

# 74AUP2G07

## Low-power dual buffer with open-drain output

Rev. 7 — 29 November 2012

Product data sheet

### 1. General description

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The 74AUP2G07 provides two non-inverting buffers with open-drain output. The output of the device is an open drain and can be connected to other open-drain outputs to implement active-LOW wired-OR or active-HIGH wired-AND functions.

Schmitt-trigger action at all inputs makes the circuit tolerant to slower input rise and fall times across the entire  $V_{CC}$  range from 0.8 V to 3.6 V.

This device ensures a very low static and dynamic power consumption across the entire  $V_{CC}$  range from 0.8 V to 3.6 V.

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

### 2. Features and benefits

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- Wide supply voltage range from 0.8 V to 3.6 V
- High noise immunity
- Complies with JEDEC standards:
  - ◆ JESD8-12 (0.8 V to 1.3 V)
  - ◆ JESD8-11 (0.9 V to 1.65 V)
  - ◆ JESD8-7 (1.2 V to 1.95 V)
  - ◆ JESD8-5 (1.8 V to 2.7 V)
  - ◆ JESD8-B (2.7 V to 3.6 V)
- ESD protection:
  - ◆ HBM JESD22-A114F Class 3A exceeds 5000 V
  - ◆ MM JESD22-A115-A exceeds 200 V
  - ◆ CDM JESD22-C101E exceeds 1000 V
- Low static-power consumption;  $I_{CC} = 0.9 \mu A$  (maximum)
- Latch-up performance exceeds 100 mA per JESD 78 Class II
- Inputs accept voltages up to 3.6 V
- Low noise overshoot and undershoot < 10 % of  $V_{CC}$
- $I_{OFF}$  circuitry provides partial power-down mode operation
- Multiple package options
- Specified from  $-40^{\circ}C$  to  $+85^{\circ}C$  and  $-40^{\circ}C$  to  $+125^{\circ}C$



3. Ordering information

Table 1. Ordering information

Type number	Package			
	Temperature range	Name	Description	Version
74AUP2G07GW	−40 °C to +125 °C	SC-88	plastic surface-mounted package; 6 leads	SOT363
74AUP2G07GM	−40 °C to +125 °C	XSON6	plastic extremely thin small outline package; no leads; 6 terminals; body 1 × 1.45 × 0.5 mm	SOT886
74AUP2G07GF	−40 °C to +125 °C	XSON6	plastic extremely thin small outline package; no leads; 6 terminals; body 1 × 1 × 0.5 mm	SOT891
74AUP2G07GN	−40 °C to +125 °C	XSON6	extremely thin small outline package; no leads; 6 terminals; body 0.9 × 1.0 × 0.35 mm	SOT1115
74AUP2G07GS	−40 °C to +125 °C	XSON6	extremely thin small outline package; no leads; 6 terminals; body 1.0 × 1.0 × 0.35 mm	SOT1202

4. Marking

Table 2. Marking

Type number	Marking code <sup>[1]</sup>
74AUP2G07GW	p7
74AUP2G07GM	p7
74AUP2G07GF	p7
74AUP2G07GN	p7
74AUP2G07GS	p7

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

5. Functional diagram

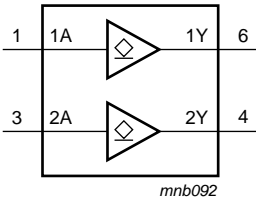


Fig 1. Logic symbol

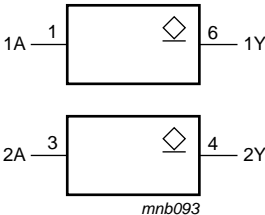


Fig 2. IEC logic symbol

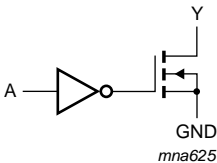
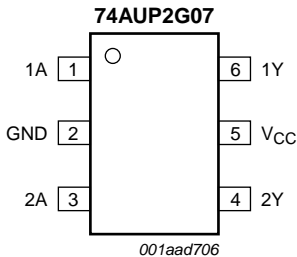


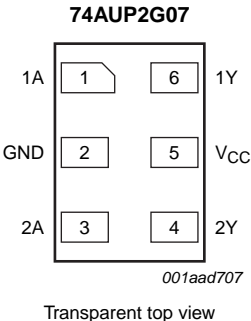
Fig 3. Logic diagram (one gate)

6. Pinning information

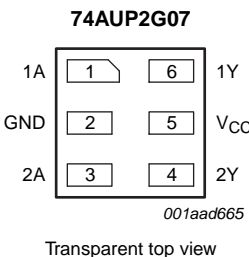
6.1 Pinning



**Fig 4. Pin configuration SOT363-1**



**Fig 5. Pin configuration SOT886**



**Fig 6. Pin configuration SOT891, SOT1115 and SOT1202**

6.2 Pin description

Table 3. Pin description

Symbol	Pin	Description
1A	1	data input
GND	2	ground (0 V)
2A	3	data input
2Y	4	data output
V <sub>CC</sub>	5	supply voltage
1Y	6	data output

7. Functional description

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

Input	Output
nA	nY
L	L
H	Z

[1] H = HIGH voltage level;  
L = LOW voltage level;  
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
$V_{CC}$	supply voltage		-0.5	+4.6	V
$I_{IK}$	input clamping current	$V_I < 0$ V	-50	-	mA
$V_I$	input voltage		[1] -0.5	+4.6	V
$I_{OK}$	output clamping current	$V_O < 0$ V	-50	-	mA
$V_O$	output voltage	Active mode and Power-down mode	[1] -0.5	+4.6	V
$I_O$	output current	$V_O = 0$ V to $V_{CC}$	-	20	mA
$I_{CC}$	supply current		-	50	mA
$I_{GND}$	ground current		-50	-	mA
$T_{stg}$	storage temperature		-65	+150	°C
$P_{tot}$	total power dissipation	$T_{amb} = -40$ °C to +125 °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 SC-88 package: above 87.5 °C the value of  $P_{tot}$  derates linearly with 4.0 mW/K.  
For XSON6 packages: above 118 °C the value of  $P_{tot}$  derates linearly with 7.8 mW/K.

## 9. Recommended operating conditions

**Table 6. Recommended operating conditions**

Symbol	Parameter	Conditions	Min	Max	Unit
$V_{CC}$	supply voltage		0.8	3.6	V
$V_I$	input voltage		0	3.6	V
$V_O$	output voltage	Active mode and Power-down mode	0	3.6	V
$T_{amb}$	ambient temperature		-40	+125	°C
$\Delta t/\Delta V$	input transition rise and fall rate	$V_{CC} = 0.8$ V to 3.6 V	0	200	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	Max	Unit
$T_{amb} = 25$ °C						
$V_{IH}$	HIGH-level input voltage	$V_{CC} = 0.8$ V	$0.70 \times V_{CC}$	-	-	V
		$V_{CC} = 0.9$ V to 1.95 V	$0.65 \times V_{CC}$	-	-	V
		$V_{CC} = 2.3$ V to 2.7 V	1.6	-	-	V
		$V_{CC} = 3.0$ V to 3.6 V	2.0	-	-	V
$V_{IL}$	LOW-level input voltage	$V_{CC} = 0.8$ V	-	-	$0.30 \times V_{CC}$	V
		$V_{CC} = 0.9$ V to 1.95 V	-	-	$0.35 \times V_{CC}$	V
		$V_{CC} = 2.3$ V to 2.7 V	-	-	0.7	V
		$V_{CC} = 3.0$ V to 3.6 V	-	-	0.9	V

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

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
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> = 20 µA; V <sub>CC</sub> = 0.8 V to 3.6 V	-	-	0.1	V
		I <sub>O</sub> = 1.1 mA; V <sub>CC</sub> = 1.1 V	-	-	0.3 × V <sub>CC</sub>	V
		I <sub>O</sub> = 1.7 mA; V <sub>CC</sub> = 1.4 V	-	-	0.31	V
		I <sub>O</sub> = 1.9 mA; V <sub>CC</sub> = 1.65 V	-	-	0.31	V
		I <sub>O</sub> = 2.3 mA; V <sub>CC</sub> = 2.3 V	-	-	0.31	V
		I <sub>O</sub> = 3.1 mA; V <sub>CC</sub> = 2.3 V	-	-	0.44	V
		I <sub>O</sub> = 2.7 mA; V <sub>CC</sub> = 3.0 V	-	-	0.31	V
		I <sub>O</sub> = 4.0 mA; V <sub>CC</sub> = 3.0 V	-	-	0.44	V
I <sub>I</sub>	input leakage current	V <sub>I</sub> = GND to 3.6 V; V <sub>CC</sub> = 0 V to 3.6 V	-	-	±0.1	µA
I <sub>OZ</sub>	OFF-state output current	V <sub>I</sub> = V <sub>IH</sub> ; V <sub>O</sub> = 0 V to 3.6 V; V <sub>CC</sub> = 0 V to 3.6 V	-	-	±0.1	µA
I <sub>OFF</sub>	power-off leakage current	V <sub>I</sub> or V <sub>O</sub> = 0 V to 3.6 V; V <sub>CC</sub> = 0 V	-	-	±0.2	µA
ΔI <sub>OFF</sub>	additional power-off leakage current	V <sub>I</sub> or V <sub>O</sub> = 0 V to 3.6 V; V <sub>CC</sub> = 0 V to 0.2 V	-	-	±0.2	µA
I <sub>CC</sub>	supply current	V <sub>I</sub> = GND or V <sub>CC</sub> ; I <sub>O</sub> = 0 A; V <sub>CC</sub> = 0.8 V to 3.6 V	-	-	0.5	µA
ΔI <sub>CC</sub>	additional supply current	V <sub>I</sub> = V <sub>CC</sub> - 0.6 V; I <sub>O</sub> = 0 A; V <sub>CC</sub> = 3.3 V	-	-	40	µA
C <sub>I</sub>	input capacitance	V <sub>CC</sub> = 0 V to 3.6 V; V <sub>I</sub> = GND or V <sub>CC</sub>	-	0.7	-	pF
C <sub>O</sub>	output capacitance	V <sub>O</sub> = GND; V <sub>CC</sub> = 0 V	-	0.9	-	pF
<b>T<sub>amb</sub> = -40 °C to +85 °C</b>						
V <sub>IH</sub>	HIGH-level input voltage	V <sub>CC</sub> = 0.8 V	0.70 × V <sub>CC</sub>	-	-	V
		V <sub>CC</sub> = 0.9 V to 1.95 V	0.65 × V <sub>CC</sub>	-	-	V
		V <sub>CC</sub> = 2.3 V to 2.7 V	1.6	-	-	V
		V <sub>CC</sub> = 3.0 V to 3.6 V	2.0	-	-	V
V <sub>IL</sub>	LOW-level input voltage	V <sub>CC</sub> = 0.8 V	-	-	0.30 × V <sub>CC</sub>	V
		V <sub>CC</sub> = 0.9 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> = 3.0 V to 3.6 V	-	-	0.9	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> = 20 µA; V <sub>CC</sub> = 0.8 V to 3.6 V	-	-	0.1	V
		I <sub>O</sub> = 1.1 mA; V <sub>CC</sub> = 1.1 V	-	-	0.3 × V <sub>CC</sub>	V
		I <sub>O</sub> = 1.7 mA; V <sub>CC</sub> = 1.4 V	-	-	0.37	V
		I <sub>O</sub> = 1.9 mA; V <sub>CC</sub> = 1.65 V	-	-	0.35	V
		I <sub>O</sub> = 2.3 mA; V <sub>CC</sub> = 2.3 V	-	-	0.33	V
		I <sub>O</sub> = 3.1 mA; V <sub>CC</sub> = 2.3 V	-	-	0.45	V
		I <sub>O</sub> = 2.7 mA; V <sub>CC</sub> = 3.0 V	-	-	0.33	V
		I <sub>O</sub> = 4.0 mA; V <sub>CC</sub> = 3.0 V	-	-	0.45	V
I <sub>I</sub>	input leakage current	V <sub>I</sub> = GND to 3.6 V; V <sub>CC</sub> = 0 V to 3.6 V	-	-	±0.5	µA
I <sub>OZ</sub>	OFF-state output current	V <sub>I</sub> = V <sub>IH</sub> ; V <sub>O</sub> = 0 V to 3.6 V; V <sub>CC</sub> = 0 V to 3.6 V	-	-	±0.5	µA

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

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$I_{OFF}$	power-off leakage current	$V_I$ or $V_O = 0\text{ V}$ to $3.6\text{ V}$ ; $V_{CC} = 0\text{ V}$	-	-	$\pm 0.5$	$\mu\text{A}$
$\Delta I_{OFF}$	additional power-off leakage current	$V_I$ or $V_O = 0\text{ V}$ to $3.6\text{ V}$ ; $V_{CC} = 0\text{ V}$ to $0.2\text{ V}$	-	-	$\pm 0.6$	$\mu\text{A}$
$I_{CC}$	supply current	$V_I = \text{GND}$ or $V_{CC}$ ; $I_O = 0\text{ A}$ ; $V_{CC} = 0.8\text{ V}$ to $3.6\text{ V}$	-	-	0.9	$\mu\text{A}$
$\Delta I_{CC}$	additional supply current	$V_I = V_{CC} - 0.6\text{ V}$ ; $I_O = 0\text{ A}$ ; $V_{CC} = 3.3\text{ V}$	-	-	50	$\mu\text{A}$
<b><math>T_{amb} = -40\text{ }^{\circ}\text{C}</math> to <math>+125\text{ }^{\circ}\text{C}</math></b>						
$V_{IH}$	HIGH-level input voltage	$V_{CC} = 0.8\text{ V}$	$0.75 \times V_{CC}$	-	-	V
		$V_{CC} = 0.9\text{ V}$ to $1.95\text{ V}$	$0.70 \times V_{CC}$	-	-	V
		$V_{CC} = 2.3\text{ V}$ to $2.7\text{ V}$	1.6	-	-	V
		$V_{CC} = 3.0\text{ V}$ to $3.6\text{ V}$	2.0	-	-	V
$V_{IL}$	LOW-level input voltage	$V_{CC} = 0.8\text{ V}$	-	-	$0.25 \times V_{CC}$	V
		$V_{CC} = 0.9\text{ V}$ to $1.95\text{ V}$	-	-	$0.30 \times V_{CC}$	V
		$V_{CC} = 2.3\text{ V}$ to $2.7\text{ V}$	-	-	0.7	V
		$V_{CC} = 3.0\text{ V}$ to $3.6\text{ V}$	-	-	0.9	V
$V_{OL}$	LOW-level output voltage	$V_I = V_{IH}$ or $V_{IL}$				
		$I_O = 20\text{ }\mu\text{A}$ ; $V_{CC} = 0.8\text{ V}$ to $3.6\text{ V}$	-	-	0.11	V
		$I_O = 1.1\text{ mA}$ ; $V_{CC} = 1.1\text{ V}$	-	-	$0.33 \times V_{CC}$	V
		$I_O = 1.7\text{ mA}$ ; $V_{CC} = 1.4\text{ V}$	-	-	0.41	V
		$I_O = 1.9\text{ mA}$ ; $V_{CC} = 1.65\text{ V}$	-	-	0.39	V
		$I_O = 2.3\text{ mA}$ ; $V_{CC} = 2.3\text{ V}$	-	-	0.36	V
		$I_O = 3.1\text{ mA}$ ; $V_{CC} = 2.3\text{ V}$	-	-	0.50	V
		$I_O = 2.7\text{ mA}$ ; $V_{CC} = 3.0\text{ V}$	-	-	0.36	V
$I_I$	input leakage current	$V_I = \text{GND}$ to $3.6\text{ V}$ ; $V_{CC} = 0\text{ V}$ to $3.6\text{ V}$	-	-	$\pm 0.75$	$\mu\text{A}$
		$V_I = V_{IH}$ ; $V_O = 0\text{ V}$ to $3.6\text{ V}$ ; $V_{CC} = 0\text{ V}$ to $3.6\text{ V}$	-	-	$\pm 0.75$	$\mu\text{A}$
$I_{OFF}$	power-off leakage current	$V_I$ or $V_O = 0\text{ V}$ to $3.6\text{ V}$ ; $V_{CC} = 0\text{ V}$	-	-	$\pm 0.75$	$\mu\text{A}$
$\Delta I_{OFF}$	additional power-off leakage current	$V_I$ or $V_O = 0\text{ V}$ to $3.6\text{ V}$ ; $V_{CC} = 0\text{ V}$ to $0.2\text{ V}$	-	-	$\pm 0.75$	$\mu\text{A}$
$I_{CC}$	supply current	$V_I = \text{GND}$ or $V_{CC}$ ; $I_O = 0\text{ A}$ ; $V_{CC} = 0.8\text{ V}$ to $3.6\text{ V}$	-	-	1.4	$\mu\text{A}$
$\Delta I_{CC}$	additional supply current	$V_I = V_{CC} - 0.6\text{ V}$ ; $I_O = 0\text{ A}$ ; $V_{CC} = 3.3\text{ V}$	-	-	75	$\mu\text{A}$

## 11. Dynamic characteristics

**Table 8. Dynamic characteristics**

Voltages are referenced to GND (ground = 0 V); for test circuit see [Figure 8](#).

Symbol	Parameter	Conditions	25 °C			–40 °C to +125 °C			Unit
			Min	Typ <sup>[1]</sup>	Max	Min	Max (85 °C)	Max (125 °C)	
C <sub>L</sub> = 5 pF									
t <sub>pd</sub>	propagation delay	nA to nY; see <a href="#">Figure 7</a>	<a href="#">[2]</a>						
		V <sub>CC</sub> = 0.8 V	-	11.6	-	-	-	-	ns
		V <sub>CC</sub> = 1.1 V to 1.3 V	2.1	4.1	7.5	1.7	9.1	10.0	ns
		V <sub>CC</sub> = 1.4 V to 1.6 V	1.6	3.0	5.1	1.3	6.1	6.7	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	1.6	2.7	4.0	1.2	5.0	5.5	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	1.1	2.1	3.2	0.9	4.0	4.4	ns
		V <sub>CC</sub> = 3.0 V to 3.6 V	1.4	2.2	2.8	1.1	3.3	3.6	ns
C <sub>L</sub> = 10 pF									
t <sub>pd</sub>	propagation delay	nA to nY; see <a href="#">Figure 7</a>	<a href="#">[2]</a>						
		V <sub>CC</sub> = 0.8 V	-	14.7	-	-	-	-	ns
		V <sub>CC</sub> = 1.1 V to 1.3 V	3.0	5.1	9.0	2.4	11.2	12.3	ns
		V <sub>CC</sub> = 1.4 V to 1.6 V	2.3	3.8	6.1	2.0	7.4	8.1	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	2.4	3.6	4.8	1.8	6.1	6.7	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	1.7	2.8	3.8	1.3	4.8	5.3	ns
		V <sub>CC</sub> = 3.0 V to 3.6 V	2.2	3.1	4.2	1.6	4.5	5.0	ns
C <sub>L</sub> = 15 pF									
t <sub>pd</sub>	propagation delay	nA to nY; see <a href="#">Figure 7</a>	<a href="#">[2]</a>						
		V <sub>CC</sub> = 0.8 V	-	17.7	-	-	-	-	ns
		V <sub>CC</sub> = 1.1 V to 1.3 V	3.5	6.1	10.4	3.2	13.1	14.5	ns
		V <sub>CC</sub> = 1.4 V to 1.6 V	3.0	4.5	6.8	2.6	8.6	9.4	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	2.8	4.4	6.7	2.2	7.8	8.6	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	2.4	3.4	4.5	1.9	5.3	5.8	ns
		V <sub>CC</sub> = 3.0 V to 3.6 V	2.2	4.0	5.7	1.9	6.1	6.7	ns
C <sub>L</sub> = 30 pF									
t <sub>pd</sub>	propagation delay	nA to nY; see <a href="#">Figure 7</a>	<a href="#">[2]</a>						
		V <sub>CC</sub> = 0.8 V	-	26.7	-	-	-	-	ns
		V <sub>CC</sub> = 1.1 V to 1.3 V	4.8	9.0	15.6	4.3	18.8	20.7	ns
		V <sub>CC</sub> = 1.4 V to 1.6 V	4.1	6.7	9.4	3.7	11.8	13.0	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	3.8	6.8	9.7	3.2	11.0	12.1	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	3.7	5.2	6.7	3.0	7.1	7.8	ns
		V <sub>CC</sub> = 3.0 V to 3.6 V	3.6	6.4	9.7	2.8	10.4	11.4	ns

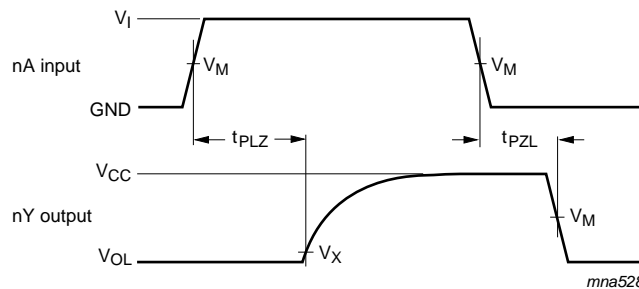
**Table 8. Dynamic characteristics ...continued**

Voltages are referenced to GND (ground = 0 V); for test circuit see [Figure 8](#).

Symbol	Parameter	Conditions	25 °C			–40 °C to +125 °C			Unit
			Min	Typ <sup>[1]</sup>	Max	Min	Max (85 °C)	Max (125 °C)	
C <sub>L</sub> = 5 pF, 10 pF, 15 pF and 30 pF									
C <sub>PD</sub>	power dissipation capacitance	f <sub>i</sub> = 1 MHz; V <sub>I</sub> = GND to V <sub>CC</sub> <a href="#">[3][4]</a>							
		V <sub>CC</sub> = 0.8 V	-	0.5	-	-	-	-	pF
		V <sub>CC</sub> = 1.1 V to 1.3 V	-	0.6	-	-	-	-	pF
		V <sub>CC</sub> = 1.4 V to 1.6 V	-	0.6	-	-	-	-	pF
		V <sub>CC</sub> = 1.65 V to 1.95 V	-	0.7	-	-	-	-	pF
		V <sub>CC</sub> = 2.3 V to 2.7 V	-	0.9	-	-	-	-	pF
		V <sub>CC</sub> = 3.0 V to 3.6 V	-	1.2	-	-	-	-	pF

- [1] All typical values are measured at nominal  $V_{CC}$ .
- [2]  $t_{pd}$  is the same as  $t_{PZL}$  and  $t_{PLZ}$ .
- [3] All specified values are the average typical values over all stated loads.
- [4]  $C_{PD}$  is used to determine the dynamic power dissipation ( $P_D$  in  $\mu\text{W}$ ).
- $P_D = C_{PD} \times V_{CC}^2 \times f_i \times N$  where:
- $f_i$  = input frequency in MHz;
- $V_{CC}$  = supply voltage in V;
- $N$  = number of inputs switching.

## 12. Waveforms



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

Logic level:  $V_{OL}$  is the typical output voltage level that occurs with the output load.

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

**Table 9. Measurement points**

Supply voltage	Input	Output	
$V_{CC}$	$V_M$	$V_M$	$V_X$
0.8 V to 1.6 V	$0.5 \times V_{CC}$	$0.5 \times V_{CC}$	$V_{OL} + 0.1 \text{ V}$
1.65 V to 2.7 V	$0.5 \times V_{CC}$	$0.5 \times V_{CC}$	$V_{OL} + 0.15 \text{ V}$
3.0 V to 3.6 V	$0.5 \times V_{CC}$	$0.5 \times V_{CC}$	$V_{OL} + 0.3 \text{ V}$



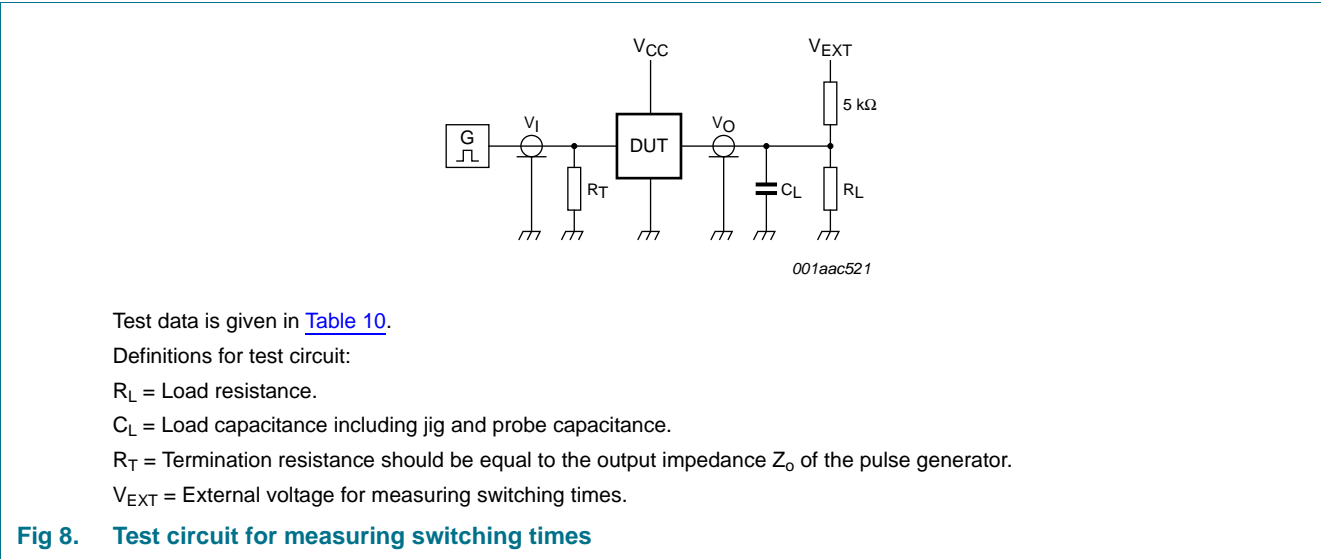


Table 10. Test data

Supply voltage	Input		Load		V <sub>EXT</sub>		
V <sub>CC</sub>	V <sub>I</sub>	t <sub>r</sub> , t <sub>f</sub>	C <sub>L</sub>	R <sub>L</sub> <sup>[1]</sup>	t <sub>PLH</sub> , t <sub>PHL</sub>	t <sub>PZH</sub> , t <sub>PHZ</sub>	t <sub>PZL</sub> , t <sub>PLZ</sub>
0.8 V to 3.6 V	V <sub>CC</sub>	≤ 3 ns	5 pF, 10 pF, 15 pF and 30 pF	5 kΩ or 1 MΩ	open	GND	2 × V <sub>CC</sub>

[1] For measuring enable and disable times  $R_L = 5\text{ k}\Omega$ , for measuring propagation delays, set-up and hold times and pulse width  $R_L = 1\text{ M}\Omega$ .

13. Package outline

Plastic surface-mounted package; 6 leadsSOT363

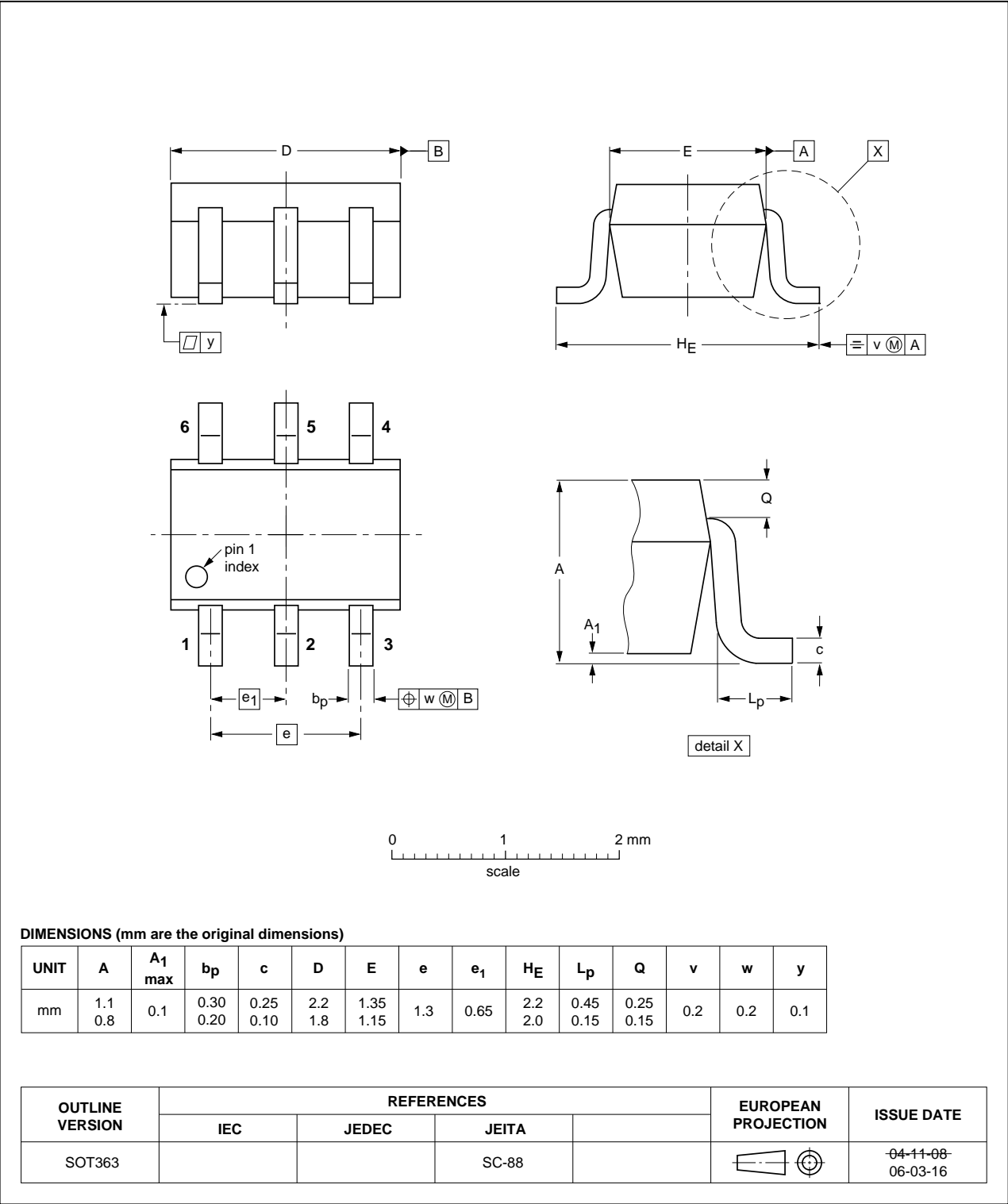


Fig 9. Package outline SOT363 (SC-88)

XSON6: plastic extremely thin small outline package; no leads; 6 terminals; body 1 x 1.45 x 0.5 mm

SOT886

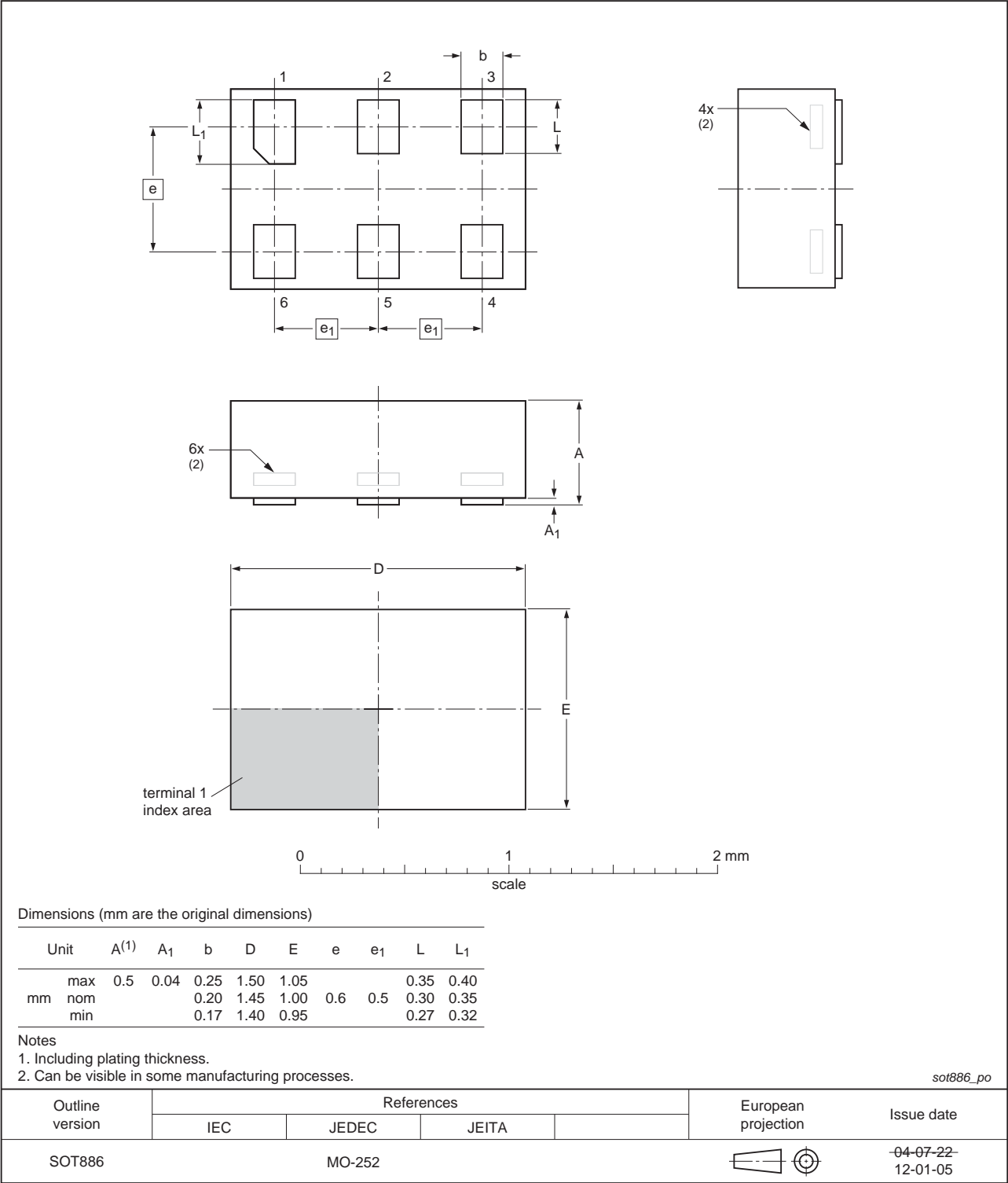


Fig 10. Package outline SOT886 (XSON6)

XSON6: plastic extremely thin small outline package; no leads; 6 terminals; body 1 x 1 x 0.5 mm

SOT891

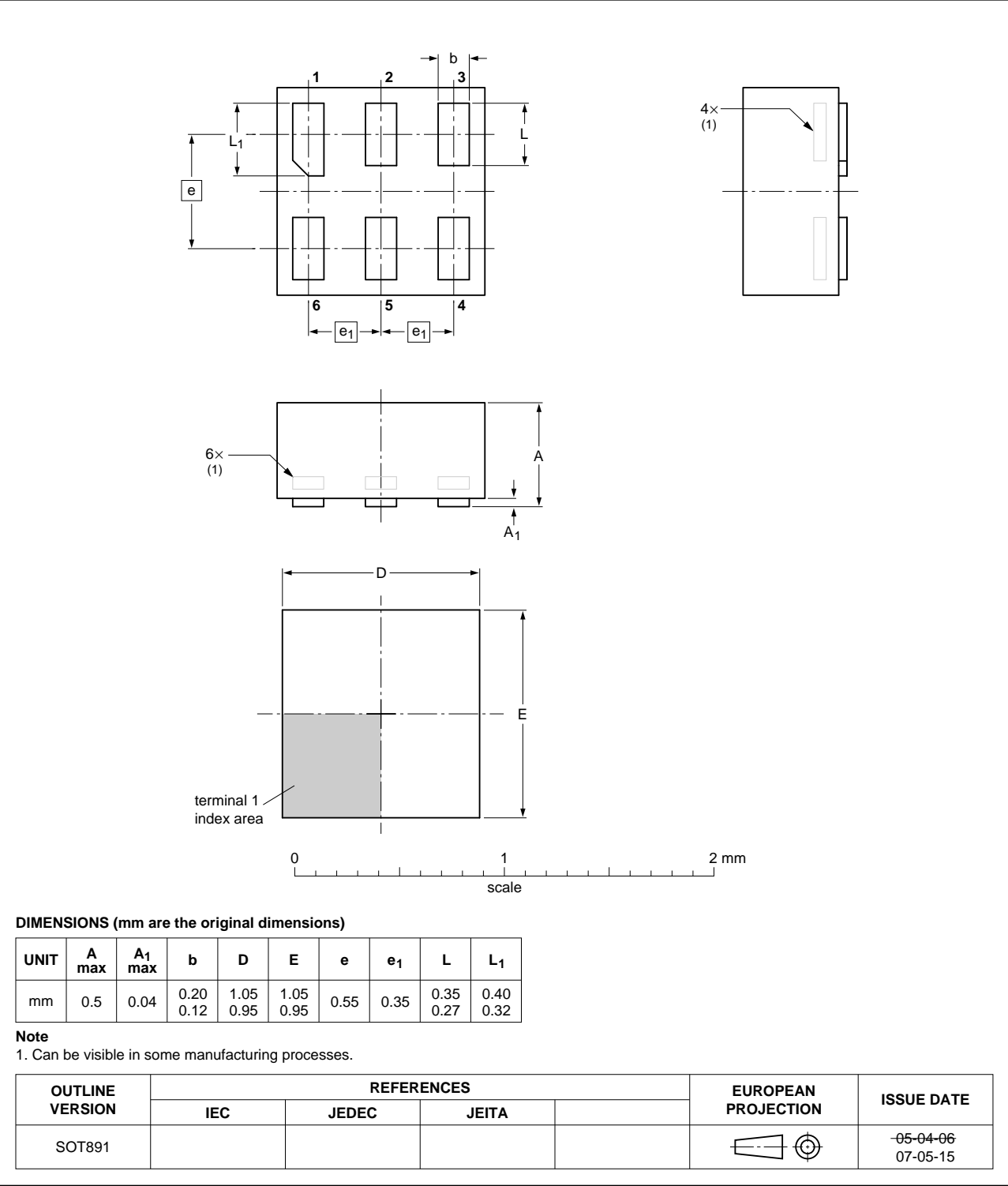
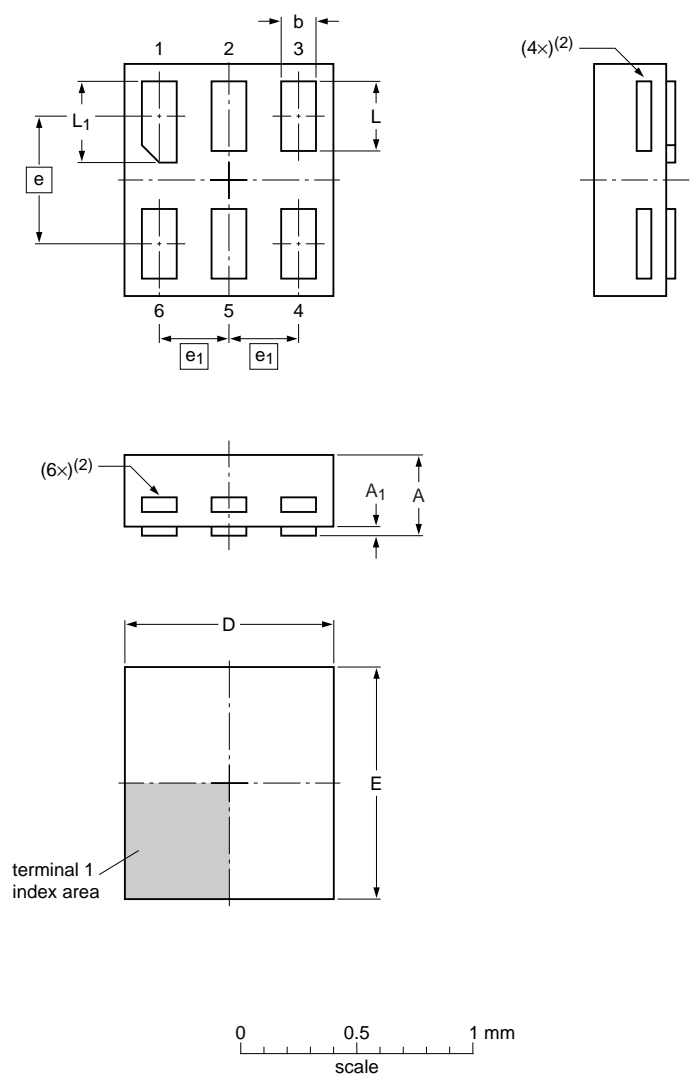


Fig 11. Package outline SOT891 (XSON6)

XSON6: extremely thin small outline package; no leads;  
6 terminals; body 0.9 x 1.0 x 0.35 mm

SOT1115



Dimensions

Unit	A <sup>(1)</sup>	A <sub>1</sub>	b	D	E	e	e <sub>1</sub>	L	L <sub>1</sub>
mm	max	0.35	0.04	0.20	0.95	1.05		0.35	0.40
	nom			0.15	0.90	1.00	0.55	0.30	0.35
	min			0.12	0.85	0.95		0.27	0.32

- Note
- 1. Including plating thickness.
  - 2. Visible depending upon used manufacturing technology.

sot1115\_po

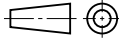
Outline version	References				European projection	Issue date
	IEC	JEDEC	JEITA			
SOT1115						<del>10-04-02</del> 10-04-07

Fig 12. Package outline SOT1115 (XSON6)

XSON6: extremely thin small outline package; no leads;  
6 terminals; body 1.0 x 1.0 x 0.35 mm

SOT1202

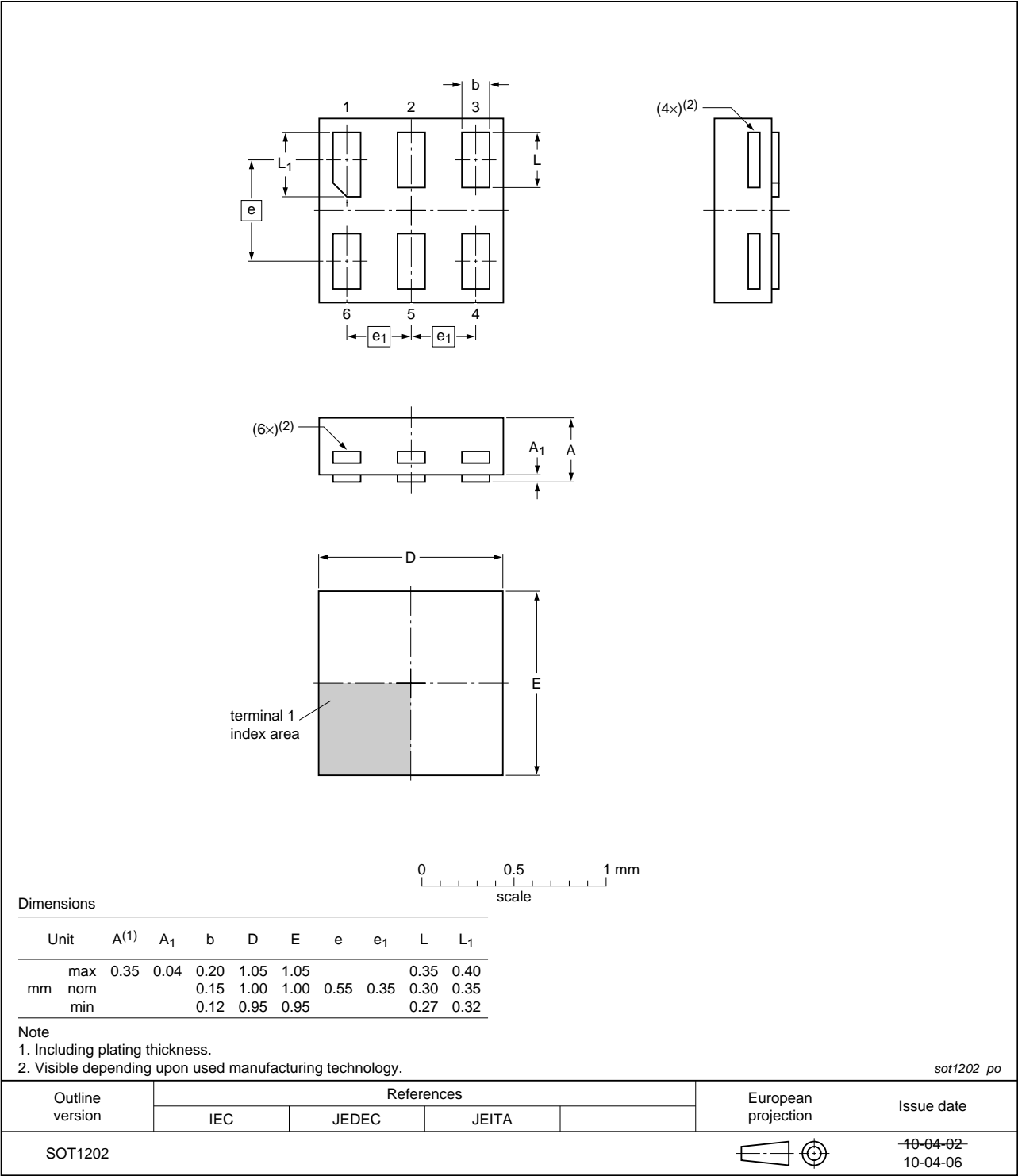


Fig 13. Package outline SOT1202 (XSON6)

## 14. Abbreviations

Table 11. Abbreviations

Acronym	Description
CDM	Charged Device Model
DUT	Device Under Test
ESD	ElectroStatic Discharge
HBM	Human Body Model
MM	Machine Model

## 15. Revision history

Table 12. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
74AUP2G07 v.7	20121129	Product data sheet	-	74AUP2G07 v.6
Modifications:	• Package outline drawing of SOT886 ( <a href="#">Figure 10</a> ) modified.			
74AUP2G07 v.6	20111202	Product data sheet	-	74AUP2G07 v.5
74AUP2G07 v.5	20100909	Product data sheet	-	74AUP2G07 v.4
74AUP2G07 v.4	20090611	Product data sheet	-	74AUP2G07 v.3
74AUP2G07 v.3	20071016	Product data sheet	-	74AUP2G07 v.2
74AUP2G07 v.2	20070612	Product data sheet	-	74AUP2G07 v.1
74AUP2G07 v.1	20061121	Product data sheet	-	-

## 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".

[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>.

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