V_{RSM}/V_{RRM} V	I_{FAV} (sin. 180; T_w = 40 °C) 7000 A (8 l/min)
200	**SKWD 7000/02**
400	**SKWD 7000/04**
600	**SKWD 7000/06**

High Current Rectifier Diode Blocks for Water Cooling

SKWD 7000

Symbol	Conditions	SKWD 7000[1)]
I_{FM}	Vol_w = 4 l/min; T_w = 40 °C; ED = 100 %	19 kA
	Vol_w = 8 l/min	22 kA
I_{FSM}	T_{vj} = 40 °C 10 ms	120 kA
	T_{vj} = 180 °C	100 kA
i^2t	T_{vj} = 40 °C	72 · 10^6 A^2s
	T_{vj} = 180 °C	50 · 10^6 A^2s
V_F	T_{vj} = 25 °C; I_F = 45 kA	1,75 V[1)]
$V_{(TO)}$	T_{vj} = 180 °C	0,7 V
r_T	T_{vj} = 180 °C	0,015 mΩ
R_{thjw}	Vol_w = 4 l/min	0,025 °C/W
	8 l/min	0,021 °C/W
$T_{vj\ max.}$		180 °C
T_{stg}		5 ... 85 °C
p_w	max.	10 bar
w		8,9 kg
Case		C 4

Features

- Silicon rectifier diodes for very high currents, water cooled, also for parallel connection

Typical Applications

- Large resistance welding or galvanic equipment

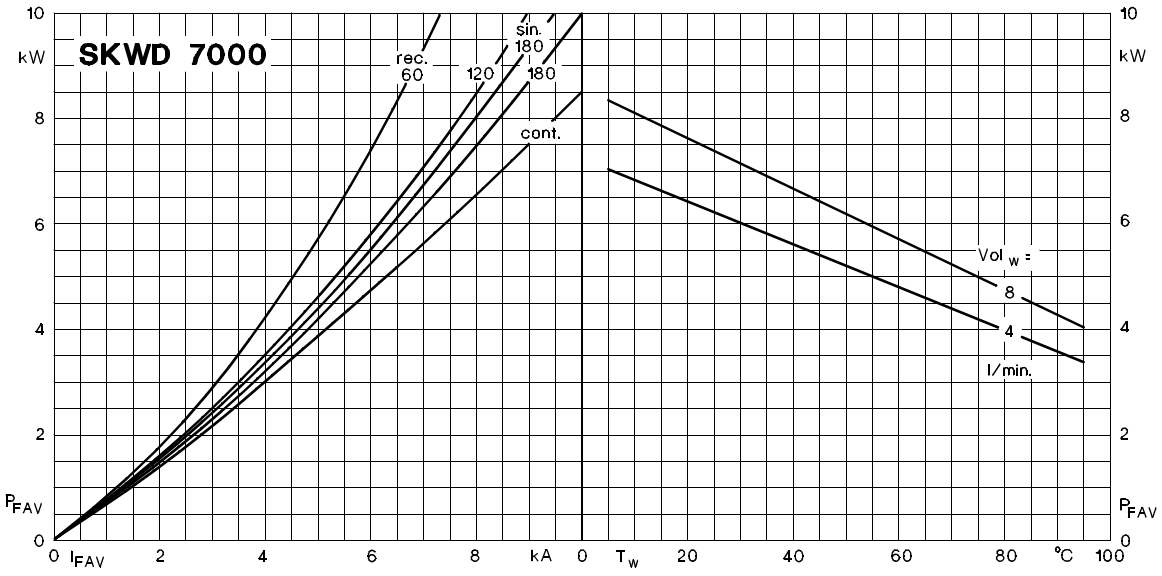


Fig. 2 Power dissipation vs. forward current and water temperature

[1)] For parallel connections selected devices are available on request

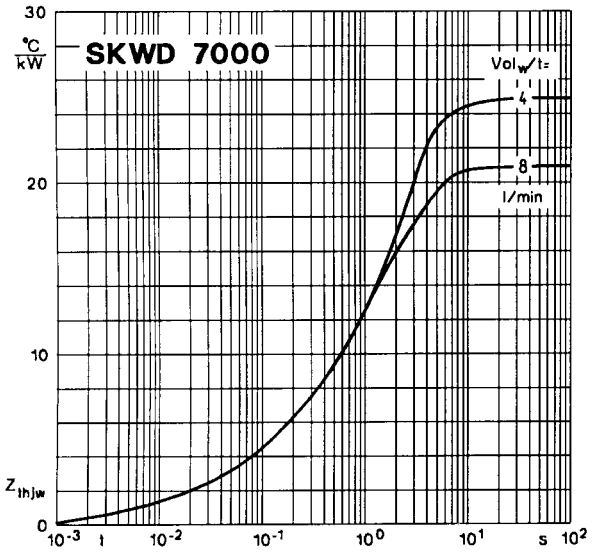


Fig. 5 Transient thermal impedance vs. time

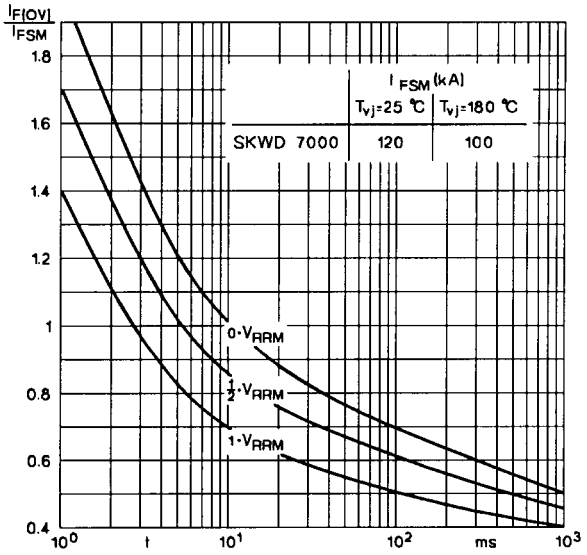


Fig. 7 Surge overload current vs. time

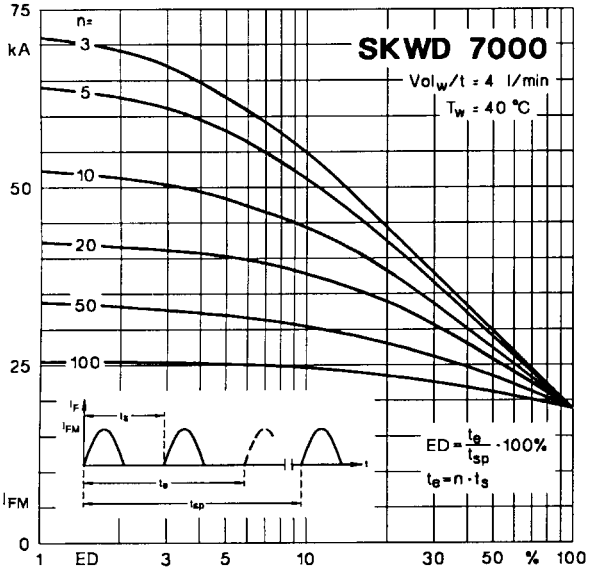


Fig. 12 a Rated peak forward current vs. duty cycle

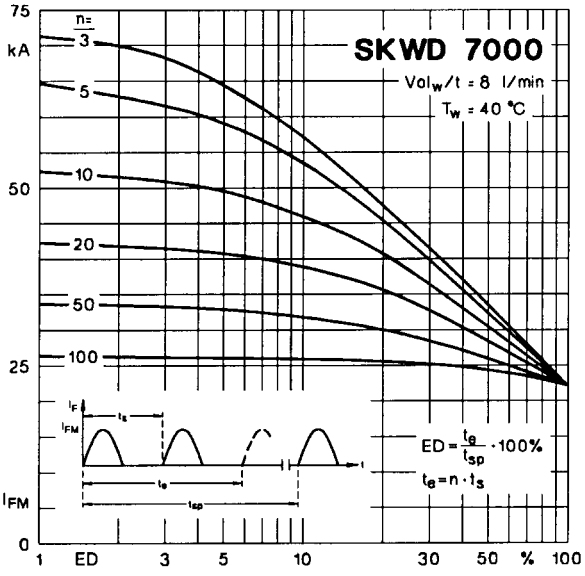


Fig. 12 b Rated peak forward current vs. duty cycle

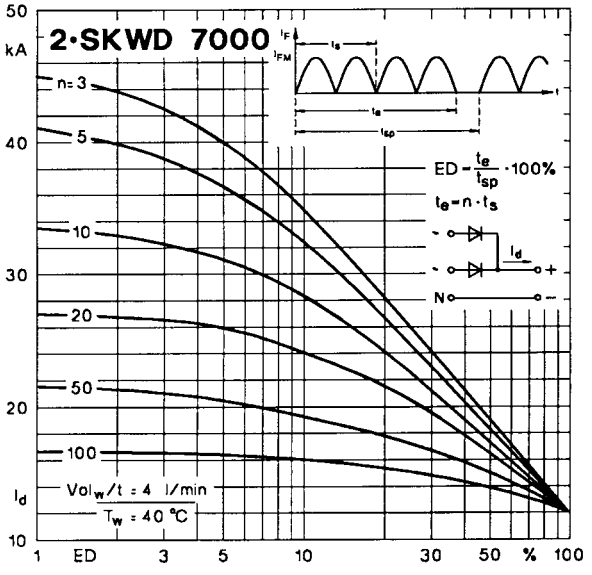


Fig. 13 a Rated direct output current vs. duty cycle

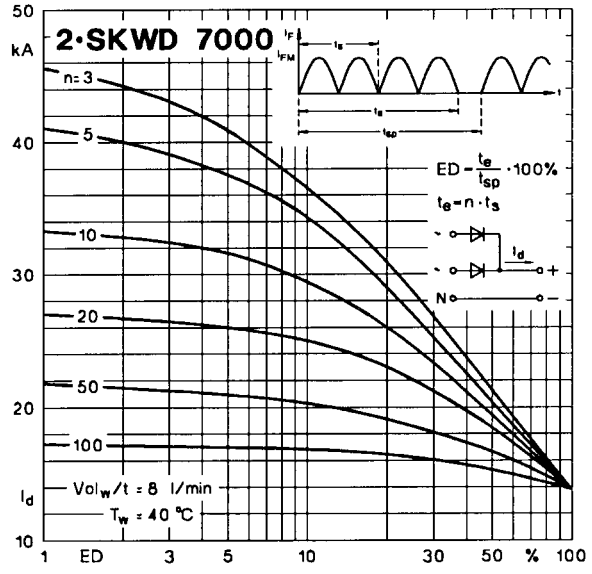
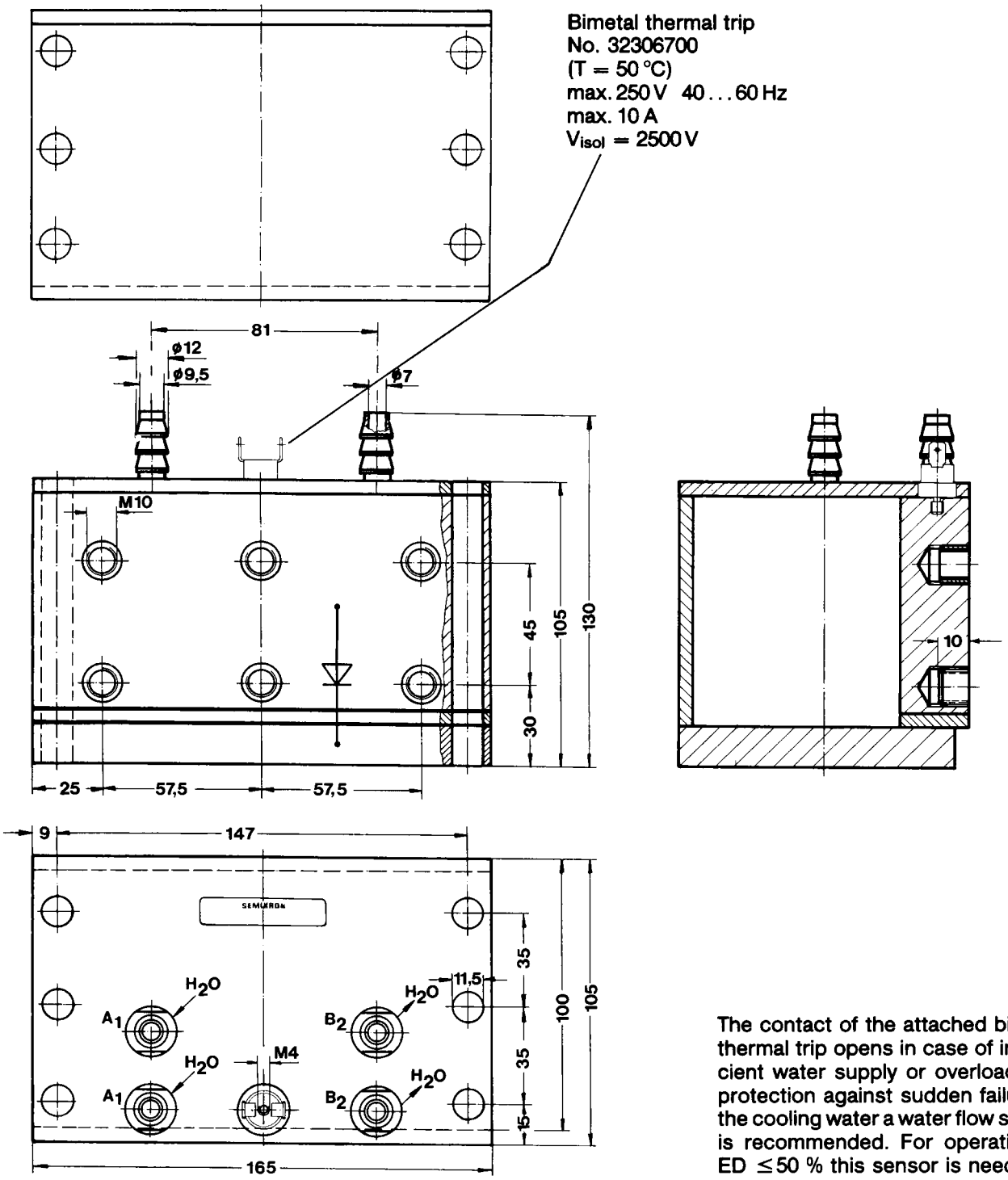


Fig. 13 b Rated direct output current vs. duty cycle

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.