# National Semiconductor

#### ADVANCED INFORMATION

T-45-23-17

# 54F/74F701 Register, Counter, Comparator

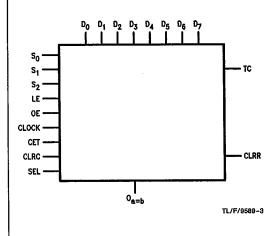
### **General Description**

The 'F701 is a high speed 8-bit expandable register/counter/comparator. It is capable of synchronous loading of the counter and/or register as well as an up/down counting facility. The device incorporates an 8-bit bidirectional data bus which is used to input data to the register or counter. The data bus is also used to output the values held in the register and counter. Internal data paths allow the value held in the register to be transferred to the counter or the values to be transferred from the counter to the register. The outputs of the counter and the register are compared in an "A=B" comparator.

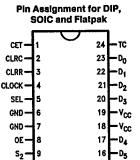
#### **Features**

- 8-bit counter/register/comparator
- Synchronous parallel loading and counting
- Look ahead carry capability for easy cascading
- TRI-STATE® output for bus organized systems
- Multi data path routing
- 80 MHz count frequency
- Fully expandable for 16, 24, 32, etc., bit systems

## **Logic Symbol**



### **Connection Diagram**



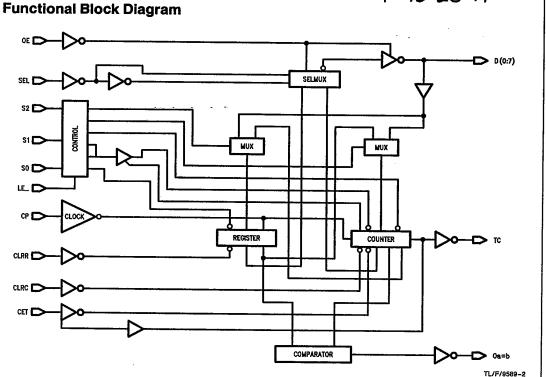
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