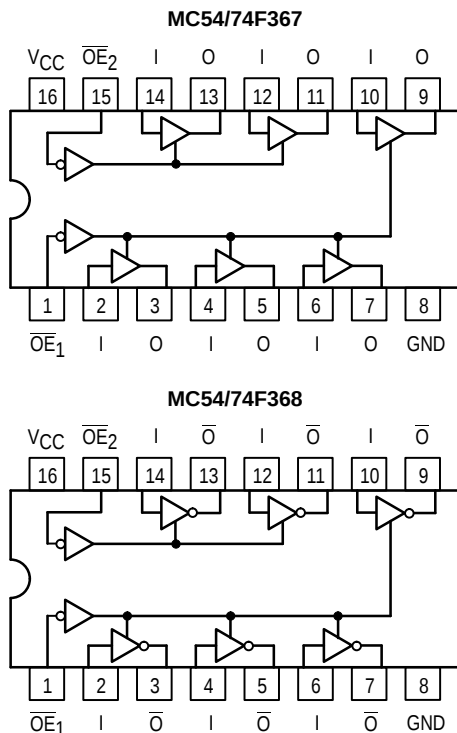




HEX BUFFER/DRIVER 4-BIT PLUS 2-BIT, NONINVERTING AND INVERTING, 3-STATE

CONNECTION DIAGRAMS



FUNCTION TABLE

Inputs		Outputs	
$\overline{OE}$	I	O	$\overline{O}$
L	L	L	H
L	H	H	L
H	X	Z	Z

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

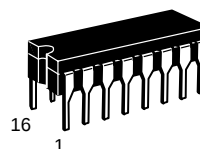
GUARANTEED OPERATING RANGES

Symbol	Parameter		Min	Typ	Max	Unit
V_{CC}	Supply Voltage	54, 74	4.5	5.0	5.5	V
T_A	Operating Ambient Temperature Range	54	-55	25	125	°C
		74	0	25	70	
I_{OH}	Output Current — High	54			-12	mA
		74			-15	
I_{OL}	Output Current — Low	54			48	mA
		74			64	

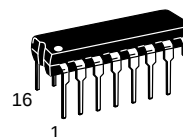
MC54/74F367
MC54/74F368

F367
 HEX BUFFER/DRIVER
 4-BIT PLUS 2-BIT,
 NONINVERTING 3-STATE

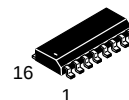
F368
 HEX BUFFER/DRIVER
 4-BIT PLUS 2-BIT,
 INVERTING 3-STATE
 FAST™ SCHOTTKY TTL



J SUFFIX
 CERAMIC
 CASE 620-09



N SUFFIX
 PLASTIC
 CASE 648-08



D SUFFIX
 SOIC
 CASE 751B-03

ORDERING INFORMATION

MC54FXXXJ Ceramic
 MC74FXXXN Plastic
 MC74FXXXD SOIC

MC54/74F367 • MC54/74F368

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	I _{IN} = −18 mA	V _{CC} = MIN
V _{OH}	Output HIGH Voltage	54, 74	2.4	3.4		V	I _{OH} = −3.0 mA	V _{CC} = 4.5 V
		74	2.7	3.4		V	I _{OH} = −3.0 mA	V _{CC} = 4.75 V
		54	2.0			V	I _{OH} = −12 mA	V _{CC} = 4.5 V
		74	2.0			V	I _{OH} = −15 mA	V _{CC} = 4.5 V
V _{OL}	Output LOW Voltage	54		0.35	0.55	V	I _{OL} = 48 mA	V _{CC} = MAX
		74		0.4	0.55	V	I _{OL} = 64 mA	
I _{OZH}	Output Off Current HIGH				50	μA	V _{OUT} = 2.7 V	V _{CC} = MAX
I _{OZL}	Output Off Current LOW				−50	μA	V _{OUT} = 0.5 V	V _{CC} = MAX
I _{IH}	Input HIGH Current				20	μA	V _{IN} = 2.7 V	V _{CC} = MAX
					100		V _{IN} = 7.0 V	V _{CC} = 0 V
I _{IL}	Input LOW Current				−20	μA	V _{IN} = 0.5 V	V _{CC} = MAX
I _{OS}	Output Short Circuit Current (Note 2)		−100		−225	mA	V _{OUT} = GND	V _{CC} = MAX
I _{CC}	F367	I _{CCH}			35	mA	V _{CC} = MAX	
		I _{CCL}			62			
		I _{CCZ}			48			
	F368	I _{CCH}			25			
		I _{CCL}			62			
		I _{CCZ}			48			

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.

AC CHARACTERISTICS

Symbol	Parameter	54/74F			54F		74F		Unit	
		T _A = +25°C V _{CC} = +5.0 V C _L = 50 pF			T _A = −55°C to +125°C V _{CC} = 5.0 V ± 10% C _L = 50 pF		T _A = 0°C to +70°C V _{CC} = 5.0 V ± 10% C _L = 50 pF			
		Min	Typ	Max	Min	Max	Min	Max		
t _{PLH}	Propagation Delay	F367	2.0	4.5	6.5	2.0	8.0	2.0	7.0	ns
t _{PHL}	I _N to O _N		3.0	5.5	7.0	3.0	8.5	3.0	7.5	
t _{PLH}	Propagation Delay	F368	2.0	5.0	6.5	2.0	8.5	2.0	7.5	ns
t _{PHL}	I _N to $\overline{O}_N$		1.0	3.0	5.0	1.0	6.5	1.0	5.5	
t _{PZH}	Output Enable Time		2.5	5.5	7.5	2.5	9.5	2.5	8.5	ns
t _{PZL}	to HIGH and LOW Level		3.0	6.5	8.5	3.0	10	3.0	9.0	
t _{PHZ}	Output Disable Time		2.5	4.5	6.5	2.5	8.0	2.5	7.0	ns
t _{PLZ}	from HIGH and LOW Level		1.5	4.0	6.0	1.5	7.5	1.5	6.5	