

Product Announcement

Introducing TLC2252 as Bare Die Product from Texas Instruments

Dual Rail-To-Rail Micropower Operational Amplifier

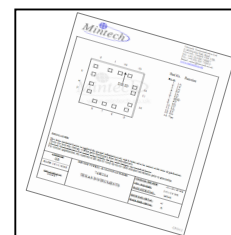
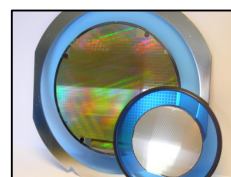
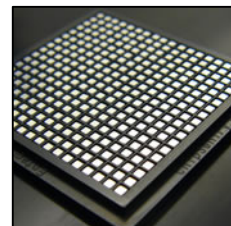
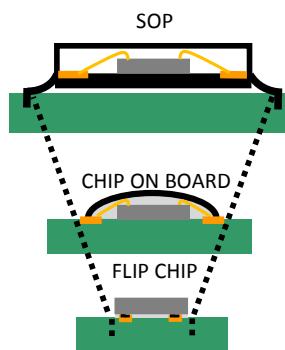
The TLC2252 is a dual operational amplifier from Texas Instruments. It exhibits rail-to-rail output performance for increased dynamic range in single- or split-supply applications. The TLC2252 consumes only 35 μA of supply current per channel. This micropower operation makes it a good choice for battery-powered applications. The noise performance has been dramatically improved over previous generations of CMOS amplifiers. The TLC2252 has a noise level of $19 \text{ nV}/\sqrt{\text{Hz}}$ at 1kHz; four times lower than competitive micropower solutions (Fig. 1 [Full datasheet](#)).

The TLC2252 amplifier, exhibiting high input impedance and low noise, is excellent for small-signal conditioning for high-impedance sources, such as piezoelectric transducers or sensors.

Designing applications using TLC2252 in bare die form allows the designer to place the device closer to the signal source to reduce noise pickup and increase signal integrity. Bare Die also offers >50% X-Y-Z size reduction when compared with smallest available package. \therefore Bare die form factor greatly assists size sensitive applications.

Quick Reference Data

Number of Channels	2
Total Supply Voltage (V)(Min)(+5V=5, +/-5V=10)	4.4
Total Supply Voltage (V)(Max)(+5V=5, +/-5V=10)	16
Iq per channel(Max)(mA)	0.0625
GBW(Typ)(MHz)	0.2
Slew Rate(Typ)(V/us)	0.12
VIO (25 deg C)(Max)(mV)	1.5
Offset Drift(Typ)(uV/C)	0.5
IIB(Max)(pA)	60
CMRR(Min)(dB)	70
Vn at 1kHz(Typ)(nV/rtHz)	19
Rail-Rail	Out



Features

- LOW NOISE . . . $19 \text{ nV}/\sqrt{\text{Hz}}$ TYP AT $f = 1 \text{ kHz}$
- LOW INPUT OFFSET VOLTAGE
850 μV MAX AT $T_A = 25^\circ\text{C}$
- LOW INPUT BIAS CURRENT . . . 1 pA TYP
- COMMON-MODE INPUT VOLTAGE RANGE
INCLUDES THE NEGATIVE RAIL
- FULLY SPECIFIED FOR BOTH SINGLE-SUPPLY
AND SPLIT-SUPPLY OPERATION
- SMALLEST FORM FACTOR (mm) - $1.55 \times 1.12 \times 0.38^*$
(* Custom thicknesses also available)

Applications

- LOW LEVEL SIGNAL CONDITIONING
- OPTOELECTRONICS
- SENSOR MODULES
- HYBRID CIRCUITS

Please [contact us](#) if you would like a copy of the TLC2252 die geometry.

A full electrical datasheet is available from <http://focus.ti.com/lit/ds/symlink/tlc2252.pdf>

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

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