500kHz 2A/3A Synchronous Step-down DC/DC

Features

- **2A/3A Output Current**
- **Internal 100mΩ RDS-ON High-Side and 100mΩ RDS-ON Low-Side Power Switches**
- **Available two kinds of delay in PG**
  PG pin is detect FB until threshold then immediately react in G579X
  PG pin is detect FB until threshold then delay 220mS react in G579XA
- **Stable with Low ESR Output Ceramic Capacitors**
- **32μA Shutdown Mode**
- **Fixed 500kHz Frequency**
- **Thermal Shutdown**
- **Cycle-by-Cycle Over Current Protection**
- **Wide 4.5V to 24V Operating Input Range**
- **Vref =0.8V +-2%**
- **Internal soft start**
- **Available in SOP-8/SOP-8 (FD) Package**

Applications

- **DSL Modems**
- **Distributed Power Systems**
- **Pre-Regulator for Linear Regulators**

General Description

The G5798/G5799 is a monolithic step-down switch mode regulator with a built in internal power MOSFET. It achieves 2A/3A continuous output current over a wide input supply range with excellent load and line regulation.

Current mode operation provides fast transient response and eases loop stabilization.

Fault condition protection includes cycle-by-cycle current limiting, output short circuit protection and thermal shutdown. In shutdown mode the regulator draws 32μA of supply current. Internal soft-start for output power up ramp and minimizes the inrush supply current at initial startup.

PG in G579X is open-drain pin detect from FB. When FB>0.92XVref, PG is high impedance and FB<0.85XVref, PG is low impedance.

G579XA add typical 220mS deglitch timeout period when FB>0.92XVref to make sure PG signal.

The G5798/G5799 requires a minimum number of readily available standard external components. It is available in a SOP-8 (FD) package.

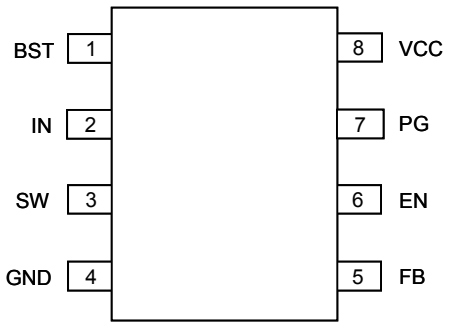
Ordering Information

ORDER NUMBER	MARKING	PG DELAY TIME	TEMP. RANGE	PACKAGE (Green)
G5798P11U	G5798	No delay	-40°C to +85°C	SOP-8
G5798AP11U	G5798A	delay 220mS	-40°C to +85°C	SOP-8
G5799F11U	G5799	No delay	-40°C to +85°C	SOP-8 (FD)
G5799AF11U	G5799A	delay 220mS	-40°C to +85°C	SOP-8 (FD)

Note: P1: SOP-8 F1: SOP-8 (FD)
1: Bonding Code
U : Tape & Reel

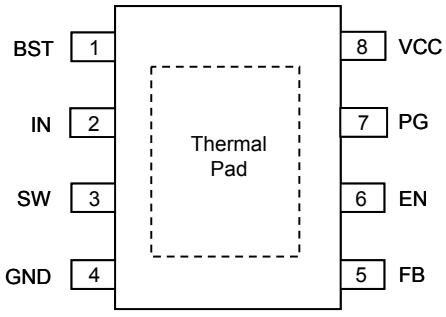
Pin Configuration

G5798/G5798A



SOP-8

G5799/G5799A



SOP-8 (FD)

Note: Recommend connecting the Thermal Pad to the Ground for excellent power dissipation.