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NTE74LS126A
Integrated Circuit
TTL – Quad Bus Buffer with 3–State Outputs

Description:

The NTE74LS126A is a quad bus buffer in a 14–Lead plastic DIP type package that features three–state outputs that, when enabled, have the low impedance characteristics of a TTL output with additional drive capability at high logic levels to permit driving heavily loaded bus lines without external pull–up resistors, when disabled, both output transistors are turned off presenting a high–impedance state to the bus so the output will act neither as a significant load nor as a driver. The device outputs are disabled when G is low.

Features:

- Quad Bus Buffers
- 3–State Outputs
- Separate Controls for Each Channel

Absolute Maximum Ratings: (Note 1)

Supply Voltage, V_{CC} 7V
DC Input Voltage, V_{IN} 7V
Operating Temperature Range, T_A . . . . . 0°C to +70°C
Storage Temperature Range, T_{stg} . . . . . –65°C to +150°C

Note 1. Unless otherwise specified, all voltages are referenced to GND.

Recommended Operating Conditions:

Parameter	Symbol	Min	Typ	Max	Unit
Supply Voltage	V_{CC}	4.75	5.0	5.25	V
High–Level Input Voltage	V_{IH}	2	–	–	V
Low–Level Input Voltage	V_{IL}	–	–	0.8	V
High–Level Output Current	I_{OH}	–	–	–2.6	mA
Low–Level Output Current	I_{OL}	–	–	24	mA
Operating Temperature Range	T_A	0	–	+70	°C

Electrical Characteristics: (Note 2, Note 3)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Input Clamp Voltage	V_{IK}	V_{CC} = MIN, I_I = −18mA		–	–	−1.5	V
High Level Output Voltage	V_{OH}	V_{CC} = MIN, V_{IH} = 2V, V_{IL} = 0.8V, I_{OH} = -2.6mA		2.4	–	–	V
Low Level Output Voltage	V_{OL}	V_{CC} = MIN, V_{IH} = 2V, V_{IL} = 0.8V	I_{OL} = 12mA	–	0.25	0.4	V
			I_{OL} = 24mA	–	0.35	0.5	V
Output Off Current	I_{OZ}	V_{CC} = MAX, V_{IH} = 2V, V_{IL} = 0.8V	V_O = 2.4V	–	–	20	μA
			V_O = 0.4V	–	–	−20	μA
Input Current	I_I	V_{CC} = MAX, V_I = 7V		–	–	0.1	mA
High Level Input Current	I_{IH}	V_{CC} = MAX, V_I = 2.7V		–	–	20	μA
Low Level Input Current	I_{IL}	V_{CC} = MAX, V_I = 0.4V		–	–	−0.4	mA
Short−Circuit Output Current	I_{OS}	V_{CC} = MAX, Note 4		−40	–	−225	mA
Supply Current	I_{CC}	V_{CC} = MAX, Note 5		–	12	22	mA

Note 2. .For conditions shown as MIN or MAX, use the appropriate value specified under “Recommended Operation Conditions”.

Note 3. All typical values are at V_{CC} = 5V, T_A = +25°C.

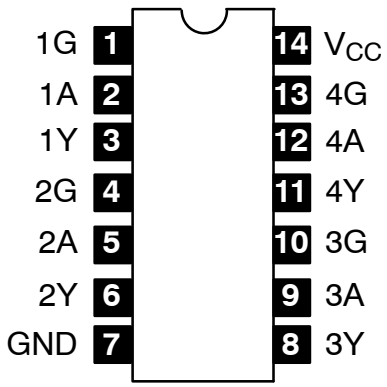
Note 4. Not more than one output should be shorted at a time, and the duration of the short−circuit should not exceed one second.

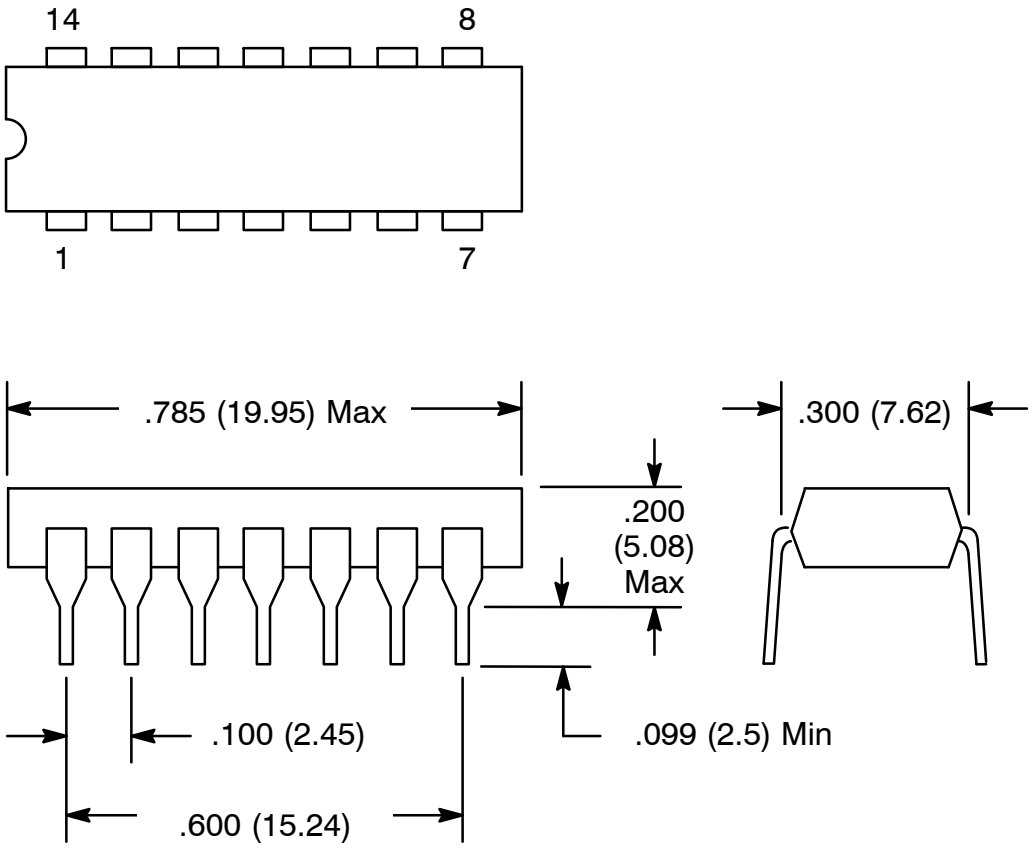
Note 5. Data inputs = 0V, Output controls = 0V.

Switching Characteristics: (V_{CC} = 5V, T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Propagation Delay Time Data to Output	t_{PLH}	R_L = 667Ω, C_L = 45pF	–	9	15	ns
	t_{PHL}		–	8	18	ns
Output Enable Time	t_{PZH}		–	16	25	ns
	t_{PZL}		–	21	35	ns
Output Disable Time	t_{PHZ}	R_L = 667Ω, C_L = 5pF	–	–	25	ns
	t_{PLZ}		–	–	25	ns

Pin Connection Diagram




14
8
1
7
.785 (19.95) Max
.300 (7.62)
.200
(5.08)
Max
.100 (2.45)
.099 (2.5) Min
.600 (15.24)