

Operational Amplifiers

Single Operational Amplifiers

Internally Compensated, Commercial Temperature Range (0 to 70°C)

Mfr.'s Type	I _a (μA) Max.	V _{io} (mV) Max.	T _{CW0} (μV/°C) Typ.	I _{io} (nA) Max.	A _{vol} (V/mV) Min.	Bandwidth (A _v =1) (MHz) Typ.	Slew Rate (A _v =1) (V/μs) Typ.	Supply Voltage (V) Min/Max	Description	Package Type
MC34071P	0.500	5.0	10	75.00	25.0	4.5	10.0	+3.0/+44	High Performance	8 Lead PDIP

Internally Compensated, Automotive Temperature Range (−40 to +85°C)

MC33171P	0.100	4.5	10	20.00	50.0	1.8	2.1	+3.0/+44	Low Power Single Supply	8 Lead PDIP
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Dual Operational Amplifiers

Internally Compensated, Commercial Temperature Range (0 to 70°C)

LM358N MC34072P MC34072AP	25.000 0.500 500.000 nA	6.0 5.0 3.0	7 10 10	50.00 75.00 50.00	25.0 25.0 50.0	1.0 4.5 4.5	0.6 10.0 10.0	±1.5/±18 (Split Supplies), +3.0 / +36 (Single Supply) +3.0/+44 +3.0/+44	Low Power Consumption High Performance, Single Supply High Performance, Single Supply	8 Lead PDIP 8 Lead PDIP 8 Lead PDIP
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Internally Compensated, Industrial Temperature Range (−25 to +85°C)

LM258N	0.150	5.0	10	30.00	50.0	1.0	0.6	±1.5/ ±18 (Split Supplies), +3.0/+36 (Single Supply)	Split or Single Supply Op Amp	8 Lead PDIP
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Internally Compensated, Automotive Temperature Range (−40 to +85°C)

LM2904N MC33072P MC33078P MC33172P MC33178P	0.250 0.500 750.000 nA 0.100 0.500	7.0 5.0 2.0 4.5 3.0	7 10 2 10 2	50.00 75.00 150.00 20.00 50.00	100 Typ. 25.0 31.6 50.0 50.0	1.0 4.5 16.0 1.8 5.0	6.0 10.0 7.0 2.1 2.0	±1.5/±13 (Split Supplies), +3.0/+26 (Single Supply) +3.0/+44 ±5.0/±18 +3.0/+44 ±2.0/±18	Split or Single Supply Op Amp High Performance, Single Supply Low Noise Low Power, Single Supply High Output Current	8 Lead PDIP 8 Lead PDIP 8 Lead PDIP 8 Lead PDIP 8 Lead PDIP
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Internally Compensated, Extended Automotive Temperature Range (−40 to +125°C)

TCA0372DP1	500 nA	15.0	20	50.00	30.0	1.1	1.4	+5.0/+36	Power Op Amp, Single Supply	8 Lead PDIP
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Quad Operational Amplifiers

Internally Compensated, Commercial Temperature Range (0 to 70 °C)

LM324N MC3403P MC34074P MC34074AP	0.250 0.500 0.500 500.000 nA	6.0 10.0 5.0 3.0	7 7 10 10	25.0 50.00 75.00 50.00	25.0 20.0 25.0 50.0	1.0 1.0 4.5 4.5	0.6 0.6 10.0 10.0	±1.5/±16 (Split Supplies), +3.0/+32 (Single Supply) ±1.5/±18 (Split Supplies), +3.0/+36 (Single Supply) +3.0/+44 +3.0/+44	Low Power Consumption No Crossover Distortion High Performance, Single Supply High Performance, Single Supply	14 Lead PDIP 14 Lead PDIP 14 Lead PDIP 14 Lead PDIP
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Internally Compensated, Automotive Temperature Range (−40 to +85°C)

LM2902N MC3303P	0.500 0.500	10.0 8.0	— 10	50.00 75.00	— 20.0	1.0 1.0	0.6 0.6	±1.5/±13 (Split Supplies), +3.0/+26 (Single Supply) ±1.5/±18 (Split Supplies), +3.0/+36 (Single Supply)	Differential Low Power Differential, General Purpose	14 Lead PDIP 14 Lead PDIP
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Comparators

Single

Bipolar

Mfr.'s Type	I _s (μA) Max.	V _{io} (mV) Max.	I _{io} (μA) Max.	A _v (V/V) Min.	I _{io} (mA) Min.	Response Time (ns)	Supply Voltage (V)	Description	Temperature Range (°C)	No. of Leads
PDIP										
LM311N	0.250	7.5	0.0500	200.0 K	8	200	+15, −15	With Strobe, Will Operate from Single Supply	0 to +70	8

Dual

Bipolar

LM393N LM2903N	0.250 0.250	5.0 7.0	0.0500 0.0500	200.0 K 200.0 K	6 6	1300 1500	±1.5 to ±18 or +3.0 to +36 ±1.5 to ±18 or +3.0 to +36	Designed for Single or Split Supply Operation, Input Common Mode Includes Ground (Negative Supply)	0 to +70 −40 to +85	8 8
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Quad

Bipolar

LM2901N MC3302P	0.250 0.500	7.0 20.0	0.0500 0.5000	100.0 K 30.0 K	6	1300	±1.5 to ±18 or +3.0 to +36	Designed for Single or Split Supply Operation, Input Common Mode Includes Ground (Negative Supply)	−40 to +85 −40 to +85	14 14
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Voltage Regulators



Linear Voltage Regulators

Fixed Output

Mfr.'s Type								V _{out} (V)	Tol. * (V)	I _o (mA) Max.	V _{in} (V) Min./Max.	Reg _{line} (mV)	Reg _{load} (mV)	ΔV _o /ΔT (mV/°C) Typ.
Positive Regulator				Negative Regulator										
Case 29/T0-92	Case 221A	Case 369A	Case 751/S0-8	Case 29/T0-92	Case 221A	Case 369A	Case 751/S0-8							
—	LM2931T-5.0	—	—	—	—	—	—	5.0	±0.50	100	5.6/40	30	50	1.00
—	—	—	—	—	—	—	—	5.0	±0.25	100	5.6/40	30	50	1.00
MC78L05ACP	—	—	MC78L05ACD	MC79L05ACP	—	—	—	5.0	±0.25	100	6.7/30	150	60	1.00
—	MC78M05CT	MC78M05CDT	—	—	MC79M05CT	MC79M05CDT	—	5.0	±0.25	500	7.0/35	100	100	1.00
—	MC7805CT	—	—	—	MC7905CT	—	—	5.0	±0.25	1500	7.0/35	100	100	1.00
—	MC7805ACT	—	—	—	MC7905ACT	—	—	5.0	±0.20	1500	7.5/35	10	100	0.60
—	LM340T-5.0	—	—	—	—	—	—	5.0	±0.25	1500	7.0/35	50	50	0.60