

LC74HC08M



3034A

CMOS High-Speed Standard Logic  
LC74HC Series

## Quad 2-Input AND Gate

©2140A

## Features

- The LC74HC08M consists of 4 identical 2-input AND gates.
- Uses CMOS silicon gate process technology to achieve operating speeds similar to LS-TTL (74LS08) with the low power dissipation and high noise margin of standard CMOS ICs.
- Has buffered outputs, improving the output transition characteristics.
- All inputs and outputs are protected from damage.
- The LC74HC08M is functionally as well as pin-out compatible with the standard 54LS/74LS TTL logic family.

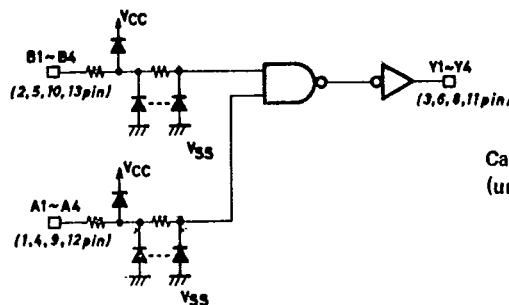
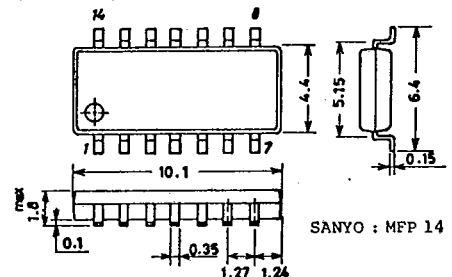
Absolute Maximum Ratings/ $T_a=25\pm 2^\circ\text{C}$ ,  $V_{SS}=0\text{V}$ 

			unit
Maximum Supply Voltage	$V_{CC}$ max	$V_{SS}-0.5$ to $V_{SS}+7.0$	V
Maximum Input Voltage	$V_{IN}$ max	$V_{SS}-0.5$ to $V_{CC}+0.5$	V
Maximum Output Voltage	$V_{OUT}$ max	$V_{SS}-0.5$ to $V_{CC}+0.5$	V
Maximum Output Current	$I_{OUT}$	Per output	$\pm 25$ mA
Current Dissipation	$I_{CC}/I_{Gnd}$		$\pm 50$ mA
Clamp Diode Current	$I_K$	Per input pin (Input protector)	$\pm 20$ mA
Allowable Power Dissipation	$P_d$ max	Per package, $T_a \leq 85^\circ\text{C}$	150 mW
Storage Temperature	$T_{stg}$	$-65$ to $+150$	$^\circ\text{C}$
Lead Temperature and Time	$T_{sol}$	$t=10\text{sec}$	260 $^\circ\text{C}$

Allowable Operating Conditions/ $V_{SS}=0\text{V}$ 

			unit
Supply Voltage	$V_{CC}$	2.0 to 6.0	V
Input Voltage	$V_{IN}$	0 to $V_{CC}$	V
Output Voltage	$V_{OUT}$	0 to $V_{CC}$	V
Operating Temperature	$T_{opg}$	$-40$ to $+85$	$^\circ\text{C}$
Input Rise/Fall Time	$t_r, t_f$	0 to 500	ns

## Equivalent Circuit and Logic Diagram (1/4 LC74HC08M)

Case Outline 3034A-M14IC  
(unit: mm)

For details, refer to the description of the LC74HC08.