

製品概要

MC74VHC1GT14: Single Inverter with TTL Level Input, Schmitt Trigger Input

技術情報は、データシートをご参照ください。

The MC74VHC1GT14 is a single gate CMOS Schmitt-trigger inverter 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 device input is compatible with TTL-type input thresholds and the output has a full 5V CMOS level output swing. The input protection circuitry on this device allows overvoltage tolerance on the input, allowing the device to be used as a logic-level translator from 3.0V CMOS logic to 5.0V CMOS Logic or from 1.8V CMOS logic to 3.0V CMOS Logic while operating at the high-voltage power supply. The MC74VHC1GT14 input structure provides protection when voltages up to 5.5V are applied, regardless of the supply voltage. This allows the MC74VHC1GT14 to be used to interface 5V circuits to 3V circuits. The output structures also provide protection when $V_{CC} = 0V$. These input and output structures help prevent device destruction caused by supply voltage - input/output voltage mismatch, battery backup, hot insertion, etc. The MC74VHC1GT14 can be used to enhance noise immunity or to square up slowly changing waveforms.

特長

- High Speed: $t_{PD} = 3.5ns$ (Typ) at $V_{CC} = 5V$
- Low Power Dissipation: $I_{CC} = 1\mu A$ (Max) at $T_A = 25^\circ C$
- TTL-Compatible Inputs: $V_{IL} = 0.8V$; $V_{IH} = 2.0V$
- CMOS-Compatible Outputs: $V_{OH} > 0.8V_{CC}$; $V_{OL} \leq 0.1V_{CC}$ @ Load
- Power Down Protection Provided on Inputs and Outputs
- Balanced Propagation Delays
- Pin and Function Compatible with Other Standard Logic Families
- Pb-Free Packages are Available

電氣的仕様

製品	Compliance	Status	Type	Channels	V_{CC} Min (V)	V_{CC} Max (V)	t_{pd} Max (ns)	I_o Max (mA)	Package Type
M74VHC1GT14DFT1G	Pb-free	Active	Inverter	1	3	5.5	10.6	8	SC-88A / SC-70-5
	Halide free								
M74VHC1GT14DFT2G	Pb-free	Active	Inverter	1	3	5.5	10.6	8	SC-88A / SC-70-5
	Halide free								
M74VHC1GT14DFT1G	Pb-free	Active	Inverter	1	3	5.5	10.6	8	TSOP-5 / SOT-23-5
	Halide free								
MC74VHC1GT14DBVT1G	Pb-free	NEW	Inverter	1	3	5.5	10.6	8	SC-74A
	Halide free								
MC74VHC1GT14MU1TCG	Pb-free	NEW	Inverter	1	3	5.5	10.6	8	UDFN-6
	Halide free								
MC74VHC1GT14MU2TCG	Pb-free	NEW	Inverter	1	3	5.5	10.6	8	UDFN-6
	Halide free								
MC74VHC1GT14MU3TCG	Pb-free	NEW	Inverter	1	3	5.5	10.6	8	UDFN-6
	Halide free								
NLVHC1GT14DFT1G	AEC Qualified	Active	Inverter	1	3	5.5	10.6	8	SC-88A / SC-70-5
	PPAP Capable								
	Pb-free								
	Halide free								
NLVHC1GT14DFT2G	AEC Qualified	Active	Inverter	1	3	5.5	10.6	8	SC-88A / SC-70-5
	PPAP Capable								
	Pb-free								
	Halide free								

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