

T-43-21



3034A

CMOS High-Speed Standard Logic  
LC74HC Series

# Triple 3-Input NAND Gate

©2141A

**Features**

- The LC74HC10M consists of 3 identical 3-input NAND gates.
- Uses CMOS silicon gate process technology to achieve operating speeds similar to LS-TTL (74LS10) 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 LC74HC10M is functionally as well as pin-out compatible with the standard 54LS/74LS TTL logic family.

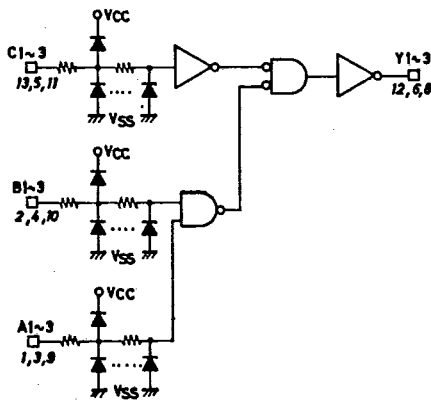
**Absolute Maximum Ratings/Ta=25±2°C, VSS=0V**

|                             |          |                                 | unit           |
|-----------------------------|----------|---------------------------------|----------------|
| Maximum Supply Voltage      | VCC max  | VSS-0.5 to VSS+7.0              | V              |
| Maximum Input Voltage       | VIN max  | VSS-0.5 to VCC+0.5              | V              |
| Maximum Output Voltage      | VOUT max | VSS-0.5 to VCC+0.5              | V              |
| Maximum Output Current      | IOUT     | Per output                      | ±25 mA         |
| Current Dissipation         | ICC/IGnd |                                 | ±50 mA         |
| Clamp Diode Current         | IK       | Per input pin (Input protector) | ±20 mA         |
| Allowable Power Dissipation | Pd max   | Per package, Ta≤85°C            | 150 mW         |
| Storage Temperature         | Tstg     |                                 | -65 to +150 °C |
| Lead Temperature and Time   | Tsol     | t=10sec                         | 260 °C         |

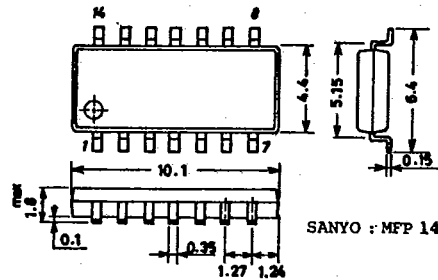
**Allowable Operating Conditions/VSS=0V**

|                       |        |            | unit |
|-----------------------|--------|------------|------|
| Supply Voltage        | VCC    | 2.0 to 6.0 | V    |
| Input Voltage         | VIN    | 0 to VCC   | V    |
| Output Voltage        | VOUT   | 0 to VCC   | V    |
| Operating Temperature | Topg   | -40 to +85 | °C   |
| Input Rise/Fall Time  | tr, tf | 0 to 500   | ns   |

**Equivalent Circuit and Logic Diagram (1/3 LC74HC10M)**



**Case Outline 3034A-M14C (unit: mm)**



For details, refer to the description of the LC74HC10.

5306KI/4106KI, TS III No. 2141-1/3