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Simple & Small Delay Block Offers Accurate Timing for 1 μ s to 33.6s

MILPITAS, CA –September 20, 2010 – Linear Technology announces the [LTC6994](#), an accurate and simple delay block, based on Linear Technology's silicon oscillator technology and the newest member of the TimerBlox™ family. The LTC6994 contains a delay circuit that is simply programmed using 1 to 3 resistors, providing a programmable range of 1 μ s to 33.6 seconds. This delay period can also be controlled via a separate input voltage. Delay error is less than 2.3% and two versions of the LTC6994 are available: the LTC6994-1 and LTC6994-2.

The LTC6994-1 will delay either the rising or falling edge of the input signal, as selected by the user. With a rising edge delay, the output follows the input high after the delay period, and remains high until the input falls. With a falling edge delay, the output follows the input low after the delay period, and remains low until the input rises. This operation is well suited for pulse qualification. The LTC6994-2 will delay both the rising and falling edge of the input signal. The output only responds to input changes that persist longer than the delay period. The LTC6994-2 is ideal for switch debouncing, delay matching and guaranteeing that a signal meets minimum pulse width requirements.

The LTC6994 is part of the TimerBlox family of versatile silicon timing devices in which an accurate programmable oscillator is combined with precision circuitry and logic. No capacitors, no crystals, no microcontroller and no programming are required. TimerBlox devices are solid state and can be operated under high acceleration, vibration and temperature extremes. They offer higher accuracy, stability and lower power consumption than typical resistor/capacitor-based oscillators. The

20mA source and sink capability allows for directly driving opto-isolators and transformers for electrical isolation. Fully specified over the temperature range of -40°C to 125°C, the TimerBlox parts are suitable for demanding automotive and industrial environments where many oscillators and microcontrollers are unable to operate. The small SOT23 footprint allows each timing device to be placed at the point of use, without routing signals over long distances, and provides an ideal timer for space-limited applications such as handheld and portable devices.

“Adding an accurate delay to any circuit should be this simple and easy,” says Doug LaPorte, design manager for Linear Technology.

The LTC6994 is now available, priced starting at \$1.35 each in 1,000-piece quantities. For more information, visit www.linear.com/6994.


Photo Caption: Delay Block is Programmable for 1us to 33.6s

Summary of Features: LTC6994

- Delay Range: 1us to 33.6s
- Simple Set-up Using 1 to 3 Resistors
- Delay Max Error:
 - <2.3% for Delay > 512us
 - <3.4% for Delay of 8us – 512us
 - <5.1% for Delay of 1us – 8us
- Two LTC6994 Options Available:
 - Delay Rising-Edge or Falling-Edge
 - Delay Both Rising-Edge & Falling Edge
- Configurable Output Inversion (LTC6994-2)
- 2.25V to 5.5V Single Supply Operation
- 55uA to 125uA Supply Current
- CMOS Output Driver Sources/Sinks 20mA
- -40°C to 125°C Operating Temperature Range
- Low Profile ThinSOT™ and 2mm x 3mm DFN

About Linear Technology

Linear Technology Corporation, a manufacturer of high performance linear integrated circuits, was founded in 1981, became a public company in 1986 and joined the S&P 500 index of major public companies in 2000. Linear Technology products include high performance amplifiers, comparators, voltage references, monolithic filters, linear regulators, DC-DC converters, battery chargers, data converters, communications interface circuits, RF signal conditioning circuits, uModule[®] products, and many other analog functions. Applications for Linear Technology's high performance circuits include telecommunications, cellular telephones, networking products such as optical switches, notebook and desktop computers, computer peripherals, video/multimedia, industrial instrumentation, security monitoring devices, high-end consumer products such as digital cameras and MP3 players, complex medical devices, automotive electronics, factory automation, process control, and military and space systems.

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