



**THE DATASHEET OF
74HC393N,652**



74HC393; 74HCT393

Dual 4-bit binary ripple counter

Rev. 9 — 19 March 2024

Product data sheet

1. General description

The 74HC393; 74HCT393 is a dual 4-stage binary ripple counter. Each counter features a clock input (\overline{nCP}), an overriding asynchronous master reset input (\overline{nMR}) and 4 buffered parallel outputs ($\overline{nQ0}$ to $\overline{nQ3}$). The counter advances on the HIGH-to-LOW transition of \overline{nCP} . A HIGH on \overline{nMR} clears the counter stages and forces the outputs LOW, independent of the state of \overline{nCP} . 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
- Complies with JEDEC standards:
 - JESD8C (2.7 V to 3.6 V)
 - JESD7A (2.0 V to 6.0 V)
- Input levels:
 - For 74HC393: CMOS level
 - For 74HCT393: TTL level
- ESD protection:
 - HBM: ANSI/ESDA/JEDEC JS-001 class 2 exceeds 2000 V
 - CDM: ANSI/ESDA/JEDEC JS-002 class C3 exceeds 1000 V
- Two 4-bit binary counters with individual clocks
- Divide by any binary module up to 28 in one package
- Two master resets to clear each 4-bit counter individually

3. Ordering information

Table 1. Ordering information

| Type number | Package | | | Version |
|----------------------------|-------------------|----------|--|--------------------------|
| | Temperature range | Name | Description | |
| 74HC393D | -40 °C to +125 °C | SO14 | plastic small outline package; 14 leads; body width 3.9 mm | SOT108-1 |
| 74HCT393D | | | | |
| 74HC393PW | -40 °C to +125 °C | TSSOP14 | plastic thin shrink small outline package; 14 leads; body width 4.4 mm | SOT402-1 |
| 74HCT393PW | | | | |
| 74HC393BQ | -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 | SOT762-1 |
| 74HCT393BQ | | | | |

4. Functional diagram

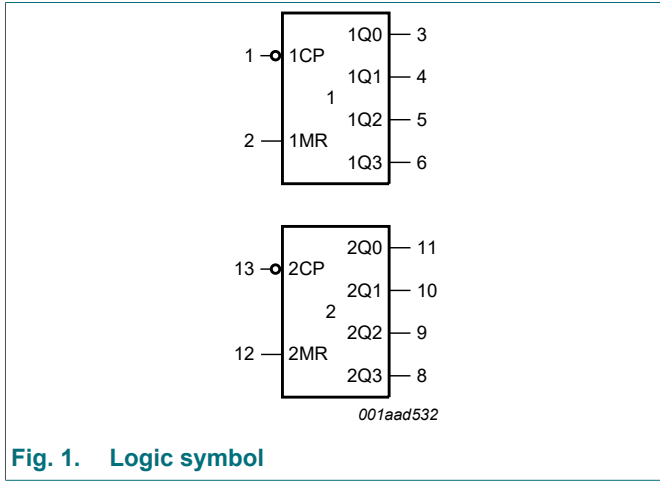


Fig. 1. Logic symbol

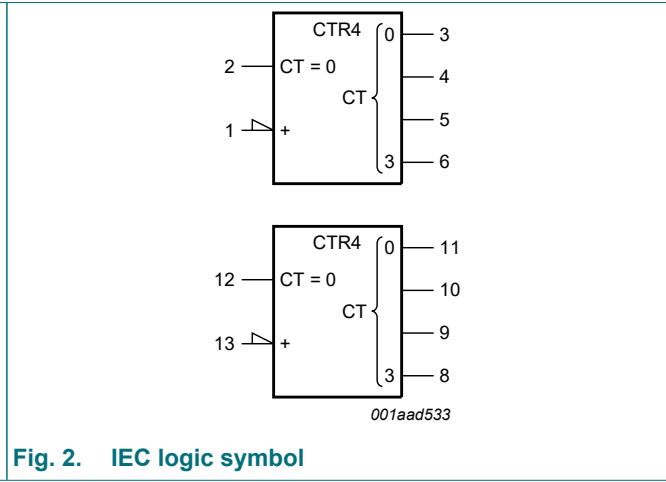


Fig. 2. IEC logic symbol

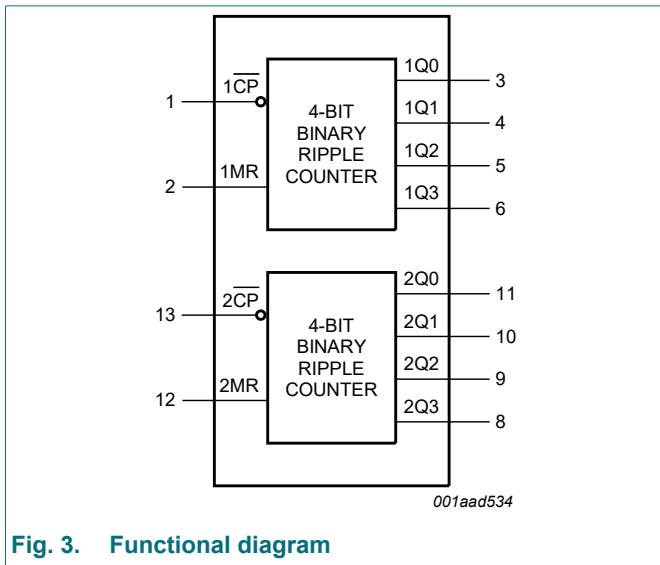


Fig. 3. Functional diagram

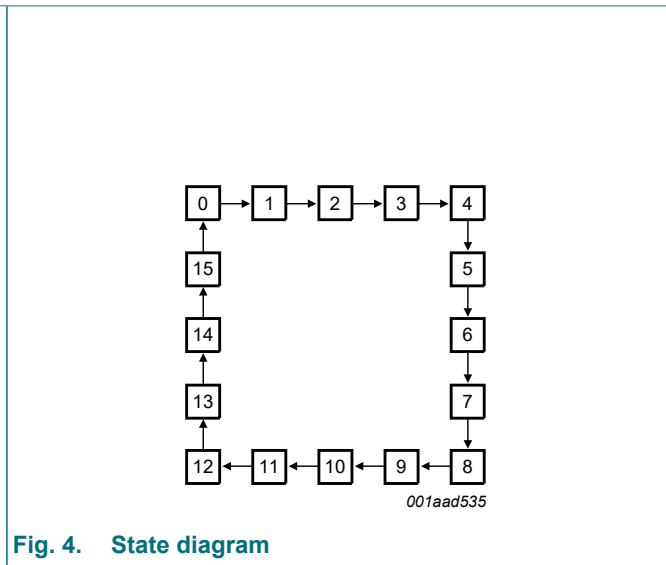


Fig. 4. State diagram

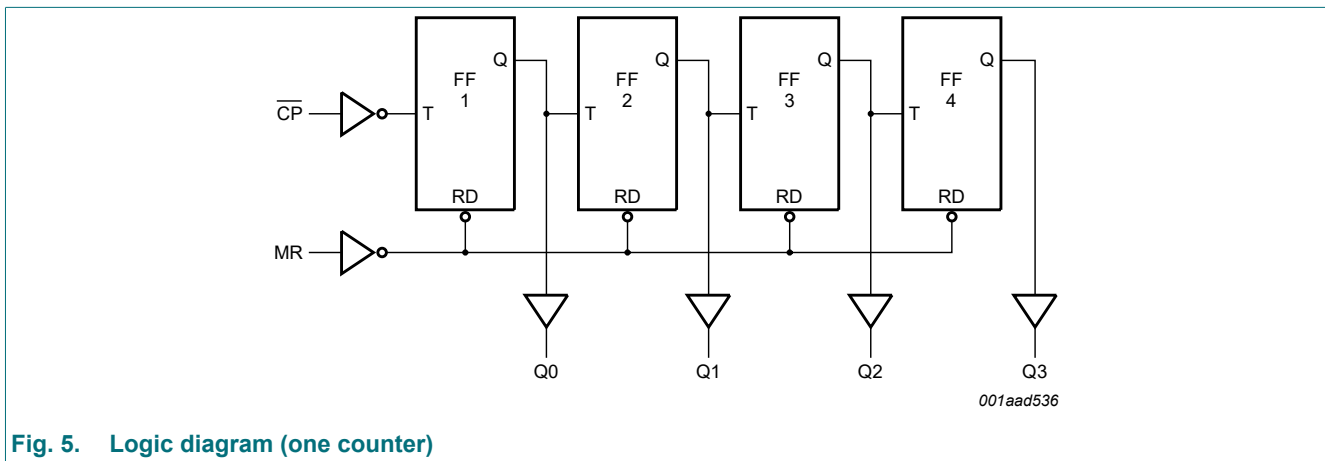
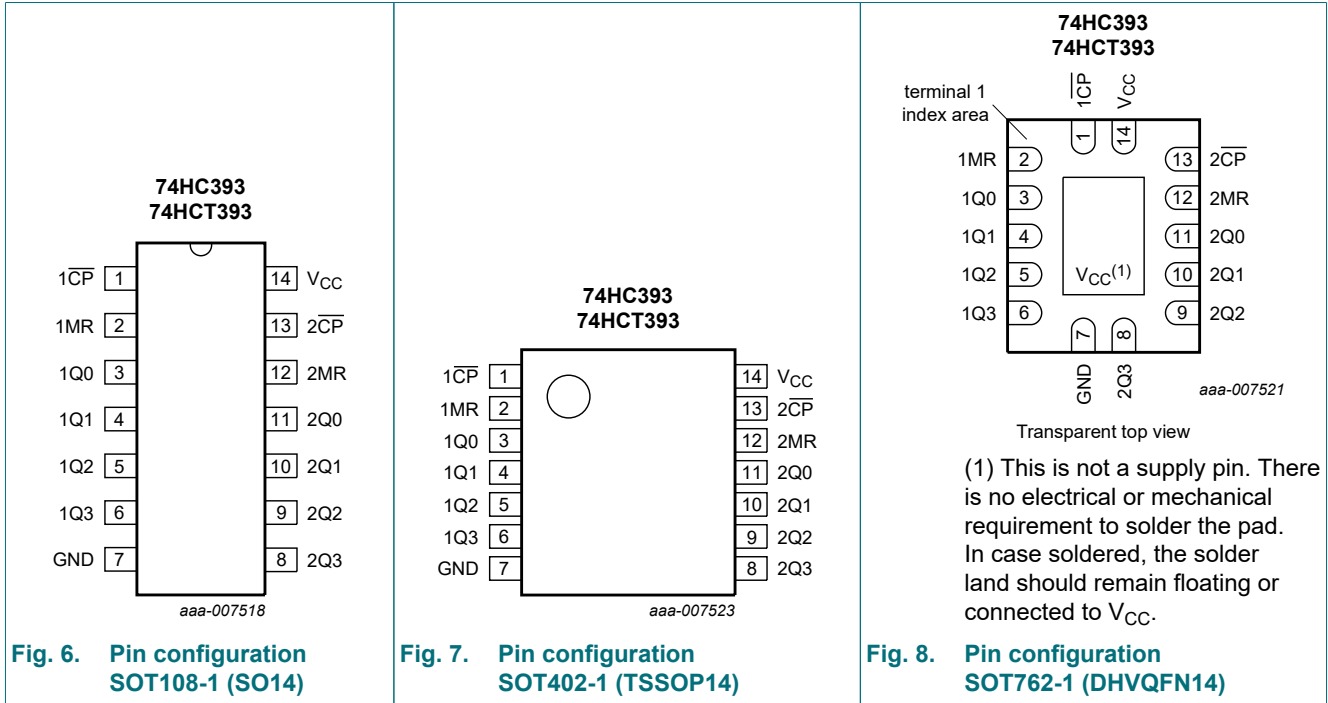


Fig. 5. Logic diagram (one counter)

5. Pinning information

5.1. Pinning



5.2. Pin description

Table 2. Pin description

| Symbol | Pin | Description |
|--------------------|--------------|---|
| 1CP | 1 | clock input (HIGH-to-LOW, edge-triggered) |
| 1MR | 2 | asynchronous master reset input (active HIGH) |
| 1Q0, 1Q1, 1Q2, 1Q3 | 3, 4, 5, 6 | flip-flop output |
| GND | 7 | ground (0 V) |
| 2Q3, 2Q2, 2Q1, 2Q0 | 8, 9, 10, 11 | flip-flop output |
| 2MR | 12 | asynchronous master reset input (active HIGH) |
| 2CP | 13 | clock input (HIGH-to-LOW, edge-triggered) |
| V _{CC} | 14 | supply voltage |

6. Functional description

Table 3. Count sequence for one counter

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

| Count | Output | | | |
|-------|--------|-----|-----|-----|
| | nQ0 | nQ1 | nQ2 | nQ3 |
| 0 | L | L | L | L |
| 1 | H | L | L | L |
| 2 | L | H | L | L |
| 3 | H | H | L | L |
| 4 | L | L | H | L |
| 5 | H | L | H | L |
| 6 | L | H | H | L |
| 7 | H | H | H | L |
| 8 | L | L | L | H |
| 9 | H | L | L | H |
| 10 | L | H | L | H |
| 11 | H | H | L | H |
| 12 | L | L | H | H |
| 13 | H | L | H | H |
| 14 | L | H | H | H |
| 15 | H | H | 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 | $V_I < -0.5\text{ V}$ 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 | [1] | - | 500 | mW |

- [1] 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 | 74HC393 | | | 74HCT393 | | | 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 | 25 °C | | | -40 °C to +85 °C | | -40 °C to +125 °C | | Unit |
|----------------|---------------------------|---|-------|------|-----------|------------------|-----------|-------------------|-----------|---------------|
| | | | Min | Typ | Max | Min | Max | Min | Max | |
| 74HC393 | | | | | | | | | | |
| V_{IH} | HIGH-level input voltage | $V_{CC} = 2.0\text{ V}$ | 1.5 | 1.2 | - | 1.5 | - | 1.5 | - | V |
| | | $V_{CC} = 4.5\text{ V}$ | 3.15 | 2.4 | - | 3.15 | - | 3.15 | - | V |
| | | $V_{CC} = 6.0\text{ V}$ | 4.2 | 3.2 | - | 4.2 | - | 4.2 | - | V |
| V_{IL} | LOW-level input voltage | $V_{CC} = 2.0\text{ V}$ | - | 0.8 | 0.5 | - | 0.5 | - | 0.5 | V |
| | | $V_{CC} = 4.5\text{ V}$ | - | 2.1 | 1.35 | - | 1.35 | - | 1.35 | V |
| | | $V_{CC} = 6.0\text{ V}$ | - | 2.8 | 1.8 | - | 1.8 | - | 1.8 | V |
| V_{OH} | HIGH-level output voltage | $V_I = V_{IH}$ or V_{IL} | | | | | | | | |
| | | $I_O = -20\ \mu\text{A}$; $V_{CC} = 2.0\text{ V}$ | 1.9 | 2.0 | - | 1.9 | - | 1.9 | - | V |
| | | $I_O = -20\ \mu\text{A}$; $V_{CC} = 4.5\text{ V}$ | 4.4 | 4.5 | - | 4.4 | - | 4.4 | - | V |
| | | $I_O = -20\ \mu\text{A}$; $V_{CC} = 6.0\text{ V}$ | 5.9 | 6.0 | - | 5.9 | - | 5.9 | - | V |
| | | $I_O = -4.0\text{ mA}$; $V_{CC} = 4.5\text{ V}$ | 3.98 | 4.32 | - | 3.84 | - | 3.7 | - | V |
| V_{OL} | LOW-level output voltage | $V_I = V_{IH}$ or V_{IL} | | | | | | | | |
| | | $I_O = 20\ \mu\text{A}$; $V_{CC} = 2.0\text{ V}$ | - | 0 | 0.1 | - | 0.1 | - | 0.1 | V |
| | | $I_O = 20\ \mu\text{A}$; $V_{CC} = 4.5\text{ V}$ | - | 0 | 0.1 | - | 0.1 | - | 0.1 | V |
| | | $I_O = 20\ \mu\text{A}$; $V_{CC} = 6.0\text{ V}$ | - | 0 | 0.1 | - | 0.1 | - | 0.1 | V |
| | | $I_O = 4.0\text{ mA}$; $V_{CC} = 4.5\text{ V}$ | - | 0.15 | 0.26 | - | 0.33 | - | 0.4 | V |
| I_I | input leakage current | $V_I = V_{CC}$ or GND; $V_{CC} = 6.0\text{ V}$ | - | - | ± 0.1 | - | ± 1.0 | - | ± 1.0 | μA |
| | | $V_I = V_{CC}$ or GND; $I_O = 0\text{ A}$; $V_{CC} = 6.0\text{ V}$ | - | - | 8.0 | - | 80 | - | 160 | μA |
| C_I | 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 | |
| 74HCT393 | | | | | | | | | | |
| 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 |
| 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; nCP | - | 40 | 144 | - | 180 | - | 196 | μA |
| | | per input pin; nMR | - | 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. 11.

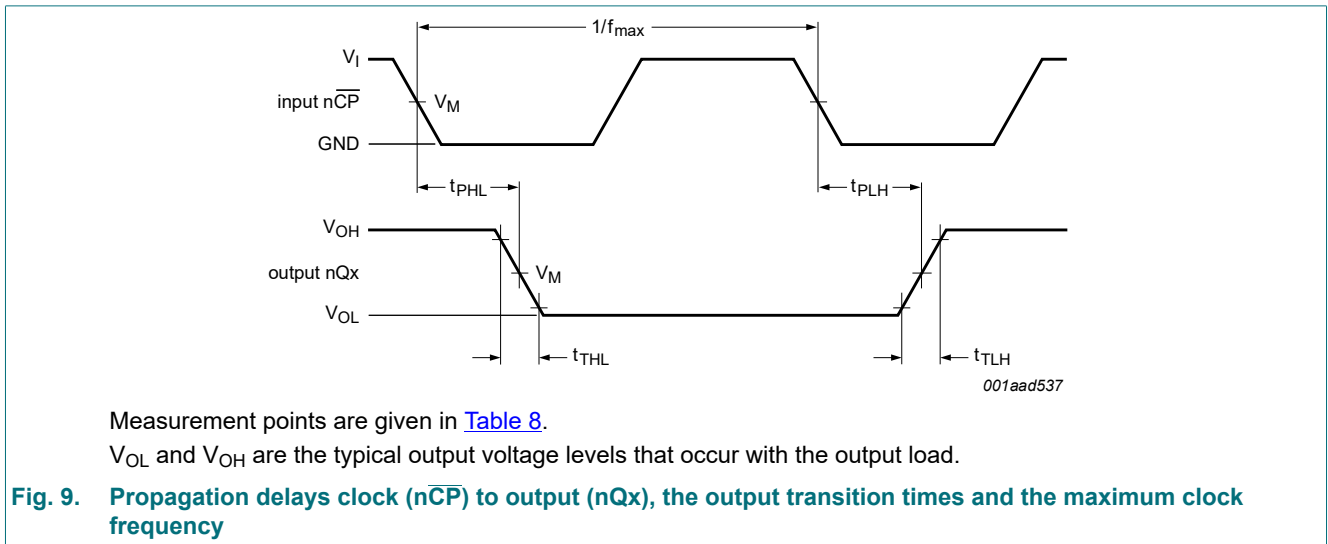
| Symbol | Parameter | Conditions | 25 °C | | | -40 °C to +85 °C | | -40 °C to +125 °C | | Unit |
|-------------------------|-------------------|---|-------|-----|-----|------------------|-----|-------------------|-----|------|
| | | | Min | Typ | Max | Min | Max | Min | Max | |
| 74HC393 | | | | | | | | | | |
| t _{pd} | propagation delay | nCP to nQ0; see Fig. 9 [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 |
| | | nQx to nQ(x+1); see Fig. 9 [1] | | | | | | | | |
| | | V _{CC} = 2.0 V | - | 14 | 45 | - | 55 | - | 70 | ns |
| | | V _{CC} = 4.5 V | - | 5 | 9 | - | 11 | - | 14 | ns |
| | | V _{CC} = 5 V; C _L = 15 pF | - | 5 | - | - | - | - | - | ns |
| V _{CC} = 6.0 V | - | 4 | 8 | - | 9 | - | 12 | ns | | |

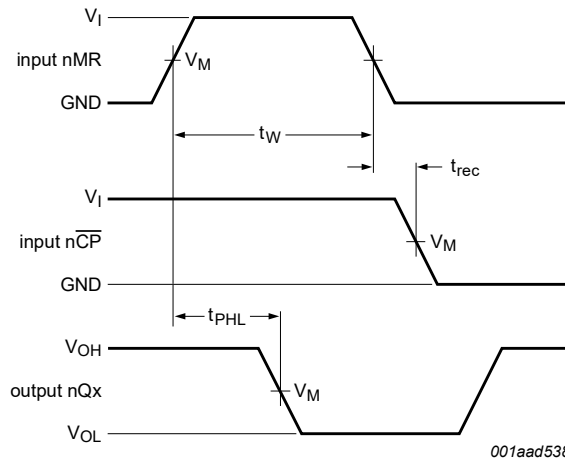
| Symbol | Parameter | Conditions | 25 °C | | | -40 °C to +85 °C | | -40 °C to +125 °C | | Unit |
|-----------------------|-------------------------------|--|-------|-----|-----|------------------|-----|-------------------|-----|------|
| | | | Min | Typ | Max | Min | Max | Min | Max | |
| t _{PHL} | HIGH to LOW propagation delay | nMR to nQx; see Fig. 10 | | | | | | | | |
| | | V _{CC} = 2.0 V | - | 39 | 140 | - | 175 | - | 210 | ns |
| | | V _{CC} = 4.5 V | - | 14 | 28 | - | 35 | - | 42 | ns |
| | | V _{CC} = 5 V; C _L = 15 pF | - | 11 | - | - | - | - | - | ns |
| | | V _{CC} = 6.0 V | - | 11 | 24 | - | 30 | - | 36 | ns |
| t _t | transition time | Qn; see Fig. 9 [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 |
| t _w | pulse width | nCP HIGH or LOW; see Fig. 9 | | | | | | | | |
| | | V _{CC} = 2.0 V | 80 | 17 | - | 100 | - | 120 | - | ns |
| | | V _{CC} = 4.5 V | 16 | 6 | - | 20 | - | 24 | - | ns |
| | | V _{CC} = 6.0 V | 14 | 5 | - | 17 | - | 20 | - | ns |
| | | nMR HIGH; see Fig. 10 | | | | | | | | |
| | | V _{CC} = 2.0 V | 80 | 19 | - | 100 | - | 120 | - | ns |
| | | V _{CC} = 4.5 V | 16 | 7 | - | 20 | - | 24 | - | ns |
| | | V _{CC} = 6.0 V | 14 | 6 | - | 17 | - | 20 | - | ns |
| t _{rec} | recovery time | nMR to nCP; see Fig. 10 | | | | | | | | |
| | | V _{CC} = 2.0 V | 5 | 3 | - | 5 | - | 5 | - | ns |
| | | V _{CC} = 4.5 V | 5 | 1 | - | 5 | - | 5 | - | ns |
| | | V _{CC} = 6.0 V | 5 | 1 | - | 5 | - | 5 | - | ns |
| f _{clk(max)} | maximum clock frequency | see Fig. 9 | | | | | | | | |
| | | V _{CC} = 2.0 V | 6 | 30 | - | 5 | - | 4 | - | MHz |
| | | V _{CC} = 4.5 V | 30 | 90 | - | 24 | - | 20 | - | MHz |
| | | V _{CC} = 5 V; C _L = 15 pF | - | 99 | - | - | - | - | - | MHz |
| C _{PD} | power dissipation capacitance | C _L = 50 pF; f = 1 MHz; V _I = GND to V _{CC} [3] | - | 23 | - | - | - | - | - | pF |
| | | | | | | | | | | |
| 74HCT393 | | | | | | | | | | |
| t _{pd} | propagation delay | nCP to nQ0; see Fig. 9 [1] | | | | | | | | |
| | | V _{CC} = 4.5 V | - | 15 | 25 | - | 31 | - | 38 | ns |
| | | V _{CC} = 5 V; C _L = 15 pF | - | 20 | - | - | - | - | - | ns |
| | | nQx to nQ(x+1); see Fig. 9 [1] | | | | | | | | |
| | | V _{CC} = 4.5 V | - | 6 | 10 | - | 13 | - | 15 | ns |
| t _{PHL} | HIGH to LOW propagation delay | V _{CC} = 4.5 V | - | 18 | 32 | - | 40 | - | 48 | ns |
| | | V _{CC} = 5 V; C _L = 15 pF | - | 15 | - | - | - | - | - | ns |
| t _t | transition time | Qn; see Fig. 9 [2] | | | | | | | | |
| | | V _{CC} = 4.5 V | - | 7 | 15 | - | 19 | - | 22 | ns |

| Symbol | Parameter | Conditions | 25 °C | | | -40 °C to +85 °C | | -40 °C to +125 °C | | Unit |
|-----------------------|-------------------------------|--|-------|-----|-----|------------------|-----|-------------------|-----|------|
| | | | Min | Typ | Max | Min | Max | Min | Max | |
| t _W | pulse width | nCP HIGH or LOW; see Fig. 9 | | | | | | | | |
| | | V _{CC} = 4.5 V | 19 | 11 | - | 24 | - | 29 | - | ns |
| t _{rec} | recovery time | nMR HIGH; see Fig. 10 | | | | | | | | |
| | | V _{CC} = 4.5 V | 16 | 6 | - | 20 | - | 24 | - | ns |
| f _{clk(max)} | maximum clock frequency | see Fig. 9 | | | | | | | | |
| | | V _{CC} = 4.5 V | 27 | 48 | - | 22 | - | 18 | - | MHz |
| | | V _{CC} = 5 V; C _L = 15 pF | - | 53 | - | - | - | - | - | MHz |
| C _{PD} | power dissipation capacitance | C _L = 50 pF; f = 1 MHz; V _I = GND to V _{CC} - 1.5 V [3] | - | 25 | - | - | - | - | - | 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;
 Σ(C_L × V_{CC}² × f_o) = sum of outputs.

10.1. Waveforms and test circuit





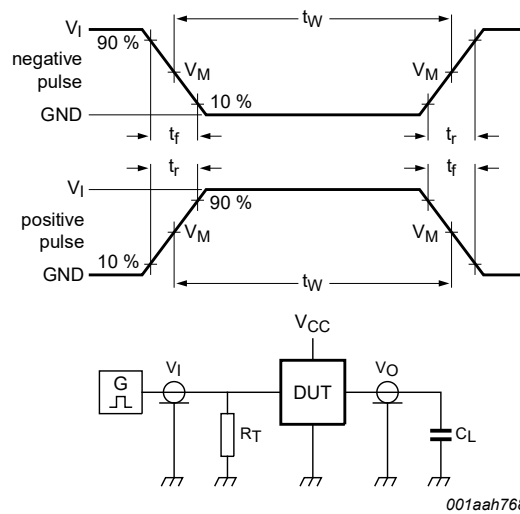
Measurement points are given in [Table 8](#).

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

Fig. 10. Propagation delays clock (nCP) to output (nQx), pulse width master reset (nMR), and recovery time master reset (nMR) to clock (nCP)

Table 8. Measurement points

| Type | Input | | Output |
|----------|-------------|-------------|-------------|
| | V_M | V_M | V_M |
| 74HC393 | $0.5V_{CC}$ | $0.5V_{CC}$ | $0.5V_{CC}$ |
| 74HCT393 | 1.3 V | 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.

Fig. 11. Test circuit for measuring switching times

Table 9. Test data

| Type | Input | | Load | Test |
|----------|----------|------------|--------------|--------------------|
| | V_I | t_r, t_f | C_L | |
| 74HC393 | V_{CC} | 6.0 ns | 15 pF, 50 pF | t_{PLH}, t_{PHL} |
| 74HCT393 | 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. 12. Package outline SOT108-1 (SO14)

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

SOT402-1



Fig. 13. 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

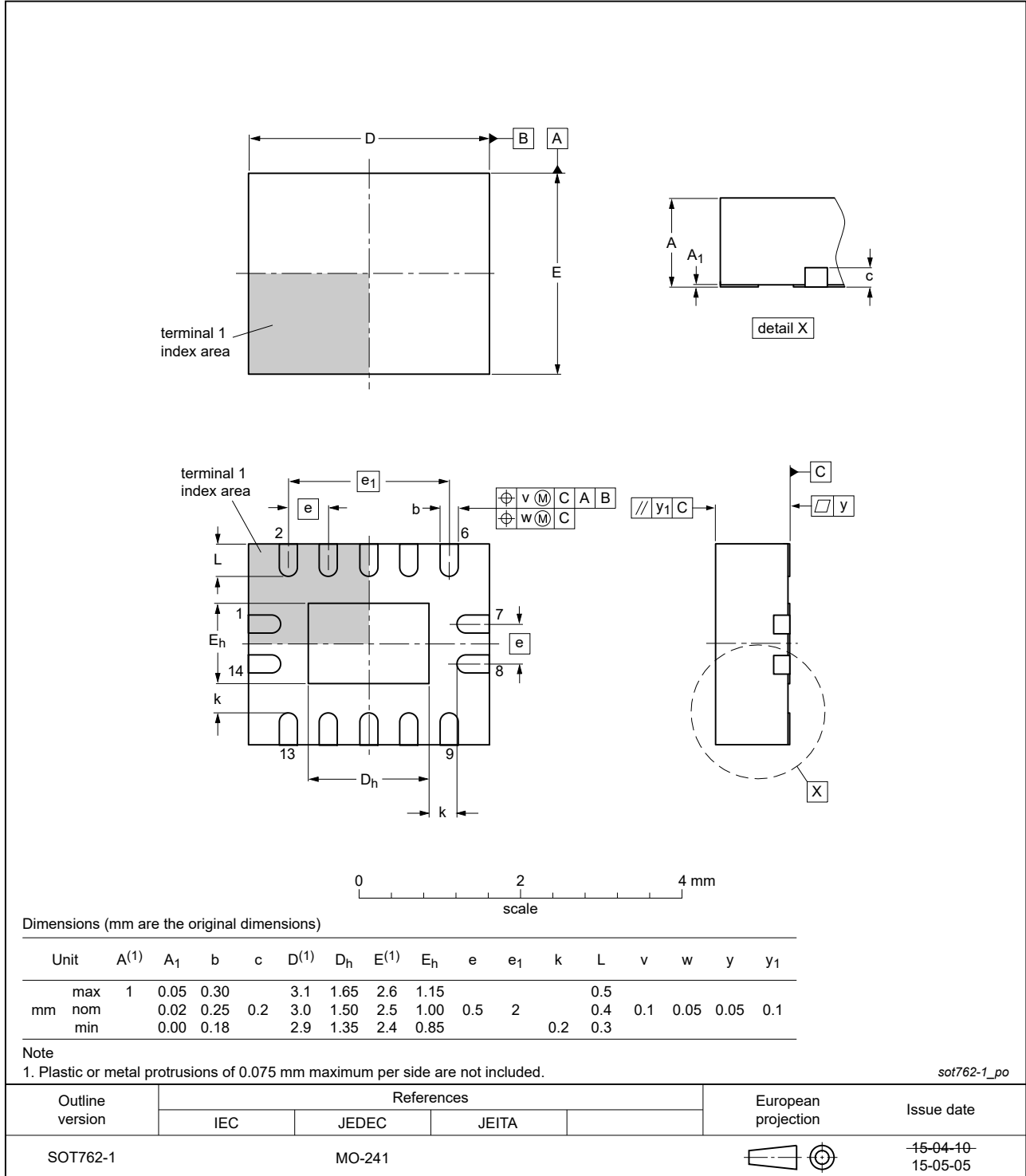


Fig. 14. Package outline SOT762-1 (DHVQFN14)

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 |

13. Revision history

Table 11. Revision history

| Document ID | Release date | Data sheet status | Change notice | Supersedes |
|---------------------|--|-----------------------|---------------|---------------------|
| 74HC_HCT393 v.9 | 20240319 | Product data sheet | - | 74HC_HCT393 v.8 |
| Modifications: | <ul style="list-style-type: none"> Fig. 12, Fig. 13: Aligned SO and TSSOP package outline drawings to JEDEC MS-012 and MO-153. Section 2: ESD specification updated according to the latest JEDEC standard. | | | |
| 74HC_HCT393 v.8 | 20211022 | Product data sheet | - | 74HC_HCT393 v.7.1 |
| Modifications: | <ul style="list-style-type: none"> Table 6: V_{OH} and V_{OL} conditions for 74HCT393 corrected. (Errata) | | | |
| 74HC_HCT393 v.7.1 | 20201021 | Product data sheet | - | 74HC_HCT393 v.6 |
| Modifications: | <ul style="list-style-type: none"> The format of this data sheet has been redesigned to comply with the identity guidelines of Nexperia. Legal texts have been adapted to the new company name where appropriate. Type numbers 74HC393DB and 74HCT393DB (SOT337-1/SSOP14) removed. Section 1 (Errata) and Section 2 updated. Table 4: Derating values for P_{tot} total power dissipation updated. v.7.1: Table 6: Values input leakage current for 74HC393 aligned with 74HCT393. (Errata) | | | |
| 74HC_HCT393 v.6 | 20151203 | Product data sheet | - | 74HC_HCT393 v.5 |
| Modifications: | <ul style="list-style-type: none"> Type numbers 74HC393N and 74HCT393N (SOT27-1) removed. | | | |
| 74HC_HCT393 v.5 | 20140401 | Product data sheet | - | 74HC_HCT393 v.4 |
| Modifications: | <ul style="list-style-type: none"> Table 7: The conditions for C_{PD} have been corrected (errata). | | | |
| 74HC_HCT393 v.4 | 20130516 | Product data sheet | - | 74HC_HCT393 v.3 |
| Modifications: | <ul style="list-style-type: none"> The format of this data sheet has been redesigned to comply with the new identity guidelines of NXP Semiconductors. Legal texts have been adapted to the new company name where appropriate. | | | |
| 74HC_HCT393 v.3 | 20050906 | Product data sheet | - | 74HC_HCT393_CNV v.2 |
| 74HC_HCT393_CNV v.2 | 19901201 | 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. |
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- [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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