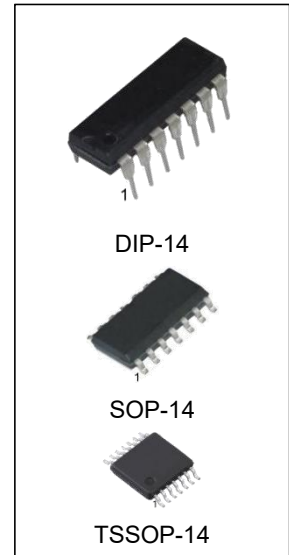


Quad 2-Input Or Gate

Features

- Wide operating voltage range $V_{DD}=3V$ to 18V
- Fully static operation
- 5V-10V-15V parametric ratings
- Standardized symmetrical output characteristics
- Inputs and outputs are protected against electrostatic effects
- Specified from $-40^{\circ}C$ to $+85^{\circ}C$



Ordering Information

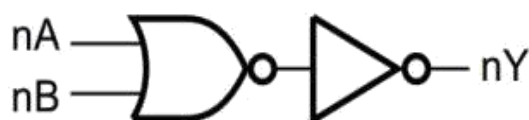
DEVICE	Package Type	MARKING	Packing	Packing Qty
CD4071BPG	DIP-14	CD4071B	TUBE	1000pcs/box
CD4071BDRG	SOP-14	CD4071B	REEL	2500pcs/reel
CD4071BDRG4	SOP-14	CD4071B	REEL	4000pcs/reel
CD4071BPWRG	TSSOP-14	CD4071B	REEL	2500pcs/reel

Description

The CD4071B is a quad 2-input OR gate, These quad gates are monolithic complementary MOS(CMOS) integrated circuits constructed with N- and P-channel enhancement mode transistors.

They have equal source and sink current capabilities. The devices also have buffered outputs which improve transfer characteristics by providing very high gain. All inputs are buffered.

Logic Diagram

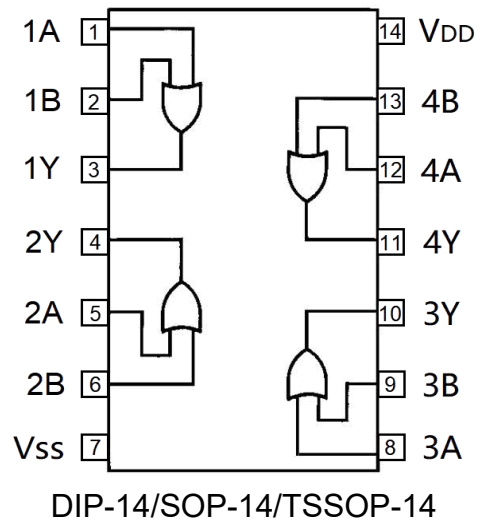


Logic Diagram (one gate)

Truth Table

Input		Outputs
nA	nB	Y
0	0	0
0	1	1
1	0	1
1	1	1

Connection Diagrams



Pin Description

PIN No.	NAME	I/O	FUNCTION
1	1A	I	Data Input
2	1B	I	Data Input
3	1Y	O	Data Output
4	2Y	O	Data Output
5	2A	I	Data Input
6	2B	I	Data Input
7	V _{SS}	-	Ground
8	3A	I	Data Input
9	3B	I	Data Input
10	3Y	O	Data Output
11	4Y	O	Data Output
12	4A	I	Data Input
13	4B	I	Data Input
14	V _{DD}	-	Positive Supply Voltage

Absolute Maximum Ratings

Symbol	Parameter	MIN	MAX	Unit
V_{DD}	Supply Voltage	-0.5	20	V
V_I	DC Input Voltage	0.5	$V_{CC}+0.5$	V
P_D	Power Dissipation		500	mW
T_J	Junction Temperature		125	°C
T_{OP}	Operating Temperature	-40	85	°C
T_L	Lead Temperature (10 Seconds)		260	°C

Absolute maximum ratings are those values beyond which the device could be permanently damaged, These are stress ratings only, which do not imply functional operation of the device at these or any other conditions beyond those indicated under Recommended Operating Conditions.

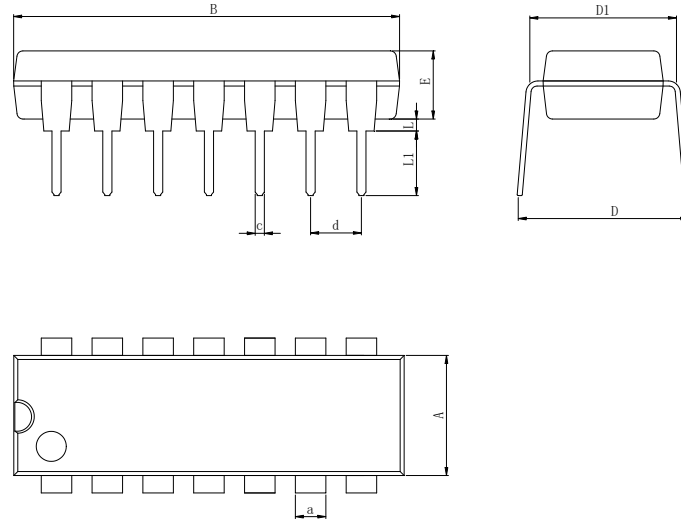
Electrical Characteristics

($T_a=25^{\circ}\text{C}$, voltages are referenced to VSS (ground=0V), unless otherwise specified)

Symbol	Parameter	Test Condition			MIN	TYP	MAX	Unit
		V_O	V_{IN}	V_{DD}				
I_{DD}	Supply Current		0,5	5	--		1	uA
			0,10	10	--		1	uA
			0,18	18	--		2	uA
I_{OL}	Low Level Output Current	0.4	0,5	5	1	2	--	mA
		0.5	0,10	10	2	5	--	mA
		1.5	0,15	15	10	20	--	mA
I_{OH}	High Level Output Current	4.6	0,5	5	-0.5	-1	--	mA
		2.5	0,5	5	-2	-4	--	mA
		9.5	0,10	10	-1	-2.2	--	mA
		13.5	0,15	15	-4	-8	--	mA
V_{OL}	Low Level Output Voltage		0,5	5	--	0.0	0.05	V
			0,10	10	--	0.0	0.05	V
			0,15	15	--	0.0	0.05	V
V_{OH}	High Level Output Voltage		0,5	5	4.95	5	--	V
			0,10	10	9.95	10	--	V
			0,15	15	14.95	15	--	V
V_{IL}	Low Level Output Voltage	0.5,4.5		5	--		1.5	V
		1,9		10	--		3	V
		1.5,13.5		15	--		4	V
V_{IH}	High Level Output Voltage	0.5		5	3.5		--	V
		1		10	7		--	V
		1.5		15	11		--	V
I_I	Input Leakage Current		0,18	18	--		±1	uA

Physical Dimensions

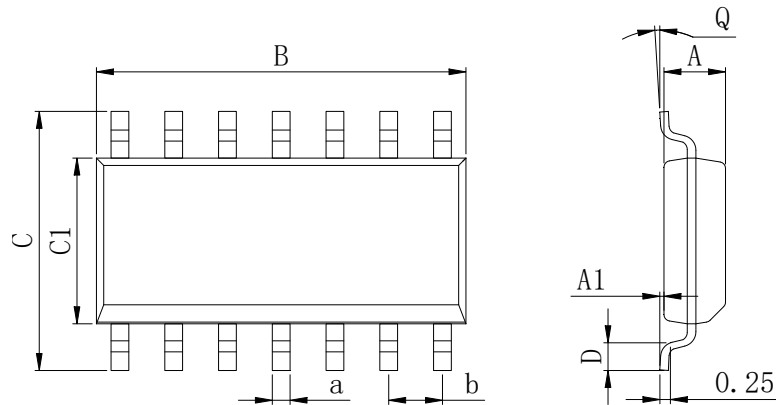
DIP-14



Dimensions In Millimeters(DIP-14)

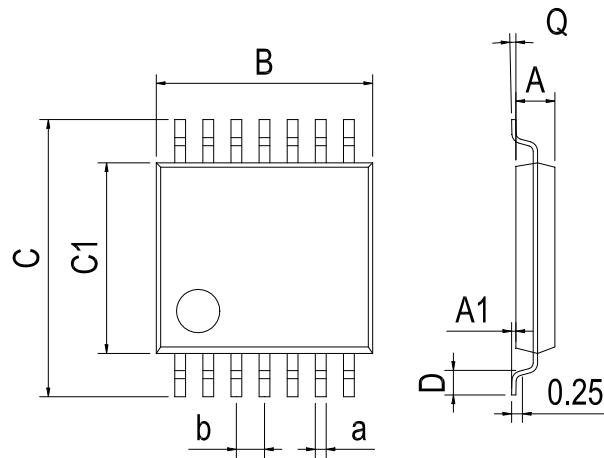
Symbol:	A	B	D	D1	E	L	L1	a	c	d
Min:	6.10	18.94	8.10	7.42	3.10	0.50	3.00	1.50	0.40	2.54 BSC
Max:	6.68	19.56	10.9	7.82	3.55	0.70	3.60	1.55	0.50	

SOP-14



Dimensions In Millimeters(SOP-14)

Symbol:	A	A1	B	C	C1	D	Q	a	b
Min:	1.35	0.05	8.55	5.80	3.80	0.40	0°	0.35	1.27 BSC
Max:	1.55	0.20	8.75	6.20	4.00	0.80	8°	0.45	

TSSOP-14


Dimensions In Millimeters(TSSOP-14)									
Symbol:	A	A1	B	C	C1	D	Q	a	b
Min:	0.85	0.05	4.90	6.20	4.30	0.40	0°	0.20	0.65 BSC
Max:	0.95	0.20	5.10	6.60	4.50	0.80	8°	0.25	

Revision History

REVISION NUMBER	DATE	REVISION	PAGE
V1.0	2019-11	New	1-5
V1.1	2025-8	Document Reformatting	1-8

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