

Product Overview

NCS20072: Operational Amplifier, Wide supply range, 3 MHz 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 while taking advantage of 3 MHz bandwidth. The NCS2007x 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 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. Automotive qualified options are available under the NCV prefix.

Product Family:

NCS20071
NCS20072
NCS20074

Channel
1
2
4

Packages
SOT553, SOT23-5
SOIC-8, Micro-8, TSSOP-8
TSSOP-14, SOIC-14

Features

- Wide Supply Range: 2.7 V to 36 V
- Rail-To-Rail Output
- Wide Bandwidth: 3 MHz typical at $V_S = 2.7\text{ V}$
- High Slew Rate: 2.8 V/μs typical at $V_S = 2.7\text{ V}$
- Low Supply Current: 405 μA per channel at $V_S = 2.7\text{ V}$
- Low Input Bias Current: 5 pA typical
- 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

Applications

- Current Sensing
- Signal Conditioning
- Automotive

Benefits

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

End Products

- Notebook Computers
- Portable Instruments
- Power Supplies

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)	ΔV _O /ΔT (μV/°C)	e _N (nV/√Hz)	I _{bias} Typ (pA)	CMRR Typ (dB)	Architecture	Temperature Range (°C)	Package Type
NCS20072DMR2G	0.32	Pb-free Halide free non AEC-Q and PPAP	Active	Output	2	2.7	36	0.41	4	3	2.5	50	2	30	5	145	CMOS	-40 to 125	Micro8™
NCS20072DR2G	0.24	Pb-free Halide free non AEC-Q and PPAP	Active	Output	2	2.7	36	0.41	4	3	2.5	50	2	30	5	145	CMOS	-40 to 125	SOI C-8
NCS20072DTBR2G	0.3333	Pb-free Halide free non AEC-Q and PPAP	Active	Output	2	2.7	36	0.41	4	3	2.5	50	2	30	5	145	CMOS	-40 to 125	TSSOP-8
NCV20072DMR2G	0.3333	AEC Qualified PPAP Capable Pb-free Halide free	Active	Output	2	2.7	36	0.41	4	3	2.5	50	2	30	5	145	CMOS	-40 to 125	Micro8™
NCV20072DR2G	0.24	AEC Qualified PPAP Capable Pb-free Halide free	Active	Output	2	2.7	36	0.41	4	3	2.5	50	2	30	5	145	CMOS	-40 to 125	SOI C-8
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For more information please contact your local sales support at www.onsemi.com.

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