



## New Product Announcement

### AH5792

# AH5792 smart fan driver with internal Hall sensor for single phase brushless DC motor

## Description

The AH5792 is a highly integrated single chip solution for driving single-phase brushless DC (BLDC) fans and motors.

The AH5792 has an integrated bidirectional full bridge driver output stage for single coil fan motor applications. The device includes features such as Rotor Lock Protection, with rotor lock detection and automatic self-restart, to avoid damage to the coil when the rotor is locked.

The AH5792 provides open-drain frequency generator (Tachometer) pin, FG, which makes it easier to interface with external hardware for status and speed monitoring purposes. The FG frequency is half (1/2) the magnetic change frequency.

The AH5792 is now available in SOT89-5L in addition to SOT553.



## The Diodes advantage

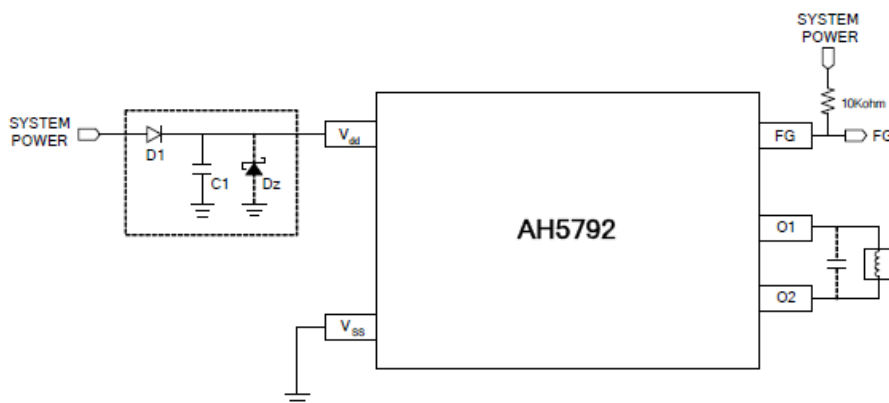
The AH5792 provides highly integrated yet simple low cost effective solution for cooling fans and motor drives

- **Built-in Hall sensor and amplifier**  
All-in-one integrated solution drastically reduces external component count.
- **Integrated bidirectional full bridge driver**  
Supports source and sink current for single phase motor driver operation up to 300mA average load current.  
No external driver components – reduced PCB area
- **Lock detection and automatic self-start, without external capacitor**  
Protects coil from over-heating or burn-out during motor/fan lockout  
Reduces number of external components
- **Packages: SOT895-L and SOT553** (Available in “Green” Moulding Compound)  
Provides low pin count SMT BLDC fans/motor driver  
Improved thermal performance and higher current with SOT89-5L  
Low profile small footprint with SOT553 for space constrained needs

## Applications

- 3.3/5V BLDC cooling fan LED driving
- Low voltage/low power BLDC motors
- Micro-vibrating motors

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## Electrical characteristics

Part Number	Operating Voltage (V)	Average output current (mA)	IC supply current (mA)	Operating Point Bop (Gauss)	Release Point Brp (Gauss)	Operating Temperature (°C)	Package
AH5792-ZG-7	1.8 to 5	200	3.5	50/10	-10/-50	-40 to 100	SOT553
AH5792-YG-13	1.8 to 5	300	3.5	50/10	-10/-50	-40 to 100	SOT89-5L

## To find out more information:

Product page: <http://www.diodes.com/products/catalog/list.php?parent-id=117>

Datasheet: <http://www.diodes.com/datasheets/AH5792.pdf>



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## Product portfolio

Part Number	Operating Voltage (V)	Average Output current (mA)	Operating Point Bop (Gauss)	Release Point Brp (Gauss)	Operating Temperature (°C)	Package
AH284	3.8 to 20	500	5/60	-5/-60	-40 to 100	SOT89-5L
AH285	3.8 to 20	500	5/60	-5/-60	-40 to 100	SOT89-5L
AH286	3.8 to 20	500	5/60	-5/-60	-40 to 100	SOT89-5L
AH287	3.8 to 28	400	5/60	-5/-60	-40 to 100	SIP4-L SOT89-5L
AH288	3.8 to 28	400	5/60	-5/-60	-40 to 100	SOT89-5L
AH289	3.8 to 28	400	5/60	-5/-60	-40 to 100	SOT89-5L
AH291	1.8 to 5.75	400	5/60	-5/-60	-20 to 100	SIP4-L
AH292	1.8 to 5.75	400	5/60	-5/-60	-20 to 100	SOT89-5L
AH293	1.8 to 5.75	400	5/60	-5/-60	-20 to 100	SOT89-5L
AH2984	3.8 to 20	400	5/60	-5/-60	-40 to 100	SIP4-L
AH5771	2.5 to 15	400	10/50	-10/-50	-40 to 100	SIP4-L
AH5792	1.8 to 5	200 300	5/60	-5/-60	-40 to 100	SOT553 SOT89-5L

## Ordering information

Device	Packaging	Pack mark	Reel size	Tape width	Quantity
AH5792-ZG-7	SOT553	KE YWX	7" 178mm	8mm	3000
AH5792-YG-13	SOT89-5L	KF YWX	13" 330mm	12mm	2500

All variants are in packages that are "Green" Molding Compound (No Br, Sb) with Lead Free Finish/RoHS Compliant (Note 1)

- Notes:
- EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. see *EU Directive 2002/95/EC Annex Notes*. Please visit our website at [http://www.diodes.com/products/lead\\_free.html](http://www.diodes.com/products/lead_free.html)
  - Pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.

Codes for date coding on part marks

**Y** Year 0~9    **W** A~Z week 1~26    a~z week 27~53

**X** A~Z: Green