# 74HC157-Q100; 74HCT157-Q100

## Quad 2-input multiplexer

Rev. 3 — 24 July 2020 Product data sheet

## 1. General description

The 74HC157-Q100; 74HCT157-Q100 is a quad 2-input multiplexer. The device features select (S) and enable $\overline{E}$ inputs. A HIGH on S selects data source 1, a LOW data source 0. A HIGH on $\overline{E}$ forces all the outputs (1Y to 4Y) LOW. Inputs include clamp diodes. This enables 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 °C to +85 °C and from -40 °C to +125 °C
- 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
- Complies with JEDEC standards:
  - JESD8C (2.7 V to 3.6 V)
  - JESD7A (2.0 V to 6.0 V)
- Input levels:
  - For 74HC157-Q100: CMOS level
  - For 74HCT157-Q100: TTL level
- Non-inverting data path
- 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
- DHVQFN package with Side-Wettable Flanks enabling Automatic Optical Inspection (AOI) of solder joints

## 3. Ordering information

**Table 1. Ordering information**

| Type number | Package | | | |
|---|---|---|---|---|
| | Temperature range | Name | Description | Version |
| 74HC157D-Q100 | -40 °C to +125 °C | SO16 | plastic small outline package; 16 leads; body width 3.9 mm | SOT109-1 |
| 74HCT157D-Q100 | | | | |
| 74HC157PW-Q100 | -40 °C to +125 °C | TSSOP16 | plastic thin shrink small outline package; 16 leads; body width 4.4 mm | SOT403-1 |
| 74HCT157PW-Q100 | | | | |
| 74HC157BQ-Q100 | -40 °C to +125 °C | DHVQFN16 | plastic dual in-line compatible thermal enhanced very thin quad flat package; no leads; 16 terminals; body 2.5 × 3.5 × 0.85 mm | SOT763-1 |
| 74HCT157BQ-Q100 | | | | |

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## 4. Functional diagram

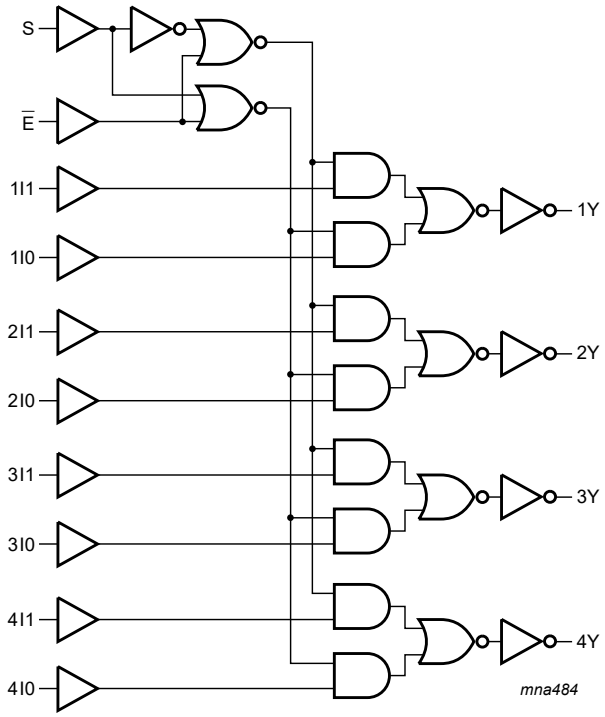



Fig. 1. Logic diagram

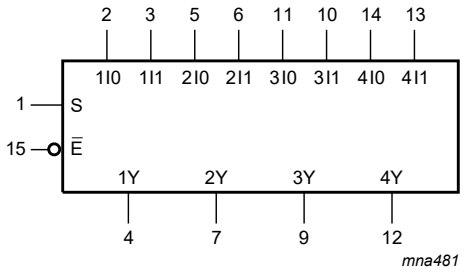



Fig. 2. logic symbol

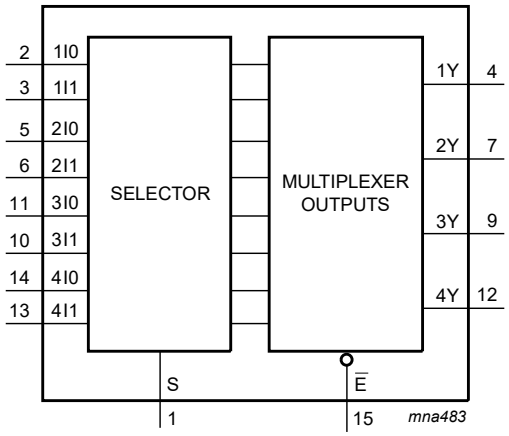



Fig. 3. Logic symbol

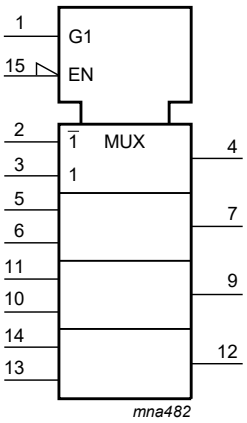



Fig. 4. IEC logic symbol

# 5. Pinning information

## 5.1. Pinning

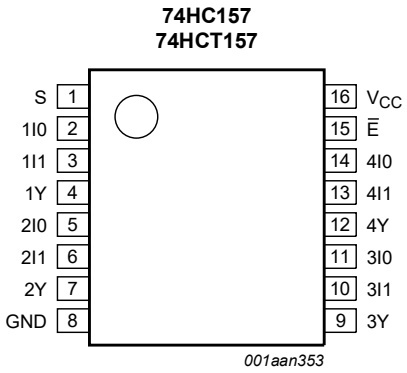
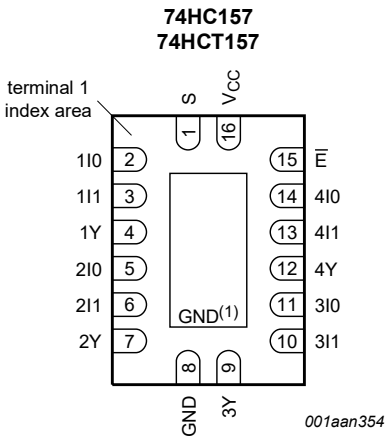



**Fig. 5. Pin configuration SOT109-1 (SO16) and SOT403-1 (TSSOP16)**




Transparent top view

(1) This is not a ground pin. There is no electrical or mechanical requirement to solder the pad. In case soldered, the solder land should remain floating or connected to GND.

**Fig. 6. Pin configuration SOT763-1 (DHVQFN16)**

## 5.2. Pin description

**Table 2. Pin description**

| Symbol | Pin | Description |
|---|---|---|
| S | 1 | common data select input |
| 1I0 to 4I0 | 2, 5, 11, 14 | data inputs from source 0 |
| 1I1 to 4I1 | 3, 6, 10, 13 | data inputs from source 1 |
| 1Y to 4Y | 4, 7, 9, 12 | multiplexer outputs |
| GND | 8 | ground (0 V) |
| $\overline{E}$ | 15 | enable input (active LOW) |
| $V_{CC}$ | 16 | supply voltage |

# 6. Functional description

**Table 3. Function table**

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

| Input | | | | Output |
|---|---|---|---|---|
| $\overline{E}$ | S | nI0 | nI1 | nY |
| H | X | X | X | L |
| L | L | L | X | L |
| L | L | H | X | H |
| L | H | X | L | L |
| L | H | X | H | H |

# 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 | $V_I < -0.5$ V or $V_I > V_{CC} + 0.5$ V | - | ±20 | mA |
| $I_{OK}$ | output clamping current | $V_O < -0.5$ V or $V_O > V_{CC} + 0.5$ V | - | ±20 | mA |
| $I_O$ | output current | $V_O = -0.5$ V to $V_{CC} + 0.5$ 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 °C to +125 °C [1] | - | 500 | mW |

[1] For SOT109-1 (SO16) package: $P_{tot}$ derates linearly with 12.4 mW/K above 110 °C.
For SOT403-1 (TSSOP16) package: $P_{tot}$ derates linearly with 8.5 mW/K above 91 °C.
For SOT763-1 (DHVQFN16) package: $P_{tot}$ derates linearly with 11.2 mW/K above 106 °C.

# 8. Recommended operating conditions

**Table 5. Recommended operating conditions**

*Voltages are referenced to GND (ground = 0 V)*

| Symbol | Parameter | Conditions | 74HC157-Q100 | | | 74HCT157-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 |
| Δt/ΔV | input transition rise and fall rate | $V_{CC}$ = 2.0 V | - | - | 625 | - | - | - | ns/V |
| | | $V_{CC}$ = 4.5 V | - | 1.67 | 139 | - | 1.67 | 139 | ns/V |
| | | $V_{CC}$ = 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 | $T_{amb}$ = 25 °C | | | $T_{amb}$ = -40 °C to +85 °C | | $T_{amb}$ = -40 °C to +125 °C | | Unit |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Min | Typ | Max | Min | Max | Min | Max | |
| **74HC157-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 |
| $I_{CC}$ | 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 |

| 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 | |
| **74HCT157-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 |
| $I_{CC}$ | supply current | $V_I$ = $V_{CC}$ or GND; $I_O$ = 0 A; $V_{CC}$ = 5.5 V | - | - | 8.0 | - | 80 | - | 160 | µA |
| $\Delta I_{CC}$ | additional supply current | $V_I$ = $V_{CC}$ - 2.1 V; $I_O$ = 0 A; other inputs at $V_{CC}$ or GND; $V_{CC}$ = 4.5 V to 5.5 V | | | | | | | | |
| | | per input pin; nI0, nI1 inputs | - | 100 | 360 | - | 450 | - | 490 | µA |
| | | per input pin; $\overline{E}$ input | - | 60 | 216 | - | 270 | - | 294 | µA |
| | | per input pin; S input | - | 100 | 360 | - | 450 | - | 490 | µA |
| $C_I$ | input capacitance | | - | 3.5 | - | - | - | - | - | pF |

# 10. Dynamic characteristics

**Table 7. Dynamic characteristics**

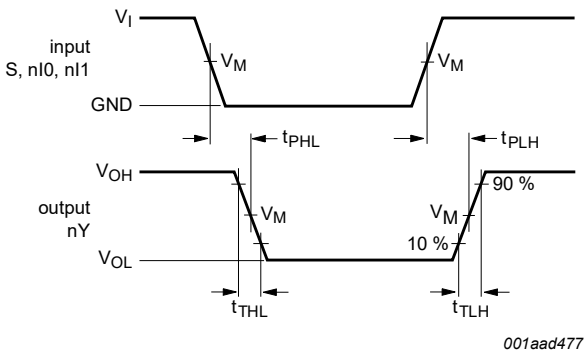
*Voltages are referenced to GND (ground = 0 V); $C_L$ = 50 pF unless otherwise specified; for test circuit see Fig. 9.*

| 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 | |
| **74HC157-Q100** | | | | | | | | | | |
| $t_{pd}$ | propagation delay | nI0, nI1 to nY; see Fig. 7 [1] | | | | | | | | |
| | | $V_{CC}$ = 2.0 V | - | 36 | 125 | - | 155 | - | 190 | ns |
| | | $V_{CC}$ = 4.5 V | - | 13 | 25 | - | 31 | - | 38 | ns |
| | | $V_{CC}$ = 5 V; $C_L$ = 15 pF | - | 11 | - | - | - | - | - | ns |
| | | $V_{CC}$ = 6.0 V | - | 10 | 21 | - | 26 | - | 32 | ns |
| | | S to nY; see Fig. 7 [1] | | | | | | | | |
| | | $V_{CC}$ = 2.0 V | - | 41 | 125 | - | 155 | - | 190 | ns |
| | | $V_{CC}$ = 4.5 V | - | 15 | 25 | - | 31 | - | 38 | ns |
| | | $V_{CC}$ = 5 V; $C_L$ = 15 pF | - | 12 | - | - | - | - | - | ns |
| | | $V_{CC}$ = 6.0 V | - | 12 | 21 | - | 26 | - | 32 | ns |
| | | $\overline{E}$ to nY; see Fig. 8 [1] | | | | | | | | |
| | | $V_{CC}$ = 2.0 V | - | 39 | 115 | - | 145 | - | 175 | ns |
| | | $V_{CC}$ = 4.5 V | - | 14 | 23 | - | 29 | - | 35 | ns |
| | | $V_{CC}$ = 5 V; $C_L$ = 15 pF | - | 11 | - | - | - | - | - | ns |
| | | $V_{CC}$ = 6.0 V | - | 11 | 20 | - | 25 | - | 30 | ns |
| $t_t$ | transition time | nY; see Fig. 7 [2] | | | | | | | | |
| | | $V_{CC}$ = 2.0 V | - | 19 | 75 | - | 95 | - | 110 | ns |
| | | $V_{CC}$ = 4.5 V | - | 7 | 15 | - | 19 | - | 22 | ns |
| | | $V_{CC}$ = 6.0 V | - | 6 | 13 | - | 16 | - | 19 | ns |
| $C_{PD}$ | power dissipation capacitance | $C_L$ = 50 pF; f = 1 MHz; $V_I$ = GND to $V_{CC}$ [3] | - | 70 | - | - | - | - | - | pF |

| 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 | |
| **74HCT157-Q100** | | | | | | | | | | |
| $t_{pd}$ | propagation delay | nI0, nI1 to nY; see Fig. 7 [1] | | | | | | | | |
| | | $V_{CC}$ = 4.5 V | - | 16 | 27 | - | 34 | - | 41 | ns |
| | | $V_{CC}$ = 5 V; $C_L$ = 15 pF | - | 13 | - | - | - | - | - | ns |
| | | S to nY; see Fig. 7 [1] | | | | | | | | |
| | | $V_{CC}$ = 4.5 V | - | 22 | 37 | - | 46 | - | 56 | ns |
| | | $V_{CC}$ = 5 V; $C_L$ = 15 pF | - | 19 | - | - | - | - | - | ns |
| | | $\overline{E}$ to nY; see Fig. 8 [1] | | | | | | | | |
| | | $V_{CC}$ = 4.5 V | - | 15 | 26 | - | 33 | - | 39 | ns |
| | | $V_{CC}$ = 5 V; $C_L$ = 15 pF | - | 12 | - | - | - | - | - | ns |
| $t_t$ | transition time | nY; see Fig. 7 [2] | | | | | | | | |
| | | $V_{CC}$ = 4.5 V | - | 7 | 15 | - | 19 | - | 22 | ns |
| $C_{PD}$ | power dissipation capacitance | $C_L$ = 50 pF; f = 1 MHz; $V_I$ = GND to $V_{CC}$ - 1.5 V [3] | - | 70 | - | - | - | - | - | pF |

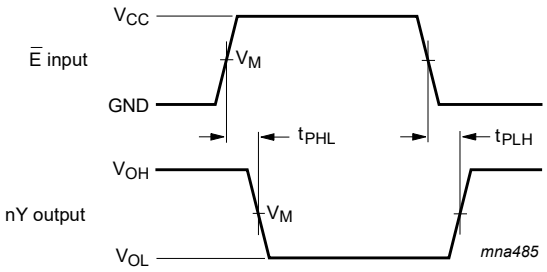
[1] $t_{pd}$ is the same as $t_{PLH}$ and $t_{PHL}$.
[2] $t_t$ is the same as $t_{THL}$ and $t_{TLH}$.
[3] $C_{PD}$ is used to determine the dynamic power dissipation ($P_D$ in µW).
$P_D = C_{PD} \times V_{CC}^2 \times f_i \times N + \Sigma(C_L \times V_{CC}^2 \times f_o)$ where:
$f_i$ = input frequency 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 outputs.

## 10.1. 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. 7. Propagation delay input (nI0, nI1, S) to output (nYn)**



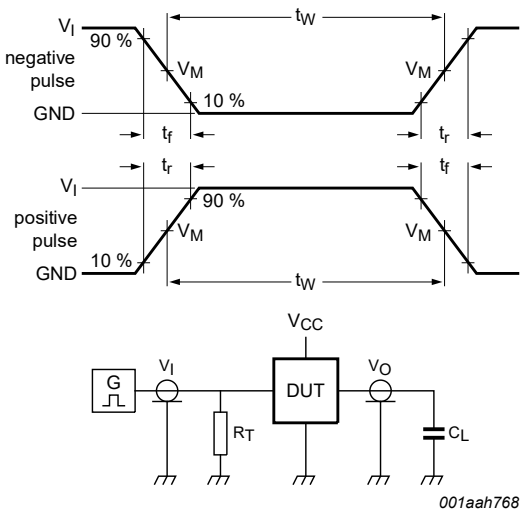

Measurement points are given in Table 8.

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

**Fig. 8. Propagation delay input ($\overline{E}$) to output (nY)**

**Table 8. Measurement points**

| Type | Input | Output |
|---|---|---|
| | $V_M$ | $V_M$ |
| 74HC157-Q100 | $0.5V_{CC}$ | $0.5V_{CC}$ |
| 74HCT157-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.

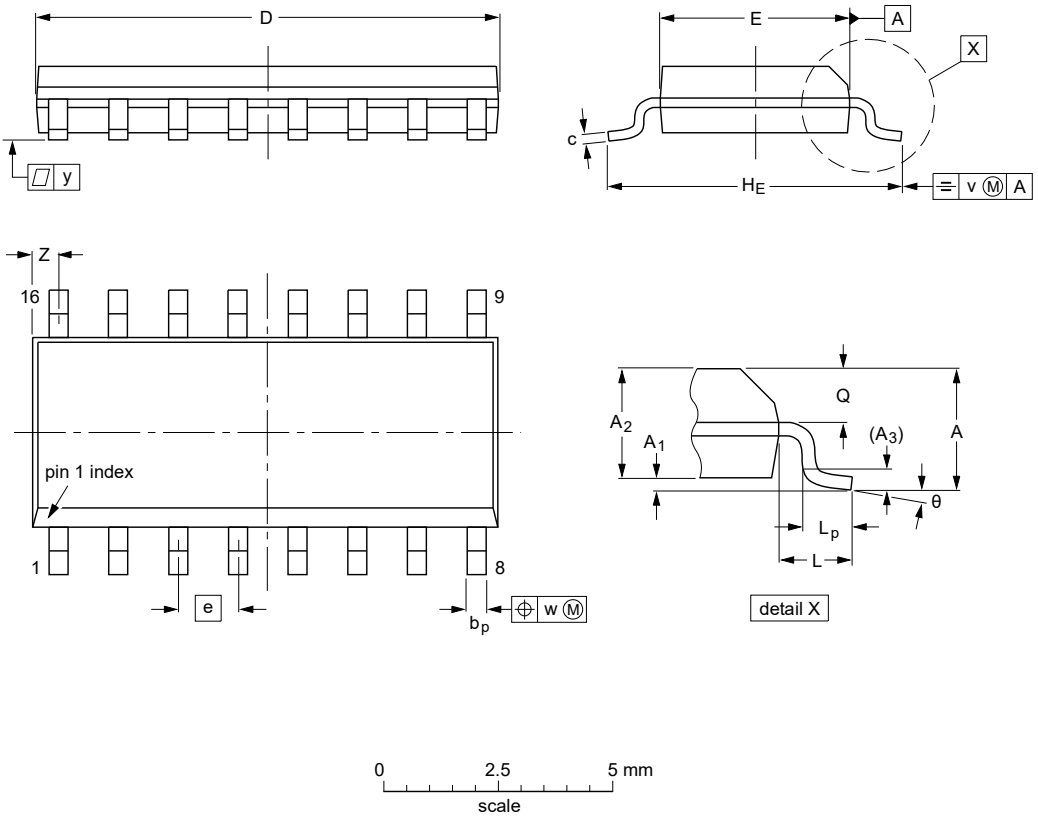
**Fig. 9. Test circuit for measuring switching times**

**Table 9. Test data**

| Type | Input | | Load | Test |
|---|---|---|---|---|
| | $V_I$ | $t_r$, $t_f$ | $C_L$ | |
| 74HC157-Q100 | $V_{CC}$ | 6.0 ns | 15 pF, 50 pF | $t_{PLH}$, $t_{PHL}$ |
| 74HCT157-Q100 | 3.0 V | 6.0 ns | 15 pF, 50 pF | $t_{PLH}$, $t_{PHL}$ |

# 11. Package outline

**SO16: plastic small outline package; 16 leads; body width 3.9 mm** **SOT109-1**




**DIMENSIONS (inch dimensions are derived from the original mm dimensions)**

| UNIT | A max. | $A_1$ | $A_2$ | $A_3$ | $b_p$ | c | $D^{(1)}$ | $E^{(1)}$ | e | $H_E$ | L | $L_p$ | Q | v | w | y | $Z^{(1)}$ | θ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | 1.75 | 0.25<br>0.10 | 1.45<br>1.25 | 0.25 | 0.49<br>0.36 | 0.25<br>0.19 | 10.0<br>9.8 | 4.0<br>3.8 | 1.27 | 6.2<br>5.8 | 1.05 | 1.0<br>0.4 | 0.7<br>0.6 | 0.25 | 0.25 | 0.1 | 0.7<br>0.3 | 8°<br>0° |
| inches | 0.069 | 0.010<br>0.004 | 0.057<br>0.049 | 0.01 | 0.019<br>0.014 | 0.0100<br>0.0075 | 0.39<br>0.38 | 0.16<br>0.15 | 0.05 | 0.244<br>0.228 | 0.041 | 0.039<br>0.016 | 0.028<br>0.020 | 0.01 | 0.01 | 0.004 | 0.028<br>0.012 | |

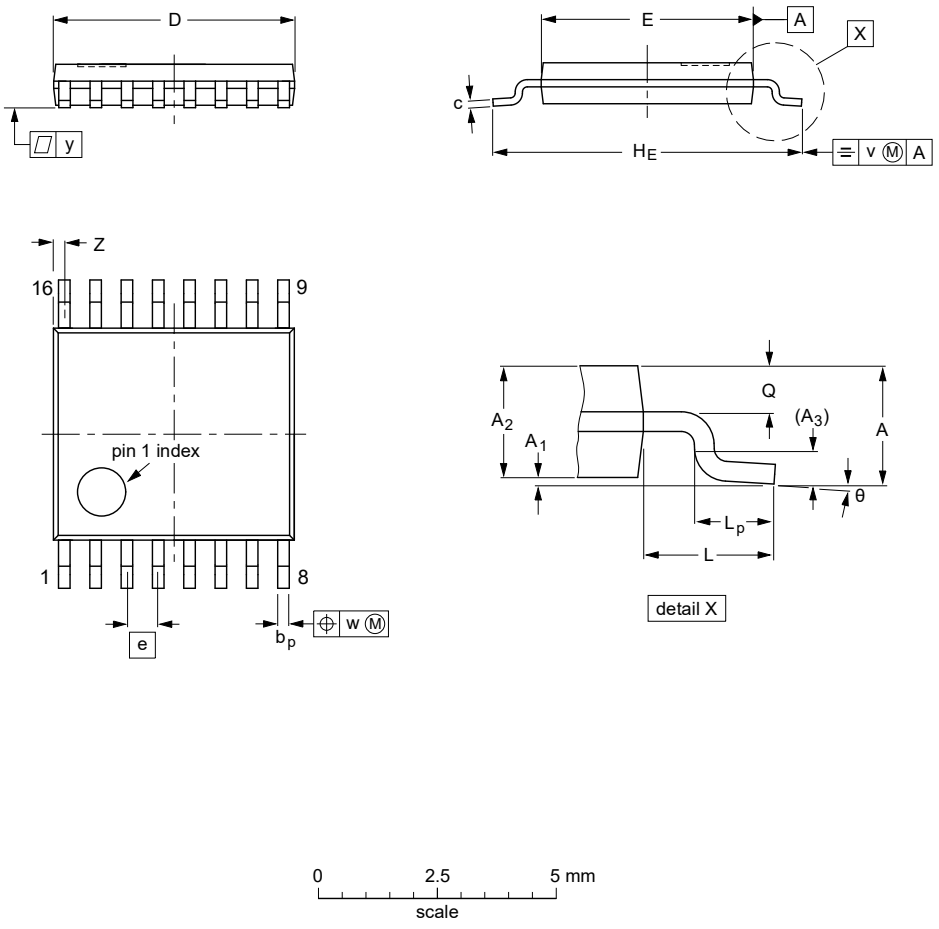
**Note**

1. Plastic or metal protrusions of 0.15 mm (0.006 inch) maximum per side are not included.

| OUTLINE VERSION | REFERENCES | | | | EUROPEAN PROJECTION | ISSUE DATE |
|---|---|---|---|---|---|---|
| | IEC | JEDEC | JEITA | | | |
| SOT109-1 | 076E07 | MS-012 | | | | ~~99-12-27~~<br>03-02-19 |

**Fig. 10. Package outline SOT109-1 (SO16)**

**TSSOP16: plastic thin shrink small outline package; 16 leads; body width 4.4 mm** **SOT403-1**




**DIMENSIONS (mm are the original dimensions)**

| UNIT | A max. | $A_1$ | $A_2$ | $A_3$ | $b_p$ | c | D (1) | E (2) | e | $H_E$ | L | $L_p$ | Q | v | w | y | Z (1) | θ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | 1.1 | 0.15<br>0.05 | 0.95<br>0.80 | 0.25 | 0.30<br>0.19 | 0.2<br>0.1 | 5.1<br>4.9 | 4.5<br>4.3 | 0.65 | 6.6<br>6.2 | 1 | 0.75<br>0.50 | 0.4<br>0.3 | 0.2 | 0.13 | 0.1 | 0.40<br>0.06 | 8°<br>0° |

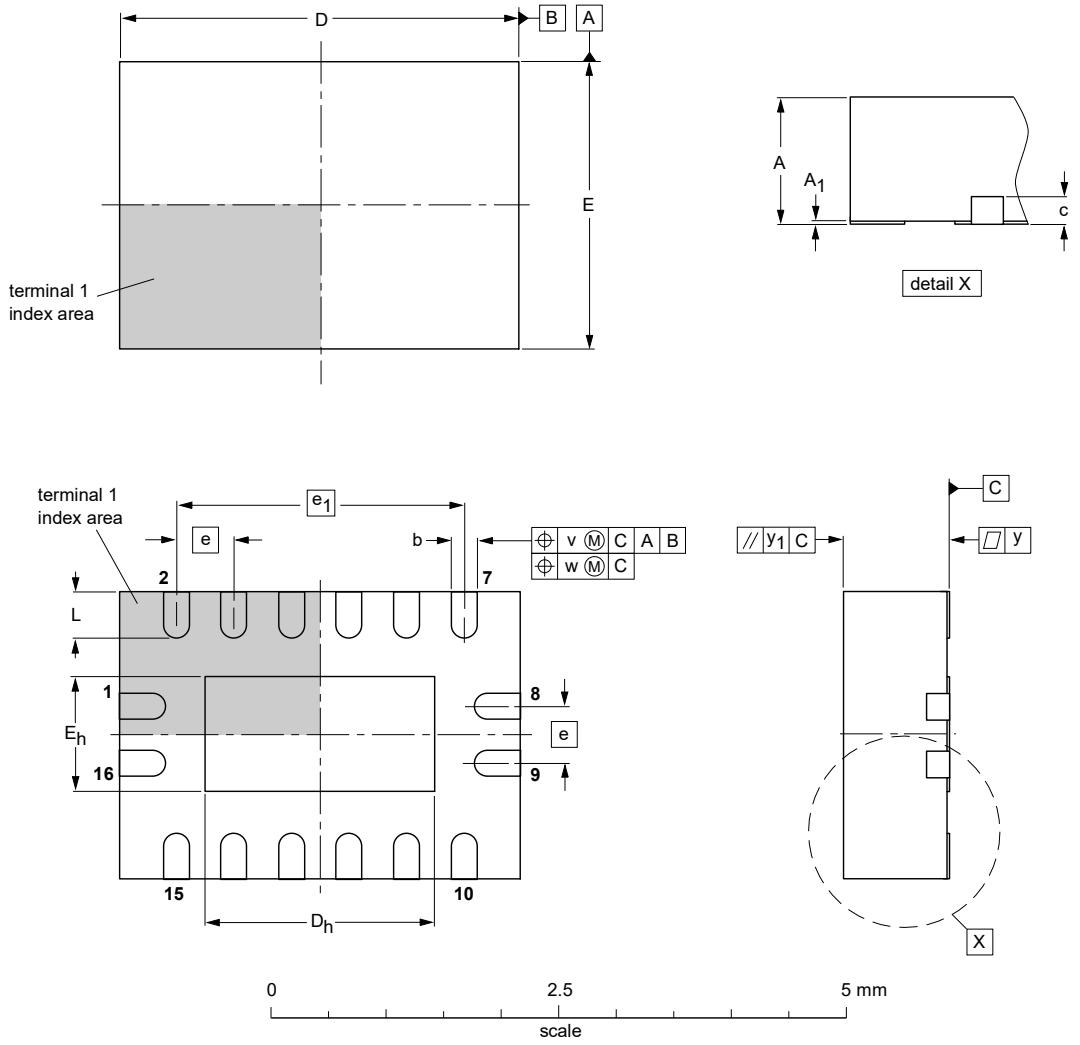
**Notes**

1. Plastic or metal protrusions of 0.15 mm maximum per side are not included.
2. Plastic interlead protrusions of 0.25 mm maximum per side are not included.

| OUTLINE VERSION | REFERENCES | | | | EUROPEAN PROJECTION | ISSUE DATE |
|---|---|---|---|---|---|---|
| | IEC | JEDEC | JEITA | | | |
| SOT403-1 | | MO-153 | | | | ~~99-12-27~~<br>03-02-18 |

**Fig. 11. Package outline SOT403-1 (TSSOP16)**

**DHVQFN16: plastic dual in-line compatible thermal enhanced very thin quad flat package; no leads; 16 terminals; body 2.5 x 3.5 x 0.85 mm** **SOT763-1**




**DIMENSIONS (mm are the original dimensions)**

| UNIT | $A^{(1)}$ max. | $A_1$ | b | c | $D^{(1)}$ | $D_h$ | $E^{(1)}$ | $E_h$ | e | $e_1$ | L | v | w | y | $y_1$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | 1 | 0.05<br>0.00 | 0.30<br>0.18 | 0.2 | 3.6<br>3.4 | 2.15<br>1.85 | 2.6<br>2.4 | 1.15<br>0.85 | 0.5 | 2.5 | 0.5<br>0.3 | 0.1 | 0.05 | 0.05 | 0.1 |

**Note**

1. Plastic or metal protrusions of 0.075 mm maximum per side are not included.

| OUTLINE VERSION | REFERENCES | | | | EUROPEAN PROJECTION | ISSUE DATE |
|---|---|---|---|---|---|---|
| | IEC | JEDEC | JEITA | | | |
| SOT763-1 | - - - | MO-241 | - - - | | | ~~02-10-17~~<br>03-01-27 |

**Fig. 12. Package outline SOT763-1 (DHVQFN16)**

# 12. 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 |

# 13. Revision history

**Table 11. Revision history**

| Document ID | Release date | Data sheet status | Change notice | Supersedes |
|---|---|---|---|---|
| 74HC_HCT157_Q100 v.3 | 20200724 | Product data sheet | - | 74HC_HCT157_Q100 v.2 |
| 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>• Table 4: Derating values for $P_{tot}$ total power dissipation have been updated. | | | |
| 74HC_HCT157_Q100 v.2 | 20150121 | Product data sheet | - | 74HC_HCT157_Q100 v.1 |
| Modifications: | • Table 7: Power dissipation capacitance condition for 74HCT157 is corrected. | | | |
| 74HC_HCT157_Q100 v.1 | 20120802 | Product data sheet | - | - |

# 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".
[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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