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NTE74H01
Integrated Circuit
TTL – High Speed,
Quad 2–Input POSITIVE NAND Gate
With Open Collector Outputs
14–Lead DIP

Recommended Operating Conditions:

Parameter	Symbol	Min	Typ	Max	Unit
Supply Voltage	V_{CC}	4.75	5.0	5.25	V
Operating Temperature Range	T_A	0	+25	+125	°C
Input Loading for Each Input		–	–	1.25	U.L.

Electrical Characteristics: (Note 1, Note 2 unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Input HIGH Voltage	V_{IH}	Guaranteed Input HIGH Voltage	2.0	–	–	V	
Input LOW Voltage	V_{IL}	Guaranteed Input LOW Voltage	–	–	0.8	V	
Output HIGH Current	I_{OH}	$V_{CC} = \text{MIN}, V_{OH} = 5.5V, V_{IN} = 0.8V$	–	–	0.25	mA	
Output LOW Voltage	V_{OL}	$V_{CC} = \text{MIN}, I_{OL} = 20mA, V_{IN} = 2.0V$	–	–	0.4	V	
Input HIGH Current	I_{IH}	$V_{CC} = \text{MAX}, V_{IN} = 2.4V$	Each Input	–	–	50	μA
		$V_{CC} = \text{MAX}, V_{IN} = 5.5V$		–	–	1.0	mA
Input LOW Current	I_{IL}	$V_{CC} = \text{MAX}, V_{IN} = 0.4V, \text{Each Input}$	–	–	–2.0	mA	
Output Short Circuit Current	I_{OS}	$V_{CC} = \text{MAX}$	–40	–	–100	mA	
Supply Current HIGH	I_{CCH}	$V_{CC} = \text{MAX}, V_{IN} = 0V$	–	6.8	10	mA	
Supply Current LOW	I_{CCL}	$V_{CC} = \text{MAX}, V_{IN} = 4.5V$	–	26	40	mA	

Note 1. For conditions shown as MIN. or MAX., use the appropriate value specified under the “Recommended Operating Conditions”.

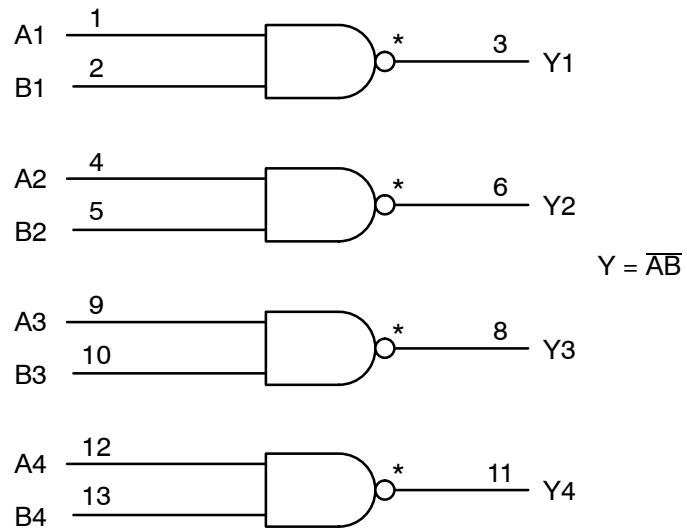
Note 2. Typical limits are at $V_{CC} = 5.0V, +25^{\circ}C$.

Note 3. Not more than one output should be shorted at a time, and duration of short-circuit test should not exceed 1 second.

Switching Characteristics: ($V_{CC} = 5V, C_L = 25pF, R_L = 280\Omega$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn–Off Delay Input to Output	t_{PLH}		–	10	15	ns
Turn–On Delay Input to Output	t_{PHL}		–	7.5	12	ns

Logic Diagram



Pin14 = V_{CC}
Pin7 = GND
* Open Collector

Pin Connection Diagram

