

# CD54AC153/3A CD54ACT153/3A

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June 1997

# **Dual 4-Input Multiplexer**

## Description

The CD54AC153/3A and CD54ACT153/3A are dual 4-input multiplexers that utilize the Harris Advanced CMOS Logic technology. One of the four sources for each section is selected by the common Select inputs, S0 and S1. When the Enable inputs ( $\overline{1E}$ ,  $\overline{2E}$ ) are HIGH, the outputs are in the low state.

The CD54AC153/3A and CD54ACT153/3A are supplied in 16 lead dual-in-line ceramic packages (F suffix).

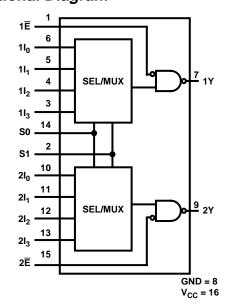
#### **ACT INPUT LOAD TABLE**

INPUT	UNIT LOAD (NOTE 1)
S0, S1, nl <sub>0</sub> - nl <sub>3</sub>	1
nE	0.47

#### NOTE:

1. Unit load is  $\Delta I_{CC}$  limit specified in DC Electrical Specifications Table, e.g., 2.4mA Max at +25°C.

## Functional Diagram



### **Absolute Maximum Ratings**

DC Supply Voltage, $V_{CC}$ 0.5V to +6V DC Input Diode Current, $I_{IK}$
For $V_1 < -0.5V$ or $V_1 > V_{CC} + 0.5V$ ±20mA
DC Output Diode Current, I <sub>OK</sub>
For $V_0 < -0.5V$ or $V_0 > V_{CC} + 0.5V$
DC Output Source or Sink Current, Per Output Pin, IO
For $V_O > -0.5V$ or $V_O < V_{CC} + 0.5V$
DC V <sub>CC</sub> or GND Current, I <sub>CC</sub> or I <sub>GND</sub>
For Up to 4 Outputs Per Device, Add ±25mA For Each
Additional Output

Power Dissipation Per Package, $P_D$ $T_A = -55^{\circ}C$ to $+100^{\circ}C$ (Package F)
Operating Temperature Range, T <sub>A</sub>
Package Type F55°C to +125°C
Storage Temperature, T <sub>STG</sub> 65°C to +150°C
Lead Temperature (During Soldering)
At Distance 1/16in. ± 1/32in. (1.59mm ± 0.79mm)
From Case For 10s Max+265°C
Unit Inserted Into a PC Board (Min Thickness 1/16in., 1.59mm)
With Solder Contacting Lead Tips Only+300°C

CAUTION: Stresses above those listed in "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress only rating and operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied.

## **Recommended Operating Conditions**

Supply Voltage Range, V <sub>CC</sub>		
Unless Otherwise Specified, All Voltages Referenced to GND		
T <sub>A</sub> = Full Package Temperature Range		
CD54AC Types		
CD54ACT Types		
DC Input or Output Voltage, V <sub>1</sub> , V <sub>2</sub> ,		

Operating Temperature, T <sub>A</sub>	55°C to +125°C
at 1.5V to 3V (AC Types)	0ns/V to 50ns/V
at 3.6V to 5.5V (AC Types)	0ns/V to 20ns/V
at 4.5V to 5.5V (AC Types)	Ons/V to 10ns/V