

# SKBa B500/445-4



## Avalanche Bridge Rectifiers

### SKBa B500/445-4

#### Features

- Square plastic case with screw terminals
- High blocking voltage
- With avalanche characteristics

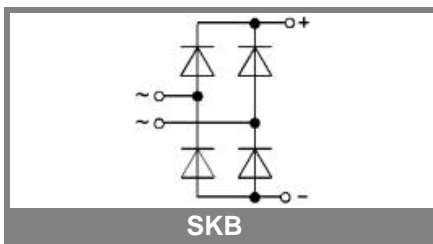
#### Typical Applications\*

- Internal power supplies for electronic equipment
- Electronic control equipment
- DC motors
- Field rectifiers for DC motors
- Battery charger rectifiers
- Inductive loads: Solenoids, Motor brakes

- 1) Freely suspended or mounted on an insulator
- 2) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

$V_{(BR) \min}$ V	$V_{VRMS}$ V	$I_D = 5 \text{ A}$ ( $T_a = 45 \text{ }^\circ\text{C}$ ) Types	$C_{\max}$ $\mu\text{F}$	$R_{\min}$ $\Omega$
1300	500	SKBa B500/445-4		2

Symbol	Conditions	Values	Units
$I_D$	$T_a = 45 \text{ }^\circ\text{C}$ , isolated <sup>1)</sup>	5	A
	$T_a = 45 \text{ }^\circ\text{C}$ , chassis <sup>2)</sup>	5	A
$I_{DCL}$	$T_a = 45 \text{ }^\circ\text{C}$ , isolated <sup>1)</sup>	4	A
	$T_a = 45 \text{ }^\circ\text{C}$ , chassis <sup>2)</sup>	4	A
$I_{FSM}$	$T_{vj} = 25 \text{ }^\circ\text{C}$ , 10 ms	180	A
	$T_{vj} = 150 \text{ }^\circ\text{C}$ , 10 ms	150	A
$i^2t$	$T_{vj} = 25 \text{ }^\circ\text{C}$ , 8,3 ... 10 ms	160	A <sup>2</sup> s
	$T_{vj} = 150 \text{ }^\circ\text{C}$ , 8,3 ... 10 ms	110	A <sup>2</sup> s
$P_{RSM}$	$t_p = 10 \text{ } \mu\text{s}$	3000	W
$V_F$	$T_{vj} = 25 \text{ }^\circ\text{C}$ , $I_F = 80 \text{ A}$	max. 2,65	V
$V_{(TO)}$	$T_{vj} = 150 \text{ }^\circ\text{C}$	0,8	V
$r_T$	$T_{vj} = 150 \text{ }^\circ\text{C}$	24	m $\Omega$
$I_{RD}$	$T_{vj} = 25 \text{ }^\circ\text{C}$ , $V_{RD} = V_{(BR) \min}$	10	$\mu\text{A}$
$I_{RD}$	$T_{vj} = 150 \text{ }^\circ\text{C}$ , $V_{RD} = V_{(BR) \min}$	0,6	mA
$t_{rr}$	$T_{vj} = 25 \text{ }^\circ\text{C}$	10	$\mu\text{s}$
$f_G$		2000	Hz
$R_{th(j-a)}$	isolated <sup>1)</sup>	13	K/W
$T_{vj}$		- 40 ... + 150	$^\circ\text{C}$
$T_{stg}$		- 55 ... + 150	$^\circ\text{C}$
$M_s$	to heatsink	1,5 $\pm$ 15%	Nm
$M_t$	to terminals	1 $\pm$ 15 %	Nm
m		60	g
$F_u$		6	A
Case		G 8	



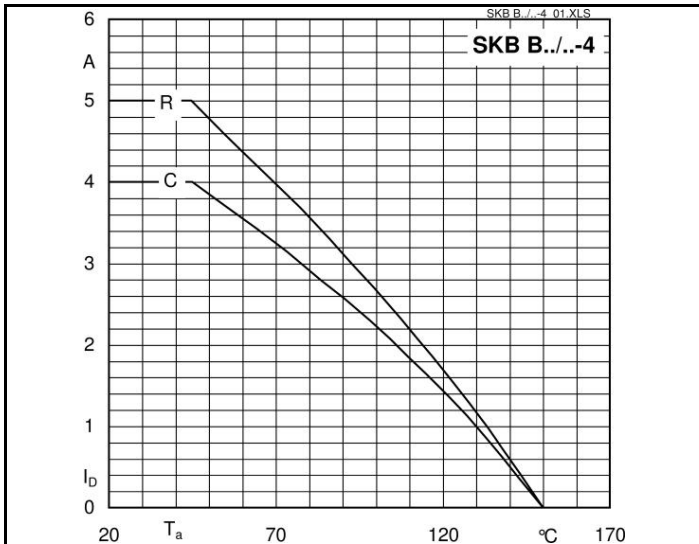


Fig. 1 Rated output current vs. ambient temperature

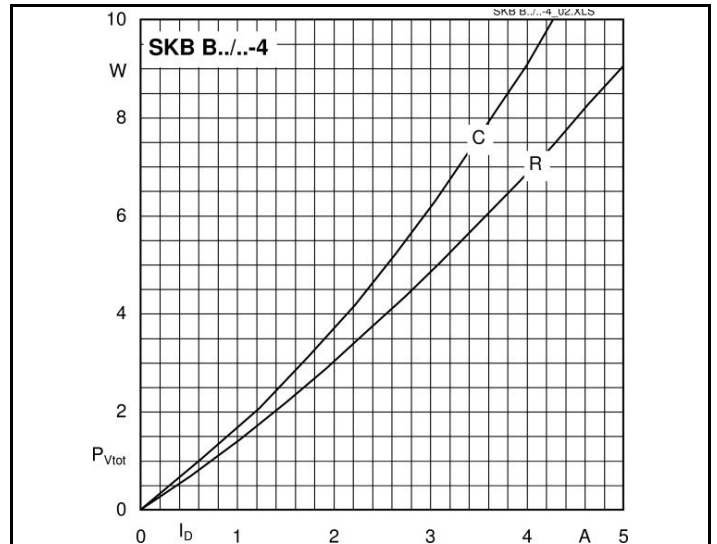


Fig. 2 Power dissipation vs. output current

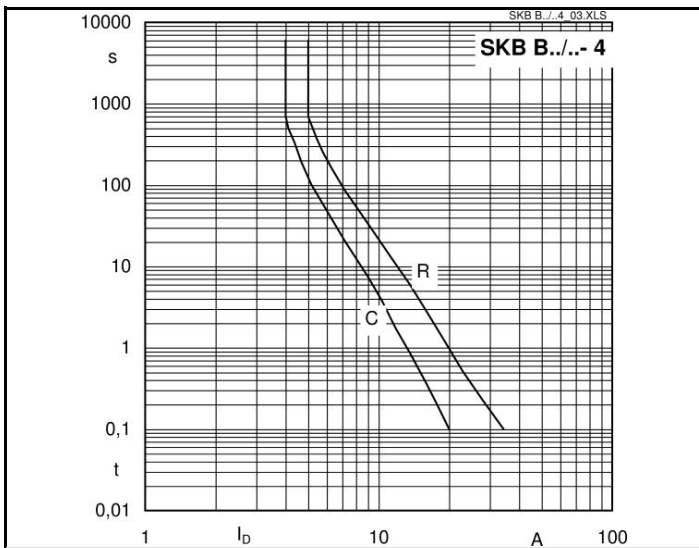


Fig. 6 Rated overload characteristics vs. time

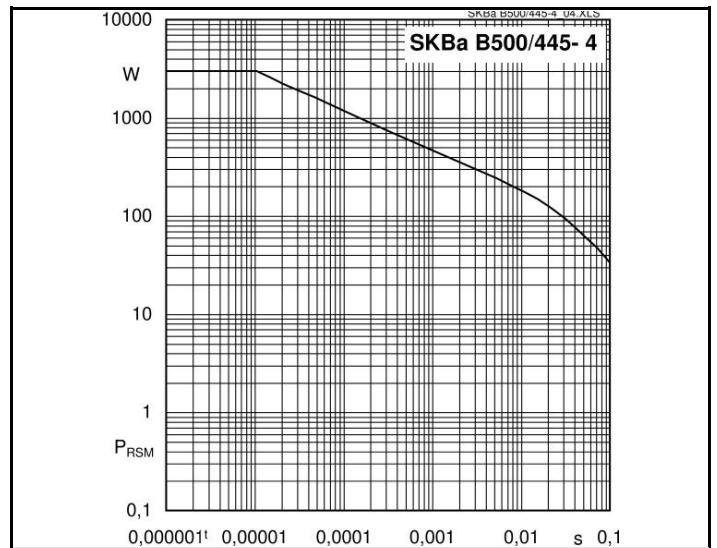


Fig. 7 Rated reverse power dissipation vs. time

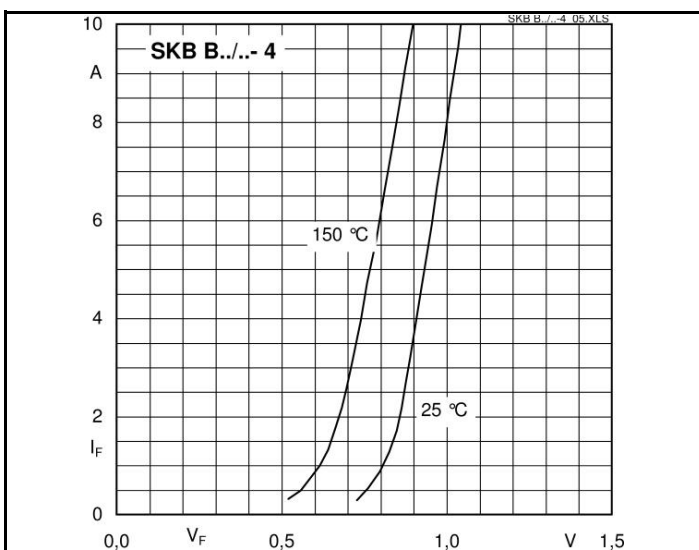
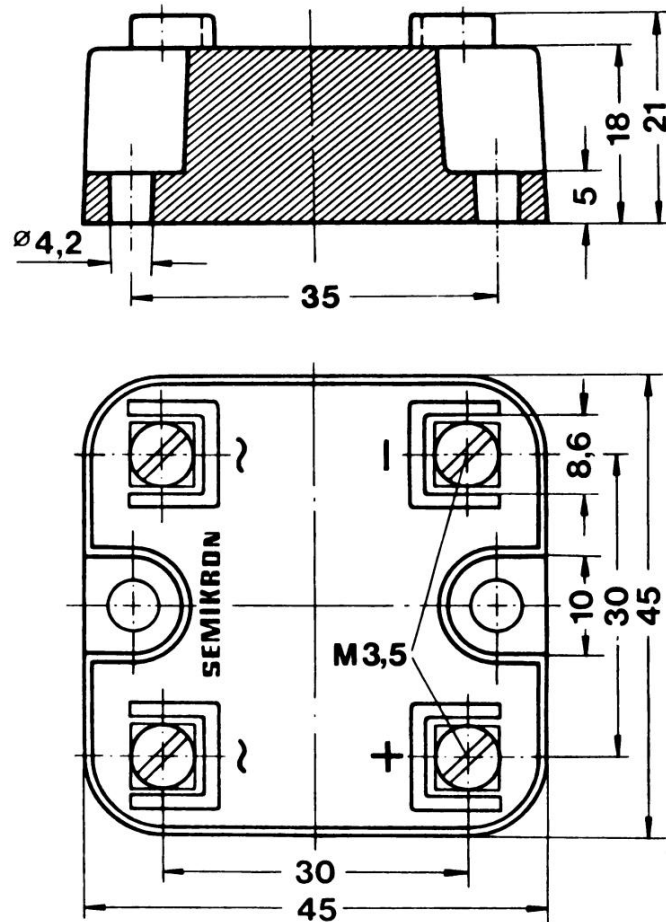


Fig. 9 Forward characteristics of a diode arm



Case G 8

\* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our staff.