

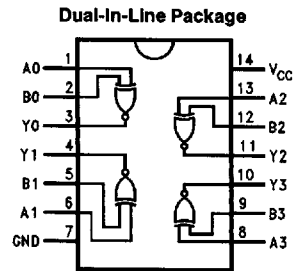
DM74LS266

Quad 2-Input Exclusive-NOR Gate with Open-Collector Outputs

General Description

This device contains four independent gates each of which performs the logic exclusive-NOR function. Outputs are open collector.

Connection Diagram



TL/F/10182-1

Order Number DM74LS266M or DM74LS266N
See NS Package Number M14A or N14A

Truth Table

Inputs		Outputs
A	B	Y
L	L	H
L	H	L
H	L	L
H	H	H

H = HIGH Voltage Level

L = LOW Voltage Level

DM74LS266 Quad 2-Input Exclusive-NOR Gate with Open-Collector Outputs

Absolute Maximum Ratings (Note)

Supply Voltage	7V
Input Voltage	7V
Operating Free Air Temperature Range DM74LS	0°C to +70°C
Storage Temperature Range	-65°C to +150°C

Note: 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" table 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
V _{OH}	High Level Output Voltage			5.5	V
I _{OL}	Low Level Output Current			8	mA
T _A	Free Air Operating Temperature	0		70	°C

Electrical Characteristics over recommended operating free air temperature range (unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ (Note 1)	Max	Units
V _I	Input Clamp Voltage	V _{CC} = Min, I _I = -18 mA			-1.5	V
I _{CEX}	High Level Output Current	V _{CC} = Min, V _O = 5.5V, V _{IL} = Max			100	μA
V _{OL}	Low Level Output Voltage	V _{CC} = Min, I _{OL} = Max, V _{IH} = Min			0.5	V
		I _{OL} = 4 mA, V _{CC} = Min			0.4	
I _I	Input Current @ Max Input Voltage	V _{CC} = Max, V _I = 7V			0.2	mA
I _{IH}	High Level Input Current	V _{CC} = Max, V _I = 2.7V			40	μA
I _{IL}	Low Level Input Current	V _{CC} = Max, V _I = 0.4V			-0.8	mA
I _{OS}	Short Circuit Output Current	V _{CC} = Max (Note 2)	-20		-100	mA
I _{CC}	Supply Current	V _{CC} = Max			13	mA

Switching Characteristics

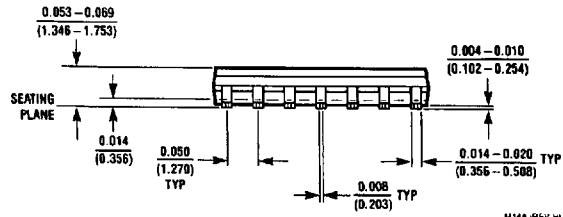
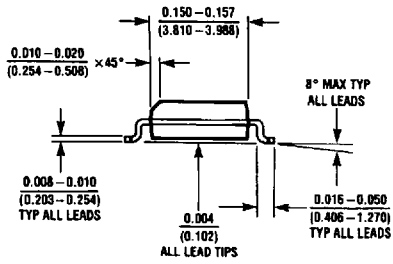
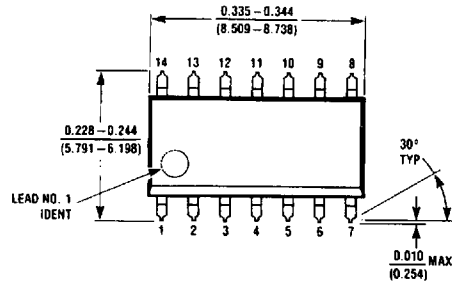
at V_{CC} = 5V and T_A = 25°C

Symbol	Parameter	R _L = 2 kΩ C _L = 15 pF		Units
		Min	Max	
t _{PLH}	Propagation Delay Time Low to High Level Output		23	ns
t _{PHL}	Propagation Delay Time High to Low Level Output		23	ns

Note 1: All typicals are at V_{CC} = 5V, T_A = 25°C.

Note 2: Not more than one output should be shorted at a time, and the duration should not exceed one second.

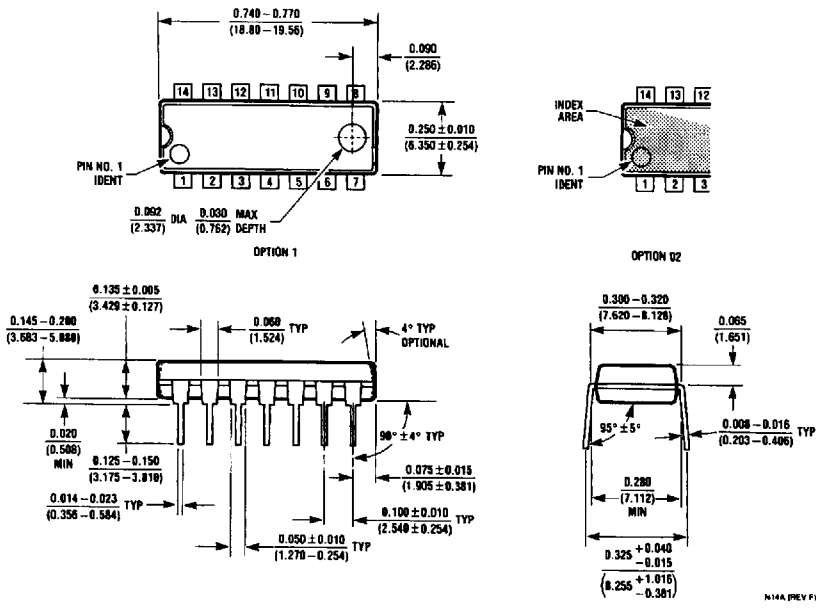
Physical Dimensions inches (millimeters)



14-Lead Small Outline Molded Package (M)
Order Number DM74LS266M
NS Package Number M14A

M14A (REV H)

Physical Dimensions inches (millimeters) (Continued)



14-Lead Molded Dual-In-Line Package (N)
Order Number DM74LS266N
NS Package Number N14A

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