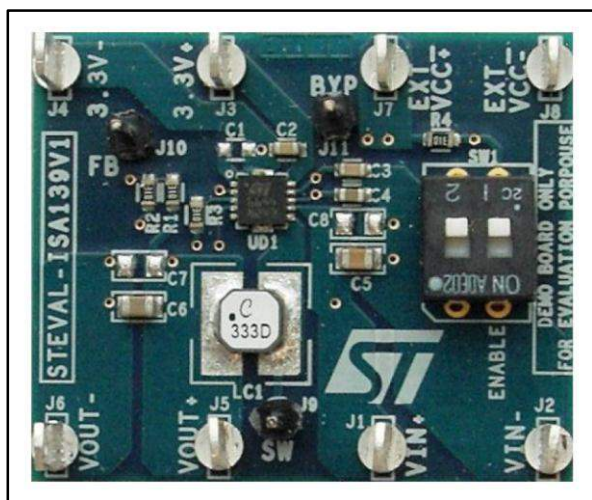


350 mA valley current limit adjustable step-down regulator based on the PM6644

Data brief



Features

- 4.5 V to 25 V input voltage range
- Fixed 3.43 V or adjustable 0.9 V to 5 V
- Reference accuracy = $\pm 1\%$, $T_j=0\text{ }^\circ\text{C}$ to $85\text{ }^\circ\text{C}$
- 380 mA maximum output current
- Constant on-time control with current sense
- Programmable switching frequency in PWM mode
- Pulse skipping mode (skip mode) at light loads
- Independent EN signal
- Latched OVP and UVP
- High accuracy 3.3 V reference voltage

Description

This product evaluation board is based on STMicroelectronics' PM6644. The device combines a 350 mA valley current limit step-down regulator with a high accuracy 3.3 V voltage reference in a small DFN10 3x3 package.

The switching regulator is based on a CoT (constant on time) architecture that assures fast load transient response. The embedded voltage feed-forward provides nearly constant switching frequency operation. Pulse-skipping is employed to increase efficiency at very light load. The switching frequency can be adjusted from 200 kHz to 600 kHz by means of a simple resistor.

The switching regulator can be programmed to regulate a fixed value of 3.43 V or it can deliver an adjustable voltage, depending on the FB pin setup. The high precision integrated 3.3 V reference can source up to 5 mA.

2 Revision history

Table 1: Document revision history

Date	Revision	Changes
28-Aug-2014	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.

© 2014 STMicroelectronics – All rights reserved