



New Product Announcement

LM2901Q/03Q
LM2902Q/04Q

Automotive Compliant Dual/Quad Operational Amplifiers and Comparators

The LM2902Q/04Q and LM2901Q/03Q consist of four/two independent high-gain operational amplifiers and voltage comparators respectively. They are designed to operate from a wide range of single power supplies as well as from split power supplies.

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

All members of the LM290xQ series have been qualified to AEC-Q100 Grade 1 and are Automotive Compliant – supporting PPAP documents.

The dual devices are in SO-8, MSOP-8 and now TSSOP-8. The quad devices are in SO-14 and TSSOP-14. All are in industry standard pin-outs with green mold compound as standard.



The Diodes Advantage

■ **Qualified for Automotive Applications**

- Qualified to AEC-Q100 Grade 1
- Offer higher reliability and cost-effective alternatives to other manufacturers' LM290xQ series

■ **PPAP Capable**

- Supports Automotive manufacturers documentation

■ **Wide Operating Temperature Range (-40°C to +125°C)**

- Compatible with most automotive system requirements

■ **Industry standard package options and pin arrangement**

Duals in SO-8, MSOP-8 and TSSOP-8

Quads in SO-14 and TSSOP-14

- Form, factor replacements

Applications

- **Automotive ECU**
- **Automotive Signal Conditioning**



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LM2901Q/03Q
LM2902Q/04Q

Bipolar Comparator Product Portfolio

Part Number	Supply Voltage Range (V)	Supply Current @ V _{CC} =5V (mA)	Max Input Offset Voltage (mV)	Input Bias Current (nA)	Common Mode Input Voltage (V)	Output Type	Number of Channels	Ambient Temperature Range, T _A (°C)	Package Outline
LM2901Q/AQ	2~36	0.9	7.0/2.0	25	0 to V _{CC} -1.5	Open Collector	4	-40 to +125	SO-14, TSSOP-14
LM2903Q/AQ	2~36	0.6	7.0/2.0	25	0 to V _{CC} -1.5		2	-40 to +125	SO-8, MSOP-8, TSSOP-8
AS393/A	2~36	0.6	5.0/3.0	25	0 to V _{CC} -1.5	Open Collector	2	-40 to +85	SO-8, TSSOP-8, MSOP-8, DIP-8, TDIP-8
AS339	2~36	0.9	5.0	25	0 to V _{CC} -1.5		4	-40 to +85	SO-14, TSSOP-14, DIP-14

Bipolar Operational Amplifier Product Portfolio

Part Number	Supply Voltage Range (V)	Supply Current @ V _{CC} =5V (per Ch) (mA)	Input Offset Voltage (typ/max) (mV)	Input Bias Current (nA)	Common Mode Input Voltage (V)	Output Current Sink (mA)	Number of Channels	Ambient Temperature Range, T _A (°C)	Package Outline
LM2902Q/AQ	3~36	0.9	7.0/2.0	25	0 to V _{CC} -1.5	16	4	-40 to +125	SO-14, TSSOP-14
LM2904Q/AQ	3~36	0.6	7.0/2.0	25	0 to V _{CC} -1.5	16	2	-40 to +125	SO-8, MSOP-8, TSSOP-8
AS358/A	3~36	0.5	5.0/3.0	20	0 to V _{CC} -1.5	15	2	-40 to +85	SO-8, TSSOP-8, MSOP-8, DIP-8, TDIP-8
AS324		0.7	5.0/3.0				4		SO-14, TSSOP-14, DIP-14

Ordering Information

Device	Type	Offset	Package Code	Packaging	Status	13" Tape and Reel		Remark
						Quantity	Part Number Suffix	
LM2901AQS14-13	Quad Comparator	Low	S14	SO-14	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2901AQT14-13		Low	T14	TSSOP-14	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2901QS14-13		Normal	S14	SO-14	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2901QT14-13		Normal	T14	TSSOP-14	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2902AQS14-13	Quad Op amp	Low	S14	SO-14	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2902AQT14-13		Low	T14	TSSOP-14	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2902QS14-13		Normal	S14	SO-14	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2902QT14-13		Normal	T14	TSSOP-14	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2903AQM8-13	Dual Comparator	Low	M8	MSOP-8	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2903AQS-13		Low	S	SO-8	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2903AQTH-13		Low	TH	TSSOP-8	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2903QM8-13		Normal	M8	MSOP-8	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2903QS-13		Normal	S	SO-8	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2903QTH-13		Normal	TH	TSSOP-8	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2904AQM8-13	Dual Op amp	Low	M8	MSOP-8	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2904AQS-13		Low	S	SO-8	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2904AQTH-13		Low	TH	TSSOP-8	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2904QM8-13		Normal	M8	MSOP-8	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2904QS-13		Normal	S	SO-8	Active	2,500/Tape & Reel	-13	Automotive Compliant
LM2904QTH-13		Normal	TH	TSSOP-8	Active	2,500/Tape & Reel	-13	Automotive Compliant