

Conn Test Plug PL 3POS Screw ST Cable Mount 1Port

|               |                                     |
|---------------|-------------------------------------|
| Manufacturers | <a href="#">Analog Devices, Inc</a> |
| Package/Case  | DFN6                                |
| Product Type  | Amplifier ICs                       |
| RoHS          | Pb-free Halide free                 |
| Lifecycle     |                                     |



Images are for reference only

Please submit RFQ for LT6105IDCB#TRMPBF 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<sub>-</sub> (Independent High Side or Low Side Current Sensing of V<sub>+</sub>) - Extends -0.3V Below V<sub>-</sub>

Wide Power Supply Range: 2.85V to 36V

Input Offset Voltage: 300µV Maximum

Gain Accuracy: 1% Max

Gain Configurable with External Resistors

Operating Current: 150µA

Slew Rate: 2V/µs

Sense Input Current When Powered Down: 1nA

Full-Scale Output Current: 1mA Minimum

Operating Temperature Range -40°C to 125°C

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

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## 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



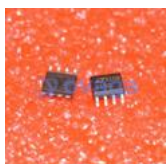
### [LT1491ACS](#)

Analog Devices, Inc  
SOP14



### [LT6105IMS8](#)

Analog Devices, Inc  
MSOP-8



### [LTC1150CS8](#)

Analog Devices, Inc  
SOP8



### [LT1013CN8](#)

Analog Devices, Inc  
DIP-8