

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 STTH16BC065C 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.

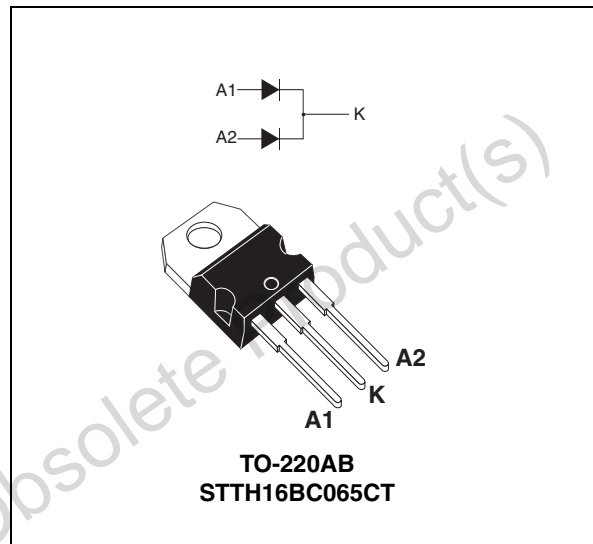


Table 1. Device summary

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

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. |

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