

Product Announcement

Introducing OPA211-HT as Bare Die Product from Texas Instruments

1.1 nV/ $\sqrt{\text{Hz}}$ Noise, Low Power, Precision Operational Amplifier

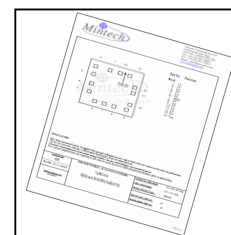
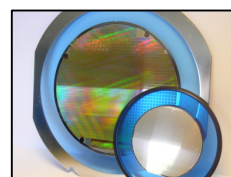
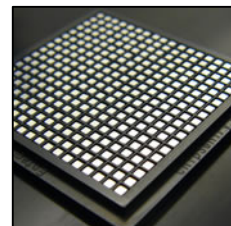
The OPA211 series of precision operational amplifiers achieves very low 1.1 nV/ $\sqrt{\text{Hz}}$ noise density with a supply current of only 3.6 mA. This series also offers rail-to-rail output swing, which maximizes dynamic range.

The extremely low voltage and low current noise, high speed, and wide output swing of the OPA211 makes this device an excellent choice as a loop filter amplifier in PLL applications.

In precision data acquisition applications, the OPA211 series of op amps provides 700-ns settling time to 16-bit accuracy throughout 10-V output swings. This ac performance, combined with only 240- μV of offset and 0.35- $\mu\text{V}/^\circ\text{C}$ of drift over temperature makes the OPA211 ideal for driving high-precision 16-bit analog-to-digital converters (ADCs) or buffering the output of high-resolution digital-to-analog converters (DACs).

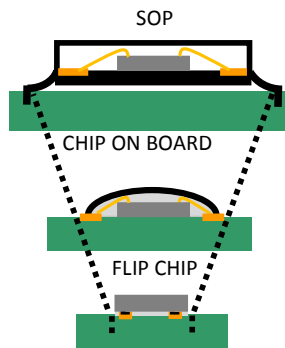
The OPA211 series is specified over a wide dual-power supply range of ± 2.25 V to ± 18 V, or for single-supply operation from 4.5 V to 36 V.

This series of op amps is specified from $T_A = -55^\circ\text{C}$ to 210°C .



Quick Reference Data

Number of Channels	1
Total Supply Voltage (V)(Min)(+5V=5, +/-5V=10)	4.5
Total Supply Voltage (V)(Max)(+5V=5, +/-5V=10)	36
Iq per channel(Max)(mA)	7.5
GBW(Typ)(MHz)	45
Slew Rate(Typ)(V/us)	27
Offset Drift (Typ) ($\mu\text{V}/^\circ\text{C}$)	0.35
IIB (Max) (pA)	250000
CMRR (Min) (dB)	113
Vn at 1kHz (Typ) (nV/ $\sqrt{\text{rtHz}}$)	1.1
Rail - Rail	Out
Rating	Military



Please [contact us](#)

Features

- THD+N: -136 dB (G = 1, f = 1 kHz)
- OFFSET VOLTAGE: 240 μV (max)
- LOW SUPPLY CURRENT: 6.0 mA/ch (TYP)
- UNITY-GAIN STABLE
- 16-BIT SETTLING: 700 ns
- OUTPUT CURRENT: 30 mA
- INPUT VOLTAGE NOISE:
80 nV_{PP} (0.1 Hz to 10Hz) THD+N: - 136dB (G=1, F=1kHz)

Applications

- EXTREME TEMPERATURE APPLICATIONS
- DOWN HOLE DRILLING
- HIGH TEMPERATURE ENVIRONMENTS

A full electrical datasheet is available from <http://focus.ti.com/lit/ds/symlink/opa211-ht.pdf>

For further die technical information and choice of available supply formats please [contact us](#)

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