



24-Channel SPI Serial Bus 32 MA/5.5 V Constant-Current LED Driver

PCA9957

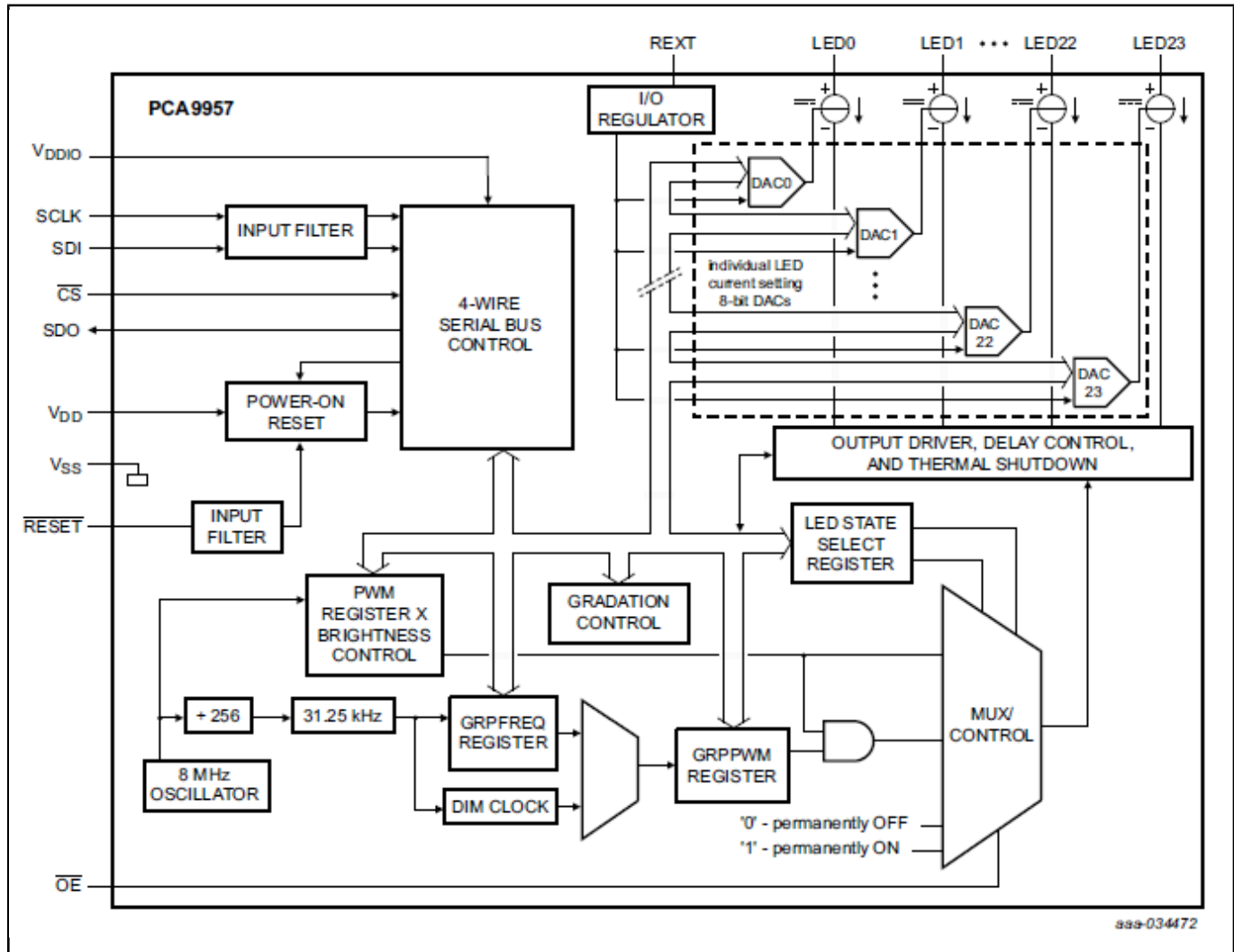
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The PCA9957 is a daisy-chain SPI-compatible 4-wire serial bus controlled 24-channel constant current LED driver optimized for dimming and blinking 32 mA Red/Green/Blue/Amber (RGBA) LEDs.

Each LED output has its own 8-bit resolution (256 steps) fixed frequency individual PWM controller that operates at 31.25 kHz with a duty cycle that is adjustable from 0 % to 100 % to allow the LED to be set to a specific brightness value. An additional 8-bit resolution (256 steps) group PWM controller has both a fixed frequency of 122 Hz and an adjustable frequency between 15 Hz to once every 16.8 seconds with a duty cycle that is adjustable from 0 % to 99.6 % that is used to either dim or blink all LEDs with the same value.

Each LED output can be off, on (no PWM control), set at its individual PWM controller value or at both individual and group PWM controller values. The PCA9957 operates with a supply voltage range of 2.7 V to 5.5 V and the constant current sink LED outputs allow up to 5 V for the LED supply. The output peak current is adjustable with an 8-bit linear DAC from 125 μ A to 31.875 mA with $R_{EXT} = 2 \text{ k}\Omega$.

PCA9957 Block diagram Block Diagram



View additional information for [24-Channel SPI Serial Bus 32 MA/5.5 V Constant-Current LED Driver](#).

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