

74AUP2G0604

Low-power inverting buffer with open-drain and inverter

Rev. 3 — 31 January 2022

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)
- 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
- 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	
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	SOT886
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

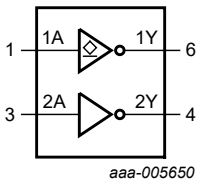


Fig. 1. Logic symbol

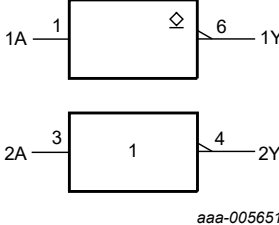


Fig. 2. IEC logic symbol

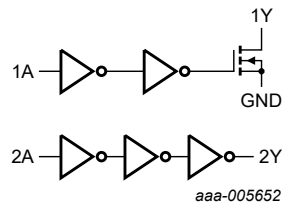
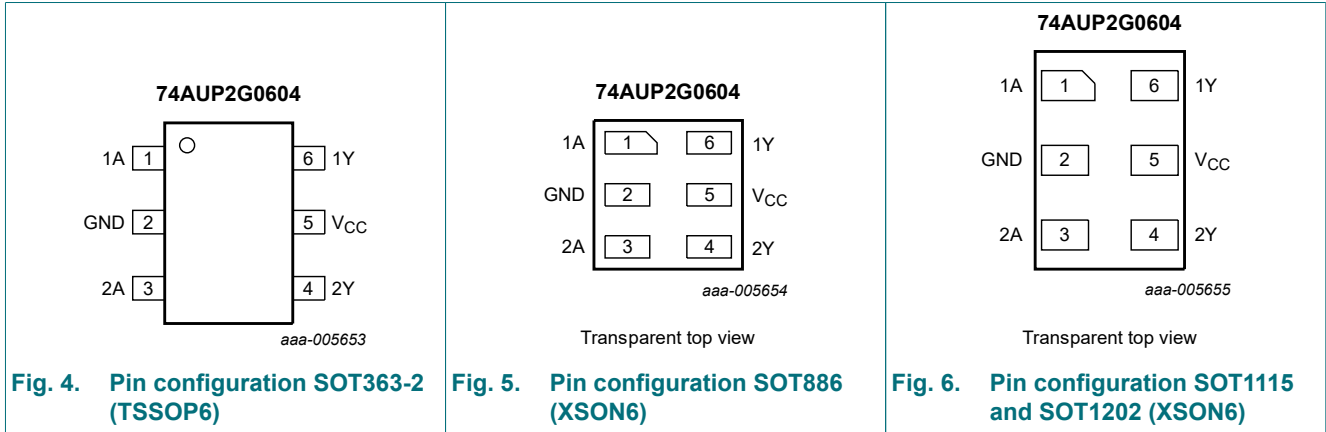


Fig. 3. Logic diagram

6. Pinning information

6.1. Pinning



6.2. Pin description

Table 3. Pin description

Symbol	Pin	Description
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
H	L

Table 5. Function table

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

Input	Output
2A	2Y
L	H
H	L

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		-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	-0.5	+4.6	V
I_O	output current	$V_O = 0$ V 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	$T_{amb} = -40$ °C to +125 °C	-	250	mW

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

[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: 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.

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
$\Delta t/\Delta V$	input transition rise and fall rate	$V_{CC} = 0.8$ V to 3.6 V	0	200	ns/V

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 _{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 _{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	0.75 × V _{CC}	-	-	V						
		I _O = -1.7 mA; V _{CC} = 1.4 V	1.11	-	-	V						
		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	-	-	V						
		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	-	-	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	-	-	0.31	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 _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	-	-	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	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	Typ	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
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
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 _I	input leakage current	V _I = GND to 3.6 V; V _{CC} = 0 V to 3.6 V	-	-	±0.5	μA
		V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 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

Low-power inverting buffer with open-drain and inverter

Symbol	Parameter	Conditions	Min	Typ	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	-	-	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
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 _I	input leakage current	V _I = GND to 3.6 V; V _{CC} = 0 V to 3.6 V	-	-	±0.75	μA
		V _I or V _O = 0 V to 3.6 V; V _{CC} = 0 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
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	-	-	75	μA

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 pF										
t _{pd}	propagation delay	1A to 1Y or 2A to 2Y; see Fig. 7 [2]								
		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
C_L = 10 pF										
t _{pd}	propagation delay	1A to 1Y or 2A to 2Y; see Fig. 7 [2]								
		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
C_L = 15 pF										
t _{pd}	propagation delay	1A to 1Y or 2A to 2Y; see Fig. 7 [2]								
		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
C_L = 30 pF										
t _{pd}	propagation delay	1A to 1Y or 2A to 2Y; see Fig. 7 [2]								
		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
C_L = 30 pF										
t _{pd}	propagation delay	1A to 1Y or 2A to 2Y; see Fig. 7 [2]								
		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
C_L = 30 pF										
t _{pd}	propagation delay	1A to 1Y or 2A to 2Y; see Fig. 7 [2]								
		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

Low-power inverting buffer with open-drain and inverter

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 pF, 10 pF, 15 pF and 30 pF										
C _{PD}	power dissipation capacitance	1A to 1Y; f _i = 1 MHz; V _I = GND to V _{CC} [3][4]								
		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; V _I = GND to V _{CC} [3][5]								
		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
		V _{CC} = 3.0 V to 3.6 V	-	4.0	-	-	-	-	-	pF

- [1] All typical values are measured at nominal V_{CC}.
- [2] t_{pd} is the same as t_{PLH} and t_{PHL}(2A to 2Y) and t_{PLZ} and t_{PZL}(1A to 1Y).
- [3] All specified values are the average typical values over all stated loads.
- [4] 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 = 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 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_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;
 $\Sigma(C_L \times V_{CC}^2 \times f_o)$ = sum of the outputs.

11.1. Waveforms and test circuit

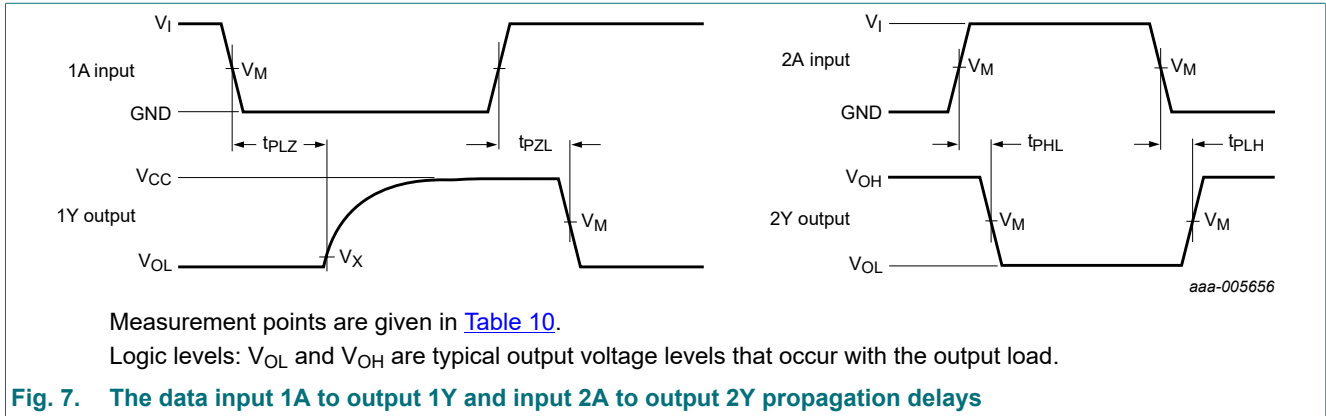


Table 10. Measurement points

Supply voltage	Output		Input		
V_{CC}	V_M	V_X	V_M	V_I	$t_r = t_f$
0.8 V to 1.6 V	$0.5 \times V_{CC}$	$V_{OL} + 0.1 \text{ V}$	$0.5 \times V_{CC}$	V_{CC}	$\leq 3.0 \text{ ns}$
1.65 V to 2.7 V	$0.5 \times V_{CC}$	$V_{OL} + 0.15 \text{ V}$	$0.5 \times V_{CC}$	V_{CC}	$\leq 3.0 \text{ ns}$
3.0 V to 3.6 V	$0.5 \times V_{CC}$	$V_{OL} + 0.3 \text{ V}$	$0.5 \times V_{CC}$	V_{CC}	$\leq 3.0 \text{ ns}$

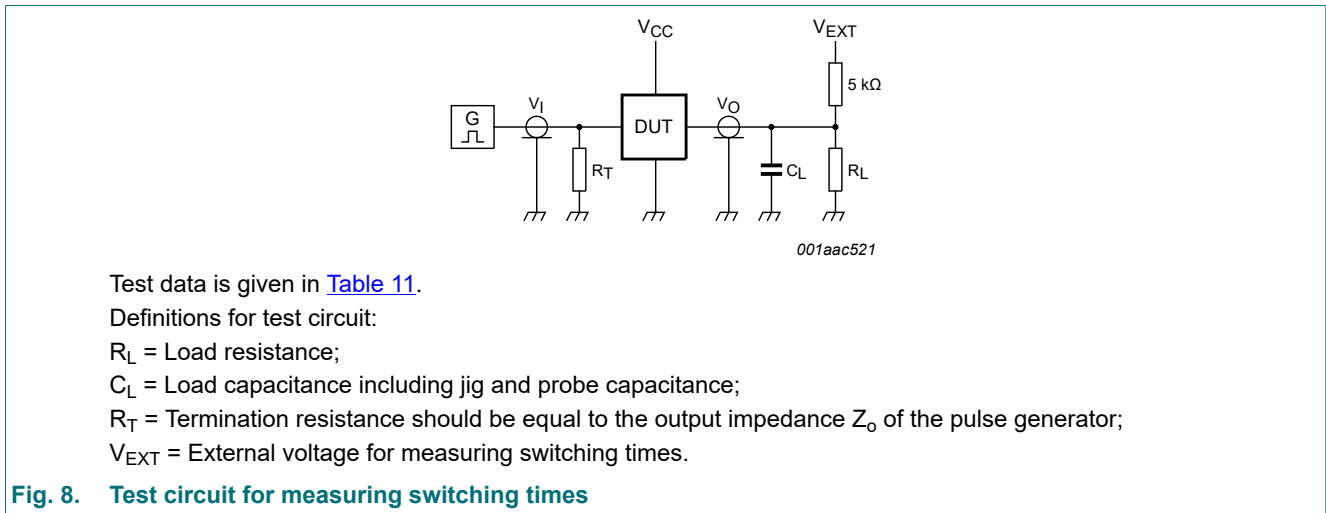


Table 11. Test data

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	$2 \times V_{CC}$

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

12. Package outline

TSSOP6: plastic thin shrink small outline package; 6 leads; body width 1.25 mm

SOT363-2



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

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

SOT886



Fig. 10. 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



Fig. 11. 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. 12. Package outline SOT1202 (XSON6)

13. Abbreviations

Table 12. Abbreviations

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

14. Revision history

Table 13. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
74AUP2G0604 v.3	20220131	Product data sheet	-	74AUP2G0604 v.2
Modifications:	<ul style="list-style-type: none"> SOT363 (SC-88) package changed to SOT363-2 (TSSOP6) package. 			
74AUP2G0604 v.2	20201215	Product data sheet	-	74AUP2G0604 v.1
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. Type number 74AUP2G0604GF (SOT891 / XSON6) removed. Table 6: Derating values for P_{tot} total power dissipation updated. 			
74AUP2G0604 v.1	20121123	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".
- [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 <https://www.nexperia.com>.

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