EUM6823

H-Bridge VCM Driver With I^{2}C Interface

DESCRIPTION

The EUM6823 is a single 10-bit DAC with ±100mA output current sink capability. It features an internal reference, I^{2}C interface, 10 bits DAC and current sense resistor. The DAC is controlled via a 2-wire (I^{2}C compatible) serial interface that operates at clock rates up to 400 kHz. The EUM6823 can operate from 2.3V to 4.8V.

Multiple slew rate control methods are integrated in this part to avoid mechanical ringing when applied on auto focus or optical zoom. The SRC (Slew Rate Control) is integrated to compensate the lens ringing during the changing current in the VCM, which reduces the needed time for auto focus significantly. Also, the direct current jump mode and linear slew rate control approach are integrated in this part.

The EUM6823 incorporates a power-on reset circuit, which ensures that DAC output powers up to 0A 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 EUM6823 with WLCSP package which it is suitable for reduced-space mounting in mobile phone and other portable applications.

The I^{2}C address for the EUM6823 is 0x18h, and this part is available in 0.76mm×1.16mm×0.31mm WLCSP-6 package.

FEATURES

- 10bit DAC for ±100mA current sink
- 2-wire (I^{2}C-compatible) 1.8V serial interface
- 2.3V to 4.8V power supply
- guaranteed monotonic over all codes
- Power-on reset and Power-down function
- Integrated 3 Slew Rate Control Method
  - Slew Rate Control
  - Direct Jump Control
  - Linear Slew Rate Control
- Over Thermal Protection
- Power-down to 1μA maximum
- Available in 0.76mm×1.16mm×0.31mm WLCSP-6 package
- RoHS compliant and 100% lead (Pb)-free Halogen-free

APPLICATIONS

- Cell Phone Auto Focus
- Digital Camera Module
- Web/PC cameras
- Lens covers
- Optical zoom
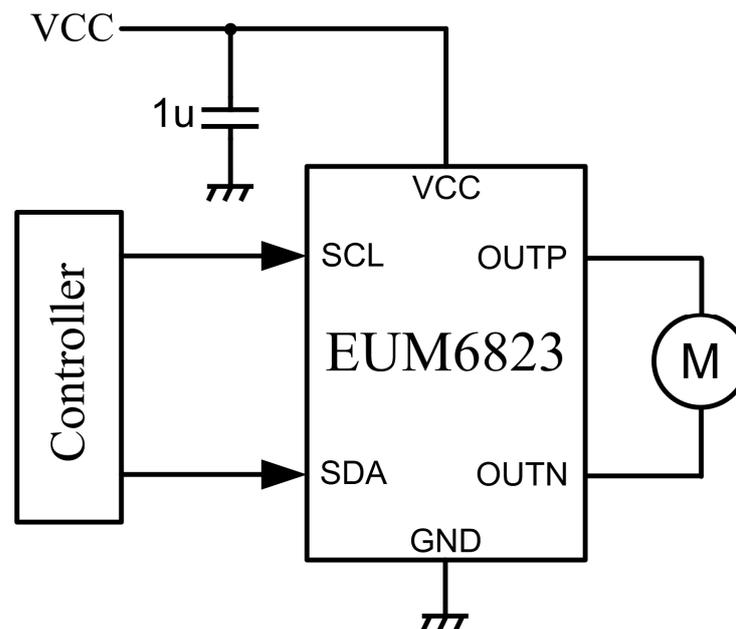- Image stabilization
- Actuator Controls

Typical Application Circuit

Figure 1 Typical Application Circuits