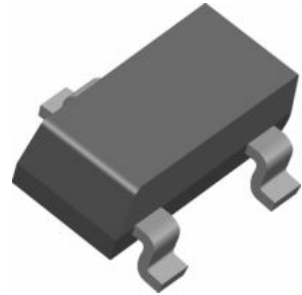




A1210 - Continuous-Time Latch

General Description:

The Allegro® A1210-A1214 Hall-effect latches are next generation replacements for the popular Allegro 317x and 318x lines of latching switches. The A121x family, produced with BiCMOS technology, consists of devices that feature fast power-on time and low-noise operation. Device programming is performed after packaging, to ensure increased switchpoint accuracy by eliminating offsets that can be induced by package stress. Unique Hall element geometries and low-offset amplifiers help to minimize noise and to reduce the residual offset voltage normally caused by device overmolding, temperature excursions, and thermal stress.

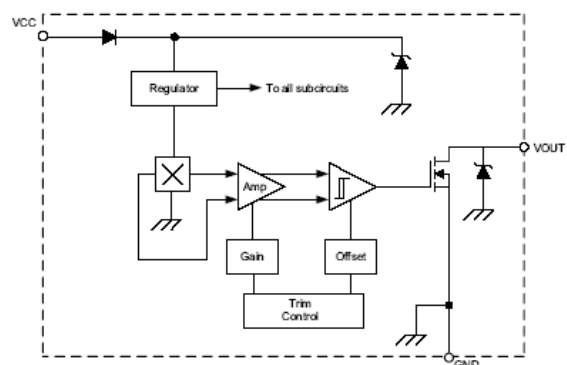


The A1210-A1214 Hall-effect latches include the following on a single silicon chip: voltage regulator, Hall-voltage generator, small-signal amplifier, Schmitt trigger, and NMOS output transistor. The integrated voltage regulator permits operation from 3.8 to 24 V. The extensive on-board protection circuitry makes possible a ± 30 V absolute maximum voltage rating for superior protection in automotive and industrial motor commutation applications, without adding external components. All devices in the family are identical except for magnetic switchpoint levels.

The small geometries of the BiCMOS process allow these devices to be provided in ultrasmall packages. The package styles available provide magnetically optimized solutions for most applications. Package LH is an SOT23W, a miniature low-profile surface-mount package, while package UA is a three-lead ultramini SIP for through-hole mounting. Each package is lead (Pb) free, with 100% matte tin plated leadframes.

Key Features:

- Continuous-time operation
 - Fast power-on time
 - Low noise
- Stable operation over full operating temperature range
- Reverse battery protection
- Solid-state reliability
- Factory-programmed at end-of-line for optimum performance
- Robust EMC performance
- High ESD rating



- Regulator stability without a bypass capacitor

Applications:

- Automotive and
- Industrial motor commutation

Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
A1210ELHLT-T	1198082	31K6614	Hall Effect Switch IC, 3-SOT-23
A1210LLHLT-T	-	31K6616	Hall Effect Switch IC, 3-SOT-23
A1210LUA-T	1791385	31K6617	HALL EFFECT SWITCH, 3-SIP
A1210EUA-T	1198083	-	HALL EFFECT SWITCH, 3-SIP