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Auto Focus Motor Driver IC

Preliminary

PT5662

DESCRIPTION

The PT5662 is a single 10-bit DAC with 102.3mA output current sink capability. It features an internal reference and operates from a single 2.3V to 5.5V supply. The DAC is controlled via a 2-wire (I²C compatible) serial interface that operates at clock rates up to 400KHz.

The PT5662's unique and proprietary Slope Control Modes allow the user to customize the output transient response thereby overcoming mechanical ringing associated with reduced form factor voice coil motors (VCMs).

The PT5662 incorporates a power-on reset circuit, which ensures that DAC output powers up to 0V and remains there until a valid write takes place. It has a power-down feature that reduces the current consumption of the device to $1\mu A$ maximum.

The PT5662 is designed for autofocus, image stabilization, and optical zoom applications in camera phones, digital still cameras, and camcorders.

The PT5662 also has many industrial applications, such as controlling temperature, light, and movement, over the range -40 $^{\circ}$ C to +85 $^{\circ}$ C without derating.

The I²C address for the PT5662 is 0x18h.

FEATURES

- 102.3mA current sink
- 2-wire (I²C -compatible) 1.8V serial interface
- 10-bit resolution DAC
- Integrated current sense resistor
- · Selectable output slope control
- 2.3V to 5.5V power supply
- · Guaranteed monotonic over all codes
- Power-down to 0.5µA typical
- Internal reference
- · Built-in UVLO shutdown circuit
- · Built-in thermal shutdown circuit
- · Power-down function
- Power-on reset
- Available in 2 x 3 array, 1.114mm x 1.614mm WLCSP packages
- Available in WCSP-6 and DFN-8

STRUCTURE

Silicon CMOS IC

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