

# 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  $-40\text{ }^{\circ}\text{C}$  to  $+85\text{ }^{\circ}\text{C}$  and  $-40\text{ }^{\circ}\text{C}$  to  $+125\text{ }^{\circ}\text{C}$

## 3. Quick reference data

**Table 1: Quick reference data**

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

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

**PHILIPS**

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

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

[1]  $C_{PD}$  is used to determine the dynamic power dissipation ( $P_D$  in  $\mu\text{W}$ ). $P_D = C_{PD} \times V_{CC}^2 \times f_i \times N + \Sigma(C_L \times V_{CC}^2 \times f_o)$  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			Version
	Temperature range	Name	Description	
<b>74HC1G125</b>				
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
<b>74HCT1G125</b>				
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

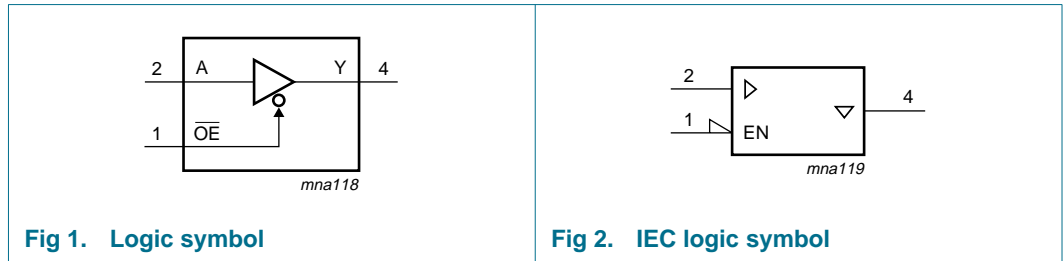


Fig 1. Logic symbol

Fig 2. IEC logic symbol

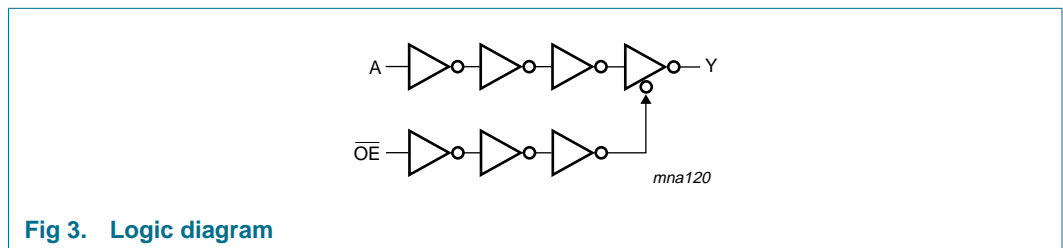


Fig 3. Logic diagram

## 7. Pinning information

### 7.1 Pinning

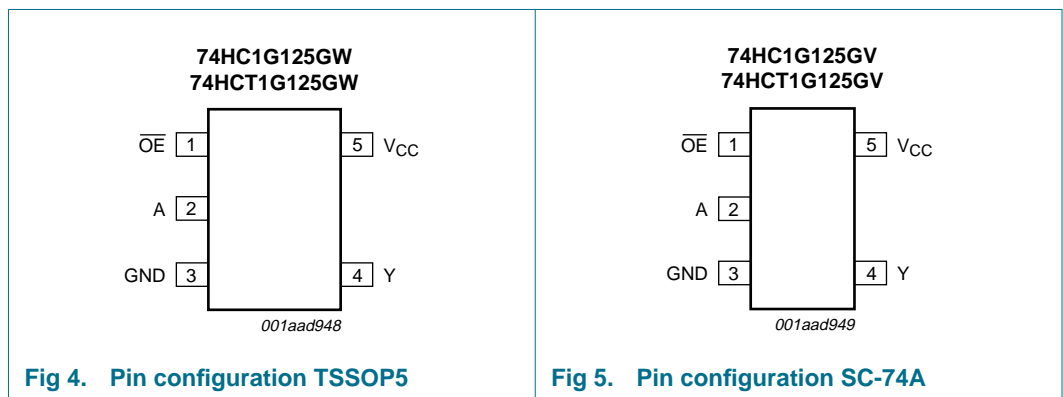


Fig 4. Pin configuration TSSOP5

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 <sup>[1]</sup>

Control	Input	Output
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	$V_I < -0.5\text{ V}$ or $V_I > V_{CC} + 0.5\text{ V}$	<sup>[1]</sup> -	±20	mA
$I_{OK}$	output clamping current	$V_O < -0.5\text{ V}$ or $V_O > V_{CC} + 0.5\text{ V}$	<sup>[1]</sup> -	±20	mA
$I_O$	output current	$V_O = -0.5\text{ V}$ to $(V_{CC} + 0.5\text{ V})$	<sup>[1]</sup> -	±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	$T_{amb} = -40\text{ °C}$ to $+125\text{ °C}$	<sup>[2]</sup> -	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
<b>74HC1G125</b>						
$V_{CC}$	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	$V_{CC} = 2.0\text{ V}$	-	-	1000	ns
		$V_{CC} = 4.5\text{ V}$	-	-	500	ns
		$V_{CC} = 6.0\text{ V}$	-	-	400	ns
<b>74HCT1G125</b>						
$V_{CC}$	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	$V_{CC} = 4.5\text{ V}$	-	-	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
$T_{amb} = -40\text{ °C to }+85\text{ °C}$ [1]						
$V_{IH}$	HIGH-state input voltage	$V_{CC} = 2.0\text{ V}$	1.5	1.2	-	V
		$V_{CC} = 4.5\text{ V}$	3.15	2.4	-	V
		$V_{CC} = 6.0\text{ V}$	4.2	3.2	-	V
$V_{IL}$	LOW-state input voltage	$V_{CC} = 2.0\text{ V}$	-	0.8	0.5	V
		$V_{CC} = 4.5\text{ V}$	-	2.1	1.35	V
		$V_{CC} = 6.0\text{ V}$	-	2.8	1.8	V
$V_{OH}$	HIGH-state output voltage	$V_I = V_{IH}$ or $V_{IL}$				
		$I_O = -20\text{ }\mu\text{A}; V_{CC} = 2.0\text{ V}$	1.9	2.0	-	V
		$I_O = -20\text{ }\mu\text{A}; V_{CC} = 4.5\text{ V}$	4.4	4.5	-	V
		$I_O = -20\text{ }\mu\text{A}; V_{CC} = 6.0\text{ V}$	5.9	6.0	-	V
		$I_O = -6.0\text{ mA}; V_{CC} = 4.5\text{ V}$	3.84	4.32	-	V
		$I_O = -7.8\text{ mA}; V_{CC} = 6.0\text{ V}$	5.34	5.81	-	V
$V_{OL}$	LOW-state output voltage	$V_I = V_{IH}$ or $V_{IL}$				
		$I_O = 20\text{ }\mu\text{A}; V_{CC} = 2.0\text{ V}$	-	0	0.1	V
		$I_O = 20\text{ }\mu\text{A}; V_{CC} = 4.5\text{ V}$	-	0	0.1	V
		$I_O = 20\text{ }\mu\text{A}; V_{CC} = 6.0\text{ V}$	-	0	0.1	V
		$I_O = 6.0\text{ mA}; V_{CC} = 4.5\text{ V}$	-	0.15	0.33	V
		$I_O = 7.8\text{ mA}; V_{CC} = 6.0\text{ V}$	-	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	$\mu$ A
$I_{OZ}$	OFF-state output current	$V_I = V_{IH}$ or $V_{IL}$ ; $V_O = V_{CC}$ or GND; $V_{CC} = 6.0$ V	-	-	5	$\mu$ A
$I_{CC}$	quiescent supply current	$V_I = V_{CC}$ or GND; $I_O = 0$ A; $V_{CC} = 6.0$ V	-	-	10	$\mu$ A
$C_i$	input capacitance		-	1.5	-	pF
<b><math>T_{amb} = -40</math> °C to <math>+125</math> °C</b>						
$V_{IH}$	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 $V_{IL}$				
		$I_O = -20$ $\mu$ A; $V_{CC} = 2.0$ V	1.9	-	-	V
		$I_O = -20$ $\mu$ A; $V_{CC} = 4.5$ V	4.4	-	-	V
		$I_O = -20$ $\mu$ A; $V_{CC} = 6.0$ V	5.9	-	-	V
		$I_O = -6.0$ mA; $V_{CC} = 4.5$ V	3.7	-	-	V
$V_{OL}$	LOW-state output voltage	$V_I = V_{IH}$ or $V_{IL}$				
		$I_O = 20$ $\mu$ A; $V_{CC} = 2.0$ V	-	-	0.1	V
		$I_O = 20$ $\mu$ A; $V_{CC} = 4.5$ V	-	-	0.1	V
		$I_O = 20$ $\mu$ A; $V_{CC} = 6.0$ 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	$\mu$ A
$I_{OZ}$	OFF-state output current	$V_I = V_{IH}$ or $V_{IL}$ ; $V_O = V_{CC}$ or GND; $V_{CC} = 6.0$ V	-	-	10	$\mu$ A
$I_{CC}$	quiescent supply current	$V_I = V_{CC}$ or GND; $I_O = 0$ A; $V_{CC} = 6.0$ V	-	-	20	$\mu$ A

[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
<b><math>T_{amb} = -40\text{ °C to }+85\text{ °C}</math> [1]</b>						
$V_{IH}$	HIGH-state input voltage	$V_{CC} = 4.5\text{ V to }5.5\text{ V}$	2.0	1.6	-	V
$V_{IL}$	LOW-state input voltage	$V_{CC} = 4.5\text{ V to }5.5\text{ V}$	-	1.2	0.8	V
$V_{OH}$	HIGH-state output voltage	$V_I = V_{IH}\text{ or }V_{IL}; V_{CC} = 4.5\text{ V}$				
		$I_O = -20\text{ }\mu\text{A}$	4.4	4.5	-	V
		$I_O = -6.0\text{ mA}$	3.84	4.32	-	V
$V_{OL}$	LOW-state output voltage	$V_I = V_{IH}\text{ or }V_{IL}; V_{CC} = 4.5\text{ V}$				
		$I_O = 20\text{ }\mu\text{A}$	-	0	0.1	V
		$I_O = 6.0\text{ mA}$	-	0.16	0.33	V
$I_{LI}$	input leakage current	$V_I = V_{CC}\text{ or GND}; V_{CC} = 5.5\text{ V}$	-	-	1.0	$\mu\text{A}$
$I_{OZ}$	OFF-state output current	$V_I = V_{IH}\text{ or }V_{IL}; V_O = V_{CC}\text{ or GND}; V_{CC} = 5.5\text{ V}$	-	-	5	$\mu\text{A}$
$I_{CC}$	quiescent supply current	$V_I = V_{CC}\text{ or GND}; I_O = 0\text{ A}; V_{CC} = 6.0\text{ V}$	-	-	10	$\mu\text{A}$
$\Delta I_{CC}$	additional quiescent supply current	$V_I = V_{CC} - 2.1\text{ V}; I_O = 0\text{ A}; V_{CC} = 4.5\text{ V to }5.5\text{ V}$	-	-	500	$\mu\text{A}$
$C_i$	input capacitance		-	1.5	-	pF
<b><math>T_{amb} = -40\text{ °C to }+125\text{ °C}</math></b>						
$V_{IH}$	HIGH-state input voltage	$V_{CC} = 4.5\text{ V to }5.5\text{ V}$	2.0	-	-	V
$V_{IL}$	LOW-state input voltage	$V_{CC} = 4.5\text{ V to }5.5\text{ V}$	-	-	0.8	V
$V_{OH}$	HIGH-state output voltage	$V_I = V_{IH}\text{ or }V_{IL}; V_{CC} = 4.5\text{ V}$				
		$I_O = -20\text{ }\mu\text{A}$	4.4	-	-	V
		$I_O = -6.0\text{ mA}$	3.7	-	-	V
$V_{OL}$	LOW-state output voltage	$V_I = V_{IH}\text{ or }V_{IL}; V_{CC} = 4.5\text{ V}$				
		$I_O = 20\text{ }\mu\text{A}$	-	-	0.1	V
		$I_O = 6.0\text{ mA}$	-	-	0.4	V
$I_{LI}$	input leakage current	$V_I = V_{CC}\text{ or GND}; V_{CC} = 5.5\text{ V}$	-	-	1.0	$\mu\text{A}$
$I_{OZ}$	OFF-state output current	$V_I = V_{IH}\text{ or }V_{IL}; V_O = V_{CC}\text{ or GND}; V_{CC} = 5.5\text{ V}$	-	-	10	$\mu\text{A}$
$I_{CC}$	quiescent supply current	$V_I = V_{CC}\text{ or GND}; I_O = 0\text{ A}; V_{CC} = 6.0\text{ V}$	-	-	20	$\mu\text{A}$
$\Delta I_{CC}$	additional quiescent supply current	$V_I = V_{CC} - 2.1\text{ V}; I_O = 0\text{ A}; V_{CC} = 4.5\text{ V to }5.5\text{ V}$	-	-	850	$\mu\text{A}$

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

## 12. Dynamic characteristics

**Table 10: Dynamic characteristics 74HC1G125**

Voltages are referenced to GND (ground = 0 V);  $C_L = 50$  pF unless otherwise specified; for test circuit see [Figure 8](#)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
<b><math>T_{amb} = -40</math> °C to <math>+85</math> °C [1]</b>						
$t_{PHL}$ , $t_{PLH}$	propagation delay A to Y	see <a href="#">Figure 6</a>				
		$V_{CC} = 2.0$ 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 OE to Y	see <a href="#">Figure 7</a>				
		$V_{CC} = 2.0$ 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 OE to Y	see <a href="#">Figure 7</a>				
		$V_{CC} = 2.0$ 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	$V_I = \text{GND to } V_{CC}$	[2]	-	30	pF
<b><math>T_{amb} = -40</math> °C to <math>+125</math> °C</b>						
$t_{PHL}$ , $t_{PLH}$	propagation delay A to Y	see <a href="#">Figure 6</a>				
		$V_{CC} = 2.0$ 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 OE to Y	see <a href="#">Figure 7</a>				
		$V_{CC} = 2.0$ 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 OE to Y	see <a href="#">Figure 7</a>				
		$V_{CC} = 2.0$ 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  $\mu$ 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.



**Table 11: Dynamic characteristics 74HCT1G125**

Voltages are referenced to GND (ground = 0 V);  $C_L = 50$  pF unless otherwise specified; for test circuit see [Figure 8](#)

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

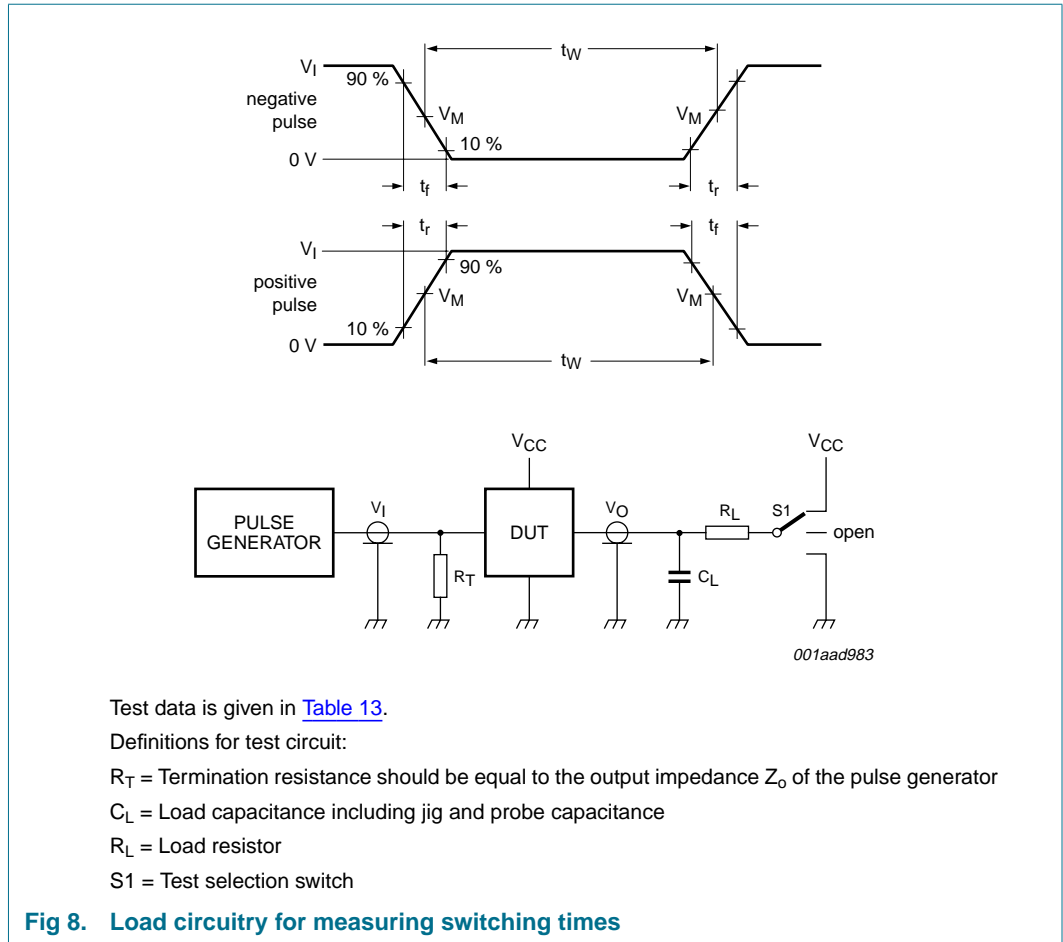
$C_L$  = output load capacitance in pF;

$V_{CC}$  = supply voltage in V;

$N$  = number of inputs switching;

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





**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 k $\Omega$	open	GND	$V_{CC}$
74HCT1G125	3 V	6 ns	15 pF, 50 pF	1 k $\Omega$	open	GND	$V_{CC}$

14. Package outline

TSSOP5: plastic thin shrink small outline package; 5 leads; body width 1.25 mm

SOT353-1

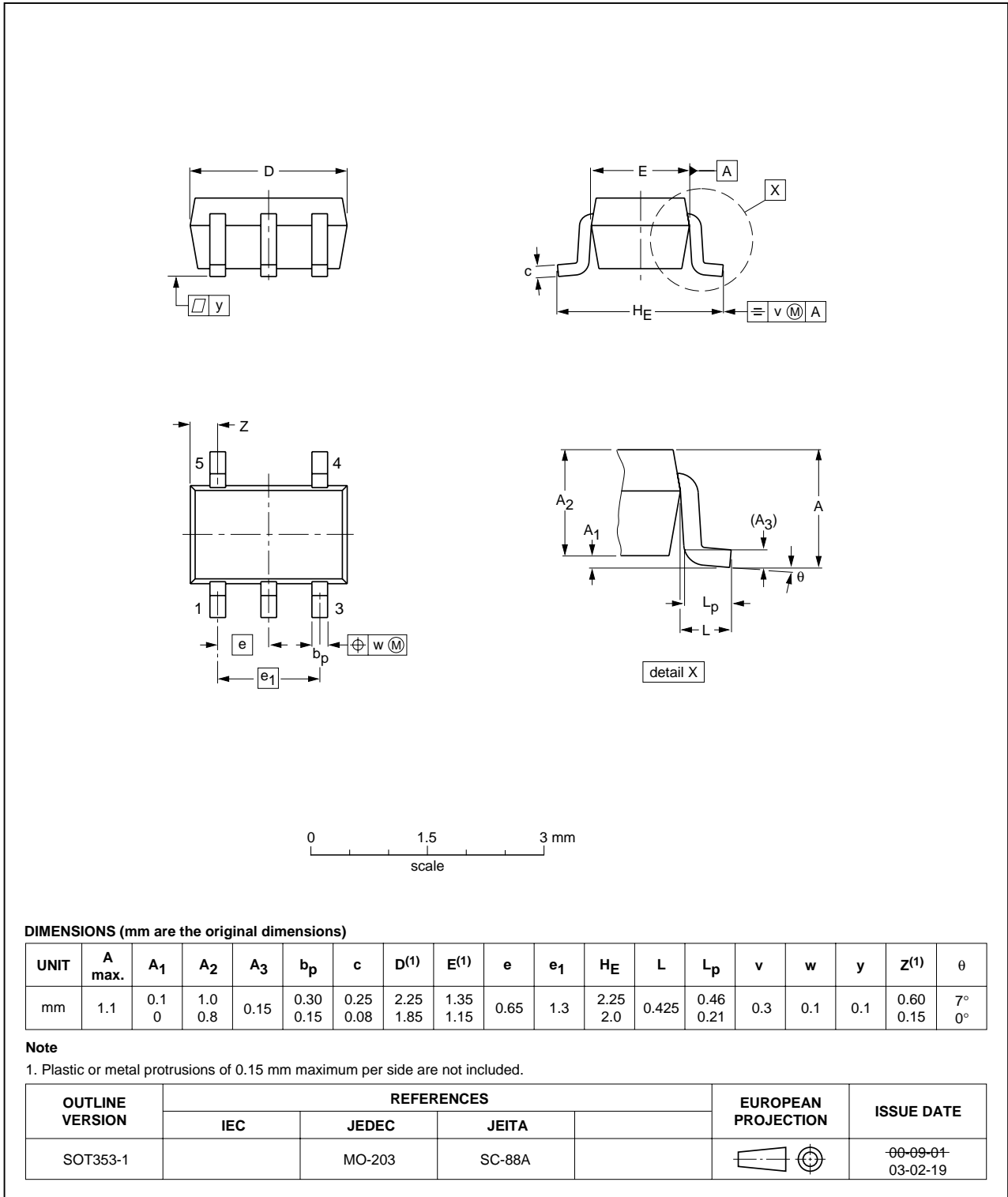


Fig 9. Package outline SOT353-1 (TSSOP5)

Plastic surface mounted package; 5 leads

SOT753

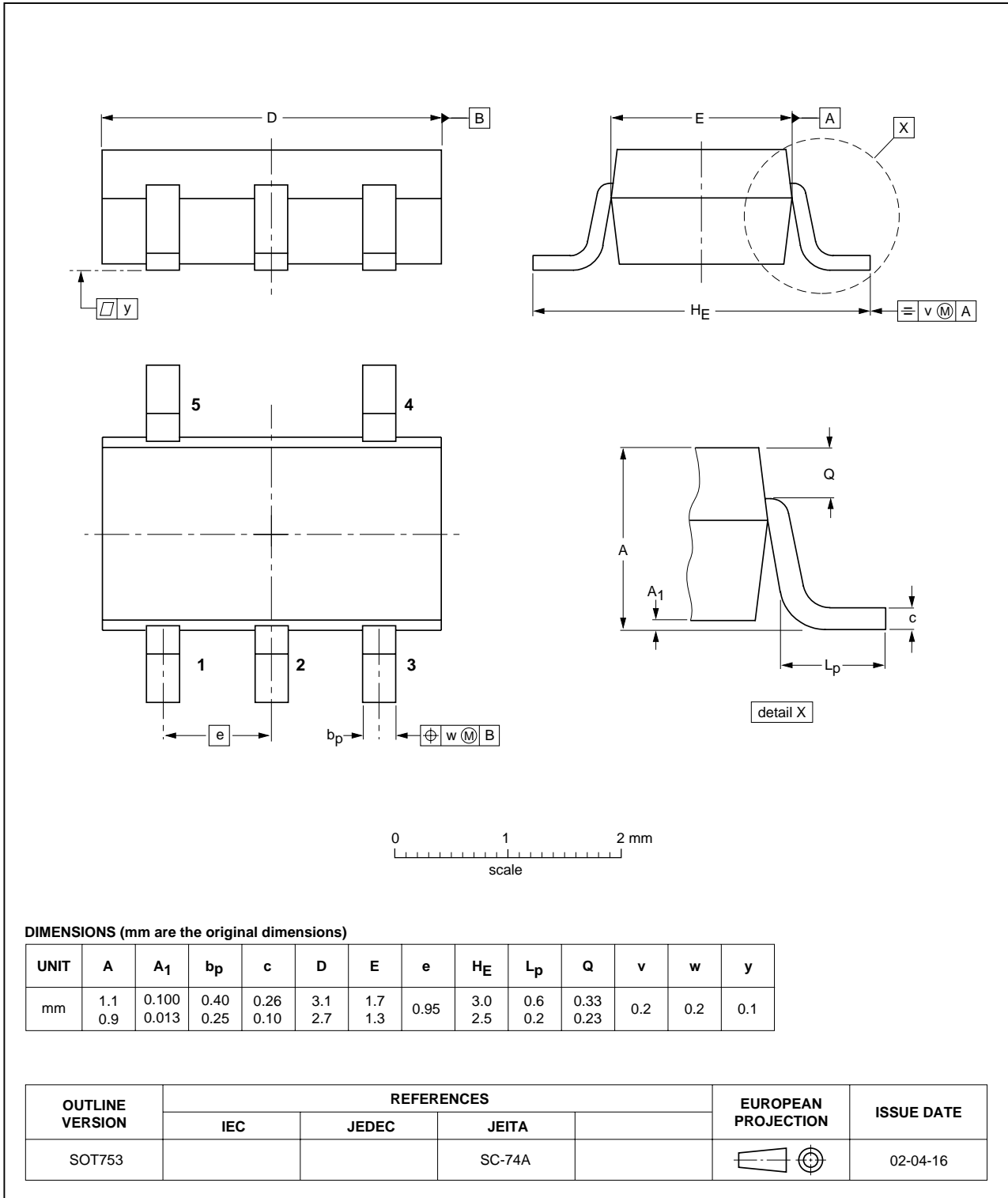


Fig 10. Package outline SOT753 (SC-74A)

## 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: <ul style="list-style-type: none"> <li>• The format of this data sheet has been redesigned to comply with the new presentation and information standard of Philips Semiconductors.</li> <li>• In <a href="#">Table 6 "Limiting values"</a> <ul style="list-style-type: none"> <li>– <math>I_O</math>: changed max value <math>\pm 12.5</math> into <math>\pm 35</math></li> <li>– <math>I_{CC}</math>: changed max value 25 into 70</li> <li>– <math>I_{GND}</math>: changed max value <math>-25</math> into <math>-70</math></li> </ul> </li> <li>• In <a href="#">Table 8 "Static characteristics 74HC1G125"</a>; <math>T_{amb} = -40\text{ }^{\circ}\text{C}</math> to <math>+85\text{ }^{\circ}\text{C}</math> <ul style="list-style-type: none"> <li>– <math>V_{OH}</math>: changed condition <math>I_O = -2.0\text{ mA}</math> into <math>I_O = -6.0\text{ mA}</math> and min value from 4.13 into 3.84</li> <li>– <math>V_{OH}</math>: changed condition <math>I_O = -2.6\text{ mA}</math> into <math>I_O = -7.8\text{ mA}</math> and min value from 5.63 into 5.34</li> <li>– <math>V_{OL}</math>: changed condition <math>I_O = 2.0\text{ mA}</math> into <math>I_O = 6.0\text{ mA}</math></li> <li>– <math>V_{OL}</math>: changed condition <math>I_O = 2.6\text{ mA}</math> into <math>I_O = 7.8\text{ mA}</math></li> </ul> </li> <li>• In <a href="#">Table 8 "Static characteristics 74HC1G125"</a>; <math>T_{amb} = -40\text{ }^{\circ}\text{C}</math> to <math>+125\text{ }^{\circ}\text{C}</math> <ul style="list-style-type: none"> <li>– <math>V_{OH}</math>: changed condition <math>I_O = -2.0\text{ mA}</math> into <math>I_O = -6.0\text{ mA}</math></li> <li>– <math>V_{OL}</math>: changed condition <math>I_O = 2.0\text{ mA}</math> into <math>I_O = 6.0\text{ mA}</math></li> </ul> </li> <li>• In <a href="#">Table 9 "Static characteristics 74HCT1G125"</a>; <math>T_{amb} = -40\text{ }^{\circ}\text{C}</math> to <math>+85\text{ }^{\circ}\text{C}</math> <ul style="list-style-type: none"> <li>– <math>V_{OH}</math>: changed condition <math>I_O = -2.0\text{ mA}</math> into <math>I_O = -6.0\text{ mA}</math> and min value from 4.13 into 3.84</li> <li>– <math>V_{OL}</math>: changed condition <math>I_O = 2.0\text{ mA}</math> into <math>I_O = 6.0\text{ mA}</math> and typ value from 0.15 into 0.16</li> </ul> </li> <li>• In <a href="#">Table 9 "Static characteristics 74HCT1G125"</a>; <math>T_{amb} = -40\text{ }^{\circ}\text{C}</math> to <math>+125\text{ }^{\circ}\text{C}</math> <ul style="list-style-type: none"> <li>– <math>V_{OH}</math>: changed condition <math>I_O = -2.0\text{ mA}</math> into <math>I_O = -6.0\text{ mA}</math></li> <li>– <math>V_{OL}</math>: changed condition <math>I_O = 2.0\text{ mA}</math> into <math>I_O = 6.0\text{ mA}</math></li> </ul> </li> </ul>					
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 <sup>[1]</sup>	Product status <sup>[2] [3]</sup>	Definition
I	Objective data	Development	This data sheet contains data from the objective specification for product development. Philips Semiconductors reserves the right to change the specification in any manner without notice.
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