



## SEMIPONT<sup>®</sup> 2

### Power Bridge Rectifiers

#### SKB 60

#### Features

- Robust plastic case with screw terminals
- Large, isolated base plate
- Blocking voltage to 1600 V
- High surge currents
- Single phase bridge rectifier
- Easy chassis mounting
- UL recognized, file no. E 63 532

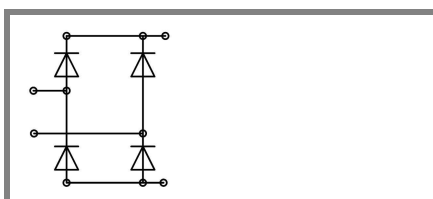
#### Typical Applications\*

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

1) Painted metal sheet of minimum 250 x 250 x 1 mm:  $R_{th(c-a)} = 1,8 \text{ K/W}$

$V_{RSM}$ V	$V_{RRM}, V_{DRM}$ V	$I_D = 60 \text{ A}$ (full conduction) ( $T_c = 88 \text{ °C}$ )
400	400	SKB 60/04
800	800	SKB 60/08
1200	1200	SKB 60/12
1400	1400	SKB 60/14
1600	1600	SKB 60/16

Symbol	Conditions	Values	Units
$I_D$	$T_c = 85 \text{ °C}$	67	A
	inductive load		A
	$T_a = 45 \text{ °C}$ , chassis <sup>1)</sup>	20	A
	$T_a = 45 \text{ °C}$ ; P13A/125 (P1A/120)	25 (44)	A
	$T_a = 35 \text{ °C}$ , P1A/200F	88	A
$I_{FSM}$	$T_{vj} = 25 \text{ °C}$ ; 10 ms	1000	A
	$T_{vj} = 125 \text{ °C}$ ; 10 ms	850	A
$i^2t$	$T_{vj} = 25 \text{ °C}$ ; 8,3 ... 10 ms	5000	A <sup>2</sup> s
	$T_{vj} = 125 \text{ °C}$ ; 8,3 ... 10 ms	3600	A <sup>2</sup> s
$V_F$	$T_{vj} = 25 \text{ °C}$ ; $I_F = 150 \text{ A}$	max. 1,6	V
$V_{(TO)}$	$T_{vj} = 125 \text{ °C}$	max. 0,85	V
$r_T$	$T_{vj} = 125 \text{ °C}$	max. 5	mΩ
$I_{RD}$	$T_{vj} = 25 \text{ °C}$ ; $V_{DD} = V_{DRM}$ ; $V_{RD} = V_{RRM}$	max. 0,5	mA
	$T_{vj} = 125 \text{ °C}$ , $V_{RD} = V_{RRM}$	2	mA
$R_{th(j-c)}$	per diode	1	K/W
	total	0,25	K/W
$R_{th(c-s)}$	total	0,05	K/W
$T_{vj}$		- 40 ... + 125	°C
$T_{stg}$		- 40 ... + 125	°C
$V_{isol}$	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 ( 3000 )	V
$M_s$	to heatsink	5 ± 15 %	Nm
$M_t$	to terminals	5 ± 15 %	Nm
m		165	g
Case		G 17	



SKB

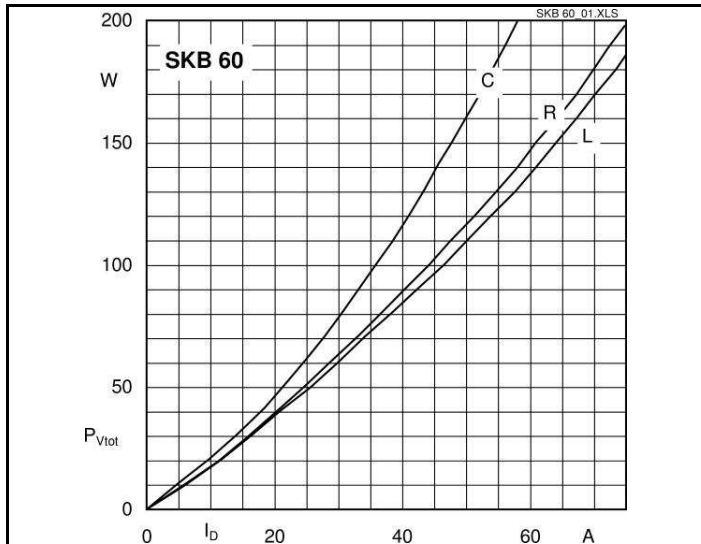


Fig. 3L Power dissipation vs. output current

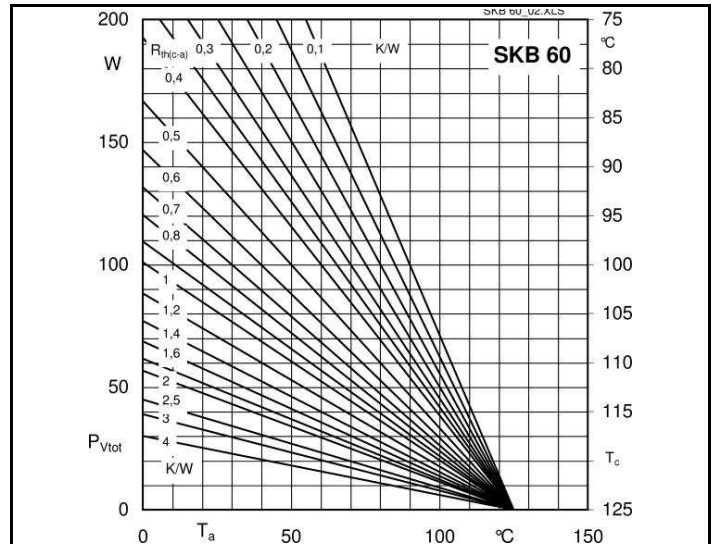


Fig. 3R Power dissipation vs. case temperature

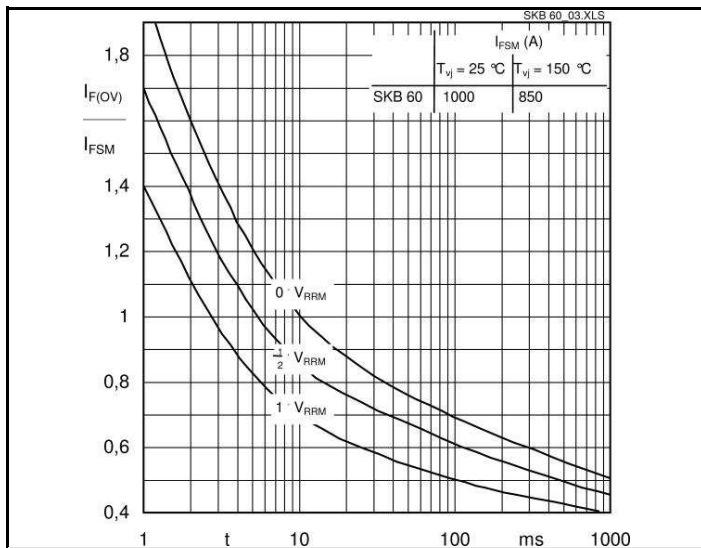


Fig. 6 Surge overload characteristics vs. time

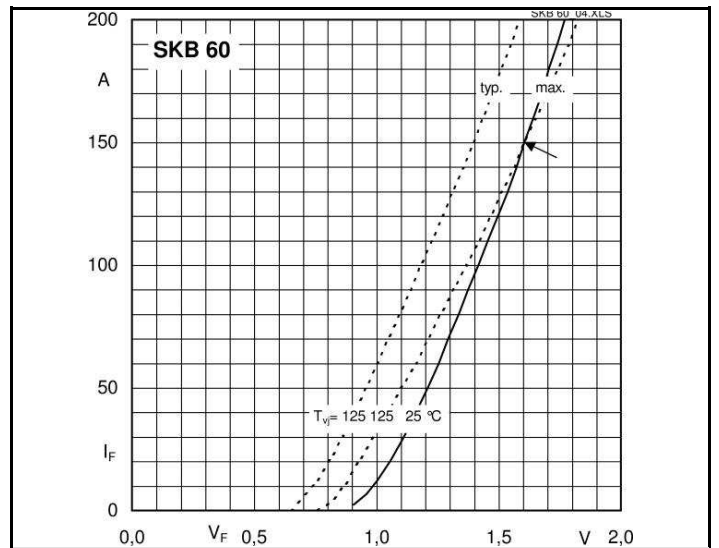


Fig. 9 Forward characteristics of a diode arm

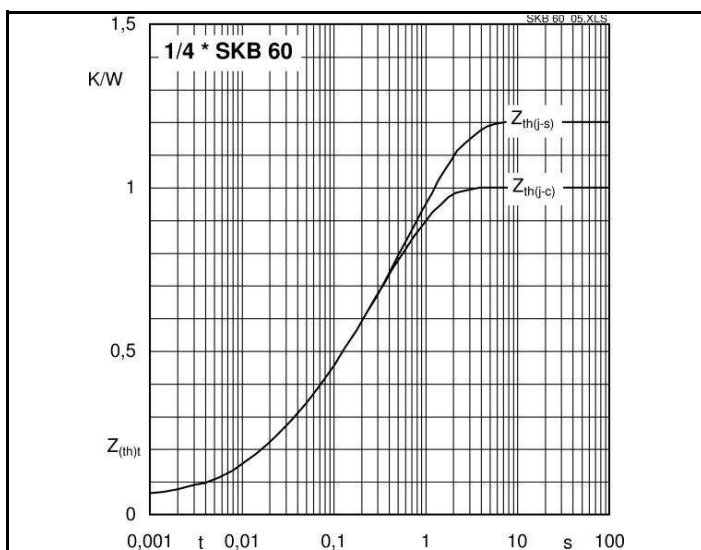
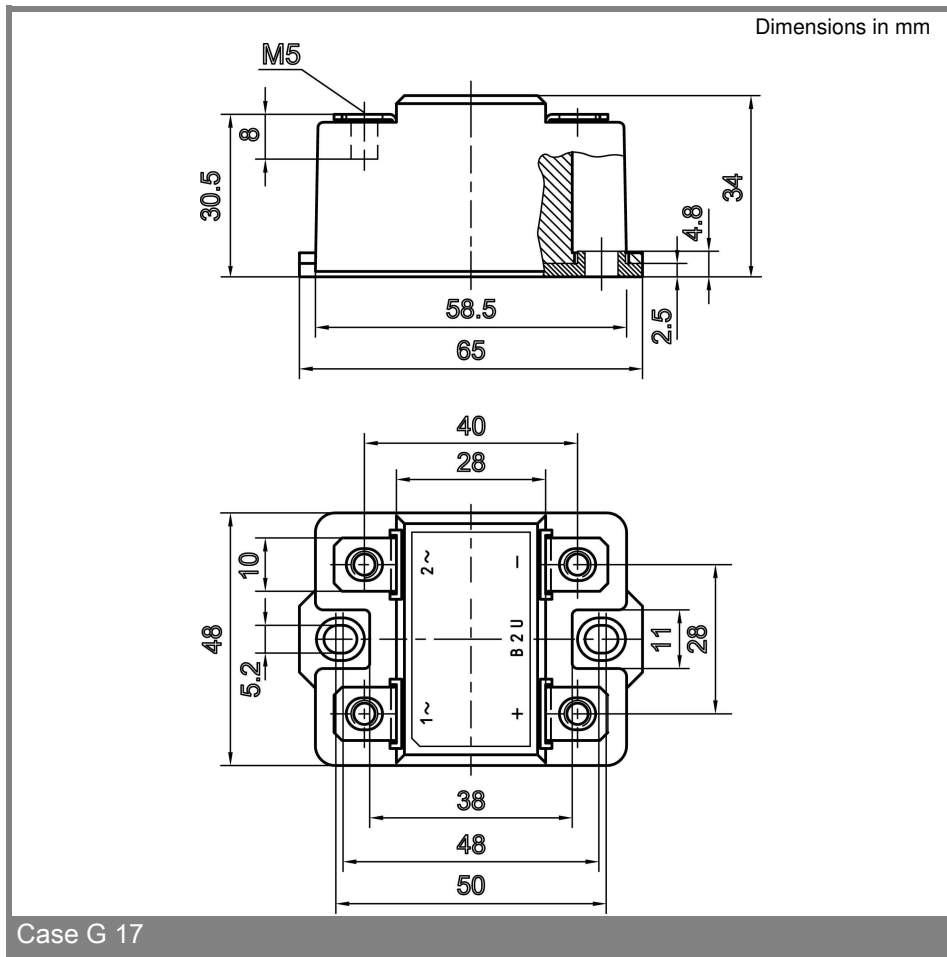


Fig. 12 Transient thermal impedance vs. time



Case G 17

\* 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.