

SKD 31F



SEMIPONT® 1

Power Bridge Rectifiers

SKD 31F

Features

- Low generated noise and peak reverse current
- Sturdy isolated metal baseplate
- Fast-on terminals with solder tips
- Suitable for wave soldering
- Blocking voltage up to 2200 V
- High surge current rating
- UL recognized, file no. E 63 532

Typical Applications

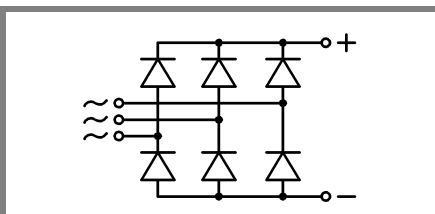
- Low EMI applications
- Input rectifiers for variable frequency drives
- Battery charger rectifiers
- Three phase rectifiers for power supplies
- Recommended snubber network for 50...60 Hz applications:
RC: 50 Ω, 0.1 μF (P_R = 1 W)

- 1) f = 50 ... 1000 Hz
- 2) Freely suspended or mounted on an insulator
- 3) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm
- 4) Recommended

V_{RSM}, V_{RRM} V	$V_{RMS}^{4)}$ V	$I_D = 31 \text{ A } (T_{case} = 100 \text{ °C})^{1)}$ Types
400	125	SKD 31F/04
800	250	SKD 31F/08
1200	400	SKD 31F/12
1600	500	SKD 31F/16
2200	690	SKD 31F/22 *

* Available in limited quantities

Symbol	Condition	Values	Units	
$I_D^{1)}$	$T_{case} = 85 \text{ °C}$	44	A	
	$T_{amb} = 45 \text{ °C}$, isolated ²⁾ chassis ³⁾	P5A/100	5,3	A
		P1A/120	17	A
		P1A/120F	26	A
	$T_{amb} = 35 \text{ °C}$, P1A/120F	32	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 ² s	
	$T_{vj} = 125 \text{ °C}$; 8,3 ... 10 ms	510	A ² 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	$T_{vj} = 125 \text{ °C}$	12	mΩ	
I_{RD}	$T_{vj} = 25 \text{ °C}$; $V_{RD} = V_{RRM}$	200	μA	
I_{RD}	$T_{vj} = 125 \text{ °C}$; $V_{RD} = V_{RRM}$	4	mA	
t_{rr}	$T_{vj} = 25 \text{ °C}$, $I_F = I_R = 1 \text{ A}$	2,5	μs	
$R_{th(j-a)}$	isolated ²⁾	15	K/W	
	chassis ³⁾	3	K/W	
	P5A/100	1,85	K/W	
	P1A/120	1,05	K/W	
$R_{th(j-c)}$	per diode	2,0	K/W	
	total	0,33	K/W	
$R_{th(c-s)}$	total	0,1	K/W	
T_{vj}		-40 ... +125	°C	
T_{stg}		-55 ... +125	°C	
V_{isol}	a. c. 50 ... 60 Hz; r.m.s.; 1 s / 1 min.	3600 / 3000	V~	
M_s	to heatsink	2 ± 15 %	Nm	
M	SI units	18 ± 15 %	lb. in.	
	US units	66	g	
Case		G 26		



SKD

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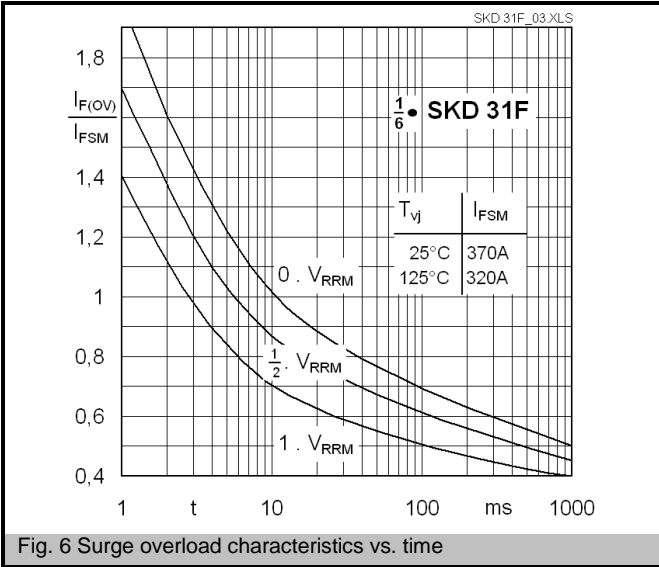


Fig. 6 Surge overload characteristics vs. time

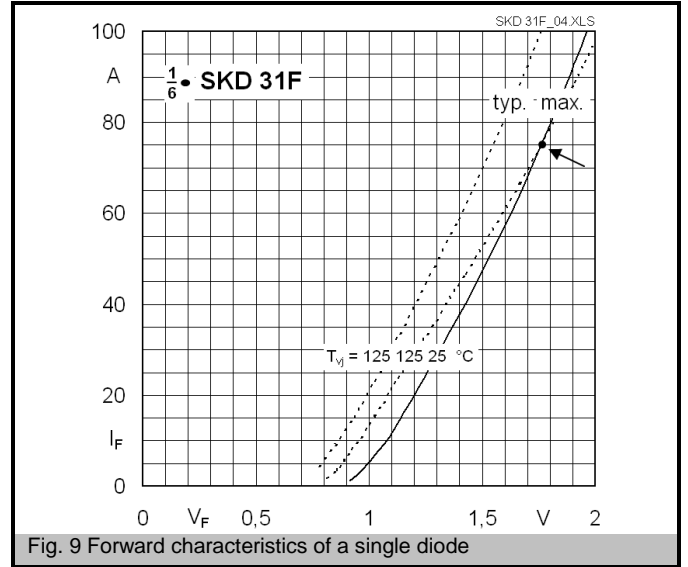


Fig. 9 Forward characteristics of a single diode

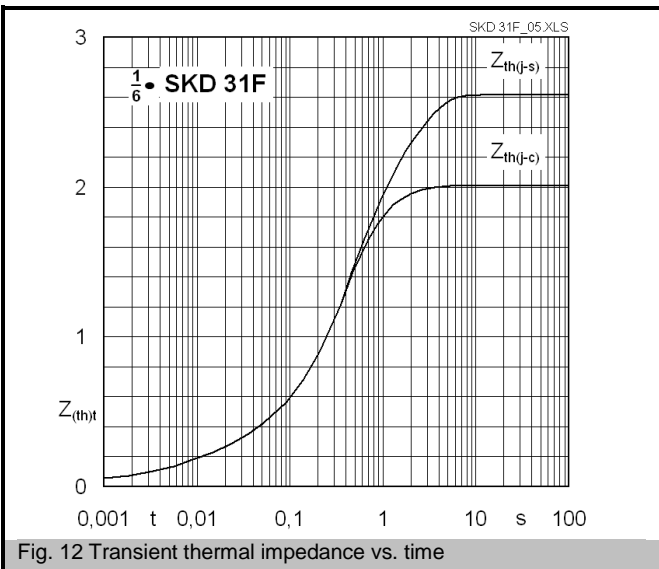
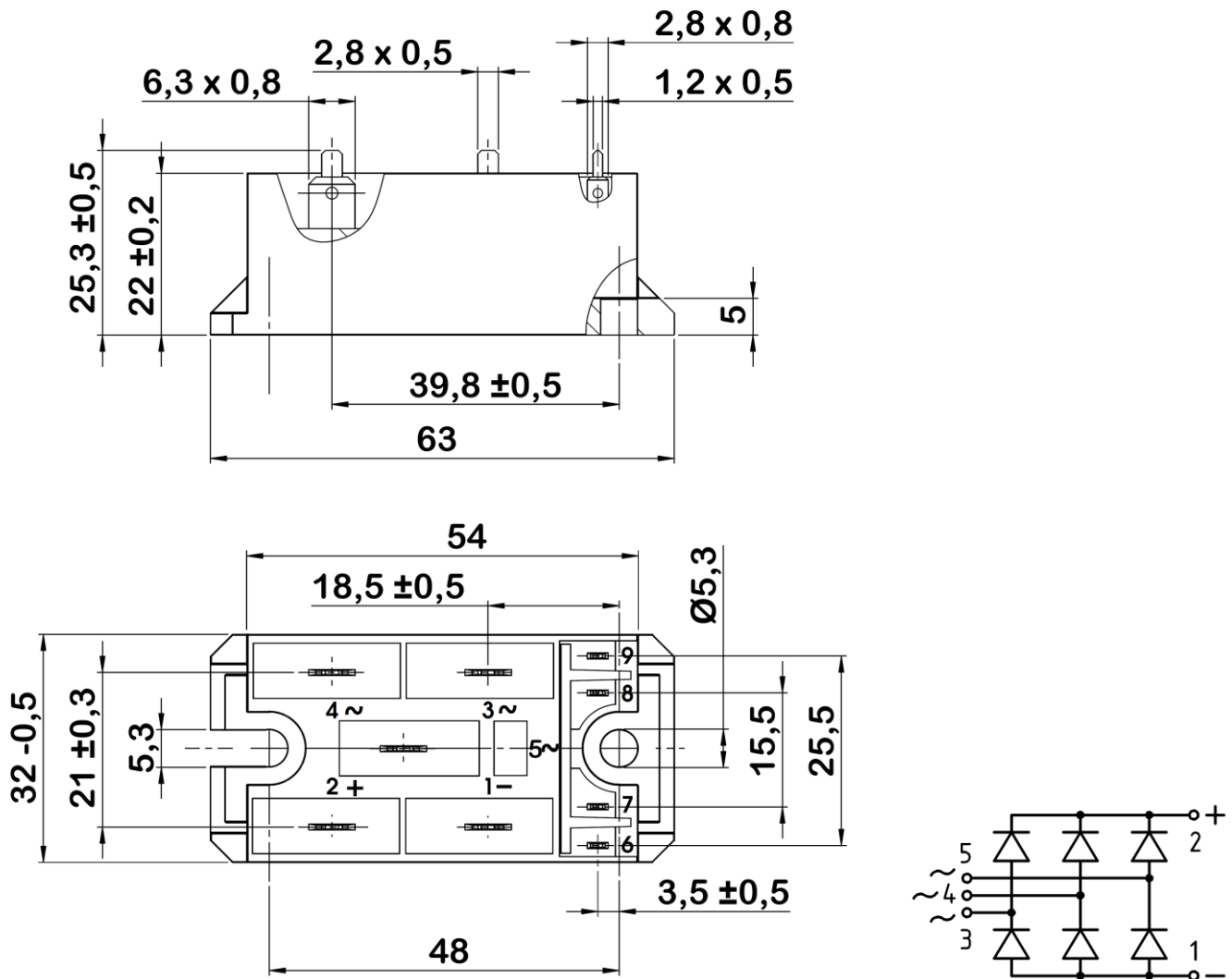


Fig. 12 Transient thermal impedance vs. time

Dimensions in millimeters



Case G26

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