

## Product Overview

### NCS20071: Operational Amplifier, Wide supply range, 3Mhz CMOS Op-Amp

For complete documentation, see the data sheet.

The NCx2007x 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 while taking advantage of 3 MHz bandwidth. The NCx2007x can operate on supply voltages as low as 2.7 V 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 NCx2007x 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 NCx2007x devices are available in a variety of compact packages. Automotive qualified options are available under the NCV prefix.

#### Features

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

#### Benefits

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

#### Applications

- Current Sensing
- Signal Conditioning
- Automotive
- Lighting

#### End Products

- Notebook Computers
- Portable Instruments
- Power Supplies

### Part Electrical Specifications

Product	Compliance	Status	Rail to Rail	Channels	$V_S$ Min (V)	$V_S$ Max (V)	$I_Q$ 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
NCS20071SN2T1G	Pb-free Halide free	Active	Output	1	2.7	36	0.48 0.43	3.5	3	2.4	50	2	30	5	135	CMOS	-40 to 125	TSOP-5
NCV20071SN2T1G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Output	1	2.7	36	0.41	4	3	2.4	50	2	30	5	145	CMOS	-40 to 125	TSOP-5

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