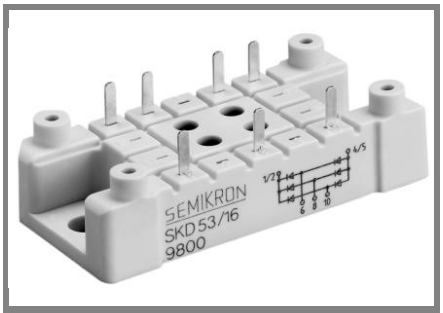
SKD 53



Power Bridge Rectifiers

SKD 53

Features

- Glass passivated silicon chips
- Low thermal impedance through use of direct copper bonded aluminum substrate (DCB) base plate
- Blocking voltage up to 1800 V
- Suitable for PCB mounting and wave soldering
- For applications with high vibrations we recommend to fasten the bridge to the pcb with 4 selftapping screw

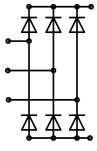
Typical Applications

- Three phase rectifiers for power supplies
- Input rectifiers for variable frequency drives
- Rectifiers for DC motor field supplies
- Battery charger rectifiers

1) Freely suspended or mounted on an insulator
2) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm
3) T_{solder} = 250 ± 10 °C (10 s)

V_{RSM} V	V_{RRM}, V_{DRM} V	I_D = 53 A (full conduction) (T_s = 100 °C)
500	400	SKD 53/04
900	800	SKD 53/08
1300	1200	SKD 53/12
1600	1400	SKD 53/14
1700	1600	SKD 53/16
1900	1800	SKD 53/18

Symbol	Conditions	Values	Units
I_D	T_s = 100 °C	53	A
	T_a = 45 °C; isolated 1)	4	A
	T_a = 45 °C; chassis 2)	18	A
	T_a = 45 °C; P5A/100 (R4A/120)	27 (29)	A
	T_a = 35 °C; P1A/120F	63	A
I_{FSM}	T_{vj} = 25 °C; 10 ms	370	A
	T_{vj} = 150 °C; 10 ms	270	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	685	A^2s
	T_{vj} = 150 °C; 8,3 ... 10 ms	365	A^2s
V_F	T_{vj} = 25 °C; I_F = 50 A	max. 1,5	V
$V_{(TO)}$	T_{vj} = 150 °C	max. 0,8	V
r_T	T_{vj} = 150 °C	max. 13	mΩ
I_{RD}	T_{vj} = 25 °C; V_{DD} = V_{DRM}; V_{RD} = V_{RRM}	max. 0,2	mA
	T_{vj} = 150 °C; V_{RD} = V_{RRM}	4	mA
$R_{th(j-s)}$	per diode	1,9	K/W
	total	0,317	K/W
$R_{th(j-a)}$	isolated 1)	14,92	K/W
	chassis 2)	2,92	K/W
T_{vj}		- 40 ... + 150	°C
T_{stg}		- 40 ... + 125 3)	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 (3000)	V
M_s	to heatsink; SI units	2 ± 15 %	Nm
M_t			
a		5 * 9,81	m/s^2
m		30	g
Case		G 55	



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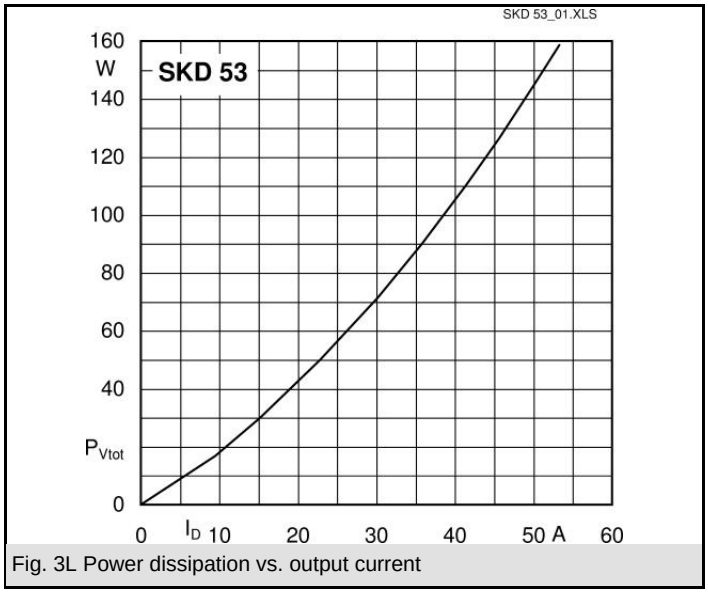

Fig. 3L Power dissipation vs. output current

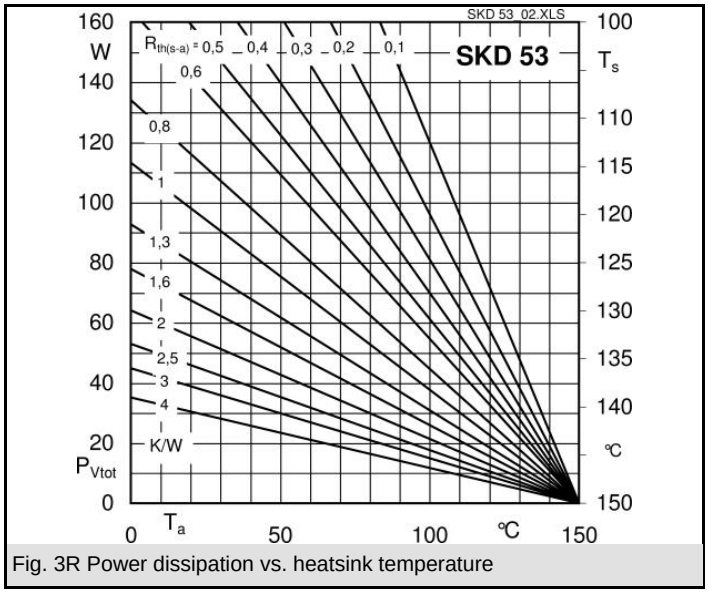

Fig. 3R Power dissipation vs. heatsink temperature

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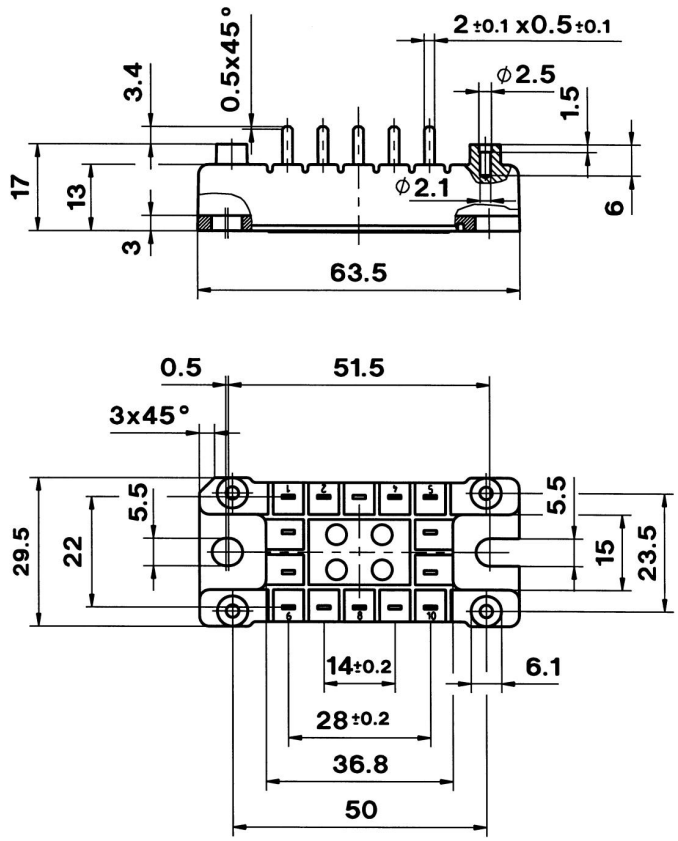
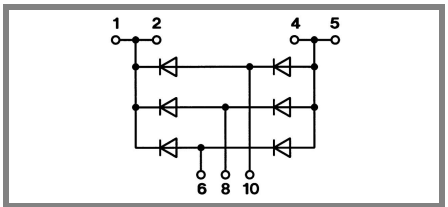
Dimensions in mm



Case G 55



SKD 53 Case G 55

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