



# 74HC02; 74HCT02

Quad 2-input NOR gate

Rev. 9 — 15 February 2024

Product data sheet

## 1. General description

The 74HC02; 74HCT02 is a quad 2-input NOR gate. 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

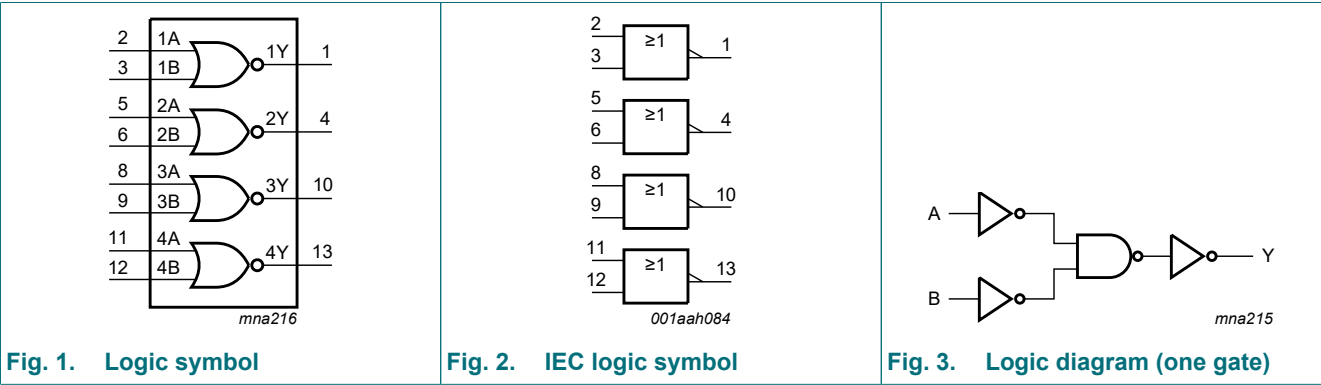
- Wide supply voltage range from 2.0 V to 6.0 V
- CMOS low power dissipation
- High noise immunity
- Latch-up performance exceeds 100 mA per JESD 78 Class II Level B
- Input levels:
  - For 74HC02: CMOS level
  - For 74HCT02: TTL level
- Complies with JEDEC standards:
  - JESD8C (2.7 V to 3.6 V)
  - JESD7A (2.0 V to 6.0 V)
- ESD protection:
  - HBM: ANSI/ESDA/JEDEC JS-001 class 2 exceeds 2000 V
  - CDM: ANSI/ESDA/JEDEC JS-002 class C3 exceeds 1000 V
- Multiple package options
- Specified from -40 °C to +85 °C and from -40 °C to +125 °C

## 3. Ordering information

Table 1. Ordering information

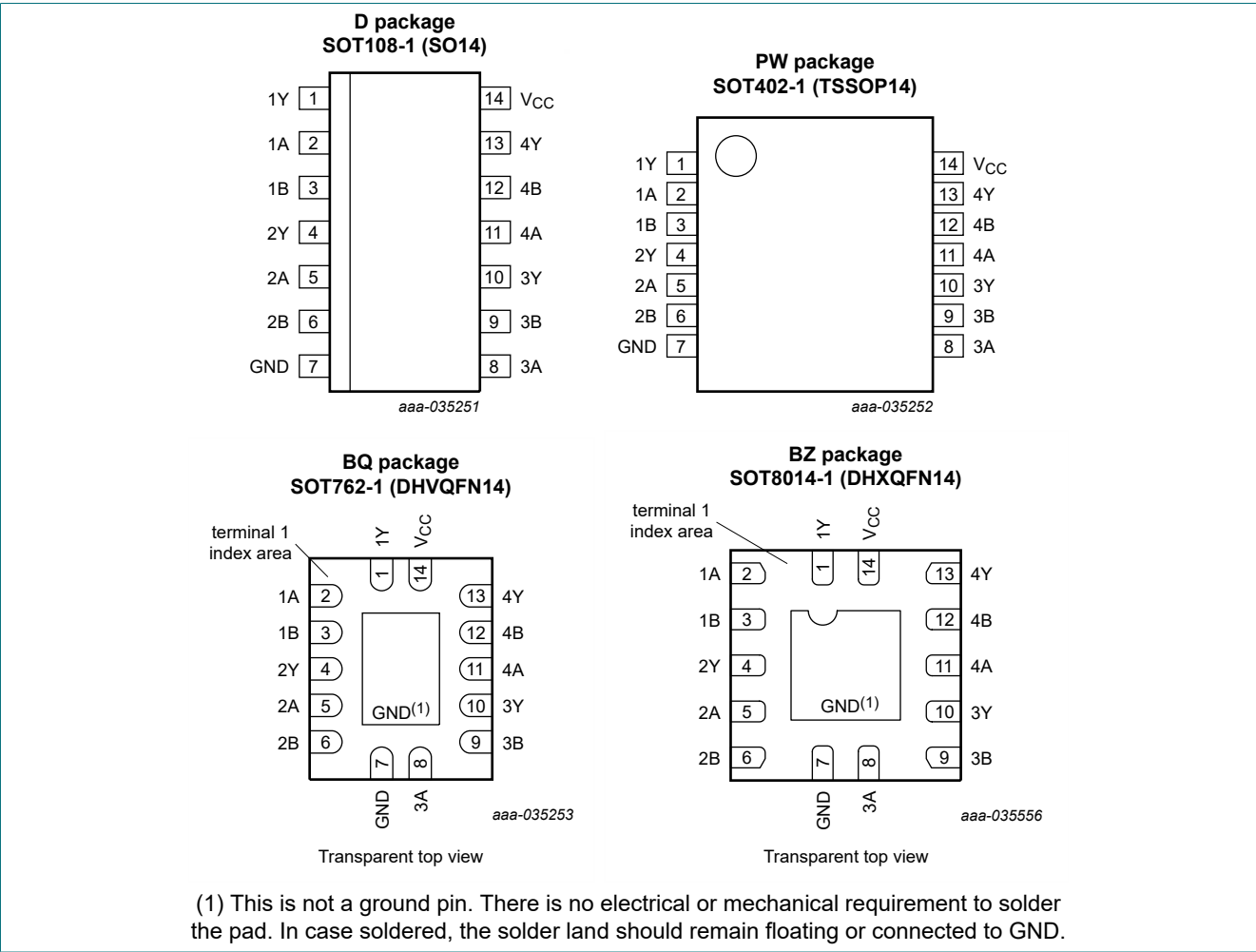
| Type number                                           | Package           |          |                                                                                                                                                             |                           |
|-------------------------------------------------------|-------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|                                                       | Temperature range | Name     | Description                                                                                                                                                 | Version                   |
| <a href="#">74HC02D</a><br><a href="#">74HCT02D</a>   | -40 °C to +125 °C | SO14     | plastic small outline package; 14 leads; body width 3.9 mm                                                                                                  | <a href="#">SOT108-1</a>  |
| <a href="#">74HC02PW</a><br><a href="#">74HCT02PW</a> | -40 °C to +125 °C | TSSOP14  | plastic thin shrink small outline package; 14 leads; body width 4.4 mm                                                                                      | <a href="#">SOT402-1</a>  |
| <a href="#">74HC02BQ</a><br><a href="#">74HCT02BQ</a> | -40 °C to +125 °C | DHVQFN14 | plastic dual in-line compatible thermal enhanced very thin quad flat package; no leads; 14 terminals; body 2.5 × 3 × 0.85 mm                                | <a href="#">SOT762-1</a>  |
| <a href="#">74HC02BZ</a><br><a href="#">74HCT02BZ</a> | -40 °C to +125 °C | DHXQFN14 | plastic, leadless dual in-line compatible thermal enhanced extreme thin quad flat package; no leads; 14 terminals; 0.4 mm pitch; body 2 mm × 2 mm × 0.48 mm | <a href="#">SOT8014-1</a> |

4. Functional diagram



5. Pinning information

5.1. Pinning



5.2. Pin description

Table 2. Pin description

| Symbol          | Pin          | Description    |
|-----------------|--------------|----------------|
| 1Y, 2Y, 3Y, 4Y  | 1, 4, 10, 13 | data output    |
| 1A, 2A, 3A, 4A  | 2, 5, 8, 11  | data input     |
| 1B, 2B, 3B, 4B  | 3, 6, 9, 12  | data input     |
| GND             | 7            | ground (0 V)   |
| V <sub>CC</sub> | 14           | supply voltage |

6. Functional description

Table 3. Function table

H = HIGH voltage level; L = LOW voltage level; X = don't care.

| Input |    | Output |
|-------|----|--------|
| nA    | nB | nY     |
| L     | L  | H      |
| X     | H  | L      |
| H     | X  | L      |

7. Limiting values

Table 4. 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 <sub>CC</sub>  | supply voltage          |                                                                         | -0.5 | +7   | V    |
| I <sub>IK</sub>  | input clamping current  | V <sub>I</sub> < -0.5 V or V <sub>I</sub> > V <sub>CC</sub> + 0.5 V [1] | -    | ±20  | mA   |
| I <sub>OK</sub>  | output clamping current | V <sub>O</sub> < -0.5 V or V <sub>O</sub> > V <sub>CC</sub> + 0.5 V [1] | -    | ±20  | mA   |
| I <sub>O</sub>   | output current          | -0.5 V < V <sub>O</sub> < V <sub>CC</sub> + 0.5 V                       | -    | ±25  | mA   |
| I <sub>CC</sub>  | supply current          |                                                                         | -    | 50   | mA   |
| I <sub>GND</sub> | ground current          |                                                                         | -50  | -    | mA   |
| T <sub>stg</sub> | storage temperature     |                                                                         | -65  | +150 | °C   |
| P <sub>tot</sub> | total power dissipation | SOT108-1<br>SOT402-1<br>SOT762-1 [2]                                    | -    | 500  | mW   |
|                  |                         | SOT8016-1                                                               | -    | 250  | mW   |

[1] The input and output voltage ratings may be exceeded if the input and output current ratings are observed.

[2] For SOT108-1 (SO14) package: P<sub>tot</sub> derates linearly with 10.1 mW/K above 100 °C.  
For SOT402-1 (TSSOP14) package: P<sub>tot</sub> derates linearly with 7.3 mW/K above 81 °C.  
For SOT762-1 (DHVQFN14) package: P<sub>tot</sub> derates linearly with 9.6 mW/K above 98 °C.

8. Recommended operating conditions

Table 5. Recommended operating conditions

Voltages are referenced to GND (ground = 0 V)

| Symbol           | Parameter                           | Conditions              | 74HC02 |      |                 | 74HCT02 |      |                 | Unit |
|------------------|-------------------------------------|-------------------------|--------|------|-----------------|---------|------|-----------------|------|
|                  |                                     |                         | Min    | Typ  | Max             | Min     | Typ  | Max             |      |
| V <sub>CC</sub>  | supply voltage                      |                         | 2.0    | 5.0  | 6.0             | 4.5     | 5.0  | 5.5             | V    |
| V <sub>I</sub>   | input voltage                       |                         | 0      | -    | V <sub>CC</sub> | 0       | -    | V <sub>CC</sub> | V    |
| V <sub>O</sub>   | output voltage                      |                         | 0      | -    | V <sub>CC</sub> | 0       | -    | V <sub>CC</sub> | V    |
| T <sub>amb</sub> | ambient temperature                 |                         | -40    | -    | +125            | -40     | -    | +125            | °C   |
| Δt/ΔV            | input transition rise and fall rate | V <sub>CC</sub> = 2.0 V | -      | -    | 625             | -       | -    | -               | ns/V |
|                  |                                     | V <sub>CC</sub> = 4.5 V | -      | 1.67 | 139             | -       | 1.67 | 139             | ns/V |
|                  |                                     | V <sub>CC</sub> = 6.0 V | -      | -    | 83              | -       | -    | -               | ns/V |

9. Static characteristics

Table 6. Static characteristics

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

| Symbol          | Parameter                 | Conditions                                                                             | 25 °C |      |      | -40 °C to +85 °C |      | -40 °C to +125 °C |      | Unit |
|-----------------|---------------------------|----------------------------------------------------------------------------------------|-------|------|------|------------------|------|-------------------|------|------|
|                 |                           |                                                                                        | Min   | Typ  | Max  | Min              | Max  | Min               | Max  |      |
| 74HC02          |                           |                                                                                        |       |      |      |                  |      |                   |      |      |
| V <sub>IH</sub> | HIGH-level input voltage  | V <sub>CC</sub> = 2.0 V                                                                | 1.5   | 1.2  | -    | 1.5              | -    | 1.5               | -    | V    |
|                 |                           | V <sub>CC</sub> = 4.5 V                                                                | 3.15  | 2.4  | -    | 3.15             | -    | 3.15              | -    | V    |
|                 |                           | V <sub>CC</sub> = 6.0 V                                                                | 4.2   | 3.2  | -    | 4.2              | -    | 4.2               | -    | V    |
| V <sub>IL</sub> | LOW-level input voltage   | V <sub>CC</sub> = 2.0 V                                                                | -     | 0.8  | 0.5  | -                | 0.5  | -                 | 0.5  | V    |
|                 |                           | V <sub>CC</sub> = 4.5 V                                                                | -     | 2.1  | 1.35 | -                | 1.35 | -                 | 1.35 | V    |
|                 |                           | V <sub>CC</sub> = 6.0 V                                                                | -     | 2.8  | 1.8  | -                | 1.8  | -                 | 1.8  | V    |
| V <sub>OH</sub> | HIGH-level output voltage | V <sub>I</sub> = V <sub>IH</sub> or V <sub>IL</sub>                                    |       |      |      |                  |      |                   |      |      |
|                 |                           | I <sub>O</sub> = -20 μA; V <sub>CC</sub> = 2.0 V                                       | 1.9   | 2.0  | -    | 1.9              | -    | 1.9               | -    | V    |
|                 |                           | I <sub>O</sub> = -20 μA; V <sub>CC</sub> = 4.5 V                                       | 4.4   | 4.5  | -    | 4.4              | -    | 4.4               | -    | V    |
|                 |                           | I <sub>O</sub> = -20 μA; V <sub>CC</sub> = 6.0 V                                       | 5.9   | 6.0  | -    | 5.9              | -    | 5.9               | -    | V    |
|                 |                           | I <sub>O</sub> = -4.0 mA; V <sub>CC</sub> = 4.5 V                                      | 3.98  | 4.32 | -    | 3.84             | -    | 3.7               | -    | V    |
|                 |                           | I <sub>O</sub> = -5.2 mA; V <sub>CC</sub> = 6.0 V                                      | 5.48  | 5.81 | -    | 5.34             | -    | 5.2               | -    | V    |
| V <sub>OL</sub> | LOW-level output voltage  | V <sub>I</sub> = V <sub>IH</sub> or V <sub>IL</sub>                                    |       |      |      |                  |      |                   |      |      |
|                 |                           | I <sub>O</sub> = 20 μA; V <sub>CC</sub> = 2.0 V                                        | -     | 0    | 0.1  | -                | 0.1  | -                 | 0.1  | V    |
|                 |                           | I <sub>O</sub> = 20 μA; V <sub>CC</sub> = 4.5 V                                        | -     | 0    | 0.1  | -                | 0.1  | -                 | 0.1  | V    |
|                 |                           | I <sub>O</sub> = 20 μA; V <sub>CC</sub> = 6.0 V                                        | -     | 0    | 0.1  | -                | 0.1  | -                 | 0.1  | V    |
|                 |                           | I <sub>O</sub> = 4.0 mA; V <sub>CC</sub> = 4.5 V                                       | -     | 0.15 | 0.26 | -                | 0.33 | -                 | 0.4  | V    |
|                 |                           | I <sub>O</sub> = 5.2 mA; V <sub>CC</sub> = 6.0 V                                       | -     | 0.16 | 0.26 | -                | 0.33 | -                 | 0.4  | V    |
| I <sub>I</sub>  | input leakage current     | V <sub>I</sub> = V <sub>CC</sub> or GND; V <sub>CC</sub> = 6.0 V                       | -     | -    | ±0.1 | -                | ±1   | -                 | ±1   | μA   |
| I <sub>CC</sub> | supply current            | V <sub>I</sub> = V <sub>CC</sub> or GND; I <sub>O</sub> = 0 A; V <sub>CC</sub> = 6.0 V | -     | -    | 2.0  | -                | 20   | -                 | 40   | μA   |
| C <sub>I</sub>  | input capacitance         |                                                                                        | -     | 3.5  | -    | -                | -    | -                 | -    | pF   |

| Symbol           | Parameter                 | Conditions                                                                                                                                              | 25 °C |      |      | -40 °C to +85 °C |      | -40 °C to +125 °C |     | Unit |
|------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|------|------------------|------|-------------------|-----|------|
|                  |                           |                                                                                                                                                         | Min   | Typ  | Max  | Min              | Max  | Min               | Max |      |
| 74HCT02          |                           |                                                                                                                                                         |       |      |      |                  |      |                   |     |      |
| V <sub>IH</sub>  | HIGH-level input voltage  | V <sub>CC</sub> = 4.5 V to 5.5 V                                                                                                                        | 2.0   | 1.6  | -    | 2.0              | -    | 2.0               | -   | V    |
| V <sub>IL</sub>  | LOW-level input voltage   | V <sub>CC</sub> = 4.5 V to 5.5 V                                                                                                                        | -     | 1.2  | 0.8  | -                | 0.8  | -                 | 0.8 | V    |
| V <sub>OH</sub>  | HIGH-level output voltage | V <sub>I</sub> = V <sub>IH</sub> or V <sub>IL</sub> ; V <sub>CC</sub> = 4.5 V                                                                           |       |      |      |                  |      |                   |     |      |
|                  |                           | I <sub>O</sub> = -20 µA                                                                                                                                 | 4.4   | 4.5  | -    | 4.4              | -    | 4.4               | -   | V    |
|                  |                           | I <sub>O</sub> = -4.0 mA                                                                                                                                | 3.98  | 4.32 | -    | 3.84             | -    | 3.7               | -   | V    |
| V <sub>OL</sub>  | LOW-level output voltage  | V <sub>I</sub> = V <sub>IH</sub> or V <sub>IL</sub> ; V <sub>CC</sub> = 4.5 V                                                                           |       |      |      |                  |      |                   |     |      |
|                  |                           | I <sub>O</sub> = 20 µA                                                                                                                                  | -     | 0    | 0.1  | -                | 0.1  | -                 | 0.1 | V    |
|                  |                           | I <sub>O</sub> = 5.2 mA                                                                                                                                 | -     | 0.15 | 0.26 | -                | 0.33 | -                 | 0.4 | V    |
| I <sub>I</sub>   | input leakage current     | V <sub>I</sub> = V <sub>CC</sub> or GND; V <sub>CC</sub> = 5.5 V                                                                                        | -     | -    | ±0.1 | -                | ±1   | -                 | ±1  | µA   |
| I <sub>CC</sub>  | supply current            | V <sub>I</sub> = V <sub>CC</sub> or GND; I <sub>O</sub> = 0 A; V <sub>CC</sub> = 5.5 V                                                                  | -     | -    | 2.0  | -                | 20   | -                 | 40  | µA   |
| ΔI <sub>CC</sub> | additional supply current | per input pin; V <sub>I</sub> = V <sub>CC</sub> - 2.1 V; I <sub>O</sub> = 0 A; other inputs at V <sub>CC</sub> or GND; V <sub>CC</sub> = 4.5 V to 5.5 V | -     | 150  | 540  | -                | 675  | -                 | 735 | µA   |
| C <sub>I</sub>   | input capacitance         |                                                                                                                                                         | -     | 3.5  | -    | -                | -    | -                 | -   | pF   |

10. Dynamic characteristics

Table 7. Dynamic characteristics

GND = 0 V; C<sub>L</sub> = 50 pF; for test circuit see Fig. 5.

| Symbol          | Parameter                     | Conditions                                               | 25 °C |     |     | -40 °C to +85 °C |     | -40 °C to +125 °C |     | Unit |
|-----------------|-------------------------------|----------------------------------------------------------|-------|-----|-----|------------------|-----|-------------------|-----|------|
|                 |                               |                                                          | Min   | Typ | Max | Min              | Max | Min               | Max |      |
| 74HC02          |                               |                                                          |       |     |     |                  |     |                   |     |      |
| t <sub>pd</sub> | propagation delay             | nA, nB to nY; see <a href="#">Fig. 4</a> [1]             |       |     |     |                  |     |                   |     |      |
|                 |                               | V <sub>CC</sub> = 2.0 V                                  | -     | 25  | 90  | -                | 115 | -                 | 135 | ns   |
|                 |                               | V <sub>CC</sub> = 4.5 V                                  | -     | 9   | 18  | -                | 23  | -                 | 27  | ns   |
|                 |                               | V <sub>CC</sub> = 5.0 V; C <sub>L</sub> = 15 pF          | -     | 7   | -   | -                | -   | -                 | -   | ns   |
|                 |                               | V <sub>CC</sub> = 6.0 V                                  | -     | 7   | 15  | -                | 20  | -                 | 23  | ns   |
| t <sub>t</sub>  | transition time               | see <a href="#">Fig. 4</a> [2]                           |       |     |     |                  |     |                   |     |      |
|                 |                               | V <sub>CC</sub> = 2.0 V                                  | -     | 19  | 75  | -                | 95  | -                 | 110 | ns   |
|                 |                               | V <sub>CC</sub> = 4.5 V                                  | -     | 7   | 15  | -                | 19  | -                 | 22  | ns   |
|                 |                               | V <sub>CC</sub> = 6.0 V                                  | -     | 6   | 13  | -                | 16  | -                 | 19  | ns   |
| C <sub>PD</sub> | power dissipation capacitance | per package; V <sub>I</sub> = GND to V <sub>CC</sub> [3] | -     | 22  | -   | -                | -   | -                 | -   | pF   |

| Symbol          | Parameter                     | Conditions                                                       | 25 °C |     |     | -40 °C to +85 °C |     | -40 °C to +125 °C |     | Unit |
|-----------------|-------------------------------|------------------------------------------------------------------|-------|-----|-----|------------------|-----|-------------------|-----|------|
|                 |                               |                                                                  | Min   | Typ | Max | Min              | Max | Min               | Max |      |
| 74HCT02         |                               |                                                                  |       |     |     |                  |     |                   |     |      |
| t <sub>pd</sub> | propagation delay             | nA, nB to nY; see <a href="#">Fig. 4</a> [1]                     |       |     |     |                  |     |                   |     |      |
|                 |                               | V <sub>CC</sub> = 4.5 V                                          | -     | 11  | 19  | -                | 24  | -                 | 29  | ns   |
|                 |                               | V <sub>CC</sub> = 5.0 V; C <sub>L</sub> = 15 pF                  | -     | 9   | -   | -                | -   | -                 | -   | ns   |
| t <sub>t</sub>  | transition time               | V <sub>CC</sub> = 4.5 V; see <a href="#">Fig. 4</a> [2]          | -     | 7   | 15  | -                | 19  | -                 | 22  | ns   |
| C <sub>PD</sub> | power dissipation capacitance | per package; V <sub>I</sub> = GND to V <sub>CC</sub> - 1.5 V [3] | -     | 24  | -   | -                | -   | -                 | -   | pF   |

- [1] t<sub>pd</sub> is the same as t<sub>PHL</sub> and t<sub>PLH</sub>.
- [2] t<sub>t</sub> is the same as t<sub>THL</sub> and t<sub>TLH</sub>.
- [3] C<sub>PD</sub> is used to determine the dynamic power dissipation (P<sub>D</sub> in μW):  
 $P_D = C_{PD} \times V_{CC}^2 \times f_i \times N + \sum (C_L \times V_{CC}^2 \times f_o)$  where:  
f<sub>i</sub> = input frequency in MHz;  
f<sub>o</sub> = output frequency in MHz;  
C<sub>L</sub> = output load capacitance in pF;  
V<sub>CC</sub> = supply voltage in V;  
N = number of inputs switching;  
 $\sum (C_L \times V_{CC}^2 \times f_o)$  = sum of outputs.

10.1. Waveforms and test circuit

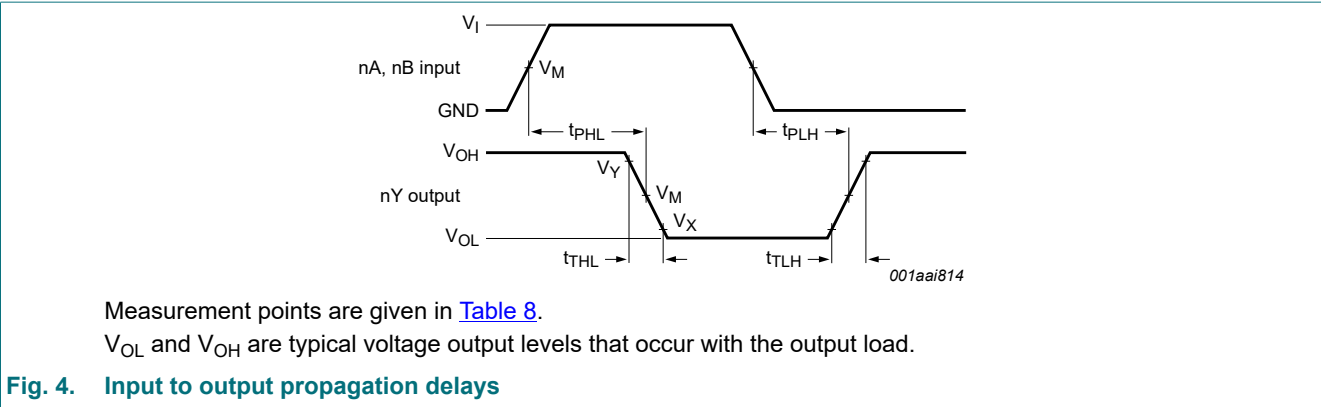
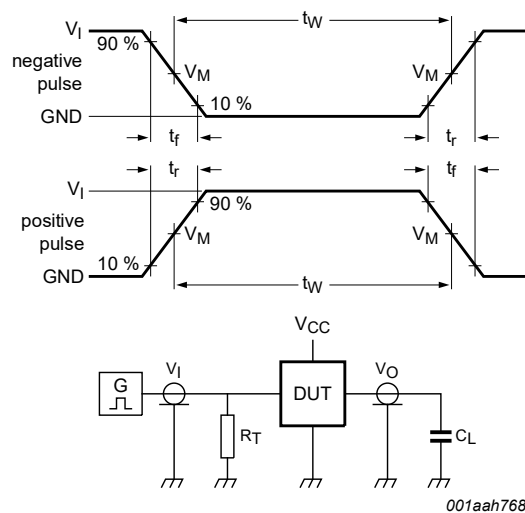


Table 8. Measurement points

| Type    | Input              | Output             |                    |                    |
|---------|--------------------|--------------------|--------------------|--------------------|
|         | V <sub>M</sub>     | V <sub>M</sub>     | V <sub>X</sub>     | V <sub>Y</sub>     |
| 74HC02  | 0.5V <sub>CC</sub> | 0.5V <sub>CC</sub> | 0.1V <sub>CC</sub> | 0.9V <sub>CC</sub> |
| 74HCT02 | 1.3 V              | 1.3 V              | 0.1V <sub>CC</sub> | 0.9V <sub>CC</sub> |



Test data is given in [Table 9](#).  
Definitions test circuit:  
 $R_T$  = termination resistance should be equal to output impedance  $Z_o$  of the pulse generator;  
 $C_L$  = load capacitance including jig and probe capacitance.

Fig. 5. Test circuit for measuring switching times

Table 9. Test data

| Type    | Input    |            | Load         | Test               |
|---------|----------|------------|--------------|--------------------|
|         | $V_I$    | $t_r, t_f$ | $C_L$        |                    |
| 74HC02  | $V_{CC}$ | 6.0 ns     | 15 pF, 50 pF | $t_{PLH}, t_{PHL}$ |
| 74HCT02 | 3.0 V    | 6.0 ns     | 15 pF, 50 pF | $t_{PLH}, t_{PHL}$ |

11. Package outline

SO14: plastic small outline package; 14 leads; body width 3.9 mm

SOT108-1

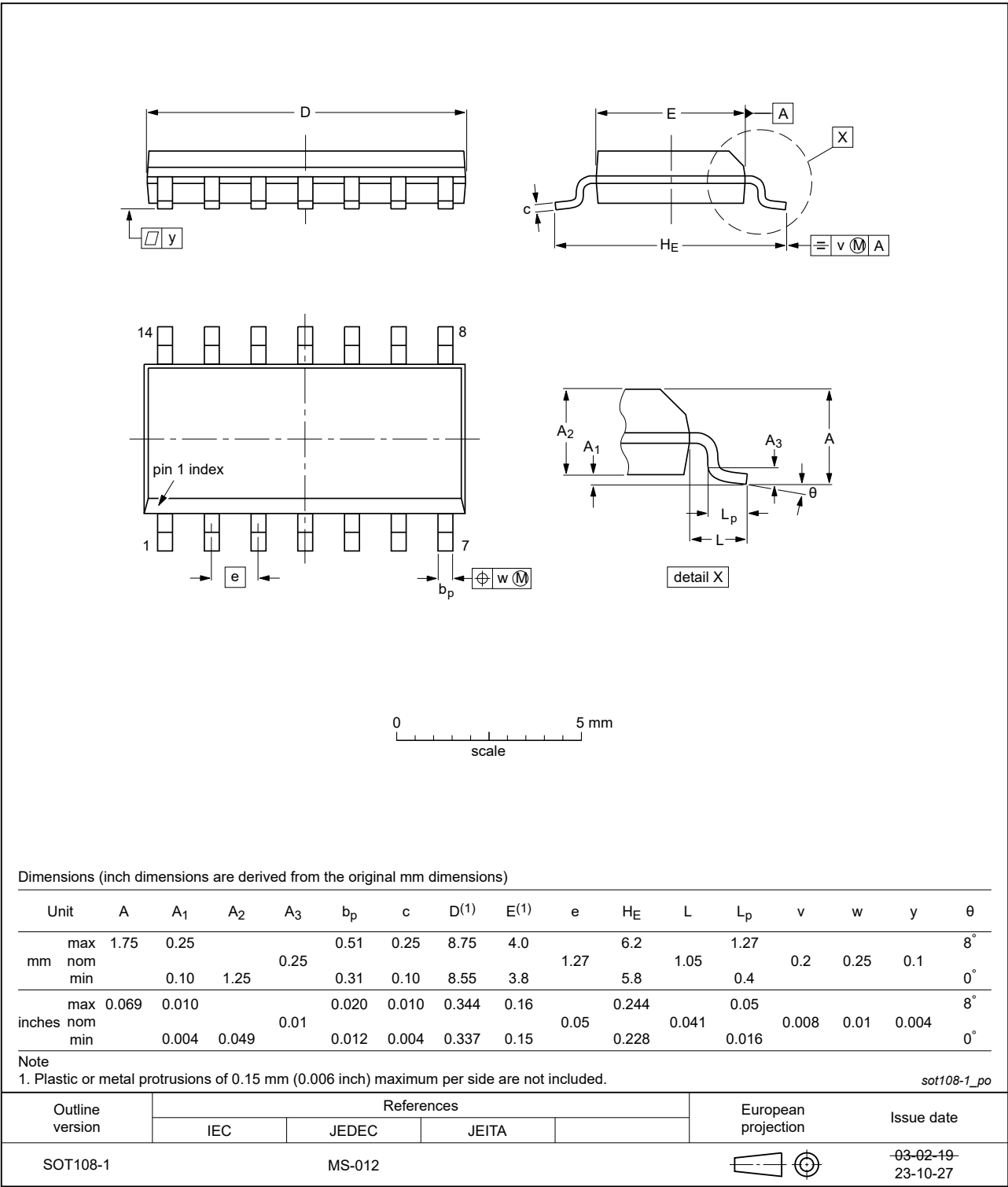


Fig. 6. Package outline SOT108-1 (SO14)

TSSOP14: plastic thin shrink small outline package; 14 leads; body width 4.4 mm

SOT402-1

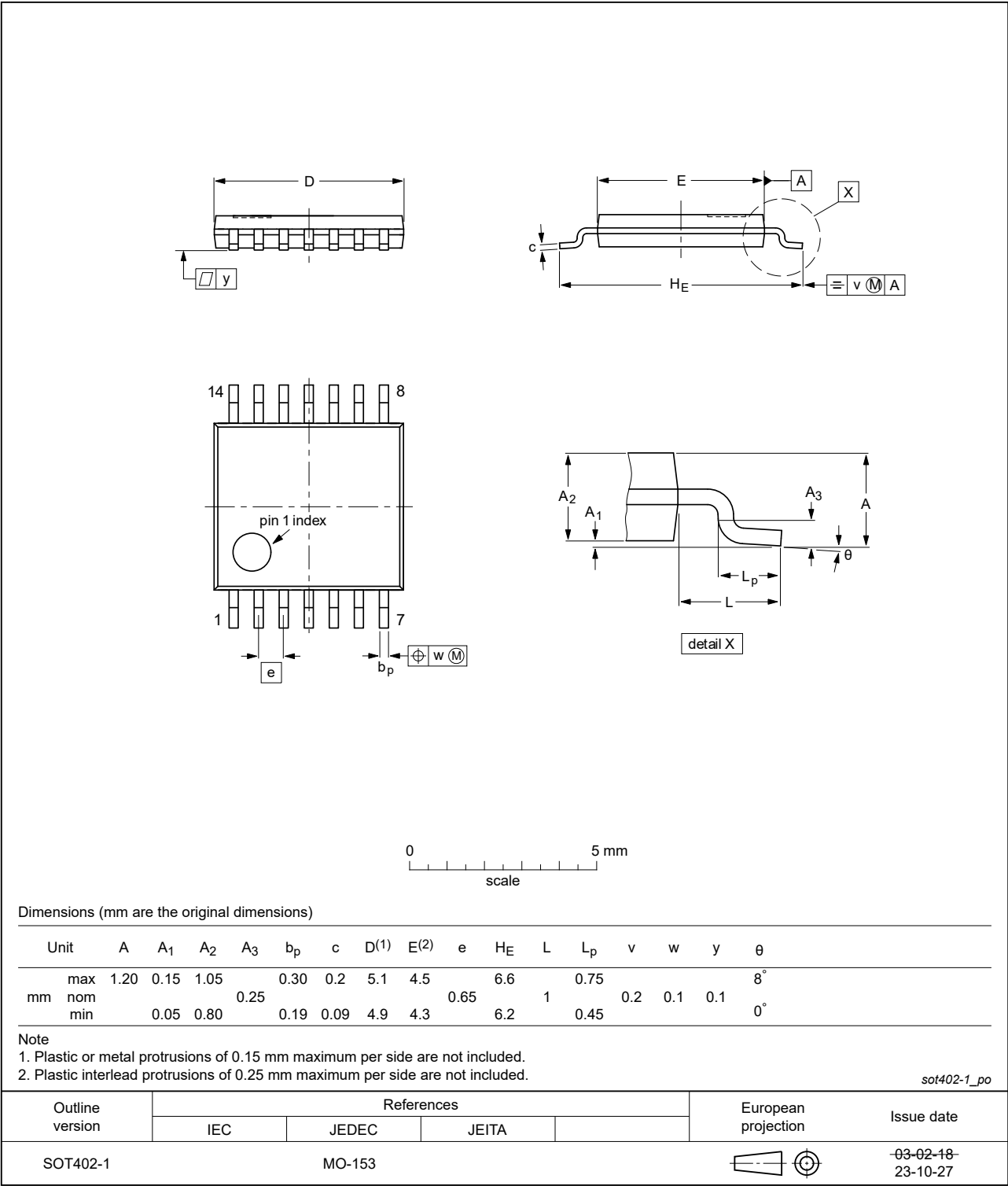


Fig. 7. Package outline SOT402-1 (TSSOP14)

DHVQFN14: plastic dual in-line compatible thermal enhanced very thin quad flat package; no leads;  
14 terminals; body 2.5 x 3 x 0.85 mm

SOT762-1

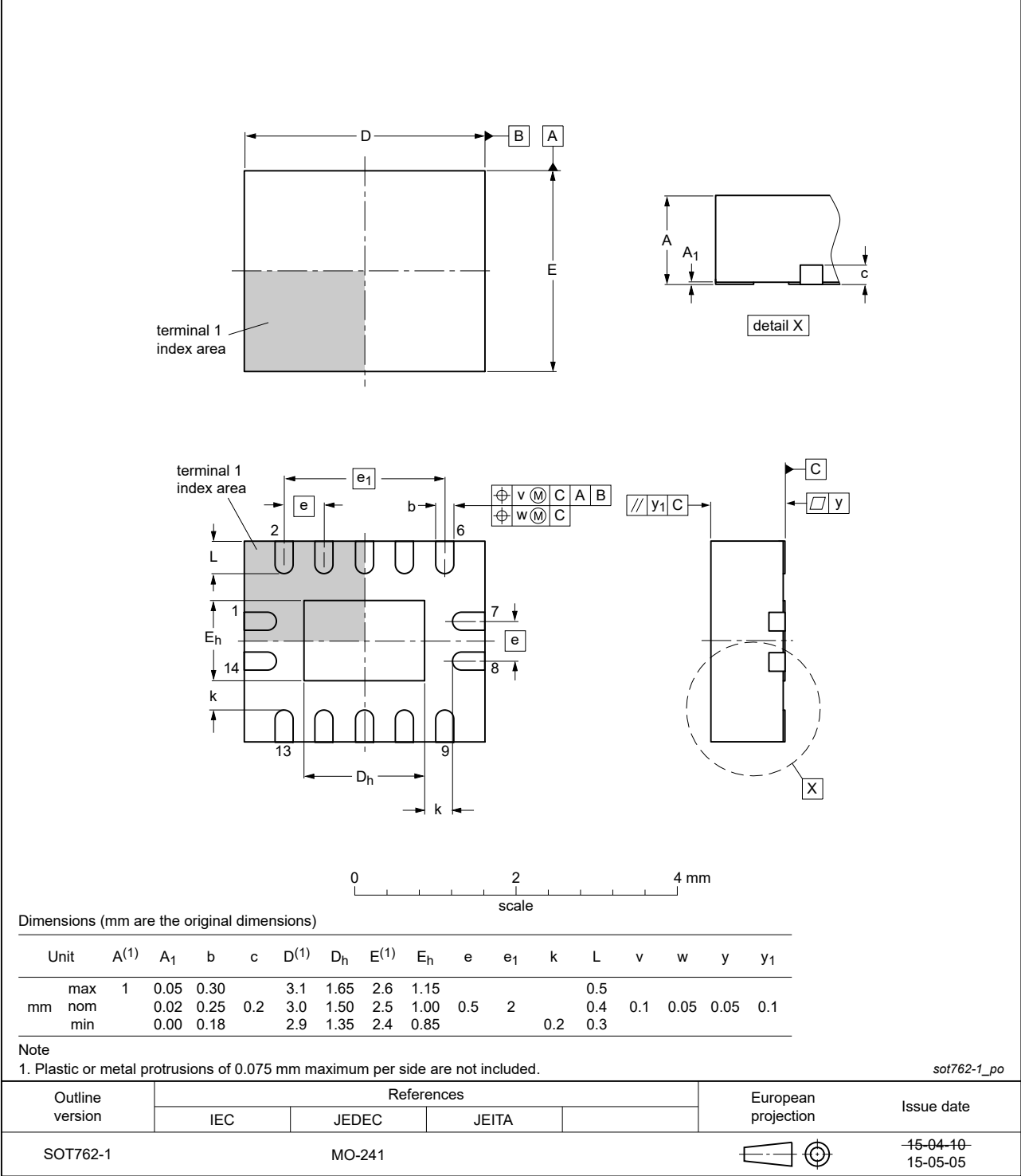


Fig. 8. Package outline SOT762-1 (DHVQFN14)

DHXQFN14: plastic, leadless dual in-line compatible thermal enhanced extreme thin quad flat package;  
no leads; 14 terminals; 0.4 mm pitch; body 2 mm x 2 mm x 0.48 mm

SOT8014-1

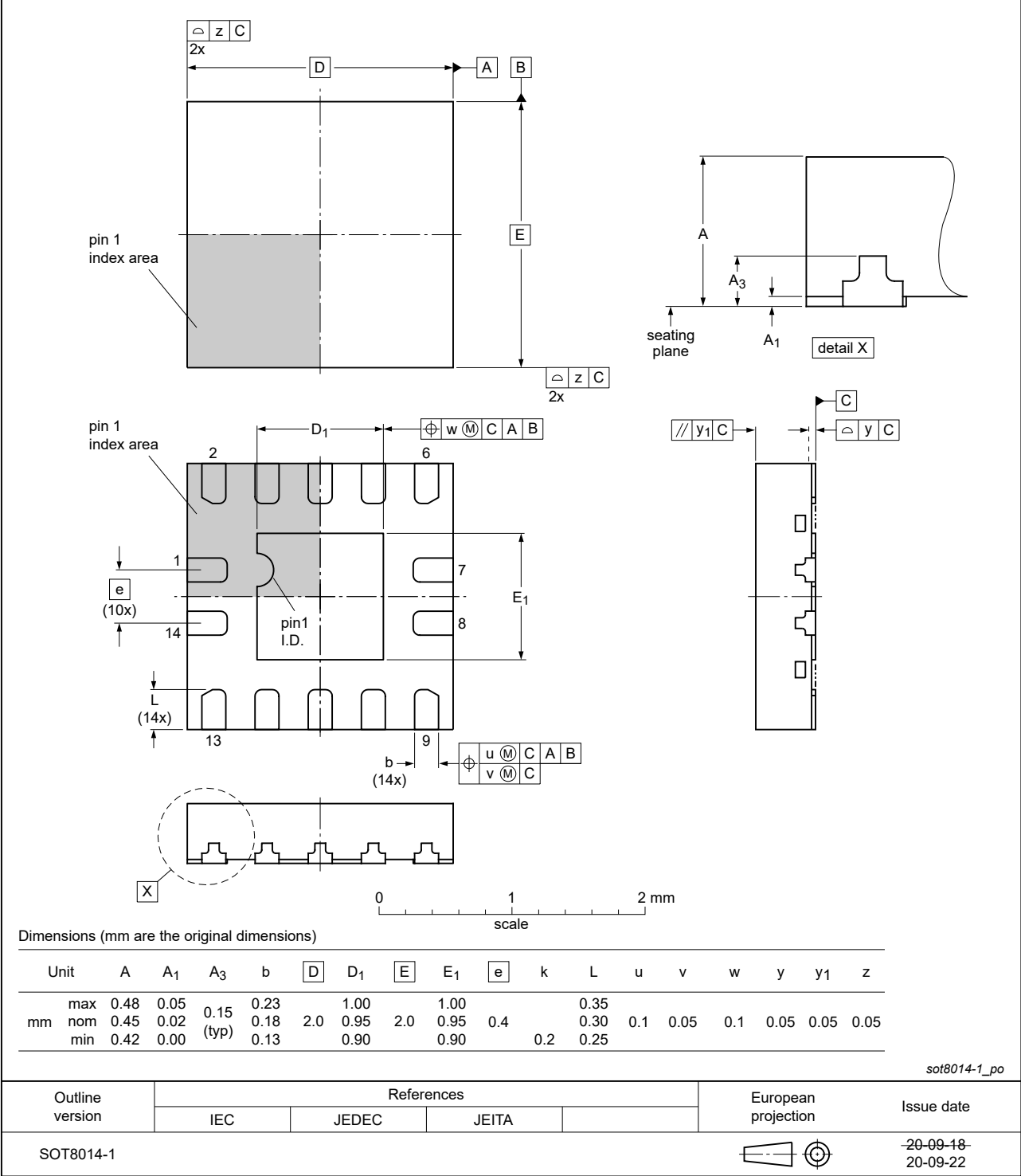


Fig. 9. Package outline SOT8014-1 (DHXQFN14)

12. Abbreviations

Table 10. Abbreviations

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

13. Revision history

Table 11. Revision history

| Document ID        | Release date                                                                                                                                                                                                                                                                                                                           | Data sheet status     | Change notice | Supersedes         |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|--------------------|
| 74HC_HCT02 v.9     | 20240215                                                                                                                                                                                                                                                                                                                               | Product data sheet    | -             | 74HC_HCT02 v.8     |
| Modifications:     | <ul style="list-style-type: none"><li>Section 2: ESD specification updated according to the latest JEDEC standard.</li><li>Fig. 6, Fig. 7: Aligned SO and TSSOP package outline drawings to JEDEC MS-012 and MO-153</li></ul>                                                                                                          |                       |               |                    |
| 74HC_HCT02 v.8     | 20230209                                                                                                                                                                                                                                                                                                                               | Product data sheet    | -             | 74HC_HCT02 v.7     |
| Modifications:     | <ul style="list-style-type: none"><li>Added type numbers 74HC02BZ and 74HCT02BZ (SOT8014-1/DHXQFN14).</li></ul>                                                                                                                                                                                                                        |                       |               |                    |
| 74HC_HCT02 v.7     | 20210810                                                                                                                                                                                                                                                                                                                               | Product data sheet    | -             | 74HC_HCT02 v.6     |
| Modifications:     | <ul style="list-style-type: none"><li>Section 2 updated.</li><li>Type numbers 74HC02DB and 74HCT02DB (SOT337-1/SSOP14) removed.</li></ul>                                                                                                                                                                                              |                       |               |                    |
| 74HC_HCT02 v.6     | 20200407                                                                                                                                                                                                                                                                                                                               | Product data sheet    | -             | 74HC_HCT02 v.5     |
| Modifications:     | <ul style="list-style-type: none"><li>The format of this data sheet has been redesigned to comply with the identity guidelines of Nexperia.</li><li>Legal texts have been adapted to the new company name where appropriate.</li><li>Table 4: Derating values for P<sub>tot</sub> total power dissipation have been updated.</li></ul> |                       |               |                    |
| 74HC_HCT02 v.5     | 20151126                                                                                                                                                                                                                                                                                                                               | Product data sheet    | -             | 74HC_HCT02 v.4     |
| Modifications:     | <ul style="list-style-type: none"><li>Type numbers 74HC02N and 74HCT02N (SOT27-1) removed.</li></ul>                                                                                                                                                                                                                                   |                       |               |                    |
| 74HC_HCT02 v.4     | 20120904                                                                                                                                                                                                                                                                                                                               | Product data sheet    | -             | 74HC_HCT02 v.3     |
| Modifications:     | <ul style="list-style-type: none"><li>Conditions for V<sub>OH</sub>, I<sub>I</sub> and I<sub>CC</sub> updated to the family specification (errata).</li></ul>                                                                                                                                                                          |                       |               |                    |
| 74HC_HCT02 v.3     | 20080918                                                                                                                                                                                                                                                                                                                               | Product data sheet    | -             | 74HC_HCT02_CNV v.2 |
| Modifications:     | <ul style="list-style-type: none"><li>The format of this data sheet has been redesigned to comply with the new identity guidelines of NXP Semiconductors.</li><li>Legal texts have been adapted to the new company name where appropriate.</li><li>Added type numbers 74HC02BQ and 74HCT02BQ (DHVQFN14 package)</li></ul>              |                       |               |                    |
| 74HC_HCT02_CNV v.2 | 19970827                                                                                                                                                                                                                                                                                                                               | Product specification | -             | -                  |

## 14. 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.                                     |

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- [2] The term 'short data sheet' is explained in section "Definitions".
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Contents

1. General description..... 1

2. Features and benefits..... 1

3. Ordering information..... 1

4. Functional diagram..... 2

5. Pinning information..... 2

5.1. Pinning..... 2

5.2. Pin description..... 3

6. Functional description..... 3

7. Limiting values..... 3

8. Recommended operating conditions..... 4

9. Static characteristics..... 4

10. Dynamic characteristics..... 5

10.1. Waveforms and test circuit..... 6

11. Package outline..... 8

12. Abbreviations..... 12

13. Revision history..... 12

14. Legal information..... 13

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