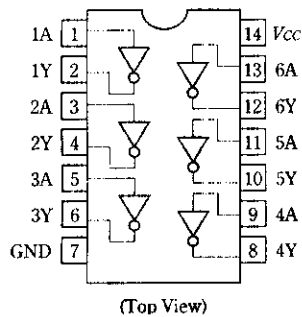


PIN ARRANGEMENT



ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Ratings	Unit
Supply voltage	V_{CC}	7.0	V
Input voltage	V_{IN}	7.0	V
Output voltage	V_{out}	30	V
Operating temperature range	T_{opr}	-20 ~ +75	°C
Storage temperature range	T_{stg}	-65 ~ +150	°C

RECOMMENDED OPERATING CONDITIONS

Item	Symbol	min	typ	max	Unit
Supply voltage	V_{CC}	4.75	5.00	5.25	V
High level output voltage	V_{OH}	-	-	30	V
Low level output current	I_{OL}	-	-	48	mA
Operating temperature range	T_{opr}	-20	25	75	°C

■ 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_{OL}	$V_{CC} = 4.75\text{V}, V_{IH} = 2\text{V}$	$I_{OL} = 24\text{mA}$	—	0.4	V
			$I_{OL} = 48\text{mA}$	—	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
Output current	I_{OH}	$V_{CC} = 4.75\text{V}, V_{IL} = 0.8\text{V}, V_{OH} = 30\text{V}$	—	—	250	μA
Supply current	I_{CCH}	$V_{CC} = 5.25\text{V}$	—	23	48	mA
	I_{CCL}	$V_{CC} = 5.25\text{V}$	—	21	51	mA
Input clamp voltage	V_{IK}	$V_{CC} = 4.75\text{V}, I_{IN} = -18\text{mA}$	—	—	-1.5	V

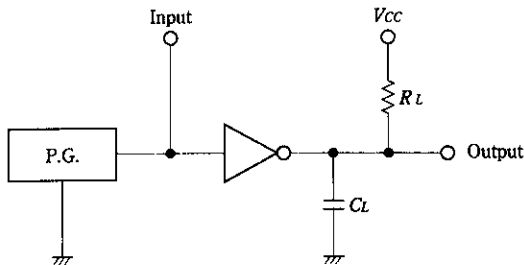
* $V_{CC} = 5\text{V}, T_a = 25^\circ\text{C}$

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

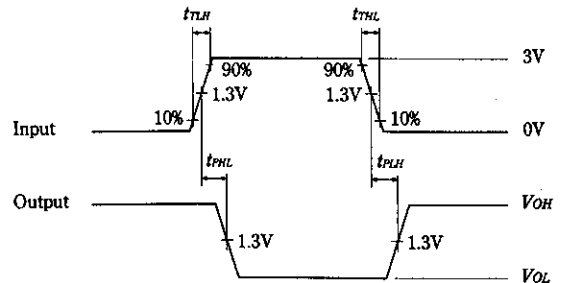
Item	Symbol	Test Conditions	min	typ	max	Unit
Propagation delay time	t_{PLH}	$C_L = 15\text{pF}, R_L = 110\Omega$	—	10	15	ns
	t_{PHL}		—	15	23	ns

■ TESTING METHOD

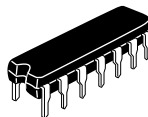
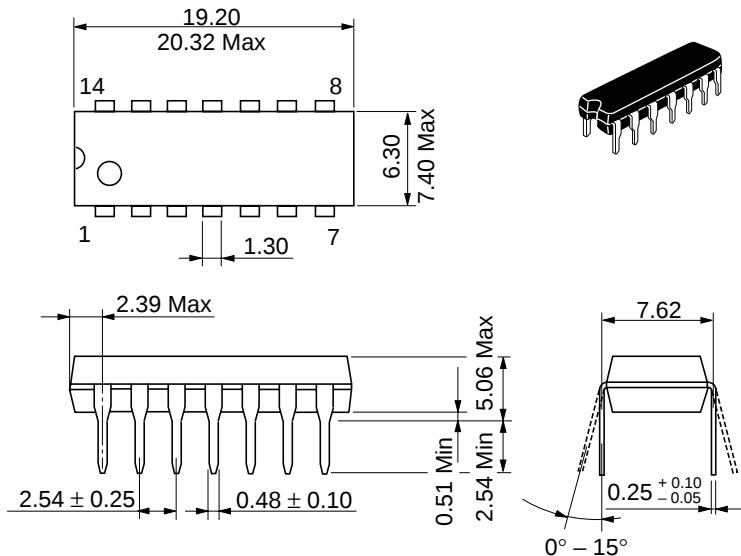
Test Circuit



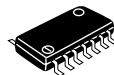
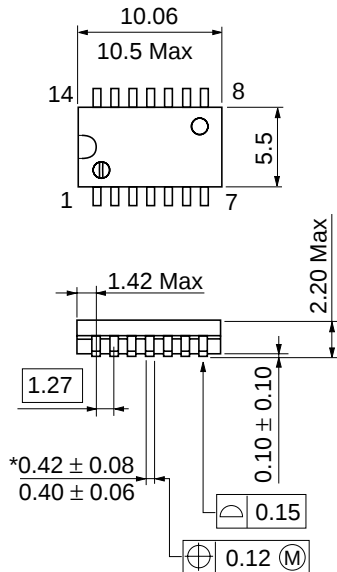
Waveform



- Notes) 1. Input pulse: PRR = 1MHz, duty cycle 50%, $Z_{out} = 50\Omega$, $t_{PLH} \leq 15\text{ns}$, $t_{PHL} \leq 6\text{ns}$
 2. C_L includes probe and jig capacitance.
 3. All diodes are 1S2074(H)

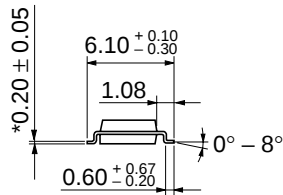
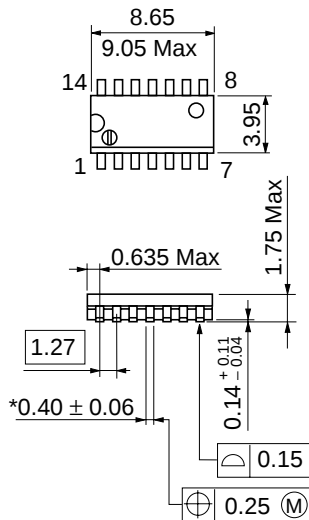


Hitachi Code	DP-14
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	0.97 g



Hitachi Code	FP-14DA
JEDEC	—
EIAJ	Conforms
Weight (reference value)	0.23 g

*Dimension including the plating thickness
Base material dimension



Hitachi Code	FP-14DN
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	0.13 g

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