A1104 - Continuous-Time Switch

General Description:



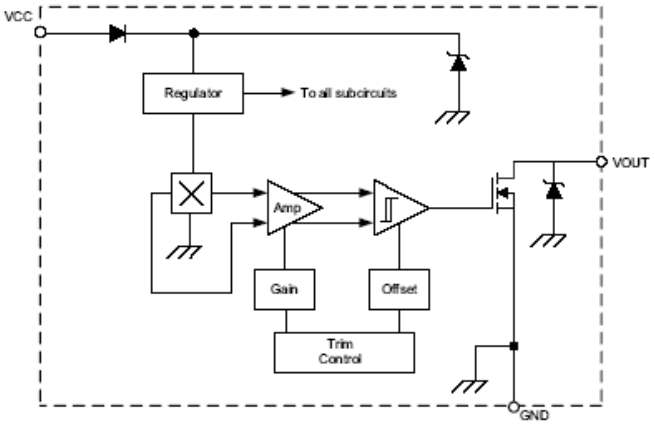
The Allegro® A1104 Hall-effect switches are next generation replacements for the popular Allegro 312x and 314x lines of unipolar switches. The A110x family, produced with BiCMOS technology, consists of devices that feature fast power-on time and low-noise operation. Device programming is performed after 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 A1104 and Hall-effect switches 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



Legal Disclaimer: The content of the pages of this website is for your general information and use only. It is subject to change without notice. From time to time, this website may also include links to other websites. These links are provided for your convenience to provide further information. They do not signify that we endorse the website(s). We have no responsibility for the content of the linked website(s). Your use of any information or materials on this website is entirely at your own risk, for which we shall not be liable. It shall be your own responsibility to ensure that any products, services or information available through this website meet your specific requirements.

Applications:

- Automotive and
- Industrial motor commutation

Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
A1104EUA-T	1521705	31K6578	Hall Effect Switch IC, 3-SIP
A1104LUA-T	9783792	31K6580	Hall Effect Switch IC, 3-SIP
A1104LLHLT-T	1791383	-	HALL EFFECT SWITCH, UNIPOLAR, 3SOT23
A1104ELHLT-T	1457205	-	SWITCH HALL EFFECT, SMD, SOT-23W

Legal Disclaimer: The content of the pages of this website is for your general information and use only. It is subject to change without notice. From time to time, this website may also include links to other websites. These links are provided for your convenience to provide further information. They do not signify that we endorse the website(s). We have no responsibility for the content of the linked website(s). Your use of any information or materials on this website is entirely at your own risk, for which we shall not be liable. It shall be your own responsibility to ensure that any products, services or information available through this website meet your specific requirements.