



# 74AC04, 74ACT04

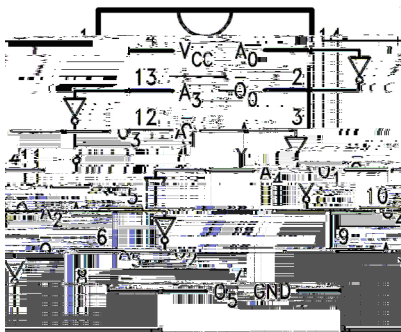


Figure 1. Connection Diagram

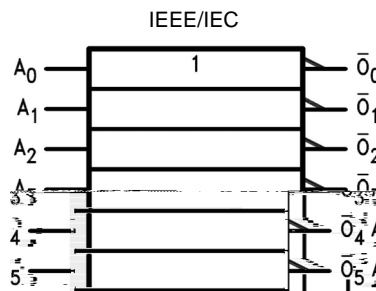


Figure 2. Logic Symbol

## PIN DESCRIPTION

Pin	Description
$A_n$	Inputs
$\bar{O}_n$	Outputs

## RECOMMENDED OPERATING CONDITIONS

Symbol	Parameter	Min	Max	Unit
$V_{CC}$	Supply Voltage AC ACT	2.0 4.5	6.0 5.5	V
$V_I$	Input Voltage	0	$V_{CC}$	V
$V_O$	Output Voltage	0	$V_{CC}$	V
$T_A$	Operating Temperature	-40	+85	°C
$\Delta V / \Delta t$	Minimum Input Edge Rate, AC Devices: $V_{IN}$ from 30% to 70% of $V_{CC}$ , $V_{CC}$ at 3.3 V, 4.5 V, 5.5 V	125		mV/ns
$\Delta V / \Delta t$	Minimum Input Edge Rate, ACT Devices: $V_{IN}$ from 0.8 V to 2.0 V, $V_{CC}$ at 4.5 V, 5.5 V	125		mV/ns

Functional operation above the stresses listed in the Recommended Operating Ranges is not implied. Extended exposure to stresses beyond



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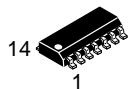
## DC ELECTRICAL CHARACTERISTICS FOR ACT

Symbol	Parameter	V <sub>CC</sub> (V)	Conditions	T <sub>A</sub> = +25°C		T <sub>A</sub> = -40°C to +85°C		Unit
				Typ	Guaranteed Limits			
V <sub>IH</sub>	Minimum HIGH Level Input Voltage	4.5	V <sub>OUT</sub> = 0.1 V or V <sub>CC</sub> - 0.1 V	1.5	2.0	2.0		V
		5.5		1.5	2.0	2.0		
V <sub>IL</sub>	Maximum LOW Level Input Voltage	4.5	V <sub>OUT</sub> = 0.1 V or V <sub>CC</sub> - 0.1 V	1.5	0.8	0.8		V
		5.5		1.5	0.8	0.8		
V <sub>OH</sub>	Minimum HIGH Level Output Voltage	4.5	I <sub>OUT</sub> = -50 μA	4.49	4.4	4.4		V
		5.5		5.49	5.4	5.4		
		4.5	V <sub>IN</sub> = V <sub>IL</sub> or V <sub>IH</sub> I <sub>OH</sub> = -24 mA	-	3.86	3.76		
		5.5	I <sub>OH</sub> = -24 mA (Note 4)	-	4.86	4.76		
V <sub>OL</sub>	Maximum LOW Level Output Voltage	4.5	I <sub>OUT</sub> = 50 μA	0.001	0.1	0.1		V
		5.5		0.001	0.1	0.1		
		4.5	V <sub>IN</sub> = V <sub>IL</sub> or V <sub>IH</sub> I <sub>OL</sub> = 24 mA	-	0.36	0.44		
		5.5	I <sub>OL</sub> = 24 mA (Note 4)	-	0.36	0.44		
I <sub>IN</sub>	Maximum Input Leakage Current	5.5	V <sub>I</sub> = V <sub>CC</sub> , GND	-	±0.1	±1.0		μA
I <sub>CCT</sub>	Maximum I <sub>CC</sub> /Input	5.5	V <sub>I</sub> = V <sub>CC</sub> - 2.1 V	0.6	-	1.5		mA
I <sub>OLD</sub>	Minimum Dynamic Output Current (Note 5)	5.5	V <sub>OLD</sub> = 1.65 V Max.	-	-	75		mA
I <sub>OHD</sub>		5.5	V <sub>OHD</sub> = 3.85 V Min.	-	-	-75		mA
I <sub>CC</sub>	Maximum Quiescent Supply Current	5.5	V <sub>IN</sub> = V <sub>CC</sub> or GND	-	4.0	40.0		μA

4. All outputs loaded; thresholds on input associated with output under test.

5. Maximum test duration 2.0 ms, one output loaded at a time.

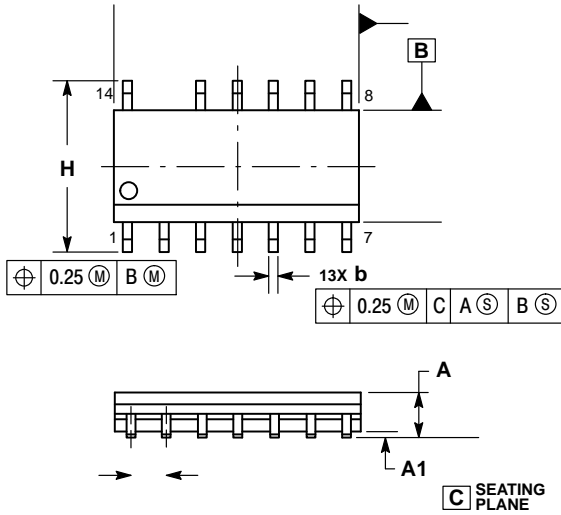




SCALE 1:1

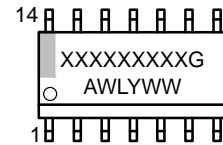
**SOIC 14 NB**  
**CASE 751A-03**  
**ISSUE L**

DATE 03 FEB 2016



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
  2. CONTROLLING DIMENSION: MILLIMETERS.
  3. DIMENSION b DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE PROTRUSION SHALL BE 0.13 TOTAL IN EXCESS OF AT MAXIMUM MATERIAL CONDITION.
  4. DIMENSIONS D AND E DO NOT INCLUDE MOLD PROTRUSIONS.
  5. MAXIMUM MOLD PROTRUSION 0.15 PER SIDE.

**GENERIC MARKING DIAGRAM\***



- XXXXXX = Specific Device Code
- A = Assembly Location
- WL = Wafer Lot
- Y = Year
- WW = Work Week
- G = Pb-Free Package

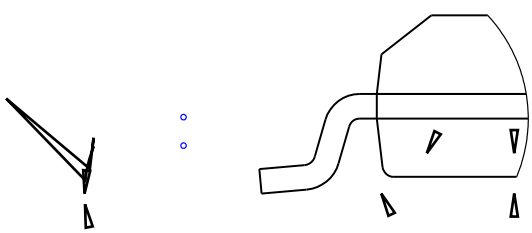
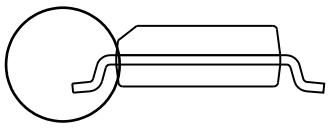
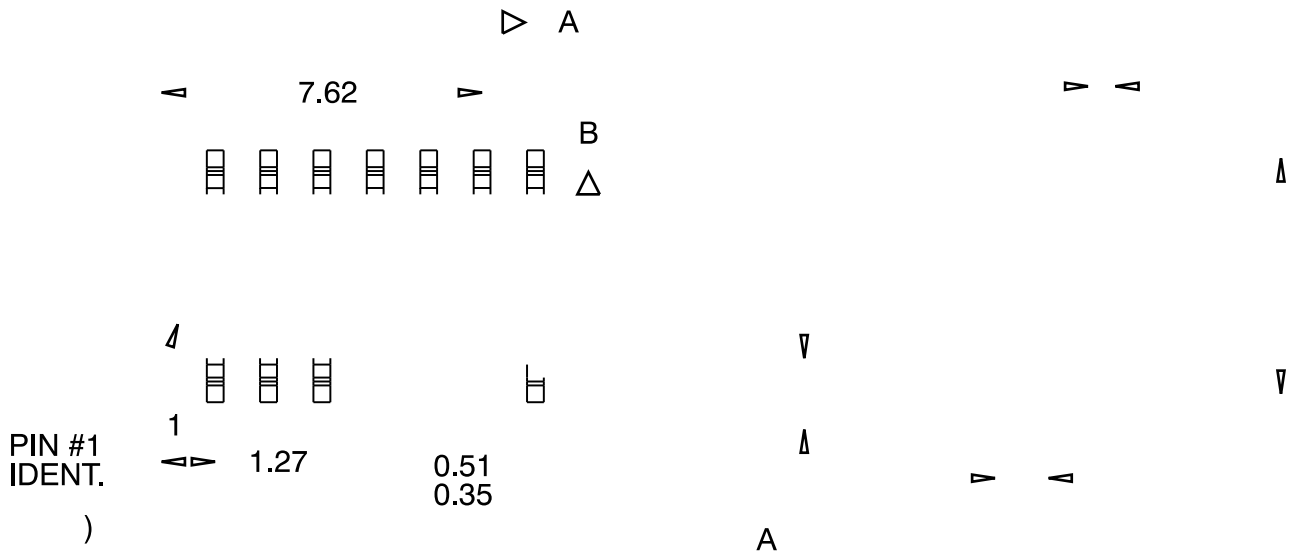
STYLES ON PAGE 2

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STYLE 7:  
PIN 1. ANODE/CATHODE  
2. COMMON ANODE  
3. COMMON CATHODE  
4. ANODE/CATHODE  
5. ANODE/CATHODE

SOIC14







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