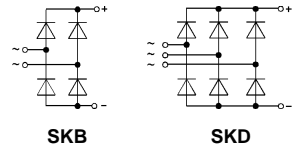


Power Bridge Rectifiers

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} Ω	Types	R_{min} Ω	
200	SKB 30/02 A1	0,15	SKD 30/02 A1	0,15
400	SKB 30/04 A1	0,3	SKD 30/04 A1	0,3
800	SKB 30/08 A1	0,5	SKD 30/08 A1	0,5
1200	SKB 30/12 A1	0,75	SKD 30/12 A1	0,75
1400	SKB 30/14 A1	0,9	SKD 30/14 A1	0,9
1600	SKB 30/16 A1	1	SKD 30/16 A1	1

Symbol	Conditions	SKB 30	SKD 30	Units
I_D	$T_{amb} = 45\text{ °C}; \text{isolated}^{(1)}$ chassis ⁽²⁾ 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}	$T_{amb} = 35\text{ °C}; \text{P1A/120 F}$ $T_{amb} = 45\text{ °C}; \text{isolated}^{(1)}$ chassis ⁽²⁾ P5A/100 P1A/120	38		A
		6	6,5	A
		13	15	A
		17	21	A
		24	31	A
	$T_{amb} = 35\text{ °C}; \text{P1A/120 F}$	32		A
I_{FSM}	$T_{vj} = 25\text{ °C}; 10\text{ ms}$	370		A
	$T_{vj} = 150\text{ °C}; 10\text{ ms}$	320		A
i^2t	$T_{vj} = 25\text{ °C}; 8,3\dots 10\text{ ms}$ $T_{vj} = 150\text{ °C}; 8,3\dots 10\text{ ms}$	680		A^2s
		500		A^2s
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 Ω
I_{RD}	$T_{vj} = 25\text{ °C}; V_{RD} = V_{RRM}$ $T_{vj} = 150\text{ °C}; V_{RD} = V_{RRM}$	0,3		mA
		5		mA
t_{rr}	$T_{vj} = 25\text{ °C}$	typ. 25		μs
f_G		2000		Hz
R_{thjc}	total	0,7		$^{\circ}C/W$
R_{thch}	total	0,1		$^{\circ}C/W$
R_{thja}	isolated ⁽¹⁾ chassis ⁽²⁾ P5A/100 P1A/120	8,5		$^{\circ}C/W$
		3,3		$^{\circ}C/W$
		2,2		$^{\circ}C/W$
		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		Ω
		0,1		μF
		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	

¹⁾ Freely suspended or mounted on an insulator

²⁾ Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

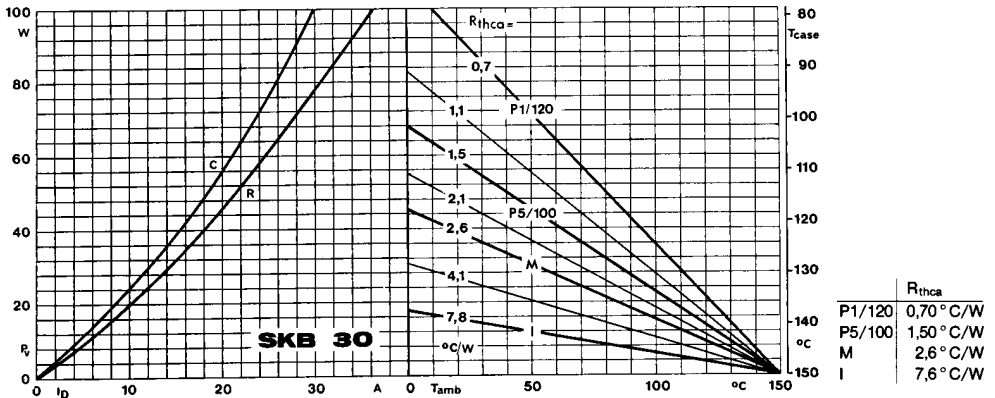


Fig. 3 a Power dissipation vs. output current and case temperature

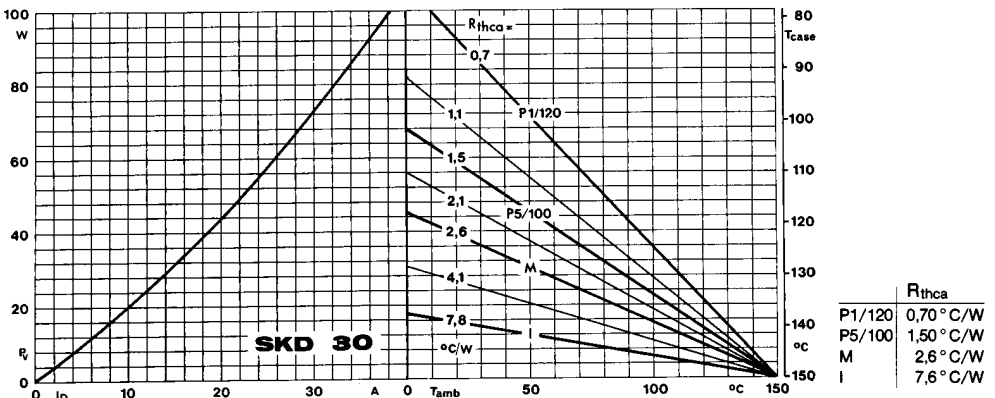


Fig. 3 b Power dissipation vs. output current and case temperature

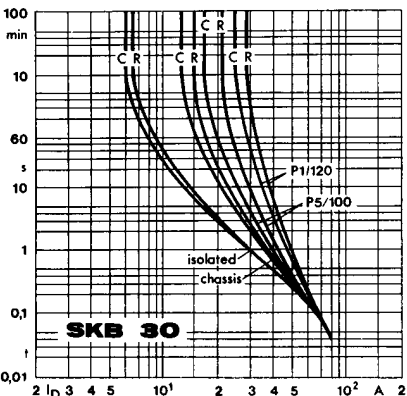


Fig. 6 a Rated overload current vs. time

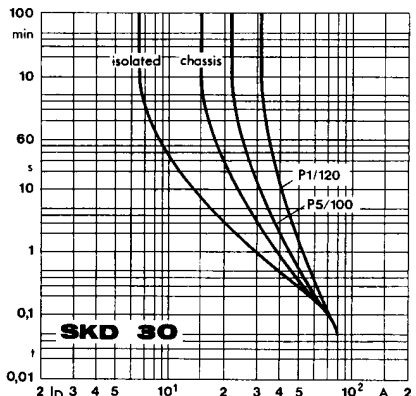


Fig. 6 b Rated overload current vs. time

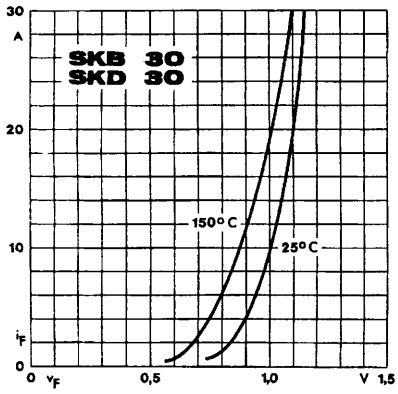
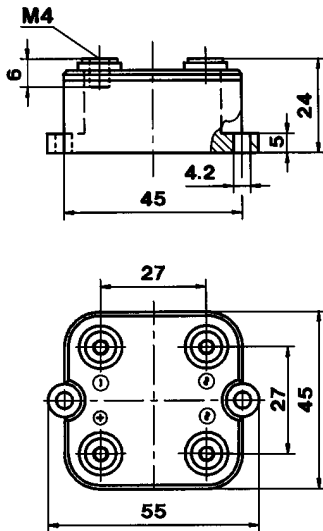


Fig. 9 Forward characteristics of a single diode

SKB 30

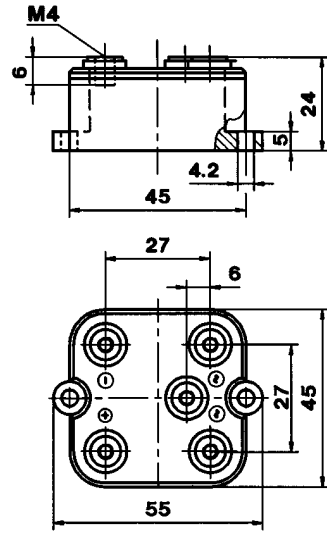
Case G 12



Dimensions in mm

SKD 30

Case G 13



Dimensions in mm