



LinearDimensions
SEMICONDUCTOR

LNDINA336

Up to Six Lead AFE Solution Uses 60% Less Current

GENERAL DESCRIPTION

The LNDINA336 are up to six lead precision instrumentation amplifiers designed to be specification compatible with the TI INA333, except that the LNDINA336 offers this performance with a significant reduction in power consumption (21 μ A typical and 25 μ A maximum vs. 50 μ A typical and 80 μ A maximum for the INA333).

To select a gain, an RG resistor is connected between the RG pins. Gain may be set from 100V/V to 2000V/V. The LNDINA336 offers extremely low offset voltage (25 μ V) and high CMRR (>100dB). A single reference channel can be utilized for differential input against five leads selected with a digitally controlled mux. A digital number on SEL0-2 will select channel 1 through 5.

The LNDINA336 will operate with a supply voltage as low as 2.7V, and offers a noise figure of <35nV/ \sqrt Hz input referred noise (@100Hz).

The LNDINA336 features 2kV HBM ESD protection. Additionally, the inputs are RFI filtered to reduce EMI susceptibility.

The LNDINA333 is available in a 4x4mm 20-pin QFN package.

BLOCK DIAGRAM

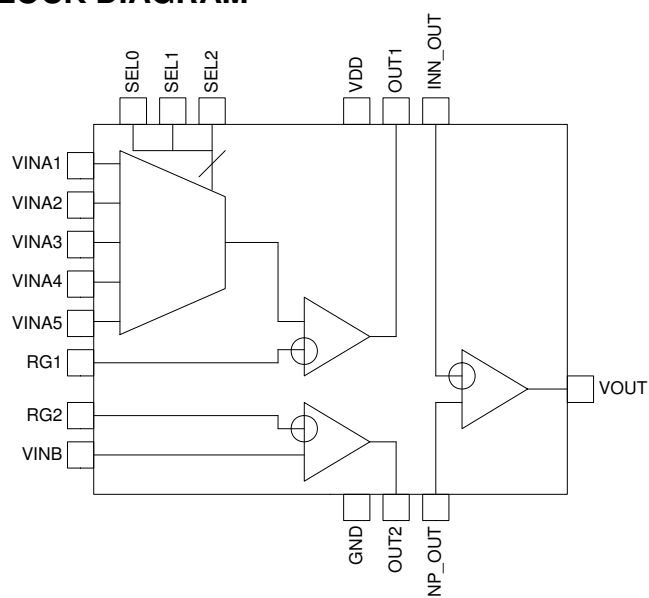


Figure 1 – LNDINA336 Equivalent Block Diagram

FEATURES

- Up to 6 Lead Instrumentation Amplifier
- Digitally Controlled Input Mux
- Single ended output
- +2.7V to +3.6V input range
- 21 μ A typ current consumption (INA333,50 μ A)
- 28 μ A max current consumption (INA333,80 μ A)
- <25 μ V typical input offset voltage
- >100db CMRR
- <35nV/ \sqrt Hz input referred noise (@100Hz)
- RFI Filtered Inputs
- External resistor Rg gain programmable
- Minimum gain setting 100V/V
- Input range: GND-0.1V to VDD-1.25V
- Output range: GND+0.05V to VDD-0.05V
- <100pA typical input bias current
- 5mA short circuit current
- Temperature range: -40°C to +125°C
- Compact QFN4x4 20 pin Package

APPLICATIONS

- Physiological Bands & Watches
- Physiological Audio Equipment
- ECG Monitors
- Medical Patches
- Portable fitness & wellness products
- Vibration measurement equipment
- Instrumentation
- Bridge amplifiers
- Pressure sensors
- Weigh scales
- Sensor amplifiers