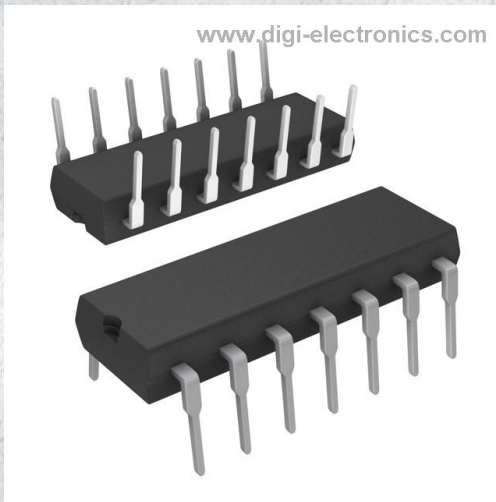


# DM74ALS04BN Datasheet



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	DM74ALS04BN-DG
Manufacturer	<a href="#">onsemi</a>
Manufacturer Product Number	DM74ALS04BN
Description	IC INVERTER 6CH 1-INP 14MDIP
Detailed Description	Inverter IC 6 Channel 14-MDIP



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

DM74ALS04BN

Series:

74ALS

Logic Type:

Inverter

Number of Inputs:

1

Voltage - Supply:

4.5V ~ 5.5V

Input Logic Level - Low:

0.8V

Max Propagation Delay @ V, Max CL:

11ns @ 5V, 50pF

Mounting Type:

Through Hole

Package / Case:

14-DIP (0.300", 7.62mm)

Manufacturer:

onsemi

Product Status:

Obsolete

Number of Circuits:

6

Features:

-

Current - Output High, Low:

400µA, 8mA

Input Logic Level - High:

2V

Operating Temperature:

0°C ~ 70°C

Supplier Device Package:

14-MDIP

Base Product Number:

74ALS04

## Environmental & Export classification

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

REACH Status:

REACH Unaffected

HTSUS:

8542.39.0001



September 1986  
Revised February 2000

DM74ALS04B Hex Inverter

# DM74ALS04B Hex Inverter

## General Description

This device contains six independent gates, each of which performs the logic INVERT function.

## Features

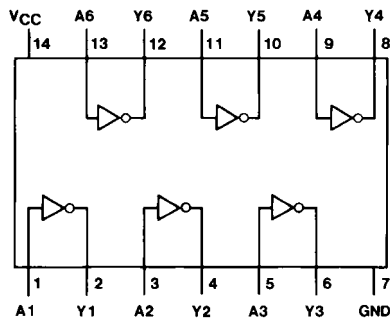
- Switching specifications at 50 pF
- Switching specifications guaranteed over full temperature and  $V_{CC}$  range
- Advanced oxide-isolated, ion-implanted Schottky TTL process
- Functionally and pin for pin compatible with Schottky and low power Schottky TTL counterpart
- Improved AC performance over Schottky and low power Schottky counterparts

## Ordering Code:

Order Number	Package Number	Package Description
DM74ALS04BM	M14A	14-Lead Small Outline Integrated Circuit (SOIC), JEDEC MS-012, 0.150 Narrow
DM74ALS04BSJ	M14D	14-Lead Small Outline Package (SOP), EIAJ TYPE II, 5.3mm Wide
DM74ALS04BN	N14A	14-Lead Plastic Dual-In-Line Package (PDIP), JEDEC MS-001, 0.300 Wide

Devices also available in Tape and Reel. Specify by appending the suffix letter "X" to the ordering code.

## Connection Diagram



## Function Table

$$Y = \bar{A}$$

Input	Output
A	Y
L	H
H	L

H = HIGH Logic Level  
L = LOW Logic Level

DM74ALS04B

**Absolute Maximum Ratings**(Note 1)

Supply Voltage	7V
Input Voltage	7V
Operating Free Air Temperature Range	0°C to +70°C
Storage Temperature Range	-65°C to +150°C
Typical $\theta_{JA}$	
N Package	88.0°C/W
M Package	118.5°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
$V_{IH}$	HIGH Level Input Voltage	2			V
$V_{IL}$	LOW Level Input Voltage			0.8	V
$I_{OH}$	HIGH Level Output Current			-0.4	mA
$I_{OL}$	LOW Level Output Current			8	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  $V_{CC} = 5V$ ,  $T_A = 25^\circ C$ .

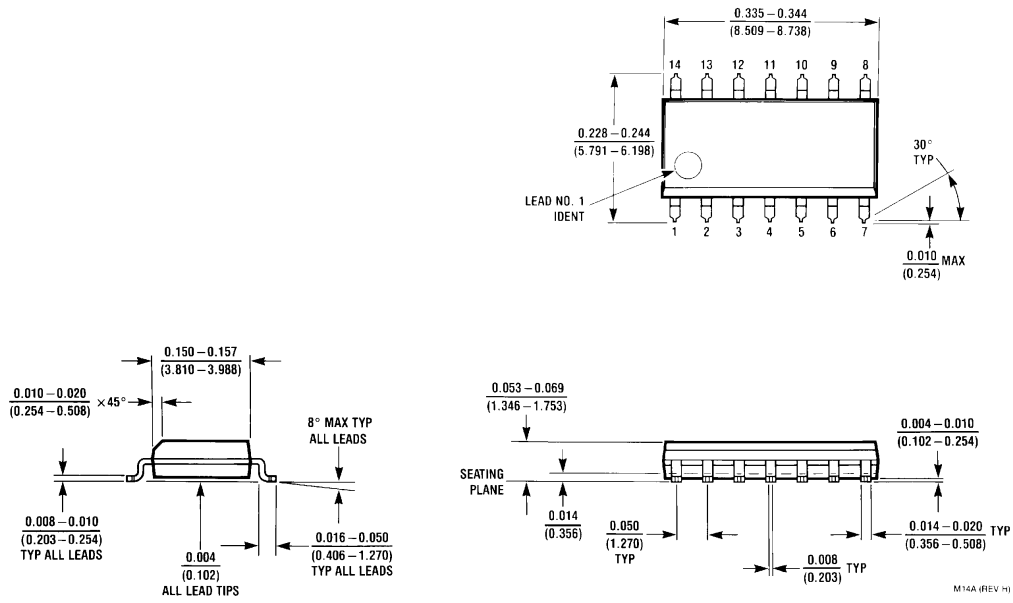
Symbol	Parameter	Conditions		Min	Typ	Max	Units
$V_{IK}$	Input Clamp Voltage	$V_{CC} = 4.5V$ , $I_I = -18\text{ mA}$				-1.2	V
$V_{OH}$	HIGH Level Output Voltage	$I_{OH} = -0.4\text{ mA}$ $V_{CC} = 4.5V\text{ to }5.5V$		$V_{CC} - 2$			V
$V_{OL}$	LOW Level Output Voltage	$V_{CC} = 4.5V$	$I_{OL} = 8\text{ mA}$		0.35	0.5	V
$I_I$	Input Current @ Maximum Input Voltage	$V_{CC} = 5.5V$ , $V_{IH} = 7V$				0.1	mA
$I_{IH}$	HIGH Level Input Current	$V_{CC} = 5.5V$ , $V_{IH} = 2.7V$				20	$\mu A$
$I_{IL}$	LOW Level Input Current	$V_{CC} = 5.5V$ , $V_{IL} = 0.4V$				-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		0.65	1.1	mA
			Outputs LOW		2.4	4.2	mA

**Switching Characteristics**

over recommended operating free air temperature range

Symbol	Parameter	Conditions	Min	Max	Units
$t_{PLH}$	Propagation Delay Time LOW-to-HIGH Level Output	$V_{CC} = 4.5V\text{ to }5.5V$ $R_L = 500\Omega$	3	11	ns
$t_{PHL}$	Propagation Delay Time HIGH-to-LOW Level Output	$C_L = 50\text{ pF}$	2	8	ns

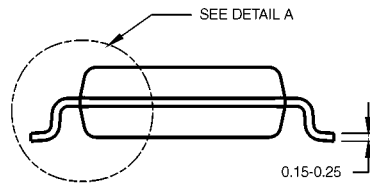
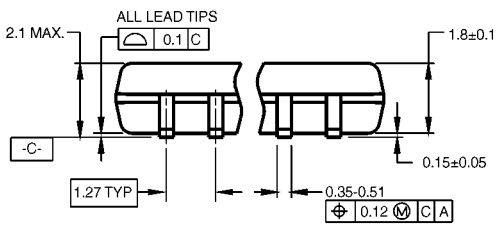
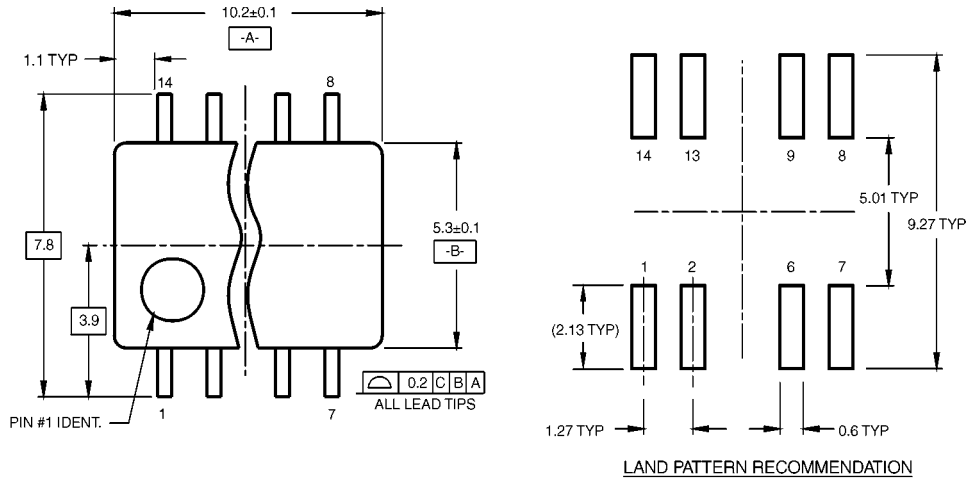
**Physical Dimensions** inches (millimeters) unless otherwise noted



**14-Lead Small Outline Integrated Circuit (SOIC), JEDEC MS-012, 0.150 Narrow  
Package Number M14A**

DM74ALS04B

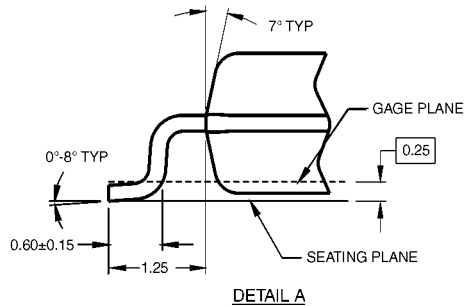
**Physical Dimensions** inches (millimeters) unless otherwise noted (Continued)



DIMENSIONS ARE IN MILLIMETERS

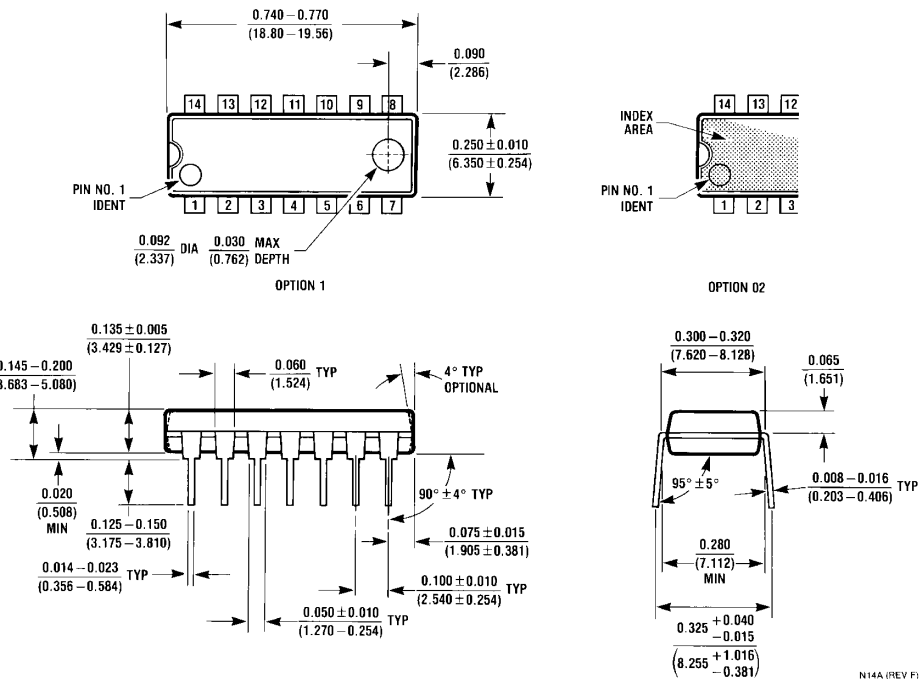
- NOTES:  
 A. CONFORMS TO EIAJ EDR-7320 REGISTRATION, ESTABLISHED IN DECEMBER, 1998.  
 B. DIMENSIONS ARE IN MILLIMETERS.  
 C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR EXTRUSIONS.

M14DRevB1



**14-Lead Small Outline Package (SOP), EIAJ TYPE II, 5.3mm Wide  
 Package Number M14D**

**Physical Dimensions** inches (millimeters) unless otherwise noted (Continued)



**14-Lead Plastic Dual-In-Line Package (PDIP), JEDEC MS-001, 0.300 Wide Package Number N14A**

N14A (REV F)

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