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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

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Keep safety first in your circuit designs!

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Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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HD74AC126/HD74ACT126

Quad Buffer/Line Driver with 3-State Output



ADE-205-367 (Z)
1st. Edition
Sep. 2000

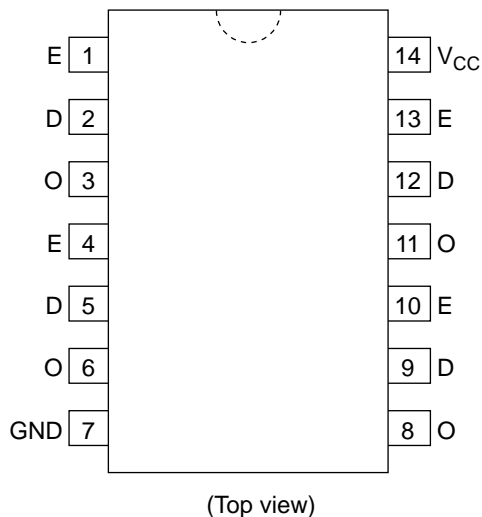
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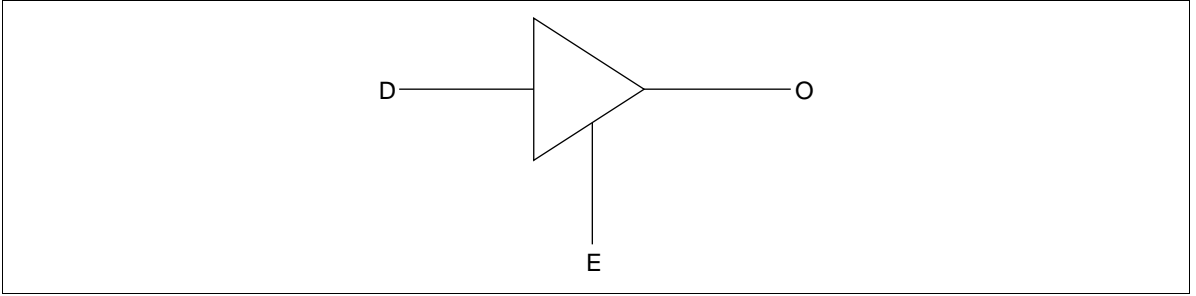
The HD74AC126/HD74ACT126 is an quad buffer and line driver designed to be employed as a memory address driver, clock driver and bus oriented transmitter/receiver which provides improved PC board density.

Features

- 3-State Outputs Drive Bus Lines or Buffer Memory Address Registers
- Outputs Source/Sink 24 mA
- HD74ACT126 has TTL-Compatible Inputs

Pin Arrangement



Logic Symbol**Pin Names**

- D Data Inputs
- E 3-State Output Enable Inputs (Active High)
- O Outputs

Truth Table**Inputs**

E	D	Output
H	L	L
H	H	H
L	X	Z

H : High Voltage Level

L : Low Voltage Level

X : Immaterial

Z : High Impedance

DC Characteristics (unless otherwise specified)

Item	Symbol	Max	Unit	Condition
Maximum Quiescent Supply Current	I_{CC}	80	μA	$V_{IN} = V_{CC}$ or ground, $V_{CC} = 5.5 \text{ V}$, $T_a = \text{Worst case}$
Maximum Quiescent Supply Current	I_{CC}	8.0	μA	$V_{IN} = V_{CC}$ or ground, $V_{CC} = 5.5 \text{ V}$, $T_a = 25^\circ\text{C}$
Maximum I_{CC} /Input (HD74ACT126)	I_{CCT}	1.5	mA	$V_{IN} = V_{CC} - 2.1 \text{ V}$, $V_{CC} = 5.5 \text{ V}$ $T_a = \text{Worst case}$

AC Characteristics: HD74AC126

Item	Symbol	V _{CC} (V) ^{*1}	Ta = +25°C C _L = 50 pF			Ta = -40°C to +85°C C _L = 50 pF		Unit
			Min	Typ	Max	Min	Max	
Propagation Delay	t _{PLH}	3.3	1.0	6.5	9.0	1.0	10.0	ns
		5.0	1.0	5.5	7.0	1.0	7.5	
Propagation Delay	t _{PHL}	3.3	1.0	6.5	9.0	1.0	10.0	
		5.0	1.0	5.0	7.0	1.0	7.5	
Enable Time	t _{ZH}	3.3	1.0	6.5	12.5	1.0	13.0	
		5.0	1.0	5.5	9.0	1.0	9.5	
Enable Time	t _{ZL}	3.3	1.0	7.0	12.0	1.0	13.0	
		5.0	1.0	5.5	9.0	1.0	9.5	
Disable Time	t _{HZ}	3.3	1.0	8.0	12.0	1.0	12.5	
		5.0	1.0	6.5	10.0	1.0	10.5	
Disable Time	t _{LZ}	3.3	1.0	7.0	12.5	1.0	13.5	
		5.0	1.0	6.0	10.0	1.0	10.5	

Note: 1. Voltage Range 3.3 is 3.3 V ± 0.3 V
Voltage Range 5.0 is 5.0 V ± 0.5 V

AC Characteristics: HD74ACT125

Item	Symbol	V _{CC} (V) ^{*1}	Ta = +25°C C _L = 50 pF			Ta = -40°C to +85°C C _L = 50 pF		Unit
			Min	Typ	Max	Min	Max	
Propagation Delay	t _{PLH}	5.0	1.0	6.5	9.0	1.0	10.0	ns
Propagation Delay	t _{PHL}	5.0	1.0	7.0	9.0	1.0	10.0	
Enable Time	t _{ZH}	5.0	1.0	6.0	9.0	1.0	10.0	
Enable Time	t _{ZL}	5.0	1.0	7.0	10.0	1.0	11.0	
Disable Time	t _{HZ}	5.0	1.0	8.0	10.5	1.0	11.5	
Disable Time	t _{LZ}	5.0	1.0	7.0	10.5	1.0	11.5	

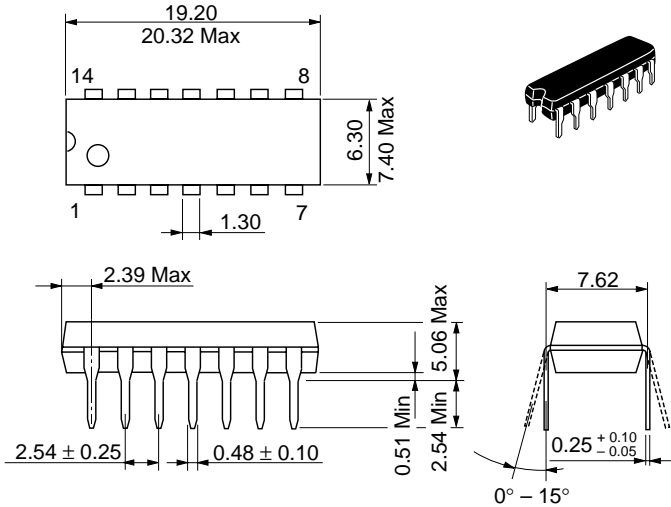
Note: 1. Voltage Range 5.0 is 5.0 V ± 0.5 V

Capacitance

Item	Symbol	Typ	Unit	Condition
Input Capacitance	C _{IN}	4.5	pF	V _{CC} = 5.5 V
Power Dissipation Capacitance	C _{PD}	45.0	pF	V _{CC} = 5.0 V

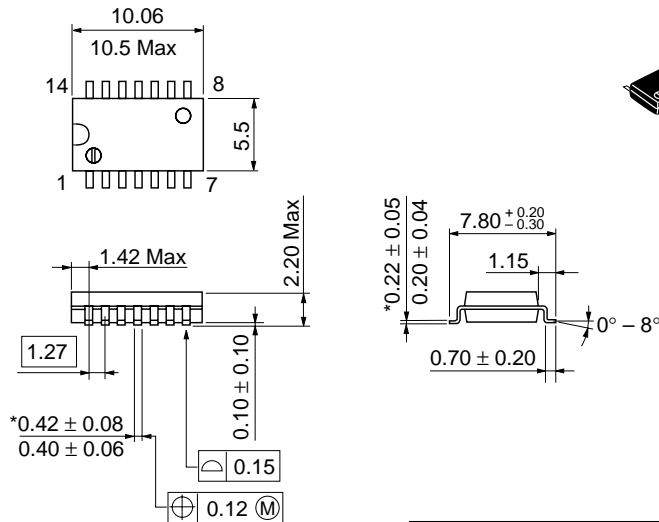
Package Dimensions

Unit: mm



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

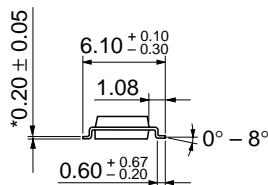
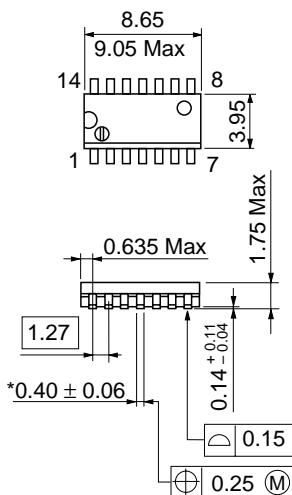
Unit: mm



*Dimension including the plating thickness
Base material dimension

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

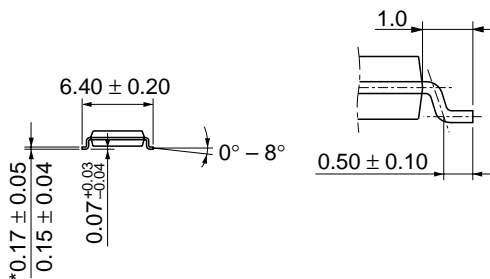
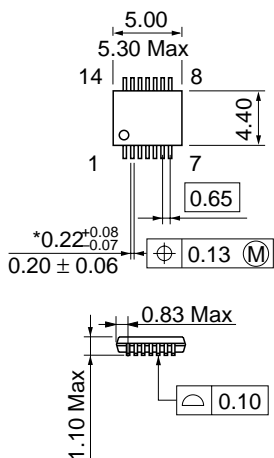
Unit: mm



*Pd plating

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

Unit: mm



*Dimension including the plating thickness
Base material dimension

Hitachi Code	TTP-14D
JEDEC	—
EIAJ	—
Mass (reference value)	0.05 g

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