# 74HC2G34; 74HCT2G34

## Dual buffer gate

Rev. 2 — 3 February 2022 Product data sheet

## 1. General description

The 74HC2G34; 74HCT2G34 is a dual buffer. Inputs include clamp diodes. This enables the use of current limiting resistors to interface inputs to voltages in excess of $V_{CC}$.

## 2. Features and benefits

- Wide supply voltage range from 2.0 V to 6.0 V
- High noise immunity
- CMOS low power dissipation
- Balanced propagation delays
- Unlimited input rise and fall times
- Input levels:
  - For 74HC2G34: CMOS level
  - For 74HCT2G34: TTL level
- Latch-up performance exceeds 100 mA per JESD 78 Class II Level B
- Complies with JEDEC standards
  - JESD8C (2.7 V to 3.6 V)
  - JESD7A (2.0 V to 6.0 V)
- ESD protection:
  - HBM JESD22-A114-D exceeds 2000 V
  - MM JESD22-A115-A exceeds 200 V
- Specified from -40 °C to +85 °C and -40 °C to +125 °C

## 3. Ordering information

**Table 1. Ordering information**

| Type number | Package | | | |
|---|---|---|---|---|
| | Temperature range | Name | Description | Version |
| 74HC2G34GW | -40 °C to +125 °C | TSSOP6 | plastic thin shrink small outline package; 6 leads; body width 1.25 mm | SOT363-2 |
| 74HCT2G34GW | | | | |
| 74HC2G34GV | -40 °C to +125 °C | SC-74; TSOP6 | plastic surface-mounted package; 6 leads | SOT457 |
| 74HCT2G34GV | | | | |

# 4. Marking

**Table 2. Marking**

| Type number | Marking code[1] |
|---|---|
| 74HC2G34GW | PA |
| 74HCT2G34GW | UA |
| 74HC2G34GV | P34 |
| 74HCT2G34GV | U34 |

[1] The pin 1 indicator is located on the lower left corner of the device, below the marking code.

# 5. Functional diagram

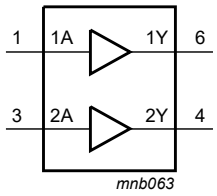



**Fig. 1. Logic symbol**

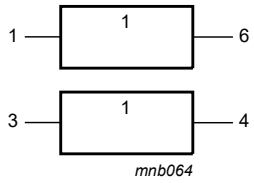



**Fig. 2. IEC logic symbol**

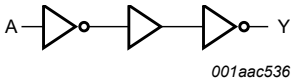



**Fig. 3. Logic diagram (one gate)**

# 6. Pinning information

## 6.1. Pinning

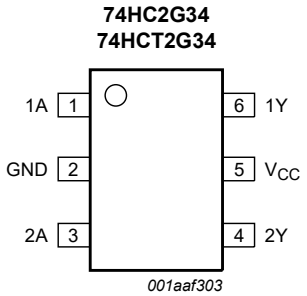



**Fig. 4. Pin configuration SOT363-2 (TSSOP6) and SOT457 (SC-74; TSOP6)**

## 6.2. Pin description

**Table 3. Pin description**

| Symbol | Pin | Description |
|---|---|---|
| 1A | 1 | data input |
| GND | 2 | ground (0 V) |
| 2A | 3 | data input |
| 2Y | 4 | data output |
| $V_{CC}$ | 5 | supply voltage |
| 1Y | 6 | data output |

# 7. Functional description

**Table 4. Function table**

*H = HIGH voltage level; L = LOW voltage level.*

| Input | Output |
|---|---|
| **nA** | **nY** |
| L | L |
| H | H |

# 8. Limiting values

**Table 5. Limiting values**

*In accordance with the Absolute Maximum Rating System (IEC 60134). Voltages are referenced to GND (ground = 0 V).*

| Symbol | Parameter | Conditions | | Min | Max | Unit |
|---|---|---|---|---|---|---|
| $V_{CC}$ | supply voltage | | | -0.5 | +7.0 | V |
| $I_{IK}$ | input clamping current | $V_I < -0.5$ V or $V_I > V_{CC} + 0.5$ V | [1] | - | ±20 | mA |
| $I_{OK}$ | output clamping current | $V_O < -0.5$ V or $V_O > V_{CC} + 0.5$ V | [1] | - | ±20 | mA |
| $I_O$ | output current | $V_O = -0.5$ V to $V_{CC} + 0.5$ V | [1] | - | ±25 | mA |
| $I_{CC}$ | supply current | | [1] | - | +50 | mA |
| $I_{GND}$ | ground current | | [1] | - | -50 | mA |
| $T_{stg}$ | storage temperature | | | -65 | +150 | °C |
| $P_{tot}$ | total power dissipation | | [2] | - | 250 | mW |

[1] The minimum input and output voltage ratings may be exceeded if the input and output current ratings are observed.
[2] For SOT363-2 (TSSOP6) package: $P_{tot}$ derates linearly with 3.7 mW/K above 83 °C.
For SOT457 (SC-74; TSOP6) package: $P_{tot}$ derates linearly with 4.1 mW/K above 89 °C.

# 9. Recommended operating conditions

**Table 6. Recommended operating conditions**

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| **74HC2G34** | | | | | | |
| $V_{CC}$ | supply voltage | | 2.0 | 5.0 | 6.0 | V |
| $V_I$ | input voltage | | 0 | - | $V_{CC}$ | V |
| $V_O$ | output voltage | | 0 | - | $V_{CC}$ | V |
| $T_{amb}$ | ambient temperature | | -40 | +25 | +125 | °C |
| $t_r$ | rise time | except for Schmitt trigger inputs | | | | |
| | | $V_{CC}$ = 2.0 V | - | - | 1000 | ns |
| | | $V_{CC}$ = 4.5 V | - | - | 500 | ns |
| | | $V_{CC}$ = 6.0 V | - | - | 400 | ns |
| $t_f$ | fall time | except for Schmitt trigger inputs | | | | |
| | | $V_{CC}$ = 2.0 V | - | - | 1000 | ns |
| | | $V_{CC}$ = 4.5 V | - | - | 500 | ns |
| | | $V_{CC}$ = 6.0 V | - | - | 400 | ns |

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| **74HCT2G34** | | | | | | |
| $V_{CC}$ | supply voltage | | 4.5 | 5.0 | 5.5 | V |
| $V_I$ | input voltage | | 0 | - | $V_{CC}$ | V |
| $V_O$ | output voltage | | 0 | - | $V_{CC}$ | V |
| $T_{amb}$ | ambient temperature | | -40 | +25 | +125 | °C |
| $t_r$ | rise time | except for Schmitt trigger inputs | | | | |
| | | $V_{CC}$ = 4.5 V | - | - | 500 | ns |
| $t_f$ | fall time | except for Schmitt trigger inputs | | | | |
| | | $V_{CC}$ = 4.5 V | - | - | 500 | ns |

## 10. Static characteristics

**Table 7. Static characteristics for 74HC2G34**

*At recommended operating conditions; voltages are referenced to GND (ground = 0 V).*

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| **$T_{amb}$ = 25 °C** | | | | | | |
| $V_{IH}$ | HIGH-level input voltage | $V_{CC}$ = 2.0 V | 1.5 | 1.2 | - | V |
| | | $V_{CC}$ = 4.5 V | 3.15 | 2.4 | - | V |
| | | $V_{CC}$ = 6.0 V | 4.2 | 3.2 | - | V |
| $V_{IL}$ | LOW-level input voltage | $V_{CC}$ = 2.0 V | - | 0.8 | 0.5 | V |
| | | $V_{CC}$ = 4.5 V | - | 2.1 | 1.35 | V |
| | | $V_{CC}$ = 6.0 V | - | 2.8 | 1.8 | V |
| $V_{OH}$ | HIGH-level output voltage | $V_I$ = $V_{IH}$ or $V_{IL}$ | | | | |
| | | $I_O$ = -20 µA; $V_{CC}$ = 2.0 V | 1.9 | 2.0 | - | V |
| | | $I_O$ = -20 µA; $V_{CC}$ = 4.5 V | 4.4 | 4.5 | - | V |
| | | $I_O$ = -20 µA; $V_{CC}$ = 6.0 V | 5.9 | 6.0 | - | V |
| | | $I_O$ = -4.0 mA; $V_{CC}$ = 4.5 V | 4.18 | 4.32 | - | V |
| | | $I_O$ = -5.2 mA; $V_{CC}$ = 6.0 V | 5.68 | 5.81 | - | V |
| $V_{OL}$ | LOW-level output voltage | $V_I$ = $V_{IH}$ or $V_{IL}$ | | | | |
| | | $I_O$ = 20 µA; $V_{CC}$ = 2.0 V | - | 0 | 0.1 | V |
| | | $I_O$ = 20 µA; $V_{CC}$ = 4.5 V | - | 0 | 0.1 | V |
| | | $I_O$ = 20 µA; $V_{CC}$ = 6.0 V | - | 0 | 0.1 | V |
| | | $I_O$ = 4.0 mA; $V_{CC}$ = 4.5 V | - | 0.15 | 0.26 | V |
| | | $I_O$ = 5.2 mA; $V_{CC}$ = 6.0 V | - | 0.16 | 0.26 | V |
| $I_I$ | input leakage current | $V_I$ = GND or $V_{CC}$; $V_{CC}$ = 6.0 V | - | - | ±0.1 | µA |
| $I_{CC}$ | supply current | $V_I$ = GND or $V_{CC}$; $I_O$ = 0 A; $V_{CC}$ = 6.0 V | - | - | 1.0 | µA |
| $C_I$ | input capacitance | | - | 1.5 | - | pF |

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| **$T_{amb}$ = -40 °C to +85 °C** | | | | | | |
| $V_{IH}$ | HIGH-level input voltage | $V_{CC}$ = 2.0 V | 1.5 | - | - | V |
| | | $V_{CC}$ = 4.5 V | 3.15 | - | - | V |
| | | $V_{CC}$ = 6.0 V | 4.2 | - | - | V |
| $V_{IL}$ | LOW-level input voltage | $V_{CC}$ = 2.0 V | - | - | 0.5 | V |
| | | $V_{CC}$ = 4.5 V | - | - | 1.35 | V |
| | | $V_{CC}$ = 6.0 V | - | - | 1.8 | V |
| $V_{OH}$ | HIGH-level output voltage | $V_I = V_{IH}$ or $V_{IL}$ | | | | |
| | | $I_O$ = -20 µA; $V_{CC}$ = 2.0 V | 1.9 | - | - | V |
| | | $I_O$ = -20 µA; $V_{CC}$ = 4.5 V | 4.4 | - | - | V |
| | | $I_O$ = -20 µA; $V_{CC}$ = 6.0 V | 5.9 | - | - | V |
| | | $I_O$ = -4.0 mA; $V_{CC}$ = 4.5 V | 4.13 | - | - | V |
| | | $I_O$ = -5.2 mA; $V_{CC}$ = 6.0 V | 5.63 | - | - | V |
| $V_{OL}$ | LOW-level output voltage | $V_I = V_{IH}$ or $V_{IL}$ | | | | |
| | | $I_O$ = 20 µA; $V_{CC}$ = 2.0 V | - | - | 0.1 | V |
| | | $I_O$ = 20 µA; $V_{CC}$ = 4.5 V | - | - | 0.1 | V |
| | | $I_O$ = 20 µA; $V_{CC}$ = 6.0 V | - | - | 0.1 | V |
| | | $I_O$ = 4.0 mA; $V_{CC}$ = 4.5 V | - | - | 0.33 | V |
| | | $I_O$ = 5.2 mA; $V_{CC}$ = 6.0 V | - | - | 0.33 | V |
| $I_I$ | input leakage current | $V_I$ = GND or $V_{CC}$; $V_{CC}$ = 6.0 V | - | - | ±1.0 | µA |
| $I_{CC}$ | supply current | $V_I$ = GND or $V_{CC}$; $I_O$ = 0 A; $V_{CC}$ = 6.0 V | - | - | 10.0 | µA |
| **$T_{amb}$ = -40 °C to +125 °C** | | | | | | |
| $V_{IH}$ | HIGH-level input voltage | $V_{CC}$ = 2.0 V | 1.5 | - | - | V |
| | | $V_{CC}$ = 4.5 V | 3.15 | - | - | V |
| | | $V_{CC}$ = 6.0 V | 4.2 | - | - | V |
| $V_{IL}$ | LOW-level input voltage | $V_{CC}$ = 2.0 V | - | - | 0.5 | V |
| | | $V_{CC}$ = 4.5 V | - | - | 1.35 | V |
| | | $V_{CC}$ = 6.0 V | - | - | 1.8 | V |
| $V_{OH}$ | HIGH-level output voltage | $V_I = V_{IH}$ or $V_{IL}$ | | | | |
| | | $I_O$ = -20 µA; $V_{CC}$ = 2.0 V | 1.9 | - | - | V |
| | | $I_O$ = -20 µA; $V_{CC}$ = 4.5 V | 4.4 | - | - | V |
| | | $I_O$ = -20 µA; $V_{CC}$ = 6.0 V | 5.9 | - | - | V |
| | | $I_O$ = -4.0 mA; $V_{CC}$ = 4.5 V | 3.7 | - | - | V |
| | | $I_O$ = -5.2 mA; $V_{CC}$ = 6.0 V | 5.2 | - | - | V |
| $V_{OL}$ | LOW-level output voltage | $V_I = V_{IH}$ or $V_{IL}$ | | | | |
| | | $I_O$ = 20 µA; $V_{CC}$ = 2.0 V | - | - | 0.1 | V |
| | | $I_O$ = 20 µA; $V_{CC}$ = 4.5 V | - | - | 0.1 | V |
| | | $I_O$ = 20 µA; $V_{CC}$ = 6.0 V | - | - | 0.1 | V |
| | | $I_O$ = 4.0 mA; $V_{CC}$ = 4.5 V | - | - | 0.4 | V |
| | | $I_O$ = 5.2 mA; $V_{CC}$ = 6.0 V | - | - | 0.4 | V |
| $I_I$ | input leakage current | $V_I$ = GND or $V_{CC}$; $V_{CC}$ = 6.0 V | - | - | ±1.0 | µA |
| $I_{CC}$ | supply current | $V_I$ = GND or $V_{CC}$; $I_O$ = 0 A; $V_{CC}$ = 6.0 V | - | - | 20.0 | µA |

**Table 8. Static characteristics for 74HCT2G34**

*At recommended operating conditions; voltages are referenced to GND (ground = 0 V).*

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| **$T_{amb}$ = 25 °C** | | | | | | |
| $V_{IH}$ | HIGH-level input voltage | $V_{CC}$ = 4.5 V to 5.5 V | 2.0 | 1.6 | - | V |
| $V_{IL}$ | LOW-level input voltage | $V_{CC}$ = 4.5 V to 5.5 V | - | 1.2 | 0.8 | V |
| $V_{OH}$ | HIGH-level output voltage | $V_I$ = $V_{IH}$ or $V_{IL}$ | | | | |
| | | $I_O$ = -20 μA; $V_{CC}$ = 4.5 V | 4.4 | 4.5 | - | V |
| | | $I_O$ = -4.0 mA; $V_{CC}$ = 4.5 V | 4.18 | 4.32 | - | V |
| $V_{OL}$ | LOW-level output voltage | $V_I$ = $V_{IH}$ or $V_{IL}$ | | | | |
| | | $I_O$ = 20 μA; $V_{CC}$ = 4.5 V | - | 0 | 0.1 | V |
| | | $I_O$ = 4.0 mA; $V_{CC}$ = 4.5 V | - | 0.15 | 0.26 | V |
| $I_I$ | input leakage current | $V_I$ = GND or $V_{CC}$; $V_{CC}$ = 5.5 V | - | - | ±0.1 | μA |
| $I_{CC}$ | supply current | $V_I$ = GND or $V_{CC}$; $I_O$ = 0 A; $V_{CC}$ = 5.5 V | - | - | 1.0 | μA |
| $\Delta I_{CC}$ | additional supply current | $V_I$ = $V_{CC}$ - 2.1 V; $V_{CC}$ = 4.5 V to 5.5 V; $I_O$ = 0 A | - | - | 300 | μA |
| $C_I$ | input capacitance | | - | 1.5 | - | pF |
| **$T_{amb}$ = -40 °C to +85 °C** | | | | | | |
| $V_{IH}$ | HIGH-level input voltage | $V_{CC}$ = 4.5 V to 5.5 V | 2.0 | - | - | V |
| $V_{IL}$ | LOW-level input voltage | $V_{CC}$ = 4.5 V to 5.5 V | - | - | 0.8 | V |
| $V_{OH}$ | HIGH-level output voltage | $V_I$ = $V_{IH}$ or $V_{IL}$ | | | | |
| | | $I_O$ = -20 μA; $V_{CC}$ = 4.5 V | 4.4 | - | - | V |
| | | $I_O$ = -4.0 mA; $V_{CC}$ = 4.5 V | 4.13 | - | - | V |
| $V_{OL}$ | LOW-level output voltage | $V_I$ = $V_{IH}$ or $V_{IL}$ | | | | |
| | | $I_O$ = 20 μA; $V_{CC}$ = 4.5 V | - | - | 0.1 | V |
| | | $I_O$ = 4.0 mA; $V_{CC}$ = 4.5 V | - | - | 0.33 | V |
| $I_I$ | input leakage current | $V_I$ = GND or $V_{CC}$; $V_{CC}$ = 5.5 V | - | - | ±1.0 | μA |
| $I_{CC}$ | supply current | $V_I$ = GND or $V_{CC}$; $I_O$ = 0 A; $V_{CC}$ = 5.5 V | - | - | 10.0 | μA |
| $\Delta I_{CC}$ | additional supply current | $V_I$ = $V_{CC}$ - 2.1 V; $V_{CC}$ = 4.5 V to 5.5 V; $I_O$ = 0 A | - | - | 375 | μA |
| **$T_{amb}$ = -40 °C to +125 °C** | | | | | | |
| $V_{IH}$ | HIGH-level input voltage | $V_{CC}$ = 4.5 V to 5.5 V | 2.0 | - | - | V |
| $V_{IL}$ | LOW-level input voltage | $V_{CC}$ = 4.5 V to 5.5 V | - | - | 0.8 | V |
| $V_{OH}$ | HIGH-level output voltage | $V_I$ = $V_{IH}$ or $V_{IL}$ | | | | |
| | | $I_O$ = -20 μA; $V_{CC}$ = 4.5 V | 4.4 | - | - | V |
| | | $I_O$ = -4.0 mA; $V_{CC}$ = 4.5 V | 3.7 | - | - | V |
| $V_{OL}$ | LOW-level output voltage | $V_I$ = $V_{IH}$ or $V_{IL}$ | | | | |
| | | $I_O$ = 20 μA; $V_{CC}$ = 4.5 V | - | - | 0.1 | V |
| | | $I_O$ = 4.0 mA; $V_{CC}$ = 4.5 V | - | - | 0.4 | V |
| $I_I$ | input leakage current | $V_I$ = GND or $V_{CC}$; $V_{CC}$ = 5.5 V | - | - | ±1.0 | μA |
| $I_{CC}$ | supply current | $V_I$ = GND or $V_{CC}$; $I_O$ = 0 A; $V_{CC}$ = 5.5 V | - | - | 20.0 | μA |
| $\Delta I_{CC}$ | additional supply current | $V_I$ = $V_{CC}$ - 2.1 V; $V_{CC}$ = 4.5 V to 5.5 V; $I_O$ = 0 A | - | - | 410 | μA |

# 11. Dynamic characteristics

**Table 9. Dynamic characteristics**

*Voltages are referenced to GND (ground = 0 V); for test circuit see Fig. 6.*

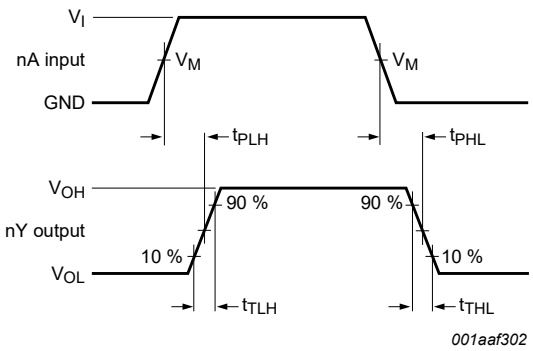
| Symbol | Parameter | Conditions | 25 °C | | | -40 °C to +85 °C | | -40 °C to +125 °C | | Unit |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Min | Typ | Max | Min | Max | Min | Max | |
| **74HC2G34** | | | | | | | | | | |
| $t_{pd}$ | propagation delay | nA to nY; see Fig. 5 [1] | | | | | | | | |
| | | $V_{CC}$ = 2.0 V; $C_L$ = 50 pF | - | 29 | 75 | - | 95 | - | 125 | ns |
| | | $V_{CC}$ = 4.5 V; $C_L$ = 50 pF | - | 9 | 15 | - | 19 | - | 25 | ns |
| | | $V_{CC}$ = 6.0 V; $C_L$ = 50 pF | - | 8 | 13 | - | 16 | - | 20 | ns |
| $t_t$ | transition time | nY; see Fig. 5 [2] | | | | | | | | |
| | | $V_{CC}$ = 2.0 V; $C_L$ = 50 pF | - | 18 | 75 | - | 95 | - | 125 | ns |
| | | $V_{CC}$ = 4.5 V; $C_L$ = 50 pF | - | 6 | 15 | - | 19 | - | 25 | ns |
| | | $V_{CC}$ = 6.0 V; $C_L$ = 50 pF | - | 5 | 13 | - | 16 | - | 20 | ns |
| $C_{PD}$ | power dissipation capacitance | $V_I$ = GND to $V_{CC}$ [3] | - | 10 | - | - | - | - | - | pF |
| **74HCT2G34** | | | | | | | | | | |
| $t_{pd}$ | propagation delay | nA to nY; see Fig. 5 [1] | | | | | | | | |
| | | $V_{CC}$ = 4.5 V; $C_L$ = 50 pF | - | 10 | 18 | - | 23 | - | 29 | ns |
| $t_t$ | transition time | nY; see Fig. 5 [2] | | | | | | | | |
| | | $V_{CC}$ = 4.5 V; $C_L$ = 50 pF | - | 6 | 15 | - | 19 | - | 25 | ns |
| $C_{PD}$ | power dissipation capacitance | $V_I$ = GND to $V_{CC}$ - 1.5 V [3] | - | 9 | - | - | - | - | - | pF |

[1] $t_{pd}$ is the same as $t_{PLH}$ and $t_{PHL}$

[2] $t_t$ is the same as $t_{TLH}$ and $t_{THL}$

[3] $C_{PD}$ is used to determine the dynamic power dissipation ($P_D$ in µW).
$P_D = C_{PD} \times V_{CC}^2 \times f_i \times N + \Sigma(C_L \times V_{CC}^2 \times f_o)$ where:
$f_i$ = input frequency in MHz;
$f_o$ = output frequency in MHz;
$C_L$ = output load capacitance in pF;
$V_{CC}$ = supply voltage in V;
N = number of inputs switching;
$\Sigma(C_L \times V_{CC}^2 \times f_o)$ = sum of the outputs.

## 11.1. Waveforms and test circuit



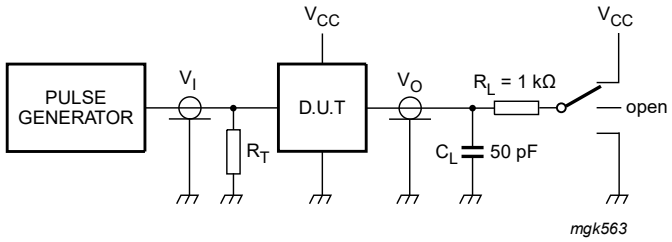

Measurement points are given in Table 10.

$V_{OL}$ and $V_{OH}$ are typical voltage output levels that occur with the output load.

**Fig. 5. The data input (nA) to output (nY) propagation delays and output transition times**

**Table 10. Measurement points**

| Type | Input | | | Output |
|---|---|---|---|---|
| | $V_M$ | $V_I$ | $t_r = t_f$ | $V_M$ |
| 74HC2G34 | $0.5V_{CC}$ | GND to $V_{CC}$ | 6.0 ns | $0.5V_{CC}$ |
| 74HCT2G34 | 1.3 V | GND to 3.0 V | 6.0 ns | 1.3 V |




Test data is given in Table 11.

Definitions test circuit:

$R_L$ = Load resistance.

$C_L$ = Load capacitance including jig and probe capacitance.

$R_T$ = Termination resistance should be equal to output impedance $Z_o$ of the pulse generator.

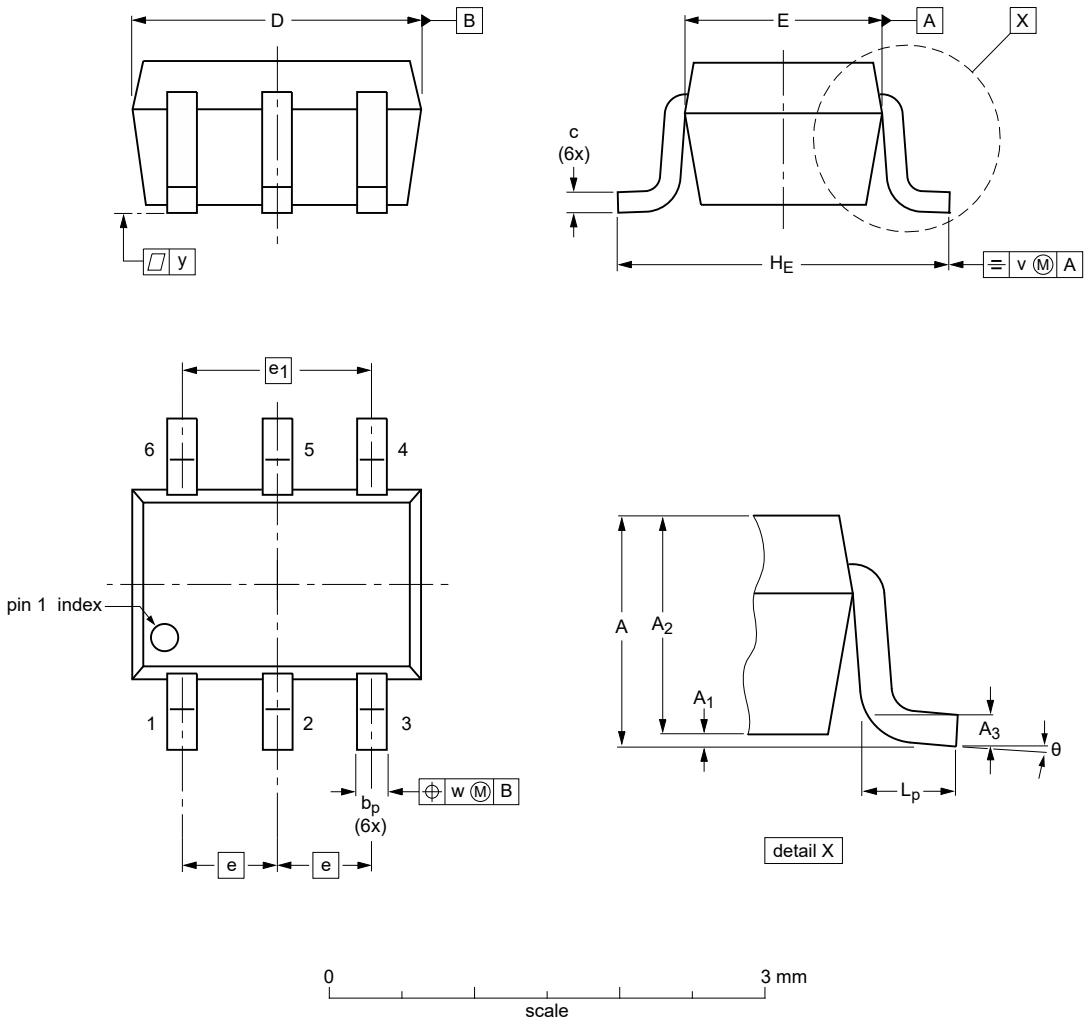
**Fig. 6. Test circuit for measuring switching times**

**Table 11. Test data**

| Type | Input | | Test |
|---|---|---|---|
| | $V_I$ | $t_r$, $t_f$ | $t_{PHL}$, $t_{PLH}$ |
| 74HC2G34 | GND to $V_{CC}$ | 6 ns | open |
| 74HCT2G34 | GND to 3.0 V | 6 ns | open |

## 12. Package outline

**TSSOP6: plastic thin shrink small outline package; 6 leads; body width 1.25 mm** **SOT363-2**




Dimensions (mm are the original dimensions)

| Unit | | A | $A_1$ | $A_2$ | $A_3$ | $b_p$ | c | $D^{(1)}$ | $E^{(1)}$ | e | $e_1$ | $H_E$ | $L_p$ | v | w | y | θ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | max | 1.1 | 0.1 | 1.0 | 0.15 | 0.30 | 0.25 | 2.2 | 1.35 | 0.65 | 1.3 | 2.4 | 0.46 | 0.3 | 0.1 | 0.1 | 8° |
| | min | 0.8 | 0 | 0.8 | | 0.15 | 0.08 | 1.8 | 1.15 | | | 1.8 | 0.26 | | | | 0° |

Note

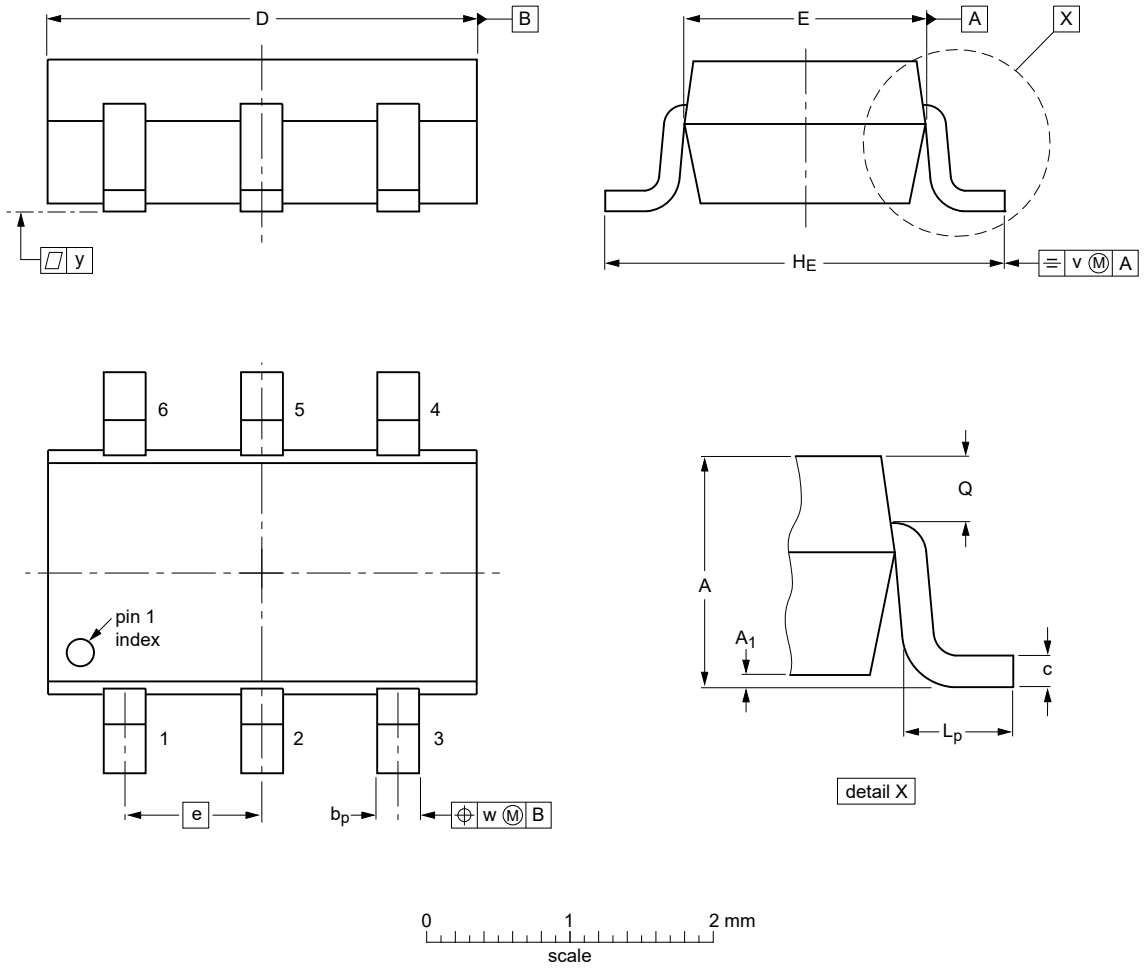
1. Plastic or metal protrusions of 0.2 mm maximum per side are not included.

*sot363-2_po*

| Outline version | References | | | | European projection | Issue date |
|---|---|---|---|---|---|---|
| | IEC | JEDEC | JEITA | | | |
| SOT363-2 | | MO-203 | SC-88A | | | ~~21-12-15~~ 21-12-16 |

**Fig. 7. Package outline SOT363-2 (TSSOP6)**

**Plastic, surface-mounted package (SC-74; TSOP6); 6 leads** **SOT457**




Dimensions (mm are the original dimensions)

| Unit | | A | $A_1$ | $b_p$ | c | D | E | e | $H_E$ | $L_p$ | Q | v | w | y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | max | 1.1 | 0.1 | 0.40 | 0.26 | 3.1 | 1.7 | | 3.0 | 0.6 | 0.33 | 0.2 | 0.2 | 0.1 |
| | nom | | | | | | | 0.95 | | | | | | |
| | min | 0.9 | 0.013 | 0.25 | 0.10 | 2.7 | 1.3 | | 2.5 | 0.2 | 0.23 | | | |

*sot457_po*

| Outline version | References | | | | European projection | Issue date |
|---|---|---|---|---|---|---|
| | IEC | JEDEC | JEITA | | | |
| SOT457 | | | SC-74 | | | ~~06-03-16~~ 18-11-27 |

**Fig. 8. Package outline SOT457 (SC-74; TSOP6)**

## 13. Abbreviations

**Table 12. Abbreviations**

| Acronym | Description |
|---|---|
| CMOS | Complementary Metal Oxide Semiconductor |
| DUT | Device Under Test |
| ESD | ElectroStatic Discharge |
| HBM | Human Body Model |
| MM | Machine Model |
| TTL | Transistor-Transistor Logic |

## 14. Revision history

**Table 13. Revision history**

| Document ID | Release date | Data sheet status | Change notice | Supersedes |
|---|---|---|---|---|
| 74HC_HCT2G34 v.2 | 20220203 | Product data sheet | - | 74HC_HCT2G34 v.1 |
| Modifications: | • The format of this data sheet has been redesigned to comply with the identity guidelines of Nexperia.<br>• Legal texts have been adapted to the new company name where appropriate.<br>• Section 1 and Section 2 updated.<br>• Package SOT363 (SC-88) changed to SOT363-2 (SC-88).<br>• Section 8: Derating values for $P_{tot}$ total power dissipation updated.<br>• Fig. 8: Package outline drawing SOT457 (SC-74; TSOP6) has changed. | | | |
| 74HC_HCT2G34 v.1 | 20061006 | Product data sheet | - | - |

# 15. Legal information

## Data sheet status

| Document status [1][2] | Product status [3] | Definition |
|---|---|---|
| Objective [short] data sheet | Development | This document contains data from the objective specification for product development. |
| Preliminary [short] data sheet | Qualification | This document contains data from the preliminary specification. |
| Product [short] data sheet | Production | This document contains the product specification. |

[1] Please consult the most recently issued document before initiating or completing a design.
[2] The term 'short data sheet' is explained in section "Definitions".
[3] The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the internet at https://www.nexperia.com.

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**Date of release: 3 February 2022**