

## A120X

Ultrasensitive Hall-effect switches are drop-in higher-performance replacements for earlier versions

The new A120x family of ultra-sensitive bipolar Hall-effect switches from Allegro MicroSystems Europe are next-generation drop-in replacements for Allegro's popular A313x family.

The A120x family, produced using Allegro's latest BiCMOS technology, comprises continuous-time devices which feature fast power-on time and low-noise operation. These devices are programmed after packaging, at final test, providing tighter switchpoint ranges than the earlier A313x line of bipolar switches. All devices in the A120x family are identical except for the magnetic switchpoint levels.

To avoid sliver pulses, the A120x device has a 1.5  $\mu$ s blanking pulse, yet its power-on time still passes the datasheet specification limit of 4  $\mu$ s maximum. The rise and fall times are well within the 2  $\mu$ s maximum specified on the datasheet.

Saturation voltage is below the 400 mV maximum specification limit at a sink current of 20 mA over the full operating temperature range.

The distributions of the A120x magnetic operate and release points are tighter at most temperature than those of the A313x, as is the distribution of switchpoint hysteresis and supply current.

The V-I curve of the A120x offers overvoltage protection to 30 V and reverse battery protection beyond -30 V.

The A120x family is available in pin-compatible packages to the earlier range, including lead (Pb) free versions with 100% matte-tin leadframe plating.

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