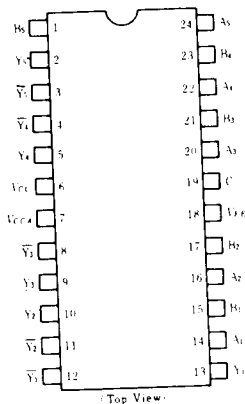


# HD100102

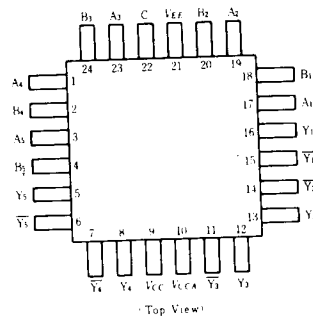
## Quintuple 2-input OR/NOR Gates

### ■ PIN ARRANGEMENT

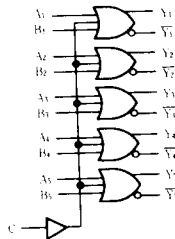
#### ● HD100102



#### ● HD100102F



### ■ LOGIC DIAGRAM



### ■ DC CHARACTERISTICS ( $V_{EE} = -4.2$ to $-4.8$ V, $V_{CC} = V_{CCA} = \text{GND}$ , $T_a = 0$ to $+85^\circ\text{C}$ )

| Item           | Symbol   | Test Condition          | min | typ | max | Unit          |
|----------------|----------|-------------------------|-----|-----|-----|---------------|
| Supply Current | $I_{EE}$ | All input open          | 38  | 55  | 80  | mA            |
| Input Current  | $I_{IH}$ | Enable                  | —   | —   | 300 | $\mu\text{A}$ |
|                |          | All input except Enable | —   | —   | 350 | $\mu\text{A}$ |

Note) As for other items, refer to the "Common DC Characteristics".

### ■ AC CHARACTERISTICS ( $V_{EE} = -2.2$ to $-2.8$ V, $V_{CC} = V_{CCA} = 2.0$ V,)

#### ● HD100102

| ● HD100102             |           |                                  |               |      |      |      |      |      |      |      |      |  |
|------------------------|-----------|----------------------------------|---------------|------|------|------|------|------|------|------|------|--|
| Item                   | Symbol    | Test Condition                   |               | 0℃   |      | 25℃  |      |      | 85℃  |      | Unit |  |
|                        |           |                                  |               | min  | max  | min  | typ  | max  | min  | max  |      |  |
| Propagation Delay Time | $t_{PLH}$ | See test circuit<br>and waveform | Data→Output   | 0.50 | 1.20 | 0.50 | 0.75 | 1.25 | 0.50 | 1.30 | ns   |  |
|                        | $t_{PHL}$ |                                  | Enable→Output | 0.90 | 2.00 | 0.90 | 1.50 | 2.00 | 0.95 | 2.00 |      |  |
| Transition Time        | $t_{TLH}$ |                                  |               | 0.40 | 1.20 | 0.40 | 0.70 | 1.20 | 0.40 | 1.10 | ns   |  |
|                        | $t_{THL}$ |                                  |               |      |      |      |      |      |      |      |      |  |

#### ● HD100102F

| ● HD100102F            |           |                                  |               |      |      |      |      |      |      |      |      |
|------------------------|-----------|----------------------------------|---------------|------|------|------|------|------|------|------|------|
| Item                   | Symbol    | Test Condition                   |               | 0℃   |      | 25℃  |      |      | 85℃  |      | Unit |
|                        |           |                                  |               | min  | max  | min  | typ  | max  | min  | max  |      |
| Propagation Delay Time | $t_{PLH}$ | See test circuit<br>and waveform | Data→Output   | 0.50 | 0.95 | 0.50 | 0.75 | 0.95 | 0.50 | 1.05 | ns   |
|                        | $t_{PHL}$ |                                  | Enable→Output | 0.90 | 1.95 | 0.90 | 1.50 | 1.95 | 0.90 | 2.00 |      |
| Transition Time        | $t_{TLH}$ |                                  |               | 0.45 | 1.10 | 0.45 | 0.70 | 1.10 | 0.45 | 1.05 | ns   |
|                        | $t_{THL}$ |                                  |               |      |      |      |      |      |      |      |      |

Note) the circuits in a test socket or mounted on a printed circuit board and transverse air flow greater than 2.5m/s (500 linear fpm) is maintained.