DM74ALS1034 Hex Non-Inverting Driver

FAIRCHILD

SEMICONDUCTOR

DM74ALS1034 **Hex Non-Inverting Driver**

General Description

These devices contain six independent drivers, each of which performs the logic identity function.

Features

- Switching specifications at 50 pF
- Switching specifications guaranteed over full temperature and $V_{\mbox{\scriptsize CC}}$ range

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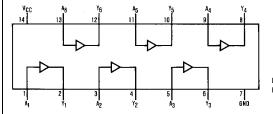
- Advanced oxide-isolated, ion-implanted Schottky TTL process
- Functionally and pin for pin compatible with Schottky and Low Power Schottky TTL counterpart
- Improved AC performance over Schottky and low power Schottky counterparts

Ordering Code:

Order Number	Package Number	Package Description				
DM74ALS1034M	M14A	14-Lead Small Outline Integrated Circuit (SOIC), JEDEC MS-012, 0.150 Narrow				
DM74ALS1034N	N14A	14-Lead Plastic Dual-In-Line Package (PDIP), JEDEC MS-001, 0.300 Wide				
Devices also available in Tane and Real. Specify by appending the suffix latter "X" to the ordering code						

Connection Diagram

Function Table $\mathbf{Y} = \mathbf{A}$



1 – A						
Input	Output					
Α	Y					
Н	Н					
L	L					

L = LOW Logic Level H = HIGH Logic Level

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Absolute Maximum Ratings(Note 1)

Supply Voltage	7V
Input Voltage	7V
Operating Free Air Temperature Range	$0^{\circ}C$ to $+70^{\circ}C$
Storage Temperature Range	$-65^{\circ}C$ to $+150^{\circ}C$
Typical θ _{JA}	
N Package	76.0°C/W
M Package	106.5°C/W

Note 1: The "Absolute Maximum Ratings" are those values beyond which the safety of the device cannot be guaranteed. The device should not be operated at these limits. The parametric values defined in the Electrical Characteristics tables are not guaranteed at the absolute maximum ratings. The "Recommended Operating Conditions" table will define the conditions for actual device operation.

Recommended Operating Conditions

Symbol	Parameter	Min	Nom	Max	Units
V _{CC}	Supply Voltage	4.5	5	5.5	V
VIH	HIGH Level Input Voltage	2			V
V _{IL}	LOW Level Input Voltage			0.8	V
ОН	HIGH Level Output Current			-15	mA
OL	LOW Level Output Current			24	mA
T _A	Free Air Operating Temperature	0		70	°C

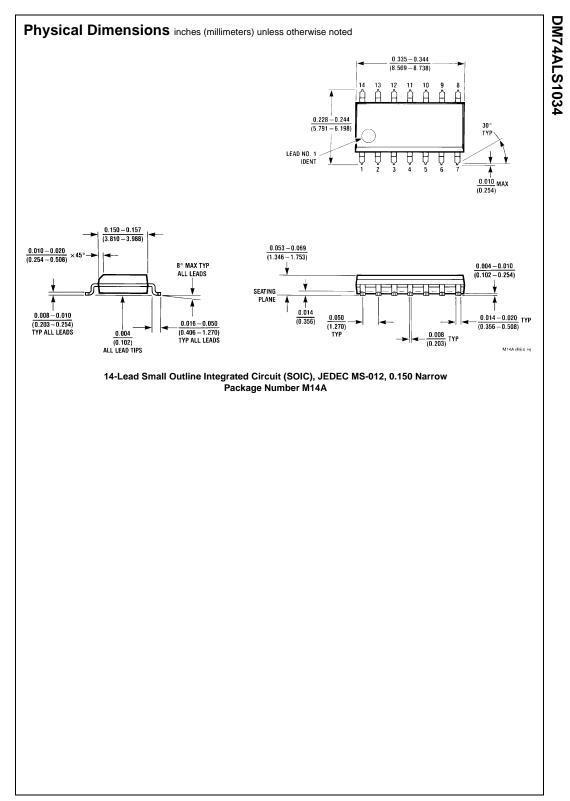
Electrical Characteristics

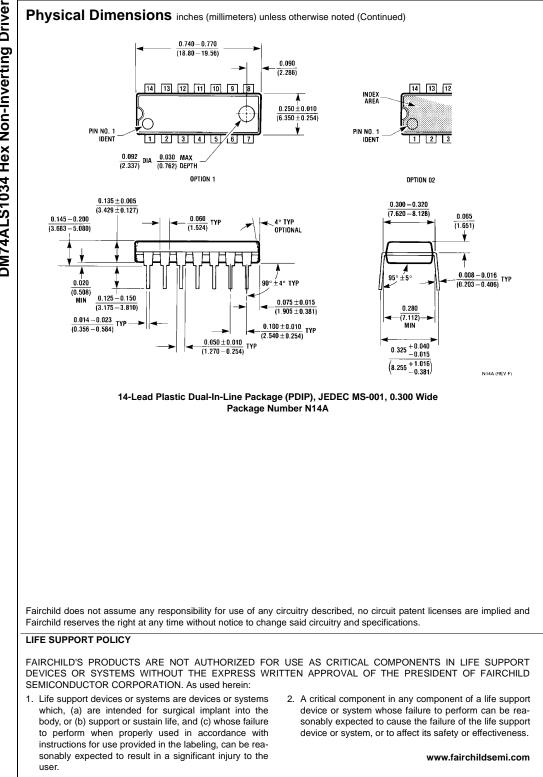
over recommended operating free air temperature range. All typical values are measured at V_{CC} = 5V, $T_A = 25^{\circ}C$.

Symbol	Parameter	Conditions		Min	Тур	Max	Units
V _{IK}	Input Clamp Voltage	$V_{CC} = 4.5V, I_1 = -18 \text{ mA}$				-1.2	V
V _{OH}	HIGH Level	$I_{OH} = -0.4 \text{ mA}, V_{CC} = 4.5 \text{V} \text{ to } 5.5 \text{V}$ $I_{OH} = \text{Max}, V_{CC} = 4.5 \text{V}$		V _{CC} – 2			V
	Output Voltage			2			V
		$I_{OH} = -3$ mA, $V_{CC} = 4.5V$		2.4			v
V _{OL}	LOW Level	$V_{CC} = 4.5V$	I _{OL} = 12 mA		0.25	0.4	V
	Output Voltage		$I_{OL} = 24 \text{ mA}$		0.35	0.5	V
l _l	Input Current @ Maximum Input Voltage	$V_{CC} = 5.5V, V_I = 7V$				0.1	mA
I _{IH}	HIGH Level Input Current	$V_{CC} = 5.5V, V_I = 2.7V$				20	μΑ
I _{IL}	LOW Level Input Current	$V_{CC} = 5.5V, V_I = 0.4V$				-0.1	mA
I _O	Output Drive Current	$V_{CC} = 5.5V, V_{O} = 2.25V$		-30		-112	mA
I _{CC}	Supply Current	V _{CC} = 5.5V	Outputs HIGH		3	6	mA
			Outputs LOW		8	14	mA

Switching Characteristics

Symbol	Parameter	Conditions	Min	Max	Units
t _{PLH}	Propagation Delay Time LOW-to-HIGH Level Output	$V_{CC} = 4.5V$ to 5.5V $R_L = 500\Omega$	1	8	ns
t _{PHL}	Propagation Delay Time HIGH-to-LOW Level Output	C _L = 50 pF	1	8	ns





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