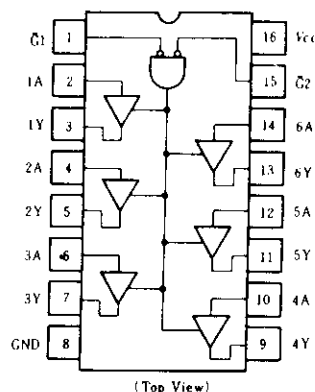


HD74LS365A • Hex Bus Drivers (with three-state outputs)

■ 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
\bar{G}_1	\bar{G}_2	A	Y
H	x	x	Z
x	H	x	Z
L	L	L	L
L	L	H	H

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

■ 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}	$V_{CC} = 4.75\text{V}, V_{IH} = 2\text{V}, I_{OL} = 24\text{mA}$	—	—	0.5		
		$V_{IL} = 0.8\text{V}, I_{OL} = 12\text{mA}$	—	—	0.4		
Output current	I_{OZH}	$V_{CC} = 5.25\text{V}, V_{IH} = 2\text{V}, V_O = 2.4\text{V}$	—	—	20	μA	
	I_{OZL}	$V_{IL} = 0.8\text{V}, V_O = 0.4\text{V}$	—	—	-20		
Input current	I_{IH}	$V_{CC} = 5.25\text{V}, V_{IH} = 2.7\text{V}$	—	—	20	μA	
	A inputs	I_{IL}	$V_{CC} = 5.25\text{V}, V_I = 0.5\text{V}, \text{Either } \bar{G} \text{ inputs} = 2\text{V}$	—	—	-20	μA
			$V_{CC} = 5.25\text{V}, V_I = 0.4\text{V}, \text{Both } \bar{G} \text{ inputs} = 0.4\text{V}$	—	—	-0.4	mA
	\bar{G} inputs	I_{IL}	$V_{CC} = 5.25\text{V}, V_I = 0.4\text{V}$	—	—	-0.4	mA
	I_I	$V_{CC} = 5.25\text{V}, V_I = 7\text{V}$	—	—	0.1	mA	
Short-circuit output current	I_{OS}	$V_{CC} = 5.25\text{V}$	-40	—	-225	mA	
Supply current	I_{CC}^{**}	$V_{CC} = 5.25\text{V}$	—	14	24	mA	
Input clamp voltage	V_{IK}	$V_{CC} = 5.25\text{V}, I_{IN} = -18\text{mA}$	—	—	-1.5	V	

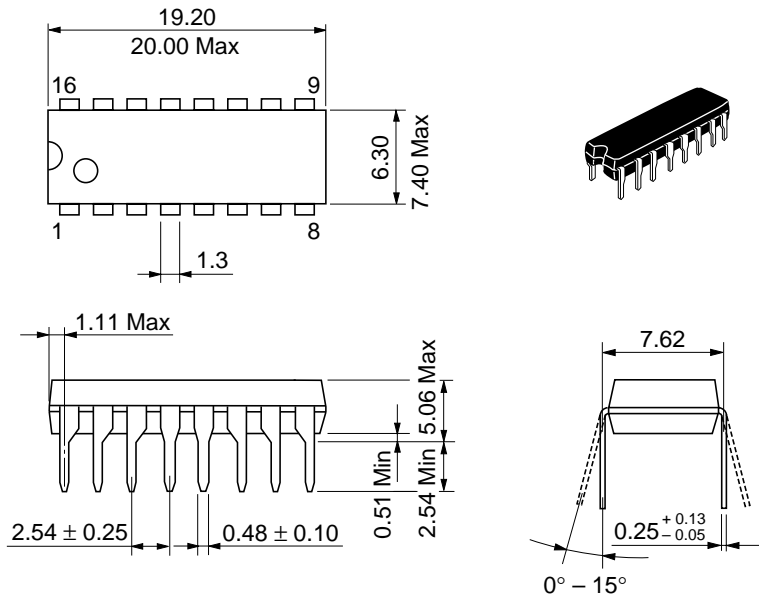
* $V_{CC} = 5\text{V}, T_a = 25^\circ\text{C}$

** With all outputs open, I_{CC} is measured with all inputs grounded and all \bar{G} inputs at 4.5V.

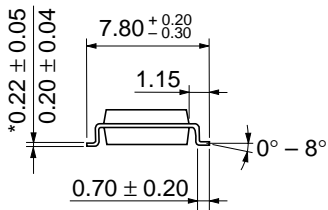
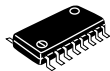
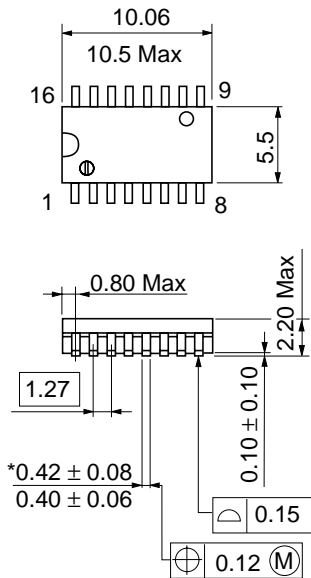
■ SWITCHING CHARACTERISTICS ($V_{CC}=5V$, $T_a=25^\circ C$)

Item	Symbol	Test Conditions	min	typ	max	Unit	
Propagation delay time	t_{PLH}	$C_L=45pF$ $R_L=667\Omega$	—	10	16	ns	
	t_{PHL}		—	9	22		
Output enable time	t_{ZH}		$C_L=5pF$ $R_L=667\Omega$	—	19		35
	t_{ZL}			—	24		40
Output disable time	t_{HZ}	$C_L=5pF$ $R_L=667\Omega$	—	—	30		
	t_{LZ}		—	—	35		

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

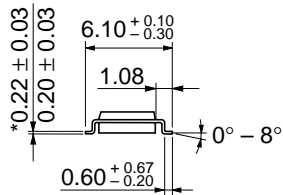
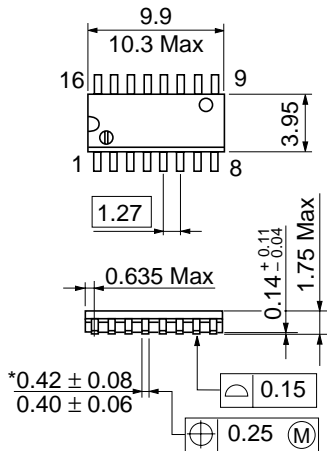


Hitachi Code	DP-16
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	1.07 g



*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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