

650 V high voltage rectifier for BC² topology

Data brief

Features

- high voltage rectifier
- optimized diode for BC² 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

Description

The STTH10BC065C is a specific rectification diode used in continuous mode power factor correction working in the BC² topology. This diode has been specially designed for the dedicated BC² 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.

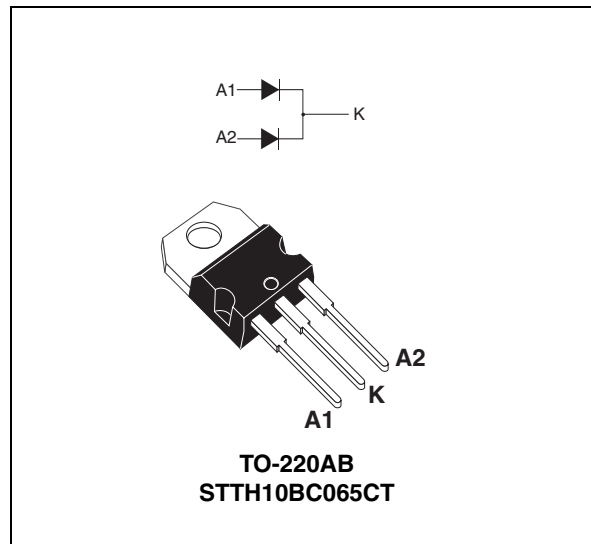


Table 1. Device summary

Symbol	Value
$I_{F(AV)}$	2 x 5 A
V_{RRM}	650 V

1 Ordering information

Table 2. Ordering information

Order code	Marking	Package	Weight	Base qty.	Delivery mode
STTH10BC065CT	STTH10BC065C	TO-220AB	1.90 g	50	Tube

2 Revision history

Table 3. Document revision history

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

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