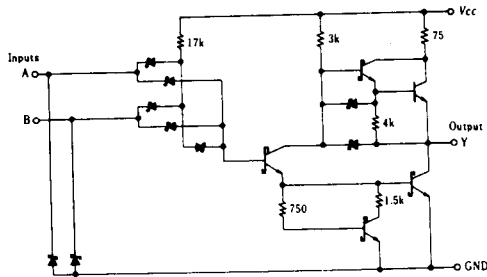


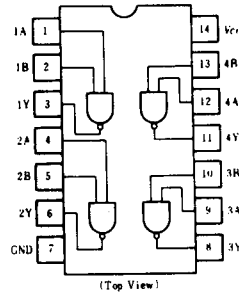
# HD74LS37

● Quadruple 2-input Positive NAND Buffers

## ■ CIRCUIT SCHEMATIC (1/4)



## ■ PIN ARRANGEMENT



## ■ RECOMMENDED OPERATING CONDITIONS

Item	Symbol	min	typ	max	Unit
High level output current	$I_{OH}$	—	—	-1.2	mA
Low level output current	$I_{OL}$	—	—	24	mA

## ■ ELECTRICAL CHARACTERISTICS ( $T_a = -20 \sim +75^\circ\text{C}$ )

Item	Symbol	Test Conditions	min	typ*	max	Unit	
Input voltage	$V_{IH}$		2.0	—	—	V	
	$V_{IL}$		—	—	0.8	V	
Output voltage	$V_{OH}$	$V_{CC} = 4.75\text{V}, V_{IL} = 0.8\text{V}, I_{OH} = -1.2\text{mA}$	2.7	—	—	V	
	$V_{OL}$	$V_{CC} = 4.75\text{V}, V_{IH} = 2\text{V}$	$I_{OL} = 24\text{mA}$	—	—	0.5	V
			$I_{OL} = 12\text{mA}$	—	—	0.4	
Input current	$I_{IH}$	$V_{CC} = 5.25\text{V}, V_i = 2.7\text{V}$	—	—	20	$\mu\text{A}$	
	$I_{IL}$	$V_{CC} = 5.25\text{V}, V_i = 0.4\text{V}$	—	—	-0.4	mA	
	$I_i$	$V_{CC} = 5.25\text{V}, V_i = 7\text{V}$	—	—	0.1	mA	
Short-circuit output current	$I_{OS}$	$V_{CC} = 5.25\text{V}$	-30	—	-130	mA	
Supply current	$I_{CCH}$	$V_{CC} = 5.25\text{V}$	—	0.9	2.0	mA	
	$I_{CCL}$	$V_{CC} = 5.25\text{V}$	—	6	12	mA	
Input clamp voltage	$V_{IK}$	$V_{CC} = 4.75\text{V}, I_{IN} = -18\text{mA}$	—	—	-1.5	V	

\*  $V_{CC} = 5\text{V}, T_a = 25^\circ\text{C}$

## ■ SWITCHING CHARACTERISTICS ( $V_{CC} = 5\text{V}, T_a = 25^\circ\text{C}$ )

Item	Symbol	Test Conditions	min	typ	max	Unit
Propagation delay time	$t_{PLH}$	$C_L = 45\text{pF}, R_L = 667\Omega$	—	12	24	ns
	$t_{PHL}$		—	12	24	ns

Note) Refer to Test Circuit and Waveform of the Common Item

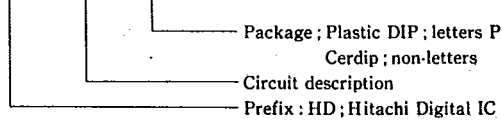


# PACKAGING INFORMATION

T-90-20

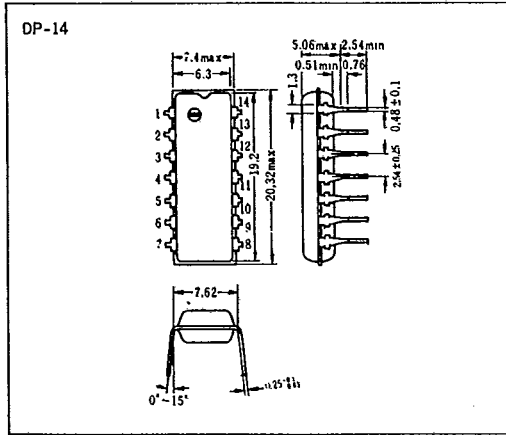
Factory orders for circuits described in this databook should include a three-part type number as explained in the following example.

## HD 74LS00 P

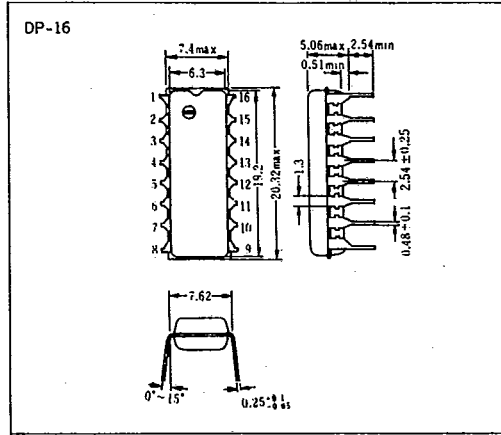


### ■ Plastic DIP

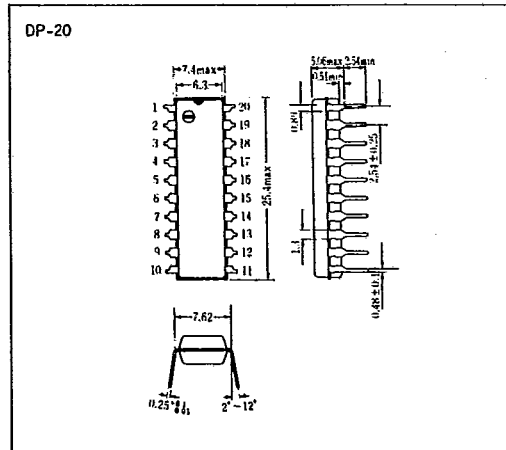
#### ● 14 Pin



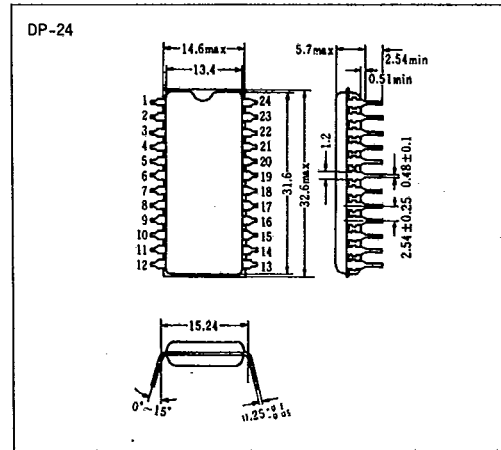
#### ● 16 Pin



#### ● 20 Pin



#### ● 24 Pin

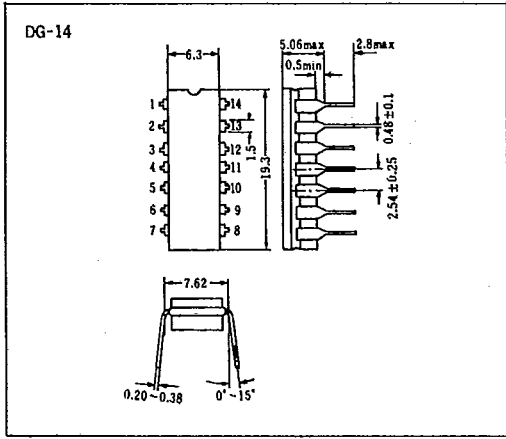


T-90-20

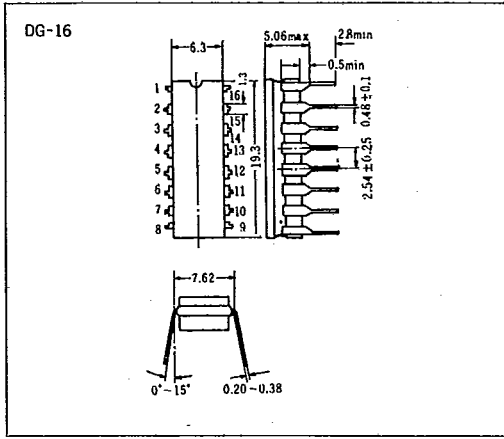
PACKAGING INFORMATIONS

■ Cerdip

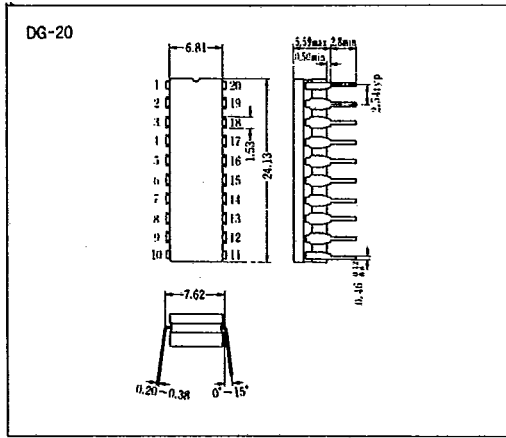
● 14 Pin



● 16 Pin



● 20 Pin



● 24 Pin

