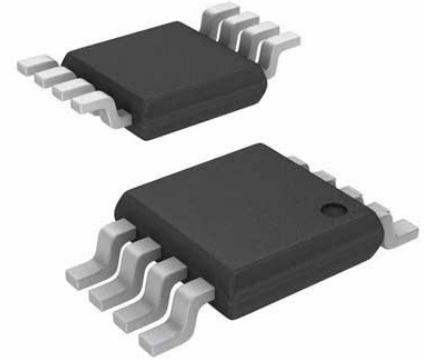


Current Sense Amplifier, Extended Input Range, 1 Amplifier, MSOP, 8 Pins, -40 °C, 85 °C

Manufacturers	Analog Devices, Inc
Package/Case	MSOP8
Product Type	Amplifier ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for LT6105IMS8#PBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The LT6105 is a micropower, precision current sense amplifier with a very wide input common mode range. The LT6105 monitors unidirectional current via the voltage across an external sense resistor. The input common mode range extends from $-0.3V$ to $44V$, with respect to the negative supply voltage (V^-). This allows the LT6105 to operate as a high side current sense monitor or a low side current sense monitor. It also allows the LT6105 to monitor current on a negative supply voltage, as well as continuously monitor a battery from full charge to depletion. The inputs of LT6105 can withstand differential voltages up to $\pm 44V$, which makes it ideal for monitoring a fuse or MOSFET switch.

Gain is configured with external resistors from $1V/V$ to $100V/V$. The input common mode rejection and power supply rejection are in excess of $100dB$ and the input offset voltage is less than $300\mu V$. A minimum slew rate of $2V/\mu s$ ensures fast response to unexpected current changes.

The LT6105 can operate from an independent power supply of $2.85V$ to $36V$ and draws only $150\mu A$. When V^+ is powered down, the sense pins are biased off. This prevents loading of the monitored circuit, irrespective of the sense voltage. The LT6105 is available in a 6-lead DFN and 8-lead MSOP package.

Applications

High Side or Low Side Current Sensing

Current Monitoring on Positive or Negative Supply Voltages

Battery Monitoring

Fuse/MOSFET Monitoring

Automotive

Power Management

Portable Test/Measurement Systems

Features

Very Wide, Over-the-Top®, Input Common Mode Range - Extends 44V Above V_{-} (Independent High Side or Low Side Current Sensing of V_{+}) - Extends $-0.3V$ Below V_{-}

Wide Power Supply Range: 2.85V to 36V

Input Offset Voltage: 300 μ V Maximum

Gain Accuracy: 1% Max

Gain Configurable with External Resistors

Operating Current: 150 μ A

Slew Rate: 2V/ μ s

Sense Input Current When Powered Down: 1nA

Full-Scale Output Current: 1mA Minimum

Operating Temperature Range $-40^{\circ}C$ to $125^{\circ}C$

Available in 2mm \times 3mm DFN and 8-Lead MSOP Packages

Application

Current Monitoring on Positive or Negative Supply Voltages

Battery Monitoring

Fuse/MOSFET Monitoring

Automotive

Power Management

Portable Test/Measurement Systems

Related Products



[LTC1151CSW#PBF](#)

Analog Devices, Inc
SOIC-16



[LT1498CS8](#)

Analog Devices, Inc
SOP-8



[LTC2053CMS8](#)

Analog Devices, Inc
MSOP8



[LTC1150CN8](#)

Analog Devices, Inc
DIP8



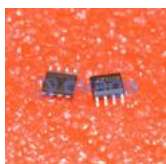
[LT1491ACS](#)

Analog Devices, Inc
SOP14



[LT6105IMS8](#)

Analog Devices, Inc
MSOP-8



[LTC1150CS8](#)

Analog Devices, Inc
SOP8



[LT1013CN8](#)

Analog Devices, Inc
DIP-8