GMW

PCB Current Sensor, AN_126KIT

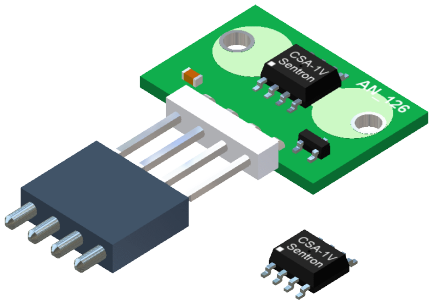
The AN_126KIT provides an easy method of evaluating the Sentron CSA-1VG current sensor in a PCB layout configuration that utilizes top and bottom PCB traces for medium current range measurement. This arrangement will produce a nominal sensitivity of 35mV/A thereby generating a full scale output at ±60A of primary current. The maximum continuous capability for this layout is 20A rms, but the PCB can handle short term higher currents up to the ±60A peak.

This PCB configuration increases the current capability by paralleling the top and bottom traces on a two sided PCB. The current flows under the IC on the top trace of the PCB as well as the bottom trace.

The AN_126KIT PCB assembly includes a SMD ferrite chip placed on the backside just under the CSA-1VG to improve sensitivity and immunity to stray fields. The layout will also function without the ferrite bead, but with reduced sensitivity.

The kit includes a mating connector to facilitate easy interfacing with the PCB board as well as an extra CSA-1VG IC to be used in the customers own layout if desired. See the CSA-1VG-SO specification at *http://www.gmw.com* for the specific details of the IC.

20Arms continuous, ±60A peak, sensitivity 35mV/A

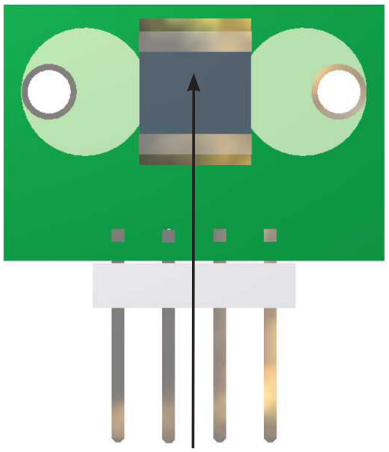


AN_126KIT with additional CSA-1VG and mating connector

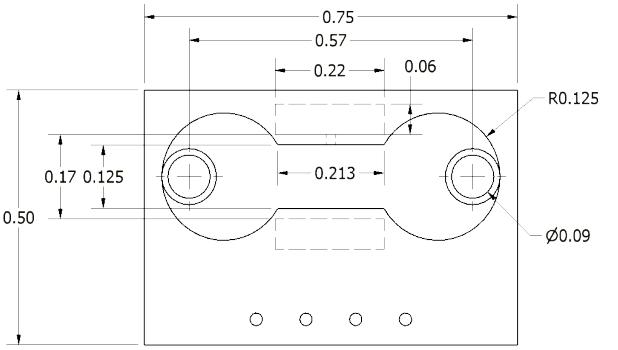
Features

- AC and bidirectional DC primary current
- Sensitivity of 35mV/A (Output Voltage to Primary Current transfer characteristic)
- Full scale output of 2.5V± 2.0V for 0±60A, instantaneously proportional to Primary Current
- Supply Voltage of 5V± 10%
- Galvanic Isolation between Primary Conductor and Sensor output
- Interface Connector - 4 Pin 0.100” centers (Mating connector included)

Bottom View



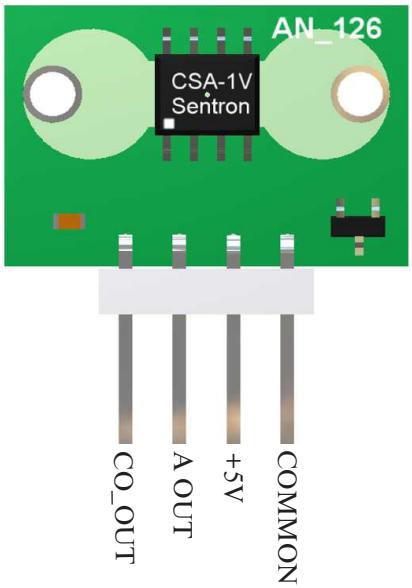
SMD 2220 Ferrite Bead,
P/N: Steward HI2220T101R-10



Dimensions in inches

PCB pattern detail FR4 1mm thick with 2 oz. copper

Top View



Revision Date: 5 JUNE 2008

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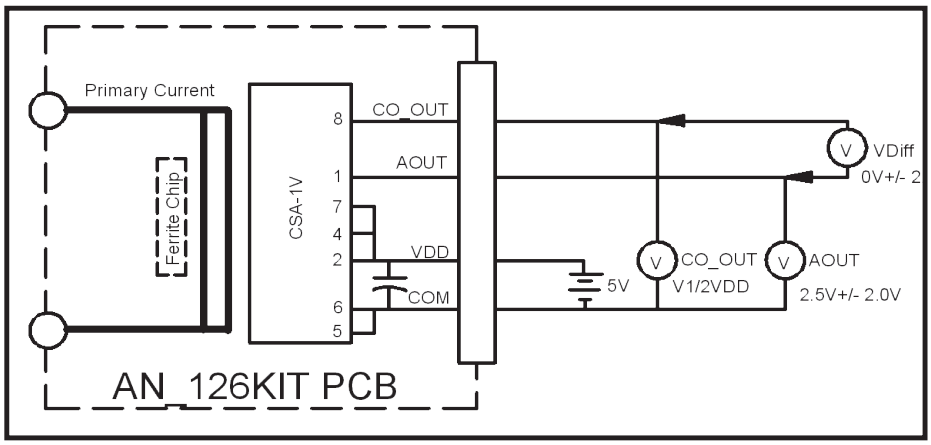
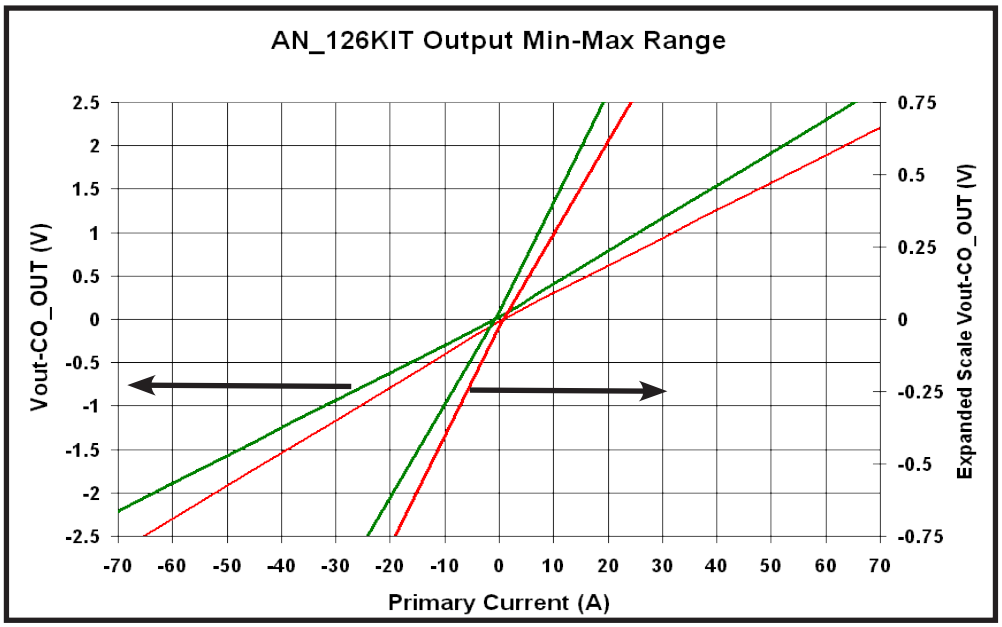
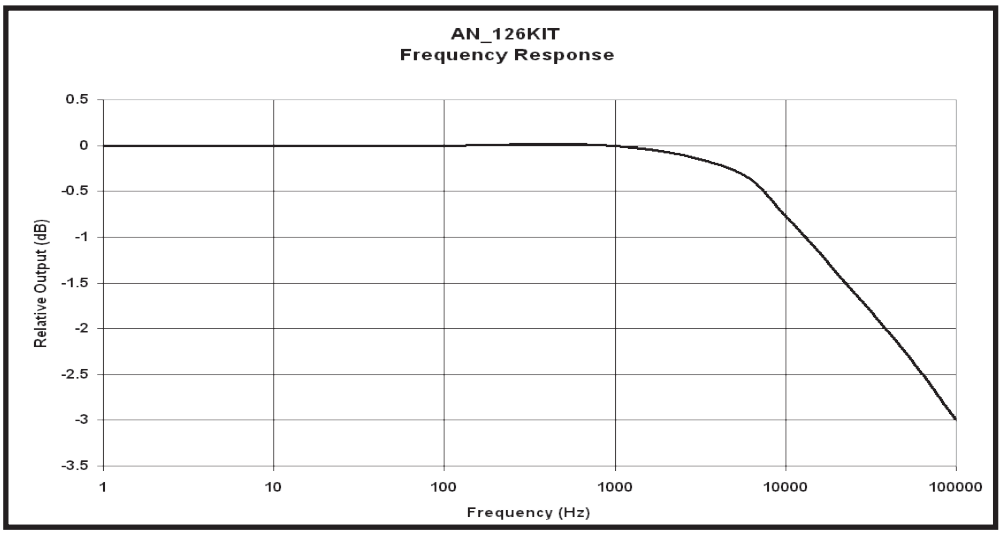
Block Diagram and Electrical Connections







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