



MP28210

Ultra-Low 500nA I_q, Wide Input 2V-5.5V, 1A Step-Down Regulator with 1.2x1.6mm CSP Package

PRELIMINARY SPECIFICATIONS SUBJECT TO CHANGE

DESCRIPTION

The MP28210 is a monolithic power-management unit containing 1A, high-efficiency, step-down, switching converter. The nanoamp quiescent current provides extremely high efficiency when the load current is down in the μA range. With minimum input voltage as low as 2V, the MP28210 allows the system to operate directly from the battery.

The constant-on-time control scheme provides fast transient response, high light-load efficiency, and requires minimal capacitance. The regulation can be made tight by integrating an error amplifier to correct the output voltage.

The CTRL pins control the on/off and output voltage selection functions.

Fault protection features include under-voltage lockout (UVLO), over-current protection (OCP), and thermal shutdown.

The MP28210 requires a minimal number of readily available, standard, external components and is available in a small CSP-12 (1.2mmx1.6mm) package.

FEATURES

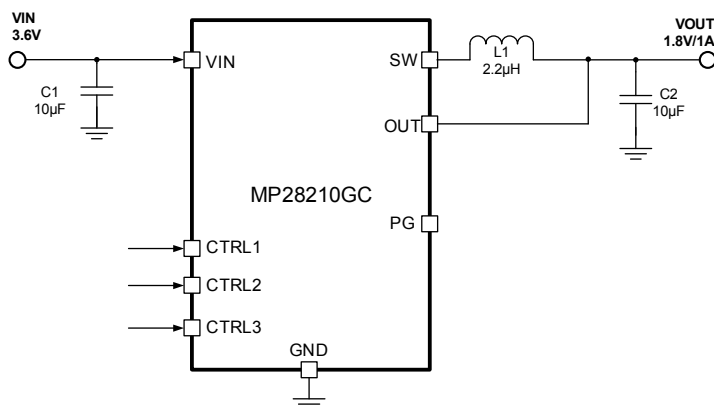
- Ultra-Low I_q: 500nA
- Wide 2.0V to 5.5V Operating Input Range
- 7 Selectable Output Voltages
- Up to 1A Output Current
- 1.5MHz Switching Frequency in Continuous Conduction Mode (CCM)
- 100% Duty Cycle in Dropout
- 0.25 Ω and 0.25 Ω Internal Power MOSFET Switches
- Cycle-by-Cycle Over-Current Protection (OCP)
- Short-Circuit Protection (SCP) with Hiccup Mode
- Available in a CSP-12 (1.2mmx1.6mm) Package

APPLICATIONS

- Wearables
- IOT
- Portable Instruments
- Battery-Powered Devices

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TYPICAL APPLICATION



Efficiency vs. Load Current

