

## 600 V high voltage free wheel rectifier for BC<sup>2</sup> topology

Data brief

### Features

- optimized free wheel diode for BC<sup>2</sup> topology (ST patent)
- low conduction losses
- high voltage rectifier
- improves efficiency by up to 2.5% compared to conventional continuous mode PFC using standard ultrafast 600 V PN diodes
- performance efficiency improved by up to 0.5% compared with 600 V Schottky power diodes with no reverse recovery charges used in CCM PFC at 200 kHz
- helps meet the 80+ efficiency requirements
- supports PFC working up to 300 kHz
- suitable for PFC up to 2 kW
- compatible with standard PFC controller ICs

### Description

The STTH5BCF060 is a specific free wheel diode used in continuous mode power factor correction working in the BC<sup>2</sup> topology. This diode has been especially designed for the dedicated BC<sup>2</sup> topology. Therefore, its electrical characteristics offer the best possible efficiency with a P-N optimized structured diode. As a result, SMPS efficiency growths up to 2.5% can be produced compared with standard ultrafast 600 V P-N diode.

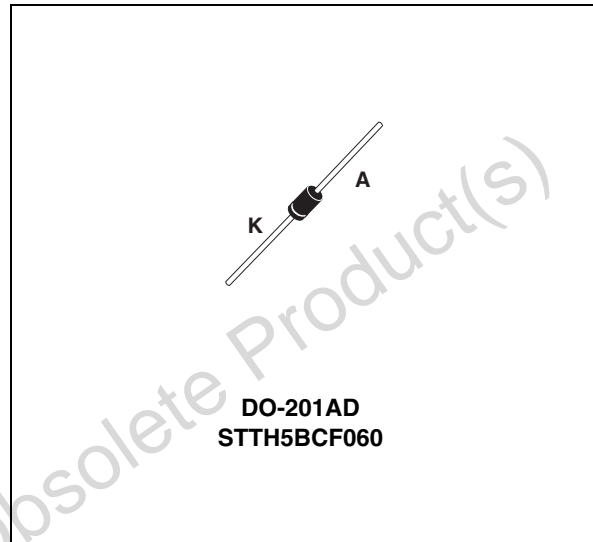


Table 1. Device summary

Symbol	Value
$I_{F(AV)}$	5 A
$V_{RRM}$	600 V

## 1 Ordering information

Table 2. Ordering information

Order codes	Marking	Package	Weight	Base qty	Delivery mode
STTH5BCF060	STTH5BCF060	DO-201AD	1.16 g	600	Ammopack

## 2 Revision history

Table 3. Document revision history

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

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