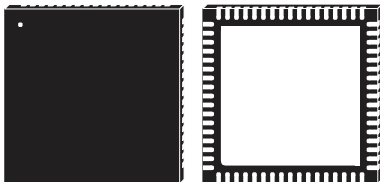


PSA digital multi-satellite controller



VFQFPN68 8x8 mm

Features

- High performance resonant / non-resonant digital control loop STVCOT™
- Drives up to 6 PSA satellites
- 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 μ C 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 **PSA60** 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 PSA satellites, the device is able to implement a scalable power supply with output power in excess of 1 kW 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 **PSA60** 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 **PSA60** is available in VFQFPN68, 8x8 mm package with exposed pad.

Product status	
PSA60	
Product summary	
Order code	PSA60TR
Package	VFQFPN68
Packing	Tape & Reel

Revision history

Table 1. Document revision history

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

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2018 STMicroelectronics – All rights reserved