



## A1220 - Chopper-Stabilized Precision Hall Effect Latches

### General Description:

The A1220, A1221, A1222, and A1223 Hall-effect sensor ICs are extremely temperature-stable and stress-resistant devices especially suited for operation over extended temperature ranges to 150°C. Superior high-temperature performance is made possible through dynamic offset cancellation, which reduces the residual offset voltage normally caused by device overmolding, temperature dependencies, and thermal stress. Each device includes on a single silicon chip a voltage regulator, Hall-voltage generator, small-signal amplifier, chopper stabilization, Schmitt trigger, and a short-circuit protected open-drain output to sink up to 25 mA. A south pole of sufficient strength turns the output on. A north pole of sufficient strength is necessary to turn the output off.

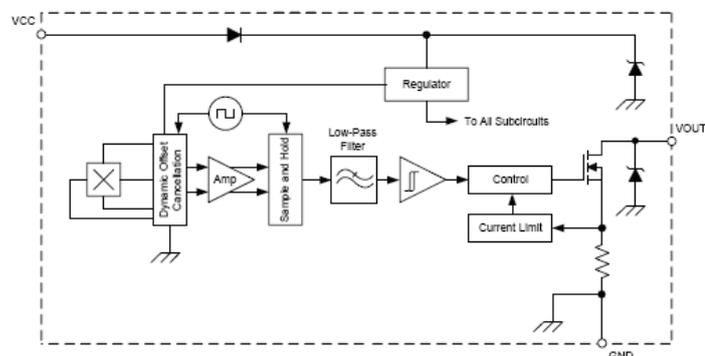


An onboard regulator permits operation with supply voltages of 3 to 24 V. The advantage of operating down to 3 V is that the device can be used in 3-V applications or with additional external resistance in series with the supply pin for greater protection against high voltage transient events.

Two package styles provide magnetically optimized packages for most applications. Package type LH is a modified 3-pin SOT23W surface mount package while UA is a three-pin ultramini SIP for through hole mounting. Both packages are lead (Pb) free, with 100% matte tin plated leadframes.

### 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:

- Automotive and

- Industrial motor commutation

## Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
A1220EUA-T	1698206	57P7562	HALL EFFECT LATCH, SIP-3
A1220LUA-T	1791386	57P7564	HALL EFFECT LATCH, 3SIP
A1220ELHLT-T	-	80P3454	HALL EFFECT LATCH, 3-lead SOT
A1220LLHLT-T	-	80P3455	HALL EFFECT LATCH, 3-lead SOT