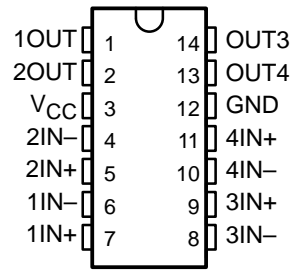


LM139, LM139A, LM239, LM239A, LM339, LM339A, LM2901 QUAD DIFFERENTIAL COMPARATORS

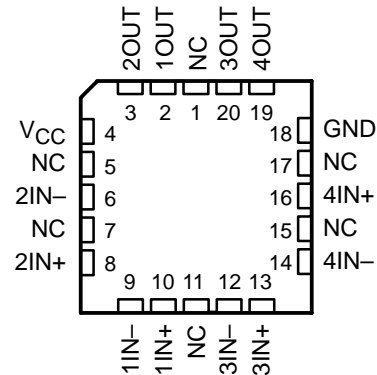
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- Single Supply or Dual Supplies
- Wide Range of Supply Voltage . . . 2 V to 36 V
- Low Supply-Current Drain Independent of Supply Voltage . . . 0.8 mA Typ
- Low Input Bias Current . . . 25 nA Typ
- Low Input Offset Current . . . 3 nA Typ (LM139)
- Low Input Offset Voltage . . . 2 mV Typ
- Common-Mode Input Voltage Range Includes Ground
- Differential Input Voltage Range Equal to Maximum-Rated Supply Voltage . . . ± 36 V
- Low Output Saturation Voltage
- Output Compatible With TTL, MOS, and CMOS
- Package Options Include Plastic Small-Outline (D, NS), Shrink Small-Outline (DB), Thin Shrink Small-Outline (PW), and Ceramic Dual Flatpack (W) Packages, Ceramic Chip Carriers (FK), and Standard Plastic (N) and Ceramic (J) DIPs

D, DB, J, N, NS, PW, OR W PACKAGE
(TOP VIEW)



FK PACKAGE
(TOP VIEW)



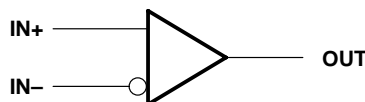
NC – No internal connection

description

These devices consist of four independent voltage comparators that are designed to operate from a single power supply over a wide range of voltages. Operation from dual supplies also is possible as long as the difference between the two supplies is 2 V to 36 V and V_{CC} is at least 1.5 V more positive than the input common-mode voltage. Current drain is independent of the supply voltage. The outputs can be connected to other open-collector outputs to achieve wired-AND relationships.

The LM139 and LM139A are characterized for operation over the full military temperature range of -55°C to 125°C . The LM239 and LM239A are characterized for operation from -25°C to 125°C . The LM339 and LM339A are characterized for operation from 0°C to 70°C . The LM2901 is characterized for operation from -40°C to 125°C .

symbol (each comparator)



Please be aware that an important notice concerning availability, standard warranty, and use in critical applications of Texas Instruments semiconductor products and disclaimers thereto appears at the end of this data sheet.

PRODUCTION DATA information is current as of publication date. Products conform to specifications per the terms of Texas Instruments standard warranty. Production processing does not necessarily include testing of all parameters.

 **TEXAS
INSTRUMENTS**

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On products compliant to MIL-PRF-38535, all parameters are tested unless otherwise noted. On all other products, production processing does not necessarily include testing of all parameters.

LM139, LM139A, LM239, LM239A, LM339, LM339A, LM2901 QUAD DIFFERENTIAL COMPARATORS

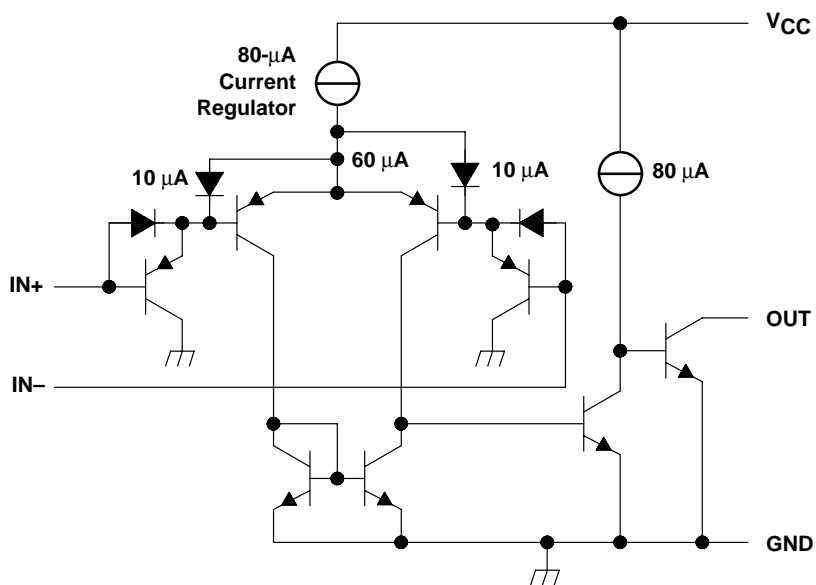
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AVAILABLE OPTIONS

T _A	V _{IO(max)} at 25°C	PACKAGED DEVICES						
		PLASTIC SOIC (D, NS)	PLASTIC SSOP (DB)	CERAMIC CHIP CARRIER (FK)	CERAMIC DIP (J)	PLASTIC DIP (N)	PLASTIC TSSOP (PW)	CERAMIC DUAL FLATPACK (W)
0°C to 70°C	5 mV 5 mV 2 mV 2 mV	LM339D LM339NS LM339AD LM339ANS	LM339DBR — — —	— — — —	— — — —	LM339N — LM339AN —	LM339PWR — — —	— — — —
-25°C to 85°C	5 mV 2 mV	LM239D LM239AD	— —	— —	— —	LM239N LM239AN	— —	— —
-40°C to 125°C	7 mV 7 mV	LM2901D LM2901NS	LM2901DBR	—	—	LM2901N	LM2901PWR	—
-55°C to 125°C	5 mV 2 mV	LM139D LM139AD	—	LM139FK LM139AFK	LM139J LM139AJ	—	—	LM139W LM139AW

The D and NS packages are available taped and reeled. Add the suffix R to the device type (e.g., LM339DR). The DB and PW packages are only available taped and reeled.

schematic (each comparator)



All current values shown are nominal.

**LM139, LM139A, LM239, LM239A,
LM339, LM339A, LM2901**
QUAD DIFFERENTIAL COMPARATORS
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absolute maximum ratings over operating free-air temperature range (unless otherwise noted)†

Supply voltage, V_{CC} (see Note 1)	36 V
Differential input voltage, V_{ID} (see Note 2)	± 36 V
Input voltage range, V_I (either input)	–0.3 V to 36 V
Output voltage, V_O	36 V
Output current, I_O	20 mA
Duration of output short circuit to ground (see Note 3)	Unlimited
Package thermal impedance, θ_{JA} (see Note 4):	
D package	86°C/W
DB package	96°C/W
N package	80°C/W
NS package	76°C/W
PW package	113°C/W
Continuous total dissipation	See Dissipation Rating Table
Case temperature for 60 seconds: FK package	260°C
Lead temperature 1,6 mm (1/16 inch) from case for 10 seconds: D, DB, N, or PW package	260°C
Lead temperature 1,6 mm (1/16 inch) from case for 60 seconds: J package	300°C
Storage temperature range, T_{stg}	–65°C to 150°C

† Stresses beyond those listed under “absolute maximum ratings” may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under “recommended operating conditions” is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

- NOTES:
1. All voltage values, except differential voltages, are with respect to network ground.
 2. Differential voltages are at $IN+$ with respect to $IN-$.
 3. Short circuits from outputs to V_{CC} can cause excessive heating and eventual destruction.
 4. The package thermal impedance is calculated in accordance with JESD 51-7.

DISSIPATION RATING TABLE

PACKAGE	$T_A \leq 25^\circ\text{C}$ POWER RATING	DERATING FACTOR	DERATE ABOVE T_A	$T_A = 70^\circ\text{C}$ POWER RATING	$T_A = 85^\circ\text{C}$ POWER RATING	$T_A = 125^\circ\text{C}$ POWER RATING
FK	900 mW	11 mW/°C	68°C	880 mW	715 mW	275 mW
J	900 mW	11 mW/°C	68°C	880 mW	715 mW	275 mW



**LM139, LM139A, LM239, LM239A,
LM339, LM339A, LM2901
QUAD DIFFERENTIAL COMPARATORS**

SLCS006F – OCTOBER 1979 – REVISED NOVEMBER 2001

electrical characteristics at specified free-air temperature, $V_{CC} = 5\text{ V}$ (unless otherwise noted)

PARAMETER	TEST CONDITIONS†	T_A ‡	LM139			LM139A			UNIT
			MIN	TYP	MAX	MIN	TYP	MAX	
V_{IO} Input offset voltage	$V_{CC} = 5\text{ V to }30\text{ V},$ $V_{IC} = V_{ICR}(\text{min}),$ $V_O = 1.4\text{ V}$	25°C		2	5		1	2	mV
		Full range			9			4	
I_{IO} Input offset current	$V_O = 1.4\text{ V}$	25°C		3	25		3	25	nA
		Full range			100			100	
I_{IB} Input bias current	$V_O = 1.4\text{ V}$	25°C		-25	-100		-25	-100	nA
		Full range			-300			-300	
V_{ICR} Common-mode input-voltage range		25°C		0 to $V_{CC}-1.5$			0 to $V_{CC}-1.5$		V
		Full range		0 to $V_{CC}-2$			0 to $V_{CC}-2$		
A_{VD} Large-signal differential-voltage amplification	$V_{CC} \pm = \pm 7.5\text{ V},$ $V_O = -5\text{ V to }5\text{ V}$	25°C		200		50	200	V/mV	
I_{OH} High-level output current	$V_{ID} = 1\text{ V}$	$V_{OH} = 5\text{ V}$	25°C		0.1		0.1	nA	
		$V_{OH} = 30\text{ V}$	Full range		1		1	μA	
V_{OL} Low-level output voltage	$V_{ID} = -1\text{ V},$ $I_{OL} = 4\text{ mA}$	25°C		150	400		150	400	mV
		Full range			700			700	
I_{OL} Low-level output current	$V_{ID} = -1\text{ V},$ $V_{OL} = 1.5\text{ V}$	25°C		6	16		6	16	mA
I_{CC} Supply current (four comparators)	$V_O = 2.5\text{ V},$ No load	25°C		0.8	2		0.8	2	mA

† All characteristics are measured with zero common-mode input voltage, unless otherwise specified.

‡ Full range (MIN to MAX) for LM139 and LM139A is -55°C to 125°C . All characteristics are measured with zero common-mode input voltage, unless otherwise specified.

switching characteristics, $V_{CC} = 5\text{ V}, T_A = 25^\circ\text{C}$

PARAMETER	TEST CONDITIONS	LM139 LM139A			UNIT	
		MIN	TYP	MAX		
Response time	R_L connected to 5 V through 5.1 k Ω , $C_L = 15\text{ pF}$ §, See Note 5	100-mV input step with 5-mV overdrive			1.3	μs
		TTL-level input step			0.3	

§ C_L includes probe and jig capacitance.

NOTE 5: The response time specified is the interval between the input step function and the instant when the output crosses 1.4 V.



**LM139, LM139A, LM239, LM239A,
LM339, LM339A, LM2901**
QUAD DIFFERENTIAL COMPARATORS
SLCS006F – OCTOBER 1979 – REVISED NOVEMBER 2001

electrical characteristics at specified free-air temperature, $V_{CC} = 5\text{ V}$ (unless otherwise noted)

PARAMETER	TEST CONDITIONS†	T_A ‡	LM239 LM339			LM239A LM339A			UNIT	
			MIN	TYP	MAX	MIN	TYP	MAX		
V_{IO} Input offset voltage	$V_{CC} = 5\text{ V to }30\text{ V}$, $V_{IC} = V_{ICR(\text{min})}$, $V_O = 1.4\text{ V}$	25°C		2	5		1	3	mV	
		Full range			9			4		
I_{IO} Input offset current	$V_O = 1.4\text{ V}$	25°C		5	50		5	50	nA	
		Full range			150			150		
I_{IB} Input bias current	$V_O = 1.4\text{ V}$	25°C		-25	-250		-25	-250	nA	
		Full range			-400			-400		
V_{ICR} Common-mode input-voltage range		25°C		0 to $V_{CC}-1.5$			0 to $V_{CC}-1.5$		V	
		Full range		0 to $V_{CC}-2$			0 to $V_{CC}-2$			
A_{VD} Large-signal differential-voltage amplification	$V_{CC} = 15\text{ V}$, $V_O = 1.4\text{ V to }11.4\text{ V}$, $R_L \geq 15\text{ k}\Omega\text{ to }V_{CC}$	25°C		50	200		50	200	V/mV	
I_{OH} High-level output current	$V_{ID} = 1\text{ V}$	$V_{OH} = 5\text{ V}$	25°C		0.1	50		0.1	50	nA
		$V_{OH} = 30\text{ V}$	Full range			1			1	μA
V_{OL} Low-level output voltage	$V_{ID} = -1\text{ V}$, $I_{OL} = 4\text{ mA}$	25°C		150	400		150	400	mV	
		Full range			700			700		
I_{OL} Low-level output current	$V_{ID} = -1\text{ V}$, $V_{OL} = 1.5\text{ V}$	25°C		6	16		6	16	mA	
I_{CC} Supply current (four comparators)	$V_O = 2.5\text{ V}$, No load	25°C		0.8	2		0.8	2	mA	

† All characteristics are measured with zero common-mode input voltage, unless otherwise specified.

‡ Full range (MIN to MAX) for LM239 and LM239A is -25°C to 85°C, for LM339 and LM339A is 0°C to 70°C. All characteristics are measured with zero common-mode input voltage, unless otherwise specified.

switching characteristics, $V_{CC} = 5\text{ V}$, $T_A = 25^\circ\text{C}$

PARAMETER	TEST CONDITIONS	LM239, LM239A, LM339, LM339A			UNIT
		MIN	TYP	MAX	
Response time	R_L connected to 5 V through 5.1 k Ω , $C_L = 15\text{ pF}$ §, See Note 5	100-mV input step with 5-mV overdrive			μs
		TTL-level input step			

§ C_L includes probe and jig capacitance.

NOTE 5: The response time specified is the interval between the input step function and the instant when the output crosses 1.4 V.



**LM139, LM139A, LM239, LM239A,
LM339, LM339A, LM2901
QUAD DIFFERENTIAL COMPARATORS**

SLCS006F – OCTOBER 1979 – REVISED NOVEMBER 2001

electrical characteristics at specified free-air temperature, $V_{CC} = 5\text{ V}$ (unless otherwise noted)

PARAMETER	TEST CONDITIONS†	T_A ‡	LM2901			UNIT	
			MIN	TYP	MAX		
V_{IO} Input offset voltage	$V_{CC} = 5\text{ V to }30\text{ V},$ $V_{IC} = V_{ICR}(\text{min}),$ $V_O = 1.4\text{ V}$	25°C		2	7	mV	
		Full range			15		
I_{IO} Input offset current	$V_O = 1.4\text{ V}$	25°C		5	50	nA	
		Full range			200		
I_{IB} Input bias current	$V_O = 1.4\text{ V}$	25°C		-25	-250	nA	
		Full range			-500		
V_{ICR} Common-mode input-voltage range		25°C		0 to $V_{CC}-1.5$		V	
		Full range		0 to $V_{CC}-2$			
A_{VD} Large-signal differential-voltage amplification	$V_{CC} = 15\text{ V},$ $V_O = 1.4\text{ V to }11.4\text{ V},$ $R_L \geq 15\text{ k}\Omega\text{ to }V_{CC}$	25°C		25	100	V/mV	
I_{OH} High-level output current	$V_{ID} = 1\text{ V}$	$V_{OH} = 5\text{ V}$	25°C		0.1	50	nA
		$V_{OH} = 30\text{ V}$	Full range			1	μA
V_{OL} Low-level output voltage	$V_{ID} = -1\text{ V},$ $I_{OL} = 4\text{ mA}$	25°C		150	500	mV	
		Full range			700		
I_{OL} Low-level output current	$V_{ID} = -1\text{ V},$ $V_{OL} = 1.5\text{ V}$	25°C		6	16	mA	
I_{CC} Supply current (four comparators)	$V_O = 2.5\text{ V},$ No load	25°C		0.8	2	mA	
	$V_{CC} = 30\text{ V},$ No load			1	2.5		

† All characteristics are measured with zero common-mode input voltage, unless otherwise specified.

‡ Full range (MIN to MAX) for LM2901 is -40°C to 125°C. All characteristics are measured with zero common-mode input voltage, unless otherwise specified.

switching characteristics, $V_{CC} = 5\text{ V}, T_A = 25^\circ\text{C}$

PARAMETER	TEST CONDITIONS	LM2901			UNIT
		MIN	TYP	MAX	
Response time	R_L connected to 5 V through 5.1 k Ω , $C_L = 15\text{ pF}$ §, See Note 5	100-mV input step with 5-mV overdrive			μs
		TTL-level input step			

§ C_L includes probe and jig capacitance.

NOTE 5: The response time specified is the interval between the input step function and the instant when the output crosses 1.4 V.



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[APPLICATION NOTES](#) | [MORE LITERATURE](#) | [MODELS](#)

LM2901, Quad, General Purpose Differential Comparator

DEVICE STATUS: **ACTIVE**

PARAMETER NAME	LM139	LM239	LM2901	LM339
IQ per channel (max) (mA)	0.5	0.5	0.625	0.5
Output Current (min) (mA)	6	6	6	6
tRESP Low - to - High (us)	0.3	0.3	0.3	0.3
Vs (max) (V)	36	30	30	30
Vs (min) (V)	2	2	2	2
VICR (max) (V)	3.5	3.5	3.5	3.5
VIO (25 deg C) (max) (mV)	5	5	3	5
Rail-Rail	No	No	No	No
Output Type	Open Drain/Collector	Open Drain/Collector	Open Drain/Collector	Open Drain/Collector
Number of Channels	4	4	4	4

FEATURES

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- Single Supply or Dual Supplies
- Wide Range of Supply Voltage ...2 V to 36 V
- Low Supply-Current Drain Independent of Supply Voltage . . . 0.8 mA Typ
- Low Input Bias Current . . . 25 nA Typ
- Low Input Offset Current ...3 nA Typ (LM139)
- Low Input Offset Voltage ...2 mV Typ
- Common-Mode Input Voltage Range Includes Ground
- Differential Input Voltage Range Equal to Maximum-Rated Supply Voltage . . . ± 36 V
- Low Output Saturation Voltage
- Output Compatible With TTL, MOS, and CMOS
- Package Options Include Plastic Small-Outline (D, NS), Shrink Small-Outline (DB), Thin Shrink Small-Outline (PW), and Ceramic Dual Flatpack (W) Packages, Ceramic Chip Carriers (FK), and Standard Plastic (N) and Ceramic (J) DIPs

DESCRIPTION

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These devices consist of four independent voltage comparators that are designed to operate from a single power supply over a wide range of voltages. Operation from dual supplies also is possible as long as the difference between the two supplies is 2 V to 36 V and V_{CC} is at least 1.5 V more positive than the input common-mode voltage. Current drain is independent of the supply voltage. The outputs can be connected to other open-collector outputs to achieve wired-AND relationships.

The LM139 and LM139A are characterized for operation over the full military temperature range of -55°C to 125°C . The LM239 and LM239A are characterized for operation from -25°C to 125°C . The LM339 and LM339A are characterized for operation from 0°C to 70°C . The LM2901 is characterized for operation from -40°C to 125°C .

TECHNICAL DOCUMENTS

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To view the following documents, [Acrobat Reader 4.0](#) is required.

To download a document to your hard drive, right-click on the link and choose 'Save'.

DATASHEET

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Full datasheet in Acrobat PDF: [lm2901.pdf](#) (107 KB,Rev.F) (Updated: 11/14/2001)

APPLICATION NOTES

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- [Analog Applications Journal \(Rev. A\)](#) (SLYT010A - Updated: 03/17/2000)
- [Op Amps for Everyone Design Guide \(Rev. B\)](#) (SLOD006B - Updated: 08/22/2002)

MORE LITERATURE

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- [Enhanced Plastic Portfolio Brochure](#) (SGZB004, 387 KB - Updated: 08/19/2002)
- [QML Class V Space Products Military Brief \(Rev. A\)](#) (SGZN001A, 257 KB - Updated: 10/07/2002)

SAMPLES

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ORDERABLE DEVICE	PACKAGE INDUSTRY (TI)	PINS	TEMP (°C)	STATUS	PRODUCT CONTENT	SAMPLES
LM2901D	SOIC (D)	14	-40 TO 125	ACTIVE	View Product Content	Request Samples
LM2901N	PDIP (N)	14	-40 TO 125	ACTIVE	View Product Content	Request Samples
LM2901PWR	TSSOP (PW)	14	-40 TO 125	ACTIVE	View Product Content	Request Samples

PRICING/AVAILABILITY/PKG

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DEVICE INFORMATION

Updated Daily

ORDERABLE DEVICE	STATUS	PACKAGE TYPE PINS	TEMP (°C)	PRODUCT CONTENT	BUDGETARY PRICING QTY SUS	STD PACK QTY
LM2901D	ACTIVE	SOIC (D) 14	-40 TO 125	View Contents	1KU 0.09	50
LM2901DR	ACTIVE	SOIC (D) 14	-40 TO 125	View Contents	1KU 0.09	2500
LM2901N	ACTIVE	PDIP (N) 14	-40 TO 125	View Contents	1KU 0.09	25

TI INVENTORY STATUS

As Of 08:00 AM GMT, 17 Apr 2003

IN STOCK	IN PROGRESS QTY DATE	LEAD TIME
4000*	2100 21 Apr	2 WKS
	>10k 12 May	
9000*	4205 02 May	3 WKS
	2500 05 May	
	>10k 08 May	
≥10k*	8125 25 Apr	4 WKS
	>10k 30 Apr	

REPORTED DISTRIBUTOR INVENTORY

As Of 08:00 AM GMT, 17 Apr 2003

DISTRIBUTOR COMPANY REGION	IN STOCK	PURCHASE
Avnet-SILICA Europe	>1k	BUY NOW
Arrow Americas	>1k	BUY NOW
Abacus Polar Europe	>1k	BUY NOW
EBV Electronik Europe	>1k	BUY NOW
Avnet Americas	>1k	BUY NOW
DigiKey Americas	>1k	BUY NOW
Newark Electronics Americas	692	BUY NOW
Insight Americas	86	BUY NOW
Abacus Polar Europe	>1k	BUY NOW
Arrow Americas	>1k	BUY NOW
Avnet Americas	>1k	BUY NOW
DigiKey Americas	>1k	BUY NOW
Avnet-SILICA Europe	>1k	BUY NOW
EBV Electronik Europe	>1k	BUY NOW

LM2901NSR	ACTIVE	SOP (NS) 14		View Contents	1KU 0.09	2000	Q*	>10k 08 May	4 WKS	
LM2901PW	ACTIVE	TSSOP (PW) 14	-40 TO 85	View Contents	1KU 0.07	90	810*	990 16 Apr	4 WKS	
								33 21 Apr		
								>10k 08 May		
LM2901PWLE	OBSOLETE	TSSOP (PW) 14		View Contents	1KU		Q*		Call**	
LM2901PWR	ACTIVE	TSSOP (PW) 14	-40 TO 125	View Contents	1KU 0.09	2000	Q*	>10k 21 Apr	2 WKS	
LM2901QD	OBSOLETE	SOIC (D) 14	-40 TO 125	View Contents	1KU		Q*		Call**	
LM2901QN	OBSOLETE	PDIP (N) 14	-40 TO 125	View Contents	1KU		Q*		Call**	

Arrow Americas	> 1k	BUY NOW
Avnet Americas	> 1k	BUY NOW
DigiKey Americas	> 1k	BUY NOW
Newark Electronics Americas	828	BUY NOW
Insight Americas	655	BUY NOW
None Reported View Distributors		
None Reported View Distributors		
None Reported View Distributors		
Arrow Americas	> 1k	BUY NOW
Insight Americas	> 1k	BUY NOW
DigiKey Americas	851	BUY NOW
None Reported View Distributors		
None Reported View Distributors		

MODELS

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- [LM2901 Spice Macromodel](#) (SLCJ010, 0 KB, ZIP - Updated: 01/10/2002)

Table Data Updated on: 4/17/2003

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[APPLICATION NOTES](#) | [MORE LITERATURE](#) | [MODELS](#)

LM339, Quad, General Purpose Differential Comparator

DEVICE STATUS: **ACTIVE**

PARAMETER NAME	LM139	LM239	LM2901	LM339
IQ per channel (max) (mA)	0.5	0.5	0.625	0.5
Output Current (min) (mA)	6	6	6	6
tRESP Low - to - High (us)	0.3	0.3	0.3	0.3
Vs (max) (V)	36	30	30	30
Vs (min) (V)	2	2	2	2
VICR (max) (V)	3.5	3.5	3.5	3.5
VIO (25 deg C) (max) (mV)	5	5	3	5
Rail-Rail	No	No	No	No
Output Type	Open Drain/Collector	Open Drain/Collector	Open Drain/Collector	Open Drain/Collector
Number of Channels	4	4	4	4

FEATURES

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- Single Supply or Dual Supplies
- Wide Range of Supply Voltage ...2 V to 36 V
- Low Supply-Current Drain Independent of Supply Voltage . . . 0.8 mA Typ
- Low Input Bias Current . . . 25 nA Typ
- Low Input Offset Current ...3 nA Typ (LM139)
- Low Input Offset Voltage ...2 mV Typ
- Common-Mode Input Voltage Range Includes Ground
- Differential Input Voltage Range Equal to Maximum-Rated Supply Voltage . . . ± 36 V
- Low Output Saturation Voltage
- Output Compatible With TTL, MOS, and CMOS
- Package Options Include Plastic Small-Outline (D, NS), Shrink Small-Outline (DB), Thin Shrink Small-Outline (PW), and Ceramic Dual Flatpack (W) Packages, Ceramic Chip Carriers (FK), and Standard Plastic (N) and Ceramic (J) DIPs

DESCRIPTION

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These devices consist of four independent voltage comparators that are designed to operate from a single power supply over a wide range of voltages. Operation from dual supplies also is possible as long as the difference between the two supplies is 2 V to 36 V and V_{CC} is at least 1.5 V more positive than the input common-mode voltage. Current drain is independent of the supply voltage. The outputs can be connected to other open-collector outputs to achieve wired-AND relationships.

The LM139 and LM139A are characterized for operation over the full military temperature range of -55°C to 125°C . The LM239 and LM239A are characterized for operation from -25°C to 125°C . The LM339 and LM339A are characterized for operation from 0°C to 70°C . The LM2901 is characterized for operation from -40°C to 125°C .

TECHNICAL DOCUMENTS

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To view the following documents, [Acrobat Reader 4.0](#) is required.

To download a document to your hard drive, right-click on the link and choose 'Save'.

DATASHEET

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Full datasheet in Acrobat PDF: [lm339.pdf](#) (107 KB,Rev.F) (Updated: 11/14/2001)

APPLICATION NOTES

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- [Analog Applications Journal \(Rev. A\)](#) (SLYT010A - Updated: 03/17/2000)
- [Op Amps for Everyone Design Guide \(Rev. B\)](#) (SLOD006B - Updated: 08/22/2002)

MORE LITERATURE

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- [Enhanced Plastic Portfolio Brochure](#) (SGZB004, 387 KB - Updated: 08/19/2002)
- [QML Class V Space Products Military Brief \(Rev. A\)](#) (SGZN001A, 257 KB - Updated: 10/07/2002)

SAMPLES

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ORDERABLE DEVICE	PACKAGE INDUSTRY (TI)	PINS	TEMP (°C)	STATUS	PRODUCT CONTENT	SAMPLES
LM339D	SOIC (D)	14		ACTIVE	View Product Content	Request Samples
LM339DBR	SSOP (DB)	14		ACTIVE	View Product Content	Request Samples
LM339N	PDIP (N)	14		ACTIVE	View Product Content	Request Samples
LM339PWR	TSSOP (PW)	14		ACTIVE	View Product Content	Request Samples

PRICING/AVAILABILITY/PKG

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DEVICE INFORMATION

Updated Daily

ORDERABLE DEVICE	STATUS	PACKAGE TYPE PINS	TEMP (°C)	PRODUCT CONTENT	BUDGETARY PRICING QTY \$US	STD PACK QTY
LM339D	ACTIVE	SOIC (D) 14		View Contents	1KU 0.10	50
LM339DBLE	OBSOLETE	SSOP (DB) 14		View Contents	1KU	
LM339DBR	ACTIVE	SSOP (DB) 14		View Contents	1KU 0.10	2000

TI INVENTORY STATUS

As Of 08:00 AM GMT, 17 Apr 2003

IN STOCK	IN PROGRESS QTY DATE	LEAD TIME
5080*	8560 25 Apr	2 WKS
	1600 30 Apr	
0*		Call**
0*	729 28 Apr	4 WKS
	1271 08 May	
	>10k 27 May	

REPORTED DISTRIBUTOR INVENTORY

As Of 08:00 AM GMT, 17 Apr 2003

DISTRIBUTOR COMPANY REGION	IN STOCK	PURCHASE
Avnet-SILICA Europe	> 1k	BUY NOW
Arrow Americas	> 1k	BUY NOW
Abacus Polar Europe	> 1k	BUY NOW
Avnet Americas	> 1k	BUY NOW
EBV Electronik Europe	> 1k	BUY NOW
DigiKey Americas	> 1k	BUY NOW
Newark Electronics Americas	> 1k	BUY NOW
Insight Americas	> 1k	BUY NOW
None Reported View Distributors		
Insight Americas	> 1k	BUY NOW
DigiKey Americas	> 1k	BUY NOW

LM339DR	ACTIVE	SOIC (D) 14	0 TO 70	View Contents	1KU 0.10	2500	0*	> 10k 12 May	4 WKS	Avnet-SILICA Europe	> 1k	BUY NOW
										Arrow Americas	> 1k	BUY NOW
										Insight Americas	> 1k	BUY NOW
										EBV Electronik Europe	> 1k	BUY NOW
										DigiKey Americas	> 1k	BUY NOW
										Newark Electronics Americas	> 1k	BUY NOW
LM339N	ACTIVE	PDIP (N) 14		View Contents	1KU 0.10	25	> 10k*	4000 28 Apr	4 WKS	Avnet-SILICA Europe	> 1k	BUY NOW
								> 10k 30 Apr		Arrow Americas	> 1k	BUY NOW
										Rochester Electronics Americas	> 1k	BUY NOW
										EBV Electronik Europe	> 1k	BUY NOW
										DigiKey Americas	> 1k	BUY NOW
										Avnet Americas	> 1k	BUY NOW
										Newark Electronics Americas	> 1k	BUY NOW
LM339NSLE	OBSOLETE	SOP (NS) 14		View Contents	1KU		0*		Call**	Insight Americas	619	BUY NOW
LM339NSR	ACTIVE	SOP (NS) 14		View Contents	1KU 0.10	2000	0*	1008 30 Apr	3 WKS	None Reported View Distributors		
								> 10k 08 May		EBV Electronik Europe	> 1k	BUY NOW
LM339PW	ACTIVE	TSSOP (PW) 14		View Contents	1KU 0.09	90	0*	90 16 Apr	4 WKS	None Reported View Distributors		
								> 10k 08 May				
LM339PWLE	OBSOLETE	TSSOP (PW) 14		View Contents	1KU		0*		Call**			
LM339PWR	ACTIVE	TSSOP (PW) 14		View Contents	1KU 0.10	2000	> 10k*	> 10k 21 Apr	2 WKS	None Reported View Distributors		
										Arrow Americas	> 1k	BUY NOW
LM339Y	OBSOLETE	(Y) 14		View Contents	1KU		0*		Call**	Avnet-SILICA Europe	> 1k	BUY NOW
										None Reported View Distributors		

MODELS

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- [LM339, LM339X2 Spice Macromodel](#) (SLCJ014, 0 KB, ZIP - Updated: 01/10/2002)

Table Data Updated on: 4/17/2003