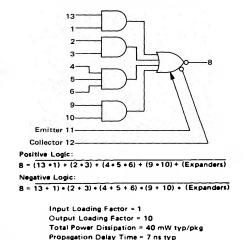
MC3100/MC3000 series

EXPANDABLE 4-WIDE 2-2-2-3-INPUT "AND-OR-INVERT" GATE

MC3132F • MC3032F MC3132L • MC3032L,P (54H53J) (74H53J, N)

12 14 VCC 760 58 2.8 k 2.8 k 2.8 k 2.8 k 3.8 k 3

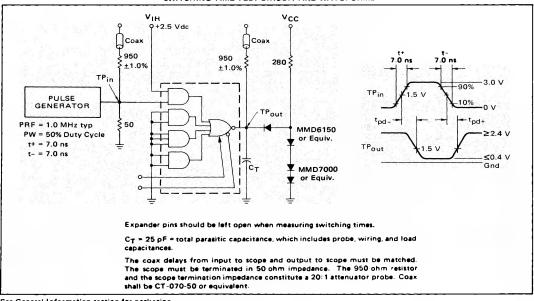
This device consists of four 2-2-2-3-input AND gates ORed together and inverted. Up to four MC3120/3020 or one MC3118/3018 expander gates may be ORed with the device at the expander points.



Pin numbers for the 54H53F/74H53F device are shown in the chart. These devices are available on special request.

DEVICE						PIN	INU	MBE	RS					
MC3132F,L/3032F,L,P	1	2	3	4	5	6	7	8	9	10	11	12	13	14
54H53F/74H53F	5	6	7	8	9	10	11	12	13	14	1	2	3	4

SWITCHING TIME TEST CIRCUIT AND WAVEFORMS



ELECTRICAL CHARACTERISTICS

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

		E-9841	4			80															
		òό	5	5		_								TEST	TEST CURRENT/VOLTAGE VALUES (All Temperatures)	IT/VOLT	AGE VA	UES (AI	Temp	ratures	
		6	+	7	_							2	mA				Ohms				
	8	Fortrar 11-	71			_			101	10	-	4	(x)	1x2	l _{X3}	1x4	REX®	⊕ x	VF	VR	VRH
	Colle	Collector 12-				1		MC3132	1)	-3.0	0.4	-10	7.0	-	-0.32	-0.47	63	1.4	4.0	2.4	4.0
		P.i.	14631	AAC 3130 Test Limits	imite	MCS	MC3022 Teet Limite	MC3032	20	2.0	1.0	-10	1.1	0.57	1.57 -0.57 -0.6 68 1.4 0.4 2.4 4.	-0.8	68 A 001	1.4	0.4 INC 110	2.4 TEN 80	4.0
Characteristic	Combol	Under	Min.	-55 to +125°C	SC	Min	0 to +75°C	ر الباد	_	-	_	_	_5	3	ly .	l.	6	V.O.	, A	^	>
Input Forward Current	I.			-2.0	mAde			_	5	5					2		1				13
Leakage Current	I'R	1	4	20	p.Ade		20	p Ade												1	
Breakdown Voltage	BVan	1	5.5	1.	mVdc	5.5*	r.	mVdc	i	,	1	9.		ī			11		1	i.	*
Clamp Voltage	VD.	1	4	-1, 5**	mVdc		-1.5**	mVdc.	10			1	i	¥.	1.	j.	K		H	à.	*
Expander luput Current	LEX	12 D	ī	-5.85	mAde	r	-6.3	mAde	80								1	12	1	i.	
Base-Emitter Voltage	V _{BE}	11 3	,	1.0	Vdc		0.1	Vdc	60		r	ř.	11,12		1.	۳.		7	5-	τ.	+ "
Output																					
Output Voltage	VOL	9	4	0.4	Vdc	i	6.0	Vdc	œ	Ŷ	,	1.		À	,	i		ŧ		Ž.	
		8 8	. 10	6.4	Vdc	9	6.4	Vdc	В	•	· ¥-	· e	12.			11	12				
	VOH	200	9	٧.	Vdc	2.4	2	Vdc	ř	80		,									3,5
		.00	9	,	Vdc	41	r	Vdc	1.0	0	i	4	4	11	12		,	1		,	
Short-Circuit Corrent	JSC.	œ	-20	22*	mAde	-18	- 22	mAde									·				
Power Requirements Power Supply Drain	HOd	14		14	mAde	¥	2	mAde	,			,	,	,	,			,			1,2,3,4,6
	I PDL	14		п	mAdc	ε	11	mAdc.	a)	į.			6		1	4	1-	100	35	, .	
Switching Parameters									Pulse	Pulse											
Turn-On Delay	t pd	1,8	7	**11	911	χ	*****	su	1	89	•									13	4
Turn-Off Delay	1 pd+	1,8	4	11,	stt	¥.	11**	su	1	10				,		١.	٠			2	,

7,9,10,13

2,3,4,5,6,

14 14

1, 13 1,13

.

7,9,10,13 1,2,3,4,5,6,

2,3,4,5,6,7,9,10,13 2,3,4,5,6,

> 14 4 51

.

Gnd

Vcc Vca VccH

V_{IE}

N H

14 14 14

à

į,

Voc Vcci Vccu

5.0 4.75 5.25

0.8

7,8,9,10,13

7,9,10,13

2 .

7,9,10,13

b

17 14

1,23,4,6

2,3,4,5,6, 7,9,10 2,3,4,5,6, 7,9,10

14 14

.

> * Expander pins open *Tested only at 25°C

D See Figure 1.See Figure 2.See Figure 3.

FIGURE 1 - IEX TEST CIRCUIT

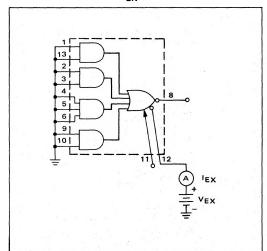


FIGURE 2 - VBE TEST CIRCUIT

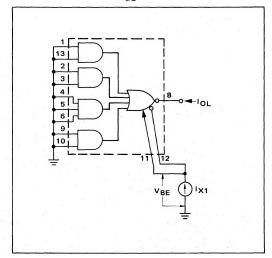


FIGURE 3 - VOL TEST CIRCUIT

