

# 74LVC2G241

Dual buffer/line driver; 3-state

Rev. 09 — 10 June 2008

Product data sheet

## 1. General description

The 74LVC2G241 is a dual non-inverting buffer/line driver with 3-state outputs. The 3-state outputs are controlled by the output enable inputs  $1\overline{OE}$  and 2OE:

- A HIGH level at pin  $1\overline{OE}$  causes output 1Y to assume a high-impedance OFF-state.
- A LOW level at pin 2OE causes output 2Y to assume a high-impedance OFF-state.

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

Inputs can be driven from either 3.3 V or 5 V devices. This feature allows the use of the 74LVC2G241 as a translator in a mixed 3.3 V and 5 V environment.

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

## 2. Features

- Wide supply voltage range from 1.65 V to 5.5 V
- 5 V tolerant input/output for interfacing with 5 V logic
- High noise immunity
- Complies with JEDEC standard:
  - ◆ JESD8-7 (1.65 V to 1.95 V)
  - ◆ JESD8-5 (2.3 V to 2.7 V)
  - ◆ JESD8-B/JESD36 (2.7 V to 3.6 V)
- ESD protection:
  - ◆ HBM JESD22-A114E exceeds 2000 V
  - ◆ MM JESD22-A115-A exceeds 200 V
- $\pm 24$  mA output drive ( $V_{CC} = 3.0$  V)
- CMOS low power consumption
- Latch-up performance exceeds 250 mA
- Direct interface with TTL levels
- Inputs accept voltages up to 5 V
- Multiple package options
- Specified from  $-40$  °C to  $+85$  °C and  $-40$  °C to  $+125$  °C

### 3. Ordering information

Table 1. Ordering information

Type number	Package			Version
	Temperature range	Name	Description	
74LVC2G241DP	-40 °C to +125 °C	TSSOP8	plastic thin shrink small outline package; 8 leads; body width 3 mm; lead length 0.5 mm	SOT505-2
74LVC2G241DC	-40 °C to +125 °C	VSSOP8	plastic very thin shrink small outline package; 8 leads; body width 2.3 mm	SOT765-1
74LVC2G241GT	-40 °C to +125 °C	XSON8	plastic extremely thin small outline package; no leads; 8 terminals; body 1 × 1.95 × 0.5 mm	SOT833-1
74LVC2G241GD	-40 °C to +125 °C	XSON8U	plastic extremely thin small outline package; no leads; 8 terminals; UTLP based; body 3 × 2 × 0.5 mm	SOT996-2
74LVC2G241GM	-40 °C to +125 °C	XQFN8U	plastic extremely thin quad flat package; no leads; 8 terminals; UTLP based; body 1.6 × 1.6 × 0.5 mm	SOT902-1

### 4. Marking

Table 2. Marking codes

Type number	Marking code
74LVC2G241DP	V241
74LVC2G241DC	V41
74LVC2G241GT	V41
74LVC2G241GD	V41
74LVC2G241GM	V41

### 5. Functional diagram

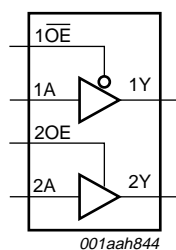


Fig 1. Logic symbol

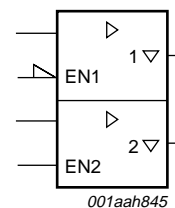
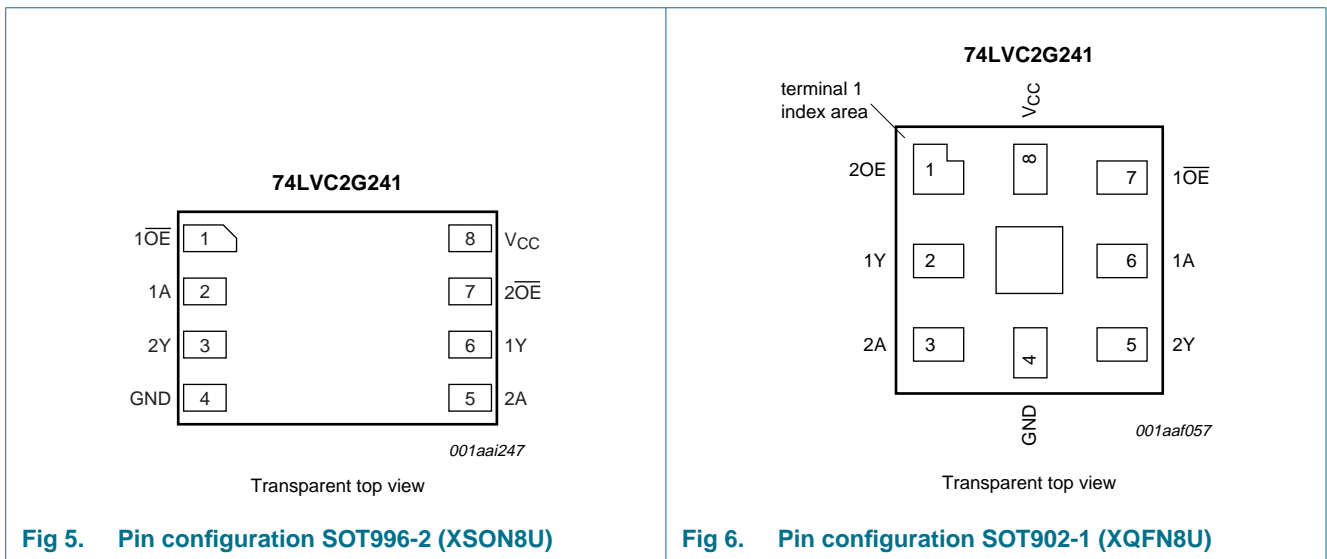
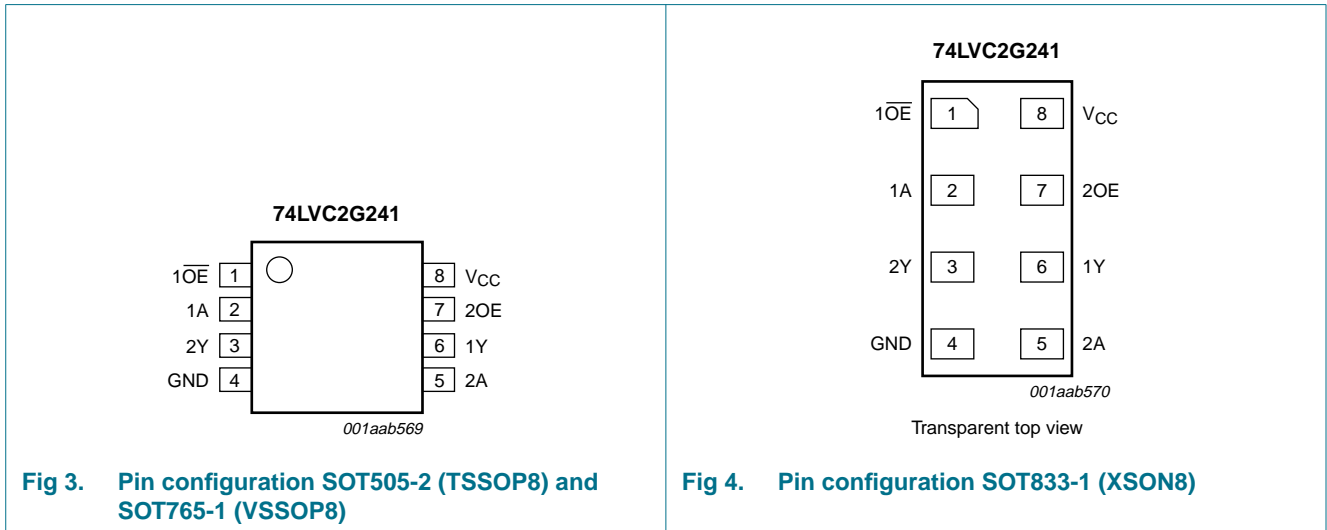


Fig 2. IEC logic symbol

## 6. Pinning information

### 6.1 Pinning



### 6.2 Pin description

**Table 3. Pin description**

Symbol	Pin		Description
	SOT505-2, SOT765-1, SOT833-1 and SOT996-2	SOT902-1	
1OE	1	7	output enable input (active LOW)
1A, 2A	2, 5	6, 3	data input
GND	4	4	ground (0 V)

Table 3. Pin description ...continued

Symbol	Pin		Description
	SOT505-2, SOT765-1, SOT833-1 and SOT996-2	SOT902-1	
1Y, 2Y	6, 3	2, 5	data output
2OE	7	1	output enable input (active HIGH)
V <sub>CC</sub>	8	8	supply voltage

## 7. Functional description

Table 4. Function table<sup>[1]</sup>

Input				Output	
1OE	1A	2OE	2A	1Y	2Y
L	L	H	L	L	L
L	H	H	H	H	H
H	X	L	X	Z	Z

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

## 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 <sub>CC</sub>	supply voltage		-0.5	+6.5	V
I <sub>IK</sub>	input clamping current	V <sub>I</sub> < 0 V	-50	-	mA
V <sub>I</sub>	input voltage		[1] -0.5	+6.5	V
I <sub>OK</sub>	output clamping current	V <sub>O</sub> > V <sub>CC</sub> or V <sub>O</sub> < 0 V	-	±50	mA
V <sub>O</sub>	output voltage	enable mode	[1] -0.5	V <sub>CC</sub> + 0.5	V
		disable mode	[1] -0.5	+6.5	V
		Power-down mode	[1][2] -0.5	+6.5	V
I <sub>O</sub>	output current	V <sub>O</sub> = 0 V to V <sub>CC</sub>	-	±50	mA
I <sub>CC</sub>	supply current		-	100	mA
I <sub>GND</sub>	ground current		-100	-	mA
T <sub>stg</sub>	storage temperature		-65	+150	°C
P <sub>tot</sub>	total power dissipation	T <sub>amb</sub> = -40 °C to +125 °C	[3] -	300	mW

- [1] The input and output voltage ratings may be exceeded if the input and output current ratings are observed.  
 [2] When V<sub>CC</sub> = 0 V (Power-down mode), the output voltage can be 5.5 V in normal operation.  
 [3] For TSSOP8 packages: above 55 °C the value of P<sub>tot</sub> derates linearly at 2.5 mW/K.  
 For VSSOP8 packages: above 110 °C the value of P<sub>tot</sub> derates linearly at 8.0 mW/K.  
 For XSON8, XSON8U and XQFN8U packages: above 45 °C the value of P<sub>tot</sub> derates linearly at 2.4 mW/K.

## 9. Recommended operating conditions

**Table 6. Operating conditions**

Symbol	Parameter	Conditions	Min	Max	Unit
$V_{CC}$	supply voltage		1.65	5.5	V
$V_I$	input voltage		0	5.5	V
$V_O$	output voltage	$V_{CC} = 1.65\text{ V to }5.5\text{ V; enable mode}$	0	$V_{CC}$	V
		$V_{CC} = 1.65\text{ V to }5.5\text{ V; disable mode}$	0	5.5	V
		$V_{CC} = 0\text{ V; Power-down mode}$	0	5.5	V
$T_{amb}$	ambient temperature		-40	+125	°C
$\Delta t/\Delta V$	input transition rise and fall rate	$V_{CC} = 1.65\text{ V to }2.7\text{ V}$	-	20	ns/V
		$V_{CC} = 2.7\text{ V to }5.5\text{ V}$	-	10	ns/V

## 10. Static characteristics

**Table 7. Static characteristics**

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

Symbol	Parameter	Conditions	Min	Typ <sup>[1]</sup>	Max	Unit
<b><math>T_{amb} = -40\text{ °C to }+85\text{ °C}</math></b>						
$V_{IH}$	HIGH-level input voltage	$V_{CC} = 1.65\text{ V to }1.95\text{ V}$	$0.65 \times V_{CC}$	-	-	V
		$V_{CC} = 2.3\text{ V to }2.7\text{ V}$	1.7	-	-	V
		$V_{CC} = 2.7\text{ V to }3.6\text{ V}$	2.0	-	-	V
		$V_{CC} = 4.5\text{ V to }5.5\text{ V}$	$0.7 \times V_{CC}$	-	-	V
$V_{IL}$	LOW-level input voltage	$V_{CC} = 1.65\text{ V to }1.95\text{ V}$	-	-	$0.35 \times V_{CC}$	V
		$V_{CC} = 2.3\text{ V to }2.7\text{ V}$	-	-	0.7	V
		$V_{CC} = 2.7\text{ V to }3.6\text{ V}$	-	-	0.8	V
		$V_{CC} = 4.5\text{ V to }5.5\text{ V}$	-	-	$0.3 \times V_{CC}$	V
$V_{OL}$	LOW-level output voltage	$V_I = V_{IH}\text{ or }V_{IL}$				
		$I_O = 100\ \mu\text{A; }V_{CC} = 1.65\text{ V to }5.5\text{ V}$	-	-	0.1	V
		$I_O = 4\text{ mA; }V_{CC} = 1.65\text{ V}$	-	-	0.45	V
		$I_O = 8\text{ mA; }V_{CC} = 2.3\text{ V}$	-	-	0.3	V
		$I_O = 12\text{ mA; }V_{CC} = 2.7\text{ V}$	-	-	0.4	V
		$I_O = 24\text{ mA; }V_{CC} = 3.0\text{ V}$	-	-	0.55	V
		$I_O = 32\text{ mA; }V_{CC} = 4.5\text{ V}$	-	-	0.55	V
$V_{OH}$	HIGH-level output voltage	$V_I = V_{IH}\text{ or }V_{IL}$				
		$I_O = -100\ \mu\text{A; }V_{CC} = 1.65\text{ V to }5.5\text{ V}$	$V_{CC} - 0.1$	-	-	V
		$I_O = -4\text{ mA; }V_{CC} = 1.65\text{ V}$	1.2	-	-	V
		$I_O = -8\text{ mA; }V_{CC} = 2.3\text{ V}$	1.9	-	-	V
		$I_O = -12\text{ mA; }V_{CC} = 2.7\text{ V}$	2.2	-	-	V
		$I_O = -24\text{ mA; }V_{CC} = 3.0\text{ V}$	2.3	-	-	V
		$I_O = -32\text{ mA; }V_{CC} = 4.5\text{ V}$	3.8	-	-	V
$I_I$	input leakage current	$V_I = 5.5\text{ V or GND; }V_{CC} = 0\text{ V to }5.5\text{ V}$	-	$\pm 0.1$	$\pm 5$	$\mu\text{A}$

**Table 7. Static characteristics ...continued**

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

Symbol	Parameter	Conditions	Min	Typ <sup>[1]</sup>	Max	Unit
I <sub>OZ</sub>	OFF-state output current	V <sub>I</sub> = V <sub>IH</sub> or V <sub>IL</sub> ; V <sub>O</sub> = 5.5 V or GND; V <sub>CC</sub> = 3.6 V	-	±0.1	±10	μA
I <sub>OFF</sub>	power-off leakage current	V <sub>I</sub> or V <sub>O</sub> = 5.5 V; V <sub>CC</sub> = 0 V	-	±0.1	±10	μA
I <sub>CC</sub>	supply current	V <sub>I</sub> = 5.5 V or GND; I <sub>O</sub> = 0 A; V <sub>CC</sub> = 1.65 V to 5.5 V	-	0.1	10	μA
ΔI <sub>CC</sub>	additional supply current	per pin; V <sub>I</sub> = V <sub>CC</sub> - 0.6 V; I <sub>O</sub> = 0 A; V <sub>CC</sub> = 2.3 V to 5.5 V	-	5	500	μA
C <sub>I</sub>	input capacitance		-	2	-	pF
<b>T<sub>amb</sub> = -40 °C to +125 °C</b>						
V <sub>IH</sub>	HIGH-level input voltage	V <sub>CC</sub> = 1.65 V to 1.95 V	0.65 × V <sub>CC</sub>	-	-	V
		V <sub>CC</sub> = 2.3 V to 2.7 V	1.7	-	-	V
		V <sub>CC</sub> = 2.7 V to 3.6 V	2.0	-	-	V
		V <sub>CC</sub> = 4.5 V to 5.5 V	0.7 × V <sub>CC</sub>	-	-	V
V <sub>IL</sub>	LOW-level input voltage	V <sub>CC</sub> = 1.65 V to 1.95 V	-	-	0.35 × V <sub>CC</sub>	V
		V <sub>CC</sub> = 2.3 V to 2.7 V	-	-	0.7	V
		V <sub>CC</sub> = 2.7 V to 3.6 V	-	-	0.8	V
		V <sub>CC</sub> = 4.5 V to 5.5 V	-	-	0.3 × V <sub>CC</sub>	V
V <sub>OL</sub>	LOW-level output voltage	V <sub>I</sub> = V <sub>IH</sub> or V <sub>IL</sub>				
		I <sub>O</sub> = 100 μA; V <sub>CC</sub> = 1.65 V to 5.5 V	-	-	0.1	V
		I <sub>O</sub> = 4 mA; V <sub>CC</sub> = 1.65 V	-	-	0.70	V
		I <sub>O</sub> = 8 mA; V <sub>CC</sub> = 2.3 V	-	-	0.45	V
		I <sub>O</sub> = 12 mA; V <sub>CC</sub> = 2.7 V	-	-	0.60	V
		I <sub>O</sub> = 24 mA; V <sub>CC</sub> = 3.0 V	-	-	0.80	V
V <sub>OH</sub>	HIGH-level output voltage	V <sub>I</sub> = V <sub>IH</sub> or V <sub>IL</sub>				
		I <sub>O</sub> = -100 μA; V <sub>CC</sub> = 1.65 V to 5.5 V	V <sub>CC</sub> - 0.1	-	-	V
		I <sub>O</sub> = -4 mA; V <sub>CC</sub> = 1.65 V	0.95	-	-	V
		I <sub>O</sub> = -8 mA; V <sub>CC</sub> = 2.3 V	1.7	-	-	V
		I <sub>O</sub> = -12 mA; V <sub>CC</sub> = 2.7 V	1.9	-	-	V
		I <sub>O</sub> = -24 mA; V <sub>CC</sub> = 3.0 V	2.0	-	-	V
I <sub>I</sub>	input leakage current	V <sub>I</sub> = 5.5 V or GND; V <sub>CC</sub> = 0 V to 5.5 V	-	-	±20	μA
I <sub>OZ</sub>	OFF-state output current	V <sub>I</sub> = V <sub>IH</sub> or V <sub>IL</sub> ; V <sub>O</sub> = 5.5 V or GND; V <sub>CC</sub> = 3.6 V	-	-	±20	μA
I <sub>OFF</sub>	power-off leakage current	V <sub>I</sub> or V <sub>O</sub> = 5.5 V; V <sub>CC</sub> = 0 V	-	-	±20	μA
I <sub>CC</sub>	supply current	V <sub>I</sub> = 5.5 V or GND; I <sub>O</sub> = 0 A; V <sub>CC</sub> = 1.65 V to 5.5 V	-	-	40	μA
ΔI <sub>CC</sub>	additional supply current	per pin; V <sub>I</sub> = V <sub>CC</sub> - 0.6 V; I <sub>O</sub> = 0 A; V <sub>CC</sub> = 2.3 V to 5.5 V	-	-	5	mA

[1] Typical values are measured at V<sub>CC</sub> = 3.3 V and T<sub>amb</sub> = 25 °C.

## 11. Dynamic characteristics

**Table 8. Dynamic characteristics**

Voltages are referenced to GND (ground = 0 V); for test circuit see [Figure 10](#).

Symbol	Parameter	Conditions	-40 °C to +85 °C			-40 °C to +125 °C		Unit		
			Min	Typ <sup>[1]</sup>	Max	Min	Max			
t <sub>pd</sub>	propagation delay	nA to nY; see <a href="#">Figure 7</a> <sup>[2]</sup>								
		V <sub>CC</sub> = 1.65 V to 1.95 V	1.0	4.5	8.8	1.0	11.0	ns		
		V <sub>CC</sub> = 2.3 V to 2.7 V	0.5	2.8	4.9	0.5	6.3	ns		
		V <sub>CC</sub> = 2.7 V	1.0	2.8	4.7	1.0	5.9	ns		
		V <sub>CC</sub> = 3.0 V to 3.6 V	0.5	2.6	4.3	0.5	5.4	ns		
		V <sub>CC</sub> = 4.5 V to 5.5 V	0.5	2.1	3.7	0.5	4.6	ns		
t <sub>en</sub>	enable time	1OE to 1Y; see <a href="#">Figure 8</a> <sup>[3]</sup>								
		V <sub>CC</sub> = 1.65 V to 1.95 V	1.5	5.2	9.9	1.5	12.4	ns		
		V <sub>CC</sub> = 2.3 V to 2.7 V	1.0	3.1	5.6	1.0	7.0	ns		
		V <sub>CC</sub> = 2.7 V	1.5	3.2	5.5	1.5	6.9	ns		
		V <sub>CC</sub> = 3.0 V to 3.6 V	0.5	2.7	4.7	0.5	5.9	ns		
		V <sub>CC</sub> = 4.5 V to 5.5 V	0.5	2.0	3.8	0.5	4.8	ns		
		2OE to 2Y; see <a href="#">Figure 9</a> <sup>[3]</sup>								
		V <sub>CC</sub> = 1.65 V to 1.95 V	1.0	4.3	8.8	1.0	11.0	ns		
		V <sub>CC</sub> = 2.3 V to 2.7 V	1.0	2.7	4.7	1.0	5.9	ns		
		V <sub>CC</sub> = 2.7 V	1.0	2.7	4.6	1.0	5.8	ns		
		V <sub>CC</sub> = 3.0 V to 3.6 V	1.0	2.5	4.1	1.0	5.1	ns		
		V <sub>CC</sub> = 4.5 V to 5.5 V	0.5	1.9	3.3	0.5	4.1	ns		
		t <sub>dis</sub>	disable time	1OE to 1Y; see <a href="#">Figure 8</a> <sup>[4]</sup>						
				V <sub>CC</sub> = 1.65 V to 1.95 V	1.0	3.2	11.6	1.0	14.1	ns
V <sub>CC</sub> = 2.3 V to 2.7 V	0.5			2.2	5.8	0.5	7.6	ns		
V <sub>CC</sub> = 2.7 V	1.0			2.8	4.6	1.0	5.9	ns		
V <sub>CC</sub> = 3.0 V to 3.6 V	1.0			2.6	4.4	1.0	5.7	ns		
V <sub>CC</sub> = 4.5 V to 5.5 V	0.5			2.0	3.4	0.5	4.6	ns		
2OE to 2Y; see <a href="#">Figure 9</a> <sup>[4]</sup>										
V <sub>CC</sub> = 1.65 V to 1.95 V	1.0			3.6	12.5	1.0	15.2	ns		
V <sub>CC</sub> = 2.3 V to 2.7 V	0.5			2.0	5.2	0.5	6.9	ns		
V <sub>CC</sub> = 2.7 V	1.5			3.2	4.9	1.5	6.3	ns		
V <sub>CC</sub> = 3.0 V to 3.6 V	1.0			2.8	4.2	1.0	5.4	ns		
V <sub>CC</sub> = 4.5 V to 5.5 V	0.5			2.0	3.3	0.5	4.4	ns		

**Table 8. Dynamic characteristics ...continued**

Voltages are referenced to GND (ground = 0 V); for test circuit see [Figure 10](#).

Symbol	Parameter	Conditions	-40 °C to +85 °C			-40 °C to +125 °C		Unit
			Min	Typ <sup>[1]</sup>	Max	Min	Max	
C <sub>PD</sub>	power dissipation capacitance	per buffer; V <sub>I</sub> = GND to V <sub>CC</sub> <sup>[5]</sup>						
		output enabled	-	20	-	-	-	pF
		output disabled	-	5	-	-	-	pF

[1] Typical values are measured at nominal V<sub>CC</sub> and at T<sub>amb</sub> = 25 °C.

[2] t<sub>pd</sub> is the same as t<sub>PLH</sub> and t<sub>PHL</sub>.

[3] t<sub>en</sub> is the same as t<sub>PZH</sub> and t<sub>PZL</sub>.

[4] t<sub>dis</sub> is the same as t<sub>PLZ</sub> and t<sub>PHZ</sub>.

[5] C<sub>PD</sub> is used to determine the dynamic power dissipation (P<sub>D</sub> in μW).

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

f<sub>i</sub> = input frequency in MHz;

f<sub>o</sub> = output frequency in MHz;

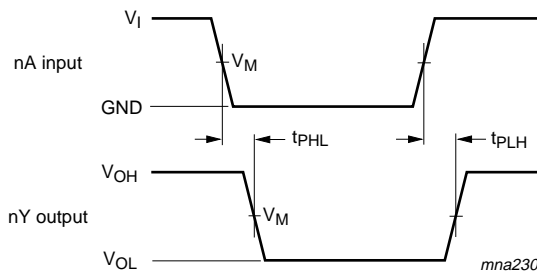
C<sub>L</sub> = output load capacitance in pF;

V<sub>CC</sub> = supply voltage in V;

N = number of inputs switching;

Σ(C<sub>L</sub> × V<sub>CC</sub><sup>2</sup> × f<sub>o</sub>) = sum of outputs.

## 12. Waveforms



Measurement points are given in [Table 9](#).

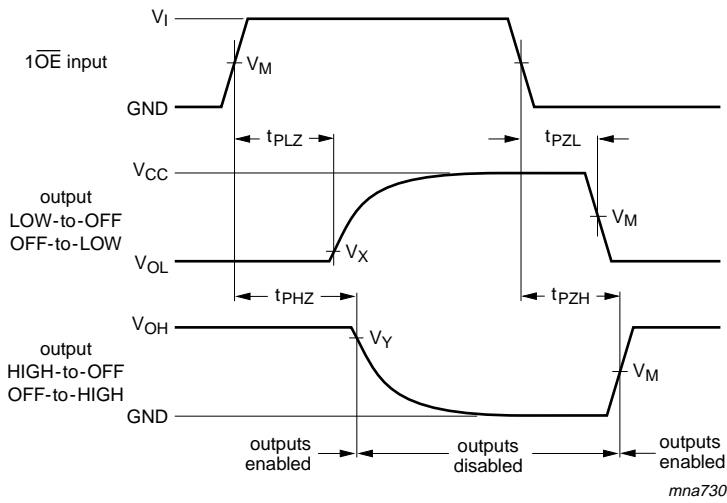
Logic levels: V<sub>OL</sub> and V<sub>OH</sub> are typical output voltage levels that occur with the output load.

**Fig 7. The data input (nA) to output (nY) propagation delays**

**Table 9. Measurement points**

Supply voltage	Input	Output		
V <sub>CC</sub>	V <sub>M</sub>	V <sub>M</sub>	V <sub>X</sub>	V <sub>Y</sub>
1.65 V to 1.95 V	0.5 × V <sub>CC</sub>	0.5 × V <sub>CC</sub>	V <sub>OL</sub> + 0.15 V	V <sub>OH</sub> - 0.15 V
2.3 V to 2.7 V	0.5 × V <sub>CC</sub>	0.5 × V <sub>CC</sub>	V <sub>OL</sub> + 0.15 V	V <sub>OH</sub> - 0.15 V
2.7 V	1.5 V	1.5 V	V <sub>OL</sub> + 0.3 V	V <sub>OH</sub> - 0.3 V
3.0 V to 3.6 V	1.5 V	1.5 V	V <sub>OL</sub> + 0.3 V	V <sub>OH</sub> - 0.3 V
4.5 V to 5.5 V	0.5 × V <sub>CC</sub>	0.5 × V <sub>CC</sub>	V <sub>OL</sub> + 0.3 V	V <sub>OH</sub> - 0.3 V

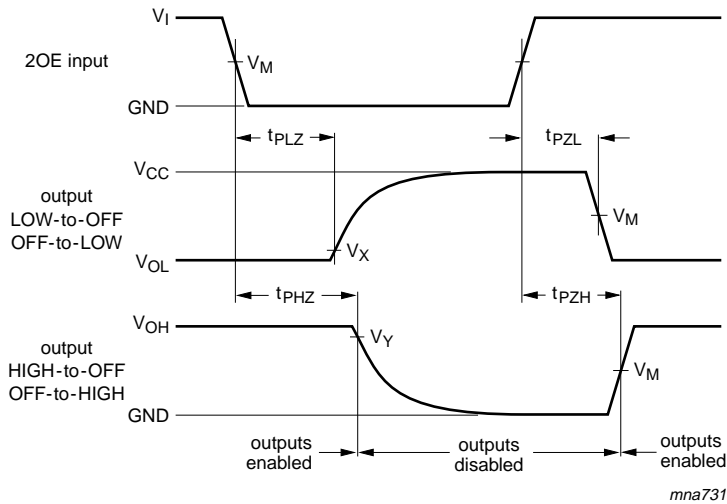




Measurement points are given in [Table 9](#).

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

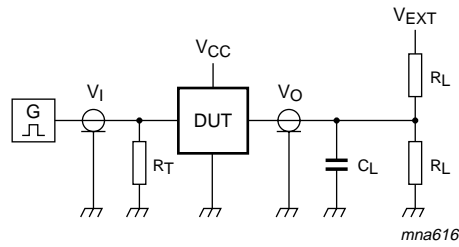
**Fig 8. Enable and disable times for input  $\overline{1OE}$**



Measurement points are given in [Table 9](#).

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

**Fig 9. Enable and disable times for input 2OE**



Test data is given in [Table 10](#).

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 the output impedance  $Z_o$  of the pulse generator.

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

**Fig 10. Load circuit for measuring switching times**

**Table 10. Test data**

Supply voltage	Input	Load		$V_{EXT}$		
	$V_I$	$C_L$	$R_L$	$t_{PLH}, t_{PHL}$	$t_{PZH}, t_{PHZ}$	$t_{PZL}, t_{PLZ}$
1.65 V to 1.95 V	$V_{CC}$	30 pF	1 k $\Omega$	open	GND	$2 \times V_{CC}$
2.3 V to 2.7 V	$V_{CC}$	30 pF	500 $\Omega$	open	GND	$2 \times V_{CC}$
2.7 V	2.7 V	50 pF	500 $\Omega$	open	GND	6 V
3.0 V to 3.6 V	2.7 V	50 pF	500 $\Omega$	open	GND	6 V
4.5 V to 5.5 V	$V_{CC}$	50 pF	500 $\Omega$	open	GND	$2 \times V_{CC}$

13. Package outline

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

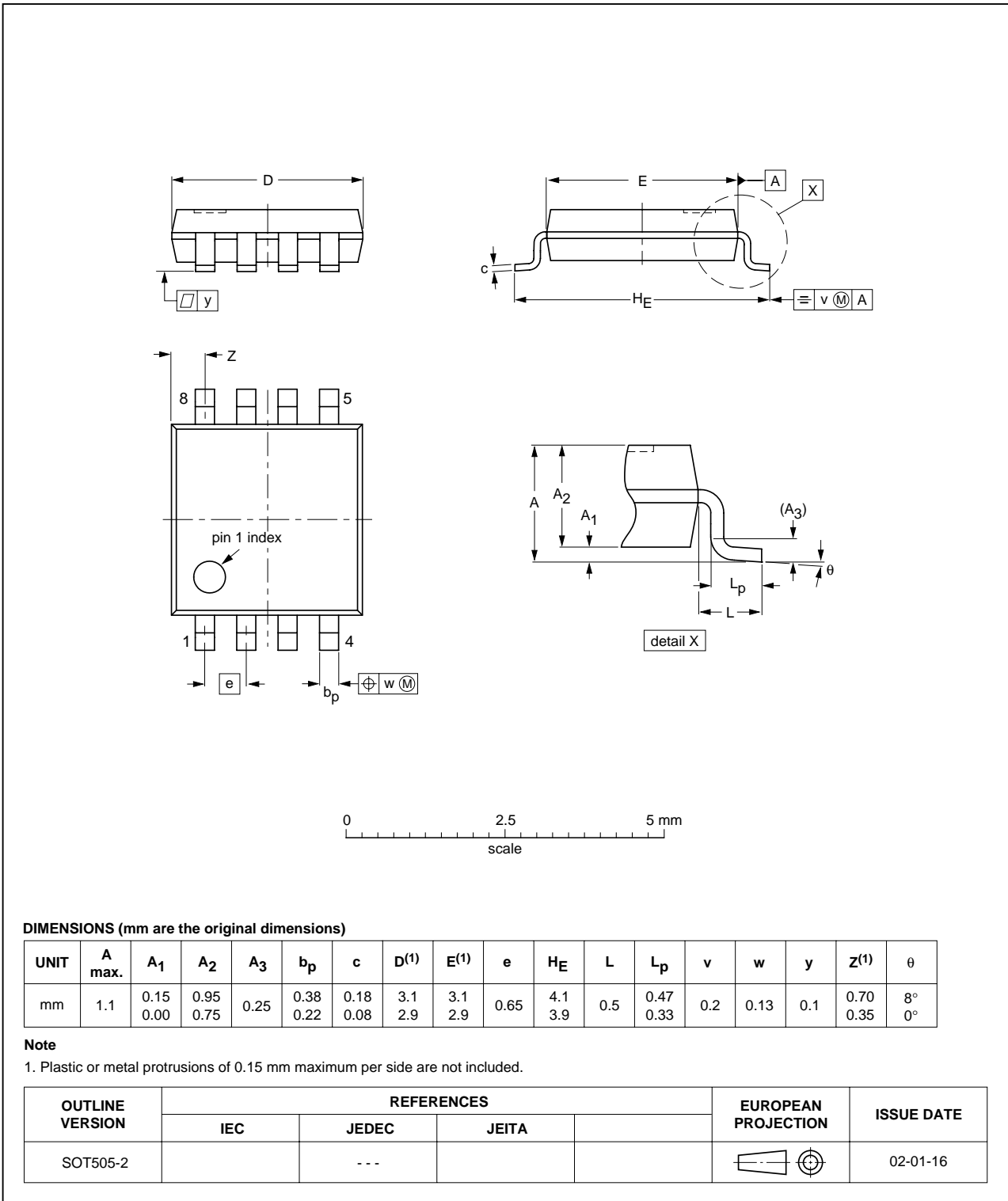


Fig 11. Package outline SOT505-2 (TSSOP8)

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

SOT765-1

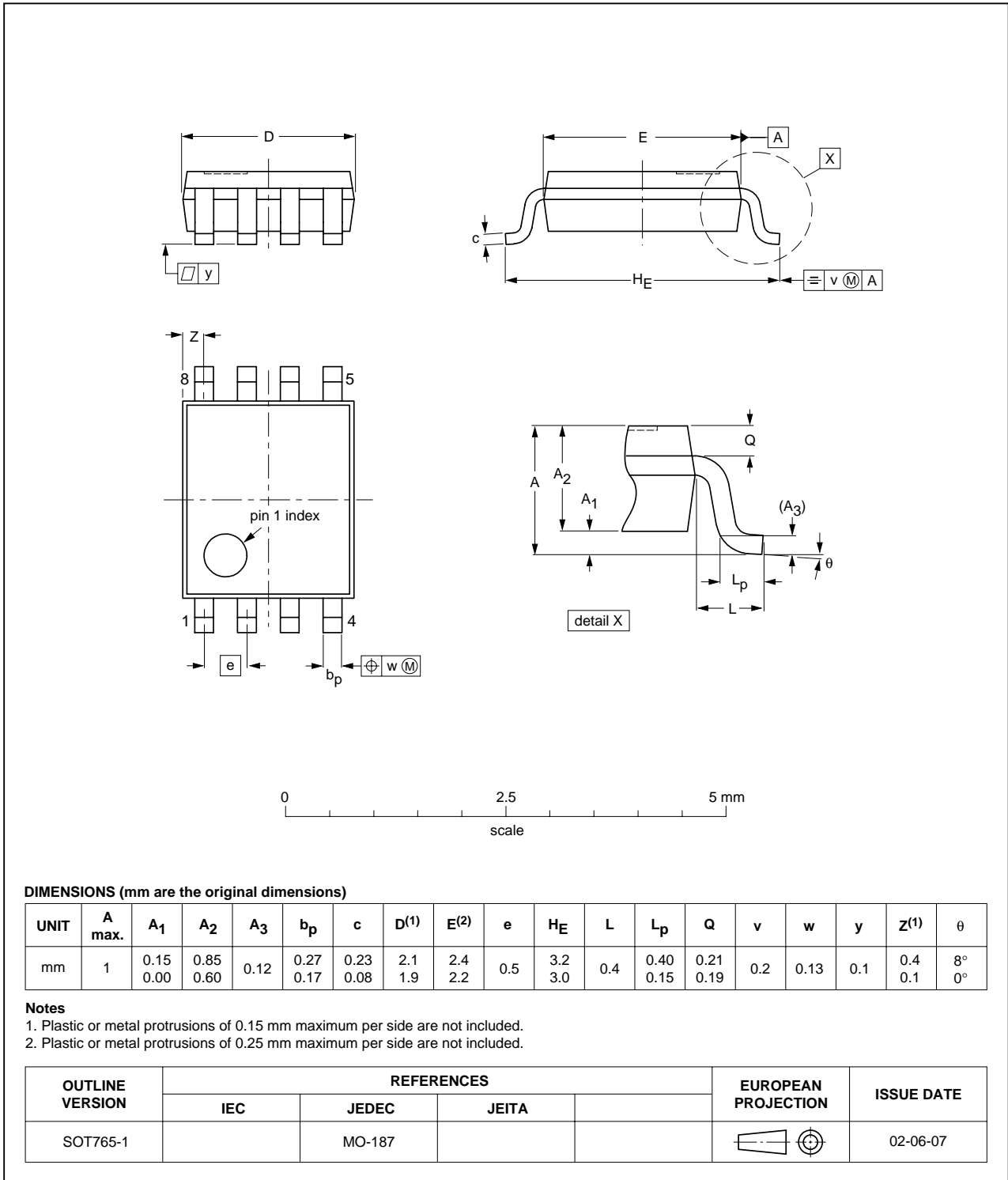


Fig 12. Package outline SOT765-1 (VSSOP8)

XSON8: plastic extremely thin small outline package; no leads; 8 terminals; body 1 x 1.95 x 0.5 mm

SOT833-1

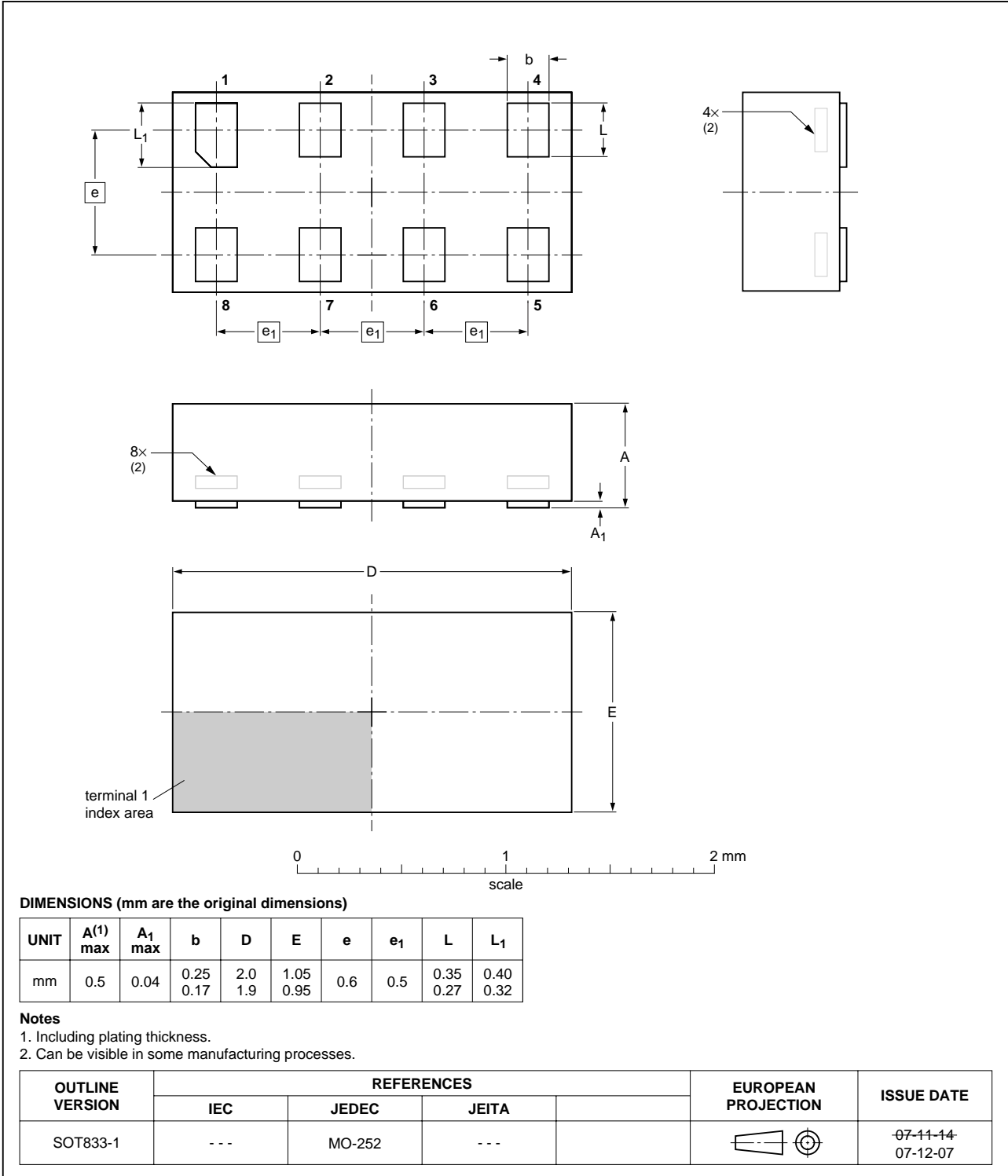


Fig 13. Package outline SOT833-1 (XSON8)

XSON8U: plastic extremely thin small outline package; no leads;  
8 terminals; UTLP based; body 3 x 2 x 0.5 mm

SOT996-2

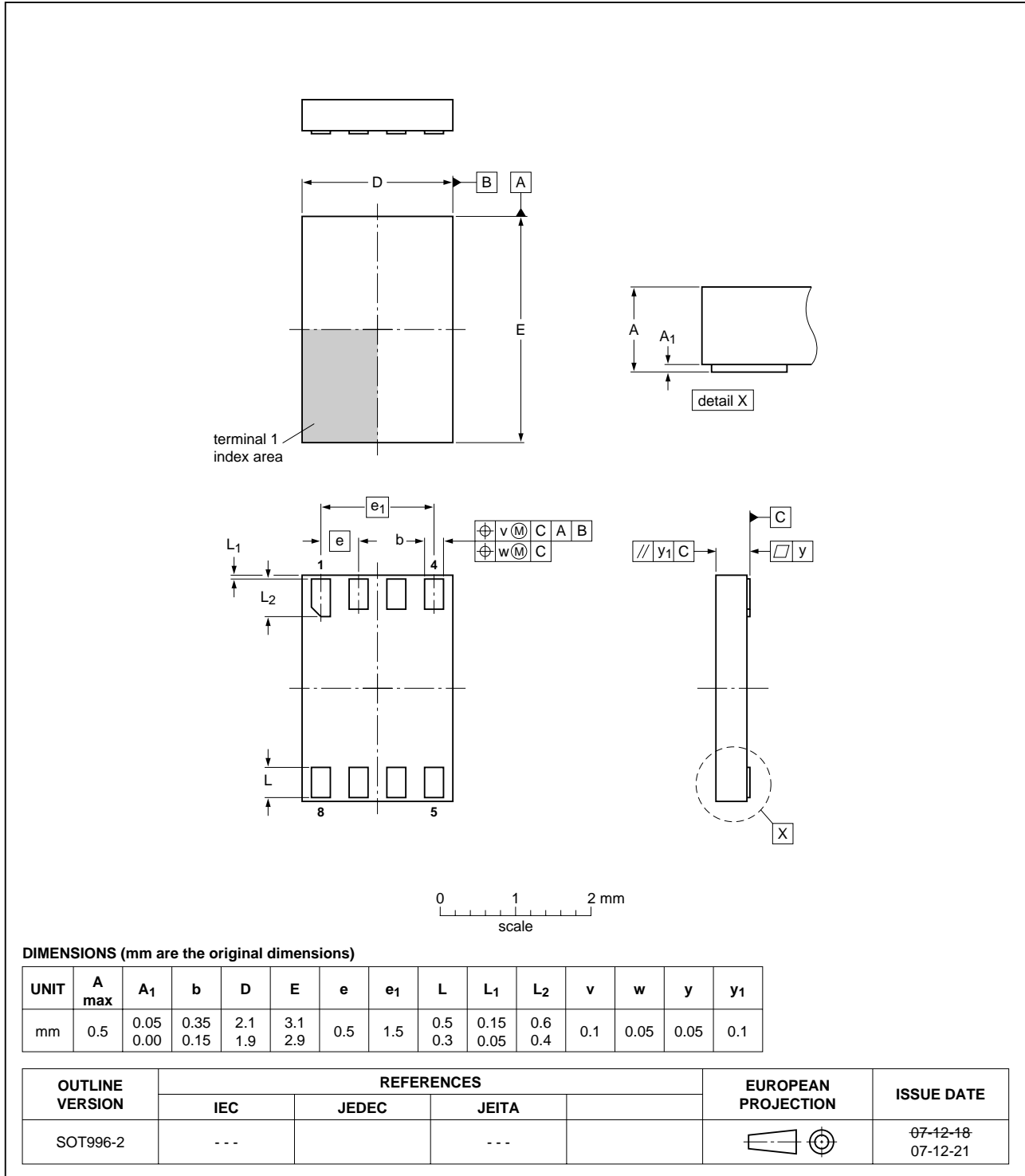


Fig 14. Package outline SOT996-2 (XSON8U)

XQFN8U: plastic extremely thin quad flat package; no leads; 8 terminals; UTLP based; body 1.6 x 1.6 x 0.5 mm

SOT902-1

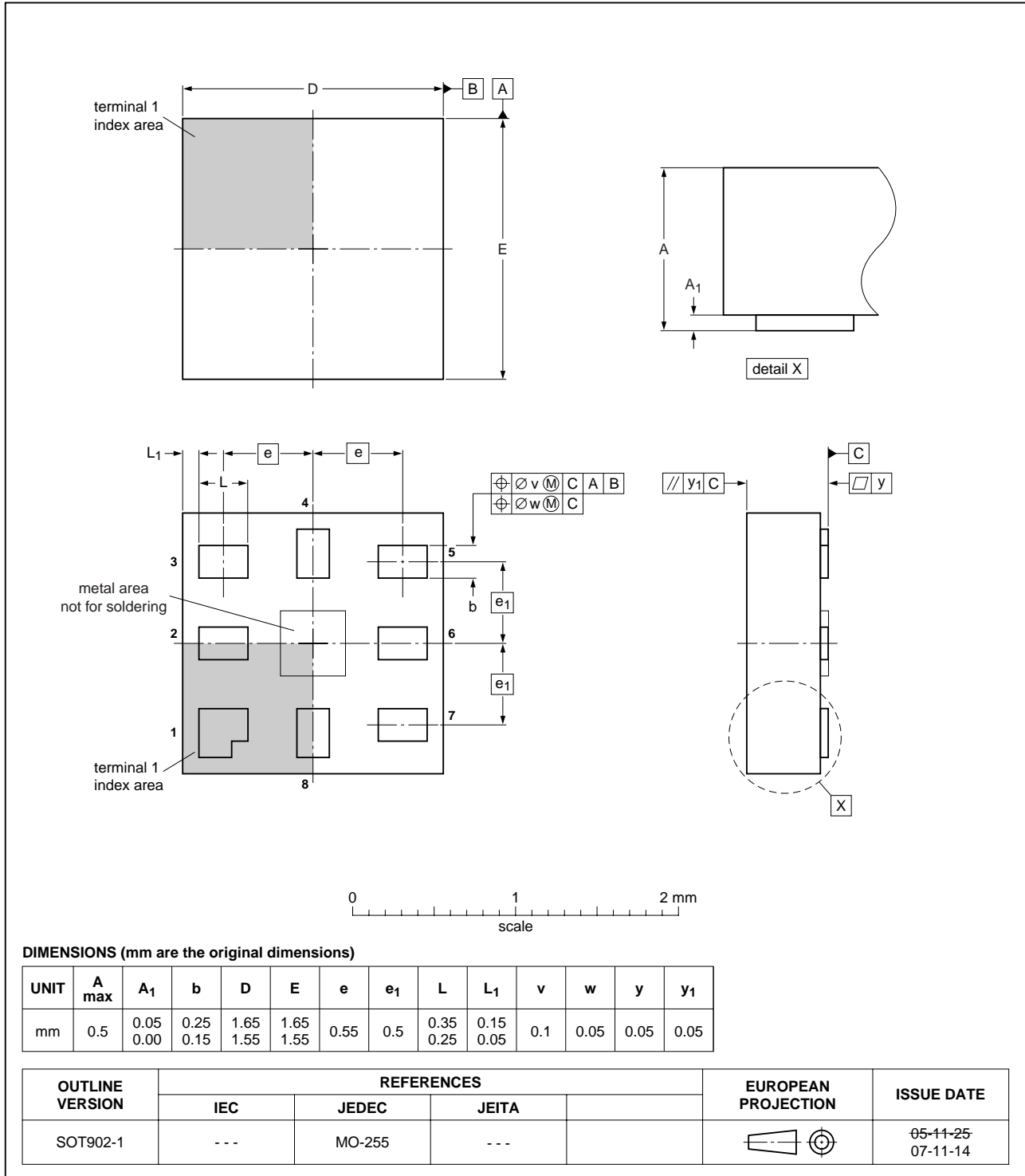


Fig 15. Package outline SOT902-1 (XQFN8U)

## 14. Abbreviations

Table 11. Abbreviations

Acronym	Description
CMOS	Complementary Metal-Oxide Semiconductor
DUT	Device Under Test
ESD	ElectroStatic Discharge
HBM	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
74LVC2G241_9	20080610	Product data sheet	-	74LVC2G241_8
Modifications:	<ul style="list-style-type: none"> <li>Added type number 74LVC2G241GD (XSON8U package)</li> </ul>			
74LVC2G241_8	20080312	Product data sheet	-	74LVC2G241_7
74LVC2G241_7	20071005	Product data sheet	-	74LVC2G241_6
74LVC2G241_6	20060922	Product data sheet	-	74LVC2G241_5
74LVC2G241_5	20050202	Product specification	-	74LVC2G241_4
74LVC2G241_4	20040922	Product specification	-	74LVC2G241_3
74LVC2G241_3	20030311	Product specification	-	74LVC2G241_2
74LVC2G241_2	20030129	Product specification	-	74LVC2G241_1
74LVC2G241_1	20021030	Product specification	-	-



## 16. Legal information

### 16.1 Data sheet status

Document status <sup>[1][2]</sup>	Product status <sup>[3]</sup>	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".

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