



## Power Bridge Rectifiers

### SKB 51L-W

#### Features

- Low profile plastic case with isolated metal base plate and wire leads
- Ideal for printed circuit boards
- Blocking voltage up to 1600 V
- High surge current
- Easy chassis mounting
- UL recognized plastic material

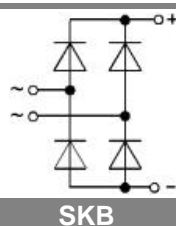
#### Typical Applications\*

- Rectifier for power supplies
- Input rectifier for variable frequency drives
- Rectifier for DC motor field supplies
- Battery charger rectifiers
- Recommended snubber network:  
RC: 50 Ω, 0.1 μF ( $P_R = 1 \text{ W}$ )

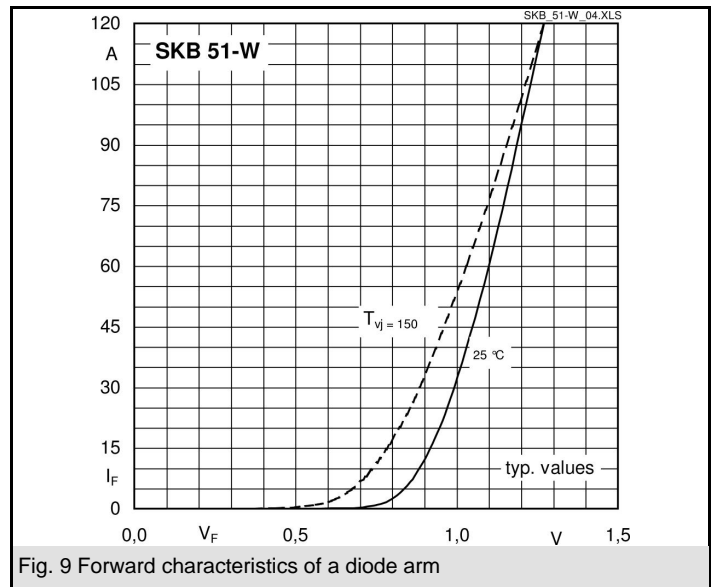
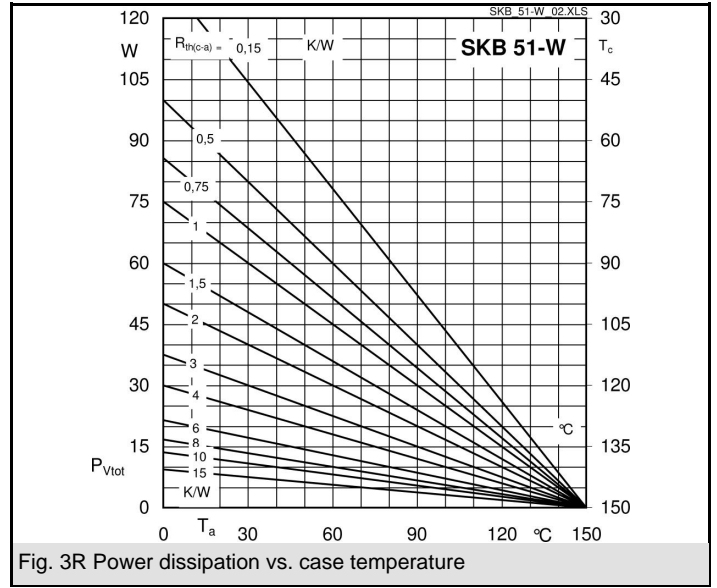
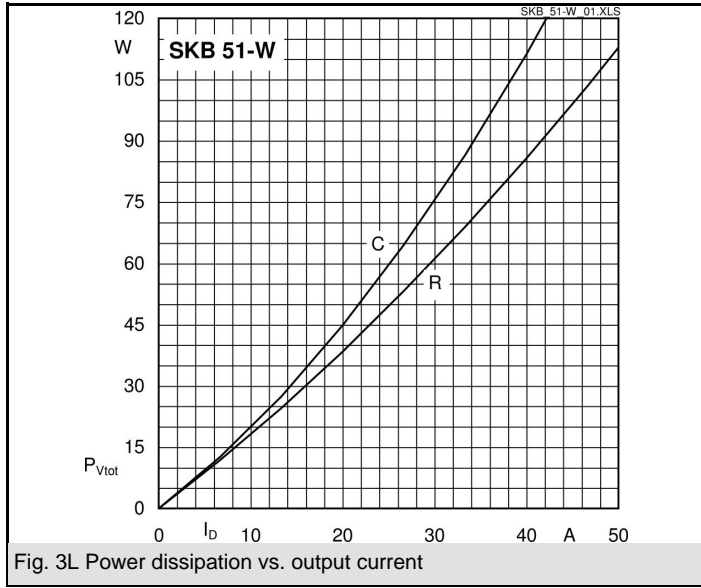
- 1) Freely suspended or mounted on an insulator
- 2) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm

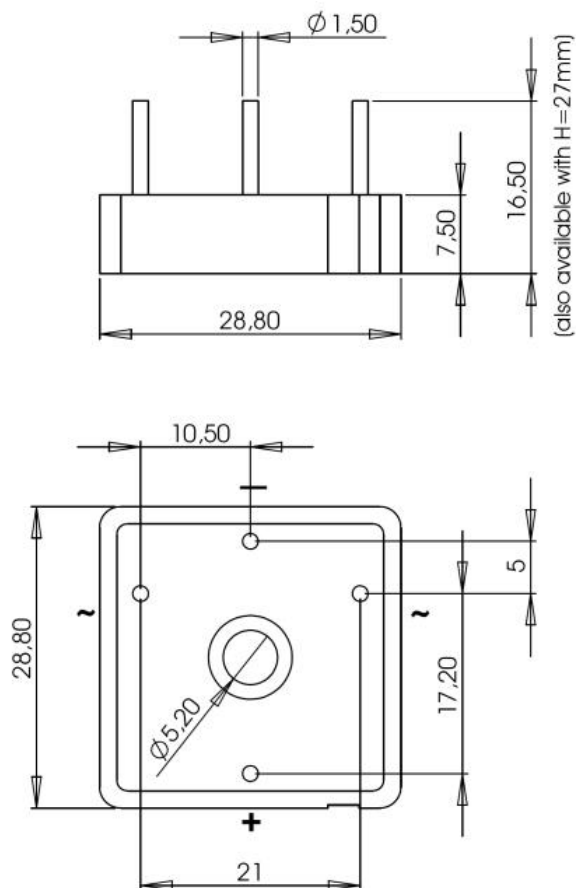
$V_{RSM}, V_{RRM}$ V	$V_{VRMS}$ V	$I_D = 50 \text{ A}$ ( $T_c = 37 \text{ °C}$ ) Types	$C_{max}$ μF	$R_{min}$ Ω
200		SKB 51L02-W		0,08
400		SKB 51L04-W		0,15
800		SKB 51L08-W		0,25
1200		SKB 51L12-W		0,4
1600		SKB 51L16-W		0,5

Symbol	Conditions	Values	Units
$I_D$	$T_a = 45 \text{ °C}$ , P1/120 $T_a = 45 \text{ °C}$ , chassis <sup>2)</sup>	29 15	A A
$I_{DCL}$	$T_a = 45 \text{ °C}$ , P1/120 $T_a = 45 \text{ °C}$ , chassis <sup>2)</sup> $T_a = \text{ °C}$ ,	24,5 13,5	A A A
$I_{FSM}$	$T_{vj} = 25 \text{ °C}$ , 10 ms $T_{vj} = 150 \text{ °C}$ , 10 ms	650 560	A A
$i^2t$	$T_{vj} = 25 \text{ °C}$ , 8,3 ... 10 ms $T_{vj} = 150 \text{ °C}$ , 8,3 ... 10 ms	2100 1550	A <sup>2</sup> s A <sup>2</sup> s
$V_F$	$T_{vj} = 25 \text{ °C}$ , $I_F = 150 \text{ A}$	max. 1,5	V
$V_{(TO)}$	$T_{vj} = 150 \text{ °C}$	max. 0,85	V
$r_T$	$T_{vj} = 150 \text{ °C}$	max. 4,5	mΩ
$I_{RD}$	$T_{vj} = 25 \text{ °C}$ , $V_{RD} = V_{RRM}$ $T_{vj} = \text{ °C}$ , $V_{RD} = V_{RRM} \geq V$	500	μA μA
$I_{RD}$	$T_{vj} = 150 \text{ °C}$ , $V_{RD} = V_{RRM}$ $T_{vj} = \text{ °C}$ , $V_{RD} = V_{RRM} \geq V$ $T_{vj} = 25 \text{ °C}$	8	mA mA
$t_{tr}$	$T_{vj} = 25 \text{ °C}$	20	μs
$f_G$		2000	Hz
$R_{th(j-a)}$	isolated <sup>1)</sup> chassis <sup>2)</sup>	14 3,7	K/W K/W
$R_{th(j-c)}$	total	1	K/W
$R_{th(c-s)}$	total	0,15	K/W
$T_{vj}$		- 40 ... + 150	°C
$T_{stg}$		- 55 ... + 130	°C
$V_{isol}$	a.c. 50 ... 60 Hz; r.m.s.; 1 s / 1 min.	3000 / 2500	V~
$M_s$	to heatsink	$2 \pm 15 \%$	Nm
$M_t$			Nm
$a$			m/s <sup>2</sup>
$w$	approx.	19	g
$F_u$		40	A
Case		SKB 51L-W	



SKB





Case SKB 51L-W

\* 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.