

**Two Phase Dual-coil High Voltage Smart Fan Motor Driver with FG/RD AH9281/82****Description**

The AH9281/82 is a one-chip solution for driving two-coil brushless DC motors and fans.

Based on the advanced CDMOS process, the IC contains a Hall-effect sensor, dynamic offset correction and powerful output drivers with 1200mA peak output current capability.

Specially designed for driving large fans, the device is optimized for low start-up voltage. Frequency Generator or Rotation Detection is available. The open drain output makes easier the connectivity with any external interface such as hardware monitoring or Super I/O IC.

The AH9281/82 is available in TO-95 and SOT-89-5 packages.

Features

- High Sensitivity Integrated Hall Sensor
- Low Start-up Voltage
- 5V, 12V and 24V Operation
- Peak Output Current up to 1200mA
- Power Efficient CMOS and Power MOSFETs
- Built-in Output Protection Clamping Diode
- Locked Rotor Shutdown and Auto-restart
- Integrated Tachometer (AH9281) or Alarm (AH9282) Signal Output
- ESD Rating: 6000V (Human Body Model)
400V (Machine Model)

Applications

- 5V/12V/24V DC Brushless Motor/Fan
- PC, Server, Laptop Cooling Fan
- Power Supply Cooling Fan
- Large or Small Fans

Parametric Table

Supply Voltage (V)	2.5 to 24
Output Saturation Voltage ($V_{CC}=12V$, $I_{OUT}=350mA$) (V)	0.6
FG/RD Output Low Voltage ($V_{CC}=12V$, $I_{FG}=5mA$) (V)	0.1
Supply Current (mA)	4
Output ON Time (S)	0.8
Output OFF Time (S)	5
Operating Point (Gauss)	20
Releasing Point (Gauss)	-20
Hysteresis (Gauss)	40

Benefits

- Minimum External Components
- Low Startup Voltage
- Locked Protection and Auto-restart
- With FG or RD Output
- Wide Operation Voltage Range
- Excellent Temperature Performance
- High Sensitivity for Switching Symmetry
- High ESD and Power Efficient

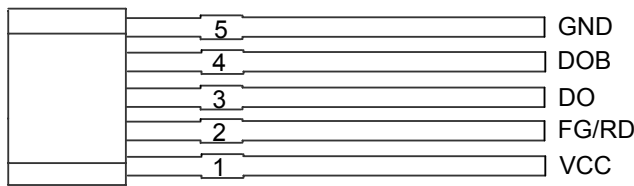
Additional Available Materials

- Samples
- Preliminary Datasheet
- Reliability Report
- ESD Report

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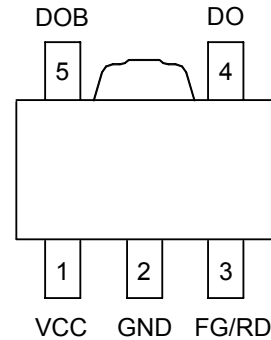
Pin Configuration

Z5 Package
(TO-95)



(Front View)

R Package
(SOT-89-5)



(Top View)

Ordering Information Example

Package	Temperature Range	Output Signal	Part Number	Marking ID	Packing Type
TO-95	-40 to 125°C	FG	AH9281Z5-G1	9281Z5-G1	Bulk
		RD	AH9282Z5-G1	9282Z5-G1	Bulk
SOT-89-5		FG	AH9281RTR-G1	G41C	Tape & Reel
		RD	AH9282RTR-G1	G41D	Tape & Reel

Detailed information please refer to the relevant datasheet.

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