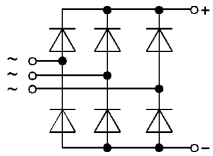
SEMIPONT® 1
Power Bridge Rectifiers

SKD 31

V_{RSM} V_{RRM}	I_D (T_{case} = 100 °C) 31 A
200 V	**SKD 31/02**
400 V	**SKD 31/04**
800 V	**SKD 31/08**
1200 V	**SKD 31/12**
1400 V	**SKD 31/14**
1600 V	**SKD 31/16**



Symbol	Conditions		SKD 31
I_D	T_{case} = 85 °C		44 A
	T_{amb} = 45 °C,	isolated[1)]	5,3 A
		chassis[2)]	17 A
		P5A/100	26 A
	R4A/120,	P13A/125	27 A
		P1A/120	32 A
	T_{amb} = 35 °C,	P1A/120 F	56 A
I_{FSM}	T_{vj} = 25 °C, 10 ms		370 A
	T_{vj} = 125 °C, 10 ms		320 A
i^2t	T_{vj} = 25 °C, 8,3...10 ms		685 A^2s
	T_{vj} = 125 °C, 8,3...10 ms		510 A^2s
V_F	T_{vj} = 25 °C; I_F = 75 A		max. 1, 75 V
$V_{(TO)}$	T_{vj} = 125 °C		0,85 V
r_T	T_{vj} = 125 °C		12 mΩ
I_{RD}	T_{vj} = 25 °C/125 °C; V_{RD} = V_{RRM}		0,2/2 mA
R_{thjc}	per diode		2,0 °C/W
	total		0,33 °C/W
R_{thch}	total		0,1 °C/W
R_{thja}	isolated[1)]		15 °C/W
	chassis[2)]		3 °C/W
	P5A/100		1,85 °C/W
	P1A/120		1,05 °C/W
T_{vj}			– 40...+ 125 °C
T_{stg}			– 40...+ 125 °C
V_{isol}	a.c. 50...60 Hz; r.m.s.; 1 s / 1 min		3600 V~ / 3000 V~
RC	P_R = 1 W		0,1 µF + 50 Ω
Fu			25 A
M_1	case to heatsink; SI units/US units		2 Nm/18 lb. in. ± 15 %
w			66 g
Case	→ page B11-28		G 26

Features

- Sturdy isolated metal baseplate
- Fast-on terminals with solder tips
- Suitable for wave soldering
- High surge current rating
- UL recognized, file no. E 63 532

Typical Applications

- DC power supply, e. g. for transistorized AC motor controllers
- Battery chargers
- Non-controlled DC motor field supply

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

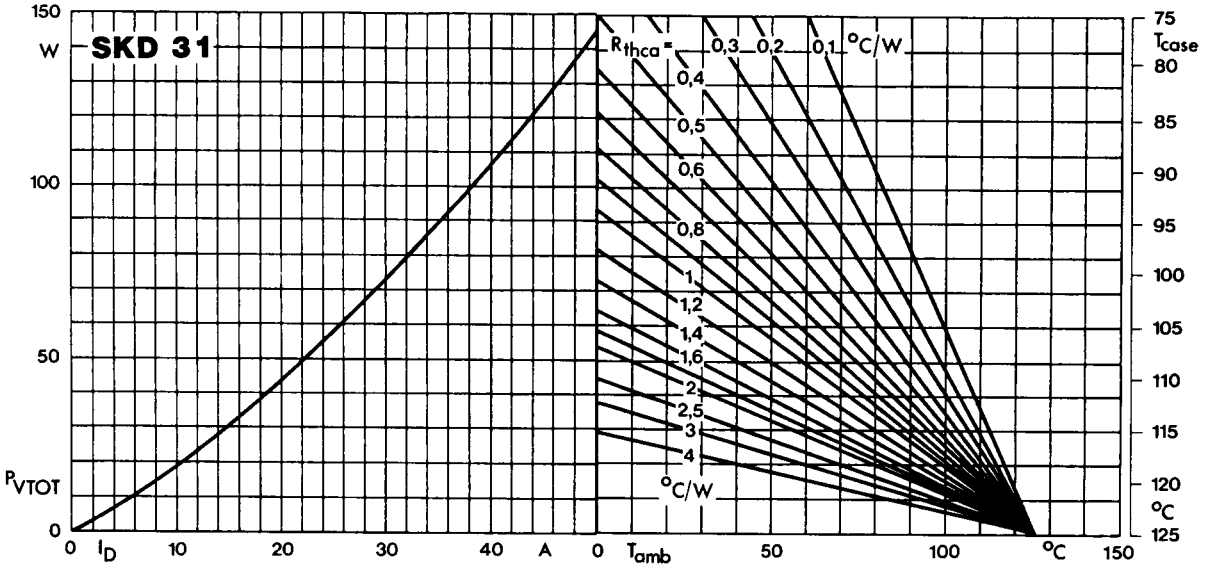


Fig. 3 Power dissipation vs. output current and case temperature

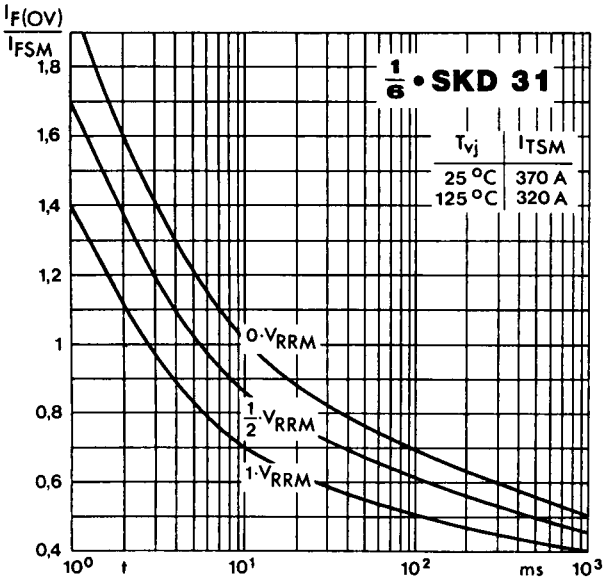


Fig. 5 Surge overload current vs. time

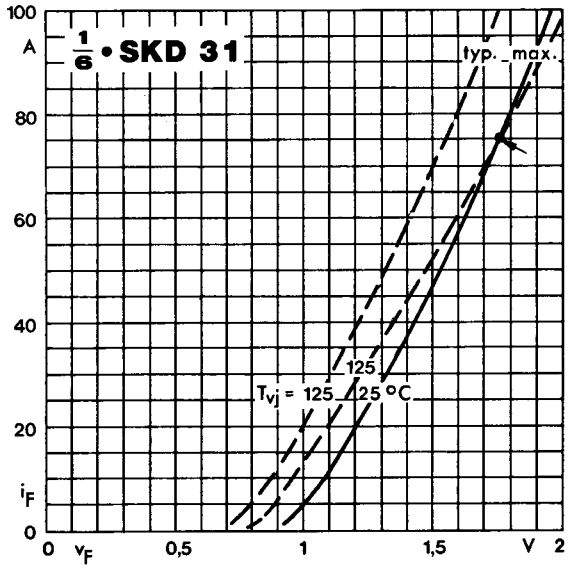


Fig. 9 Forward characteristics of a single diode

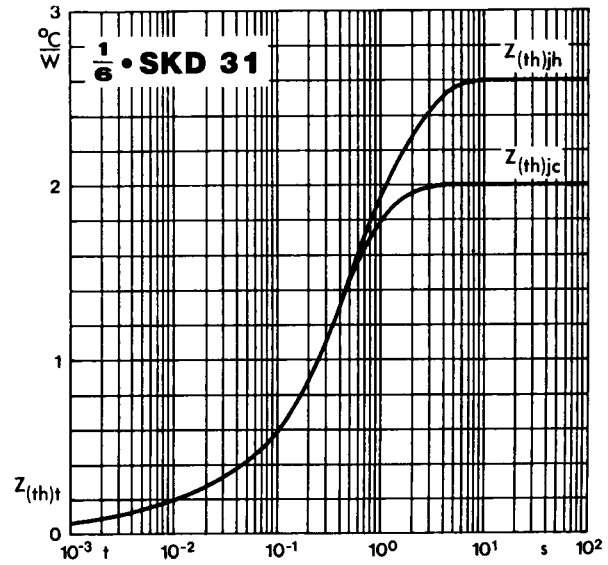
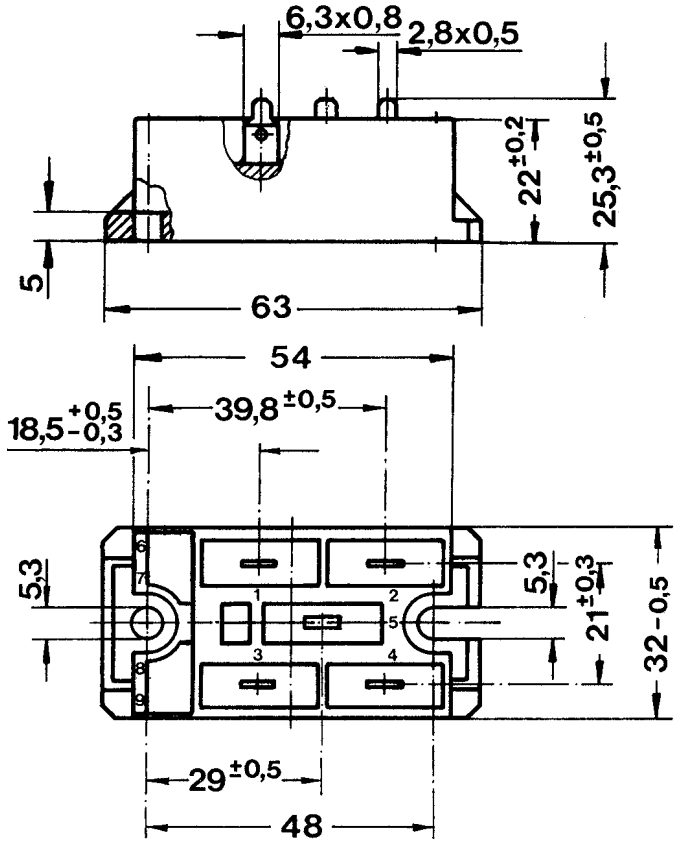
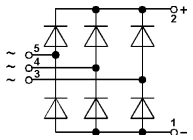


Fig. 12 Transient thermal impedance vs. time

SKD 31

Case G 26
SEMIPONT® 1





Dimensions in mm

