National Semiconductor

MM54C373/MM74C373 TRI-STATE® Octal D-Type Latch
MM54C374/MM74C374 TRI-STATE Octal D-Type Flip-Flop

General Description

The MM54C373/MM74C373, MM54C374/MM74C374 are integrated, complementary MOS (CMOS), 8-bit storage elements with TRI-STATE outputs. These outputs have been specially designed to drive high capacitive loads, such as one might find when driving a bus, and to have a fan out of 1 when driving standard TTL. When a high logic level is applied to the OUTPUT DISABLE input, all outputs go to a high impedance state, regardless of what signals are present at the other inputs and the state of the storage elements.

The MM54C373/MM74C373 is an 8-bit latch. When $\overline{\text{LATCH ENABLE}}$ is high, the Q outputs will follow the D inputs. When $\overline{\text{LATCH ENABLE}}$ goes low, data at the D inputs, which meets the set-up and hold time requirements, will be retained at the outputs until $\overline{\text{LATCH ENABLE}}$ returns high again.

The MM54C374/MM74C374 is an 8-bit, D-type, positive-edge triggered flip-flop. Data at the D inputs, meeting the set-up and hold time requirements, is transferred to the Q outputs on positive-going transitions of the CLOCK input.

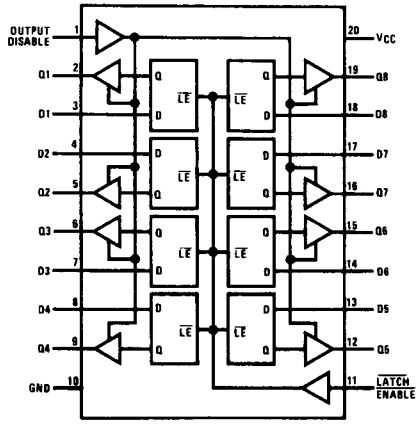
Both the MM54C373/MM74C373 and the MM54C374/MM74C374 are being assembled in 20-pin dual-in-line packages with 0.300" pin centers.

Features

- Wide supply voltage range — 3V to 15V
- High noise immunity — 0.45 V_{CC} (typ.)
- Low power consumption
- TTL compatibility — Fan out of 1 driving standard TTL
- Bus driving capability
- TRI-STATE outputs
- Eight storage elements in one package
- Single CLOCK/$\overline{\text{LATCH ENABLE}}$ and OUTPUT DISABLE control inputs
- 20-pin dual-in-line package with 0.300" centers takes half the board space of a 24-pin package

Connection Diagrams

MM54C373/MM74C373
Dual-In-Line Package

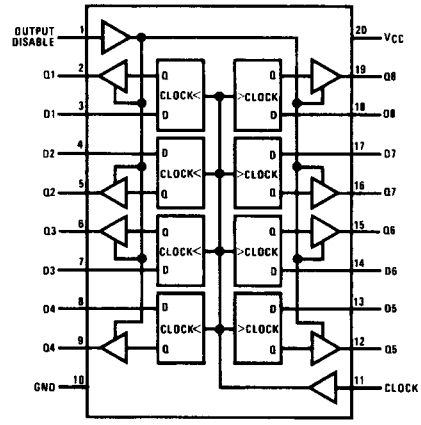


TL/F/5906–1

Top View

Order Number MM54C373* or MM74C373*

MM54C374/MM74C374
Dual-In-Line Package



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Top View

Order Number MM54C374* or MM74C374*

*Please look into Section 8, Appendix D for availability of various package types.