8-bit addressable latch

Rev. 5 — 7 August 2012

1. General description

The 74HC259; 74HCT259 are high-speed Si-gate CMOS devices and are pin compatible with Low-power Schottky TTL (LSTTL). They are specified in compliance with JEDEC standard No. 7-A.

The 74HC259; 74HCT259 are high-speed 8-bit addressable latches designed for general-purpose storage applications in digital systems. They are multifunctional devices capable of storing single-line data in eight addressable latches. They provide a 3-to-8 decoder and multiplexer function with active HIGH outputs (Q0 to Q7). They also incorporate an active LOW common reset (MR) for resetting all latches as well as an active LOW enable input (\overline{LE}).

The 74HC259; 74HCT259 has four modes of operation:

- Addressable latch mode, in this mode data on the data line (D) is written into the addressed latch. The addressed latch follows the data input with all non-addressed latches remaining in their previous states.
- Memory mode, in this mode all latches remain in their previous states and are unaffected by the data or address inputs.
- Demultiplexing mode (or 3-to-8 decoding), in this mode the addressed output follows the state of the data input (D) with all other outputs in the LOW state.
- Reset mode, in this mode all outputs are LOW and unaffected by the address inputs (A0 to A2) and data input (D).

When operating the 74HC259; 74HCT259 as an address latch, changing more than one address bit could impose a transient wrong address. Therefore, this should only be done while in the Memory mode.

2. Features and benefits

- Combined demultiplexer and 8-bit latch
- Serial-to-parallel capability
- Output from each storage bit available
- Random (addressable) data entry
- Easily expandable
- Common reset input
- Useful as a 3-to-8 active HIGH decoder
- Input levels:
 - ◆ For 74HC259: CMOS level
 - For 74HCT259: TTL level



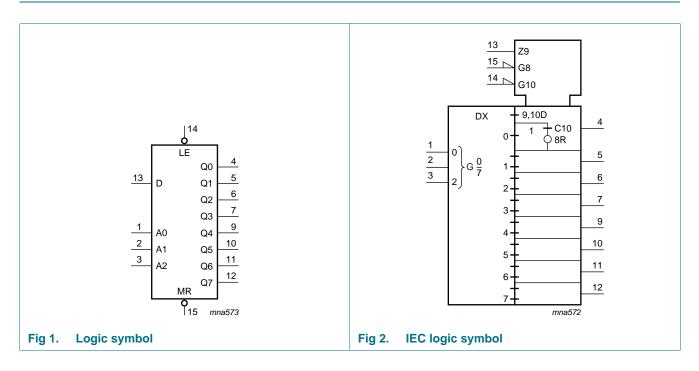
- ESD protection:
 - HBM JESD22-A114F exceeds 2000 V
 - MM JESD22-A115-A exceeds 200 V
 - CDM JESD22E exceeds 1000 V
- Multiple package options
- Specified from -40 °C to +85 °C and from -40 °C to +125 °C

3. Ordering information

Table 1. Ordering information

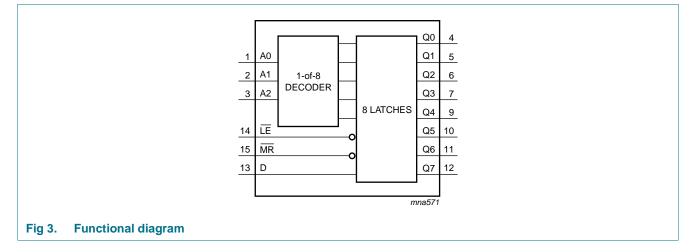
Type number	Package				
	Temperature range	Name	Description	Version	
74HC259N	–40 °C to +125 °C	DIP16	plastic dual in-line package; 16 leads (300 mil)	SOT38-4	
74HCT259N					
74HC259D	–40 °C to +125 °C	SO16	plastic small outline package; 16 leads;	SOT109-1	
74HCT259D			body width 3.9 mm		
74HC259DB	–40 °C to +125 °C	SSOP16	plastic shrink small outline package; 16 leads; body	SOT338-1	
74HCT259DB			width 5.3 mm		
74HC259PW	–40 °C to +125 °C	TSSOP16	plastic thin shrink small outline package; 16 leads;	SOT403-1	
74HCT259PW			body width 4.4 mm		
74HC259BQ	–40 °C to +125 °C	DHVQFN16	plastic dual in-line compatible thermal enhanced very	SOT763-1	
74HCT259BQ			thin quad flat package; no leads; 16 terminals; body 2.5 \times 3.5 \times 0.85 mm		

4. Functional diagram

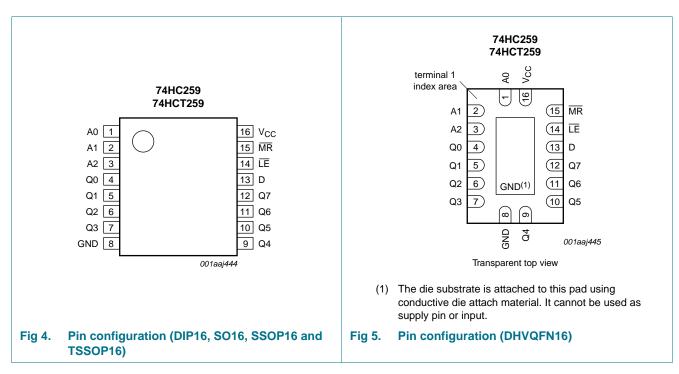


74HC259; 74HCT259

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5. Pinning information



5.1 Pinning

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5.2 Pin description

Pin	Description
1, 2, 3	address input
4, 5, 6, 7, 9, 10, 11, 12	latch output
8	ground (0 V)
13	data input
14	latch enable input (active LOW)
15	conditional reset input (active LOW)
16	supply voltage
	1, 2, 3 4, 5, 6, 7, 9, 10, 11, 12 8 13 14 15

6. Functional description

Table 3. Function table^[1]

Operating mode	Inpu	t					Outpu	ıt						
	MR	LE	D	A0	A1	A2	Q0	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Reset (clear)	L	Н	Х	Х	Х	Х	L	L	L	L	L	L	L	L
Demultiplexer	L	L	d	L	L	L	Q = d	L	L	L	L	L	L	L
(active HIGH 8-channel decoder (when D = H)	L	L	d	Н	L	L	L	Q = d	L	L	L	L	L	L
	L	L	d	L	Н	L	L	L	Q = d	L	L	L	L	L
	L	L	d	Н	Н	L	L	L	L	Q = d	L	L	L	L
	L	L	d	L	L	Н	L	L	L	L	Q = d	L	L	L
	L	L	d	Н	L	Н	L	L	L	L	L	Q = d	L	L
	L	L	d	L	Н	Н	L	L	L	L	L	L	Q = d	L
	L	L	d	Н	Н	Н	L	L	L	L	L	L	L	Q = d
Memory (no action)	Н	Н	Х	Х	Х	Х	q 0	q ₁	q_2	q ₃	q_4	q_5	q ₆	q ₇
Addressable latch	Н	L	d	L	L	L	Q = d	q ₁	q_2	q ₃	q_4	q_5	q ₆	q ₇
	Н	L	d	Н	L	L	q ₀	Q = d	q_2	q_3	q_4	q_5	q ₆	q ₇
	Н	L	d	L	Н	L	q ₀	q ₁	Q = d	q_3	q_4	q_5	q ₆	q ₇
	Н	L	d	Н	Н	L	q ₀	q ₁	q_2	Q = d	q_4	q_5	q ₆	q ₇
	Н	L	d	L	L	Н	q ₀	q ₁	q_2	q_3	Q = d	q_5	q ₆	q ₇
	Н	L	d	Н	L	Н	q 0	q ₁	q_2	q ₃	q_4	Q = d	q ₆	q ₇
	Н	L	d	L	Н	Н	q 0	q ₁	q_2	q ₃	q_4	q ₅	Q = d	q ₇
	Н	L	d	Н	Н	Н	\mathbf{q}_0	q ₁	q_2	q ₃	q_4	q_5	q ₆	Q = d

[1] H = HIGH voltage level;

L = LOW voltage level;

X = don't care;

d = HIGH or LOW data one set-up time prior to the LOW-to-HIGH $\overline{\text{LE}}$ transition;

q = lower case letter indicates the state of the referenced input one set-up time prior to the LOW-to-HIGH transition.

Table 4.	Operating mode select table ^[1]						
LE	MR	Mode					
L	Н	Addressable latch mode					
Н	Н	Memory mode					
L	L	Demultiplexer mode					
Н	L	Reset mode					

[1] H = HIGH voltage level; L = LOW voltage level.

7. Limiting values

Table 5. 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
I _{IK}	input clamping current	$V_{\rm I}$ < –0.5 V or $V_{\rm I}$ > $V_{\rm CC}$ + 0.5 V	<u>[1]</u> _	±20	mA
Ι _{ΟΚ}	output clamping current	$V_{\rm O}$ < –0.5 V or $V_{\rm O}$ > $V_{\rm CC}$ + 0.5 V	<u>[1]</u> _	±20	mA
lo	output current	V_{O} = -0.5 V to V_{CC} + 0.5 V	-	±25	mA
I _{CC}	supply current		-	+70	mA
I _{GND}	ground current		-70	-	mA
T _{stg}	storage temperature		-65	+150	°C
P _{tot}	total power dissipation	$T_{amb} = -40 \ ^{\circ}C$ to +125 $^{\circ}C$			
		DIP16 package	[2] _	750	mW
		SO16 package	<u>[3]</u>	500	mW
		(T)SSOP16 package	<u>[4]</u> _	500	mW
		DHVQFN16 package	<u>[5]</u>	500	mW

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

[2] P_{tot} derates linearly with 12 mW/K above 70 °C.

[3] P_{tot} derates linearly with 8 mW/K above 70 °C.

[4] P_{tot} derates linearly with 5.5 mW/K above 60 °C.

[5] P_{tot} derates linearly with 4.5 mW/K above 60 °C.

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8. Recommended operating conditions

Table 6. Recommended operating conditions

Voltages are referenced to GND (ground = 0 V)

Symbol	Parameter	Conditions	74HC2	74HC259			74HCT259		
			Min	Тур	Max	Min	Тур	Max	
V _{CC}	supply voltage		2.0	5.0	6.0	4.5	5.0	5.5	V
VI	input voltage		0	-	V _{CC}	0	-	V _{CC}	V
Vo	output voltage		0	-	V _{CC}	0	-	V _{CC}	V
T _{amb}	ambient temperature		-40	-	+125	-40	-	+125	°C
$\Delta t / \Delta V$	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 7. Static characteristics

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

Symbol	Parameter	Conditions		25 °C		–40 °C t	o +85 °C	–40 °C to	o +125 ℃	Unit
			Min	Тур	Max	Min	Max	Min	Max	
74HC25	9								1	
VIH	HIGH-level	$V_{CC} = 2.0 V$	1.5	1.2	-	1.5	-	1.5	-	V
	input voltage	$V_{CC} = 4.5 V$	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	$V_{CC} = 2.0 V$	-	0.8	0.5	-	0.5	-	0.5	V
	input voltage	$V_{CC} = 4.5 V$	-	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	$V_{I} = V_{IH} \text{ or } V_{IL}$								
	output voltage	I_{O} = -20 μ A; V_{CC} = 2.0 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
		$I_O = -20 \ \mu A; \ V_{CC} = 6.0 \ V$	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	$V_{I} = V_{IH} \text{ or } V_{IL}$								
	output voltage	I_{O} = 20 μ A; V_{CC} = 2.0 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
		$I_O = 20 \ \mu\text{A}; \ V_{CC} = 6.0 \ V$	-	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
		$I_{O} = 5.2 \text{ mA}; V_{CC} = 6.0 \text{ V}$	-	0.16	0.26	-	0.33	-	0.4	V
I	input leakage current	$V_I = V_{CC}$ or GND; $V_{CC} = 6.0 V$	-	-	±0.1	-	±1	-	±1	μΑ
I _{CC}	supply current		-	-	8.0	-	80	-	160	μA

74HC_HCT259
Product data sheet

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pF

V

V

V

V

V

V

μΑ

μA

μΑ

μΑ

μΑ

pF

-

25 °C -40 °C to +85 °C -40 °C to +125 °C Unit Symbol Parameter Conditions Min Тур Max Min Max Min Max CI input 3.5 _ _ -_ _ capacitance 74HCT259 HIGH-level V_{CC} = 4.5 V to 5.5 V 2.0 1.6 2.0 2.0 VIH _ input voltage VIL LOW-level V_{CC} = 4.5 V to 5.5 V 1.2 0.8 0.8 0.8 --input voltage $V_{I} = V_{IH}$ or V_{IL} ; $V_{CC} = 4.5$ V HIGH-level VOH output voltage $I_0 = -20 \ \mu A$ 4.4 4.5 4.4 4.4 -- $I_{O} = -4.0 \text{ mA}$ 4.32 3.7 3.98 -3.84 - $V_{I} = V_{IH}$ or V_{IL} ; $V_{CC} = 4.5$ V LOW-level VOL output voltage $I_0 = 20 \ \mu A; V_{CC} = 4.5 \ V$ 0 0.1 0.1 -0.1 -- $I_{O} = 5.2 \text{ mA}; V_{CC} = 6.0 \text{ V}$ 0.33 -0.15 0.26 --0.4 $V_I = V_{CC}$ or GND; ±0.1 I_I input leakage ±1 ±1 _ --- $V_{CC} = 5.5 V$ current supply current $V_I = V_{CC}$ or GND; $I_O = 0$ A; -8.0 80 160 I_{CC} --- $V_{CC} = 5.5 V$ additional $V_{I} = V_{CC} - 2.1 V; I_{O} = 0 A;$ ΔI_{CC} supply current other inputs at V_{CC} or GND; V_{CC} = 4.5 V to 5.5 V pin An, LE 150 540 675 735 --pin D 120 432 540 588 --pin MR 75 270 338 368 ---

Static characteristics ... continued Table 7.

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

CI

input

capacitance

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8-bit addressable latch

10. Dynamic characteristics

Table 8. Dynamic characteristics

Voltages are referenced to GND (ground = 0 V); for test circuit see <u>Figure 12</u>.

Symbol	Parameter	Conditions			25 °C		–40 °C to +85 °C		–40 °C to +125 °C		Unit
				Min	Typ[1]	Max	Min	Max	Min	Max	
74HC259	9										
^t pd	propagation	D to Qn; see Figure 6	[2]								
	delay	$V_{CC} = 2.0 V$		-	58	185	-	230	-	280	ns
		$V_{CC} = 4.5 V$		-	21	37	-	46	-	56	ns
		$V_{CC} = 5.0 \text{ V}; \text{ C}_{L} = 15 \text{ pF}$		-	18	-	-	-	-	-	ns
		$V_{CC} = 6.0 V$		-	17	31	-	39	-	48	ns
		An to Qn; see Figure 7	[2]								
		$V_{CC} = 2.0 V$		-	58	185	-	230	-	280	ns
		$V_{CC} = 4.5 V$		-	21	37	-	46	-	56	ns
		$V_{CC} = 5.0 \text{ V}; \text{ C}_{L} = 15 \text{ pF}$		-	17	-	-	-	-	-	ns
		$V_{CC} = 6.0 V$		-	17	31	-	39	-	48	ns
		LE to Qn; see Figure 8	[2]								
		$V_{CC} = 2.0 V$		-	55	170	-	215	-	255	ns
		$V_{CC} = 4.5 V$		-	20	34	-	43	-	51	ns
		$V_{CC} = 5.0 \text{ V}; \text{ C}_{L} = 15 \text{ pF}$		-	17	-	-	-	-	-	ns
		$V_{CC} = 6.0 V$		-	16	29	-	37	-	43	ns
PHL	HIGH to LOW	MR to Qn; see Figure 9									
	propagation delay	$V_{CC} = 2.0 V$		-	50	155	-	195	-	235	ns
	uelay	$V_{CC} = 4.5 V$		-	18	31	-	39	-	47	ns
		$V_{CC} = 5.0 \text{ V}; \text{ C}_{L} = 15 \text{ pF}$		-	15	-	-	-	-	-	ns
		$V_{CC} = 6.0 V$		-	14	26	-	33	-	40	ns
t	transition time	see Figure 8	[3]								
		$V_{CC} = 2.0 V$		-	19	75	-	95	-	119	ns
		$V_{CC} = 4.5 V$		-	7	15	-	19	-	22	ns
		$V_{CC} = 6.0 V$		-	6	13	-	16	-	19	ns
W	pulse width	LE HIGH or LOW; see <u>Figure 8</u>									
		$V_{CC} = 2.0 V$		70	17	-	90	-	105	-	ns
		$V_{CC} = 4.5 V$		14	6	-	18	-	21	-	ns
		$V_{CC} = 6.0 V$		12	5	-	15	-	18	-	ns
		MR LOW; see Figure 9									
		$V_{CC} = 2.0 V$		70	17	-	90	-	105	-	ns
		$V_{CC} = 4.5 V$		14	6	-	18	-	21	-	ns
		V _{CC} = 6.0 V		12	5		15		18		

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	lin Max 20 - 24 - 20 -	ns ns ns
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	- 24	ns
$\begin{array}{ c c c c c c c } \hline V_{CC} = 4.5 \ V & 16 & 7 & - & 20 & - & 22 \\ \hline V_{CC} = 6.0 \ V & 14 & 6 & - & 17 & - & 22 \\ \hline V_{CC} = 6.0 \ V & 14 & 6 & - & 17 & - & 22 \\ \hline V_{CC} = 6.0 \ V & 0 & -19 & - & 0 & - & 0 \\ \hline V_{CC} = 2.0 \ V & 0 & -6 & - & 0 & - & 0 \\ \hline V_{CC} = 4.5 \ V & 0 & -6 & - & 0 & - & 0 \\ \hline V_{CC} = 6.0 \ V & 0 & -5 & - & 0 & - & 0 \\ \hline V_{CC} = 6.0 \ V & 0 & -5 & - & 0 & - & 0 \\ \hline V_{CC} = 2.0 \ V & 2 & -11 & - & 2 & - & 0 \\ \hline V_{CC} = 4.5 \ V & 2 & -4 & - & 2 & - & 0 \\ \hline V_{CC} = 6.0 \ V & 2 & -3 & - & 2 & - & 0 \\ \hline V_{CC} = 6.0 \ V & 2 & -3 & - & 2 & - & 0 \\ \hline V_{CC} = 6.0 \ V & 2 & -3 & - & 2 & - & 0 \\ \hline V_{CC} = 6.0 \ V & 2 & -3 & - & 2 & - & 0 \\ \hline V_{CC} = 6.0 \ V_{CC} & & & 19 & - & - & - \\ \hline V_{CC} = 4.5 \ V_{1} = \ GND \ V_{CC} & & & - & 23 & 39 & - & 49 \\ \hline V_{CC} = 5.0 \ V; \ C_{L} = 15 \ pF & - & 20 & - & - & - \\ \hline An \ To \ Dn \ See \ Figure \ 7 & 21 & - & - & - \\ \hline V_{CC} = 4.5 \ V & - & 25 \ 41 & 51 \\ \hline \end{array}$	- 24	ns
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	- 0	ns
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$\frac{V_{CC} = 4.5 \ V}{V_{CC} = 6.0 \ V} = 2 -4 - 2 - 3$ $\frac{V_{CC} = 6.0 \ V}{V_{CC} = 6.0 \ V} = 2 -3 - 2 - 3$ $\frac{1}{V_{CC} = 6.0 \ V}{V_{CC} = 6.0 \ V} = \frac{19}{1000 \ V_{CC}} = \frac{1000 \ V_{CC}}{1000 \ V_{CC}} = 1000 $		
$V_{CC} = 6.0 V 2 -3 - 2 - 3$ CPD power dissipation capacitance $I_1 = 1 \text{ MHz};$ $I_1 = 0 \text{ MD to } V_{CC}$ $I_2 = 0 \text{ MHz} = 0 \text{ MHz}$ $V_1 = 0 \text{ GND to } V_{CC} = 0 \text{ MHz} = 0 $	2 -	ns
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2 -	ns
$\begin{array}{c} V_{I} = {\sf GND} \ {\sf to} \ {\sf V}_{CC} \\ \hline \textbf{74HCT259} \\ \hline \textbf{74HCT259} \\ \hline \textbf{pd} \\ propagation \\ delay \\ \hline \textbf{V}_{CC} = 4.5 \ V \\ \hline \textbf{V}_{CC} = 4$	2 -	ns
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delay $V_{CC} = 4.5 V$ - 23 39 - 49 $V_{CC} = 5.0 V; C_L = 15 \text{ pF}$ - 20 An to Qn; see Figure 7 [2] $V_{CC} = 4.5 V$ - 25 41 51		
$V_{CC} = 4.5 V$ $25 - 65 - 45$ $V_{CC} = 5.0 V; C_L = 15 pF$ $- 20$ An to Qn; see Figure 7 [2] $V_{CC} = 4.5 V$ $- 25 - 41$ 51		
An to Qn; see Figure 7 [2] $V_{CC} = 4.5 V$ - 25 41 51	- 59	ns
$V_{\rm CC} = 4.5 \ {\rm V}$ - 25 41 51		ns
$V_{ab} = 5.0 V/C_{b} = 15 \text{ pc}$ = 20 = -	62	ns
		ns
LE to Qn; see Figure 8 [2]		
$V_{CC} = 4.5 V$ - 22 38 - 48	- 57	ns
$V_{CC} = 5.0 \text{ V}; C_L = 15 \text{ pF} - 20$		ns
PHL HIGH to LOW MR to Qn; see Figure 9		
propagation $V_{CC} = 4.5 V$ - 23 39 - 49	- 59	ns
$V_{CC} = 5.0 \text{ V}; C_{L} = 15 \text{ pF} - 20$		ns
t transition time see Figure 8 [3]		
	- 22	ns
w pulse width LE HIGH or LOW; see <u>Figure 8</u>		
V _{CC} = 4.5 V 19 11 - 24 - 2 MR LOW; see <u>Figure 9</u>	- 29	ns
	27 -	ns

Table 8. Dynamic characteristics ... continued

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Symbol	Parameter	Conditions		25 °C	;	–40 °C t	o +85 °C	–40 °C t	o +125 °C	Unit
			Mi	n Typ <mark>ľ</mark>	l Max	Min	Max	Min	Max	
t _{su} set-up time		D, An to LE; see <u>Figure 10</u> and <u>Figure 11</u>		·						
		$V_{CC} = 4.5 V$	17	' 10	-	21	-	26	-	ns
t _h	hold time	D to LE; see <u>Figure 10</u> and <u>Figure 11</u>								
		$V_{CC} = 4.5 V$	0	-8	-	0	-	0	-	ns
		An to LE; see <u>Figure 10</u> and <u>Figure 11</u>								
		$V_{CC} = 4.5 V$	0	-4	-	0	-	0	-	ns
C _{PD}	power dissipation capacitance	f_i = 1 MHz; V_I = GND to V_{CC} – 1.5 V	<u>[4]</u>	19	-	-	-	-	-	pF

Table 8. Dynamic characteristics ...continued

Voltages are referenced to GND (ground = 0 V); for test circuit see <u>Figure 12</u>.

[1] Typical values are measured at nominal supply voltage (V_{CC} = 3.3 V and V_{CC} = 5.0 V).

[2] t_{pd} is the same as t_{PLH} and t_{PHL} .

 $[3] \quad t_t \mbox{ is the same as } t_{THL} \mbox{ and } t_{TLH}.$

[4] C_{PD} is used to determine the dynamic power dissipation (P_D in μ W).

 $P_{D} = C_{PD} \times V_{CC}^{2} \times f_{i} \times N + \Sigma(C_{L} \times V_{CC}^{2} \times f_{o}) \text{ where:}$

 f_i = input frequency in MHz;

 $f_o = output frequency in MHz;$

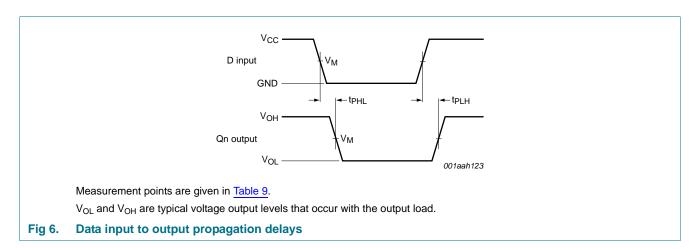
 C_L = output load capacitance in pF;

 V_{CC} = supply voltage in V;

N = number of inputs switching;

 $\Sigma(C_L \times V_{CC}^2 \times f_o)$ = sum of the outputs.

11. Waveforms



74HC259; 74HCT259

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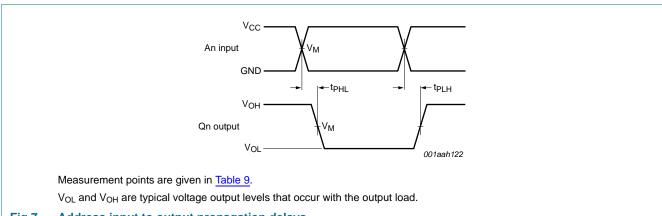
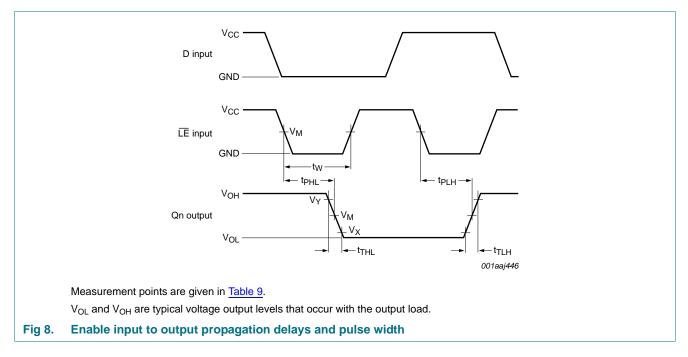
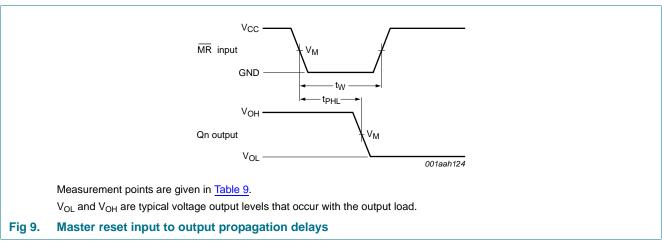


Fig 7. Address input to output propagation delays

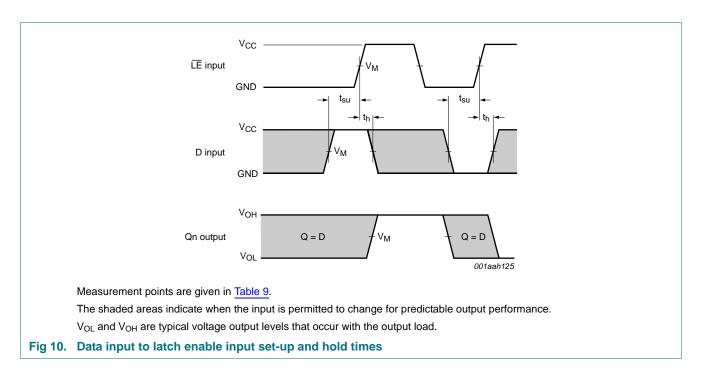




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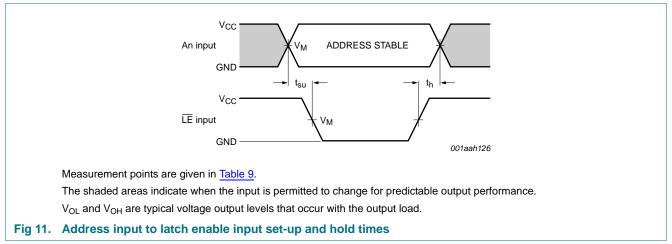


Table 9. Measurement points

Туре	Input	Output					
	V _M	V _M	V _X	V _Y			
74HC259	0.5V _{CC}	0.5V _{CC}	0.1V _{CC}	0.9V _{CC}			
74HCT259	1.3 V	1.3 V	0.1V _{CC}	0.9V _{CC}			

74HC259; 74HCT259

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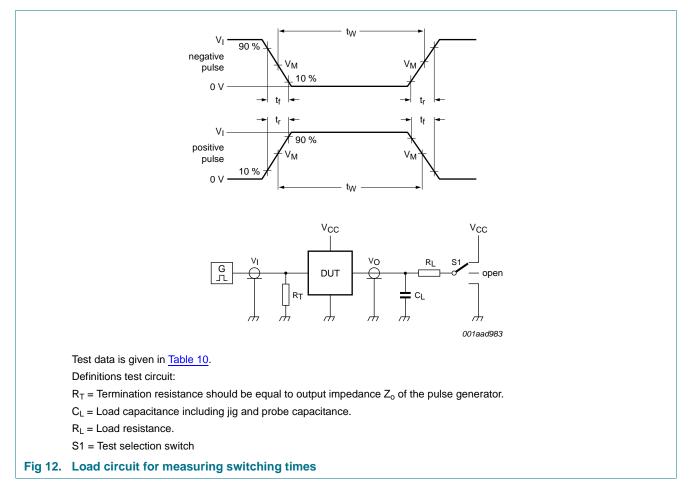


Table 10. Test data

Туре	Input		Load	S1 position	
	VI	t _r , t _f	CL	RL	t _{PHL} , t _{PLH}
74HC259	V _{CC}	6 ns	15 pF, 50 pF	1 kΩ	open
74HCT259	3 V	6 ns	15 pF, 50 pF	1 kΩ	open

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12. Package outline

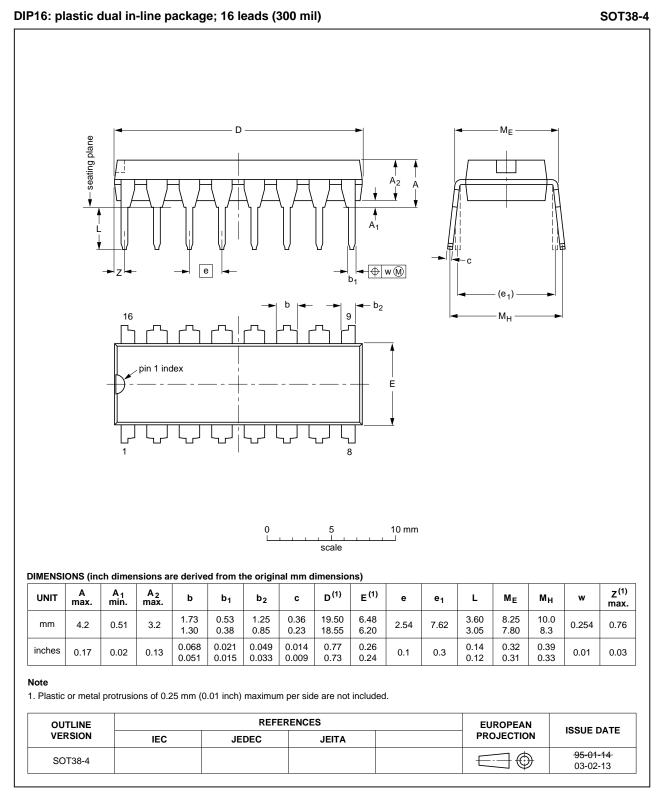


Fig 13. Package outline SOT38-4 (DIP16)

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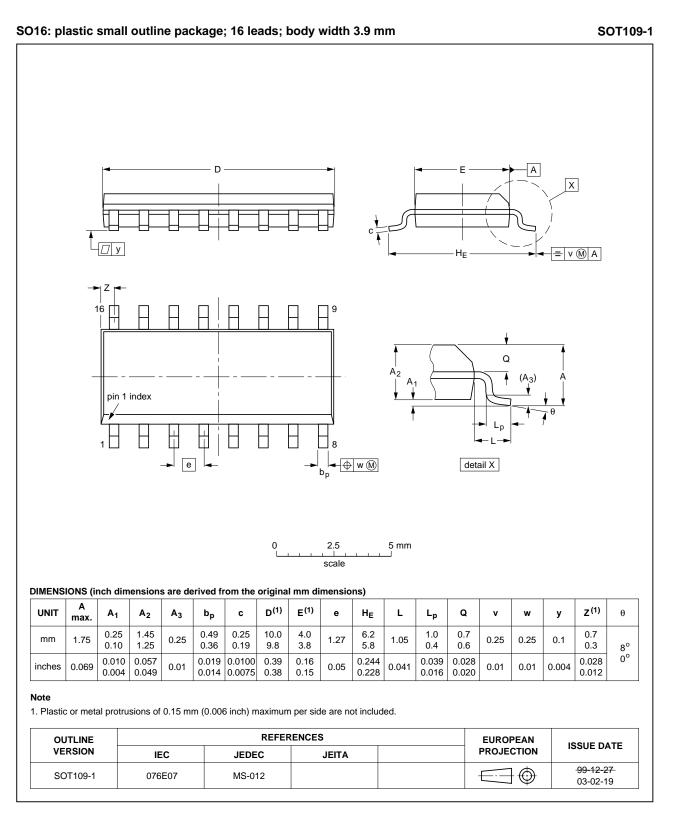


Fig 14. Package outline SOT109-1 (SO16)

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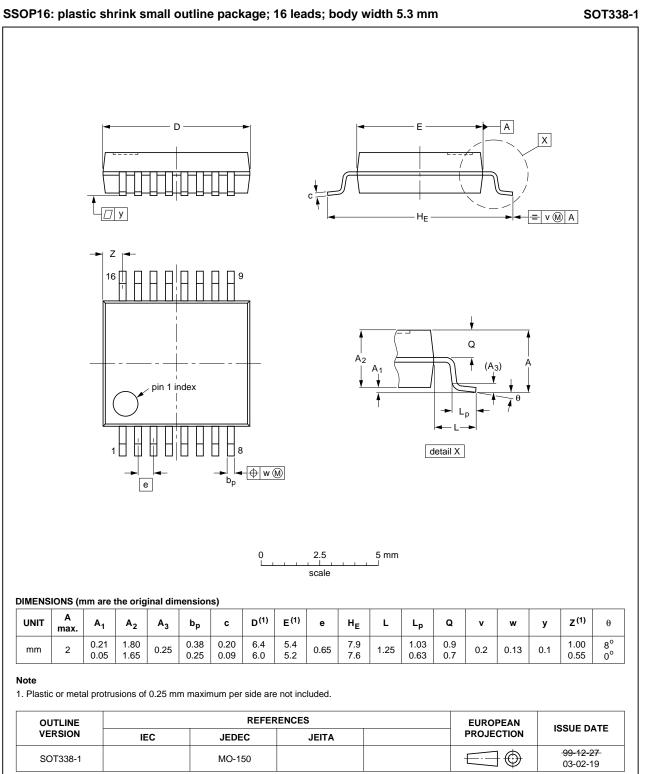


Fig 15. Package outline SOT338-1 (SSOP16)

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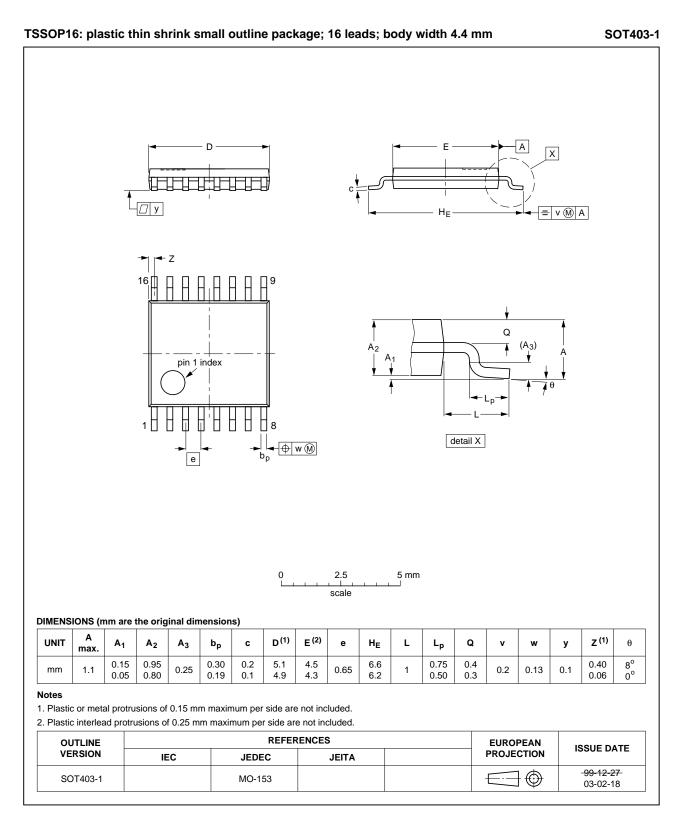
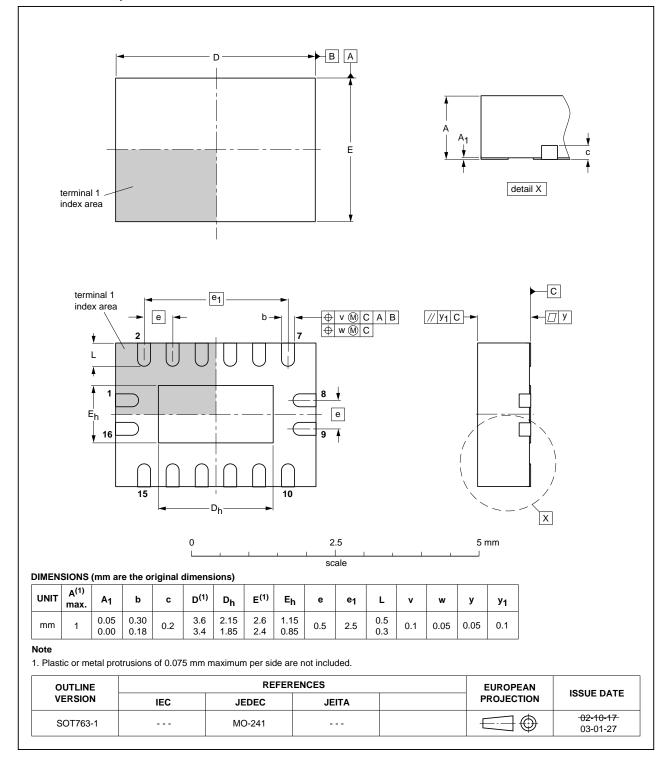


Fig 16. Package outline SOT403-1 (TSSOP16)

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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

Fig 17. Package outline SOT763-1 (DHVQFN16)

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13. Abbreviations

Table 11.	Abbreviations		
Acronym	Description		
CDM	Charged Device Model		
CMOS	Complementary Metal-Oxide Semiconductor		
DUT	Device Under Test		
ESD	ElectroStatic Discharge		
HBM	Human Body Model		
LSTTL	Low-power Schottky Transistor-Transistor Logic		
MM	Machine Model		
TTL	Transistor-Transistor Logic		

14. Revision history

Table 12. Revision hist	tory			
Document ID	Release date	Data sheet status	Change notice	Supersedes
74HC_HCT259 v.5	20120807	Product data sheet	-	74HC_HCT259 v.4
Modifications:	of NXP Semi			
	 Legal texts have 	ave been adapted to the new o	company name wher	re appropriate.
74HC_HCT259 v.4	20090225	Product data sheet	-	74HC_HCT259 v.3
Modifications:	 Added type n 	umber 74HC259N and 74HC1	ſ259N (DIP16 packa	ge)
	 Added type n 	umber 74HC259DB and 74HC	T259DB (SSOP16	package)
74HC_HCT259 v.3	20090108	Product data sheet	-	74HC_HCT259_CNV v.2
74HC_HCT259_CNV v.2	19970828	Product specification	-	-

15. Legal information

15.1 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 URL http://www.nxp.com.

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