

5.5V, 11-MHz, RRIO, CMOS Operational Amplifiers

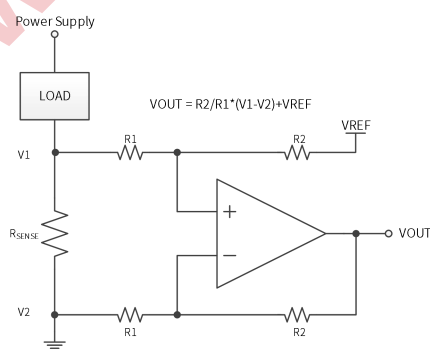
1 Features

- Rail-to-rail Input and Output
- Input Offset Voltage: $\pm 0.3 \text{ mV}$ (typ @25°C)
- High Gain-bandwidth Product: 11MHz
- High Slew Rate: 13V/ μs
- Low Broadband Noise: 12.9nV/ $\sqrt{\text{Hz}}$
- Low Quiescent Current: 0.8mA/channel
- Low Input Bias Current: 1pA
- Unity-gain Stable
- Internal RFI and EMI Filter
- Operational Supply Voltages from 1.8V to 5.5V
- Easier to Stabilize with Higher Capacitive Load
- Shutdown Version: KS11062E
- Operation Temperature Range: -40°C to 125°C
- Small Packaging:
 - KS11062 in SOP-8, SOT23-8
 - KS11062E in MSOP-10
 - KS11064 in SOP-14, TSSOP-14

2 Applications

- White Goods
- Sweeping Robot
- Motor Control
- Audio
- Battery Test Equipment

Simplified Schematic



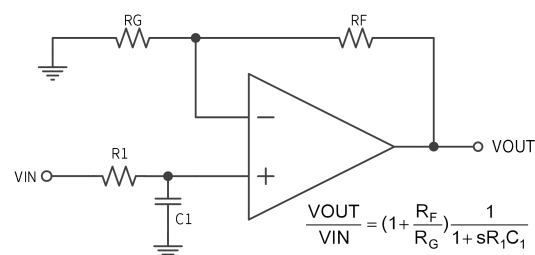
Low-side Current Sense

- Sensor Signal Conditioning
- Active Filters
- Low-side Current Sense

3 Description

The KS11062/KS11062E/KS11064 are a family of dual/qual operational amplifiers, which are optimized for low voltage, low noise and low power operation. These devices can operate from 1.8V to 5.5V power supply, and consume low quiescent current. The supply current of KS11062E is less than 1 μA in shut-down mode.

The inputs and outputs of KS11062/KS11062E/KS11064 can operate from rail to rail at a very high slew rate. These devices are perfect for cost constrained applications where low-voltage operation, high slew rate, and low quiescent current is needed. The capacitive-load drive is 100 pF, and the resistive open-loop output impedance makes stabilization easier with much higher capacitive loads. The family is unity-gain stable, integrates the RFI and EMI rejection filter, and provides no phase reversal in overdrive condition, which makes it easier for system design.



Single-pole, Low Pass Filter