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# LP339 Product Folder

## Ultra-Low Power Quad Comparator

Generic P/N 339

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**Parametric Table**

Temperature Min (deg C)	0000000000.0000
Temperature Max (deg C)	70
Channels (Channels)	4
Response Time (us)	8
Supply Min (Volt)	2
Supply Max (Volt)	36
SupplyCurrent Per Channel (mA)	.0213

**Parametric Table**

Input Range	Vcm to V-
Output Bus	Open Drain
Output Current (mA)	30
Offset Voltage (mV)	5
Max Input Bias Current (nA)	40
Special Features	Undefined

### Datasheet

	Size in Kbytes	Date	 <b>View Online</b>	 <b>Download</b>	 <b>Receive via Email</b>
LP339 Ultra-Low Power Quad Comparator	229 Kbytes	23-Aug-00	<a href="#">View Online</a>	<a href="#">Download</a>	<a href="#">Receive via Email</a>

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### Package Availability, Models, Samples & Pricing

Part Number	Package			Status		Models		Budgetary Pricing	Std Pack Size	Package Marking Format	
	Type	Pins	MSL Pb-Free Availability	Lead Time	Qty	SPICE	IBIS				
LP339M	SOIC NARROW	14	MSL/RoHS	Full production		N/A	N/A			rail of 55	NSUZXYTT LP339M
				4 weeks	3835						
LP339MX	SOIC NARROW	14	MSL/RoHS	Full production		N/A	N/A			reel of 2500	NSUZXYTT LP339M
				7 weeks	37706						
LP339N	MDIP	14	MSL/RoHS	Full production		N/A	N/A			rail of 25	NSUZXYTT LP339N
				4 weeks	61077						
LP339 MWA	Wafer			Full production		N/A	N/A			wafer jar of N/A	-
				N/A	N/A						

### General Description

The LP339 consists of four independent voltage comparators designed specifically to operate from a single power supply and draw typically 60  $\mu$ A of power supply drain current over a wide range of power supply voltages. Operation from split supplies is also possible and the ultra-low power supply drain current is independent of the power supply voltage. These comparators also feature a common-mode range which includes ground, even when operated from a single supply.

Applications include limit comparators, simple analog-to-digital converters, pulse, square and time delay generators; VCO's; multivibrators; high voltage logic gates. The LP339 was specifically designed to interface with the CMOS logic family. The ultra-low supply current makes the LP339 valuable in battery powered applications.

## Features

- Ultra-low power supply current drain (60  $\mu$ A)-independent of the supply voltage (75  $\mu$ W/comparator at +5  $V_{DC}$ )
- Low input biasing current: 3 nA
- Low input offset current:  $\pm 0.5$  nA
- Low input offset voltage:  $\pm 2$  mV
- Input common-mode voltage includes ground
- Output voltage compatible with MOS and CMOS logic
- High output sink current capability (30 mA at  $V_O=2 V_{DC}$ )
- Supply Input protected against reverse voltages

## Applications

- Ultra-low power supply drain suitable for battery applications
- Single supply operation
- Sensing at ground
- Compatible with CMOS logic family
- Pin-out identical to LM339

## Reliability Metrics

Part Number	Process	Early Failure Rate - Rejects	Sample Size (EFR)	PPM *	Rel. Rejects	Device Hours	Long Term Failure Rates (FITS)	MTTF
LP339 MWA	SLM	0	24380	0	0	922500	4	261761848
LP339M	SLM	0	24380	0	0	922500	4	261761848
LP339MX	SLM	0	24380	0	0	922500	4	261761848
LP339N	SLM	0	24380	0	0	922500	4	261761848

For more information on Reliability Metrics, please click [here](#).

## Design Tools

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Amplifiers Selection Guide software for Windows	8 Kbytes	14-Oct-2005	<a href="#">View</a>		