Product Overview

MC74VHCT132A: Quad 2-Input NAND Gate with Schmitt Trigger Input

For complete documentation, see the data sheet.

The MC74VHCT132A is an advanced high speed CMOS Schmitt NAND trigger fabricated with silicon gate CMOS technology. It achieves high speed operation similar to equivalent Bipolar Schottky TTL while maintaining CMOS low power dissipation. Pin configuration and function are the same as the MC74VHC00, but the inputs have hysteresis and, with its Schmitt trigger function, the VHCT132A can be used as a line receiver which will receive slow input signals. The VHCT inputs are compatible with TTL levels. This device can be used as a level converter for interfacing 3.3V to 5.0V, because it has full 5V CMOS level output swings. The VHCT132A input structures provide protection when voltages between 0V and 5.5V are applied, regardless of the supply voltage. The output structures also provide protection when VCC = 0V. These input and output structures help prevent device destruction caused by supply voltage- input/output voltage mismatch, battery backup, hot insertion, etc. The internal circuit is composed of three stages, including a buffer output which provides high noise immunity and stable output. The inputs tolerate voltages up to 7V, allowing the interface of 5V systems to 3V systems.

Features

- High Speed: tPD = 4.9ns (Typ) at VCC = 5V
- Low Power Dissipation: ICC = 2mA (Max) at TA = 25°C
- TTL-Compatible Inputs: VIL = 0.8V; VIH = 2.0V
- Power Down Protection Provided on Inputs
- Balanced Propagation Delays
- Designed for 2V to 5.5V Operating Range
- Low Noise: VOLP = 0.8V (Max)
- Pin and Function Compatible with Other Standard Logic Families
- Latchup Performance Exceeds 300mA
- ESD Performance: HBM > 2000V; Machine Model > 200V

  For more features, see the data sheet

Part Electrical Specifications

Product	Pricing ($/Unit)	Compliance	Status	Type	Channels	V_{CC} Min (V)	V_{CC} Max (V)	t_{pd} Max (ns)	I_O Max (mA)	Package Type
MC74VHCT132ADR2G	0.1733	Pb-free Halide free non AEC-Q and PPAP	Active	NAND	4	4.5	5.5	null	8	SOIC-16
MC74VHCT132ADTRG	0.1996	Pb-free Halide free non AEC-Q and PPAP	Active	NAND	4	4.5	5.5	null	8	TSSOP-14
NLVVHCT132ADTR2G	0.1951	Pb-free Halide free non AEC-Q and PPAP	Active	NAND	4	4.5	5.5	9.7	8	TSSOP-14

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