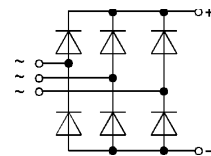
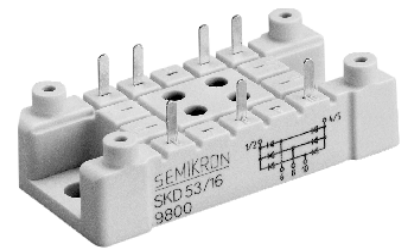


V_{RRM}	V_{RSM}	$I_D (T_h^1) = \dots \text{ }^\circ\text{C}$		
V	V	33 A (110 °C)	53 A (100 °C)	83 A (95 °C)
400	500	SKD 33/04	SKD 53/04	SKD 83/04
800	900	SKD 33/08	SKD 53/08	SKD 83/08
1200	1300	SKD 33/12	SKD 53/12	SKD 83/12
1400	1600	SKD 33/14	SKD 53/14	SKD 83/14
1600	1700	SKD 33/16	SKD 53/16	SKD 83/16
1800	1900	SKD 33/18	SKD 53/18	SKD 83/18

Power Bridge Rectifiers

SKD 33
SKD 53
SKD 83

Preliminary Data



Symbol	Conditions	SKD 33	SKD 53	SKD 83	Units
I_D, I_{DCL}	$(T_h^1) = \dots \text{ }^\circ\text{C}$	36	53	83	A
	$(T_h^1) = \dots \text{ }^\circ\text{C}$	(106)	(100)	(95)	$^\circ\text{C}$
	$T_{amb} = 45 \text{ }^\circ\text{C}$; isolated ²⁾	4	4	4	A
	chassis ³⁾	16	18	20	A
	P5A/100	24	27	32	A
	R4A/120	25	29	34	A
	P1A/120	34	39	48	A
$T_{amb} = 35 \text{ }^\circ\text{C}$, P1A/120F	50	63	83	A	
I_{FSM}	$T_{vj} = 25 \text{ }^\circ\text{C}$; 10 ms	300	370	700	A
	$T_{vj} = 150 \text{ }^\circ\text{C}$; 10 ms	240	270	560	A
i^2t	$T_{vj} = 25 \text{ }^\circ\text{C}$; 8,3 ... 10 ms	450	685	2 450	A^2s
	$T_{vj} = 150 \text{ }^\circ\text{C}$; 8,3 ... 10 ms	290	365	1 570	A^2s
V_F	$T_{vj} = 25 \text{ }^\circ\text{C}$; ($I_F = \dots \text{ A}$); max.	1,60 (50)	1,50 (50)	1,45 (80)	V
$V_{(TO)}$	$T_{vj} = 150 \text{ }^\circ\text{C}$	0,8	0,8	0,8	V
r_T	$T_{vj} = 150 \text{ }^\circ\text{C}$	18	13	7,5	$\text{m}\Omega$
I_{RD}	$T_{vj} = 25 \text{ }^\circ\text{C}$; $V_{RD} = V_{RRM}$	0,2	0,2	0,2	mA
	$T_{vj} = 150 \text{ }^\circ\text{C}$; $V_{RD} = V_{RRM}$	4	4	4	mA
R_{thjh}	per diode	2,5	1,9	1,4	$^\circ\text{C/W}$
	total	0,417	0,317	0,233	$^\circ\text{C/W}$
R_{thja}	isolated ²⁾	15,02	14,92	14,83	$^\circ\text{C/W}$
	chassis ³⁾	3,02	2,92	2,83	$^\circ\text{C/W}$
	P5A/100	1,77	1,67	1,58	$^\circ\text{C/W}$
	R4A/120	1,67	1,57	1,48	$^\circ\text{C/W}$
	P1A/120	1,12	1,02	0,93	$^\circ\text{C/W}$
	P1A/120F	0,67	0,57	0,48	$^\circ\text{C/W}$
T_{vj}		- 40 ... + 150			$^\circ\text{C}$
T_{stg}		- 40 ... + 125			$^\circ\text{C}$
V_{isol}	a. c. 50 Hz; r.m.s; 1 s/1 min	3600 / 3000			V~
T_{solder}	10 s	250 ± 10			$^\circ\text{C}$
M_1	Case to heatsink	2 ± 15 %			Nm
	US units	18 ± 15 %			lb. in.
a		5 · 9,81			m/s^2
w		30			g
Case		G 55			

1) T_h = heatsink temperature
 2) Freely suspended or mounted on an insulator
 3) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

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 screws
- UL recognition applied for

Typical Applications

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

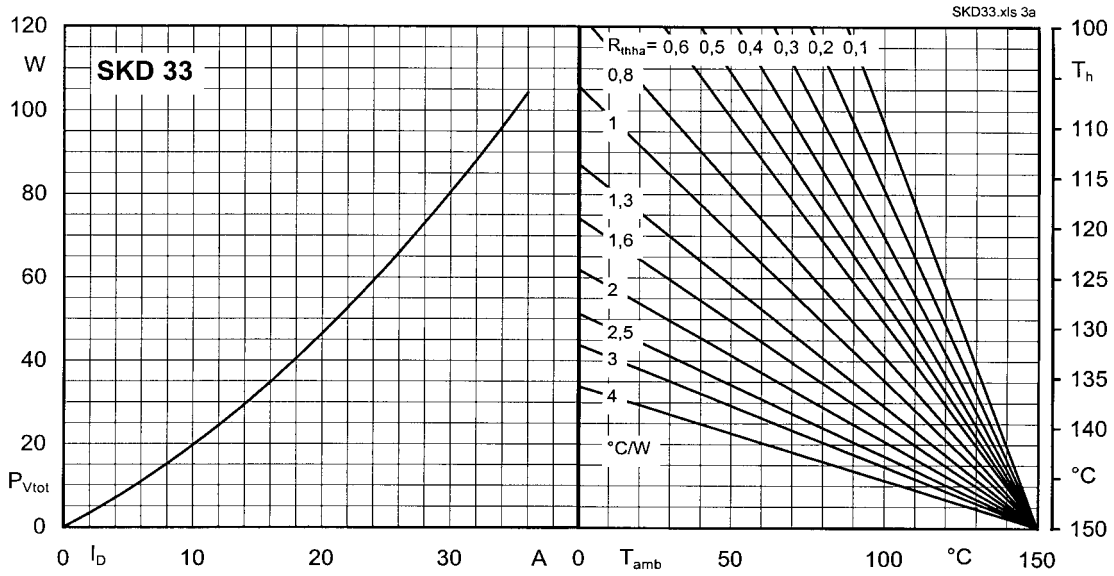


Fig. 3 a Power dissipation vs. output current and case temperature

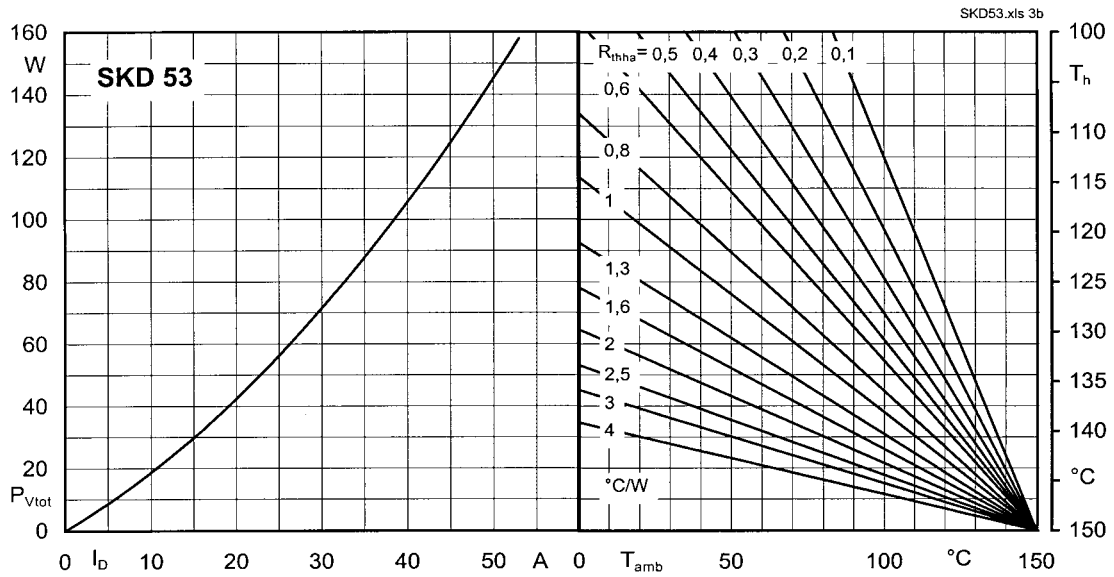


Fig. 3 b Power dissipation vs. output current and case temperature

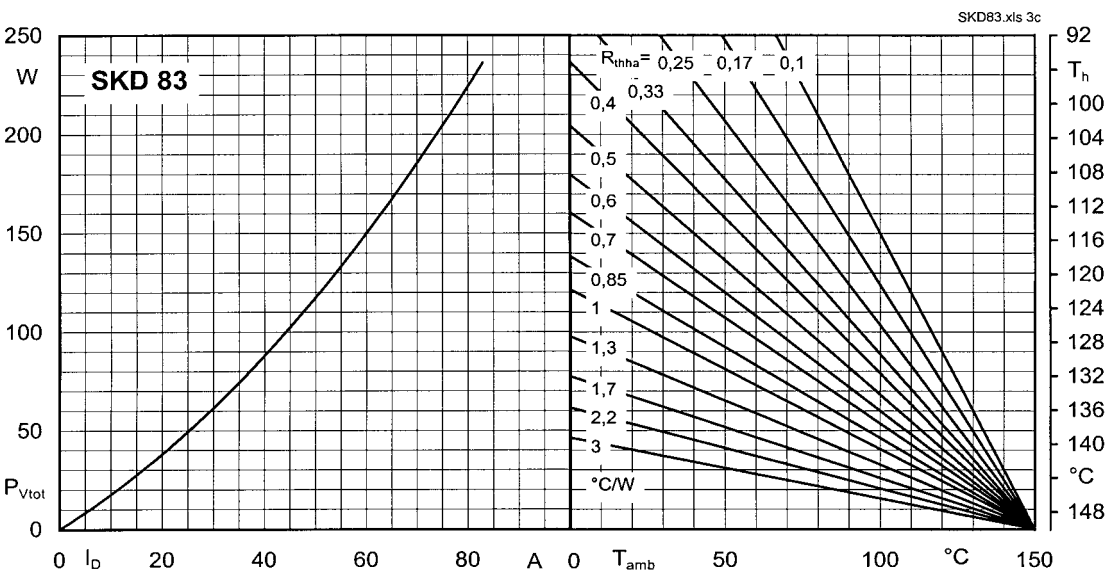
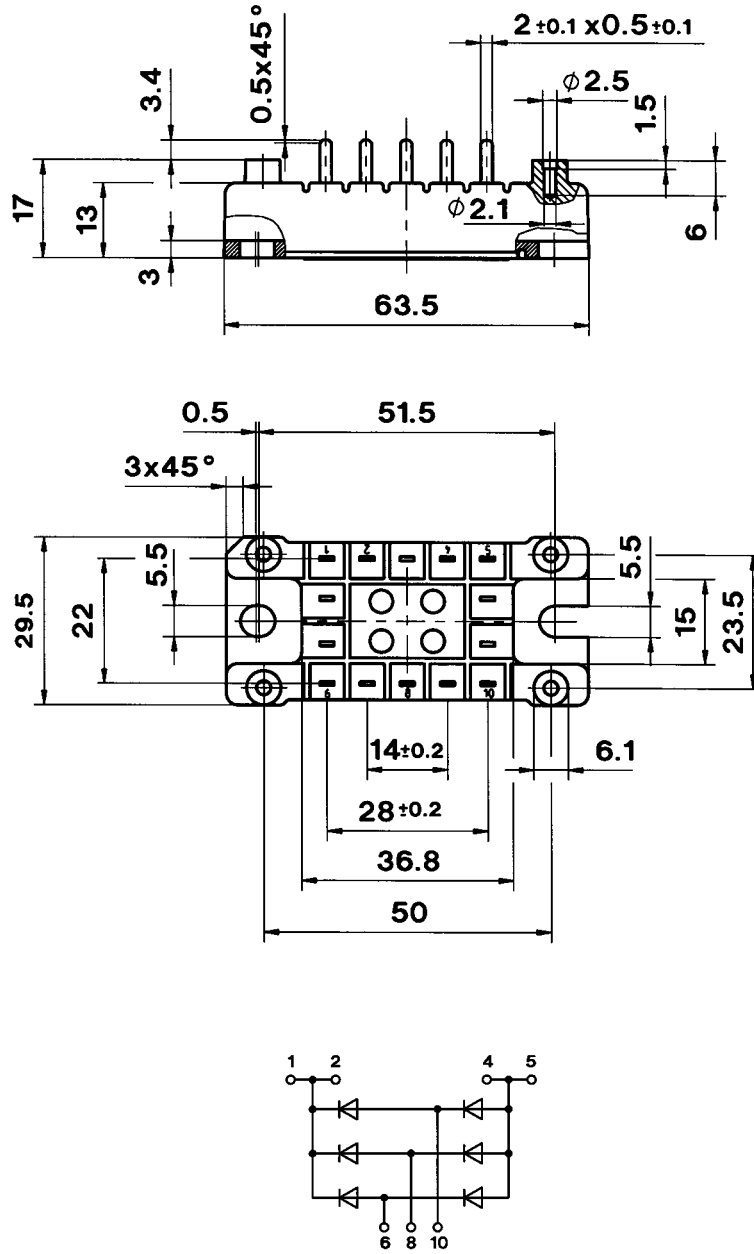


Fig. 3 c Power dissipation vs. output current and case temperature

SKD 33
 SKD 53
 SKD 83
 Case G 55



Dimensions in mm