
1uF
16V

U12
LT1964ES5-SD
GND   OUT
IN
SHDN ADJ

R55
3.92k

R57
1k

C64
10uF
10V
0805

E3
V-

V-

APPROVALS
PCB DES.   KIM T.
APP ENG.   DOUG S.

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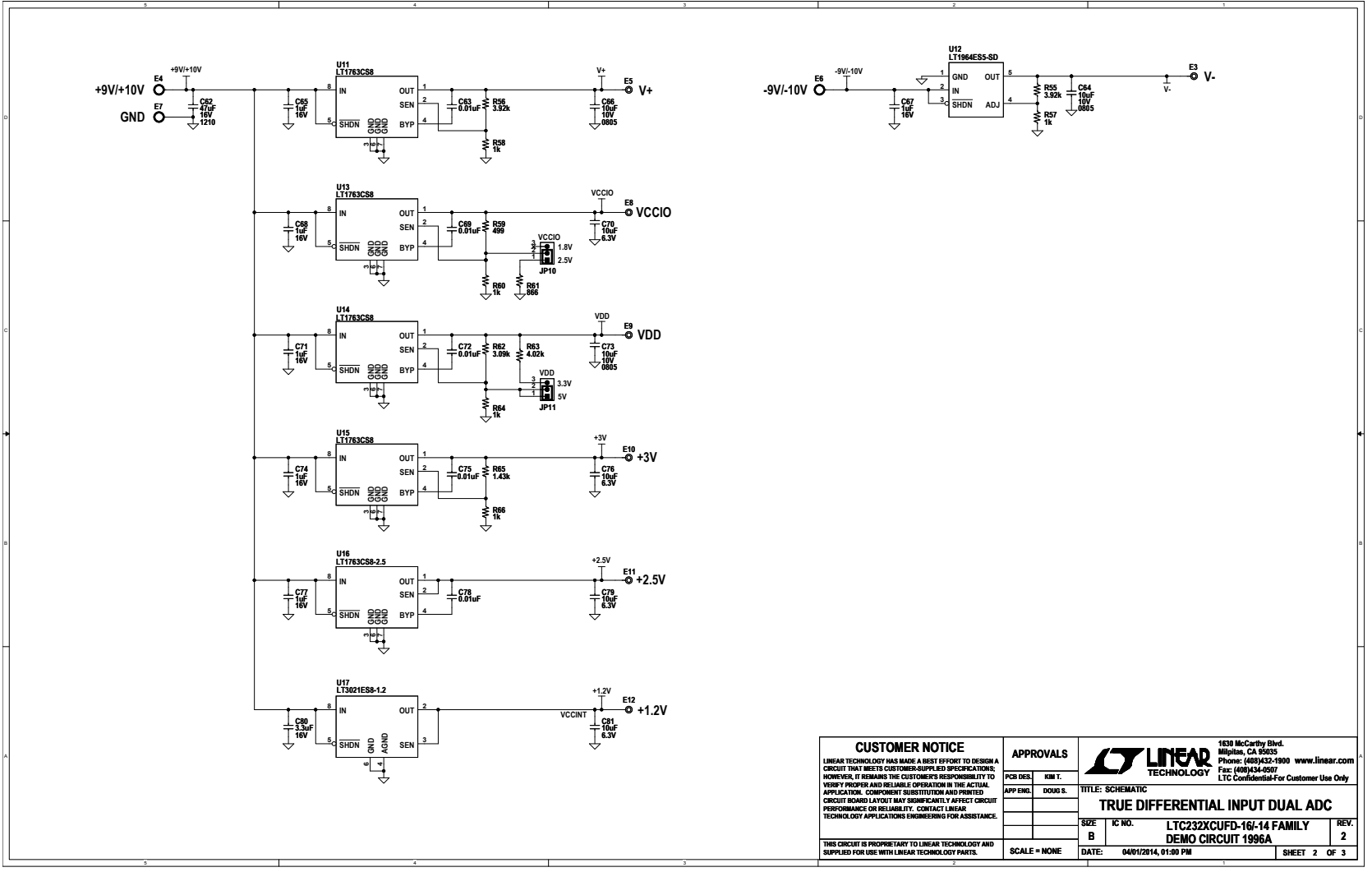
TITLE: SCHEMATIC
TRUE DIFFERENTIAL INPUT DUAL ADC

SIZE   IC NO.   LTC232XCUFD-16/-14 FAMILY   REV.
B   DEMO CIRCUIT 1996A   2

DATE: 04/01/2014, 01:00 PM   SHEET 2 OF 3

LINEAR TECHNOLOGY

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.

U18B BANK1 — CYCLONE3-EP3C5E144

U18C BANK2 — CYCLONE3-EP3C5E144

U18D BANK3 — CYCLONE3-EP3C5E144

U18E BANK4 — CYCLONE3-EP3C5E144

U18F BANK5 — CYCLONE3-EP3C5E144

U18G BANK6 — CYCLONE3-EP3C5E144

U18H BANK7 — CYCLONE3-EP3C5E144

U18I BANK8 — CYCLONE3-EP3C5E144

U18A PWR — CYCLONE3-EP3C5E144

U18J CONFIG — CYCLONE3-EP3C5E144

P1 — EDGE-CON-100

FPGA PROGRAM — J6 HD2X5-100

U19 — EPCS4SI8

U20 — 24LC024-I/ST — EEPROM ARRAY

JP12 — EEPROM WP PROG

JTAG — J7 HD2X5-100

D1 BAT54WS D2 BAT54WS D3 BAT54WS D4 BAT54WS

L1 BLM31PG391SN1L

R105 4.99k 0603 R106 4.99k 0603 R107 4.99k 0603 R108 4.99k 0603

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL RESISTORS AND CAPACITORS ON THIS PAGE ARE 0402.
2. SEE ASSEMBLY TABLE ON PAGE 1 FOR R67, R68, R73, AND R74 VALUES.

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LTC Confidential-For Customer Use Only

TITLE: SCHEMATIC
TRUE DIFFERENTIAL INPUT DUAL ADC

SIZE B
IC NO. LTC232XCUFD-16/-14 FAMILY
DEMO CIRCUIT 1996A
REV. 2

SCALE = NONE
DATE: 04/01/2014, 12:59 PM
SHEET 3 OF 3

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