

DN74LS260

Dual 5-input Positive NOR Gates

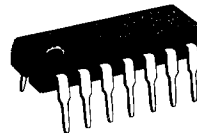
■ Description

DN74LS60 contains two 5-input positive-logic NOR gate circuits.

■ Features

- Low power consumption ($P_d = 20\text{mW}$ typical)
- High speed ($t_{pd} = 9\text{ns}$ typical)
- Low output impedance
- Wide operating temperature range ($T_a = -20$ to $+75^\circ\text{C}$)

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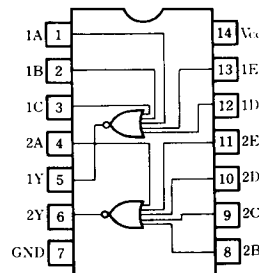
14-pin plastic DIL package

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14-pin Panaflat package (SO-14D)

Pin configuration (top view)



■ Recommended operating conditions

Parameter	Sym	Min	Typ	Max	Unit
Supply voltage	V_{CC}	4.75	5.00	5.25	V
Output current	I_{OH}			-400	μA
	I_{OL}			8	mA
Operating temperature range	T_{opr}	-20	25	75	$^\circ\text{C}$

■ DC characteristics (Ta = -20 ~ +75 °C)

Parameter	Sym	Test conditions	Min	Typ*	Max	Unit
Input voltage	V _{IH}		2.0			V
	V _{IL}				0.8	V
Output voltage	V _{OH}	V _{CC} = 4.75 V, V _{IL} = 0.8 V I _{OH} = -400 μA	2.7	3.4		V
	V _{OL1}	V _{CC} = 4.75 V I _{OL} = 4 mA		0.25	0.4	V
	V _{OL2}	V _{IH} = 2 V I _{OL} = 8 mA		0.35	0.5	V
Input current	I _{IH}	V _{CC} = 5.25 V V _I = 2.7 V			20	μA
	I _{IL}	V _{CC} = 5.25 V V _I = 0.4 V			-0.4	mA
	I _I	V _{CC} = 5.25 V V _I = 7 V			0.1	mA
Output short circuit current**	I _{OS}	V _{CC} = 5.25 V, V _O = 0 V	-15		-100	mA
Input clamp voltage	V _{IK}	V _{CC} = 4.75 V I _I = -18 mA			-1.5	V
Supply current***	I _{CCH}	V _{CC} = 5.25 V,			4	mA
	I _{CCL}	V _{CC} = 5.25 V,			5.5	mA

* When constant at V_{CC} = 5V, Ta = 25 °C.

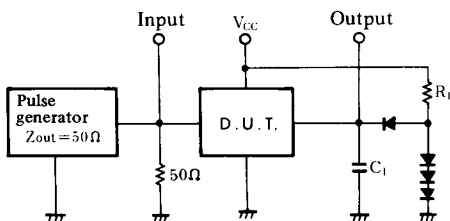
** Only one output at a time short circuited to GND. Also, short circuit time to GND within 1 second.

■ Switching characteristics (V_{CC} = 5 V, Ta = 25 °C)

Parameter	Sym	Test conditions	Min	Typ	Max	Unit
Propagation delay time	t _{PLH}	C _L = 15 pF			12	ns
	t _{PHL}	R _L = 2 KΩ			12	ns

※ Switching parameter measurement information

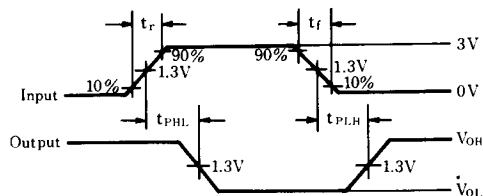
1. Measurement circuit



Notes

- C_L includes probe and tool floating capacitance.
- Diodes are all MA161.

2. Waveforms



Notes

- Input waveform: t_r ≤ 15ns, t_f ≤ 6ns, PRR = 1MHz, duty cycle = 50%.