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NTE74H10 **Integrated Circuit** **TTL – High Speed,** **Triple 3–Input Positive NAND Gate** **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	+70	°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 Voltage	V_{OH}	$V_{CC} = \text{MIN}, I_{OH} = -0.5\text{mA}, V_{IN} = 0.8\text{V}$	2.4	–	–	V
Output LOW Voltage	V_{OL}	$V_{CC} = \text{MIN}, I_{OH} = 20\text{mA}, V_{IN} = 2.0\text{V}$	–	–	0.4	V
Input HIGH Current	I_{IH}	$V_{CC} = \text{MAX}, V_{IN} = 2.4\text{V}$	Each Input	–	–	50 μA
		$V_{CC} = \text{MAX}, V_{IN} = 5.5\text{V}$		–	–	1.0 mA
Input LOW Current	I_{IL}	$V_{CC} = \text{MAX}, V_{IN} = 0.4\text{V}$, Each Input	–	–	–2.0	mA
Output Short Circuit Current	I_{OS}	$V_{CC} = \text{MAX}$, Note 3	–40	–	–100	mA
Supply Current HIGH	I_{CCH}	$V_{CC} = \text{MAX}, V_{IN} = 0\text{V}$	–	7.5	12.6	mA
Supply Current LOW	I_{CCL}	$V_{CC} = \text{MAX}, V_{IN} = 4.5\text{V}$	–	19.5	30	mA

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

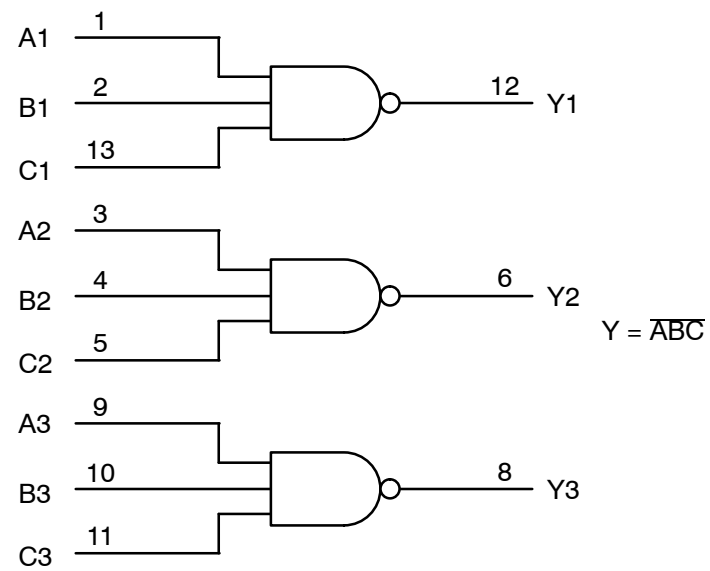
Note 2. Typical limits are at $V_{CC} = 5.0\text{V}$, +25°C.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn–Off Delay Input to Output	t_{PLH}		–	5.9	10	ns
Turn–On Delay Input to Output	t_{PHL}		–	6.3	10	ns

Logic Diagram



Pin14 = V_{CC}
Pin7 = GND

Pin Connection Diagram

