SKD 31

SEMIPONT® 1

Power Bridge Rectifiers

SKD 31

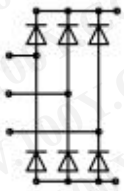
Features

- Sturdy isolated metal baseplate
- Fast-on terminals with solder tips
- Suitable for wave soldering
- High surge current 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 µF, 50 Ω (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



SKD

V_{RSM}	V_{RRM}, V_{DRM}	I_D = 31 A (full conduction)
V	V	(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 1)	5,3	A
	T_a = 45 °C; chassis 2)	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^2s
	T_{vj} = 125 °C; 8,3 ... 10 ms ms	510	A^2s
V_F	T_{vj} = 25 °C; I_F = 75 A	max. 1,75	V
$V_{(TO)}$	T_{vj} = 125 °C	max. 0,85	V
r_T	T_{vj} = 125 °C	max. 12	mΩ
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
$R_{th(c-s)}$	total	0,1	K/W
$R_{th(j-a)}$	isolated 1) (chassis 2))	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 ± 15 %	Nm
M_t			
m		66	g
Case		G 26	

Diagrams

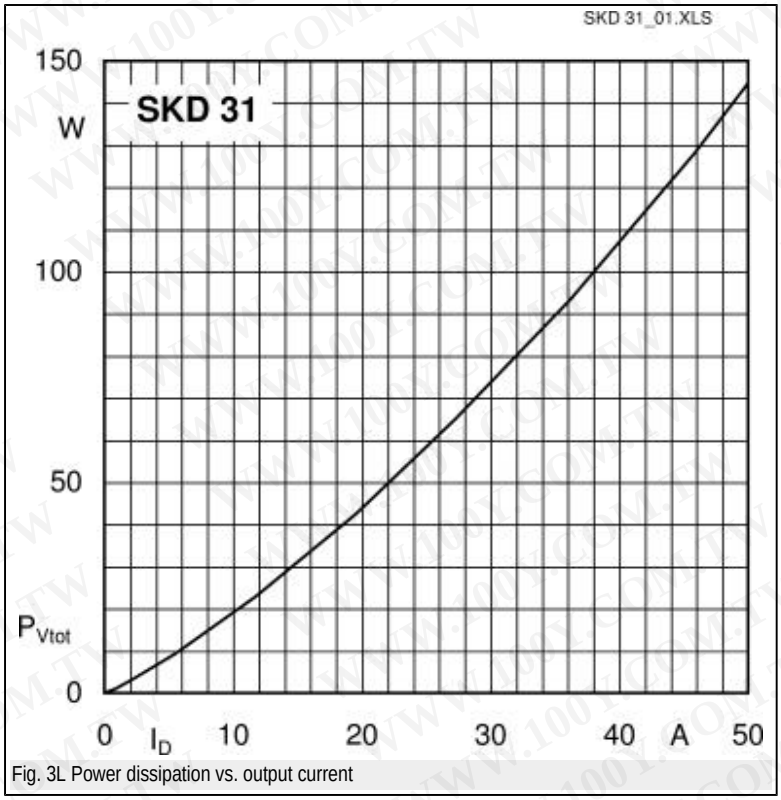


Fig. 3L Power dissipation vs. output current

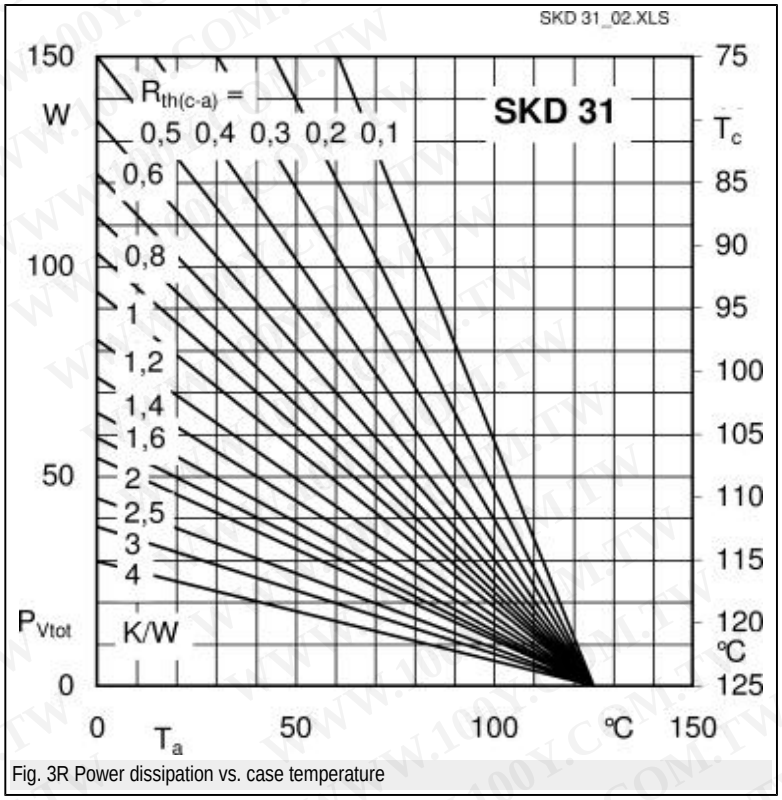


Fig. 3R Power dissipation vs. case temperature

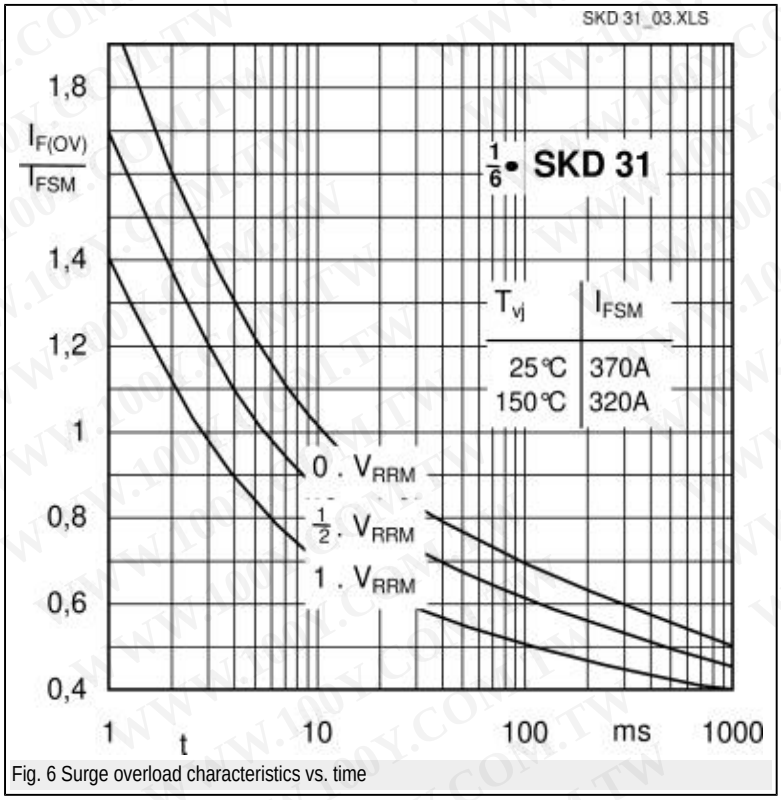


Fig. 6 Surge overload characteristics vs. time

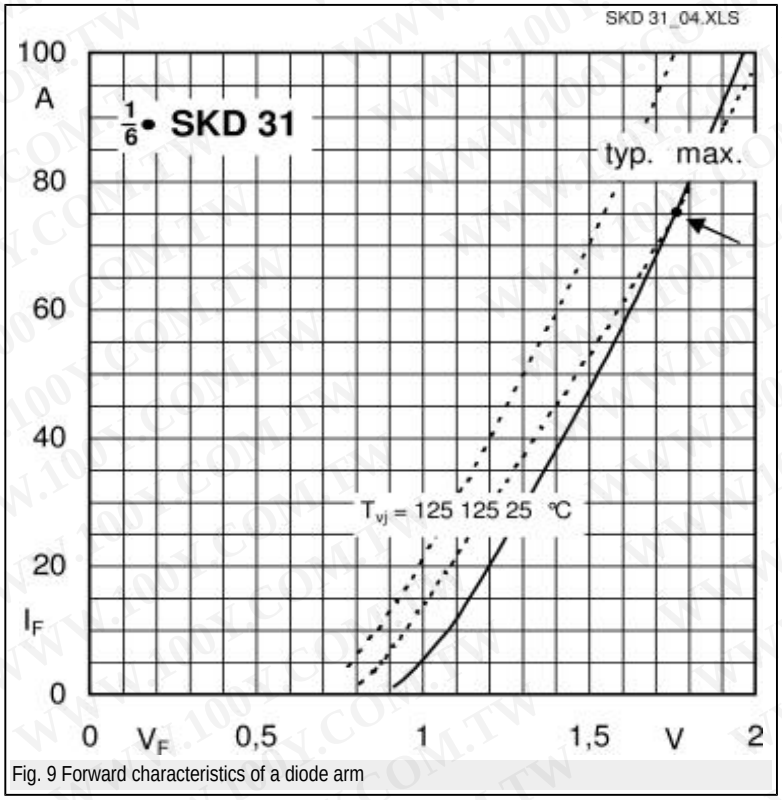


Fig. 9 Forward characteristics of a diode arm

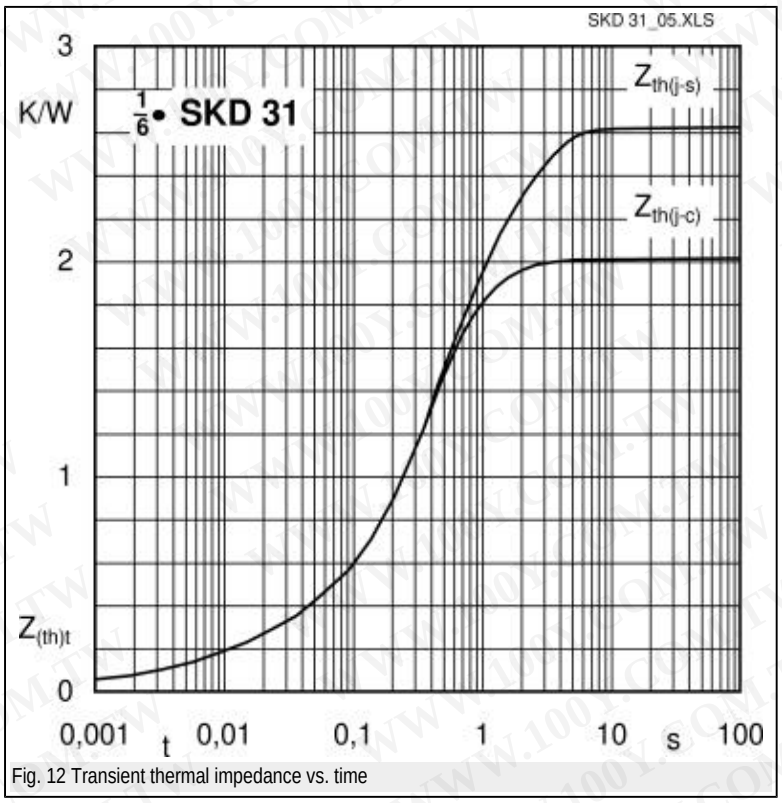
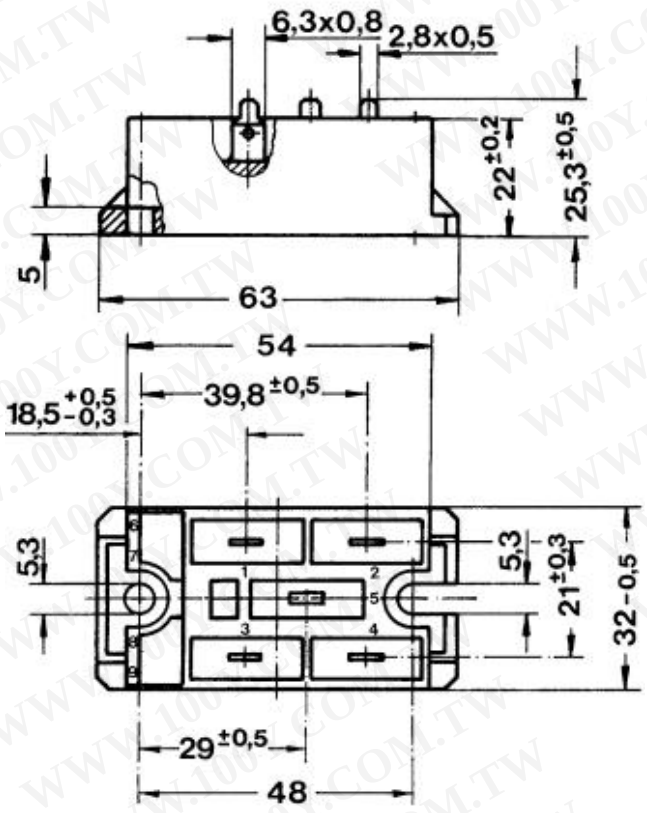


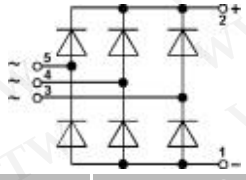
Fig. 12 Transient thermal impedance vs. time

Cases / Circuits

Dimensions in mm



Case G 26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