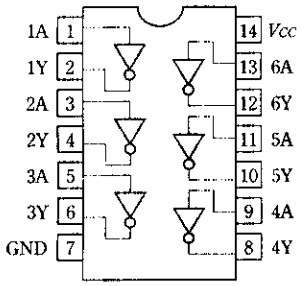
HD74LS06 ● Hex Inverter Buffers/Drivers (With Open Collector High-Voltage Outputs)

■ PIN ARRANGEMENT



(Top View)

■ ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Ratings	Unit
Supply voltage	*Vcc*	7.0	V
Input voltage	*VIN*	7.0	V
Output voltage	*Vout*	30	V
Operating temperature range	*Topr*	–20 ~ +75	°C
Storage temperature range	*Tstg*	–65 ~ +150	°C

■ RECOMMENDED OPERATING CONDITIONS

Item	Symbol	min	typ	max	Unit
Supply voltage	*Vcc*	4.75	5.00	5.25	V
High level output voltage	*VOH*	–	–	30	V
Low level output current	*IOL*	–	–	48	mA
Operating temperature range	*Topr*	–20	25	75	°C

■ ELECTRICAL CHARACTERISTICS (Ta = –20 ~ +75°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} = 4.75V, V_{IH} = 2V	I_{OL} = 24mA	–	–	0.4	V
			I_{OL} = 48mA	–	–	0.5	V
Input current	I_{IH}	V_{CC} = 5.25V V_I = 2.7V		–	–	20	µA
	I_{IL}	V_{CC} = 5.25V, V_I = 0.4V		–	–	–0.4	mA
	I_I	V_{CC} = 5.25V, V_I = 7V		–	–	0.1	mA
Output current	I_{OH}	V_{CC} = 4.75V, V_{IL} = 0.8V,	V_{OH} = 30V	–	–	250	µA
Supply current	I_{CCH}	V_{CC} = 5.25V		–	23	48	mA
	I_{CCL}	V_{CC} = 5.25V		–	21	51	mA
Input clamp voltage	V_{IK}	V_{CC} = 4.75V, I_{IN} = –18mA		–	–	–1.5	V

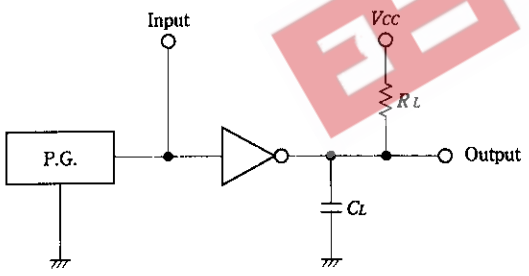
*V_{CC} = 5V, Ta = 25°C

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

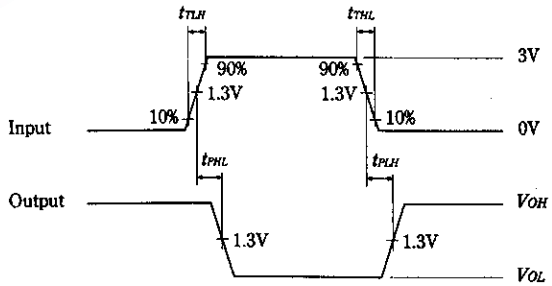
Item	Symbol	Test Conditions	min	typ	max	Unit
Propagation delay time	t_{PLH}	C_L = 15pF, R_L = 110Ω	–	10	15	ns
	t_{PHL}		–	15	23	ns

■ TESTING METHOD

Test Circuit

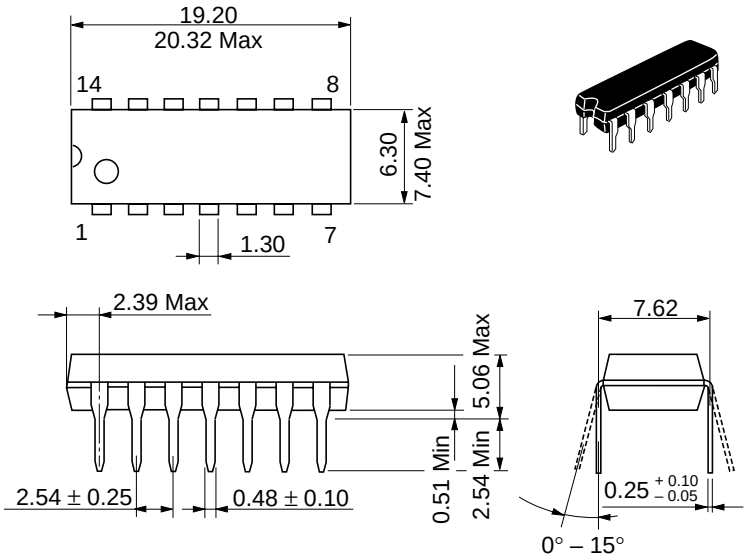


Waveform



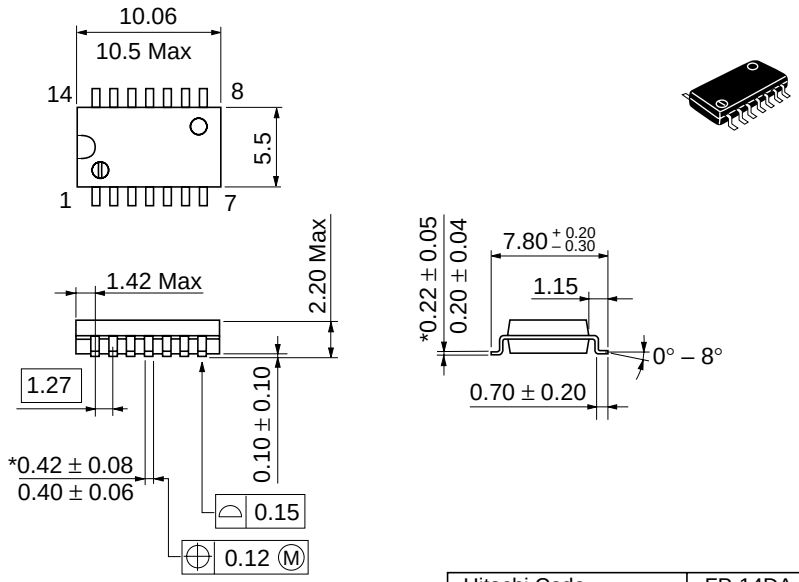
Notes) 1. Input pulse: PRR = 1MHz, duty cycle 50%, Zout = 50Ω, $t_{TLH} \leq 15$ns, $t_{THL} \leq 6$ns
2. C_L includes probe and jig capacitance.
3. All diodes are 1S2074Ⓗ

Unit: mm



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

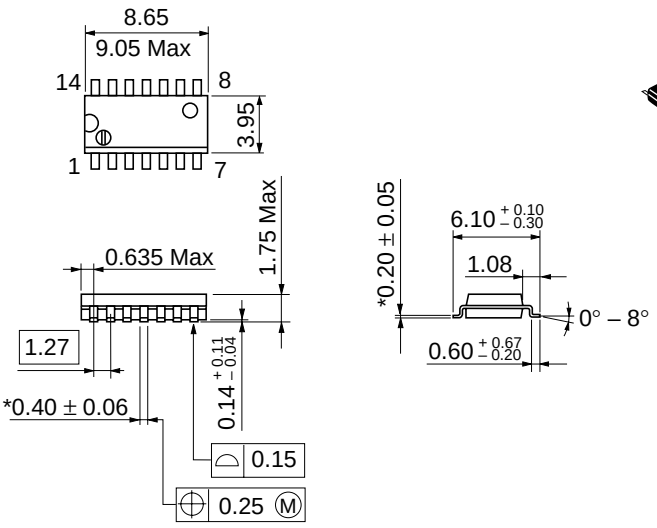
Unit: mm



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

*Dimension including the plating thickness
Base material dimension

Unit: mm



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

*Pd plating

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