



CY54/74FCT2374T CY54/74FCT2574T

8-Bit Registers

Features

- Function and pinout compatible with FCT and F logic
- 25Ω output series resistors to reduce transmission line reflection noise
- FCT-C speed at 5.2 ns max. (Com'l)
FCT-A speed at 6.5 ns max. (Com'l)
- Reduced V_{OH} (typically=3.3V) versions of equivalent FCT functions
- Edge-rate control circuitry for significantly improved noise characteristics
- Power-off disable feature
- Matched rise and fall times
- Fully compatible with TTL input and output logic levels
- ESD > 2000V

- Sink current 12 mA (Com'l), 12 mA (Mil)
- Source current 15 mA (Com'l), 12 mA (Mil)
- Edge-triggered D-type inputs
- 250 MHz typical toggle rate

Functional Description

The FCT2374T and FCT2574T are high-speed low-power octal D-type flip-flops featuring separate D-type inputs for each flip-flop. On-chip termination resistors have been added to the outputs to reduce system noise caused by reflections. The FCT2374T and FCT2574T can be used to replace the FCT374T and FCT574T to reduce noise in an existing design. Both devices have three-state outputs for bus oriented

applications. A buffered clock (CP) and output enable (\overline{OE}) are common to all flip-flops. The FCT2574T is identical to FCT2374T except that all the outputs are on one side of the package and inputs on the other side. The flip-flops contained in the FCT2374T and FCT2574T will store the state of their individual D inputs that meet the set-up and hold time requirements on the LOW-to-HIGH clock (CP) transition. When \overline{OE} is LOW, the contents of the flip-flops are available at the outputs. When \overline{OE} is HIGH, the outputs will be in the high-impedance state. The state of output enable does not affect the state of the flip-flops.

The outputs are designed with a power-off disable feature to allow for live insertion of boards.

