Description

CD4572 Hex Gate provides the system designer with direct implementation of inverter,NAND,and NOR functions and supplements the existing family of CMOS gates.

Features

- Pin 7 NOR input positioned adjacent to VSS for easy use of gate as an inverter
- Pin 15 NAND input positioned adjacent to VDD for easy use of gate as an inverter
- Standardized symmetrical output characteristics
- 100% tested for quiescent current at 18V
- Maximum input current of 1μA at 18V and 25℃
- 5V,10V, and 15V parametric ratings

Pin Description and Functional Diagram

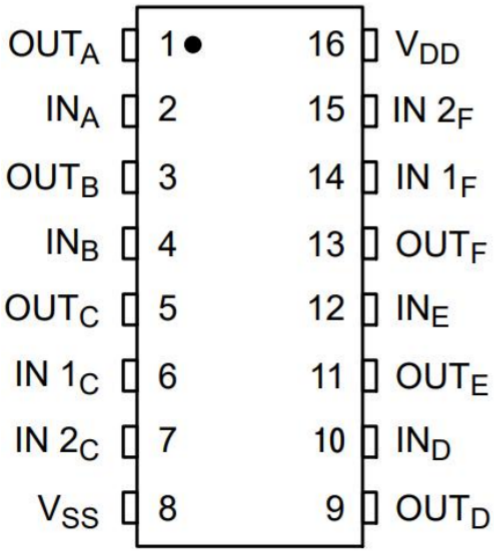


Figure 2.1 Top View

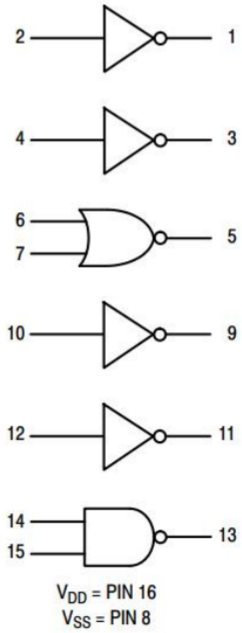


Figure 2.2 Functional Diagram

PIN No.	NAME	I/O	FUNCTION
1	OUT_A	O	Inverter A Output
2	IN_A	I	Inverter A Input
3	OUT_B	O	Inverter B Output
4	IN_B	I	Inverter B Input
5	OUT_C	O	NOR Output
6	$IN1_C$	I	NOR Input 1
7	$IN2_C$	I	NOR Input 2
8	VSS		Ground
9	OUT_D	O	Inverter D Output
10	IN_D	I	Inverter D Input
11	OUT_E	O	Inverter E Output
12	IN_E	I	Inverter E Input
13	OUT_F	O	NAND Output
14	$IN1_F$	I	NAND Input 1
15	$IN2_F$	I	NAND Input 2
16	VDD		Supply Voltage

Schematic Diagram

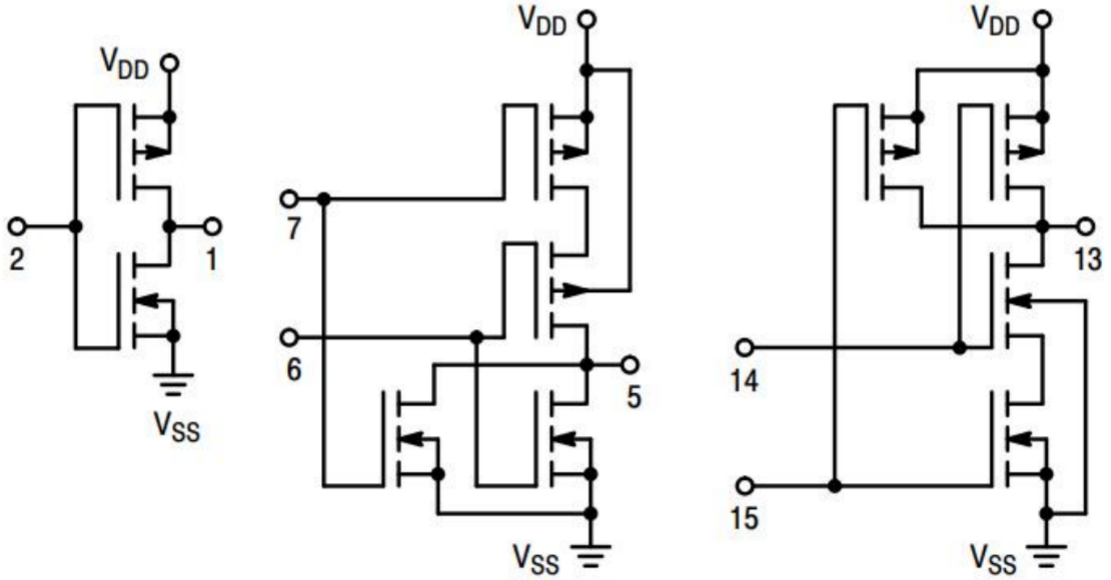


Figure 3.1：CD4572 Schematic Diagram

Absolute Maximum Ratings

Symbol	Parameter	MIN	MAX	Unit
V_{DD}	DC Supply Voltage Range (Voltage Referenced to VSS Terminals)	-0.5	20	V
V_I	Input Voltage Range, All Inputs	0.5	VDD+0.5	V
P_D	Power Dissipation		500	mW
T_J	Junction Temperature		125	℃
T_{OP}	Operating Temperature	-40	85	℃

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

DC Specifications

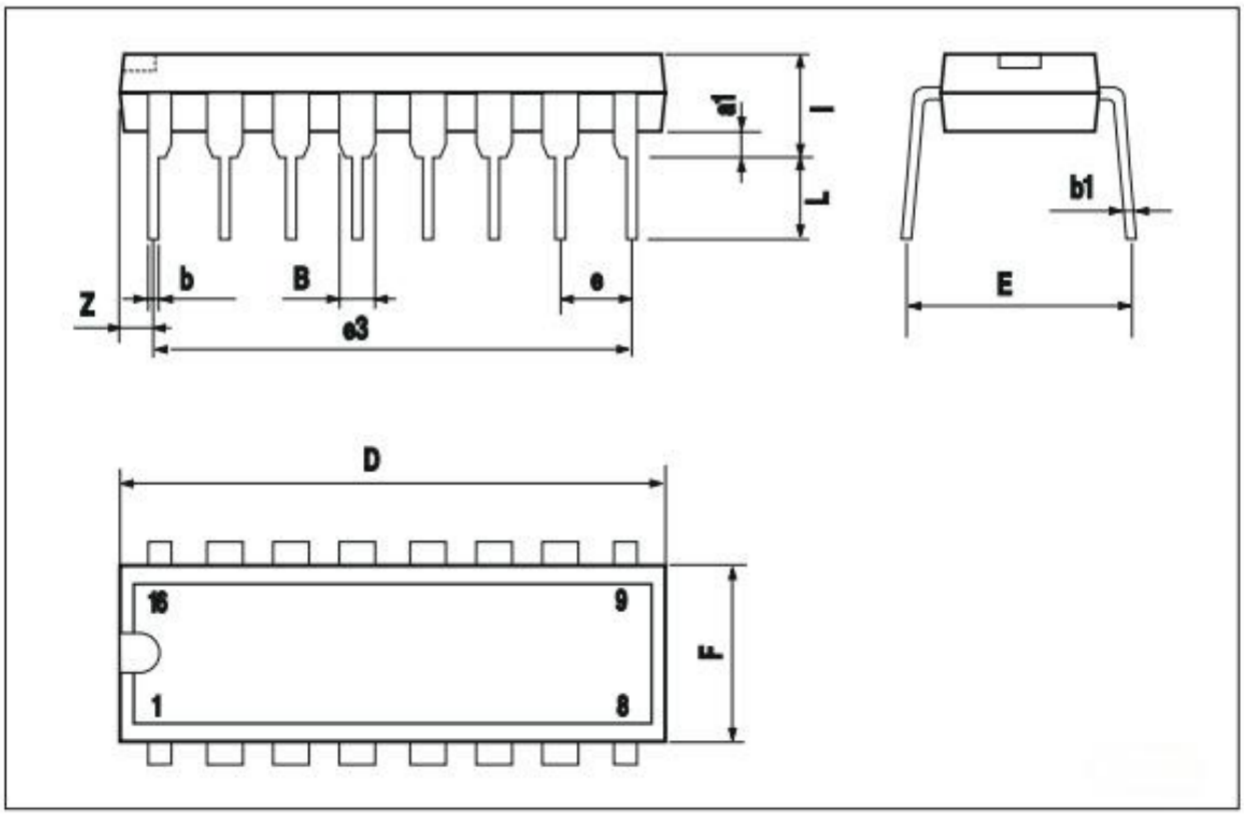
(T_a=25℃, voltages are referenced to VSS (ground=0V), unless otherwise specified)

Symbol	Parameter	Test Condition			MIN	TYP	MAX	Unit
		VO	VIN	VDD				
I_{DD}	Supply Current	--	0,5	5	--	0	1	uA
		--	0,10	10	--	0	1	uA
		--	0,18	18	--	0	1	uA
I_{OL}	Low Level Output Current	0.4	0,5	5	1	2	--	mA
		0.5	0,10	10	2.5	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	-2.5	-5	--	mA
		9.5	0,10	10	-1	-2.5	--	mA
		13.5	0,15	15	-5	-10	--	mA
V_{OL}	Low Level Output Voltage	--	0,5	5	--	0	0.05	V
		--	0,10	10	--	0	0.05	V
		--	0,15	15	--	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 Input Voltage	0.5,4.5	--	5	--	--	1	V
		1,9	--	10	--	--	2	V
		1.5,13.5	--	15	--	--	2.5	V
V_{IH}	High Level Input Voltage	0.5,4.5	--	5	4	--	--	V
		1,9	--	10	8	--	--	V
		1.5,13.5	--	15	12.5	--	--	V
I_{IN}	Input Leakage Current	--	0,18	18	--	0	±1	uA

Package Information

DIP16

Dim.	mm.			inch.		
	Min.	Typ.	Max.	Min.	Typ.	Max.
a1	0.51			0.020		
B	0.77		1.65	0.030		0.065
b		0.5			0.020	
b1		0.25			0.010	
D			20			0.787
E		8.5			0.335	
e		2.54			0.100	
e3		17.78			0.700	
F			7.1			0.280
I			5.1			0.201
L		3.3			0.130	
Z			1.27			0.050



SOP16

Dim.	mm.			inch.		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			1.75			0.068
a1	0.1		0.25	0.004		0.010
a2			1.64			0.063
b	0.35		0.46	0.013		0.018
b1	0.19		0.25	0.007		0.010
C		0.5			0.019	
c1	45° (typ.)					
D	9.8		10	0.385		0.393
E	5.8		6.2	0.228		0.244
e		1.27			0.050	
e3		8.89			0.350	
F	3.8		4.0	0.149		0.157
G	4.6		5.3	0.181		0.208
L	0.5		1.27	0.019		0.050
M			0.62			0.024
S	8° (max.)					

