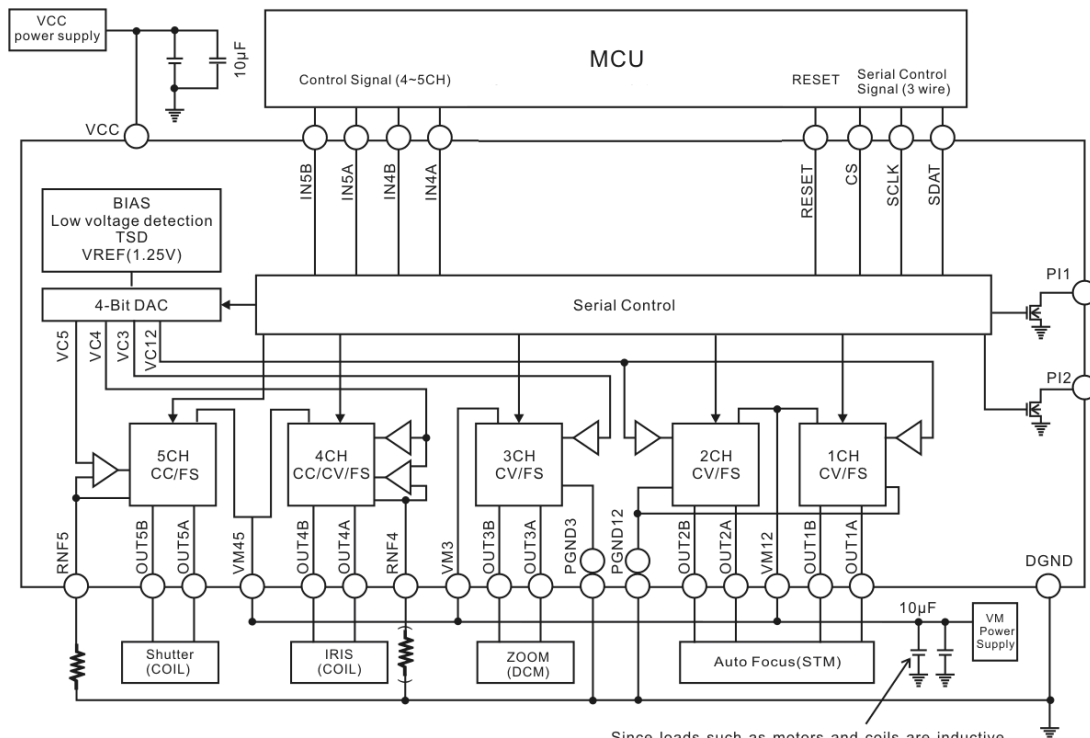


FEATURES

- An ultra-fine CMOS process has been adopted for low power consumption in a design with no charge-pump.
- A small 28-pin QFN package (4*4mm) has been adopted.
- All bridges can be driven simultaneously.
- Constant-Voltage control H-bridges Drive; Accuracy $\pm 5\%$ (at CV DAC=4.0V)
- Constant-Current H-bridges Drive; Accuracy $\pm 5\%$ (at CC DAC=200mV)
- A constant voltage value and a constant current value are set as arbitrary values by serial setup(4-bit).
- External resistance is unnecessary in order to change by Built-in DAC.
- Built-in thermal shutdown circuit.(shut: 150°C/return: 120°C/Hysterisis: 30°C)
- Built-in UVLO shutdown circuit.(shut: 1.8V/return: 2.0V/Hysterisis: 0.2V)
- H-Bridge Drive Type/ON Resistance
 - CH1~3: CV/FS Ron=1.3 Ω (TYP) at VM=5V, I=100mA (600mA MAX)
 - CH4: CC/CV/FS Ron=1.3 Ω (TYP) at VM=5V, I=100mA (600mA MAX)
 - CH5: CC/FS Ron=1.3 Ω (TYP) at VM=5V, I=100mA (600mA MAX)
- PI Drive Type/ON Voltage
 - 1~2CH: Nch open drain Von=0.5V(MAX) at I=30mA
- DAC
 - 4-bit composition
 - 1~4CH Constant-Voltage: 1.8~4.8V, 0.2V/bit
 - 4~5CH Constant-Current: 150~300mV, 10mV/bit
- Recommend Operating Condition
 - Power-supply voltage range: VCC: 2.5~5.5V, VM: 1.9~ 5.5V
 - Rated power-supply voltage: VCC: 3.3V, VM: 5.0V

BLOCK DIAGRAM



Since loads such as motors and coils are inductive, overshoots may occur on the power supply pin. Therefore, we recommend the connection of a roughly 10 μ F capacitor between the VM pin and GND.

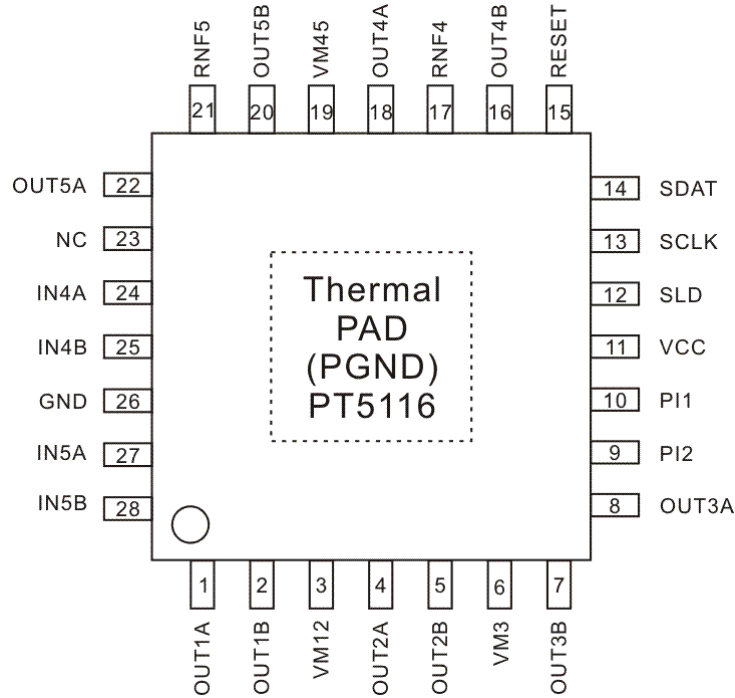
Notes:

1. FS=Full-Swing
2. CV=Constant-Voltage
3. CC=Constant-Current

ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT5116-QF	28 Pins, QFN	PT5116

PIN CONFIGURATION



PIN DESCRIPTION

Pin Name	I/O	Description	Pin No.
OUT1A	O	CH1 output A	1
OUT1B	O	CH1 output B	2
VM12	Power Supply	CH1/2 Power supply	3
OUT2A	O	CH2 output A	4
OUT2B	O	CH2 output B	5
VM3	Power Supply	CH3 Power supply	6
OUT3B	O	CH3 output B	7
OUT3A	O	CH3 output A	8
PI2	O	PI2 open drain output	9
PI1	O	PI1 open drain output	10
VCC	Power Supply	Small signal power supply	11
SLD	I	Serial data latch control	12
SCLK	I	Serial clock input	13
SDAT	I	Serial data input	14
RESET	I	Logic reset	15
OUT4B	O	CH4 output B	16
RNF4	I/O	CH4 current sense input(CC) or power GND(CV/FS)	17
OUT4A	O	CH4 output A	18
VM45	Power Supply	CH4/5 Power supply	19
OUT5B	O	CH5 output B	20
RNF5	I/O	CH5 current sense input(CC) or power GND(FS)	21
OUT5A	O	CH5 output B	22
NC	-	Not connected	23
IN4A	I	CH4 input A	24
IN4B	I	CH4 input B	25
GND	GND	Ground	26
IN5A	I	CH5 input A	27
IN5B	I	CH5 input B	28
Thermal PAD	GND	CH1/2 Power GND and CH3 Power GND	Bottom