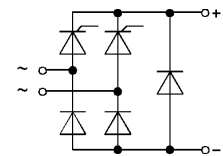


Controllable Bridge Rectifiers

SKB 33



V_{RSM} V	V_{DRM} V_{RRM} V	I_D ($T_{case} = 62\text{ °C}$, full conduction) 33 A
300	200	SKB 33/02
500	400	SKB 33/04
700	600	SKB 33/06
900	800	SKB 33/08
1100	1000	SKB 33/10
1300	1200	SKB 33/12

Symbol	Conditions	SKB 33
I_D	$T_{amb} = 45\text{ °C}$; isolated ¹⁾ chassis ²⁾ P1A/120 $T_{amb} = 35\text{ °C}$; P1A/120 F	6,5 A 14 A 24 A 32 A
I_{TSM}, I_{FSM}	$T_{vj} = 25\text{ °C}$, 10 ms $T_{vj} = 130\text{ °C}$, 10 ms	370 A 340 A
i^2t	$T_{vj} = 25\text{ °C}$, 8,3...10 ms $T_{vj} = 130\text{ °C}$, 8,3...10 ms	680 A ² s 580 A ² s
$(di/dt)_{cr}$ $(dv/dt)_{cr}$ t_q I_H I_L	$T_{vj} = 130\text{ °C}$; 50 Hz $T_{vj} = 130\text{ °C}$ $T_{vj} = 130\text{ °C}$ $T_{vj} = 25\text{ °C}$ $T_{vj} = 25\text{ °C}$	50 A/ μ s 200 V/ μ s typ. 80 μ s typ. 20 mA; max. 200 mA typ. 80 mA; max. 400 mA
V_T $V_{T(TO)}$ r_T $I_{DD}; I_{RD}$	$T_{vj} = 25\text{ °C}$; $I_T = 75\text{ A}$ $T_{vj} = 130\text{ °C}$ $T_{vj} = 130\text{ °C}$ $T_{vj} = 130\text{ °C}$; $V_{DD} = V_{DRM}$ $V_{RD} = V_{RRM}$	2,4 V 1 V 1,5 m Ω 10 mA
V_{GT} I_{GT} V_{GD} I_{GD}	$T_{vj} = 25\text{ °C}$ $T_{vj} = 25\text{ °C}$ $T_{vj} = 130\text{ °C}$ $T_{vj} = 130\text{ °C}$	3 V 100 mA 0,25 V 3 mA
R_{thjc} R_{thch} T_{vj} T_{stg}	per thyristor/diode total total	2,6 °C/W 0,65 °C/W 0,06 °C/W - 40...+ 130 °C - 55...+ 150 °C
V_{isol} F_u M_1 M_2 w	a.c. 50...60 Hz; r.m.s.; 1 s / 1 min $V_{VRMS} \leq 220\text{ V}$ $V_{VRMS} > 220\text{ V}$ case to heatsink } SI units/ busbars to terminals } US units	3000 V~ / 2500 V~ 36 A 25 A 5 Nm/44 lb. in. $\pm 15\%$ 3 Nm/26 lb. in. $\pm 15\%$ approx. 250 g
Case		G 16

Features

- Half controlled, single phase rectifier with free wheeling diode
- Isolated metal case with screw terminals
- Blocking voltage to 1200 V
- High surge currents
- Easy chassis mounting

Typical Applications

- Power supplies for electronic equipment
- DC motors
- Field rectifiers for DC motors
- 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

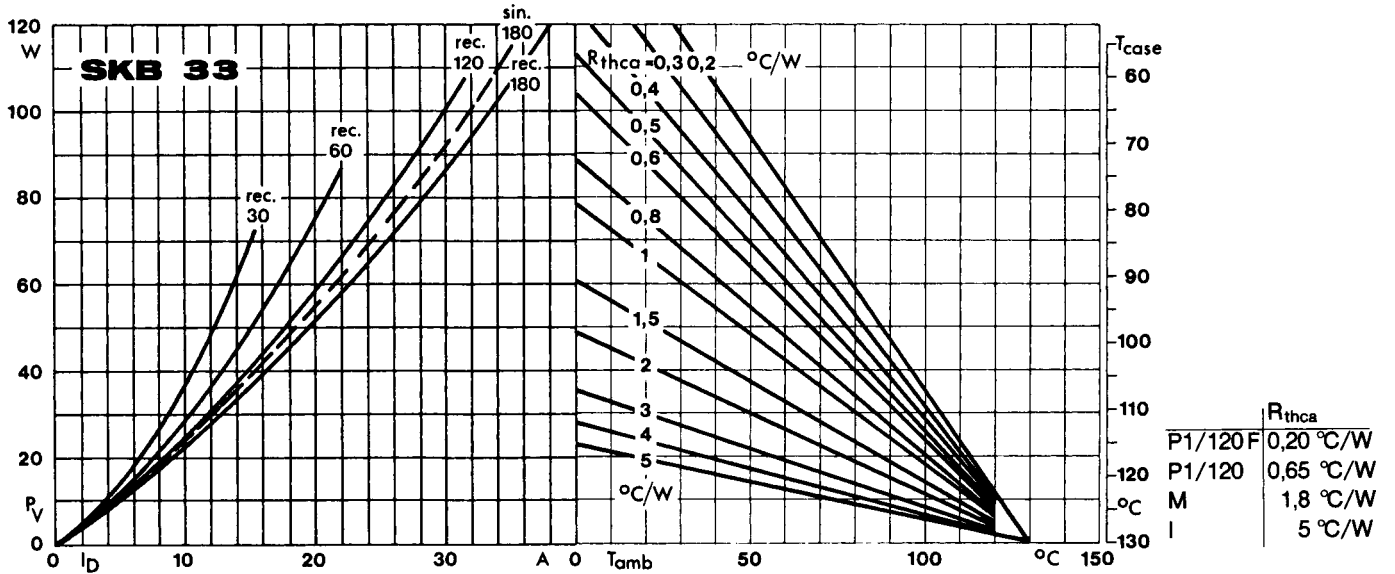


Fig. 4 Power dissipation vs. output current and case temperature

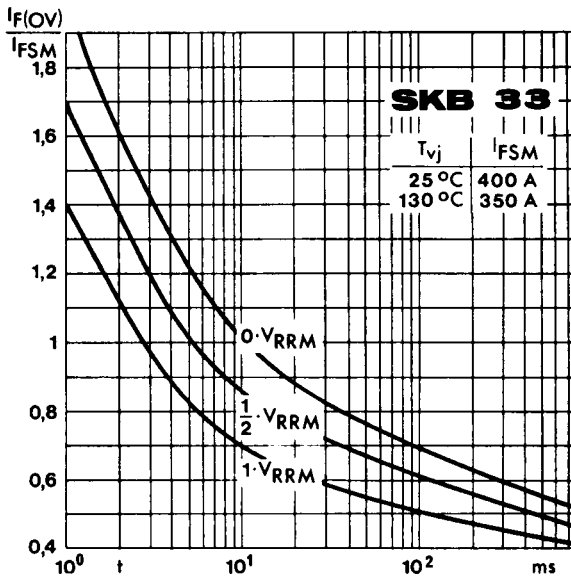


Fig. 5 Surge overload current vs. time

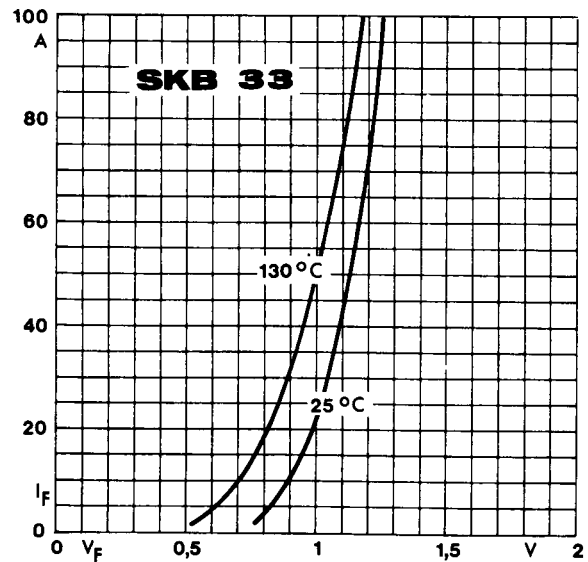


Fig. 9 Forward characteristics of a single diode

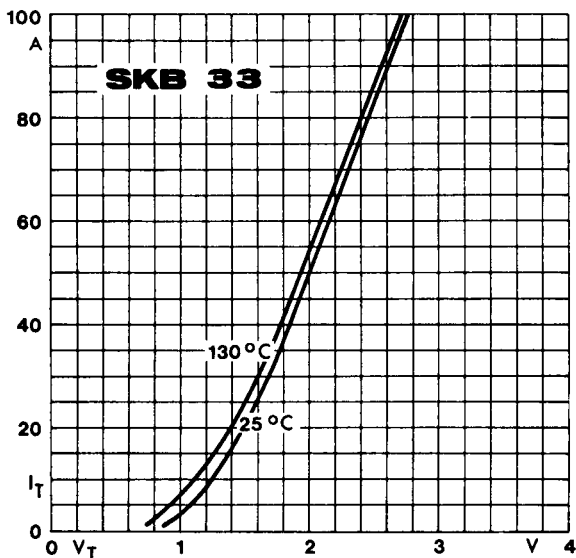


Fig. 10 On-state characteristics of a single thyristor

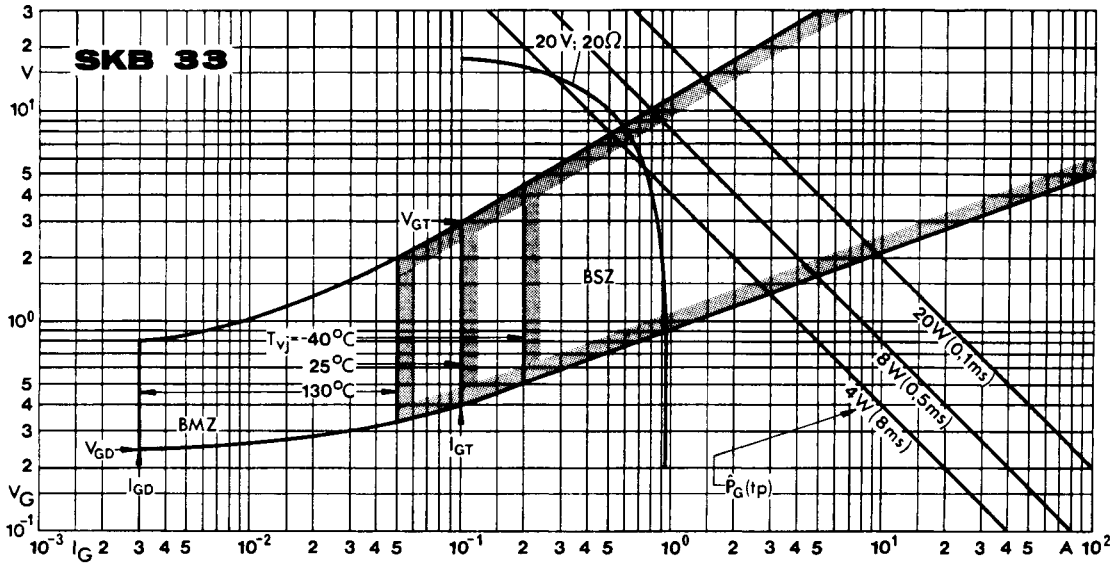


Fig. 11 Gate trigger characteristics

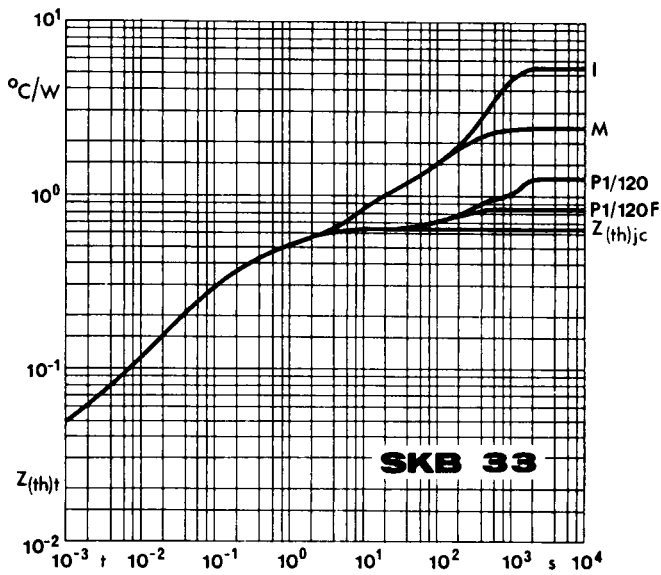
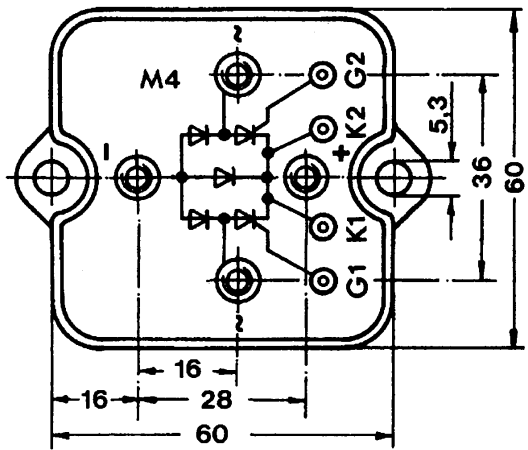
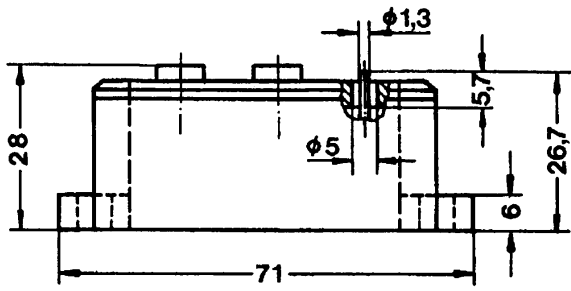


Fig. 12 Transient thermal impedance vs. time

SKB 33

Case G 16



Dimensions in mm