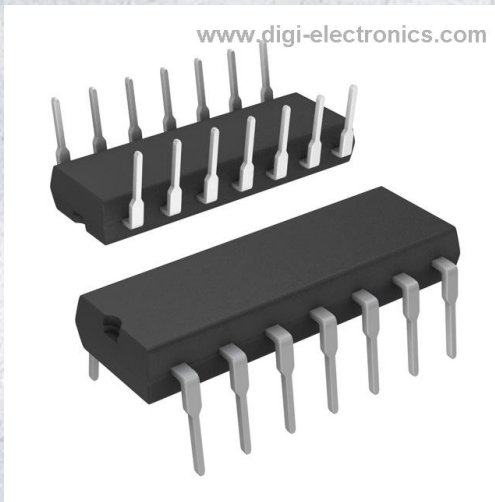


DM74S30N Datasheet



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	DM74S30N-DG
Manufacturer	onsemi
Manufacturer Product Number	DM74S30N
Description	IC GATE NAND 1CH 8-INP 14MDIP
Detailed Description	NAND Gate IC 1 Channel 14-MDIP



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Purchase and inquiry

Manufacturer Product Number:

DM74S30N

Series:

74S

Logic Type:

NAND Gate

Number of Inputs:

8

Voltage - Supply:

4.75V ~ 5.25V

Input Logic Level - Low:

0.8V

Max Propagation Delay @ V, Max CL:

10ns @ 5V, 50pF

Mounting Type:

Through Hole

Package / Case:

14-DIP (0.300", 7.62mm)

Manufacturer:

onsemi

Product Status:

Obsolete

Number of Circuits:

1

Features:

-

Current - Output High, Low:

1mA, 20mA

Input Logic Level - High:

2V

Operating Temperature:

0°C ~ 70°C

Supplier Device Package:

14-MDIP

Base Product Number:

74S30

Environmental & Export classification

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

REACH Status:

REACH Unaffected

HTSUS:

8542.39.0001



September 1986
Revised April 2000

DM74S30 8-Input NAND Gate

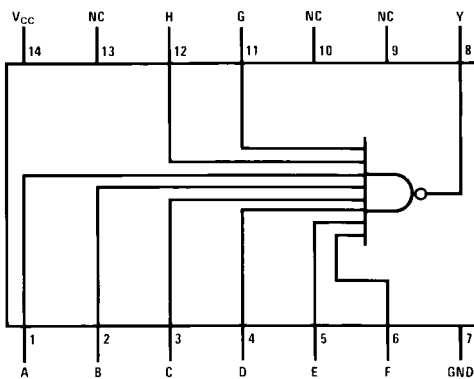
General Description

This device contains a single gate which performs the logic NAND function.

Ordering Code:

Order Number	Package Number	Package Description
DM74S30N	N14A	14-Lead Plastic Dual-In-Line Package (PDIP), JEDEC MS-001, 0.300 Wide

Connection Diagram



Function Table

$$Y = \overline{ABCDEFGH}$$

Inputs	Output
A thru H	Y
All Inputs H	L
One or More Input L	H

H = HIGH Logic Level
L = LOW Logic Level

DM74S30 8-Input NAND Gate

DM74S30

Absolute Maximum Ratings(Note 1)

Supply Voltage	7V
Input Voltage	5.5V
Operating Free Air Temperature Range	0°C to +70°C
Storage Temperature Range	-65°C to +150°C

Note 1: The "Absolute Maximum Ratings" are those values beyond which the safety of the device cannot be guaranteed. The device should not be operated at these limits. The parametric values defined in the Electrical Characteristics tables are not guaranteed at the absolute maximum ratings. The "Recommended Operating Conditions" table will define the conditions for actual device operation.

Recommended Operating Conditions

Symbol	Parameter	Min	Nom	Max	Units
V _{CC}	Supply Voltage	4.75	5	5.25	V
V _{IH}	HIGH Level Input Voltage	2			V
V _{IL}	LOW Level Input Voltage			0.8	V
I _{OH}	HIGH Level Output Current			-1	mA
I _{OL}	LOW Level Output Current			20	mA
T _A	Free Air Operating Temperature	0		70	°C

Electrical Characteristics

over recommended operating free air temperature (unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ (Note 2)	Max	Units
V _I	Input Clamp Voltage	V _{CC} = Min, I _I = -18 mA			-1.2	V
V _{OH}	HIGH Level Output Voltage	V _{CC} = Min, I _{OH} = Max V _{IL} = Max	2.7	3.4		V
V _{OL}	LOW Level Output Voltage	V _{CC} = Min, I _{OL} = Max V _{IH} = Min			0.5	V
I _I	Input Current @ Max Input Voltage	V _{CC} = Max, V _I = 5.5V			1	mA
I _{IH}	HIGH Level Input Current	V _{CC} = Max, V _I = 2.7V			50	μA
I _{IL}	LOW Level Input Current	V _{CC} = Max, V _I = 0.5V			-2	mA
I _{OS}	Short Circuit Output Current	V _{CC} = Max (Note 3)	-40		-100	mA
I _{CCH}	Supply Current with Outputs HIGH	V _{CC} = Max		3	5	mA
I _{CCL}	Supply Current with Outputs LOW	V _{CC} = Max		5.5	10	mA

Note 2: All typicals are at V_{CC} = 5V, T_A = 25°C.

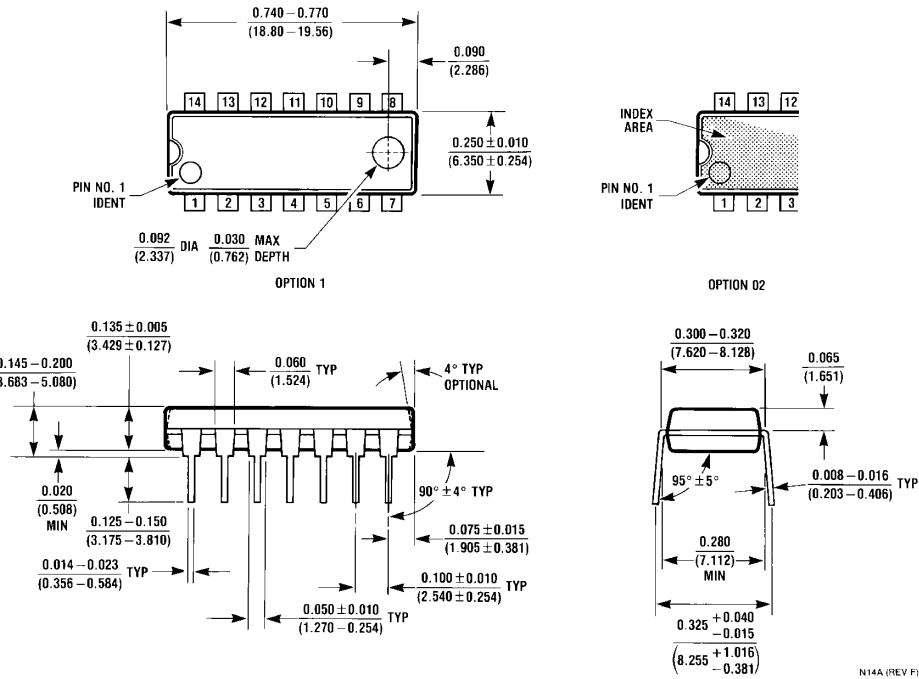
Note 3: Not more than one output should be shorted at a time, and the duration should not exceed one second.

Switching Characteristics

at V_{CC} = 5V and T_A = 25°C

Symbol	Parameter	R _L = 280Ω				Units
		C _L = 15 pF		C _L = 50 pF		
		Min	Max	Min	Max	
t _{PLH}	Propagation Delay Time LOW-to-HIGH Level Output	2	6	2	8	ns
t _{PHL}	Propagation Delay Time HIGH-to-LOW Level Output	2	7	3	10	ns

Physical Dimensions inches (millimeters) unless otherwise noted



14-Lead Plastic Dual-In-Line Package (PDIP), JEDEC MS-001, 0.300 Wide Package Number N14A

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