

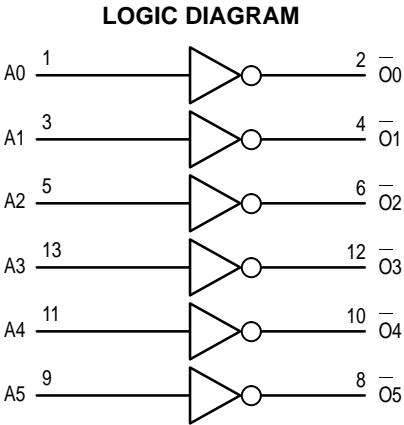
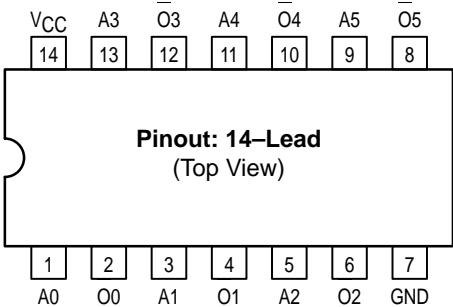
Product Preview

# Low-Voltage CMOS Hex Inverter, Open Drain With 5V-Tolerant Inputs

The MC74LCX05 is a high performance open drain hex inverter operating from a 2.7 to 3.6V supply. High impedance TTL compatible inputs significantly reduce current loading to input drivers. A  $V_I$  specification of 5.5V allows MC74LCX05 inputs to be safely driven from 5V devices.

The MC74LCX05 requires the addition of an external resistor to perform a wire-NOR function. The open drain output with a 5V pull-up resistor can be utilized to drive 5V CMOS inputs. Current drive capability is 24mA at the outputs.

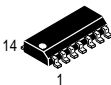
- Designed for 2.7 to 3.6V  $V_{CC}$  Operation
- 5V Tolerant Inputs — Interface Capability With 5V TTL Logic
- LVTTL Compatible
- LVCMOS Compatible
- 24mA Output Sink Capability
- Near Zero Static Supply Current (10 $\mu$ A) Substantially Reduces System Power Requirements
- Latchup Performance Exceeds 500mA
- ESD Performance: Human Body Model >2000V; Machine Model >200V



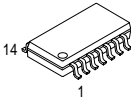
MC74LCX05

LCX

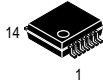
LOW-VOLTAGE CMOS  
HEX INVERTER  
OPEN DRAIN



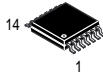
D SUFFIX  
PLASTIC SOIC  
CASE 751A-03



M SUFFIX  
PLASTIC SOIC EIAJ  
CASE 965-01



SD SUFFIX  
PLASTIC SSOP  
CASE 940A-03



DT SUFFIX  
PLASTIC TSSOP  
CASE 948G-01

PIN NAMES

Pins	Function
$A_n$ On	Data Inputs Outputs

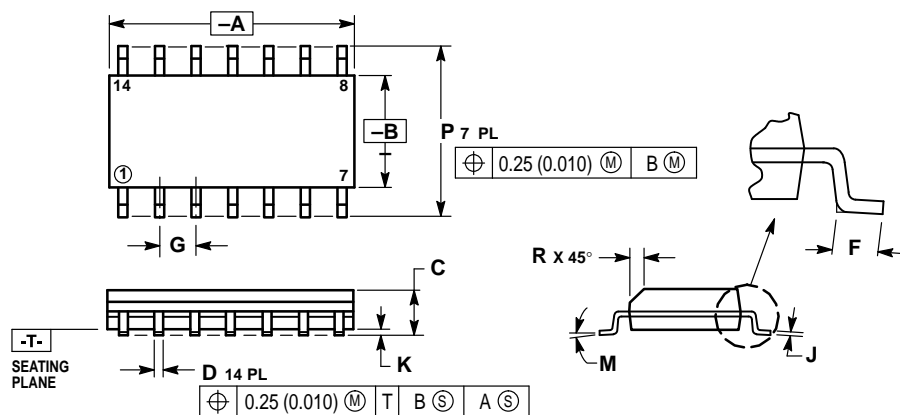
FUNCTION TABLE

$A_n$	$\overline{O_n}$
L	H
H	L

This document contains information on a product under development. Motorola reserves the right to change or discontinue this product without notice.

## OUTLINE DIMENSIONS

**D SUFFIX**  
**PLASTIC SOIC PACKAGE**  
**CASE 751A-03**  
**ISSUE F**

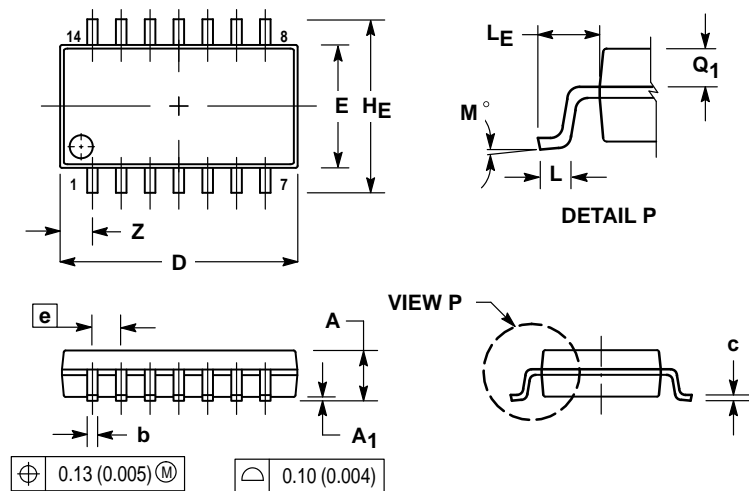


## NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. DIMENSIONS A AND B DO NOT INCLUDE MOLD PROTRUSION.
4. MAXIMUM MOLD PROTRUSION 0.15 (0.006) PER SIDE.
5. DIMENSION D DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.127 (0.005) TOTAL IN EXCESS OF THE D DIMENSION AT MAXIMUM MATERIAL CONDITION.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.55	8.75	0.337	0.344
B	3.80	4.00	0.150	0.157
C	1.35	1.75	0.054	0.068
D	0.35	0.49	0.014	0.019
F	0.40	1.25	0.016	0.049
G	1.27 BSC		0.050 BSC	
J	0.19	0.25	0.008	0.009
K	0.10	0.25	0.004	0.009
M	0°	7°	0°	7°
P	5.80	6.20	0.228	0.244
R	0.25	0.50	0.010	0.019

**M SUFFIX**  
**PLASTIC SOIC EIAJ PACKAGE**  
**CASE 965-01**  
**ISSUE O**




## NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH OR PROTRUSIONS AND ARE MEASURED AT THE PARTING LINE. MOLD FLASH OR PROTRUSIONS SHALL NOT EXCEED 0.15 (0.006) PER SIDE.
4. TERMINAL NUMBERS ARE SHOWN FOR REFERENCE ONLY.
5. THE LEAD WIDTH DIMENSION (b) DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.08 (0.003) TOTAL IN EXCESS OF THE LEAD WIDTH DIMENSION AT MAXIMUM MATERIAL CONDITION. DAMBAR CANNOT BE LOCATED ON THE LOWER RADIUS OR THE FOOT. MINIMUM SPACE BETWEEN PROTRUSIONS AND ADJACENT LEAD TO BE 0.46 (0.018).

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	---	2.05	---	0.081
A <sub>1</sub>	0.05	0.20	0.002	0.008
b	0.35	0.50	0.014	0.020
c	0.18	0.27	0.007	0.011
D	9.90	10.50	0.390	0.413
E	5.10	5.45	0.201	0.215
e	1.27 BSC		0.050 BSC	
H <sub>E</sub>	7.40	8.20	0.291	0.323
L	0.50	0.85	0.020	0.033
L <sub>E</sub>	1.10	1.50	0.043	0.059
M	0°	10°	0°	10°
Q <sub>1</sub>	0.70	0.90	0.028	0.035
Z	---	1.42	---	0.056



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