

# SKB 52



**SEMIPONT® 3**

## Power Bridge Rectifiers

### SKB 52

#### Features

- Robust plastic case with screw terminals
- Large, isolated base plate
- Blocking voltage up to 1800 V
- High surge currents
- Single phase bridge rectifier
- Easy chassis mounting
- UL recognized, file no. E 63 532

#### Typical Applications

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

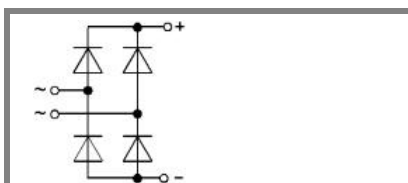
1) Freely suspended or mounted on an isolator

2) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm:

$$R_{th(s-a)} = 1,8 \text{ K/W}$$

$V_{RSM}$ V	$V_{RRM}, V_{DRM}$ V	$I_D = 50 \text{ A}$ (full conduction) ( $T_c = 99 \text{ }^\circ\text{C}$ )
400	400	SKB 52/04
800	800	SKB 52/08
1200	1200	SKB 52/12
1400	1400	SKB 52/14
1600	1600	SKB 52/16
1800	1800	SKB 52/18

Symbol	Conditions	Values	Units
$I_D$	$T_c = 85 \text{ }^\circ\text{C}$ resistive / inductive load	60	A
	$T_a = 45 \text{ }^\circ\text{C}$ ; isolated <sup>1)</sup>	9,5	A
	$T_a = 45 \text{ }^\circ\text{C}$ ; chassis <sup>2)</sup>	21,5	A
	$T_a = 45 \text{ }^\circ\text{C}$ ; P1A/120 (P1A/200)	40 (45)	A
$I_{FSM}$	$T_{vj} = 25 \text{ }^\circ\text{C}$ ; 10 ms	500	A
	$T_{vj} = 150 \text{ }^\circ\text{C}$ ; 10 ms	425	A
$i^2t$	$T_{vj} = 25 \text{ }^\circ\text{C}$ ; 8,3 ... 10 ms	1250	A <sup>2</sup> s
	$T_{vj} = 150 \text{ }^\circ\text{C}$ ; 8,3 ... 10 ms	900	A <sup>2</sup> s
$V_F$	$T_{vj} = 25 \text{ }^\circ\text{C}$ ; $I_F = 150 \text{ A}$	max. 1,8	V
$V_{(TO)}$	$T_{vj} = 150 \text{ }^\circ\text{C}$	max. 0,85	V
$r_T$	$T_{vj} = 150 \text{ }^\circ\text{C}$	max. 8	mΩ
$I_{RD}$	$T_{vj} = 25 \text{ }^\circ\text{C}$ ; $V_{DD} = V_{DRM}$ ; $V_{RD} = V_{RRM}$	max. 0,5	mA
	$T_{vj} = 150 \text{ }^\circ\text{C}$ ; $V_{RD} = V_{RRM}$	5	mA
$R_{th(j-c)}$	per diode	1,5	K/W
	total	0,375	K/W
$R_{th(c-s)}$	total	0,07	K/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
$M_s$	to heatsink	$5 \pm 15\%$	Nm
$M_t$	to terminals	$5 \pm 15\%$	Nm
m		165	g
Case		G 35	



SKB

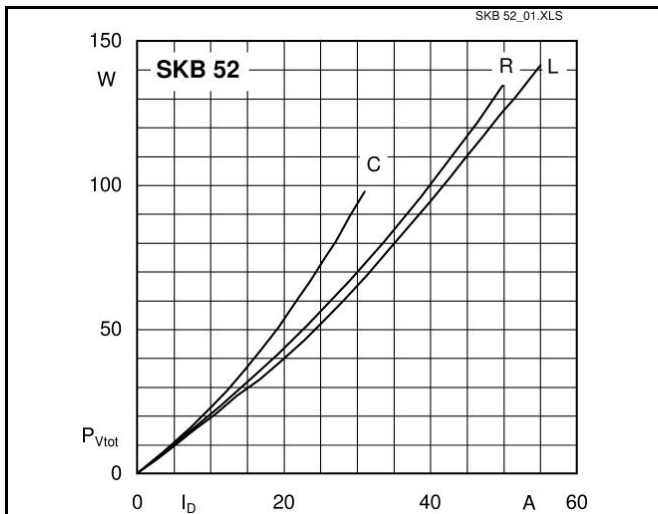


Fig. 3L Power dissipation vs. output current

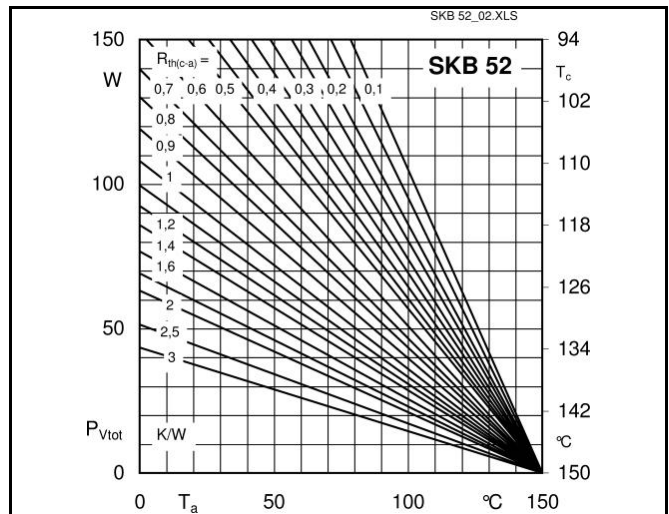


Fig. 3R Power dissipation vs. case temperature

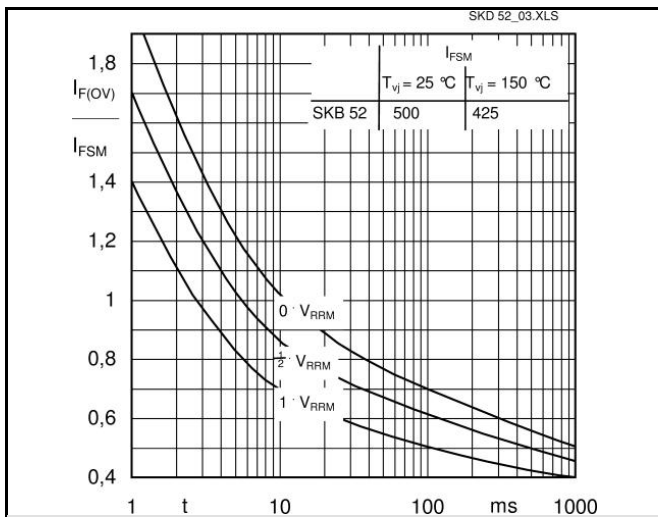


Fig. 5 Surge overload characteristics vs. time

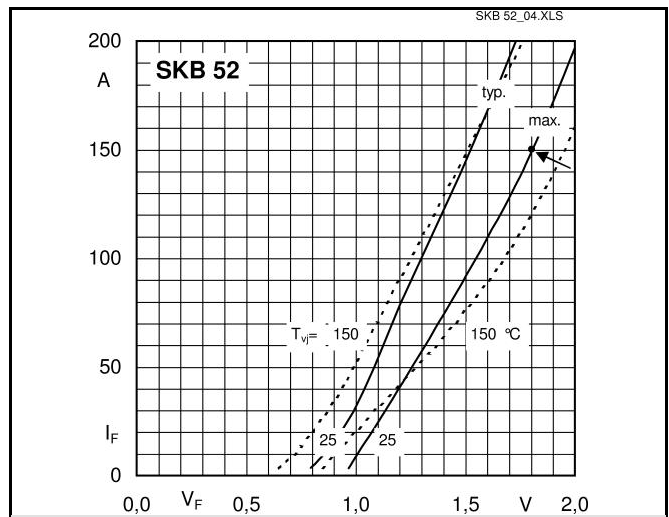


Fig. 9 Forward characteristics of a diode arm

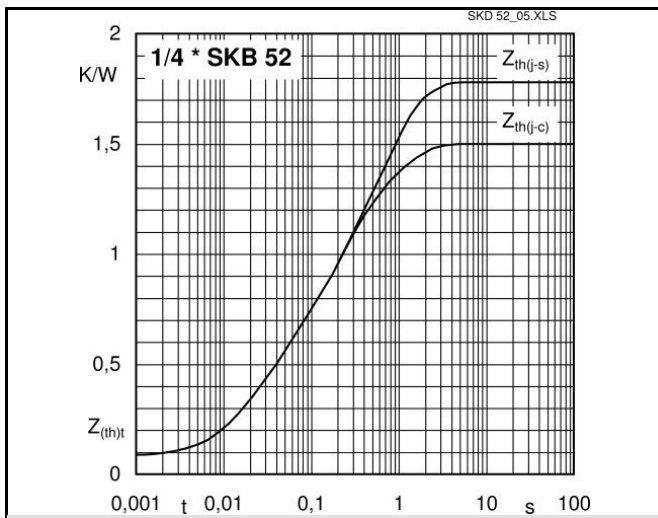
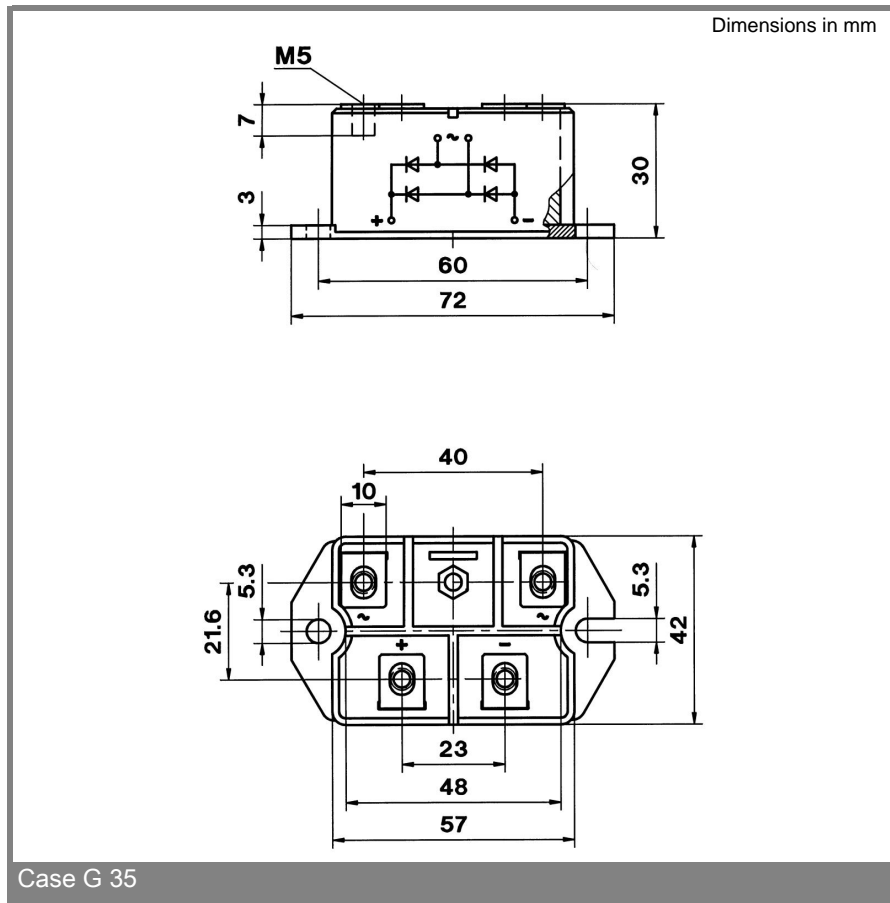


Fig. 12 Transient thermal impedance vs. time



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