

# Amplifiers

## Bipolar Operational Amplifiers

Motorola offers a broad line of operational amplifiers to meet a wide range of applications. From low-cost industry-standard types to high precision circuits, the span encompasses a large range of performance capabilities. These linear integrated circuits are available as single, dual, and quad monolithic devices

in a variety of temperature ranges and package styles. Most devices may be obtained in unencapsulated "chip" form as well. For price and delivery information on chips, please contact your Motorola Sales Representative or Distributor.

## Single Operational Amplifiers

### Noncompensated

Device	$I_{IB}$	$V_{IO}$	$TC_{VIO}$	$I_{IO}$	$A_{vol}$	BW	SR	Supply Voltage		Description	Packages
	$\mu A$	mV	$\mu V/^{\circ}C$	nA	V/mV	( $A_V=1$ ) MHz	( $A_V=1$ ) V/ $\mu s$	Min	Max		

#### Military Temperature Range (-55°C to +125°C)

LM101A	0.075	2.0	10	10	50	1.0	0.5	$\pm 3.0$	$\pm 22$	General Purpose	601,693
LM108A	0.002	0.5	1.0	0.2	80	1.0	0.3	$\pm 3.0$	$\pm 20$	Precision	601
MC1709	0.5	5.0	15	200	25	1.0	0.3	$\pm 3.0$	$\pm 18$	General Purpose	601
MC1748	0.5	5.0	15	200	50	1.0	0.5	$\pm 3.0$	$\pm 22$	General Purpose	601,693

#### Commercial Temperature Range (0°C to +70°C)

LM301A	0.25	7.5	10	50	25	1.0	0.5	$\pm 3.0$	$\pm 18$	General Purpose	601,626,693,751
LM308	7.0	7.5	15	1.0	25	1.0	0.3	$\pm 3.0$	$\pm 18$	Precision	601,751
LM308A	7.0	0.5	5.0	1.0	80	1.0	0.3	$\pm 3.0$	$\pm 18$	Precision	601,751
MC1439	1.0	7.5	15	100	15	2.0	4.2	$\pm 6.0$	$\pm 18$	High Slew Rate	601
MC1709C	1.5	7.5	15	500	15	1.0	0.3	$\pm 3.0$	$\pm 18$	General Purpose	601,626
MC1748C	0.5	6.0	15	200	20	1.0	0.5	$\pm 3.0$	$\pm 18$	General Purpose	601,626,693

#### Industrial Temperature Range (-25°C to +85°C)

LM201A	0.075	2.0	10	10	50	1.0	0.5	$\pm 3.0$	$\pm 22$	General Purpose	601,626,693
LM208A	0.002	0.5	1.0	0.2	80	1.0	0.3	$\pm 3.0$	$\pm 20$	Precision	601,751

### Internally Compensated

Device	$I_{IB}$	$V_{IO}$	$TC_{VIO}$	$I_{IO}$	$A_{vol}$	BW	SR	Supply Voltage		Description	Packages
	$\mu A$	mV	$\mu V/^{\circ}C$	nA	V/mV	( $A_V=1$ ) MHz	( $A_V=1$ ) V/ $\mu s$	Min	Max		

#### Military Temperature Range (-55°C to +125°C)

MC1556	0.015	4.0	10	2.0	100	1.0	2.5	$\pm 3.0$	$\pm 22$	High Performance	693
MC1733	0.20	—	—	3.0 $\mu A$	90	90	—	$\pm 4.0$	$\pm 8.0$	Differential Wideband Video Amp	603,632
MC1741	0.5	5.0	15	200	50	1.0	0.5	$\pm 3.0$	$\pm 22$	General Purpose	601,693
MC1741N	0.5	5.0	15	200	50	1.0	0.5	$\pm 3.0$	$\pm 22$	Low Noise	601
MC1776	0.0075	5.0	15	3.0	200	1.0	0.2	$\pm 1.5$	$\pm 18$	$\mu$ Power, Programmable	601,632
MC35001A	75 pA	2.0	10	25 pA	50	4.0	13	$\pm 5.0$	$\pm 22$	JFET Input	601,693
MC35001B	100 pA	5.0	10	50 pA	50	4.0	13	$\pm 5.0$	$\pm 22$	JFET Input	601,693
MC35071	0.5	3.5	10	75	25	4.5	13	$\pm 3.0$	$\pm 44$	High Performance	693
MC35071A	0.5	1.5	10	50	50	4.5	13	$\pm 3.0$	$\pm 44$	Single Supply	693
MC35171	100 nA	4.5	10	20 nA	50	1.8	2.1	+3.0	+44V	Micropower	693
MC35080	200 pA	4	10	100 pA	25	16	50	$\pm 3$	$\pm 22$	Single Supply Decoupled	601,693
MC35080A	200 pA	3.5	10	100 pA	50	16	50	$\pm 3$	$\pm 22$	HC 35081 $A_{vcl} > 2$	601,693
MC35081	200 pA	4	10	100 pA	25	8	30	$\pm 3$	$\pm 22$	High Speed	601,693
MC35081A	200 pA	3.5	10	100 pA	50	8	30	$\pm 3$	$\pm 22$	JFET Input	601,693