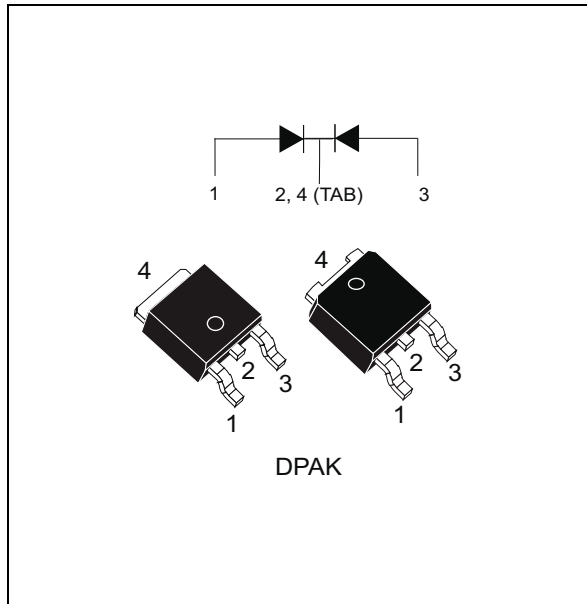


Power Schottky rectifier

Datasheet – production data


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

Symbol	Value
$I_{F(AV)}$	2 x 3 A
V_{RRM}	60 V
$V_F(\text{typ})$	0.55 V

Features

- Negligible switching losses
- Low forward voltage drop
- Low capacitance
- High reverse avalanche surge capability
- Tape and reel packing
- ECOPACK^{®2} compliant component for DPAK on demand

1 Characteristics

Table 2. Absolute ratings (limiting values, per diode, at 25 °C unless otherwise specified)

Symbol	Parameter	Value	Unit
V _{RRM}	Repetitive peak reverse voltage	60	V
I _{F(RMS)}	Forward rms current	6	A
I _{F(AV)}	Average forward current, $\delta = 0.5$ square wave	T _c = 115 °C	A
I _{FSM}	Surge non repetitive forward current	t _p = 10 ms sinusoidal	A
T _{stg}	Storage temperature range	-65 to +150	°C
T _j	Maximum operating junction temperature ⁽¹⁾	125	°C

1. $\frac{dP_{tot}}{dT_j} < \frac{1}{R_{th(j-a)}}$ condition to avoid thermal runaway for a diode on its own heatsink

Table 3. Thermal parameters

Symbol	Parameter	Max. value	Unit
R _{th(j-c)}	Junction to case	per diode	3.5
		per device	2
R _{th(c)}	coupling	0.5	°C/W

Table 4. Static electrical characteristics (per diode)

Symbol	Parameter	Test conditions	Min.	Typ	Max.	Unit	
I _R ⁽¹⁾	Reverse leakage current	T _j = 25 °C	V _R = 60 V	-	-	30	µA
		T _j = 125 °C		-	2.5	10	mA
V _F ⁽²⁾	Forward voltage drop	T _j = 25 °C	I _F = 3 A	-	-	0.65	V
		T _j = 125 °C		-	0.55	0.59	

1. Pulse test: t_p = 5 ms, $\delta < 2\%$

2. Pulse test: t_p = 380 µs, $\delta < 2\%$

To evaluate the conduction losses, use the following equation:

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

Table 5. Dynamic electrical characteristics (per diode)

Symbol	Test conditions	Min.	Typ.	Max.	Unit	
C	Junction capacitance	V _R = 0 V, F = 1 MHz, T _j = 25 °C	-	815	-	pF

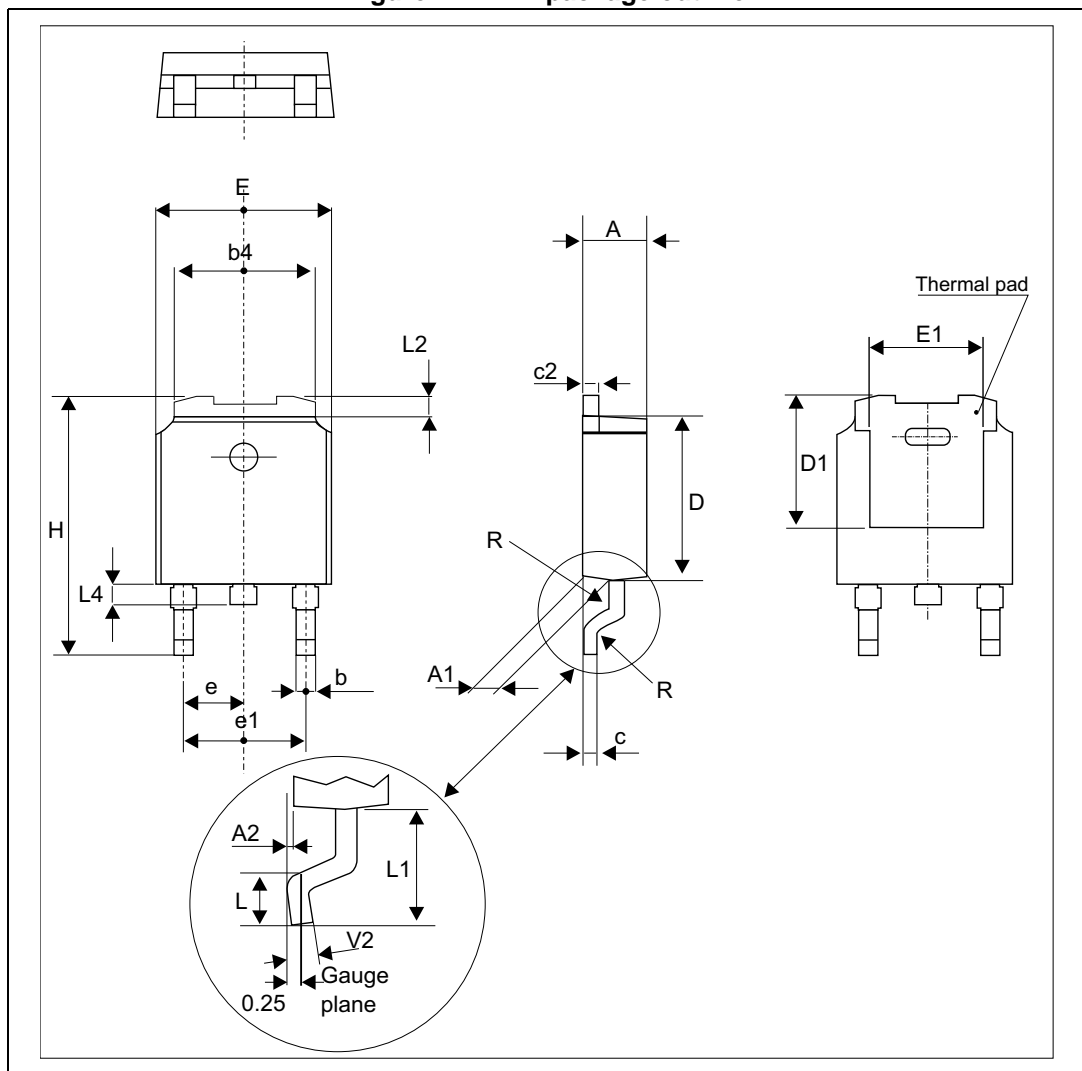
2 Package Information

- Epoxy meets UL94,V0
- Cooling method: by conduction (C)

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. ECOPACK® is an ST trademark.

2.1 DPAK package information

Figure 1. DPAK package outline

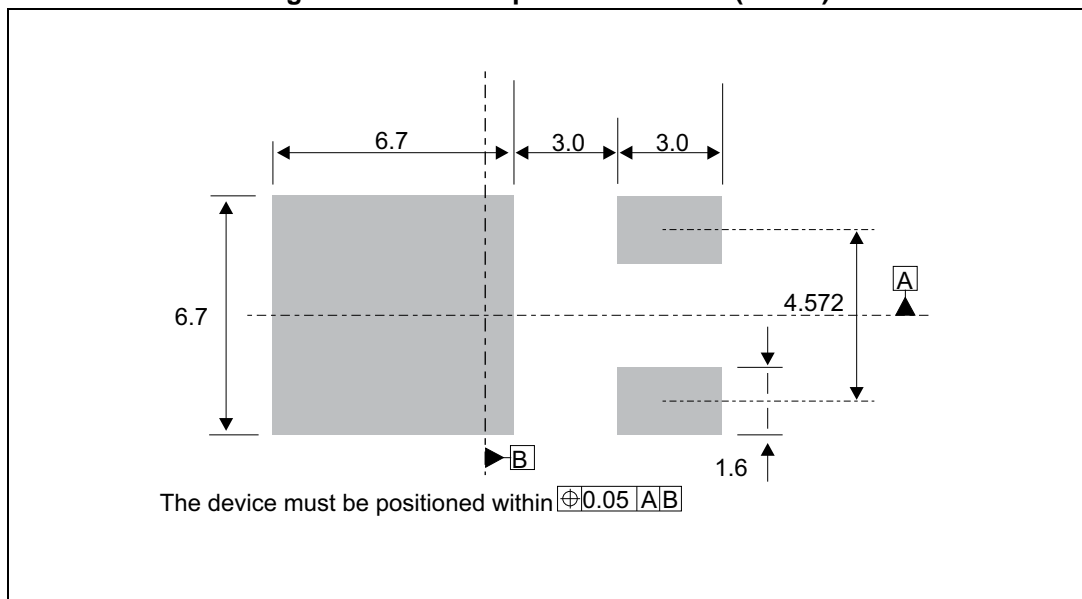


Note: This package drawing may slightly differ from the physical package. However, all the specified dimensions are guaranteed.

Table 6. DPAK package mechanical data

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.18		2.40	0.085		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	4.95		5.46	0.194		0.214
c	0.46		0.61	0.018		0.024
c2	0.46		0.60	0.018		0.023
D	5.97		6.22	0.235		0.244
D1	4.95		5.60	0.194		0.220
E	6.35		6.73	0.250		0.264
E1	4.32		5.50	0.170		0.216
e		2.28			0.090	
e1	4.40		4.70	0.173		0.185
H	9.35		10.40	0.368		0.409
L	1.00		1.78	0.039		0.070
L2			1.27			0.050
L4	0.60		1.02	0.023		0.040
V2	-8°		+8°	-8°		8°

Figure 2. DPAK footprint dimensions (in mm)



3 Ordering information

Table 7. Ordering information

Order code	Marking	Package	Weight	Base qty	Delivery mode
STPS660CB-TR	S6 60C	DPAK	0.32 g	2500	Tape and reel

4 Revision history

Table 8. Document revision history

Date	Revision	Changes
Jul-1998	1C	Previous version
18-Oct-2013	2	Updated package footprint graphic.
07-Jan-2015	3	Updated DPAK package information.
16-May-2017	4	Updated DPAK package information.

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2017 STMicroelectronics – All rights reserved

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Schottky Diodes & Rectifiers](#) category:

Click to view products by [STMicroelectronics](#) manufacturer:

Other Similar products are found below :

[MA4E2039](#) [D1FH3-5063](#) [MBR10100CT-BP](#) [MBR1545CT](#) [MMBD301M3T5G](#) [RB160M-50TR](#) [RB551V-30](#) [BAS16E6433HTMA1](#) [BAT](#)
[54-02LRH E6327](#) [NSR05F40QNXT5G](#) [NTE555](#) [JANS1N6640](#) [SB07-03C-TB-H](#) [SB1003M3-TL-W](#) [SK310-T](#) [SK32A-LTP](#) [SK33A-TP](#)
[SK34B-TP](#) [SS3003CH-TL-E](#) [GA01SHT18](#) [CRS10I30A\(TE85L,QM](#) [MA4E2501L-1290](#) [MBRB30H30CT-1G](#) [SB007-03C-TB-E](#) [SK32A-TP](#)
[SK33B-TP](#) [SK35A-TP](#) [SK38B-TP](#) [NRVBM120LT1G](#) [NTE505](#) [NTSB30U100CT-1G](#) [SS15E-TP](#) [VS-6CWQ10FNHM3](#) [ACDBA1100LR-HF](#)
[ACDBA1200-HF](#) [ACDBA140-HF](#) [ACDBA2100-HF](#) [ACDBA3100-HF](#) [CDBQC0530L-HF](#) [CDBQC0240LR-HF](#) [ACDBA340-HF](#)
[ACDBA260LR-HF](#) [ACDBA1100-HF](#) [SK310B-TP](#) [MA4E2502L-1246](#) [MA4E2502H-1246](#) [NRVBM120ET1G](#) [NSR01L30MXT5G](#) [NTE573](#)
[NTE6081](#)