



## SEMIPONT® 4

### Power Bridge Rectifiers

#### SKD 210

Preliminary Data

#### Features

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

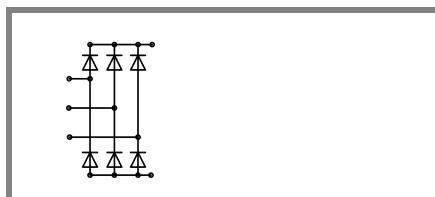
#### Typical Applications\*

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

1) Max. output current limited by the terminals: 220A rms

$V_{RSM}$ V	$V_{RRM}, V_{DRM}$ V	$I_D = 210$ A (full conduction) ( $T_c = 99$ °C)
900	800	SKD 210/08
1300	1200	SKD 210/12
1700	1600	SKD 210/16
1900	1800	SKD 210/18

Symbol	Conditions	Values	Units
$I_D$	$T_c = 100$ °C	207	A
$I_D$	$T_c = 95$ °C	220 <sup>1)</sup>	A
$I_{FSM}$	$T_{vj} = 25$ °C; 10 ms	2000	A
	$T_{vj} = 150$ °C; 10 ms	1600	A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms	20000	A <sup>2</sup> s
	$T_{vj} = 150$ °C; 8,3 ... 10 ms	12800	A <sup>2</sup> s
$V_F$	$T_{vj} = 25$ °C; $I_F = 300$ A	max. 1,65	V
$V_{(TO)}$	$T_{vj} = 150$ °C	max. 0,85	V
$r_T$	$T_{vj} = 150$ °C	max. 3	mΩ
$I_{RD}$	$T_{vj} = 25$ °C; $V_{DD} = V_{DRM}; V_{RD} = V_{RRM}$	max. 0,5	mA
	$T_{vj} = 150$ °C; $V_{RD} = V_{RRM}$	6	mA
$R_{th(j-c)}$	per diode	0,5	K/W
	total	0,083	K/W
$R_{th(c-s)}$	total	0,03	K/W
$T_{vj}$		- 40 ... + 150	°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
$m$		270	g
Case		G 37	



SKD

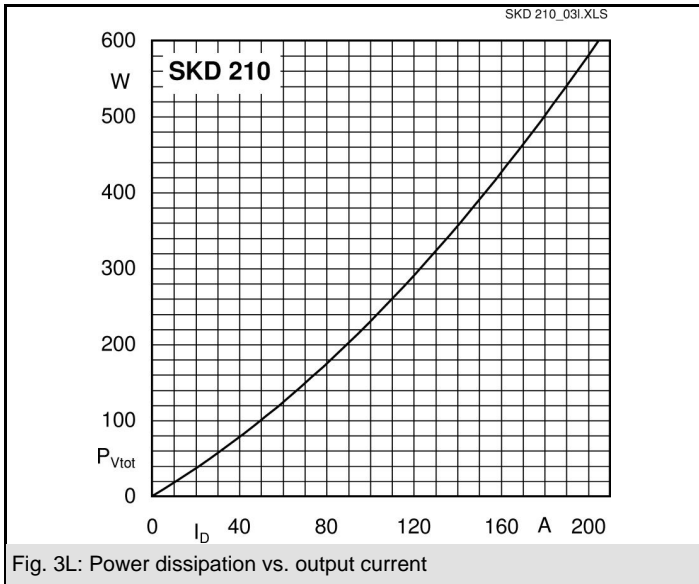


Fig. 3L: Power dissipation vs. output current

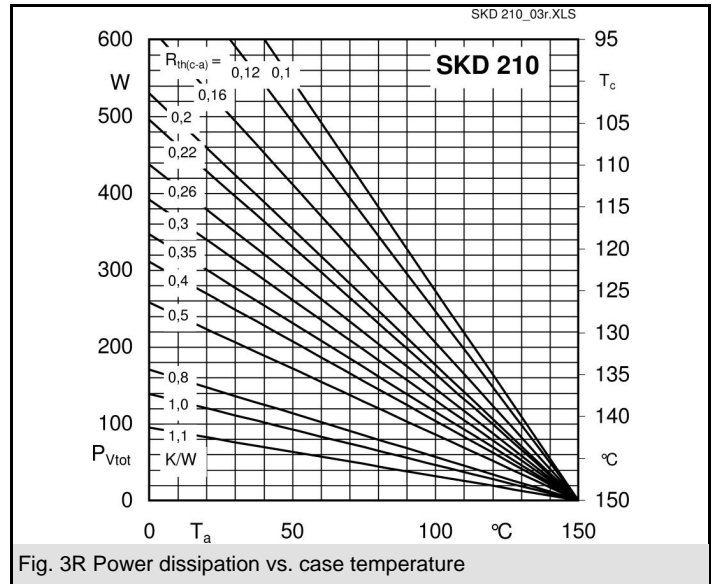


Fig. 3R: Power dissipation vs. case temperature

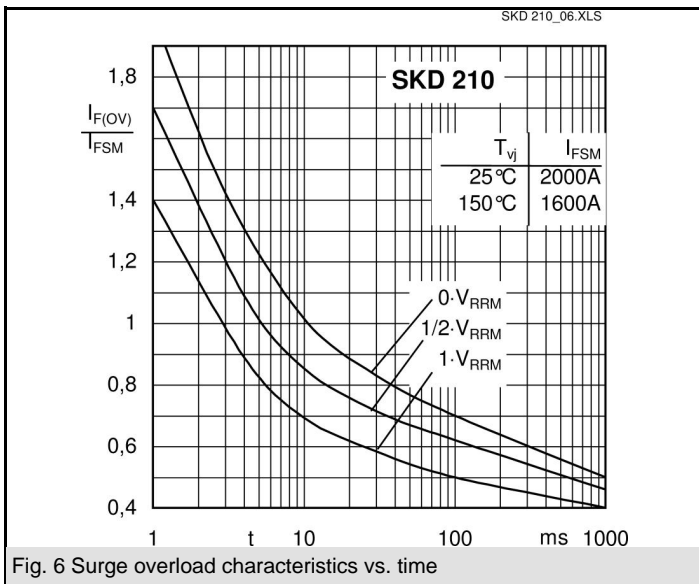


Fig. 6: Surge overload characteristics vs. time

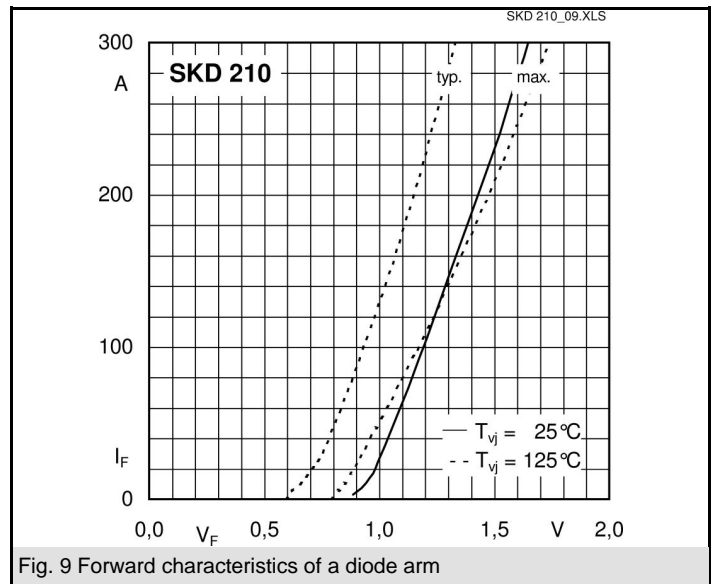


Fig. 9: Forward characteristics of a diode arm

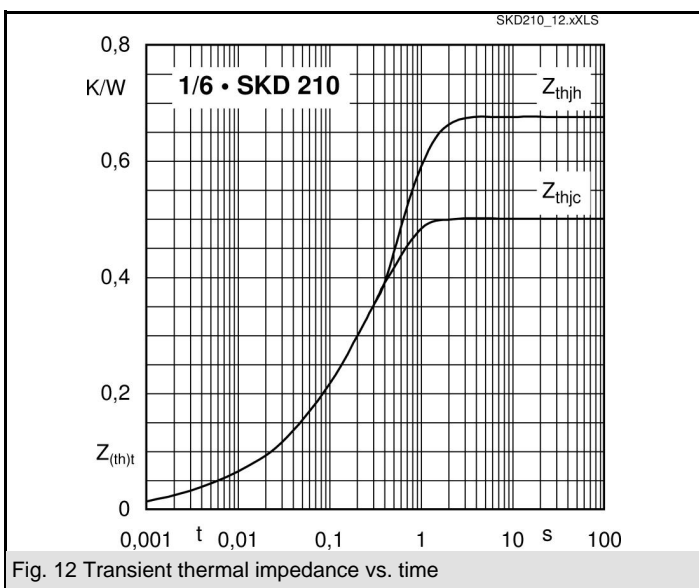
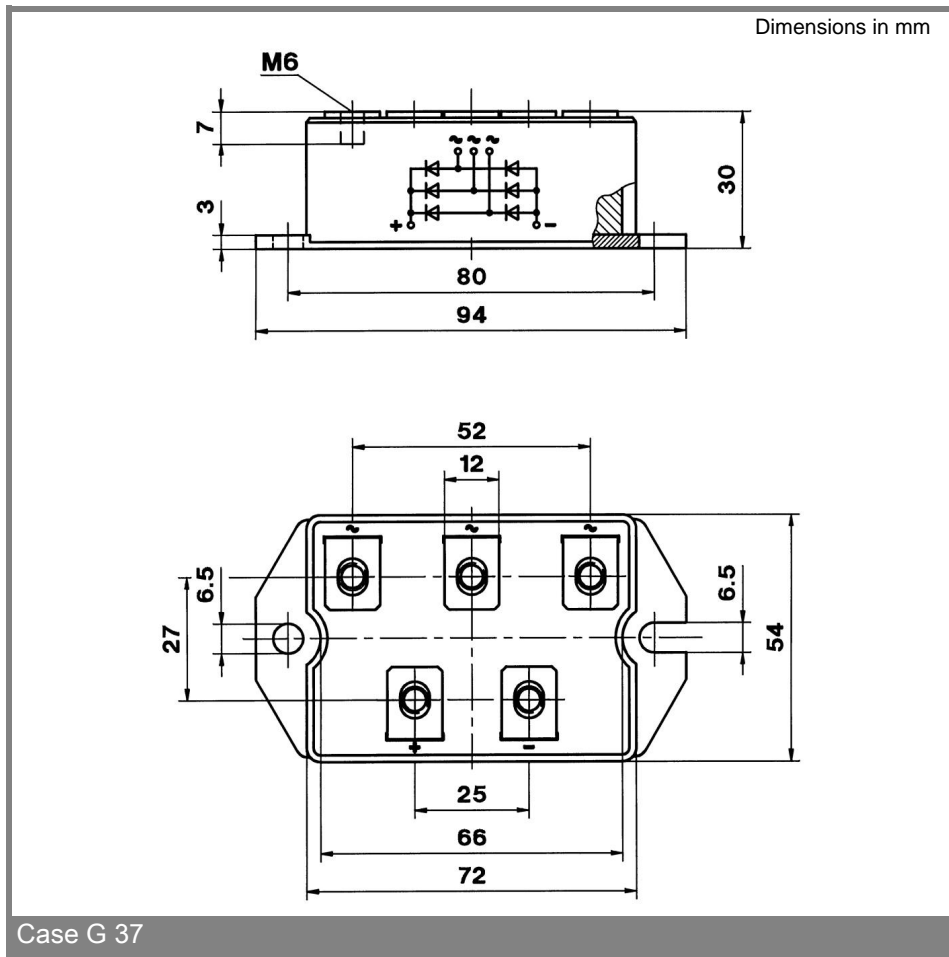


Fig. 12: Transient thermal impedance vs. time



Case G 37

\* 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.