74HC1G125; 74HCT1G125

Bus buffer/line driver; 3-state

Rev. 05 — 23 December 2005 Product data sheet

1. General description

The 74HC1G125; 74HCT1G125 is a high-speed, Si-gate CMOS device.

The 74HC1G125; 74HCT1G125 provides one non-inverting buffer/line driver with 3-state output. The 3-state output is controlled by the output enable input (pin $\overline{OE}$). A HIGH level at pin $\overline{OE}$ causes the output to assume a high-impedance OFF-state.

The bus driver output currents are equal compared to the 74HC125 and 74HCT125.

2. Features

- Wide supply voltage range from 2.0 V to 6.0 V
- Symmetrical output impedance
- High noise immunity
- Low power consumption
- Balanced propagation delays
- ESD protection:
  - HBM EIA/JESD22-A114-C exceeds 2000 V
  - MM EIA/JESD22-A115-A exceeds 200 V
- Very small 5 pins packages
- Specified from –40 °C to +85 °C and –40 °C to +125 °C

3. Quick reference data

Table 1: Quick reference data
GND = 0 V; T_{amb} = 25 °C; $t_r = t_f \leq 6.0$ ns.

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
74HC1G125							
t_{PHL}, t_{PLH}	propagation delay A to Y	V_{CC} = 5 V; C_L = 15 pF		-	9	-	ns
C_i	input capacitance			-	1.5	-	pF
C_{PD}	power dissipation capacitance	V_I = GND to V_{CC}	[1]	-	30	-	pF

Table 1: Quick reference data *...continued*

GND = 0 V; T_{amb} = 25 °C; $t_r = t_f \leq 6.0$ ns.

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
74HCT1G125							
t_{PHL}, t_{PLH}	propagation delay A to Y	V_{CC} = 5 V; C_L = 15 pF		-	10	-	ns
C_i	input capacitance			-	1.5	-	pF
C_{PD}	power dissipation capacitance	V_I = GND to V_{CC} − 1.5 V	[1]	-	27	-	pF

[1] 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 the outputs.

4. Ordering information

Table 2: Ordering information

Type number	Package			
	Temperature range	Name	Description	Version
74HC1G125				
74HC1G125GW	−40 °C to +125 °C	TSSOP5	plastic thin shrink small outline package; 5 leads; body width 1.25 mm	SOT353-1
74HC1G125GV	−40 °C to +125 °C	SC-74A	plastic surface mounted package; 5 leads	SOT753
74HCT1G125				
74HCT1G125GW	−40 °C to +125 °C	TSSOP5	plastic thin shrink small outline package; 5 leads; body width 1.25 mm	SOT353-1
74HCT1G125GV	−40 °C to +125 °C	SC-74A	plastic surface mounted package; 5 leads	SOT753

5. Marking

Table 3: Marking

Type number	Marking code
74HC1G125GW	HM
74HC1G125GV	H25
74HCT1G125GW	TM
74HCT1G125GV	T25

6. Functional diagram

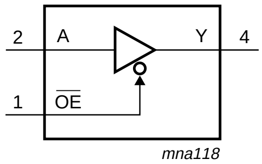


Fig 1. Logic symbol

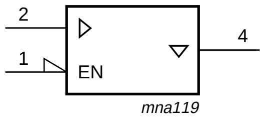


Fig 2. IEC logic symbol

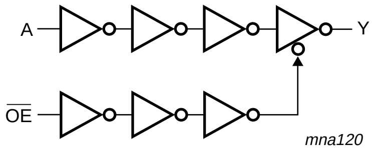


Fig 3. Logic diagram

7. Pinning information

7.1 Pinning

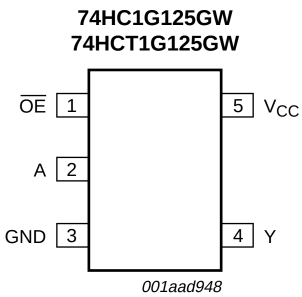


Fig 4. Pin configuration TSSOP5

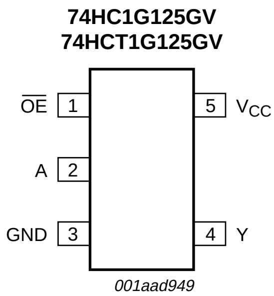


Fig 5. Pin configuration SC-74A

7.2 Pin description

Table 4: Pin description

Symbol	Pin	Description
$\overline{OE}$	1	output enable input (active LOW)
A	2	data input
GND	3	ground (0 V)
Y	4	data output
V_{CC}	5	supply voltage

8. Functional description

8.1 Function table

Table 5: Function table [1]

Control	Input	Output
$\overline{OE}$	A	Y
L	L	L
L	H	H
H	X	Z

[1] H = HIGH voltage level;
L = LOW voltage level;
X = don't care;
Z = high-impedance OFF-state.

9. Limiting values

Table 6: 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	$V_I < -0.5$ V or $V_I > V_{CC} + 0.5$ V	[1]	-	±20	mA
I_{OK}	output clamping current	$V_O < -0.5$ V or $V_O > V_{CC} + 0.5$ V	[1]	-	±20	mA
I_O	output current	$V_O = -0.5$ V to (V_{CC} + 0.5 V)	[1]	-	±35	mA
I_{CC}	quiescent 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 °C to +125 °C	[2]	-	200	mW

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

[2] Above 55 °C the value of P_{tot} derates linearly with 2.5 mW/K.

10. Recommended operating conditions

Table 7: Recommended operating conditions

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
74HC1G125						
V_{CC}	supply voltage		2.0	5.0	6.0	V
V_I	input voltage		0	-	V_{CC}	V
V_O	output voltage		0	-	V_{CC}	V
T_{amb}	ambient temperature		–40	+25	+125	°C
t_r, t_f	input rise and fall times	V_{CC} = 2.0 V	-	-	1000	ns
		V_{CC} = 4.5 V	-	-	500	ns
		V_{CC} = 6.0 V	-	-	400	ns
74HCT1G125						
V_{CC}	supply voltage		4.5	5.0	5.5	V
V_I	input voltage		0	-	V_{CC}	V
V_O	output voltage		0	-	V_{CC}	V
T_{amb}	ambient temperature		–40	+25	+125	°C
t_r, t_f	input rise and fall times	V_{CC} = 4.5 V	-	-	500	ns

11. Static characteristics

Table 8: Static characteristics 74HC1G125

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_{amb} = –40 °C to +85 °C [1]						
V_{IH}	HIGH-state input voltage	V_{CC} = 2.0 V	1.5	1.2	-	V
		V_{CC} = 4.5 V	3.15	2.4	-	V
		V_{CC} = 6.0 V	4.2	3.2	-	V
V_{IL}	LOW-state input voltage	V_{CC} = 2.0 V	-	0.8	0.5	V
		V_{CC} = 4.5 V	-	2.1	1.35	V
		V_{CC} = 6.0 V	-	2.8	1.8	V
V_{OH}	HIGH-state output voltage	V_I = V_{IH} or V_{IL}				
		I_O = –20 μA; V_{CC} = 2.0 V	1.9	2.0	-	V
		I_O = –20 μA; V_{CC} = 4.5 V	4.4	4.5	-	V
		I_O = –20 μA; V_{CC} = 6.0 V	5.9	6.0	-	V
		I_O = –6.0 mA; V_{CC} = 4.5 V	3.84	4.32	-	V
		I_O = –7.8 mA; V_{CC} = 6.0 V	5.34	5.81	-	V
V_{OL}	LOW-state output voltage	V_I = V_{IH} or V_{IL}				
		I_O = 20 μA; V_{CC} = 2.0 V	-	0	0.1	V
		I_O = 20 μA; V_{CC} = 4.5 V	-	0	0.1	V
		I_O = 20 μA; V_{CC} = 6.0 V	-	0	0.1	V
		I_O = 6.0 mA; V_{CC} = 4.5 V	-	0.15	0.33	V
		I_O = 7.8 mA; V_{CC} = 6.0 V	-	0.16	0.33	V

Table 8: Static characteristics 74HC1G125 *...continued*

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
I_{LI}	input leakage current	$V_I = V_{CC}$ or GND; V_{CC} = 6.0 V	-	-	1.0	μA
I_{OZ}	OFF-state output current	$V_I = V_{IH}$ or V_{IL}; $V_O = V_{CC}$ or GND; V_{CC} = 6.0 V	-	-	5	μA
I_{CC}	quiescent supply current	$V_I = V_{CC}$ or GND; I_O = 0 A; V_{CC} = 6.0 V	-	-	10	μA
C_i	input capacitance		-	1.5	-	pF
T_{amb} = −40 °C to +125 °C						
V_{IH}	HIGH-state input voltage	V_{CC} = 2.0 V	1.5	-	-	V
		V_{CC} = 4.5 V	3.15	-	-	V
		V_{CC} = 6.0 V	4.2	-	-	V
V_{IL}	LOW-state input voltage	V_{CC} = 2.0 V	-	-	0.5	V
		V_{CC} = 4.5 V	-	-	1.35	V
		V_{CC} = 6.0 V	-	-	1.8	V
V_{OH}	HIGH-state output voltage	$V_I = V_{IH}$ or V_{IL}				
		I_O = −20 μA; V_{CC} = 2.0 V	1.9	-	-	V
		I_O = −20 μA; V_{CC} = 4.5 V	4.4	-	-	V
		I_O = −20 μA; V_{CC} = 6.0 V	5.9	-	-	V
		I_O = −6.0 mA; V_{CC} = 4.5 V	3.7	-	-	V
		I_O = −7.8 mA; V_{CC} = 6.0 V	5.2	-	-	V
V_{OL}	LOW-state output voltage	$V_I = V_{IH}$ or V_{IL}				
		I_O = 20 μA; V_{CC} = 2.0 V	-	-	0.1	V
		I_O = 20 μA; V_{CC} = 4.5 V	-	-	0.1	V
		I_O = 20 μA; V_{CC} = 6.0 V	-	-	0.1	V
		I_O = 6.0 mA; V_{CC} = 4.5 V	-	-	0.4	V
		I_O = 7.8 mA; V_{CC} = 6.0 V	-	-	0.4	V
I_{LI}	input leakage current	$V_I = V_{CC}$ or GND; V_{CC} = 6.0 V	-	-	1.0	μA
I_{OZ}	OFF-state output current	$V_I = V_{IH}$ or V_{IL}; $V_O = V_{CC}$ or GND; V_{CC} = 6.0 V	-	-	10	μA
I_{CC}	quiescent supply current	$V_I = V_{CC}$ or GND; I_O = 0 A; V_{CC} = 6.0 V	-	-	20	μA

[1] All typical values are measured at T_{amb} = 25 °C.

Table 9: Static characteristics 74HCT1G125

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_{amb} = −40 °C to +85 °C [1]						
V_{IH}	HIGH-state input voltage	V_{CC} = 4.5 V to 5.5 V	2.0	1.6	-	V
V_{IL}	LOW-state input voltage	V_{CC} = 4.5 V to 5.5 V	-	1.2	0.8	V
V_{OH}	HIGH-state output voltage	V_I = V_{IH} or V_{IL}; V_{CC} = 4.5 V				
		I_O = −20 µA	4.4	4.5	-	V
		I_O = −6.0 mA	3.84	4.32	-	V
V_{OL}	LOW-state output voltage	V_I = V_{IH} or V_{IL}; V_{CC} = 4.5 V				
		I_O = 20 µA	-	0	0.1	V
		I_O = 6.0 mA	-	0.16	0.33	V
I_{LI}	input leakage current	V_I = V_{CC} or GND; V_{CC} = 5.5 V	-	-	1.0	µA
I_{OZ}	OFF-state output current	V_I = V_{IH} or V_{IL}; V_O = V_{CC} or GND; V_{CC} = 5.5 V	-	-	5	µA
I_{CC}	quiescent supply current	V_I = V_{CC} or GND; I_O = 0 A; V_{CC} = 6.0 V	-	-	10	µA
ΔI_{CC}	additional quiescent supply current	V_I = V_{CC} − 2.1 V; I_O = 0 A; V_{CC} = 4.5 V to 5.5 V	-	-	500	µA
C_i	input capacitance		-	1.5	-	pF
T_{amb} = −40 °C to +125 °C						
V_{IH}	HIGH-state input voltage	V_{CC} = 4.5 V to 5.5 V	2.0	-	-	V
V_{IL}	LOW-state input voltage	V_{CC} = 4.5 V to 5.5 V	-	-	0.8	V
V_{OH}	HIGH-state output voltage	V_I = V_{IH} or V_{IL}; V_{CC} = 4.5 V				
		I_O = −20 µA	4.4	-	-	V
		I_O = −6.0 mA	3.7	-	-	V
V_{OL}	LOW-state output voltage	V_I = V_{IH} or V_{IL}; V_{CC} = 4.5 V				
		I_O = 20 µA	-	-	0.1	V
		I_O = 6.0 mA	-	-	0.4	V
I_{LI}	input leakage current	V_I = V_{CC} or GND; V_{CC} = 5.5 V	-	-	1.0	µA
I_{OZ}	OFF-state output current	V_I = V_{IH} or V_{IL}; V_O = V_{CC} or GND; V_{CC} = 5.5 V	-	-	10	µA
I_{CC}	quiescent supply current	V_I = V_{CC} or GND; I_O = 0 A; V_{CC} = 6.0 V	-	-	20	µA
ΔI_{CC}	additional quiescent supply current	V_I = V_{CC} − 2.1 V; I_O = 0 A; V_{CC} = 4.5 V to 5.5 V	-	-	850	µA

[1] All typical values are measured at T_{amb} = 25 °C.

12. Dynamic characteristics

Table 10: Dynamic characteristics 74HC1G125

Voltages are referenced to GND (ground = 0 V); CL = 50 pF unless otherwise specified; for test circuit see Figure 8

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
T_{amb} = −40 °C to +85 °C [1]							
t_{PHL}, t_{PLH}	propagation delay A to Y	see Figure 6					
		V_{CC} = 2.0 V		-	24	125	ns
		V_{CC} = 4.5 V		-	10	25	ns
		V_{CC} = 5 V; C_L = 15 pF		-	9	-	ns
		V_{CC} = 6.0 V		-	8	21	ns
t_{PZH}, t_{PZL}	3-state output enable time $\overline{OE}$ to Y	see Figure 7					
		V_{CC} = 2.0 V		-	19	155	ns
		V_{CC} = 4.5 V		-	9	31	ns
		V_{CC} = 6.0 V		-	7	26	ns
t_{PHZ}, t_{PLZ}	3-state output disable time $\overline{OE}$ to Y	see Figure 7					
		V_{CC} = 2.0 V		-	18	155	ns
		V_{CC} = 4.5 V		-	12	31	ns
		V_{CC} = 6.0 V		-	11	26	ns
C_{PD}	power dissipation capacitance	V_I = GND to V_{CC}	[2]	-	30	-	pF
T_{amb} = −40 °C to +125 °C							
t_{PHL}, t_{PLH}	propagation delay A to Y	see Figure 6					
		V_{CC} = 2.0 V		-	-	150	ns
		V_{CC} = 4.5 V		-	-	30	ns
		V_{CC} = 6.0 V		-	-	26	ns
t_{PZH}, t_{PZL}	3-state output enable time $\overline{OE}$ to Y	see Figure 7					
		V_{CC} = 2.0 V		-	-	190	ns
		V_{CC} = 4.5 V		-	-	38	ns
		V_{CC} = 6.0 V		-	-	32	ns
t_{PHZ}, t_{PLZ}	3-state output disable time $\overline{OE}$ to Y	see Figure 7					
		V_{CC} = 2.0 V		-	-	190	ns
		V_{CC} = 4.5 V		-	-	38	ns
		V_{CC} = 6.0 V		-	-	32	ns

[1] All typical values are measured at T_{amb} = 25 °C.

[2] 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 the outputs.

Table 11: Dynamic characteristics 74HCT1G125

Voltages are referenced to GND (ground = 0 V); CL = 50 pF unless otherwise specified; for test circuit see Figure 8

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
T_{amb} = −40 °C to +85 °C [1]							
t_{PHL}, t_{PLH}	propagation delay A to Y	see Figure 6					
		V_{CC} = 4.5 V		-	11	30	ns
		V_{CC} = 5 V; C_L = 15 pF		-	10	-	ns
t_{PZH}, t_{PZL}	3-state output enable time $\overline{OE}$ to Y	V_{CC} = 4.5 V; see Figure 7		-	10	35	ns
t_{PHZ}, t_{PLZ}	3-state output disable time $\overline{OE}$ to Y	V_{CC} = 4.5 V; see Figure 7		-	11	31	ns
C_{PD}	power dissipation capacitance	V_I = GND to V_{CC} − 1.5 V	[2]	-	27	-	pF
T_{amb} = −40 °C to +125 °C							
t_{PHL}, t_{PLH}	propagation delay A to Y	V_{CC} = 4.5 V; see Figure 6		-	-	36	ns
t_{PZH}, t_{PZL}	3-state output enable time $\overline{OE}$ to Y	V_{CC} = 4.5 V; see Figure 7		-	-	42	ns
t_{PHZ}, t_{PLZ}	3-state output disable time $\overline{OE}$ to Y	V_{CC} = 4.5 V; see Figure 7		-	-	38	ns

[1] All typical values are measured at T_{amb} = 25 °C.

[2] 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;

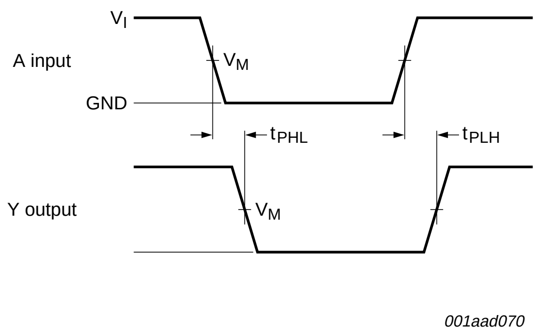
C_L = output load capacitance in pF;

V_{CC} = supply voltage in V;

N = number of inputs switching;

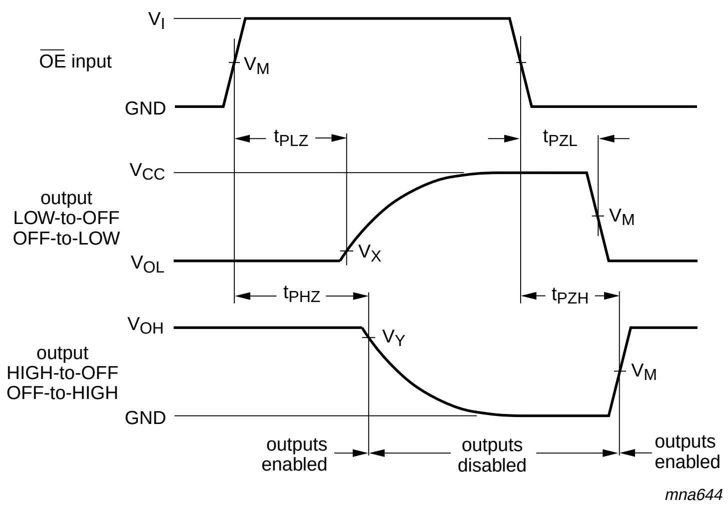
$\Sigma(C_L \times V_{CC}^2 \times f_o)$ = sum of the outputs.

13. Waveforms



Measurement points are given in Table 12.

Fig 6. Propagation delay data input (A) to output (Y)



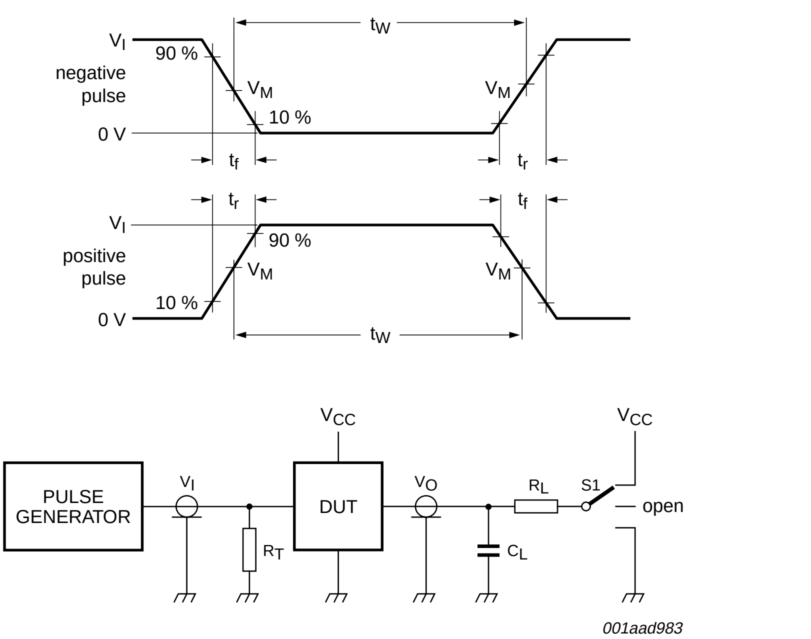
Measurement points are given in Table 12.

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

Fig 7. Enable and disable times

Table 12: Measurement points

Type	Input	Output		
	V_M	V_M	V_X	V_Y
74HC1G125	$0.5V_{CC}$	$0.5V_{CC}$	$V_{OL} + 0.3$ V	$V_{OH} - 0.3$ V
74HCT1G125	1.3 V	1.3 V	$V_{OL} + 0.3$ V	$V_{OH} - 0.3$ V



Test data is given in Table 13.

Definitions for test circuit:

R_T = Termination resistance should be equal to the output impedance Z_o of the pulse generator

C_L = Load capacitance including jig and probe capacitance

R_L = Load resistor

S1 = Test selection switch

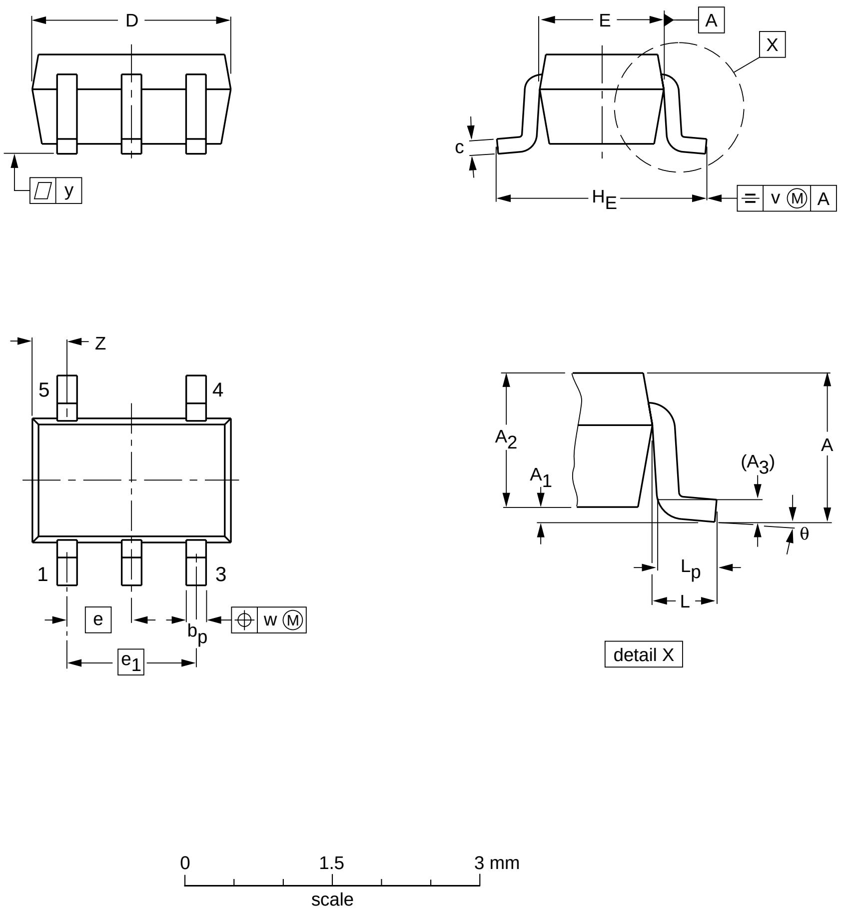
Fig 8. Load circuitry for measuring switching times

Table 13: Test data

Type	Input		Load		S1 position		
	V_I	t_r, t_f	C_L	R_L	t_{PLH}, t_{PHL}	t_{PZH}, t_{PHZ}	t_{PZL}, t_{PLZ}
74HC1G125	V_{CC}	6 ns	15 pF, 50 pF	1 kΩ	open	GND	V_{CC}
74HCT1G125	3 V	6 ns	15 pF, 50 pF	1 kΩ	open	GND	V_{CC}

14. Package outline

TSSOP5: plastic thin shrink small outline package; 5 leads; body width 1.25 mm **SOT353-1**



DIMENSIONS (mm are the original dimensions)

UNIT	A max.	A_1	A_2	A_3	b_p	c	D(1)	E(1)	e	e_1	H_E	L	L_p	v	w	y	Z(1)	θ
mm	1.1	0.1 0	1.0 0.8	0.15	0.30 0.15	0.25 0.08	2.25 1.85	1.35 1.15	0.65	1.3	2.25 2.0	0.425	0.46 0.21	0.3	0.1	0.1	0.60 0.15	7° 0°

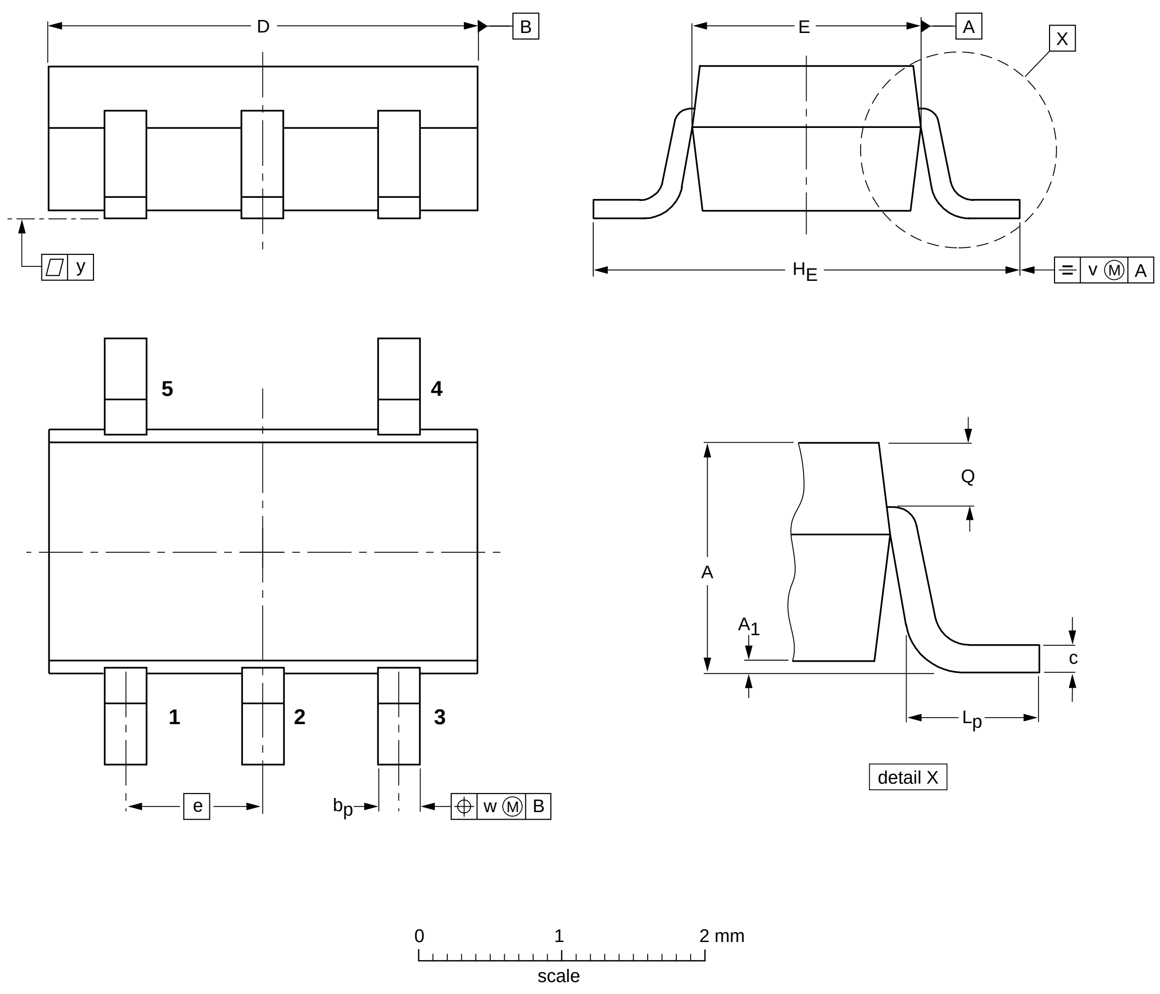
Note

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

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA			
SOT353-1		MO-203	SC-88A			~~00-09-01~~ 03-02-19

Fig 9. Package outline SOT353-1 (TSSOP5)

Plastic surface mounted package; 5 leads **SOT753**



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1	b_p	c	D	E	e	H_E	L_p	Q	v	w	y
mm	1.1 0.9	0.100 0.013	0.40 0.25	0.26 0.10	3.1 2.7	1.7 1.3	0.95	3.0 2.5	0.6 0.2	0.33 0.23	0.2	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA			
SOT753			SC-74A			02-04-16

Fig 10. Package outline SOT753 (SC-74A)

15. Abbreviations

Table 14: Abbreviations

Acronym	Description
CMOS	Complementary Metal Oxide Semiconductor
ESD	ElectroStatic Discharge
HBM	Human Body Model
TTL	Transistor-Transistor Logic
MM	Machine Model

16. Revision history

Table 15: Revision history

Document ID	Release date	Data sheet status	Change notice	Doc. number	Supersedes
74HC_HCT1G125_5	20051223	Product data sheet	ECN05_085	-	74HC_HCT1G125_4
Modifications:	• The format of this data sheet has been redesigned to comply with the new presentation and information standard of Philips Semiconductors. • In Table 6 "Limiting values" – I_O: changed max value ±12.5 into ±35 – I_{CC}: changed max value 25 into 70 – I_{GND}: changed max value –25 into –70 • In Table 8 "Static characteristics 74HC1G125"; T_{amb} = –40 °C to +85 °C – V_{OH}: changed condition I_O = –2.0 mA into I_O = –6.0 mA and min value from 4.13 into 3.84 – V_{OH}: changed condition I_O = –2.6 mA into I_O = –7.8 mA and min value from 5.63 into 5.34 – V_{OL}: changed condition I_O = 2.0 mA into I_O = 6.0 mA – V_{OL}: changed condition I_O = 2.6 mA into I_O = 7.8 mA • In Table 8 "Static characteristics 74HC1G125"; T_{amb} = –40 °C to +125 °C – V_{OH}: changed condition I_O = –2.0 mA into I_O = –6.0 mA – V_{OL}: changed condition I_O = 2.0 mA into I_O = 6.0 mA • In Table 9 "Static characteristics 74HCT1G125"; T_{amb} = –40 °C to +85 °C – V_{OH}: changed condition I_O = –2.0 mA into I_O = –6.0 mA and min value from 4.13 into 3.84 – V_{OL}: changed condition I_O = 2.0 mA into I_O = 6.0 mA and typ value from 0.15 into 0.16 • In Table 9 "Static characteristics 74HCT1G125"; T_{amb} = –40 °C to +125 °C – V_{OH}: changed condition I_O = –2.0 mA into I_O = –6.0 mA – V_{OL}: changed condition I_O = 2.0 mA into I_O = 6.0 mA				
74HC_HCT1G125_4	20040727	Product specification	-	9397 750 13725	74HC_HCT1G125_3
74HC_HCT1G125_3	20020517	Product specification	-	9397 750 09718	74HC_HCT1G125_2
74HC_HCT1G125_2	20010302	Product specification	-	9397 750 07966	74HC_HCT1G125_1
74HC_HCT1G125_1	19981110	Product specification	-	9397 750 03693	-

17. Data sheet status

Level	Data sheet status [1]	Product status [2] [3]	Definition
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[3] For data sheets describing multiple type numbers, the highest-level product status determines the data sheet status.

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Limiting values definition — Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 60134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.

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22. Contents

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