

## Power Bridge Rectifiers

### SKD 51

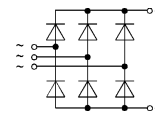
$V_{RRM}$	$V_{RSM}$	$V_{VRMS}$	$I_D$ ( $T_{case} = 125\text{ }^\circ\text{C}$ $50\text{ }^1$ ) A
V	V	V	
400	500	125	<b>SKD 51/04</b>
800	900	250	<b>SKD 51/08</b>
1200	1300	380	<b>SKD 51/12</b>
1400	1500	440	<b>SKD 51/14</b>
1600	1700	500	<b>SKD 51/16</b>
1800	1900	570	<b>SKD 51/18*</b>



Symbol	Conditions	SKD 51	Units
$I_D, I_{DCL}$	$T_{case} = 125\text{ }^\circ\text{C}$	$50\text{ }^1$	A
	$T_{amb} = 45\text{ }^\circ\text{C}$ ; isolated <sup>2)</sup>	7	A
	chassis <sup>3)</sup>	18	A
	R4A/120	27	A
	P5A/100	31	A
	P1A/120	52	A
$I_{FSM}$	$T_{vj} = 25\text{ }^\circ\text{C}$ , 10 ms	775	A
	$T_{vj} = 150\text{ }^\circ\text{C}$ , 10 ms	700	A
$i^2t$	$T_{vj} = 25\text{ }^\circ\text{C}$ , 8,3...10 ms	3000	$\text{A}^2\text{s}$
	$T_{vj} = 150\text{ }^\circ\text{C}$ , 8,3...10 ms	2450	$\text{A}^2\text{s}$
$V_F$	$T_{vj} = 25\text{ }^\circ\text{C}$ ; $I_F = 75\text{ A}$	1,45	V
$V_{(TO)}$	$T_{vj} = 150\text{ }^\circ\text{C}$	0,8	V
$r_T$	$T_{vj} = 150\text{ }^\circ\text{C}$	8,5	m $\Omega$
$I_{RD}$	$T_{vj} = 25\text{ }^\circ\text{C}$ ; $V_{RD} = V_{RRM}$	0,2	mA
	$T_{vj} = 150\text{ }^\circ\text{C}$ ; $V_{RD} = V_{RRM}$	4	mA
$t_{rr}$	$T_{vj} = 25\text{ }^\circ\text{C}$ ; $I_F = I_R = 1\text{ A}$	typ. 5	$\mu\text{s}$
$f_G$		2000	Hz
$R_{thjc}$	per diode	1,1	$^\circ\text{C/W}$
	total	0,183	$^\circ\text{C/W}$
$R_{thch}$	total	0,1	$^\circ\text{C/W}$
$R_{thja}$	isolated <sup>2)</sup>	9	$^\circ\text{C/W}$
	chassis <sup>3)</sup>	3,15	$^\circ\text{C/W}$
	P5A/100	1,8	$^\circ\text{C/W}$
	R4A/120	1,15	$^\circ\text{C/W}$
	P1A/120	0,883	$^\circ\text{C/W}$
$T_{vj}$		- 40...+ 150	$^\circ\text{C}$
$T_{stg}$		- 40...+ 125	$^\circ\text{C}$
$V_{isol}$	a.c. 50 Hz; r.m.s.; 1 s	3600	V~
	1 min	3000	V~
RC	$P_R = 1\text{ W}$	50	$\Omega$
		0,1	$\mu\text{F}$
$M_1$	case to heatsink	SI units	$4,5 \pm 15\%$
		US units	$40 \pm 15\%$
w		97	g
Case		G 51	

\* available in limited quantities

- <sup>1)</sup> For solder connection.  
Permissible current for plug connection see DIN IEC 760E and DIN 46249 part 1
- <sup>2)</sup> Freely suspended or mounted on an insulator
- <sup>3)</sup> Mounted on a painted metal sheet of min. 250 x 250 x 1 mm



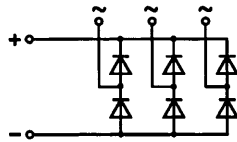
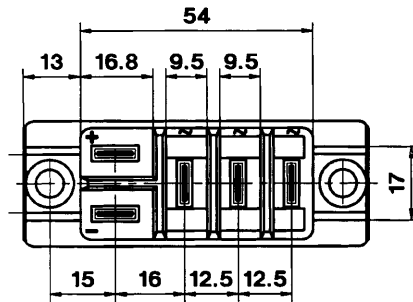
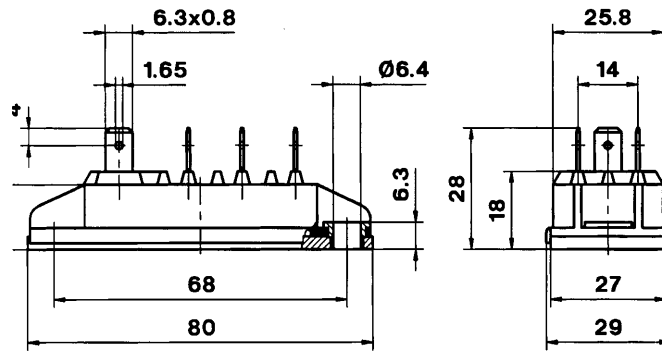
#### Features

- Glass passivated silicon chips
- Fast-on terminals for pcb solder or plug-on connection
- Sturdy isolated metal base plate
- Low thermal impedance through use of direct copper bonded aluminum substrate (DCB)
- Blocking voltage up to 1800 V
- High surge currents
- UL recognized, file no. E63 532

#### Typical Applications

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

SKD 51  
Case G 51



Dimensions in mm