

Important notice

Dear Customer,

On 7 February 2017 the former NXP Standard Product business became a new company with the tradename **Nexperia**. Nexperia is an industry leading supplier of Discrete, Logic and PowerMOS semiconductors with its focus on the automotive, industrial, computing, consumer and wearable application markets

In data sheets and application notes which still contain NXP or Philips Semiconductors references, use the references to Nexperia, as shown below.

Instead of http://www.nxp.com, http://www.nxp.com, http://www.nexperia.com, http://www.nexperia.com)

Instead of sales.addresses@www.nxp.com or sales.addresses@www.semiconductors.philips.com, use salesaddresses@nexperia.com (email)

Replace the copyright notice at the bottom of each page or elsewhere in the document, depending on the version, as shown below:

- © NXP N.V. (year). All rights reserved or © Koninklijke Philips Electronics N.V. (year). All rights reserved

Should be replaced with:

- © Nexperia B.V. (year). All rights reserved.

If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via **salesaddresses@nexperia.com**). Thank you for your cooperation and understanding,

Kind regards,

Team Nexperia

74AHC1G126; 74AHCT1G126

Bus buffer/line driver; 3-state
Rev. 8 — 23 August 2012

Product data sheet

1. **General description**

74AHC1G126 and 74AHCT1G126 are high-speed Si-gate CMOS devices. They provide one non-inverting buffer/line driver with 3-state output. The 3-state output is controlled by the output enable input pin (OE). A LOW at pin OE causes the output to assume a high-impedance OFF-state.

The AHC device has CMOS input switching levels and supply voltage range 2 V to 5.5 V.

The AHCT device has TTL input switching levels and supply voltage range 4.5 V to 5.5 V.

Features and benefits 2.

- Symmetrical output impedance
- High noise immunity
- Low power dissipation
- Balanced propagation delays
- Multiple package options
- ESD protection:
 - ◆ HBM JESD22-A114F: exceeds 2000 V
 - MM JESD22-A115-A: exceeds 200 V
 - CDM JESD22-C101E: exceeds 1000 V
- Specified from -40 °C to +125 °C

Ordering information 3.

Table 1. **Ordering information**

Type number	Package									
	Temperature range	Name	Description	Version						
74AHC1G126GW	–40 °C to +125 °C	TSSOP5	process process control processes, a reason,							
74AHCT1G126GW			body width 1.25 mm							
74AHC1G126GV	–40 °C to +125 °C	SC-74A	plastic surface-mounted package; 5 leads	SOT753						
74AHCT1G126GV										
74AHC1G126GM	–40 °C to +125 °C	XSON6	plastic extremely thin small outline package; no	SOT886						
74AHCT1G126GM			leads; 6 terminals; body 1 \times 1.45 \times 0.5 mm							
74AHC1G126GF	–40 °C to +125 °C	XSON6	SON6 plastic extremely thin small outline package;							
74AHCT1G126GF			no leads; 6 terminals; body 1 \times 1 \times 0.5 mm							



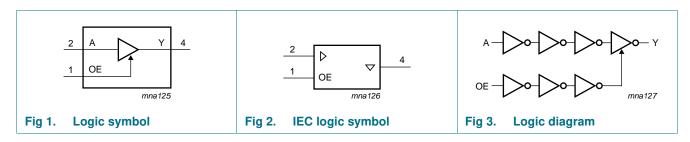
4. Marking

Table 2. Marking codes

Type number	Marking ^[1]
74AHC1G126GW	AN
74AHCT1G126GW	CN
74AHC1G126GV	A26
74AHCT1G126GV	C26
74AHC1G126GM	AN
74AHCT1G126GM	CN
74AHC1G126GF	AN
74AHCT1G126GF	CN

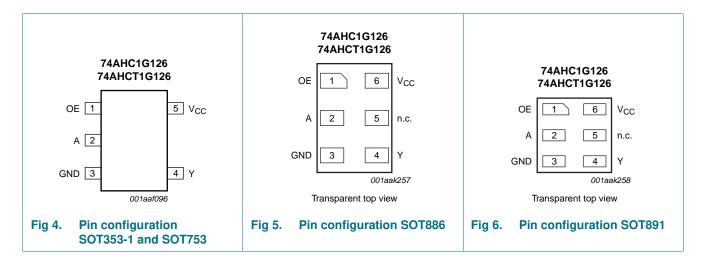
^[1] The pin 1 indicator is located on the lower left corner of the device, below the marking code.

5. Functional diagram



6. Pinning information

6.1 Pinning



6.2 Pin description

Table 3. Pin description

Symbol	Pin		Description
	SOT353-1/SOT753	SOT886/SOT891	
OE	1	1	output enable input
Α	2	2	data input A
GND	3	3	ground (0 V)
Υ	4	4	data output Y
n.c.	-	5	not connected
V _{CC}	5	6	supply voltage

7. Functional description

Table 4. Function table

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

Input OE	Output	
OE	A	Υ
Н	L	L
Н	Н	Н
L	X	Z

8. Limiting values

Table 5. 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
VI	input voltage		-0.5	+7.0	V
I _{IK}	input clamping current	$V_1 < -0.5 V$	<u>[1]</u> –20	-	mA
I _{OK}	output clamping current	$V_O < -0.5 \text{ V or } V_O > V_{CC} + 0.5 \text{ V}$	<u>[1]</u> -	±20	mA
lo	output current	$-0.5 \text{ V} < \text{V}_{\text{O}} < \text{V}_{\text{CC}} + 0.5 \text{ V}$	-	±25	mA
I _{CC}	supply current		-	75	mA
I_{GND}	ground current		−75	-	mA
T_{stg}	storage temperature		-65	+150	°C
P _{tot}	total power dissipation	$T_{amb} = -40 ^{\circ}\text{C} \text{ to } +125 ^{\circ}\text{C}$	[2] -	250	mW

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

^[2] For TSSOP5 and SC-74A packages: above 87.5 $^{\circ}$ C the value of P_{tot} derates linearly with 4.0 mW/K. For XSON6 packages: above 118 $^{\circ}$ C the value of P_{tot} derates linearly with 7.8 mW/K.

9. Recommended operating conditions

Table 6. Recommended operating conditions

Voltages are referenced to GND (ground = 0 V).

Symbol	Parameter Conditions			1G126		74AHCT1G126			Unit
			Min	Тур	Max	Min	Тур	Max	
V_{CC}	supply voltage		2.0	5.0	5.5	4.5	5.0	5.5	V
VI	input voltage		0	-	5.5	0	-	5.5	V
V _O	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	V_{CC} = 3.3 V \pm 0.3 V	-	-	100	-	-	-	ns/V
and fall rate	V_{CC} = 5.0 V \pm 0.5 V	-	-	20	-	-	20	ns/V	

10. Static characteristics

Table 7. Static characteristics

Voltages are referenced to GND (ground = 0 V).

Symbol	Parameter	Conditions		25 °C	;	-40 °C	to +85 °C	-40 °C to +125 °C		Unit
			Min	Тур	Max	Min	Max	Min	Max	
74AHC1	G126									
V _{IH}	HIGH-level	$V_{CC} = 2.0 \text{ V}$	1.5	-	-	1.5	-	1.5	-	٧
	input voltage	V _{CC} = 3.0 V	2.1	-	-	2.1	-	2.1	-	V
	V _{CC} = 5.5 V	3.85	-	-	3.85	-	3.85	-	V	
V_{IL}	LOW-level	$V_{CC} = 2.0 \text{ V}$	-	-	0.5	-	0.5	-	0.5	V
	input voltage	V _{CC} = 3.0 V	-	-	0.9	-	0.9	-	0.9	V
		V _{CC} = 5.5 V	-	-	1.65	-	1.65	-	1.65	V
V_{OH}	HIGH-level	$V_I = V_{IH}$ or V_{IL}								
	output voltage	$I_{O} = -50 \mu A; V_{CC} = 2.0 V$	1.9	2.0	-	1.9	-	1.9	-	V
		$I_O = -50 \mu A; V_{CC} = 3.0 V$	2.9	3.0	-	2.9	-	2.9	-	V
		$I_O = -50 \mu A; V_{CC} = 4.5 V$	4.4	4.5	-	4.4	-	4.4	-	V
		$I_{O} = -4.0 \text{ mA}; V_{CC} = 3.0 \text{ V}$	2.58	-	-	2.48	-	2.40	-	V
		$I_{O} = -8.0 \text{ mA}; V_{CC} = 4.5 \text{ V}$	3.94	-	-	3.8	-	3.70	-	V
V_{OL}	LOW-level	$V_I = V_{IH}$ or V_{IL}								
	output voltage	$I_O = 50 \mu A; V_{CC} = 2.0 V$	-	0	0.1	-	0.1	-	0.1	V
		$I_O = 50 \mu A; V_{CC} = 3.0 V$	-	0	0.1	-	0.1	-	0.1	V
		$I_O = 50 \ \mu A; \ V_{CC} = 4.5 \ V$	-	0	0.1	-	0.1	-	0.1	V
		$I_O = 4.0 \text{ mA}; V_{CC} = 3.0 \text{ V}$	-	-	0.36	-	0.44	-	0.55	V
		$I_O = 8.0 \text{ mA}; V_{CC} = 4.5 \text{ V}$	-	-	0.36	-	0.44	-	0.55	V
l _{OZ}	OFF-state output current	$V_{I} = V_{IH}$ or V_{IL} ; $V_{O} = V_{CC}$ or GND; $V_{CC} = 5.5 \text{ V}$	-	-	±0.25	-	±2.5	-	±10	μΑ
l _l	input leakage current	$V_I = 5.5 \text{ V or GND};$ $V_{CC} = 0 \text{ V to 5.5 V}$	-	-	0.1	-	1.0	-	2.0	μΑ
I _{CC}	supply current	$V_I = V_{CC}$ or GND; $I_O = 0$ A; $V_{CC} = 5.5 \text{ V}$	-	-	2.0	-	20	-	40	μΑ

74AHC_AHCT1G126

All information provided in this document is subject to legal disclaimers.

Table 7. Static characteristics ...continued Voltages are referenced to GND (ground = 0 V).

Symbol	Parameter	Conditions		25 °C		-40 °C	to +85 °C	-40 °C	to +125 °C	Unit
			Min	Тур	Max	Min	Max	Min	Max	
Cı	input capacitance		-	3	10	-	10	-	10	pF
74AHCT	1G126									
V _{IH}	HIGH-level input voltage	$V_{CC} = 4.5 \text{ V to } 5.5 \text{ V}$	2.0	-	-	2.0	-	2.0	-	V
V _{IL}	LOW-level input voltage	V_{CC} = 4.5 V to 5.5 V	-	-	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	$I_O = -50 \mu A$	4.4	4.5	-	4.4	-	4.4	-	V
		$I_{O} = -8.0 \text{ mA}$	3.94	-	-	3.8	-	3.70	-	V
V _{OL}	LOW-level	$V_I = V_{IH}$ or V_{IL} ; $V_{CC} = 4.5 \text{ V}$								
	output voltage	I _O = 50 μA	-	0	0.1	-	0.1	-	0.1	V
		$I_{O} = 8.0 \text{ mA}$	-	-	0.36	-	0.44	-	0.55	V
I _{OZ}	OFF-state output current	$V_{I} = V_{IH}$ or V_{IL} ; $V_{O} = V_{CC}$ or GND; $V_{CC} = 5.5 \text{ V}$	-	-	±0.25	-	±2.5	-	±10	μΑ
II	input leakage current	$V_I = 5.5 \text{ V or GND};$ $V_{CC} = 0 \text{ V to 5.5 V}$	-	-	0.1	-	1.0	-	2.0	μА
I _{CC}	supply current	$V_I = V_{CC}$ or GND; $I_O = 0$ A; $V_{CC} = 5.5$ V	-	-	2.0	-	20	-	40	μА
Δl _{CC}	additional supply current	per input pin; $V_{I} = V_{CC} - 2.1 \text{ V;}$ other inputs at V_{CC} or GND; $I_{O} = 0 \text{ A;}$ $V_{CC} = 4.5 \text{ V to } 5.5 \text{ V}$	-	-	1.35	-	1.5	-	1.5	mA
Cı	input capacitance		-	3	10	-	10	-	10	pF

11. Dynamic characteristics

Table 8. Dynamic characteristics GND = 0 V; For test circuit see <u>Figure 9</u>.

Symbol	Parameter	Conditions	Conditions		25 °C		–40 °C	to +85 °C	–40 °C t	o +125 °C	Unit
					Тур	Max	Min	Max	Min	Max	
74AHC1	G126										
t _{pd} p	propagation	A to Y; see Figure 7	[1]								
	delay	$V_{CC} = 3.0 \text{ V to } 3.6 \text{ V}$	[2]								
		C _L = 15 pF		-	4.4	8.0	1.0	9.5	1.0	10.0	ns
		$C_L = 50 pF$		-	6.3	11.5	1.0	13.0	1.0	14.5	ns
		$V_{CC} = 4.5 \text{ V to } 5.5 \text{ V}$	[3]								
		C _L = 15 pF		-	3.4	5.5	1.0	6.5	1.0	7.0	ns
		$C_L = 50 pF$		-	4.7	7.5	1.0	8.5	1.0	9.5	ns

Table 8. Dynamic characteristics ...continued GND = 0 V; For test circuit see <u>Figure 9</u>.

Symbol	Parameter	Conditions			25 °C		-40 °C	to +85 °C	-40 °C	to +125 °C	Unit
				Min	Тур	Max	Min	Max	Min	Max	
t _{en}	enable time	OE to Y; see Figure 8	[1]			•		"	•	•	
		$V_{CC} = 3.0 \text{ V to } 3.6 \text{ V}$	[2]								
		$C_L = 15 pF$		-	4.9	8.0	1.0	9.5	1.0	10.0	ns
		$C_L = 50 pF$		-	7.0	11.5	1.0	13.0	1.0	14.5	ns
		$V_{CC} = 4.5 \text{ V to } 5.5 \text{ V}$	[3]								
		$C_{L} = 15 pF$		-	3.6	5.6	1.0	6.3	1.0	7.0	ns
		$C_L = 50 pF$		-	5.4	8.0	1.0	9.0	1.0	9.5	ns
t _{dis}	disable time	OE to Y; see Figure 8	[1]								
		$V_{CC} = 3.0 \text{ V to } 3.6 \text{ V}$	[2]								
		$C_{L} = 15 pF$		-	6.3	9.7	1.0	11.5	1.0	12.5	ns
		$C_L = 50 pF$		-	9.0	13.2	1.0	15.0	1.0	16.5	ns
		$V_{CC} = 4.5 \text{ V to } 5.5 \text{ V}$	[3]								
		$C_{L} = 15 pF$		-	4.3	6.8	1.0	8.0	1.0	8.5	ns
		$C_L = 50 pF$		-	6.1	8.8	1.0	10.0	1.0	11.0	ns
C_{PD}	power dissipation capacitance	per buffer; $C_L = 50 \text{ pF}$; $f = 1 \text{ MHz}$; $V_I = \text{GND to } V_{CC}$	[4]	-	9	-	-	-	-	-	pF
74AHCT	1G126										
t _{pd}	propagation	A to Y; see Figure 7	[1]								
	delay	$V_{CC} = 4.5 \text{ V to } 5.5 \text{ V}$	[3]								
		$C_{L} = 15 pF$		-	3.4	5.5	1.0	6.5	1.0	7.0	ns
		$C_L = 50 pF$		-	4.7	7.5	1.0	8.5	1.0	9.5	ns
t _{en}	enable time	OE to Y; see Figure 8	[1]								
		$V_{CC} = 4.5 \text{ V to } 5.5 \text{ V}$	[3]								
		C _L = 15 pF		-	3.4	5.6	1.0	6.3	1.0	6.5	ns
		$C_L = 50 pF$		-	4.8	8.0	1.0	9.0	1.0	9.0	ns
t _{dis}	disable time	OE to Y; see Figure 8	[1]								
		$V_{CC} = 4.5 \text{ V to } 5.5 \text{ V}$	[3]								
		$C_{L} = 15 pF$			4.0	6.8	1.0	8.0	1.0	8.5	ns
		$C_L = 50 pF$			5.7	8.8	1.0	10.0	1.0	11.5	ns
		2L 00 P.			· · ·	3.0					

 Table 8.
 Dynamic characteristics ...continued

GND = 0 V; For test circuit see Figure 9.

Symbol	Parameter	arameter Conditions		25 °C		–40 °C to +85 °C		-40 °C to +125 °C		Unit
			Min	Тур	Max	Min	Max	Min	Max	
C_{PD}	power dissipation capacitance	per buffer; [4] $C_L = 50 \text{ pF}$; $f = 1 \text{ MHz}$; $V_I = \text{GND to } V_{CC}$	-	11	-	-	-	-	-	pF

- [1] t_{pd} is the same as t_{PLH} and t_{PHL} .
 - t_{en} is the same as t_{PZL} and t_{PZH} .
 - t_{dis} is the same as t_{PLZ} and t_{PHZ} .
- [2] Typical values are measured at $V_{CC} = 3.3 \text{ V}$.
- [3] Typical values are measured at $V_{CC} = 5.0 \text{ V}$.
- [4] C_{PD} is used to determine the dynamic power dissipation P_D (μW).

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

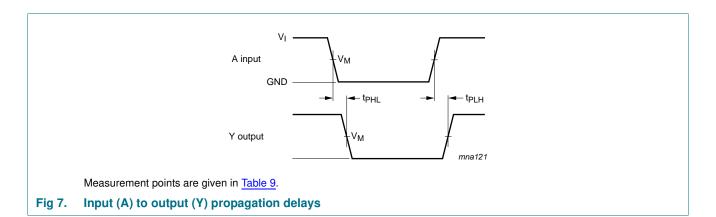
 f_i = input frequency in MHz;

fo = output frequency in MHz;

C_L = output load capacitance in pF;

 V_{CC} = supply voltage in Volts.

12. Waveforms



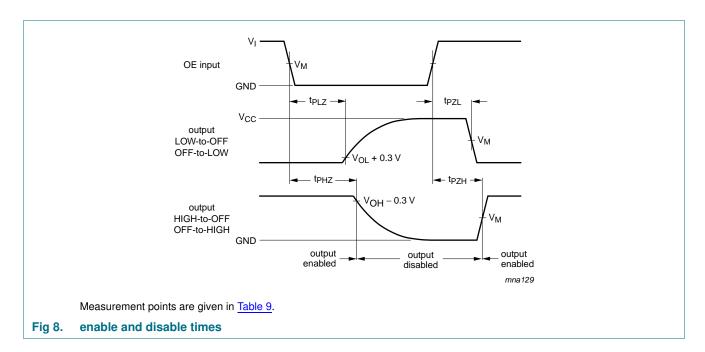
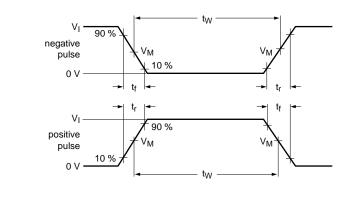
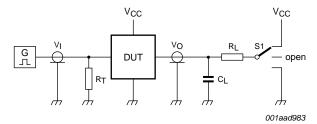


Table 9. Measurement points

Туре	Input	Output	
	V _M	V _I	V _M
74AHC1G126	$0.5 \times V_{CC}$	GND to V _{CC}	$0.5 \times V_{CC}$
74AHCT1G126	1.5 V	GND to 3.0 V	$0.5 \times V_{CC}$

8 of 17





Test data is given in Table 10.

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 9. Test circuit for measuring switching times

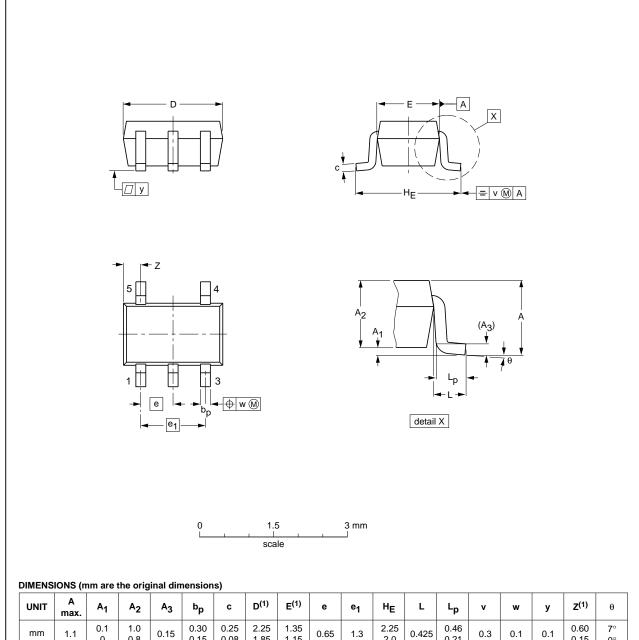
Table 10. Test data

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}	
74AHC1G126	V_{CC}	≤ 3 ns	15 pF, 50 pF	1 kΩ	open	GND	V _{CC}	
74AHCT1G126	3 V	≤ 3 ns	15 pF, 50 pF	1 kΩ	open	GND	V _{CC}	

13. Package outline

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

SOT353-1



UNIT	A max.	A ₁	A ₂	A ₃	bp	С	D ⁽¹⁾	E ⁽¹⁾	е	e ₁	HE	L	Lp	v	w	у	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°

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

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

Fig 10. Package outline SOT353-1 (TSSOP5)

74AHC_AHCT1G126 All information provided in this document is subject to legal disclaimers.

Plastic surface-mounted package; 5 leads

SOT753

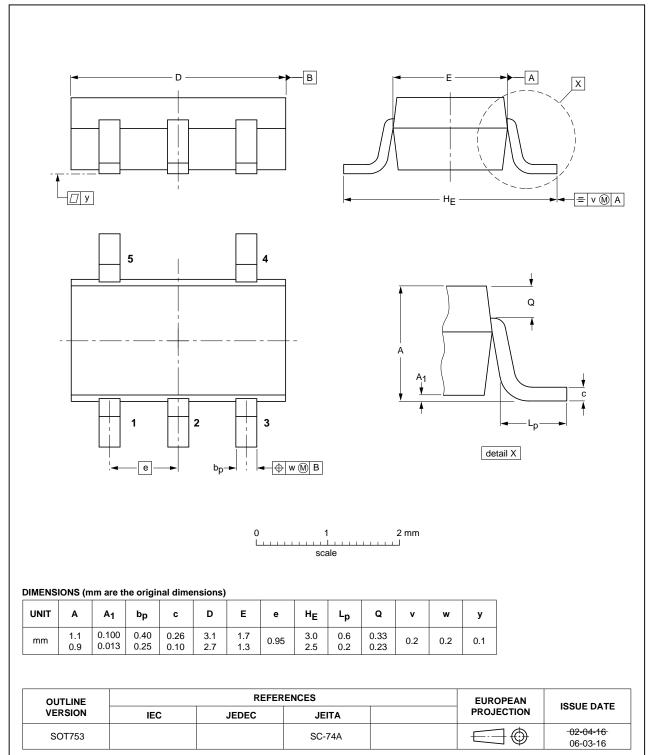


Fig 11. Package outline SOT753 (SC-74A)

74AHC_AHCT1G126

All information provided in this document is subject to legal disclaimers.

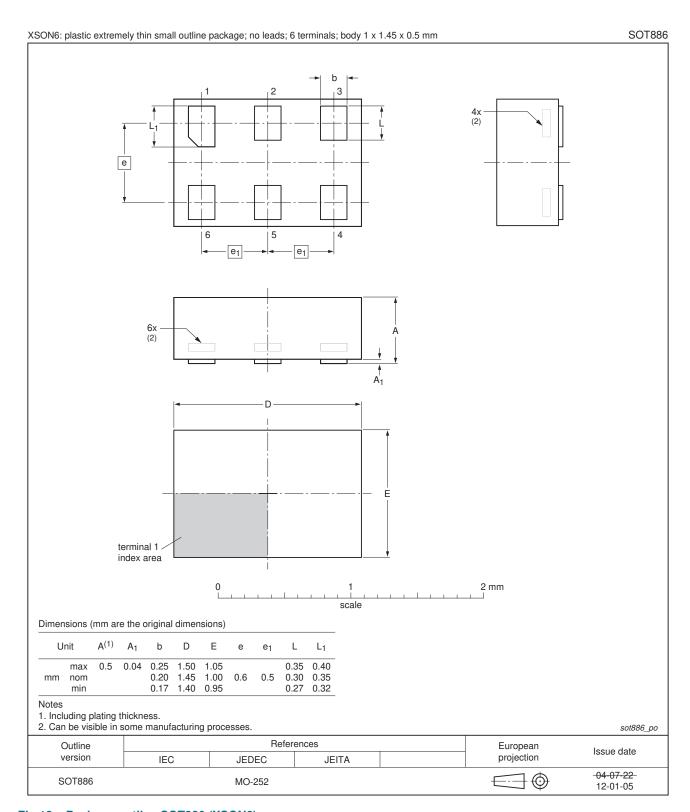


Fig 12. Package outline SOT886 (XSON6)

74AHC_AHCT1G126

All information provided in this document is subject to legal disclaimers.

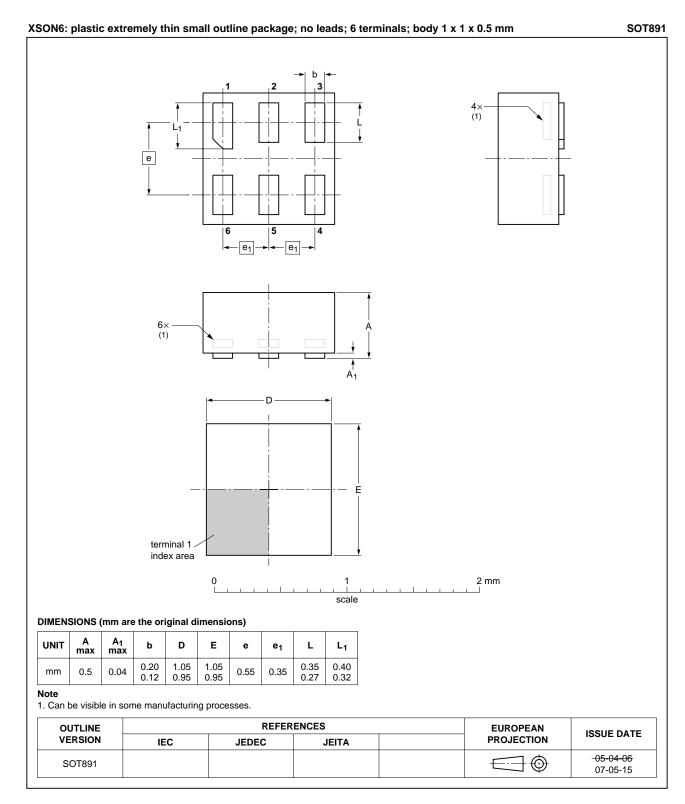


Fig 13. Package outline SOT891 (XSON6)

74AHC_AHCT1G126 All information provided in this document is subject to legal disclaimers.

14. Abbreviations

Table 11. Abbreviations

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

15. Revision history

Table 12. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
74AHC_AHCT1G126 v.8	20120823	Product data sheet	-	74AHC_AHCT1G126 v.7
Modifications:	 Package or 	utline drawing of SOT886	(Figure 12) modified	l.
74AHC_AHCT1G126 v.7	20090617	Product data sheet	-	74AHC_AHCT1G126 v.6
74AHC_AHCT1G126 v.6	20070525	Product data sheet	-	74AHC_AHCT1G126 v.5
74AHC_AHCT1G126 v.5	20070514	Product data sheet	-	74AHC_AHCT1G126 v.4
74AHC_AHCT1G126 v.4	20020606	Product specification	-	74AHC_AHCT1G126 v.3
74AHC_AHCT1G126 v.3	20020215	Product specification	-	74AHC_AHCT1G126 v.2
74AHC_AHCT1G126 v.2	20010406	Product specification	-	74AHC1G_AHCT1G126 v.1
74AHC1G_AHCT1G126 v.1	19990920	Product specification	-	-

16. Legal information

16.1 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.nxp.com.

16.2 Definitions

Draft — The document is a draft version only. The content is still under internal review and subject to formal approval, which may result in modifications or additions. NXP Semiconductors does not give any representations or warranties as to the accuracy or completeness of information included herein and shall have no liability for the consequences of use of such information.

Short data sheet — A short data sheet is an extract from a full data sheet with the same product type number(s) and title. A short data sheet is intended for quick reference only and should not be relied upon to contain detailed and full information. For detailed and full information see the relevant full data sheet, which is available on request via the local NXP Semiconductors sales office. In case of any inconsistency or conflict with the short data sheet, the full data sheet shall prevail.

Product specification — The information and data provided in a Product data sheet shall define the specification of the product as agreed between NXP Semiconductors and its customer, unless NXP Semiconductors and customer have explicitly agreed otherwise in writing. In no event however, shall an agreement be valid in which the NXP Semiconductors product is deemed to offer functions and qualities beyond those described in the Product data sheet.

16.3 Disclaimers

Limited warranty and liability — Information in this document is believed to be accurate and reliable. However, NXP Semiconductors does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information. NXP Semiconductors takes no responsibility for the content in this document if provided by an information source outside of NXP Semiconductors.

In no event shall NXP Semiconductors be liable for any indirect, incidental, punitive, special or consequential damages (including - without limitation - lost profits, lost savings, business interruption, costs related to the removal or replacement of any products or rework charges) whether or not such damages are based on tort (including negligence), warranty, breach of contract or any other legal theory.

Notwithstanding any damages that customer might incur for any reason whatsoever, NXP Semiconductors' aggregate and cumulative liability towards customer for the products described herein shall be limited in accordance with the *Terms and conditions of commercial sale* of NXP Semiconductors.

Right to make changes — NXP Semiconductors reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.

Suitability for use — NXP Semiconductors products are not designed, authorized or warranted to be suitable for use in life support, life-critical or safety-critical systems or equipment, nor in applications where failure or malfunction of an NXP Semiconductors product can reasonably be expected to result in personal injury, death or severe property or environmental damage. NXP Semiconductors and its suppliers accept no liability for inclusion and/or use of NXP Semiconductors products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk.

Applications — Applications that are described herein for any of these products are for illustrative purposes only. NXP Semiconductors makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.

Customers are responsible for the design and operation of their applications and products using NXP Semiconductors products, and NXP Semiconductors accepts no liability for any assistance with applications or customer product design. It is customer's sole responsibility to determine whether the NXP Semiconductors product is suitable and fit for the customer's applications and products planned, as well as for the planned application and use of customer's third party customer(s). Customers should provide appropriate design and operating safeguards to minimize the risks associated with their applications and products.

NXP Semiconductors does not accept any liability related to any default, damage, costs or problem which is based on any weakness or default in the customer's applications or products, or the application or use by customer's third party customer(s). Customer is responsible for doing all necessary testing for the customer's applications and products using NXP Semiconductors products in order to avoid a default of the applications and the products or of the application or use by customer's third party customer(s). NXP does not accept any liability in this respect.

Limiting values — Stress above one or more limiting values (as defined in the Absolute Maximum Ratings System of IEC 60134) will cause permanent damage to the device. Limiting values are stress ratings only and (proper) operation of the device at these or any other conditions above those given in the Recommended operating conditions section (if present) or the Characteristics sections of this document is not warranted. Constant or repeated exposure to limiting values will permanently and irreversibly affect the quality and reliability of the device.

Terms and conditions of commercial sale — NXP Semiconductors products are sold subject to the general terms and conditions of commercial sale, as published at http://www.nxp.com/profile/terms, unless otherwise agreed in a valid written individual agreement. In case an individual agreement is concluded only the terms and conditions of the respective agreement shall apply. NXP Semiconductors hereby expressly objects to applying the customer's general terms and conditions with regard to the purchase of NXP Semiconductors products by customer.

No offer to sell or license — Nothing in this document may be interpreted or construed as an offer to sell products that is open for acceptance or the grant, conveyance or implication of any license under any copyrights, patents or other industrial or intellectual property rights.

74AHC_AHCT1G126

74AHC1G126; 74AHCT1G126

Bus buffer/line driver; 3-state

Export control — This document as well as the item(s) described herein may be subject to export control regulations. Export might require a prior authorization from competent authorities.

Non-automotive qualified products — Unless this data sheet expressly states that this specific NXP Semiconductors product is automotive qualified, the product is not suitable for automotive use. It is neither qualified nor tested in accordance with automotive testing or application requirements. NXP Semiconductors accepts no liability for inclusion and/or use of non-automotive qualified products in automotive equipment or applications.

In the event that customer uses the product for design-in and use in automotive applications to automotive specifications and standards, customer (a) shall use the product without NXP Semiconductors' warranty of the product for such automotive applications, use and specifications, and (b) whenever customer uses the product for automotive applications beyond

NXP Semiconductors' specifications such use shall be solely at customer's own risk, and (c) customer fully indemnifies NXP Semiconductors for any liability, damages or failed product claims resulting from customer design and use of the product for automotive applications beyond NXP Semiconductors' standard warranty and NXP Semiconductors' product specifications.

Translations — A non-English (translated) version of a document is for reference only. The English version shall prevail in case of any discrepancy between the translated and English versions.

16.4 Trademarks

Notice: All referenced brands, product names, service names and trademarks are the property of their respective owners.

17. Contact information

For more information, please visit: http://www.nxp.com

For sales office addresses, please send an email to: salesaddresses@nxp.com

18. Contents

1	General description
2	Features and benefits
3	Ordering information 1
4	Marking 2
5	Functional diagram 2
6	Pinning information
6.1	Pinning
6.2	Pin description
7	Functional description
8	Limiting values
9	Recommended operating conditions 4
10	Static characteristics 4
11	Dynamic characteristics 5
12	Waveforms
13	Package outline
14	Abbreviations
15	Revision history
16	Legal information
16.1	Data sheet status
16.2	Definitions
16.3	Disclaimers
16.4	Trademarks16
17	Contact information 16
18	Contents

Please be aware that important notices concerning this document and the product(s) described herein, have been included in section 'Legal information'.