

Product Overview

MC74VHCT541A: Non-inverting Octal Bus Buffer/Line Driver/Line Receiver, TTL Level, 3-State

For complete documentation, see the data sheet.

The MC74VHCT541A is an advanced high speed CMOS octal bus buffer fabricated with silicon gate CMOS technology. It achieves high speed operation similar to equivalent Bipolar Schottky TTL while maintaining CMOS low power dissipation. The MC74VHCT541A is a noninverting, 3-state, buffer/line driver/line receiver. When either OE1 or OE2 is high, the terminal outputs are in the high impedance state. 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 VHCT541A input and output (when disabled) structures provide protection when voltages between 0V and 5.5V are applied, regardless of the supply voltage. These input and output structures help prevent device destruction caused by supply voltage - input/output voltage mismatch, battery backup, hot insertion, etc.

Features

- High Speed: $t_{PD} = 5.4\text{ns}$ (Typ) at $V_{CC} = 5\text{V}$
- Low Power Dissipation: $I_{CC} = 4\mu\text{A}$ (Max) at $T_A = 25\text{C}$
- TTL-Compatible Inputs: $V_{IL} = 0.8\text{V}$; $V_{IH} = 2.0\text{V}$
- Power Down Protection Provided on Inputs and Outputs
- Balanced Propagation Delays
- Designed for 4.5V to 5.5V Operating Range
- Low Noise: $V_{OLP} = 1.6\text{V}$ (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	Channels	Output	V_{CC} Min (V)	V_{CC} Max (V)	t_{pd} Max (ns)	I_o Max (mA)	Package Type
MC74VHCT541ADTG	Pb-free	Active	8	3-State	4.5	5.5	7.9	8	TSSOP-20
	Halide free								
MC74VHCT541ADTR G	Pb-free	Active	8	3-State	4.5	5.5	7.9	8	TSSOP-20
	Halide free								
MC74VHCT541ADWG	Pb-free	Active	8	3-State	4.5	5.5	7.9	8	SOIC-20W
	Halide free								
MC74VHCT541ADWR G	Pb-free	Active	8	3-State	4.5	5.5	7.9	8	SOIC-20W
	Halide free								
NLV74VHCT541ADTR G	AEC Qualified	Active	8	3-State	4.5	5.5	7.9	8	TSSOP-20
	PPAP Capable								
	Pb-free								
	Halide free								

For more information please contact your local sales support at www.onsemi.com.

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