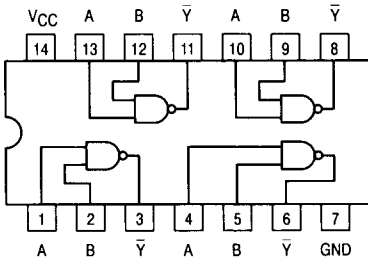


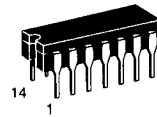


# QUAD 2-INPUT NAND BUFFER, OPEN COLLECTOR

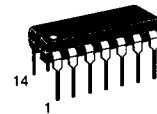


**MC74F38**

**QUAD 2-INPUT NAND BUFFER,  
OPEN COLLECTOR  
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

**GUARANTEED OPERATING RANGES**

Symbol	Parameter		Min	Typ	Max	Unit
V <sub>CC</sub>	Supply Voltage	74	4.5	5.0	5.5	V
T <sub>A</sub>	Operating Ambient Temperature Range	74	0	25	70	°C
I <sub>OL</sub>	Output Current — Low	74			64	mA

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# MC74F38

## DC CHARACTERISTICS OVER OPERATING TEMPERATURE RANGE (unless otherwise specified)

Symbol	Parameter	Limits			Unit	Test Conditions
		Min	Typ	Max		
V <sub>IH</sub>	Input HIGH Voltage	2.0			V	Guaranteed Input HIGH Voltage
V <sub>IL</sub>	Input LOW Voltage			0.8	V	Guaranteed Input LOW Voltage
V <sub>IK</sub>	Input Clamp Diode Voltage			-1.2	V	V <sub>CC</sub> = MIN, I <sub>IN</sub> = -18 mA
V <sub>OL</sub>	Output LOW Voltage			0.55	V	I <sub>OL</sub> = 64 mA, V <sub>CC</sub> = MIN
I <sub>IH</sub>	Input HIGH Current			20	μA	V <sub>CC</sub> = MAX, V <sub>IN</sub> = 2.7 V
				0.1	mA	V <sub>CC</sub> = MAX, V <sub>IN</sub> = 7.0 V
I <sub>IL</sub>	Input LOW Current			-1.2	mA	V <sub>CC</sub> = MAX, V <sub>IN</sub> = 0.5 V
I <sub>OH</sub>	Output HIGH Current			250	μA	V <sub>CC</sub> = MIN, V <sub>IL</sub> = MAX V <sub>IH</sub> = MIN, V <sub>OH</sub> = MAX
I <sub>CC</sub>	Power Supply Current Total, Output HIGH			7.0	mA	V <sub>CC</sub> = MAX, V <sub>IN</sub> = GND
	Total, Output LOW			30	mA	V <sub>CC</sub> = MAX, V <sub>IN</sub> = Open

### NOTES:

1. For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions for the applicable device type.

## AC CHARACTERISTICS

Symbol	Parameter	74F		74F		Unit
		T <sub>A</sub> = +25°C		T <sub>A</sub> = 0°C to 70°C		
		Min	Max	Min	Max	
t <sub>PLH</sub>	Propagation Delay	7.5	12.5	7.5	13	ns
t <sub>PHL</sub>	Propagation Delay	1.0	5.0	1.0	5.5	ns

V<sub>CC</sub> = +5.0 V  
C<sub>L</sub> = 50 pF

## FUNCTION TABLE

Inputs		Output
A	B	$\bar{Y}$
L	L	H
L	H	H
H	L	H
H	H	L

H = HIGH Voltage Level

L = LOW Voltage Level

X = Don't Care