P54/74FCT3157A/C- P54/74FCT3158A/C
3.3V SSOP (QSOP) NOTEBOOK LOGIC
3.3 VOLT DATA SELECTOR/MULTIPLEXER

ADVANCE INFORMATION

FEATURES

- **Function and Drive Compatible with the Fastest TTL Logic**
- **Inputs and Outputs Interface with TTL Logic Levels**
- **3.3V ± 10% Power Supply and CMOS for Lowest Power Dissipation**
- **FCT3-A speed at 5.0ns max. (Com'l)**
  FCT3-C speed at 4.3ns max. (Com'l)
- **ESD protection exceeds 2000V**
- **Edge-rate Control Circuitry for Significantly Improved Switching Characteristics**
- **48mA Sink Current (Com'l), 32 mA (Mil)**
  15mA Source Current (Com'l), 12 mA (Mil)
- **QSOP (SSOP150) package for minimum board space requirements**
- **Input Clamp Diodes to Limit Bus Reflections**
- **Quad 2-Input Data Selector/Multiplexer**
- **Manufactured in 0.4 micron PACE Technology™**

DESCRIPTION

The 'FCT3157 and 'FCT3158 are quad 2-input multiplexer which select 4 bits of data from two sources under the control of a common data Select input (S). The Enable input ($\overline{E}$) is active-low. When $\overline{E}$ is HIGH, all of the inputs (Y) are forced LOW regardless of all other input conditions.

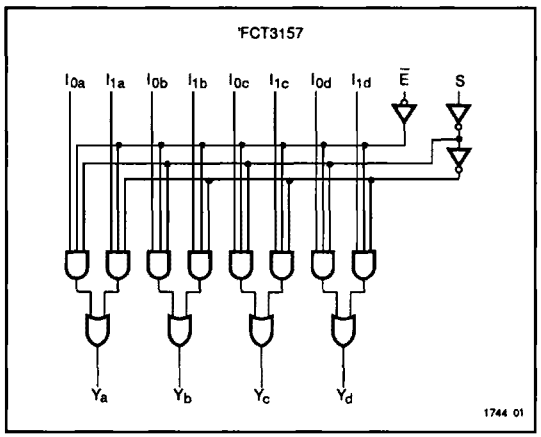
Moving data from two groups of registers to four common output busses is a common use of the 'FCT3157 and 'FCT3158. The state of the Select input determines the particular register from which the data comes. It can also be used as a function generator. The device is useful for implementing highly irregular logic by generating any four of the 16 different functions of two variables with one variable common.

These devices are logic implementation of a 4-pole, 2 position switch where the position of the switch is determined by the logic levels supplied to the Select input. The outputs of the 'FCT3157 are Non-Inverting whereas the 'FCT3158 has Inverting outputs.

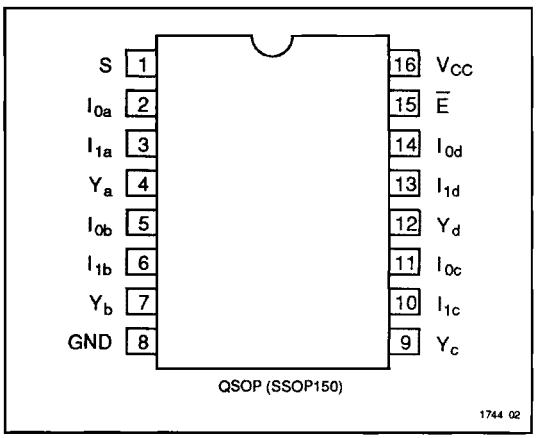
The 'FCT3157/3158 is manufactured using PACE III Technology™ which is Performance Advanced CMOS Engineered to use 0.4 micron effective channel lengths giving 250 picoseconds loaded *internal gate delays. The nominal supply voltage is reduced from the conventional 5.0V to 3.3V, thus reducing output swing dramatically.

*For a fan-in/fan-out of 4, at 85°C junction temperature and 5.0V.

FUNCTIONAL BLOCK DIAGRAM



PIN CONFIGURATIONS



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