

Product Overview

MC74VHC1GT50: Single Non-Inverting Buffer, TTL Level

For complete documentation, see the data sheet.

The MC74VHC1GT50 is a single gate noninverting buffer fabricated with silicon gate CMOS technology. It achieves high speed operation 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 low threshold input thresholds and the output has a full 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 1.65 V logic to 5.5V CMOS. The MC74VHC1GT50 input structure provides protection for input voltages up to 5.5V, regardless of the supply voltage. The output structures also provide protection when VCC = 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 VCC = 5V
- Low Power Dissipation: ICC = 1µA (Max) at TA = 25°C
- Low threshold Inputs, TTL compatible if Vcc= 5 V: VIL = 0.8V; VIH = 2.0V
- CMOS-Compatible Outputs: VOH > 0.8VCC ; VOL 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
M74VHC1GT50DFT1G	Pb-free	Active	1	CMOS	1.65	5.5	7.5	8	SC-88A / SC-70-5
	Halide free								
M74VHC1GT50DFT2G	Pb-free	Active	1	CMOS	1.65	5.5	7.5	8	SC-88A / SC-70-5
	Halide free								
M74VHC1GT50DFT1G	Pb-free	Active	1	CMOS	1.65	5.5	7.5	8	TSOP-5 / SOT-23-5
	Halide free								
MC74VHC1GT50DBVT1G	Pb-free	NEW	1	CMOS	1.65	5.5	7.5	8	SC-74A
NL17VHC1GT50DF1G	Pb-free	Active	1	CMOS	1.65	5.5	7.5	8	SC-88A / SC-70-5
	Halide free								
NLV74VHC1GT50DFT1G	AEC Qualified	Active	1	CMOS	1.65	5.5	7.5	8	TSOP-5 / SOT-23-5
	PPAP Capable								
	Pb-free								
	Halide free								
NLVHC1GT50DFT1G	AEC Qualified	Active	1	CMOS	1.65	5.5	7.5	8	SC-88A / SC-70-5
	PPAP Capable								
	Pb-free								
	Halide free								
NLVHC1GT50DFT2G	AEC Qualified	Active	1	CMOS	1.65	5.5	7.5	8	SC-88A / SC-70-5
	PPAP Capable								
	Pb-free								
	Halide free								

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Created on: 7/16/2019