

Bridge Rectifier

SK 95 D 16p

Features

- Compact design
- One screw mounting
- Solder free mounting with Press-Fit terminals
- Fully compatible with SEMITOP® Press-Fit types
- Heat transfer and isolation through direct copper bonded aluminium oxide ceramic (DBC)
- High surge currents
- Glass passivated diode chips
- UL recognized, file no. E 63 532

Typical Applications*

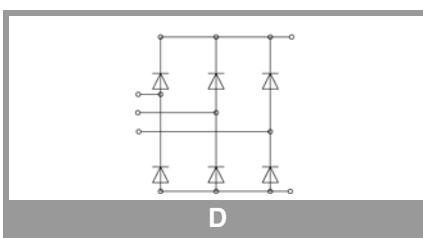
- Input rectifier for power supplies
- Rectifier

Absolute Maximum Ratings		Values	Unit
Symbol	Conditions		
Rectifier			
V_{RSM}	$T_j = 25^\circ\text{C}$	1700	V
V_{RRM}	$T_j = 25^\circ\text{C}$	1600	V
I_D	$T_s = 25^\circ\text{C}$	137	A
	$T_j = 150^\circ\text{C}$	104	A
I_{FSM}	$\sin 180^\circ$	635	A
	10 ms	560	A
i^2t	$\sin 180^\circ$	2016	A^2s
	10 ms	1568	A^2s
T_j		-40 ... 150	$^\circ\text{C}$

Absolute Maximum Ratings		Values	Unit
Symbol	Conditions		
Module			
$I_t(\text{RMS})$	$T_{\text{terminal}} = 100^\circ\text{C}, T_S = 60^\circ\text{C}$	40	A
T_{stg}		-40 ... 125	$^\circ\text{C}$
V_{isol}	AC, sinusoidal, $t = 1 \text{ min}$	2500	V

Characteristics		min.	typ.	max.	Unit
Symbol	Conditions				
Rectifier					
V_F	$I_F = 25 \text{ A}$	$T_j = 25^\circ\text{C}$	1.00	1.21	V
	chiplevel	$T_j = 125^\circ\text{C}$	0.90	1.10	V
V_{FO}	chiplevel	$T_j = 25^\circ\text{C}$	0.88	0.98	V
		$T_j = 125^\circ\text{C}$	0.73	0.83	V
r_F	chiplevel	$T_j = 25^\circ\text{C}$	4.8	9.2	$\text{m}\Omega$
		$T_j = 125^\circ\text{C}$	6.8	11	$\text{m}\Omega$
I_R	$T_j = 145^\circ\text{C}, V_{RRM}$			1.1	mA
$R_{\text{th(j-s)}}$	per Diode			1.2	K/W

Characteristics		min.	typ.	max.	Unit
Symbol	Conditions				
Module					
M_s	to heatsink	1.8		2	Nm
w	weight		19		g



SK 95 D 16p

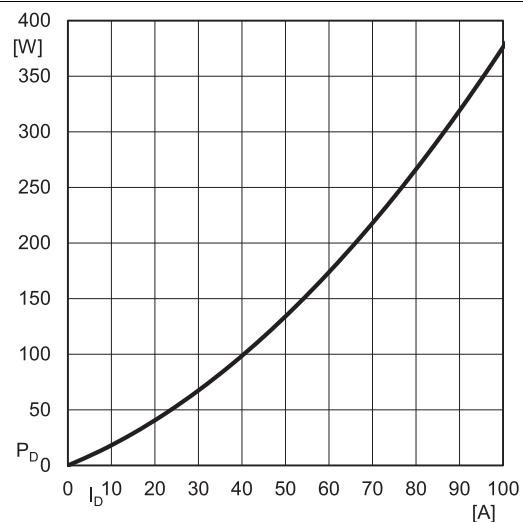


Fig. 1: Power dissipation vs. Output current

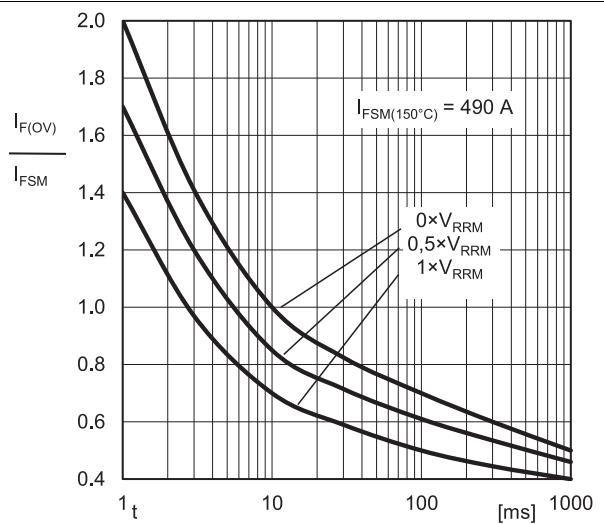


Fig. 2: Surge overload current vs time

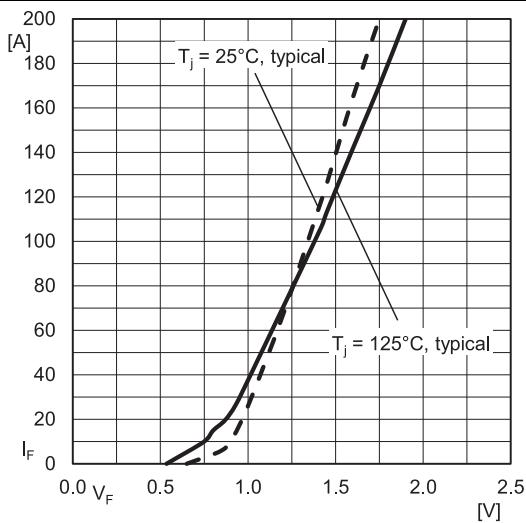


Fig. 3: Forward characteristic of single diode

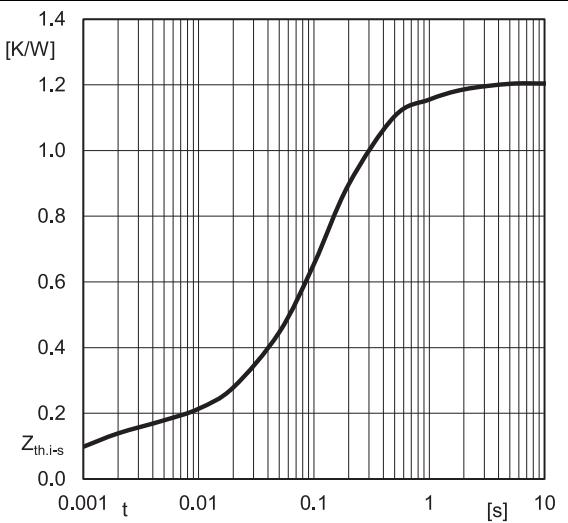
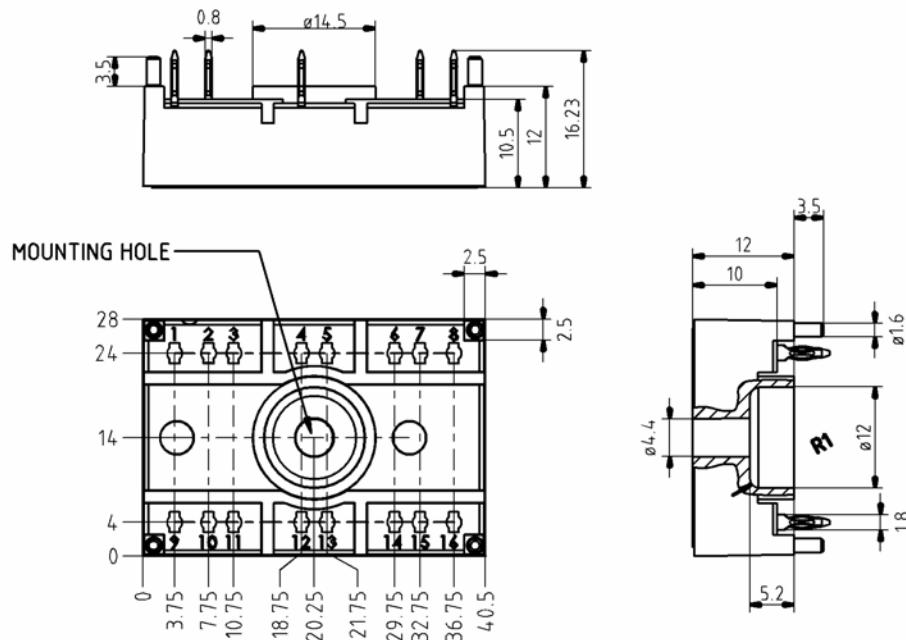


Fig. 4: Transient thermal impedance vs. time

dimensions in mm
tolerance system: ISO 2768-m



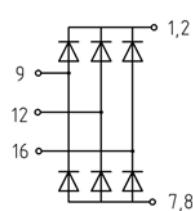
Suggested drilled hole diameter for terminal pins in the circuit board:

- minimum: 1,575mm
- typical: 1,6mm
- maximum: 1,625mm

Suggested hole diameter for the mounting pins in the circuit board: 2mm

These documents are SEMIKRON properties. SEMIKRON reserves all copyrights.
All copying and transmitting of this information requires written permission.
For the case of industrial property rights, SEMIKRON reserves all rights

SEMITOP 2 Press-Fit



D

This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, chapter IX.

***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 non-infringement 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.