

74AUP1G97

Low-power configurable multiple function gate

Rev. 8 — 15 August 2012

Product data sheet

1. General description

The 74AUP1G97 provides configurable multiple functions. The output state is determined by eight patterns of 3-bit input. The user can choose the logic functions MUX, AND, OR, NAND, NOR, inverter and buffer. All inputs can be connected to V_{CC} or GND.

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.

The 74AUP1G97 has Schmitt trigger inputs making it capable of transforming slowly changing input signals into sharply defined, jitter-free output signals.

The inputs switch at different points for positive and negative-going signals. The difference between the positive voltage V_{T+} and the negative voltage V_{T-} is defined as the input hysteresis voltage V_H.

2. Features and benefits

- Wide supply voltage range from 0.8 V to 3.6 V
- High noise immunity
- ESD protection:
 - ◆ HBM JESD22-A114F exceeds 5000 V
 - ◆ MM JESD22-A115-A exceeds 200 V
 - ◆ CDM JESD22-C101E exceeds 1000 V
- Low static power consumption; I_{CC} = 0.9 µA (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 °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		
74AUP1G97GW	−40 °C to +125 °C	SC-88	plastic surface-mounted package; 6 leads		SOT363
74AUP1G97GM	−40 °C to +125 °C	XSON6	plastic extremely thin small outline package; no leads; 6 terminals; body 1 × 1.45 × 0.5 mm		SOT886
74AUP1G97GF	−40 °C to +125 °C	XSON6	plastic extremely thin small outline package; no leads; 6 terminals; body 1 × 1 × 0.5 mm		SOT891
74AUP1G97GN	−40 °C to +125 °C	XSON6	extremely thin small outline package; no leads; 6 terminals; body 0.9 × 1.0 × 0.35 mm		SOT1115
74AUP1G97GS	−40 °C to +125 °C	XSON6	extremely thin small outline package; no leads; 6 terminals; body 1.0 × 1.0 × 0.35 mm		SOT1202

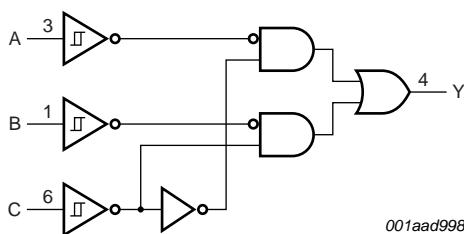
4. Marking

Table 2. Marking

Type number	Marking code ^[1]
74AUP1G97GW	aV
74AUP1G97GM	aV
74AUP1G97GF	aV
74AUP1G97GN	aV
74AUP1G97GS	aV

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

5. Functional diagram



001aad998

Fig 1. Logic symbol

6. Pinning information

6.1 Pinning

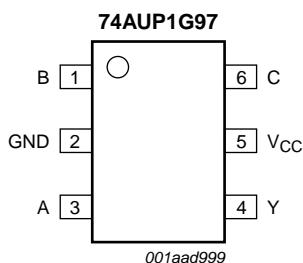


Fig 2. Pin configuration SOT363

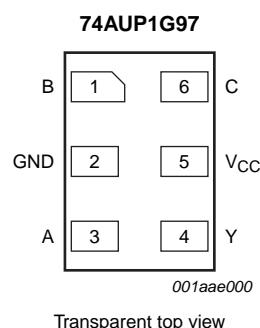


Fig 3. Pin configuration SOT886

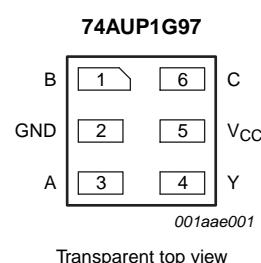


Fig 4. Pin configuration SOT891, SOT1115 and SOT1202

6.2 Pin description

Table 3. Pin description

Symbol	Pin	Description
B	1	data input
GND	2	ground (0 V)
A	3	data input
Y	4	data output
V _{CC}	5	supply voltage
C	6	data input

7. Functional description

Table 4. Function table^[1]

Input			Output
C	B	A	Y
L	L	L	L
L	L	H	L
L	H	L	H
L	H	H	H
H	L	L	L
H	L	H	H
H	H	L	L
H	H	H	H

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

7.1 Logic configurations

Table 5. Function selection table

Logic function	Figure
2-input MUX	see Figure 5
2-input AND	see Figure 6
2-input OR with one input inverted	see Figure 7
2-input NAND with one input inverted	see Figure 7
2-input AND with one input inverted	see Figure 8
2-input NOR with one input inverted	see Figure 8
2-input OR	see Figure 9
Inverter	see Figure 10
Buffer	see Figure 11

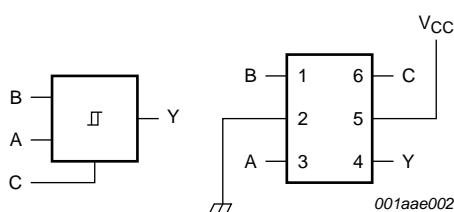


Fig 5. 2-input MUX

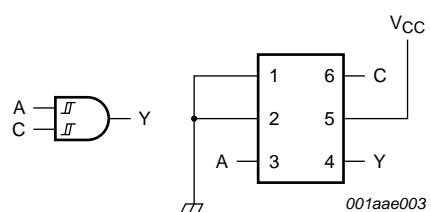


Fig 6. 2-input AND gate

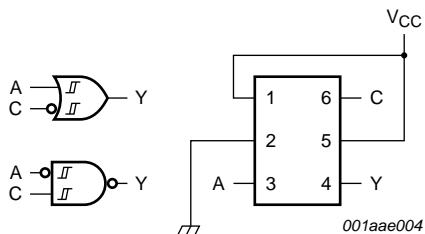


Fig 7. 2-input NAND gate with input A inverted or 2-input OR gate with input C inverted

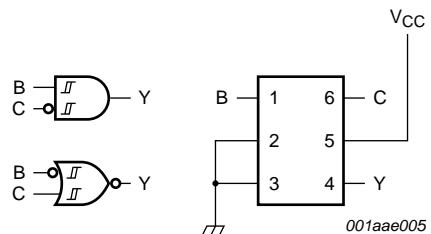


Fig 8. 2-input NOR gate with input B inverted or 2-input AND gate with input C inverted

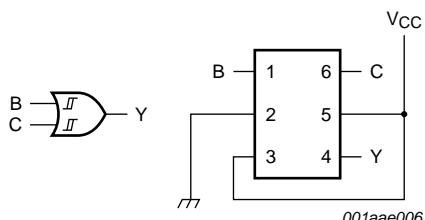


Fig 9. 2-input OR gate

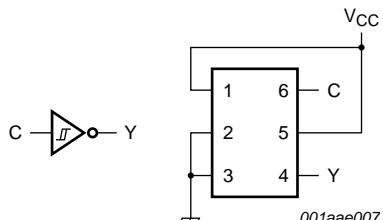


Fig 10. Inverter

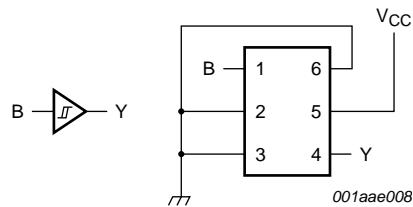


Fig 11. Buffer

8. Limiting values

Table 6. 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 minimum input and output voltage ratings may be exceeded if the input and output current ratings are observed.

[2] For SC-88 packages: 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 7. 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	0	V _{CC}	V
		Power-down mode; V _{CC} = 0 V	0	3.6	V
T _{amb}	ambient temperature		-40	+125	°C

10. Static characteristics

Table 8. 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 _{OH}	HIGH-level output voltage	V _I = V _{T+} or V _{T-} I _O = -20 µA; V _{CC} = 0.8 V to 3.6 V I _O = -1.1 mA; V _{CC} = 1.1 V I _O = -1.7 mA; V _{CC} = 1.4 V I _O = -1.9 mA; V _{CC} = 1.65 V I _O = -2.3 mA; V _{CC} = 2.3 V I _O = -3.1 mA; V _{CC} = 2.3 V I _O = -2.7 mA; V _{CC} = 3.0 V I _O = -4.0 mA; V _{CC} = 3.0 V	V _{CC} - 0.1	-	-	V
V _{OL}	LOW-level output voltage	V _I = V _{T+} or V _{T-} I _O = 20 µA; V _{CC} = 0.8 V to 3.6 V I _O = 1.1 mA; V _{CC} = 1.1 V I _O = 1.7 mA; V _{CC} = 1.4 V I _O = 1.9 mA; V _{CC} = 1.65 V I _O = 2.3 mA; V _{CC} = 2.3 V I _O = 3.1 mA; V _{CC} = 2.3 V I _O = 2.7 mA; V _{CC} = 3.0 V I _O = 4.0 mA; V _{CC} = 3.0 V	-	-	0.1	V
I _I	input leakage current	V _I = GND to 3.6 V; V _{CC} = 0 V to 3.6 V	-	-	±0.1	µA
I _{OFF}	power-off leakage current	V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 V	-	-	±0.2	µA
ΔI _{OFF}	additional power-off leakage current	V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 V to 0.2 V	-	-	±0.2	µA
I _{CC}	supply current	V _I = GND or V _{CC} ; I _O = 0 A; V _{CC} = 0.8 V to 3.6 V	-	-	0.5	µA
ΔI _{CC}	additional supply current	V _I = V _{CC} - 0.6 V; I _O = 0 A; V _{CC} = 3.3 V	[1]	-	40	µA
C _I	input capacitance	V _{CC} = 0 V to 3.6 V; V _I = GND or V _{CC}	-	1.1	-	pF
C _O	output capacitance	V _O = GND; V _{CC} = 0 V	-	1.7	-	pF
T_{amb} = -40 °C to +85 °C						
V _{OH}	HIGH-level output voltage	V _I = V _{T+} or V _{T-} I _O = -20 µA; V _{CC} = 0.8 V to 3.6 V I _O = -1.1 mA; V _{CC} = 1.1 V I _O = -1.7 mA; V _{CC} = 1.4 V I _O = -1.9 mA; V _{CC} = 1.65 V I _O = -2.3 mA; V _{CC} = 2.3 V I _O = -3.1 mA; V _{CC} = 2.3 V I _O = -2.7 mA; V _{CC} = 3.0 V I _O = -4.0 mA; V _{CC} = 3.0 V	V _{CC} - 0.1	-	-	V

Table 8. Static characteristics ...continued

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _{OL}	LOW-level output voltage	V _I = V _{T+} or V _{T-}				
		I _O = 20 µA; V _{CC} = 0.8 V to 3.6 V	-	-	0.1	V
		I _O = 1.1 mA; V _{CC} = 1.1 V	-	-	0.3V _{CC}	V
		I _O = 1.7 mA; V _{CC} = 1.4 V	-	-	0.37	V
		I _O = 1.9 mA; V _{CC} = 1.65 V	-	-	0.35	V
		I _O = 2.3 mA; V _{CC} = 2.3 V	-	-	0.33	V
		I _O = 3.1 mA; V _{CC} = 2.3 V	-	-	0.45	V
		I _O = 2.7 mA; V _{CC} = 3.0 V	-	-	0.33	V
		I _O = 4.0 mA; V _{CC} = 3.0 V	-	-	0.45	V
I _I	input leakage current	V _I = GND to 3.6 V; V _{CC} = 0 V to 3.6 V	-	-	±0.5	µA
I _{OFF}	power-off leakage current	V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 V	-	-	±0.5	µA
ΔI _{OFF}	additional power-off leakage current	V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 V to 0.2 V	-	-	±0.6	µA
I _{CC}	supply current	V _I = GND or V _{CC} ; I _O = 0 A; V _{CC} = 0.8 V to 3.6 V	-	-	0.9	µA
ΔI _{CC}	additional supply current	V _I = V _{CC} - 0.6 V; I _O = 0 A; V _{CC} = 3.3 V	[1]	-	50	µA
T_{amb} = -40 °C to +125 °C						
V _{OH}	HIGH-level output voltage	V _I = V _{T+} or V _{T-}				
		I _O = -20 µA; V _{CC} = 0.8 V to 3.6 V	V _{CC} - 0.11	-	-	V
		I _O = -1.1 mA; V _{CC} = 1.1 V	0.6V _{CC}	-	-	V
		I _O = -1.7 mA; V _{CC} = 1.4 V	0.93	-	-	V
		I _O = -1.9 mA; V _{CC} = 1.65 V	1.17	-	-	V
		I _O = -2.3 mA; V _{CC} = 2.3 V	1.77	-	-	V
		I _O = -3.1 mA; V _{CC} = 2.3 V	1.67	-	-	V
		I _O = -2.7 mA; V _{CC} = 3.0 V	2.40	-	-	V
		I _O = -4.0 mA; V _{CC} = 3.0 V	2.30	-	-	V
V _{OL}	LOW-level output voltage	V _I = V _{T+} or V _{T-}				
		I _O = 20 µA; V _{CC} = 0.8 V to 3.6 V	-	-	0.11	V
		I _O = 1.1 mA; V _{CC} = 1.1 V	-	-	0.33V _{CC}	V
		I _O = 1.7 mA; V _{CC} = 1.4 V	-	-	0.41	V
		I _O = 1.9 mA; V _{CC} = 1.65 V	-	-	0.39	V
		I _O = 2.3 mA; V _{CC} = 2.3 V	-	-	0.36	V
		I _O = 3.1 mA; V _{CC} = 2.3 V	-	-	0.50	V
		I _O = 2.7 mA; V _{CC} = 3.0 V	-	-	0.36	V
		I _O = 4.0 mA; V _{CC} = 3.0 V	-	-	0.50	V
I _I	input leakage current	V _I = GND to 3.6 V; V _{CC} = 0 V to 3.6 V	-	-	±0.75	µA
I _{OFF}	power-off leakage current	V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 V	-	-	±0.75	µA

Table 8. Static characteristics ...continued

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
ΔI_{OFF}	additional power-off leakage current	V_I or V_O = 0 V to 3.6 V; V_{CC} = 0 V to 0.2 V	-	-	± 0.75	μA
I_{CC}	supply current	V_I = GND or V_{CC} ; I_O = 0 A; V_{CC} = 0.8 V to 3.6 V	-	-	1.4	μA
ΔI_{CC}	additional supply current	V_I = V_{CC} – 0.6 V; I_O = 0 A; V_{CC} = 3.3 V	[1]	-	75	μA

[1] One input at V_{CC} – 0.6 V, other input at V_{CC} or GND.

11. Dynamic characteristics

Table 9. Dynamic characteristicsVoltages are referenced to GND (ground = 0 V); for test circuit see [Figure 13](#).

Symbol	Parameter	Conditions	25 °C			–40 °C to +125 °C			Unit
			Min	Typ[1]	Max	Min	Max (85 °C)	Max (125 °C)	
$C_L = 5 \text{ pF}$									
t_{pd}	propagation delay	A, B, C to Y; see Figure 12	[2]						
		$V_{CC} = 0.8 \text{ V}$	-	23.0	-	-	-	-	ns
		$V_{CC} = 1.1 \text{ V to } 1.3 \text{ V}$	2.8	6.6	12.6	2.5	13.0	13.2	ns
		$V_{CC} = 1.4 \text{ V to } 1.6 \text{ V}$	2.3	4.7	7.6	2.5	8.2	8.6	ns
		$V_{CC} = 1.65 \text{ V to } 1.95 \text{ V}$	2.2	3.9	6.2	2.0	6.8	7.2	ns
		$V_{CC} = 2.3 \text{ V to } 2.7 \text{ V}$	2.0	3.2	4.5	1.7	5.1	5.3	ns
		$V_{CC} = 3.0 \text{ V to } 3.6 \text{ V}$	1.9	2.9	3.9	1.5	4.1	4.3	ns
$C_L = 10 \text{ pF}$									
t_{pd}	propagation delay	A, B, C to Y; see Figure 12	[2]						
		$V_{CC} = 0.8 \text{ V}$	-	26.6	-	-	-	-	ns
		$V_{CC} = 1.1 \text{ V to } 1.3 \text{ V}$	3.2	7.4	14.3	2.9	14.9	15.2	ns
		$V_{CC} = 1.4 \text{ V to } 1.6 \text{ V}$	2.6	5.3	8.7	2.8	9.4	9.8	ns
		$V_{CC} = 1.65 \text{ V to } 1.95 \text{ V}$	2.5	4.5	7.0	2.3	7.8	8.2	ns
		$V_{CC} = 2.3 \text{ V to } 2.7 \text{ V}$	2.4	3.7	5.2	2.1	5.9	6.1	ns
		$V_{CC} = 3.0 \text{ V to } 3.6 \text{ V}$	2.3	3.4	4.6	1.9	4.9	5.1	ns
$C_L = 15 \text{ pF}$									
t_{pd}	propagation delay	A, B, C to Y; see Figure 12	[2]						
		$V_{CC} = 0.8 \text{ V}$	-	30.1	-	-	-	-	ns
		$V_{CC} = 1.1 \text{ V to } 1.3 \text{ V}$	3.6	8.2	16.0	3.2	16.7	17.0	ns
		$V_{CC} = 1.4 \text{ V to } 1.6 \text{ V}$	2.9	5.9	9.6	3.1	10.4	10.9	ns
		$V_{CC} = 1.65 \text{ V to } 1.95 \text{ V}$	2.8	5.0	7.8	2.5	8.7	9.1	ns
		$V_{CC} = 2.3 \text{ V to } 2.7 \text{ V}$	2.7	4.2	5.8	2.4	6.5	6.9	ns
		$V_{CC} = 3.0 \text{ V to } 3.6 \text{ V}$	2.5	3.8	5.1	2.2	5.5	5.7	ns

Table 9. Dynamic characteristics ...continuedVoltages are referenced to GND (ground = 0 V); for test circuit see [Figure 13](#).

Symbol	Parameter	Conditions	25 °C			–40 °C to +125 °C			Unit
			Min	Typ ^[1]	Max	Min	Max (85 °C)	Max (125 °C)	
C_L = 30 pF									
t _{pd}	propagation delay	A, B, C to Y; see Figure 12	[2]						
		V _{CC} = 0.8 V	-	38.3	-	-	-	-	ns
		V _{CC} = 1.1 V to 1.3 V	4.6	10.5	20.9	4.0	21.8	22.2	ns
		V _{CC} = 1.4 V to 1.6 V	3.7	7.4	12.2	3.8	13.3	14.0	ns
		V _{CC} = 1.65 V to 1.95 V	3.5	6.3	9.9	3.2	11.1	11.8	ns
		V _{CC} = 2.3 V to 2.7 V	3.4	5.3	7.4	3.1	8.3	8.8	ns
		V _{CC} = 3.0 V to 3.6 V	3.2	4.9	6.6	2.8	7.0	7.4	ns
C_L = 5 pF, 10 pF, 15 pF and 30 pF									
C _{PD}	power dissipation capacitance	f _i = 1 MHz; V _I = GND to V _{CC}	[3]						
		V _{CC} = 0.8 V	-	2.6	-	-	-	-	pF
		V _{CC} = 1.1 V to 1.3 V	-	2.8	-	-	-	-	pF
		V _{CC} = 1.4 V to 1.6 V	-	2.9	-	-	-	-	pF
		V _{CC} = 1.65 V to 1.95 V	-	3.1	-	-	-	-	pF
		V _{CC} = 2.3 V to 2.7 V	-	3.7	-	-	-	-	pF
		V _{CC} = 3.0 V to 3.6 V	-	4.3	-	-	-	-	pF

[1] All typical values are measured at nominal V_{CC}.[2] t_{pd} is the same as t_{PLH} and t_{PHL}.[3] C_{PD} is used to determine the dynamic power dissipation (P_D in μ W).

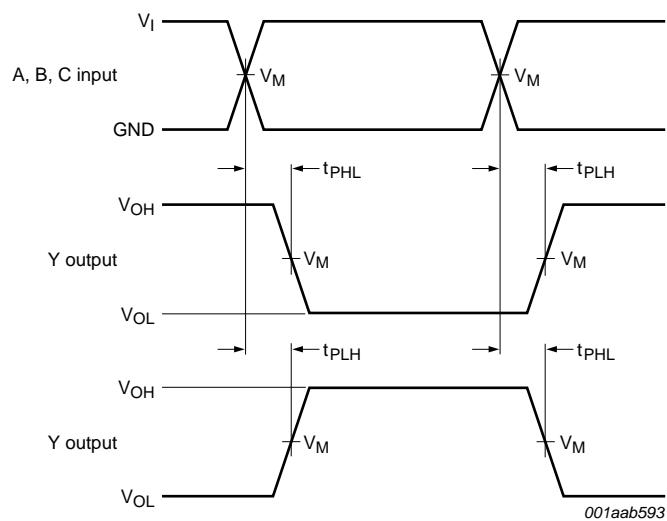
$$P_D = C_{PD} \times V_{CC}^2 \times f_i \times N + \sum(C_L \times V_{CC}^2 \times f_o)$$

f_i = input frequency in MHz;f_o = output frequency in MHz;C_L = output load capacitance in pF;V_{CC} = supply voltage in V;

N = number of inputs switching;

 $\sum(C_L \times V_{CC}^2 \times f_o)$ = sum of the outputs.

12. Waveforms



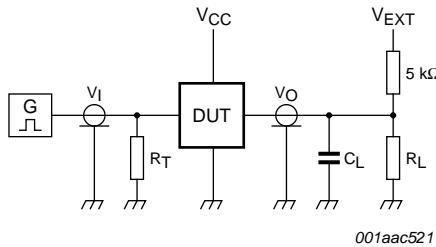
Measurement points are given in [Table 10](#).

V_{OL} and V_{OH} are typical output voltage drop that occur with the output load.

Fig 12. Input A, B and C to output Y propagation delay times

Table 10. Measurement points

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



Test data is given in [Table 11](#).

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_0 of the pulse generator.

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

Fig 13. Test circuit for measuring switching times

Table 11. 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 V_{CC}

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

13. Transfer characteristics

Table 12. Transfer characteristics

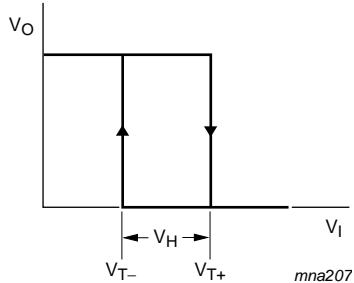
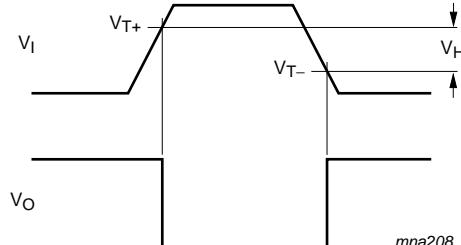
Voltages are referenced to GND (ground = 0 V; for test circuit see [Figure 13](#)).

Symbol	Parameter	Conditions	25 °C			−40 °C to +125 °C			Unit
			Min	Typ	Max	Min	Max (85 °C)	Max (125 °C)	
V_{T+}	positive-going threshold voltage	see Figure 14 and Figure 15	$V_{CC} = 0.8 \text{ V}$	0.30	-	0.60	0.30	0.60	0.62 V
			$V_{CC} = 1.1 \text{ V}$	0.53	-	0.90	0.53	0.90	0.92 V
			$V_{CC} = 1.4 \text{ V}$	0.74	-	1.11	0.74	1.11	1.13 V
			$V_{CC} = 1.65 \text{ V}$	0.91	-	1.29	0.91	1.29	1.31 V
			$V_{CC} = 2.3 \text{ V}$	1.37	-	1.77	1.37	1.77	1.80 V
			$V_{CC} = 3.0 \text{ V}$	1.88	-	2.29	1.88	2.29	2.32 V
V_{T-}	negative-going threshold voltage	see Figure 14 and Figure 15	$V_{CC} = 0.8 \text{ V}$	0.10	-	0.60	0.10	0.60	0.60 V
			$V_{CC} = 1.1 \text{ V}$	0.26	-	0.65	0.26	0.65	0.65 V
			$V_{CC} = 1.4 \text{ V}$	0.39	-	0.75	0.39	0.75	0.75 V
			$V_{CC} = 1.65 \text{ V}$	0.47	-	0.84	0.47	0.84	0.84 V
			$V_{CC} = 2.3 \text{ V}$	0.69	-	1.04	0.69	1.04	1.04 V
			$V_{CC} = 3.0 \text{ V}$	0.88	-	1.24	0.88	1.24	1.24 V

Table 12. Transfer characteristics ...continuedVoltages are referenced to GND (ground = 0 V; for test circuit see [Figure 13](#).

Symbol	Parameter	Conditions	25 °C			−40 °C to +125 °C			Unit
			Min	Typ	Max	Min	Max (85 °C)	Max (125 °C)	
V _H	hysteresis voltage	(V _{T+} − V _{T−}); see Figure 14 , Figure 15 , Figure 16 and Figure 17							
		V _{CC} = 0.8 V	0.07	-	0.50	0.07	0.50	0.50	V
		V _{CC} = 1.1 V	0.08	-	0.46	0.08	0.46	0.46	V
		V _{CC} = 1.4 V	0.18	-	0.56	0.18	0.56	0.56	V
		V _{CC} = 1.65 V	0.27	-	0.66	0.27	0.66	0.66	V
		V _{CC} = 2.3 V	0.53	-	0.92	0.53	0.92	0.92	V
		V _{CC} = 3.0 V	0.79	-	1.31	0.79	1.31	1.31	V

14. Waveforms transfer characteristics

**Fig 14. Transfer characteristic**V_{T+} and V_{T−} limits at 70 % and 20 %.**Fig 15. Definition of V_{T+}, V_{T−} and V_H**

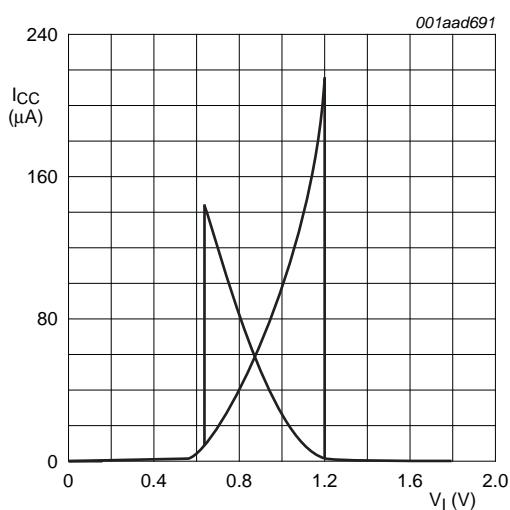


Fig 16. Typical transfer characteristics; $V_{CC} = 1.8\text{ V}$

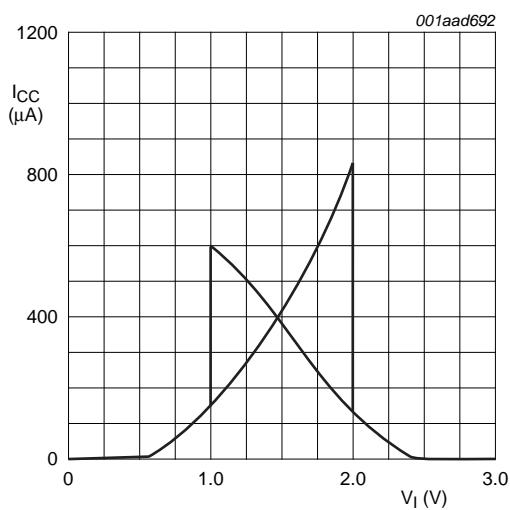
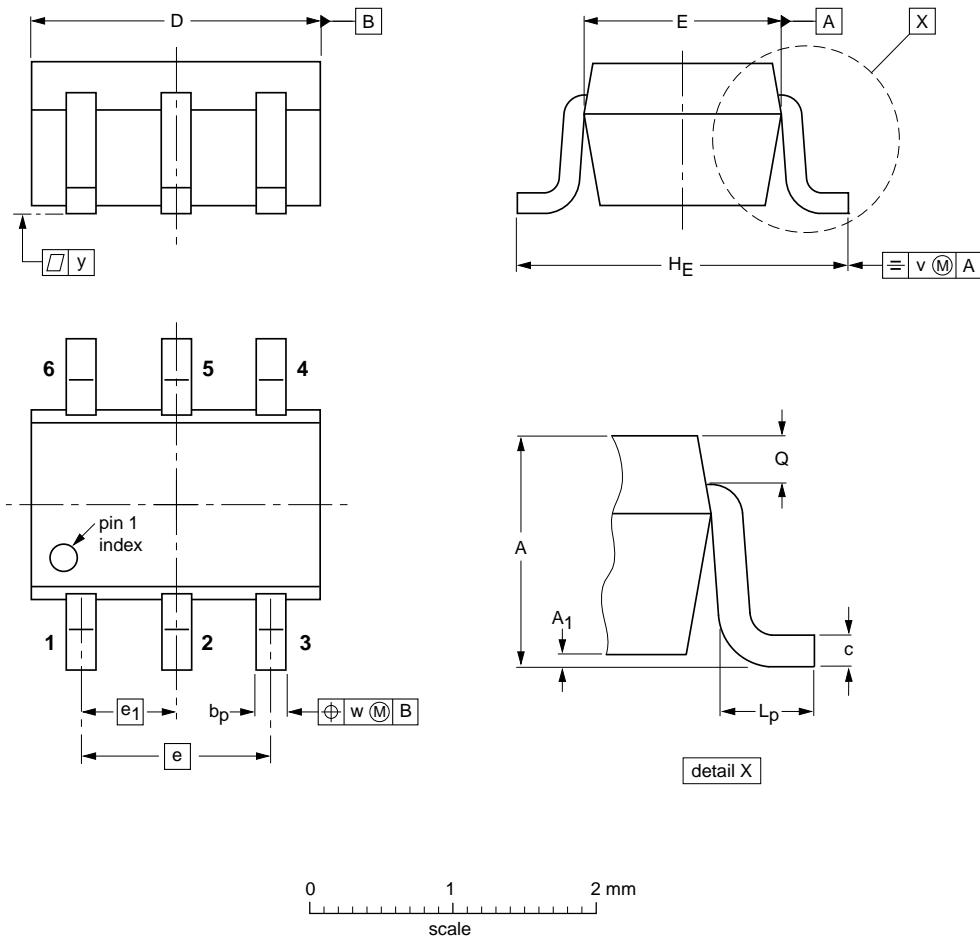


Fig 17. Typical transfer characteristics; $V_{CC} = 3.0\text{ V}$

15. Package outline

Plastic surface-mounted package; 6 leads

SOT363



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1 max	b_p	c	D	E	e	e_1	H_E	L_p	Q	v	w	y
mm	1.1 0.8	0.1	0.30 0.20	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.25 0.15	0.2	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA			
SOT363			SC-88			-04-11-08- 06-03-16

Fig 18. 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

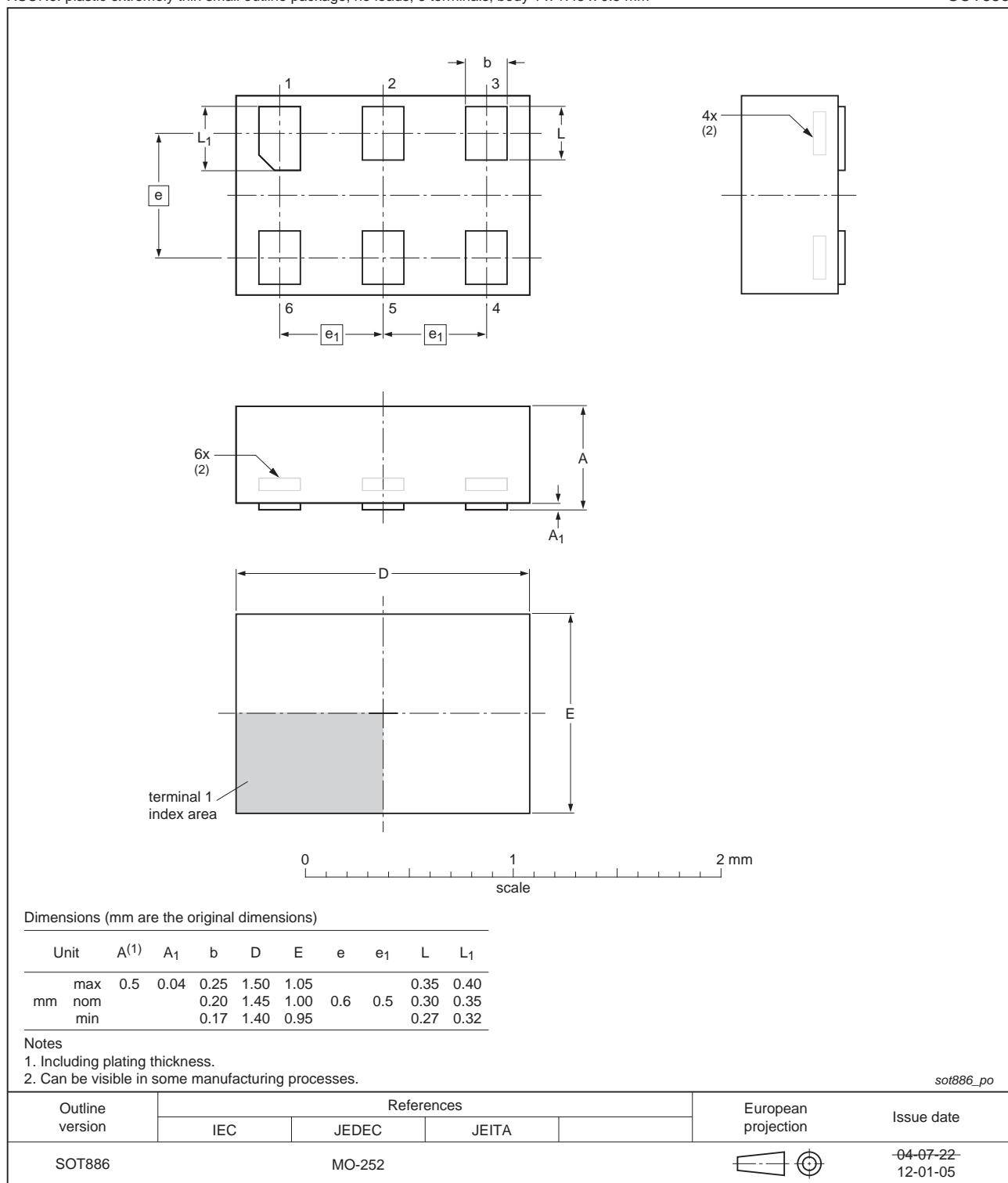
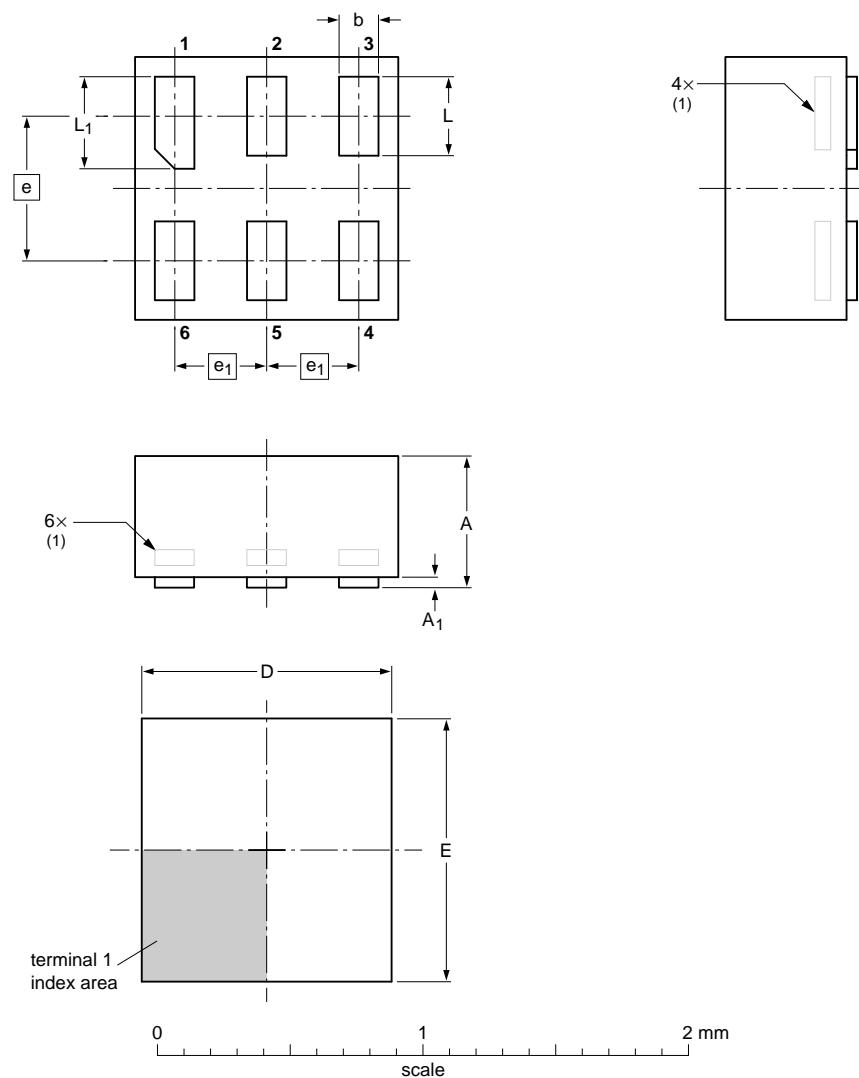


Fig 19. Package outline SOT886 (XSON6)

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

SOT891

**DIMENSIONS (mm are the original dimensions)**

UNIT	A max	A ₁ max	b	D	E	e	e ₁	L	L ₁
mm	0.5	0.04	0.20 0.12	1.05 0.95	1.05 0.95	0.55	0.35	0.35 0.27	0.40 0.32

Note

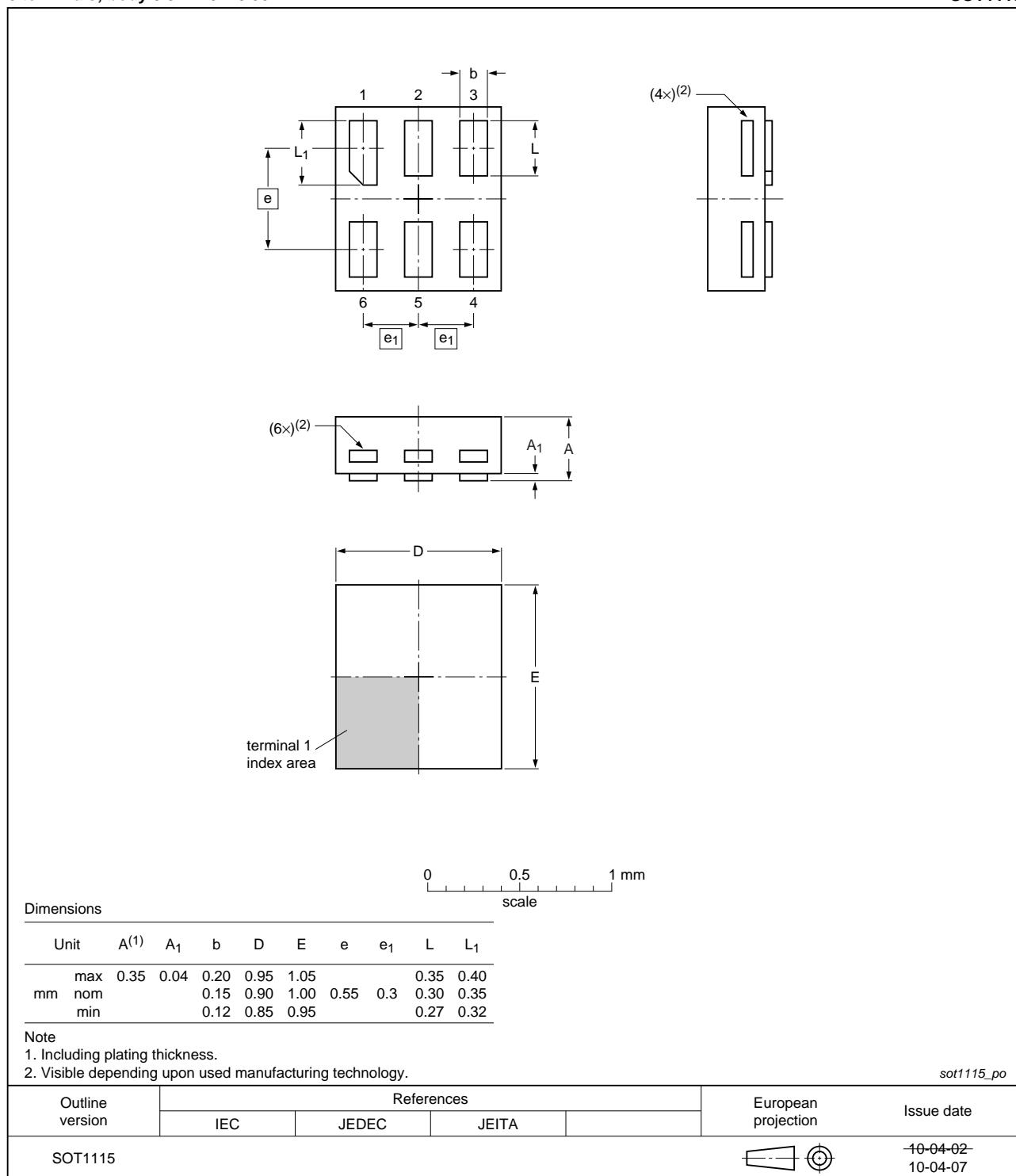
1. Can be visible in some manufacturing processes.

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA			
SOT891						05-04-06 07-05-15

Fig 20. 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 21. 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

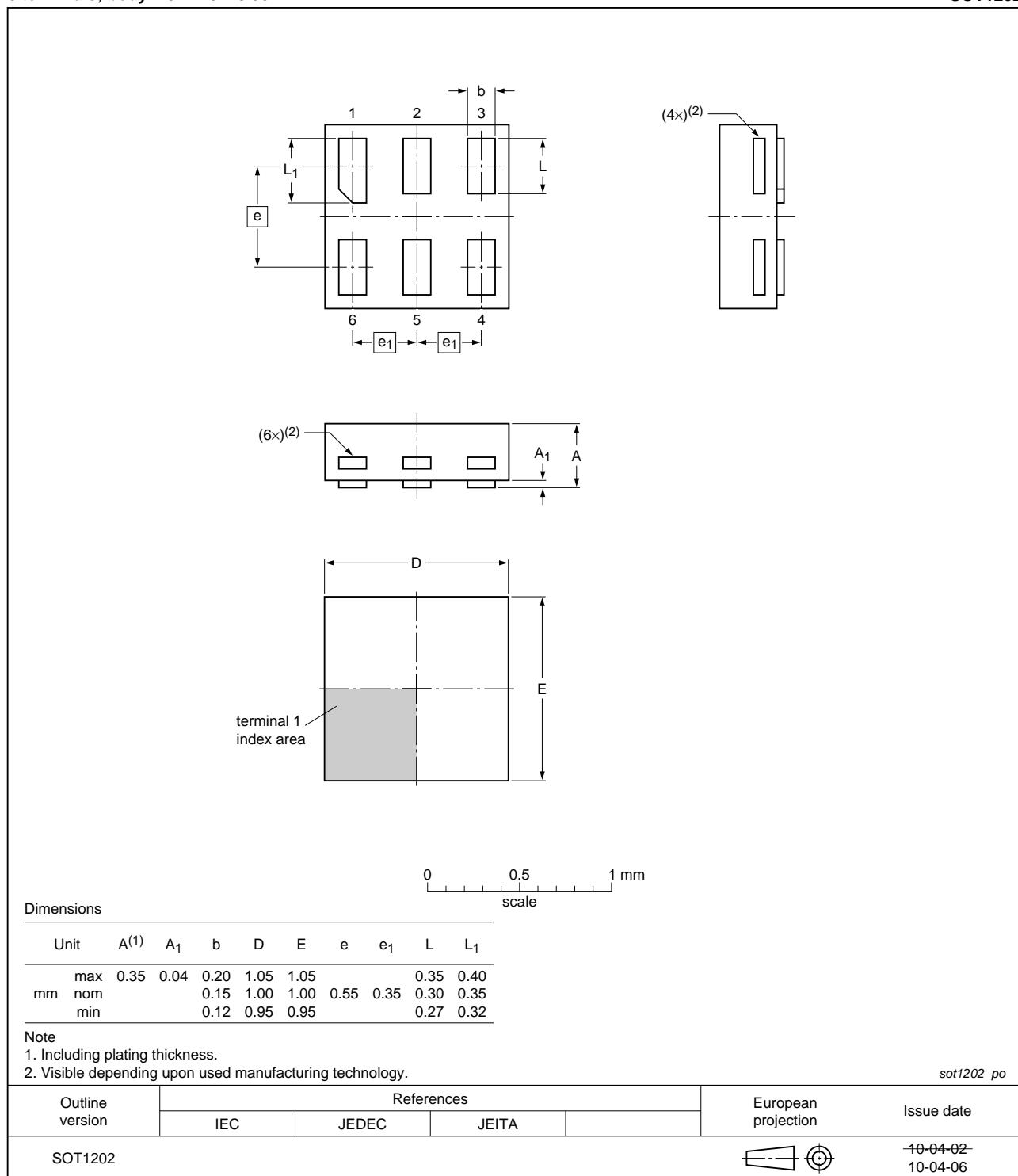


Fig 22. Package outline SOT1202 (XSON6)

16. Abbreviations

Table 13. 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 14. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
74AUP1G97 v.8	20120815	Product data sheet	-	74AUP1G97 v.7
Modifications:	• Package outline drawing of SOT886 (Figure 19) modified.			
74AUP1G97 v.7	20111128	Product data sheet	-	74AUP1G97 v.6
74AUP1G97 v.6	20110110	Product data sheet	-	74AUP1G97 v.5
74AUP1G97 v.5	20101020	Product data sheet	-	74AUP1G97 v.4
74AUP1G97 v.4	20090623	Product data sheet	-	74AUP1G97 v.3
74AUP1G97 v.3	20090518	Product data sheet	-	74AUP1G97 v.2
74AUP1G97 v.2	20090327	Product data sheet	-	74AUP1G97 v.1
74AUP1G97 v.1	20061107	Product data sheet	-	-

18. Legal information

18.1 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>.

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