74LVC2244A

Octal buffer/line driver; 30 Ω series termination; 5 V tolerant input/output; 3-state

Rev. 6 — 20 September 2021

Product data sheet

1. General description

The 74LVC2244A is an 8-bit buffer/line driver with 3-state outputs. The device can be used as two 4-bit buffers or one 8-bit buffer. The device features two output enables $(1\overline{OE} \text{ and } 2\overline{OE})$, each controlling four of the 3-state outputs. A HIGH on $n\overline{OE}$ causes the outputs to assume a high-impedance OFF-state. Inputs can be driven from either 3.3 V or 5 V devices. This feature allows the use of these devices as translators in mixed 3.3 V and 5 V environments.

Schmitt-trigger action at all inputs makes the circuit tolerant of slower input rise and fall times.

This device is fully specified for partial power down applications using I_{OFF} . The I_{OFF} circuitry disables the output, preventing the potentially damaging backflow current through the device when it is powered down.

2. Features and benefits

- Overvoltage tolerant inputs to 5.5 V
- Wide supply voltage range from 1.2 V to 3.6 V
- CMOS low-power consumption
- Direct interface with TTL levels
- Integrated 30 Ω termination resistors
- I_{OFF} circuitry provides partial Power-down mode operation
- Complies with JEDEC standard:
 - JESD8-7A (1.65 V to 1.95 V)
 - JESD8-5A (2.3 V to 2.7 V)
 - JESD8-C/JESD36 (2.7 V to 3.6 V)
- ESD protection:
 - HBM JESD22-A114F exceeds 2000 V
 - MM JESD22-A115B exceeds 200 V
 - CDM JESD22-C101E exceeds 1000 V
- Specified from -40 °C to +85 °C and -40 °C to +125 °C

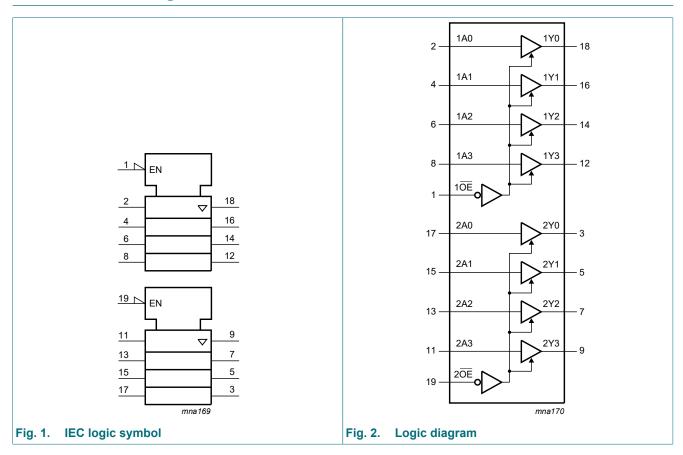
3. Ordering information

Table 1. Ordering information

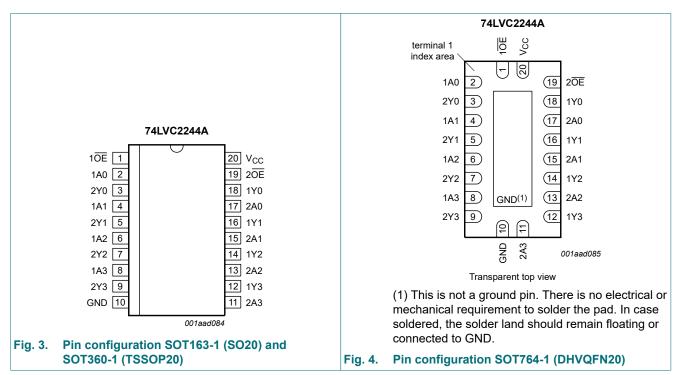
Type number	Package					
	Temperature range	Name	Description	Version		
74LVC2244AD	-40 °C to +125 °C	SO20	plastic small outline package; 20 leads; body width 7.5 mm	SOT163-1		
74LVC2244APW	-40 °C to +125 °C	TSSOP20	plastic thin shrink small outline package; 20 leads; body width 4.4 mm	SOT360-1		
74LVC2244ABQ	-40 °C to +125 °C	DHVQFN20	plastic dual in-line compatible thermal enhanced very thin quad flat package; no leads; 20 terminals; body 2.5 × 4.5 × 0.85 mm	SOT764-1		

ne<mark>x</mark>peria

4. Functional diagram



5. Pinning information



5.1. Pinning

5.2. Pin description

Table 2. Pin description						
Symbol	Pin	Description				
1 0E	1	output enable input (active LOW)				
2 0E	19	output enable input (active LOW)				
1A0, 1A1, 1A2, 1A3	2, 4, 6, 8	data input				
2A0, 2A1, 2A2, 2A3	17, 15, 13, 11	data input				
1Y0, 1Y1, 1Y2, 1Y3	18, 16, 14, 12	data output				
2Y0, 2Y1, 2Y2, 2Y3	3, 5, 7, 9	data output				
GND	10	ground (0 V)				
V _{CC}	20	supply voltage				

6. Functional description

Table 3. Functional table

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

Input nOE	Output	
nŌE	nAn	nYn
L	L	L
L	Н	Н
Н	X	Z

74LVC2244A

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	+6.5	V
I _{IK}	input clamping current	V ₁ < 0 V	-50	-	mA
VI	input voltage	[1]	-0.5	+6.5	V
I _{OK}	output clamping current	$V_{\rm O}$ > $V_{\rm CC}$ or $V_{\rm O}$ < 0 V	-	±50	mA
Vo	output voltage	output HIGH or LOW state [2]	-0.5	V _{CC} + 0.5	V
		output 3-state [2]	-0.5	+6.5	V
I _O	output current	$V_{O} = 0 V \text{ to } V_{CC}$	-	±50	mA
I _{CC}	supply current		-	100	mA
I _{GND}	ground current		-100	-	mA
T _{stg}	storage temperature		-65	+150	°C
P _{tot}	total power dissipation	T _{amb} = -40 °C to +125 °C [3]	-	500	mW

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

[2] The output voltage ratings may be exceeded if the output current ratings are observed.

[3] For SOT163-1 (SO20) package: P_{tot} derates linearly with 12.3 mW/K above 109 °C.

For SOT360-1 (TSSOP20) package: P_{tot} derates linearly with 10.0 mW/K above 100 °C. For SOT764-1 (DHVQFN20) package: P_{tot} derates linearly with 12.9 mW/K above 111 °C.

8. Recommended operating conditions

Table 5. Recommended operating conditions

Symbol	Parameter	Conditions	Min	Тур	Мах	Unit
V _{CC}	supply voltage		1.65	-	3.6	V
		functional	1.2	-	-	V
VI	input voltage		0	-	5.5	V
Vo	output voltage	output HIGH or LOW state	0	-	V _{CC}	V
		output 3-state	0	-	5.5	V
T _{amb}	ambient temperature		-40	-	+125	°C
Δt/ΔV	input transition rise and fall	V _{CC} = 1.65 V to 2.7 V	0	-	20	ns/V
ra	rate	V _{CC} = 2.7 V to 3.6 V	0	-	10	ns/V

9. Static characteristics

Table 6. Static characteristics

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

Symbol	Parameter	Conditions	-40 °C to +85 °C			-40 °C to	Unit	
				Typ [1]	Мах	Min	Max	1
V _{IH}	HIGH-level input	V _{CC} = 1.2 V	1.08	-	-	1.08	-	V
	voltage	V _{CC} = 1.65 V to 1.95 V	0.65V _{CC}	-	-	0.65V _{CC}	-	V
		V _{CC} = 2.3 V to 2.7 V	1.7	-	-	1.7	-	V
		V _{CC} = 2.7 V to 3.6 V	2.0	-	-	2.0	-	V
V _{IL}	LOW-level input	V _{CC} = 1.2 V	-	-	0.12	-	0.12	V
	voltage	V _{CC} = 1.65 V to 1.95 V	-	-	0.35V _{CC}	-	0.35V _{CC}	V
		V _{CC} = 2.3 V to 2.7 V	-	-	0.7	-	0.7	V
		V _{CC} = 2.7 V to 3.6 V	-	-	0.8	-	0.8	V
V _{он}	HIGH-level	$V_{I} = V_{IH} \text{ or } V_{IL}$						
	output voltage	I _O = -100 μA; V _{CC} = 1.65 V to 3.6 V	V _{CC} - 0.2	V _{CC}	-	V _{CC} - 0.3	-	V
		I _O = -2 mA; V _{CC} = 1.65 V	1.2	-	-	1.05	-	V
		I _O = -4 mA; V _{CC} = 2.3 V	1.8	-	-	1.65	-	V
		I _O = -6 mA; V _{CC} = 2.7 V	2.2	-	-	2.05	-	V
		I _O = -9 mA; V _{CC} = 2.7 V	2.4	-	-	2.25	-	V
		I _O = -12 mA; V _{CC} = 3.0 V	2.2	-	-	2.0	-	V
V _{OL}	LOW-level	$V_{I} = V_{IH} \text{ or } V_{IL}$						
	output voltage	I _O = 100 μA; V _{CC} = 1.65 V to 3.6 V	-	-	0.2	-	0.3	V
		I _O = 2 mA; V _{CC} = 1.65 V	-	-	0.45	-	0.65	V
		I _O = 4 mA; V _{CC} = 2.3 V	-	-	0.6	-	0.8	V
		I _O = 6 mA; V _{CC} = 2.7 V	-	-	0.4	-	0.6	V
		I _O = 12 mA; V _{CC} = 3.0 V	-	-	0.55	-	0.8	V
I	input leakage current	V _{CC} = 3.6 V; V _I = 5.5 V or GND	-	±0.1	±5	-	±20	μA
I _{OZ}	OFF-state output current	$V_I = V_{IH} \text{ or } V_{IL}; V_{CC} = 3.6 \text{ V};$ $V_O = 5.5 \text{ V or GND}$	-	±0.1	±5	-	±20	μA
I _{OFF}	power-off leakage current	V_{CC} = 0 V; V _I or V _O = 5.5 V	-	±0.1	±10	-	±20	μA
lcc	supply current	V_{CC} = 3.6 V; V_I = V_{CC} or GND; I_O = 0 A	-	0.1	10	-	40	μA
ΔI _{CC}	additional supply current	per input pin; $V_{CC} = 2.7 \text{ V}$ to 3.6 V; $V_I = V_{CC} - 0.6 \text{ V}$; $I_0 = 0 \text{ A}$	-	5	500	-	5000	μA
Cı	input capacitance	$V_{CC} = 0 V$ to 3.6 V; V ₁ = GND to V _{CC}	-	4.0	-	-	-	pF

[1] All typical values are measured at V_{CC} = 3.3 V (unless stated otherwise) and T_{amb} = 25 °C.

10. Dynamic characteristics

Table 7. Dynamic characteristics

Voltages are referenced to GND (ground = 0 V). For test circuit see Fig. 7.

Parameter	Conditions		-40	°C to +8	5 °C	-40 °C to	o +125 °C	Unit
				Typ [1]	Мах	Min	Max	
propagation delay	nAn to nYn; see Fig. 5	[2]						
	V _{CC} = 1.2 V		-	35	-	-	-	ns
	V _{CC} = 1.65 V to 1.95 V		1.9	7.8	17.7	1.9	18.6	ns
	V _{CC} = 2.3 V to 2.7 V		1.5	4.1	8.7	1.5	9.6	ns
	V _{CC} = 2.7 V		1.5	4.1	6.4	1.5	7.0	ns
	V _{CC} = 3.0 V to 3.6 V		1.5	3.5	5.5	1.5	8.0	ns
enable time	nOE to nYn; see Fig. 6	[2]						
	V _{CC} = 1.2 V		-	38	-	-	-	ns
	V _{CC} = 1.65 V to 1.95 V		2.3	8.9	19.7	2.3	20.7	ns
	V _{CC} = 2.3 V to 2.7 V		1.9	5.0	10.3	1.9	11.4	ns
	V _{CC} = 2.7 V		1.5	5.1	8.1	1.5	9.0	ns
	V _{CC} = 3.0 V to 3.6 V		1.0	4.0	7.1	1.0	10.5	ns
disable time	nOE to nYn; see Fig. 6	[2]						
	V _{CC} = 1.2 V		-	9.0	-	-	-	ns
	V _{CC} = 1.65 V to 1.95 V		2.9	4.7	9.3	2.9	9.8	ns
	V _{CC} = 2.3 V to 2.7 V		1.0	2.6	5.0	1.0	5.6	ns
	V _{CC} = 2.7 V		1.5	3.4	6.4	1.5	7.0	ns
	V _{CC} = 3.0 V to 3.6 V		1.5	3.2	5.4	1.5	8.0	ns
output skew time	V _{CC} = 3.0 V to 3.6 V	[3]	-	-	1.0	-	1.5	ns
power dissipation	per input; V_I = GND to V_{CC}	[4]						
capacitance	V _{CC} = 1.65 V to 1.95 V		-	1.8	-	-	-	pF
	V _{CC} = 2.3 V to 2.7 V		-	4.9	-	-	-	pF
	V _{CC} = 3.0 V to 3.6 V		-	7.7	-	-	-	pF
	propagation delay enable time disable time output skew time			Image: matrix propagation delay nAn to nYn; see Fig. 5 [2] V_{CC} = 1.2 V - V_{CC} = 1.65 V to 1.95 V 1.9 V_{CC} = 2.3 V to 2.7 V 1.5 V_{CC} = 2.3 V to 2.7 V 1.5 V_{CC} = 3.0 V to 3.6 V 1.5 V_{CC} = 3.0 V to 3.6 V 1.5 enable time nOE to nYn; see Fig. 6 [2] V_{CC} = 1.65 V to 1.95 V 2.3 V_{CC} = 1.65 V to 1.95 V 2.3 V_{CC} = 1.65 V to 1.95 V 2.3 V_{CC} = 2.3 V to 2.7 V 1.5 V_{CC} = 1.65 V to 1.95 V 2.3 V_{CC} = 2.3 V to 2.7 V 1.9 V_{CC} = 3.0 V to 3.6 V 1.0 disable time nOE to nYn; see Fig. 6 [2] V_{CC} = 1.65 V to 1.95 V 2.9 V_{CC} = 2.3 V to 2.7 V 1.0 V_{CC} = 2.3 V to 3.6 V 1.0 V_{CC} = 2.3 V to 2.7 V 1.5 V_{CC} = 3.0 V to 3.6 V 1.5 V_{CC} = 3.0 V to 3.6 V 1.5 V_{CC} = 3.0 V to 3.6 V 3 power dissipati	Min Typ [1] propagation delay nAn to nYn; see Fig. 5 [2] \sim $V_{CC} = 1.2 V$ - 35 $V_{CC} = 1.65 V to 1.95 V$ 1.9 7.8 $V_{CC} = 2.3 V to 2.7 V$ 1.5 4.1 $V_{CC} = 2.7 V$ 1.5 4.1 $V_{CC} = 3.0 V to 3.6 V$ 1.5 3.5 enable time nOE to nYn; see Fig. 6 [2] \sim $V_{CC} = 1.2 V$ - 38 $V_{CC} = 2.3 V to 2.7 V$ 1.9 5.0 $V_{CC} = 2.3 V to 2.7 V$ 1.9 5.0 $V_{CC} = 2.3 V to 2.7 V$ 1.9 5.0 $V_{CC} = 2.3 V to 3.6 V$ 1.0 4.0 disable time nOE to nYn; see Fig. 6 [2] \sim $V_{CC} = 1.65 V to 1.95 V$ 2.9 4.7 $V_{CC} = 2.3 V to 2.7 V$ 1.0 2.6 $V_{CC} = 3.0 V to 3.6 V$ 1.5 3	MinTyp [1]Maxpropagation delaynAn to nYn; see Fig. 5[2]	Image in the propagation delaynAn to nYn; see Fig. 5[2]MinTyp [1]MaxMinpropagation delaynAn to nYn; see Fig. 5[2]-35 $V_{CC} = 1.2$ V-351.7.71.9 $V_{CC} = 2.3$ V to 2.7 V1.54.18.71.5 $V_{CC} = 2.3$ V to 2.7 V1.54.16.41.5 $V_{CC} = 2.7$ V1.54.16.41.5 $V_{CC} = 3.0$ V to 3.6 V1.53.55.51.5enable timenOE to nYn; see Fig. 6[2] $V_{CC} = 1.65$ V to 1.95 V2.38.919.72.3 $V_{CC} = 1.65$ V to 1.95 V2.38.919.72.3 $V_{CC} = 2.3$ V to 3.6 V1.04.07.11.0 $V_{CC} = 2.3$ V to 3.6 V1.04.07.11.0 $V_{CC} = 1.65$ V to 1.95 V2.94.79.32.9 $V_{CC} = 2.3$ V to 3.6 V1.53.46.41.5 $V_{CC} = 3.0$ V to 3.6 V1.5	MinTyp [1]MaxMinMaxpropagation delaynAn to nYn; see Fig. 5[2] </td

[1] Typical values are measured at T_{amb} = 25 °C and V_{CC} = 1.2 V, 1.8 V, 2.5 V, 2.7 V, and 3.3 V respectively.

 t_{pd} is the same as t_{PLH} and t_{PHL} . [2] t_{en} is the same as t_{PZL} and $t_{\text{PZH}}.$ t_{dis} is the same as t_{PLZ} and $t_{\text{PHZ}}.$

Skew between any two outputs of the same package switching in the same direction. This parameter is guaranteed by design. [3]

 C_{PD} is used to determine the dynamic power dissipation (P_D in μ 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: [4]

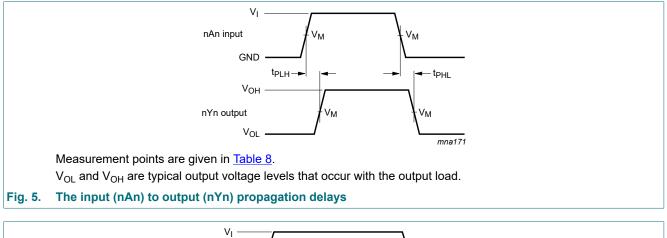
 f_i = input frequency in MHz; f_o = output frequency in MHz

C_L = output load capacitance in pF

V_{CC} = supply voltage in Volts

N = number of inputs switching $\Sigma(C_L \times V_{CC}^2 \times f_o)$ = sum of the outputs

10.1. Waveforms and test circuit



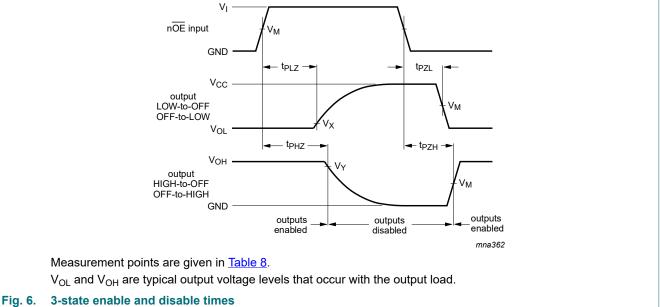
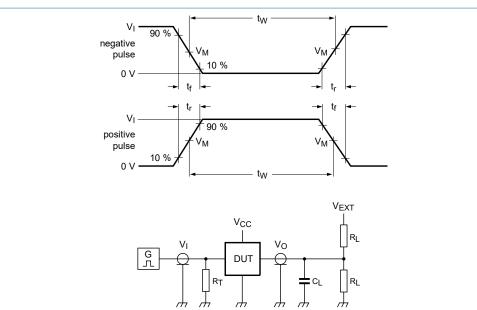


Table 8. Measurement points

Supply voltage	Input	ut Output					
V _{cc}	VI	V _M	V _M	V _X	V _Y		
1.2 V	V _{CC}	0.5 × V _{CC}	$0.5 \times V_{CC}$	V _{OL} + 0.15 V	V _{OH} - 0.15 V		
1.65 V to 1.95 V	V _{CC}	0.5 × V _{CC}	$0.5 \times V_{CC}$	V _{OL} + 0.15 V	V _{OH} - 0.15 V		
2.3 V to 2.7 V	V _{CC}	0.5 × V _{CC}	$0.5 \times V_{CC}$	V _{OL} + 0.15 V	V _{OH} - 0.15 V		
2.7 V	2.7 V	1.5 V	1.5 V	V _{OL} + 0.3 V	V _{OH} - 0.3 V		
3.0 V to 3.6 V	2.7 V	1.5 V	1.5 V	V _{OL} + 0.3 V	V _{OH} - 0.3 V		

74LVC2244A

Octal buffer/line driver; 30 Ω series termination; 5 V tolerant input/output; 3-state





Test data is given in Table 9.

Definitions for test circuit:

R_L = Load resistance.

 C_L = Load capacitance including jig and probe capacitance.

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

V_{EXT} = External voltage for measuring switching times.

Fig. 7. Test circuit for measuring switching times

Table 9. Test data

Supply voltage	Input		Load	Load		V _{EXT}		
	VI	t _r , t _f	CL	RL	t _{PLH} , t _{PHL}	t _{PLZ} , t _{PZL}	t _{PHZ} , t _{PZH}	
1.2 V	V _{CC}	≤ 2 ns	30 pF	1 kΩ	open	2 × V _{CC}	GND	
1.65 V to 1.95 V	V _{CC}	≤ 2 ns	30 pF	1 kΩ	open	$2 \times V_{CC}$	GND	
2.3 V to 2.7 V	V _{CC}	≤ 2 ns	30 pF	500 Ω	open	2 × V _{CC}	GND	
2.7 V	2.7 V	≤ 2.5 ns	50 pF	500 Ω	open	2 × V _{CC}	GND	
3.0 V to 3.6 V	2.7 V	≤ 2.5 ns	50 pF	500 Ω	open	$2 \times V_{CC}$	GND	

11. Package outline

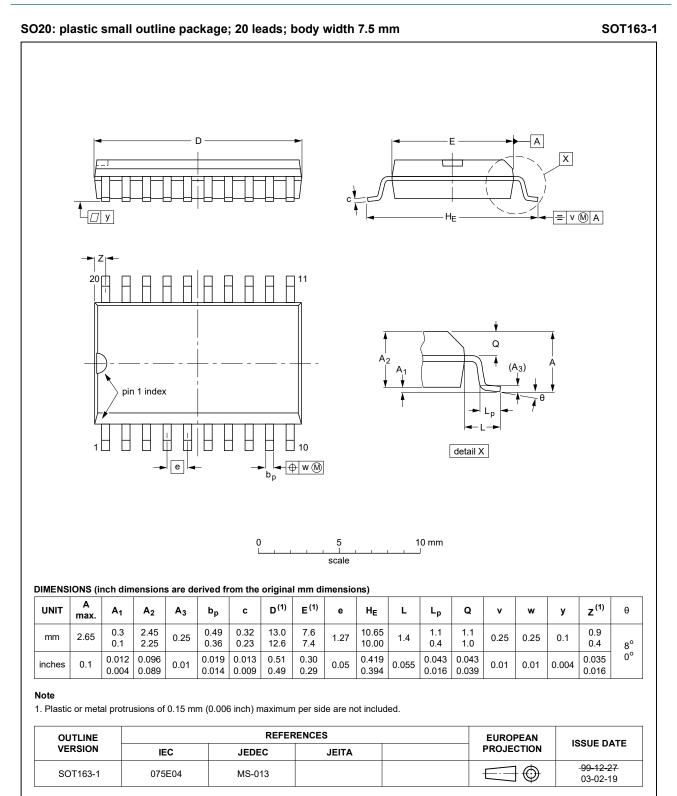


Fig. 8. Package outline SOT163-1 (SO20)

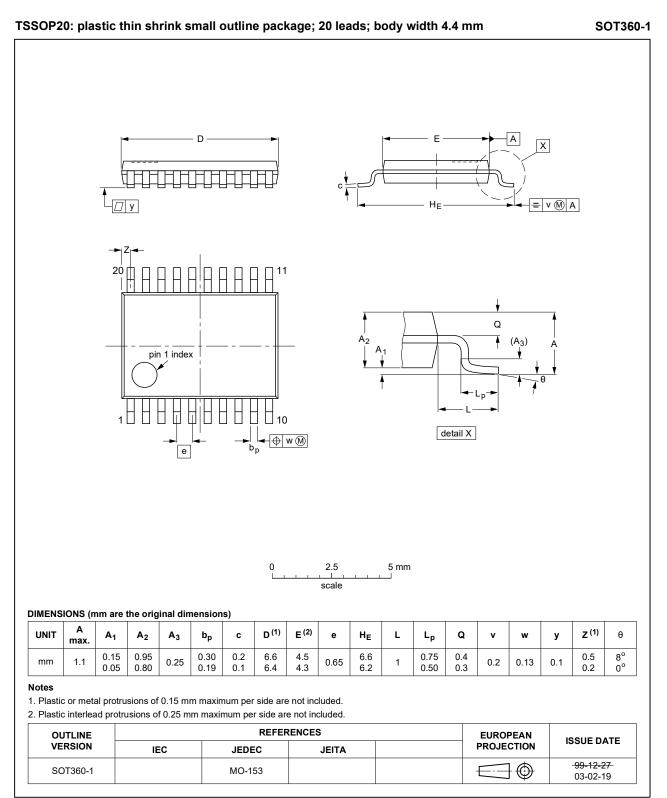


Fig. 9. Package outline SOT360-1 (TSSOP20)

⁷⁴LVC2244A

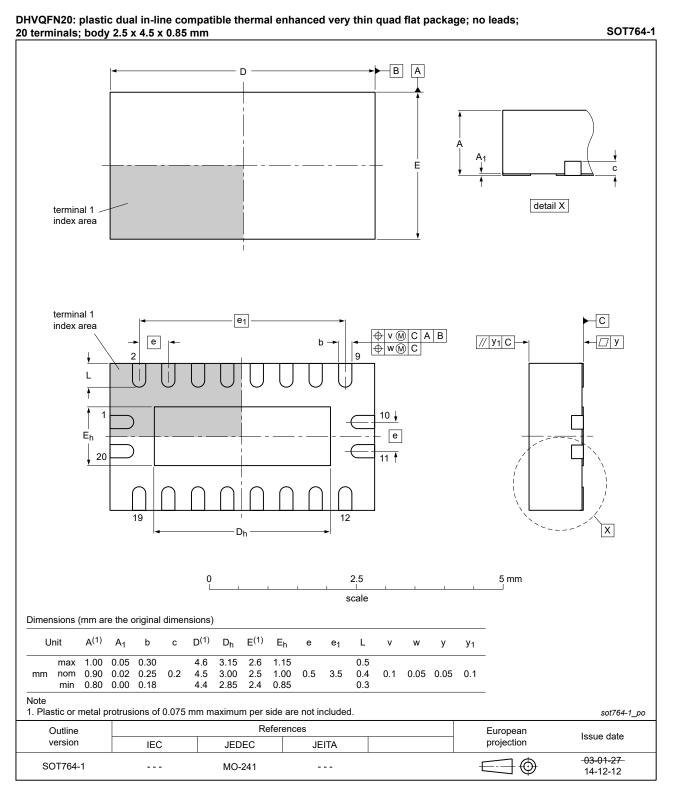


Fig. 10. Package outline SOT764-1 (DHVQFN20)

12. Abbreviations

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

13. Revision history

Table 11. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes				
74LVC2244A v.6	20210920	Product data sheet	-	74LVC2244A v.5				
Modifications:	guidelines of Legal texts <u>Section 1</u> u Type numb <u>Section 7</u> : I <u>Table 8</u> : Me	ave been adapted to the new company name where appropriate.						
74LVC2244A v.5	20111103	Product data sheet	-	74LVC2244A v.4				
Modifications:	guidelines o Legal texts	 guidelines of NXP Semiconductors. Legal texts have been adapted to the new company name where appropriate. 						
74LVC2244A v.4	20040407	Product specification	-	74LVC2244A v.3				
74LVC2244A v.3	20021213	Product specification	-	74LVC2244A v.2				
74LVC2244A v.2	20020618	Product specification	-	74LVC2244A v.1				
74LVC2244A v.1	19990930	Product specification	-	-				

14. Legal information

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.

 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 <u>https://www.nexperia.com</u>.

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. Nexperia 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 Nexperia 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 Nexperia and its customer, unless Nexperia and customer have explicitly agreed otherwise in writing. In no event however, shall an agreement be valid in which the Nexperia product is deemed to offer functions and qualities beyond those described in the Product data sheet.

Disclaimers

Limited warranty and liability — Information in this document is believed to be accurate and reliable. However, Nexperia 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. Nexperia takes no responsibility for the content in this document if provided by an information source outside of Nexperia.

In no event shall Nexperia 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, Nexperia's 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 Nexperia.

Right to make changes — Nexperia 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 — Nexperia 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 Nexperia product can reasonably be expected to result in personal

injury, death or severe property or environmental damage. Nexperia and its suppliers accept no liability for inclusion and/or use of Nexperia products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk.

Quick reference data — The Quick reference data is an extract of the product data given in the Limiting values and Characteristics sections of this document, and as such is not complete, exhaustive or legally binding.

Applications — Applications that are described herein for any of these products are for illustrative purposes only. Nexperia 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 Nexperia products, and Nexperia accepts no liability for any assistance with applications or customer product design. It is customer's sole responsibility to determine whether the Nexperia 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.

Nexperia 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 Nexperia 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). Nexperia 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 — Nexperia products are sold subject to the general terms and conditions of commercial sale, as published at <u>http://www.nexperia.com/profile/terms</u>, 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. Nexperia hereby expressly objects to applying the customer's general terms and conditions with regard to the purchase of Nexperia 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.

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

Trademarks

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

Contents

1. General description	1
2. Features and benefits	1
3. Ordering information	1
4. Functional diagram	2
5. Pinning information	3
5.1. Pinning	3
5.2. Pin description	3
6. Functional description	3
7. Limiting values	4
8. Recommended operating conditions	4
9. Static characteristics	5
10. Dynamic characteristics	6
10.1. Waveforms and test circuit	7
11. Package outline	9
12. Abbreviations	12
13. Revision history	12
14. Legal information	

© Nexperia B.V. 2021. All rights reserved

For more information, please visit: http://www.nexperia.com For sales office addresses, please send an email to: salesaddresses@nexperia.com Date of release: 20 September 2021

74LVC2244A

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Buffers & Line Drivers category:

Click to view products by Nexperia manufacturer:

Other Similar products are found below :

LXV200-024SW 74AUP2G34FW3-7 HEF4043BP NLU1GT126CMUTCG PI74FCT3244L MC74HCT365ADTR2G Le87401NQC Le87402MQC 028192B 042140C 051117G 070519XB NL17SZ07P5T5G NLU1GT126AMUTCG 74AUP1G17FW5-7 74LVC2G17FW4-7 CD4502BE 5962-8982101PA 5962-9052201PA 74LVC1G125FW4-7 NL17SH17P5T5G 74HCT126T14-13 NL17SH125P5T5G NLV37WZ07USG RHRXH162244K1 74AUP1G34FW5-7 74AUP1G07FW5-7 74LVC2G126RA3-7 NLX2G17CMUTCG 74LVCE1G125FZ4-7 Le87501NQC 74AUP1G126FW5-7 TC74HC4050AP(F) 74LVCE1G07FZ4-7 NLX3G16DMUTCG NLX2G06AMUTCG NLU2G17AMUTCG LE87100NQC LE87100NQCT LE87285NQC LE87285NQCT LE87290YQC LE87290YQCT LE87511NQC LE87511NQCT LE87557NQC LE87557NQCT LE87614MQC LE87614MQCT LE87286NQCT