

Product Overview

MC74VHC00: Quad 2-Input NAND Gate

For complete documentation, see the data sheet.

The MC74VHC00 is an advanced high speed CMOS 2-input NAND gate fabricated with silicon gate CMOS technology. It achieves high speed operation similar to equivalent Bipolar Schottky TTL while maintaining CMOS low power dissipation. 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: $t_{PD} = 3.7ns$ (Typ) at $V_{CC} = 5V$
- Low Power Dissipation: $I_{CC} = 2\mu A$ (Max) at $T_A = 25\text{ C}$
- High Noise Immunity: $V_{NIH} = V_{NIL} = 28\% V_{CC}$
- Power Down Protection Provided on Inputs
- Balanced Propagation Delays
- Designed for 2V to 5.5V Operating Range
- Low Noise: $V_{OLP} = 0.8V$ (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	Compliance	Status	Type	Channels	V_{CC} Min (V)	V_{CC} Max (V)	t_{pd} Max (ns)	I_O Max (mA)	Package Type
MC74VHC00DR2G	Pb-free	Active	NAND	4	2	5.5	null	null	SOIC-14
	Halide free								
MC74VHC00DTG	Pb-free	Active	NAND	4	2	5.5	null	null	TSSOP-14
	Halide free								
MC74VHC00DTR2G	Pb-free	Active	NAND	4	2	5.5	null	null	TSSOP-14
	Halide free								
NLV74VHC00DTR2G	AEC Qualified	Active	NAND	4	2	5.5	7.5	null	TSSOP-14
	PPAP Capable								
	Pb-free								
	Halide free								

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