Product Overview

NCV33204: Operational Amplifier, Rail to Rail I/O, High Output Drive

For complete documentation, see the data sheet.

The MC33201/2/4 family of op-amps provides rail-to-rail operation on both the input and output. The inputs can be driven as high as 200mV beyond the supply rails without phase reversal on the outputs, and the output can swing within 50 mV of each rail. This rail-to-rail operation enables the user to make full use of the supply voltage range available. It is designed to work at very low supply voltages (+/- 0.9 V) yet can operate with a supply of up to +12V and ground. Output current boosting techniques provide a high output current capability while keeping the drain current of the amplifier to a minimum. Also, the combination of low noise and distortion with a high slew rate and drive capability make this an ideal amplifier for audio applications.

Features

- Low Voltage, Single Supply Operation (+1.8 V and Ground to +12 V and Ground)
- Input Voltage Range Includes both Supply Rails
- Output Voltage Swings within 50 mV of both Rails
- No Phase Reversal on the Output for Over-driven Input Signals
- High Output Current (ISC = 80 mA, Typ)
- Low Supply Current (ID = 0.9 mA, Typ)
- 600 W Output Drive Capability
- Extended Operating Temperature Ranges (-40° to +105°C and -55° to +125°C)
- Typical Gain Bandwidth Product = 2.2 MHz

Part Electrical Specifications

Product	Pricing ($/Unit)	Compliance	Status	Rail to Rail	Channels	V_S Min (V)	V_S Max (V)	I_g Typ (mA)	V_{OS} Max (mV)	GBW Typ (MHz)	SR Typ (V/µs)	I_O Typ (mA)	$\Delta V_{OS}/\Delta T$ (µV/C)	e_N (nV/√Hz)	I_{bias} Typ (pA)	CMRR Typ (dB)	Architecture	Temperature Range (°C)	Package Type
NCV33204DR2G	0.6495	AEC Qualified PPAP Capable Pb-free Halide free	Active	Input/Output	4	1.8	12	0.9	6	2	1	80	2	20	80000	90	Bipolar	-55 to 125	SOIC-14
NCV33204DTBR2G	0.4807	AEC Qualified PPAP Capable Pb-free Halide free	Active	Input/Output	4	1.8	12	0.9	6	2	1	80	2	20	80000	90	Bipolar	-55 to 125	TSSOP-14

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