

## Product Overview

### 74VHCT00A: Quad 2-Input NAND Gate

For complete documentation, see the data sheet.

The VHCT00A is an advanced high-speed CMOS 2-input NAND Gate fabricated with silicon gate CMOS technology. It achieves the high-speed operation similar to equivalent Bipolar Schottky TTL while maintaining the CMOS low power dissipation. The internal circuit is composed of 3 stages, including buffer output, which provide high noise immunity and stable output. Protection circuits ensure that 0V to 7V can be applied to the input pins without regard to the supply voltage and to the output pins with  $V_{CC} = 0V$ . These circuits prevent device destruction due to mismatched supply and input/output voltages. This device can be used to interface 3V to 5V systems and two supply systems such as battery backup.

### Features

- High speed:  $t_{PD} = 5.0$  ns (typ) at  $T_A = 25^\circ C$
- High noise immunity:  $V_{IH} = 2.0V$ ,  $V_{IL} = 0.8V$
- Power down protection is provided on all inputs and outputs
- Low noise:  $V_{OLP} = 0.8V$  (max)
- Low power dissipation:  $I_{CC} = 2 \mu A$  (max) at  $T_A = 25^\circ C$
- Pin and function compatible with 74HCT00

### Applications

- This product is general usage and suitable for many different applications.

### 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
74VHCT00AM	Pb-free	Active	NAND	4	4.5	5.5	5	8	SOIC-14
	Halide free								
74VHCT00AMTCX	Pb-free	Active	NAND	4	4.5	5.5	5	8	TSSOP-14 WB
	Halide free								
74VHCT00AMX	Pb-free	Active	NAND	4	4.5	5.5	5	8	SOIC-14
	Halide free								

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