

Single-Ended to Differential Adaptor

DESCRIPTION

Demonstration circuit 2219 is an adaptor board to be used with high speed ADCs. It is designed to receive a single-ended signal on J3 and output a differential signal on J1 and J2. This is done with a balun transformer with a range from 5MHz to 3000MHz. The spacing of J1 and J2 is 0.5". This spacing mates with the clock inputs of Linear Technology high speed ADC demo boards. There

is also a transmission line that can be used to calibrate and test the 50Ω transmission lines. To use this feature install SMA connectors on J5 and J6.

Design files for this circuit board are available at <http://www.linear.com/demo/DC2219A>

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QUICK START PROCEDURE

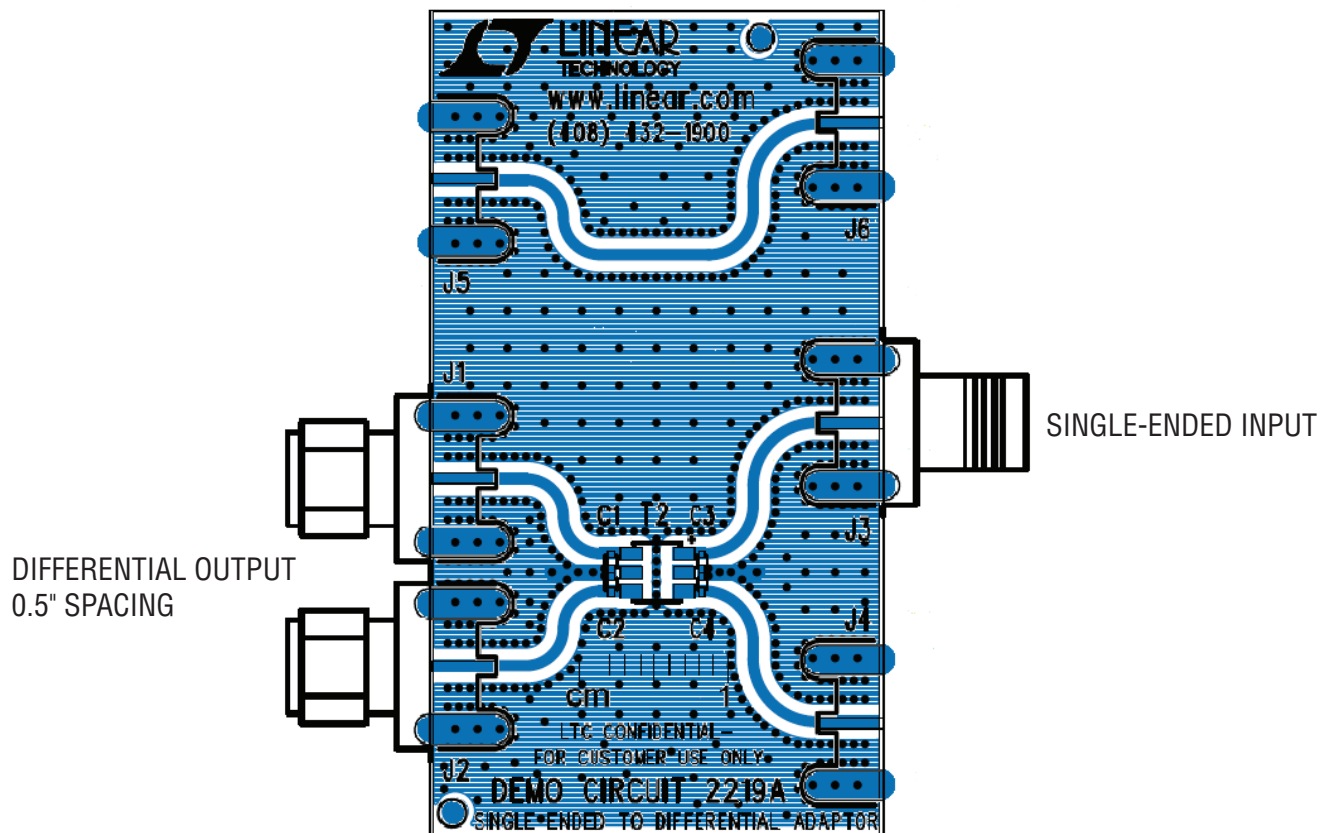


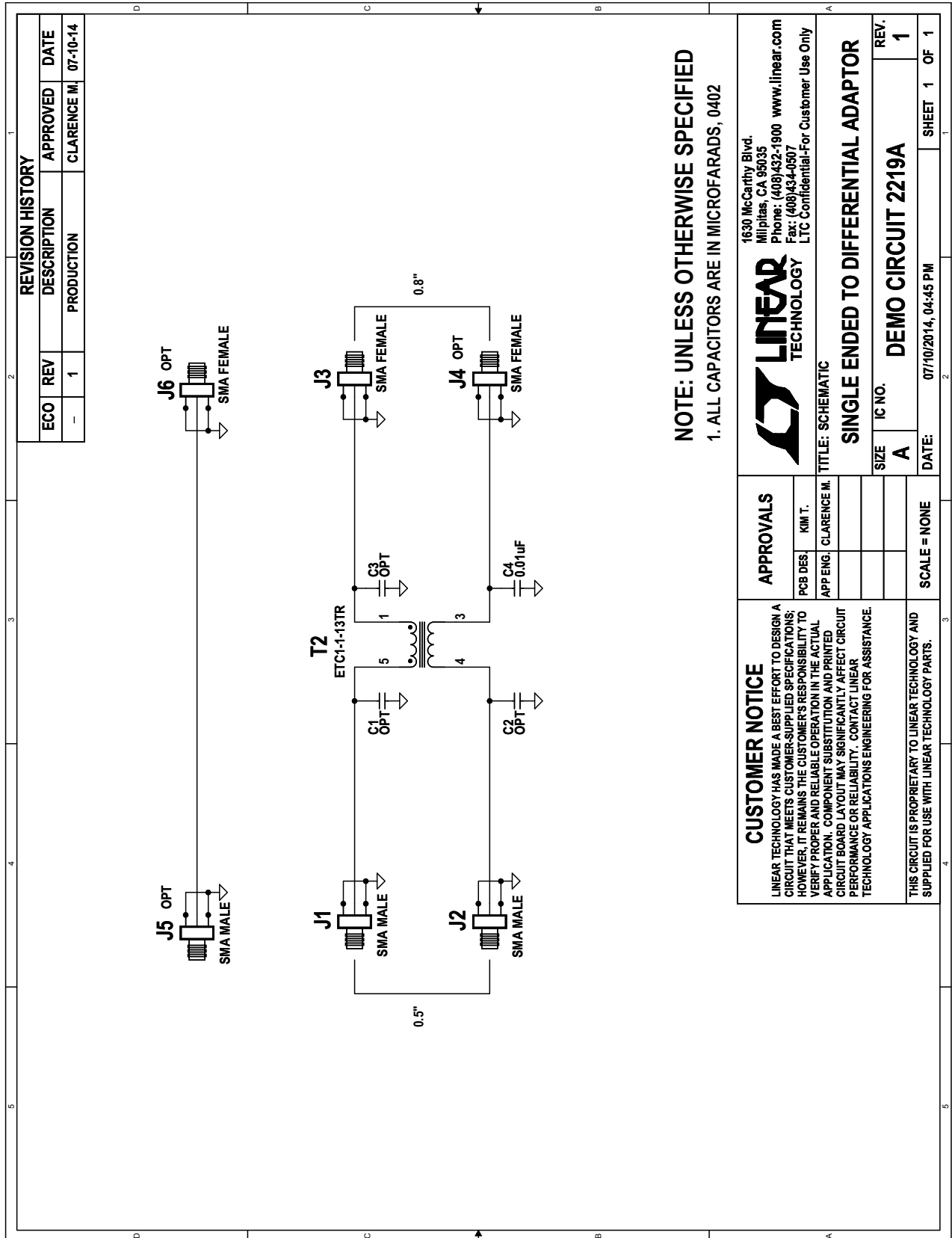
Figure 1

DEMO MANUAL DC2219A

PARTS LIST

ITEM	QTY	REFERENCE	PART DESCRIPTION	MANUFACTURER/PART NUMBER
1	0	C1, C2, C3	CAP., 0402	OPT
2	1	C4	CAP., X7R, 0.01 μ F, 16V, 10%, 0402	AVX, 0402YC103KAT2A
3	2	J1, J2	CONN, SMA 50 Ω , MALE	E.F. JOHNSON, 142-0801-801
4	1	J3	CONN, SMA 50 Ω , FEMALE	E.F. JOHNSON, 142-0701-851/132357
5	0	J4, J6	CONN, SMA 50 Ω , FEMALE	OPT
6	0	J5	CONN, SMA 50 Ω , MALE	OPT
7	1	T2	XMFR, E-SERIES, 4.5MHz to 3000MHz	MA-COM, MABA-007159-000000

SCHEMATIC DIAGRAM



REVISION HISTORY				
ECO	REV	DESCRIPTION	APPROVED	DATE
-	1	PRODUCTION	CLARENCE M.	07-10-14

NOTE: UNLESS OTHERWISE SPECIFIED
1. ALL CAPACITORS ARE IN MICROFARADS, 0402

<p>1630 McCarthy Blvd. Milpitas, CA 95035 Phone: (408)432-1900 www.linear.com Fax: (408)434-0507 LTC Confidential-For Customer Use Only</p>	<p>APPROVALS</p> <table border="1"> <tr> <td>PCB DES</td> <td>KIM T.</td> </tr> <tr> <td>APP ENG.</td> <td>CLARENCE M.</td> </tr> </table>		PCB DES	KIM T.	APP ENG.	CLARENCE M.
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APP ENG.	CLARENCE M.					
<p>CUSTOMER NOTICE 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 APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT LINEAR TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE.</p>	<p>TITLE: SCHEMATIC SINGLE ENDED TO DIFFERENTIAL ADAPTOR</p>					
<p>SCALE = NONE</p>	<p>SIZE: A</p>	<p>IC NO.: DEMO CIRCUIT 2219A</p>				
<p>THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.</p>	<p>DATE: 07/10/2014, 04:45 PM</p>	<p>REV. 1</p> <p>SHEET 1 OF 1</p>				

DEMO MANUAL DC2219A

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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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