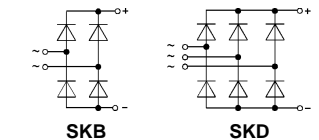


## Power Bridge Rectifiers

### SKB 50 SKD 50



### Features

- Isolated metal case with screw terminals
- Blocking voltage to 1600 V
- High surge current
- **SKB** = single phase bridge rectifier
- **SKD** = three phase bridge rectifier
- Easy chassis mounting

### 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

$V_{RSM}$ $V_{RRM}$  V	$I_D$ ( $T_{case} = \dots$ )			
	50 A (64 °C)		50 A (92 °C)	
	Types	$R_{min}$ $\Omega$	Types	$R_{min}$ $\Omega$
200	<b>SKB 50/02 A3</b>	0,1	<b>SKD 50/02 A3</b>	0,1
400	<b>SKB 50/04 A3</b>	0,3	<b>SKD 50/04 A3</b>	0,2
800	<b>SKB 50/08 A3</b>	0,4	<b>SKD 50/08 A3</b>	0,4
1200	<b>SKB 50/12 A3</b>	0,6	<b>SKD 50/12 A3</b>	0,6
1400	<b>SKB 50/14 A3</b>	0,7	<b>SKD 50/14 A3</b>	0,7
1600	<b>SKB 50/16 A3</b>	0,8	<b>SKD 50/16 A3</b>	0,8

Symbol	Conditions	SKB 50	SKD 50	Units	
$I_D$	$T_{amb} = 45$ °C; isolated <sup>1)</sup> chassis <sup>2)</sup>	10 20 34	10 22 40	A A A	
	$T_{amb} = 35$ °C; P1A/120 F	47	60	A	
	$T_{amb} = 45$ °C; isolated <sup>1)</sup> chassis <sup>2)</sup>	8 16 29	10 22 40	A A A	
$I_{DCL}$	$T_{amb} = 150$ °C; P1A/120 F	40	60	A	
$I_{FSM}$	$T_{vj} = 25$ °C; 10 ms	750		A	
	$T_{vj} = 150$ °C; 10 ms	600		A	
$i^2t$	$T_{vj} = 25$ °C; 8,3...10 ms	2800		A <sup>2</sup> s	
	$T_{vj} = 150$ °C; 8,3...10 ms	1800		A <sup>2</sup> s	
$V_F$	$T_{vj} = 25$ °C; $I_F = 150$ A	1,6		V	
$V_{(TO)}$	$T_{vj} = 150$ °C	0,85		V	
$r_T$	$T_{vj} = 150$ °C	8		m $\Omega$	
$I_{RD}$	$T_{vj} = 25$ °C; $V_{RD} = V_{RRM}$	1		mA	
	$T_{vj} = 150$ °C; $V_{RD} = V_{RRM}$	10		mA	
$t_{rr}$	$T_{vj} = 25$ °C	typ. 10		$\mu$ s	
$f_G$		2000		Hz	
$R_{thjc}$ $R_{thch}$ $R_{thja}$	total	0,65	0,45	°C/W	
	total	0,06	0,06	°C/W	
	$T_{amb} = 35$ °C; P1A/120 F	0,9	0,7	°C/W	
	isolated <sup>1)</sup> chassis <sup>2)</sup>	5,7 2,5	5,5 2,3	°C/W °C/W	
	P1A /120	1,3	1,1	°C/W	
$T_{vj}$		- 40...+ 150		°C	
$T_{stg}$		- 55...+ 150		°C	
$V_{isol}$ RC	a.c. 50...60 Hz; r.m.s., 1 s / 1 min $P_R = 1$ W	3000 / 2500		V~	
		50		$\Omega$	
		0,1		$\mu$ F	
$F_u$		50		A	
$M_1$	to heatsink	SI units	5 ± 15 %		Nm
		US units	44 ± 15 %		lb. in.
$M_2$	to terminals	SI units	3 ± 15 %		Nm
		US units	26 ± 15 %		lb. in.
w		250		g	
Case		G 14	G 15		

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

<sup>2)</sup> Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

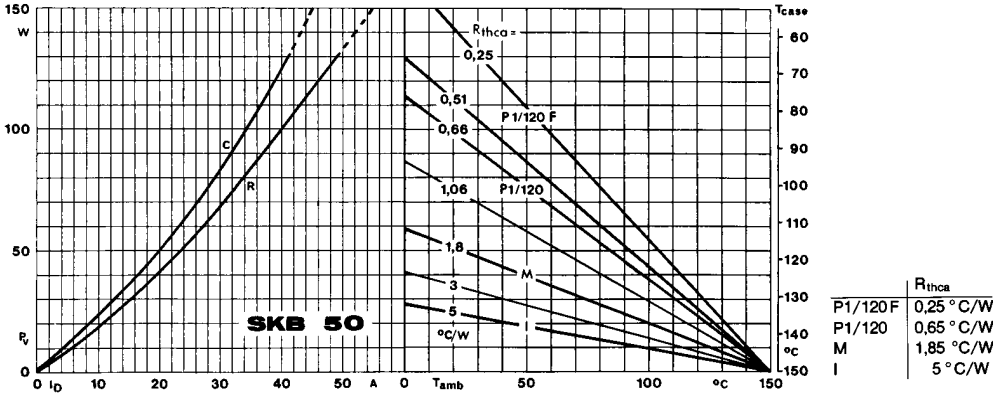


Fig. 3 a Power dissipation vs. output current and case temperature

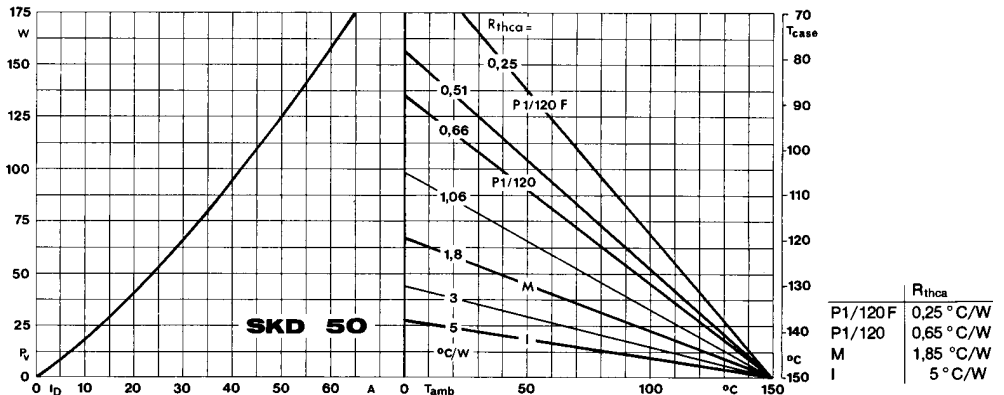


Fig. 3 b Power dissipation vs. output current and case temperature

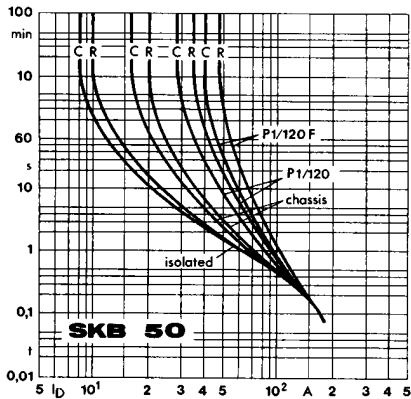


Fig. 6 a Rated overload current vs. time

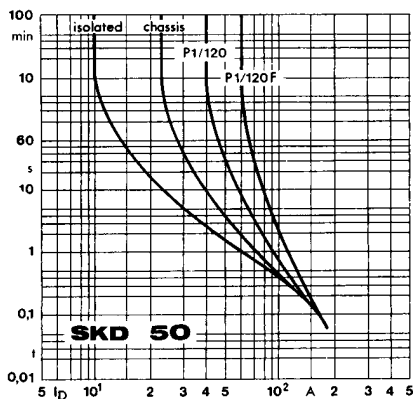


Fig. 6 b Rated overload current vs. time

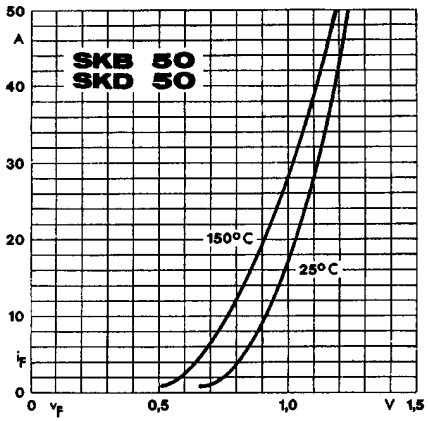
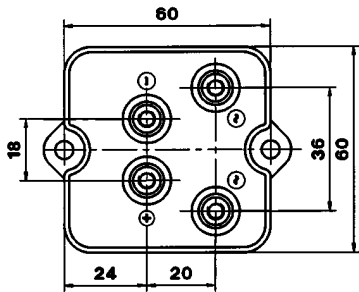
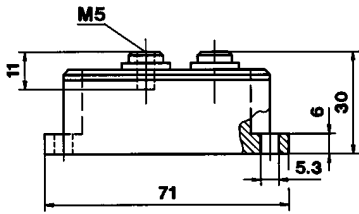


Fig. 9 Forward characteristics of a single diode

**SKB 50**

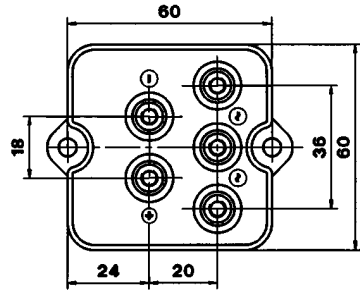
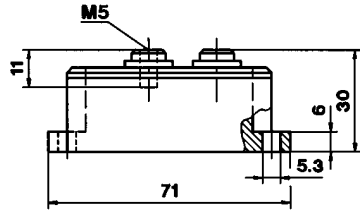
Case G 14



Dimensions in mm

**SKD 50**

Case G 15



Dimensions in mm