# **74AUP1G06**

# Low-power inverter with open-drain output

Rev. 10 — 13 January 2022

**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<sub>CC</sub> = 0.9 μA (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<sub>CC</sub>
- I<sub>OFF</sub> 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 JESD22-A114F Class 3A exceeds 5000 V
  - MM JESD22-A115-A exceeds 200 V
  - CDM JESD22-C101E exceeds 1000 V
- Multiple package options
- Specified from -40 °C to +85 °C and -40 °C to +125 °C



### Low-power inverter with open-drain output

# 3. Ordering information

**Table 1. Ordering information** 

Type number	Package								
	Temperature range Name Description								
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					

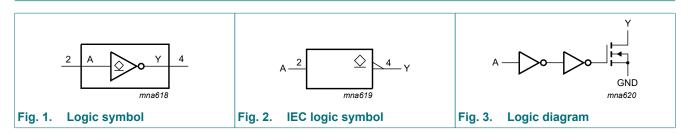
# 4. Marking

#### Table 2. Marking

Marking code [1]
pR

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

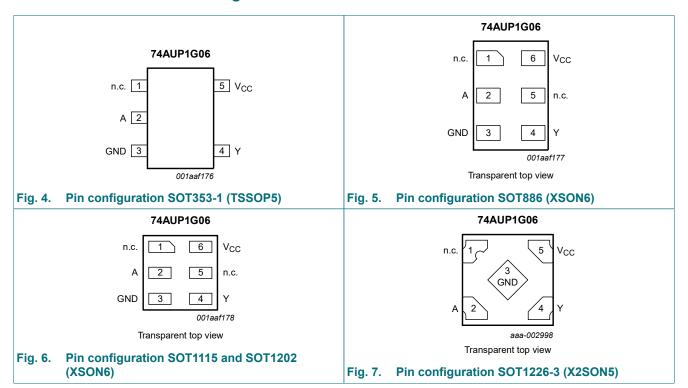
# 5. Functional diagram



Low-power inverter with open-drain output

# 6. Pinning information

### 6.1. Pinning



### 6.2. Pin description

Table 3. Pin description

Symbol	Pin	Pin		
	TSSOP5 and X2SON5	TSSOP5 and X2SON5 XSON6		
n.c.	1	1	not connected	
A	2	2	data input	
GND	3	3	ground (0 V)	
Υ	4	4	data output	
n.c.	-	5	not connected	
V <sub>CC</sub>	5	6	supply voltage	

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## 7. Functional description

#### **Table 4. Function table**

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

Input	Output
Α	Υ
L	Z
Н	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 <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
VI	input voltage	[1]	-0.5	+4.6	V
I <sub>OK</sub>	output clamping current	V <sub>O</sub> < 0 V	-50	-	mA
Vo	output voltage	Active mode and Power-down mode [1]	-0.5	+4.6	V
Io	output current	$V_O = 0 V \text{ to } V_{CC}$	-	+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	$T_{amb} = -40  ^{\circ}\text{C} \text{ to } +125  ^{\circ}\text{C}$ [2]	-	250	mW

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

# 9. Recommended operating conditions

Table 6. Recommended operating conditions

Symbol	Parameter	Conditions	Min	Max	Unit
$V_{CC}$	supply voltage		0.8	3.6	V
VI	input voltage		0	3.6	V
Vo	output voltage	Active mode	0	V <sub>CC</sub>	V
		Power-down mode; V <sub>CC</sub> = 0 V	0	3.6	V
T <sub>amb</sub>	ambient temperature		-40	+125	°C
Δt/ΔV	input transition rise and fall rate	V <sub>CC</sub> = 0.8 V to 3.6 V	0	200	ns/V

<sup>[2]</sup> For SOT353-1 (TSSOP5) package: Ptot derates linearly with 3.3 mW/K above 74 °C.

For SOT886 (XSON6) package: Ptot derates linearly with 3.3 mW/K above 74 °C.

For SOT1115 (XSON6) package: P<sub>tot</sub> derates linearly with 3.2 mW/K above 71 °C.

For SOT1202 (XSON6) package: Ptot derates linearly with 3.3 mW/K above 74 °C.

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

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# 10. Static characteristics

**Table 7. Static characteristics** 

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

Symbol	Parameter	Conditions	Min	Тур	Max	Unit
T <sub>amb</sub> = 2	25 °C					
V <sub>IH</sub>	HIGH-level input	V <sub>CC</sub> = 0.8 V	0.70 × V <sub>CC</sub>	-	-	V
	voltage	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	$V_I = V_{IH}$ or $V_{IL}$				
	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	-	-	0.31	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	$V_I$ = GND to 3.6 V; $V_{CC}$ = 0 V to 3.6 V	-	-	±0.1	μΑ
l <sub>OZ</sub>	OFF-state output current	$V_I = V_{IL}$ ; $V_O = 0 \text{ V to } 3.6 \text{ V}$ ; $V_{CC} = 0 \text{ V to } 3.6 \text{ V}$	-	-	±0.1	μΑ
I <sub>OFF</sub>	power-off leakage current	$V_{I}$ or $V_{O} = 0$ V to 3.6 V; $V_{CC} = 0$ V	-	-	±0.2	μΑ
ΔI <sub>OFF</sub>	additional power-off leakage current	$V_1$ or $V_0 = 0 V$ to 3.6 V; $V_{CC} = 0 V$ to 0.2 V	-	-	±0.2	μΑ
I <sub>CC</sub>	supply current	$V_I = GND \text{ or } V_{CC}; I_O = 0 \text{ A};$ $V_{CC} = 0.8 \text{ V to } 3.6 \text{ V}$	-	-	0.5	μΑ
ΔI <sub>CC</sub>	additional supply current	$V_I = V_{CC} - 0.6 \text{ V}; I_O = 0 \text{ A}; V_{CC} = 3.3 \text{ V}$	-	-	40	μΑ
Cı	input capacitance	$V_{CC}$ = 0 V to 3.6 V; $V_{I}$ = GND or $V_{CC}$	-	0.8	-	pF
Co	output capacitance	output enabled; $V_O = GND$ ; $V_{CC} = 0 V$	-	1.7	-	pF
		output disabled; V <sub>O</sub> = GND; V <sub>CC</sub> = 0 V	-	1.1	-	pF
T <sub>amb</sub> = -	40 °C to +85 °C				<u>'</u>	
V <sub>IH</sub>	HIGH-level input	V <sub>CC</sub> = 0.8 V	0.70 × V <sub>CC</sub>	-	-	V
	voltage	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

Symbol	Parameter	Conditions	Min	Тур	Max	Unit
V <sub>OL</sub>	LOW-level output	$V_I = V_{IH}$ or $V_{IL}$				
V <sub>OL</sub>	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	$V_I$ = GND to 3.6 V; $V_{CC}$ = 0 V to 3.6 V	-	-	±0.5	μΑ
l <sub>OZ</sub>	OFF-state output current	$V_I = V_{IL}$ ; $V_O = 0 \text{ V to } 3.6 \text{ V}$ ; $V_{CC} = 0 \text{ V to } 3.6 \text{ V}$	-	-	±0.5	μΑ
l <sub>OFF</sub>	power-off leakage current	$V_1 \text{ or } V_0 = 0 \text{ V to } 3.6 \text{ V}; V_{CC} = 0 \text{ V}$	-	-	±0.5	μΑ
Δl <sub>OFF</sub>	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	μΑ
I <sub>CC</sub>	supply current	$V_I$ = GND or $V_{CC}$ ; $I_O$ = 0 A; $V_{CC}$ = 0.8 V to 3.6 V	-	-	0.9	μΑ
Δl <sub>CC</sub>	additional supply current	$V_I = V_{CC} - 0.6 \text{ V}; I_O = 0 \text{ A}; V_{CC} = 3.3 \text{ V}$	-	-	50	μΑ
T <sub>amb</sub> = -4	40 °C to +125 °C				1	
V <sub>IH</sub>	HIGH-level input	V <sub>CC</sub> = 0.8 V	0.75 × V <sub>CC</sub>	-	-	V
	voltage	V <sub>CC</sub> = 0.9 V to 1.95 V	0.70 × 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	-	-	0.25 × V <sub>CC</sub>	V
		V <sub>CC</sub> = 0.9 V to 1.95 V	-	-	0.30 × 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	$V_I = V_{IH}$ or $V_{IL}$				
	voltage	$I_O = 20 \mu A; V_{CC} = 0.8 \text{ V to } 3.6 \text{ V}$	-	-	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

### Low-power inverter with open-drain output

Symbol	Parameter	Conditions	Min	Тур	Max	Unit
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>OZ</sub>	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	μΑ
I <sub>OFF</sub>	power-off leakage current	$V_1 \text{ or } V_0 = 0 \text{ V to } 3.6 \text{ V}; V_{CC} = 0 \text{ V}$	-	-	±0.75	μΑ
$\Delta I_{OFF}$	additional power-off leakage current	$V_1 \text{ or } V_0 = 0 \text{ V to } 3.6 \text{ V}; V_{CC} = 0 \text{ V to } 0.2 \text{ V}$	-	-	±0.75	μΑ
I <sub>CC</sub>	supply current	$V_I$ = GND or $V_{CC}$ ; $I_O$ = 0 A; $V_{CC}$ = 0.8 V to 3.6 V	-	-	1.4	μΑ
ΔI <sub>CC</sub>	additional supply current	$V_1 = V_{CC} - 0.6 \text{ V}; I_O = 0 \text{ A}; V_{CC} = 3.3 \text{ V}$	-	-	75	μΑ

# 11. Dynamic characteristics

### **Table 8. Dynamic characteristics**

Voltages are referenced to GND (ground = 0 V); for test circuit see Fig. 9.

Symbol	Parameter	Conditions		25 °C			°C to 5 °C		°C to 5 °C	Unit
			Min	Typ [1]	Max	Min	Max	Min	Max	
C <sub>L</sub> = 5 p	F									
P	propagation	A to Y; see <u>Fig. 8</u> [2]								
	delay	V <sub>CC</sub> = 0.8 V	-	12.8	-	-	-	-	-	ns
		V <sub>CC</sub> = 1.1 V to 1.3 V	2.3	4.3	9.9	2.0	10.9	2.0	12.0	ns
		V <sub>CC</sub> = 1.4 V to 1.6 V	1.8	3.1	6.1	1.5	7.1	1.5	7.8	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	1.5	2.8	4.7	1.2	5.7	1.2	6.3	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	1.2	2.2	3.2	1.0	3.9	1.0	4.3	ns
		V <sub>CC</sub> = 3.0 V to 3.6 V	1.1	2.2	3.3	0.8	3.6	0.8	4.0	ns
C <sub>L</sub> = 10	pF					,		,		<u>'</u>
t <sub>pd</sub>	propagation	A to Y; see <u>Fig. 8</u> [2]								
	delay	V <sub>CC</sub> = 0.8 V	-	15.8	-	-	-	-	-	ns
		V <sub>CC</sub> = 1.1 V to 1.3 V	2.7	5.4	11.2	2.5	13.2	2.5	15.0	ns
		V <sub>CC</sub> = 1.4 V to 1.6 V	2.2	3.9	7.0	2.0	8.5	2.0	9.4	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	1.9	3.6	5.4	1.7	6.7	1.7	7.4	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	1.7	2.9	3.8	1.4	4.5	1.4	5.0	ns
		V <sub>CC</sub> = 3.0 V to 3.6 V	1.6	3.2	4.6	1.2	4.9	1.2	5.4	ns
C <sub>L</sub> = 15	pF								'	1
t <sub>pd</sub>	propagation	A to Y; see <u>Fig. 8</u> [2]								
	delay	V <sub>CC</sub> = 0.8 V	-	18.8	-	-	-	-	-	ns
		V <sub>CC</sub> = 1.1 V to 1.3 V	3.2	6.4	12.2	2.9	15.2	2.9	17.0	ns
		V <sub>CC</sub> = 1.4 V to 1.6 V	2.6	4.6	7.7	2.3	9.4	2.3	10.0	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	2.3	4.5	6.6	2.1	7.3	2.1	8.1	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	2.1	3.5	4.6	1.7	5.1	1.7	5.7	ns
		V <sub>CC</sub> = 3.0 V to 3.6 V	2.0	4.0	6.0	1.5	6.5	1.5	7.2	ns

#### Low-power inverter with open-drain output

Symbol	Parameter	rameter Conditions 25 °C			-40 °C to +85 °C		-40 °C to +125 °C		Unit	
			Min	Typ [1]	Max	Min	Max	Min	Max	
C <sub>L</sub> = 30	pF									
t <sub>pd</sub>	propagation	A to Y; see <u>Fig. 8</u> [2]								
	delay	V <sub>CC</sub> = 0.8 V	-	27.8	-	-	-	-	-	ns
		V <sub>CC</sub> = 1.1 V to 1.3 V	4.4	9.3	16.5	3.9	19.3	3.9	21.3	ns
		V <sub>CC</sub> = 1.4 V to 1.6 V	3.6	6.8	10.1	3.2	12.0	3.2	13.2	ns
		V <sub>CC</sub> = 1.65 V to 1.95 V	3.2	6.8	10.7	2.9	11.0	2.9	12.1	ns
		V <sub>CC</sub> = 2.3 V to 2.7 V	2.9	5.3	7.2	2.6	7.8	2.6	8.6	ns
		V <sub>CC</sub> = 3.0 V to 3.6 V	2.9	6.5	10.5	2.5	10.8	2.5	11.9	ns
C <sub>L</sub> = 5 p	F, 10 pF, 15 p	F and 30 pF								
C <sub>PD</sub>	power	$f_i = 1 \text{ MHz}; V_I = \text{GND to } V_{CC}$ [3]								
	dissipation capacitance	V <sub>CC</sub> = 0.8 V	-	0.5	-	-	-	-	-	pF
	Capacitarioc	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	-	0.7	-	-	-	-	-	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	-	1.0	-	-	-	-	-	pF
		V <sub>CC</sub> = 3.0 V to 3.6 V	-	1.2	-	-	-	-	-	pF

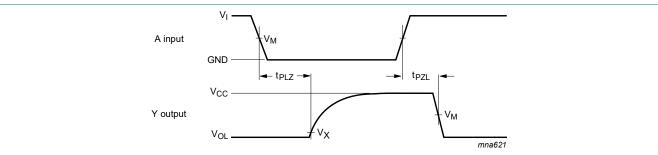
- All typical values are measured at nominal V<sub>CC</sub>.
- [2]
- $t_{pd}$  is the same as  $t_{PZL}$  and  $t_{PLZ}$ .  $C_{PD}$  is used to determine the dynamic power dissipation ( $P_D$  in  $\mu W$ ).  $P_D = C_{PD} \times V_{CC}^{\ \ 2} \times f_i \times N$  where:

 $f_i$  = input frequency in MHz;

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

N = number of inputs switching.

### 11.1. Waveforms and test circuit



Measurement points are given in <u>Table 9</u>.

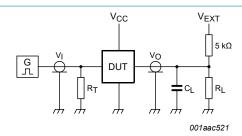
Logic level:  $V_{\text{OL}}$  is the typical output voltage level that occurs at the output load.

The data input (A) to output (Y) propagation delays Fig. 8.

**Table 9. Measurement points** 

Supply voltage	Input	Input					
V <sub>cc</sub>	V <sub>M</sub>	$V_{M}$ $V_{I}$ $t_{r} = t_{f}$		$V_{l}$ $t_{r} = t_{f}$		V <sub>M</sub>	V <sub>X</sub>
0.8 V to 1.6 V	0.5 × V <sub>CC</sub>	V <sub>CC</sub>	≤ 3.0 ns	0.5 × V <sub>CC</sub>	V <sub>OL</sub> + 0.1 V		
1.65 V to 2.7 V	0.5 × V <sub>CC</sub>	V <sub>CC</sub>	≤ 3.0 ns	0.5 × V <sub>CC</sub>	V <sub>OL</sub> + 0.15 V		
3.0 V to 3.6 V	0.5 × V <sub>CC</sub>	V <sub>CC</sub>	≤ 3.0 ns	0.5 × V <sub>CC</sub>	V <sub>OL</sub> + 0.3 V		

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Test data is given in Table 10.

Definitions for test circuit:

R<sub>L</sub> = Load resistance;

C<sub>L</sub> = Load capacitance including jig and probe capacitance;

 $R_T$  = Termination resistance should be equal to the output impedance  $Z_o$  of the pulse generator;

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

#### Fig. 9. Test circuit for measuring switching times

#### Table 10. Test data

Supply voltage	Load	V <sub>EXT</sub>			
V <sub>CC</sub>	CL	R <sub>L</sub> [1]	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	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 k $\Omega$ . For measuring propagation delays, setup and hold times and pulse width  $R_L$  = 1 M $\Omega$ .

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# 12. Package outline

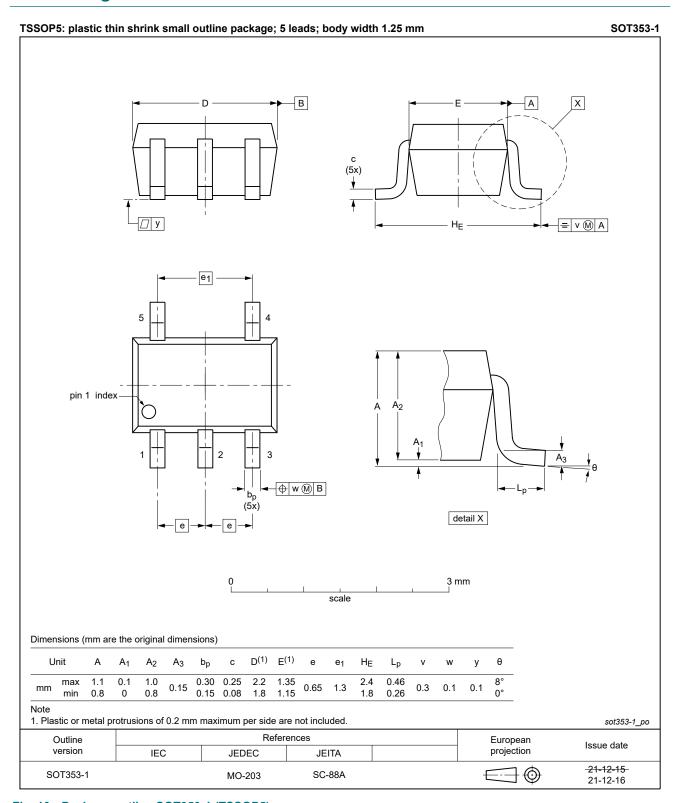


Fig. 10. Package outline SOT353-1 (TSSOP5)

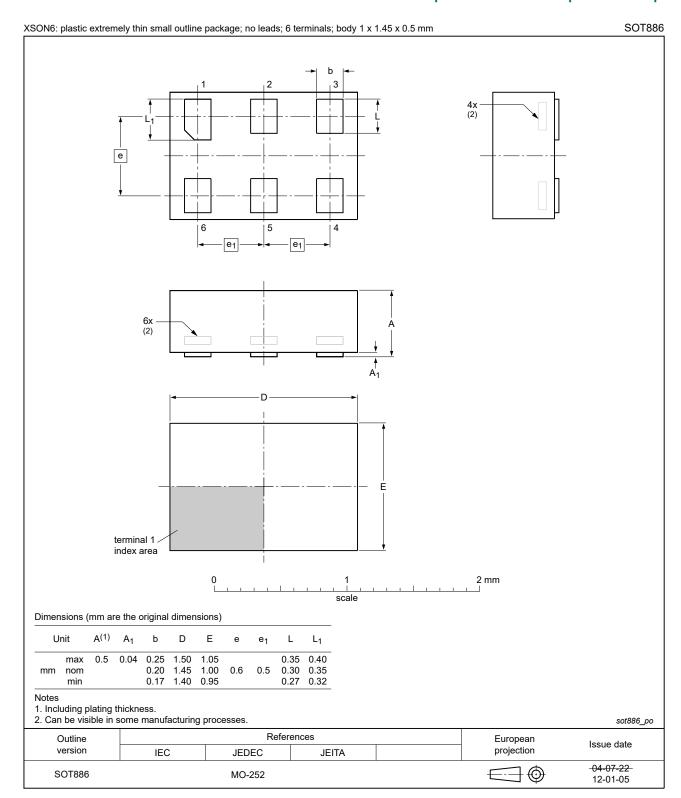


Fig. 11. Package outline SOT886 (XSON6)

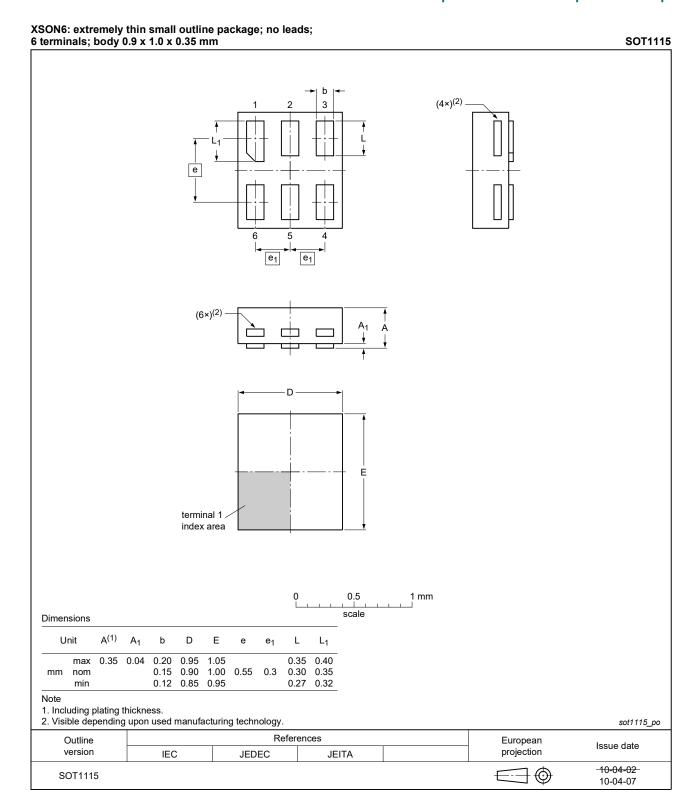


Fig. 12. Package outline SOT1115 (XSON6)

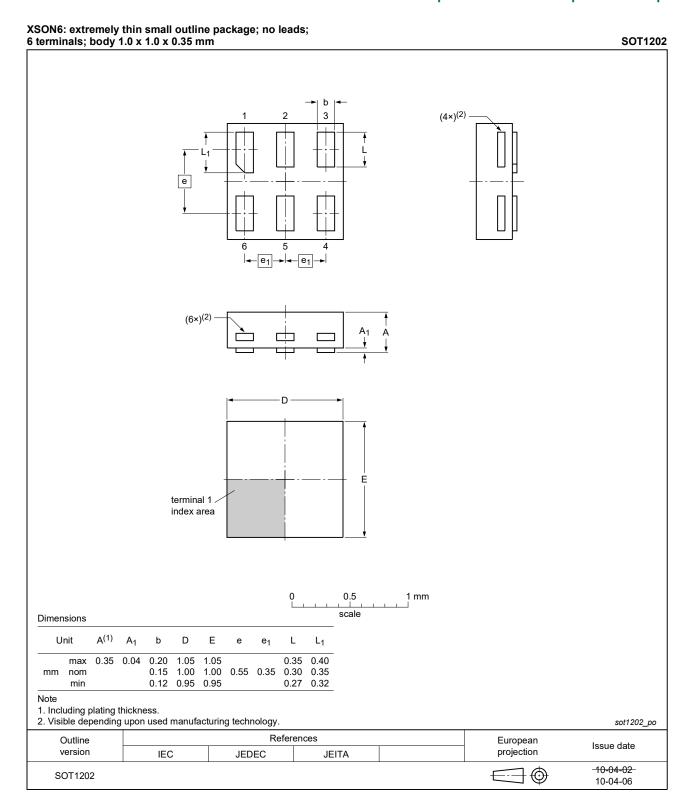


Fig. 13. Package outline SOT1202 (XSON6)

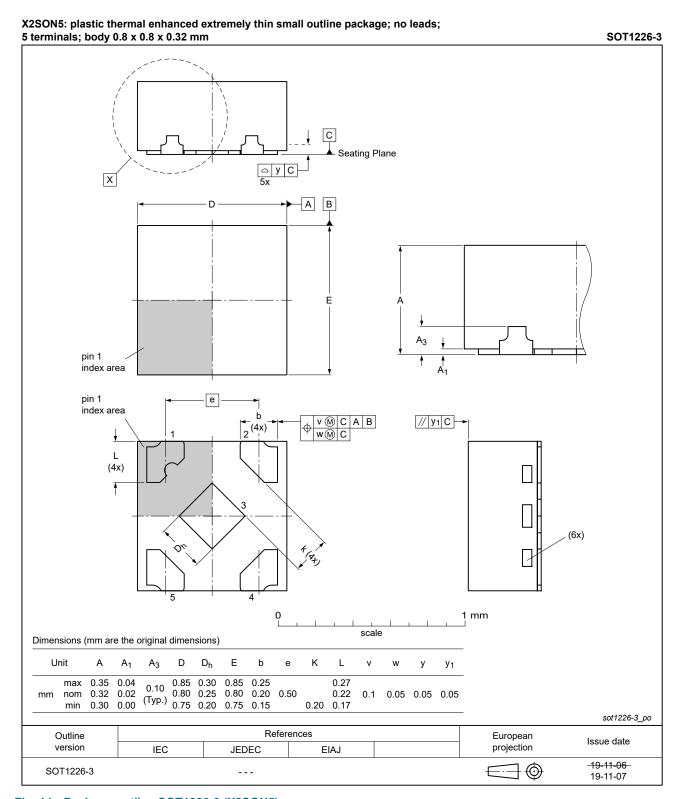


Fig. 14. Package outline SOT1226-3 (X2SON5)

### Low-power inverter with open-drain output

# 13. Abbreviations

#### **Table 11. Abbreviations**

Acronym	Description
CDM	Charged Device Model
CMOS	Complementary Metal-Oxide Semiconductor
DUT	Device Under Test
ESD	ElectroStatic Discharge
НВМ	Human Body Model
MM	Machine Model

# 14. Revision history

### Table 12. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
74AUP1G06 v.10	20220113	Product data sheet	-	74AUP1G06 v.9
Modifications:		nd <u>Section 2</u> updated. ckage outline drawing for	SOT353-1 (TSSOF	<sup>2</sup> 5) has changed.
74AUP1G06 v.9	20210706	Product data sheet	-	74AUP1G06 v.8
Modifications:	<ul><li>SOT1226 (</li><li>Section 1 a</li></ul>	er 74AUP1G06GF (SOT8 X2SON5) package chang nd <u>Section 2</u> updated. rrating values for P <sub>tot</sub> total	ed to SOT1226-3 (	X2SON5) package.
74AUP1G06 v.8	20180212	Product data sheet	-	74AUP1G06 v.7
Modifications:	guidelines o Legal texts	of this data sheet has been of Nexperia.  have been adapted to the	-	
	<ul> <li>Pin configu</li> </ul>	ration drawing of SOT122	6 (X2SON5) updat	ed.
74AUP1G06 v.7	20120628	ration drawing of SOT122 Product data sheet	6 (X2SON5) updat	ed. 74AUP1G06 v.6
	20120628  • Added type		- (SOT1226)	
Modifications:	20120628  • Added type	Product data sheet number 74AUP1G06GX	- (SOT1226)	
Modifications: 74AUP1G06 v.6	20120628  • Added type • Package ou	Product data sheet number 74AUP1G06GX atline drawing of SOT886 Product data sheet	- (SOT1226)	74AUP1G06 v.6
Modifications: 74AUP1G06 v.6 Modifications:	20120628  • Added type • Package ou 20111115	Product data sheet number 74AUP1G06GX atline drawing of SOT886 Product data sheet	- (SOT1226)	74AUP1G06 v.6
Modifications:  74AUP1G06 v.6  Modifications:  74AUP1G06 v.5	20120628  • Added type • Package of 20111115 • Legal page	Product data sheet number 74AUP1G06GX utline drawing of SOT886 Product data sheet s updated.	- (SOT1226)	74AUP1G06 v.6 74AUP1G06 v.5
74AUP1G06 v.7 Modifications: 74AUP1G06 v.6 Modifications: 74AUP1G06 v.5 74AUP1G06 v.4 74AUP1G06 v.3	20120628  • Added type • Package of 20111115 • Legal page 20101022	Product data sheet number 74AUP1G06GX utline drawing of SOT886 Product data sheet s updated. Product data sheet	- (SOT1226)	74AUP1G06 v.5 74AUP1G06 v.5
Modifications:  74AUP1G06 v.6  Modifications:  74AUP1G06 v.5  74AUP1G06 v.4	20120628  • Added type • Package of 20111115 • Legal page 20101022 20090610	Product data sheet number 74AUP1G06GX utline drawing of SOT886 Product data sheet s updated. Product data sheet Product data sheet Product data sheet	- (SOT1226)	74AUP1G06 v.5  74AUP1G06 v.4  74AUP1G06 v.3

## 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.

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