

DESCRIPTION

The PT5130 is a single 10-bit DAC with 120mA 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 PT5130'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 PT5130 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 1μA maximum.

The PT5130 is designed for autofocus, image stabilization, and optical zoom applications in camera phones, digital still cameras, and camcorders.

The PT5130 also has many industrial applications, such as controlling temperature, light, and movement, over the range -40°C to +85°C without derating.

The I²C address for the PT5130 is 0 x 18h.

Xshutdown pin about PT5130:

XShutdown pin is active low. (Hard Shutdown mode at V_{XSHUTDOWN}=0V)

STRUCTURE

- Silicon CMOS IC

FEATURES

- 120mA 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
- Power-down function
- Power-on reset
- Available in 2 x 3 array, 0.809mm x 1.367mm x 0.395mm WLCSP-6 packages

APPLICATIONS

CONSUMER APPLICATIONS

- Lens autofocus
- Image stabilization
- Optical zoom
- Shutters
- Iris/exposure
- Neutral density (ND) filters
- Lens covers
- Camera phones
- Digital still cameras
- Camera modules
- Digital video cameras/camcorders
- Camera-enabled devices
- Security cameras
- Web/PC cameras

INDUSTRIAL APPLICATIONS

- Heater controls
- Fan controls
- Cooler (Peltier) controls
- Solenoid controls
- Valve controls
- Linear actuator controls
- Light controls
- Current loop controls