

NC7SZU04A

Pin Configurations

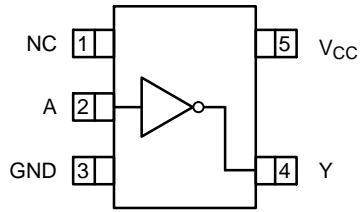


Figure 2. SC88A and SCi74A (Top View)

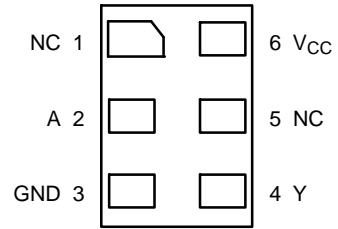


Figure 3. MicroPak (Top Through View)

PIN DEFINITIONS

Pin # SC i88A / SC i74A	Pin # MicroPak	Name	Description
1	1, 5	NC	No Connect
2	2	A	Input
3	3	GND	Ground
4	4	Y	Output
5	6	V _{CC}	Supply Voltage

FUNCTION TABLE

Inputs	Output
A	Y
L	H
H	L

H = HIGH Logic Level
L = LOW Logic Level

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ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Min	Max	Unit
V_{CC}	Supply Voltage	-0.5	6.5	V
V_{IN}	DC Input Voltage	-0.5	6.5	

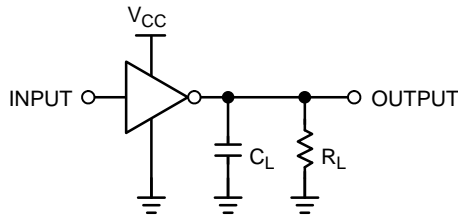
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AC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	V _{CC} (V)	Conditions	T _A = +25°C			T _A = -40 to +85°C		Unit
				Min	Typ	Max	Min	Max	
t _{PLH} , t _{PHL}	Propagation Delay (Figure 4, 5)	1.65	C _L = 15 pF, R _L = 1 MΩ	ī	ī	11.7	ī	12.1	ns
		1.80		ī	ī	8.5	ī	9.0	
		2.50 ±0.20		ī	ī	6.2	ī	6.5	
		3.30 ±0.30	C _L = 50 pF, R _L = 500 Ω	ī	ī	4.5	ī	4.8	
		5.00 ±0.50		ī	ī	3.9	ī	4.1	
		3.30 ±0.30		ī	ī	6.0	ī	6.5	
		5.00 ±0.50		ī	ī	5.0	ī	5.5	
C _{IN}	Input Capacitance	0.00		ī	4.5	ī	ī	ī	pF
C _{PD}	Power Dissipation Capacitance (Note 2) (Figure 6)	3.30		ī	6.3	ī	ī	ī	pF
		5.00		ī	9.5	ī	ī	ī	

2. C_{PD} is defined as the value of the internal equivalent capacitance which is derived from dynamic operating current consumption (I_{CCD}) at no output loading and operating at 50% duty cycle. C_{PD} is related to I_{CCD} dynamic operating current by the expression:
 $I_{CCD} = (C_{PD}) (V_{CC}) (f_{IN}) + (I_{CCstatic})$.



NOTE:
 3. C_L includes load and stray capacitance.
 4. Input PRR = 1.0 MHz; t_w = 500 ns

Figure 4. AC Test Circuit

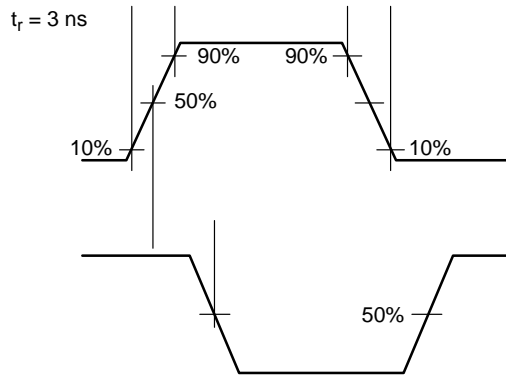
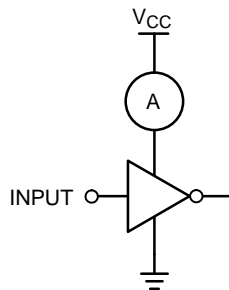


Figure 5. AC Waveforms



NOTE:
 5. When operating the NC7SZU04A's unbuffered output stage in its linear range, as in oscillator applications, care must be taken to observe maximum power rating for the device and package. The high drive nature of the design of the output stage results in substantial simultaneous conduction currents when the stage is in the linear region.
 6. Input = AC Waveform; t_r = t_f = 1.8 ns; PRR = Variable; Duty Cycle = 50%.

Figure 6. I_{CCD} Test Circuit

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ORDERING INFORMATION

Part Number	Top Mark	Packages	Shipping †
NC7SZU04AM5X	7ZU4	SC i74A	3000 / Tape & Reel
NC7SZU04AP5X	ZU4	SC i88A	3000 / Tape & Reel
NC7SZU04AL6X	C5	SIP6, MicroPak	5000 / Tape & Reel
NC7SZU04AFHX	C5	UDFN6, MicroPak2	5000 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

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PACKAGE DIMENSIONS

SIP6 1.45X1.0
CASE 127EB
ISSUE O

2. DIMEN

NC7SZU04A

PACKAGE DIMENSIONS

SC i88A (SCi70i5/SOTi353)
CASE 419A i02
ISSUE M

1. DIMENSIONING AND TOLERANCE

NC7SZU04A



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PACKAGE DIMENSIONS

SC 74A

