

Total Power Dissipation = 84 mW typ/pkg Propagation Delay Time = 9.0 ns typ

## SWITCHING TIME TEST CIRCUIT AND WAVEFORMS



Gnd

t+ 7.0 ns t-7.0 ns 3.0 V 90% TP 5 10% 0 V tod pd+ ≥2.4 V TPout .5 V <0.4 V Gnd

 $C_T$  = 25 pF = total parasitic capacitance, which includes probe, wiring, and load capacitances.

The coax delays from input to scope and output to scope must be matched. The scope must be terminated in 50-ohm impedance. The 950-ohm resistor and the scope termination impedance constitute a 20:1 attenuator probe. Coax shall be CT-070-50 or equivalent.

See General Information section for packaging.

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Test procedures are shown for only one gate. The other gates are tested in the same manner. Further, test procedures are shown for only one input of the gate under test. To complete testing, sequence through re-maining inputs.



									Gnd	2	2,7,13	2,7,13	7	7	2	7,12	5	7
V <sub>IHX</sub>	•	2.5	-		2.5				VIHX				1			12	ана. 1914 г. – 1 <sub>10</sub>	i.
V <sub>ccH</sub>	5.5	5.5	5.5	5.25	5.25	5.25			VccH	14	14	14	•	- 1 <sup>2</sup>	<b>1</b> 73	14		14
VccL	4.5	4.5	4.5	4.75	4.75	4.75	. MO	Γ	Vcc1		•		14	14	14		1	
<ul><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><li>C</li><l< th=""><th>5.0</th><th>5.0</th><th>5.0</th><th>5.0</th><th>5.0</th><th>5.0</th><th>BELC</th><th>T</th><th>20</th><th></th><th>,</th><th>,</th><th></th><th></th><th></th><th></th><th></th><th>1</th></l<></ul>	5.0	5.0	5.0	5.0	5.0	5.0	BELC	T	20		,	,						1
Vmax	•	7.0	4	1	7.0	,	LISTE		Vmax			•	1	,	. •		14	1
V <sub>RH</sub>	4.0	4.0	4.0	4.0	4.0	4.0	D TO PINS		V <sub>RH</sub>	2,13*	*	*	*	2,13*	2,13*	1,2,13*	1,2,3,4,5, 9,10,11,13	1, 2, 3, 4, 5, 9, 10, 11, 13
× ×	2.4	2.4	2.4	2.5	2.5	2.5	APPLIE		>"		-	ı	•	,			Т	
ς,	0.4	0.4	0.4	0.4	0.4	0.4	AGE		>"	1	1	1	,		1	•		
×,	2.0	1.8	1.8	2.0	1.8	1.8	/ VOLT		>			•	1	. ;	-		·	
<ul><li></li></ul>	1.1	1.1	0.8	1.1	1.1	0.9	RENT		× <			,	1	-	1	1	· .	1
_0	•	-10	•		-10	,	CUR		-		1		1		,	1	1	•
<u>.</u> s	•	1.0	•		1.0	•	TEST		s			-						1
Ч	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0			Ч		1	1	1	× 1	12			
101	20	20	20	20	20	20			or	U.	,	1	1	12	1			•
ature	-55°C	+25°C	125°C	125°C 0°C +25°C					Unit	mAdc	μAdc	Vdc	Vdc	Vdc	Vdc	mAdc	mAdc	mAdc
Tempe				-	~ 9	-	s	5°C	Max	-2.0	50	1	1	0.4	1	-100	1	20
	C310				1C300		Limit	4	Min			1	•	,	2.5	-40	1	
	Σ N			2			AC3006 Tes	0°C +25°C	Мах	-2.0	50	,	-1.5	0.4	1	-100	28	20
					Min				,	5.5	,		2.5	-40		,		
							<		Max	-2.0	50	1	1	0.4	î,	-100	1	20
								0	Min	1		1	1	,1	2.5	-40		
								5°C	Max	-2.0	50	•	i.	0.4	1	-100	1.1	20
							nits	+12	Min		1	1	1		2.4	-40		ì
					est Lir	2°C	Max	-2.0	50	1	-1.5	0.4	1	-100	28	20		
	6		80				MC3106 T	5°C +2!	Min	•	•	5.5	i,	14 Ju	2.4	-40	1	1
	Ī		Ĩ						Max	-2.0	50	•		0.4	i.	-100		20
10	1	)				ŝ	Min						2.4	-40	1	1		
	Π	IL T	Π			-	Pin	Under	Test	1	1	1	1	12	12	12	14	14
1   1	4 10	- 6	10	E					Symbol	$I_{\rm F}$	IR	BV <sub>in</sub>	v <sub>D</sub>	VOL	нол	Isc	Imax	IpDH

Breakdown Voltage

Clamp Voltage

Output Output Voltage

Forward Current Leakage Current

nput

Characteristic

MC3106, MC3006 (continued)

Volts

MA

@ Test

TEST CURRENT/VOLTAGE VALUES

 $^{*}$ since this is a non-inverting gate, power drain is minimized by tying the inputs to gates not under test to  $v_{
m RH}^{-}$ 

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I<sub>PDL</sub>

Power Supply Drain

ower Requirements (Total Device) Maximum Power Supply Current

Short-Circuit Current

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Turn-Off Delay

Switching Parameters Turn-On Delay

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Pulse

Pulse ,

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