74HC597; 74HCT597

8-bit shift register with input flip-flops Rev. 4 — 25 February 2016

Product data sheet

1. **General description**

The 74HC597; 74HCT597 is an 8-bit shift register with input flip-flops. It consists of an 8-bit storage register feeding a parallel-in, serial-out 8-bit shift register. Both the storage register and the shift register have positive edge-triggered clocks. The shift register also has direct load (from storage) and clear inputs. Inputs include clamp diodes that enable the use of current limiting resistors to interface inputs to voltages in excess of V_{CC}.

Features and benefits 2.

- Complies with JEDEC standard JESD7A
- Input levels:
 - ◆ For 74HC597: CMOS level
 - For 74HCT597: TTL level
- 8-bit parallel storage register inputs
- Shift register has direct overriding load and clear
- ESD protection:
 - ♦ HBM EIA/JESD22-A114F exceeds 2000 V
 - MM EIA/JESD22-A115-A exceeds 200 V
- Specified from −40 °C to +85 °C and from −40 °C to +125 °C
- Multiple package options

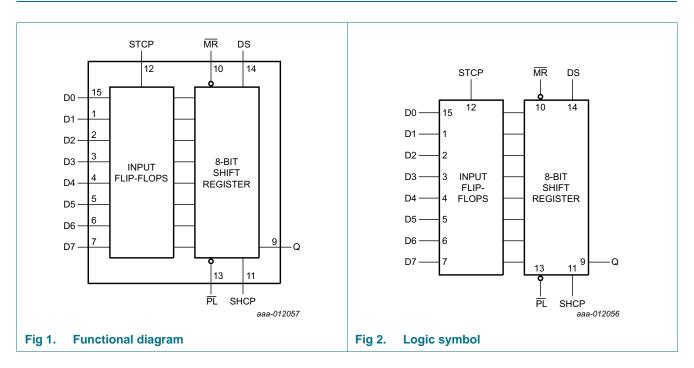
Ordering information 3.

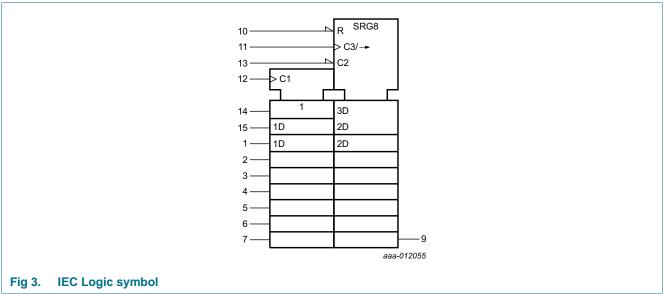
Ordering information Table 1.

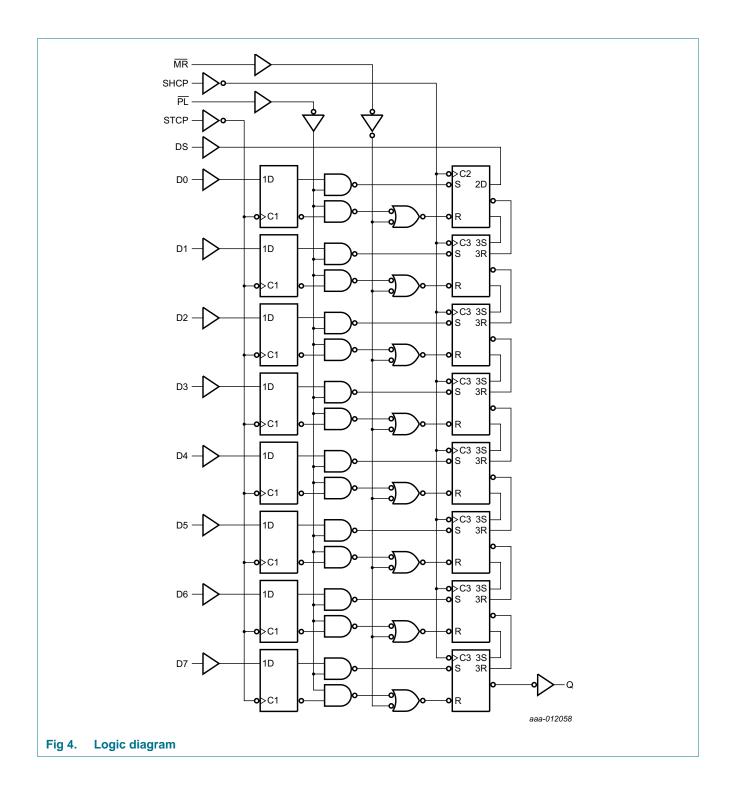
Type number	Package	Package									
	Temperature range	Name	Description	Version							
74HC597D	−40 °C to +125 °C	SO16	plastic small outline package; 16 leads; body width	SOT109-1							
74HCT597D			3.9 mm								
74HC597DB	-40 °C to +125 °C	SSOP16	plastic shrink small outline package; 16 leads;	SOT338-1							
74HCT597DB			body width 5.3 mm								
74HC597PW	–40 °C to +125 °C	TSSOP16	plastic thin shrink small outline package; 16 leads; body width 4.4 mm	SOT403-1							



4. Functional diagram

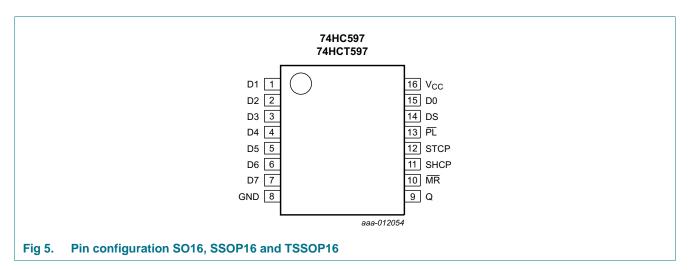






5. Pinning information

5.1 Pinning



5.2 Pin description

Table 2. Pin description

Symbol	Pin	Description
GND	8	ground (0 V)
Q	9	serial data output
MR	10	asynchronous master reset input (active LOW)
SHCP	11	shift register clock input (LOW-to-HIGH, edge-triggered)
STCP	12	storage register clock input (LOW-to-HIGH, edge-triggered)
PL	13	parallel load input (active LOW)
DS	14	serial data input
D0, D1, D2, D3, D4, D5, D6, D7	15, 1, 2, 3, 4, 5, 6, 7	parallel data inputs
V _{CC}	16	supply voltage

6. Functional description

Table 3. Function table[1]

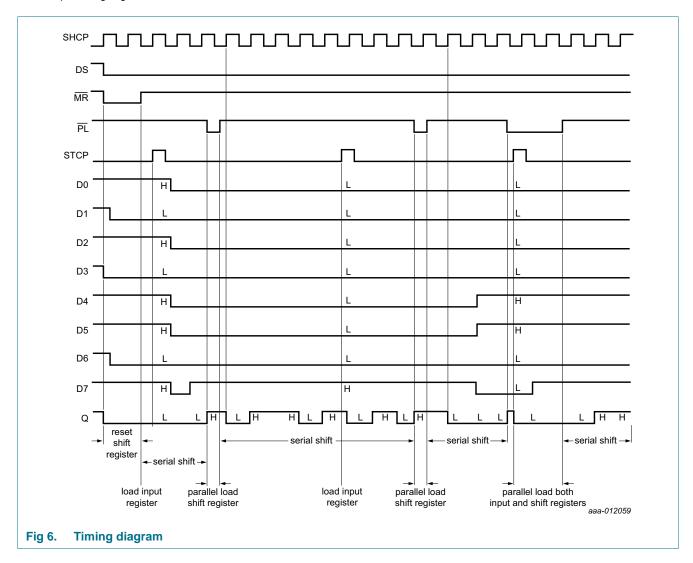
Inputs				Function
STCP	SHCP	PL	MR	
\uparrow	X	Х	Х	data loaded to input latches
\uparrow	X	L	Н	data loaded from inputs to shift register
no clock edge	X	L	Н	data transferred from input flip-flops to shift register
X	X	L	L	invalid logic, state of shift register is indeterminate when signals removed
Х	X	Н	L	shift register cleared
X	↑	Н	Н	shift register clocked Qn = Qn-1, Q0 = DS

[1] H = HIGH voltage level.

L = LOW voltage level.

X = don't care.

 \uparrow = positive-going transition.



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	SO16, SSOP16 and TSSOP16 packages	[1] _	500	mW

^[1] For SO16 package: P_{tot} derates linearly with 8 mW/K above 70 °C. For SSOP16 and TSSOP16 packages: 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	74HC597			7	4HCT59	7	Unit	
			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	+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	
		$V_{CC} = 6.0 \text{ V}$	-	-	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 t	o +85 °C	-40 °C t	o +125 °C	Unit
			Min	Тур	Max	Min	Max	Min	Max	
74HC59	7									
V _{IH}	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
		$V_{CC} = 6.0 \text{ V}$	-	2.8	1.8	-	1.8	-	1.8	V
V _{OH}	HIGH-level	$V_I = V_{IH}$ or V_{IL}								
	output voltage	$I_{O} = -20 \mu A; V_{CC} = 2.0 V$	1.9	2.0	-	1.9	-	1.9	-	V
		$I_O = -20 \mu A$; $V_{CC} = 4.5 \text{ V}$	4.4	4.5	-	4.4	-	4.4	-	V
		$I_O = -20 \mu A; V_{CC} = 6.0 \text{ V}$	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
		$I_{O} = -5.2 \text{ mA}; V_{CC} = 6.0 \text{ V}$	5.48	5.81	-	5.34	-	5.2	-	V
V _{OL}	LOW-level	$V_I = V_{IH}$ or V_{IL}								
C	output voltage	$I_O = 20 \mu A; V_{CC} = 2.0 V$	-	0	0.1	-	0.1	-	0.1	V
		$I_O = 20 \mu A; V_{CC} = 4.5 V$	-	0	0.1	-	0.1	-	0.1	٧
		$I_O = 20 \mu A; V_{CC} = 6.0 \text{ V}$	-	0	0.1	-	0.1	-	0.1	٧
		$I_O = 4.0 \text{ mA}; V_{CC} = 4.5 \text{ V}$	-	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 _I	input leakage current	$V_I = V_{CC}$ or GND; $V_{CC} = 6.0 \text{ V}$	-	-	±0.1	-	±1.0	-	±1.0	μΑ
I _{CC}	supply current	$V_I = V_{CC}$ or GND; $I_O = 0$ A; $V_{CC} = 6.0 \text{ V}$	-	-	8.0	-	80.0	-	160.0	μΑ
Cı	input capacitance		-	3.5	-	-	-	-	-	pF
74HCT5	97							I .		
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	8.0	-	0.8	-	0.8	V
V _{OH}	HIGH-level	$V_I = V_{IH}$ or V_{IL} ; $V_{CC} = 4.5 \text{ V}$								
	output voltage	I _O = -20 μA	4.4	4.5	-	4.4	-	4.4	-	V
		$I_{O} = -4.0 \text{ mA}$	3.98	4.32	-	3.84	-	3.7	-	V
V _{OL}	LOW-level	$V_I = V_{IH}$ or V_{IL} ; $V_{CC} = 4.5 \text{ V}$								
	output voltage	Ι _Ο = 20 μΑ	-	0	0.1	-	0.1	-	0.1	V
		I _O = 4.0 mA	-	0.15	0.26	-	0.33	-	0.4	V
lı	input leakage current	V _I = V _{CC} or GND; V _{CC} = 5.5 V	-	-	±0.1	-	±1.0	-	±1.0	μА

 Table 6.
 Static characteristics ...continued

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 +125 °C		Unit
			Min	Тур	Max	Min	Max	Min	Max	
I _{CC}	supply current	$V_I = V_{CC}$ or GND; $I_O = 0$ A; $V_{CC} = 5.5$ V	-	-	8.0	-	80.0	-	160.0	μΑ
Δl _{CC}	additional supply current	$\begin{aligned} V_I &= V_{CC} - 2.1 \text{ V;} \\ \text{other inputs at } V_{CC} \text{ or GND;} \\ V_{CC} &= 4.5 \text{ V to } 5.5 \text{ V;} \\ I_O &= 0 \text{ A} \end{aligned}$								
		per input pin; DS input	-	25	90	-	112.5	-	122.5	μΑ
		per input pin; Dn inputs	-	30	108	-	135	-	147	μΑ
		per input pin; PL, MR inputs	-	150	540	-	675	-	735	μΑ
		per input pin; STCP, SHCP inputs	-	150	540	-	675	-	735	μΑ
C _I	input capacitance		-	3.5	-	-	-	-	-	pF

10. Dynamic characteristics

Table 7. Dynamic characteristics

Symbol	Parameter	Conditions		25 °C		-40 °C to +85 °C		-40 °C to +125 °C		Unit
			Min	Тур	Max	Min	Max	Min	Max	Ī
74HC59	7						-			_
t _{pd}	propagation	SHCP to Q; see Figure 7								
	delay	V _{CC} = 2.0 V	-	55	175	-	220	-	265	ns
		V _{CC} = 4.5 V	-	20	35	-	44	-	53	ns
	$V_{CC} = 5.0 \text{ V}; C_L = 15 \text{ pF}$	-	17	-	-	-	-	-	ns	
	V _{CC} = 6.0 V	-	16	30	-	37	-	45	ns	
		MR to Q; see Figure 8								
		V _{CC} = 2.0 V	-	58	175	-	220	-	265	ns
		V _{CC} = 4.5 V	-	21	35	-	44	-	53	ns
		V _{CC} = 6.0 V	-	17	30	-	37	-	45	ns
		STCP to Q; see Figure 7								
		V _{CC} = 2.0 V	-	80	250	-	315	-	375	ns
		V _{CC} = 4.5 V	-	29	50	-	63	-	75	ns
		$V_{CC} = 5.0 \text{ V}; C_L = 15 \text{ pF}$	-	25	-	-	-	-	-	ns
		V _{CC} = 6.0 V	-	23	43	-	54	-	64	ns
		PL to Q; see Figure 9								
		V _{CC} = 2.0 V	-	69	215	-	270	-	325	ns
		V _{CC} = 4.5 V	-	25	43	-	54	-	65	ns
		$V_{CC} = 5.0 \text{ V}; C_L = 15 \text{ pF}$	-	21	-	-	-	-	-	ns
		V _{CC} = 6.0 V	-	20	37	-	46	-	55	ns

 Table 7.
 Dynamic characteristics ...continued

Symbol	Parameter	Conditions		25 °C		-40 °C	to +85 °C	-40 °C to +125 °C		Unit
			Min	Тур	Max	Min	Max	Min	Max	
t _t	transition	see Figure 9 [2]								
	time	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	STCP HIGH or LOW; see Figure 7								
		V _{CC} = 2.0 V	80	11	-	100	-	120	-	ns
		V _{CC} = 4.5 V	16	4	-	20	-	24	-	ns
		V _{CC} = 6.0 V	14	3	-	17	-	20	-	ns
		SHCP HIGH or LOW; see Figure 7								
		V _{CC} = 2.0 V	80	14	-	100	-	120	-	ns
		V _{CC} = 4.5 V	16	5	-	20	-	24	-	ns
		V _{CC} = 6.0 V	14	4	-	17	-	20	-	ns
		MR LOW; see Figure 8								
		V _{CC} = 2.0 V	80	22	-	100	-	120	-	ns
		V _{CC} = 4.5 V	16	8	-	20	-	24	-	ns
		V _{CC} = 6.0 V	14	6	-	17	-	20	-	ns
		PL LOW; see Figure 9								
		V _{CC} = 2.0 V	80	22	-	100	-	120	-	ns
		V _{CC} = 4.5 V	16	8	-	20	-	24	-	ns
		V _{CC} = 6.0 V	14	6	-	17	-	20	-	ns
t _{rec}	recovery time	MR to SHCP; see Figure 10								
		V _{CC} = 2.0 V	60	-3	-	75	-	90	-	ns
		V _{CC} = 4.5 V	12	-1	-	15	-	18	-	ns
		V _{CC} = 6.0 V	10	-1	-	13	-	15	-	ns

 Table 7.
 Dynamic characteristics ...continued

Symbol	Parameter	Conditions		25 °C		-40 °C	to +85 °C	-40 °C t	o +125 °C	Unit
			Min	Тур	Max	Min	Max	Min	Max	
t _{su}	set-up time	Dn to STCP; see Figure 11								
		V _{CC} = 2.0 V	60	8	-	75	-	90	-	ns
		V _{CC} = 4.5 V	12	3	-	15	-	18	-	ns
		V _{CC} = 6.0 V	10	2	-	13	-	15	-	ns
		DS to SHCP; see Figure 11								
		V _{CC} = 2.0 V	60	11	-	75	-	90	-	ns
		V _{CC} = 4.5 V	12	4	-	15	-	18	-	ns
		V _{CC} = 6.0 V	10	3	-	13	-	15	-	ns
		PL to SHCP; see Figure 12								
		V _{CC} = 2.0 V	60	11	-	75	-	90	-	ns
		V _{CC} = 4.5 V	12	4	-	15	-	18	-	ns
		V _{CC} = 6.0 V	10	3	-	13	-	15	-	ns
t _h	hold time	Dn to STCP; see Figure 11								
		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
		PL, DS to SHCP; see Figure 11								
		V _{CC} = 2.0 V	5	-6	-	5	-	5	-	ns
		V _{CC} = 4.5 V	5	-2	-	5	-	5	-	ns
		V _{CC} = 6.0 V	5	-2	-	5	-	5	-	ns
f _{max}	maximum	SHCP; see Figure 7								
	frequency	V _{CC} = 2.0 V	6.0	29	-	4.8	-	4.0	-	MHz
		V _{CC} = 4.5 V	30	87	-	24	-	20	-	MHz
		$V_{CC} = 5.0 \text{ V}; C_L = 15 \text{ pF}$	-	96	-	-	-	-	-	MHz
		V _{CC} = 6.0 V	35	104	-	28	-	24	-	MHz
C _{PD}	power dissipation capacitance	$C_L = 50 \text{ pF}; f = 1 \text{ MHz};$ $V_I = \text{GND to } V_{CC}$	-	29	-	-	-	-	-	pF

 Table 7.
 Dynamic characteristics ...continued

Symbol	Parameter	Conditions		25 °C		-40 °C	to +85 °C	–40 °C t	o +125 °C	Unit
			Min	Тур	Max	Min	Max	Min	Max	
74HCT5	97									
t _{pd}	propagation	SHCP to Q; see Figure 7	1							
•	delay	V _{CC} = 4.5 V	-	23	40	-	50	-	60	ns
		$V_{CC} = 5.0 \text{ V}; C_L = 15 \text{ pF}$	-	20	-	-	-	-	-	ns
		MR to Q; see Figure 8	1							
		V _{CC} = 4.5 V	-	28	49	-	61	-	74	ns
		STCP to Q; see Figure 7	1							
		V _{CC} = 4.5 V	-	33	57	-	71	-	86	ns
		$V_{CC} = 5.0 \text{ V}; C_L = 15 \text{ pF}$	-	29	-	-	-	-	-	ns
		PL to Q; see Figure 9	1							
		V _{CC} = 4.5 V	-	30	52	-	65	-	78	ns
		$V_{CC} = 5.0 \text{ V}; C_L = 15 \text{ pF}$	-	26	-	-	-	-	-	ns
t _t	transition	see Figure 7	2]							
	time	V _{CC} = 4.5 V	-	7	15	-	19	-	22	ns
t _W	pulse width	STCP HIGH or LOW;								
		see Figure 7								
		$V_{CC} = 4.5 \text{ V}$	16	6	-	20	-	24	-	ns
		SHCP HIGH or LOW; see Figure 7								
		V _{CC} = 4.5 V	16	7	-	20	-	24	-	ns
		MR LOW; see Figure 8								
		V _{CC} = 4.5 V	25	14	-	31	-	38	-	ns
		PL LOW; see Figure 9								
		V _{CC} = 4.5 V	20	10	-	25	-	30	-	ns
t _{rec}	recovery time	MR to SHCP; see Figure 10								
		V _{CC} = 4.5 V	12	-2	-	15	-	18	-	ns
t _{su}	set-up time	Dn to STCP; see Figure 11								
		V _{CC} = 4.5 V	12	5	-	15	-	18	-	ns
		DS to SHCP; see Figure 11								
		V _{CC} = 4.5 V	12	2	-	15	-	18	-	ns
		PL to SHCP; see Figure 12								
		V _{CC} = 4.5 V	12	4	-	15	-	18	-	ns

 Table 7.
 Dynamic characteristics ...continued

Voltages are referenced to GND (ground = 0 V); $C_L = 50 \text{ pF}$ unless otherwise specified; for test circuit, see Figure 13.

Symbol	Parameter	Conditions		25 °C		-40 °C to +85 °C		-40 °C to +125 °C		Unit
			Min	Тур	Max	Min	Max	Min	Max	
t _h	hold time	Dn to STCP; see Figure 11								
		V _{CC} = 4.5 V	5	-1	-	5	-	5	-	ns
		PL, DS to SHCP; see Figure 11								
		V _{CC} = 4.5 V	5	-2	-	5	-	5	-	ns
f _{max}	maximum	SHCP; see Figure 7								
	frequency	V _{CC} = 4.5 V	30	75	-	24	-	20	-	MHz
		$V_{CC} = 5.0 \text{ V}; C_L = 15 \text{ pF}$	-	83	-	-	-	-	-	MHz
C _{PD}	power dissipation capacitance	$C_L = 50 \text{ pF; } f = 1 \text{ MHz;}$ $V_I = \text{GND to } V_{CC} - 1.5 \text{ V}$	-	32	-	-	-	-	-	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).

 $P_D = C_{PD} \times V_{CC}^2 \times f_i \times N + \sum (C_L \times V_{CC}^2 \times f_o)$ where:

 f_i = input frequency in MHz;

f_o = output frequency in MHz;

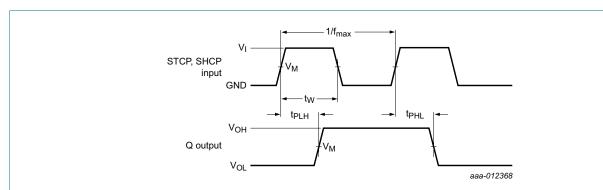
C_L = output load capacitance in pF;

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

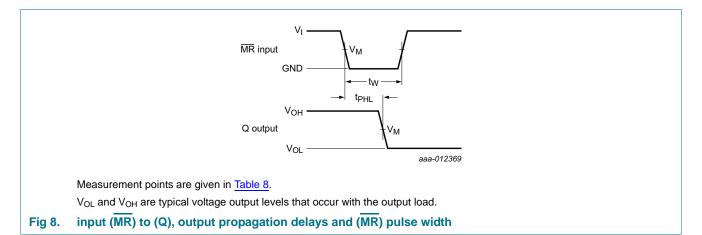


Measurement points are given in Table 8.

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

Fig 7. Shift clock and storage clock inputs to output, propagation delays, pulse widths and maximum clock frequency

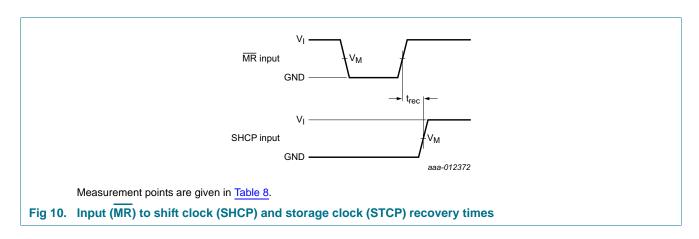
74HC_HCT597

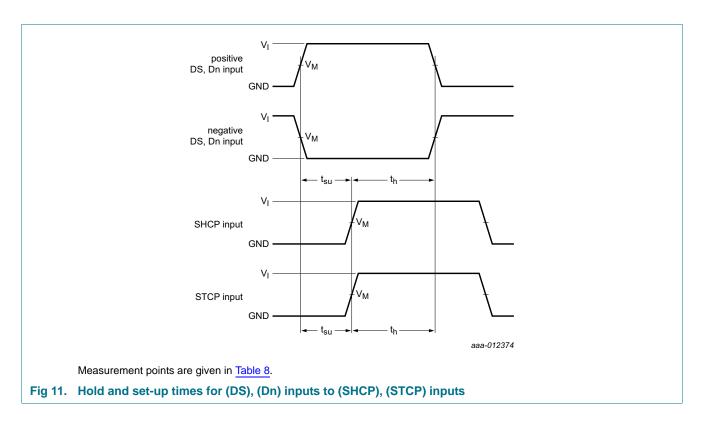


Measurement points are given in Table 8.

Vol. and Voh are typical voltage output levels that occur with the output load.

Fig 9. Input (PL) to (Q), output propagation delays, PL pulse width and output transition times





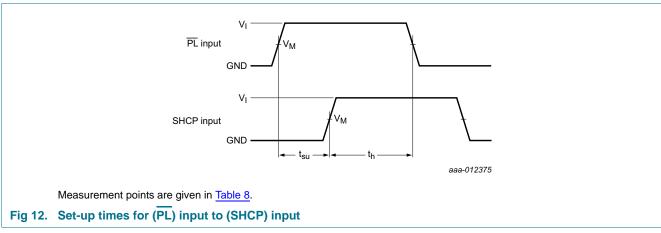
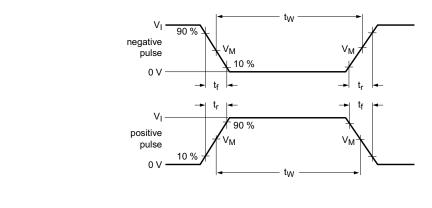
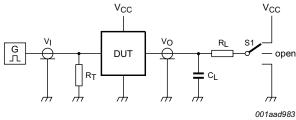


Table 8. Measurement points

Туре	Input		Output
	V_{M}	V _I	V _M
74HC597	$0.5 \times V_{CC}$	GND to V _{CC}	$0.5 \times V_{CC}$
74HCT597	1.3 V	GND to 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 13. Test circuit for measuring switching times

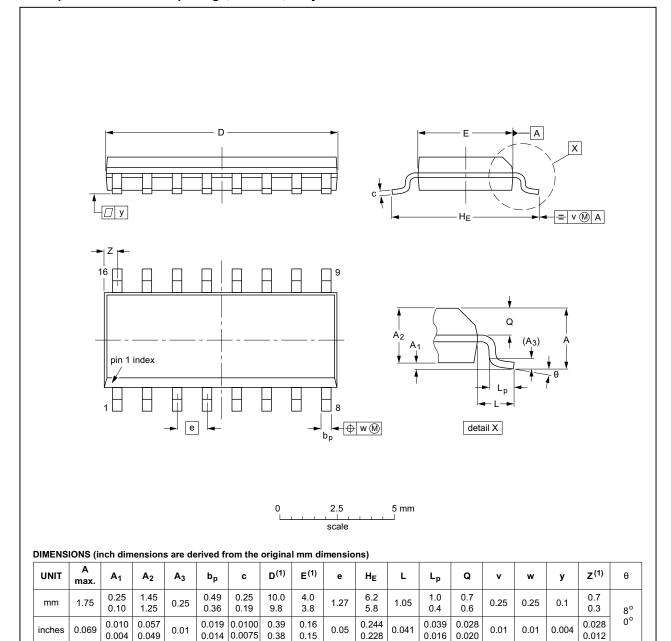
Table 9. Test data

Туре	Input		Load		S1 position			
	VI	t _r , t _f	CL	R _L	t _{PHL} , t _{PLH}	t _{PZH} , t _{PHZ}	t _{PZL} , t _{PLZ}	
74HC597	V _{CC}	6 ns	15 pF, 50 pF	1 kΩ	open	GND	V _{CC}	
74HCT597	3 V	6 ns	15 pF, 50 pF	1 kΩ	open	GND	V _{CC}	

12. Package outline

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

SOT109-1



Note

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

OUTLINE		REFER	EUROPEAN	ISSUE DATE			
VERSION	ION IEC JEDEC		JEITA		PROJECTION	ISSUE DATE	
SOT109-1	076E07	MS-012				99-12-27 03-02-19	

Fig 14. Package outline SOT109-1 (SO16)

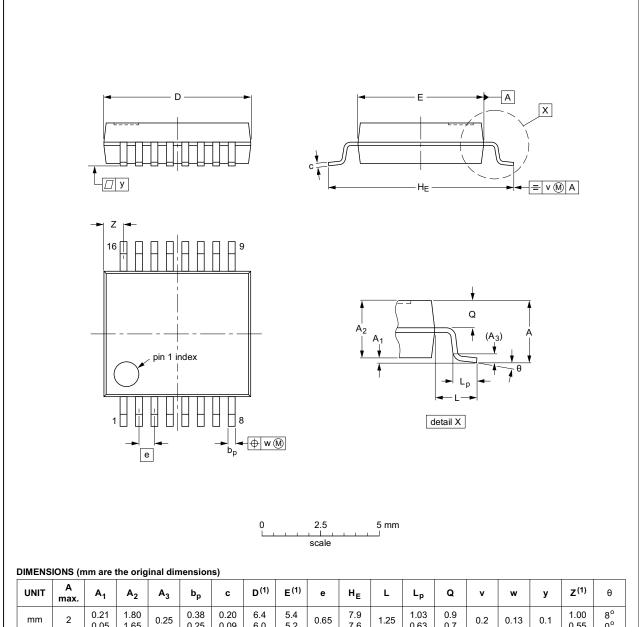
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SSOP16: plastic shrink small outline package; 16 leads; body width 5.3 mm

SOT338-1



UNIT	A max.	A ₁	A ₂	A ₃	b _p	C	D ⁽¹⁾	E ⁽¹⁾	е	HE	L	Lp	Q	٧	w	у	Z ⁽¹⁾	θ
mm	2	0.21 0.05	1.80 1.65	0.25	0.38 0.25	0.20 0.09	6.4 6.0	5.4 5.2	0.65	7.9 7.6	1.25	1.03 0.63	0.9 0.7	0.2	0.13	0.1	1.00 0.55	8° 0°

Note

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

OUTLINE		REFER	EUROPEAN	ISSUE DATE		
VERSION	IEC JEDEC	JEITA		PROJECTION	ISSUE DATE	
SOT338-1		MO-150				99-12-27 03-02-19

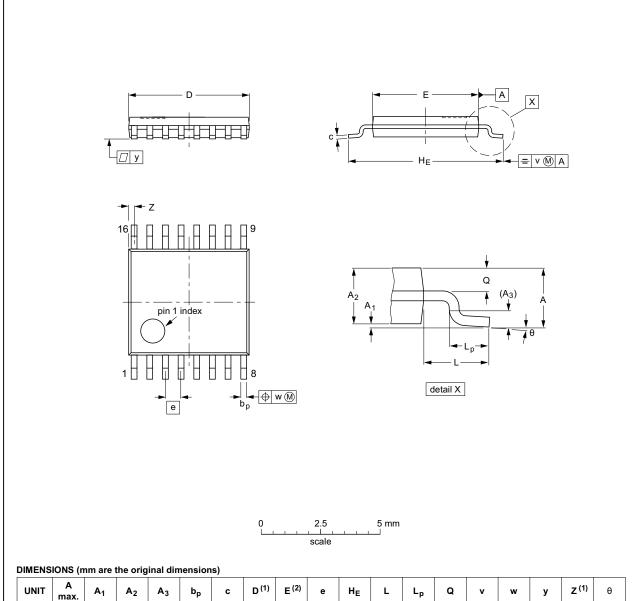
Fig 15. Package outline SOT338-1 (SSOP16)

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

SOT403-1



UNIT	A max.	A ₁	A ₂	A ₃	b _p	С	D ⁽¹⁾	E (2)	е	HE	L	Lp	Q	v	w	у	Z ⁽¹⁾	θ
mm	1.1	0.15 0.05	0.95 0.80	0.25	0.30 0.19	0.2 0.1	5.1 4.9	4.5 4.3	0.65	6.6 6.2	1	0.75 0.50	0.4 0.3	0.2	0.13	0.1	0.40 0.06	8° 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		REFER	RENCES	EUROPEAN	ISSUE DATE	
VERSION	IEC	JEDEC	JEITA	PROJECTION		
SOT403-1		MO-153			99-12-27 03-02-18	

Fig 16. Package outline SOT403-1 (TSSOP16)

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13. Abbreviations

Table 10. Abbreviations

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

14. Revision history

Table 11. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes					
74HC_HCT597 v.4	20160225	Product data sheet	-	74HC_HCT597 v.3					
Modifications:	Type number	Type numbers 74HC597N and 74HCT597N (SOT38-4) removed.							
74HC_HCT597 v.3	20140415	Product data sheet	-	74HC_HCT597_CNV v.2					
Modifications:		 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_HCT597_CNV v.2	19901201	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.nexperia.com.

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