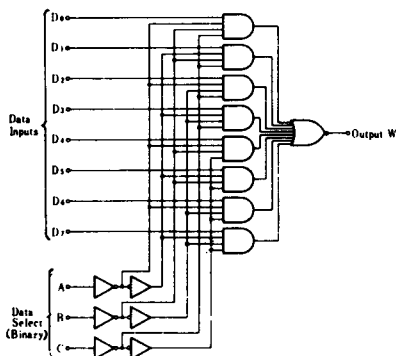


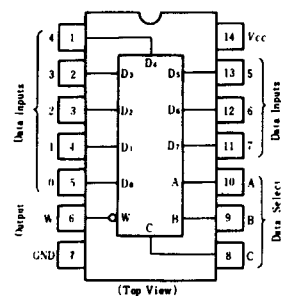
HD74LS152 • 1-of-8 Data Selectors/Multiplexers

This data selector/multiplexer contains full-on-chip binary decoding to select the desired data source. The HD74LS152 selects one-of-eight data sources.

■ BLOCK DIAGRAM



■ PIN ARRANGEMENT



■ FUNCTION TABLE

Select inputs			Output	Select inputs			Output
C	B	A	W	C	B	A	W
L	L	L	\bar{D}_0	H	L	L	\bar{D}_4
L	L	H	\bar{D}_1	H	L	H	\bar{D}_5
L	H	L	\bar{D}_2	H	H	L	\bar{D}_6
L	H	H	\bar{D}_3	H	H	H	\bar{D}_7

Notes) $\bar{D}_0 \sim \bar{D}_7$; the level of the D respective input
 H; high level
 L; low level

■ 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}	$V_{CC}=4.75\text{V}, I_{OH}=-400\mu\text{A}, V_{IH}=2\text{V}, V_{IL}=0.8\text{V}$	2.7	—	—	V
	V_{OL}	$V_{CC}=4.75\text{V}, V_{IH}=2\text{V}, I_{OL}=4\text{mA}$	—	—	0.4	V
		$V_{IL}=0.8\text{V}, I_{OL}=8\text{mA}$	—	—	0.5	V
Input current	I_{IH}	$V_{CC}=5.25\text{V}, V_I=2.7\text{V}$	—	—	20	μA
	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}	$V_{CC}=5.25\text{V}$	-20	—	-100	mA
Supply current**	I_{CC}	$V_{CC}=5.25\text{V}$	—	6.0	10	mA
Input clamp voltage	V_{IK}	$V_{CC}=4.75\text{V}, I_{IN}=-18\text{mA}$	—	—	-1.5	V

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

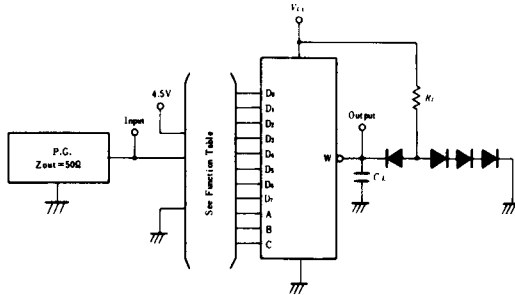
** I_{CC} is measured with all outputs open and all inputs at 4.5V.

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

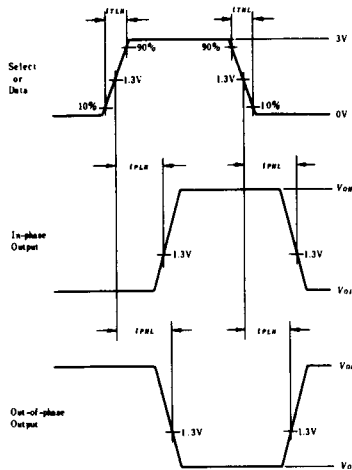
Item	Symbol	Inputs	Outputs	Test Conditions	min	typ	max	Unit
Propagation delay time	t_{PLH}	A, B, C	W	$C_L=15pF$, $R_L=2k\Omega$	—	14	23	ns
	t_{PHL}				—	20	32	
	t_{PLH}	Data	W		—	13	21	
	t_{PHL}				—	12	20	

TESTING METHOD

1) Test Circuit



Waveform



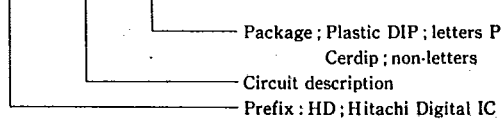
- Notes)
1. Input pulse; $t_{TLH} \leq 15ns$, $t_{THL} \leq 6ns$, $PRR=1MHz$, duty cycle=50%
 2. C_L includes probe and jig capacitance.
 3. All diodes are 1S2074 (H).

PACKAGING INFORMATIONS

T-90-20

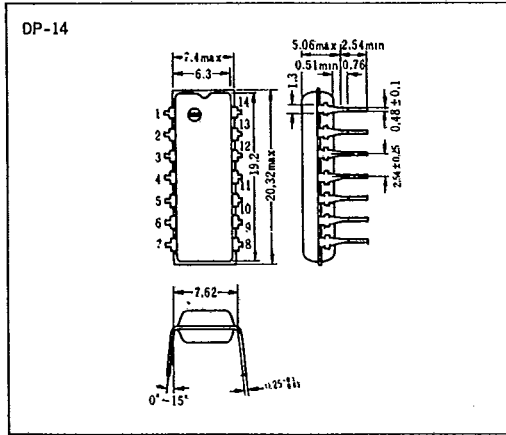
Factory orders for circuits described in this databook should include a three-part type number as explained in the following example.

HD 74LS00 P

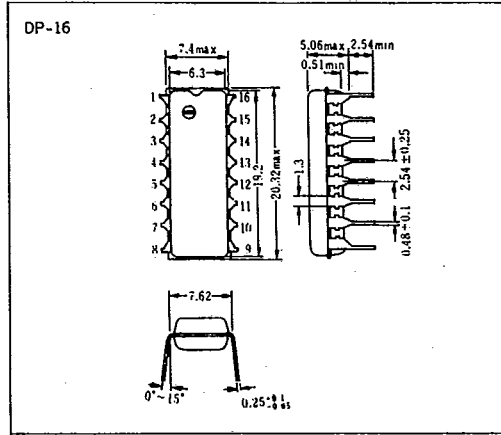


■ Plastic DIP

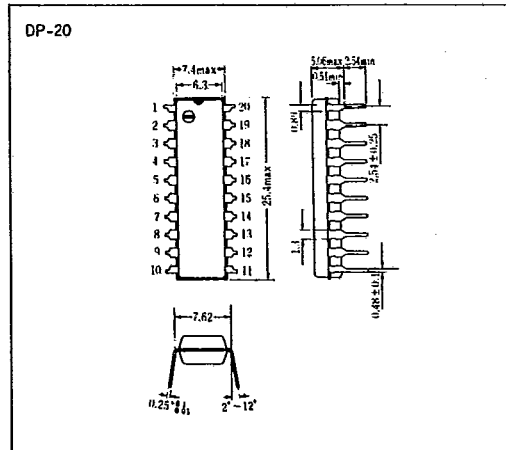
● 14 Pin



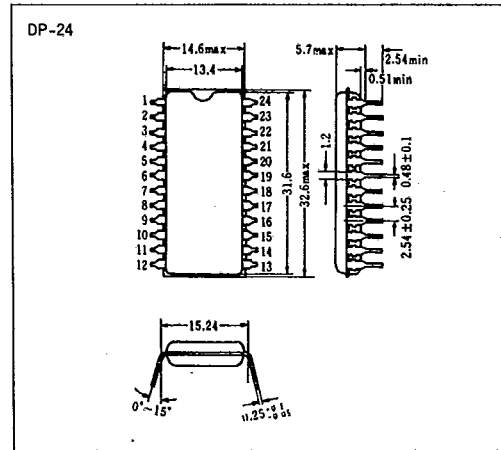
● 16 Pin



● 20 Pin



● 24 Pin

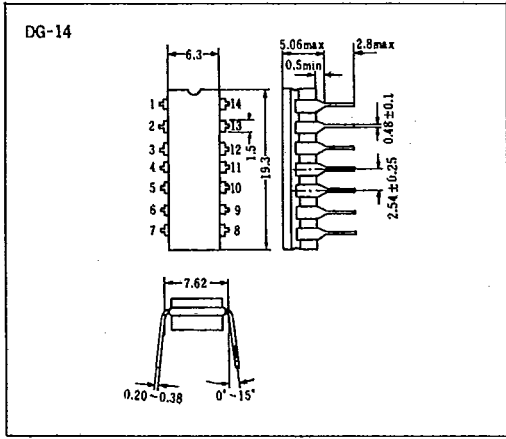


T-90-20

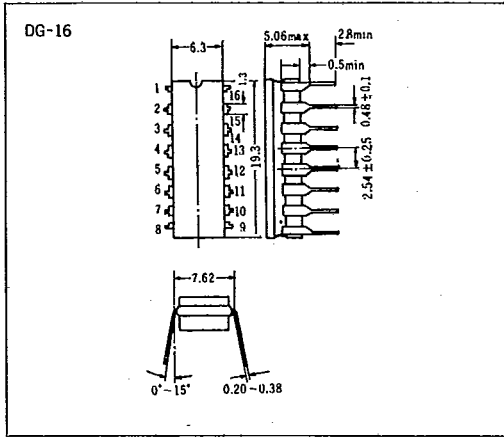
PACKAGING INFORMATIONS

■ Cerdip

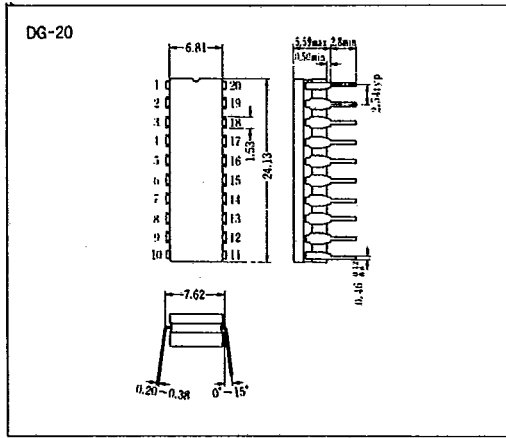
● 14 Pin



● 16 Pin



● 20 Pin



● 24 Pin

