

HD74AC368/HD74ACT368

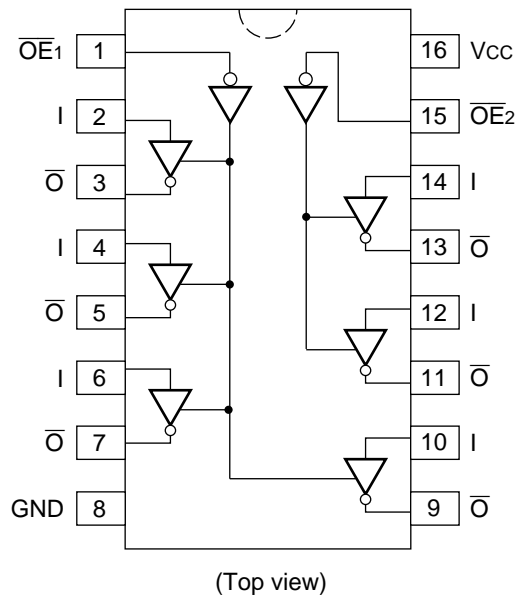
Hex Inverter Buffer with 3-State Output

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Features

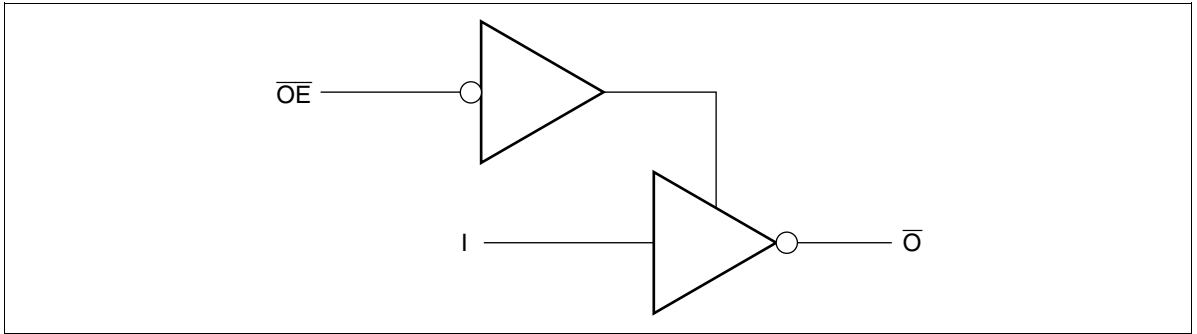
- 3-State Outputs Drive Bus Lines or Buffer Memory Address Registers
- Outputs Source/Sink 24 mA
- HD74ACT368 has TTL-Compatible Inputs

Pin Arrangement



HD74AC368/HD74ACT368

Logic Symbol



Pin Names

| | |
|------------------------------------|---|
| $\overline{OE}_1, \overline{OE}_2$ | 3-State Output: Enable Input (Active Low) |
| I | Inputs |
| \overline{O} | Outputs |

Truth Table

| Inputs | | Output |
|-----------------|---|----------------|
| \overline{OE} | I | \overline{O} |
| L | L | L |
| L | H | H |
| H | X | Z |

H : High Voltage Level

L : Low Voltage Level

X : Immaterial

Z : High Impedance

DC Characteristics (unless otherwise specified)

| Item | Symbol | Max | Unit | Condition |
|-------------------------------------|-----------|-----|---------|--|
| Maximum quiescent supply current | I_{CC} | 80 | μA | $V_{IN} = V_{CC}$ or ground, $V_{CC} = 5.5 V$, $T_a = \text{Worst case}$ |
| Maximum quiescent supply current | I_{CC} | 8.0 | μA | $V_{IN} = V_{CC}$ or ground, $V_{CC} = 5.5 V$, $T_a = 25^\circ C$ |
| Maximum $I_{CC}/input$ (HD74ACT368) | I_{CCT} | 1.5 | mA | $V_{IN} = V_{CC} - 2.1 V$, $V_{CC} = 5.5 V$, $T_a = \text{Worst case}$ |

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AC Characteristics: HD74AC368

| Item | Symbol | V _{CC} (V) ^{*1} | Ta = +25°C C _L = 50 pF | | | Ta = -40°C to +85°C C _L = 50 pF | | Unit |
|-------------------|------------------|-----------------------------------|--------------------------------------|------|------|---|------|------|
| | | | Min | Typ | Max | Min | Max | |
| Propagation delay | t _{PLH} | 3.3 | 1.0 | 7.0 | 9.0 | 1.0 | 10.0 | ns |
| | | 5.0 | 1.0 | 5.0 | 7.0 | 1.0 | 7.5 | |
| Propagation delay | t _{PHL} | 3.3 | 1.0 | 7.0 | 9.0 | 1.0 | 10.0 | ns |
| | | 5.0 | 1.0 | 4.5 | 7.0 | 1.0 | 7.5 | |
| Enable time | t _{PZH} | 3.3 | 1.0 | 9.0 | 13.0 | 1.0 | 13.5 | ns |
| | | 5.0 | 1.0 | 7.0 | 9.5 | 1.0 | 10.0 | |
| Enable time | t _{PZL} | 3.3 | 1.0 | 10.0 | 12.5 | 1.0 | 13.5 | ns |
| | | 5.0 | 1.0 | 7.5 | 10.0 | 1.0 | 10.5 | |
| Disable time | t _{PHZ} | 3.3 | 1.0 | 9.5 | 12.0 | 1.0 | 12.5 | ns |
| | | 5.0 | 1.0 | 7.5 | 10.0 | 1.0 | 10.5 | |
| Disable time | t _{PLZ} | 3.3 | 1.0 | 9.0 | 12.5 | 1.0 | 13.5 | ns |
| | | 5.0 | 1.0 | 7.0 | 10.0 | 1.0 | 10.5 | |

Note: 1. Voltage Range 3.3 is 3.3 V ± 0.3 V
Voltage Range 5.0 is 5.0 V ± 0.5 V

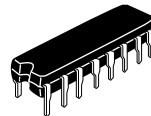
AC Characteristics: HD74ACT368

| Item | Symbol | V _{CC} (V) ^{*1} | Ta = +25°C C _L = 50 pF | | | Ta = -40°C to +85°C C _L = 50 pF | | Unit |
|-------------------|------------------|-----------------------------------|--------------------------------------|-----|------|---|------|------|
| | | | Min | Typ | Max | Min | Max | |
| Propagation delay | t _{PLH} | 5.0 | 1.0 | 6.5 | 9.0 | 1.0 | 10.0 | ns |
| Propagation delay | t _{PHL} | 5.0 | 1.0 | 6.0 | 9.0 | 1.0 | 10.0 | ns |
| Enable time | t _{PZH} | 5.0 | 1.0 | 8.0 | 10.0 | 1.0 | 11.0 | ns |
| Enable time | t _{PZL} | 5.0 | 1.0 | 8.0 | 12.0 | 1.0 | 13.0 | ns |
| Disable time | t _{PHZ} | 5.0 | 1.0 | 9.0 | 12.0 | 1.0 | 13.0 | ns |
| Disable time | t _{PLZ} | 5.0 | 1.0 | 8.5 | 11.0 | 1.0 | 12.0 | ns |

Note: 1. Voltage Range 5.0 is 5.0 V ± 0.5 V

Capacitance

| Item | Symbol | Typ | Unit | Condition |
|-------------------------------|-----------------|------|------|-------------------------|
| Input capacitance | C _{IN} | 4.5 | pF | V _{CC} = 5.5 V |
| Power dissipation capacitance | C _{PD} | 40.0 | pF | V _{CC} = 5.0 V |



| | |
|--------------------------|----------|
| Hitachi Code | DP-16 |
| JEDEC | Conforms |
| EIAJ | Conforms |
| Weight (reference value) | 1.07 g |



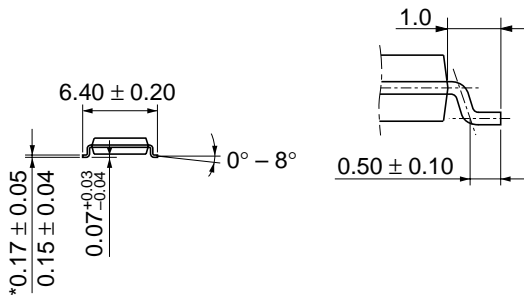
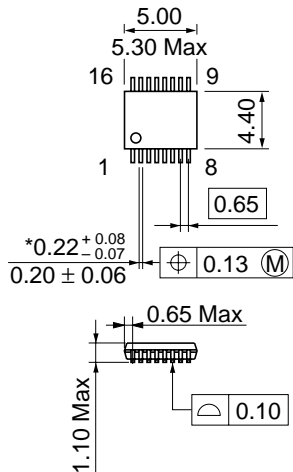
*Dimension including the plating thickness
Base material dimension

| | |
|--------------------------|----------|
| Hitachi Code | FP-16DA |
| JEDEC | — |
| EIAJ | Conforms |
| Weight (reference value) | 0.24 g |



*Dimension including the plating thickness
Base material dimension

| | |
|--------------------------|----------|
| Hitachi Code | FP-16DN |
| JEDEC | Conforms |
| EIAJ | Conforms |
| Weight (reference value) | 0.15 g |



*Dimension including the plating thickness
 Base material dimension

| | |
|--------------------------|----------|
| Hitachi Code | TTP-16DA |
| JEDEC | — |
| EIAJ | — |
| Weight (reference value) | 0.05 g |

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