

## DESCRIPTION

The PT5617 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 breakdown. The UVLO circuits prevent malfunction when VCC and VBS are lower than the specified threshold voltage. 600V high-voltage process and common-mode noise canceling technique provide stable operation of high-side drivers under high-dv/dt noise circumstances.

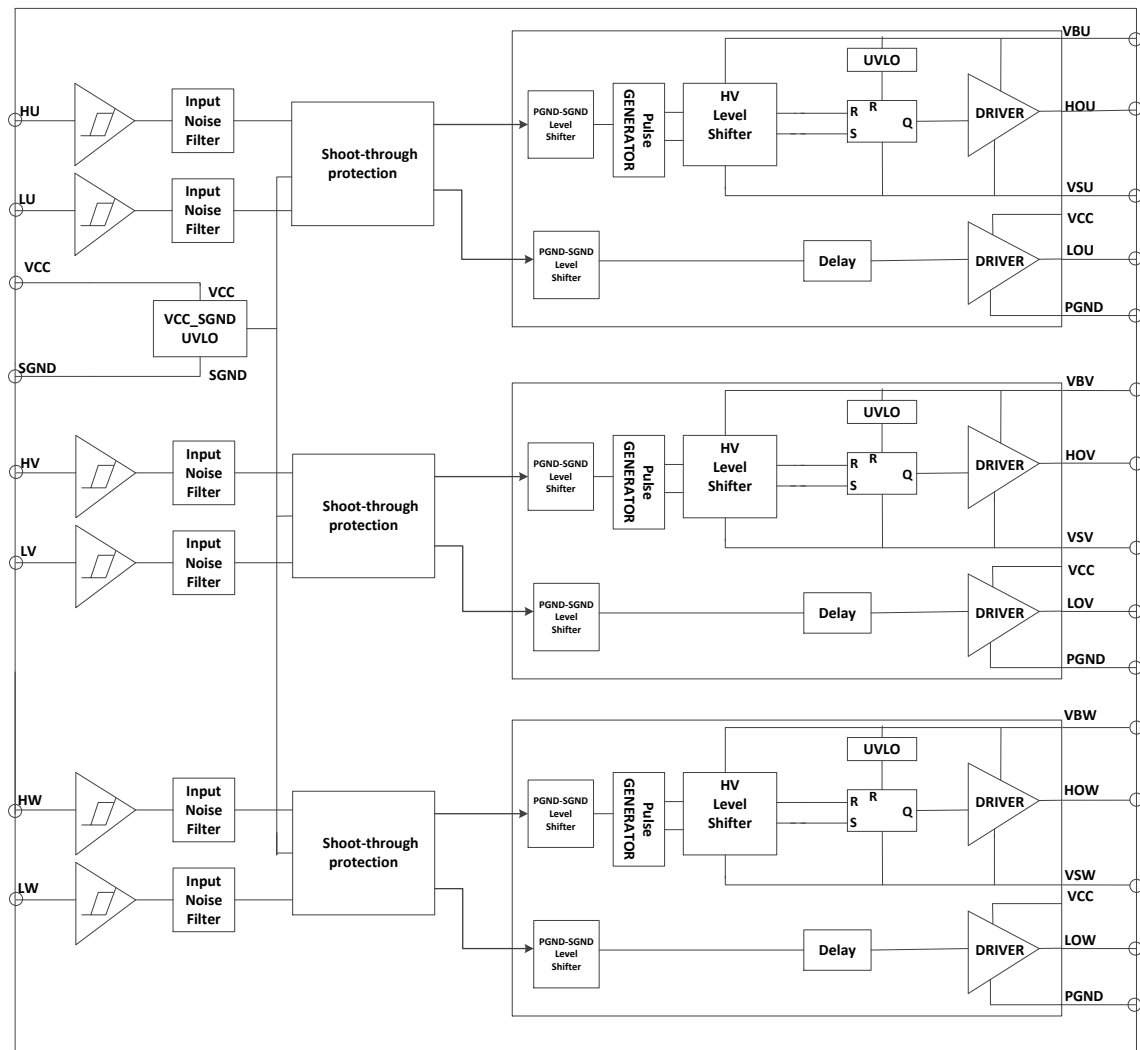
## FEATURES

- Integrated 600V 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
- -40°C to 125°C operating range
- Common-Mode dv/dt Noise Canceling Circuit

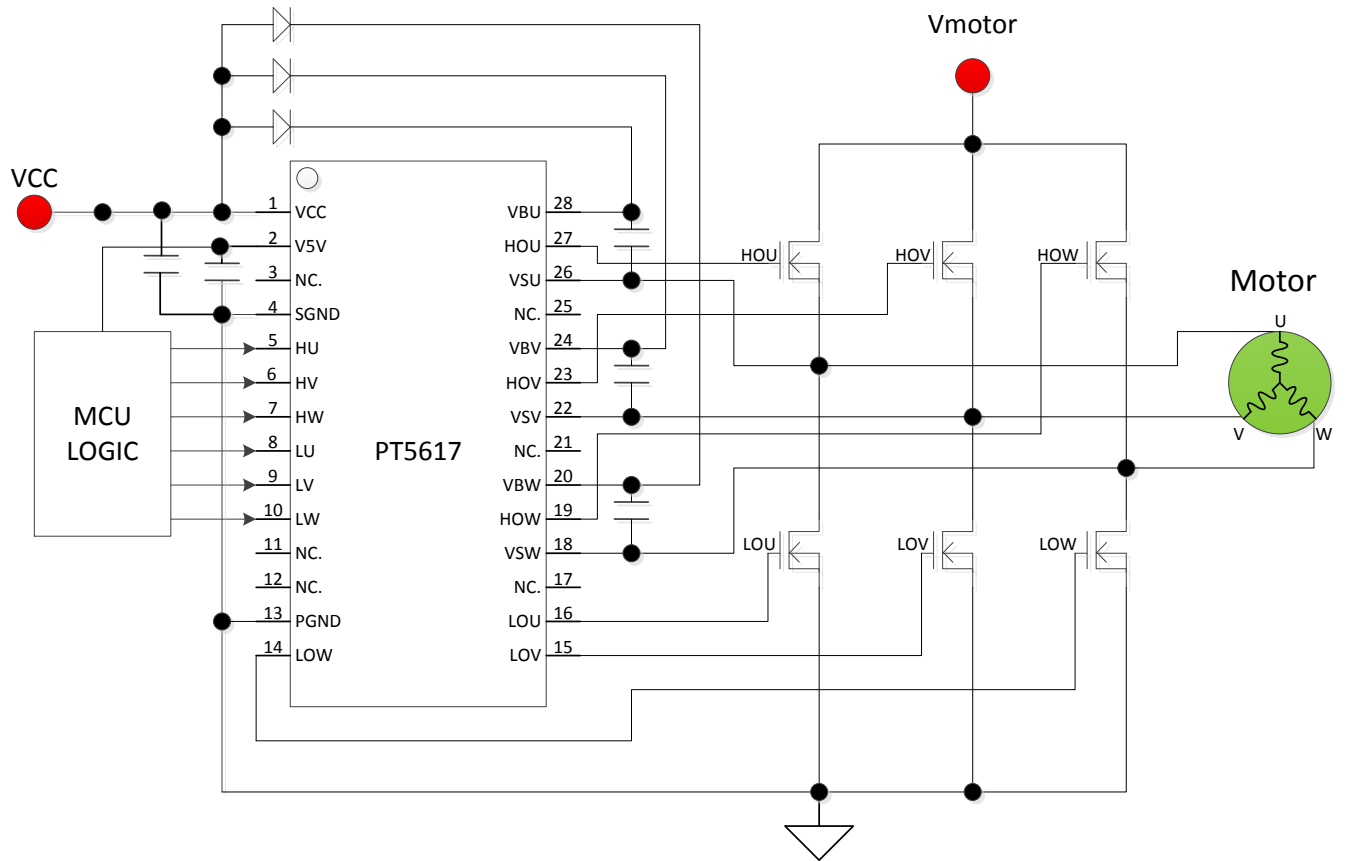
## APPLICATION

- 3-phase Motor Inverter Driver
- Air Condition
- Washing Machines

## BLOCK DIAGRAM



# TYPICAL APPLICATION CIRCUIT

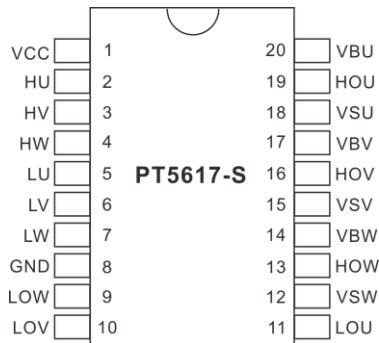


## ORDER INFORMATION

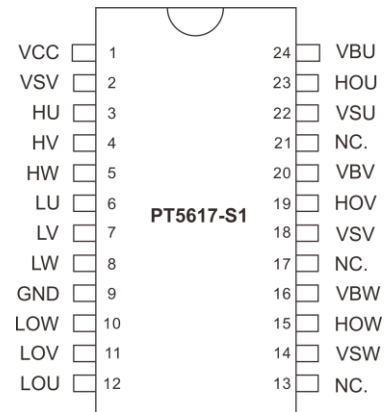
Valid Part Number	Package Type	Top Code
PT5617-S	20-PIN, SOP, 300mil	PT5617-S
PT5617-S1	24-PIN, SOP, 300mil	PT5617-S1
PT5617-S2	28-PIN, SOP, 300mil	PT5617-S2

## PIN CONFIGURATION

### 20-PIN



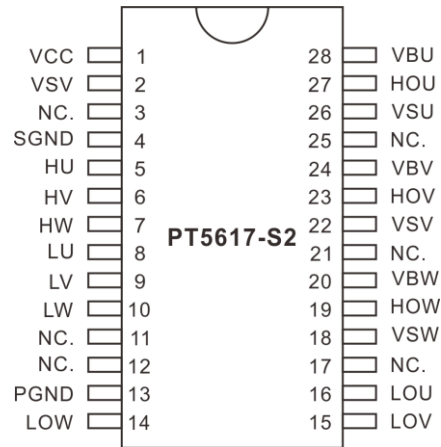
### 24-PIN



## PIN DESCRIPTION

Pin Name	Description	Pin No.	
		SOP20	SOP24
VCC	Logic and low-side gate drivers power supply voltage	1	1
V5V	5V LDO output		2
HU	Logic input for high-side gate U-phase driver	2	3
HV	Logic input for high-side gate V-phase driver	3	4
HW	Logic input for high-side gate W-phase driver	4	5
LU	Logic input for low-side gate U-phase driver	5	6
LV	Logic input for low-side gate V-phase driver	6	7
LW	Logic input for low-side gate W-phase driver	7	8
GND	Logic ground and low-side gate drivers ground	8	9
LOW	Low-side gate driver W-phase output	9	10
LOV	Low-side gate driver V-phase output	10	11
LOU	Low-side gate driver U-phase output	11	12
NC.	Not Connected		13
VSW	High-side driver W-phase floating supply offset voltage	12	14
HOW	High-side driver W-phase gate driver output	13	15
VBW	High-side driver W-phase floating supply	14	16
NC.	Not Connected		17
VSV	High-side driver V-phase floating supply offset voltage	15	18
HOV	High-side driver V-phase gate driver output	16	19
VBV	High-side driver V-phase floating supply	17	20
NC.	Not Connected		21
VSU	High-side driver U-phase floating supply offset voltage	18	22
HOU	High-side driver U-phase gate driver output	19	23
VBU	High-side driver U-phase floating supply	20	24

## 28-PIN



## PIN DESCRIPTION

Pin Name	Description	Pin No.
VCC	Logic and low-side gate drivers power supply voltage	1
V5V	5V LDO output	2
NC.	Not Connected	3
SGND	Logic ground	4
HU	Logic input for high-side gate U-phase driver	5
HV	Logic input for high-side gate V-phase driver	6
HW	Logic input for high-side gate W-phase driver	7
LU	Logic input for low-side gate U-phase driver	8
LV	Logic input for low-side gate V-phase driver	9
LW	Logic input for low-side gate W-phase driver	10
NC.	Not Connected	11
NC.	Not Connected	12
PGND	Low-side gate drivers ground	13
LOW	Low-side gate driver W-phase output	14
LOV	Low-side gate driver V-phase output	15
LOU	Low-side gate driver U-phase output	16
NC.	Not Connected	17
VSW	High-side driver W-phase floating supply offset voltage	18
HOW	High-side driver W-phase gate driver output	19
VBW	High-side driver W-phase floating supply	20
NC.	Not Connected	21
VSV	High-side driver V-phase floating supply offset voltage	22
HOV	High-side driver V-phase gate driver output	23
VBV	High-side driver V-phase floating supply	24
NC.	Not Connected	25
VSU	High-side driver U-phase floating supply offset voltage	26
HOU	High-side driver U-phase gate driver output	27
VBU	High-side driver U-phase floating supply	28

## **IMPORTANT NOTICE**

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