

DESCRIPTION

The PT5618 is a high speed power MOSFET and IGBT driver with three independent high and low side referenced output channels for 3-phase gate driver. Built-in deadtime protection and Shoot-through protection that prevent half-bridge against damage.

The UVLO circuits prevent malfunction when VCC and VBS are lower than the specified threshold voltage. Novel high-voltage BCD process and common-mode noise canceling technique provide stable operation of high-side drivers under high-dv/dt noise circumstances and excellent negative transient voltage tolerance. PIN EN designed for standby mode can be used to enable chip into low quiescent current state and get long battery life time.

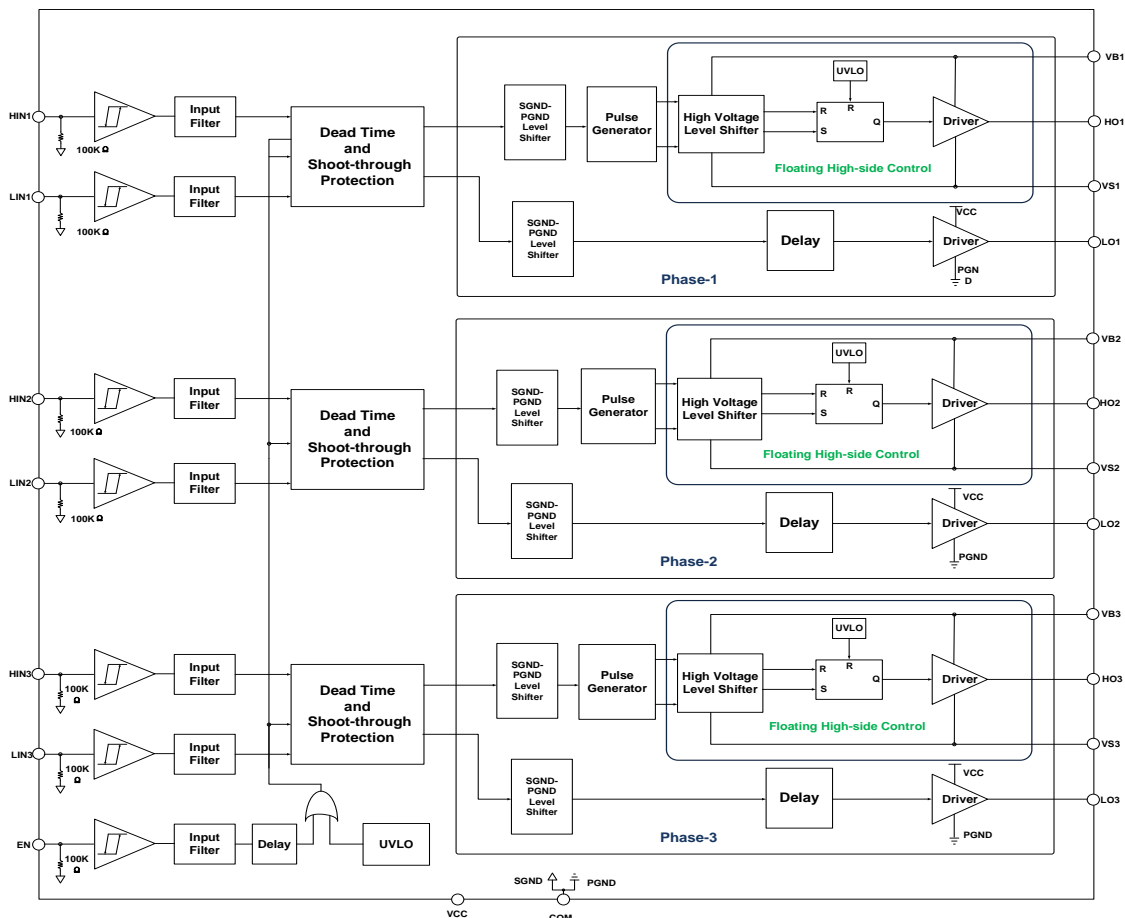
FEATURES

- Integrated 200V half-bridge high side driver
- Driver up to 3-phase half-bridge gates
- Built-in deadtime control
- Shoot-through protection
- Under voltage lockout for VCC and VBS
- 3.3V, 5V, 15V input logic Compatible
- Built-in input filter
- Low standby current
- IO+/IO-: 320mA/620mA
- Built-in dead time: 0.55μs(typ.)
- Common-Mode dv/dt Noise Canceling Circuit
- Tolerant to negative transient voltage
- Low di/dt gate drive for better noised immunity
- -40°C- 125°C operating range
- Small footprint package: TSSOP20P/24P, 173mil

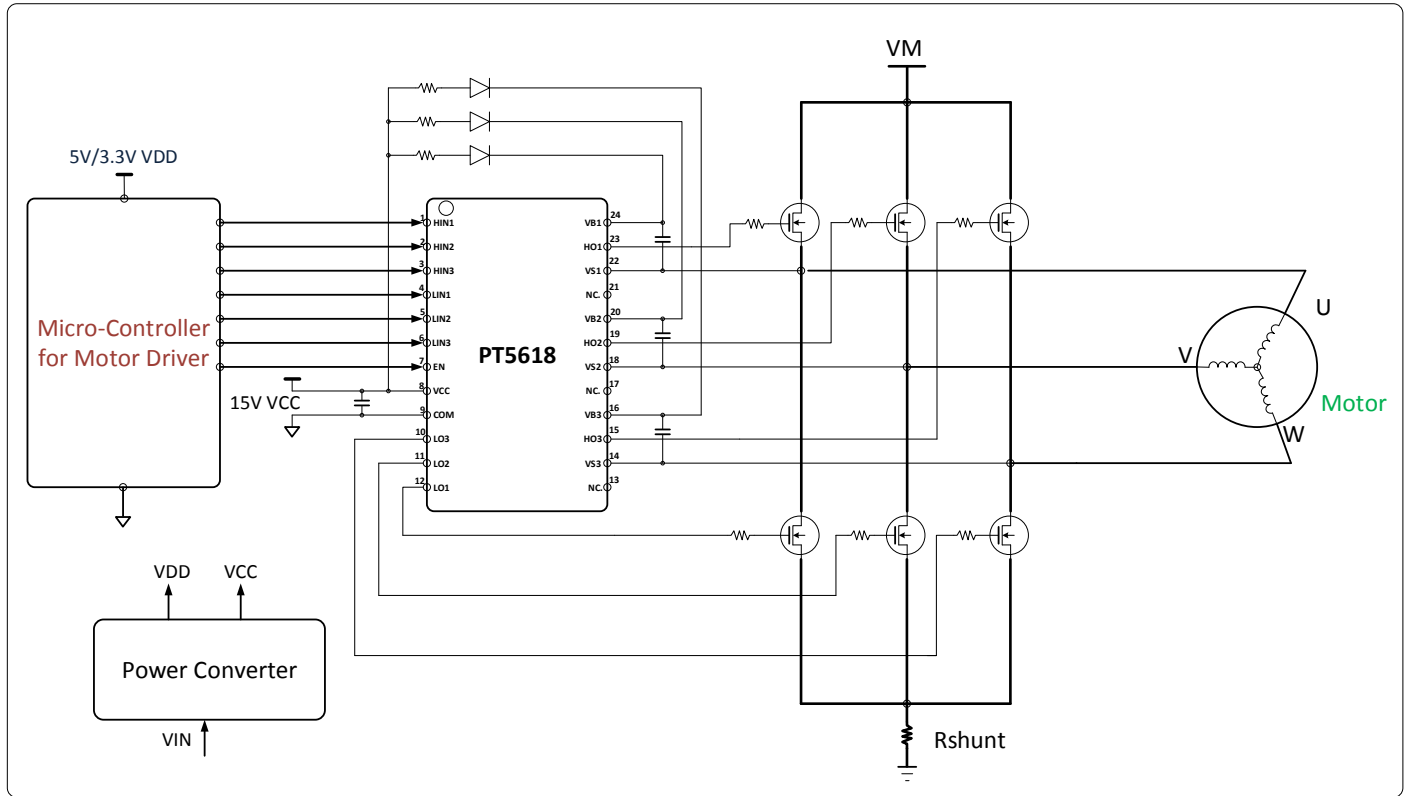
APPLICATIONS

- 3-phase Motor Driver for E-BIKE, electric power tool
- Mini/micro motor control powered by battery
- Home appliance fed by 110V-AC grid
- General purpose inverter

BLOCK DIAGRAM

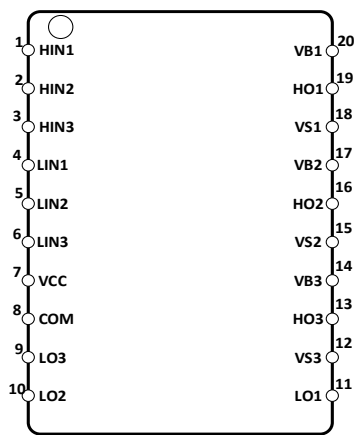


APPLICATION CIRCUIT

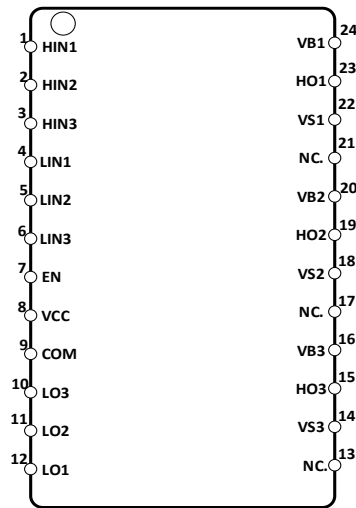


PIN CONFIGURATION

TSSOP20



TSSOP24



PIN DESCRIPTION

Pin Name	Description	Pin No.	
		TSSOP20	TSSOP24
HIN1	Logic input for phase-1 high-side gate driver	1	1
HIN2	Logic input for phase-2 high-side gate driver	2	2
HIN3	Logic input for phase-3 high-side gate driver	3	3
LIN1	Logic input for phase-1 low-side gate driver	4	4
LIN2	Logic input for phase-2 low-side gate driver	5	5
LIN3	Logic input for phase-3 low-side gate driver	6	6
EN	Logic input for standby mode control	-	7
VCC	Logic and low-side gate drivers power supply voltage	7	8
COM	Logic ground and low-side gate drivers ground	8	9
LO3	Phase-3 Low-side gate driver output	9	10
LO2	Phase-2 Low-side gate driver output	10	11
LO1	Phase-1 Low-side gate driver output	11	12
NC.	Not Connected	-	13
VS3	Phase-3 High-side driver floating supply offset voltage	12	14
HO3	Phase-3 High-side driver output	13	15
VB3	Phase-3 High-side driver floating supply	14	16
NC.	Not Connected	-	17
VS2	Phase-2 High-side driver floating supply offset voltage	15	18
HO2	Phase-2 High-side driver output	16	19
VB2	Phase-2 High-side driver floating supply	17	20
NC.	Not Connected	-	21
VS1	Phase-1 High-side driver floating supply offset voltage	18	22
HO1	Phase-1 High-side driver output	19	23
VB1	Phase-1 High-side driver floating supply	20	24

ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT5618-TX	20 Pins, TSSOP, 173mil	PT5618-TX
PT5618	24 Pins, TSSOP, 173mil	PT5618

IMPORTANT NOTICE

Princeton Technology Corporation (PTC) reserves the right to make corrections, modifications, enhancements, improvements, and other changes to its products and to discontinue any product without notice at any time.

PTC cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a PTC product. No circuit patent licenses are implied.

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