



## A1301 & A1302 - Continuous-Time Ratiometric Linear Hall Effect Sensor IC

### General Description:

The A1301 and A1302 are continuous-time, ratiometric, linear Hall-effect sensor ICs. They are optimized to accurately provide a voltage output that is proportional to an applied magnetic field. These devices have a quiescent output voltage that is 50% of the supply voltage. Two output sensitivity options are provided: 2.5 mV/G typical for the A1301, and 1.3 mV/G typical for the A1302.



The Hall-effect integrated circuit included in each device includes a Hall sensing element, a linear amplifier, and a CMOS Class A output structure. Integrating the Hall sensing element and the amplifier on a single chip minimizes many of the problems normally associated with low voltage level analog signals.

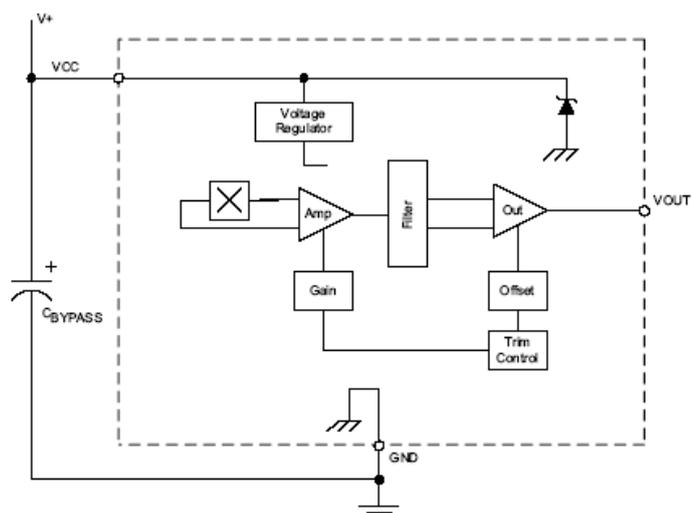
High precision in output levels is obtained by internal gain and offset trim adjustments made at end-of-line during the manufacturing process.

These features make the A1301 and A1302 ideal for use in position sensing systems, for both linear target motion and rotational target motion. They are well-suited for industrial applications over extended temperature ranges, from -40°C to 125°C.

Two device package types are available: LH, a 3-pin SOT23W type for surface mount, and UA, a 3-pin ultramini SIP for through-hole mount. Each package is available in a lead (Pb) free version (suffix, -T) with 100% matte tin plated leadframe.

### Key Features:

- Symmetrical latch switchpoints
- Resistant to physical stress
- Superior temperature stability
- Output short-circuit protection
- Operation from unregulated supply down to 3 V
- Reverse battery protection
- Solid-state reliability



- Small package sizes

## Applications:

- Motor control
- Position sensing systems

## Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
A1301EUA-T	1198085	96K6650	HALL EFFECT LATCH, SIP-3
A1301KLHLT-T	1791387	31K6636	HALL EFFECT LATCH, 3-lead SOT
A1301KUA-T	-	31K6637	HALL EFFECT LATCH, SIP-3
A1302ELHLT-T	1457209	31K6638	HALL EFFECT LATCH, SOT
A1302KLHLT-T	-	31K6640	HALL EFFECT LATCH, 3-lead SOT
A1302KUA-T	1791388	31K6641	HALL EFFECT LATCH, SIP-3