

FEATURES

- ◆ Ultra Low Supply Current: 1µA at 25kHz
- ◆ Supply Voltage Operation: 0.9V to 1.8V
- ◆ FOUT Period Accuracy: ±2%
- ◆ FOUT Period Drift: 0.044%/°C
- ◆ PWMOUT Duty Cycle Range: 12% to 90%
- ◆ Single Resistor and Capacitor Set Output Frequency
- ◆ Output Driver Resistance: 160Ω

APPLICATIONS

- Portable and Battery-Powered Equipment
- Low Parts Count Nanopower Oscillator
- Compact Nanopower Replacement for Crystal and Ceramic Oscillators
- Nanopower Pulse-width Modulation Control
- Nanopower Pulse-position Modulation Control
- Nanopower Clock Generation
- Nanopower Sequential Timing

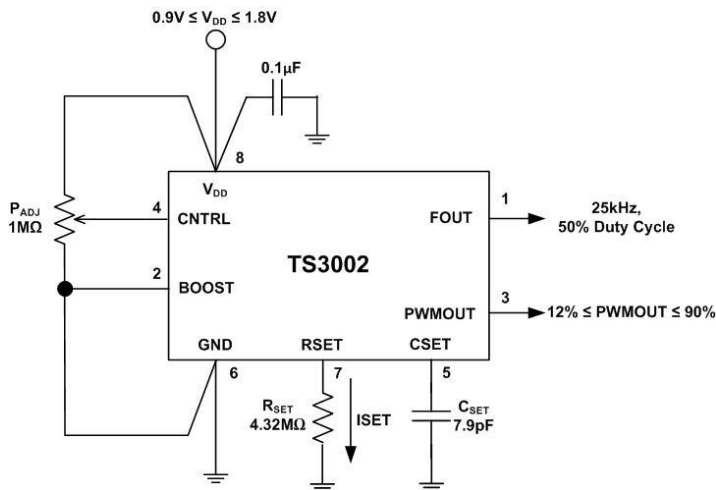
DESCRIPTION

The TS3002 is the industry’s first and only single-supply CMOS oscillator fully specified to operate at 1V while consuming a 1µA supply current at an output frequency of 25kHz. This oscillator is compact, easy-to-use, and versatile. Optimized for ultra-long life, battery-powered applications, the TS3002 is Touchstone’s first oscillator in the “NanoWatt Analog™” high-performance analog integrated circuits portfolio. The TS3002 can operate from single-supply voltages from 0.9V to 1.8V.

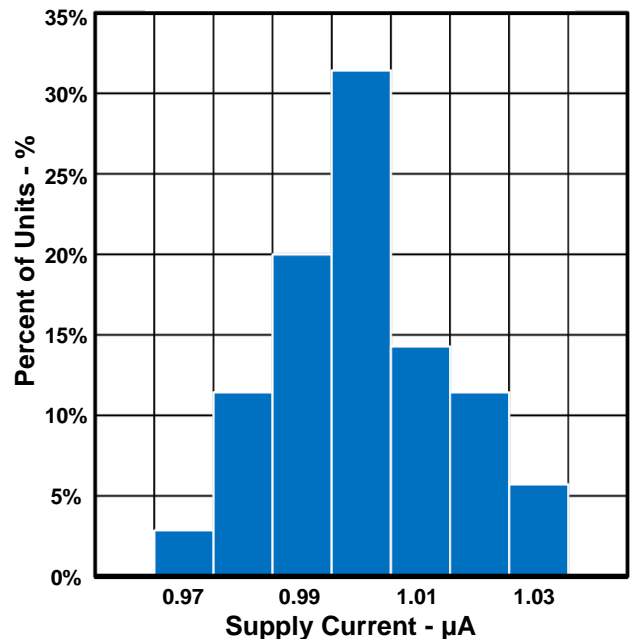
Requiring only a resistor and a capacitor to set the output frequency, the TS3002 represents a 66% reduction in pcb area and a factor-of-10 reduction in power consumption over other CMOS-based integrated circuit oscillators. When compared against industry-standard 555-timer-based products, the TS3002 offers up to 93% reduction in pcb area and four orders of magnitude lower power consumption

The TS3002 is fully specified over the -40°C to +85°C temperature range and is available in a low-profile, 8-pin 2x2mm TDFN package with an exposed back-side paddle.

TYPICAL APPLICATION CIRCUIT



Supply Current Distribution

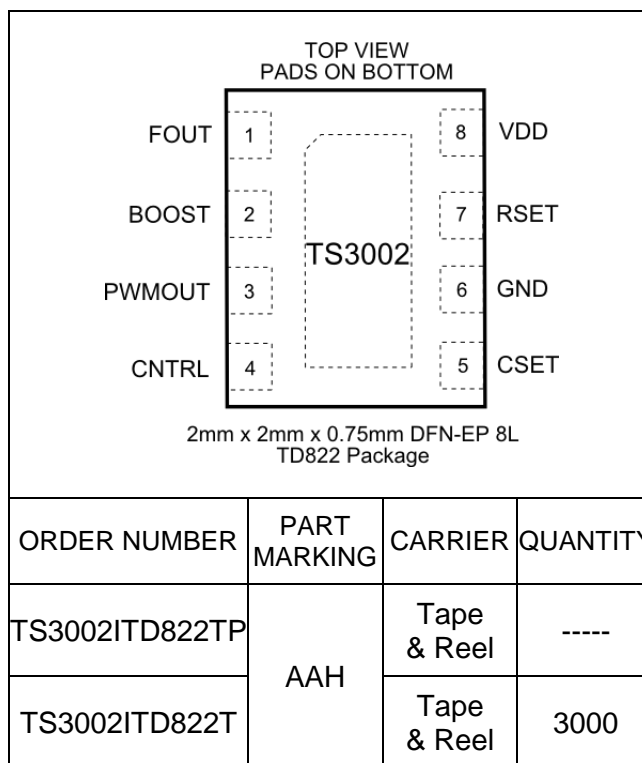


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TS3002 Product Brief



PACKAGE/ORDERING INFORMATION



Lead-free Program: Touchstone Semiconductor supplies only lead-free packaging.

Consult Touchstone Semiconductor for products specified with wider operating temperature ranges.

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