

## Product Overview

### NCS20081: Operational Amplifier, 5.5V Rail-to-Rail Input and Output, 1.2 MHz, Single

For complete documentation, see the data sheet.

The NCS2008 series operational amplifiers provide rail-to-rail input and output operation, 1.2 MHz bandwidth, and are available in single, dual, and quad configurations. Rail-to-rail operation gives designers use of the entire supply voltage range while taking advantage of the 1.2 MHz bandwidth. The NCS2008 can operate on supply voltages from 1.8 to 5.5 V over a temperature range from -40 to 125°C. At a 1.8 V supply, this device has a slew rate of 0.4 V/s while consuming only 42 µA of quiescent current per channel. 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 NCS2008 devices are available in a variety of compact packages.

### Features

- Rail-to-Rail Input and Output
- Wide Supply Range: 1.8 to 5.5 V
- Wide Bandwidth: 1.2 MHz
- High Slew Rate: 0.4 V/s at  $V_S = 1.8$  V
- Low Supply Current: 42 µA per Channel at  $V_S = 1.8$  V
- Low Input Bias Current: 1 pA Typical
- Wide Temperature Range: -40 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
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

For more features, see the data sheet

### Applications

- Unity Gain Buffer
- Battery Powered / Low Quiescent Current Applications
- Low Cost Current Sensing
- Automotive

### 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
NCS20081MUTAG	Pb-free Halide free	Active	Input /Output	1	1.8	5.5	0.042	3.5	1.2	0.4	11	1	30	1	79	CMOS	-40 to 125	UDFN-6
NCS20081SN2T1G	Pb-free Halide free	Active	Input /Output	1	1.8	5.5	0.042	3.5	1.2	0.4	11	1	30	1	79	CMOS	-40 to 125	TSOP-5
NCS20081SN3T1G	Pb-free Halide free	Active	Input /Output	1	1.8	5.5	0.042	3.5	1.2	0.4	11	1	30	1	79	CMOS	-40 to 125	TSOP-5
NCS20081SQ3T2G	Pb-free Halide free	Active	Input /Output	1	1.8	5.5	0.042	3.5	1.2	0.4	11	1	30	1	79	CMOS	-40 to 125	SC-88A / SC-70-5
NCV20081SN2T1G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Input /Output	1	1.8	5.5	0.042	3.5	1.2	0.4	11	1	30	1	79	CMOS	-40 to 125	TSOP-5
NCV20081SQ3T2G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Input /Output	1	1.8	5.5	0.042	3.5	1.2	0.4	11	1	30	1	79	CMOS	-40 to 125	SC-88A / SC-70-5

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