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# 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

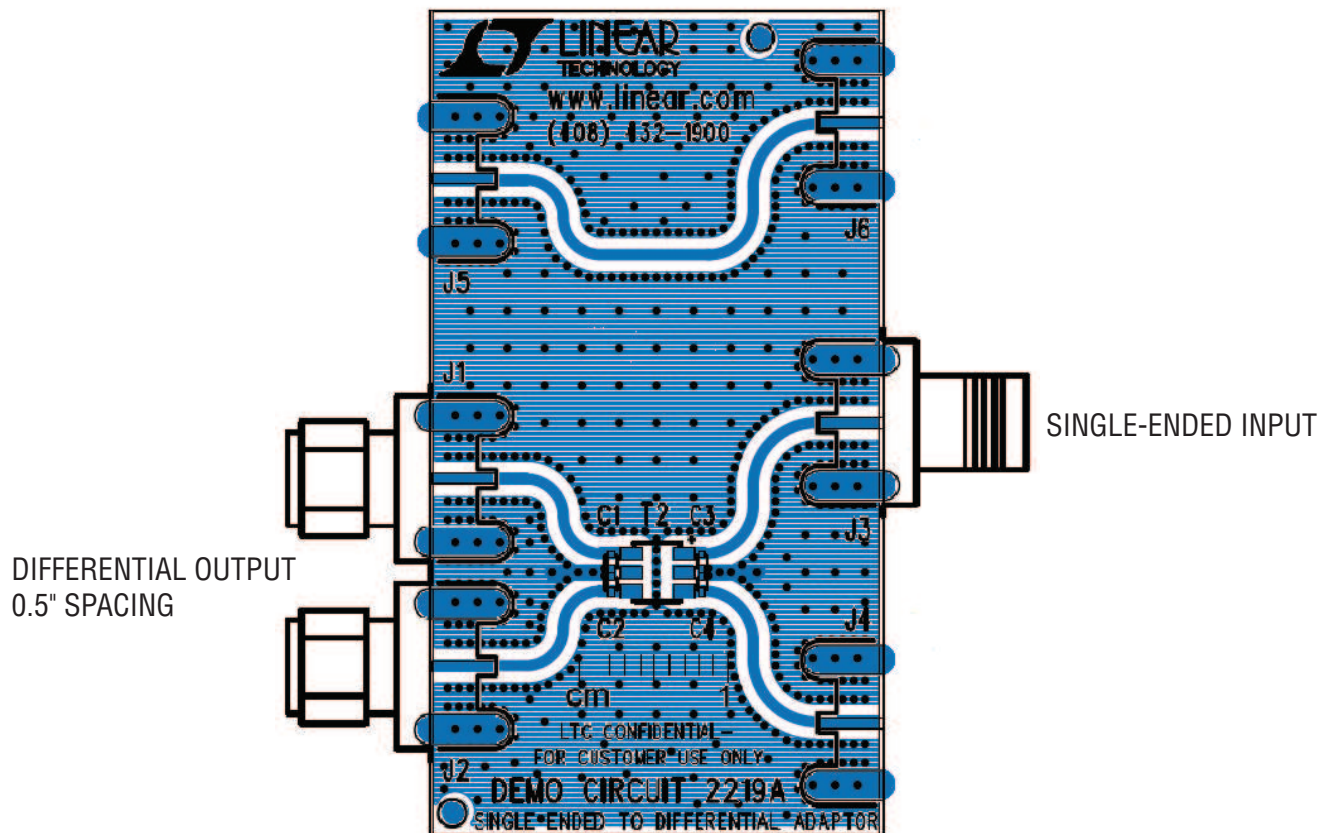


Figure 1

# DEMO MANUAL DC2219A

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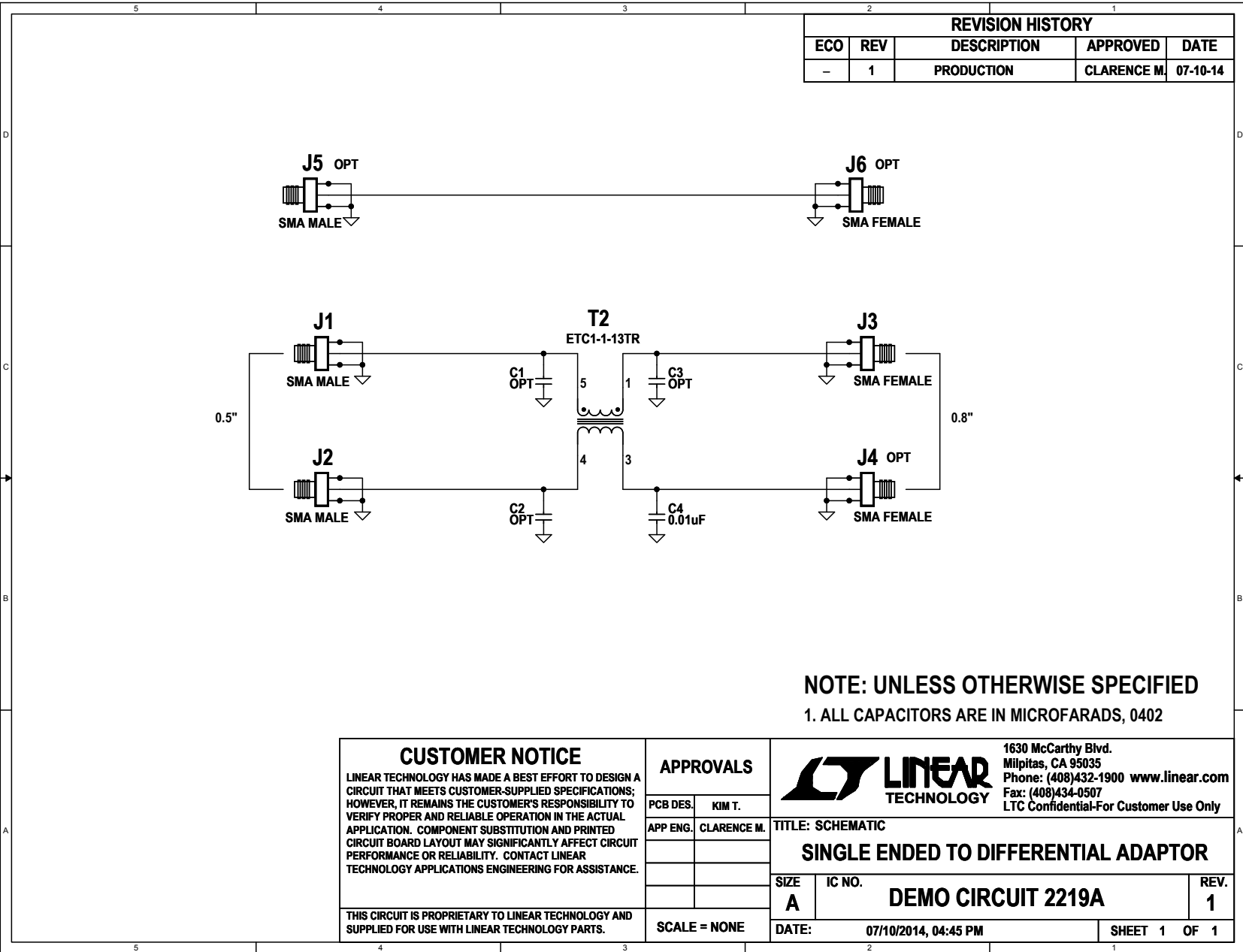
## PARTS LIST

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



**SCHEMATIC DIAGRAM**

**DEMO MANUAL DC2219A**



# DEMO MANUAL DC2219A

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## DEMONSTRATION BOARD IMPORTANT NOTICE

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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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