

DM54123/DM74123 Dual Retriggerable One-Shot with Clear and Complementary Outputs

General Description

The '123 is a dual retriggerable monostable multivibrator capable of generating output pulses from a few nano-seconds to extremely long duration up to 100% duty cycle. Each device has three inputs permitting the choice of either leading-edge or trailing edge triggering. Pin (A) is an active-low transition trigger input and pin (B) is an active-high transition trigger input. A low at the clear (CLR) input terminates the output pulse: which also inhibits triggering. An internal connection from CLR to the input gate makes it possible to trigger the circuit by a positive-going signal on CLR as shown in the truth table.

To obtain the best and trouble free operation from this device please read the operating rules as well as the NSC one-shot application notes carefully and observe recommendations.

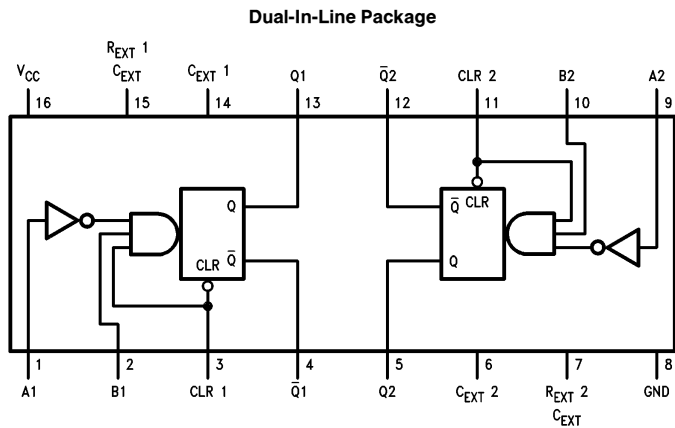
Features

- DC triggered from active-high transition or active-low transition inputs
- Retriggerable to 100% duty cycle
- Direct reset terminates output pulse
- Compensated for V_{CC} and temperature variations
- DTL, TTL compatible
- Input clamp diodes

Functional Description

The basic output pulse width is determined by selection of an external resistor (R_X) and capacitor (C_X). Once triggered, the basic pulse width may be extended by retriggering the gated active-low transition or active-high transition inputs or be reduced by use of the active-low transition clear input. Retriggering to 100% duty cycle is possible by application of an input pulse train whose cycle time is shorter than the output cycle time such that a continuous "HIGH" logic state is maintained at the "Q" output.






Connection Diagram



TL/F/6539-1

Order Number DM54123J-MIL, DM54123W-MIL or DM74123N
See NS Package Number J16A, N16A or W16A

Triggering Truth Table

Inputs			Response
A	B	CLR	
X	X	L	No Trigger
	L	X	No Trigger
	H	H	Trigger
H		X	No Trigger
L		H	Trigger
L	H		Trigger

H = HIGH Voltage Level
L = LOW Voltage Level
X = Immaterial