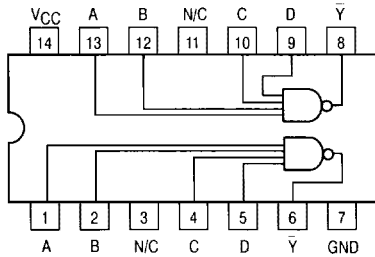


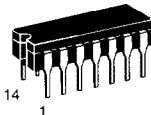


DUAL 4-INPUT NAND BUFFER

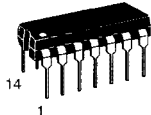


MC74F40


DUAL 4-INPUT NAND BUFFER
FAST™ SCHOTTKY TTL



J SUFFIX
 CERAMIC
 CASE 632-08



N SUFFIX
 PLASTIC
 CASE 646-06



D SUFFIX
 SOIC
 CASE 751A-02

ORDERING INFORMATION

MC74FXXJ	Ceramic
MC74FXXN	Plastic
MC74FXXD	SOIC

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GUARANTEED OPERATING RANGES

Symbol	Parameter		Min	Typ	Max	Unit
V _{CC}	Supply Voltage	74	4.5	5.0	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

MC74F40

DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE (unless otherwise specified)

Symbol	Parameter	Limits			Unit	Test Conditions
		Min	Typ	Max		
V _{IH}	Input HIGH Voltage	2.0			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	2.0		V	I _{OH} = -15 mA
		74	2.4		V	I _{OH} = -1.0 mA
		74	2.7		V	I _{OH} = -1.0 mA
V _{OL}	Output LOW Voltage			0.55	V	I _{OL} = 64 mA
I _{IH}	Input HIGH Current			20	μA	V _{CC} = MAX, V _{IN} = 2.7 V
				0.1	mA	V _{CC} = MAX, V _{IN} = 7.0 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:

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

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AC CHARACTERISTICS

Symbol	Parameter	74F		74F		Unit
		T _A = +25°C		T _A = 0°C to 70°C		
		Min	Max	Min	Max	
t _{PLH}	Propagation Delay	1.5	6.0	1.5	7.0	ns
t _{PHL}	Propagation Delay	1.0	5.0	1.0	5.5	ns

V_{CC} = +5.0 V
C_L = 50 pF

FUNCTION TABLE

Inputs				Output
A	B	C	D	Y
L	X	X	X	H
X	L	X	X	H
X	X	L	X	H
X	X	X	L	H
H	H	H	H	L

H = HIGH Voltage Level
L = LOW Voltage Level
X = Don't Care