SILEGO

GreenLIB™
DUAL 2-INPUT NAND GATE

General Description

The GreenLIB provides the dual 2-input NAND function.

This device ensures a very low static and dynamic power consumption.

Output Summary

- 2 CMOS Push-Pull Output

Functional equivalent device for:

Fairchild:

NC7WP00 and NC7WZ00 devices

NXP Semiconductors:

74AUP2G00 and 74LVC2G00 devices

ON Semiconductors:

NL27WZ00 devices

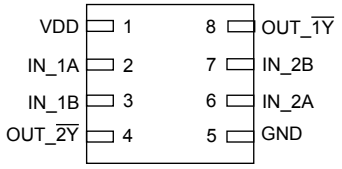
Texas Instruments:

SN74AUC2G00, SN74AUP2G00 and SN74LVC2G00 devices

Features

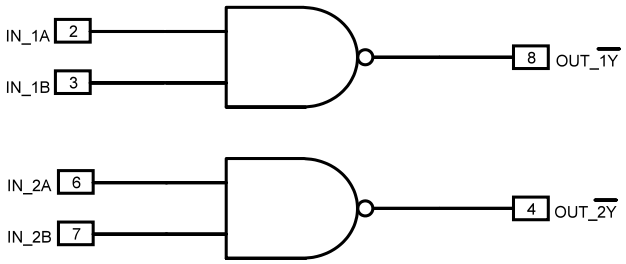
- Pb-Free / RoHS Compliant
- Halogen-Free
- TDFN-8 Package
- Low static power consumption I_{DD} = 1μA
- 3.3V logic

Pin Configuration



TDFN-8

Block Diagram



Function Table

Input		Output
IN_A	IN_B	OUT_$\overline{Y}$
0	0	1
0	1	1
1	0	1
1	1	0

1 = HIGH voltage level; 0 = LOW voltage level

Pin Description

Pin #	Pin Name	Pin Description
1	VDD	Supply Voltage
2	IN_1A	Input - CMOS logic
3	IN_1B	Input - CMOS logic
4	OUT_$\overline{2Y}$	Output - CMOS Push-Pull
5	GND	Ground
6	IN_2A	Input - CMOS logic
7	IN_2B	Input - CMOS logic
8	OUT_$\overline{1Y}$	Output - CMOS Push-Pull

Ordering Information

Part Number	Type
SLG74LB2G00V	TDFN-8
SLG74LB2G00VTR	TDFN-8 - Tape and Reel (3k units)

Absolute Maximum Conditions

Parameter	Min.	Max.	Unit
V_{DD} to GND	-0.3	4.6	V
Voltage at input pins	-0.3	4.6	V
Current at input pin	-1.0	1.0	mA
Storage temperature range	-65	150	°C
Operating temperature range	0	70	°C
Junction temperature	--	150	°C

Electrical Characteristics

Symbol	Parameter	Condition/Note	Min.	Typ.	Max.	Unit
V_{DD}	Power Supply	± 5%	3.135	3.3	3.465	V
I_{DD}	Supply Current	Static Inputs and Outputs	--	<1	--	µA
V_{IH}	High-Level Input Voltage	Logic Input	2	--	--	V
V_{IL}	Low-Level Input Voltage	Logic Input	-0.3	--	0.6	V
V_{OH}	High-Level Output Voltage	I_{OH} = -1mA / Logic Level Outputs	2.4	--	--	V
V_{OL}	Low-Level Output Voltage	I_{OL} = 1mA / Logic Level Outputs	--	--	0.4	V
I_{OH}	High-Level Output Current	Push-Pull	--	-16	--	mA
I_{OL}	Low-Level Output Current	Push-Pull	--	16	--	mA
I_{Leak}	Input Leakage Current		--	--	<1	nA
T_{StUp}	Start Up Time		--	7	--	ms

Switching Characterictics

over recommended operating free-air temperature range, C_L = 5pF (unless otherwise noted)

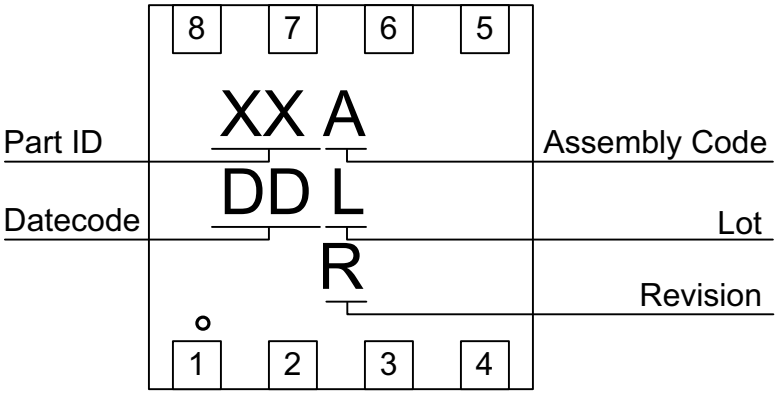
Parameters	From (Input)	To (Output)	V_{DD}	Ta = 25 °C			Unit
				Min.	Typ.	Max.	
t_{pd}	A or B	Y	3.3V ± 0.3V	--	25	--	ns

Functional Equivalent device for the following parts:[1]

Fairchild:	NXP Semiconductors:	ON Semiconductors:	Texas Instruments:
NC7WP00K8X	74AUP2G00DC	NL27WZ00USG	SN74AUC2G00DCTR
NC7WP00L8X	74AUP2G00GD		SN74AUC2G00DCUR
NC7WZ00K8X	74AUP2G00GM		SN74AUP2G00DQER
NC7WZ00L8X	74LVC2G00DC		SN74AUP2G08YFPR
	74LVC2G00DP		SN74LVC2G08DCTR
	74LVC2G00GD		SN74LVC2G08DCUR
	74LVC2G00GM		SN74LVC2G08YZPR

1.Not Pin-to-Pin Compatible

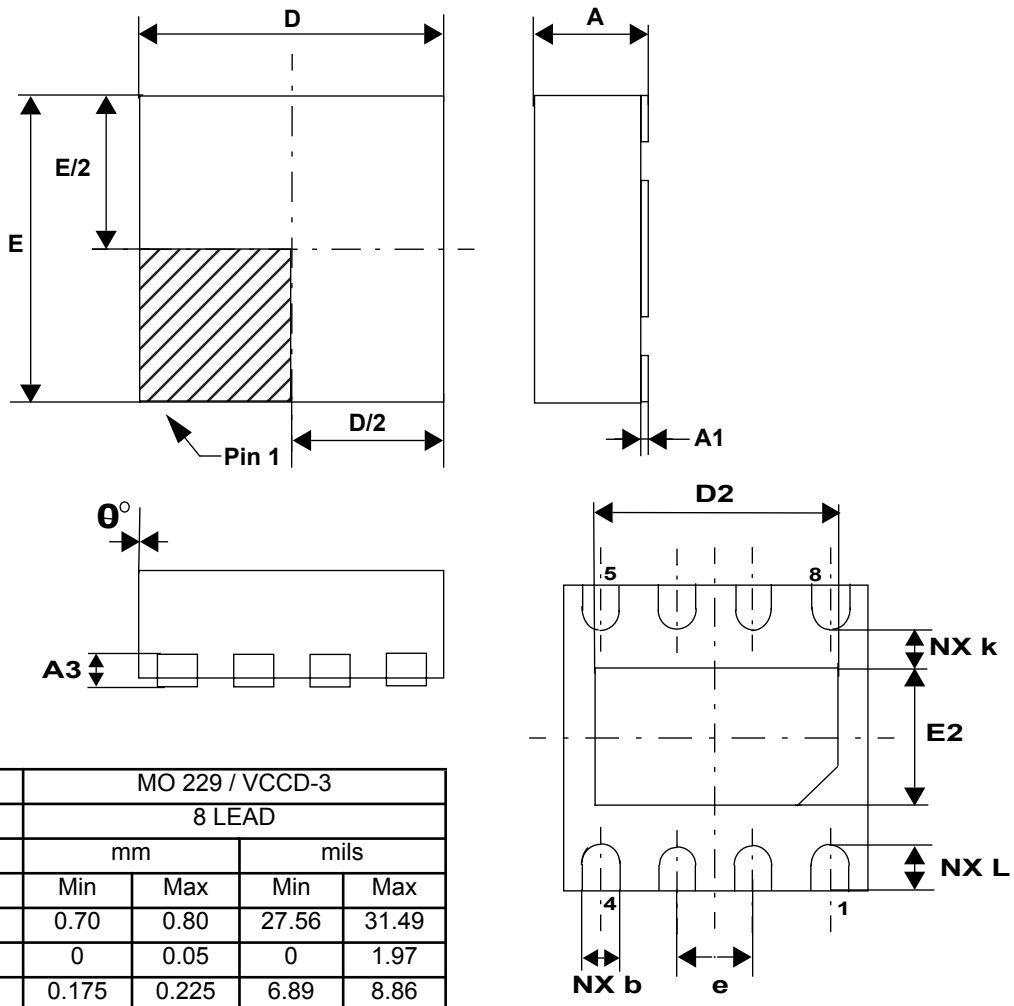
Package Top Marking System Definition



XX – Part ID Field: identifies the specific device configuration
A – Assembly Code Field: Assembly Location of the device.
DD – Date Code Field: Coded date of manufacture
L – Lot Code: Designates Lot #
R – Revision Code: Device Revision

Package Drawing and Dimensions

8 Lead TDFN Package



JEDEC	MO 229 / VCCD-3			
TYPE	8 LEAD			
Dimension	mm		mils	
SYMBOL	Min	Max	Min	Max
A	0.70	0.80	27.56	31.49
A1	0	0.05	0	1.97
A3	0.175	0.225	6.89	8.86
D	1.9	2.1	74.80	82.68
E	1.9	2.1	74.80	82.68
D2	1.35	1.65	53	65
E2	0.75	1.05	30	41
e	0.5 BSC		19.68 BSC	
NX b	0.20	0.30	7.87	11.81
NX k	0.20	--	7.87	--
NX L	0.25	0.35	10	14
Θ	0	4	0	4
ND	4			
NE	0			

Note

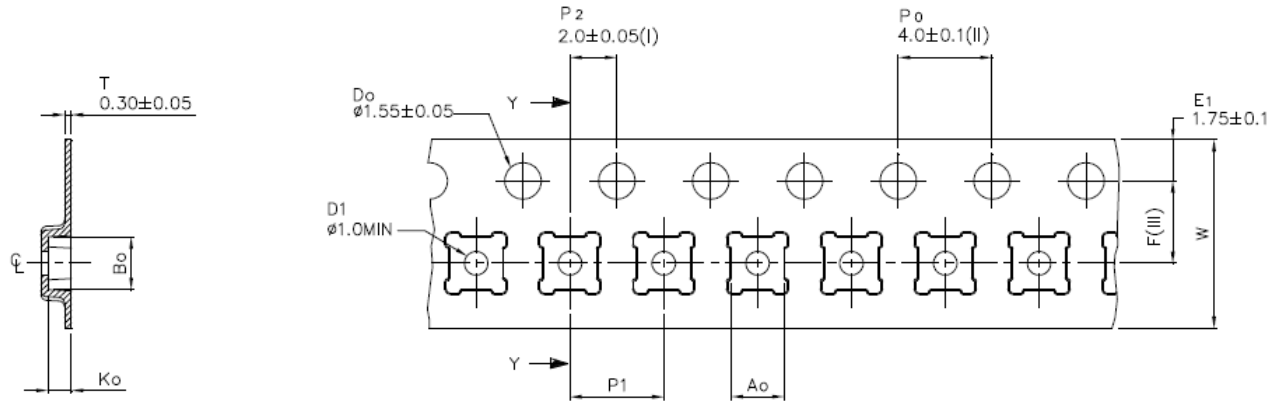
- SPADE WIGTH, LEAD WIDTH AND LEAD THICKNESS EXCLUSIVE OF SOLDER PLATE.
- PACKAGE OUTLINE EXCLUSIVE OF MOLD FLASHES AND BURR DIMENSIONS.
- COMPLANARITY APPLIES TO THE EXPOSED PAD AS WELL AS THE TERMINALS, COMPLANARITYSHALL NOT EXCEED 0.08mm.
- WARPAGE SHALL NOT EXCEED 0.10mm.
- THE TERMINAL #1 IDENTIFIER AND TERMINAL NUMBERING CONVENTION SHALL CONFORM TO JESD 95-1 SPP-012; DETAILS OF TERMINAL #1 IDENTIFIER ARE OPTIONAL, BUT MUST BE LOCATED WITHIN THE ZONE INDICATED. THE TERMINAL IDENTIFIER MAY BE EITHER A MOLD OR MARKED FEATURE.
- ND AND NE REFER TO THE NUMBER OF TERMINALS ON EACH D AND E SIDE RESPECTIVELY.

Note: Bottom side metal plate is at ground potential

Tape and Reel Specifications

Package Type	# of Pins	Nominal Package Size	Units per Reel	Trailer A		Leader B		Pocket Tape (mm)		Reel Diameter (mm)
				Pockets	Length (mm)	Pockets	Length (mm)	Width	Pitch	
8TDFN	8	2x2mm	3,000	42	168	42	168	8	4	178

Tape and Reel Drawing



SECTION Y-Y

Ao	2.25+/-0.1
Bo	2.25*/-0.1
Ko	1.00+/-0.1
F	3.50+/-0.1
P1	4.00+/-0.1
W	8.00+/-0.3

1. Measured from centreline of sprocket hole to centreline of pocket.
2. Cumulative tolerance of 10 sprocket holes is ±0.20.
3. Measured from centreline of sprocket hole to centreline of pocket.
4. Other material available.

ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED.