

Product Overview

MC74VHC1GT126: Single Non-Inverting Buffer, TTL Level

For complete documentation, see the data sheet.

The MC74VHC1GT126 is a single gate noninverting 3-state 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 MC74VHC1GT126 requires the 3-state control input (OE(bar)) to be set Low to place the output into the high impedance state. 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 MC74VHC1GT126 input structure provides protection when voltages up to 5.5V are applied, regardless of the supply voltage. This allows the MC74VHC1GT126 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.

Features

- 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: $V_{OH} > 0.8V_{CC}$; $V_{OL} < 0.1V_{CC}$ @Load
- Power Down Protection Provided on Inputs and Outputs
- Balanced Propagation Delays
- Pin and Function Compatible with Other Standard Logic Families
- Chip Complexity: FETs = 3/4 100
- Pb-Free Packages are Available

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
M74VHC1GT126DF1G	Pb-free	Active	1	3-State	3	5.5	7.5	8	SC-88A / SC-70-5
	Halide free								
M74VHC1GT126DF2G	Pb-free	Active	1	3-State	3	5.5	7.5	8	SC-88A / SC-70-5
	Halide free								
M74VHC1GT126DT1G	Pb-free	Active	1	3-State	3	5.5	7.5	8	TSOP-5 / SOT-23-5
	Halide free								
MC74VHC1GT126DBVT1G	Pb-free	NEW	1	3-State	3	5.5	7.5	8	SC-74A
	Halide free								
NLVVHC1GT126DF1G	AEC Qualified	Active	1	3-State	3	5.5	7.5	8	SC-88A / SC-70-5
	PPAP Capable								
	Pb-free								
	Halide free								
NLVVHC1GT126DF2G	AEC Qualified	Active	1	3-State	3	5.5	7.5	8	SC-88A / SC-70-5
	PPAP Capable								
	Pb-free								
	Halide free								
NLVVHC1GT126DT1G	AEC Qualified	Active	1	3-State	3	5.5	7.5	8	TSOP-5 / SOT-23-5
	PPAP Capable								
	Pb-free								
	Halide free								

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