

## Product Overview

### MC33074: Operational Amplifier, Single Supply 3.0 V to 44 V, Quad

For complete documentation, see the data sheet.

Quality bipolar fabrication with innovative design concepts are employed for the MC33071/72/74, MC34071/72/74, NCV33072/74A series of monolithic op-amps. These op-amps offer 4.5 MHz of gain bandwidth product, 13 V/ $\mu$ s slew rate and fast settling time without the use of JFET device technology. Although this series can be operated from split supplies, it is particularly suited for single supply operation, since the common mode input voltage range includes ground potential (VEE). With a Darlington input stage, this series exhibits high input resistance, low input offset voltage and high gain. The all NPN output stage, characterized by no deadband crossover distortion and large output voltage swing, provides high capacitance drive capability, excellent phase and gain margins, low open loop high frequency output impedance and symmetrical source/sink AC frequency response. The MC33071/72/74, MC34071/72/74, NCV33072/74, A series of devices are available in standard or prime performance (A Suffix) grades and are specified over the commercial, industrial/vehicular or military temperature ranges. The complete series of single, dual and quad operational amplifiers are available in plastic DIP, SOIC and TSSOP surface mount packages.

### Features

- Wide Bandwidth: 4.5 MHz
- High Slew Rate: 13 V/ $\mu$ s
- Fast Settling Time: 1.1  $\mu$ s to 0.1%
- Wide Single Supply Operation: 3.0 V to 44 V
- Wide Input Common Mode Voltage Range: Includes Ground (VEE)
- Low Input Offset Voltage: 3.0 mV Maximum (A Suffix)
- Large Output Voltage Swing: -14.7 V to +14 V (with +/-15 V Supplies)
- Large Capacitance Drive Capability: 0 pF to 10,000 pF
- Low Total Harmonic Distortion: 0.02%
- Excellent Phase Margin: 60°

For more features, see the data sheet

### Applications

- Instrumentation and Control

## Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Rail to Rail	Channels	V <sub>S</sub> Min (V)	V <sub>S</sub> Max (V)	I <sub>g</sub> Typ (mA)	V <sub>OS</sub> Max (mV)	GBW Typ (MHz)	SR Typ (V/μs)	I <sub>O</sub> Typ (mA)	ΔV <sub>OS</sub> /ΔT (μV/C)	e <sub>N</sub> (nV/√Hz)	I <sub>bias</sub> Typ (pA)	CMRR Typ (dB)	Architecture	Temperature Range (°C)	Package Type
MC33074ADR2G	0.4753	Pb-free Halide free non AEC-Q and PPAP	Active	No	4	3	44	1.9	3	4.5	10	30	10	32	100000	97	Bipolar	-40 to 85	SOI C-14
MC33074ADTBR2G	0.5368	Pb-free Halide free non AEC-Q and PPAP	Active	No	4	3	44	1.9	3	4.5	10	30	10	32	100000	97	Bipolar	-40 to 85	TSS OP-14
MC33074DR2G	0.3923	Pb-free Halide free non AEC-Q and PPAP	Active	No	4	3	44	1.9	3	4.5	10	30	10	32	100000	97	Bipolar	-40 to 85	SOI C-14
MC33074DTBR2G	0.4945	Pb-free Halide free non AEC-Q and PPAP	Active	No	4	3	44	1.9	3	4.5	10	30	10	32	100000	97	Bipolar	-40 to 85	TSS OP-14
NCV33074ADTBR2G	0.768	AEC Qualified PPAP Capable Pb-free Halide free	Active	No	4	3	44	1.9	3	4.5	10	30	10	32	100000	97	Bipolar	-40 to 85	TSS OP-14
NCV33074DR2G	0.5773	AEC Qualified PPAP Capable Pb-free Halide free	Active	No	4	3	44	1.9	3	4.5	10	30	10	32	100000	97	Bipolar	-40 to 85	SOI C-14

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