Product Announcement

Introducing LPV324 Bare Die Product from National Semiconductor

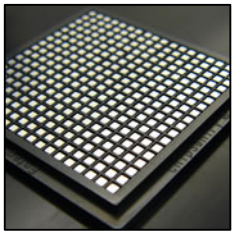
Ultra Low Power Consumption Operational Amplifier

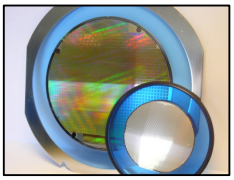
The LPV324 is a low power (9 µA per channel at 5.0V) version of the LMV324 op amp particularly suited for Medical Sensing applications as bare die.

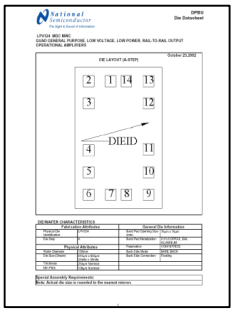
The LPV324 is the most effective solution for medical applications where low voltage, low power operation and space saving are critical. The LPV324 has rail-to-rail output swing capability and the input common-mode voltage range includes ground. The LPV324 exhibits excellent speed-power ratio, achieving 5 kHz of bandwidth with a supply current of only 9 µA.

Designing medical applications with the LPV324 in bare die form also allows the designer to place the device closer to the signal source to reduce noise pickup and increase signal integrity.

The chip is built with National's advanced submicron silicon-gate BiCMOS process. The LPV324 has bipolar input and output stages for improved noise performance and higher output current drive.

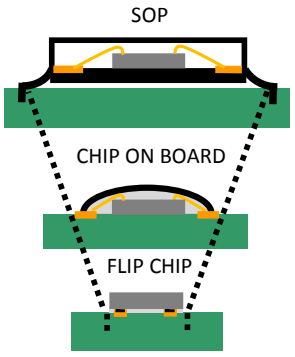






Quick Reference Data

Supply Min	2.7 Volt
Supply Max	5 Volt
Gain Bandwidth	0.152 MHz
Offset Voltage max, 25C	7 mV
Max Input Bias Current	60 nA
Channels	4
Supply Current Per Channel	0.0075 mA
Input OutputType	Vcm to V-, R-R Out
Slew Rate	0.1 Volts/usec
Output Current	17 mA
Shut down	No
Voltage Noise	146 nV/root(Hz)



Features

- GUARANTEED 2.7V AND 5V PERFORMANCE
- NO CROSSOVER DISTORTION
- GAIN-BANDWITH PRODUCT 152 kHz
- LOW SUPPLY CURRENT 9 µA
- RAIL-TO-RAIL OUTPUT SWING @ 100KΩ LOAD
  V+-3.5 mV
  V-+90 mV
- SMALLEST FORM FACTOR - 0.61mm x 0.97mm x 0.25mm*
  (* Standard die thickness – custom thicknesses also available)

Applications

- MEDICAL ACTIVE FILTERS
- LOW VOLTAGE MEDICAL APPLICATIONS
- PORTABLE MEDICAL DEVICES
- MULTI-CHIP-MODULES

A full electrical datasheet is available from **http://www.national.com/ds/LP/LPV321.pdf**

For further die technical information and choice of available supply formats please contact us

Micross Components EU
Unit D2 Meadowbank
Oldham, Lancashire
OL9 8EH England

Tel: +44 (0)161 683 5236
Fax: +44 (0)161 684 1233

Micross Components USA
22 Just Road
Fairfield, NJ 07004-3413
USA

Tel: (973) 227 8007
Fax: (973) 227 4766

MIcross Components Asia
299299 Kaiyuan Road
Jiangning, Nanjing
China 211100

Tel: +86-25-6667 8880

www.micross.com

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