



Product Overview

LV8862JA: Single-phase FAN Motor Driver

For complete documentation, see the [data sheet](#)

Product Description

LV8862JA is a driver IC used for single-phase fan motor. High-efficiency and low-noise are realized by reducing reactive power using Silent PWM. This IC's feature is low on-resistance 0.6 Ω & High-efficiency. Therefore, it is optimal for high power fan motor and home appliance equipment.

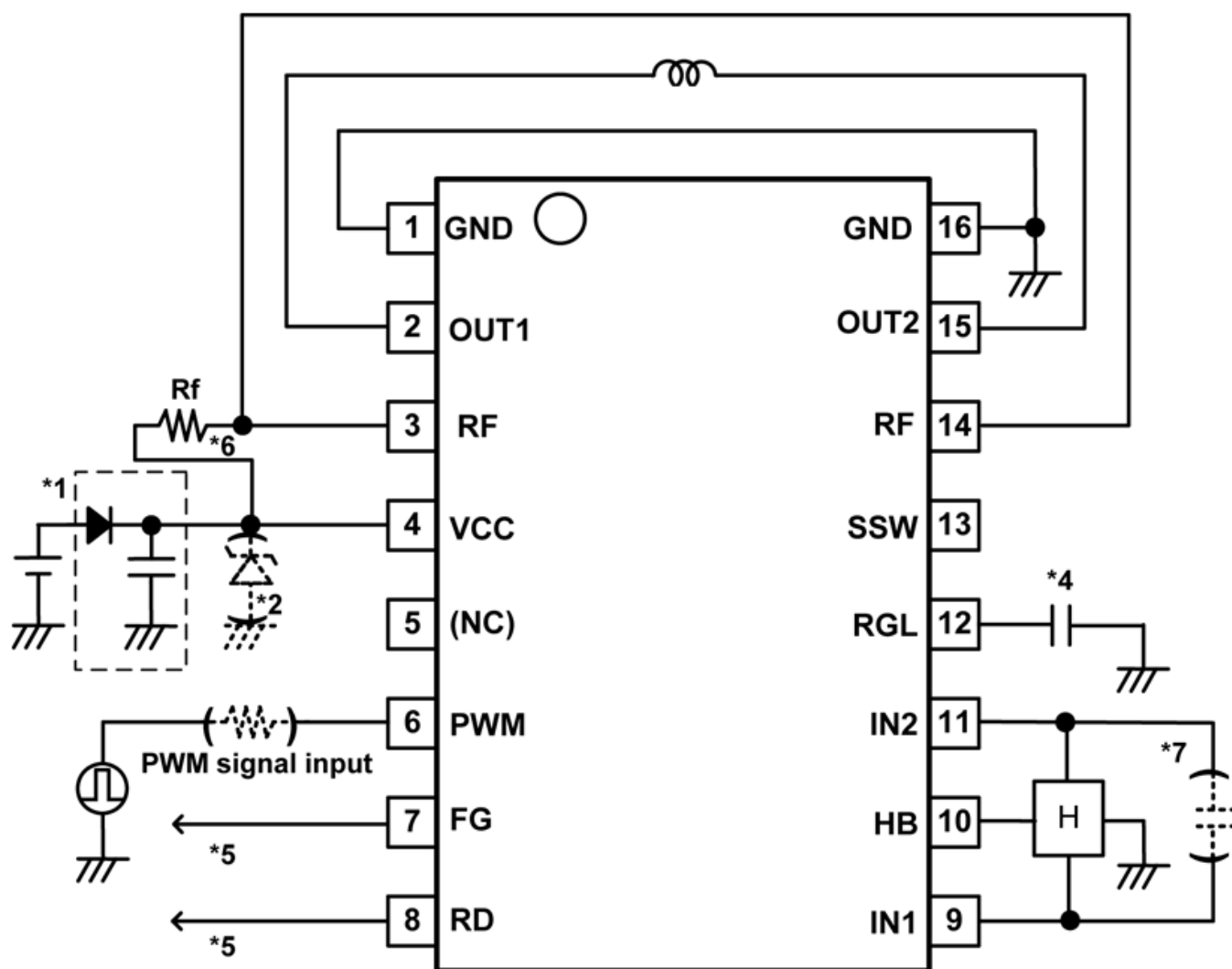
Features	Benefits
<ul style="list-style-type: none"> Single-phase full wave operation by Silent PWM drive Speed is controllable by PWM input Hall bias output pin Integrated Quick Start Circuit FG (rotation detection) / RD (lock detection) output pin (open drain output) Integrated current limiter circuit (limit at $I_o=500\text{mA}$ with $R_L=0.5\Omega$ connection, limit value is determined based on R_f.) Integrated lock protector circuit and automatic recovery circuit Integrated thermal shut-down (TSD) circuit 	<ul style="list-style-type: none"> Silent motor drive Simple control Reduce external parts Definite booting motor Selectable output signal Safety control Safety control Safety control

Applications	End Products
<ul style="list-style-type: none"> Fan motor units 	<ul style="list-style-type: none"> Desk top PCs Refrigerator Projectors

Part Electrical Specifications

Product	Compliance	Status	Type	V_M Min (V)	V_M Max (V)	V_{CC} Min (V)	V_{CC} Max (V)	I_o Max (A)	I_o Peak Max (A)	Step Reso- lution	Cont rol Type	Feed back Meth- od	Curr- ent Sense	Regu- lator Out- put	Fault Dete- ction	Flyb- ack Protec- tion	$R_{DS(on)}$ Typ (Ω)	Pack- age Type
LV8862JA-AH	Pb-free Halide free	Active	Single- Phase Fan Motor			3.6	16	1.5			PWM	None	External Resistor	Yes	Lock Over- Current Thermal UV LO	Integrated Active	0.6	SSOP-16

Application Diagram



- *1 When diode Di is used to prevent destruction of IC from reverse connection, make sure to implement the large capacitor Cr to secure regenerative current route.
 - *2 If kickback at a phase change is greater, insert zener diode between GND and VCC or implement the larger capacitor between GND and VCC mentioned in *1.
 - *4 Make sure to implement enough capacitance 0.1uF or higher between RGL pin and GND pin for stable performance.
 - *5 FG pin and RD pin are open drain output. Keep the pins open when unused.
 - *6 The current limiter is activated when the current detection resistor voltage exceeds 250mV between RF and VCC. Where $R_L=0.5\Omega$, current limiter is activated at $I_o=500mA$. Setting is made using R_f resistance.
 - *7 Hall element outputs stable hall signal with good temperature characteristic when it is biased with constant voltage from HB pin. If you wish to alleviate heating of IC, do not use HB pin. When you do not use this Pin (Pin HB), pull down with resistor of around 10k Ω (recommended).
- To defend signal against the noise, it is necessary to wire as short as possible from hall sensor to each pin and to connect the capacitor between IN1 and IN2. Value from 1,000pF to 10,000pF is recommended for the capacitor. But its value should be selected in consideration with the actual motor action.

For more information please contact your local sales support at www.onsemi.com

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