

# 74AUP1GU04

Low-power unbuffered inverter

Rev. 3 — 21 July 2010

Product data sheet

## 1. General description

The 74AUP1GU04 provides the single unbuffered inverting gate.

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.

## 2. Features and benefits

- Wide supply voltage range from 0.8 V to 3.6 V
- High noise immunity
- 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;  $I_{CC} = 0.9 \mu\text{A}$  (maximum)
- Latch-up performance exceeds 100 mA per JESD 78 Class II
- Inputs accept voltages up to 3.6 V
- Multiple package options
- Specified from  $-40\text{ }^{\circ}\text{C}$  to  $+85\text{ }^{\circ}\text{C}$  and  $-40\text{ }^{\circ}\text{C}$  to  $+125\text{ }^{\circ}\text{C}$

## 3. Ordering information

Table 1. Ordering information

Type number	Package			
	Temperature range	Name	Description	Version
74AUP1GU04GW	$-40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$	TSSOP5	plastic thin shrink small outline package; 5 leads; body width 1.25 mm	SOT353-1
74AUP1GU04GM	$-40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$	XSON6	plastic extremely thin small outline package; no leads; 6 terminals; body $1 \times 1.45 \times 0.5$ mm	SOT886
74AUP1GU04GF	$-40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$	XSON6	plastic extremely thin small outline package; no leads; 6 terminals; body $1 \times 1 \times 0.5$ mm	SOT891
74AUP1GU04GN	$-40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$	XSON6	extremely thin small outline package; no leads; 6 terminals; body $0.9 \times 1.0 \times 0.35$ mm	SOT1115
74AUP1GU04GS	$-40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$	XSON6	extremely thin small outline package; no leads; 6 terminals; body $1.0 \times 1.0 \times 0.35$ mm	SOT1202



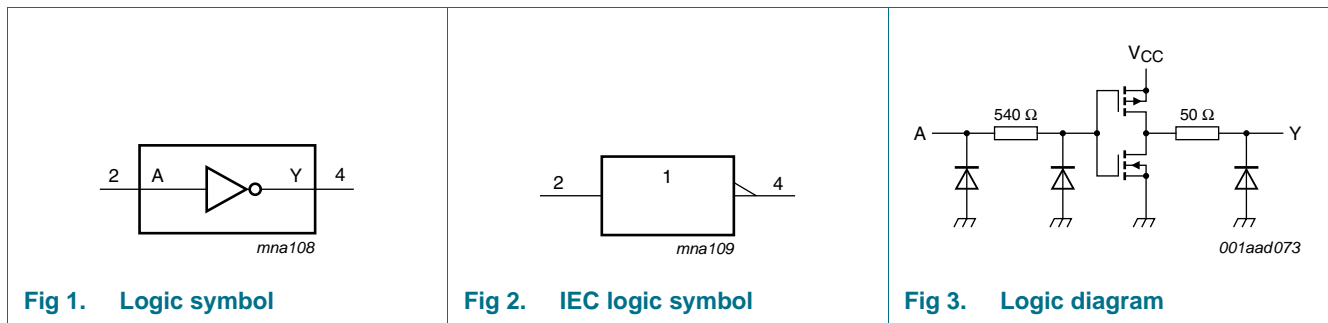
## 4. Marking

Table 2. Marking

Type number	Marking code <sup>[1]</sup>
74AUP1GU04GW	pD
74AUP1GU04GM	pD
74AUP1GU04GF	pD
74AUP1GU04GN	pD
74AUP1GU04GS	pD

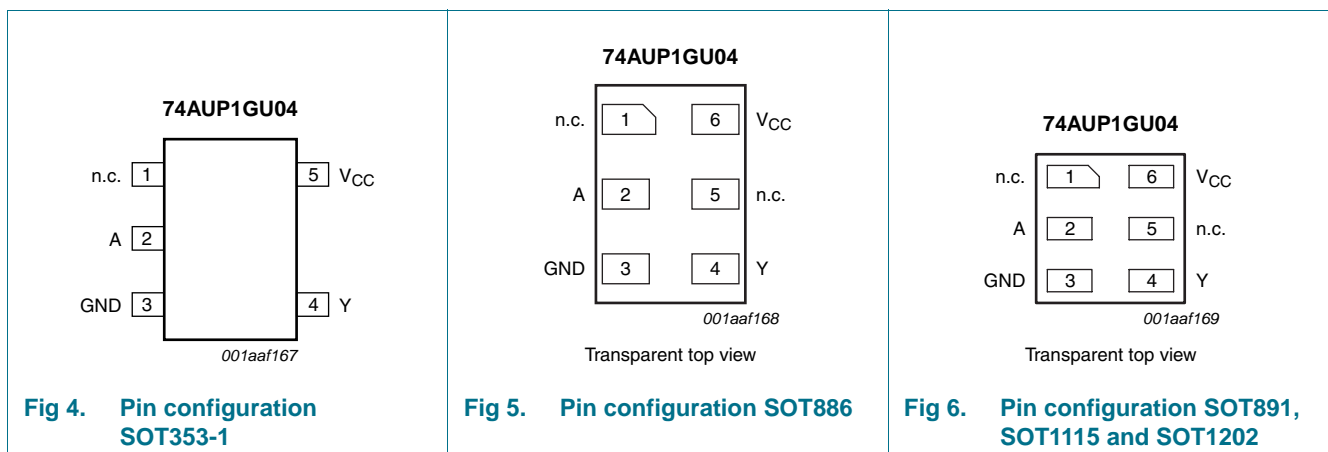
[1] The pin 1 indicator is located on the lower left corner of the device, below the marking code.

## 5. Functional diagram



## 6. Pinning information

### 6.1 Pinning



## 6.2 Pin description

Table 3. Pin description

Symbol	Pin		Description
	TSSOP5	XSON6	
n.c.	1	1	not connected
A	2	2	data input A
GND	3	3	ground (0 V)
Y	4	4	data output Y
n.c.	-	5	not connected
V <sub>CC</sub>	5	6	supply voltage

## 7. Functional description

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

Input	Output
A	Y
L	H
H	L

[1] H = HIGH voltage level; L = LOW voltage level.

## 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	+4.6	V
I <sub>IK</sub>	input clamping current	V <sub>I</sub> < 0 V	-50	-	mA
V <sub>I</sub>	input voltage		<sup>[1]</sup> -0.5	+4.6	V
I <sub>OK</sub>	output clamping current	V <sub>O</sub> < 0 V	-50	-	mA
V <sub>O</sub>	output voltage		<sup>[1]</sup> -0.5	V <sub>CC</sub> + 0.5	V
I <sub>O</sub>	output current	V <sub>O</sub> = 0 V to V <sub>CC</sub>	-	±20	mA
I <sub>CC</sub>	supply current		-	+50	mA
I <sub>GND</sub>	ground current		-50	-	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	<sup>[2]</sup> -	250	mW

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

[2] For TSSOP5 packages: above 87.5 °C the value of P<sub>tot</sub> derates linearly with 4.0 mW/K.  
For XSON6 packages: above 118 °C the value of P<sub>tot</sub> 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		0	$V_{CC}$	V
$T_{amb}$	ambient temperature		-40	+125	°C
$\Delta t/\Delta V$	input transition rise and fall rate	$V_{CC} = 0.8\text{ V to }3.6\text{ V}$	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
<b><math>T_{amb} = 25\text{ °C}</math></b>						
$V_{IH}$	HIGH-level input voltage	$V_{CC} = 0.8\text{ V to }3.6\text{ V}$	$0.75 \times V_{CC}$	-	-	V
$V_{IL}$	LOW-level input voltage	$V_{CC} = 0.8\text{ V to }3.6\text{ V}$	-	-	$0.25 \times V_{CC}$	V
$V_{OH}$	HIGH-level output voltage	$I_O = -20\text{ }\mu\text{A}; V_{CC} = 0.8\text{ V to }3.6\text{ V}$	$V_{CC} - 0.1$	-	-	V
		$I_O = -1.1\text{ mA}; V_{CC} = 1.1\text{ V}$	$0.75 \times V_{CC}$	-	-	V
		$I_O = -1.7\text{ mA}; V_{CC} = 1.4\text{ V}$	1.11	-	-	V
		$I_O = -1.9\text{ mA}; V_{CC} = 1.65\text{ V}$	1.32	-	-	V
		$I_O = -2.3\text{ mA}; V_{CC} = 2.3\text{ V}$	2.05	-	-	V
		$I_O = -3.1\text{ mA}; V_{CC} = 2.3\text{ V}$	1.9	-	-	V
		$I_O = -2.7\text{ mA}; V_{CC} = 3.0\text{ V}$	2.72	-	-	V
		$I_O = -4.0\text{ mA}; V_{CC} = 3.0\text{ V}$	2.6	-	-	V
$V_{OL}$	LOW-level output voltage	$I_O = 20\text{ }\mu\text{A}; V_{CC} = 0.8\text{ V to }3.6\text{ V}$	-	-	0.1	V
		$I_O = 1.1\text{ mA}; V_{CC} = 1.1\text{ V}$	-	-	$0.3 \times V_{CC}$	V
		$I_O = 1.7\text{ mA}; V_{CC} = 1.4\text{ V}$	-	-	0.31	V
		$I_O = 1.9\text{ mA}; V_{CC} = 1.65\text{ V}$	-	-	0.31	V
		$I_O = 2.3\text{ mA}; V_{CC} = 2.3\text{ V}$	-	-	0.31	V
		$I_O = 3.1\text{ mA}; V_{CC} = 2.3\text{ V}$	-	-	0.44	V
		$I_O = 2.7\text{ mA}; V_{CC} = 3.0\text{ V}$	-	-	0.31	V
		$I_O = 4.0\text{ mA}; V_{CC} = 3.0\text{ V}$	-	-	0.44	V
$I_I$	input leakage current	$V_I = \text{GND to }3.6\text{ V}; V_{CC} = 0\text{ V to }3.6\text{ V}$	-	-	$\pm 0.1$	$\mu\text{A}$
$I_{CC}$	supply current	$V_I = \text{GND or }V_{CC}; I_O = 0\text{ A}; V_{CC} = 0.8\text{ V to }3.6\text{ V}$	-	-	0.5	$\mu\text{A}$
$C_I$	input capacitance	$V_{CC} = 0\text{ V to }3.6\text{ V}; V_I = \text{GND or }V_{CC}$	-	1.5	-	pF
$C_O$	output capacitance	$V_O = \text{GND}; V_{CC} = 0\text{ V}$	-	1.8	-	pF

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

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
<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 to 3.6 V	0.75 × V <sub>CC</sub>	-	-	V
V <sub>IL</sub>	LOW-level input voltage	V <sub>CC</sub> = 0.8 V to 3.6 V	-	-	0.25 × V <sub>CC</sub>	V
V <sub>OH</sub>	HIGH-level output voltage	I <sub>O</sub> = -20 μA; V <sub>CC</sub> = 0.8 V to 3.6 V	V <sub>CC</sub> - 0.1	-	-	V
		I <sub>O</sub> = -1.1 mA; V <sub>CC</sub> = 1.1 V	0.7 × V <sub>CC</sub>	-	-	V
		I <sub>O</sub> = -1.7 mA; V <sub>CC</sub> = 1.4 V	1.03	-	-	V
		I <sub>O</sub> = -1.9 mA; V <sub>CC</sub> = 1.65 V	1.30	-	-	V
		I <sub>O</sub> = -2.3 mA; V <sub>CC</sub> = 2.3 V	1.97	-	-	V
		I <sub>O</sub> = -3.1 mA; V <sub>CC</sub> = 2.3 V	1.85	-	-	V
		I <sub>O</sub> = -2.7 mA; V <sub>CC</sub> = 3.0 V	2.67	-	-	V
		I <sub>O</sub> = -4.0 mA; V <sub>CC</sub> = 3.0 V	2.55	-	-	V
V <sub>OL</sub>	LOW-level output voltage	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>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	-	-	0.9	μA
<b>T<sub>amb</sub> = -40 °C to +125 °C</b>						
V <sub>IH</sub>	HIGH-level input voltage	V <sub>CC</sub> = 0.8 V to 3.6 V	0.75 × V <sub>CC</sub>	-	-	V
V <sub>IL</sub>	LOW-level input voltage	V <sub>CC</sub> = 0.8 V to 3.6 V	-	-	0.25 × V <sub>CC</sub>	V
V <sub>OH</sub>	HIGH-level output voltage	I <sub>O</sub> = -20 μA; V <sub>CC</sub> = 0.8 V to 3.6 V	V <sub>CC</sub> - 0.11	-	-	V
		I <sub>O</sub> = -1.1 mA; V <sub>CC</sub> = 1.1 V	0.6 × V <sub>CC</sub>	-	-	V
		I <sub>O</sub> = -1.7 mA; V <sub>CC</sub> = 1.4 V	0.93	-	-	V
		I <sub>O</sub> = -1.9 mA; V <sub>CC</sub> = 1.65 V	1.17	-	-	V
		I <sub>O</sub> = -2.3 mA; V <sub>CC</sub> = 2.3 V	1.77	-	-	V
		I <sub>O</sub> = -3.1 mA; V <sub>CC</sub> = 2.3 V	1.67	-	-	V
		I <sub>O</sub> = -2.7 mA; V <sub>CC</sub> = 3.0 V	2.40	-	-	V
		I <sub>O</sub> = -4.0 mA; V <sub>CC</sub> = 3.0 V	2.30	-	-	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	I <sub>O</sub> = 20 μA; V <sub>CC</sub> = 0.8 V to 3.6 V	-	-	0.11	V
		I <sub>O</sub> = 1.1 mA; V <sub>CC</sub> = 1.1 V	-	-	0.33 × V <sub>CC</sub>	V
		I <sub>O</sub> = 1.7 mA; V <sub>CC</sub> = 1.4 V	-	-	0.41	V
		I <sub>O</sub> = 1.9 mA; V <sub>CC</sub> = 1.65 V	-	-	0.39	V
		I <sub>O</sub> = 2.3 mA; V <sub>CC</sub> = 2.3 V	-	-	0.36	V
		I <sub>O</sub> = 3.1 mA; V <sub>CC</sub> = 2.3 V	-	-	0.50	V
		I <sub>O</sub> = 2.7 mA; V <sub>CC</sub> = 3.0 V	-	-	0.36	V
		I <sub>O</sub> = 4.0 mA; V <sub>CC</sub> = 3.0 V	-	-	0.50	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	-	-	±0.75	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	-	-	1.4	μA

## 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	A to Y; see <a href="#">Figure 7</a> <a href="#">[2]</a>							
		V <sub>CC</sub> = 0.8 V	-	6.2	-	-	-	-	ns
		V <sub>CC</sub> = 1.1 V to 1.3 V	0.9	2.3	4.4	0.9	4.8	5.3	ns
		V <sub>CC</sub> = 1.4 V to 1.6 V	0.7	1.7	3.1	0.6	3.4	3.8	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	0.5	1.4	2.6	0.5	2.9	3.2	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	0.4	1.1	2.0	0.4	2.3	2.6	ns
		V <sub>CC</sub> = 3.0 V to 3.6 V	0.3	1.0	1.8	0.3	2.1	2.4	ns

**C<sub>L</sub> = 10 pF**

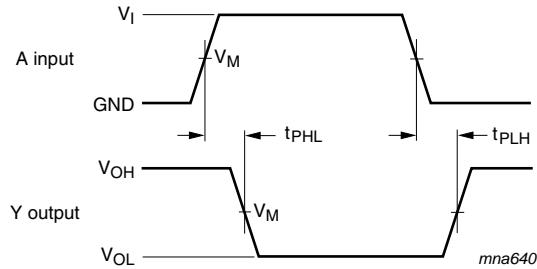
t <sub>pd</sub>	propagation delay	A to Y; see <a href="#">Figure 7</a> <a href="#">[2]</a>							
		V <sub>CC</sub> = 0.8 V	-	9.6	-	-	-	-	ns
		V <sub>CC</sub> = 1.1 V to 1.3 V	1.2	3.1	6.1	1.2	6.8	7.5	ns
		V <sub>CC</sub> = 1.4 V to 1.6 V	1.0	2.3	4.0	0.9	4.6	5.1	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	0.8	1.9	3.3	0.7	3.8	4.2	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	0.6	1.5	2.7	0.6	3.1	3.5	ns
		V <sub>CC</sub> = 3.0 V to 3.6 V	0.5	1.3	2.4	0.5	2.7	3.0	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)	
<b>C<sub>L</sub> = 15 pF</b>									
t <sub>pd</sub>	propagation delay	A to Y; see <a href="#">Figure 7</a>							
		V <sub>CC</sub> = 0.8 V	-	13.0	-	-	-	-	ns
		V <sub>CC</sub> = 1.1 V to 1.3 V	1.6	3.8	7.9	1.4	8.8	9.7	ns
		V <sub>CC</sub> = 1.4 V to 1.6 V	1.3	2.8	4.9	1.1	5.7	6.3	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	1.0	2.3	4.0	0.9	4.7	5.2	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	0.8	1.9	3.2	0.8	3.7	4.1	ns
		V <sub>CC</sub> = 3.0 V to 3.6 V	0.7	1.6	2.9	0.7	3.3	3.7	ns
<b>C<sub>L</sub> = 30 pF</b>									
t <sub>pd</sub>	propagation delay	A to Y; see <a href="#">Figure 7</a>							
		V <sub>CC</sub> = 0.8 V	-	23.2	-	-	-	-	-
		V <sub>CC</sub> = 1.1 V to 1.3 V	2.4	6.0	13.1	2.2	14.8	16.3	ns
		V <sub>CC</sub> = 1.4 V to 1.6 V	2.0	4.2	7.6	1.8	9.0	9.9	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	1.7	3.6	6.1	1.5	7.2	8.0	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	1.4	2.9	4.8	1.3	5.7	6.3	ns
		V <sub>CC</sub> = 3.0 V to 3.6 V	1.2	2.5	4.3	1.1	5.1	5.7	ns
<b>C<sub>L</sub> = 5 pF, 10 pF, 15 pF and 30 pF</b>									
C <sub>PD</sub>	power dissipation capacitance	f = 1 MHz; V <sub>I</sub> = GND to V <sub>CC</sub>							
		V <sub>CC</sub> = 0.8 V	-	1.2	-	-	-	-	pF
		V <sub>CC</sub> = 1.1 V to 1.3 V	-	1.1	-	-	-	-	pF
		V <sub>CC</sub> = 1.4 V to 1.6 V	-	1.2	-	-	-	-	pF
		V <sub>CC</sub> = 1.65 V to 1.95 V	-	1.4	-	-	-	-	pF
		V <sub>CC</sub> = 2.3 V to 2.7 V	-	2.8	-	-	-	-	pF
		V <sub>CC</sub> = 3.0 V to 3.6 V	-	4.4	-	-	-	-	pF

[1] All typical values are measured at nominal V<sub>CC</sub>.  
 [2] t<sub>pd</sub> is the same as t<sub>PLH</sub> and t<sub>PHL</sub>.  
 [3] C<sub>PD</sub> is used to determine the dynamic power dissipation (P<sub>D</sub> in μW).  
 $P_D = C_{PD} \times V_{CC}^2 \times f_i \times N + \Sigma(C_L \times V_{CC}^2 \times f_o)$  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;  
 $\Sigma(C_L \times V_{CC}^2 \times f_o)$  = sum of the outputs.

12. Waveforms

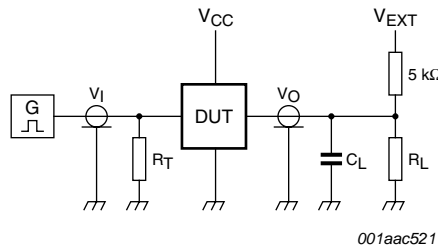


Measurement points are given in [Table 9](#).  
 Logic levels:  $V_{OL}$  and  $V_{OH}$  are typical output voltage drop that occur with the output load.

Fig 7. The data input (A) to output (Y) propagation delays

Table 9. Measurement points

Supply voltage	Output	Input		
$V_{CC}$	$V_M$	$V_M$	$V_I$	$t_r = t_f$
0.8 V to 3.6 V	$0.5 \times V_{CC}$	$0.5 \times V_{CC}$	$V_{CC}$	$\leq 3.0$ ns



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 8. Test circuit for measuring switching times

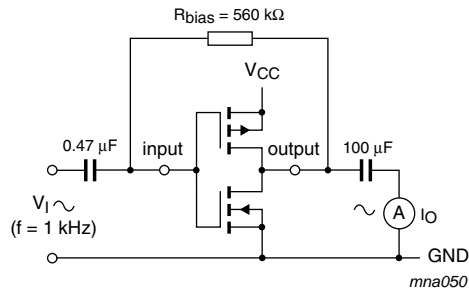
Table 10. Test data

Supply voltage	Load		$V_{EXT}$		
$V_{CC}$	$C_L$	$R_L$ [1]	$t_{PLH}, t_{PHL}$	$t_{PZH}, t_{PHZ}$	$t_{PZL}, t_{PLZ}$
0.8 V to 3.6 V	5 pF, 10 pF, 15 pF and 30 pF	5 kΩ or 1 MΩ	open	GND	$2 \times V_{CC}$

[1] For measuring enable and disable times  $R_L = 5$  kΩ, for measuring propagation delays, setup and hold times and pulse width  $R_L = 1$  MΩ.



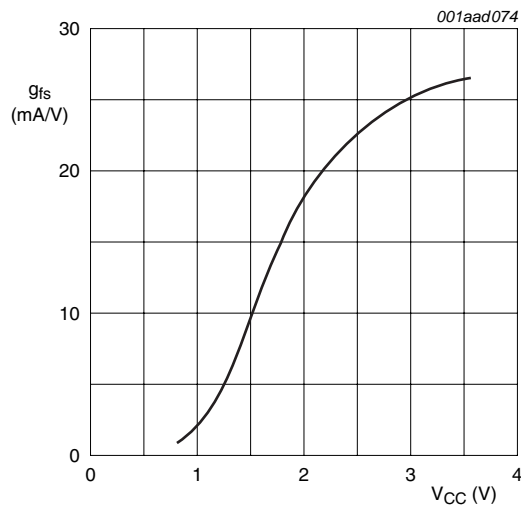
13. Additional characteristics



$$g_{fs} = \frac{\Delta I_o}{\Delta V_i}$$

$V_O$  is constant.

Fig 9. Test set-up for measuring forward transconductance



$T_{amb} = 25\text{ }^{\circ}\text{C}$ .

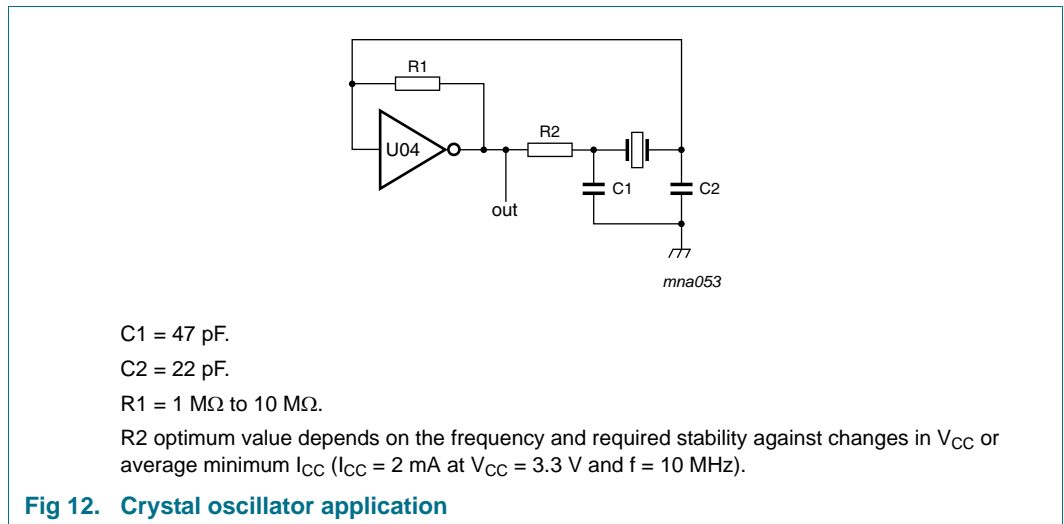
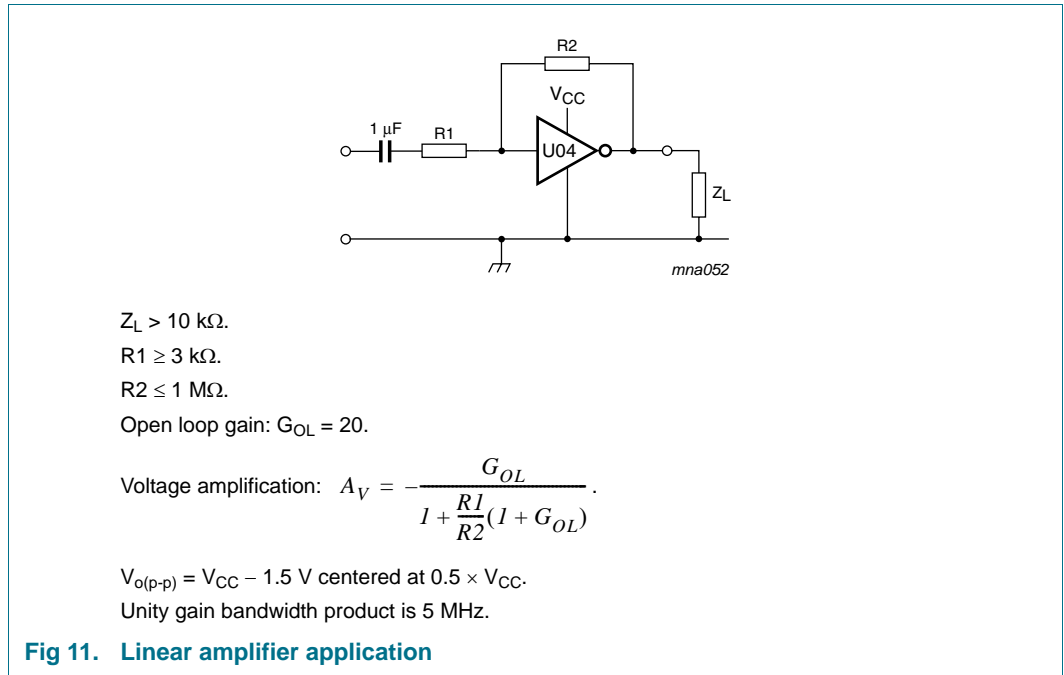
Fig 10. Typical forward transconductance as a function of supply voltage

### 14. Application information

Some applications for the 74AUP1GU04 are:

- Linear amplifier (see [Figure 11](#))
- Crystal oscillator (see [Figure 12](#)).

**Remark:** All values given are typical values unless otherwise specified.



15. Package outline

Plastic surface-mounted package; 6 leads

SOT363

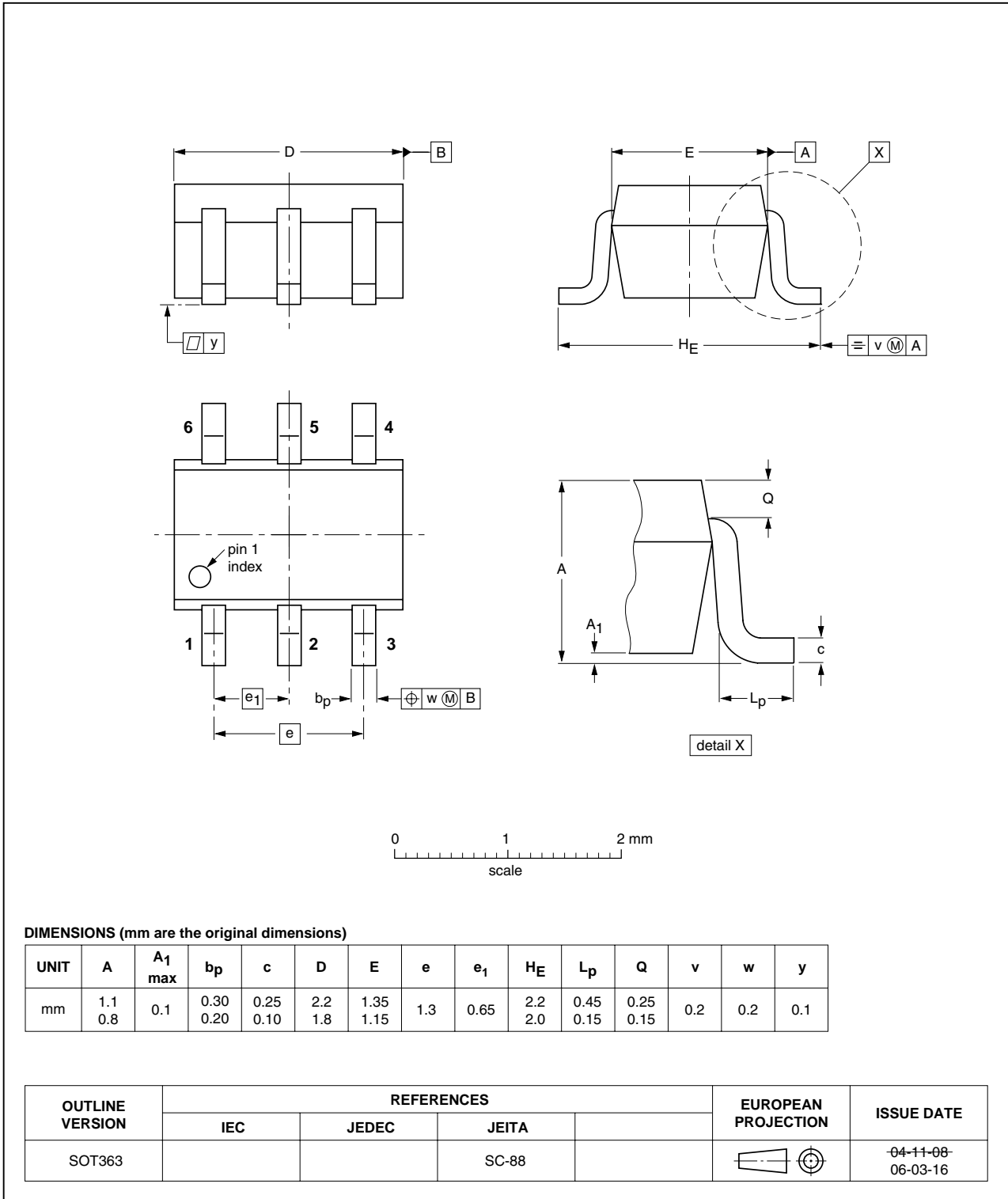


Fig 13. Package outline SOT363 (SC-88)

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

SOT886

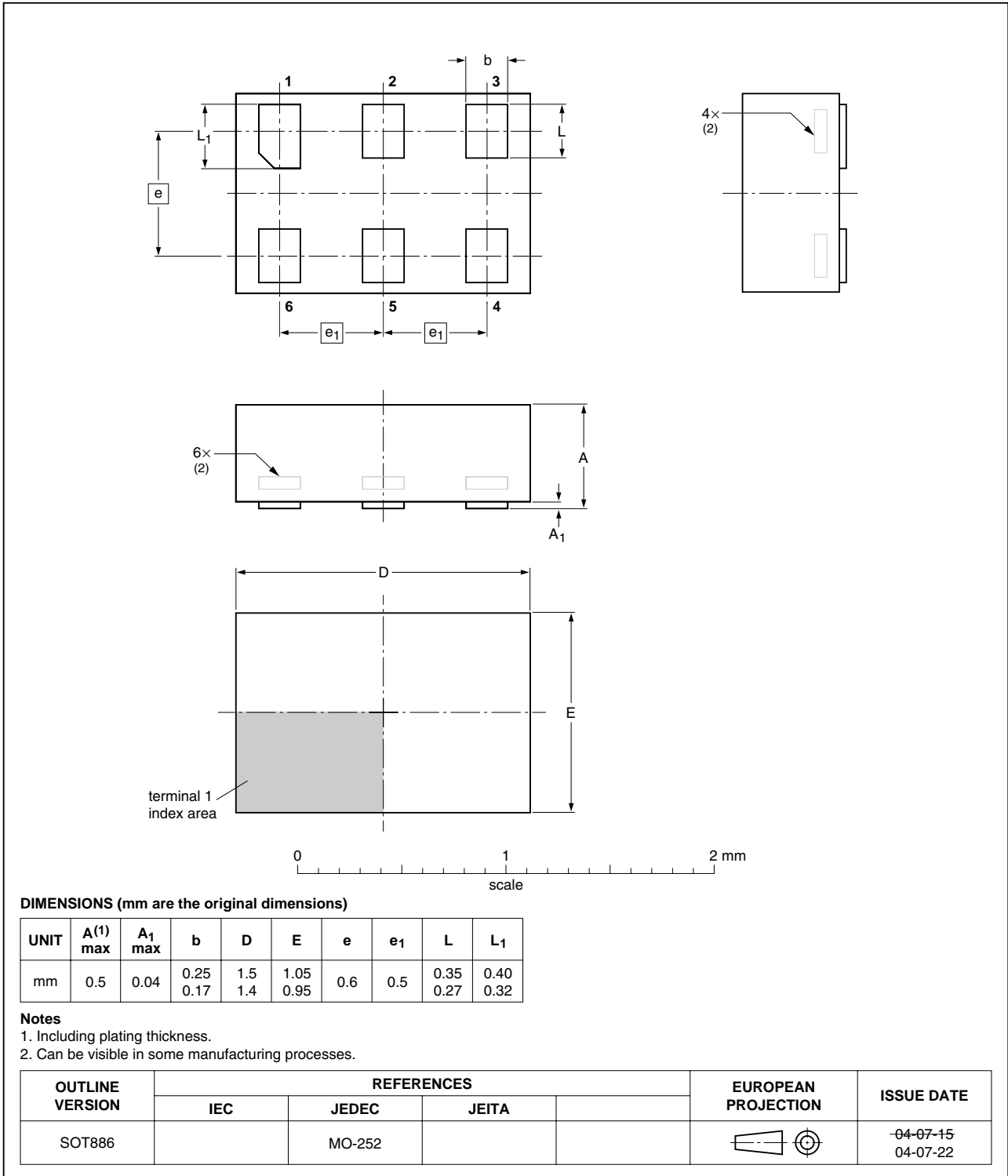


Fig 14. Package outline SOT886 (XSON6)

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

SOT891

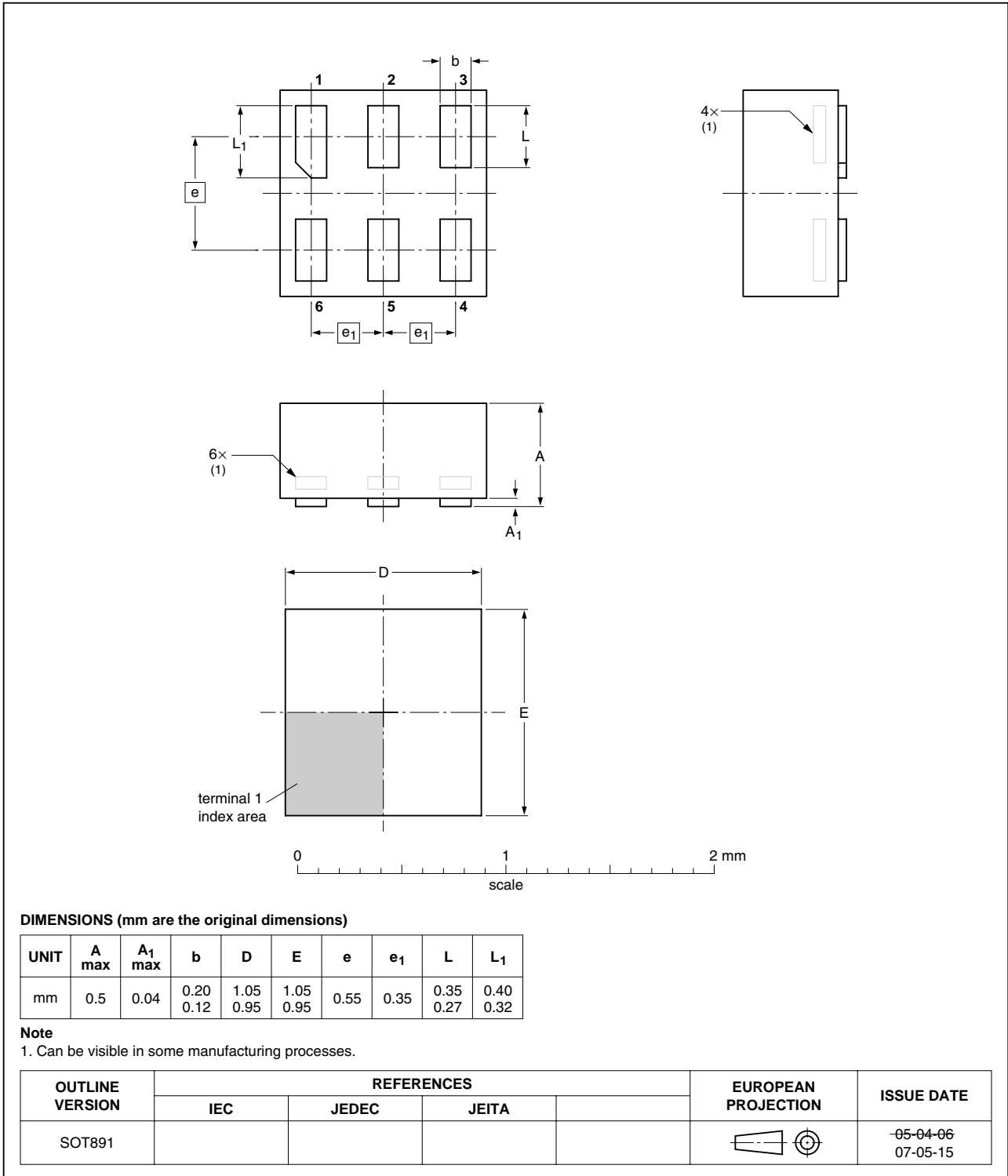


Fig 15. Package outline SOT891 (XSON6)

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

SOT1115

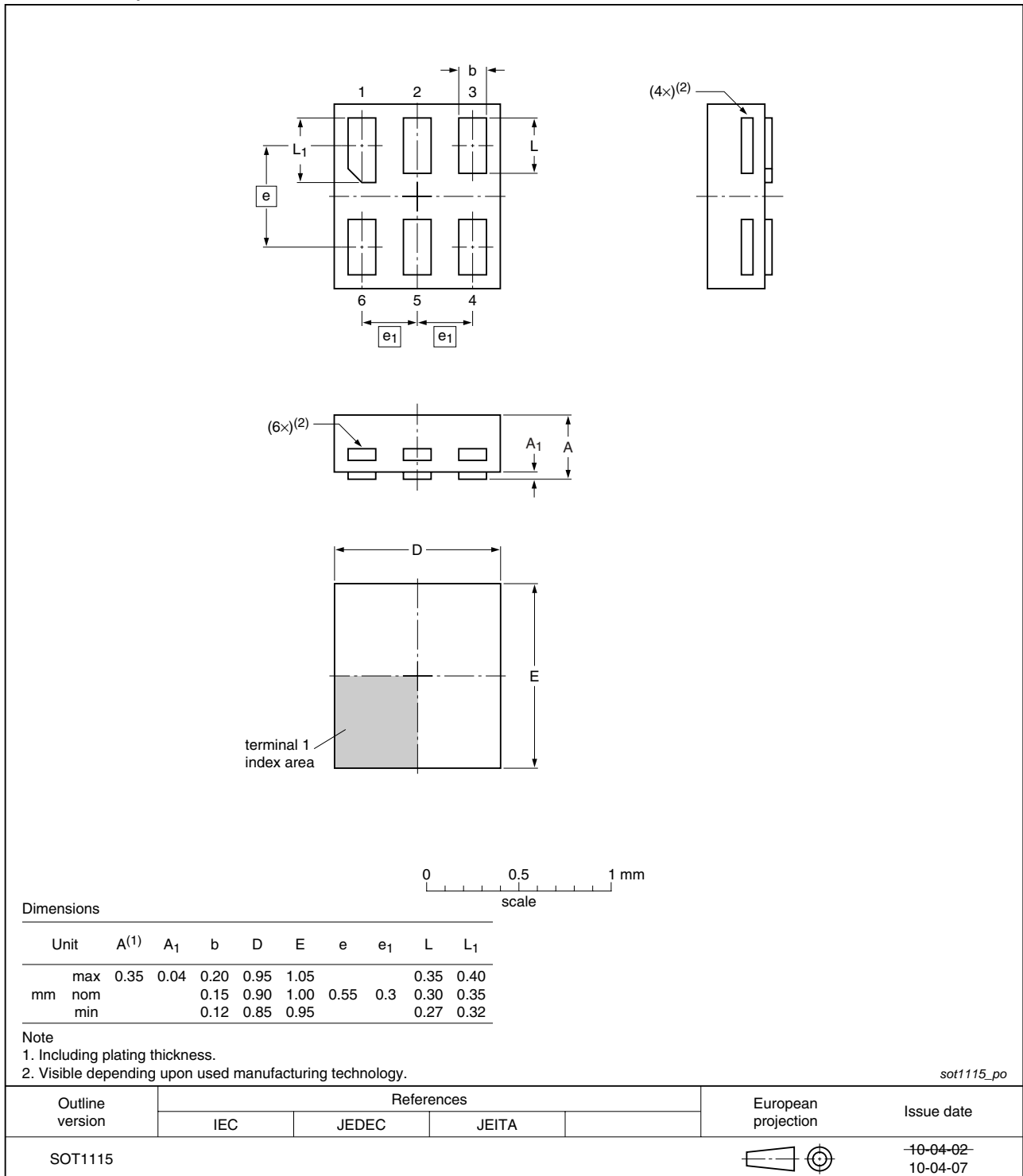
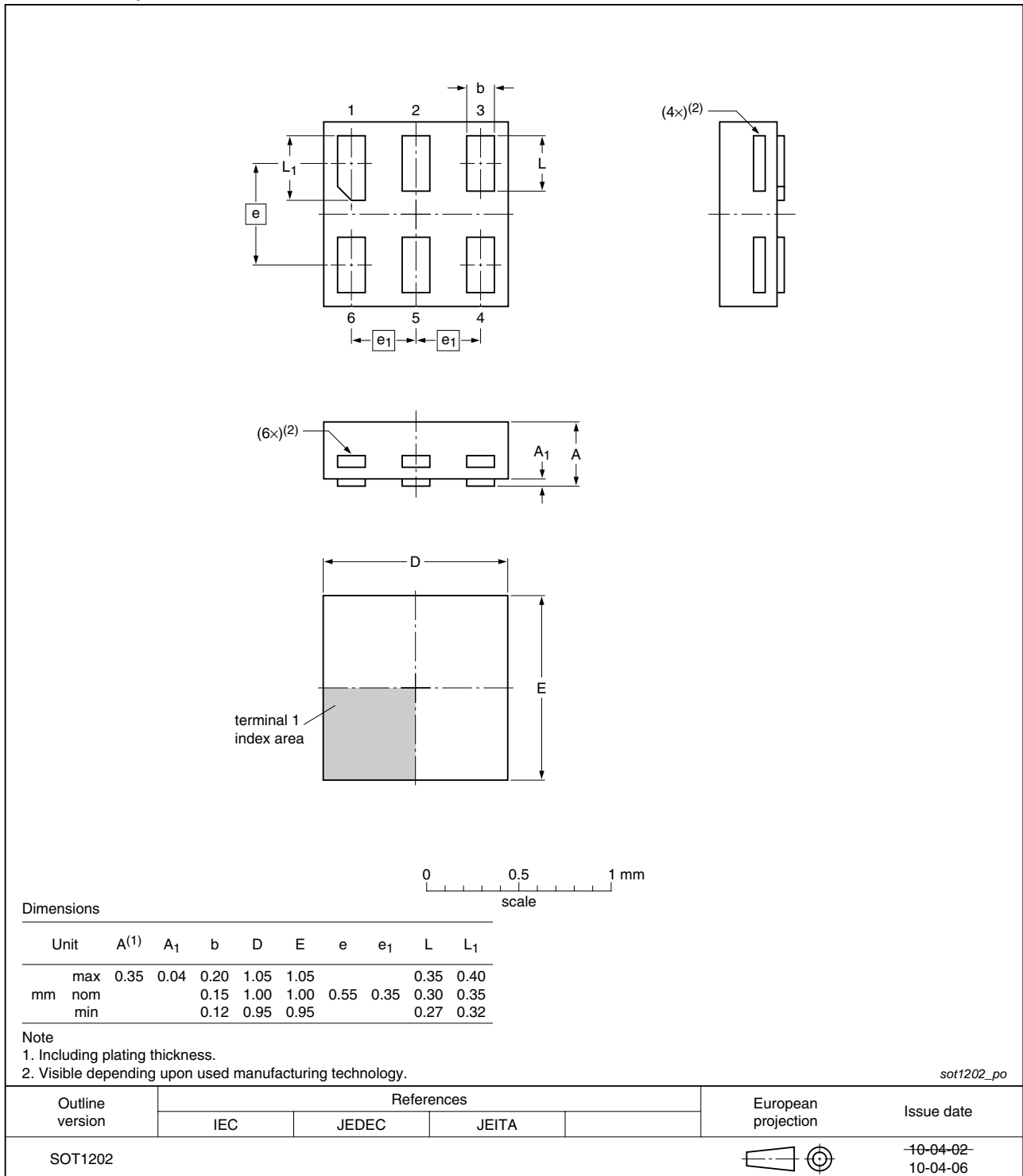


Fig 16. Package outline SOT1115 (XSON6)

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

**SOT1202**



**Fig 17. Package outline SOT1202 (XSON6)**

## 16. Abbreviations

Table 11. Abbreviations

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

## 17. Revision history

Table 12. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
74AUP1GU04 v.3	20100721	Product data sheet	-	74AUP1GU04 v.2
Modifications:	<ul style="list-style-type: none"> <li>• <a href="#">Figure 11</a>: in figure notes, <math>A_{OL}</math> (open loop amplification) changed to <math>G_{OL}</math> (open loop gain).</li> <li>• Added type number 74AUP1GU04GN (SOT1115/XSON6 package).</li> <li>• Added type number 74AUP1GU04GS (SOT1202/XSON6 package).</li> </ul>			
74AUP1GU04 v.2	20060803	Product data sheet	-	74AUP1GU04 v.1
74AUP1GU04 v.1	20050810	Product data sheet	-	-



## 18. Legal information

### 18.1 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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