

74HC251-Q100; 74HCT251-Q100

8-input multiplexer; 3-state

Rev. 1 — 12 August 2013

Product data sheet

1. General description

The 74HC251-Q100; 74HCT251-Q100 is an 8-bit multiplexer with eight binary inputs (I0 to I7), three select inputs (S0 to S2) and an output enable input (\overline{OE}). The select inputs select one of the eight binary inputs and route it to the complementary outputs (Y and \overline{Y}). A HIGH on \overline{OE} causes the outputs to assume a high-impedance OFF-state. Inputs include clamp diodes that enable the use of current limiting resistors to interface inputs to voltages in excess of V_{CC} .

This product has been qualified to the Automotive Electronics Council (AEC) standard Q100 (Grade 1) and is suitable for use in automotive applications.

2. Features and benefits

- Automotive product qualification in accordance with AEC-Q100 (Grade 1)
 - ◆ Specified from $-40\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$ and from $-40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$
- Input levels:
 - ◆ For 74HC251-Q100: CMOS level
 - ◆ For 74HCT251-Q100: TTL level
- Low-power dissipation
- Non-inverting data path
- Specified in compliance with JEDEC standard no. 7A
- ESD protection:
 - ◆ MIL-STD-883, method 3015 exceeds 2000 V
 - ◆ HBM JESD22-A114F exceeds 2000 V
 - ◆ MM JESD22-A115-A exceeds 200 V (C = 200 pF, R = 0 Ω)
- Multiple package options

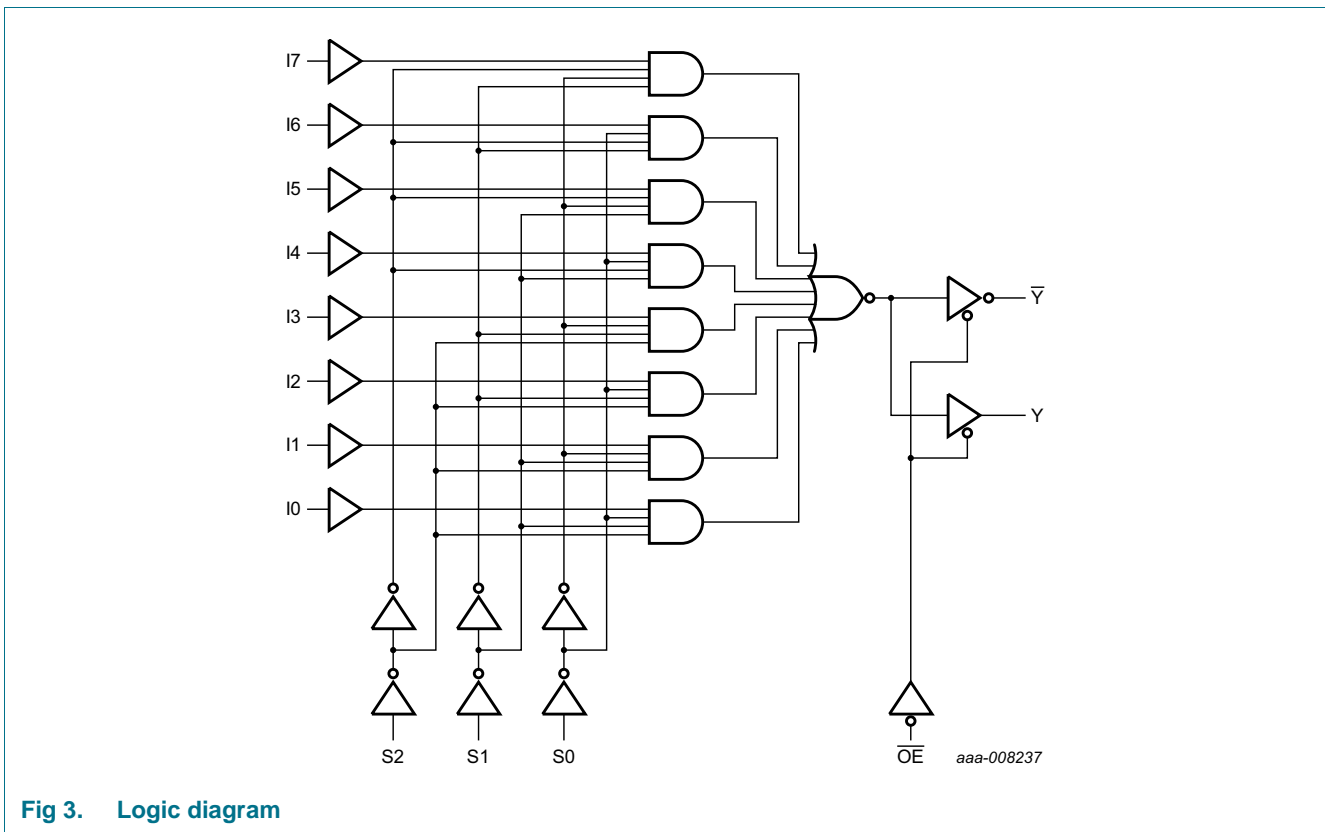
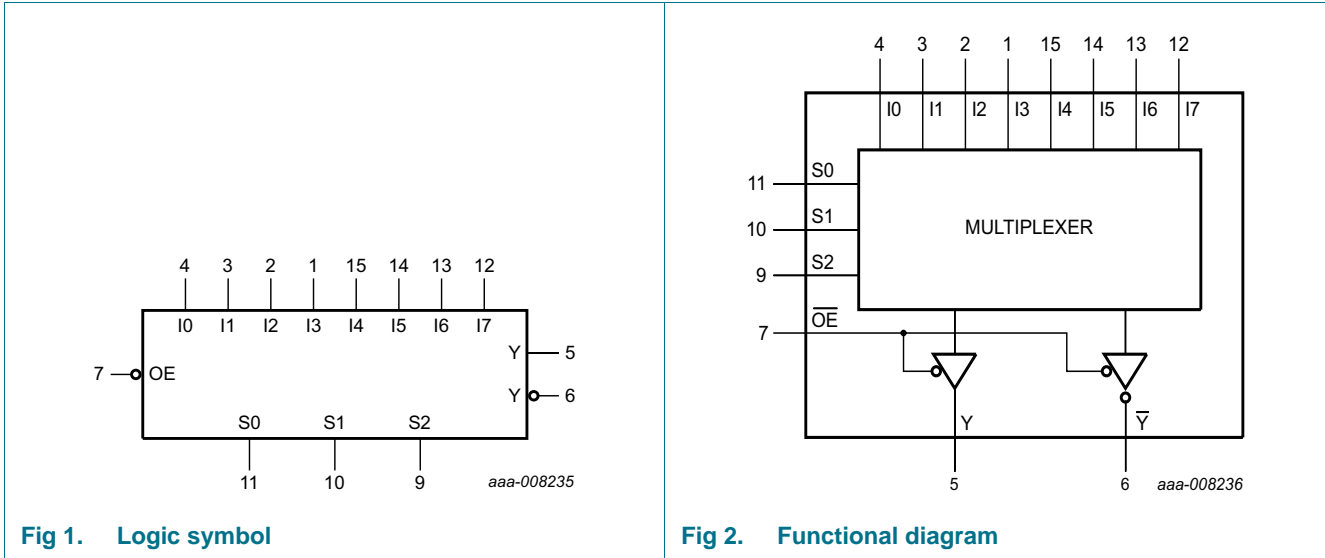
3. Ordering information

Table 1. Ordering information

| Type number | Package | | | Version |
|-----------------------------------|---|---------|--|----------|
| | Temperature range | Name | Description | |
| 74HC251D-Q100 74HCT251D-Q100 | $-40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$ | SO16 | plastic small outline package; 16 leads; body width 3.9 mm | SOT109-1 |
| 74HC251PW-Q100 74HCT251PW-Q100 | $-40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$ | TSSOP16 | plastic thin shrink small outline package; 16 leads; body width 4.4 mm | SOT403-1 |



4. Functional diagram



5. Pinning information

5.1 Pinning

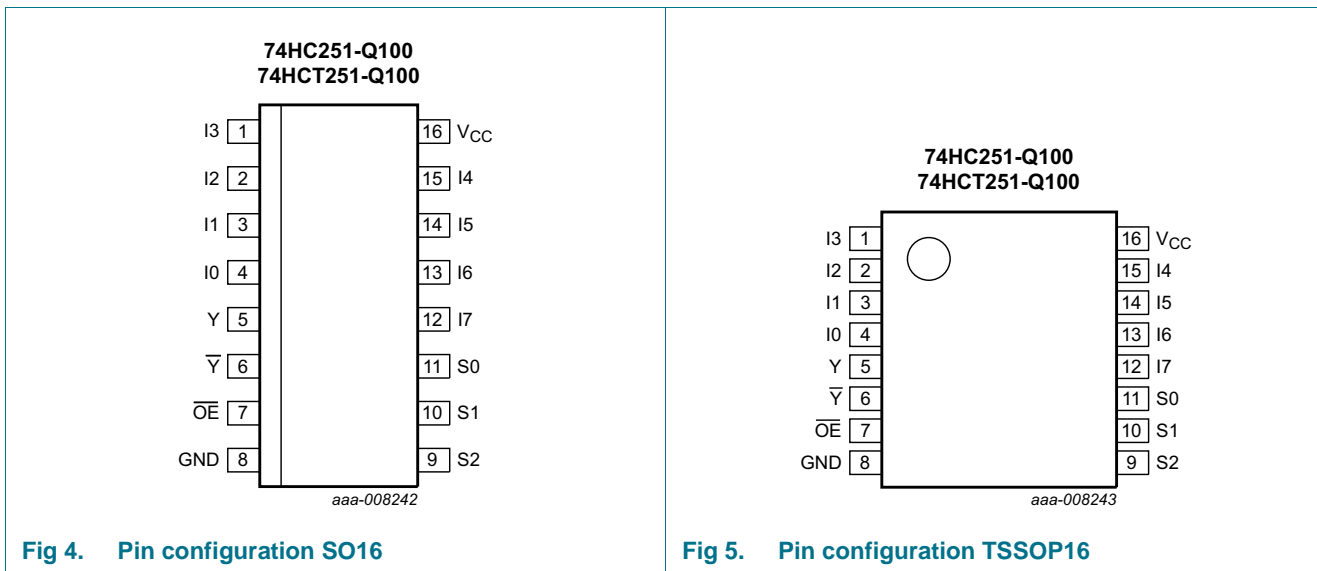


Fig 4. Pin configuration SO16

Fig 5. Pin configuration TSSOP16

5.2 Pin description

Table 2. Pin description

| Symbol | Pin | Description |
|-----------------|----------------------------|----------------------------------|
| I0 to I7 | 4, 3, 2, 1, 15, 14, 13, 12 | data inputs |
| Y | 5 | multiplexer output |
| \bar{Y} | 6 | complementary multiplexer output |
| \overline{OE} | 7 | output enable input (active LOW) |
| GND | 8 | ground (0 V) |
| S0, S1, S2 | 11, 10, 9 | common data select inputs |
| V _{CC} | 16 | supply voltage |

6. Functional description

Table 3. Function table^[1]

| Input | | | | | | | | | | | | Output | |
|------------------------|----|----|----|----|----|----|----|----|----|----|----|-----------------------|---|
| $\overline{\text{OE}}$ | S2 | S1 | S0 | I0 | I1 | I2 | I3 | I4 | I5 | I6 | I7 | $\overline{\text{Y}}$ | Y |
| H | X | X | X | X | X | X | X | X | X | X | X | Z | Z |
| L | L | L | L | L | X | X | X | X | X | X | X | H | L |
| L | L | L | L | H | X | X | X | X | X | X | X | L | H |
| L | L | L | H | X | L | X | X | X | X | X | X | H | L |
| L | L | L | H | X | H | X | X | X | X | X | X | L | H |
| L | L | H | L | X | X | L | X | X | X | X | X | H | L |
| L | L | H | L | X | X | H | X | X | X | X | X | L | H |
| L | L | H | H | X | X | X | L | X | X | X | X | H | L |
| L | L | H | H | X | X | X | H | X | X | X | X | L | H |
| L | H | L | L | X | X | X | X | L | X | X | X | H | L |
| L | H | L | L | X | X | X | X | H | X | X | X | L | H |
| L | H | L | H | X | X | X | X | X | L | X | X | H | L |
| L | H | L | H | X | X | X | X | X | H | X | X | L | H |
| L | H | H | L | X | X | X | X | X | X | L | X | H | L |
| L | H | H | L | X | X | X | X | X | X | H | X | L | H |
| L | H | H | H | X | X | X | X | X | X | X | L | H | L |
| L | H | H | H | X | X | X | X | X | X | X | H | L | H |

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

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 | V |
| I_{IK} | input clamping current | $V_I < -0.5\text{ V}$ or $V_I > V_{CC} + 0.5\text{ V}$ | - | ± 20 | mA |
| I_{OK} | output clamping current | $V_O < -0.5\text{ V}$ or $V_O > V_{CC} + 0.5\text{ V}$ | - | ± 20 | mA |
| I_O | output current | $V_O = -0.5\text{ V}$ to $(V_{CC} + 0.5\text{ V})$ | - | ± 25 | mA |
| I_{CC} | supply current | | - | +50 | mA |
| I_{GND} | ground current | | -50 | - | mA |
| T_{stg} | storage temperature | | -65 | +150 | °C |
| P_{tot} | total power dissipation | $T_{amb} = -40\text{ °C}$ to $+125\text{ °C}$ | [1][1] | - | 500 mW |

[1] For SO16 package: P_{tot} derates linearly with 8 mW/K above 70 °C.

[2] For TSSOP16 package: P_{tot} derates linearly with 5.5 mW/K above 60 °C.

8. Recommended operating conditions

Table 5. Recommended operating conditions

Voltages are referenced to GND (ground = 0 V)

| Symbol | Parameter | Conditions | 74HC251-Q100 | | | 74HCT251-Q100 | | | Unit |
|---------------------|-------------------------------------|-------------------------|--------------|------|----------|---------------|------|----------|------|
| | | | Min | Typ | Max | Min | Typ | Max | |
| V_{CC} | supply voltage | | 2.0 | 5.0 | 6.0 | 4.5 | 5.0 | 5.5 | V |
| V_I | input voltage | | 0 | - | V_{CC} | 0 | - | V_{CC} | 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 | $V_{CC} = 2.0\text{ V}$ | - | - | 625 | - | - | - | ns/V |
| | | $V_{CC} = 4.5\text{ V}$ | - | 1.67 | 139 | - | 1.67 | 139 | ns/V |
| | | $V_{CC} = 6.0\text{ V}$ | - | - | 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 | T _{amb} = 25 °C | | | T _{amb} = -40 °C to +85 °C | | T _{amb} = -40 °C to +125 °C | | Unit |
|---|---------------------------|--|--------------------------|------|------|-------------------------------------|------|--------------------------------------|-------|------|
| | | | Min | Typ | Max | Min | Max | Min | Max | |
| 74HC251-Q100 | | | | | | | | | | |
| V _{IH} | HIGH-level input voltage | V _{CC} = 2.0 V | 1.5 | 1.2 | - | 1.5 | - | 1.5 | - | V |
| | | V _{CC} = 4.5 V | 3.15 | 2.4 | - | 3.15 | - | 3.15 | - | V |
| | | V _{CC} = 6.0 V | 4.2 | 3.2 | - | 4.2 | - | 4.2 | - | V |
| V _{IL} | LOW-level input voltage | V _{CC} = 2.0 V | - | 0.8 | 0.5 | - | 0.5 | - | 0.5 | V |
| | | V _{CC} = 4.5 V | - | 2.1 | 1.35 | - | 1.35 | - | 1.35 | V |
| | | V _{CC} = 6.0 V | - | 2.8 | 1.8 | - | 1.8 | - | 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 | - | 1.9 | - | 1.9 | - | V |
| | | I _O = -20 μA; V _{CC} = 4.5 V | 4.4 | 4.5 | - | 4.4 | - | 4.4 | - | V |
| | | I _O = -20 μA; V _{CC} = 6.0 V | 5.9 | 6.0 | - | 5.9 | - | 5.9 | - | V |
| | | I _O = -4.0 mA; V _{CC} = 4.5 V | 3.98 | 4.32 | - | 3.84 | - | 3.7 | - | V |
| I _O = -5.2 mA; V _{CC} = 6.0 V | 5.48 | 5.81 | - | 5.34 | - | 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 | 0.1 | - | 0.1 | - | 0.1 | V |
| | | I _O = 20 μA; V _{CC} = 4.5 V | - | 0 | 0.1 | - | 0.1 | - | 0.1 | V |
| | | I _O = 20 μA; V _{CC} = 6.0 V | - | 0 | 0.1 | - | 0.1 | - | 0.1 | V |
| | | I _O = 4.0 mA; V _{CC} = 4.5 V | - | 0.15 | 0.26 | - | 0.33 | - | 0.4 | V |
| I _O = 5.2 mA; V _{CC} = 6.0 V | - | 0.16 | 0.26 | - | 0.33 | - | 0.4 | V | | |
| I _I | input leakage current | V _I = V _{CC} or GND; V _{CC} = 6.0 V | - | - | ±0.1 | - | ±1.0 | - | ±1.0 | μA |
| I _{OZ} | OFF-state output current | V _I = V _{IH} or V _{IL} ; V _O = V _{CC} or GND; V _{CC} = 6.0 V | - | - | ±0.5 | - | ±5.0 | - | ±10.0 | μA |
| I _{CC} | supply current | V _I = V _{CC} or GND; I _O = 0 A; V _{CC} = 6.0 V | - | - | 8.0 | - | 80 | - | 160 | μA |
| C _I | input capacitance | | - | 3.5 | - | | | | | pF |

Table 6. Static characteristics ...continued

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

| Symbol | Parameter | Conditions | T _{amb} = 25 °C | | | T _{amb} = -40 °C to +85 °C | | T _{amb} = -40 °C to +125 °C | | Unit |
|----------------------|---------------------------|--|--------------------------|------|------|-------------------------------------|------|--------------------------------------|------|------|
| | | | Min | Typ | Max | Min | Max | Min | Max | |
| 74HCT251-Q100 | | | | | | | | | | |
| V _{IH} | HIGH-level input voltage | V _{CC} = 4.5 V to 5.5 V | 2.0 | 1.6 | - | 2.0 | - | 2.0 | - | V |
| V _{IL} | LOW-level input voltage | V _{CC} = 4.5 V to 5.5 V | - | 1.2 | 0.8 | - | 0.8 | - | 0.8 | V |
| V _{OH} | HIGH-level output voltage | V _I = V _{IH} or V _{IL} ; V _{CC} = 4.5 V | | | | | | | | |
| | | I _O = -20 μA | 4.4 | 4.5 | - | 4.4 | - | 4.4 | - | V |
| | | I _O = -4 mA | 3.98 | 4.32 | - | 3.84 | - | 3.7 | - | V |
| V _{OL} | LOW-level output voltage | V _I = V _{IH} or V _{IL} ; V _{CC} = 4.5 V | | | | | | | | |
| | | I _O = 20 μA | - | 0 | 0.1 | - | 0.1 | - | 0.1 | V |
| | | I _O = 4.0 mA | - | 0.15 | 0.26 | - | 0.33 | - | 0.4 | V |
| I _I | input leakage current | V _I = V _{CC} or GND; V _{CC} = 5.5 V | - | - | ±0.1 | - | ±1.0 | - | ±1.0 | μA |
| I _{OZ} | OFF-state output current | V _I = V _{IH} or V _{IL} ; V _{CC} = 5.5 V; V _O = V _{CC} or GND per input pin; other inputs at V _{CC} or GND; I _O = 0 A | - | - | ±0.5 | - | ±5.0 | - | ±10 | μA |
| I _{CC} | supply current | V _I = V _{CC} or GND; I _O = 0 A; V _{CC} = 5.5 V | - | - | 8.0 | - | 80 | - | 160 | μA |
| ΔI _{CC} | additional supply current | V _I = V _{CC} - 2.1 V; other inputs at V _{CC} or GND; V _{CC} = 4.5 V to 5.5 V; I _O = 0 A | | | | | | | | |
| | | per input pin; I _n inputs | - | 100 | 360 | - | 450 | - | 490 | μA |
| | | per input pin; $\overline{\text{OE}}$ input | - | 150 | 540 | - | 675 | - | 735 | μA |
| | | per input pin; S _n input | - | 150 | 540 | - | 675 | - | 735 | μA |
| C _I | input capacitance | | - | 3.5 | - | | | | | pF |

10. Dynamic characteristics

Table 7. Dynamic characteristics

Voltages are referenced to GND (ground = 0 V); $C_L = 50$ pF unless otherwise specified; for test circuit, see [Figure 9](#).

| Symbol | Parameter | Conditions | $T_{amb} = 25\text{ }^\circ\text{C}$ | | | $T_{amb} = -40\text{ }^\circ\text{C}$ to $+85\text{ }^\circ\text{C}$ | | $T_{amb} = -40\text{ }^\circ\text{C}$ to $+125\text{ }^\circ\text{C}$ | | Unit |
|---|-------------------------------|--|--------------------------------------|--|-----|---|-----|--|-----|------|
| | | | Min | Typ | Max | Min | Max | Min | Max | |
| 74HC251-Q100 | | | | | | | | | | |
| t_{pd} | propagation delay | In to Y; see Figure 6 [1] | | | | | | | | |
| | | $V_{CC} = 2.0\text{ V}$ | - | 50 | 170 | - | 215 | - | 255 | ns |
| | | $V_{CC} = 4.5\text{ V}$ | - | 18 | 34 | - | 43 | - | 51 | ns |
| | | $V_{CC} = 5\text{ V}; C_L = 15\text{ pF}$ | - | 15 | - | - | - | - | - | ns |
| | | $V_{CC} = 6.0\text{ V}$ | - | 14 | 29 | - | 37 | - | 43 | ns |
| | | In to \bar{Y} ; see Figure 6 [1] | | | | | | | | |
| | | $V_{CC} = 2.0\text{ V}$ | - | 55 | 175 | - | 220 | - | 265 | ns |
| | | $V_{CC} = 4.5\text{ V}$ | - | 20 | 35 | - | 44 | - | 53 | ns |
| | | $V_{CC} = 5\text{ V}; C_L = 15\text{ pF}$ | - | 17 | - | - | - | - | - | ns |
| | | $V_{CC} = 6.0\text{ V}$ | - | 16 | 30 | - | 37 | - | 45 | ns |
| | | Sn to Y; see Figure 7 [1] | | | | | | | | |
| | | $V_{CC} = 2.0\text{ V}$ | - | 66 | 205 | - | 255 | - | 310 | ns |
| | | $V_{CC} = 4.5\text{ V}$ | - | 24 | 41 | - | 51 | - | 62 | ns |
| | | $V_{CC} = 5\text{ V}; C_L = 15\text{ pF}$ | - | 20 | - | - | - | - | - | ns |
| | | $V_{CC} = 6.0\text{ V}$ | - | 19 | 35 | - | 43 | - | 53 | ns |
| | | Sn to \bar{Y} ; see Figure 7 [1] | | | | | | | | |
| $V_{CC} = 2.0\text{ V}$ | - | 69 | 205 | - | 255 | - | 310 | ns | | |
| $V_{CC} = 4.5\text{ V}$ | - | 25 | 41 | - | 51 | - | 62 | ns | | |
| $V_{CC} = 5\text{ V}; C_L = 15\text{ pF}$ | - | 21 | - | - | - | - | - | ns | | |
| $V_{CC} = 6.0\text{ V}$ | - | 20 | 35 | - | 43 | - | 53 | ns | | |
| t_{en} | enable time | \overline{OE} to Y, \bar{Y} ; see Figure 7 [2] | | | | | | | | |
| | | $V_{CC} = 2.0\text{ V}$ | - | 36 | 140 | - | 175 | - | 210 | ns |
| | | $V_{CC} = 4.5\text{ V}$ | - | 13 | 28 | - | 35 | - | 42 | ns |
| t_{dis} | disable time | \overline{OE} to Y, \bar{Y} ; see Figure 7 [3] | | | | | | | | |
| | | $V_{CC} = 2.0\text{ V}$ | - | 39 | 140 | - | 170 | - | 210 | ns |
| | | $V_{CC} = 4.5\text{ V}$ | - | 14 | 28 | - | 35 | - | 42 | ns |
| t_{dis} | disable time | $V_{CC} = 6.0\text{ V}$ | - | 11 | 24 | - | 30 | - | 36 | ns |
| | | t_t | transition time | Y, \bar{Y} ; see Figure 6 [4] | | | | | | |
| | | | | $V_{CC} = 2.0\text{ V}$ | - | 19 | 75 | - | 95 | - |
| $V_{CC} = 4.5\text{ V}$ | - | | | 7 | 15 | - | 19 | - | 22 | ns |
| C_{PD} | power dissipation capacitance | $V_{CC} = 6.0\text{ V}$ | - | 6 | 13 | - | 16 | - | 19 | ns |
| | | $C_L = 50\text{ pF}; f = 1\text{ MHz}; V_1 = \text{GND to } V_{CC}$ [5] | - | 44 | - | - | - | - | - | pF |

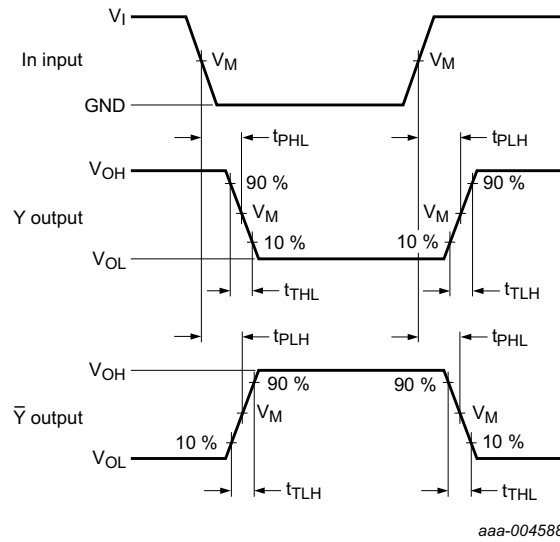
Table 7. Dynamic characteristics ...continued

Voltages are referenced to GND (ground = 0 V); $C_L = 50$ pF unless otherwise specified; for test circuit, see [Figure 9](#).

| Symbol | Parameter | Conditions | $T_{amb} = 25\text{ }^\circ\text{C}$ | | | $T_{amb} = -40\text{ }^\circ\text{C}$ to $+85\text{ }^\circ\text{C}$ | | $T_{amb} = -40\text{ }^\circ\text{C}$ to $+125\text{ }^\circ\text{C}$ | | Unit |
|----------------------|-------------------------------|--|--------------------------------------|-----|-----|---|-----|--|-----|------|
| | | | Min | Typ | Max | Min | Max | Min | Max | |
| 74HCT251-Q100 | | | | | | | | | | |
| t_{pd} | propagation delay | In to Y; see Figure 6 [1] | | | | | | | | |
| | | $V_{CC} = 4.5\text{ V}$ | - | 22 | 35 | - | 44 | - | 53 | ns |
| | | $V_{CC} = 5\text{ V}; C_L = 15\text{ pF}$ | - | 19 | - | - | - | - | - | ns |
| | | In to \bar{Y} ; see Figure 6 [1] | | | | | | | | |
| | | $V_{CC} = 4.5\text{ V}$ | - | 22 | 35 | - | 44 | - | 53 | ns |
| | | $V_{CC} = 5\text{ V}; C_L = 15\text{ pF}$ | - | 19 | - | - | - | - | - | ns |
| | | Sn to Y; see Figure 7 [1] | | | | | | | | |
| | | $V_{CC} = 4.5\text{ V}$ | - | 24 | 44 | - | 55 | - | 66 | ns |
| | | $V_{CC} = 5\text{ V}; C_L = 15\text{ pF}$ | - | 20 | - | - | - | - | - | ns |
| t_{en} | enable time | Sn to \bar{Y} ; see Figure 7 [1] | | | | | | | | |
| | | $V_{CC} = 4.5\text{ V}$ | - | 25 | 44 | - | 55 | - | 66 | ns |
| | | $V_{CC} = 5\text{ V}; C_L = 15\text{ pF}$ | - | 21 | - | - | - | - | - | ns |
| t_{dis} | disable time | \overline{OE} to Y, \bar{Y} ; see Figure 7 [2] | | | | | | | | |
| | | $V_{CC} = 4.5\text{ V}$ | - | 13 | 28 | - | 35 | - | 42 | ns |
| | | $V_{CC} = 5\text{ V}; C_L = 15\text{ pF}$ | - | 13 | - | - | - | - | - | ns |
| t_{dt} | disable time | \overline{OE} to Y, \bar{Y} ; see Figure 7 [3] | | | | | | | | |
| | | $V_{CC} = 4.5\text{ V}$ | - | 14 | 28 | - | 35 | - | 42 | ns |
| | | $V_{CC} = 5\text{ V}; C_L = 15\text{ pF}$ | - | 18 | - | - | - | - | - | ns |
| t_t | transition time | Y, \bar{Y} ; see Figure 6 [4] | | | | | | | | |
| | | $V_{CC} = 4.5\text{ V}$ | - | 7 | 15 | - | 19 | - | 22 | ns |
| C_{PD} | power dissipation capacitance | $C_L = 50\text{ pF}; f = 1\text{ MHz}; V_i = \text{GND to } V_{CC}$ [5] | - | 46 | - | - | - | - | - | pF |

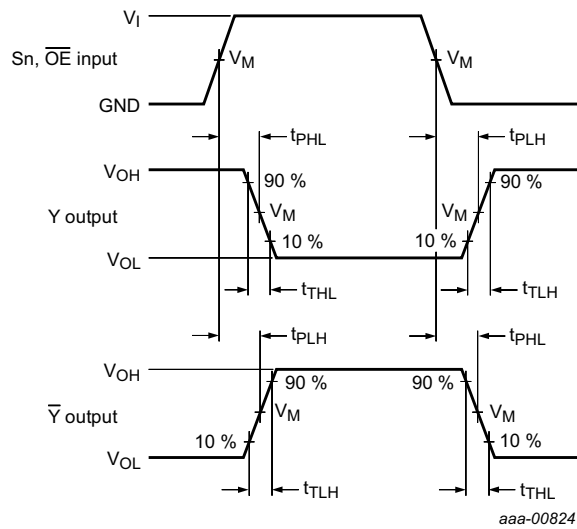
- [1] t_{pd} is the same as t_{PLH} and t_{PHL} .
- [2] t_{en} is the same as t_{PZH} and t_{PZL} .
- [3] t_{dis} is the same as t_{PLZ} and t_{PHZ} .
- [4] t_t is the same as t_{THL} and t_{TLH} .
- [5] C_{PD} is used to determine the dynamic power dissipation (P_D in μW).
 $P_D = C_{PD} \times V_{CC}^2 \times f_i \times N + \sum(C_L \times V_{CC}^2 \times f_o)$ 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;
 $\sum(C_L \times V_{CC}^2 \times f_o)$ = sum of outputs.

11. Waveforms



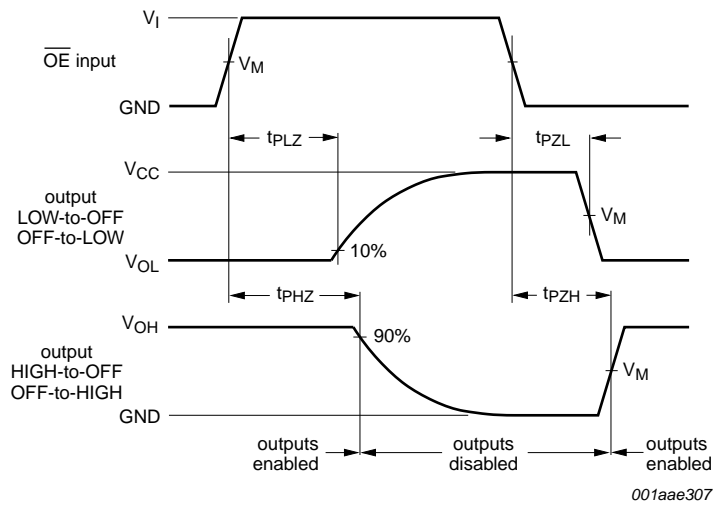
Measurement points are given in [Table 8](#).
 V_{OL} and V_{OH} are typical voltage output levels that occur with the output load.

Fig 6. Propagation delay input (In) to output (Y, \bar{Y}) and the output (Y, \bar{Y}) transition time



Measurement points are given in [Table 8](#).
 V_{OL} and V_{OH} are typical voltage output levels that occur with the output load.

Fig 7. Propagation delay input (S_n , \overline{OE}) to output (Y, \bar{Y})



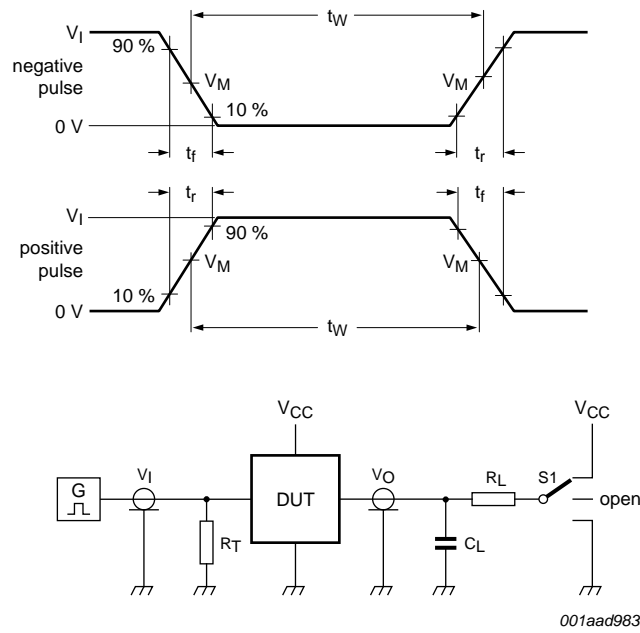
Measurement points are given in [Table 8](#).

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

Fig 8. Enable and disable times

Table 8. Measurement points

| Type | Input | Output |
|---------------|-------------|-------------|
| | V_M | V_M |
| 74HC251-Q100 | $0.5V_{CC}$ | $0.5V_{CC}$ |
| 74HCT251-Q100 | 1.3 V | 1.3 V |



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.

R_L = Load resistance.

S1 = Test selection switch.

Fig 9. Test circuit for measuring switching times

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} |
| 74HC251-Q100 | V_{CC} | 6 ns | 15 pF, 50 pF | 1 k Ω | open | GND | V_{CC} |
| 74HCT251-Q100 | 3 V | 6 ns | 15 pF, 50 pF | 1 k Ω | open | GND | V_{CC} |

12. Package outline

SO16: plastic small outline package; 16 leads; body width 3.9 mm

SOT109-1

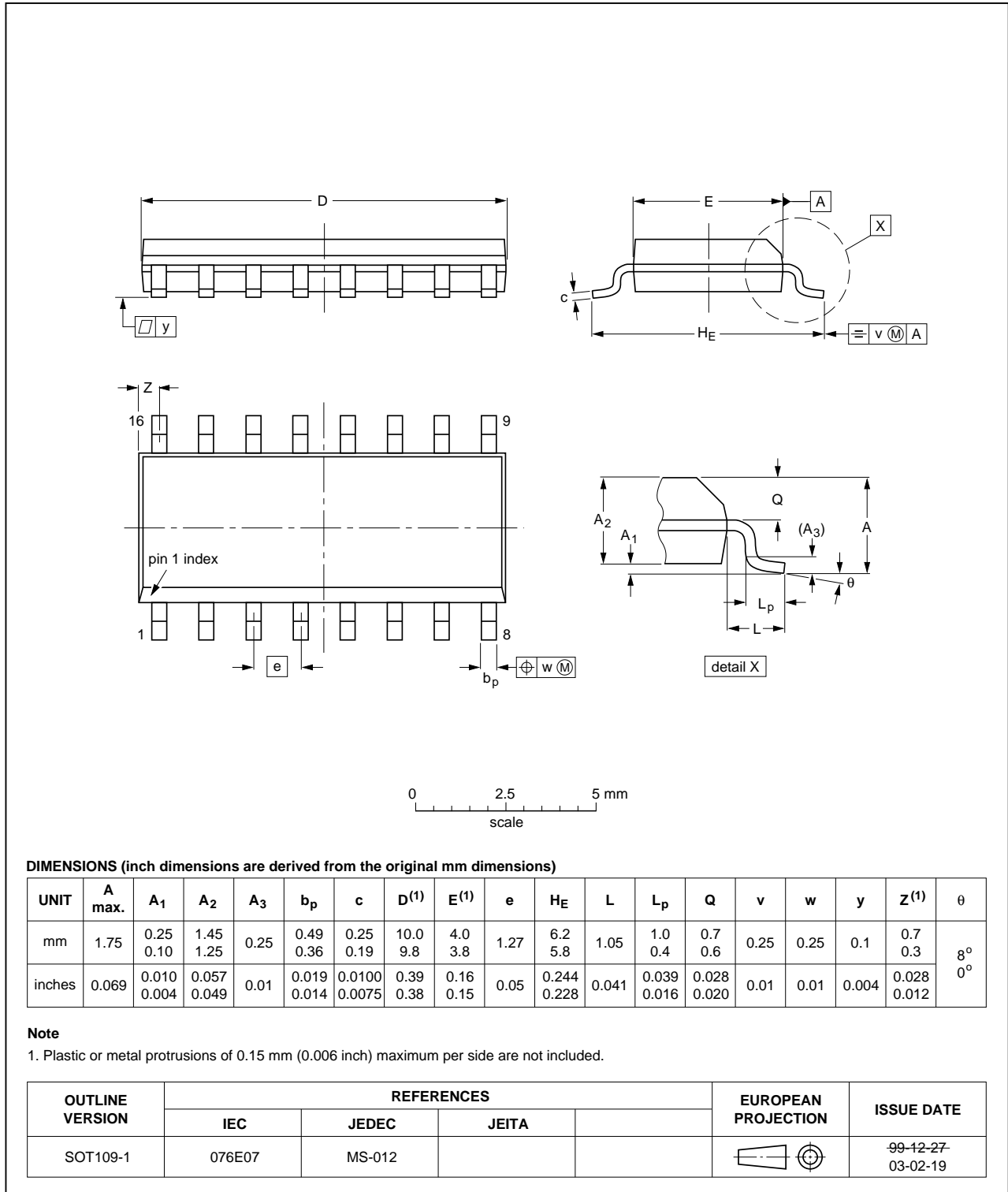


Fig 10. Package outline SOT109-1 (SO16)

TSSOP16: plastic thin shrink small outline package; 16 leads; body width 4.4 mm

SOT403-1

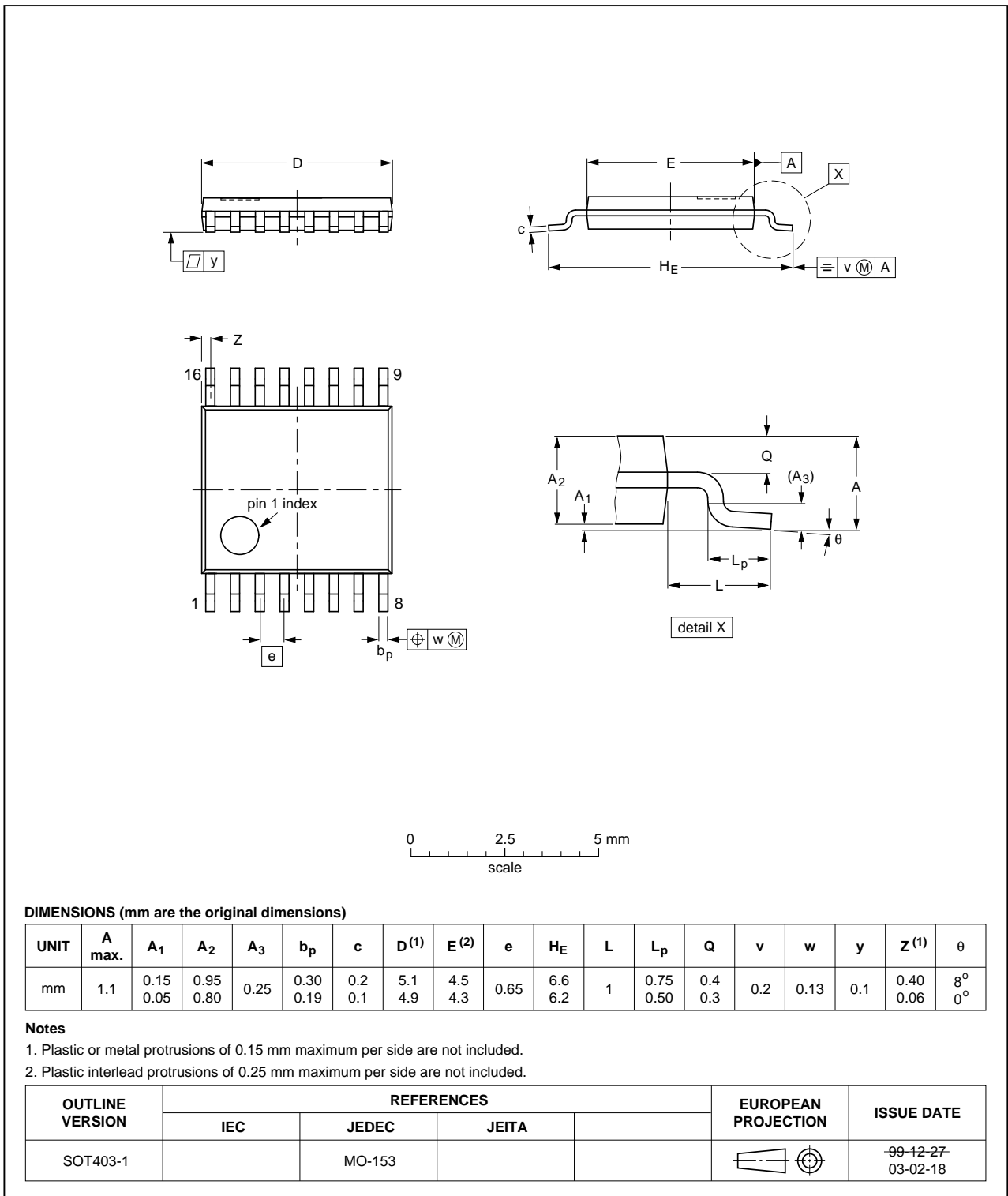


Fig 11. Package outline SOT403-1 (TSSOP16)

13. Abbreviations

Table 10. Abbreviations

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

14. Revision history

Table 11. Revision history

| Document ID | Release date | Data sheet status | Change notice | Supersedes |
|----------------------|--------------|--------------------|---------------|------------|
| 74HC_HCT251_Q100 v.1 | 20130812 | Product data sheet | - | - |

15. Legal information

15.1 Data sheet status

| Document status ^{[1][2]} | Product status ^[3] | Definition |
|-----------------------------------|-------------------------------|---|
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| 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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