

NCS2001

Operational Amplifier with sub-one volt operation, Rail to Rail I/O

Product Overview

For complete documentation, see the data sheet.

The NCS2001 is an industry first sub-one volt op-amp that features a rail-to-rail common mode input voltage range, along with rail-to-rail output drive capability. This amplifier is guaranteed to be fully operational down to 0.9 V, providing an ideal solution for powering applications from a single cell Nickel Cadmium (NiCd) or Nickel Metal Hydride (NiMH) battery. Additional features include no output phase reversal with overdriven inputs, trimmed input offset voltage of 0.5 mV, extremely low input bias current of 40 pA, and a unity gain bandwidth of 1.4 MHz at 5.0 V. The tiny NCS2001 is the ideal solution for small portable electronic applications and is available in the space saving SOT23-5 and SC70-5 packages with two industry standard pinouts.

Features

- 0.9 V Guaranteed Operation
- Rail-to-Rail Common Mode Input Voltage Range
- Rail-to-Rail Output Drive Capability
- No Output Phase Reversal for Over-Driven Input Signals
- 0.5 mV Trimmed Input Offset Typical
- 10 pA Input Bias Current
- 1.4 MHz Unity Gain Bandwidth at +/- 2.5 V, 1.1 MHz at +/- 0.5 V















Applications

- Signal Conditioning
- Sensor Interfaces

End Products

- White Goods
- 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)	ΔV _{OS} /ΔT (μV/°C)	e _N (nV/√Hz)	I _{bias} Typ (pA)	CMRR Typ (dB)	Architecture	Temperature Range (°C)	Package Type
NCS2001SN1T1G	0.3313	 	Active	Input/Output	1	0.9	7	0.51	6	1.4	1.6	76	8	100	10	70	CMOS	-40 to 105	TSOP-5 / SO T-23-5
NCS2001SN2T1G	0.3063	 	Active	Input/Output	1	0.9	7	0.51	6	1.4	1.6	76	8	100	10	70	CMOS	-40 to 105	TSOP-5 / SO T-23-5
NCS2001SQ2T2G	0.3752	 	Active	Input/Output	1	0.9	7	0.51	6	1.4	1.6	76	8	100	10	70	CMOS	-40 to 105	SC-88 A / SC-70-5
NCV2001SN2T1G	0.3744	   	Active	Input/Output	1	0.9	7	0.51	6	1.4	1.6	76	8	100	10	70	CMOS	-40 to 125	TSOP-5 / SO T-23-5
NCV2001SQ2T2G	0.3055	   	Active	Input/Output	1	0.9	7	0.51	6	1.4	1.6	76	8	100	10	70	CMOS	-40 to 125	SC-88 A / SC-70-5