

	9800	Symbol	Conditions	Values	Units
I	SEMIKRUS SKD53/16	1900	1800	SKD 33/18	
I	1/2 1/2 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4	1700	1600	SKD 33/16	
I	1945	1300	1200	SKD 33/12	

 $\rm V_{RRM},\, V_{DRM}$

400

800

 V_{RSM}

500

900

Power Bridge Rectifiers

SKD 33

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
- Freely suspended or mounted on an insulator
- 2) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm
- 3) $T_{solder} = 250 \pm 10 \, ^{\circ}C (10 \, s)$

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SKD	

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Symbol	Conditions	Values	Units
I_D	T _s = 106 °C	36	Α
	$T_a = 45 ^{\circ}\text{C}$; isolated ¹⁾	4	Α
	$T_a = 45 ^{\circ}\text{C}$; chassis $^{2)}$	16	Α
	T _a = 45 °C; P5A/100 (R4A/120)	24 (25)	Α
	T _a = 35 °C; P1A/120F	50	Α
I _{FSM}	$T_{vj} = 25 ^{\circ}\text{C}; 10 \text{ms}$	300	Α
	T _{vj} = 150 °C; 10 ms	240	Α
i²t	T _{vj} = 25 °C; 8,3 10 ms	450	A²s
	T _{vj} = 150 °C; 8,3 10 ms	290	A²s
V _F	$T_{v_i} = 25 ^{\circ}C; I_F = 50 A$	max. 1,6	V
$V_{(TO)}$	T _{vi} = 150 °C	max. 0,8	V
r _T	T _{vi} = 150 °C	max. 18	mΩ
I_{RD}	$T_{vj}^{3} = 25 \text{ °C}; V_{DD} = V_{DRM}; V_{RD} = V_{RRM}$	max. 0,2	mA
	$T_{vj} = 150 ^{\circ}\text{C}; V_{RD} = V_{RRM}$	4	mA
$R_{th(j-s)}$	per diode	2,5	K/W
(-)	total	0,417	K/W
$R_{th(j-a)}$	isolated 1)	15,02	K/W
(2)	chassis ²⁾	3,02	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	2 ± 15 %	Nm
M_t			
а		5 * 9,81	m/s²
m		30	g
Case		G 55	

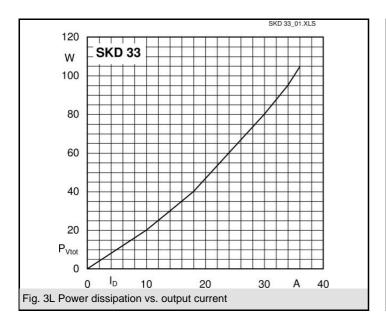
I_D = 33 A (full conduction)

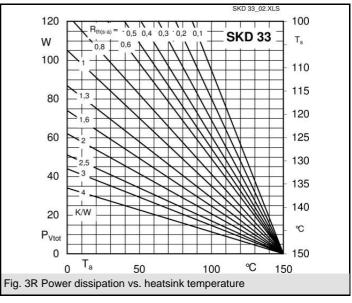
 $(T_s = 110 \, ^{\circ}C)$

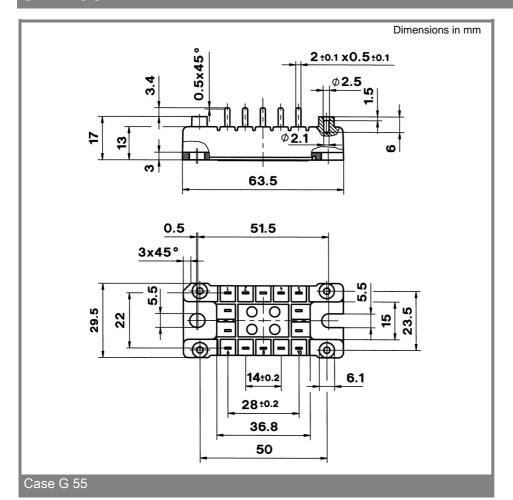
SKD 33/04

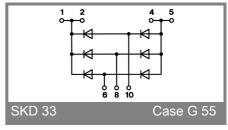
SKD 33/08

SKD 33









* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.