



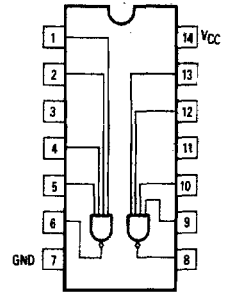
Advance Information

Dual 4-Input NAND Buffer

MC74F40

**DUAL 4-INPUT
NAND BUFFER
FAST™ SCHOTTKY TTL**

CONNECTION DIAGRAM



J SUFFIX — CASE 632-08 (CERAMIC)
N SUFFIX — CASE 646-06 (PLASTIC)
D SUFFIX — CASE 751A-02 (SOIC)

GUARANTEED OPERATING RANGES

Symbol	Parameter		Min	Typ	Max	Unit
V _{CC}	Supply Voltage	74	4.5	5	5.5	V
T _A	Operating Ambient Temperature Range	74	0	25	70	°C
I _{OH}	Output Current — High	74			-15	mA
I _{OL}	Output Current — Low	74			64	mA

DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE (unless otherwise specified)

Symbol	Parameter	Limits			Units	Test Conditions
		Min	Typ	Max		
V _{IH}	Input HIGH Voltage	2			V	Guaranteed Input HIGH Voltage
V _{IL}	Input LOW Voltage			0.8	V	Guaranteed Input LOW Voltage
V _{IK}	Input Clamp Diode Voltage			-1.2	V	V _{CC} = MIN, I _{IN} = -18 mA
V _{OH}	Output HIGH Voltage	74	2		V	I _{OH} = -15 mA, V _{CC} = 4.5
		74	2.4		V	I _{OH} = -1 mA, V _{CC} = 4.5
		74	2.7		V	I _{OH} = -1 mA, V _{CC} = 4.75
V _{OL}	Output LOW Voltage			0.55	V	I _{OL} = 64 mA, V _{CC} = MIN
I _{IH}	Input HIGH Current			20	μA	V _{CC} = MAX, V _{IN} = 2.7 V
				0.1	mA	V _{CC} = MAX, V _{IN} = 7 V
I _{IL}	Input LOW Current			-1.2	mA	V _{CC} = MAX, V _{IN} = 0.5 V
I _{OS}	Output Short Circuit Current (Note 2)	-100		-225	mA	V _{CC} = MAX, V _{OUT} = 0 V
I _{CC}	Power Supply Current Total, Output HIGH			4	mA	V _{CC} = MAX, V _{IN} = GND
	Total, Output LOW			17	mA	V _{CC} = MAX, V _{IN} = Open

NOTES: 1. For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions for the applicable device type.
2. Not more than one output should be shorted at a time, nor for more than 1 second.

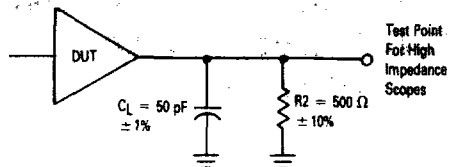
This document contains information on a new product. Specifications and information herein are subject to change without notice.

MC74F40

AC CHARACTERISTICS

Symbol	Parameter	74F		74F		Units
		Min	Max	Min	Max	
t_{PLH}	Propagation Delay	1.5	6	1.5	7	ns
t_{PHL}	Propagation Delay	1	5	1	5.5	ns

$T_A = +25^\circ\text{C}$ $T_A = 0^\circ\text{C}$ to 70°C
 $V_{CC} = +5\text{ V}$ $V_{CC} = 5\text{ V}$
 $C_L = 50\text{ pF}$ $C_L = 50\text{ pF}$
 $\pm 10\%$



For 50 Ω scopes, add a 450 Ω resistor in series with the scope and delete R2.

Figure 1. AC Test Circuit

FUNCTION TABLE

INPUTS				OUTPUT
A	B	C	D	\bar{Y}
L	X	X	X	H
X	L	X	X	H
X	X	L	X	H
X	X	X	X	H
H	H	H	H	L

H = HIGH voltage level
L = LOW voltage level
X = Don't care