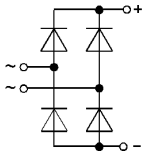
SEMIKRON

Power Bridge Rectifiers

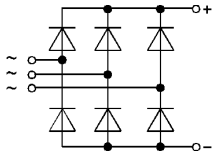
SKB 50
SKD 50

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

Symbol	Conditions	SKB 50	SKD 50	Units
I_D	T_{amb} = 45 °C; isolated[1]	10	10	A
	chassis[2]	20	22	A
	P1A/120	34	40	A
	T_{amb} = 35 °C; P1A/120 F	47	60	A
I_{DCL}	T_{amb} = 45 °C; isolated[1]	8	10	A
	chassis[2]	16	22	A
	P1A/120	29	40	A
	T_{amb} = 35 °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^2s
	T_{vj} = 150 °C, 8,3...10 ms	1800		A^2s
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		mΩ
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		µs
f_G		2000		Hz
R_{thjc}	total	0,65	0,45	°C/W
R_{thch}	total	0,06	0,06	°C/W
R_{thja}	T_{amb} = 35 °C; P1A/120 F	0,9	0,7	°C/W
	isolated[1]	5,7	5,5	°C/W
	chassis[2]	2,5	2,3	°C/W
	P1A /120	1,3	1,1	°C/W
T_{vj}		– 40...+ 150		°C
T_{stg}		– 55...+ 150		°C
V_{isol}	a.c. 50...60 Hz; r.m.s., 1 s / 1 min	3000 / 2500		V~
RC	P_R = 1 W	50		Ω
		0,1		µF
Fu		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	



SKB



SKD

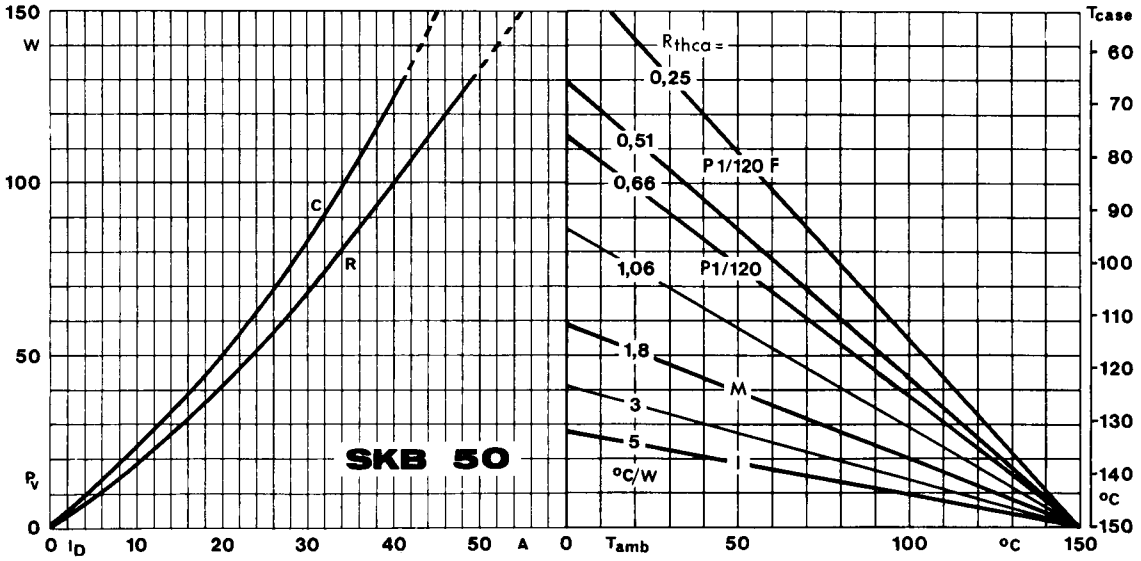
Features

- 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

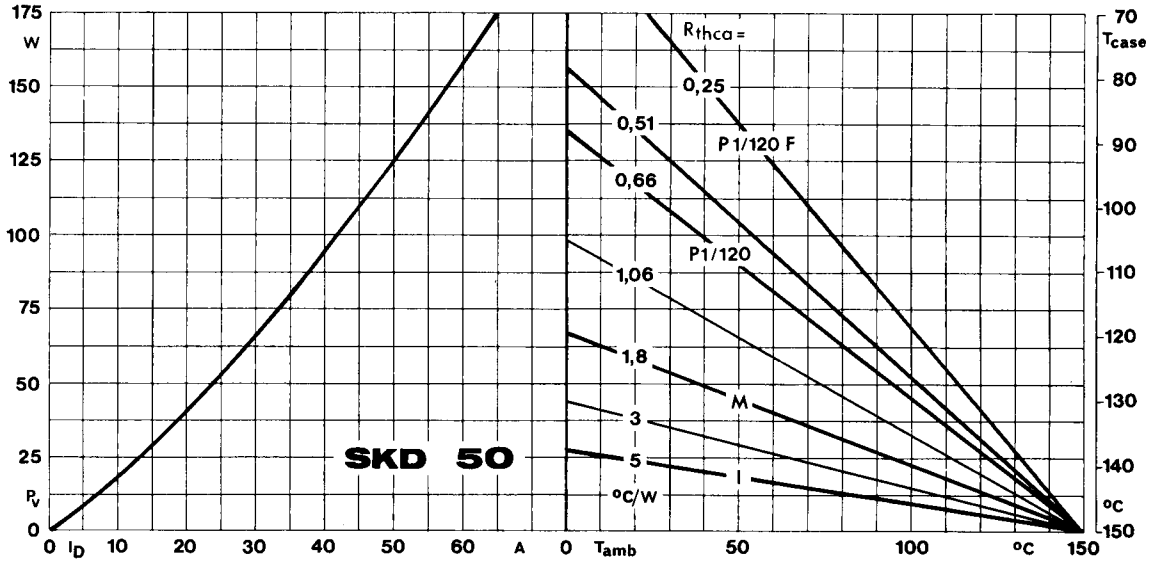
- Single and three phase rectifiers for power supplies
- Input rectifiers for variable frequency drives
- Rectifiers for DC motor field supplies
- Battery charger rectifiers

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



	R_{thca}
P1/120 F	0,25 °C/W
P1/120	0,65 °C/W
M	1,85 °C/W
I	5 °C/W

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



	R_{thca}
P1/120 F	0,25 °C/W
P1/120	0,65 °C/W
M	1,85 °C/W
I	5 °C/W

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

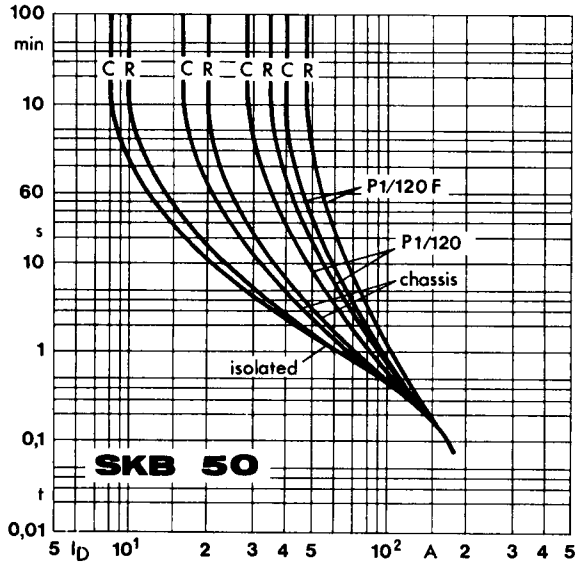


Fig. 6 a Rated overload current vs. time

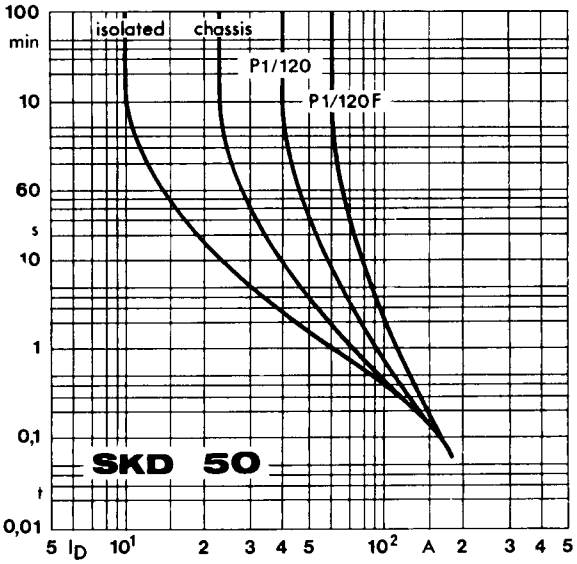


Fig. 6 b Rated overload current vs. time

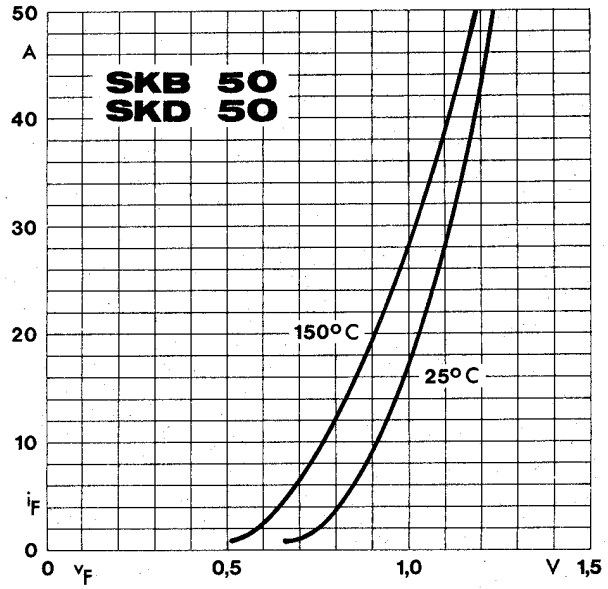
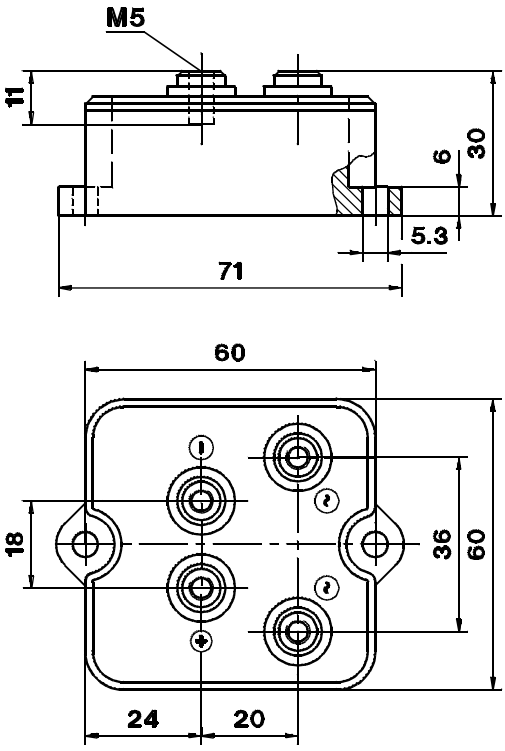


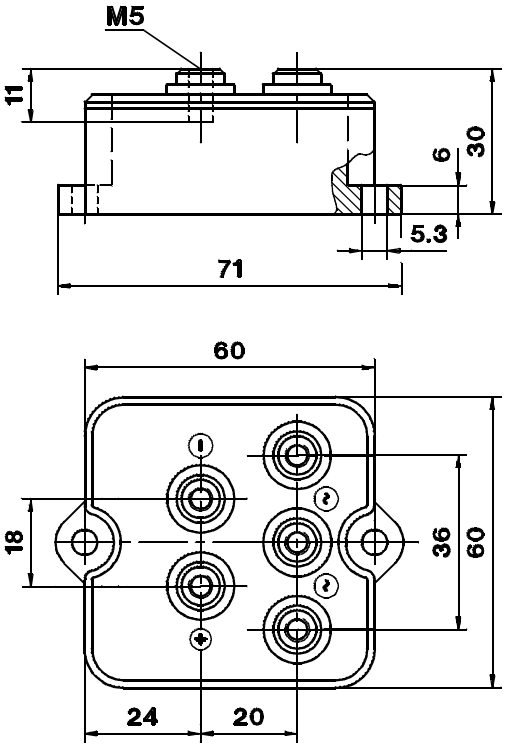
Fig. 9 Forward characteristics of a single diode

SKB 50
Case G 14



Dimensions in mm

SKD 50
Case G 15



Dimensions in mm