

## Product Overview

### LB11696V: Direct PWM Drive Brushless Motor Predriver

For complete documentation, see the data sheet

LB11696V is a direct PWM drive brushless motor predriver IC designed for 3-phase power brushless motors. A motor driver circuit with the desired output power (voltage and current) can be implemented by adding discrete transistors in the output circuits. Furthermore, the LB11696V provides a full complement of protection circuits allowing it to easily implement high reliability drive circuits. This device is optimal for driving all types of large scale motors, such as those used in air conditioners and on-demand water heaters.

#### Features

- Direct PWM drive, controlled either by control voltage or PWM variable duty pulse input
  - Built-in forward/reverse switching circuit
  - Start/stop mode switching circuit
  - Current limiter circuit (Supports 0.25V (typical) reference voltage sensing based high-precision detection)
  - Under voltage protection circuit (The operating voltage can be set with a zener diode)
  - Automatic recovery type constraint protection circuit with protection operating state discrimination output (RD pin)
  - Supports thermistor based thermal protection of the output transistors
  - 3-phase bipolar drive
  - Built-in input amplifier
  - 5.0 V regulator output (VREG pin)
- For more features, see the data sheet

#### Benefits

- Low consumption, Easy Design
- Easy control
- Stop mode power saving function
- Current protection
- Low voltage protection
- Recovery Lock Protection
- Thermal protection

#### Applications

- Consumer
- White Goods / Office Equipment

#### End Products

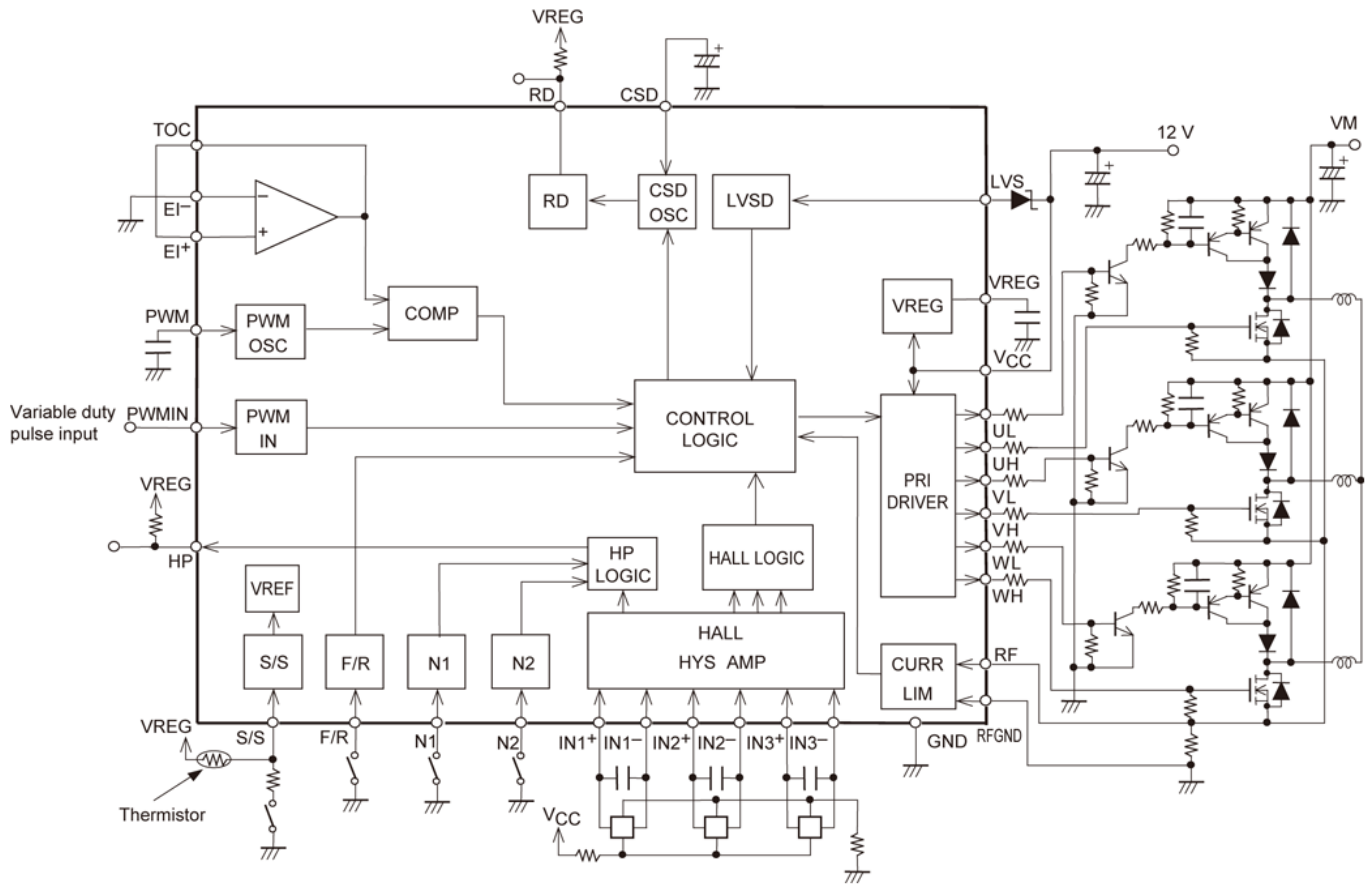
- Air Purifier
- Clothes Dryer
- Clothes Washer

#### Part Electrical Specifications

Product	Compliance	Status	Phase	V <sub>M</sub> Min (V)	V <sub>M</sub> Max (V)	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	I <sub>O</sub> Max (A)	I <sub>O</sub> Peak Max (A)	Control Type	Current Sense	Regulator Output	Fault Detection	Package Type
LB11696V-TLM-E	Pb-free	Active	3			4.5	17	0.03		DC	External Resistor	Yes	Lock	SSOP-30
LB11696V-TRM-E	Pb-free	Active	3			4.5	17	0.03		PWM	External Resistor	Yes	Thermal	SSOP-30

# Application Diagram

NMOS transistor + PNP transistor drive (low side PWM)  
using a 12V power supply with thermal protection implement using a thermistor



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Created on: 7/20/2017