

1. General Description

The EMP2112 device is a synchronous step-down buck DC-DC converter optimized for high efficiency and compact solution size. The device integrates switches capable of delivering an output current up to 1.2A.

At medium to heavy loads, the device operates in pulse width modulation (PWM) mode with 1.5-MHz switching frequency. At light load, the device automatically enters PFM mode to maintain high efficiency over the entire load current range. In shutdown, the current consumption is reduced to less than 2 μ A.

The EMP2112 provides an adjustable output voltage via an external resistor divider. An internal soft start circuit limits the inrush current during startup. Other features like over current protection, thermal shutdown protection and power good are built-in.

The device is available in a SOT23 package.

2. Features and Benefits

- 2.5V to 5.5V Input Voltage Range
- 35 μ A Operating Quiescent Current
- Internal Soft Startup
- Adjustable Output Voltage from 0.6 V to VIN
- 100% Duty Cycle for Lowest Dropout
- 1.5MHz Switching Frequency
- Integrated Low RDS(ON) Switches 200m Ω / 100m Ω
- Optimized PFM mode for battery applications to improve light load efficiency
- Power Good Output for EMP2112P
- Short circuit protection with Hiccup mode
- Thermal Shutdown Protection
- EMP2112 available in SOT23-5 package and EMP2112P available in SOT23-6 package

3.Applications

- General Purpose POL Supply
- Mobile Phone, Mobile handsets
- Network Video Camera
- Set Top Box
- Wireless Router

EMP2112

1.2A High Efficiency Synchronous Buck Converter in SOT Package

4. Ordering information

Table 1 Ordering information

Type number	Topside marking	Package		
		Name	Description	Quantity
EMP2112GV	UAPEYW	SOT23-5	SOT23 package, 5 pins 2.92mm x 2.8mm; 1.25 mm (Max) height	3000
EMP2112PGV	UAPEYW	SOT23-6	SOT23 package, 6pins 2.92mm x 2.8mm; 1.25 mm (Max) height	3000

5. Function diagram

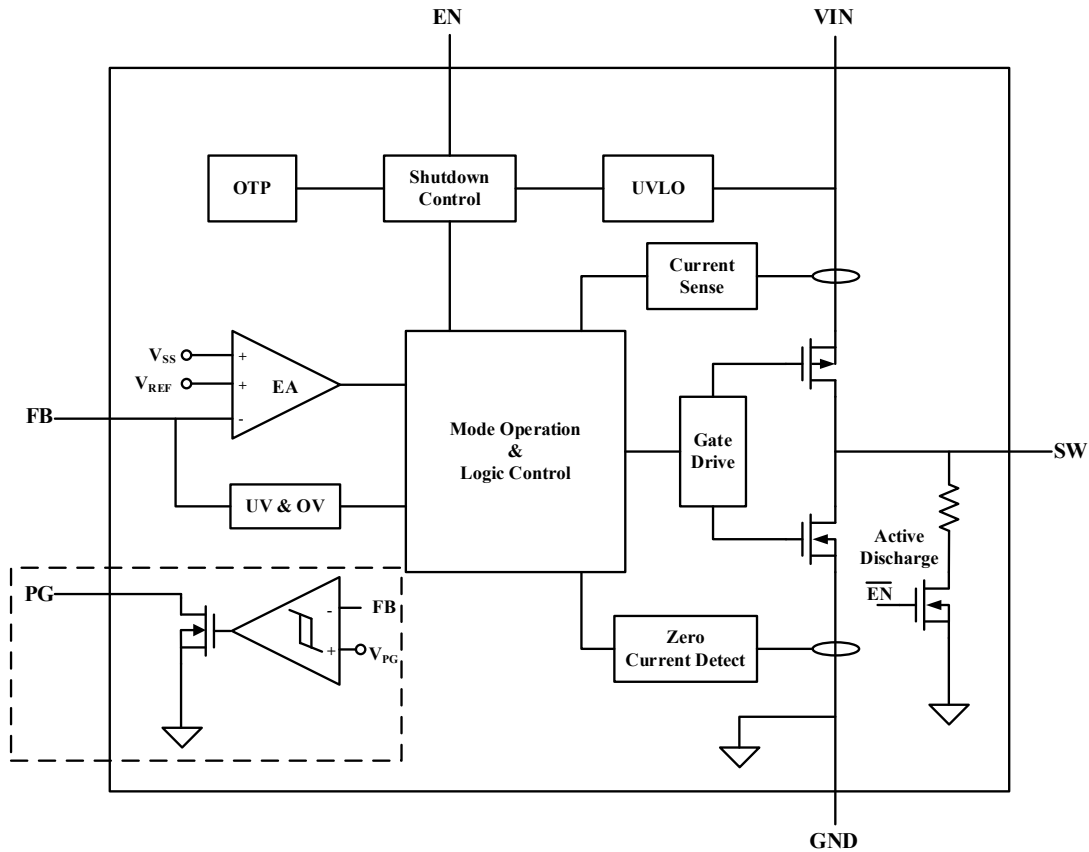


Fig 1. EMP2112(P) function diagram