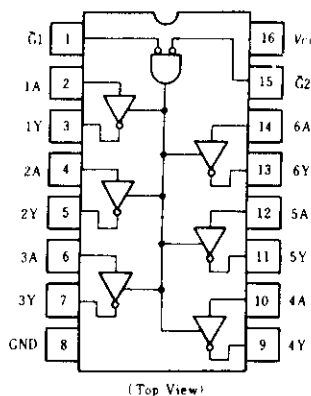


# HD74LS366A ● Hex Bus Drivers (with three-state outputs)

## ■ PIN ARRANGEMENT



## ■ ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Ratings	Unit
Supply voltage	$V_{CC}$	7.0	V
Input voltage	$V_{IN}$	7.0	V
Output voltage (off-state)	$V_{O(off)}$	5.5	V
Operating temperature range	$T_{op}$	-20 ~ +75	°C
Storage temperature range	$T_{stg}$	-65 ~ +150	°C

## ■ FUNCTION TABLE

Inputs			Output
$\overline{G}_1$	$\overline{G}_2$	A	Y
H	X	X	Z
X	H	X	Z
L	L	H	L
L	L	L	H

Note)

H; high level, L; low level,  
X; irrelevant  
Z; off (high-impedance) state  
of a 3-state output

## ■ RECOMMENDED OPERATING CONDITIONS

Item	Symbol	min	typ	max	Unit
Output current	$I_{OH}$	—	—	-2.6	mA
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		
Output voltage	$V_{OH}$	$V_{CC} = 4.75\text{V}$ , $V_{IH} = 2\text{V}$ , $V_{IL} = 0.8\text{V}$ , $I_{OH} = -2.6\text{mA}$	2.4	—	—	V	
	$V_{OL}$	$V_{CC} = 4.75\text{V}$ , $V_{IH} = 2\text{V}$ , $V_{IL} = 0.8\text{V}$	$I_{OL} = 24\text{mA}$	—	—		0.5
$I_{OL} = 12\text{mA}$			—	—	0.4		
Output current	$I_{OZH}$	$V_{CC} = 5.25\text{V}$ , $V_{IH} = 2\text{V}$ ,	—	—	20	$\mu\text{A}$	
	$I_{OZL}$	$V_{IL} = 0.8\text{V}$					$V_o = 2.4\text{V}$
Input current	$I_{IH}$	$V_{CC} = 5.25\text{V}$ , $V_{IH} = 2.7\text{V}$	—	—	20	$\mu\text{A}$	
	A inputs	$I_{IL}$	$V_{CC} = 5.25\text{V}$ , $V_I = 0.5\text{V}$ , Either $\bar{G}$ inputs = $2\text{V}$	—	—	—20	$\mu\text{A}$
			$V_{CC} = 5.25\text{V}$ , $V_I = 0.4\text{V}$ , Both $\bar{G}$ inputs = $0.4\text{V}$	—	—	—0.4	mA
	$\bar{G}$ inputs	$I_{IL}$	$V_{CC} = 5.25\text{V}$ , $V_I = 0.4\text{V}$	—	—	—0.4	
	$I_I$	$V_{CC} = 5.25\text{V}$ , $V_I = 7\text{V}$	—	—	0.1	$\text{mA}$	
Short-circuit output current	$I_{OS}$	$V_{CC} = 5.25\text{V}$	—40	—	—225	$\text{mA}$	
Supply current	$I_{CC}^{**}$	$V_{CC} = 5.25\text{V}$	—	12	21	$\text{mA}$	
Input clamp voltage	$V_{IK}$	$V_{CC} = 4.75\text{V}$ , $I_{IK} = -18\text{mA}$	—	—	—1.5	V	

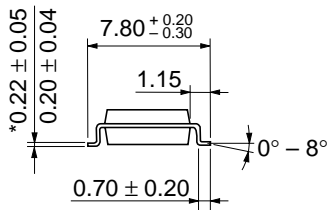
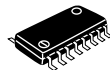
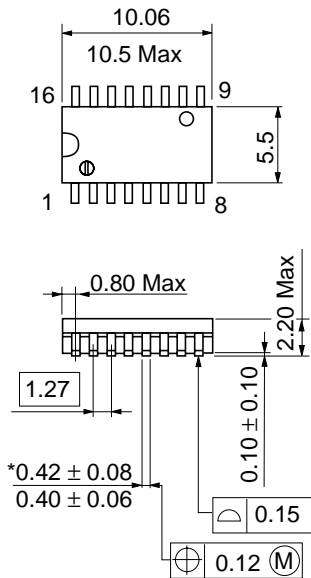
\*  $V_{CC} = 5\text{V}$ ,  $T_a = 25^\circ\text{C}$

\*\*  $I_{CC}$  is measured with data inputs grounded and output control inputs at  $4.5\text{V}$ .

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

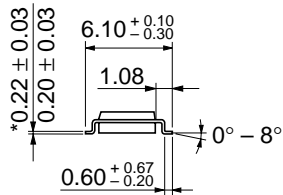
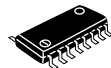
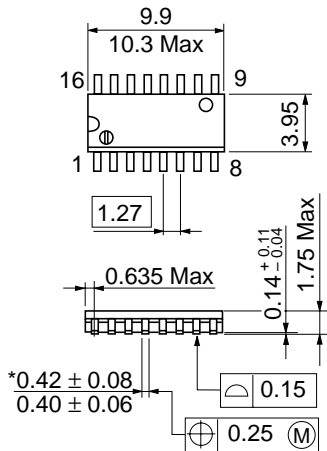
Item	Symbol	Test Conditions	min	typ	max	Unit
Propagation delay time	$t_{PLH}$	$C_L = 45\text{pF}$ $R_L = 667\Omega$	—	7	15	ns
	$t_{PHL}$		—	12	18	
Output enable time	$t_{ZH}$	$C_L = 5\text{pF}$ $R_L = 667\Omega$	—	18	35	
	$t_{ZL}$		—	28	45	
Output disable time	$t_{HZ}$	$C_L = 5\text{pF}$ $R_L = 667\Omega$	—	—	32	
	$t_{LZ}$		—	—	35	

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



\*Dimension including the plating thickness  
Base material dimension

Hitachi Code	FP-16DA
JEDEC	—
EIAJ	Conforms
Weight (reference value)	0.24 g



\*Dimension including the plating thickness  
Base material dimension

Hitachi Code	FP-16DN
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	0.15 g

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