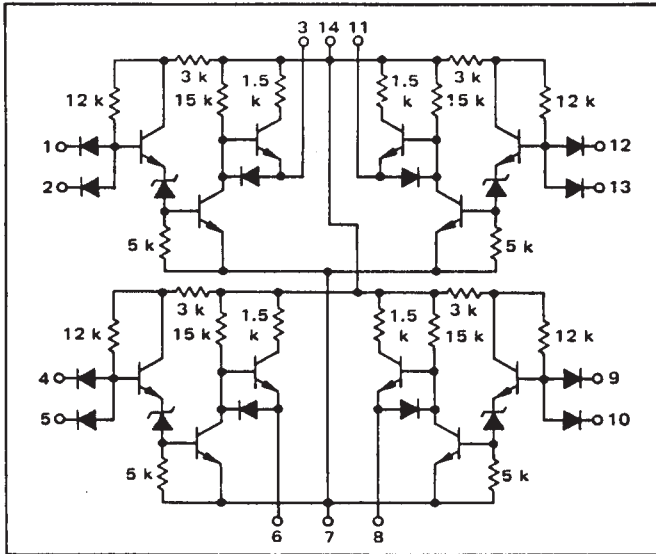


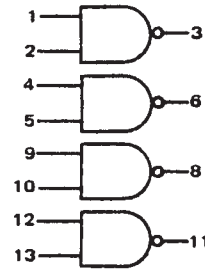
ML672

Quad 2-Input "Nand" Gate

Legacy Device: Motorola MC672



This device consists of four 2-input NAND gates with active output pullup.



Positive Logic: $3 = 1 \cdot 2$

Input Loading Factor = 1

Output Loading Factor = 10

Propagation Delay Time = 110 ns typ

Typical Total Power Dissipation

Inputs High = 176 mW typ/pkg

Input Low = 52 mW typ/pkg

ELECTRICAL CHARACTERISTICS

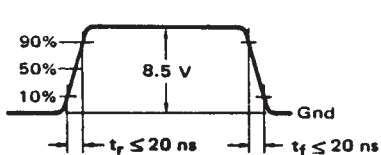
Test procedures shown are for one gate only. The other gates are tested in the same manner.

TEST CURRENT / VOLTAGE VALUES (All Temperatures)										
mA		Volts								
I_{OL}	I_{OH}	V_{IL}	V_{IH}	V_F	V_R	V_{CEX}	V_{CC}	V_{CCL}	V_{CCH}	
12.0	-0.03	6.50	8.50	1.5	16.0	16.0	15.0	14.0	16.0	

Characteristic	Symbol	Pin Under Test	672 Test Limits						Unit	TEST CURRENT / VOLTAGE APPLIED TO PINS LISTED BELOW:													
			-30°C		+25°C		+75°C			I_{OL}	I_{OH}	V_{IL}	V_{IH}	V_F	V_R	V_{CEX}	V_{CC}	V_{CCL}	V_{CCH}	Gnd			
			Min	Max	Min	Max	Min	Max															
Output Voltage	V_{OL}	3	-	1.5	-	1.5	-	1.5	Vdc	3	-	-	1.2	-	-	-	-	14	-	7			
	V_{OH}	3	-	-	12.5	-	12.5	-	Vdc	-	3	1	-	-	-	2	14	-	7				
Short-Circuit Current	I_{SC}	3	-	-	-6.5	-15.0	-6.5	-15.0	mAdc	-	-	-	-	-	-	-	-	14	1.3, 7				
Reverse Current	I_R	1	-	-	-	2.0	-	2.0	μ Adc	-	-	-	-	1	-	-	14	-	2.7				
		2	-	-	-	2.0	-	2.0	μ Adc	-	-	-	-	2	-	-	14	-	1.7				
Output Leakage Current	I_{CEX}	3	-	-	-	100	-	100	μ Adc	-	-	-	-	-	3.14	-	-	-	1.7				
Forward Current	I_F	1	-	-	-	-1.20	-	-1.20	mAdc	-	-	-	1	2	-	-	-	14	7				
		2	-	-	-	-1.20	-	-1.20	mAdc	-	-	-	2	1	-	-	-	14	7				
Power Drain Current (Total Device)	I_{CCL}	14	-	-	-	6.0	-	-	mAdc	-	-	-	-	-	-	-	-	14	1, 2, 4, 5, 7, 9, 10, 12, 13				
		I_{CCH}	14	-	-	-	20	-	-	mAdc	-	-	-	-	-	-	-	-	14	7			
Switching Times									Unit	Pulse In	Pulse Out												
										1	3										ns	1	3
										1	3											ns	1

Pins not listed are left open.

SWITCHING TIMES TEST CIRCUIT AND WAVEFORMS



f = 500 kHz
DUTY CYCLE = 50%

