V_{RSM} V_{RRM} V	I_{FAV} (sin. 180; T_{case} = ...) 4000 A (50 °C)	6000 A (85 °C)
200	**SKN 4000/02**	**SKN 6000/02**
400	**SKN 4000/04**	**SKN 6000/04**
600	**SKN 4000/06**	**SKN 6000/06**

Rectifier Diodes

SKN 4000
SKN 6000

Symbol	Conditions	SKN 4000	SKN 6000
I_{FAV}	sin. 180;T_{case} = 50 °C;DSC[1)] = 85 °C;DSC[1)] = 100 °C;DSC[1)]	4000 A 3200 A 2740 A	 6000 A 5400 A
I_{FSM}	T_{vj} = 25 °C; 10 ms T_{vj} =180 °C; 10 ms	60 kA 50 kA	
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms T_{vj} =180 °C; 8,3 ... 10 ms	18000 kA^2s 12500 kA^2s	
I_R	T_{vj} = 25 °C; V_R = V_{RRM} T_{vj} =180 °C; V_R = V_{RRM}	4 mA 100 mA	
V_F	T_{vj} = 25 °C; I_F =14 kA; max.	1,3 V[2)]	
$V_{(TO)}$	T_{vj} =180 °C	0,7 V	
r_T	T_{vj} =180 °C	0,04 mΩ	
R_{thjc}	DSC[1)] SSC[1)]	0,030 °C/W 0,060 °C/W	0,012 °C/W 0,024 °C/W
R_{thch}	DSC[1)] SSC[1)]	0,005 °C/W 0,010 °C/W	
T_{vj}		– 40 ...+ 180 °C	
T_{stg}		– 40 ...+ 150 °C	
F	SI units US units	24 ... 30 kN 5400...6750 lbs.	
w		129 g	130 g
Case		E 22	E 35

Features

- Capsule type metal-ceramic packages with precious metal pressure contacts
- Medium voltage, high current rectifier diodes with slim package for lowest thermal resistance. Low power dissipation. Especially suited for water cooling. Forward selections for paralleling available

Typical Applications

- Welding
- Electroplating

[1)] DSC = Double sided cooling
SSC = Single sided cooling
[2)] For parallel connections selected devices are available on request

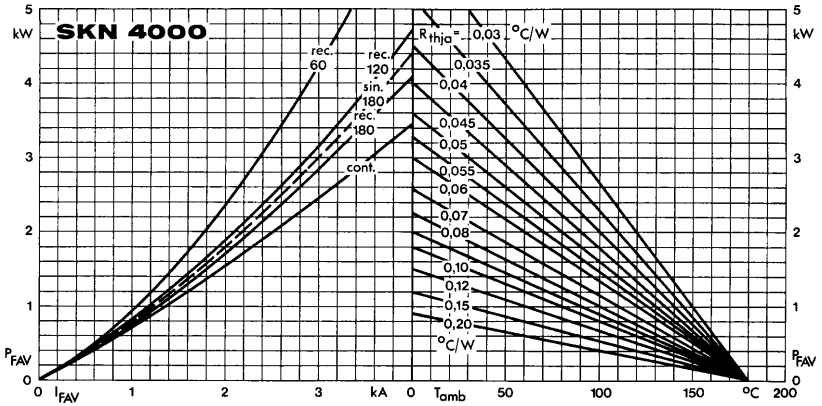


Fig. 2 a Power dissipation vs. forward current and ambient temperature

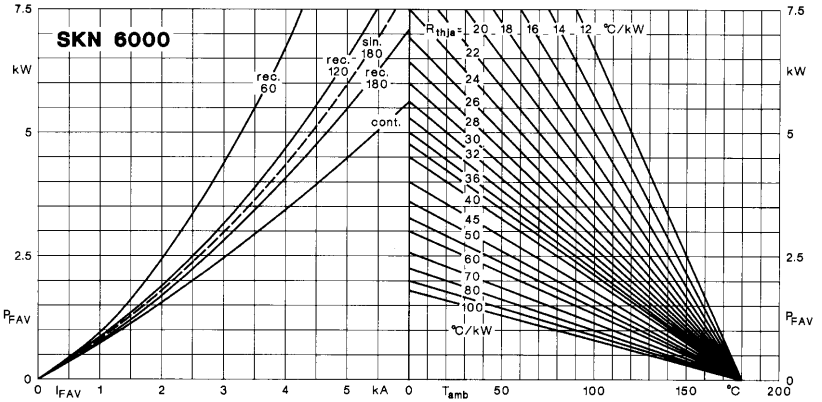


Fig. 2 b Power dissipation vs. forward current and ambient temperature

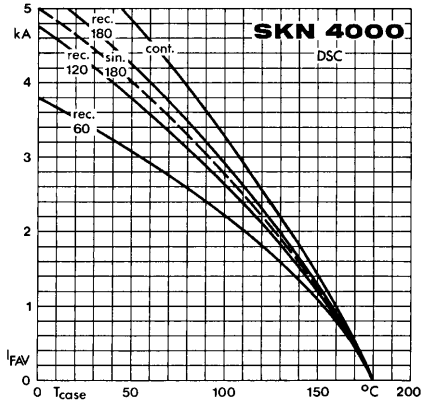


Fig. 3 a Rated forward current vs. case temperature

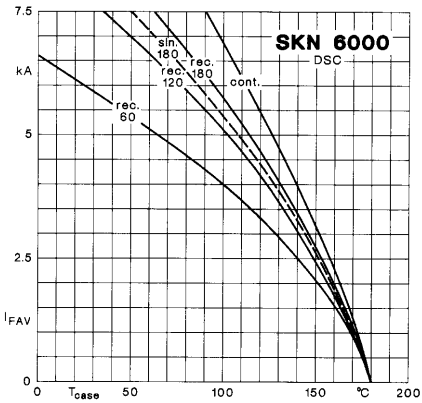


Fig. 3 b Rated forward current vs. case temperature

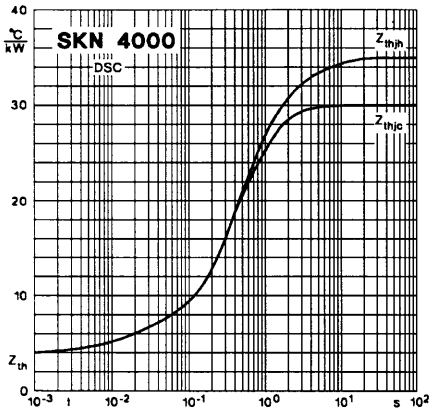


Fig. 5 a Transient thermal impedance vs. time

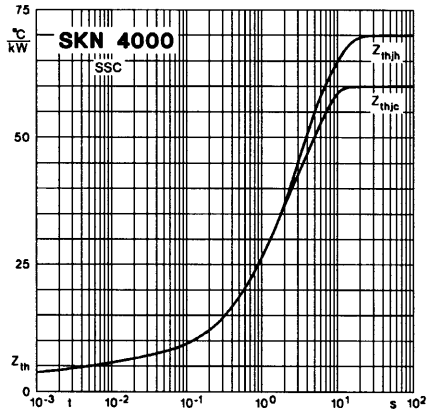


Fig. 5 b Transient thermal impedance vs. time

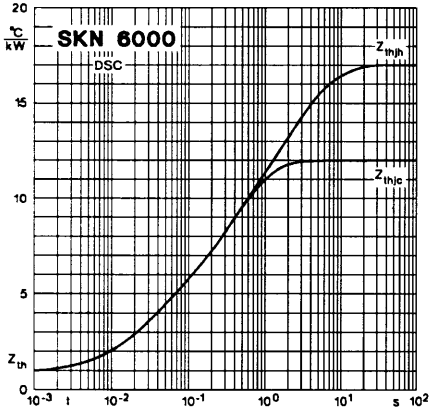


Fig. 5 c Transient thermal impedance vs. time

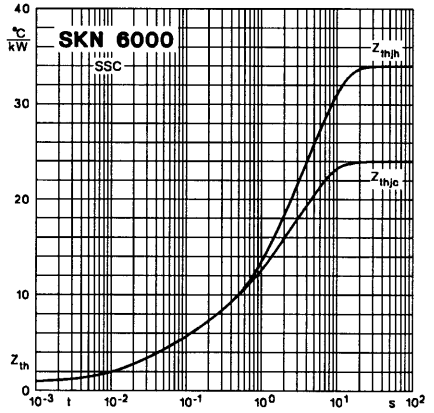


Fig. 5 d Transient thermal impedance vs. time

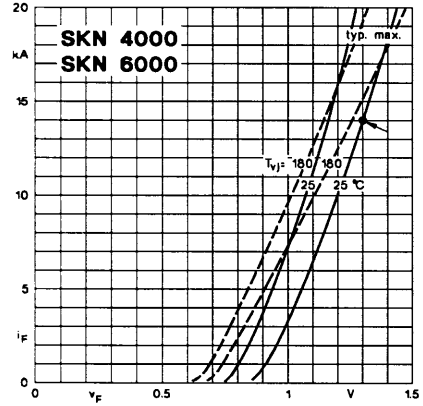


Fig. 6 Forward characteristics

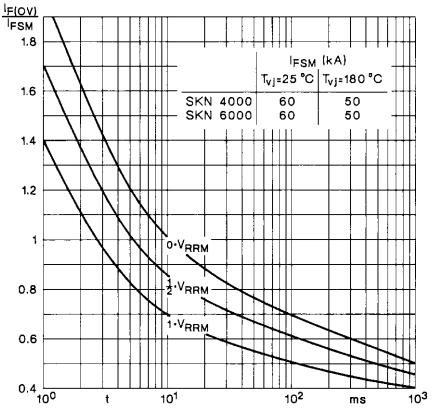


Fig. 7 Surge overload current vs. time

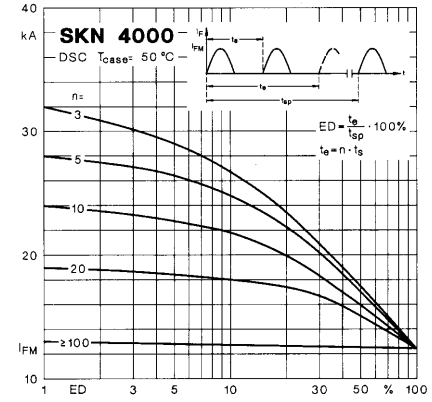


Fig. 12 a Rated peak forward current vs. duty cycle

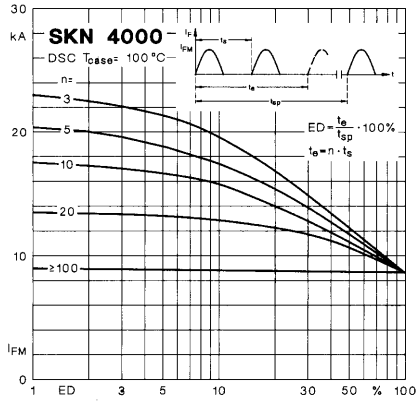


Fig. 12 b Rated peak forward current vs. duty cycle

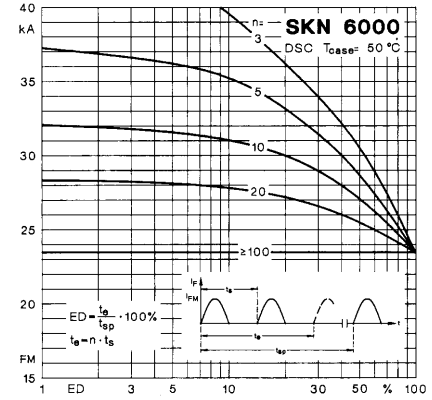


Fig. 12 c Rated peak forward current vs. duty cycle

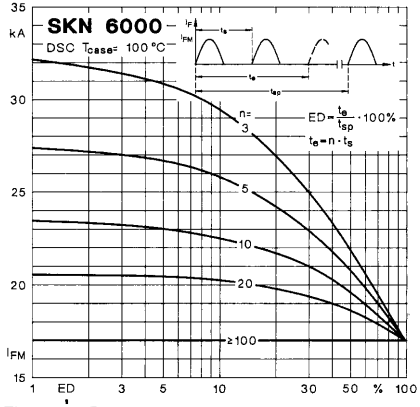


Fig. 12 d Rated peak forward current vs. duty cycle

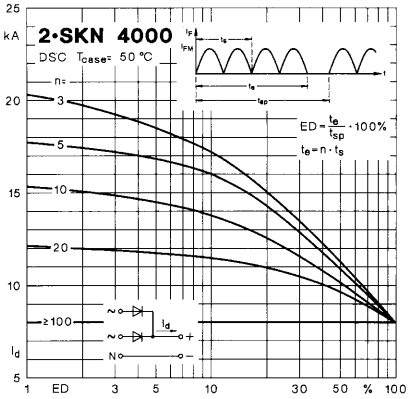


Fig. 13 a Rated direct output current vs. duty cycle

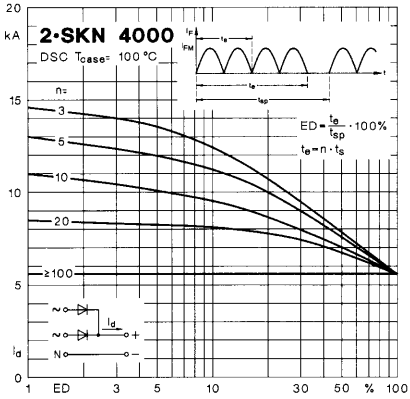


Fig. 13 b Rated direct current vs. duty cycle

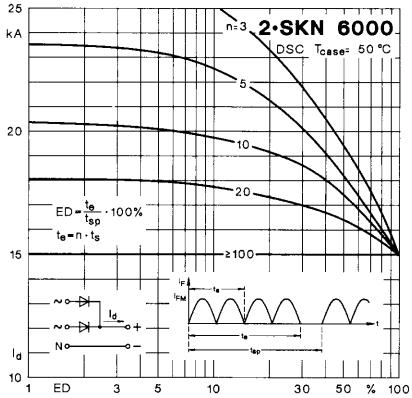


Fig. 13 c Rated direct output current vs. duty cycle

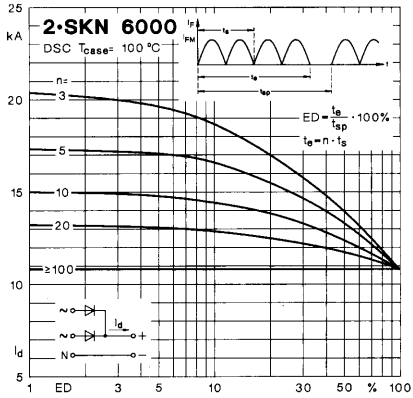
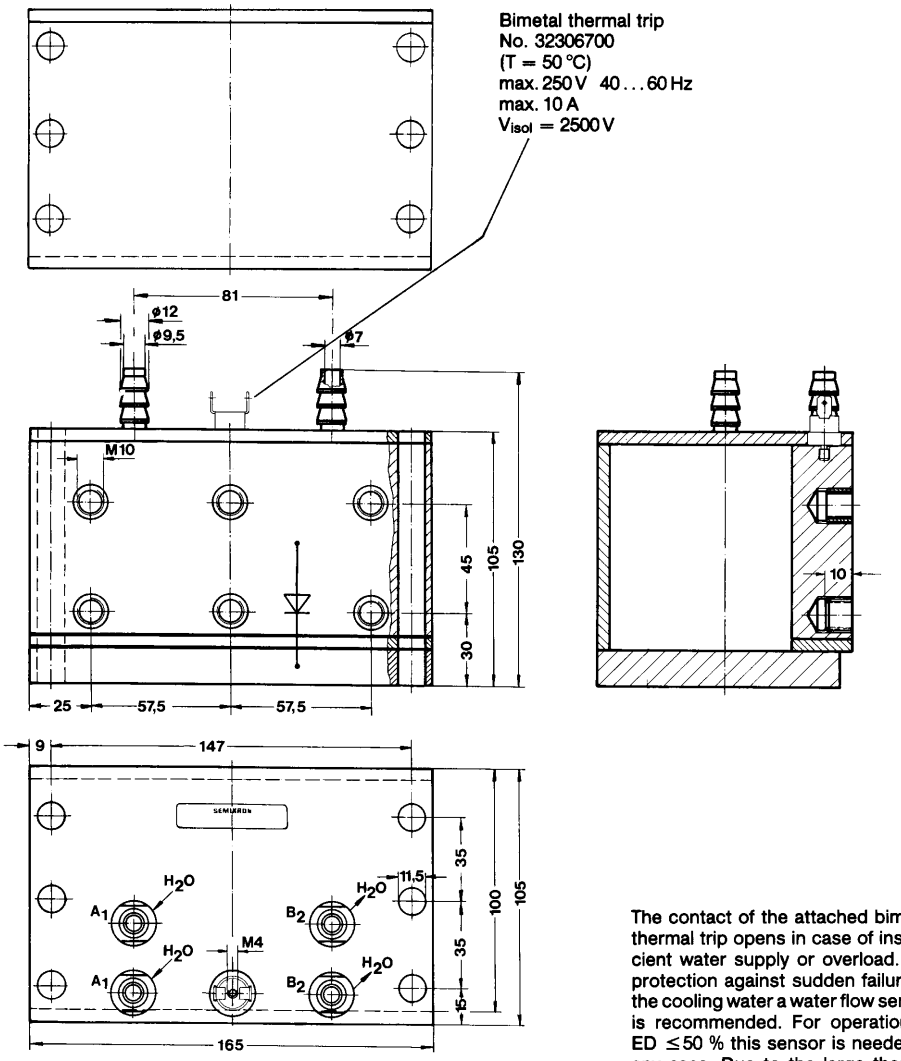


Fig. 13 d Rated direct current vs. duty cycle

SKWD 7000
Case C 4



Dimensions in mm

The contact of the attached bimetal thermal trip opens in case of insufficient water supply or overload. For protection against sudden failure of the cooling water a water flow sensor is recommended. For operation at ED ≤ 50 % this sensor is needed in any case. Due to the large thermal capacitance of the heavy copper busbars a temperature sensor cannot protect the rectifier diode under these conditions.