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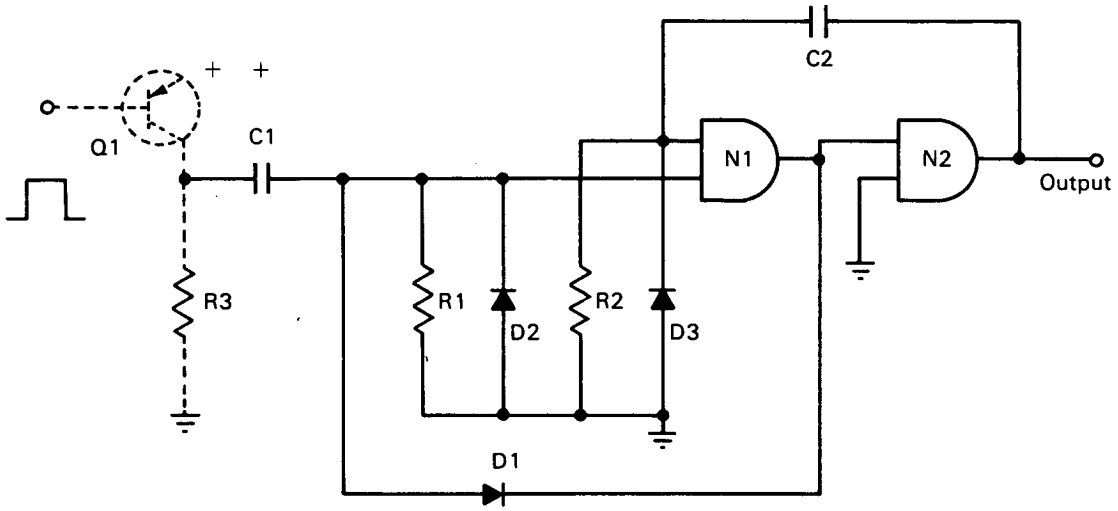
NASA TECH BRIEF

One-Shot Multivibrator with Complementary Metal-Oxide-Semiconductor Components



The illustrated circuit represents a design improvement in one-shot multivibrators. A breadboard model has been tuned to produce output pulses from one microsecond up to several seconds in width, with up to a 95% duty cycle, and with lower power consumption than is possible with previously existing circuits.

The input pulse is derived from Q1 and R3, which represent a typical driver circuit. C1 and R1 differentiate the incoming pulse and D2 limits the signal amplitude, to protect N1. The time constant, and hence the pulse width, is controlled by C2 and R2. D1 feeds the input pulse to N2 and isolates the output of N1 from the input. N1 and N2 are positive NOR gates constructed using complementary MOS devices.

Note:

Requests for further information may be directed to:
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Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

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Category 01