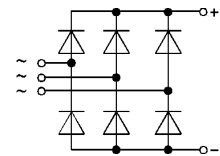


## SEMIPONT® 1 Power Bridge Rectifiers

### SKD 31



#### 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

$V_{RSM}$ $V_{RRM}$	$I_D$ ( $T_{case} = 100\text{ °C}$ ) 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
$I_D$	$T_{case} = 85\text{ °C}$	44 A
	$T_{amb} = 45\text{ °C}$ , isolated <sup>1)</sup> chassis <sup>2)</sup>	5,3 A
		17 A
	P5A/100	26 A
	R4A/120, P13A/125	27 A
	P1A/120	32 A
	$T_{amb} = 35\text{ °C}$ , P1A/120 F	56 A
$I_{FSM}$	$T_{vj} = 25\text{ °C}$ , 10 ms	370 A
	$T_{vj} = 125\text{ °C}$ , 10 ms	320 A
$i^2t$	$T_{vj} = 25\text{ °C}$ , 8,3...10 ms	685 A <sup>2</sup> s
	$T_{vj} = 125\text{ °C}$ , 8,3...10 ms	510 A <sup>2</sup> s
$V_F$	$T_{vj} = 25\text{ °C}$ ; $I_F = 75\text{ A}$	max. 1,75 V
$V_{(TO)}$	$T_{vj} = 125\text{ °C}$	0,85 V
$r_T$	$T_{vj} = 125\text{ °C}$	12m $\Omega$
$I_{RD}$	$T_{vj} = 25\text{ °C}/125\text{ °C}$ ; $V_{RD} = V_{RRM}$	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 <sup>1)</sup>	15 °C/W
	chassis <sup>2)</sup>	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	$P_R = 1\text{ W}$	0,1 $\mu\text{F}$ + 50 $\Omega$
Fu		25 A
$M_1$	case to heatsink; SI units/US units	2 Nm/18 lb. in. $\pm$ 15 %
w		Ⓜg
Case	→ page B11-28	G 26

1) Freely suspended or mounted on an insulator

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

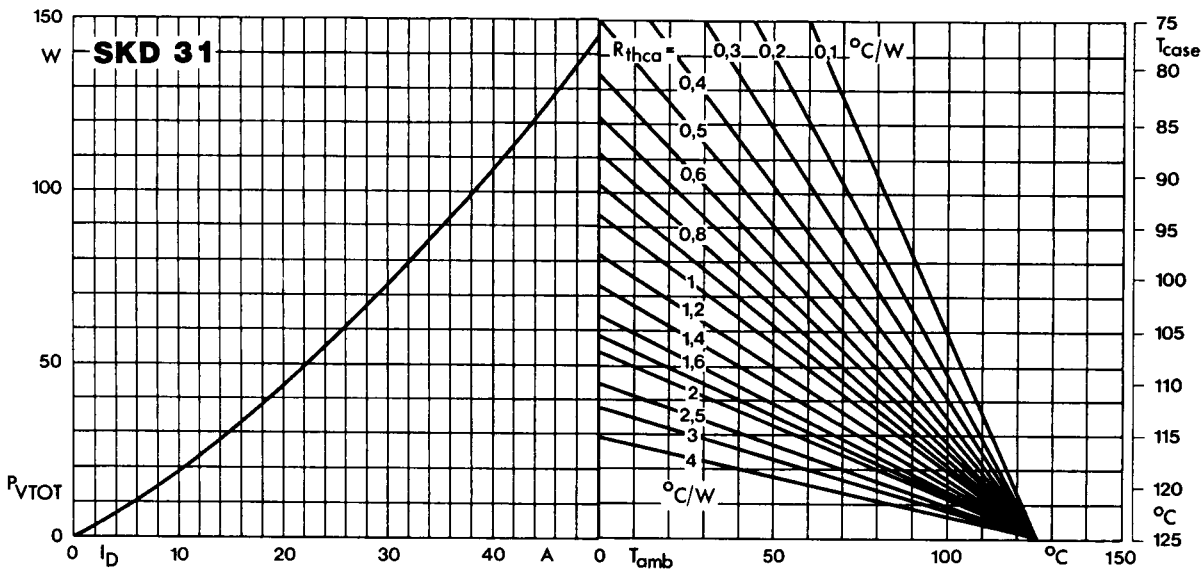


Fig. 3 Power dissipation vs. output current and case temperature

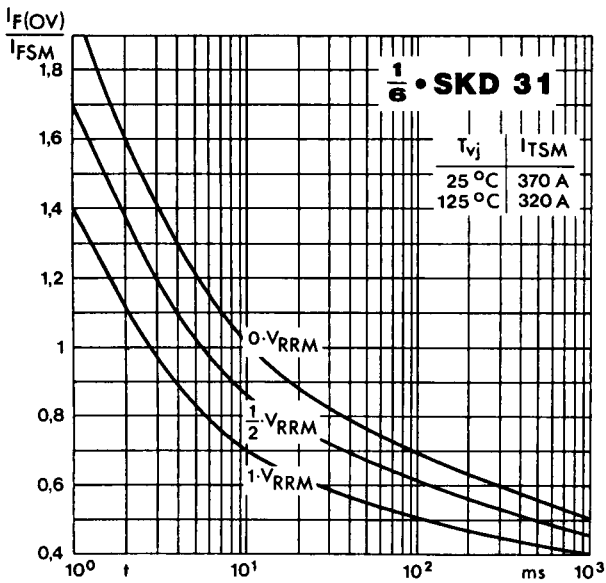


Fig. 5 Surge overload current vs. time

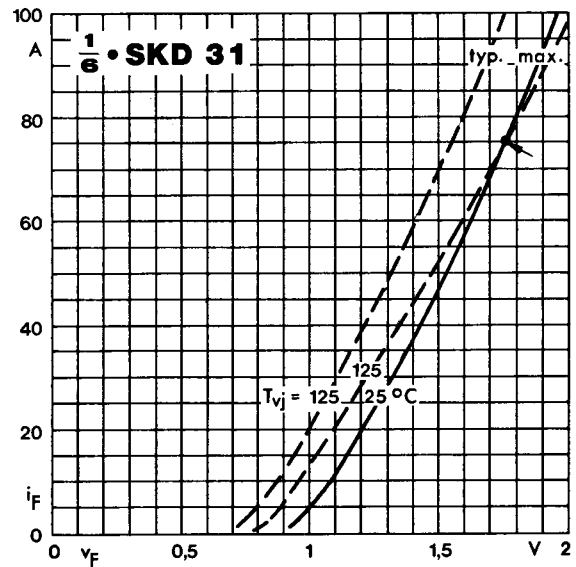


Fig. 9 Forward characteristics of a single diode

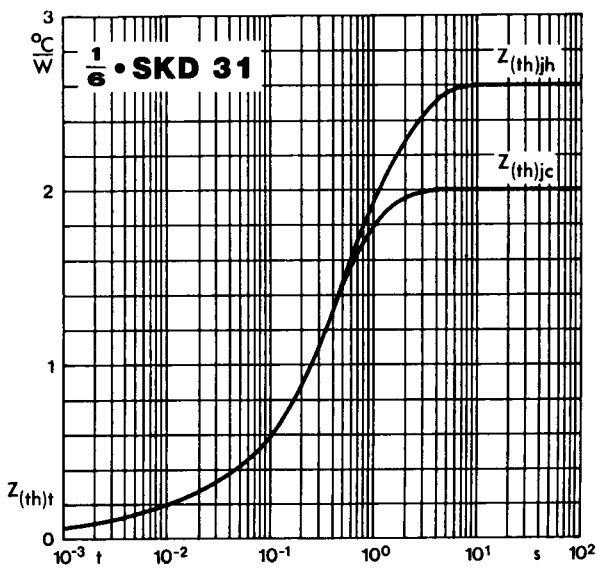
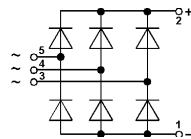
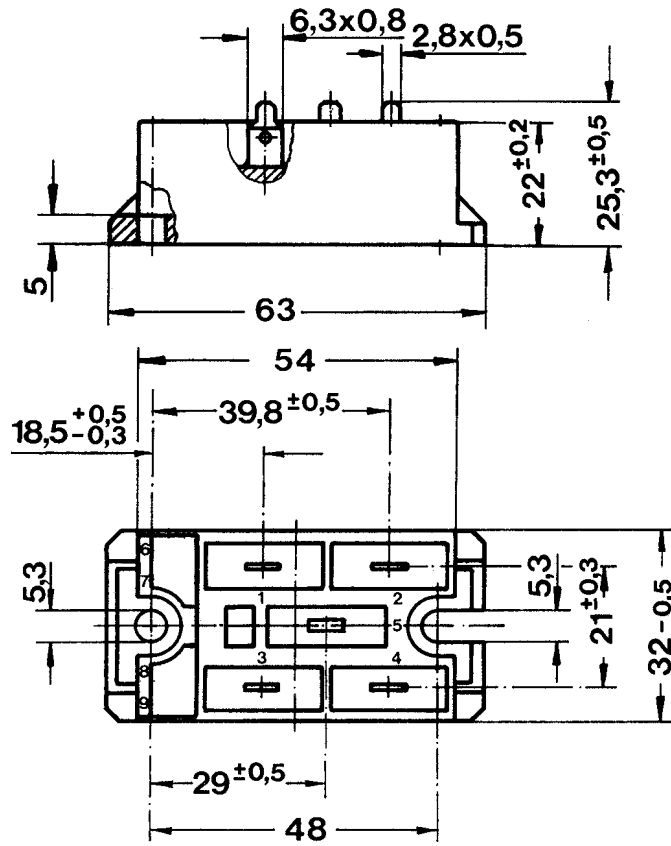


Fig. 12 Transient thermal impedance vs. time

**SKD 31**

Case G 26  
SEMIPONT® 1



Dimensions in mm