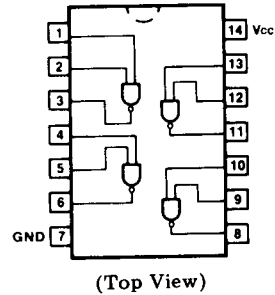


# HD74AC00/HD74ACT00 • Quad 2-Input NAND Gate

- Outputs Source/Sink 24 mA
- HD74ACT00 has TTL-Compatible Inputs

## Pin Assignment



## DC Characteristics (unless otherwise specified)

Symbol	Parameter	Max	Unit	Condition
$I_{CC}$	Maximum Quiescent Supply Current	40	$\mu\text{A}$	$V_{IX} = V_{CC}$ or Ground, $V_{CC} = 5.5\text{V}$ , $T_a = \text{Worst Case}$
$I_{CC}$	Maximum Quiescent Supply Current	4.0	$\mu\text{A}$	$V_{IX} = V_{CC}$ or Ground, $V_{CC} = 5.5\text{V}$ , $T_a = 25^\circ\text{C}$
$I_{CCT}$	Maximum Additional Icc/Input(HD74ACT00)	1.5	mA	$V_{IX} = V_{CC} - 2.1\text{V}$ , $V_{CC} = 5.5\text{V}$ , $T_a = \text{Worst Case}$

## AC Characteristics: HD74AC00

Symbol	Parameter	$V_{CC}^*$ (V)	$T_a = +25^\circ\text{C}$ $C_L = 50\text{pF}$			$T_a = -40^\circ\text{C}$ to $+85^\circ\text{C}$ $C_L = 50\text{pF}$		Unit
			Min	Typ	Max	Min	Max	
$t_{PLH}$	Propagation Delay	3.3 5.0	1.0 1.0	7.0 6.0	9.5 8.0	1.0 1.0	10.0 8.5	ns
$t_{PHL}$	Propagation Delay	3.3 5.0	1.0 1.0	5.5 4.5	8.0 6.5	1.0 1.0	8.5 7.0	ns

\*Voltage Range 3.3 is  $3.3\text{V} \pm 0.3\text{V}$   
Voltage Range 5.0 is  $5.0\text{V} \pm 0.5\text{V}$

## AC Characteristics : HD74ACT00

Symbol	Parameter	$V_{CC}^*$ (V)	$T_a = +25^\circ\text{C}$ $C_L = 50\text{pF}$			$T_a = -40^\circ\text{C}$ to $+85^\circ\text{C}$ $C_L = 50\text{pF}$		Unit
			Min	Typ	Max	Min	Max	
$t_{PLH}$	Propagation Delay	5.0	1.0	5.5	9.0	1.0	9.5	ns
$t_{PHL}$	Propagation Delay	5.0	1.0	4.0	7.0	1.0	8.0	ns

\*Voltage Range 5.0 is  $5.0\text{V} \pm 0.5\text{V}$

## Capacitance

Symbol	Parameter	Typ	Unit	Condition
$C_{IN}$	Input Capacitance	4.5	pF	$V_{CC} = 5.5\text{V}$
$C_{PD}$	Power Dissipation Capacitance	30.0	pF	$V_{CC} = 5.0\text{V}$

# Package Information

In the HD74AC series of Advanced CMOS logic, either plastic DIP and small outline packages can be selected.  
 To order, please refer to the following package code.

• Package code of Advanced CMOS Logic

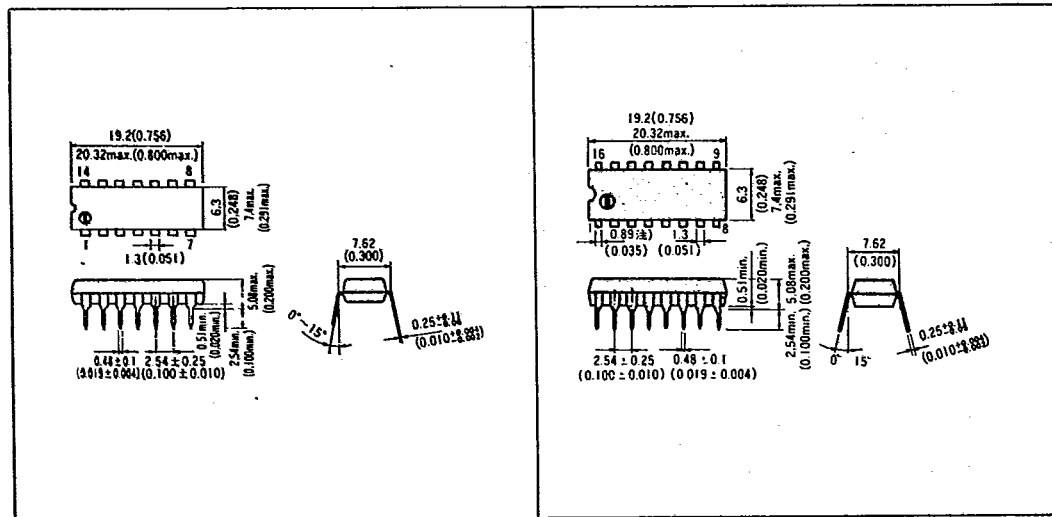
## HD74AC XXXX P

Package code  
 P: Plastic DIP,  
 FP: Small outline package  
 Individual device code  
 74AC: Commercial FACT  
 74ACT: Commercial  
 TTL-Compatible  
 Advanced CMOS  
 Initial cad of Hitachi  
 digital IC

Plastic DIP Package [Unit: mm (inch)]

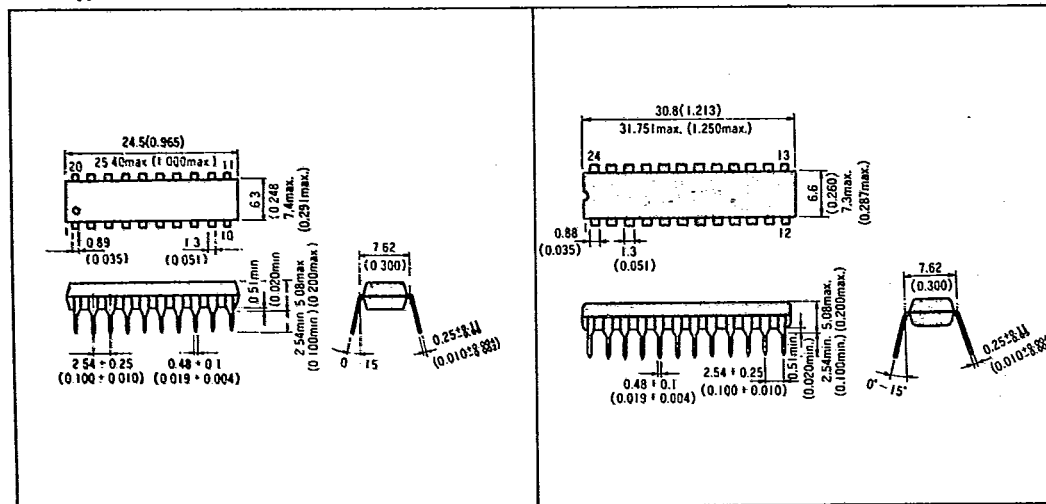
14 Pin type

16 Pin type



20 Pin type

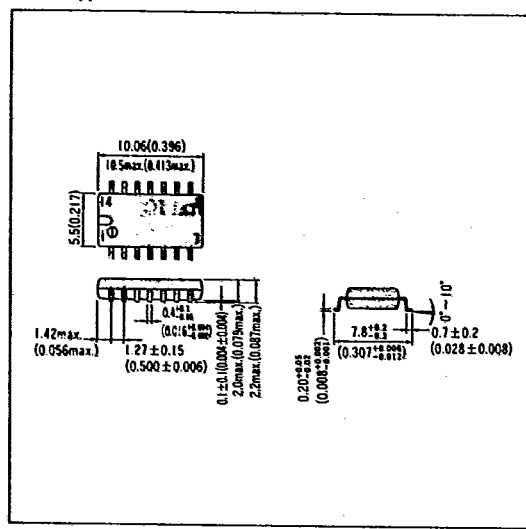
24 Pin type



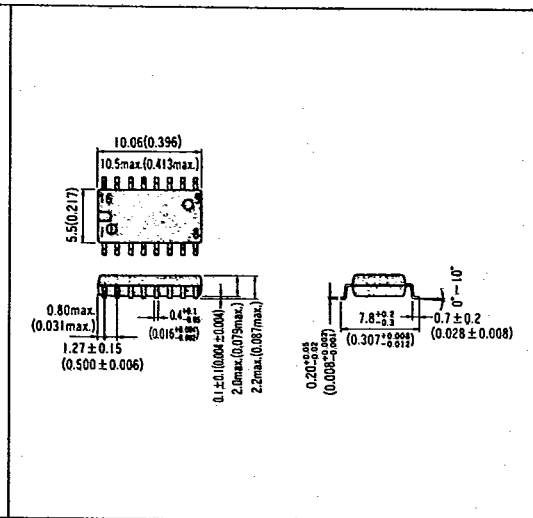
### Package Information

Small Outline Package [Unit: mm (inch)]

14 Pin type



16 Pin type



20 Pin type

