

Single-Phase Full-Wave Motor Driver with Direct PWM Input

DESCRIPTION

EUM6898R/S is a motor driver for single coil brushless DC motor. With its high efficient direct PWM control mode, EUM6898R/S can control the speed of brushless DC motor. It integrates minimum speed mode, stop mode, adjustable speed slope control mode, soft start mode, fan tachometer, lock protection, auto restart, TSD, OCP and noise controlled mode. Noise control mode optimizes low noise performance with a SW pin's resistor according to different requirements, and can drive the BLDC fan motor in low noise and low vibration. Minimum speed mode can set minimum motor speed by presetting RMIN voltage. Stop speed mode can set stop PWM duty by presetting STOP voltage. The adjustable speed slope control mode can set fan speed slope by presetting SL voltage. Soft start suppresses high peak start-up current, which will also provide a reliable start-up even for low rotation speed. If the motor is stalled by external force or obstacles, overdrive current may incur coil overheat. To prevent this, lock protection circuit can shut down the internal power devices for a few seconds after motor lockup. Then auto restart circuit will try to power up these devices. EUM6898R/S has FG output.

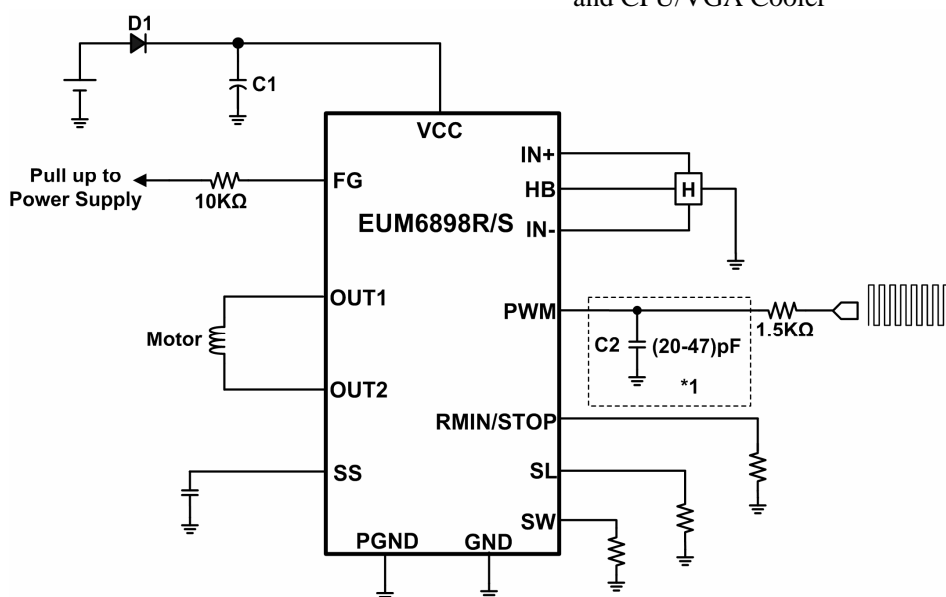
FEATURES

- Single-phase Full-wave Driver
- Few External Components
- Built-in Input Surge Protection, No Zener Diode Need
- External Programmable Soft Start and Soft Restart Function
- Wide Input Range 3.0V~18V
- Direct PWM Fan Speed Control
- Programmable Minimum Fan Speed (EUM6898R only)
- Programmable Noise Control by an External Resistor
- Stop Mode PWM Duty Adjustable (EUM6898S only)
- Fan Speed Slope Control
- Built-in Over Current Protection Function
- Lock Protection and Auto Restart
- Built in Hall Bias
- Fan Rotation Speed Feedback FG Output
- Available in TSSOP-14 (EP) Package
- RoHS Compliant and 100% Lead (Pb)-Free Halogen-Free

APPLICATIONS

- Personal Computer's Power Supply Radiation and CPU/VGA Cooler

Application Circuit



Note: *1. The capacitor C2 can be omitted if the PWM Pin is not floating.

Figure 1. Typical Application Circuit