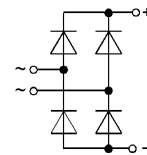


**Power Bridge Rectifiers**

**SKB B . . / . . -4**  
**SKBa B . . / . . -4**  
**SKB 15**



**Features**

- Square plastic case with screw terminals
- Blocking voltage to 1600 V
- **SKB 15** with metal baseplate for improved heat transfer
- **SKBa** with avalanche characteristics

**Typical Applications**

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

V <sub>RSM</sub> V <sub>RRM</sub>	V <sub>VRMS</sub> V	I <sub>D</sub>			
		5 A (T <sub>amb</sub> = 45 °C)		15 A (T <sub>case</sub> = 117 °C)	
V	V	Types	R <sub>min</sub> Ω	Types	R <sub>min</sub> Ω
200	60	–	–	<b>SKB 15/02 A2</b>	0,15
400	125	<b>SKB B 80/70-4</b>	0,5	<b>SKB 15/04 A2</b>	0,3
800	250	<b>SKB B 250/220-4</b>	1	<b>SKB 15/08 A2</b>	0,5
1200	380	<b>SKB B 500/445-4</b>	2	<b>SKB 15/12 A2</b>	0,75
1400	440	–	–	<b>SKB 15/14 A2</b>	0,9
1600	500	–	–	<b>SKB 15/16 A2</b>	1
V <sub>(BR)</sub> min	V <sub>VRMS</sub> V	Avalanche Type			
1300	500	<b>SKBa B 500/445-4</b>	2	–	

Symbol	Conditions	SKB.. -4 SKBa.. -4	SKB 15	Units
I <sub>D</sub>	T <sub>amb</sub> = 45 °C; isolated <sup>1)</sup> chassis <sup>2)</sup> P5A/100	5 5 –	5 11 17	A A A
I <sub>DCL</sub>	T <sub>amb</sub> = 45 °C; isolated <sup>1)</sup> chassis <sup>2)</sup> P5A/100	4 4 –	4 9 14	A A A
I <sub>FSM</sub>	T <sub>vj</sub> = 25 °C, 10 ms	180	370	A
i <sup>2</sup> t	T <sub>vj</sub> = 150 °C, 10 ms	150	320	A
P <sub>RSM</sub>	T <sub>vj</sub> = 25 °C, 8,3...10 ms	160	680	A <sup>2</sup> s
	T <sub>vj</sub> = 150 °C, 8,3...10 ms	110	500	A <sup>2</sup> s
V <sub>F</sub>	t <sub>p</sub> = 10 μs; avalanche type	3000	–	W
V <sub>(TO)</sub>	T <sub>vj</sub> = 25 °C; I <sub>F</sub> = 80 A	2,65	–	V
r <sub>T</sub>	I <sub>F</sub> = 150 A	–	2,2	V
I <sub>RD</sub>	T <sub>vj</sub> = 150 °C	0,8	0,85	V
t <sub>rr</sub> f <sub>G</sub>	T <sub>vj</sub> = 150 °C	24	12	mΩ
	T <sub>vj</sub> = 25 °C; V <sub>RD</sub> = V <sub>RRM</sub>	0,1	0,3	mA
	V <sub>RD</sub> = V <sub>(BR)min</sub>	10	–	μA
	T <sub>vj</sub> = 150 °C; V <sub>RD</sub> = V <sub>RRM</sub>	0,6	5	mA
	T <sub>vj</sub> = 25 °C	typ. 10 2000		μs Hz
R <sub>thjc</sub>	total	–	1	°C/W
R <sub>thch</sub>	total	–	0,3	°C/W
R <sub>thja</sub>	isolated <sup>1)</sup> chassis <sup>2)</sup> P5A/100	13 – –	12 4,3 2,7	°C/W °C/W °C/W
T <sub>vj</sub>		– 40...+150		°C
T <sub>stg</sub>		– 55...+150		°C
V <sub>isol</sub>	a.c. 50...60 Hz; r.m.s.; 1 s / 1 min	–	3000/2500	V~
RC	P <sub>R</sub> = 1 W	20 ... 50	20 ... 50	Ω
F <sub>u</sub>		10	100	nF
M <sub>1</sub>	to heatsink	6	20	A
M <sub>2</sub>	SI units	1,5 ± 15 %		Nm
	US units	13 ± 15 %		lb. in.
w	SI units	1 ± 15 %		Nm
	US units	9 ± 15 %		lb. in.
Case		60	65	g
		G 8	G 9	

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

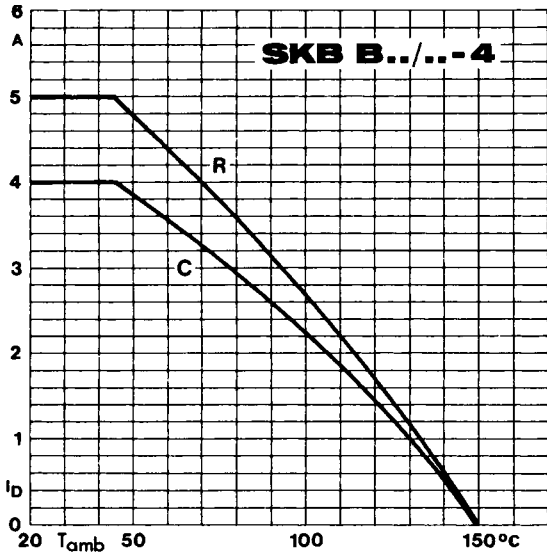


Fig. 1 Rated output current vs. ambient temperature

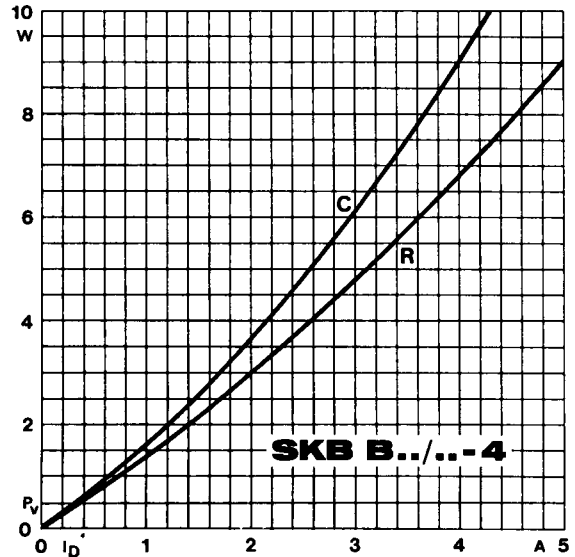


Fig. 2 Power dissipation vs. output current

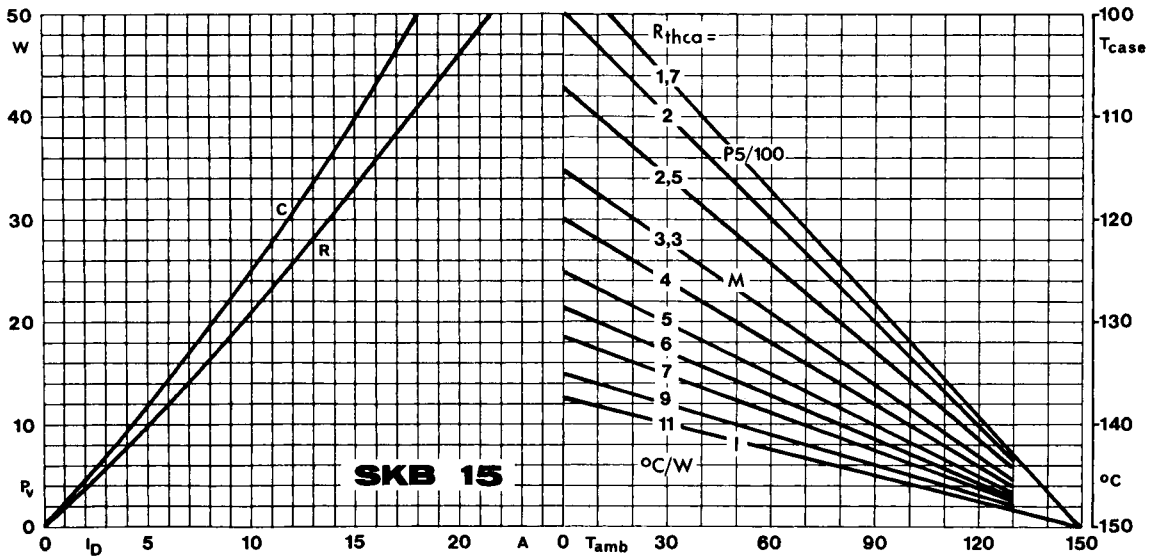


Fig. 3 Power dissipation vs. output current and case temperature

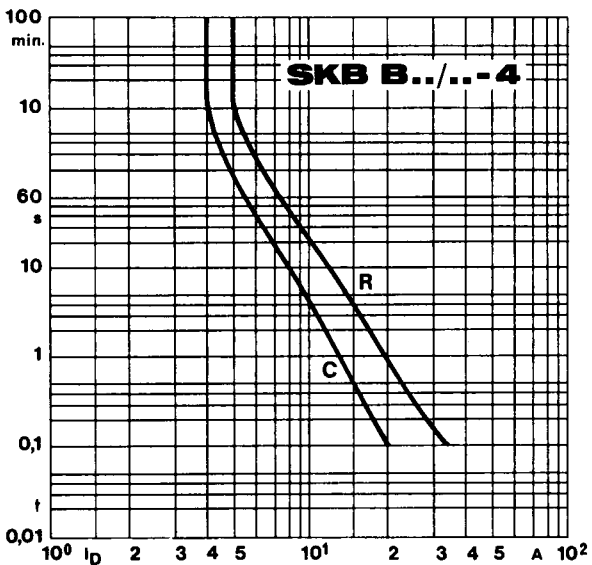


Fig. 6 a Rated overload current vs. time

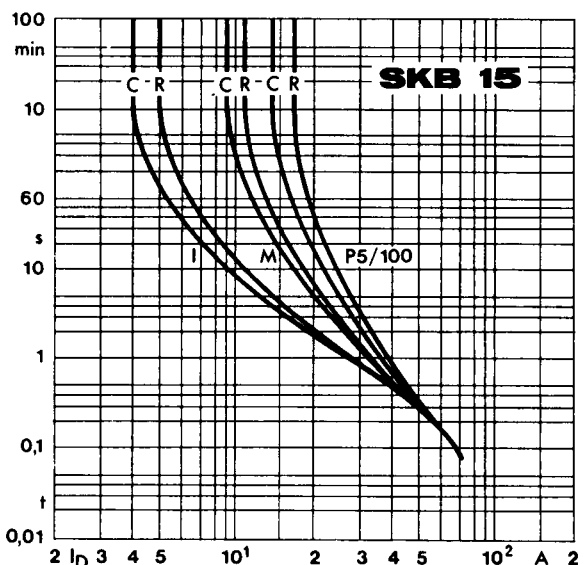


Fig. 6 b Rated overload current vs. time

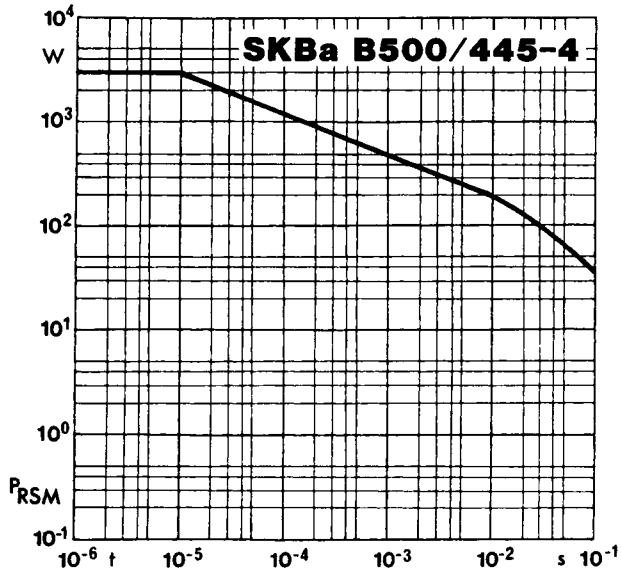


Fig. 7 Rated reverse power dissipation vs. time

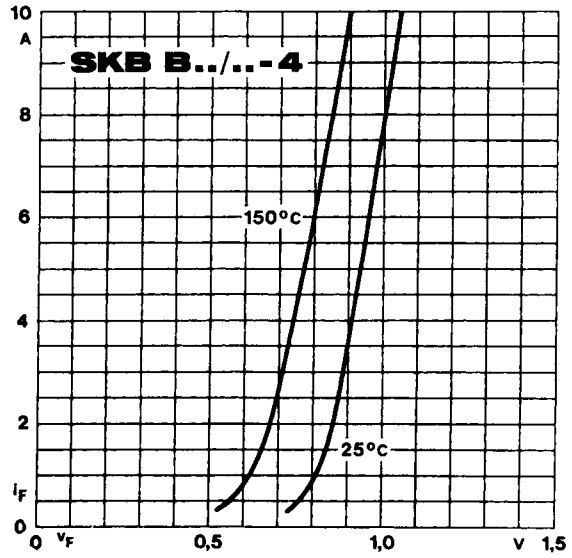


Fig. 9 a Forward characteristics of a single diode

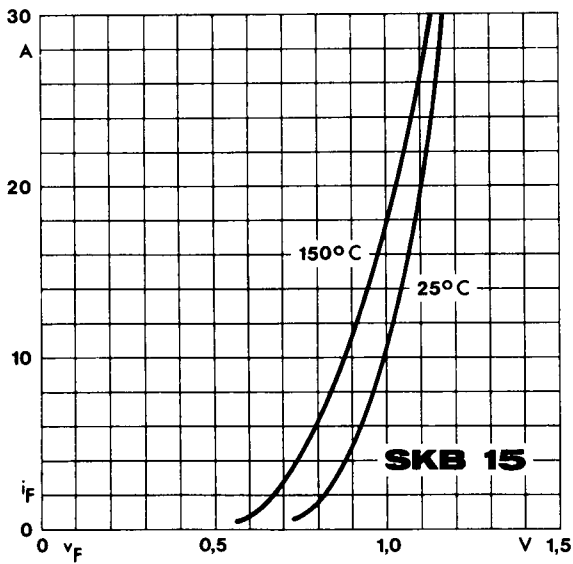
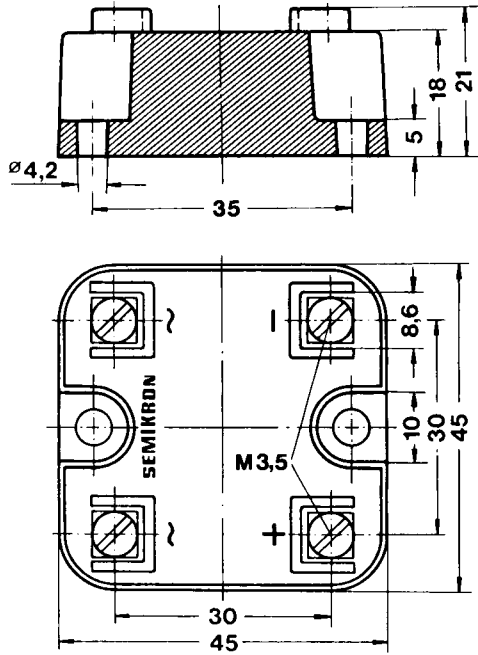


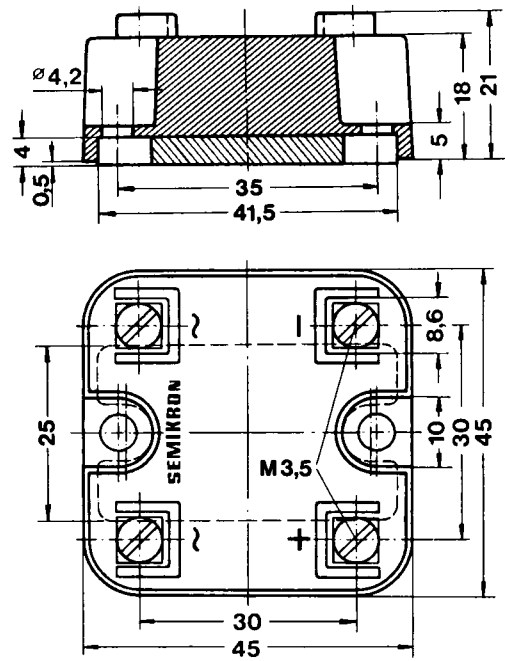
Fig. 9 b Forward characteristics of a single diode

SKBB.../...4  
 SKBaB.../...4  
 Case G 8



Dimensions in mm

SKB 15  
 Case G 9



Dimensions in mm