

**SEMIKRON® 1**

## Power Bridge Rectifiers

### SKD 31

#### Features

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

#### Typical Applications

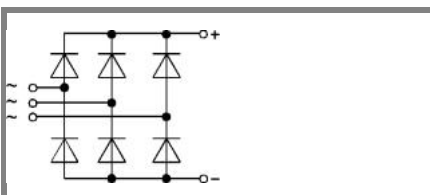
- DC power supply, e.g. for transistorized AC motor controllers
- Battery chargers
- Non-controlled DC motor field supply
- Recommended snubber network:  
RC: 0.1  $\mu$ F, 50  $\Omega$  ( $P_R = 1$  W)

1) Freely suspended or mounted on an insulator

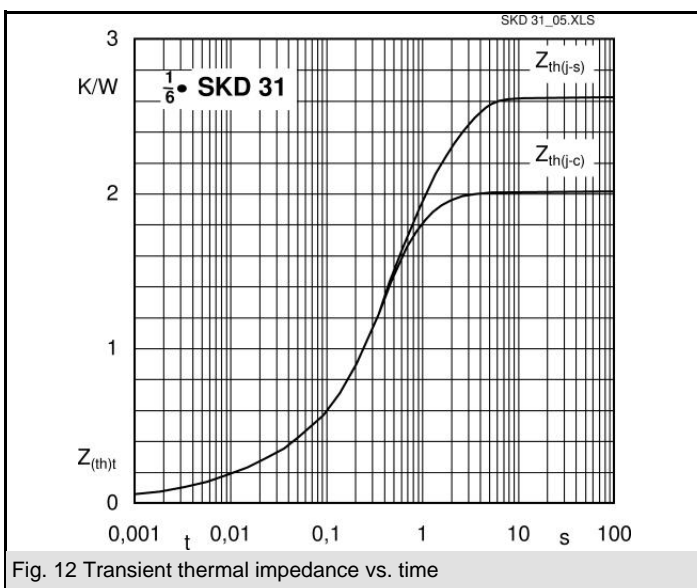
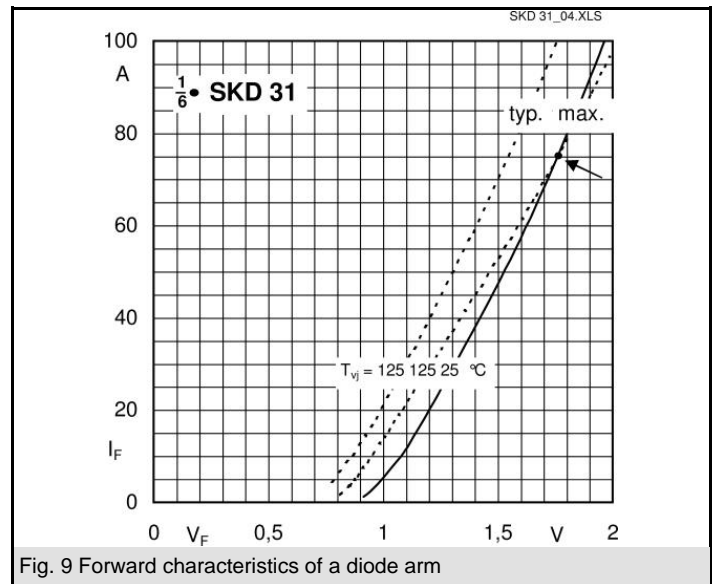
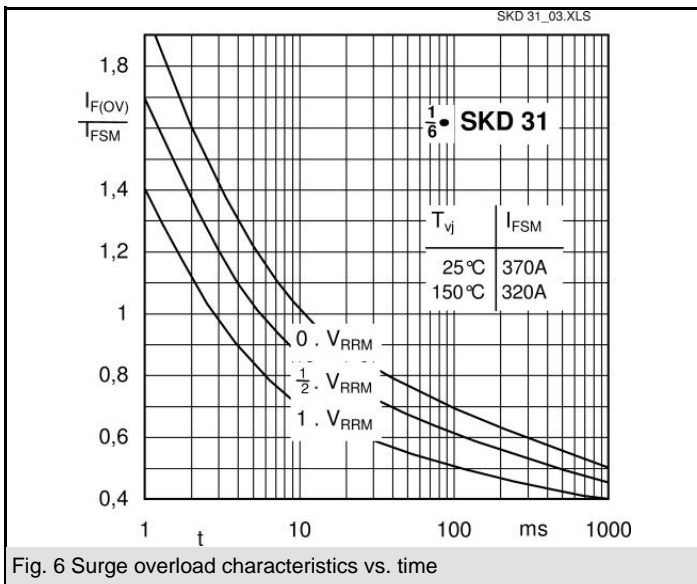
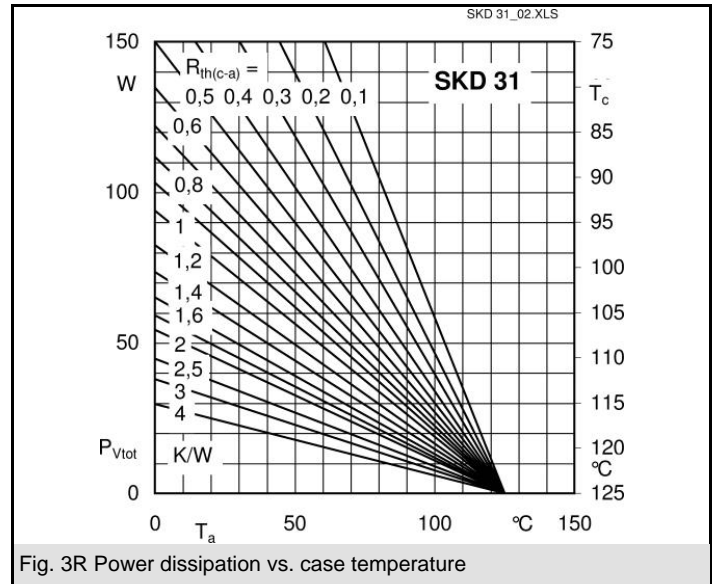
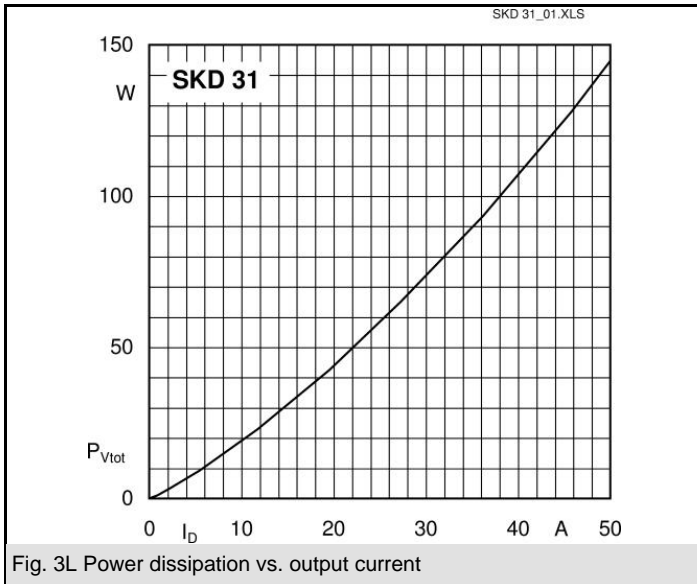
2) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

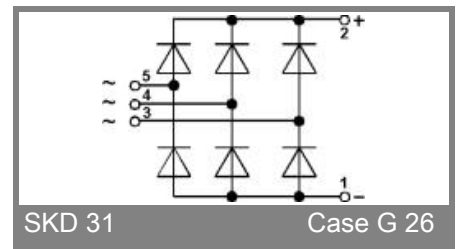
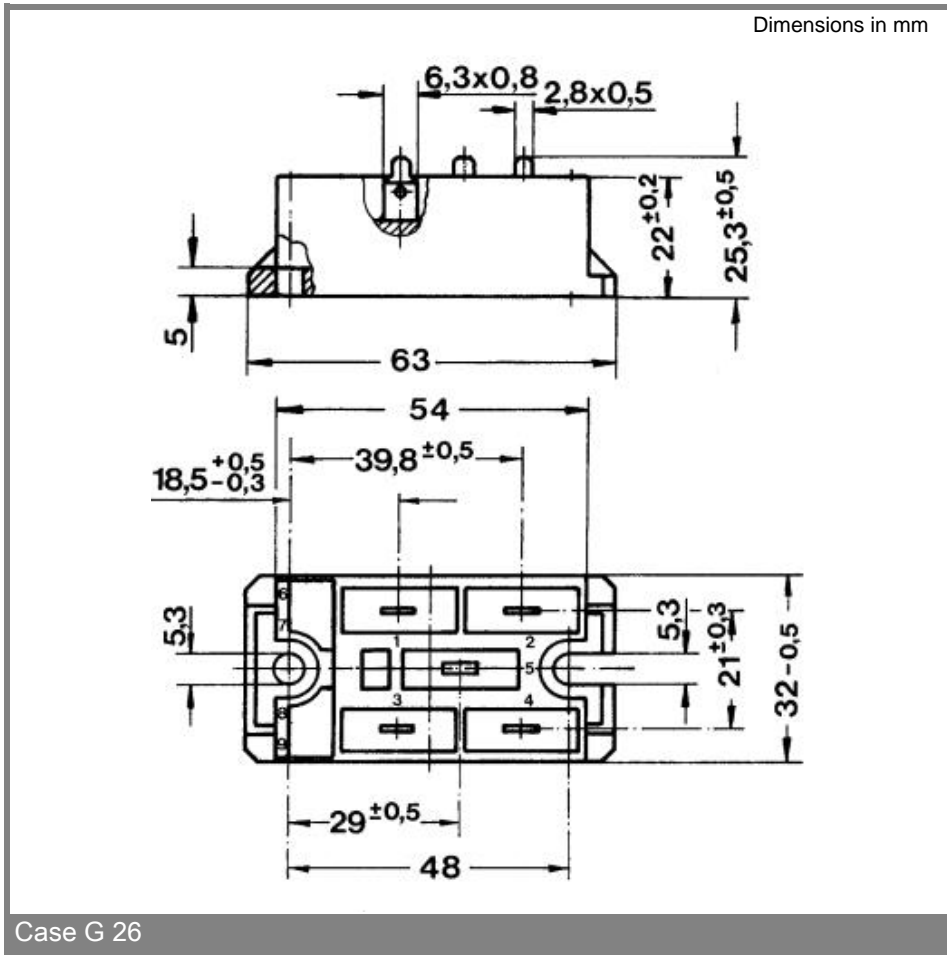
$V_{RSM}$ V	$V_{RRM}, V_{DRM}$ V	$I_D = 31$ A (full conduction) ( $T_c = 100$ °C)
200	200	SKD 31/02
400	400	SKD 31/04
800	800	SKD 31/08
1200	1200	SKD 31/12
1400	1400	SKD 31/14
1600	1600	SKD 31/16

Symbol	Conditions	Values	Units
$I_D$	$T_c = 85$ °C	44	A
	$T_a = 45$ °C; isolated <sup>1)</sup>	5,3	A
	$T_a = 45$ °C; chassis <sup>2)</sup>	17	A
	$T_a = 45$ °C; R4A/120 (P1A/120)	27 (32)	A
	$T_a = 35$ °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 ms	685	A <sup>2</sup> s
	$T_{vj} = 125$ °C; 8,3 ... 10 ms ms	510	A <sup>2</sup> s
$V_F$	$T_{vj} = 25$ °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	m $\Omega$
$I_{RD}$	$T_{vj} = 25$ °C; $V_{DD} = V_{DRM}$ ; $V_{RD} = V_{RRM}$	max. 0,2	mA
	$T_{vj} = 125$ °C; $V_{DD} = V_{DRM}$ ; $V_{RD} = V_{RRM}$	2	mA
$R_{th(j-c)}$	per diode	2	K/W
	total	0,33	K/W
	total	0,1	K/W
$R_{th(c-s)}$	total	0,1	K/W
$R_{th(j-a)}$	isolated <sup>1)</sup> (chassis <sup>2)</sup> )	15 (3)	K/W
$T_{vj}$		- 40 ... + 125 °C	°C
$T_{stg}$		- 40 ... + 125 °C	°C
$V_{isol}$	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 ( 3000 )	V
$M_s$	to heatsink	2 $\pm$ 15 %	Nm
$M_t$			
m		66	g
Case		G 26	



**SKD**





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