

Latched sink driver ICs use Allegro's DABiC-5 merged BiMOS process

The A6800 and A6801 from Allegro MicroSystems Europe are a family of latched sink driver ICs fabricated using Allegro's DABiC-5 merged BiMOS technology to combine high-current, high-voltage outputs with CMOS logic.

The new devices are pin-to-pin compatible with Allegro's earlier UCN5800 and UCN5801 products, but feature new 3.3-5 V logic capability, lower saturation voltage and higher data rates (up to 10 MHz) and switching speeds. In addition, they are lower in price than the earlier devices, and feature a lead-free package option for RoHS compliance.

The combination of a CMOS input section and bipolar n-p-n Darlington outputs means that the devices are ideally suited to interfacing computer or microprocessor I/O circuitry to inductive loads such as relays, solenoids and small DC motors.

The CMOS input section of each device consists of four or eight data ('D' type) latches with associated common clear, strobe and output-enable circuitry. The A6800 contains four latched drivers, while the A6801 contains eight. The use of internal pulldown resistors minimises the requirement for external components.

All the devices have open-collector outputs and integral diodes for inductive load transient suppression. The output transistors are capable of sinking 600 mA, and will withstand at least 50 V in the 'off' state. Outputs may be paralleled for higher load current capability.

Package options include 14-pin DIP and SOIC packages for the A6800 and 22-pin DIP, 24-pin and 28-pin PLCC packages for the A6801.
