

**COMPLETE DATA SHEET  
COMING SOON!**

June 1997

**Octal D-Type Flip-Flop with Data Enable**

### Description

The CD54HC377/3A and CD54HCT377/3A are Octal D-Type Flip-Flops with a buffered clock (CP) common to all eight flip-flops. All the flip-flops are loaded simultaneously on the positive edge of the clock (CP) when the Data Enable ( $\bar{E}$ ) is LOW.

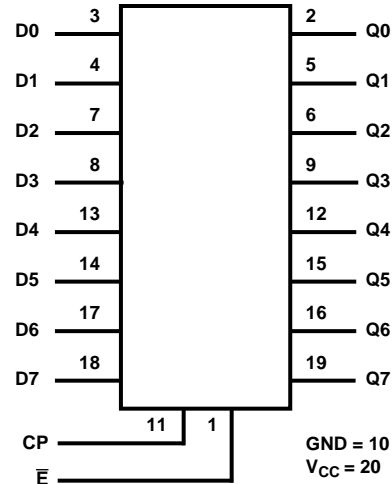
**HCT INPUT LOAD TABLE**

INPUT	UNIT LOAD (NOTE 1)
$\bar{E}$	1.5
CP	0.5
All Dn Inputs	0.25

NOTE:

- Unit load is  $\Delta I_{CC}$  limit specified in DC Electrical Specifications Table, e.g., 360 $\mu$ 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