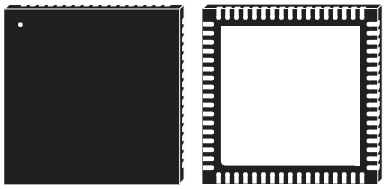
STPDDC60

Data brief

Universal digital multicell controller with PMBus™



VFQFPN68 8x8 mm

Product status
STPDDC60

Product summary	
Order code	STPDDC60TR
Package	VFQFPN68
Packing	Tape & Reel

Features

- High performance resonant / non-resonant digital control loop STVCOT™
- Drives up to 6 cells with STPRDC01 and STPRDC02, from 50 W up to > 300 W
- Compliant with Intel VR13, VR13.HC and AVS protocols
- 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
  - Analog and digital overcurrent protection (OCP)
  - Current sharing warning
  - Black box recorder (BBR)
  - Catastrophic fault precursor (CFP)
- Embedded non-volatile memory (NVM)
- Primary µC interface for telemetry (PuC)
- Single-wire synchronous rectifier driver
- RST and EN1V8 for low power mode
- VFQFPN68, 8x8 mm package

Application

- High efficiency Step-Down conversion

Description

The STPDDC60 is a high performance digital controller featuring the innovative and patented resonant / non-resonant ST VCOT™ 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 STPRDC01 and STPRDC02, 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 STPDDC60 can be fully configured through PMBus™ to minimize external component count. Full set of telemetry is provided including BBR, CFP and primary / secondary side telemetry.

The device assures fast and independent protection against overcurrent, over/under-voltage and FB disconnection.

The STPDDC60 is available in VFQFPN68, 8x8 mm package with exposed pad.

Revision history

Table 1. **Document revision history**

Date	Version	Changes
06-Mar-2018	1	Initial release.