



Disc Diode

Rectifier Diode

SKN 6000

Features

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

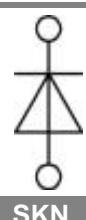
Typical Applications

- Welding
- Electroplating

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

V_{RSM}	V_{RRM}	$I_{FRMS} = 10000 \text{ A}$ (maximum value for continuous operation)
V	V	$I_{FAV} = 6000 \text{ A}$ (sin. 180; $T_c = 85 \text{ }^\circ\text{C}$)
200	200	SKN 6000/02
400	400	SKN 6000/04
600	600	SKN 6000/06

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; DSC ¹⁾ ; $T_c = 85$ (100) $^\circ\text{C}$	6000 (5400)	A
I_{FSM}	$T_{vj} = 25 \text{ }^\circ\text{C}; 10 \text{ ms}$ $T_{vj} = 180 \text{ }^\circ\text{C}; 10 \text{ ms}$	60000 50000	A A
i^2t	$T_{vj} = 25 \text{ }^\circ\text{C}; 8,3 \dots 10 \text{ ms}$ $T_{vj} = 180 \text{ }^\circ\text{C}; 8,3 \dots 10 \text{ ms}$	18000000 12500000	A ² s A ² s
V_F	$T_{vj} = 25 \text{ }^\circ\text{C}; I_F = 14000 \text{ A}$	max. 1,3	V
$V_{(TO)}$	$T_{vj} = 180 \text{ }^\circ\text{C}$	max. 0,7	V
r_T	$T_{vj} = 180 \text{ }^\circ\text{C}$	max. 0,04	mΩ
I_{RD}	$T_{vj} = 180 \text{ }^\circ\text{C}; V_{RD} = V_{RRM}$	max. 100	mA
$R_{th(j-c)}$	DSC / SSC ¹⁾	0,012 / 0,024	K/W
$R_{th(c-s)}$	DSC / SSC ¹⁾	0,005 / 0,01	K/W
T_{vj}		- 40 ... + 180	°C
T_{stg}		- 40 ... + 150	°C
V_{isol}		-	V~
F	mounting force	24 ... 30	kN
a		130	m/s ²
m	approx.		g
Case		E 35	



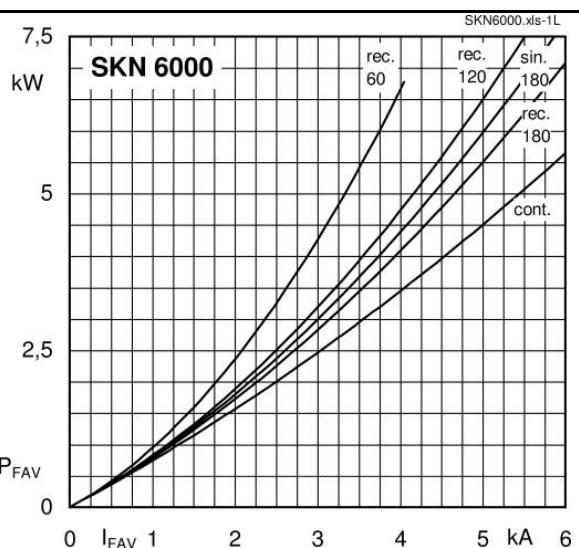


Fig. 1L Power dissipation vs. forward current

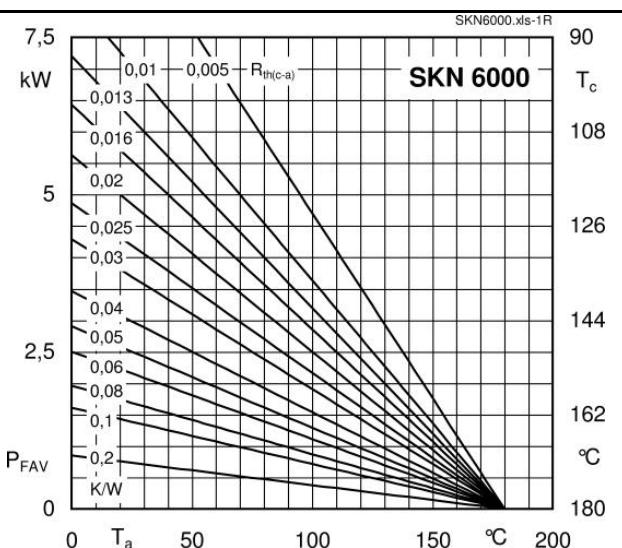


Fig. 1R Power dissipation vs. ambient temperature

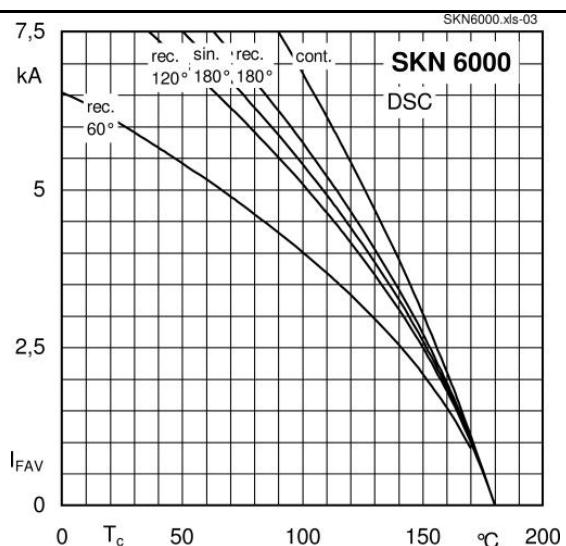


Fig. 2 Forward current vs. case temperature

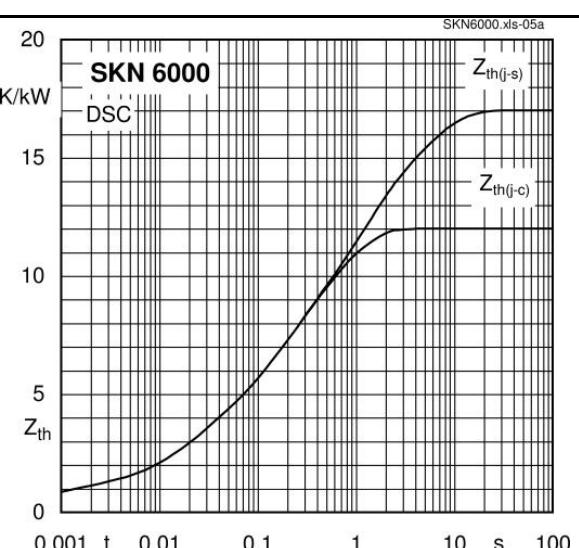


Fig. 4a Transient thermal impedance (double sided cooling)

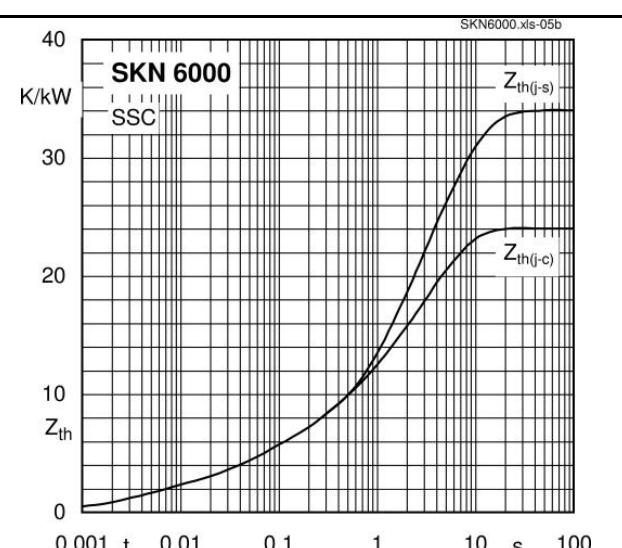


Fig. 4b Transient thermal impedance (single sided cooling)

SKN 6000 THYRISTOR BRIDGE/SCR BRIDGE

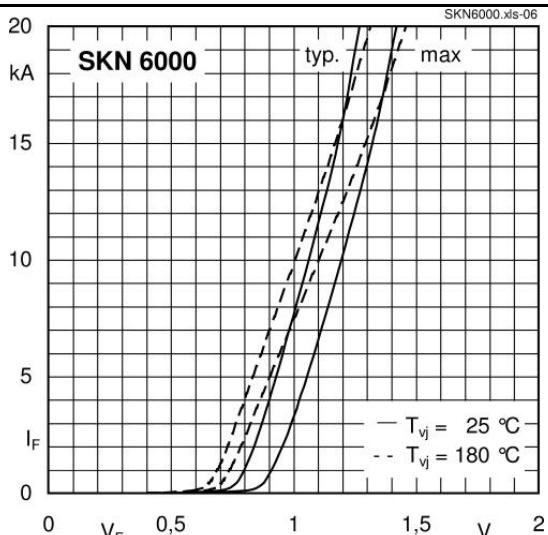


Fig. 5 Forward characteristics

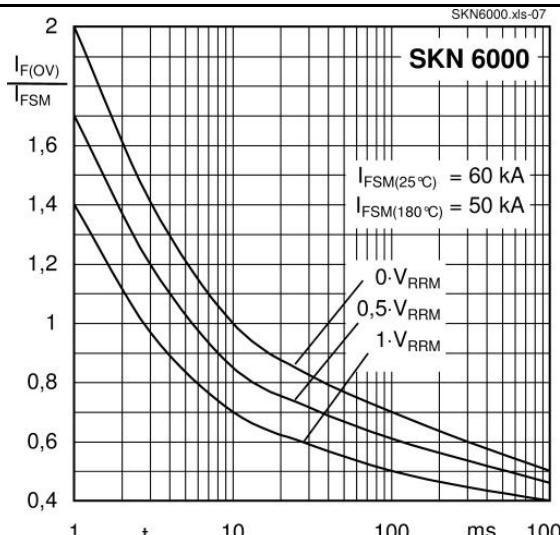


Fig. 6 Surge overload current vs. time

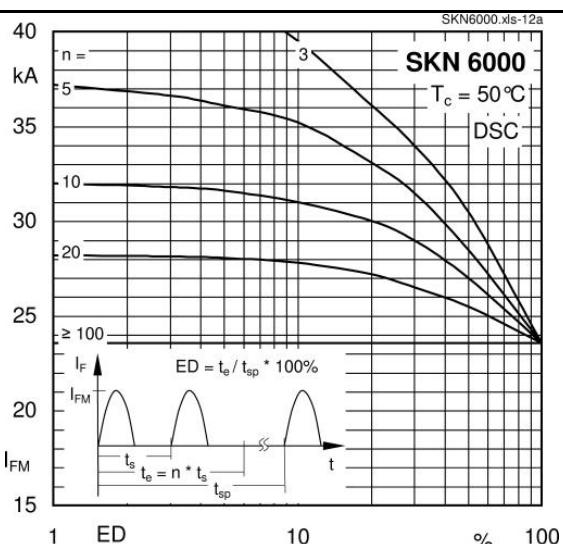


Fig. 10a Peak forward current vs. duty cycle ($T_c = 50\text{ }^{\circ}\text{C}$)

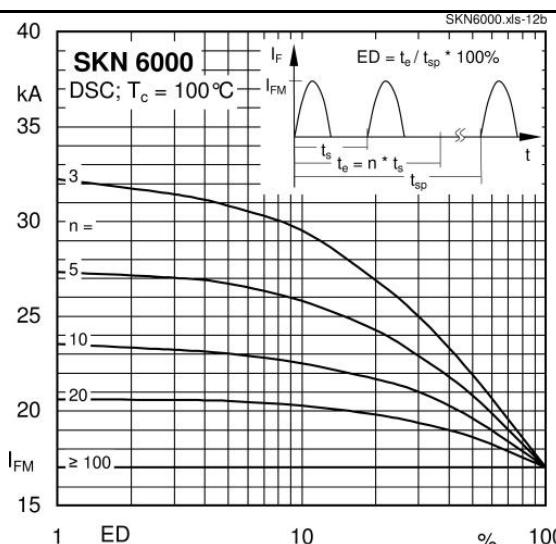


Fig. 10b Peak forward current vs. duty cycle ($T_c = 100\text{ }^{\circ}\text{C}$)

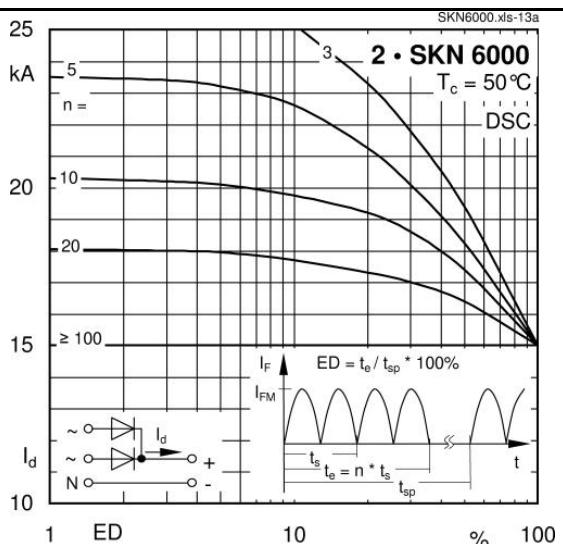


Fig. 11a Direct output current vs. duty cycle ($T_c = 50\text{ }^{\circ}\text{C}$)

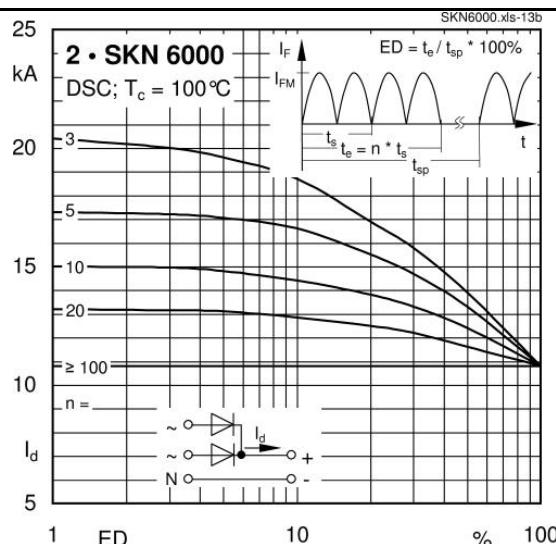
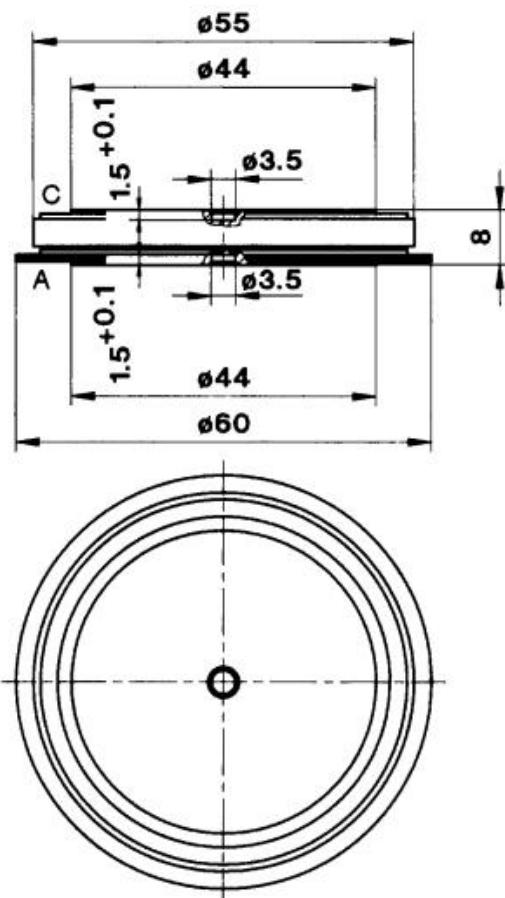


Fig. 11b Direct output current vs. duty cycle ($T_c = 100\text{ }^{\circ}\text{C}$)

Dimensions in mm



Case E 35

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