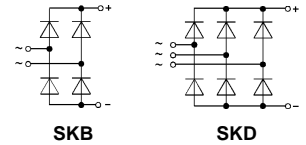


## SEMIPOINT® 3 Power Bridge Rectifiers

**SKB 52      SKD 62**  
**SKB 72      SKD 82**



### Features

- Robust plastic case with screw terminals
- Large, isolated base plate
- Blocking voltage to 1800 V
- High surge currents
- **SKB** = single phase bridge rectifier
- **SKD** = three phase bridge rectifier
- Easy chassis mounting
- UL recognized file no. E 63 532

### Typical Applications

- Single and three phase rectifiers for power supplies
- Input rectifiers for variable frequency drives
- Rectifiers for DC motor field supplies
- Battery charger rectifiers

V <sub>RSM</sub> V <sub>RRM</sub>	I <sub>D</sub> (T <sub>case</sub> = . . .)			
	50 A (99 °C)	70 A (101 °C)	60 A (110 °C)	80 A (110 °C)
200 V	<b>SKB 52/02</b>	<b>SKB 72/02</b>	<b>SKD 62/02</b>	<b>SKD 82/02</b>
400 V	<b>SKB 52/04</b>	<b>SKB 72/04</b>	<b>SKD 62/04</b>	<b>SKD 82/04</b>
800 V	<b>SKB 52/08</b>	<b>SKB 72/08</b>	<b>SKD 62/08</b>	<b>SKD 82/08</b>
1200 V	<b>SKB 52/12</b>	<b>SKB 72/12</b>	<b>SKD 62/12</b>	<b>SKD 82/12</b>
1400 V	<b>SKB 52/14</b>	<b>SKB 72/14</b>	<b>SKD 62/14</b>	<b>SKD 82/14</b>
1600 V	<b>SKB 52/16</b>	<b>SKB 72/16</b>	<b>SKD 62/16</b>	<b>SKD 82/16</b>
1800 V	<b>SKB 52/18</b>	<b>SKB 72/18</b>	<b>SKD 62/18*</b>	<b>SKD 82/18*</b>

Symbol	Conditions	SKB 52	SKD 62	SKB 72	SKD 82
I <sub>D</sub>	T <sub>case</sub> = 110 °C; resistive/ inductive load	42 A	60 A	60 A	80 A
	T <sub>amb</sub> = 45 °C, isolated <sup>1)</sup> chassis <sup>2)</sup> P 1A/120 P 1A/200	9,5 A	10,5 A	10 A	12 A
		21,5 A	24 A	23,5 A	26 A
		40 A	46 A	48 A	54 A
		45 A	53 A	54 A	63 A
I <sub>FSM</sub>	T <sub>vj</sub> = 25 °C, 10 ms	500 A		750 A	
	T <sub>vj</sub> = 150 °C, 10 ms	425 A		640 A	
i <sup>2</sup> t	T <sub>vj</sub> = 25 °C, 8,3...10 ms	1250 A <sup>2</sup> s		2800 A <sup>2</sup> s	
	T <sub>vj</sub> = 150 °C, 8,3...10 ms	900 A <sup>2</sup> s		2000 A <sup>2</sup> s	
V <sub>F</sub>	T <sub>vj</sub> = 25 °C; I <sub>F</sub> = 150 A	1,8 V		1,6 V	
V <sub>(TO)</sub>	T <sub>vj</sub> = 150 °C	0,85 V		0,85 V	
r <sub>T</sub>	T <sub>vj</sub> = 150 °C	8 mΩ		5 mΩ	
I <sub>RD</sub>	T <sub>vj</sub> = 25/150 °C; V <sub>RD</sub> = V <sub>RRM</sub>	0,5 / 5 mA		0,5 / 6 mA	
R <sub>thjc</sub>	per diode	1,5 °C/W		1,1 °C/W	
	total, SKB	0,375 °C/W		0,275 °C/W	
	total, SKD	0,25 °C/W		0,183 °C/W	
R <sub>thch</sub>	total	0,07 °C/W			
T <sub>vj</sub>		- 40 . . . + 150 °C			
T <sub>stg</sub>		- 40 . . . + 125 °C			
V <sub>isol</sub>	a.c. 50...60 Hz; r.m.s.; 1s/1min	3600 V~ / 3000 V~			
M <sub>1</sub>	case to heatsink } SI units/ busbars to } US units terminals	5 Nm/44 lb. in. ± 15 %			
M <sub>2</sub>		5 Nm/44 lb. in. ± 15 %			
w		165 g			
Case		G 35	G 36	G 35	G 36

\* Available in limited quantities

<sup>1)</sup> Freely suspended or mounted on an isolator

<sup>2)</sup> Mounted on a painted metal sheet of minimum 250 x 250 x 1 mm: R<sub>thha</sub> = 1,8 °C/W

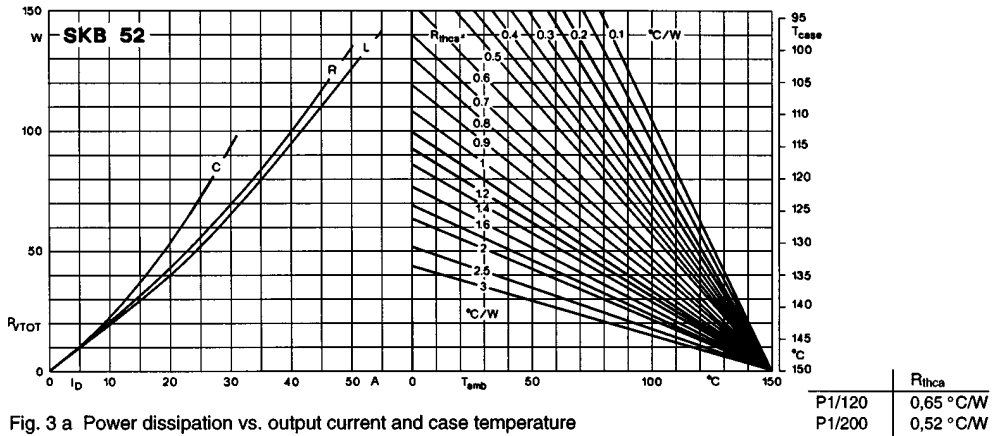


Fig. 3 a Power dissipation vs. output current and case temperature

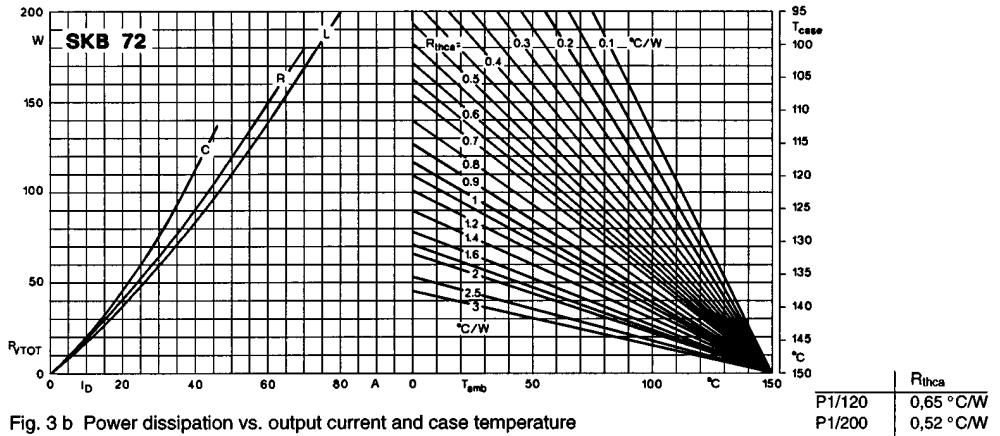


Fig. 3 b Power dissipation vs. output current and case temperature

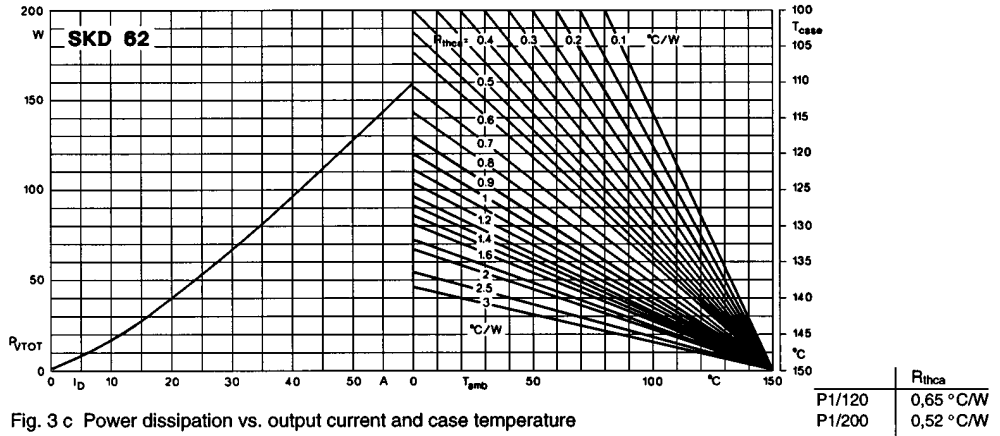


Fig. 3 c Power dissipation vs. output current and case temperature

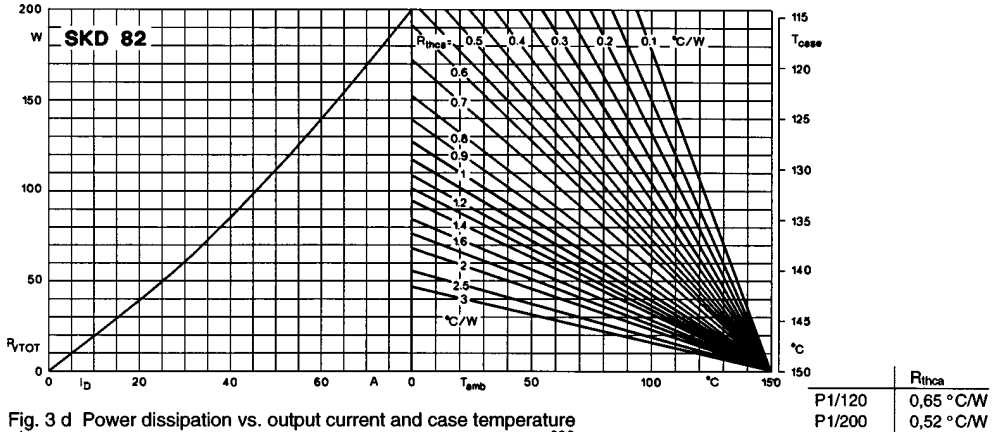


Fig. 3 d Power dissipation vs. output current and case temperature

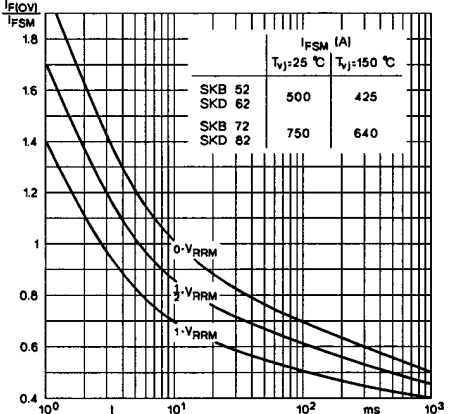


Fig. 5 Surge overload current vs. time

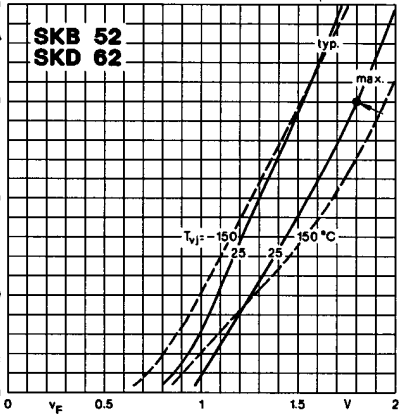


Fig. 9 a Forward characteristics of a single diode

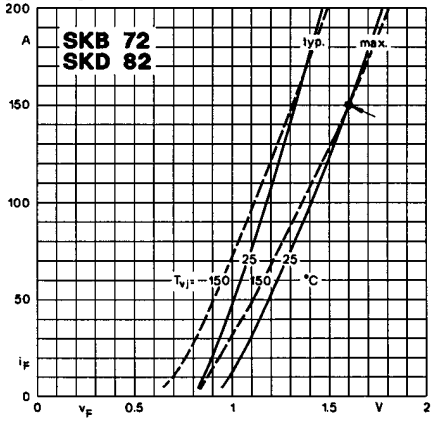


Fig. 9 b Forward characteristics of a single diode

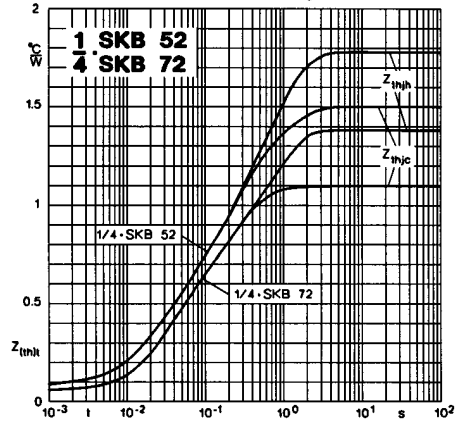
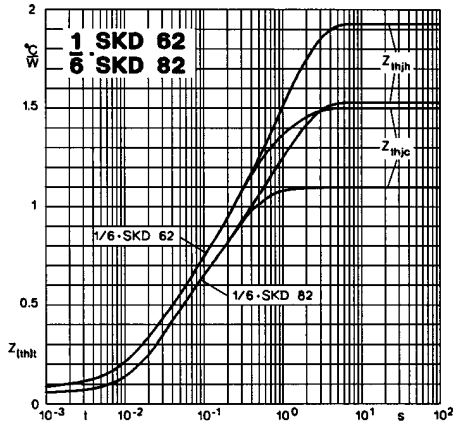
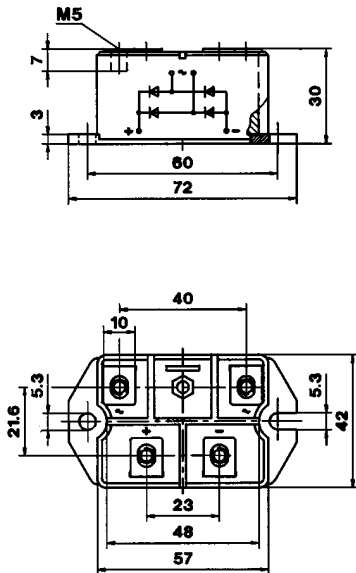


Fig. 12 a Transient thermal impedance vs. time



SKB 52  
SKB 72  
Case G 35

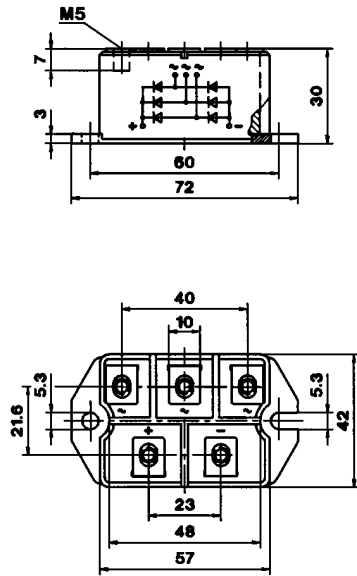
SEMIPONT®3



Dimensions in mm

SKD 62  
SKD 82  
Case G 36

SEMIPONT®3



Dimensions in mm