

**COMPLETE DATA SHEET
COMING SOON!**

September 1998

Quad 2-Line-to-4-Line Data Selector

Description

The CD54HCT258/3A is a quad 2-input multiplexer which selects four bits of data from two sources under the control of a common Select input (S). The Output Enable input (\overline{OE}) is active LOW. When \overline{OE} is HIGH, all of the outputs (1Y - 4Y) are in the high impedance state regardless of all other input conditions.

Moving data from two groups of registers to four common output busses is a common use of the 258. The state of the Select input determines the particular register from which the data comes. It can also be used as a function generator.

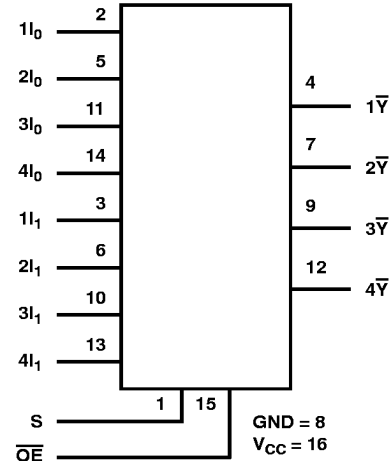
HCT INPUT LOAD TABLE

INPUT	UNIT LOAD (NOTE 1)
Data	0.5
S	1.5
\overline{OE}	1.5

NOTE:

- Unit load is ΔI_{CC} limit specified in DC Electrical Specifications Table, e.g., 360 μ A Max at +25°C.

Functional Diagram



Absolute Maximum Ratings

DC Supply Voltage, V_{CC}

Voltages Referenced to GND -0.5V to +7.0V

DC Input Voltage Range, All Inputs, V_{IN} -0.5V to $V_{CC} + 0.5V$

DC Output Voltage Range, All Outputs, V_{OUT} . . -0.5V to $V_{CC} + 0.5V$

DC Input Diode Current, I_{IK}

For $V_I < -0.5V$ or $V_I > V_{CC} + 0.5V$ $\pm 20mA$

DC Output Diode Current, I_{OK}

For $V_O < -0.5V$ or $V_O > V_{CC} + 0.5V$ $\pm 20mA$

DC Drain Current, Per Output, I_O , For $-0.5V < V_O < V_{CC} + 0.5V$

Standard Output $\pm 25mA$

Bus Driver Output $\pm 35mA$

DC V_{CC} or GND Current, I_{CC}

Standard Output $\pm 50mA$

Bus Driver Output $\pm 70mA$

Power Dissipation Per Package, P_D

$T_A = -55^\circ C$ to $+100^\circ C$ (Package F) 500mW

$T_A = +100^\circ C$ to $+125^\circ C$ (Package F) Derate Linearly at
8mW/ $^\circ C$ to 300mW

Operating Temperature Range, T_A

Package Type F $-55^\circ C$ to $+125^\circ C$

Storage Temperature, T_{STG} $-65^\circ C$ to $+150^\circ C$

Lead Temperature (During Soldering)

At Distance 1/16in. \pm 1/32in. (1.59mm \pm 0.79mm)

From Case For 10s Max $+265^\circ C$

Unit Inserted Into a PC Board (Min Thickness 1/16in., 1.59mm)

With Solder Contacting Lead Tips Only $+300^\circ C$

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_{CC}

T_A = Full Package Temperature Range

CD54HC Types 2V to 6V

CD54HCT Types 4.5V to 5.5V

DC Input or Output Voltage, V_{IN} , V_{OUT} 0V to V_{CC}

Operating Temperature Range, T_A $-55^\circ C$ to $+125^\circ C$

Input Rise and Fall Times, t_R , t_F

at 2V 0ns to 1000ns

at 4.5V 0ns to 500ns

at 6V 0ns to 400ns