

Rectifier Diodes

SKN 4000
SKN 6000



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

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

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 ² t	T _{vj} = 25 °C; 8,3 ... 10 ms T _{vj} = 180 °C; 8,3 ... 10 ms	18000 kA ² s 12500 kA ² s	
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) r _T	T _{vj} = 180 °C T _{vj} = 180 °C	0,7 V 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} T _{stg}		- 40 ... + 180 °C - 40 ... + 150 °C	
F	SI units US units	24 ... 30 kN 5400...6750 lbs.	
w		129 g	130 g
Case		E 22	E 35

¹⁾ DSC = Double sided cooling
SSC = Single sided cooling

²⁾ For parallel connections selected devices are available on request

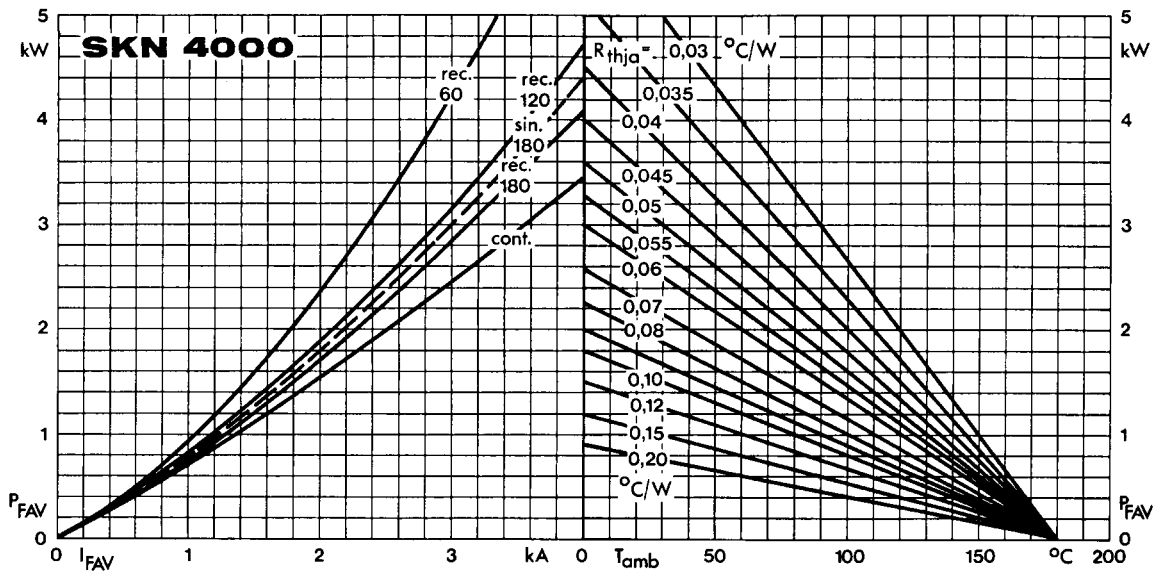


Fig. 2 a Power dissipation vs. forward current and ambient temperature

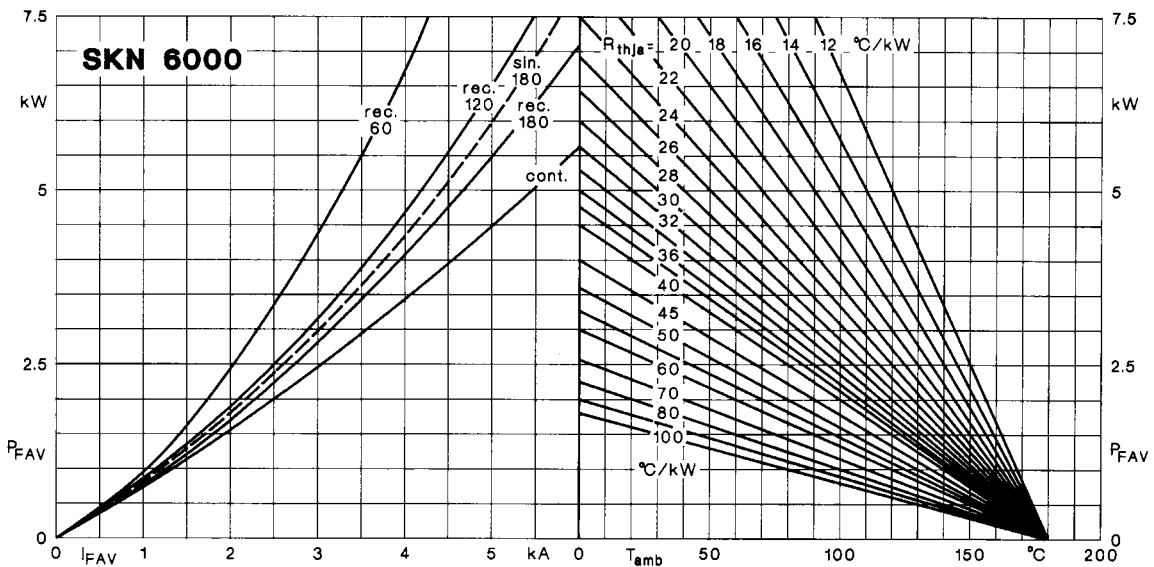


Fig. 2 b Power dissipation vs. forward current and ambient temperature

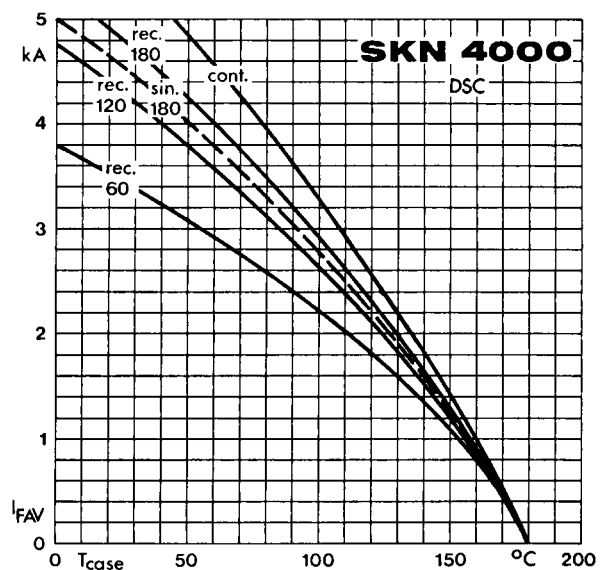


Fig. 3 a Rated forward current vs. case temperature

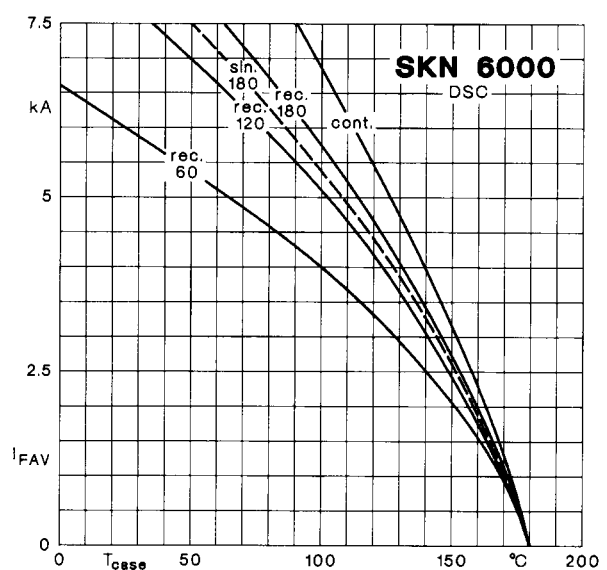


Fig. 3 b Rated forward current vs. case temperature

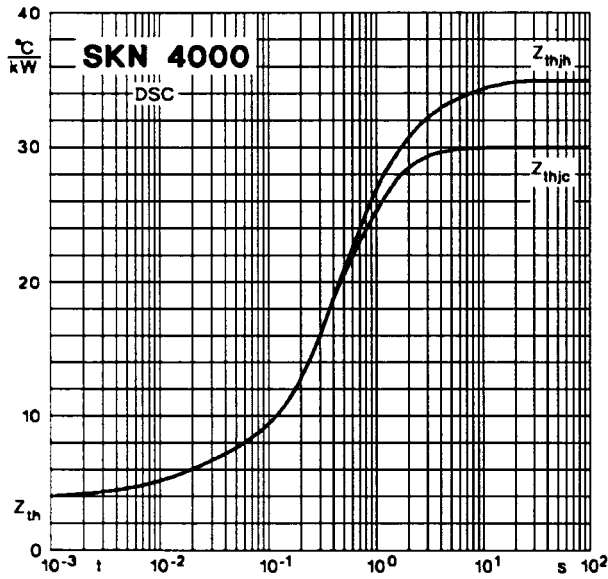


Fig. 5 a Transient thermal impedance vs. time

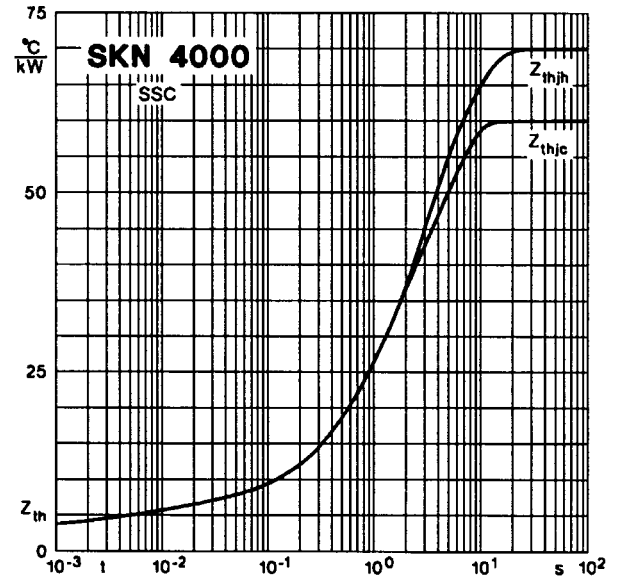


Fig. 5 b Transient thermal impedance vs. time

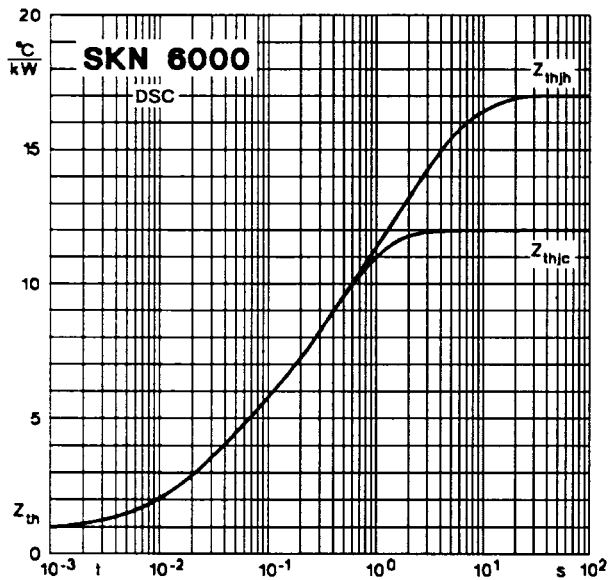


Fig. 5 c Transient thermal impedance vs. time

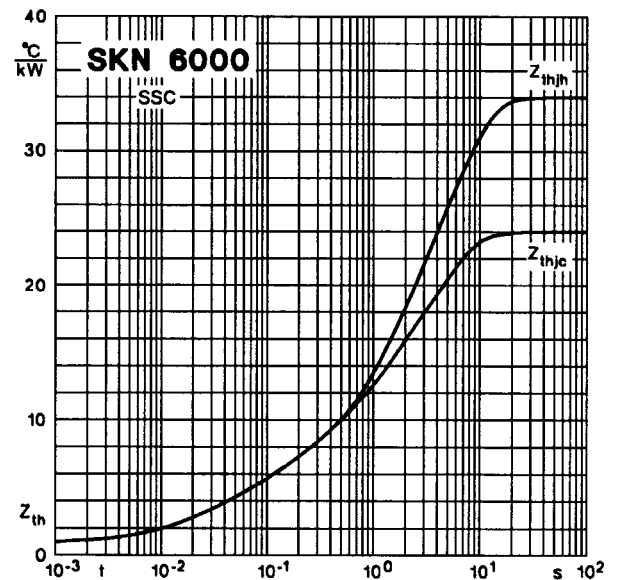


Fig. 5 d Transient thermal impedance vs. time

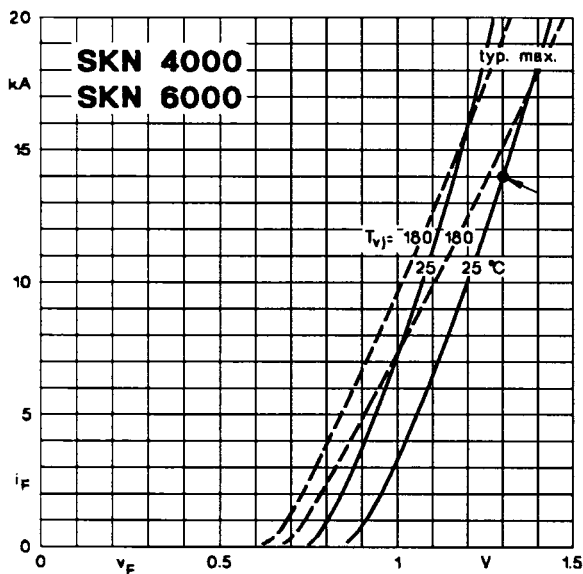


Fig. 6 Forward characteristics

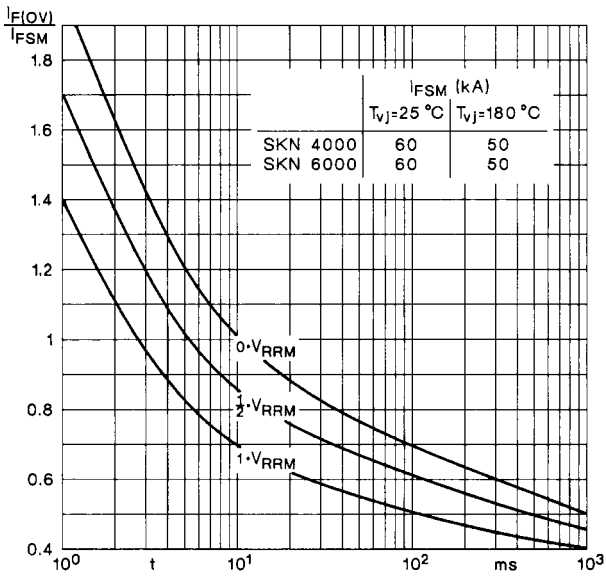


Fig. 7 Surge overload current vs. time

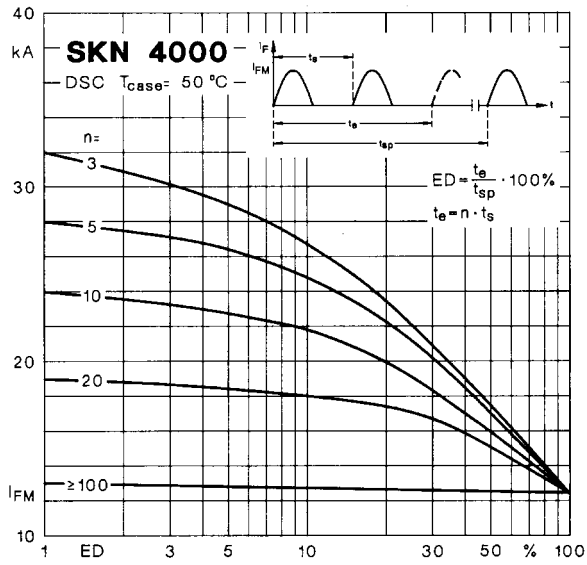


Fig. 12 a Rated peak forward current vs. duty cycle

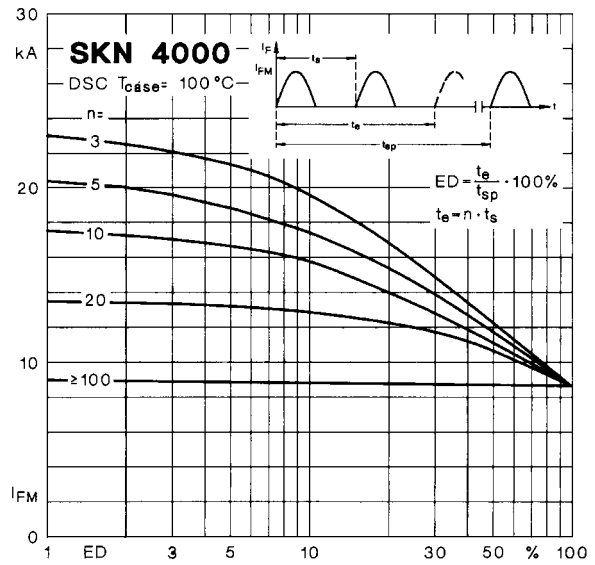


Fig. 12 b Rated peak forward current vs. duty cycle

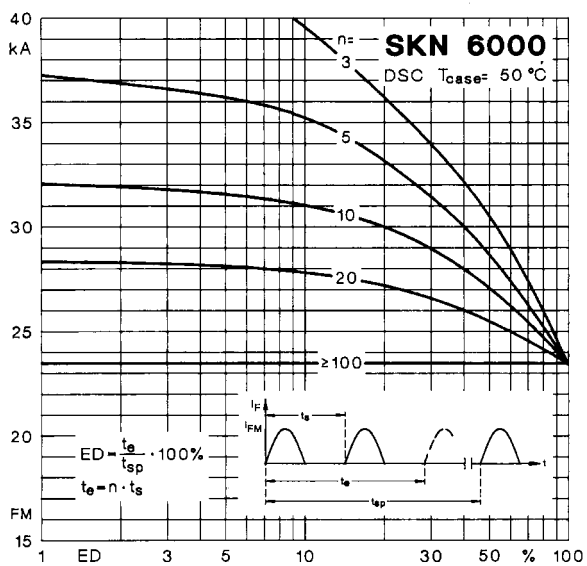


Fig. 12 c Rated peak forward current vs. duty cycle

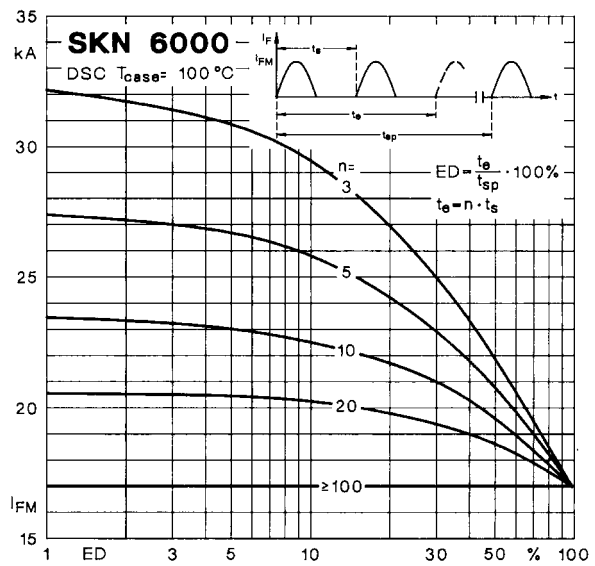


Fig. 12 d Rated peak forward current vs. duty cycle

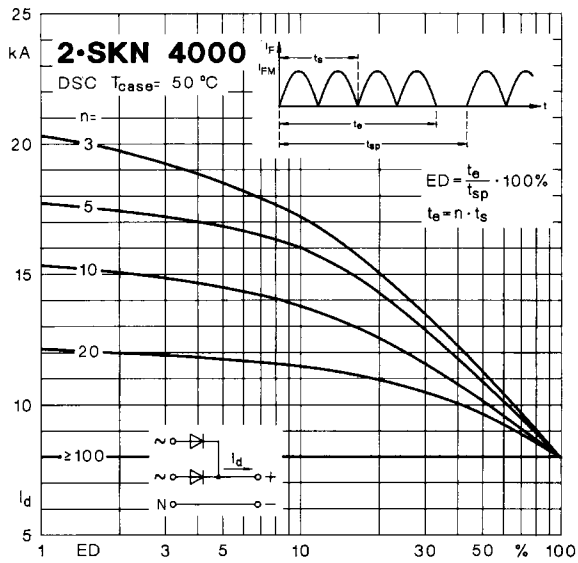


Fig. 13 a Rated direct output current vs. duty cycle

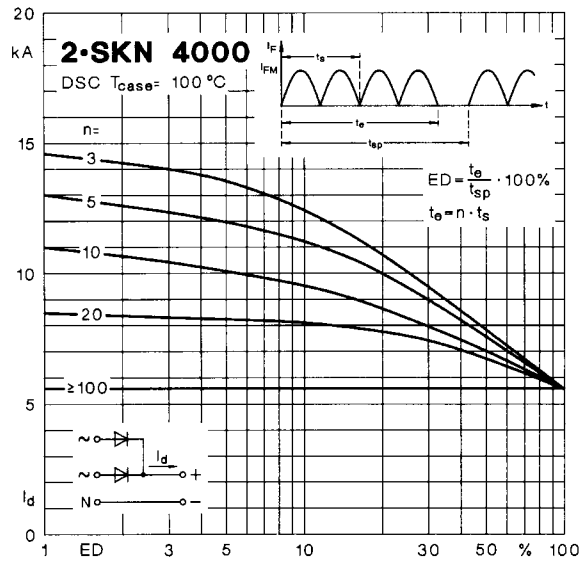


Fig. 13 b Rated direct current vs. duty cycle

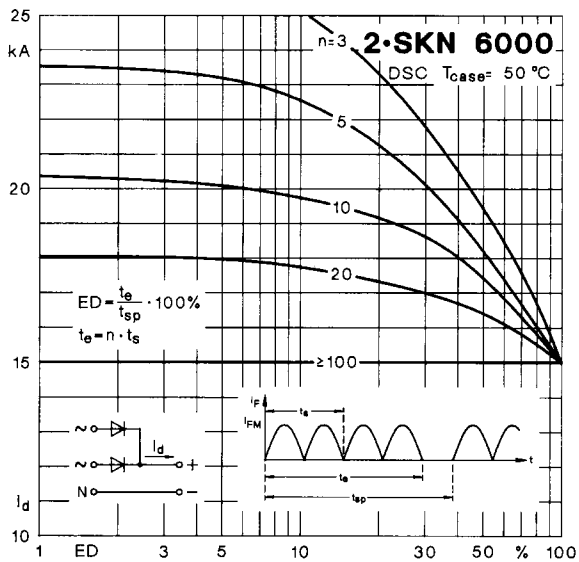


Fig. 13 c Rated direct output current vs. duty cycle

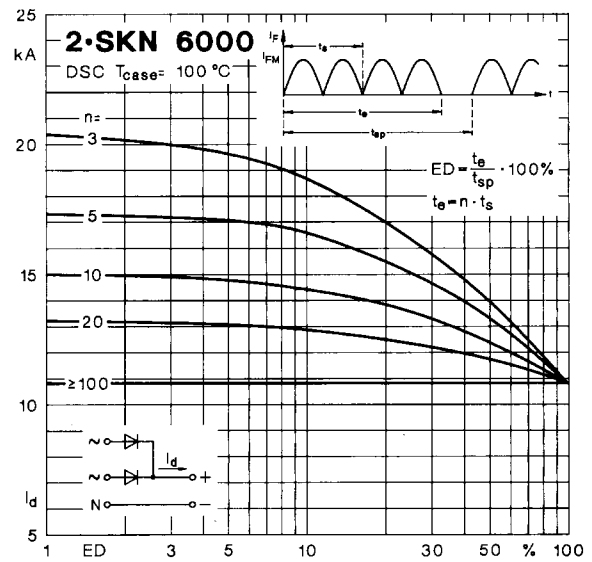
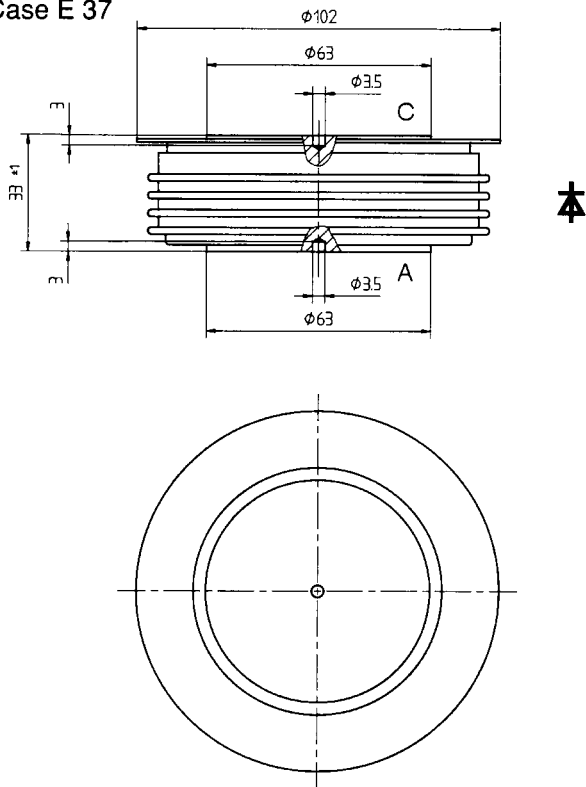


Fig. 13 d Rated direct current vs. duty cycle

**SKN 3000
SKN 3400**

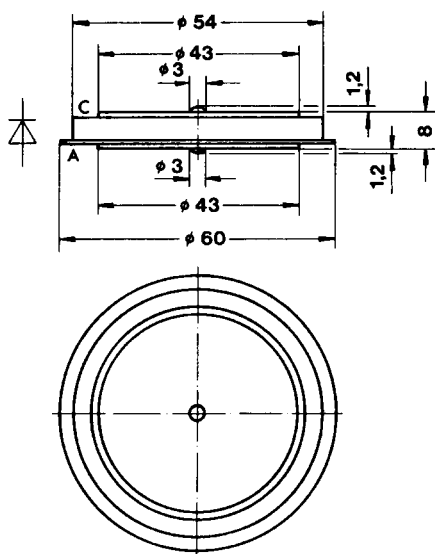
Case E 37



Dimensions in mm

SKN 4000

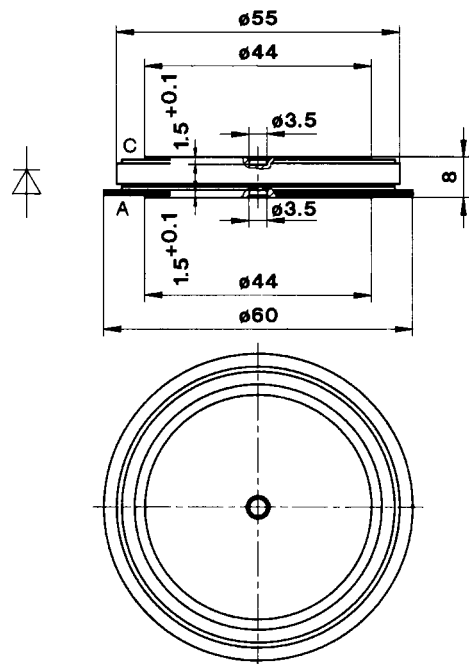
Case E 22



Dimensions in mm

SKN 6000

Case E 35



Dimensions in mm