

74AUP2G06GW,125 Datasheet

www.digi-electronics.com



DiGi Electronics Part Number Manufacturer Manufacturer Product Number Description Detailed Description

er 74AUP2G06GW,125-DG er Nexperia USA Inc. 74AUP2G06GW,125 n IC INVERTER 2CH 2-INP 6TSSOP Inverter IC 2 Channel Open Drain 6-TSSOP

https://www.DiGi-Electronics.com



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.



Purchase and inquiry

Manufacturer Product Number:	Manufacturer:					
74AUP2G06GW,125	Nexperia USA Inc.					
Series:	Product Status:					
74AUP	Active					
Logic Type:	Number of Circuits:					
Inverter	2					
Number of Inputs:	Features:					
2	Open Drain					
Voltage - Supply:	Current - Quiescent (Max):					
0.8V ~ 3.6V	500 nA					
Current - Output High, Low:	Input Logic Level - Low:					
-, 4mA	0.7V ~ 0.9V					
Input Logic Level - High:	Max Propagation Delay @ V, Max CL:					
1.6V ~ 2V	10.5ns @ 3.3V, 30pF					
Operating Temperature:	Mounting Type:					
-40°C ~ 125°C	Surface Mount					
Supplier Device Package:	Package / Case:					
6-TSSOP	6-TSSOP, SC-88, SOT-363					
Base Product Number:						
74AUP2G06						

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROH53 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8542.39.0001	

Low-power dual inverter with open-drain output

Rev. 9 — 24 July 2023

Product data sheet

1. General description

The 74AUP2G06 provides two inverting buffers with open-drain output. The output of the device is an open drain and can be connected to other open-drain outputs to implement active-LOW wired-OR or active-HIGH wired-AND functions.

Schmitt-trigger action at all inputs makes the circuit tolerant to 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
- Low static power consumption; I_{CC} = 0.9 μA (maximum)
- Latch-up performance exceeds 100 mA per JESD 78B 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
- 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: 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

ne<mark>x</mark>peria

Low-power dual inverter with open-drain output

3. Ordering information

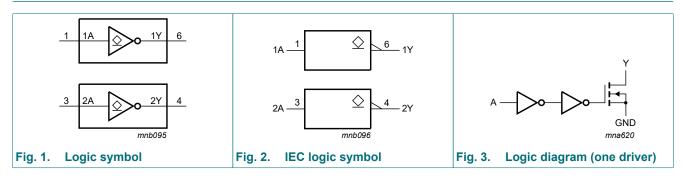
Type number	Package	Package							
	Temperature range	Name	Description	Version					
74AUP2G06GW	-40 °C to +125 °C	TSSOP6	plastic thin shrink small outline package; 6 leads; body width 1.25 mm	<u>SOT363-2</u>					
74AUP2G06GM	-40 °C to +125 °C	XSON6	plastic extremely thin small outline package; no leads; 6 terminals; body 1 × 1.45 × 0.5 mm	<u>SOT886</u>					
74AUP2G06GN	-40 °C to +125 °C	XSON6	extremely thin small outline package; no leads; 6 terminals; body 0.9 × 1.0 × 0.35 mm	<u>SOT1115</u>					
74AUP2G06GS	-40 °C to +125 °C	XSON6	extremely thin small outline package; no leads; 6 terminals; body 1.0 × 1.0 × 0.35 mm	<u>SOT1202</u>					

4. Marking

Table 2. Marking	
Type number	Marking code[1]
74AUP2G06GW	p6
74AUP2G06GM	p6
74AUP2G06GN	p6
74AUP2G06GS	p6

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

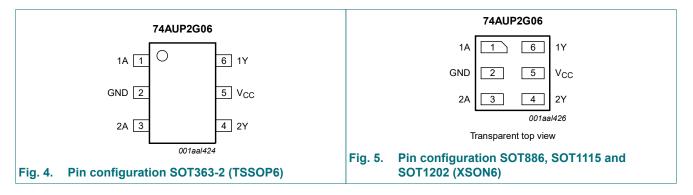
5. Functional diagram



Low-power dual inverter with open-drain output

6. Pinning information

6.1. Pinning



6.2. Pin description

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

7. Functional description

Table 4. Function table

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

Input nA	Output nY
L	Z
Н	L

Low-power dual inverter with open-drain output

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

[2] For SOT363-2 (TSSOP6) package: Ptot 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 $^\circ\text{C}.$

9. Recommended operating conditions

Table 6. Recommended operating conditions

Symbol	Parameter	Conditions	Min	Max	Unit
V _{CC}	supply voltage		0.8	3.6	V
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

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 _{amb} = 2	5 °C		i			
VIH	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	-	-	$0.30 \times V_{CC}$	V
		V _{CC} = 0.9 V to 1.95 V	-	-	$0.35 \times V_{CC}$	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 dual inverter with open-drain output

Symbol	Parameter	Conditions	Min	Тур	Мах	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	-	-	0.31	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
l _l	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	$V_{I} = V_{IL}; V_{O} = 0 V \text{ to } 3.6 V;$ $V_{CC} = 0 V \text{ to } 3.6 V$	-	-	±0.1	μA
I _{OFF}	power-off leakage current	V_1 or V_0 = 0 V to 3.6 V; V_{CC} = 0 V	-	-	±0.2	μA
ΔI _{OFF}	additional power-off leakage current	$V_1 \text{ or } V_0 = 0 \text{ V to } 3.6 \text{ V};$ $V_{CC} = 0 \text{ V to } 0.2 \text{ V}$	-	-	±0.2	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	$V_{I} = V_{CC} - 0.6 \text{ V}; I_{O} = 0 \text{ A}; V_{CC} = 3.3 \text{ V}$	-	-	40	μA
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_0 = GND; V_{CC} = 0 V	-	1.7	-	pF
		output disabled; V_0 = GND; V_{CC} = 0 V	-	1.1	-	pF
T _{amb} = -4	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	$0.65 \times V_{CC}$	-	-	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	-	-	$0.30 \times V_{CC}$	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	$V_{I} = V_{IH} \text{ or } V_{IL}$				
		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	-	-	$0.3 \times V_{CC}$	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
lı	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	$V_{I} = V_{IL}; V_{O} = 0 V \text{ to } 3.6 V;$ $V_{CC} = 0 V \text{ to } 3.6 V$	-	-	±0.5	μA
I _{OFF}	power-off leakage current	V_1 or V_0 = 0 V to 3.6 V; V_{CC} = 0 V	-	-	±0.5	μA
ΔI _{OFF}	additional power-off leakage current	$V_1 \text{ or } V_0 = 0 \text{ V to } 3.6 \text{ V};$ $V_{CC} = 0 \text{ V to } 0.2 \text{ V}$	-	-	±0.6	μA

74AUP2G06

Low-power dual inverter with open-drain output

Symbol	Parameter	Conditions	Min	Тур	Max	Unit
I _{CC}	supply current	$V_I = GND \text{ or } V_{CC}; I_O = 0 \text{ A};$ $V_{CC} = 0.8 \text{ V to } 3.6 \text{ V}$	-	-	0.9	μA
ΔI _{CC}	additional supply current	$V_{I} = V_{CC} - 0.6 \text{ V}; I_{O} = 0 \text{ A}; V_{CC} = 3.3 \text{ V}$	-	-	50	μA
T _{amb} = -4	40 °C to +125 °C				·	
VIH	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
VIL	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	$V_{I} = V_{IH} \text{ or } V_{IL}$				
		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
I	input leakage current	V_1 = GND to 3.6 V; V_{CC} = 0 V to 3.6 V	-	-	±0.75	μA
I _{OZ}	OFF-state output current	$V_{I} = V_{IL}; V_{O} = 0 V \text{ to } 3.6 V;$ $V_{CC} = 0 V \text{ to } 3.6 V$	-	-	±0.75	μA
I _{OFF}	power-off leakage current	V_1 or V_0 = 0 V to 3.6 V; V_{CC} = 0 V	-	-	±0.75	μA
ΔI _{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	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	$V_{I} = V_{CC} - 0.6 \text{ V}; I_{O} = 0 \text{ A}; V_{CC} = 3.3 \text{ V}$	-	-	75	μA

11. Dynamic characteristics

Table 8. Dynamic characteristics

Voltages are referenced to GND (ground = 0 V); for test circuit see Fig. 7.

Symbol	Parameter	Conditions		25 °C		-40 °C to	o +85 °C	-40 °C to +125 °C		Unit
			Min	Typ[1]	Мах	Min	Max	Min	Мах	
C _L = 5 p	F									
t _{pd}	propagation	nA to nY; see Fig. 6 [2]								
delay	delay	V _{CC} = 0.8 V	-	12.8	-	-	-	-	-	ns
		V _{CC} = 1.1 V to 1.3 V	2.3	4.3	9.9	2.0	10.9	2.0	12.0	ns
		V _{CC} = 1.4 V to 1.6 V	1.8	3.1	6.1	1.5	7.1	1.5	7.8	ns
		V _{CC} = 1.65 V to 1.95 V	1.5	2.8	4.7	1.2	5.7	1.2	6.3	ns
		V _{CC} = 2.3 V to 2.7 V	1.2	2.2	3.2	1.0	3.9	1.0	4.3	ns
		V _{CC} = 3.0 V to 3.6 V	1.1	2.2	3.3	0.8	3.6	0.8	4.0	ns

74AUP2G06

Low-power dual inverter with open-drain output

Symbol	Parameter	Conditions		25 °C		-40 °C t	o +85 °C	-40 °C to	o +125 °C	C Unit	
			Min	Typ[1]	Мах	Min	Мах	Min	Max		
C _L = 10	pF					1	II				
t _{pd}	propagation	nA to nY; see Fig. 6 [2]									
	delay	V _{CC} = 0.8 V	-	15.8	-	-	-	-	-	ns	
		V _{CC} = 1.1 V to 1.3 V	2.7	5.4	11.2	2.5	13.2	2.5	15.0	ns	
		V _{CC} = 1.4 V to 1.6 V	2.2	3.9	7.0	2.0	8.5	2.0	9.4	ns	
		V _{CC} = 1.65 V to 1.95 V	1.9	3.6	5.4	1.7	6.7	1.7	7.4	ns	
		V _{CC} = 2.3 V to 2.7 V	1.7	2.9	3.8	1.4	4.5	1.4	5.0	ns	
		V _{CC} = 3.0 V to 3.6 V	1.6	3.2	4.6	1.2	4.9	1.2	5.4	ns	
C _L = 15	pF						<u> </u>			-	
t _{pd}	propagation	nA to nY; see Fig. 6 [2]									
	delay	V _{CC} = 0.8 V	-	18.8	-	-	-	-	-	ns	
		V _{CC} = 1.1 V to 1.3 V	3.2	6.4	12.2	2.9	15.2	2.9	17.0	ns	
		V _{CC} = 1.4 V to 1.6 V	2.6	4.6	7.7	2.3	9.4	2.3	10.0	ns	
		V _{CC} = 1.65 V to 1.95 V	2.3	4.5	6.6	2.1	7.3	2.1	8.1	ns	
		V _{CC} = 2.3 V to 2.7 V	2.1	3.5	4.6	1.7	5.1	1.7	5.7	ns	
		V _{CC} = 3.0 V to 3.6 V	2.0	4.0	6.0	1.5	6.5	1.5	7.2	ns	
C _L = 30	pF									İ	
t _{pd}	propagation	nA to nY; see Fig. 6 [2]									
	delay	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 p	F, 10 pF, 15 pl	F and 30 pF									
C _{PD}	power	$f_i = 1 \text{ MHz}; V_1 = \text{GND to } V_{\text{CC}}$ [3]									
	dissipation capacitance	V _{CC} = 0.8 V	-	0.5	-	-	-	-	-	pF	
	capacitance	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_{PL7} .

[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 μ W).

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

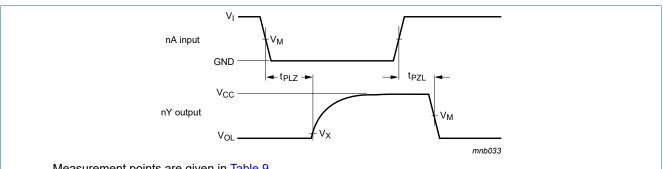
f_i = input frequency in MHz;

V_{CC} = supply voltage in V;

N = number of inputs switching.

Low-power dual inverter with open-drain output

11.1. Waveform and test circuit



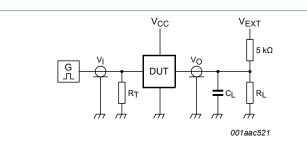
Measurement points are given in <u>Table 9</u>.

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

Fig. 6. The data input (nA) to output (nY) propagation delays

Table 9. Measurement points

Supply voltage	Input	Output			
V _{cc}	V _M	V _M	V _X		
0.8 V to 1.6 V	$0.5 \times V_{CC}$	0.5 × V _{CC}	V _{OL} + 0.1 V		
1.65 V to 2.7 V	0.5 × V _{CC}	0.5 × V _{CC}	V _{OL} + 0.15 V		
3.0 V to 3.6 V	$0.5 \times V_{CC}$	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. 7. Test circuit for measuring switching times

Table 10. Test data

Supply voltage	Input		Load	V _{EXT}			
V _{cc}	VI	t _r , t _f	CL	R _L [1]	t _{PLH} , t _{PHL}	t _{PZH} , t _{PHZ}	t _{PZL} , t _{PLZ}
0.8 V to 3.6 V	V _{CC}	≤ 3 ns	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 $R_L = 5 k\Omega$. For measuring propagation delays, setup and hold times and pulse width $R_L = 1 M\Omega$.

Low-power dual inverter with open-drain output

12. Package outline

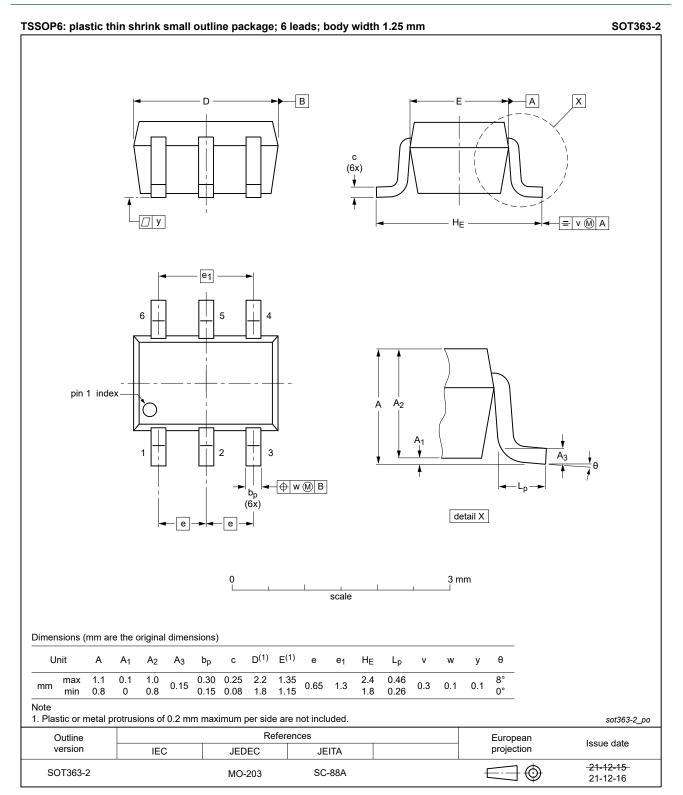


Fig. 8. Package outline SOT363-2 (TSSOP6)

74AUP2G06

Low-power dual inverter with open-drain output

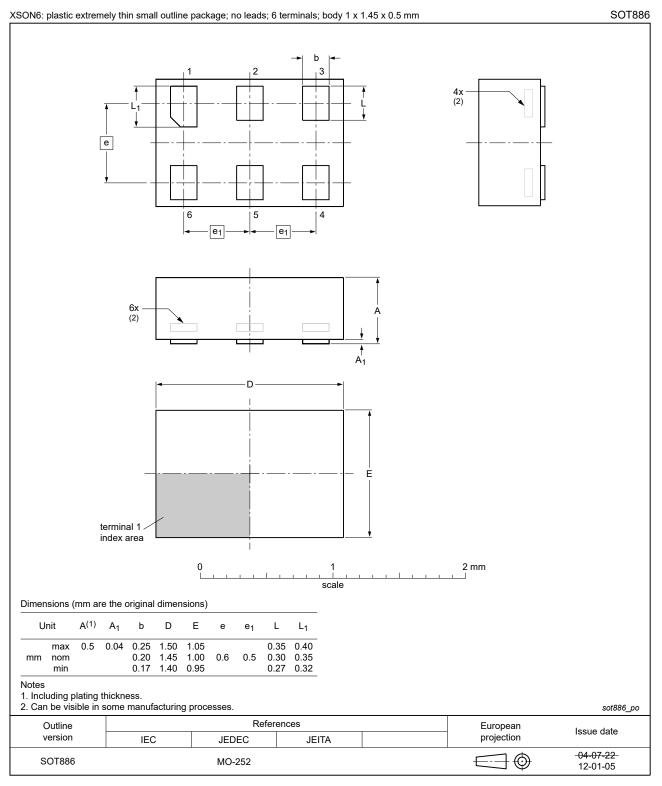
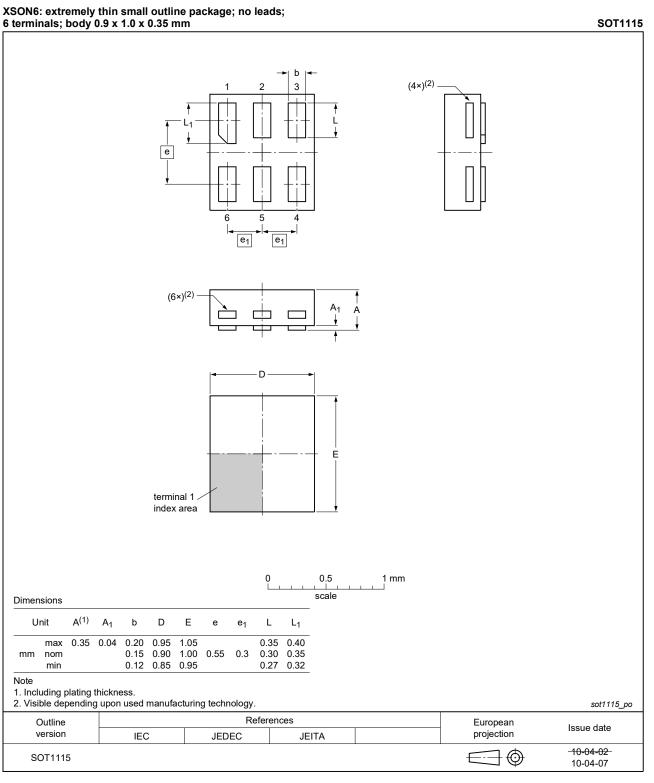


Fig. 9. Package outline SOT886 (XSON6)

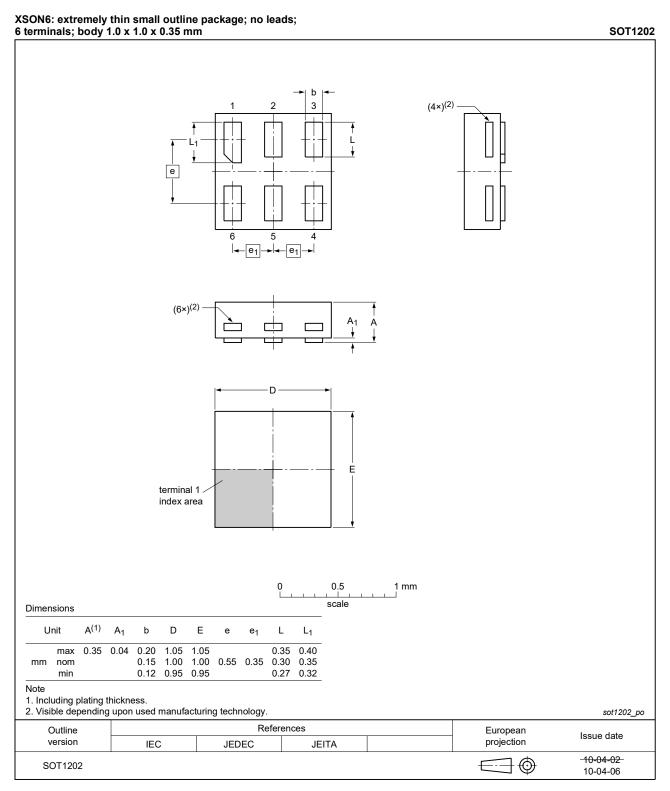
10 / 15

Low-power dual inverter with open-drain output





Low-power dual inverter with open-drain output





Low-power dual inverter with open-drain output

13. Abbreviations

Table 11. Abbreviations				
Acronym	Description			
CDM	Charged Device Model			
DUT	Device Under Test			
ESD	ElectroStatic Discharge			
НВМ	Human Body Model			

14. Revision history

Table 12. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes		
74AUP2G06 v.9	20230724	Product data sheet	-	74AUP2G06 v.8		
Modifications:	<u>Section 2</u> :	• <u>Section 2</u> : ESD specification updated according to the latest JEDEC standard.				
74AUP2G06 v.8	20220131	Product data sheet	-	74AUP2G06 v.7		
Modifications:	Package S	Package SOT363 (SC-88) has changed to SOT363-2 (TSSOP6) package.				
74AUP2G06 v.7	20210604	Product data sheet	-	74AUP2G06 v.6		
Modifications:		ber 74AUP2G06GF (SOT Derating values for P _{tot} to				
74AUP2G06 v.6	20190315	Product data sheet	-	74AUP2G06 v.5		
Modifications:	guidelines	 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. 				
74AUP2G06 v.5	20121129	Product data sheet	-	74AUP2G06 v.4		
Modifications:	Package c	Package outline drawing of SOT886 (Fig. 9) modified.				
74AUP2G06 v.4	20111206	Product data sheet	-	74AUP2G06 v.3		
74AUP2G06 v.3	20101026	Product data sheet	-	74AUP2G06 v.2		
74AUP2G06 v.2	20100325	Product data sheet	-	74AUP2G06 v.1		
74AUP2G06 v.1	20100211	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.		

 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 <u>https://www.nexperia.com</u>.

Definitions

Draft — The document is a draft version only. The content is still under internal review and subject to formal approval, which may result in modifications or additions. Nexperia does not give any representations or warranties as to the accuracy or completeness of information included herein and shall have no liability for the consequences of use of such information.

Short data sheet — A short data sheet is an extract from a full data sheet with the same product type number(s) and title. A short data sheet is intended for quick reference only and should not be relied upon to contain detailed and full information. For detailed and full information see the relevant full data sheet, which is available on request via the local Nexperia sales office. In case of any inconsistency or conflict with the short data sheet, the full data sheet shall prevail.

Product specification — The information and data provided in a Product data sheet shall define the specification of the product as agreed between Nexperia and its customer, unless Nexperia and customer have explicitly agreed otherwise in writing. In no event however, shall an agreement be valid in which the Nexperia product is deemed to offer functions and qualities beyond those described in the Product data sheet.

Disclaimers

Limited warranty and liability — Information in this document is believed to be accurate and reliable. However, Nexperia does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information. Nexperia takes no responsibility for the content in this document if provided by an information source outside of Nexperia.

In no event shall Nexperia be liable for any indirect, incidental, punitive, special or consequential damages (including - without limitation - lost profits, lost savings, business interruption, costs related to the removal or replacement of any products or rework charges) whether or not such damages are based on tort (including negligence), warranty, breach of contract or any other legal theory.

Notwithstanding any damages that customer might incur for any reason whatsoever, Nexperia's aggregate and cumulative liability towards customer for the products described herein shall be limited in accordance with the Terms and conditions of commercial sale of Nexperia.

Right to make changes — Nexperia reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.

Suitability for use — Nexperia products are not designed, authorized or warranted to be suitable for use in life support, life-critical or safety-critical systems or equipment, nor in applications where failure or malfunction of an Nexperia product can reasonably be expected to result in personal

Low-power dual inverter with open-drain output

injury, death or severe property or environmental damage. Nexperia and its suppliers accept no liability for inclusion and/or use of Nexperia products in such equipment or applications and therefore such inclusion and/or use is at the customer's own risk.

Quick reference data — The Quick reference data is an extract of the product data given in the Limiting values and Characteristics sections of this document, and as such is not complete, exhaustive or legally binding.

Applications — Applications that are described herein for any of these products are for illustrative purposes only. Nexperia makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.

Customers are responsible for the design and operation of their applications and products using Nexperia products, and Nexperia accepts no liability for any assistance with applications or customer product design. It is customer's sole responsibility to determine whether the Nexperia product is suitable and fit for the customer's applications and products planned, as well as for the planned application and use of customer's third party customer(s). Customers should provide appropriate design and operating safeguards to minimize the risks associated with their applications and products.

Nexperia does not accept any liability related to any default, damage, costs or problem which is based on any weakness or default in the customer's applications or products, or the application or use by customer's third party customer(s). Customer is responsible for doing all necessary testing for the customer's applications and products using Nexperia products in order to avoid a default of the applications and the products or of the application or use by customer's third party customer(s). Nexperia does not accept any liability in this respect.

Limiting values — Stress above one or more limiting values (as defined in the Absolute Maximum Ratings System of IEC 60134) will cause permanent damage to the device. Limiting values are stress ratings only and (proper) operation of the device at these or any other conditions above those given in the Recommended operating conditions section (if present) or the Characteristics sections of this document is not warranted. Constant or repeated exposure to limiting values will permanently and irreversibly affect the quality and reliability of the device.

Terms and conditions of commercial sale — Nexperia products are sold subject to the general terms and conditions of commercial sale, as published at <u>http://www.nexperia.com/profile/terms</u>, unless otherwise agreed in a valid written individual agreement. In case an individual agreement is concluded only the terms and conditions of the respective agreement shall apply. Nexperia hereby expressly objects to applying the customer's general terms and conditions with regard to the purchase of Nexperia products by customer.

No offer to sell or license — Nothing in this document may be interpreted or construed as an offer to sell products that is open for acceptance or the grant, conveyance or implication of any license under any copyrights, patents or other industrial or intellectual property rights.

Export control — This document as well as the item(s) described herein may be subject to export control regulations. Export might require a prior authorization from competent authorities.

Non-automotive qualified products — Unless this data sheet expressly states that this specific Nexperia product is automotive qualified, the product is not suitable for automotive use. It is neither qualified nor tested in accordance with automotive testing or application requirements. Nexperia accepts no liability for inclusion and/or use of non-automotive qualified products in automotive equipment or applications.

In the event that customer uses the product for design-in and use in automotive applications to automotive specifications and standards, customer (a) shall use the product without Nexperia's warranty of the product for such automotive applications, use and specifications, and (b) whenever customer uses the product for automotive applications beyond Nexperia's specifications such use shall be solely at customer's own risk, and (c) customer fully indemnifies Nexperia for any liability, damages or failed product claims resulting from customer design and use of the product for automotive applications beyond Nexperia's standard warranty and Nexperia's product specifications.

Translations — A non-English (translated) version of a document is for reference only. The English version shall prevail in case of any discrepancy between the translated and English versions.

Trademarks

Notice: All referenced brands, product names, service names and trademarks are the property of their respective owners.

74AUP2G06

Low-power dual inverter with open-drain output

Contents

1. General description	1
2. Features and benefits	1
3. Ordering information	2
4. Marking	2
5. Functional diagram	2
6. Pinning information	3
6.1. Pinning	
6.2. Pin description	
7. Functional description	3
8. Limiting values	4
9. Recommended operating conditions	4
10. Static characteristics	4
11. Dynamic characteristics	6
11.1. Waveform and test circuit	
12. Package outline	9
13. Abbreviations	
14. Revision history	13
15. Legal information	

© Nexperia B.V. 2023. All rights reserved

For more information, please visit: http://www.nexperia.com For sales office addresses, please send an email to: salesaddresses@nexperia.com Date of release: 24 July 2023



OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we striciy control the quality of products and services. Welcome your RFQ to Email: Info@DiGi-Electronics.com

DCI	DCI		
QUALITY MANAGEMENT SYSTEM CERTIFICATE	ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE	OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM CERTIFICATE	の可能可能可能 CERTIFICATE OF INCORPORATION
DIGI ELECTRONICS HK LIMITED	DIGI ELECTRONICS HK LIMITED	DIGI ELECTRONICS HK LIMITED	A. A. B. A. B. W. Hanniby and By that
RATINGS SHE IN HIS COMMERCIAL EXTREMENTAL AND STREET, MONGHO	PLATENTS 207, HO HOR COMMITTEE CALLES HAVE VER CHEET, MONORO	FLATENUE 267, HO HOUS CONVERTIGN AND AN AVEN STREET, MONGO	DELERATIONCE INCLAMPSO 网络電子性者作用公司
GB/T 19001-2016 ktt ISO9001:2015	GB/T 24001-2016 idt ISO14001:2015	GB/T45001-2020 idt ISO45001:2018	$0 \rightarrow 0$ B, B $\rightarrow 0$ A, H B 122 B $\subset \odot$ G $\rightarrow H >$ 11 DN: Any Incorporated In Namy Early under the Comparise Ordinaria $A \rightarrow 0$, $A \rightarrow A \rightarrow B$, $A \rightarrow 0 \rightarrow 2$, $A \rightarrow 0$ (Tributor TeX of the Laws of Hearly Kong, and Bellik compare is
Ref Ref Participation components	Retto nagagante	For the Index of all interviews	Constant with in the Last in Yang Wong, and the lost dompany is it is a lost a limited company.
tantananan man mananan mananan manananan mananan mananan	tomantener men photosener men metalementener meneration Manalit	torinamientes 2008 Inter land can Can 2008-000-00 Jacobierto National Anna 2008	★ # 4 # 0 ± 0 − Λ + − Λ ± + ± + # ± − NAME 04. 22 houry 200.
			Oldentrikalis or tor 64,8,4 kill to Min. Aul. L. DERING Programmers and a second seco
In the second se	The second secon	Control tests of a state of the state o	In Heps: 公司各場合公司中局工作用:工作品中提供学校公司名表式市场大型公司者包括基本中 工程品名提用: TableAdd #: TableAdd #: TableAdd #: TableAdd #: TableA





Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.