

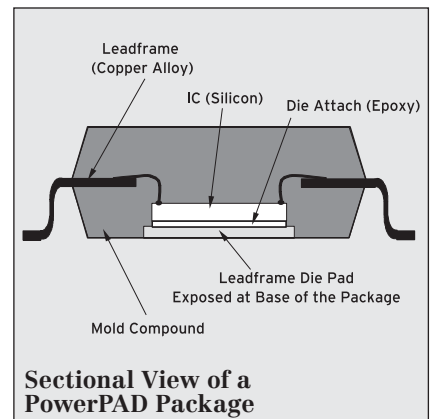
OPA569

2 A Rail-to-Rail I/O Power Amplifier

from Texas Instruments

The OPA569 is a low-cost, high-current, operational amplifier. It is designed for driving a wide variety of loads while operating on low-voltage supplies. It operates from either single or dual supplies for design flexibility and has rail-to-rail swing on the input and output. The OPA569 is unity gain stable, has low DC errors, is easy to use, and free from the phase inversion problems found in some power amplifiers. Typical output swing is within 200 mV of the supply rails, with output current of 2 A. Output swing closer to the rails can be achieved with lighter loads. High performance is maintained at voltage swings near the output rails. The OPA569 provides an accurate user-selected current limit that is set with an external resistor, or digitally adjusted via a D/A converter. An IMONITOR pin provides a 1:475 bidirectional copy of the output current. This eliminates the need for a series current shunt resistor, allowing more voltage to be applied to the load. This pin can be used for simple monitoring, or feedback control to establish constant output current. Two flags are provided: one for warning of thermal overstress, and one

for current limit condition. The Thermal Flag pin can be connected to the Enable pin to provide a thermal shutdown solution. Packaged in the Texas Instruments PowerPAD™ package, it is small and easy to heat sink. The OPA569 is specified for operation over the extended industrial temperature range of -40...+85 °C.

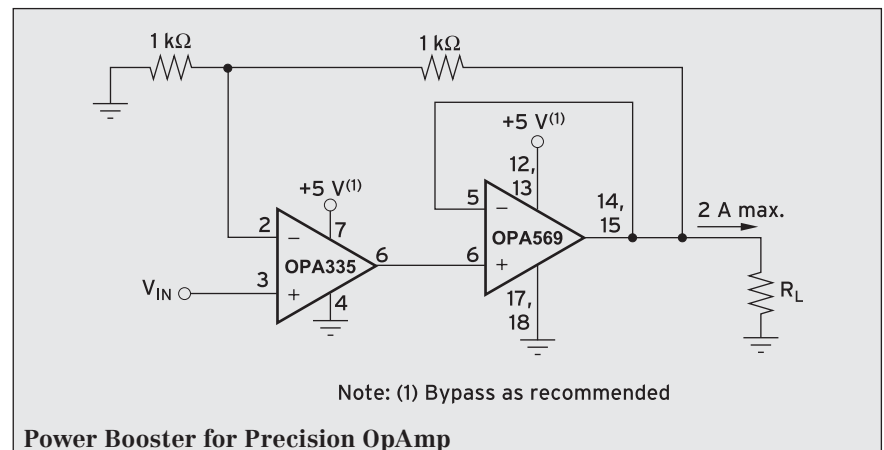


Features

- Low supply voltage operation: 2.7...5.5 V
- High output current: 2 A
- Output swings to: 200 mV of rails with $I = 2$ A
- Thermal protection and adjustable current limit
- Two flags: current limit and temperature warning
- Shutdown function with output disable
- Small power package: SO-20 PowerPAD™

Applications

- Thermoelectric cooler drivers
- Laser diode pump drivers
- Valve actuator drivers
- Synchro, server drivers
- Transducer excitation
- General linear power booster for op-amps
- Paralleling option for higher current applications



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