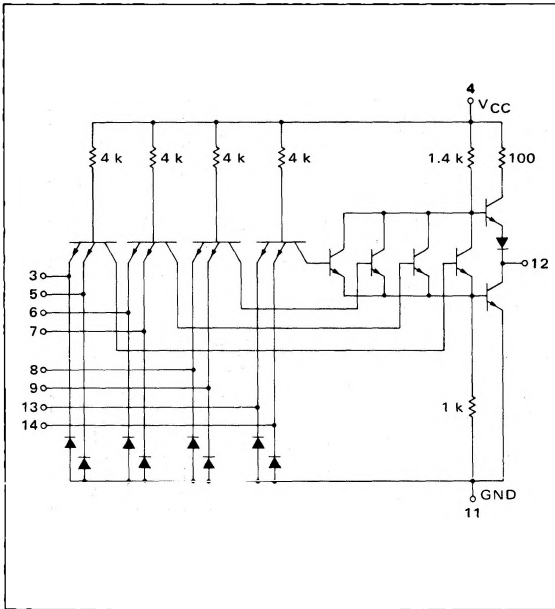


4-WIDE 2-INPUT  
"AND-OR-INVERT" GATE

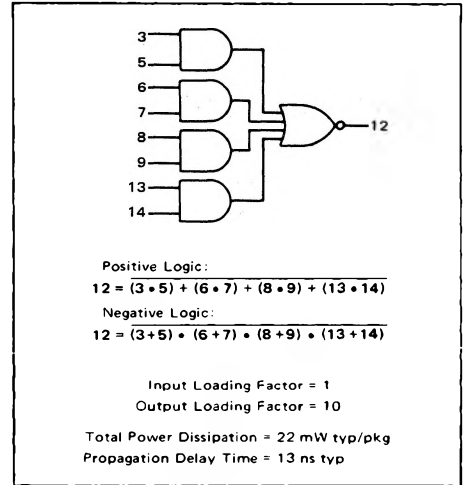
MCBC5400/MCB5400F series

**MCBC5454\***  
**MCB5454F\***



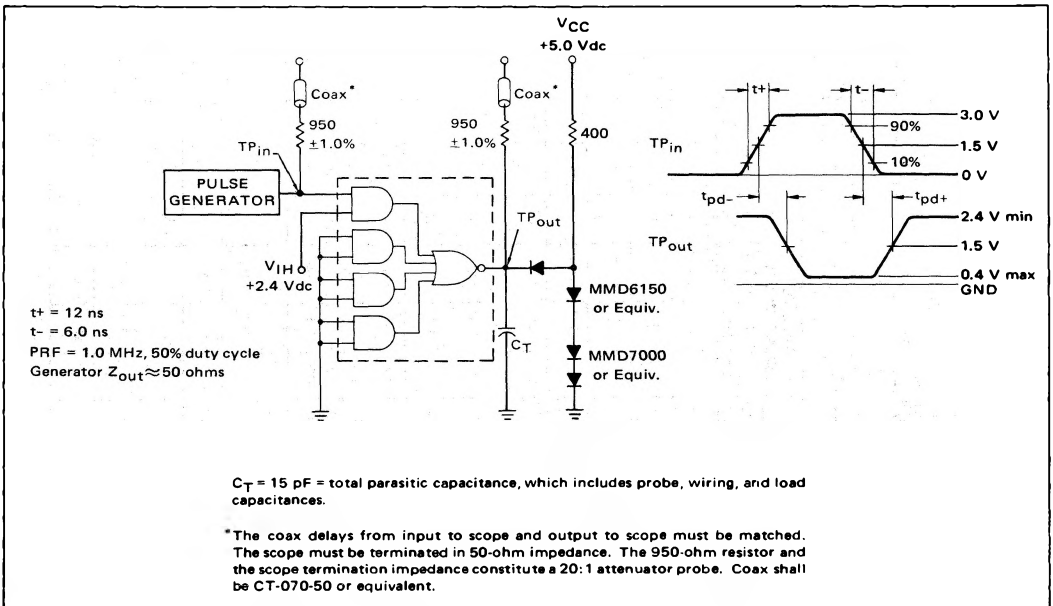
This device consists of four 2-input AND gates ORed together and inverted.

Beam lead sealed junction technology is used to manufacture these devices. They are particularly useful in highly reliable systems using hybrid beam lead assembly techniques or standard flat package assembly techniques.



SWITCHING TIME TEST CIRCUIT

VOLTAGE WAVEFORMS AND DEFINITIONS



\*F suffix = 1/4" x 1/4" ceramic package (Case 651). MCBC-prefixed devices are unencapsulated. Beam numbers are the same as the pin numbers for flat-packaged devices. See General Information section for package and chip details.

MCBC5454, MCB5454F (continued)

**ELECTRICAL CHARACTERISTICS**

Test procedures are shown for only one input of this device. To complete testing, sequence through remaining inputs in the same manner.



Characteristic	Symbol	Pin Under Test	Test Limits MCBC5454/MCB5454F -55 to +125°C			TEST CURRENT / VOLTAGE VALUES (All Temperatures)												
			Min	Max	Unit	Volts												
						I <sub>OL</sub>	I <sub>OH</sub>	V <sub>IL</sub>	V <sub>IH</sub>	V <sub>IHH</sub>	V <sub>RI</sub>	V <sub>R2</sub>	V <sub>th1</sub>	V <sub>th0</sub>	V <sub>CC</sub>	V <sub>CCL</sub>	V <sub>CCH</sub>	
Input Forward Current	I <sub>F</sub>	3	-	-1.6	mAdc	-	-	3	-	5	-	-	-	-	-	-	-	
Leakage Current	I <sub>R1</sub>	3	-	40	μAdc	-	-	-	3	-	-	-	-	-	-	-	-	
	I <sub>R2</sub>	3	-	1.0	mAdc	-	-	-	-	3	-	-	-	-	-	-	-	
Output Output Voltage	V <sub>OL</sub>	12	-	0.4	Vdc	-	-	-	-	-	3,5	-	-	4	-	-	6,7,8,9,11,13,14	
	V <sub>OH</sub>	12	2.4	-	Vdc	-	-	-	5,7,9,14	-	-	3,6,8,13	-	4	-	-	11	
Short-Circuit Current	I <sub>SC</sub>	12	-20	-55	mAdc	-	-	-	-	-	-	-	-	-	-	-	3,5,6,7,8,9,11,12,13,14	
<b>Power Requirements</b>																		
Power Supply Drain	I <sub>PDH</sub>	4	-	9.5	mAdc	-	-	-	-	-	3,5,6,7,8,9,13,14	-	-	-	-	-	11	
	I <sub>PDL</sub>	4	-	8.0	mAdc	-	-	-	-	-	-	-	-	-	-	-	3,5,6,7,8,9,11,13,14	
<b>Switching Parameters</b>																		
Turn-On Delay	t <sub>pd-</sub>	3,12	-	15**	ns	3	12	-	5	-	-	-	-	4	-	-	6,7,8,9,11,13,14	
Turn-Off Delay	t <sub>pd+</sub>	3,12	-	22**	ns	3	12	-	5	-	-	-	-	4	-	-	6,7,8,9,11,13,14	

\*\*Tested only at 25°C.