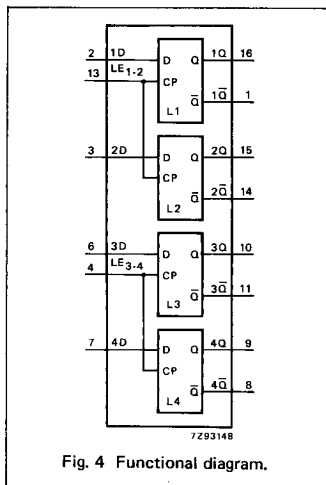


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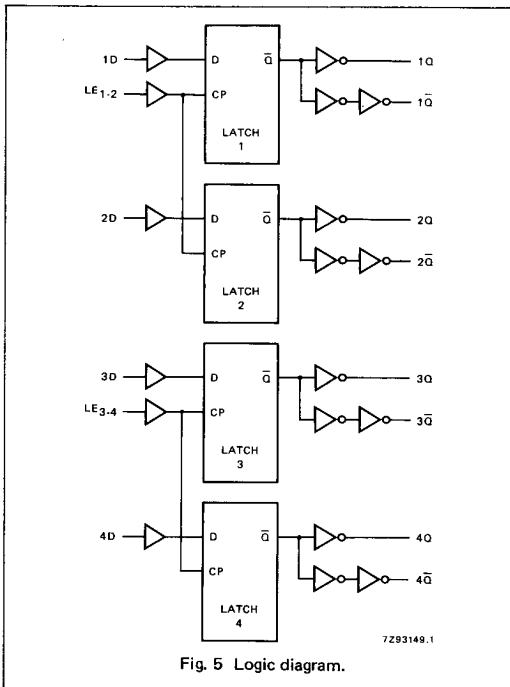
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FUNCTION TABLE

OPERATING MODES	INPUTS		OUTPUTS	
	LE_{n-n}	nD	nQ	$n\bar{Q}$
data enabled	H	H	L	H
data latched	L	X	q	$\bar{q}$

H = HIGH voltage level
L = LOW voltage level
q = lower case letters indicate the state of the referenced output one set-up time prior to the HIGH-to-LOW LE_{n-n} transition
X = don't care



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DC CHARACTERISTICS FOR 74HC

For the DC characteristics see chapter "HCMOS family characteristics", section "Family specifications".

Output capability: standard

I_{CC} category: MSI

AC CHARACTERISTICS FOR 74HC

GND = 0 V; t_r = t_f = 6 ns; C_L = 50 pF

SYMBOL	PARAMETER	T _{amb} (°C)							UNIT	TEST CONDITIONS	
		74HC								V _{CC} V	WAVEFORMS
		+25			−40 to +85		−40 to +125				
		min.	typ.	max.	min.	max.	min.	max.			
t _{PHL} / t _{PLH}	propagation delay nD to nQ		33 12 10	110 22 19		140 28 24		165 33 28	ns	2.0 4.5 6.0	Fig. 6
t _{PHL} / t _{PLH}	propagation delay nD to nQ		39 14 11	120 24 20		150 30 26		180 36 31	ns	2.0 4.5 6.0	Fig. 7
t _{PHL} / t _{PLH}	propagation delay LE _{n-n} to nQ		33 12 10	120 24 20		150 30 26		180 36 31	ns	2.0 4.5 6.0	Fig. 8
t _{PHL} / t _{PLH}	propagation delay LE _{n-n} to nQ		39 14 11	125 25 21		155 31 26		190 38 32	ns	2.0 4.5 6.0	Fig. 8
t _{THL} / t _{TLH}	output transition time		19 7 6	75 15 13		95 19 16		110 22 19	ns	2.0 4.5 6.0	Figs 6 and 7
t _W	enable pulse width HIGH	80 16 14	17 6 5		100 20 17		120 24 20		ns	2.0 4.5 6.0	Fig. 8
t _{su}	set-up time nD to LE _{n-n}	60 12 10	14 5 4		75 15 13		90 18 15		ns	2.0 4.5 6.0	Fig. 9
t _h	hold time nD to LE _{n-n}	3 3 3	−8 −3 −2		3 3 3		3 3 3		ns	2.0 4.5 6.0	Fig. 9

[查询"74HC75D-T"供应商](#)**DC CHARACTERISTICS FOR 74HCT**

For the DC characteristics see chapter "HCMOS family characteristics", section "Family specifications".

Output capability: standard

I_{CC} category: MSI

Note to HCT types

The value of additional quiescent supply current (ΔI_{CC}) for a unit load of 1 is given in the family specifications. To determine ΔI_{CC} per input, multiply this value by the unit load coefficient shown in the table below.

INPUT	UNIT LOAD COEFFICIENT
nD	0.75
LE _{n-n}	1.00

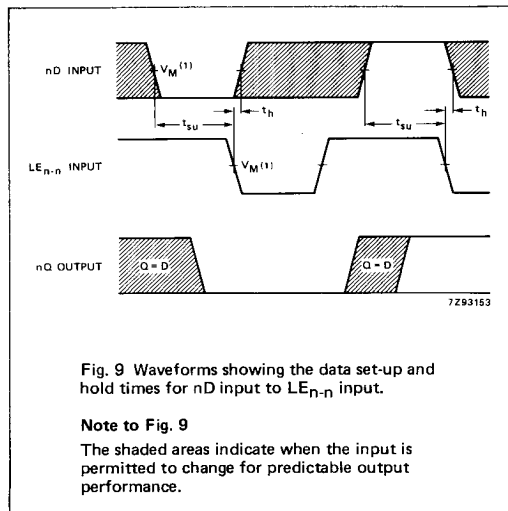
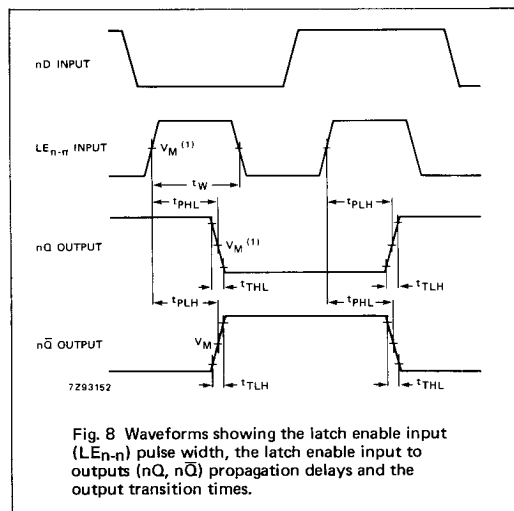
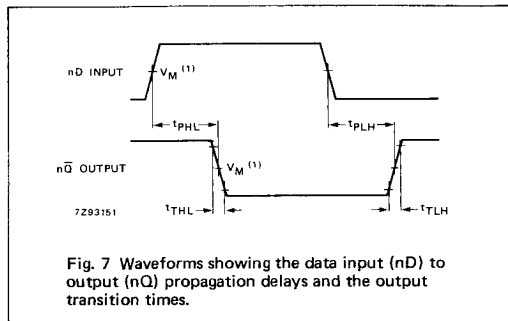
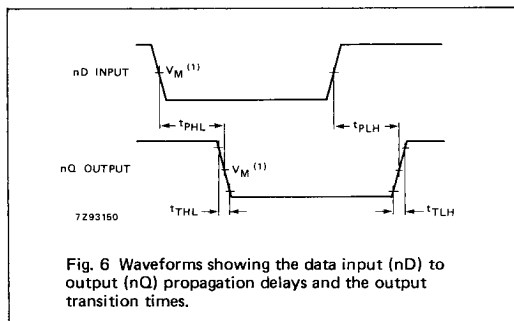
AC CHARACTERISTICS FOR 74HCT

GND = 0 V; t_r = t_f = 6 ns; C_L = 50 pF

SYMBOL	PARAMETER	T _{amb} (°C)							UNIT	TEST CONDITIONS	
		74HCT								V _{CC} V	WAVEFORMS
		+25			−40 to +85		−40 to +125				
		min.	typ.	max.	min.	max.	min.	max.			
		t _{PHL} / t _{PLH}	propagation delay nD to nQ		15	28		35			
t _{PHL} / t _{PLH}	propagation delay nD to nQ̄		15	28		35		42	ns	4.5	Fig. 7
t _{PHL} / t _{PLH}	propagation delay LE _{n-n} to nQ		13	28		35		42	ns	4.5	Fig. 8
t _{PHL} / t _{PLH}	propagation delay LE _{n-n} to nQ̄		15	30		38		45	ns	4.5	Fig. 8
t _{THL} / t _{TLH}	output transition time		7	15		19		22	ns	4.5	Figs 6 and 7
t _W	enable pulse width HIGH	16	4		20		24		ns	4.5	Fig. 8
t _{su}	set-up time nD to LE _{n-n}	12	4		15		18		ns	4.5	Fig. 9
t _h	hold time nD to LE _{n-n}	3	−2		3		3		ns	4.5	Fig. 9

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AC WAVEFORMS



Note to AC waveforms

(1) HC : $V_M = 50\%$; $V_I = \text{GND to } V_{CC}$.HCT: $V_M = 1.3 \text{ V}$; $V_I = \text{GND to } 3 \text{ V}$.