

Product Overview

NCS20074: Operational Amplifier, Wide supply range, 3Mhz CMOS Op-Amp

For complete documentation, see the data sheet.

The NCS2007x series operational amplifiers provide rail-to-rail output operation, 3 MHz bandwidth, and are available in single, dual, and quad configurations. Rail-to-rail operation enables the user to make optimal use of the entire supply voltage range. The NCS2007x can operate on supply voltages as low as 2.7 V up to 36V over the temperature range of -40°C to 125°C. At a 2.7 V supply, the high bandwidth provides a slew rate of 2.8 V/μs while only consuming 405 μA of quiescent current per channel. The wide supply range allows the NCS2007x to run on supply voltages as high as 36 V, making it ideal for a broad range of applications. Since this is a CMOS device, high input impedance and low bias currents make it ideal for interfacing to a wide variety of signal sensors. The NCS2007x devices are available in a variety of compact packages.

Features

- Rail-To-Rail Output
- Wide Supply Range: 2.7 V to 36 V
- Wide Bandwidth: 3 MHz typical at $V_S = 2.7$ V
- High Slew Rate: 2.8 V/μs typical at $V_S = 2.7$ V
- Low Supply Current: 405 μA per channel at $V_S = 2.7$ V
- Low Input Bias Current: 5 pA typical
- Wide Temperature Range: -40°C to 125°C
- Available in a variety of packages
- NCV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q100 Qualified and PPAP Capable

Benefits

- Wide output range
- Wide supply range suitable for a wide variety of applications
- Compatible with high speed signals up to 3 MHz
- High large signal bandwidth
- Low current consumption
- High input impedance
- Functional over wide temperature range
- Fits in a variety of applications, simple drop-in replacement
- Meets automotive standards

Applications

- Economical low side current sensing solution
- Sensor signal conditioning including high impedance sensors
- Rail to Rail output swing applications
- Active Filters

End Products

- Automotive
- Battery powered Instruments
- Power Supplies
- Notebook Computers
- Industrial Equipment

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Rail to Rail	Channels	V_S Min (V)	V_S Max (V)	I_a Typ (mA)	V_{OS} Max (mV)	GBW Typ (MHz)	SR Typ (V/μs)	I_o Typ (mA)	$\Delta V_o / \Delta T$ (μV/°C)	e_N (nV/√Hz)	I_{bias} Typ (pA)	CMRR Typ (dB)	Architecture	Temperature Range (°C)	Package Type
NCS20074DR2G	0.36	Pb-free Halide free	Active	Output	4	2.7	36	0.41	3	3	2.8	50	2	30	5	145	CMOS	-40 to 125	SOIC-14
NCS20074DTBR2G	0.3733	Pb-free Halide free	Active	Output	4	2.7	36	0.41	3	3	2.8	50	2	30	5	145	CMOS	-40 to 125	TSSOP-14
NCV20074DR2G	0.4	AEC Qualified PPAP Capable Pb-free Halide free	Active	Output	4	2.7	36	0.41	4	3	2.8	50	2	30	5	145	CMOS	-40 to 125	SOIC-14
NCV20074DTBR2G	0.3733	AEC Qualified PPAP Capable Pb-free Halide free	Active	Output	4	2.7	36	0.41	4	3	2.8	50	2	30	5	145	CMOS	-40 to 125	TSSOP-14

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