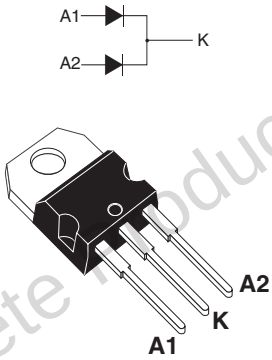
STTH16BC065C

650 V high voltage rectifier for BC^2 topology

Data brief

Features

- high voltage rectifier
- optimized diode for BC^2 topology (ST patent)
- low switching losses
- improves efficiency by up to 2.5% compared to a conventional continuous mode PFC using standard ultrafast 600 V PN diodes
- efficiency performance similar to traditional topologies using 600 V Schottky power diodes with no reverse recovery charges used in CCM PFC
- provides a cost-effective solution to meet the 80+ efficiency requirements
- supports PFC working up to 300 kHz
- suitable for PFC up to 1 kW
- compatible with standard PFC controller ICs



TO-220AB
STTH16BC065CT

Table 1. Device summary

Symbol	Value
$I_{F(AV)}$	2 x 8 A
V_{RRM}	650 V

Description

The STTH16BC065C is a specific rectification diode used in continuous mode power factor correction working in the BC^{2}topology. This diode has been specially designed for the dedicated BC^2 topology. Its electrical characteristics were specifically studied to optimize the cost/performance ratio. As a result, SMPS efficiency improvements of up to 2.5% (comparable with topologies using SiC) can be achieved at an optimized cost.

Obsolete Product(s) - Obsolete Product(s)

For further information contact your local STMicroelectronics sales office. www.st.com

1 Ordering information

Table 2. Ordering information

Order code	Marking	Package	Weight	Base qty.	Delivery mode
STTH16BC065CT	STTH16BC065C	TO-220AB	1.90 g	50	Tube

2 Revision history

Table 3. Document revision history

Date	Revision	Changes
05-Nov-2010	1	Initial release.

Obsolete Product(s) - Obsolete Product(s)

Obsolete Product(s) - Obsolete Product(s)

Please Read Carefully:

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST’s terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

UNLESS OTHERWISE SET FORTH IN ST’S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS EXPRESSLY APPROVED IN WRITING BY AN AUTHORIZED ST REPRESENTATIVE, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER’S OWN RISK.

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners.

© 2010 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Philippines - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com