

DATA SHEET

74AHC2G125; 74AHCT2G125 Bus buffer/line driver; 3-state

Product specification

2004 Jan 13

Bus buffer/line driver; 3-state**74AHC2G125; 74AHCT2G125****FEATURES**

- Symmetrical output impedance
- High noise immunity
- ESD protection:
 - HBM EIA/JESD22-A114-A exceeds 2000 V
 - MM EIA/JESD22-A115-A exceeds 200 V
 - CDM EIA/JESD22-C101 exceeds 1000 V.
- Low power dissipation
- Balanced propagation delays
- SOT505-2 and SOT765-1 package
- Specified from –40 to +85 °C and –40 to +125 °C.

DESCRIPTION

The 74AHC2G/AHCT2G125 is a high-speed Si-gate CMOS device.

The 74AHC2G/AHCT2G125 provides a dual non-inverting buffer/line driver with 3-state output. The 3-state output is controlled by the output enable input ($n\overline{OE}$). A HIGH at pin $n\overline{OE}$ causes the output to assume a high-impedance OFF-state.

QUICK REFERENCE DATA

GND = 0 V; $T_{amb} = 25\text{ °C}$; $t_r = t_f \leq 3.0\text{ ns}$.

SYMBOL	PARAMETER	CONDITIONS	TYPICAL		UNIT
			AHC2G	AHCT2G	
t_{PHL}/t_{PLH}	propagation delay nA to nY	$C_L = 15\text{ pF}$; $V_{CC} = 5\text{ V}$	3.4	3.4	ns
C_I	input capacitance		1.5	1.5	pF
C_{PD}	power dissipation capacitance	$C_L = 50\text{ pF}$; $f = 1\text{ MHz}$; notes 1 and 2	9	11	pF

Notes

1. C_{PD} is used to determine the dynamic power dissipation (P_D in μW).

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

f_i = input frequency in MHz;

f_o = output frequency in MHz;

C_L = output load capacitance in pF;

V_{CC} = supply voltage in Volts;

N = total load switching outputs;

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

2. The condition is $V_I = \text{GND to } V_{CC}$.

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FUNCTION TABLE

See note 1.

INPUT		OUTPUT
$\overline{\text{nOE}}$	nA	nY
L	L	L
L	H	H
H	X	Z

Note

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

ORDERING INFORMATION

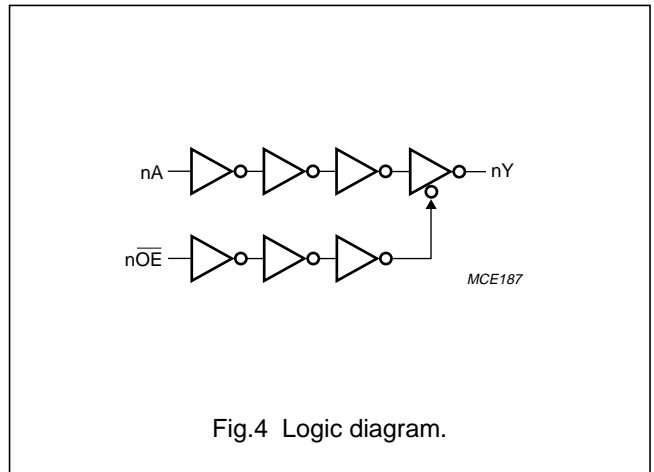
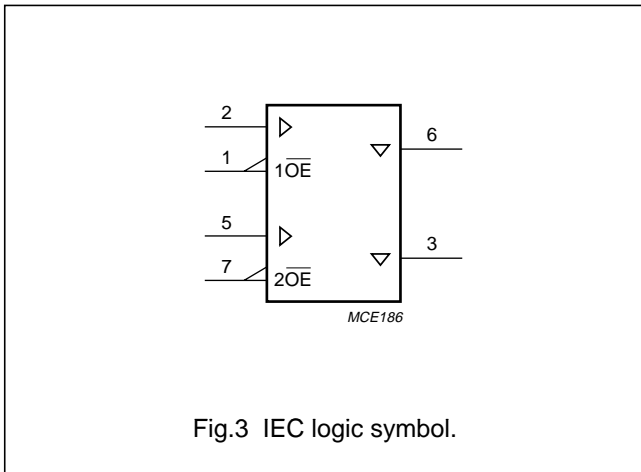
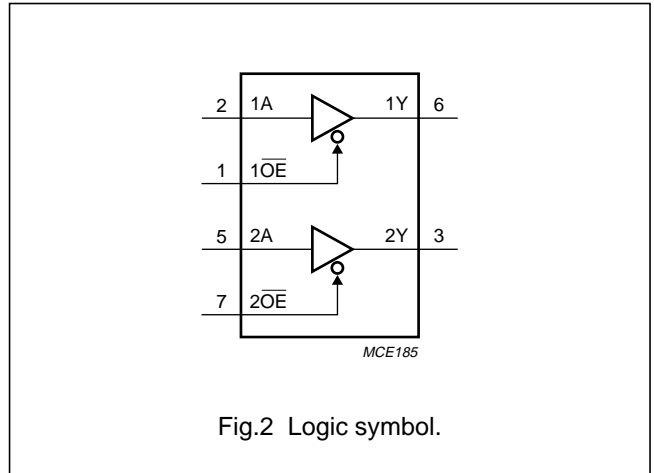
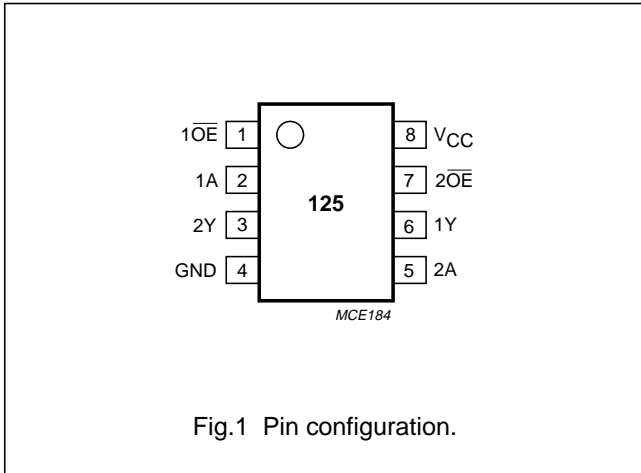
TYPE NUMBER	PACKAGE					
	TEMPERATURE RANGE	PINS	PACKAGE	MATERIAL	CODE	MARKING
74AHC2G125DP	-40 to +125 °C	8	TSSOP8	plastic	SOT505-2	A25
74AHCT2G125DP	-40 to +125 °C	8	TSSOP8	plastic	SOT505-2	C25
74AHC2G125DC	-40 to +125 °C	8	VSSOP8	plastic	SOT765-1	A25
74AHCT2G125DC	-40 to +125 °C	8	VSSOP8	plastic	SOT765-1	C25

PINNING

PIN	SYMBOL	DESCRIPTION
1	1OE	output enable input (active LOW)
2	1A	data input
3	2Y	data output
4	GND	ground (0 V)
5	2A	data input
6	1Y	data output
7	2OE	output enable input (active LOW)
8	V _{CC}	supply voltage

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RECOMMENDED OPERATING CONDITIONS

SYMBOL	PARAMETER	CONDITIONS	74AHC2G125			74AHCT2G125			UNIT
			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
V_{CC}	supply voltage		2.0	5.0	5.5	4.5	5.0	5.5	V
V_I	input voltage		0	–	5.5	0	–	5.5	V
V_O	output voltage		0	–	V_{CC}	0	–	V_{CC}	V
T_{amb}	operating ambient temperature	see DC and AC characteristics per device	–40	+25	+125	–40	+25	+125	°C
t_r, t_f	input rise and fall times	$V_{CC} = 3.3 \pm 0.3$ V	–	–	100	–	–	–	ns/V
		$V_{CC} = 5 \pm 0.5$ V	–	–	20	–	–	20	ns/V

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
V_I	input voltage		–0.5	+7.0	V
I_{IK}	input diode current	$V_I < -0.5$ V	–	–20	mA
I_{OK}	output diode current	$V_O < -0.5$ V or $V_O > V_{CC} + 0.5$ V; note 1	–	± 20	mA
I_O	output source or sink current	-0.5 V < V_O < $V_{CC} + 0.5$ V	–	± 25	mA
I_{CC}, I_{GND}	V_{CC} or GND current		–	± 75	mA
T_{stg}	storage temperature		–65	+150	°C
P_{tot}	power dissipation	$T_{amb} = -40$ to $+125$ °C	–	250	mW

Note

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

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DC CHARACTERISTICS

Type 74AHC2G125

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

SYMBOL	PARAMETER	CONDITIONS		MIN.	TYP.	MAX.	UNIT
		OTHER	V _{CC} (V)				
T_{amb} = 25 °C							
V _{IH}	HIGH-level input voltage		2.0	1.5	–	–	V
			3.0	2.1	–	–	V
			5.5	3.85	–	–	V
V _{IL}	LOW-level input voltage		2.0	–	–	0.5	V
			3.0	–	–	0.9	V
			5.5	–	–	1.65	V
V _{OH}	HIGH-level output voltage	V _I = V _{IH} or V _{IL} I _O = –50 µA	2.0	1.9	2.0	–	V
		I _O = –50 µA	3.0	2.9	3.0	–	V
		I _O = –50 µA	4.5	4.4	4.5	–	V
		I _O = –4.0 mA	3.0	2.58	–	–	V
		I _O = –8.0 mA	4.5	3.94	–	–	V
V _{OL}	LOW-level output voltage	V _I = V _{IH} or V _{IL} I _O = 50 µA	2.0	–	0	0.1	V
		I _O = 50 µA	3.0	–	0	0.1	V
		I _O = 50 µA	4.5	–	0	0.1	V
		I _O = 4.0 mA	3.0	–	–	0.36	V
		I _O = 8.0 mA	4.5	–	–	0.36	V
I _{oz}	3-state output OFF-state current	V _I = V _{CC} or GND	5.5	–	–	0.25	µA
I _{LI}	input leakage current	V _I = V _{CC} or GND	5.5	–	–	0.1	µA
I _{CC}	quiescent supply current	V _I = V _{CC} or GND; I _O = 0	5.5	–	–	1.0	µA
C _I	input capacitance		–	–	1.5	10	pF

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SYMBOL	PARAMETER	CONDITIONS		MIN.	TYP.	MAX.	UNIT
		OTHER	V _{CC} (V)				
T_{amb} = -40 to +85 °C							
V _{IH}	HIGH-level input voltage		2.0	1.5	–	–	V
			3.0	2.1	–	–	V
			5.5	3.85	–	–	V
V _{IL}	LOW-level input voltage		2.0	–	–	0.5	V
			3.0	–	–	0.9	V
			5.5	–	–	1.65	V
V _{OH}	HIGH-level output voltage	V _I = V _{IH} or V _{IL} I _O = -50 µA	2.0	1.9	–	–	V
		I _O = -50 µA	3.0	2.9	–	–	V
		I _O = -50 µA	4.5	4.4	–	–	V
		I _O = -4.0 mA	3.0	2.48	–	–	V
		I _O = -8.0 mA	4.5	3.8	–	–	V
V _{OL}	LOW-level output voltage	V _I = V _{IH} or V _{IL} I _O = 50 µA	2.0	–	–	0.1	V
		I _O = 50 µA	3.0	–	–	0.1	V
		I _O = 50 µA	4.5	–	–	0.1	V
		I _O = 4.0 mA	3.0	–	–	0.44	V
		I _O = 8.0 mA	4.5	–	–	0.44	V
I _{OZ}	3-state output OFF-state current	V _I = V _{CC} or GND	5.5	–	–	2.5	µA
I _{LI}	input leakage current	V _I = V _{CC} or GND	5.5	–	–	1.0	µA
I _{CC}	quiescent supply current	V _I = V _{CC} or GND; I _O = 0	5.5	–	–	10	µA
C _I	input capacitance		–	–	–	10	pF

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SYMBOL	PARAMETER	CONDITIONS		MIN.	TYP.	MAX.	UNIT
		OTHER	V _{CC} (V)				
T_{amb} = -40 to +125 °C							
V _{IH}	HIGH-level input voltage		2.0	1.5	–	–	V
			3.0	2.1	–	–	V
			5.5	3.85	–	–	V
V _{IL}	LOW-level input voltage		2.0	–	–	0.5	V
			3.0	–	–	0.9	V
			5.5	–	–	1.65	V
V _{OH}	HIGH-level output voltage	V _I = V _{IH} or V _{IL} I _O = -50 µA	2.0	1.9	–	–	V
		I _O = -50 µA	3.0	2.9	–	–	V
		I _O = -50 µA	4.5	4.4	–	–	V
		I _O = -4.0 mA	3.0	2.40	–	–	V
		I _O = -8.0 mA	4.5	3.70	–	–	V
V _{OL}	LOW-level output voltage	V _I = V _{IH} or V _{IL} I _O = 50 µA	2.0	–	–	0.1	V
		I _O = 50 µA	3.0	–	–	0.1	V
		I _O = 50 µA	4.5	–	–	0.1	V
		I _O = 4.0 mA	3.0	–	–	0.55	V
		I _O = 8.0 mA	4.5	–	–	0.55	V
I _{OZ}	3-state output OFF-state current	V _I = V _{CC} or GND	5.5	–	–	10	µA
I _{LI}	input leakage current	V _I = V _{CC} or GND	5.5	–	–	2.0	µA
I _{CC}	quiescent supply current	V _I = V _{CC} or GND; I _O = 0	5.5	–	–	40	µA
C _I	input capacitance		–	–	–	10	pF

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Type 74AHCT2G125

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

SYMBOL	PARAMETER	CONDITIONS		MIN.	TYP.	MAX.	UNIT
		OTHER	V _{CC} (V)				
T_{amb} = 25 °C							
V _{IH}	HIGH-level input voltage		4.5 to 5.5	2.0	–	–	V
V _{IL}	LOW-level input voltage		4.5 to 5.5	–	–	0.8	V
V _{OH}	HIGH-level output voltage	V _I = V _{IH} or V _{IL} I _O = –50 µA	4.5	4.4	4.5	–	V
		I _O = –8.0 mA	4.5	3.94	–	–	V
V _{OL}	LOW-level output voltage	V _I = V _{IH} or V _{IL} I _O = 50 µA	4.5	–	0	0.1	V
		I _O = 8.0 mA	4.5	–	–	0.36	V
I _{OZ}	3-state output OFF-state current	V _I = V _{CC} or GND	5.5	–	–	0.25	µA
I _{LI}	input leakage current	V _I = V _{IH} or V _{IL}	5.5	–	–	0.1	µA
I _{CC}	quiescent supply current	V _I = V _{CC} or GND; I _O = 0	5.5	–	–	1.0	µA
ΔI _{CC}	additional quiescent supply current per input pin	V _I = 3.4 V; other inputs at V _{CC} or GND; I _O = 0	5.5	–	–	1.35	mA
C _I	input capacitance			–	1.5	10	pF
T_{amb} = –40 to +85 °C							
V _{IH}	HIGH-level input voltage		4.5 to 5.5	2.0	–	–	V
V _{IL}	LOW-level input voltage		4.5 to 5.5	–	–	0.8	V
V _{OH}	HIGH-level output voltage	V _I = V _{IH} or V _{IL} I _O = –50 µA	4.5	4.4	–	–	V
		I _O = –8.0 mA	4.5	3.8	–	–	V
V _{OL}	LOW-level output voltage	V _I = V _{IH} or V _{IL} I _O = 50 µA	4.5	–	–	0.1	V
		I _O = 8.0 mA	4.5	–	–	0.44	V
I _{OZ}	3-state output OFF-state current	V _I = V _{CC} or GND	5.5	–	–	2.5	µA
I _{LI}	input leakage current	V _I = V _{IH} or V _{IL}	5.5	–	–	1.0	µA
I _{CC}	quiescent supply current	V _I = V _{CC} or GND; I _O = 0	5.5	–	–	10	µA
ΔI _{CC}	additional quiescent supply current per input pin	V _I = 3.4 V; other inputs at V _{CC} or GND; I _O = 0	5.5	–	–	1.5	mA
C _I	input capacitance		–	–	–	10	pF

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SYMBOL	PARAMETER	CONDITIONS		MIN.	TYP.	MAX.	UNIT
		OTHER	V _{CC} (V)				
T_{amb} = -40 to +125 °C							
V _{IH}	HIGH-level input voltage		4.5 to 5.5	2.0	–	–	V
V _{IL}	LOW-level input voltage		4.5 to 5.5	–	–	0.8	V
V _{OH}	HIGH-level output voltage	V _I = V _{IH} or V _{IL}	4.5	4.4	–	–	V
		I _O = -50 µA I _O = -8.0 mA	4.5	3.70	–	–	V
V _{OL}	LOW-level output voltage	V _I = V _{IH} or V _{IL}	4.5	–	–	0.1	V
		I _O = 50 µA I _O = 8.0 mA	4.5	–	–	0.55	V
I _{OZ}	3-state output OFF-state current	V _I = V _{CC} or GND	5.5	–	–	10	µA
I _{LI}	input leakage current	V _I = V _{IH} or V _{IL}	5.5	–	–	2.0	µA
I _{CC}	quiescent supply current	V _I = V _{CC} or GND; I _O = 0	5.5	–	–	40	µA
ΔI _{CC}	additional quiescent supply current per input pin	V _I = 3.4 V; other inputs at V _{CC} or GND; I _O = 0	5.5	–	–	1.5	mA
C _I	input capacitance		–	–	–	10	pF

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AC CHARACTERISTICS

Type 74AHC2G125

GND = 0 V; $t_r = t_f \leq 3.0$ ns.

SYMBOL	PARAMETER	TEST CONDITIONS		MIN.	TYP.	MAX.	UNIT
		WAVEFORMS	C_L (pF)				
$T_{amb} = 25\text{ }^\circ\text{C}$							
$V_{CC} = 3.0$ to 3.6 V; note 1							
t_{PHL}/t_{PLH}	propagation delay nA to nY	see Figs 5 and 7	15	–	4.7	8.0	ns
t_{PZH}/t_{PZL}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	15	–	5.0	8.0	ns
t_{PHZ}/t_{PLZ}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	15	–	6.0	9.7	ns
t_{PHL}/t_{PLH}	propagation delay nA to nY	see Figs 5 and 7	50	–	6.6	11.5	ns
t_{PZH}/t_{PZL}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	50	–	6.9	11.5	ns
t_{PHZ}/t_{PLZ}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	50	–	8.3	13.2	ns
$V_{CC} = 4.5$ to 5.5 V; note 2							
t_{PHL}/t_{PLH}	propagation delay nA to nY	see Figs 5 and 7	15	–	3.4	5.5	ns
t_{PZH}/t_{PZL}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	15	–	3.6	5.1	ns
t_{PHZ}/t_{PLZ}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	15	–	4.1	6.8	ns
t_{PHL}/t_{PLH}	propagation delay nA to nY	see Figs 5 and 7	50	–	4.8	7.5	ns
t_{PZH}/t_{PZL}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	50	–	4.9	7.5	ns
t_{PHZ}/t_{PLZ}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	50	–	5.7	8.8	ns
$T_{amb} = -40$ to $+85\text{ }^\circ\text{C}$							
$V_{CC} = 3.0$ to 3.6 V; note 1							
t_{PHL}/t_{PLH}	propagation delay nA to nY	see Figs 5 and 7	15	1.0	–	9.5	ns
t_{PZH}/t_{PZL}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	15	1.0	–	9.5	ns
t_{PHZ}/t_{PLZ}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	15	1.0	–	11.5	ns
t_{PHL}/t_{PLH}	propagation delay nA to nY	see Figs 5 and 7	50	1.0	–	13.0	ns
t_{PZH}/t_{PZL}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	50	1.0	–	13.0	ns
t_{PHZ}/t_{PLZ}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	50	1.0	–	15.0	ns
$V_{CC} = 4.5$ to 5.5 V; note 2							
t_{PHL}/t_{PLH}	propagation delay nA to nY	see Figs 5 and 7	15	1.0	–	6.5	ns
t_{PZH}/t_{PZL}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	15	1.0	–	6.0	ns
t_{PHZ}/t_{PLZ}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	15	1.0	–	8.0	ns
t_{PHL}/t_{PLH}	propagation delay nA to nY	see Figs 5 and 7	50	1.0	–	8.5	ns
t_{PZH}/t_{PZL}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	50	1.0	–	8.5	ns
t_{PHZ}/t_{PLZ}	propagation delay $n\overline{OE}$ to nY	see Figs 6 and 7	50	1.0	–	10.0	ns

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SYMBOL	PARAMETER	TEST CONDITIONS		MIN.	TYP.	MAX.	UNIT
		WAVEFORMS	C _L (pF)				
T_{amb} = -40 to +125 °C							
V_{CC} = 3.0 to 3.6 V; note 1							
t _{PHL} /t _{PLH}	propagation delay nA to nY	see Figs 5 and 7	15	1.0	–	11.5	ns
t _{PZH} /t _{PZL}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	15	1.0	–	11.5	ns
t _{PHZ} /t _{PLZ}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	15	1.0	–	12.5	ns
t _{PHL} /t _{PLH}	propagation delay nA to nY	see Figs 5 and 7	50	1.0	–	14.5	ns
t _{PZH} /t _{PZL}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	50	1.0	–	14.5	ns
t _{PHZ} /t _{PLZ}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	50	1.0	–	16.5	ns
V_{CC} = 4.5 to 5.5 V; note 2							
t _{PHL} /t _{PLH}	propagation delay nA to nY	see Figs 5 and 7	15	1.0	–	7.0	ns
t _{PZH} /t _{PZL}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	15	1.0	–	6.5	ns
t _{PHZ} /t _{PLZ}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	15	1.0	–	8.5	ns
t _{PHL} /t _{PLH}	propagation delay nA to nY	see Figs 5 and 7	50	1.0	–	9.5	ns
t _{PZH} /t _{PZL}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	50	1.0	–	9.5	ns
t _{PHZ} /t _{PLZ}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	50	1.0	–	11.0	ns

Notes

1. All typical values are measured at V_{CC} = 3.3 V.
2. All typical values are measured at V_{CC} = 5.0 V.

Type 74AHCT2G125GND = 0 V; t_r = t_f ≤ 3.0 ns.

SYMBOL	PARAMETER	TEST CONDITIONS		MIN.	TYP.	MAX.	UNIT
		WAVEFORMS	C _L (pF)				
T_{amb} = 25 °C							
V_{CC} = 4.5 to 5.5 V; note 1							
t _{PHL} /t _{PLH}	propagation delay nA to nY	see Figs 5 and 7	15	–	3.4	5.5	ns
t _{PZH} /t _{PZL}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	15	–	3.9	5.1	ns
t _{PHZ} /t _{PLZ}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	15	–	4.5	6.8	ns
t _{PHL} /t _{PLH}	propagation delay nA to nY	see Figs 5 and 7	50	–	4.8	7.5	ns
t _{PZH} /t _{PZL}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	50	–	5.1	7.5	ns
t _{PHZ} /t _{PLZ}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	50	–	6.1	8.8	ns
T_{amb} = -40 to +85 °C							
V_{CC} = 4.5 to 5.5 V							
t _{PHL} /t _{PLH}	propagation delay nA to nY	see Figs 5 and 7	15	1.0	–	6.5	ns
t _{PZH} /t _{PZL}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	15	1.0	–	6.0	ns
t _{PHZ} /t _{PLZ}	propagation delay n $\overline{O\!E}$ to nY	see Figs 6 and 7	15	1.0	–	8.0	ns
t _{PHL} /t _{PLH}	propagation delay nA to nY	see Figs 5 and 7	50	1.0	–	8.5	ns

Bus buffer/line driver; 3-state

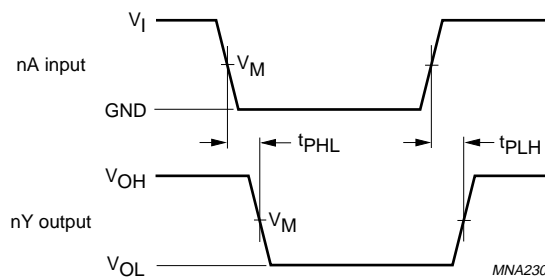
74AHC2G125; 74AHCT2G125

SYMBOL	PARAMETER	TEST CONDITIONS		MIN.	TYP.	MAX.	UNIT
		WAVEFORMS	C _L (pF)				
t _{PZH} /t _{PZL}	propagation delay n $\overline{O\overline{E}}$ to nY	see Figs 6 and 7	50	1.0	–	8.5	ns
t _{PHZ} /t _{PLZ}	propagation delay n $\overline{O\overline{E}}$ to nY	see Figs 6 and 7	50	1.0	–	10.0	ns
T_{amb} = –40 to +125 °C							
V_{CC} = 4.5 to 5.5 V							
t _{PHL} /t _{PLH}	propagation delay nA to nY	see Figs 5 and 7	15	1.0	–	6.5	ns
t _{PZH} /t _{PZL}	propagation delay n $\overline{O\overline{E}}$ to nY	see Figs 6 and 7	15	1.0	–	6.0	ns
t _{PHZ} /t _{PLZ}	propagation delay n $\overline{O\overline{E}}$ to nY	see Figs 6 and 7	15	1.0	–	8.0	ns
t _{PHL} /t _{PLH}	propagation delay nA to nY	see Figs 5 and 7	50	1.0	–	8.5	ns
t _{PZH} /t _{PZL}	propagation delay n $\overline{O\overline{E}}$ to nY	see Figs 6 and 7	50	1.0	–	8.5	ns
t _{PHZ} /t _{PLZ}	propagation delay n $\overline{O\overline{E}}$ to nY	see Figs 6 and 7	50	1.0	–	10.0	ns

Note

1. All typical values are measured at V_{CC} = 5.0 V.

AC WAVEFORMS

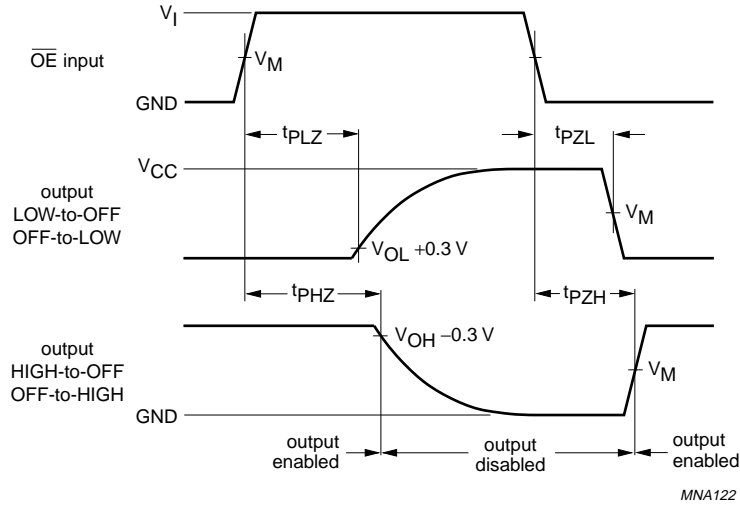


FAMILY	V _I INPUT REQUIREMENTS	V _M INPUT	V _M OUTPUT
AHC2G125	GND to V _{CC}	50% V _{CC}	50% V _{CC}
AHCT2G125	GND to 3.0 V	1.5 V	50% V _{CC}

Fig.5 The input (nA) to output (nY) propagation delays.

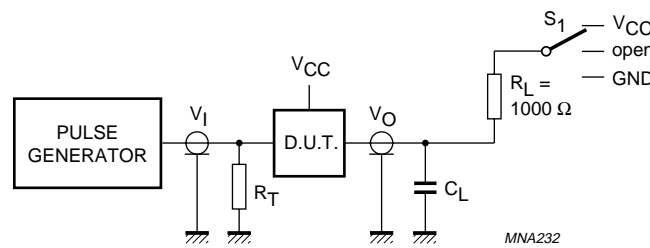
Bus buffer/line driver; 3-state

74AHC2G125; 74AHCT2G125



FAMILY	V _I INPUT REQUIREMENTS	V _M INPUT	V _M OUTPUT
AHC2G125	GND to V _{CC}	50% V _{CC}	50% V _{CC}
AHCT2G125	GND to 3.0 V	1.5 V	50% V _{CC}

Fig.6 The 3-state enable and disable times.



TEST	S ₁
t _{PLH} /t _{PHL}	open
t _{PLZ} /t _{PZL}	V _{CC}
t _{PHZ} /t _{PZH}	GND

Definitions for test circuit:

R_L = load resistance.

C_L = load capacitance including jig and probe capacitance (see Chapter "AC characteristics" for the value).

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

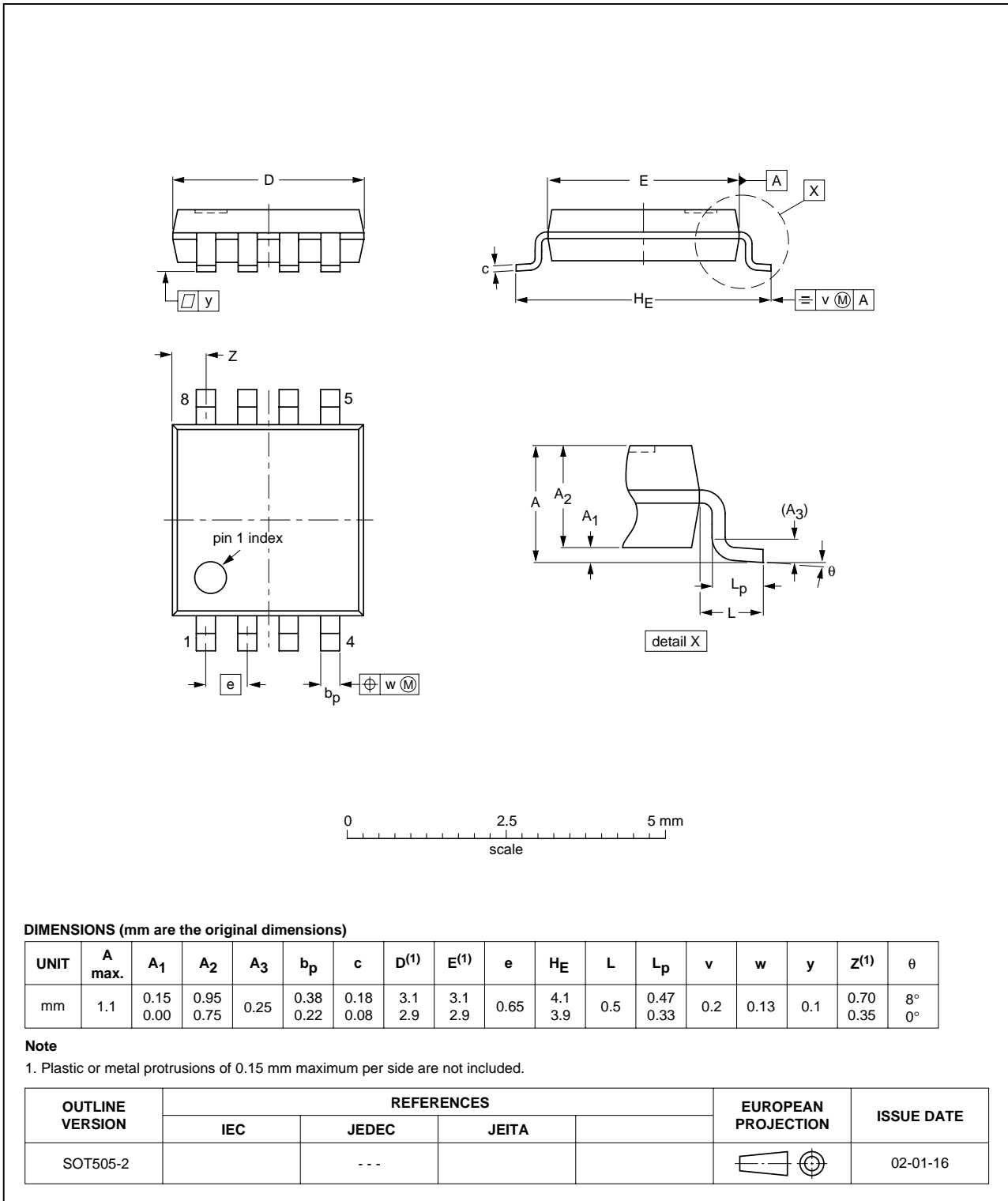
Fig.7 Load circuitry for switching times.

Bus buffer/line driver; 3-state

74AHC2G125; 74AHCT2G125

PACKAGE OUTLINES

TSSOP8: plastic thin shrink small outline package; 8 leads; body width 3 mm; lead length 0.5 mm SOT505-2

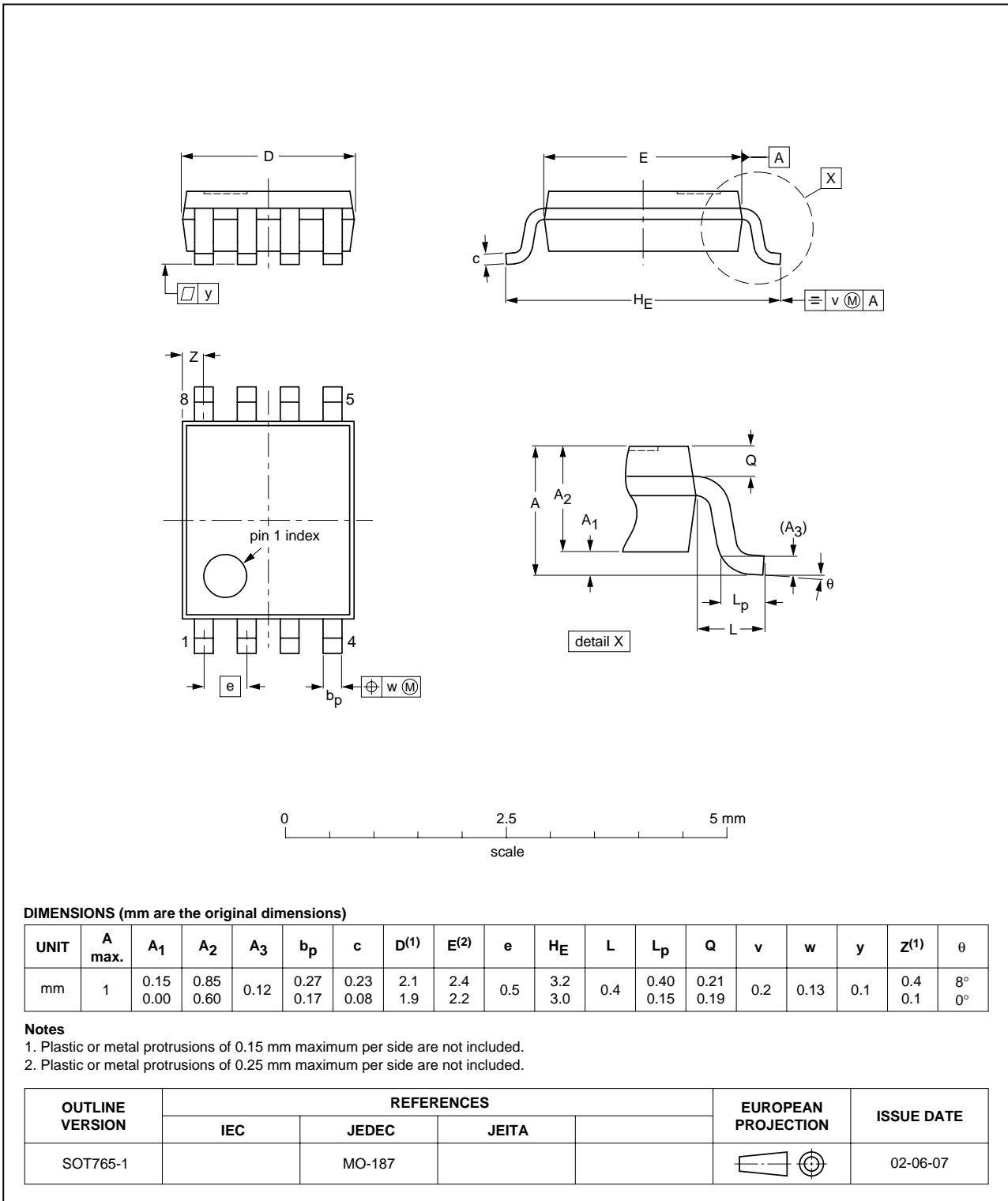


Bus buffer/line driver; 3-state

74AHC2G125; 74AHCT2G125

VSSOP8: plastic very thin shrink small outline package; 8 leads; body width 2.3 mm

SOT765-1



Bus buffer/line driver; 3-state

74AHC2G125; 74AHCT2G125

DATA SHEET STATUS

LEVEL	DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾⁽³⁾	DEFINITION
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