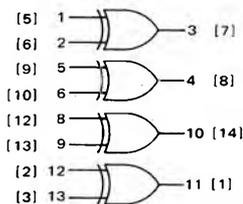


QUAD EXCLUSIVE "OR" GATE

MC8200/MC7200 series

MC8241F, L*
MC7241F, L, P*

ADVANCE INFORMATION/NEW PRODUCT



$$3 = 1 \cdot \bar{2} + \bar{1} \cdot 2$$

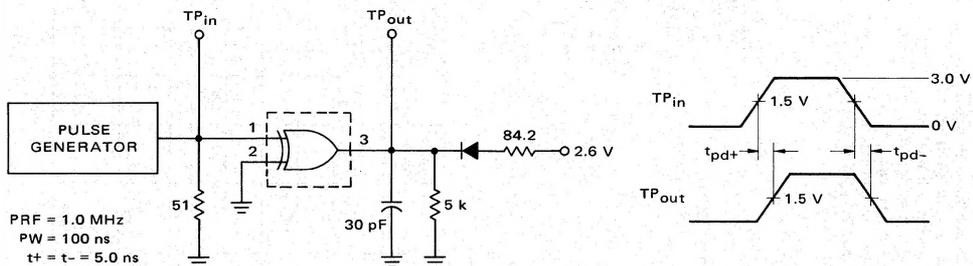
$V_{CC} = \text{Pin } 14 [4]$
 $GND = \text{Pin } 7 [11]$

Numbers at ends of terminals represent pin numbers for devices in the dual in-line package.
 Numbers in brackets represent pin numbers for devices in the flat package.

This device contains two independent gating structures to perform the Exclusive OR function on two input variables. The output employs the totem-pole structure.

Input Loading Factor = 2
 Output Loading Factor = 10
 Total Power Dissipation = 225 mW typ/pkg

SWITCHING TIME TEST CIRCUIT AND WAVEFORMS



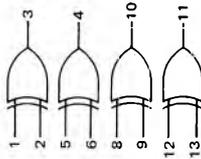
5 kΩ and 30 pF include jig and scope.

*F suffix = TO-86 ceramic flat package (Case 607).
 L suffix = TO-116 ceramic dual in-line package (Case 632).
 P suffix = TO-116 plastic dual in-line package (Case 605).

MC8241F,L, MC7241F,L,P (continued)

ELECTRICAL CHARACTERISTICS

Test procedures are shown for only one gate. The other gates are tested in the same manner. Pin numbers indicated are for devices in dual in-line packages only. To test devices in the flat package, substitute pin numbers shown in brackets on the logic diagram on the first page of this data sheet.



Characteristic	Symbol	Pin Under Test	TEST CURRENT/VOLTAGE VALUE												
			mA						Volts						
			I _{OL}	I _{OH}	I _{in}	V _{IL}	V _{IH}	V _F	V _R	V _{CC}	V _{CLL}	V _{CCH}			
			TEST CURRENT/VOLTAGE APPLIED TO PINS LISTED BELOW:												
Input	Forward Current	IF	-55°C			+25°C			+125°C			+75°C			Unit
			Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	
Leakage Current	IR	1	-55°C			+25°C			+125°C			+75°C			mAdc
			Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	
Breakdown Voltage	BV _{in}	2	-55°C			+25°C			+125°C			+75°C			µAdc
			Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	
Output	Output Voltage	VOL	-55°C			+25°C			+125°C			+75°C			Vdc
			Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	
Short Circuit Current	V _{OH}	3	-55°C			+25°C			+125°C			+75°C			mAdc
			Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	
Power Requirements	V _{OH}	3	-55°C			+25°C			+125°C			+75°C			mAdc
			Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	
Switching Parameters	I _{SC}	3	-55°C			+25°C			+125°C			+75°C			mAdc
			Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	
Turn-On Delay	I _{PD}	14	-55°C			+25°C			+125°C			+75°C			mAdc
			Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	
Turn-Off Delay	I _{pd-}	3	-55°C			+25°C			+125°C			+75°C			ns
			Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	
Turn-Off Delay	I _{pd+}	3	-55°C			+25°C			+125°C			+75°C			ns
			Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	

TEST CURRENT/VOLTAGE VALUE											
mA						Volts					
I _{OL}	I _{OH}	I _{in}	V _{IL}	V _{IH}	V _F	V _R	V _{CC}	V _{CLL}	V _{CCH}		
16	-0.5	-	0.8	2.0	0.4	4.5	5.0	4.75	5.25		
16	-0.5	10	0.8	2.0	0.4	4.5	5.0	4.75	5.25		
16	-0.5	-	0.8	2.0	0.4	4.5	5.0	4.75	5.25		
16	-0.5	-	0.8	2.0	0.4	4.5	5.0	4.75	5.25		
16	-0.5	10	0.8	2.0	0.4	4.5	5.0	4.75	5.25		
16	-0.5	-	0.8	2.0	0.4	4.5	5.0	4.75	5.25		