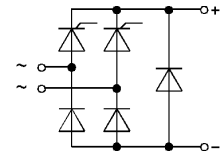


$V_{RSM}$ V	$V_{DRM}$ $V_{RRM}$ V	$I_D$ ( $T_{case} = 62\text{ °C}$ , full conduction) 33 A
300	200	<b>SKB 33/02</b>
500	400	<b>SKB 33/04</b>
700	600	<b>SKB 33/06</b>
900	800	<b>SKB 33/08</b>
1100	1000	<b>SKB 33/10</b>
1300	1200	<b>SKB 33/12</b>

## Controllable Bridge Rectifiers

### SKB 33



Symbol	Conditions	SKB 33
$I_D$	$T_{amb} = 45\text{ °C}$ ; isolated <sup>1)</sup> chassis <sup>2)</sup> 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 <sup>2</sup> s 580 A <sup>2</sup> 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/ $\mu$ s 200 V/ $\mu$ s typ. 80 $\mu$ 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 15 m $\Omega$ 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 - 40...+ 130 °C - 55...+ 150 °C	2,6 °C/W 0,65 °C/W 0,06 °C/W
$V_{isol}$ $F_u$ $M_1$ $M_2$ $w$	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

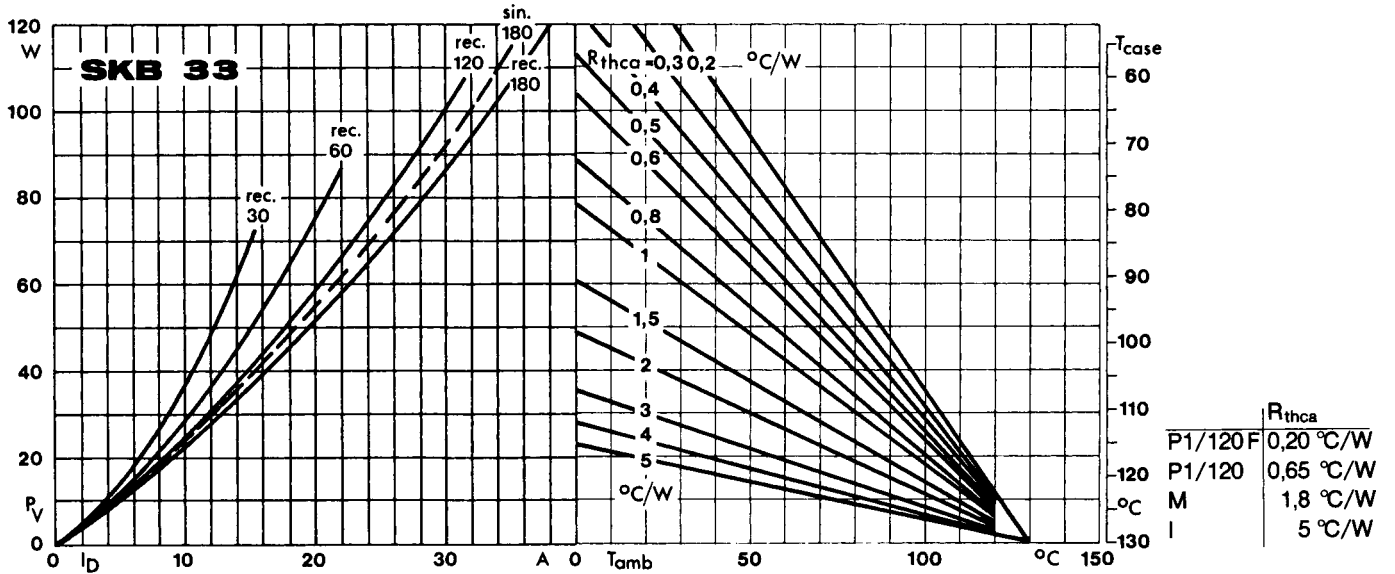


Fig. 4 Power dissipation vs. output current and case temperature

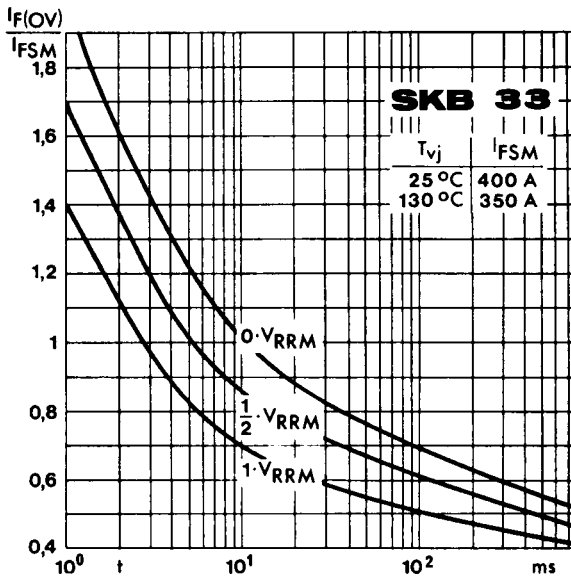


Fig. 5 Surge overload current vs. time

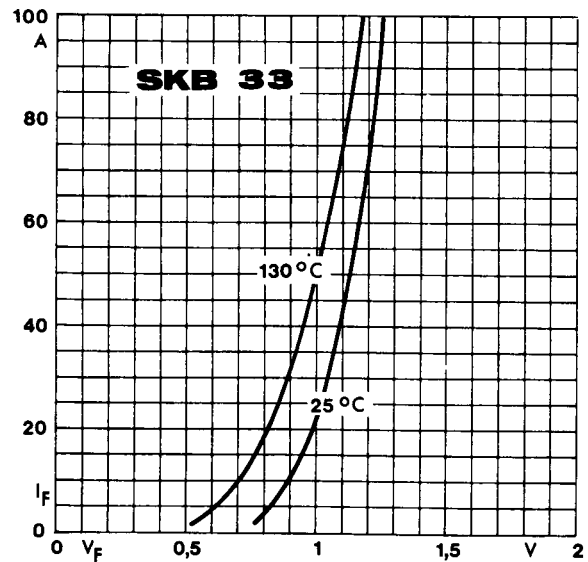


Fig. 9 Forward characteristics of a single diode

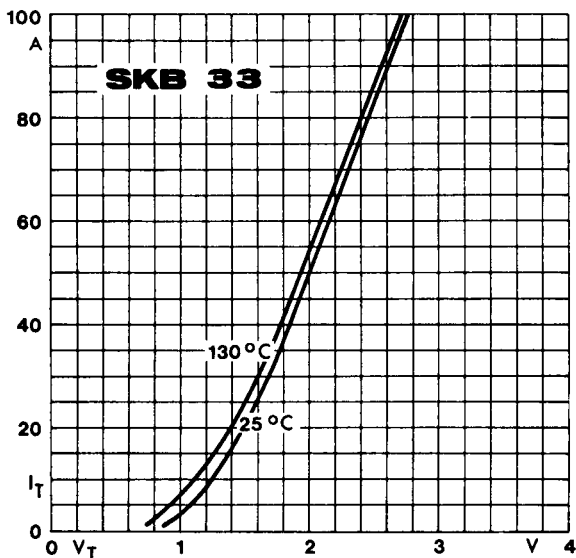


Fig. 10 On-state characteristics of a single thyristor

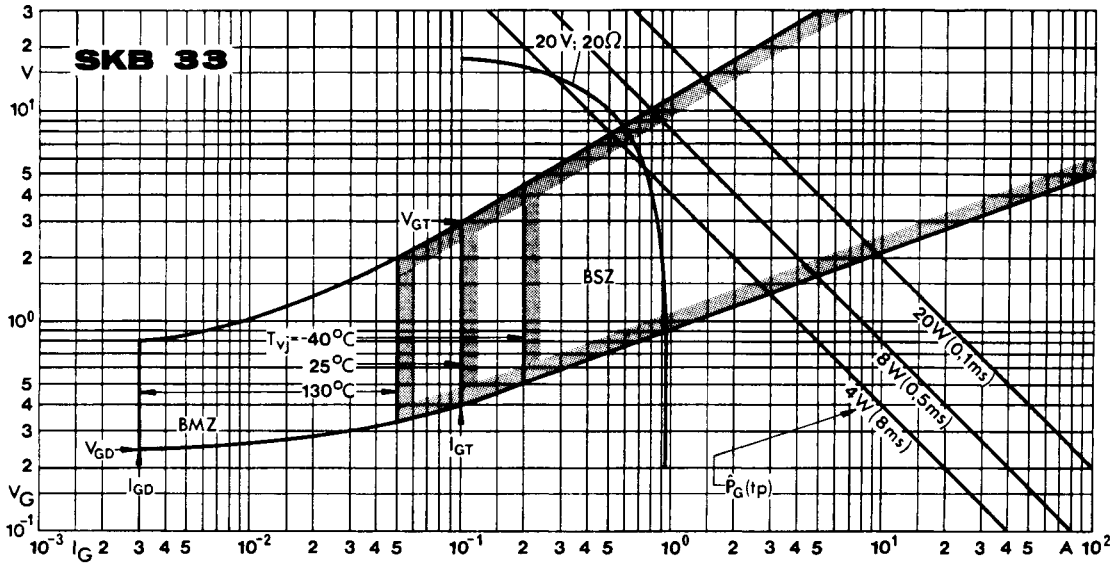


Fig. 11 Gate trigger characteristics

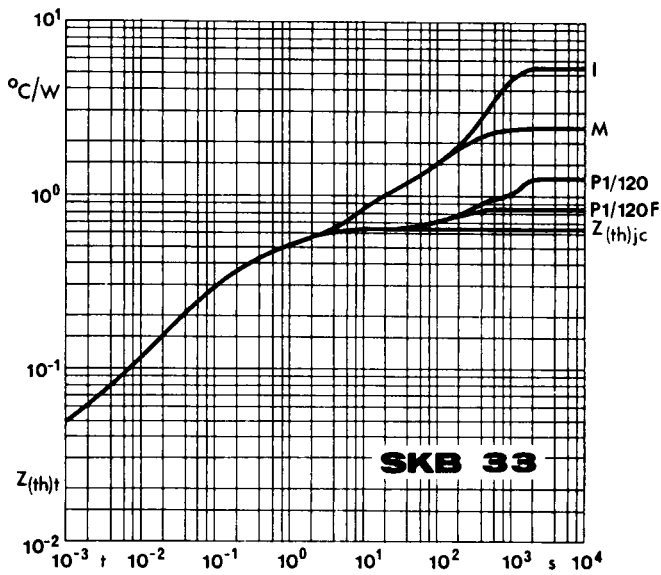


Fig. 12 Transient thermal impedance vs. time

