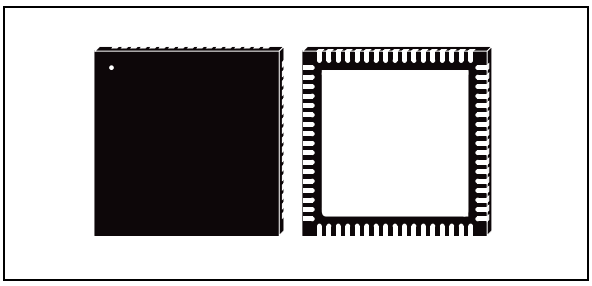
STRG06

Universal digital multicell controller with PMBus™

Data brief



Features

- High performance resonant digital control loop RVCOT ™
- Drives up to 6 cells with STRG02 and STRG04, from 50 W up to > 300 W
- Compliant with Intel VR12.5 ™ and VR13 protocol
- Fully configurable through PMBus ™ Rev1.2
  - Telemetry for primary and secondary
  - Full IC configuration / management
  - Voltage positioning
- Advanced power management
  - Auto cell shedding with PFM
  - Low power 1.8 V logic
- Programmable protections
  - OV / UV and FB disconnection
  - Pos/neg OC per cell
  - Current sharing error
  - Black box recorder (BBR)
  - Catastrophic fault precursor (CFP)
- Embedded non-volatile memory (NVM)
- Primary µC interface for telemetry (PuC)
- Single-wire synchronous rectifier drive
- RST and EN1V8 for low power mode
- VFQFPN68, 8 x 8 mm package

Applications

- High efficiency step down conversion

Description

The STRG06 is a high performance digital controller featuring the innovative and patented ST RVCOT ™ control loop that allows to implement a high efficiency DC-DC converter in single stage conversion directly from the 60 V bus.

In combination with the STRG02 and STRG04, the device is able to implement a scalable power supply with output power ranging from 50 W up to > 300 W featuring auto cell shedding and PFM to optimize the overall efficiency maintaining a > 90% baseline over the whole current range without compromising the load transient and DVID response.

The STRG06 device can be fully configured through the PMBus ™ to minimize the external component count. A full set of telemetry is provided including the BBR, CFP and primary / secondary side telemetry.

The device assures fast and independent protection against the positive and negative OC (per cells), over/undervoltage and FB disconnection.

The STRG06 is available in a VFQFPN68, 8 x 8 mm package with an exposed pad.

Table 1. Device summary

Order code	Package	Packing
STRG06TR	VFQFPN68	Tape and reel

Revision history

Table 2. Document revision history

Date	Revision	Changes
03-Mar-2016	1	Initial release.