

LM224

Operational Amplifier, Single Supply, Quad

Product Overview

For complete documentation, see the data sheet.

The LM224 is a low-cost, quad op-amp with true differential inputs. This device has several distinct advantages over standard operational amplifier types in single supply applications. The quad amplifier can operate at supply voltages as low as 3.0 V or as high as 32 V with quiescent currents about one-fifth of those associated with the MC1741 (on a per amplifier basis). The common mode input range includes the negative supply, thereby eliminating the necessity for external biasing components in many applications. The output voltage range also includes the negative power supply voltage.

Features

- Short Circuited Protected Outputs
- True Differential Input Stage
- Single Supply Operation: 3.0 V to 32 V (LM224, LM324, LM324A)
- Low Input Bias Currents: 100 nA Maximum (LM324A)
- Four Amplifiers Per Package
- Internally Compensated
- Common Mode Range Extends to Negative Supply
- Industry Standard Pinouts
- ESD Clamps on the Inputs Increase Ruggedness without Affecting Device Operation
- Pb-Free Packages are Available*

For more features, see the data sheet

Part Electrical Specifications

Product	Status	Compliance	Rail to Rail	Channels	V _{Min} (V)	V _S Max (V)	I _q Typ (mA)	V _{OS} Max (mV)	GBW Typ (MHz)	SRR Typ (V/μs)	I _O Typ (mA)	ΔV _{OS} /ΔT (μV/°C)	e _N (nV/√Hz)	I _{bias} Typ (pA)	CMRR Typ (dB)	Architecture	Temperature Range (°C)	Package Type	Case Outline	MSLT Type	MSLT Temp (°C)	Container Type	Container Qty.
LM224DG	Obsolete		No	4	3	32	0.35	5	1	0.6	40	7	-	-900000	85	Bipolar	-25 to 85	SOIC - 14	751A-03.PDF	1	260	TUBE	55
LM224DR2G	Active		No	4	3	32	0.35	5	1	0.6	40	7	-	-900000	85	Bipolar	-25 to 85	SOIC - 14	751A-03.PDF	1	260	REEL	2500
LM224DTBG	Obsolete		No	4	3	32	0.35	5	1	0.6	40	7	-	-900000	85	Bipolar	-25 to 85	TSSOP - 14WB	948G.PDF	1	260	TUBE	96
LM224DTBR2G	Active		No	4	3	32	0.35	5	1	0.6	40	7	-	-900000	85	Bipolar	-25 to 85	TSSOP - 14WB	948G.PDF	1	260	REEL	2500
LM224NG	Obsolete		No	4	3	32	0.35	5	1	0.6	40	7	-	-900000	85	Bipolar	-25 to 85	PDP - 14	646-06.PDF	NA	0	TUBE	25