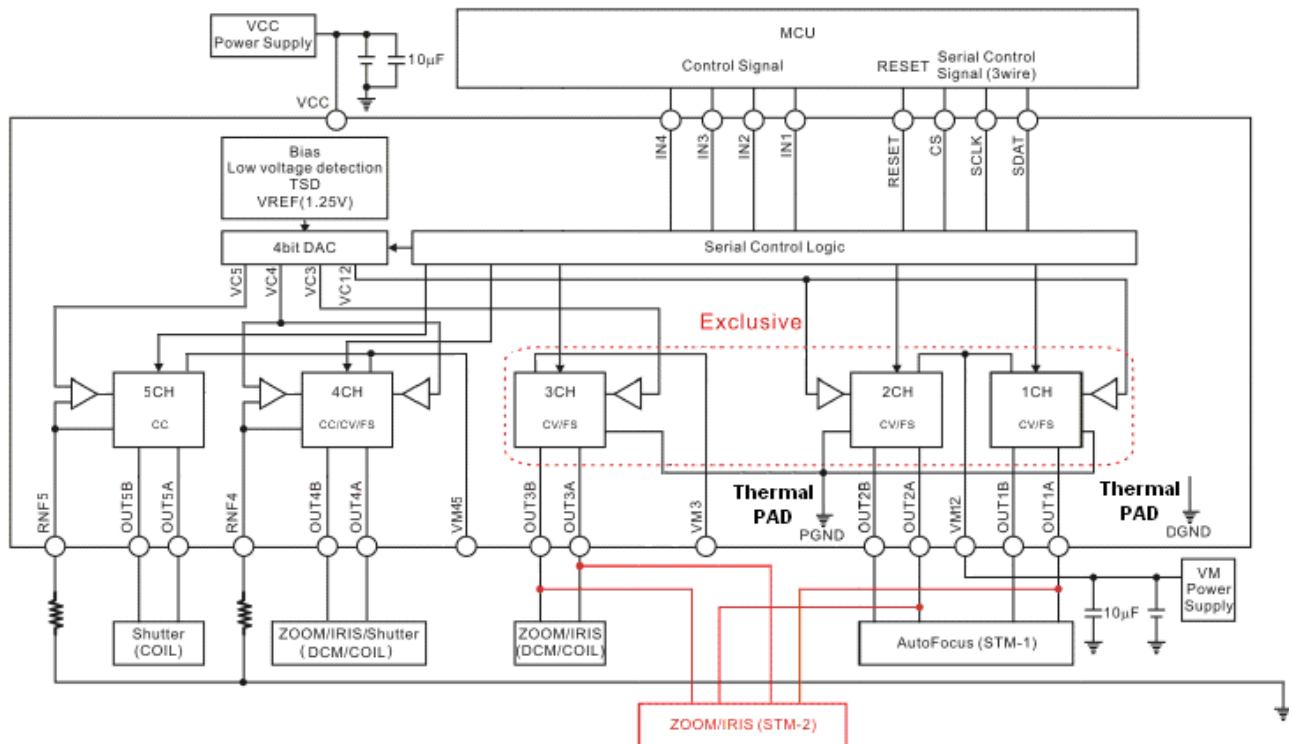


## FEATURES

- An ultra-fine CMOS process has been adopted for low power consumption in a design with no charge-pump.
- A small 24-pin QFN package (4\*4mm / t=0.8mmMax / Lead pitch 0.4mm) has been adopted.
- All bridges can be driven simultaneously.
- Constant-Voltage control H-bridges Drive; Accuracy±5%(at CV DAC=4.0V)
- Constant-Current H-bridges Drive; Accuracy±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)
- Built-in CC mode weak excitation
- H-Bridge Drive Type/ON Resistance
  - CH1~3: CV/FS Ron=1.3Ω(TYP) at VM=5V, I=100mA (600mA MAX)
  - CH4: CC/CV/FS Ron=1.3Ω(TYP) at VM=5V, I=100mA (600mA MAX)
  - CH5: CC/Ron=1.3Ω(TYP) at VM=5V, I=100mA (600mA MAX)
- 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: 2.7~3.6V, VM: 2.7~ 5.5V
  - Rated power-supply voltage: VCC: 3.3V, VM: 5.0V

## BLOCK DIAGRAM



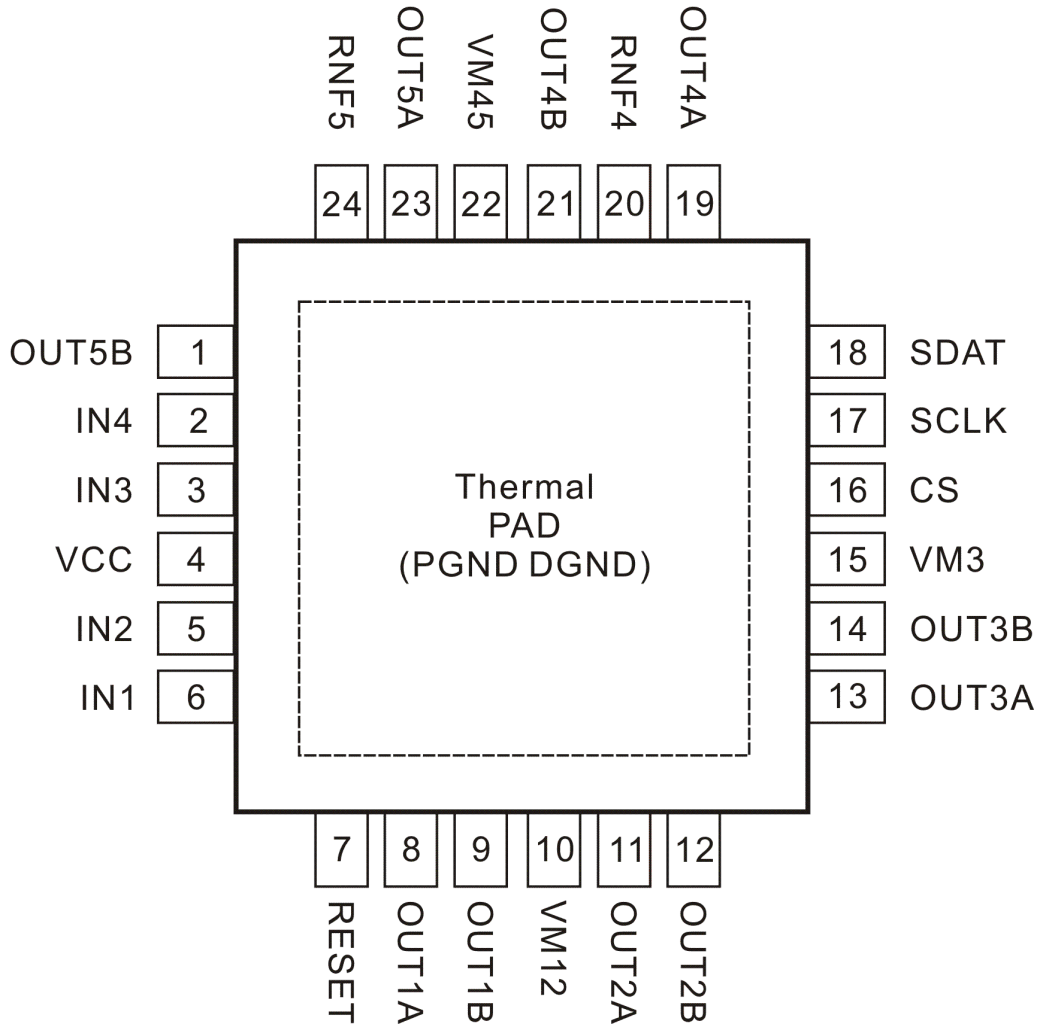
### Notes:

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

## ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT5113	24 Pins, QFN	PT5113

## PIN CONFIGURATION



## PIN DESCRIPTION

Pin Name	I/O	Description	Pin No.
OUT5B	O	CH5 output B	1
IN4	I	Parallel input signal	2
IN3	I	Parallel input signal	3
VCC	Power Supply	Small signal power supply	4
IN2	I	Parallel input signal	5
IN1	I	Parallel input signal	6
RESET	I	Logic reset	7
OUT1A	O	CH1 output A	8
OUT1B	O	CH1 output B	9
VM12	Power Supply	CH1/2 Power supply	10
OUT2A	O	CH2 output A	11
OUT2B	O	CH2 output B	12
OUT3A	O	CH3 output A	13
OUT3B	O	CH3 output B	14
VM3	Power Supply	CH3 Power supply	15
CS	I	Serial data latch control	16
SCLK	I	Serial clock input	17
SDAT	I	Serial data input	18
OUT4A	O	CH4 output A	19
RNF4	I/O	CH4 current sense input	20
OUT4B	O	CH4 output B	21
VM45	Power Supply	CH4/5 Power supply	22
OUT5A	O	CH5 output A	23
RNF5	I/O	CH5 current sense input	24
Thermal PAD	GND	CH1/2 Power GND and CH3 Power GND	Bottom
Thermal PAD	GND	Small signal power GND	Bottom

## **IMPORTANT NOTICE**

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