

74AUP1G06GW,125 Datasheet

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DiGi Electronics Part Number	74AUP1G06GW,125-DG
Manufacturer	Nexperia USA Inc.
Manufacturer Product Number	74AUP1G06GW,125
Description	IC INVERTER 1CH 1-INP 5TSSOP
Detailed Description	Inverter IC 1 Channel Open Drain 5-TSSOP



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Purchase and inquiry

Manufacturer Product Number:

74AUP1G06GW,125

Series:

74AUP

Logic Type:

Inverter

Number of Inputs:

1

Voltage - Supply:

0.8V ~ 3.6V

Current - Output High, Low:

-, 4mA

Input Logic Level - High:

1.6V ~ 2V

Operating Temperature:

-40°C ~ 125°C

Supplier Device Package:

5-TSSOP

Base Product Number:

74AUP1G06

Manufacturer:

Nexperia USA Inc.

Product Status:

Active

Number of Circuits:

1

Features:

Open Drain

Current - Quiescent (Max):

500 nA

Input Logic Level - Low:

0.7V ~ 0.9V

Max Propagation Delay @ V, Max CL:

10.5ns @ 3.3V, 30pF

Mounting Type:

Surface Mount

Package / Case:

5-TSSOP, SC-70-5, SOT-353

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8542.39.0001

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

74AUP1G06

Low-power inverter with open-drain output

Rev. 12 — 13 November 2024

Product data sheet

1. General description

The 74AUP1G06 is a single inverter with open-drain output. Schmitt-trigger action at all inputs makes the circuit tolerant of slower input rise and fall times.

This device ensures 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 potentially damaging backflow current through the device when it is powered down.

2. Features and benefits

- Wide supply voltage range from 0.8 V to 3.6 V
- High noise immunity
- CMOS low power dissipation
- Low static power consumption; $I_{CC} = 0.9 \mu\text{A}$ (maximum)
- Latch-up performance exceeds 100 mA per JESD 78 Class II
- Overvoltage tolerant inputs to 3.6 V
- Low noise overshoot and undershoot < 10 % of V_{CC}
- I_{OFF} circuitry provides partial Power-down mode operation
- Complies with JEDEC standards:
 - JESD8-12 (0.8 V to 1.3 V)
 - JESD8-11 (0.9 V to 1.65 V)
 - JESD8-7 (1.65 V to 1.95 V)
 - JESD8-5 (2.3 V to 2.7 V)
 - JESD8C (2.7 V to 3.6 V)
- ESD protection:
 - HBM: ANSI/ESDA/JEDEC JS-001 class 3A exceeds 5000 V
 - CDM: ANSI/ESDA/JEDEC JS-002 class C3 exceeds 1000 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
74AUP1G06GW	-40 °C to +125 °C	TSSOP5	plastic thin shrink small outline package; 5 leads; body width 1.25 mm	SOT353-1
74AUP1G06GM	-40 °C to +125 °C	XSON6	plastic extremely thin small outline package; no leads; 6 terminals; body 1 × 1.45 × 0.5 mm	SOT886
74AUP1G06GN	-40 °C to +125 °C	XSON6	extremely thin small outline package; no leads; 6 terminals; body 0.9 × 1.0 × 0.35 mm	SOT1115
74AUP1G06GS	-40 °C to +125 °C	XSON6	extremely thin small outline package; no leads; 6 terminals; body 1.0 × 1.0 × 0.35 mm	SOT1202
74AUP1G06GX	-40 °C to +125 °C	X2SON5	plastic thermal enhanced extremely thin small outline package; no leads; 5 terminals; body 0.8 × 0.8 × 0.32 mm	SOT1226-3
74AUP1G06GZ	-40 °C to +125 °C	XSON5	plastic thermal enhanced extremely thin small outline package with side-wettable flanks (SWF); no leads; 5 terminals; body 1.1 × 0.85 × 0.5 mm	SOT8065-1

4. Marking

Table 2. Marking

Type number	Marking code [1]
74AUP1G06GW	pR
74AUP1G06GM	pR
74AUP1G06GN	pR
74AUP1G06GS	pR
74AUP1G06GX	pR
74AUP1G06GZ	pR

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

5. Functional diagram

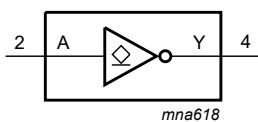


Fig. 1. Logic symbol

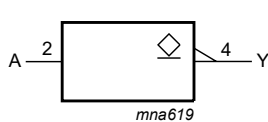


Fig. 2. IEC logic symbol

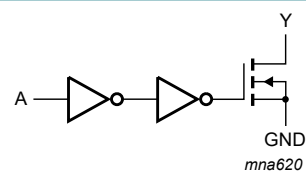
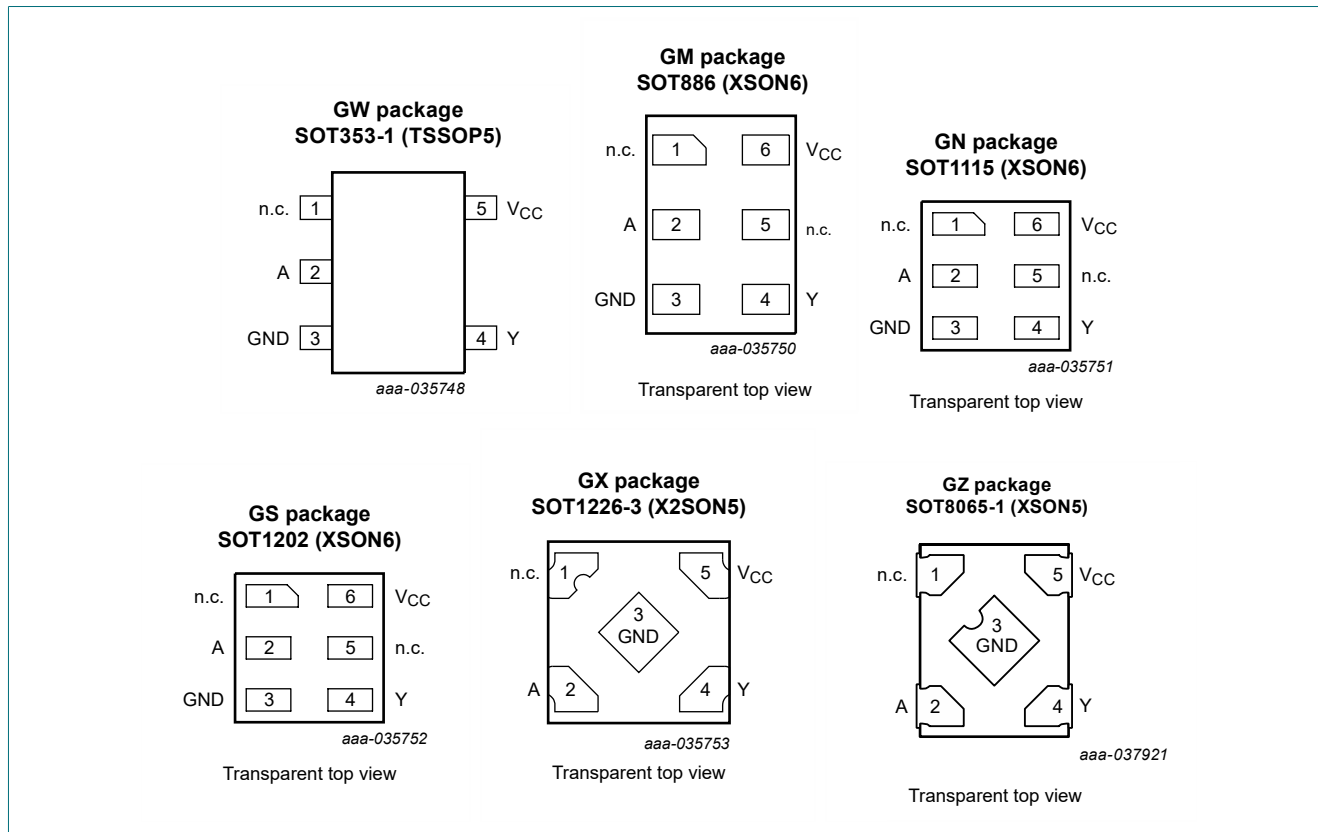


Fig. 3. Logic diagram

6. Pinning information

6.1. Pinning



6.2. Pin description

Table 3. Pin description

Symbol	Pin		Description
	TSSOP5, XSON5 and X2SON5	XSON6	
n.c.	1	1	not connected
A	2	2	data input
GND	3	3	ground (0 V)
Y	4	4	data output
n.c.	-	5	not connected
V _{CC}	5	6	supply voltage

7. Functional description

Table 4. Function table

H = HIGH voltage level; L = LOW voltage level; Z = high-impedance OFF state.

Input	Output
A	Y
L	Z
H	L

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	$V_I < 0\text{ V}$	-50	-	mA
V_I	input voltage	[1]	-0.5	+4.6	V
I_{OK}	output clamping current	$V_O < 0\text{ V}$	-50	-	mA
V_O	output voltage	Active mode and Power-down mode [1]	-0.5	+4.6	V
I_O	output current	$V_O = 0\text{ V to }V_{CC}$	-	+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	$T_{amb} = -40\text{ °C to }+125\text{ °C}$ [2]	-	250	mW

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

[2] For SOT353-1 (TSSOP5) package: P_{tot} derates linearly with 3.3 mW/K above 74 °C.

For SOT886 (XSON6) package: P_{tot} derates linearly with 3.3 mW/K above 74 °C.

For SOT1115 (XSON6) package: P_{tot} derates linearly with 3.2 mW/K above 71 °C.

For SOT1202 (XSON6) package: P_{tot} derates linearly with 3.3 mW/K above 74 °C.

For SOT1226-3 (X2SON5) package: P_{tot} derates linearly with 3.0 mW/K above 67 °C.

For SOT8065-1 (XSON5) package: P_{tot} derates linearly with 3.2 mW/K above 72 °C.

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	0	V_{CC}	V
		Power-down mode; $V_{CC} = 0\text{ V}$	0	3.6	V
T_{amb}	ambient temperature		-40	+125	°C
$\Delta t/\Delta V$	input transition rise and fall rate	$V_{CC} = 0.8\text{ V to }3.6\text{ V}$	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
T_{amb} = 25 °C						
V _{IH}	HIGH-level input voltage	V _{CC} = 0.8 V	0.70 × V _{CC}	-	-	V
		V _{CC} = 0.9 V to 1.95 V	0.65 × 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 × V _{CC}	V
		V _{CC} = 0.9 V to 1.95 V	-	-	0.35 × 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
V _{OL}	LOW-level output voltage	V _I = V _{IH} or V _{IL}				
		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	-	-	0.3 × V _{CC}	V
		I _O = 1.7 mA; V _{CC} = 1.4 V	-	-	0.31	V
		I _O = 1.9 mA; V _{CC} = 1.65 V	-	-	0.31	V
		I _O = 2.3 mA; V _{CC} = 2.3 V	-	-	0.31	V
		I _O = 3.1 mA; V _{CC} = 2.3 V	-	-	0.44	V
		I _O = 2.7 mA; V _{CC} = 3.0 V	-	-	0.31	V
I _O = 4.0 mA; V _{CC} = 3.0 V	-	-	0.44	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 _{OZ}	OFF-state output current	V _I = V _{IL} ; V _O = 0 V 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	-	-	40	μA
C _I	input capacitance	V _{CC} = 0 V to 3.6 V; V _I = GND or V _{CC}	-	0.8	-	pF
C _O	output capacitance	output enabled; V _O = GND; V _{CC} = 0 V	-	1.7	-	pF
		output disabled; V _O = GND; V _{CC} = 0 V	-	1.1	-	pF
T_{amb} = -40 °C to +85 °C						
V _{IH}	HIGH-level input voltage	V _{CC} = 0.8 V	0.70 × V _{CC}	-	-	V
		V _{CC} = 0.9 V to 1.95 V	0.65 × 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 × V _{CC}	V
		V _{CC} = 0.9 V to 1.95 V	-	-	0.35 × 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

Low-power inverter with open-drain output

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _{OL}	LOW-level output voltage	V _I = V _{IH} or V _{IL}				
		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	-	-	0.3 × V _{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 _{OZ}	OFF-state output current	V _I = V _{IL} ; V _O = 0 V 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	-	-	50	μA
T_{amb} = -40 °C to +125 °C						
V _{IH}	HIGH-level input voltage	V _{CC} = 0.8 V	0.75 × V _{CC}	-	-	V
		V _{CC} = 0.9 V to 1.95 V	0.70 × 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	-	-	0.25 × V _{CC}	V
		V _{CC} = 0.9 V to 1.95 V	-	-	0.30 × 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
V _{OL}	LOW-level output voltage	V _I = V _{IH} or V _{IL}				
		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	-	-	0.33 × V _{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		

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
I_I	input leakage current	$V_I = \text{GND to } 3.6 \text{ V}; V_{CC} = 0 \text{ V to } 3.6 \text{ V}$	-	-	± 0.75	μA
I_{OZ}	OFF-state output current	$V_I = V_{IL}; V_O = 0 \text{ V to } 3.6 \text{ V}; V_{CC} = 0 \text{ V to } 3.6 \text{ V}$	-	-	± 0.75	μA
I_{OFF}	power-off leakage current	$V_I \text{ or } V_O = 0 \text{ V to } 3.6 \text{ V}; V_{CC} = 0 \text{ V}$	-	-	± 0.75	μA
ΔI_{OFF}	additional power-off leakage current	$V_I \text{ or } V_O = 0 \text{ V to } 3.6 \text{ V}; V_{CC} = 0 \text{ V to } 0.2 \text{ V}$	-	-	± 0.75	μA
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	μA
ΔI_{CC}	additional supply current	$V_I = V_{CC} - 0.6 \text{ V}; I_O = 0 \text{ A}; V_{CC} = 3.3 \text{ V}$	-	-	75	μA

11. Dynamic characteristics

Table 8. Dynamic characteristics

Voltages are referenced to GND (ground = 0 V); for test circuit see Fig. 5.

Symbol	Parameter	Conditions	25 °C			-40 °C to +85 °C		-40 °C to +125 °C		Unit
			Min	Typ [1]	Max	Min	Max	Min	Max	
$C_L = 5 \text{ pF}$										
t_{pd}	propagation delay	A to Y; see Fig. 4 [2]								
		$V_{CC} = 0.8 \text{ V}$	-	12.8	-	-	-	-	-	ns
		$V_{CC} = 1.1 \text{ V to } 1.3 \text{ V}$	2.3	4.3	9.9	2.0	10.9	2.0	12.0	ns
		$V_{CC} = 1.4 \text{ V to } 1.6 \text{ V}$	1.8	3.1	6.1	1.5	7.1	1.5	7.8	ns
		$V_{CC} = 1.65 \text{ V to } 1.95 \text{ V}$	1.5	2.8	4.7	1.2	5.7	1.2	6.3	ns
		$V_{CC} = 2.3 \text{ V to } 2.7 \text{ V}$	1.2	2.2	3.2	1.0	3.9	1.0	4.3	ns
$V_{CC} = 3.0 \text{ V to } 3.6 \text{ V}$	1.1	2.2	3.3	0.8	3.6	0.8	4.0	ns		
$C_L = 10 \text{ pF}$										
t_{pd}	propagation delay	A to Y; see Fig. 4 [2]								
		$V_{CC} = 0.8 \text{ V}$	-	15.8	-	-	-	-	-	ns
		$V_{CC} = 1.1 \text{ V to } 1.3 \text{ V}$	2.7	5.4	11.2	2.5	13.2	2.5	15.0	ns
		$V_{CC} = 1.4 \text{ V to } 1.6 \text{ V}$	2.2	3.9	7.0	2.0	8.5	2.0	9.4	ns
		$V_{CC} = 1.65 \text{ V to } 1.95 \text{ V}$	1.9	3.6	5.4	1.7	6.7	1.7	7.4	ns
		$V_{CC} = 2.3 \text{ V to } 2.7 \text{ V}$	1.7	2.9	3.8	1.4	4.5	1.4	5.0	ns
$V_{CC} = 3.0 \text{ V to } 3.6 \text{ V}$	1.6	3.2	4.6	1.2	4.9	1.2	5.4	ns		
$C_L = 15 \text{ pF}$										
t_{pd}	propagation delay	A to Y; see Fig. 4 [2]								
		$V_{CC} = 0.8 \text{ V}$	-	18.8	-	-	-	-	-	ns
		$V_{CC} = 1.1 \text{ V to } 1.3 \text{ V}$	3.2	6.4	12.2	2.9	15.2	2.9	17.0	ns
		$V_{CC} = 1.4 \text{ V to } 1.6 \text{ V}$	2.6	4.6	7.7	2.3	9.4	2.3	10.0	ns
		$V_{CC} = 1.65 \text{ V to } 1.95 \text{ V}$	2.3	4.5	6.6	2.1	7.3	2.1	8.1	ns
		$V_{CC} = 2.3 \text{ V to } 2.7 \text{ V}$	2.1	3.5	4.6	1.7	5.1	1.7	5.7	ns
$V_{CC} = 3.0 \text{ V to } 3.6 \text{ V}$	2.0	4.0	6.0	1.5	6.5	1.5	7.2	ns		

Symbol	Parameter	Conditions	25 °C			-40 °C to +85 °C		-40 °C to +125 °C		Unit
			Min	Typ [1]	Max	Min	Max	Min	Max	
C_L = 30 pF										
t _{pd}	propagation delay	A to Y; see Fig. 4 [2]								
		V _{CC} = 0.8 V	-	27.8	-	-	-	-	-	ns
		V _{CC} = 1.1 V to 1.3 V	4.4	9.3	16.5	3.9	19.3	3.9	21.3	ns
		V _{CC} = 1.4 V to 1.6 V	3.6	6.8	10.1	3.2	12.0	3.2	13.2	ns
		V _{CC} = 1.65 V to 1.95 V	3.2	6.8	10.7	2.9	11.0	2.9	12.1	ns
		V _{CC} = 2.3 V to 2.7 V	2.9	5.3	7.2	2.6	7.8	2.6	8.6	ns
		V _{CC} = 3.0 V to 3.6 V	2.9	6.5	10.5	2.5	10.8	2.5	11.9	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	-	0.5	-	-	-	-	-	pF
		V _{CC} = 1.1 V to 1.3 V	-	0.6	-	-	-	-	-	pF
		V _{CC} = 1.4 V to 1.6 V	-	0.7	-	-	-	-	-	pF
		V _{CC} = 1.65 V to 1.95 V	-	0.7	-	-	-	-	-	pF
		V _{CC} = 2.3 V to 2.7 V	-	1.0	-	-	-	-	-	pF
		V _{CC} = 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] C_{PD} is used to determine the dynamic power dissipation (P_D in μW).

$$P_D = C_{PD} \times V_{CC}^2 \times f_i \times N \text{ where:}$$

f_i = input frequency in MHz;

V_{CC} = supply voltage in V;

N = number of inputs switching.

11.1. Waveforms and test circuit

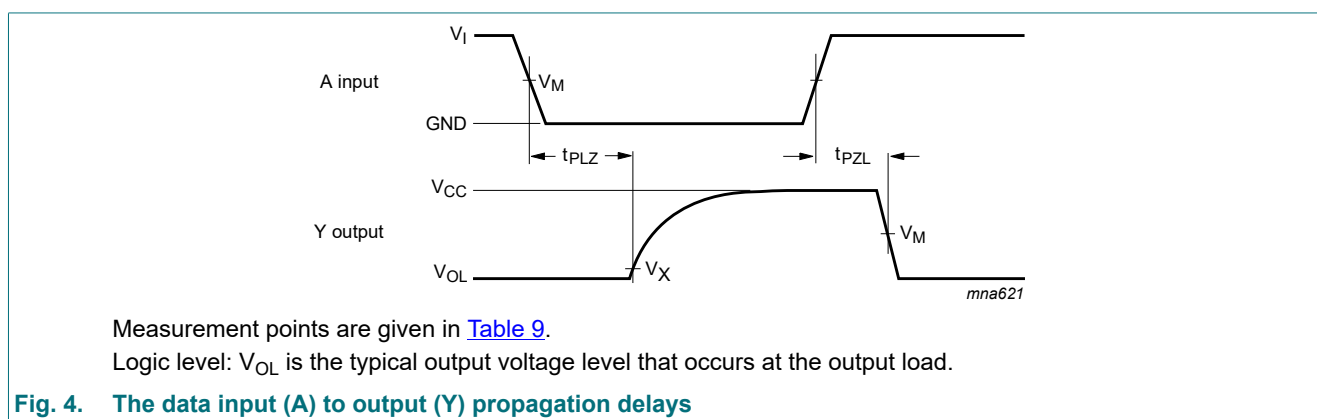
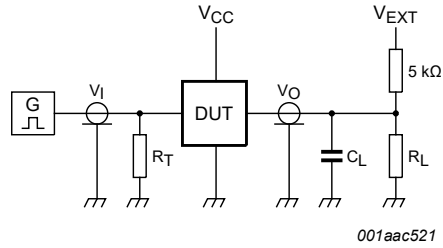


Table 9. Measurement points

Supply voltage	Input			Output	
V _{CC}	V _M	V _I	t _r = t _f	V _M	V _X
0.8 V to 1.6 V	0.5 × V _{CC}	V _{CC}	≤ 3.0 ns	0.5 × V _{CC}	V _{OL} + 0.1 V
1.65 V to 2.7 V	0.5 × V _{CC}	V _{CC}	≤ 3.0 ns	0.5 × V _{CC}	V _{OL} + 0.15 V
3.0 V to 3.6 V	0.5 × V _{CC}	V _{CC}	≤ 3.0 ns	0.5 × V _{CC}	V _{OL} + 0.3 V



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. 5. 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 $R_L = 5 \text{ k}\Omega$.

For measuring propagation delays, setup and hold times and pulse width $R_L = 1 \text{ M}\Omega$.

12. Package outline

TSSOP5: plastic thin shrink small outline package; 5 leads; body width 1.25 mm

SOT353-1

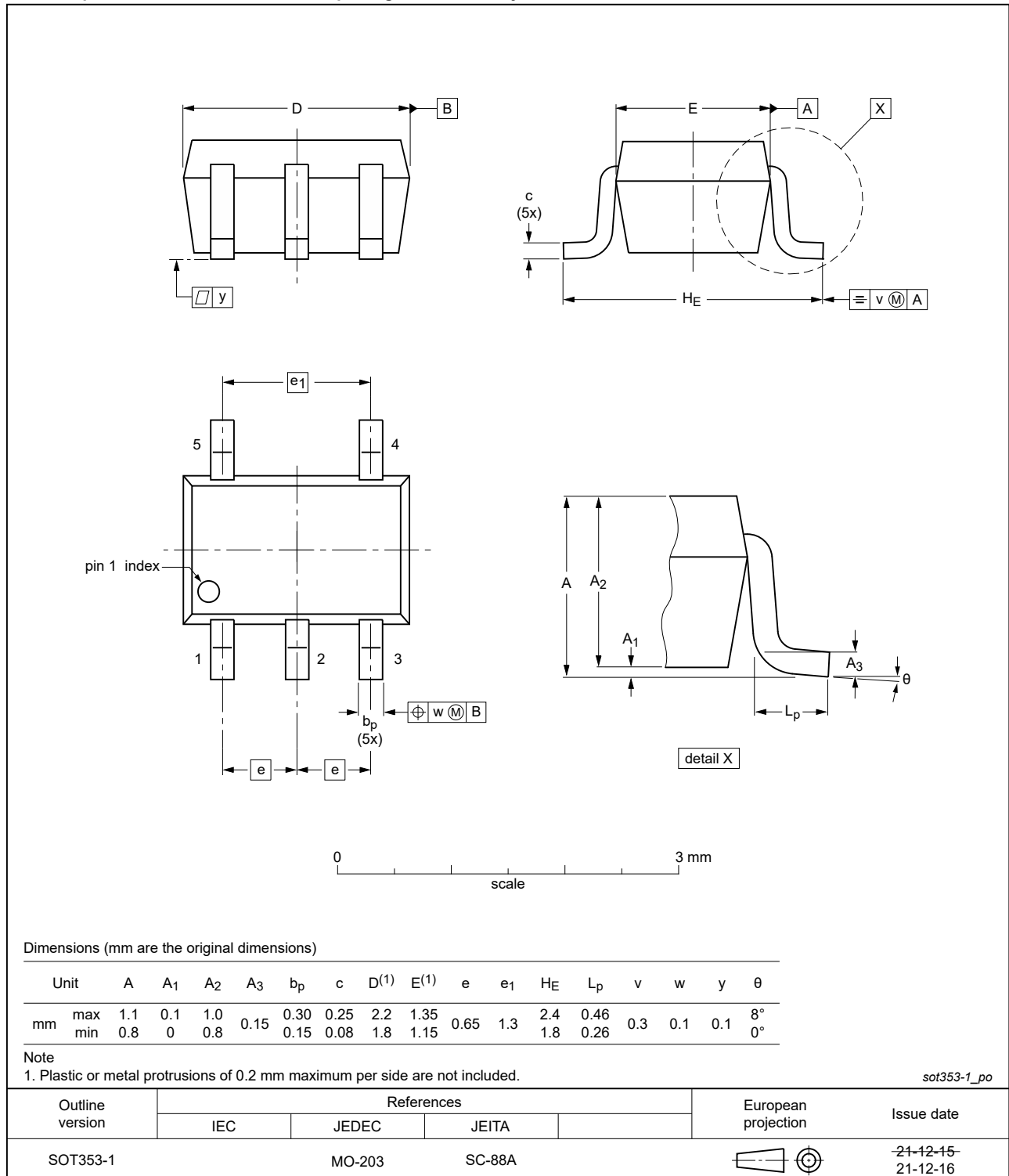


Fig. 6. Package outline SOT353-1 (TSSOP5)

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

SOT886

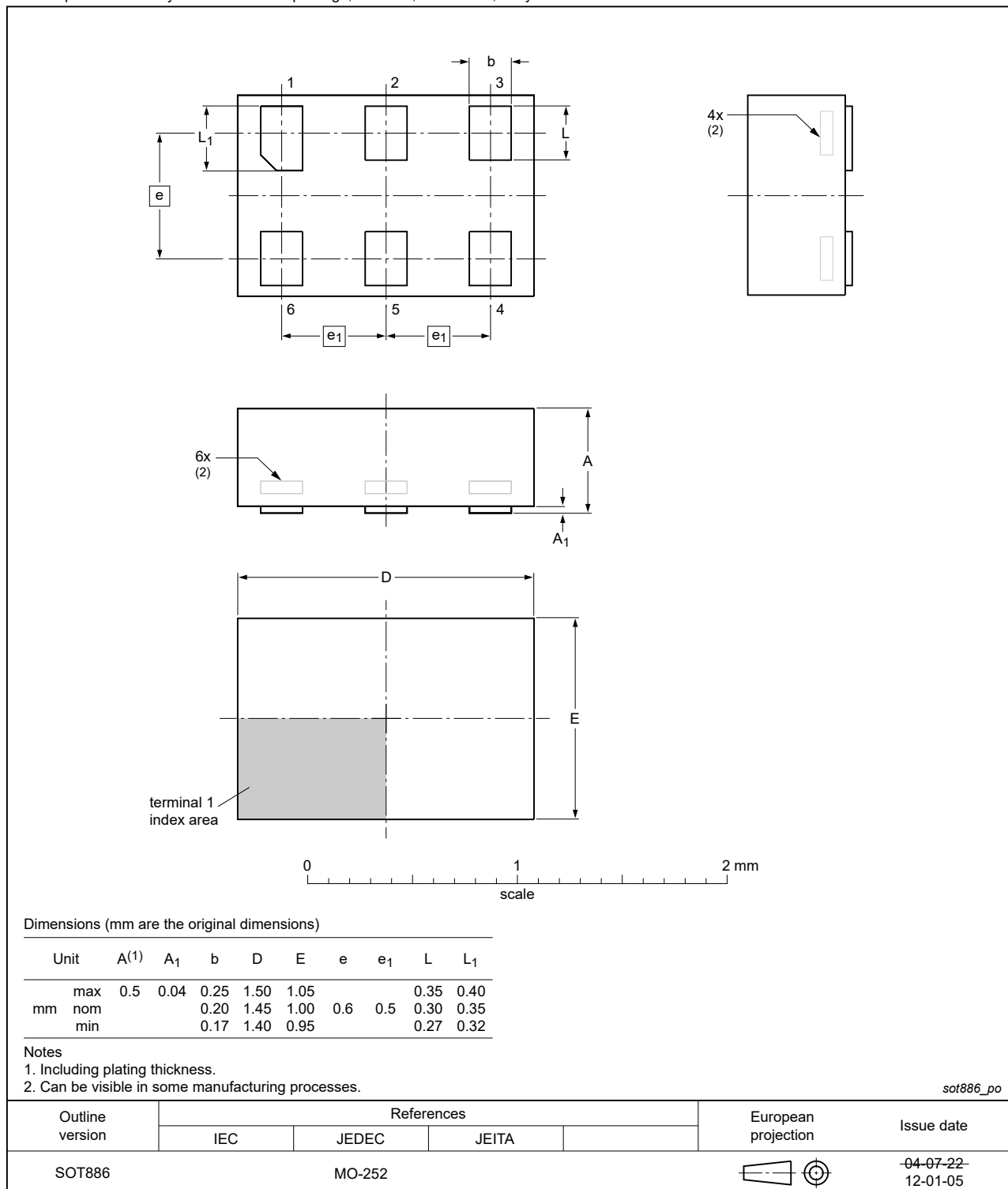
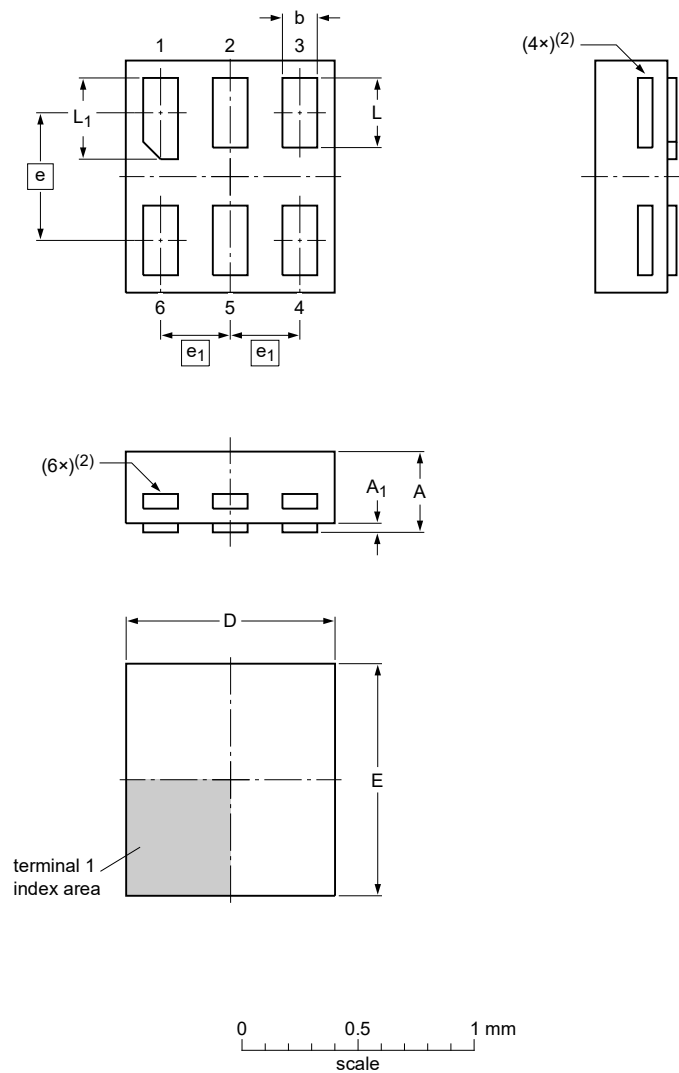


Fig. 7. Package outline SOT886 (XSON6)

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

SOT1115



Dimensions

Unit	A ⁽¹⁾	A ₁	b	D	E	e	e ₁	L	L ₁
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	0.3	0.30	0.35
	min		0.12	0.85	0.95			0.27	0.32

Note

- Including plating thickness.
- Visible depending upon used manufacturing technology.

sot1115_po


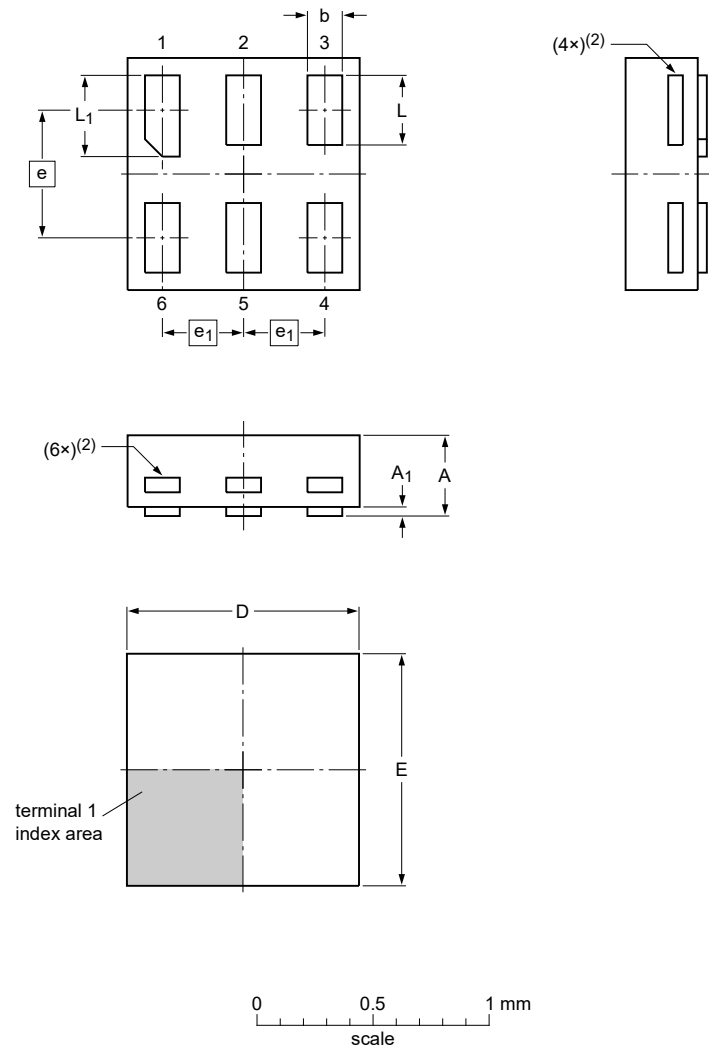
Outline version	References				European projection	Issue date
	IEC	JEDEC	JEITA			
SOT1115						10-04-02 10-04-07

Fig. 8. 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



Dimensions

Unit	A ⁽¹⁾	A ₁	b	D	E	e	e ₁	L	L ₁
mm	max	0.35	0.04	0.20	1.05	1.05		0.35	0.40
	nom			0.15	1.00	1.00	0.55	0.30	0.35
	min			0.12	0.95	0.95		0.27	0.32

Note

- Including plating thickness.
- Visible depending upon used manufacturing technology.

sot1202_po

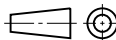
Outline version	References				European projection	Issue date
	IEC	JEDEC	JEITA			
SOT1202						10-04-02 10-04-06

Fig. 9. Package outline SOT1202 (XSON6)

X2SON5: plastic thermal enhanced extremely thin small outline package; no leads; 5 terminals; body 0.8 x 0.8 x 0.32 mm

SOT1226-3

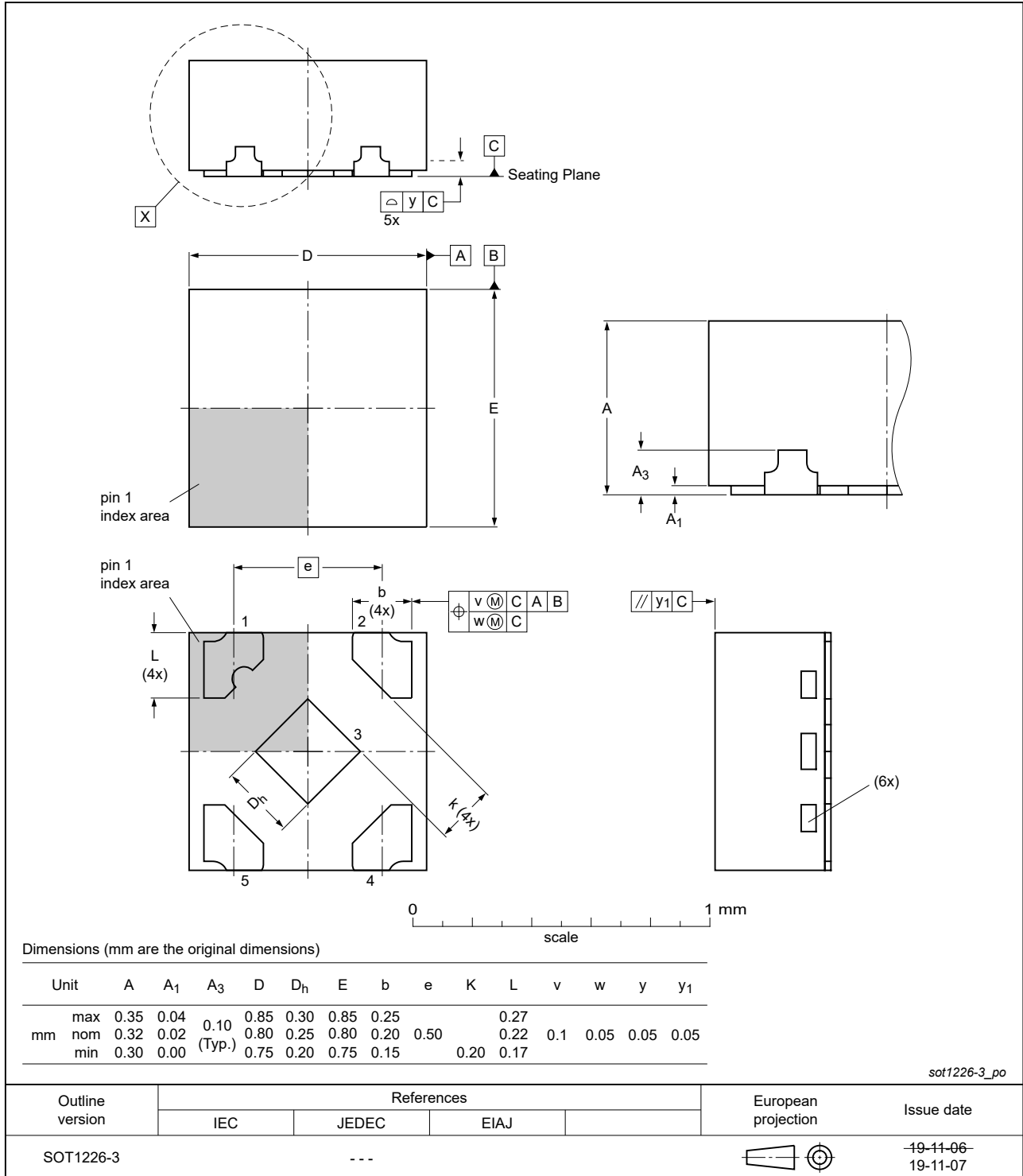


Fig. 10. Package outline SOT1226-3 (X2SON5)

XSON5: Plastic thermal enhanced extremely thin small outline package with side-wettable flanks (SWF); no leads; 5 terminals; body 1.1 × 0.85 × 0.5 mm

SOT8065-1

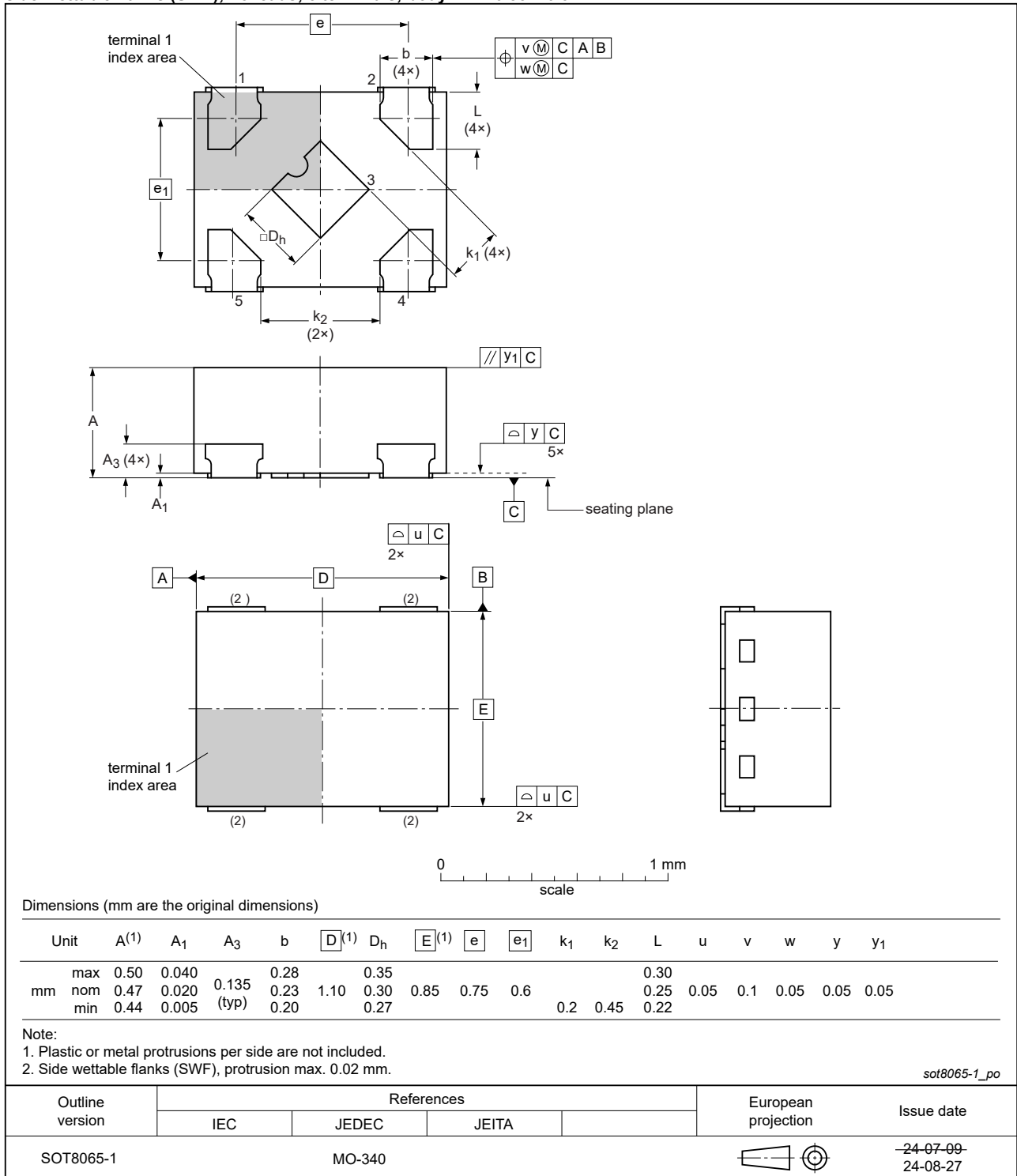


Fig. 11. Package outline SOT8065-1 (XSON5)

13. Abbreviations

Table 11. Abbreviations

Acronym	Description
ANSI	American National Standards Institute
CDM	Charged Device Model
CMOS	Complementary Metal-Oxide Semiconductor
DUT	Device Under Test
ESD	ElectroStatic Discharge
ESDA	ElectroStatic Discharge Association
HBM	Human Body Model
JEDEC	Joint Electron Device Engineering Council

14. Revision history

Table 12. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
74AUP1G06 v.12	20241113	Product data sheet	-	74AUP1G06 v.11.1
Modifications:	<ul style="list-style-type: none"> Type number 74AUP1G06GZ (SOT8065-1/XSON5) added. 			
74AUP1G06 v.11.1	20230711	Product data sheet	-	74AUP1G06 v.10
Modifications:	<ul style="list-style-type: none"> Section 2: ESD specification updated according to the latest JEDEC standard. 			
74AUP1G06 v.10	20220113	Product data sheet	-	74AUP1G06 v.9
Modifications:	<ul style="list-style-type: none"> Section 1 and Section 2 updated. Fig. 6: Package outline drawing for SOT353-1 (TSSOP5) has changed. 			
74AUP1G06 v.9	20210706	Product data sheet	-	74AUP1G06 v.8
Modifications:	<ul style="list-style-type: none"> Type number 74AUP1G06GF (SOT891 / XSON6) removed. SOT1226 (X2SON5) package changed to SOT1226-3 (X2SON5) package. Section 1 and Section 2 updated. Table 5: Derating values for P_{tot} total power dissipation have been updated. 			
74AUP1G06 v.8	20180212	Product data sheet	-	74AUP1G06 v.7
Modifications:	<ul style="list-style-type: none"> The format of this data sheet has been redesigned to comply with the identity guidelines of Nexperia. Legal texts have been adapted to the new company name where appropriate. Pin configuration drawing of SOT1226 (X2SON5) updated. 			
74AUP1G06 v.7	20120628	Product data sheet	-	74AUP1G06 v.6
Modifications:	<ul style="list-style-type: none"> Added type number 74AUP1G06GX (SOT1226) Package outline drawing of SOT886 (Fig. 7) modified. 			
74AUP1G06 v.6	20111115	Product data sheet	-	74AUP1G06 v.5
Modifications:	<ul style="list-style-type: none"> Legal pages updated. 			
74AUP1G06 v.5	20101022	Product data sheet	-	74AUP1G06 v.4
74AUP1G06 v.4	20090610	Product data sheet	-	74AUP1G06 v.3
74AUP1G06 v.3	20070615	Product data sheet	-	74AUP1G06 v.2
74AUP1G06 v.2	20060824	Product data sheet	-	74AUP1G06 v.1
74AUP1G06 v.1	20050718	Product data sheet	-	-

15. 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.

- [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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