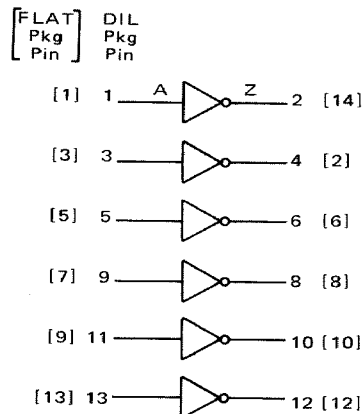
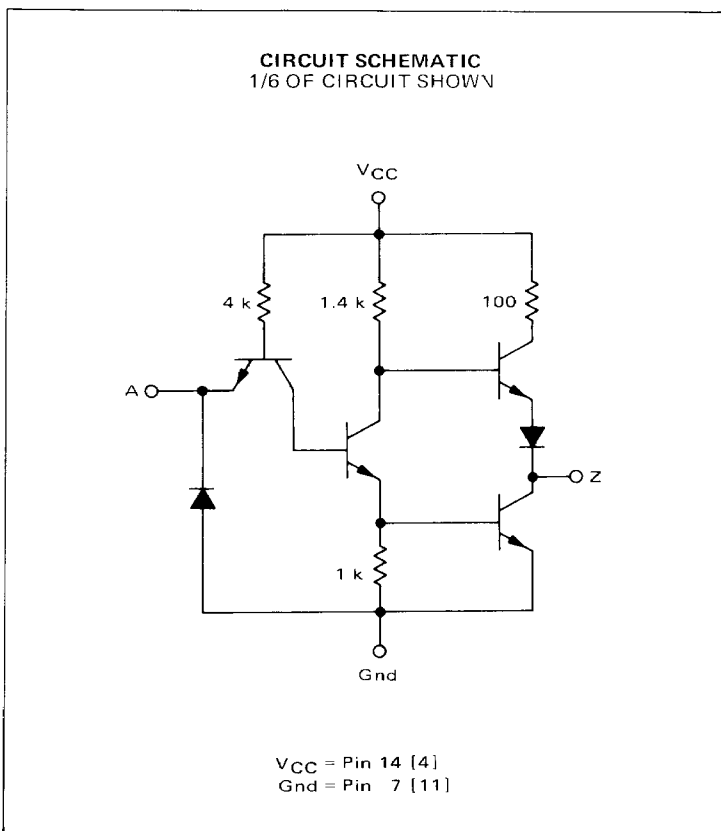




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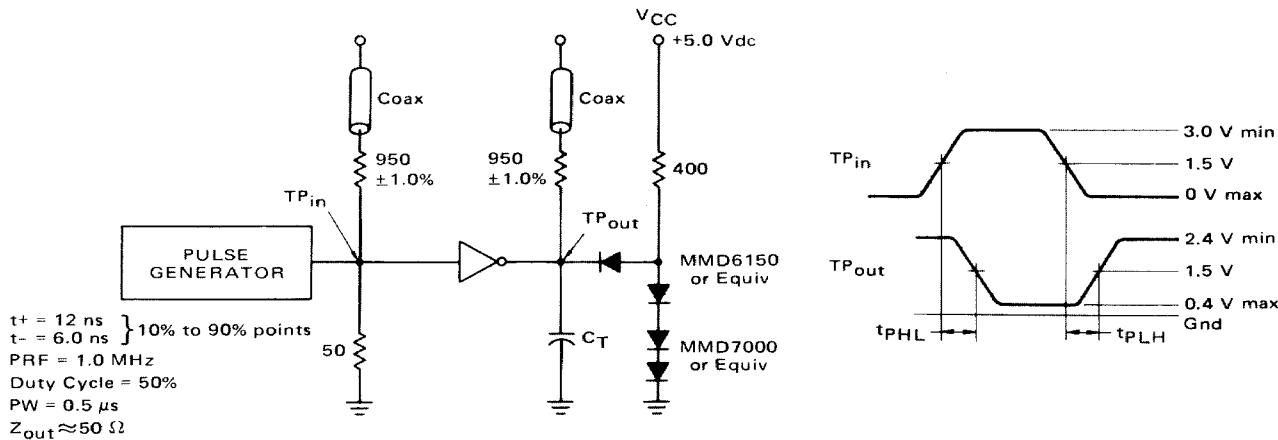
Add Suffix F for TO-86 ceramic package (Case 607).
Suffix L for TO-116 ceramic package (Case 632).
Suffix P for TO-116 plastic package (Case 646) MC7404 only.



Positive Logic: $Z = \bar{A}$

Input Loading Factor = 1
Output Loading Factor = 10
Total Power Dissipation = 60 mW typ/pkg
Propagation Delay Time = 13 ns typ

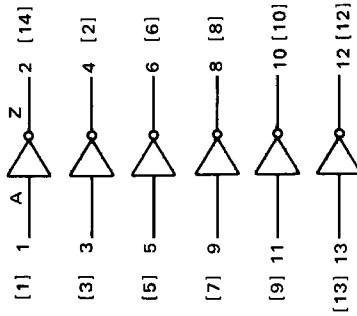
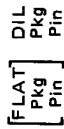
SWITCHING TIME TEST CIRCUIT AND WAVEFORMS



$C_T = 15 \text{ pF}$ = 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.

ELECTRICAL CHARACTERISTICS

Test procedures are shown for only one inverter. The other inverters are tested in the same manner.



V = V_{CC} = Pin 14 [4]
Gnd = Pin 7 [11]

Characteristic	Symbol	Pin Under Test	TEST CURRENT/VOLTAGE VALUES (All Temperatures)						mA	TEST CURRENT/VOLTAGE APPLIED TO PINS LISTED BELOW:												Pin 7 [11] is grounded for all tests in addition to the pins listed below:											
			Volts																														
			V _{IL}	V _{IH}	V _{IHH}	V _{R1}	V _{R2}	V _{th1}		V _{th0}	V _{CC}	V _{ccl}	V _{CCH}																				
Input Forward Current	I _F	A	I _{OL}	I _{OH}	V _{IL}	V _{IH}	V _{IHH}	V _{R1}	V _{R2}	V _{th1}	V _{th0}	V _{CC}	V _{ccl}	V _{CCH}	16	16	-0.4	-0.4	0.4	0.4	2.4	2.4	5.5	5.5	4.5	4.5	5.0	5.0	0.8	0.8	5.0	4.75	5.50
			I _{OL}	I _{OH}	V _{IL}	V _{IH}	V _{IHH}	V _{R1}	V _{R2}	V _{th1}	V _{th0}	V _{CC}	V _{ccl}	V _{CCH}																			
Leakage Current	I _{R1}	A	MC5404 Test Limits -55 to +125°C												MC7404 Test Limits 0 to +70°C																		
			Min	Max	Unit	Min	Max	Unit																									
Output Output Voltage	V _{OL}	Z	MC5404 Test Limits -55 to +125°C												MC7404 Test Limits 0 to +70°C																		
			Min	Max	Unit	Min	Max	Unit																									
Short-Circuit Current	I _{OS}	Z	MC5404 Test Limits -55 to +125°C												MC7404 Test Limits 0 to +70°C																		
			Min	Max	Unit	Min	Max	Unit																									
Power Requirements (Total Device) Power Supply Drain	I _{PDH}	V	MC5404 Test Limits -55 to +125°C												MC7404 Test Limits 0 to +70°C																		
			Min	Max	Unit	Min	Max	Unit																									
Switching Parameters	t _{PHL}	A,Z	MC5404 Test Limits -55 to +125°C												MC7404 Test Limits 0 to +70°C																		
			Min	Max	Unit	Min	Max	Unit																									
Turn-On Delay	t _{PLH}	A,Z	MC5404 Test Limits -55 to +125°C												MC7404 Test Limits 0 to +70°C																		
			Min	Max	Unit	Min	Max	Unit																									
Turn-Off Delay	t _{PLH}	A,Z	MC5404 Test Limits -55 to +125°C												MC7404 Test Limits 0 to +70°C																		
			Min	Max	Unit	Min	Max	Unit																									

* Ground inputs to inverters not under test.
** Tested only at 25°C.
† Only one output should be shorted at a time.



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