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Find the *Analog Devices / Linear Technology DC1075A* at our website: *Click HERE*

Clock Divider/Sine Wave 50 Ohm to CMOS Level Converter

DESCRIPTION

Demonstration circuit 1075 is a clock divider for use with high speed ADCs. Each assembly includes a clock divider followed by a retiming stage used to produce sharp clock edges.

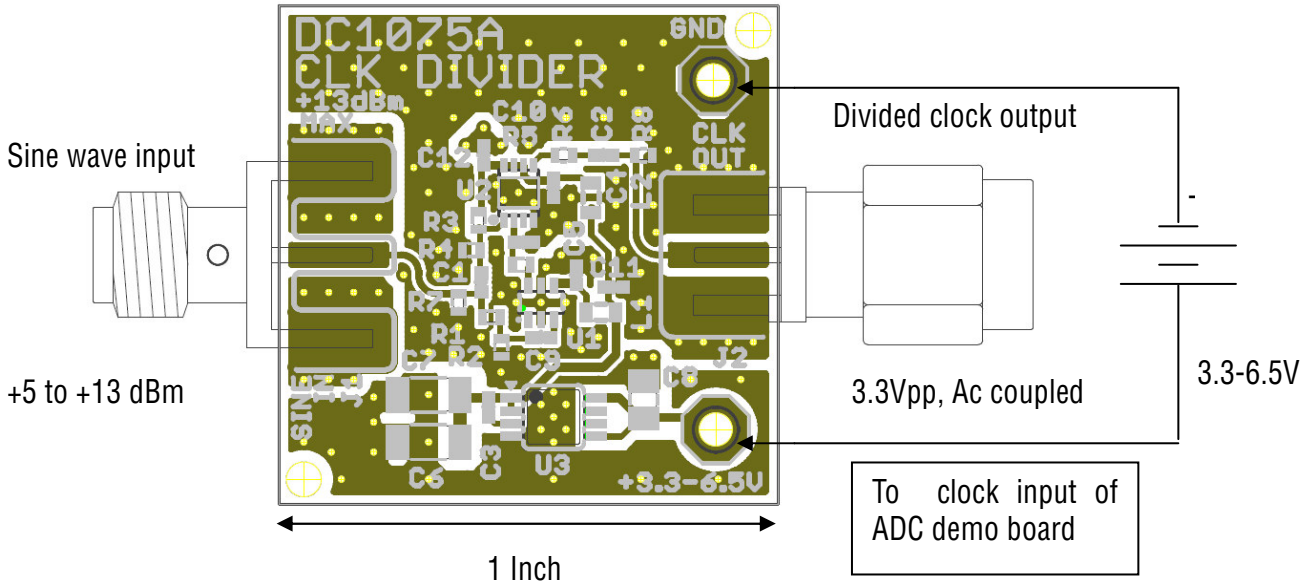
Functionally, the DC1075 receives a high frequency sine wave which is attenuated and routed into the clock divider. The output of the clock divider is then routed to a D flip flop retiming stage. This D flip flop is clocked by the original input. This is critical to ensure signal integrity. The output of this retiming stage is a CMOS signal suitable to be a clock source for high speed ADCs.

This circuit also is a model for designs involving FPGAs which serve as clock dividers. Whenever this is done, a D flip flop retiming stage is required to ensure a low jitter clock signal.

Design files for this circuit board are available. Call the LTC factory.

LTC is a trademark of Linear Technology Corporation

QUICK START PROCEDURE

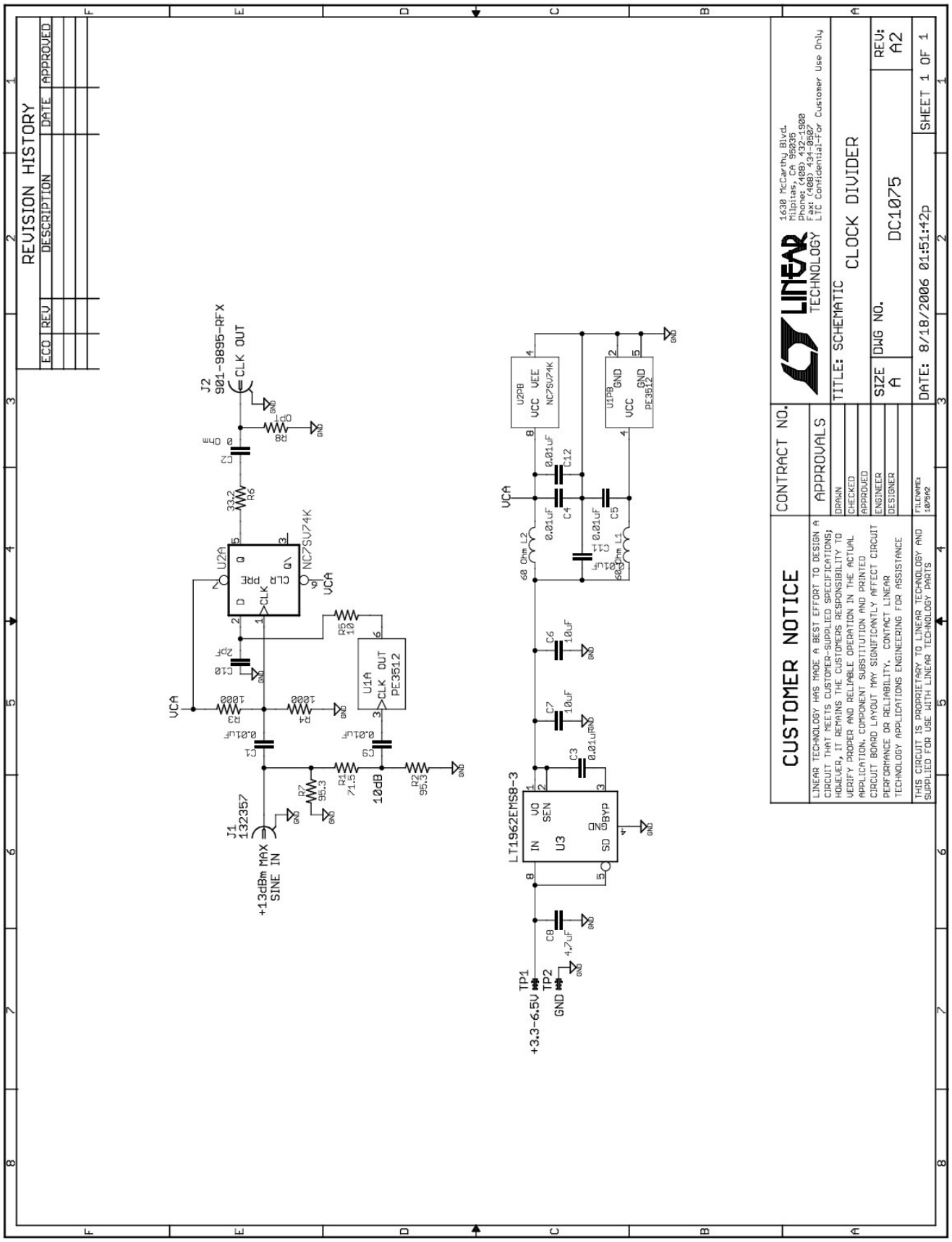


SETUP

The DC1075 requires an external sine wave and an external power supply above 3.3V. The input voltage should not exceed 6.5V. Connect the female SMA connector to the sine wave generator. The input signal should not exceed 13.0dBm. The DC1075 uses a male SMA output connector that can be connected directly to the clock input of ADC demo boards without additional adaptors.

For best results put a bandpass filter between the sine source and the DC1075 to reduce jitter of the input signal.

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