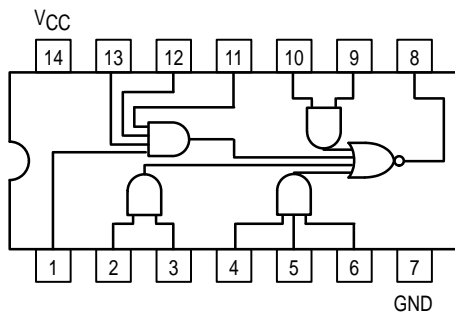




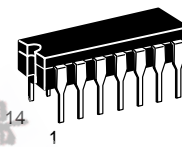
4-2-3-2-INPUT AND-OR-INVERT GATE



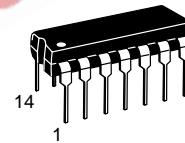
MC54/74F64

**4-2-3-2-INPUT
AND-OR-INVERT GATE**

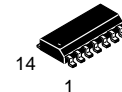
FAST™ SCHOTTKY TTL



J SUFFIX
CERAMIC
CASE 632-08



N SUFFIX
PLASTIC
CASE 646-06



D SUFFIX
SOIC
CASE 751A-02

ORDERING INFORMATION

MC54FXXJ	Ceramic
MC74FXXN	Plastic
MC74FXXD	SOIC

GUARANTEED OPERATING RANGES

Symbol	Parameter		Min	Typ	Max	Unit
VCC	Supply Voltage	54, 74	4.5	5.0	5.5	V
TA	Operating Ambient Temperature Range	54	-55	25	125	°C
		74	0	25	70	
IOH	Output Current — High	54, 74			-1.0	mA
IOL	Output Current — Low	54, 74			20	mA

MC54/74F64

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	54, 74	2.5		V	I _{OH} = -1.0 mA, V _{CC} = 4.50 V
		74	2.7		V	I _{OH} = -1.0 mA, V _{CC} = 4.75 V
V _{OL}	Output LOW Voltage			0.5	V	I _{OL} = 20 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} = 7.0 V
I _{IL}	Input LOW Current			-0.6	mA	V _{CC} = MAX, V _{IN} = 0.5 V
I _{OS}	Output Short Circuit Current (Note 2)	-60		-150	mA	V _{CC} = MAX, V _{OUT} = 0 V
I _{CC}	Power Supply Current Total, Output HIGH			2.8	mA	V _{CC} = MAX, V _{IN} = GND
	Total, Output LOW			4.7	mA	V _{CC} = MAX, V _{IN} = Note 3

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.
3. I_{CC}L is measured with all inputs of one gate open and remaining inputs grounded.

AC CHARACTERISTICS

Symbol	Parameter	54/74F		54F		74F		Unit
		T _A = +25°C		T _A = -55°C to +125°C		T _A = 0°C to 70°C		
		V _{CC} = +5.0 V		V _{CC} = 5.0 V ± 10%		V _{CC} = 5.0 V ± 10%		
		C _L = 50 pF		C _L = 50 pF		C _L = 50 pF		
		Min	Max	Min	Max	Min	Max	
t _{PLH}	Propagation Delay	2.5	6.5	2.5	8.5	2.5	7.5	ns
t _{PHL}	Propagation Delay	1.5	4.5	1.5	6.5	1.5	5.5	ns