

## Description

High voltage dual Schottky rectifier suited to switch mode power supplies and other power converters.

Packaged in DPAK, this device is intended for use in medium voltage operation, and particularly, in high frequency circuits where low switching losses are required.

**Table 1. Device summary**

$I_{F(AV)}$	2 x 3 A
$V_{RRM}$	60 V
$V_{F(max)}$	0.59 V

## Features

- Negligible switching losses
- Low forward drop voltage
- Low capacitance
- High reverse avalanche surge capability
- Tape and reel packing

# 1 Characteristics

**Table 2. Absolute ratings (limiting values)**

Symbol	Parameter	Value	Unit
$V_{RRM}$	Repetitive peak reverse voltage	60	V
$I_{F(RMS)}$	RMS forward current	6	A
$I_{F(AV)}$	Average forward current	$T_{case} = 120^\circ C$ $\delta = 0.5$	A
$I_{FSM}$	Surge non repetitive forward current	$t_p = 10 \text{ ms}$ Sinusoidal	50
$I_{RRM}$	Repetitive peak reverse current	$t_p = 2 \mu\text{s}$ $F = 1 \text{ kHz}$	A
$T_{stg}$ $T_j$	Storage temperature range Maximum junction temperature	-65 to + 150 125	$^\circ C$
$dV/dt$	Critical rate of rise of reverse voltage	10000	V/ $\mu\text{s}$

**Table 3. Thermal resistances**

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	Junction to case	Per diode	3.5
		Total	2

**Table 4. Static electrical characteristics**

Symbol	Test conditions			Min.	Typ.	Max.	Unit
$I_R^{(1)}$	Reverse leakage current	$T_j = 25^\circ C$	$V_R = 60 \text{ V}$			30	$\mu\text{A}$
		$T_j = 125^\circ C$			2.5	10	mA
$V_F^{(2)}$	Forward voltage drop	$T_j = 25^\circ C$	$I_F = 3 \text{ A}$			0.65	V
		$T_j = 125^\circ C$	$I_F = 3 \text{ A}$		0.55	0.59	
C	Junction capacitance $V_R = 0 \text{ V}$ , $F = 1 \text{ MHz}$	$T_j = 25^\circ C$			815		pF

1. Pulse test:  $t_p = 5 \text{ ms}$ ,  $\delta < 2\%$
2. Pulse test:  $t_{pt} = 380 \mu\text{s}$ ,  $\delta < 2\%$

To evaluate the maximum conduction losses use the following equation:

$$P = 0.49 \times I_{F(AV)} + 0.035 I_{F(RMS)}^2$$

## 2 Package information

In order to meet environmental requirements, ST offers these devices in different grades of ECOPACK® packages, depending on their level of environmental compliance. ECOPACK® specifications, grade definitions and product status are available at: [www.st.com](http://www.st.com).  
ECOPACK® is an ST trademark.

- Epoxy meets UL94, V0
- Lead-free package

Figure 1. DPAK dimension definitions

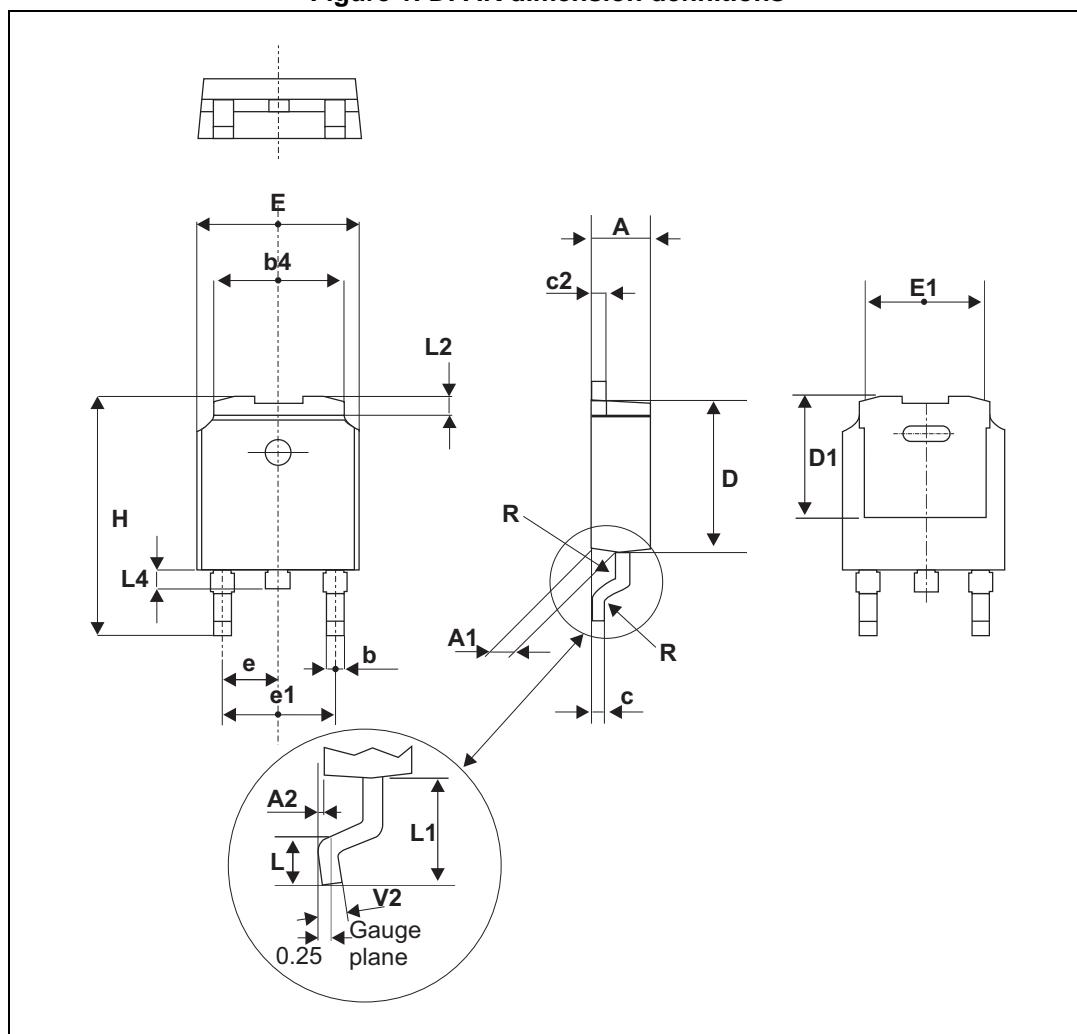
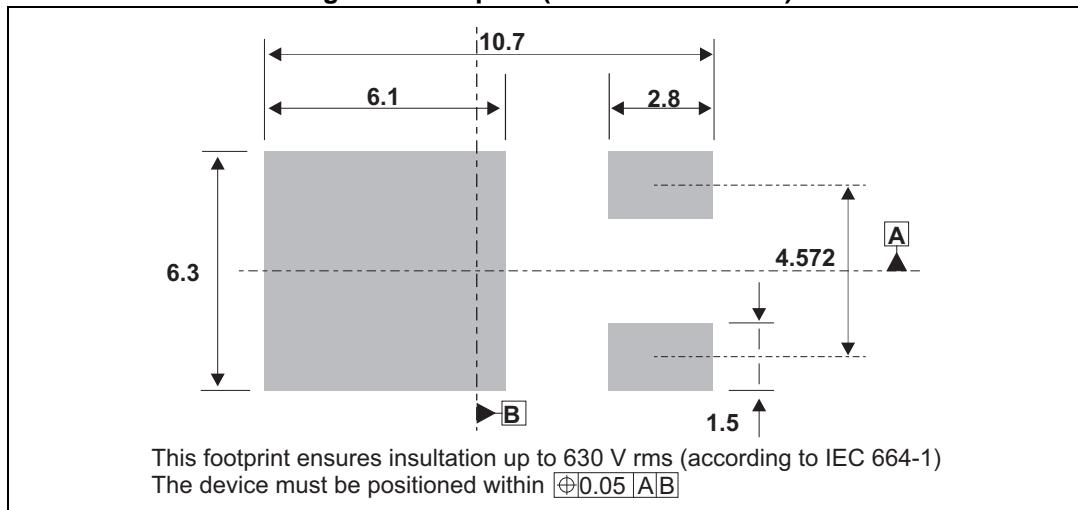


Table 5. DPAK dimension values

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.094
A1	0.90		1.10	0.035		0.043
A2	0.03		0.23	0.001		0.009
b	0.64		0.90	0.025		0.035
b4	5.20		5.40	0.204		0.212
c	0.45		0.60	0.017		0.023
c2	0.48		0.60	0.018		0.023
D	6.00		6.20	0.236		0.244
D1		5.10			0.201	
E	6.40		6.60	0.251		0.259
E1		4.70			0.185	
e		2.28			0.090	
e1	4.40		4.60	0.173		0.181
H	9.35		10.10	0.368		0.397
L	1.00		1.50	0.039		0.059
L1		2.80			0.11	
L2		0.80			0.032	
L4	0.60		1.00	0.023		0.039
R		0.2			0.008	
V2	0°		8°	0°		8°

Figure 2. Footprint (dimensions in mm)



### 3 Ordering information

**Table 6. Ordering information**

Type	Marking	Package	Weight	Base qty	Delivery mode
STPS660CB-TR	S6 60C	DPAK	320 mg	2500	Tape and reel

### 4 Revision history

**Table 7. Document revision history**

Date	Revision	Changes
Jul-1998	1C	Previous version
18-Oct-2013	2	Updated package footprint graphic.

**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.**

**ST PRODUCTS ARE NOT DESIGNED OR AUTHORIZED FOR USE IN: (A) SAFETY CRITICAL APPLICATIONS SUCH AS LIFE SUPPORTING, ACTIVE IMPLANTED DEVICES OR SYSTEMS WITH PRODUCT FUNCTIONAL SAFETY REQUIREMENTS; (B) AERONAUTIC APPLICATIONS; (C) AUTOMOTIVE APPLICATIONS OR ENVIRONMENTS, AND/OR (D) AEROSPACE APPLICATIONS OR ENVIRONMENTS. WHERE ST PRODUCTS ARE NOT DESIGNED FOR SUCH USE, THE PURCHASER SHALL USE PRODUCTS AT PURCHASER'S SOLE RISK, EVEN IF ST HAS BEEN INFORMED IN WRITING OF SUCH USAGE, UNLESS A PRODUCT IS EXPRESSLY DESIGNATED BY ST AS BEING INTENDED FOR "AUTOMOTIVE, AUTOMOTIVE SAFETY OR MEDICAL" INDUSTRY DOMAINS ACCORDING TO ST PRODUCT DESIGN SPECIFICATIONS. PRODUCTS FORMALLY ESCC, QML OR JAN QUALIFIED ARE DEEMED SUITABLE FOR USE IN AEROSPACE BY THE CORRESPONDING GOVERNMENTAL AGENCY.**

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.

© 2013 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](http://www.st.com)