



## New Product Announcement Update

LM2901/03  
LM2902/04

### Dual/Quad Operational Amplifiers and Comparators with Industrial Temperature Range – now with TSSOP/MSOP-8

The LM2901/02/03/04 series consists of four and two independent high-gain operational amplifiers and voltage comparators.

The LM290x series is designed to operate from single power rails over a wide range of voltages. However operation from split power supplies is also possible.

The devices offer low power supply current drain independent of the magnitude of the power supply voltage.

The LM290x series is characterized for operation from -40°C to +125°C.

The quad devices are available in SO-14 and TSSOP-14, while the dual devices are available in SO-8, MSOP-8 and TSSOP-8; all members with industry-standard pin-outs.

All use green mold compound as standard and are RoHS compliant.



#### The Diodes Advantage

- **Industry standard part numbers and specification**  
Direct replacement and cost effective alternative to other manufacturers' LM290x series
- **Extended industrial temperature range (-40 to +125°C)**  
Suitable for higher ambient temperature industrial systems
- **Industry-standard package options and pin-outs**  
Drop in replacement for alternative parts

#### Applications

- Motion Control
- Instrument System
- Switch-Mode Power Supply
- Industrial Process Control



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LM2902/04

## Comparators:

Part Number	Supply Voltage Range (V)	Supply Current (mA)	Input Offset Voltage (typ/max) (mV)	Min. Input Common Mode Voltage (V)	Number of Channels	Ambient Temperature Range, (°C)	Output Type	Package Outline
LM2901	2~36	0.9	2.0/7.0	0 to $V_{CC}$ -1.5	4	-40 to +125	Open Collector	SO-14, TSSOP-14
LM2901A			1.0/2.0					SO-8, <b>TSSOP-8, MSOP-8</b>
LM2903		0.6	2.0/7.0		2			
LM2903A			1.0/2.0					
AS393	2~36	0.6	1.0/5.0	0 to $V_{CC}$ -1.5	2	-40 to +85	Open Collector	SO-8, TSSOP-8, MSOP-8, T/DIP-8
AS393A			1.0/3.0					SO-8, DIP-8
AS339		0.9	2.0/5.0		4			SO-14, TSSOP-14, DIP-14

## Operational Amplifiers:

Part Number	Supply Voltage Range (V)	Supply Current (per Op Amp) (mA)	Input Offset Voltage (typ/max) (mV)	Min. Input Common Mode Voltage (V)	Number of Channels	Ambient Temperature Range, (°C)	Output Current Sink (mA)	Package Outline
LM2902	3~36	0.9	2.0/7.0	0 to $V_{CC}$ -1.5	4	-40 to +125	16	SO-14, TSSOP-14
LM2902A			1.0/2.0					SO-8, <b>TSSOP-8, MSOP-8</b>
LM2904		0.6	2.0/7.0		2			
LM2904A			1.0/2.0					
AS358	3~36	0.5	2.0/5.0	0 to $V_{CC}$ -1.5	2	-40 to +85	15	SO-8, TSSOP-8, MSOP-8, T/DIP-8,
AS358A			2.0/3.0					SO-8, DIP-8
AS324		0.7	2.0/5.0		4			SO-14, TSSOP-14, DIP-14
AS324A			2.0/3.0					SO-14

## Ordering Information

Device		Type	Package Code	Packaging	13" Tape and Reel		Status
Standard Offset	Low Offset				Quantity	Part Number Suffix	
LM2901T14-13	LM2901AT14-13	Quad Comparator	T14	TSSOP-14	2500/Tape & Reel	-13	Active
LM2901S14-13	LM2901AS14-13		S14	SO-14	2500/Tape & Reel	-13	Active
LM2902T14-13	LM2902AT14-13	Quad Op amp	T14	TSSOP-14	2500/Tape & Reel	-13	Active
LM2902S14-13	LM2902AS14-13		S14	SO-14	2500/Tape & Reel	-13	Active
LM2903S-13	LM2903AS-13	Dual Comparator	S	SO-8	2500/Tape & Reel	-13	Active
<b>LM2903M8-13</b>	<b>LM2903AM8-13</b>		<b>M8</b>	<b>MSOP-8</b>	<b>2500/Tape &amp; Reel</b>	<b>-13</b>	<b>Active</b>
<b>LM2903TH-13</b>	<b>LM2903ATH-13</b>		<b>TH</b>	<b>TSSOP-8</b>	<b>2500/Tape &amp; Reel</b>	<b>-13</b>	<b>Active</b>
LM2904S-13	LM2904AS-13	Dual Op amp	S	SO-8	2500/Tape & Reel	-13	Active
<b>LM2904M8-13</b>	<b>LM2904AM8-13</b>		<b>M8</b>	<b>MSOP-8</b>	<b>2500/Tape &amp; Reel</b>	<b>-13</b>	<b>Active</b>
<b>LM2904TH-13</b>	<b>LM2904ATH-13</b>		<b>TH</b>	<b>TSSOP-8</b>	<b>2500/Tape &amp; Reel</b>	<b>-13</b>	<b>Active</b>

Automotive Compliant versions (with Q-suffix) of the LM2901/02/03/04 are also available with AEC-Q100 qualification  
New devices in **BOLD**