

## Product Overview

### 74VHC02: Quad 2-Input NOR Gate

For complete documentation, see the data sheet.

The VHC02 is an advanced high-speed CMOS 2-Input NOR 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. An input protection circuit insures that 0V to 7V can be applied to the input pins without regard to the supply voltage. This device can be used to interface 5V to 3V systems and two supply systems such as battery backup. This circuit prevents device destruction due to mismatched supply and input voltages.

### Features

- High Speed:  $t_{PD} = 3.6 \text{ ns (typ)}$  at  $V_{CC} = 5V$
- Low power dissipation:  $I_{CC} = 2 \mu\text{A (max)}$  at  $T_A = 25^\circ\text{C}$
- High noise immunity:  $V_{NIH} = V_{NIL} = 28\% V_{CC} \text{ (min)}$
- Power down protection is provided on all inputs
- Low noise:  $V_{OLP} = 0.8V \text{ (max)}$
- Pin and function compatible with 74HC02

### 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
74VHC02M	Pb-free	Active	NOR	4	2	5.5	3.6	8	SOIC-14
	Halide free								
74VHC02MTCX	Pb-free	Active	NOR	4	2	5.5	3.6	8	TSSOP-14 WB
	Halide free								
74VHC02MX	Pb-free	Active	NOR	4	2	5.5	3.6	8	SOIC-14
	Halide free								
74VHC02SJX	Pb-free	Active	NOR	4	2	5.5	3.6	8	SOP-14

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