



## SEMIPONT<sup>®</sup> 2

### Power Bridge Rectifiers

#### SKD 100

#### Features

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

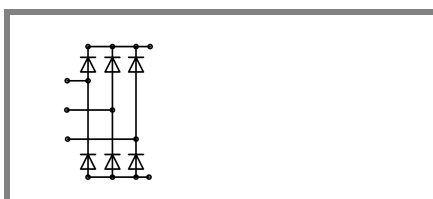
#### Typical Applications

- Three 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	$I_D = 100 \text{ A}$ (full conduction) ( $T_c = 93 \text{ }^\circ\text{C}$ )
400	400	SKD 100/04
800	800	SKD 100/08
1200	1200	SKD 100/12
1400	1400	SKD 100/14
1600	1600	SKD 100/16

Symbol	Conditions	Values	Units
$I_D$	$T_c = 85 \text{ }^\circ\text{C}$ inductive load	110	A
	$T_a = 45 \text{ }^\circ\text{C}$ , chassis <sup>1)</sup>	24	A
	$T_a = 45 \text{ }^\circ\text{C}$ ; P13A/125 (P1A/120)	28 (54)	A
	$T_a = 35 \text{ }^\circ\text{C}$ ; P1A/120F (P1A/200F)	100 (120)	A
$I_{FSM}$	$T_{vj} = 25 \text{ }^\circ\text{C}$ ; 10 ms	1150	A
	$T_{vj} = 125 \text{ }^\circ\text{C}$ ; 10 ms	1000	A
$i^2t$	$T_{vj} = 25 \text{ }^\circ\text{C}$ ; 8,3 ... 10 ms	6600	A <sup>2</sup> s
	$T_{vj} = 125 \text{ }^\circ\text{C}$ ; 8,3 ... 10 ms	5000	A <sup>2</sup> s
$V_F$	$T_{vj} = 25 \text{ }^\circ\text{C}$ ; $I_F = 150 \text{ A}$	max. 1,35	V
$V_{(TO)}$	$T_{vj} = 125 \text{ }^\circ\text{C}$	max. 0,85	V
$r_T$	$T_{vj} = 125 \text{ }^\circ\text{C}$	max. 5	mΩ
$I_{RD}$	$T_{vj} = 25 \text{ }^\circ\text{C}$ ; $V_{DD} = V_{DRM}$ ; $V_{RD} = V_{RRM}$	max. 0,5	mA
	$T_{vj} = 125 \text{ }^\circ\text{C}$ ; $V_{RD} = V_{RRM}$	2	mA
$R_{th(f-c)}$	per diode	0,85	K/W
	total	0,14	K/W
$R_{th(c-s)}$	total	0,05	K/W
$T_{vj}$		- 40 ... + 125	$^\circ\text{C}$
$T_{stg}$		- 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 18	



SKD

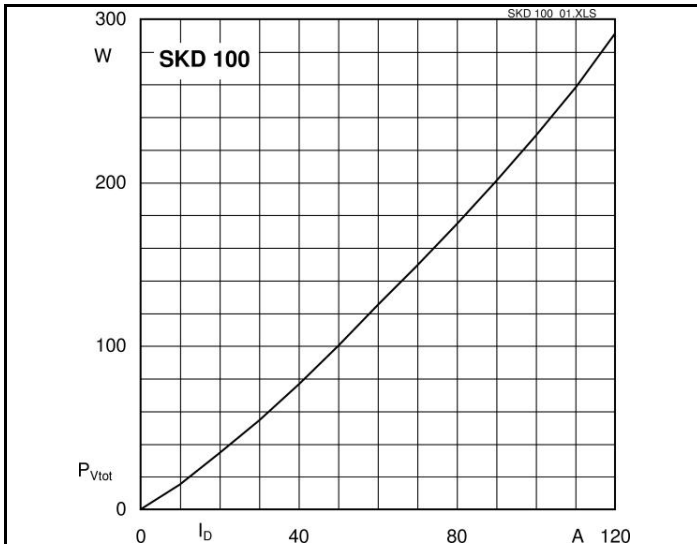


Fig. 3L Power dissipation vs. output current

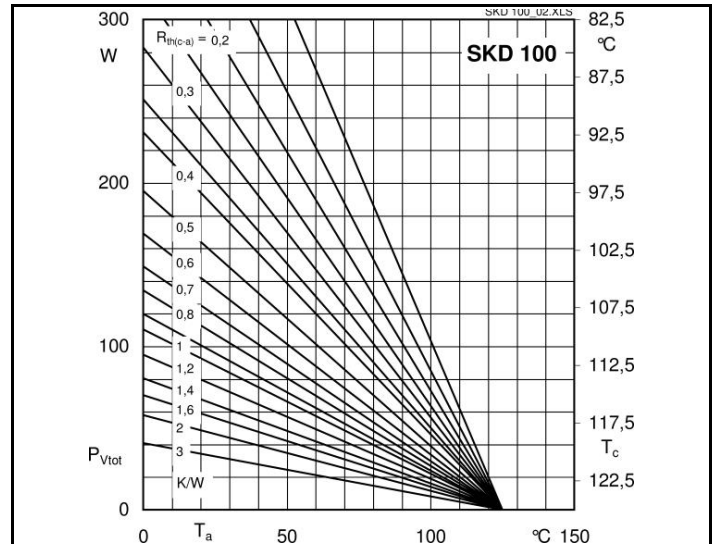


Fig. 3R Power dissipation vs. case temperature

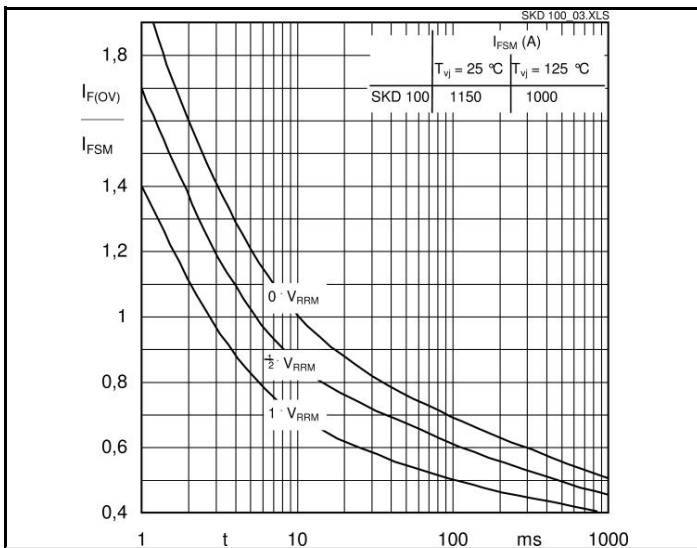


Fig. 6 Surge overload characteristics vs. time

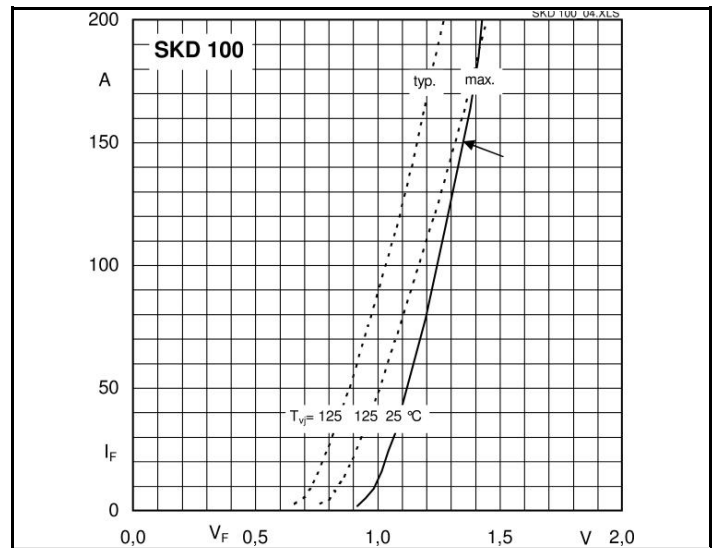


Fig. 9 Forward characteristics of a diode arm

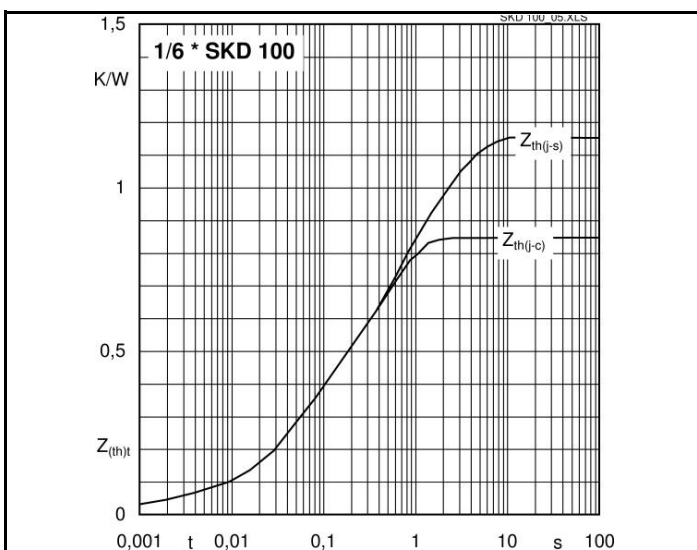
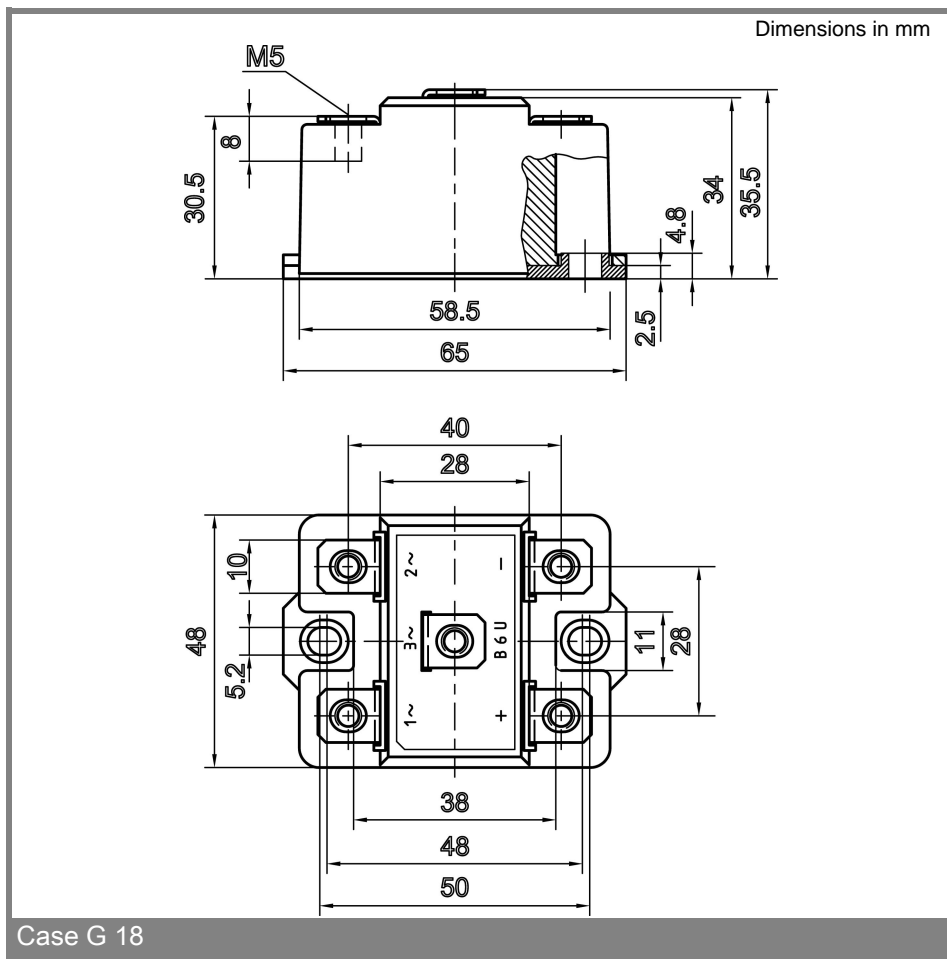


Fig. 12 Transient thermal impedance vs. time



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