

SK 95 D 16p



SEMITOP® 2 Press-Fit

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*

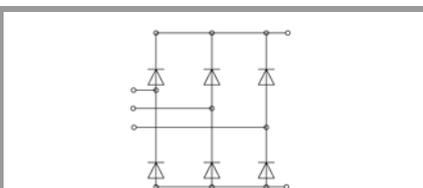
- Input rectifier for power supplies
- Rectifier

Absolute Maximum Ratings				
Symbol	Conditions	Values	Unit	
Rectifier				
V_{RSM}	$T_j = 25\text{ °C}$	1700	V	
V_{RRM}	$T_j = 25\text{ °C}$	1600	V	
I_D	$T_j = 150\text{ °C}$	$T_s = 25\text{ °C}$	137	A
		$T_s = 70\text{ °C}$	104	A
I_{FSM}	sin 180° 10 ms	$T_j = 25\text{ °C}$	635	A
		$T_j = 150\text{ °C}$	560	A
i^2t	sin 180° 10 ms	$T_j = 25\text{ °C}$	2016	A ² s
		$T_j = 150\text{ °C}$	1568	A ² s
T_j		-40 ... 150	°C	

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

Characteristics						
Symbol	Conditions	min.	typ.	max.	Unit	
Rectifier						
V_F	$I_F = 25\text{ A}$	chipelevel	$T_j = 25\text{ °C}$	1.00	1.21	V
			$T_j = 125\text{ °C}$	0.90	1.10	V
V_{F0}	chipelevel		$T_j = 25\text{ °C}$	0.88	0.98	V
			$T_j = 125\text{ °C}$	0.73	0.83	V
r_F	chipelevel		$T_j = 25\text{ °C}$	4.8	9.2	mΩ
			$T_j = 125\text{ °C}$	6.8	11	mΩ
I_R	$T_j = 145\text{ °C}, V_{RRM}$			1.1	mA	
$R_{\text{th(j-s)}}$	per Diode		1.2		K/W	

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



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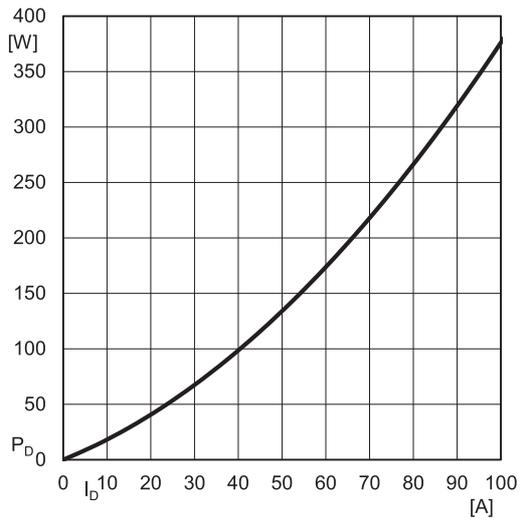


Fig. 1: Power dissipation vs. Output current

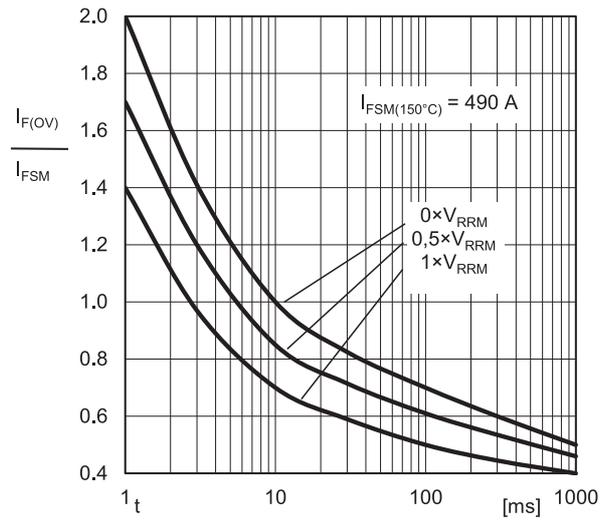


Fig. 2: Surge overload current vs time

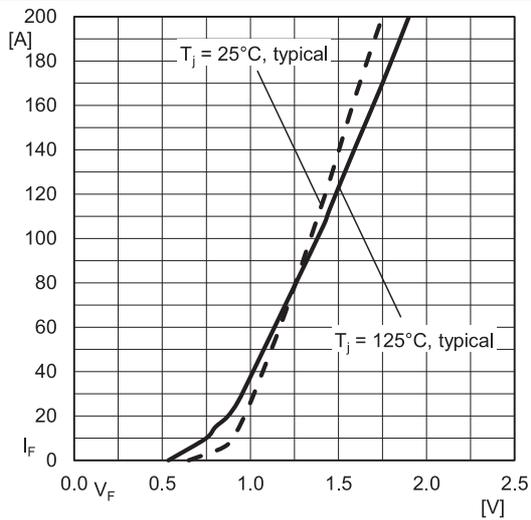


Fig. 3: Forward characteristic of single diode

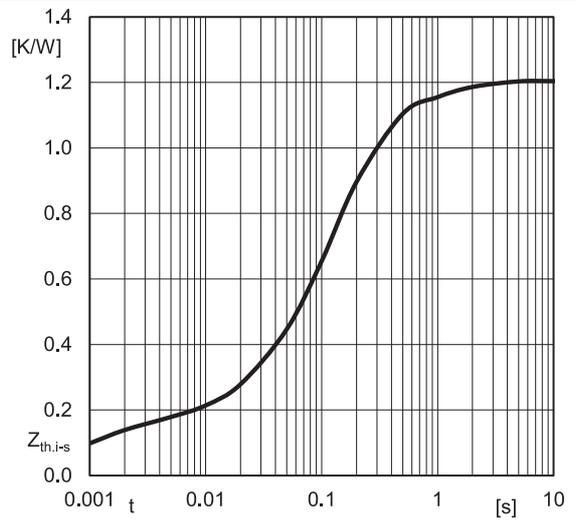
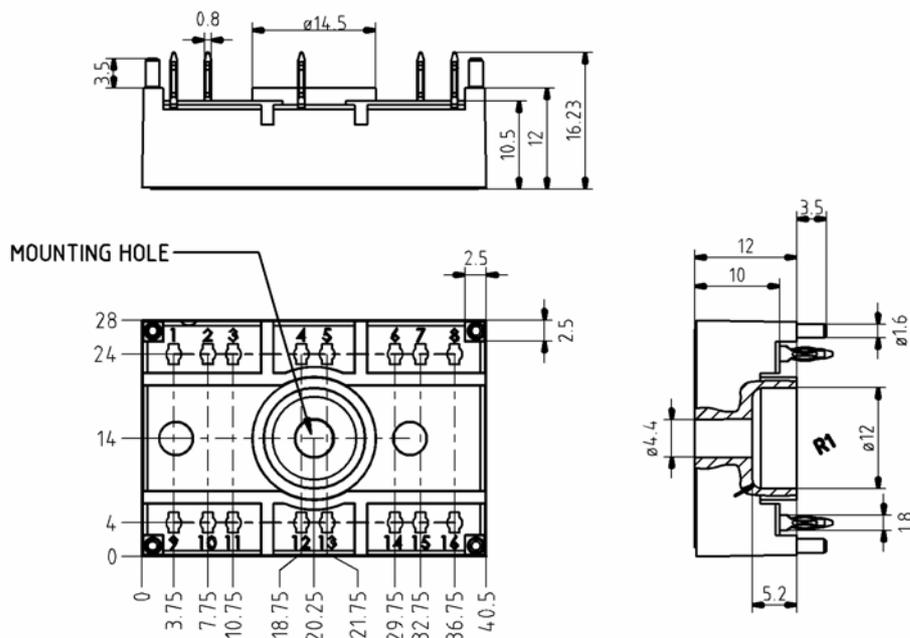


Fig. 4: Transient thermal impedance vs. time

dimensions in mm
tolerance system: ISO 2768-m



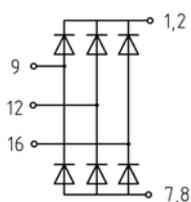
Suggested drilled hole diameter for terminal pins in the circuit board:

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

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

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SEMITOP 2 Press-Fit



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

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