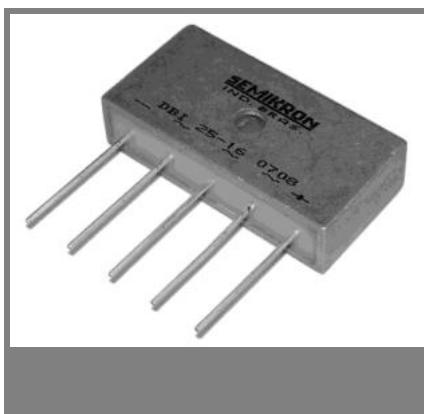


## DBI 25



$V_{RSM}, V_{RRM}$ V	$V_{VRMS}$ V	$I_D = 25 \text{ A}$ ( $T_c = 32^\circ\text{C}$ ) Types	$C_{\max}$ $\mu\text{F}$	$R_{\min}$ $\Omega$
400	280	DBI 25-04		0,3
800	560	DBI 25-08		0,7
1200	800	DBI 25-12		1
1600	1000	DBI 25-16		1,5
1800	1250	DBI 25-18		1,8

## Power Bridge Rectifiers

## DBI 25

## Features

- Isolated metal case with in-line wire leads
- Ideal for printed circuit boards
- Allow easy heatsink mounting
- Solder temperature: 260°C max. (max. 5 s)
- Blocking voltage up to 1600 V
- High surge current
- UL recognized, file no. E63532
- Lead-Free tinned terminals
- Standard packing: 54 pieces box

## Typical Applications\*

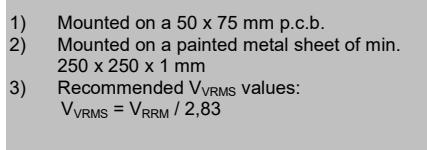
- 3 phase rectifier for power supplies
- Input rectifier for variable frequency drives
- Rectifier for DC motor field supplies
- Battery charger rectifiers
- Recommended snubber network:  $RC: 50 \Omega, 0.1 \mu\text{F}$  ( $P_R = 1 \text{ W}$ )

1) Mounted on a 50 x 75 mm p.c.b.

2) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

3) Recommended  $V_{VRMS}$  values:  
 $V_{VRMS} = V_{RRM} / 2,83$ 

Symbol	Conditions	Values	Units
$I_D$	$T_a = 46^\circ\text{C}$ , $P1/120$ , natural cooling	17	A
$I_{DCL}$	$T_a = 46^\circ\text{C}$ , chassis <sup>2)</sup>	11	A
	$T_a = 46^\circ\text{C}$ , $P1/120$ , natural cooling	17	A
	$T_a = 46^\circ\text{C}$ , chassis <sup>2)</sup>	11	A
	$T_a = 45^\circ\text{C}$ , isolated <sup>1)</sup>	2,9	A
$I_{FSM}$	$T_{vj} = 25^\circ\text{C}$ , 10 ms	370	A
	$T_{vj} = 150^\circ\text{C}$ , 10 ms	310	A
$i^2t$	$T_{vj} = 25^\circ\text{C}$ , 8,3 ... 10 ms	680	$\text{A}^2\text{s}$
	$T_{vj} = 150^\circ\text{C}$ , 8,3 ... 10 ms	480	$\text{A}^2\text{s}$
$V_F$	$T_{vj} = 25^\circ\text{C}$ , $I_F = 150 \text{ A}$	max. 2,2	V
$V_{(TO)}$	$T_{vj} = 150^\circ\text{C}$	max. 0,85	V
$r_T$	$T_{vj} = 150^\circ\text{C}$	max. 9	$\text{m}\Omega$
$I_{RD}$	$T_{vj} = 25^\circ\text{C}$ , $V_{RD} = V_{RRM}$	50	$\mu\text{A}$
$I_{RD}$	$T_{vj} = 150^\circ\text{C}$ , $V_{RD} = V_{RRM}$	5	$\text{mA}$
$t_{rr}$	$T_{vj} = 25^\circ\text{C}$	10	$\mu\text{s}$
$f_G$		2000	Hz
$R_{th(j-a)}$	isolated <sup>1)</sup>	21	K/W
	chassis <sup>2)</sup>	5	K/W
$R_{th(i-c)}$	total (from chips to bridge back side)	2,2	K/W
$R_{th(c-s)}$	total	0,15	K/W
$T_{vj}$		-40...+150	$^\circ\text{C}$
$T_{stg}$		-55...+130	$^\circ\text{C}$
$V_{isol}$	a.c. 50...60 Hz; r.m.s.; 1s / 1 min.	3000 / 2500	$\text{V}\sim$
$M_s$	torque for mounting (M4 screw)	2 $\pm$ 15%	Nm
$M_t$			Nm
$a$			$\text{m/s}^2$
$w$	approx.	21	g
$F_u$			A
Case	40 x 20 x 10 mm plus leads = 20 mm	DBI	



DB (B6U)

# DBI 25

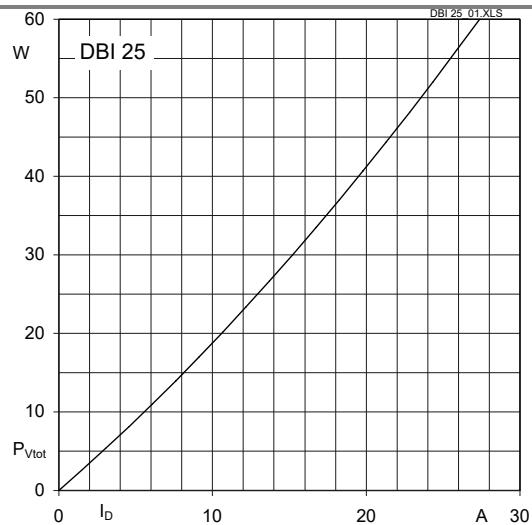


Fig. 3L Power dissipation vs. output current

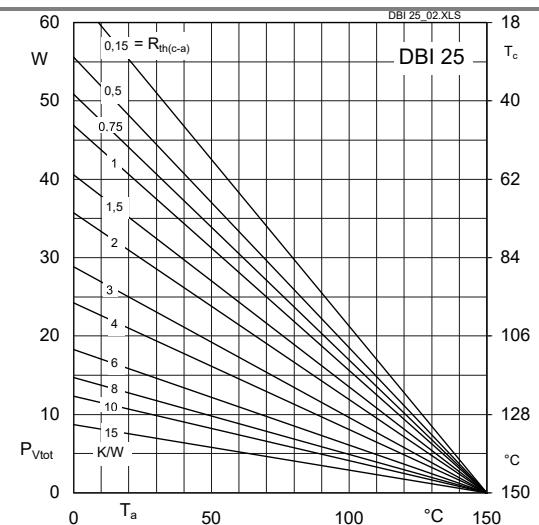


Fig. 3R Power dissipation vs. case temperature

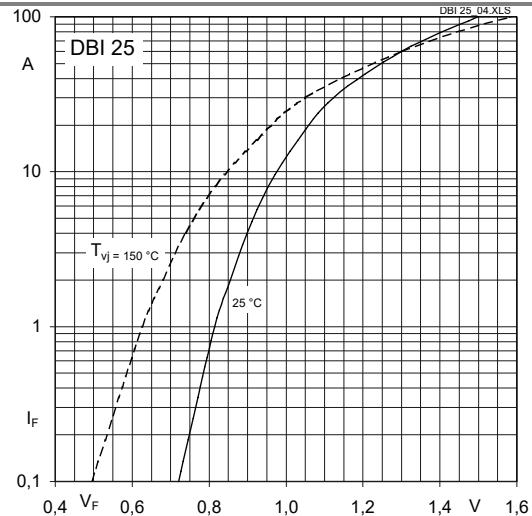
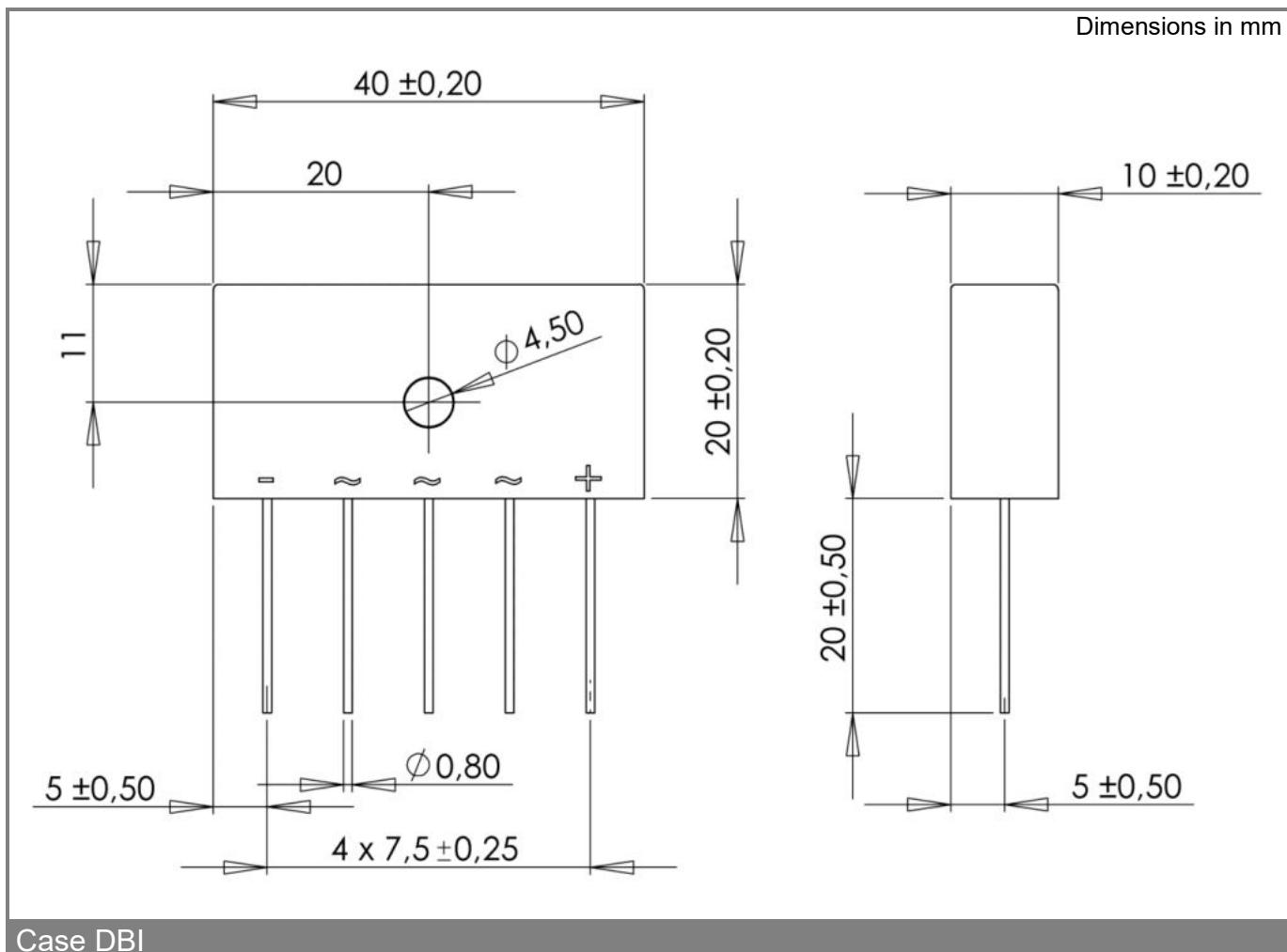


Fig. 9 Forward characteristics of a diode arm (typical)



Case DBI

**\*IMPORTANT INFORMATION AND WARNINGS**

The specifications of SEMIKRON products may not be considered as guarantee or assurance of product characteristics ("Beschaffenheitsgarantie"). The specifications of SEMIKRON products describe only the usual characteristics of products to be expected in typical applications, which may still vary depending on the specific application. Therefore, products must be tested for the respective application in advance. Application adjustments may be necessary. The user of SEMIKRON products is responsible for the safety of their applications embedding SEMIKRON products and must take adequate safety measures to prevent the applications from causing a physical injury, fire or other problem if any of SEMIKRON products become faulty. The user is responsible to make sure that the application design is compliant with all applicable laws, regulations, norms and standards. Except as otherwise explicitly approved by SEMIKRON in a written document signed by authorized representatives of SEMIKRON, SEMIKRON products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury. No representation or warranty is given and no liability is assumed with respect to the accuracy, completeness and/or use of any information herein, including without limitation, warranties of non-infringement of intellectual property rights of any third party. SEMIKRON does not assume any liability arising out of the applications or use of any product; neither does it convey any license under its patent rights, copyrights, trade secrets or other intellectual property rights, nor the rights of others. SEMIKRON makes no representation or warranty of non-infringement or alleged noninfringement of intellectual property rights of any third party which may arise from applications. Due to technical requirements our products may contain dangerous substances. For information on the types in question please contact the nearest SEMIKRON sales office. This document supersedes and replaces all information previously supplied and may be superseded by updates. SEMIKRON reserves the right to make changes.