74AUP2G0604

Low-power inverting buffer with open-drain and inverter

Rev. 4 — 24 July 2023 Product data sheet

1. General description

The 74AUP2G0604 is a single inverting buffer with open-drain output and a single inverter. It features two input pins (nA), an output pin (2Y) and an open-drain output pin (1Y).

Schmitt trigger action at all inputs makes the circuit tolerant of 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

- 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)
- 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
- 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 °C to +85 °C and -40 °C to +125 °C



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3. Ordering information

Table 1. Ordering information

Type number	Package							
	Temperature range Name		Description	Version				
74AUP2G0604GW	-40 °C to +125 °C	TSSOP6	plastic thin shrink small outline package; 6 leads; body width 1.25 mm	SOT363-2				
74AUP2G0604GM	-40 °C to +125 °C	XSON6	plastic extremely thin small outline package; no leads; 6 terminals; body 1 × 1.45 × 0.5 mm	<u>SOT886</u>				
74AUP2G0604GN	-40 °C to +125 °C	XSON6	extremely thin small outline package; no leads; 6 terminals; body 0.9 × 1.0 × 0.35 mm	SOT1115				
74AUP2G0604GS	-40 °C to +125 °C	XSON6	extremely thin small outline package; no leads; 6 terminals; body 1.0 × 1.0 × 0.35 mm	SOT1202				

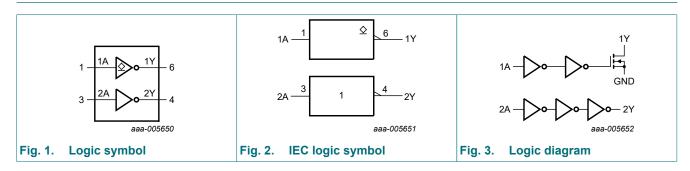
4. Marking

Table 2. Marking

Type number	Marking code [1]
74AUP2G0604GW	a6
74AUP2G0604GM	a6
74AUP2G0604GN	a6
74AUP2G0604GS	a6

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

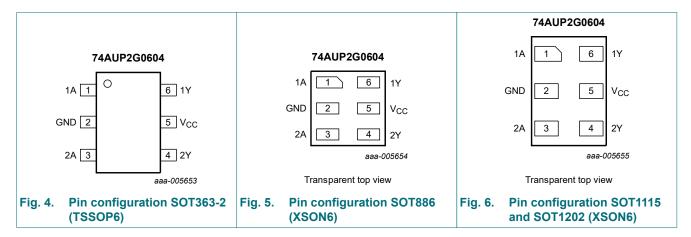
5. Functional diagram



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6. Pinning information

6.1. Pinning



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 _{CC}	5	supply voltage
1Y	6	data output

7. Functional description

Table 4. Function table

H = HIGH voltage level; L = LOW voltage level.

Input	Output
1A	1Y
L	Z
Н	L

Table 5. Function table

 $H = HIGH \ voltage \ level; \ L = LOW \ voltage \ level.$

Input	Output
2A	2Y
L	Н
Н	L

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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
VI	input voltage	[1]	-0.5	+4.6	V
I _{OK}	output clamping current	V _O < 0 V	-50	-	mA
Vo	output voltage	Active mode and Power-down mode [1]	-0.5	+4.6	V
Io	output current	$V_O = 0 V \text{ to } V_{CC}$			
		1Y	-	+20	mA
		2Y	-	±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	$T_{amb} = -40 ^{\circ}\text{C to } +125 ^{\circ}\text{C}$ [2]	-	250	mW

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

9. Recommended operating conditions

Table 7. 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 _{CC}	V
		Power-down mode; V _{CC} = 0 V	0	3.6	V
T _{amb}	ambient temperature		-40	+125	°C
Δt/ΔV	input transition rise and fall rate	V _{CC} = 0.8 V to 3.6 V	0	200	ns/V

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^[2] For SOT363-2 (TSSOP6) package: P_{tot} derates linearly with 3.7 mW/K above 83 °C.

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

For SOT1115 (XSON6) package: Ptot 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.

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10. Static characteristics

Table 8. Static characteristics

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

Symbo	l Parameter	Conditions	Min	Тур	Max	Unit
T _{amb} =	Frame = 25 °C					
V _{IH}	HIGH-level input voltage	V _{CC} = 0.8 V	0.70 × V _{CC}	-	-	٧
		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	-	-	٧
		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	V			
V _{IL}	LOW-level input voltage	V _{CC} = 0.8 V	-	-	VV VV VV - 0.30 × V _{CC} VV - 0.35 × V _{CC} VV - 0.7 VV - 0.9 VV 0.31 VV - 0.31 VV	٧
		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	٧
V _{OH}	HIGH-level output voltage	2Y; V _I = V _{IH} or V _{IL}				
Tamb = 25° VIH H VIL L VOH H II in IOFF ac CI ac AI _{OFF} ac CI in		I _O = -20 μA; V _{CC} = 0.8 V to 3.6 V	V _{CC} - 0.1	-	-	٧
		I _O = -1.1 mA; V _{CC} = 1.1 V	0.75 × V _{CC}	-	-	V
VIH H VIL L VOH H VOL L In in In		I _O = -1.7 mA; V _{CC} = 1.4 V	1.11	-	-	٧
		I _O = -1.9 mA; V _{CC} = 1.65 V	1.32	-	-	V
		I _O = -2.3 mA; V _{CC} = 2.3 V	2.05	-	-	٧
		I _O = -3.1 mA; V _{CC} = 2.3 V	1.9	-	-	V
		I _O = -2.7 mA; V _{CC} = 3.0 V	2.72	-	-	٧
		I _O = -4.0 mA; V _{CC} = 3.0 V	2.6	-	-	٧
V_{OL}	LOW-level output voltage	1Y, 2Y; V _I = V _{IH} or V _{IL}				
V _{OL}		I _O = 20 μA; V _{CC} = 0.8 V to 3.6 V	-	-	0.1	٧
		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	٧
		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	μΑ
I _{OFF}	power-off leakage current	V_{I} or $V_{O} = 0$ V to 3.6 V; $V_{CC} = 0$ V	-	-	±0.2	μΑ
Δl _{OFF}			-	-	±0.2	μΑ
I _{CC}	supply current		-	-	0.5	μA
ΔI _{CC}	additional supply current	$V_1 = V_{CC} - 0.6 \text{ V}; I_O = 0 \text{ A}; V_{CC} = 3.3 \text{ V}$	-	-	40	μA
Cı	input capacitance	$V_{CC} = 0 \text{ V to } 3.6 \text{ V; } V_I = \text{GND or } V_{CC}$	-	8.0	-	pF
Co	output capacitance	V _O = GND; V _{CC} = 0 V				
		1Y output; enabled	-	1.7	-	pF
		1Y output; disabled	-	1.1	-	pF
		2Y output	-	1.7	-	pF

Low-power inverting buffer with open-drain and inverter

Symbol	Parameter	Conditions	Min	Тур	Max	Unit
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 _{CC}	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 _{OH}	HIGH-level output voltage	2Y; V _I = V _{IH} or V _{IL}				
		I _O = -20 μA; V _{CC} = 0.8 V to 3.6 V	V _{CC} - 0.1	-	-	V
		I _O = -1.1 mA; V _{CC} = 1.1 V	0.7 × V _{CC}	-	-	V
		I _O = -1.7 mA; V _{CC} = 1.4 V	1.03	-	-	V
		I _O = -1.9 mA; V _{CC} = 1.65 V	1.30	-	-	V
		I _O = -2.3 mA; V _{CC} = 2.3 V	1.97	-	-	V
		I _O = -3.1 mA; V _{CC} = 2.3 V	1.85	-	-	V
		I _O = -2.7 mA; V _{CC} = 3.0 V	2.67	-	-	V
		I _O = -4.0 mA; V _{CC} = 3.0 V	2.55	-	-	V
V _{OL}	LOW-level output voltage	1Y, 2Y; 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
l _l	input leakage current	V_{I} = GND to 3.6 V; V_{CC} = 0 V to 3.6 V	-	-	±0.5	μΑ
I _{OFF}	power-off leakage current	V_{I} or $V_{O} = 0$ V to 3.6 V; $V_{CC} = 0$ V	-	-	±0.5	μΑ
Δl _{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	μΑ
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	μΑ
Δl _{CC}	additional supply current	$V_1 = V_{CC} - 0.6 \text{ V}; I_O = 0 \text{ A}; V_{CC} = 3.3 \text{ V}$	-	-	50	μΑ

Low-power inverting buffer with open-drain and inverter

Symbol	Parameter	Conditions	Min	Тур	Max	Unit
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	CC	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 _{OH}	HIGH-level output voltage	2Y; V _I = V _{IH} or V _{IL}				
		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	0.6 × V _{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	1Y, 2Y; 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
l _l	input leakage current	V_{I} = GND to 3.6 V; V_{CC} = 0 V to 3.6 V	-	-	±0.75	μΑ
I _{OFF}	power-off leakage current	V_{I} or $V_{O} = 0$ V to 3.6 V; $V_{CC} = 0$ V	-	-	±0.75	μΑ
Δl _{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	μΑ
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	μΑ
Δl _{CC}	additional supply current	$V_1 = V_{CC} - 0.6 \text{ V}; I_O = 0 \text{ A}; V_{CC} = 3.3 \text{ V}$	-	-	75	μΑ

Low-power inverting buffer with open-drain and inverter

11. Dynamic characteristics

Table 9. Dynamic characteristics

Voltages are referenced to GND (ground = 0 V); for test circuit see Fig. 8.

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 p	F									
t _{pd}	propagation	1A to 1Y or 2A to 2Y; see Fig. 7 [2]								
	delay	V _{CC} = 0.8 V	-	14.4	-	-	-	-	-	ns
		V _{CC} = 1.1 V to 1.3 V	2.3	4.7	10.3	2.0	11.4	2.0	12.6	ns
		V _{CC} = 1.4 V to 1.6 V	1.8	3.4	6.4	1.5	7.4	1.5	8.2	ns
		V _{CC} = 1.65 V to 1.95 V	1.5	2.9	5.0	1.2	5.9	1.2	6.5	ns
		V _{CC} = 2.3 V to 2.7 V	1.2	2.3	3.9	1.0	4.5	1.0	5.0	ns
		V _{CC} = 3.0 V to 3.6 V	1.1	2.2	3.3	8.0	3.9	0.8	4.3	ns
C _L = 10	pF			1						
t _{pd}	propagation	1A to 1Y or 2A to 2Y; see Fig. 7 [2]								
	delay	V _{CC} = 0.8 V	-	17.7	-	-	-	-	-	ns
		V _{CC} = 1.1 V to 1.3 V	2.7	5.7	12.2	2.5	13.7	2.5	15.1	ns
		V _{CC} = 1.4 V to 1.6 V	2.2	4.1	7.5	2.0	8.7	2.0	9.6	ns
		V _{CC} = 1.65 V to 1.95 V	1.9	3.6	5.9	1.7	7.0	1.7	7.7	ns
		V _{CC} = 2.3 V to 2.7 V	1.7	2.9	4.6	1.4	5.4	1.4	6.0	ns
		V _{CC} = 3.0 V to 3.6 V	1.6	3.0	4.6	1.2	4.9	1.2	5.4	ns
C _L = 15	pF									
t _{pd}	propagation	1A to 1Y or 2A to 2Y; see Fig. 7 [2]								
	delay	V _{CC} = 0.8 V	-	21.1	-	-	-	-	-	ns
		V _{CC} = 1.1 V to 1.3 V	3.2	6.6	13.0	2.9	15.8	2.9	17.4	ns
		V _{CC} = 1.4 V to 1.6 V	2.6	4.7	8.6	2.3	10.0	2.3	11.0	ns
		V _{CC} = 1.65 V to 1.95 V	2.3	4.3	6.7	2.1	8.0	2.1	8.8	ns
		V _{CC} = 2.3 V to 2.7 V	2.1	3.4	5.1	1.7	6.1	1.7	6.8	ns
		V _{CC} = 3.0 V to 3.6 V	2.0	3.6	6.0	1.5	6.5	1.5	7.2	ns
C _L = 30	pF									
t _{pd}	propagation	1A to 1Y or 2A to 2Y; see Fig. 7 [2]								
	delay	V _{CC} = 0.8 V	-	30.7	-	-	-	-	-	ns
		V _{CC} = 1.1 V to 1.3 V	4.4	9.1	16.5	3.9	19.3	3.9	21.3	ns
		V _{CC} = 1.4 V to 1.6 V	3.6	6.6	10.8	3.2	12.9	3.2	14.2	ns
		V _{CC} = 1.65 V to 1.95 V	3.2	6.1	10.7	2.9	11.0	2.9	12.1	ns
		V _{CC} = 2.3 V to 2.7 V	2.9	4.9	7.2	2.6	7.8	2.6	8.6	ns
		V _{CC} = 3.0 V to 3.6 V	2.9	5.4	10.5	2.5	10.8	2.5	11.9	ns

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Symbol	Parameter	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 p	F, 10 pF, 15 pF	and 30 pF						•		
C _{PD}	power dissipation	1A to 1Y; f_i = 1 MHz; [3][4] V_I = GND to V_{CC}								
	capacitance	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
		2A to 2Y; f _i = 1 MHz; [3][5] V _I = GND to V _{CC}								
		V _{CC} = 0.8 V	-	2.5	-	-	-	-	-	pF
		V _{CC} = 1.1 V to 1.3 V	-	2.7	-	-	-	-	-	pF
		V _{CC} = 1.4 V to 1.6 V	-	2.8	-	-	-	-	-	pF
		V _{CC} = 1.65 V to 1.95 V	-	3.0	-	-	-	-	-	pF
		V _{CC} = 2.3 V to 2.7 V	-	3.5	-	-	-	-	-	pF
İ		V _{CC} = 3.0 V to 3.6 V	-	4.0	-	-	-	-	-	pF

- [1] All typical values are measured at nominal V_{CC} .
- t_{pd} is the same as t_{PLH} and t_{PHL} (2A to 2Y) and t_{PLZ} and t_{PZL} (1A to 1Y). All specified values are the average typical values over all stated loads.
- C_{PD} is used to determine the dynamic power dissipation (P_D in μW).

 $P_D = C_{PD} \times V_{CC}^2 \times f_i \times N$ where: $f_i = \text{input frequency in MHz}$;

C_L = load capacitance in pF;

N = number of inputs switching;

[5] C_{PD} is used to determine the dynamic power dissipation (P_D in μ W). $P_D = C_{PD} \times V_{CC}^2 \times f_i \times N + \Sigma (C_L \times V_{CC}^2 \times f_o)$ where:

f_i = input frequency in MHz;

f_o = output frequency in MHz;

C_L = load capacitance in pF;

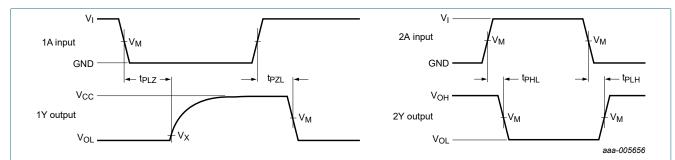
V_{CC} = supply voltage in V;

N = number of inputs switching;

 $\Sigma(C_L \times V_{CC}^2 \times f_0)$ = sum of the outputs.

Low-power inverting buffer with open-drain and inverter

11.1. Waveforms and test circuit



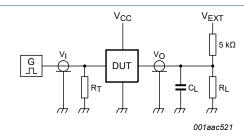
Measurement points are given in <u>Table 10</u>.

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

Fig. 7. The data input 1A to output 1Y and input 2A to output 2Y propagation delays

Table 10. Measurement points

Supply voltage	Output	Output		Input		
V _{CC}	V _M	V _X	V _M	V _I	t _r = t _f	
0.8 V to 1.6 V	0.5 × V _{CC}	V _{OL} + 0.1 V	0.5 × V _{CC}	V _{CC}	≤ 3.0 ns	
1.65 V to 2.7 V	0.5 × V _{CC}	V _{OL} + 0.15 V	0.5 × V _{CC}	V _{CC}	≤ 3.0 ns	
3.0 V to 3.6 V	0.5 × V _{CC}	V _{OL} + 0.3 V	0.5 × V _{CC}	V _{CC}	≤ 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. 8. 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 k Ω . For measuring propagation delays, set-up and hold times, and pulse width, R_L = 1 M Ω .

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12. Package outline

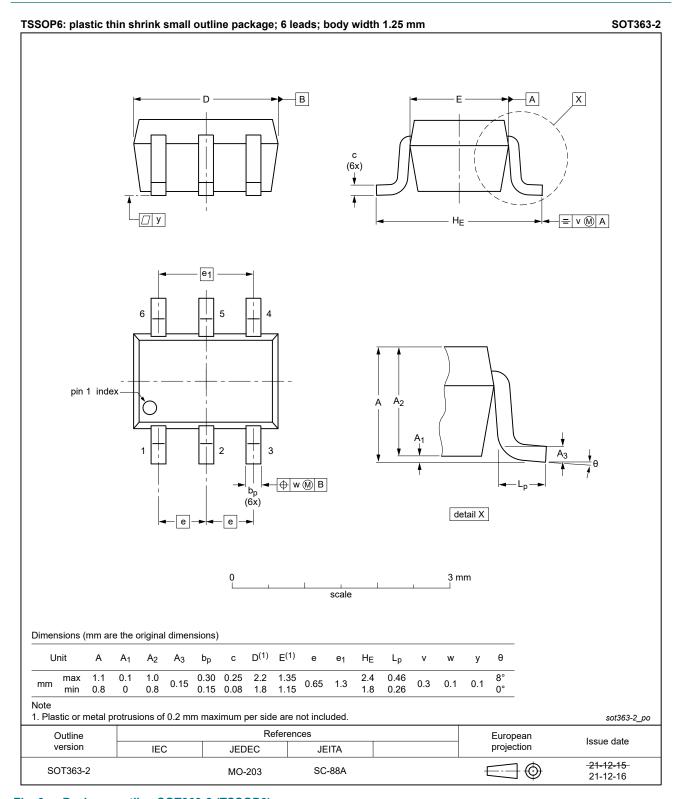


Fig. 9. Package outline SOT363-2 (TSSOP6)

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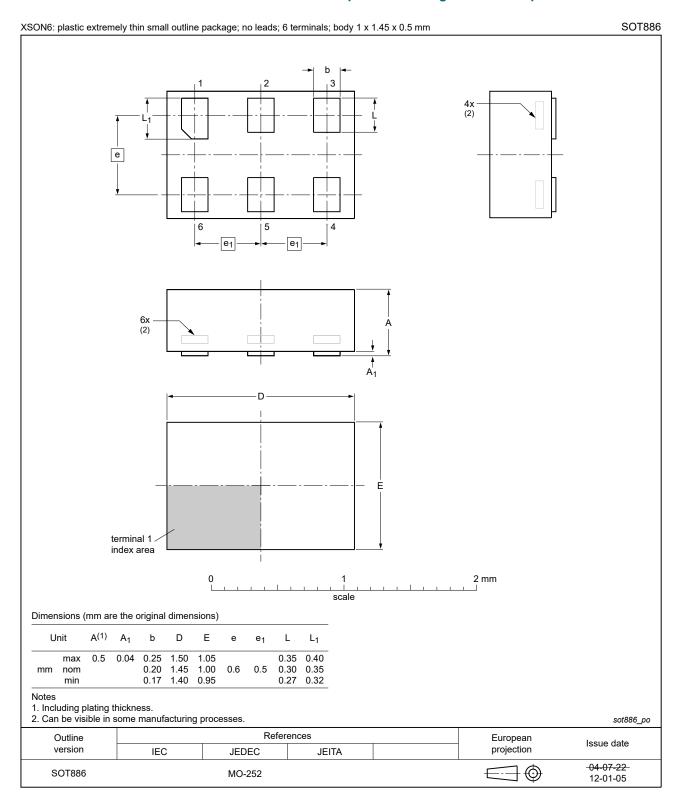


Fig. 10. Package outline SOT886 (XSON6)

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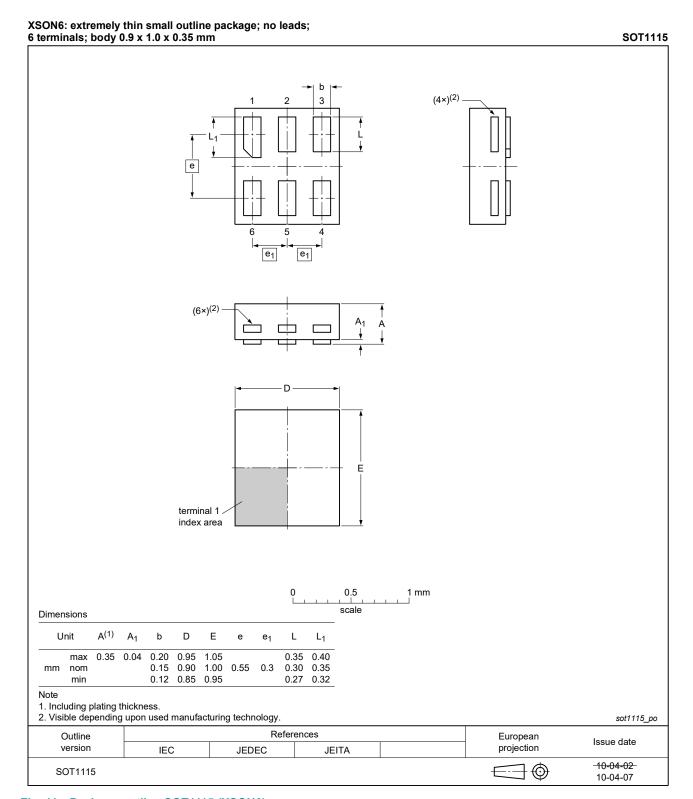


Fig. 11. Package outline SOT1115 (XSON6)

Product data sheet

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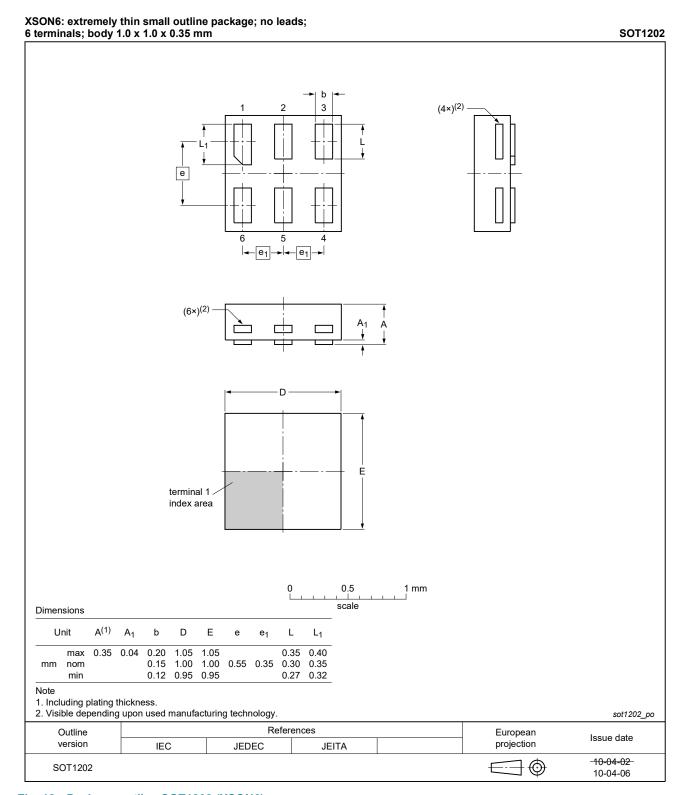


Fig. 12. Package outline SOT1202 (XSON6)

Product data sheet

Low-power inverting buffer with open-drain and inverter

13. Abbreviations

Table 12. Abbreviations

Acronym	Description
CDM	Charged Device Model
DUT	Device Under Test
ESD	ElectroStatic Discharge
НВМ	Human Body Model

14. Revision history

Table 13. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes	
74AUP2G0604 v.4	20230724	Product data sheet	-	74AUP2G0604 v.3	
Modifications:	<u>Section 2</u> : ESD specification updated according to the latest JEDEC standard.				
74AUP2G0604 v.3	20220131	Product data sheet	-	74AUP2G0604 v.2	
Modifications:	SOT363 (SC-88) package changed to SOT363-2 (TSSOP6) package.				
74AUP2G0604 v.2	20201215	Product data sheet	-	74AUP2G0604 v.1	
Modifications:	 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. Type number 74AUP2G0604GF (SOT891 / XSON6) removed. Table 6: Derating values for P_{tot} total power dissipation updated. 				
74AUP2G0604 v.1	20121123	Product data sheet	-	-	

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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.

- 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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