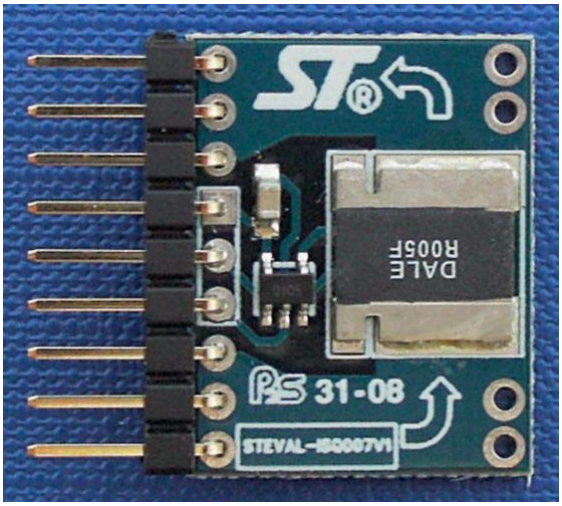
STEVAL-ISQ007V1

High-side current-sense amplifier demonstration board based on the TSC101

Data Brief

Features

- Independent supply and input common-mode voltages
- Wide common-mode operating range: 2.8 V to 30 V
- Wide common-mode surviving range: -0.3 V to 60 V (load-dump)
- Wide supply voltage range: 4 V to 24 V
- Low current consumption: ICC max is 300 µA
- Internally fixed gain:
  - 20 V/V (TSC101A)
  - 50 V/V (TSC101B)
  - 100 V/V (TSC101C)
- Buffered output



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Description

This demonstration board is specifically designed for the TSC101 integrated circuit.

The TSC101 measures a very small voltage drop on a high-side shunt resistor, and, using an internally fixed gain, amplifies the difference into a ground-referenced output voltage; the amplification gain is internally fixed.

Input common-mode and power supply voltages are independent.

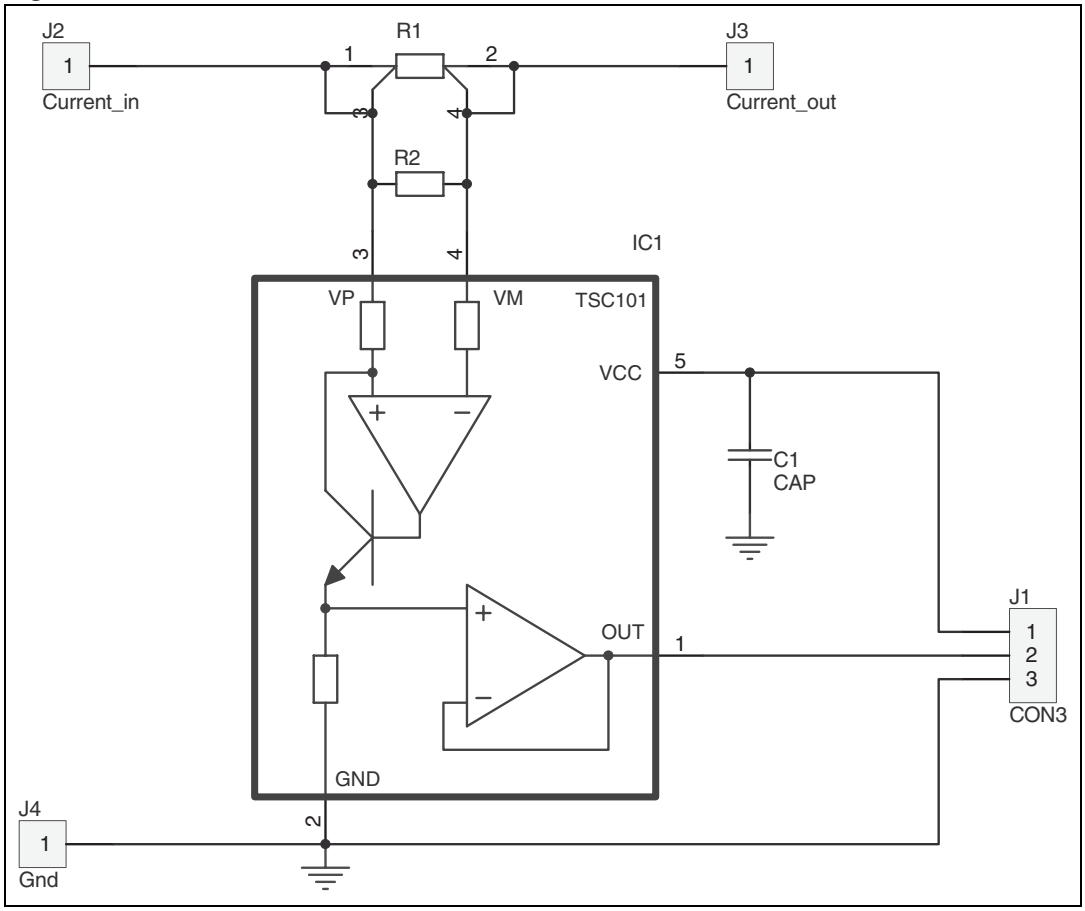
The common-mode voltage can range from 2.8 V to 30 V in operating conditions, and up to 60 V in absolute maximum ratings.

The supply voltage can range from 4 V to 24 V.

Current consumption of less than 300 µA over the temperature range and low input bias current (less than 8 µA in standard conditions, a few 100 nA if VCC isn't supplied) are particularly interesting to save power in the application.

1 Circuit schematic

Figure 1. Schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
12-Feb-2009	1	Initial release.

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