

DALLAS

SEMICONDUCTOR

DS1040

Programmable One-Shot Pulse Generator

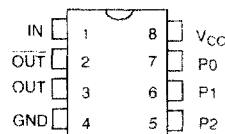
FEATURES

- All-silicon pulse width generator
- Five programmable widths
- Equal and unequal increments available
- Pulse widths from 5 ns to 500 ns
- Widths are stable and precise
- Rising edge-triggered
- Inverted and non-inverted outputs
- Width tolerance $\pm 5\%$ or ± 2 ns, whichever is greater
- Economical
- Auto-insertable, low profile
- Low-power CMOS
- TTL/CMOS-compatible
- Vapor phase, IR and wave solderable
- Custom widths available
- Fast turn prototypes
- Extended temperature range available

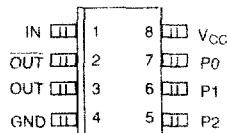
DESCRIPTION

The DS1040 Pulse Generator is a user-programmable one-shot with a choice of five precise pulse widths. Maximum widths range from 50 ns to 500 ns; increments range from 2.5 ns to 100 ns. For maximum flexibility in applications such as magneto-optical read/write disk laser power control, varieties are offered with equal and unequal increments. The DS1040 is offered in standard 8-pin DIPs and 8-pin mini-SOICs. Low cost and superior reliability over hybrid technology are achieved by the combination of a 100% CMOS silicon design and industry standard packaging. The DS1040 series of pulse generators provide a nominal width accuracy of $\pm 5\%$ or

PIN ASSIGNMENT



DS1040M 8-PIN DIP (300 MIL)
See Mech. Drawings
Section



DS1040Z 8-PIN SOIC (150 MIL)
See Mech. Drawings
Section

PIN DESCRIPTION

IN	- Trigger Input
P0-P2	- Programming Pins
GND	- Ground
OUT	- Pulse Output
$\overline{\text{OUT}}$	- Inverted Pulse Output
V _{CC}	- +5V

± 2 ns, whichever is greater. In response to the rising edge of the input (trigger) pulse, the DS1040 produces an output pulse with a width determined by the logic states of the three parallel programming pins. For convenience, both inverting and non-inverting outputs are supplied. The intrinsic delay between the trigger pulse and the output pulse is no more than 10 ns. Each output is capable of driving up to five 74LS loads.

Dallas Semiconductor can customize standard products to meet special needs. For special request and rapid delivery, call (972) 371-4348.