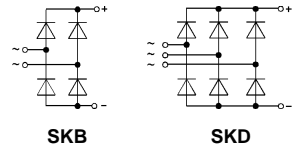


## Power Bridge Rectifiers

### SKB 30 SKD 30



#### Features

- Isolated metal case with screw terminals
- Blocking voltage to 1600 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

$V_{RSM}$ $V_{RRM}$  V	$I_D$ ( $T_{case} = . . .$ )			
	30 A (94 °C)		30 A (98 °C)	
Types	$R_{min}$ $\Omega$	Types	$R_{min}$ $\Omega$	
200	<b>SKB 30/02 A1</b>	0,15	<b>SKD 30/02 A1</b>	0,15
400	<b>SKB 30/04 A1</b>	0,3	<b>SKD 30/04 A1</b>	0,3
800	<b>SKB 30/08 A1</b>	0,5	<b>SKD 30/08 A1</b>	0,5
1200	<b>SKB 30/12 A1</b>	0,75	<b>SKD 30/12 A1</b>	0,75
1400	<b>SKB 30/14 A1</b>	0,9	<b>SKD 30/14 A1</b>	0,9
1600	<b>SKB 30/16 A1</b>	1	<b>SKD 30/16 A1</b>	1

Symbol	Conditions	SKB 30	SKD 30	Units
$I_D$	$T_{amb} = 45\text{ °C};$ isolated <sup>1)</sup> chassis <sup>2)</sup> P5A/100 R4A/120 P1A/120	6,5	6,5	A
		15	15	A
		21	21	A
		23	23	A
		29	31	A
$I_{DCL}$	$T_{amb} = 35\text{ °C};$ P1A/120 F $T_{amb} = 45\text{ °C};$ isolated <sup>1)</sup> chassis <sup>2)</sup> P5A/100 P1A/120	38		A
		6	6,5	A
		13	15	A
		17	21	A
		24	31	A
$T_{amb} = 35\text{ °C};$ P1A/120 F	32		A	
$I_{FSM}$	$T_{vj} = 25\text{ °C};$ 10 ms	370		A
$i^2t$	$T_{vj} = 150\text{ °C};$ 10 ms	320		A
	$T_{vj} = 25\text{ °C};$ 8,3...10 ms	680		A <sup>2</sup> s
	$T_{vj} = 150\text{ °C};$ 8,3...10 ms	500		A <sup>2</sup> s
$V_F$	$T_{vj} = 25\text{ °C};$ $I_F = 150\text{ A}$	2,2		V
$V_{(TO)}$	$T_{vj} = 150\text{ °C}$	0,85		V
$r_T$	$T_{vj} = 150\text{ °C}$	12		m $\Omega$
$I_{RD}$	$T_{vj} = 25\text{ °C};$ $V_{RD} = V_{RRM}$	0,3		mA
		5		mA
$t_{rr}$	$T_{vj} = 25\text{ °C}$	typ. 25		$\mu$ s
$f_G$		2000		Hz
$R_{thjc}$	total	0,7		$^{\circ}$ C/W
$R_{thch}$	total	0,1		$^{\circ}$ C/W
$R_{thja}$	isolated <sup>1)</sup>	8,5		$^{\circ}$ C/W
	chassis <sup>2)</sup>	3,3		$^{\circ}$ C/W
	P5A/100	2,2		$^{\circ}$ C/W
	P1A/120	1,4		$^{\circ}$ C/W
$T_{vj}$		- 40...+ 150		$^{\circ}$ C
$T_{stg}$		- 55...+ 150		$^{\circ}$ C
$V_{isol}$	a.c. 50...60 Hz; r.m.s.; 1 s / 1 min	3000 / 2500		V-
RC	$P_R = 1\text{ W}$	50		$\Omega$
		0,1		$\mu$ F
		25		A
$F_u$				
$M_1$	to heatsink	SI units	5 $\pm$ 15 %	Nm
		US units	44 $\pm$ 15 %	lb. in.
$M_2$	to terminals	SI units	1,5 $\pm$ 15 %	Nm
		US units	13 $\pm$ 15 %	lb.in.
w		125		g
Case		G 12	G 13	

<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

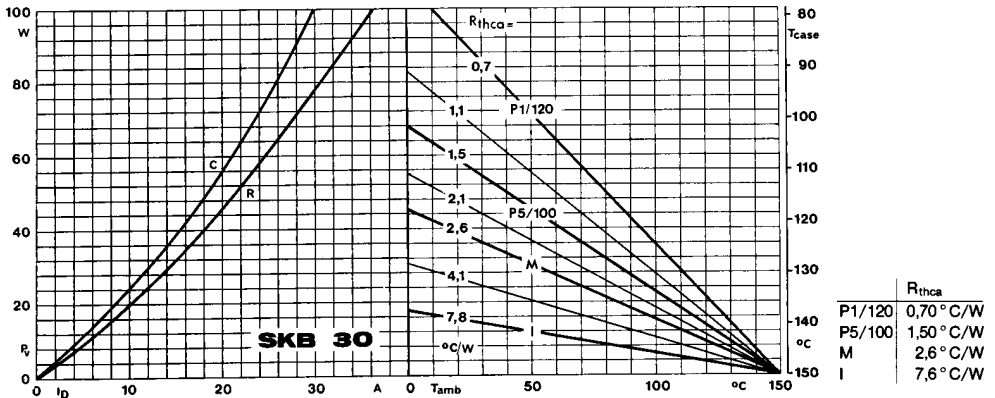


Fig. 3 a Power dissipation vs. output current and case temperature

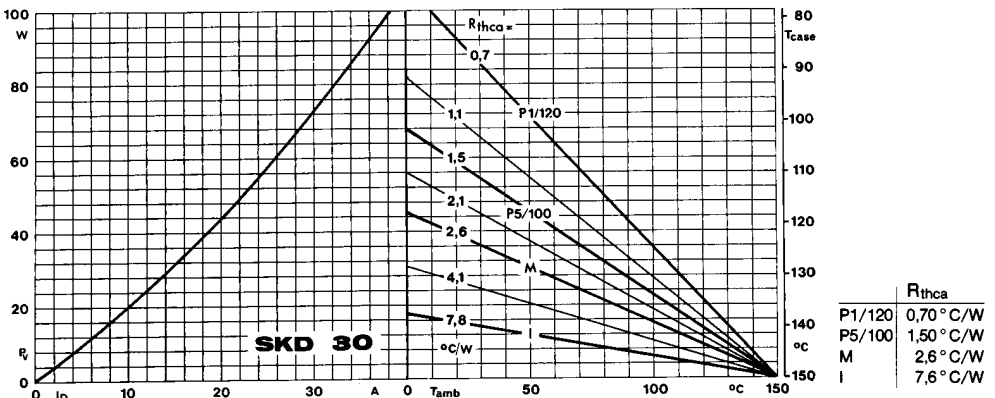


Fig. 3 b Power dissipation vs. output current and case temperature

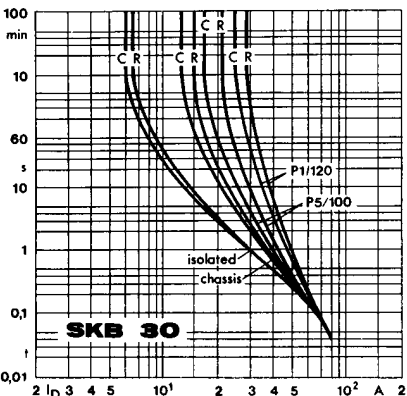


Fig. 6 a Rated overload current vs. time

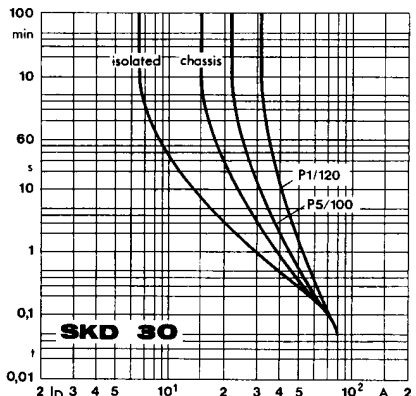


Fig. 6 b Rated overload current vs. time

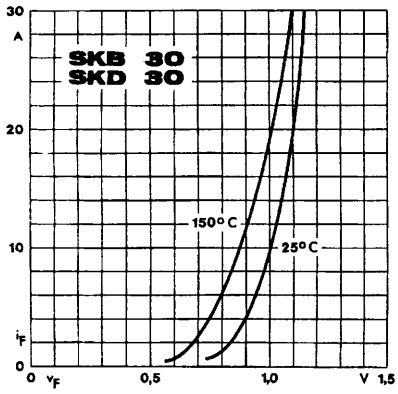
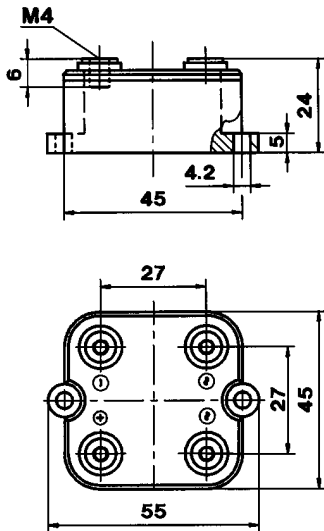


Fig. 9 Forward characteristics of a single diode

**SKB 30**

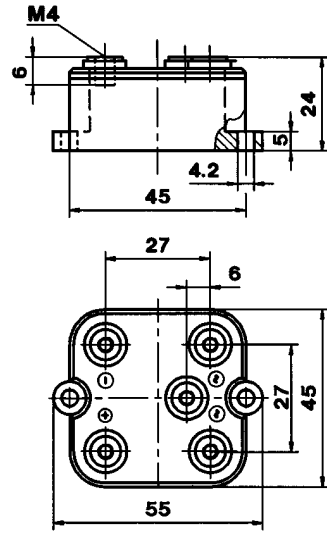
Case G 12



Dimensions in mm

**SKD 30**

Case G 13



Dimensions in mm