

# 74AHC126; 74AHCT126

Quad buffer/line driver; 3-state

Rev. 5 — 28 April 2020

Product data sheet

## 1. General description

The 74AHC126; 74AHCT126 is a quad buffer/line driver with 3-state outputs controlled by the output enable inputs (nOE). A LOW on nOE causes the outputs to assume a high-impedance OFF-state. Inputs are overvoltage tolerant. This feature allows the use of these devices as translators in mixed voltage environments.

## 2. Features

- Balanced propagation delays
- All inputs have Schmitt-trigger action
- Inputs accept voltages higher than  $V_{CC}$
- Input levels:
  - For 74AHC126: CMOS level
  - For 74AHCT126: TTL level
- ESD protection:
  - HBM JESD22-A114E exceeds 2000 V
  - MM JESD22-A115-A exceeds 200 V
  - CDM JESD22-C101C exceeds 1000 V
- Multiple package options
- Specified from  $-40\text{ °C}$  to  $+85\text{ °C}$  and from  $-40\text{ °C}$  to  $+125\text{ °C}$

## 3. Ordering information

Table 1. Ordering information

| Type number | Package                             |          |   |          |
|-------------|-------------------------------------|----------|---|----------|
|             | Temperature range                   | Name     | Description   | Version  |
| 74AHC126D   | $-40\text{ °C}$ to $+125\text{ °C}$ | SO14     | plastic small outline package; 14 leads; body width 3.9 mm  | SOT108-1 |
| 74AHCT126D  |                                     |          |   |          |
| 74AHC126PW  | $-40\text{ °C}$ to $+125\text{ °C}$ | TSSOP14  | plastic thin shrink small outline package; 14 leads; body width 4.4 mm  | SOT402-1 |
| 74AHCT126PW |                                     |          |   |          |
| 74AHC126BQ  | $-40\text{ °C}$ to $+125\text{ °C}$ | DHVQFN14 | plastic dual in-line compatible thermal enhanced very thin quad flat package; no leads; 14 terminals; body $2.5 \times 3 \times 0.85\text{ mm}$ | SOT762-1 |
| 74AHCT126BQ |                                     |          |   |          |

### 4. Functional diagram

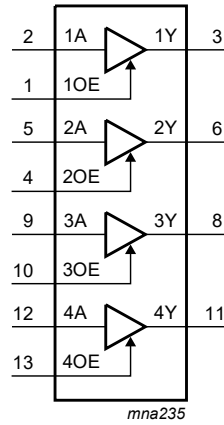


Fig. 1. Functional diagram

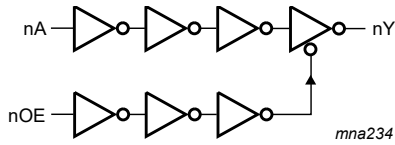


Fig. 2. Logic symbol

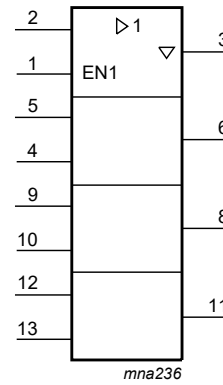
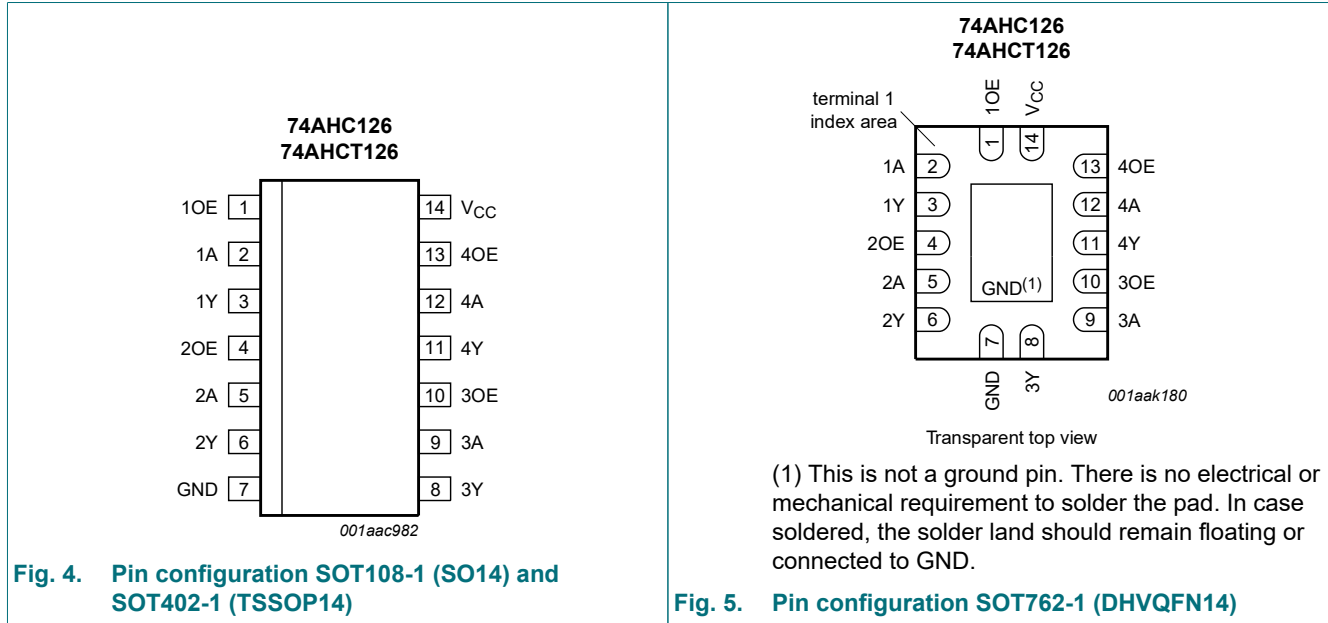


Fig. 3. IEC logic symbol

## 5. Pinning information

### 5.1. Pinning



### 5.2. Pin description

Table 2. Pin description

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

## 6. Functional description

**Table 3. Function table**

H = HIGH voltage state; L = LOW voltage state; X = don't care; Z = high-impedance OFF-state.

| Control | Input | Output |
|---------|-------|--------|
| nOE     | nA    | nY     |
| H       | L     | L      |
| H       | H     | H      |
| L       | X     | Z      |

## 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 |
|-----------|-------------------------|--|------|------|------|
| $V_{CC}$  | supply voltage          |  | -0.5 | +7.0 | V    |
| $V_I$     | input voltage           |  | -0.5 | +7.0 | V    |
| $I_{IK}$  | input clamping current  | $V_I < -0.5$ V [1]                           | -20  | -    | mA   |
| $I_{OK}$  | output clamping current | $V_O < -0.5$ V or $V_O > V_{CC} + 0.5$ V [1] | -20  | +20  | mA   |
| $I_O$     | output current          | $V_O = -0.5$ V to $(V_{CC} + 0.5)$ V         | -25  | +25  | mA   |
| $I_{CC}$  | supply current          |  | -    | +75  | mA   |
| $I_{GND}$ | ground current          |  | -75  | -    | mA   |
| $T_{stg}$ | storage temperature     |  | -65  | +150 | °C   |
| $P_{tot}$ | total power dissipation | $T_{amb} = -40$ °C to $+125$ °C [2]          | -    | 500  | 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:  $P_{tot}$  derates linearly with 10.1 mW/K above 100 °C.

For SOT402-1 (TSSOP14) package:  $P_{tot}$  derates linearly with 7.3 mW/K above 81 °C.

For SOT762-1 (DHVQFN14) package:  $P_{tot}$  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                  | 74AHC126 |     |          | 74AHCT126 |     |          | Unit |
|---------------------|-------------------------------------|-----------------------------|----------|-----|----------|-----------|-----|----------|------|
|                     |                                     |                             | Min      | Typ | Max      | Min       | Typ | Max      |      |
| $V_{CC}$            | supply voltage                      |                             | 2.0      | 5.0 | 5.5      | 4.5       | 5.0 | 5.5      | V    |
| $V_I$               | input voltage                       |                             | 0        | -   | 5.5      | 0         | -   | 5.5      | V    |
| $V_O$               | output voltage                      |                             | 0        | -   | $V_{CC}$ | 0         | -   | $V_{CC}$ | V    |
| $T_{amb}$           | ambient temperature                 |                             | -40      | +25 | +125     | -40       | +25 | +125     | °C   |
| $\Delta t/\Delta V$ | input transition rise and fall rate | $V_{CC} = 3.0$ V to $3.6$ V | -        | -   | 100      | -         | -   | -        | ns/V |
|                     |                                     | $V_{CC} = 4.5$ V to $5.5$ V | -        | -   | 20       | -         | -   | 20       | 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   |      |
| <b>74AHC126</b>                                   |                           |  |       |      |       |                  |      |                   |       |      |
| V <sub>IH</sub>                                   | HIGH-level input voltage  | V <sub>CC</sub> = 2.0 V  | 1.5   | -    | -     | 1.5              | -    | 1.5               | -     | V    |
|   |                           | V <sub>CC</sub> = 3.0 V  | 2.1   | -    | -     | 2.1              | -    | 2.1               | -     | V    |
|   |                           | V <sub>CC</sub> = 5.5 V  | 3.85  | -    | -     | 3.85             | -    | 3.85              | -     | V    |
| V <sub>IL</sub>                                   | LOW-level input voltage   | V <sub>CC</sub> = 2.0 V  | -     | -    | 0.5   | -                | 0.5  | -                 | 0.5   | V    |
|   |                           | V <sub>CC</sub> = 3.0 V  | -     | -    | 0.9   | -                | 0.9  | -                 | 0.9   | V    |
|   |                           | V <sub>CC</sub> = 5.5 V  | -     | -    | 1.65  | -                | 1.65 | -                 | 1.65  | 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> = -50 μA; V <sub>CC</sub> = 2.0 V   | 1.9   | 2.0  | -     | 1.9              | -    | 1.9               | -     | V    |
|   |                           | I <sub>O</sub> = -50 μA; V <sub>CC</sub> = 3.0 V   | 2.9   | 3.0  | -     | 2.9              | -    | 2.9               | -     | V    |
|   |                           | I <sub>O</sub> = -50 μA; V <sub>CC</sub> = 4.5 V   | 4.4   | 4.5  | -     | 4.4              | -    | 4.4               | -     | V    |
|   |                           | I <sub>O</sub> = -4.0 mA; V <sub>CC</sub> = 3.0 V  | 2.58  | -    | -     | 2.48             | -    | 2.40              | -     | V    |
| I <sub>O</sub> = -8.0 mA; V <sub>CC</sub> = 4.5 V | 3.94                      | -  | -     | 3.80 | -     | 3.70             | -    | 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> = 50 μA; V <sub>CC</sub> = 2.0 V  | -     | 0    | 0.1   | -                | 0.1  | -                 | 0.1   | V    |
|   |                           | I <sub>O</sub> = 50 μA; V <sub>CC</sub> = 3.0 V  | -     | 0    | 0.1   | -                | 0.1  | -                 | 0.1   | V    |
|   |                           | I <sub>O</sub> = 50 μA; V <sub>CC</sub> = 4.5 V  | -     | 0    | 0.1   | -                | 0.1  | -                 | 0.1   | V    |
|   |                           | I <sub>O</sub> = 4.0 mA; V <sub>CC</sub> = 3.0 V   | -     | -    | 0.36  | -                | 0.44 | -                 | 0.55  | V    |
| I <sub>O</sub> = 8.0 mA; V <sub>CC</sub> = 4.5 V  | -                         | -  | 0.36  | -    | 0.44  | -                | 0.55 | V                 |       |      |
| I <sub>I</sub>                                    | input leakage current     | V <sub>I</sub> = 5.5 V or GND;<br>V <sub>CC</sub> = 0 V to 5.5 V   | -     | -    | 0.1   | -                | 1.0  | -                 | 2.0   | μA   |
| I <sub>OZ</sub>                                   | OFF-state output current  | V <sub>I</sub> = V <sub>IH</sub> or V <sub>IL</sub> ;<br>V <sub>O</sub> = V <sub>CC</sub> or GND;<br>V <sub>CC</sub> = 5.5 V | -     | -    | ±0.25 | -                | ±2.5 | -                 | ±10.0 | μA   |
| I <sub>CC</sub>                                   | supply current            | V <sub>I</sub> = V <sub>CC</sub> or GND; I <sub>O</sub> = 0 A;<br>V <sub>CC</sub> = 5.5 V                                    | -     | -    | 2.0   | -                | 20   | -                 | 40    | μA   |
| C <sub>I</sub>                                    | input capacitance         | V <sub>I</sub> = V <sub>CC</sub> or GND  | -     | 3    | 10    | -                | 10   | -                 | 10    | pF   |
| C <sub>O</sub>                                    | output capacitance        |  | -     | 4    | -     | -                | -    | -                 | -     | pF   |

| Symbol           | Parameter                 | Conditions   | 25 °C |     |       | -40 °C to +85 °C |      | -40 °C to +125 °C |       | Unit |
|------------------|---------------------------|--|-------|-----|-------|------------------|------|-------------------|-------|------|
|                  |                           |  | Min   | Typ | Max   | Min              | Max  | Min               | Max   |      |
| <b>74AHCT126</b> |                           |  |       |     |       |                  |      |                   |       |      |
| V <sub>IH</sub>  | HIGH-level input voltage  | V <sub>CC</sub> = 4.5 V to 5.5 V   | 2.0   | -   | -     | 2.0              | -    | 2.0               | -     | V    |
| V <sub>IL</sub>  | LOW-level input voltage   | V <sub>CC</sub> = 4.5 V to 5.5 V   | -     | -   | 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> = -50 µA  | 4.4   | 4.5 | -     | 4.4              | -    | 4.4               | -     | V    |
|                  |                           | I <sub>O</sub> = -8.0 mA   | 3.94  | -   | -     | 3.80             | -    | 3.70              | -     | 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> = 50 µA   | -     | 0   | 0.1   | -                | 0.1  | -                 | 0.1   | V    |
|                  |                           | I <sub>O</sub> = 8.0 mA  | -     | -   | 0.36  | -                | 0.44 | -                 | 0.55  | V    |
| I <sub>I</sub>   | input leakage current     | V <sub>I</sub> = 5.5 V or GND;<br>V <sub>CC</sub> = 0 V to 5.5 V   | -     | -   | 0.1   | -                | 1.0  | -                 | 2.0   | µA   |
| I <sub>OZ</sub>  | OFF-state output current  | V <sub>I</sub> = V <sub>IH</sub> or V <sub>IL</sub> ;<br>V <sub>O</sub> = V <sub>CC</sub> or GND;<br>V <sub>CC</sub> = 5.5 V                                   | -     | -   | ±0.25 | -                | ±2.5 | -                 | ±10.0 | µA   |
| I <sub>CC</sub>  | supply current            | V <sub>I</sub> = V <sub>CC</sub> or GND; I <sub>O</sub> = 0 A;<br>V <sub>CC</sub> = 5.5 V  | -     | -   | 2.0   | -                | 20   | -                 | 40    | µA   |
| ΔI <sub>CC</sub> | additional supply current | per input pin;<br>V <sub>I</sub> = V <sub>CC</sub> - 2.1 V; other pins<br>at V <sub>CC</sub> or GND; I <sub>O</sub> = 0 A;<br>V <sub>CC</sub> = 4.5 V to 5.5 V | -     | -   | 1.35  | -                | 1.5  | -                 | 1.5   | mA   |
| C <sub>I</sub>   | input capacitance         | V <sub>I</sub> = V <sub>CC</sub> or GND  | -     | 3   | 10    | -                | 10   | -                 | 10    | pF   |
| C <sub>O</sub>   | output capacitance        |  | -     | 4   | -     | -                | -    | -                 | -     | pF   |

## 10. Dynamic characteristics

**Table 7. Dynamic characteristics**

Voltages are referenced to GND (ground = 0 V); for test circuit see Fig. 8.

| Symbol          | Parameter         | Conditions                       | 25 °C |        |      | -40 °C to +85 °C |      | -40 °C to +125 °C |      | Unit |
|-----------------|-------------------|----------------------------------|-------|--------|------|------------------|------|-------------------|------|------|
|                 |                   |                                  | Min   | Typ[1] | Max  | Min              | Max  | Min               | Max  |      |
| <b>74AHC126</b> |                   |                                  |       |        |      |                  |      |                   |      |      |
| t <sub>pd</sub> | propagation delay | nA to nY; see Fig. 6 [2]         |       |        |      |                  |      |                   |      |      |
|                 |                   | V <sub>CC</sub> = 3.0 V to 3.6 V |       |        |      |                  |      |                   |      |      |
|                 |                   | C <sub>L</sub> = 15 pF           | -     | 4.7    | 8.0  | 1.0              | 9.5  | 1.0               | 10.0 | ns   |
|                 |                   | C <sub>L</sub> = 50 pF           | -     | 6.7    | 11.5 | 1.0              | 13.0 | 1.0               | 14.5 | ns   |
|                 |                   | V <sub>CC</sub> = 4.5 V to 5.5 V |       |        |      |                  |      |                   |      |      |
|                 |                   | C <sub>L</sub> = 15 pF           | -     | 3.3    | 5.5  | 1.0              | 6.5  | 1.0               | 7.0  | ns   |
|                 |                   | C <sub>L</sub> = 50 pF           | -     | 4.7    | 7.5  | 1.0              | 8.5  | 1.0               | 9.5  | ns   |

| Symbol           | Parameter                     | Conditions  | 25 °C |        |      | -40 °C to +85 °C |      | -40 °C to +125 °C |      | Unit |
|------------------|-------------------------------|---|-------|--------|------|------------------|------|-------------------|------|------|
|                  |                               |   | Min   | Typ[1] | Max  | Min              | Max  | Min               | Max  |      |
| t <sub>en</sub>  | enable time                   | nOE to nY; see Fig. 7 [3]   |       |        |      |                  |      |                   |      |      |
|                  |                               | V <sub>CC</sub> = 3.0 V to 3.6 V                                    |       |        |      |                  |      |                   |      |      |
|                  |                               | C <sub>L</sub> = 15 pF  | -     | 5.3    | 8.0  | 1.0              | 9.5  | 1.0               | 10.0 | ns   |
|                  |                               | C <sub>L</sub> = 50 pF  | -     | 7.6    | 11.5 | 1.0              | 13.0 | 1.0               | 14.5 | ns   |
|                  |                               | V <sub>CC</sub> = 4.5 V to 5.5 V                                    |       |        |      |                  |      |                   |      |      |
|                  |                               | C <sub>L</sub> = 15 pF  | -     | 3.6    | 5.3  | 1.0              | 6.1  | 1.0               | 7.0  | ns   |
|                  |                               | C <sub>L</sub> = 50 pF  | -     | 5.1    | 7.6  | 1.0              | 8.7  | 1.0               | 9.5  | ns   |
| t <sub>dis</sub> | disable time                  | nOE to nY; see Fig. 7 [4]   |       |        |      |                  |      |                   |      |      |
|                  |                               | V <sub>CC</sub> = 3.0 V to 3.6 V                                    |       |        |      |                  |      |                   |      |      |
|                  |                               | C <sub>L</sub> = 15 pF  | -     | 6.6    | 9.7  | 1.0              | 11.5 | 1.0               | 12.5 | ns   |
|                  |                               | C <sub>L</sub> = 50 pF  | -     | 9.4    | 13.2 | 1.0              | 15.0 | 1.0               | 16.5 | ns   |
|                  |                               | V <sub>CC</sub> = 4.5 V to 5.5 V                                    |       |        |      |                  |      |                   |      |      |
|                  |                               | C <sub>L</sub> = 15 pF  | -     | 4.7    | 6.8  | 1.0              | 8.0  | 1.0               | 8.5  | ns   |
|                  |                               | C <sub>L</sub> = 50 pF  | -     | 6.7    | 8.8  | 1.0              | 10.0 | 1.0               | 11.0 | ns   |
| C <sub>PD</sub>  | power dissipation capacitance | f <sub>i</sub> = 1 MHz; V <sub>i</sub> = GND to V <sub>CC</sub> [5] | -     | 10     | -    | -                | -    | -                 | -    | pF   |
| <b>74AHCT126</b> |                               |   |       |        |      |                  |      |                   |      |      |
| t <sub>pd</sub>  | propagation delay             | nA to nY; see Fig. 6 [2]  |       |        |      |                  |      |                   |      |      |
|                  |                               | V <sub>CC</sub> = 4.5 V to 5.5 V                                    |       |        |      |                  |      |                   |      |      |
|                  |                               | C <sub>L</sub> = 15 pF  | -     | 3.0    | 5.5  | 1.0              | 6.5  | 1.0               | 7.0  | ns   |
|                  |                               | C <sub>L</sub> = 50 pF  | -     | 4.3    | 7.5  | 1.0              | 8.5  | 1.0               | 9.5  | ns   |
| t <sub>en</sub>  | enable time                   | nOE to nY; see Fig. 7 [3]   |       |        |      |                  |      |                   |      |      |
|                  |                               | V <sub>CC</sub> = 4.5 V to 5.5 V                                    |       |        |      |                  |      |                   |      |      |
|                  |                               | C <sub>L</sub> = 15 pF  | -     | 3.3    | 5.1  | 1.0              | 6.0  | 1.0               | 6.5  | ns   |
|                  |                               | C <sub>L</sub> = 50 pF  | -     | 4.7    | 7.1  | 1.0              | 8.0  | 1.0               | 9.0  | ns   |
| t <sub>dis</sub> | disable time                  | nOE to nY; see Fig. 7 [4]   |       |        |      |                  |      |                   |      |      |
|                  |                               | V <sub>CC</sub> = 4.5 V to 5.5 V                                    |       |        |      |                  |      |                   |      |      |
|                  |                               | C <sub>L</sub> = 15 pF  | -     | 4.8    | 6.8  | 1.0              | 8.0  | 1.0               | 8.5  | ns   |
|                  |                               | C <sub>L</sub> = 50 pF  | -     | 6.9    | 8.9  | 1.0              | 10.0 | 1.0               | 11.5 | ns   |
| C <sub>PD</sub>  | power dissipation capacitance | f <sub>i</sub> = 1 MHz; V <sub>i</sub> = GND to V <sub>CC</sub> [5] | -     | 12     | -    | -                | -    | -                 | -    | pF   |

[1] Typical values are measured at nominal supply voltage (V<sub>CC</sub> = 3.3 V and V<sub>CC</sub> = 5.0 V).

[2] t<sub>pd</sub> is the same as t<sub>PLH</sub> and t<sub>PHL</sub>.

[3] t<sub>en</sub> is the same as t<sub>PZL</sub> and t<sub>PZH</sub>.

[4] t<sub>dis</sub> is the same as t<sub>PLZ</sub> and t<sub>PHZ</sub>.

[5] C<sub>PD</sub> is used to determine the dynamic power dissipation (P<sub>D</sub> in μW).

$$P_D = C_{PD} \times V_{CC}^2 \times f_i \times N + \sum(C_L \times V_{CC}^2 \times f_o) \text{ where:}$$

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;

∑(C<sub>L</sub> × V<sub>CC</sub><sup>2</sup> × f<sub>o</sub>) = sum of the outputs.

10.1. Waveforms and test circuit

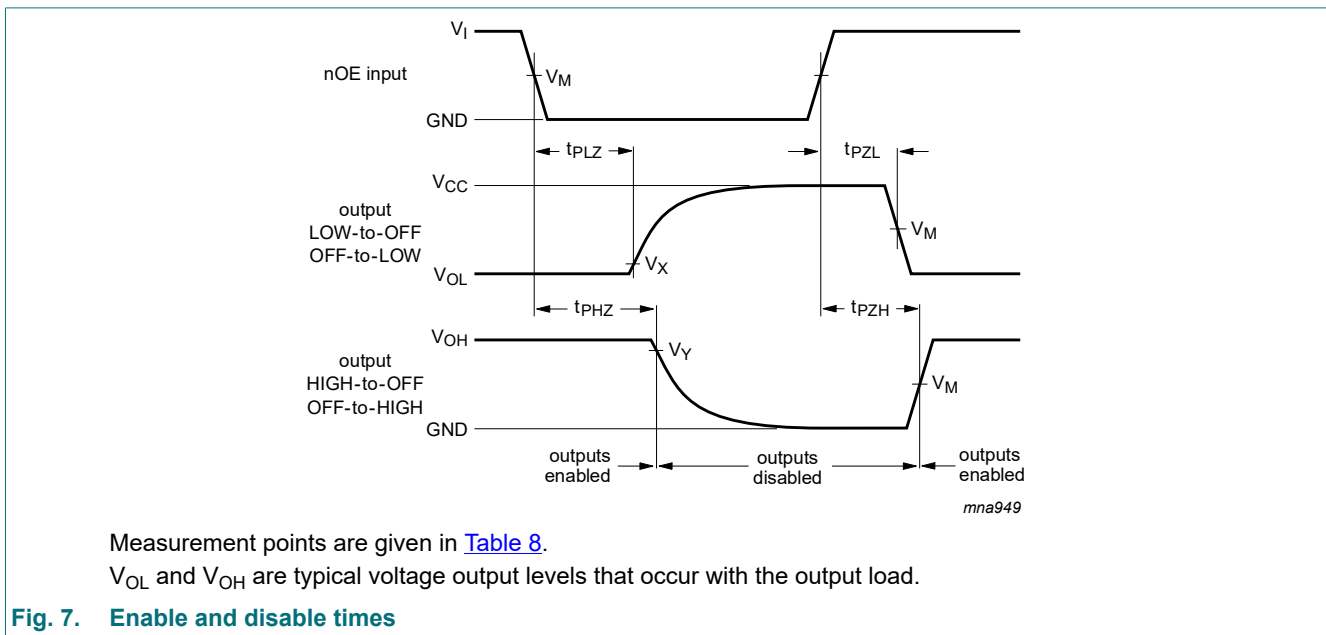
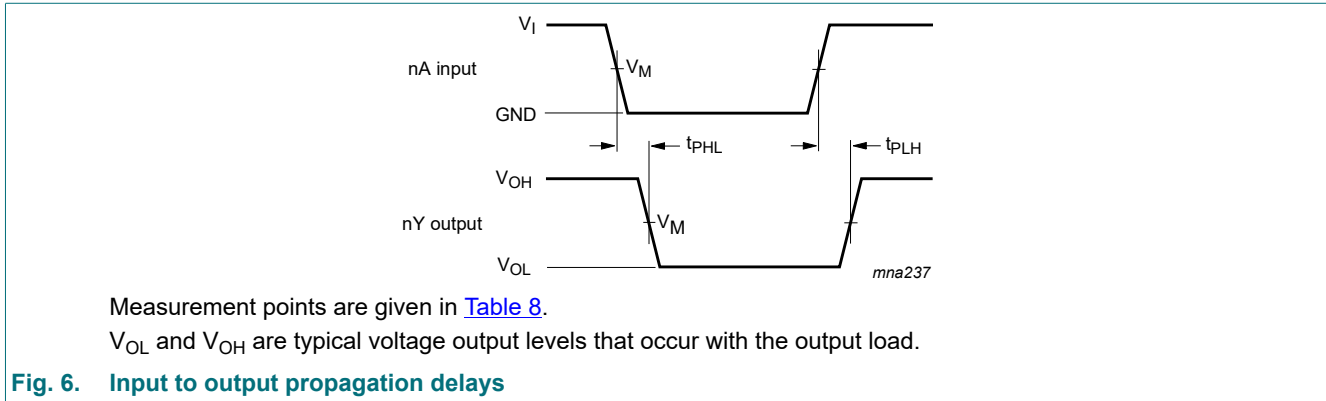
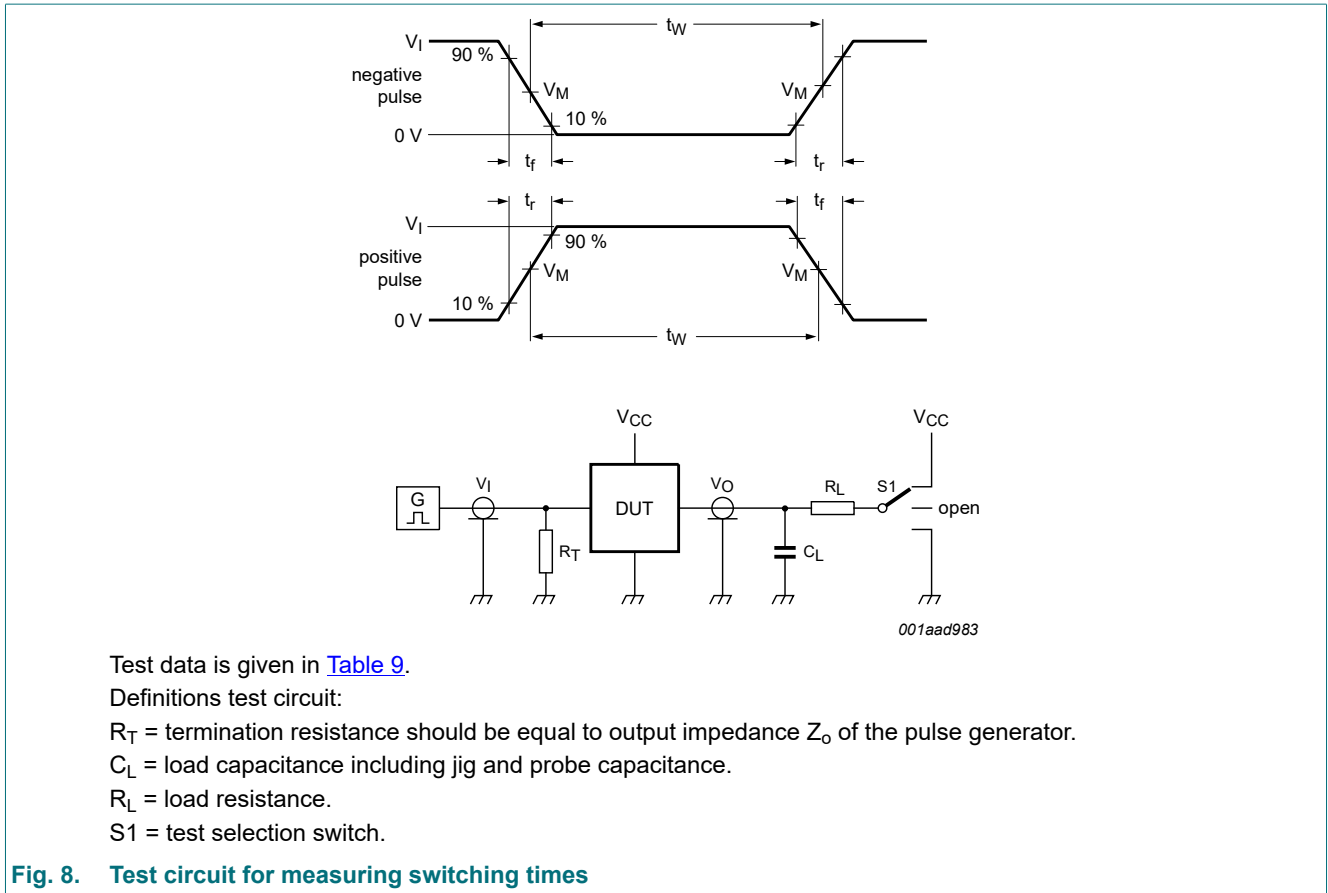


Table 8. Measurement points

| Type      | Input               | Output              |                          |                          |
|-----------|---------------------|---------------------|--------------------------|--------------------------|
|           | $V_M$               | $V_M$               | $V_X$                    | $V_Y$                    |
| 74AHC126  | $0.5 \times V_{CC}$ | $0.5 \times V_{CC}$ | $V_{OL} + 0.3 \text{ V}$ | $V_{OH} - 0.3 \text{ V}$ |
| 74AHCT126 | 1.5 V               | $0.5 \times V_{CC}$ | $V_{OL} + 0.3 \text{ V}$ | $V_{OH} - 0.3 \text{ V}$ |





**Table 9. Test data**

| Type      | Input    |                       | Load         |              | S1 position        |                    |                    |
|-----------|----------|-----------------------|--------------|--------------|--------------------|--------------------|--------------------|
|           | $V_I$    | $t_r, t_f$            | $C_L$        | $R_L$        | $t_{PHL}, t_{PLH}$ | $t_{PZH}, t_{PHZ}$ | $t_{PZL}, t_{PLZ}$ |
| 74AHC126  | $V_{CC}$ | $\leq 3.0 \text{ ns}$ | 15 pF, 50 pF | 1 k $\Omega$ | open               | GND                | $V_{CC}$           |
| 74AHCT126 | 3.0 V    | $\leq 3.0 \text{ ns}$ | 15 pF, 50 pF | 1 k $\Omega$ | open               | GND                | $V_{CC}$           |

11. Package outline

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

SOT108-1

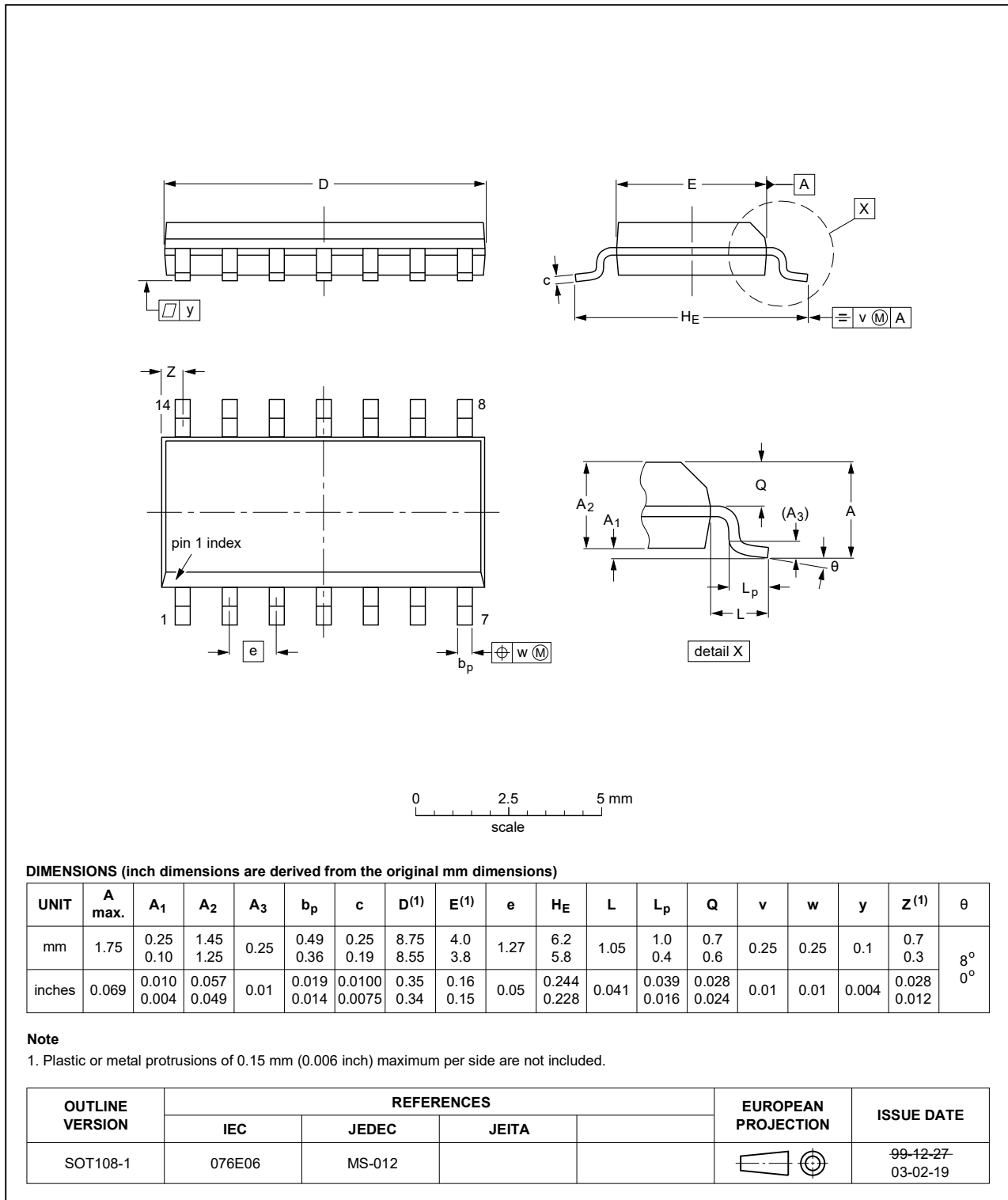


Fig. 9. Package outline SOT108-1 (SO14)

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

SOT402-1

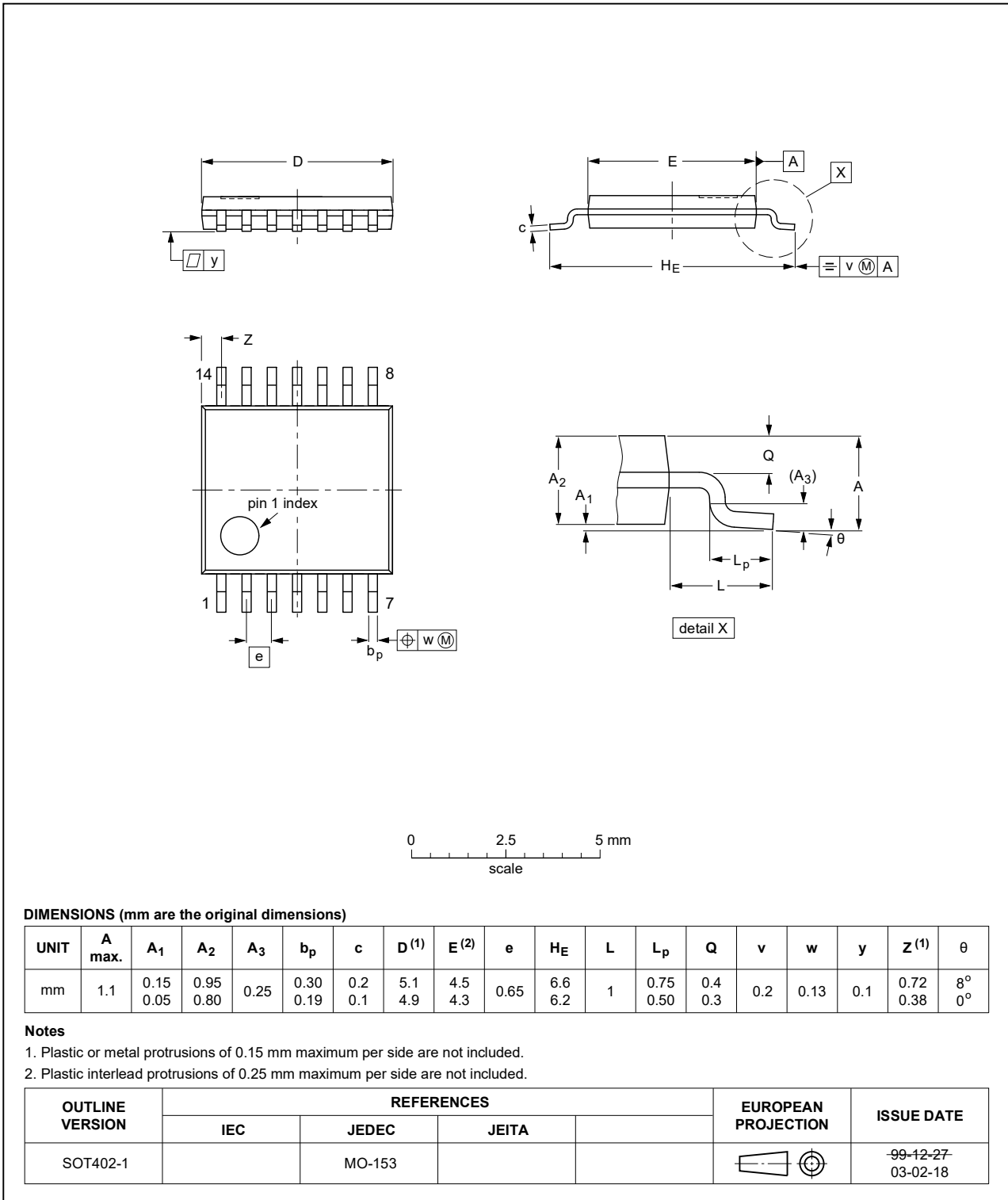


Fig. 10. Package outline SOT402-1 (TSSOP14)

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

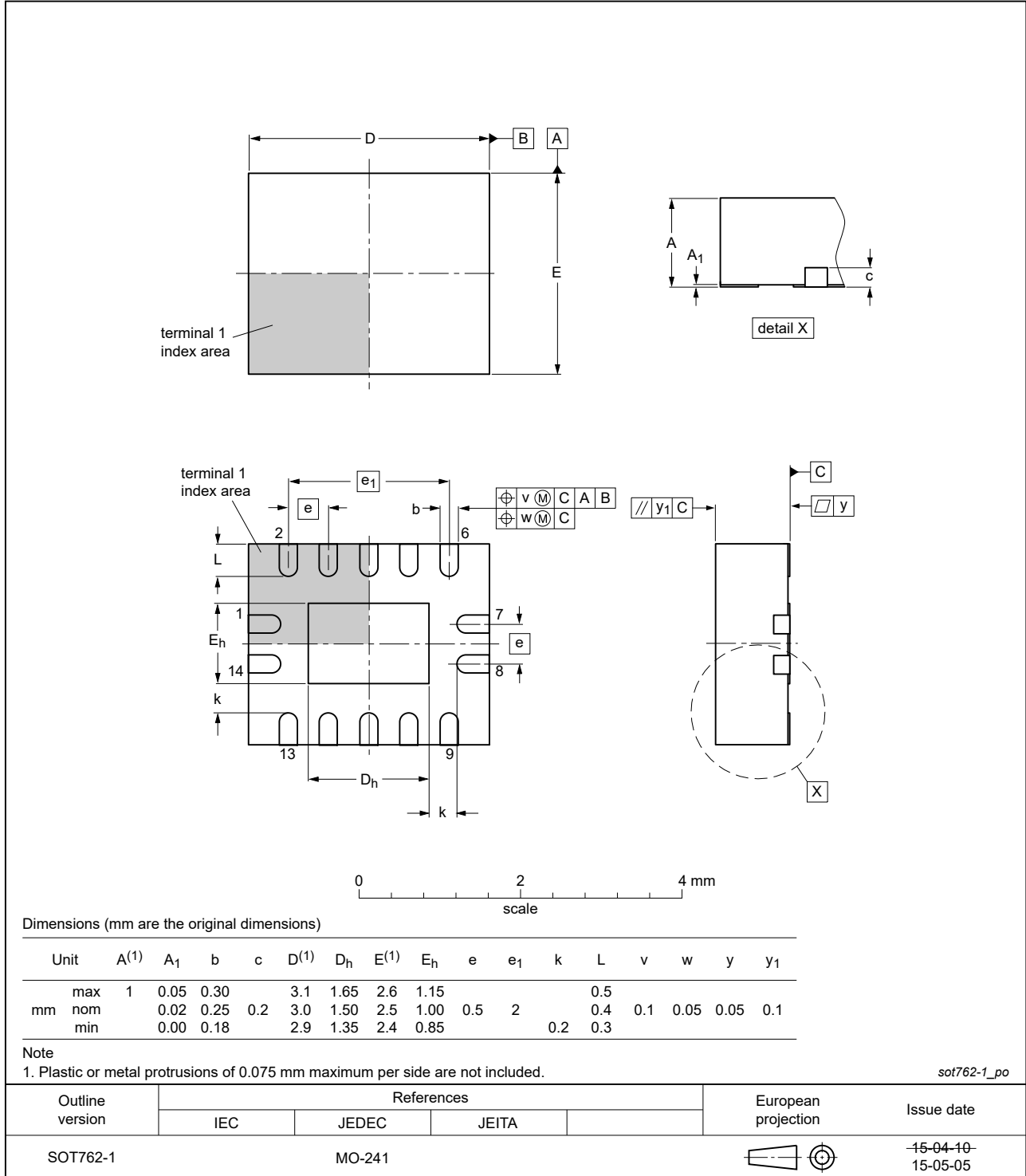


Fig. 11. Package outline SOT762-1 (DHVQFN14)

## 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                        |
| MM      | Machine Model                           |

## 13. Revision history

Table 11. Revision history

| Document ID       | Release date  | Data sheet status         | Change notice | Supersedes        |
|-------------------|---|---------------------------|---------------|-------------------|
| 74AHC_AHCT126 v.5 | 20200428  | Product data sheet        | -             | 74AHC_AHCT126 v.4 |
| 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><a href="#">Section 1</a>: updated.</li> <li><a href="#">Table 4</a>: Derating values for <math>P_{tot}</math> total power dissipation have been updated.</li> <li><a href="#">Table 6</a>: Conditions for <math>I_{OZ}</math> corrected.</li> <li>Package outline drawing of SOT762-1 (<a href="#">Fig. 11</a>) modified.</li> </ul> |                           |               |                   |
| 74AHC_AHCT126 v.4 | 20090812  | Product data sheet        | -             | 74AHC_AHCT126 v.3 |
| Modifications:    | <ul style="list-style-type: none"> <li>Added type numbers 74AHC126BQ and 74AHCT126BQ (DHVQFN14 package)</li> </ul>  |                           |               |                   |
| 74AHC_AHCT126 v.3 | 20080425  | Product data sheet        | -             | 74AHC_AHCT126 v.2 |
| 74AHC_AHCT126 v.2 | 19990929  | Product specification     | -             | 74AHC_AHCT126 v.1 |
| 74AHC_AHCT126 v.1 | 19990112  | Preliminary 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.                                     |

- [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".
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