

## 产品概览

### LV8814J: 电机驱动器，三相，PWM，全波形，BLDC

欲看完整文档，请参阅数据表。

LV8814J 是一款三相 BLDC 电机驱动器，由单个霍尔传感器控制。采用了 180 度正弦曲线驱动方法，集成电路可以在低振动和低噪声的条件下控制电机。另外，通过外部引脚可以进行前导倒角调节。前导角值和前导角斜线可单独调节。因此，该器件可实现高能效和低噪声的各种电机驱动。驱动电机的电源为内置元件，通过低导通电阻 ( $0.5 \Omega$ ) 有助于实现高能效。配备了霍尔传感器偏置驱动器，还支持霍尔集成电路。作为电机的一种转速控制方式，可以选择直接 PWM 脉冲输入或直流电压输入。

#### 特性

- 3-phase full wave (sinusoidal) drive
  - Any practical combination of slot and pole can be handled. (e.g. 3S3P, 3S4P, 6S4P, 6S8P, 12S8P, 9S12P and so on)
  - built-in power FETs (P-MOS/N-MOS)
  - Speed control function by direct PWM or DC voltage input
  - Minimum input PWM duty cycle can be configured by voltage input
  - Soft start-up function and soft shutdown function
  - Soft PWM duty cycle transitions
  - Built-in current limit circuit and thermal protection circuit
  - Regulated voltage output pin for Hall sensor bias
  - Built-in locked rotor protection and auto recovery circuit
- For more features, see the data sheet

#### 应用

- Fan motor units

#### 优势

- Static sound, low vibration, high efficiency
- Versatility
- Part mark reduction. The implementation area small
- Speed control is possible by two methods.(selectable)
- It is contributed to movement stability
- It is contributed to static sound characteristics at the time of the start
- Static sound characteristics at the time of the speed abnormality are good
- Safe use is provided by a protection function
- A PCB design is easy
- Safe use is provided by a protection function

#### 终端产品

- Refrigerator
- PC

# 应用框图

## APPLICATION CIRCUIT DIAGRAM

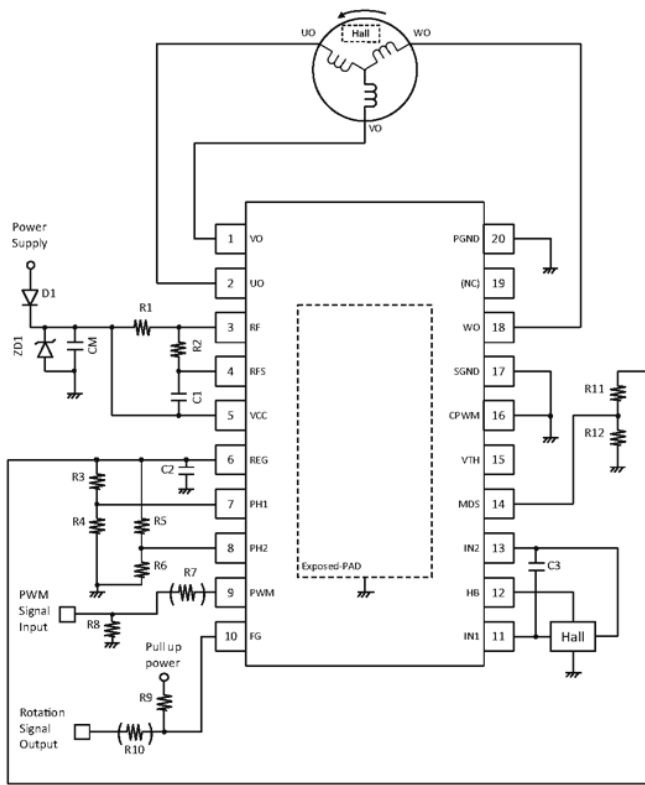


Figure 1. Three-phase BLDC Motor Drive with LV8811G, LV8813G, and LV8814J using One Hall Sensor

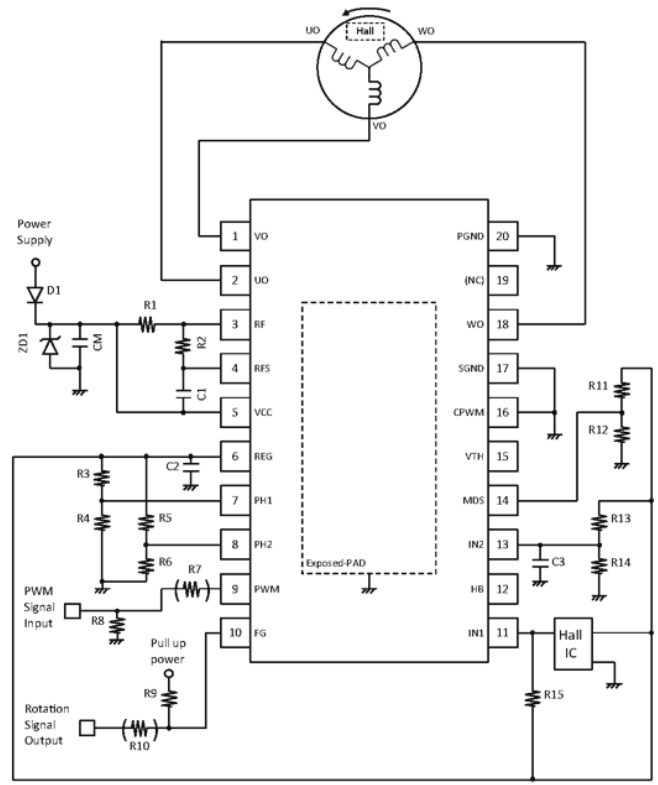


Figure 2. Three-phase BLDC Motor Drive with LV8811G, LV8813G, and LV8814J using One Hall IC

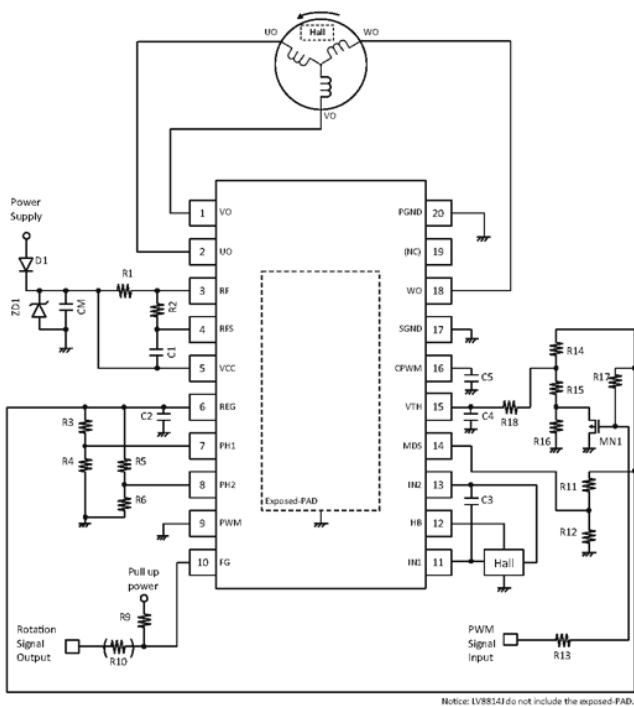


Figure 3. Three-phase BLDC Motor Drive with LV8811G, LV8813G, and LV8814J using input PWM to DC conversion for speed control

### EXAMPLE COMPONENT VALUE

Device	Value	Device	Value
D1	MBRA34013G (ON semi)	R5	0 to 50kΩ
ZD1	MNS25247B11G (ON semi)	R6	50k to 0Ω
CM	4.7μF	R7	1kΩ
C1	1500μF	R8	NC
C2	1μF	R9	1k to 10kΩ
C3	0.1μF	R10	1kΩ
C4	1μF	R11	0 to 50kΩ
C5	330μF	R12	50k to 0Ω
R1	0.22Ω / 0.22Ω (0.5W)	R13	10kΩ
R2	1kΩ	R14	30kΩ
R3	0 to 50kΩ	R15	7.5kΩ
R4	50k to 0Ω	R16	62kΩ
		R17	68kΩ
		R18	1kΩ

欲了解更多信息，请联系您当地的销售支援 [www.onsemi.cn](http://www.onsemi.cn)。

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