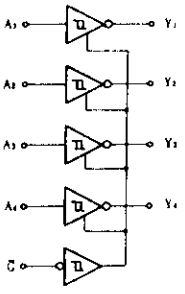
HD74LS240 ●Octal Buffers/Line Drivers/Line Receivers (inverted three-state outputs)

■BLOCK DIAGRAM (½)

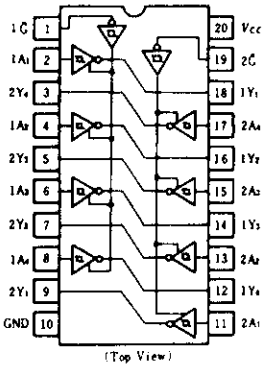


■FUNCTION TABLE

Inputs		Output
$\overline{G}$	A	Y
H	×	Z
L	H	L
L	L	H

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

■PIN ARRANGEMENT



(Top View)

■ELECTRICAL CHARACTERISTICS ($Ta = -20 \sim +75°C$)

Item		Symbol	Test Conditions		min	typ*	max	Unit
Input voltage		V_{IH}			2.0	–	–	V
		V_{IL}			–	–	0.8	V
Hysteresis		$V_T^+ - V_T^-$	V_{CC} = 4.75V		0.2	0.4	–	V
Output voltage		V_{OH}	V_{CC} = 4.75V, V_{IH} = 2V	V_{IL} = 0.8V, I_{OH} = −3mA	2.4	–	–	V
				V_{IL} = 0.5V, I_{OH} = −15mA	2.0	–	–	
		V_{OL}	V_{CC} = 4.75V, V_{IH} = 2V, V_{IL} = 0.8V	I_{OL} = 12mA	–	–	0.4	V
				I_{OL} = 24mA	–	–	0.5	
Output current		I_{OZH}	V_{CC} = 5.25V, V_{IH} = 2V, V_{IL} = 0.8V	V_O = 2.7V	–	–	20	μA
		I_{OZL}		V_O = 0.4V	–	–	−20	μA
Input current		I_{IH}	V_{CC} = 5.25V, V_I = 2.7V		–	–	20	μA
		I_{IL}	V_{CC} = 5.25V, V_I = 0.4V		–	–	−0.2	mA
		I_I	V_{CC} = 5.25V, V_I = 7V		–	–	0.1	mA
Short-circuit output current		I_{OS}	V_{CC} = 5.25V		−40	–	−225	mA
Supply current**	Outputs high	I_{CC}	V_{CC} = 5.25V		–	13	23	mA
	Outputs low				–	26	44	
	All outputs disabled				–	29	50	
Input clamp voltage		V_{IK}	V_{CC} = 4.75V, I_{IN} = −18mA		–	–	−1.5	V

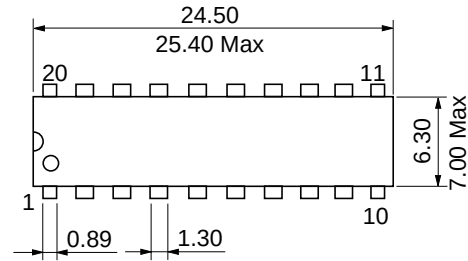
* V_{CC}=5V, Ta=25°C
** I_{CC} is measured with all outputs open.

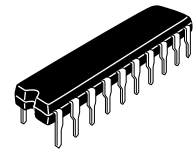
■SWITCHING CHARACTERISTICS (V_{CC} = 5V, Ta = 25°C)

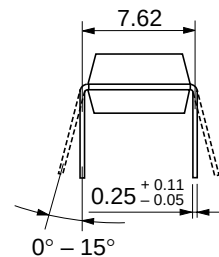
Item	Symbol	Test Conditions	min	typ	max	Unit
Propagation delay time	t_{PLH}	C_L = 45pF, R_L = 667Ω	–	9	14	ns
	t_{PHL}		–	12	18	
Output enable time	t_{ZL}		–	20	30	ns
	t_{ZH}		–	15	23	ns
Output disable time	t_{LZ}	C_L = 5pF, R_L = 667Ω	–	15	25	ns
	t_{HZ}		–	10	18	ns

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

Unit: mm

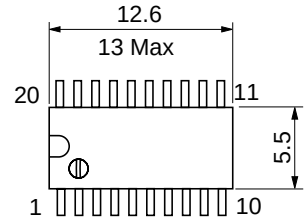


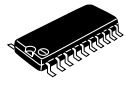


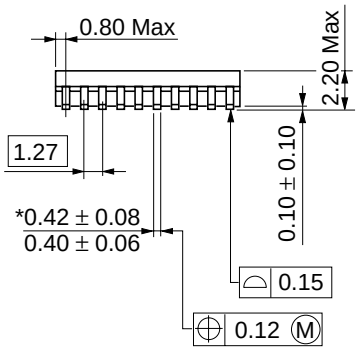


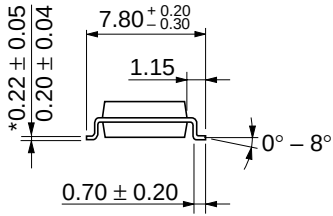
Hitachi Code	DP-20N
JEDEC	—
EIAJ	Conforms
Weight (reference value)	1.26 g

Unit: mm





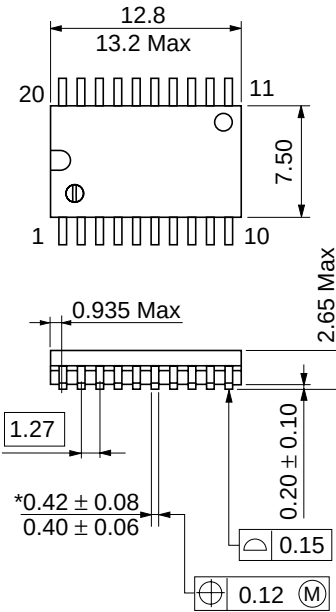


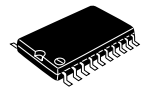


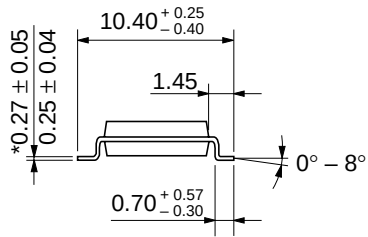
*Dimension including the plating thickness
Base material dimension

Hitachi Code	FP-20DA
JEDEC	—
EIAJ	Conforms
Weight (reference value)	0.31 g

Unit: mm







*Dimension including the plating thickness
Base material dimension

Hitachi Code	FP-20DB
JEDEC	Conforms
EIAJ	—
Weight (reference value)	0.52 g

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