SKN 503 SG

Capsule Diode

V_{RSM} V	V_{RRM} V	I_{FAV} = 507 A (sin. 180 DSC; T_c = 125ºC)
400	400	SKN 503/04 SG
800	800	SKN 503/08 SG
1200	1200	SKN 503/12 SG
1800	1800	SKN 503/18 SG
2200	2200	SKN 503/22 SG

Diodes

SKN 503 SG

Features

- Metal case with epoxy insulation
- Capsule package for double sided cooling
- Reverse voltage up to 2200 V
- Cooling with heatsinks (double or single sided)

Typical Applications *

- All-purpose high power rectifier diodes
- Industrial high power drives and traction applications
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes

RC: 1,0 µF, 20 Ω (P_R = 5 W),
R_P: 25 kΩ (P_R = 20 W)

Symbol	Condition	Values	Units
I_{FAV}	sin. 180 ; T_c = 100 (85) ºC	650 (720)	A
I_D	2 x P8/180; T_a = 45 ºC; B2/B6	575 / 815	A
	2 x P8/180F; T_a = 35 ºC; B2/B6	990 / 1385	A
I_{FSM}	T_{vj} = 25º C ; 10 ms	7000	A
	T_{vj} = 180º C ; 10 ms	6000	A
i^2t	T_{vj} = 25º C ; 8,3...10 ms	245000	A^2s
	T_{vj} = 180º C ; 8,3...10 ms	180000	A^2s
V_F	T_{vj} = 25º C, I_F = 1500 A	max. 1,65	V
$V_{F(TO)}$	T_{vj} = 180º C	max. 0,80	V
r_T	T_{vj} = 180º C	max. 0,6	mΩ
I_R	T_{vj} = 25º C; V_R = V_{RRM}	max. 2	mA
	T_{vj} = 180º C; V_R = V_{RRM}	max. 50	mA
Q_{rr}	T_{vj} = 140º C; V_{FM} = 500 A	600	µC
$R_{th(j-c)}$	cont.; DSC / SSC	70 / 140	mK/W
$R_{th(c-s)}$	DSC / SSC	12 / 24	mK/W
T_{vj}		-40...+180	°C
T_{stg}		-40...+150	°C
F	Mounting force (SI units)	4 … 5	kN
m	approx.	70	g
Case		E25	

SKN

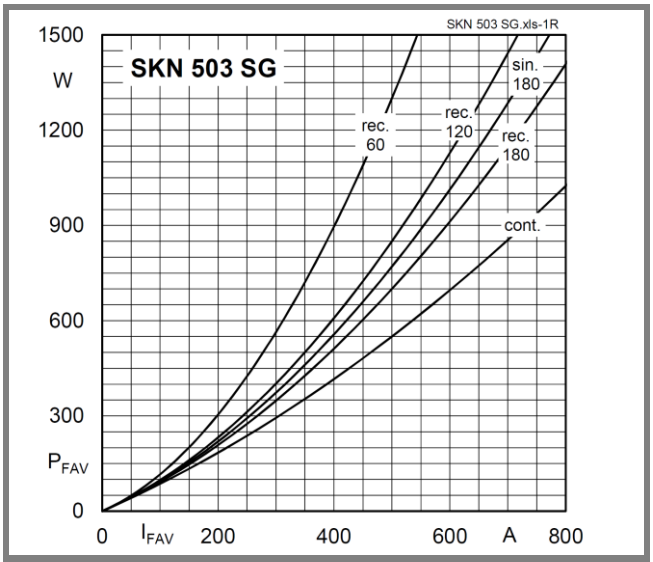


Fig. 1L Power dissipation vs. forward current

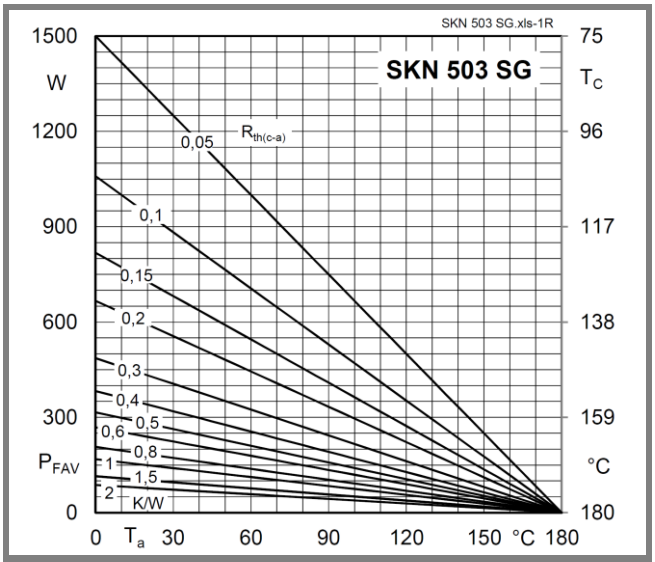


Fig. 1R Power dissipation vs. ambient temperature

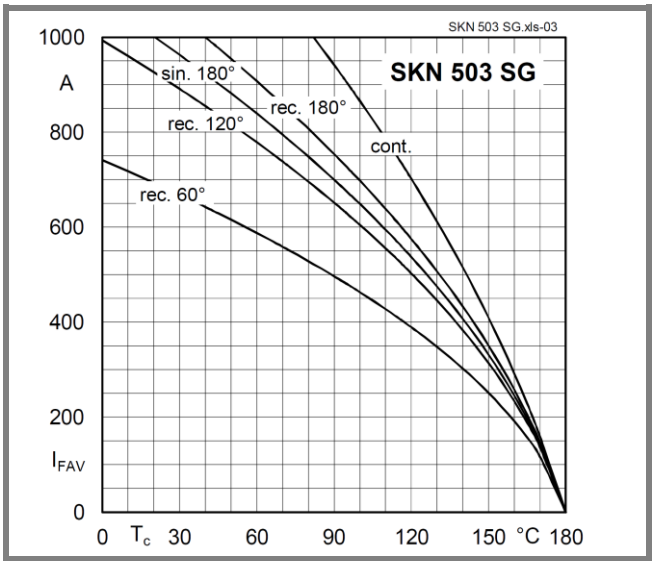


Fig. 3 Forward current vs. case temperature

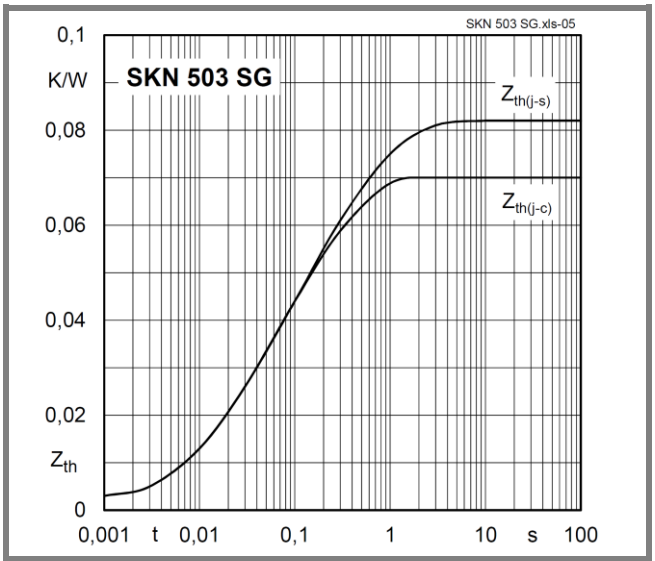


Fig. 5 Surge overload current vs. time

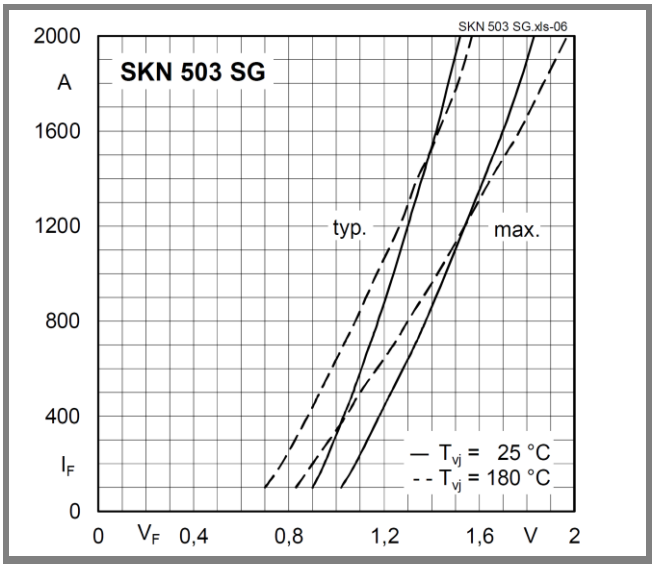


Fig. 6 Forward characteristics

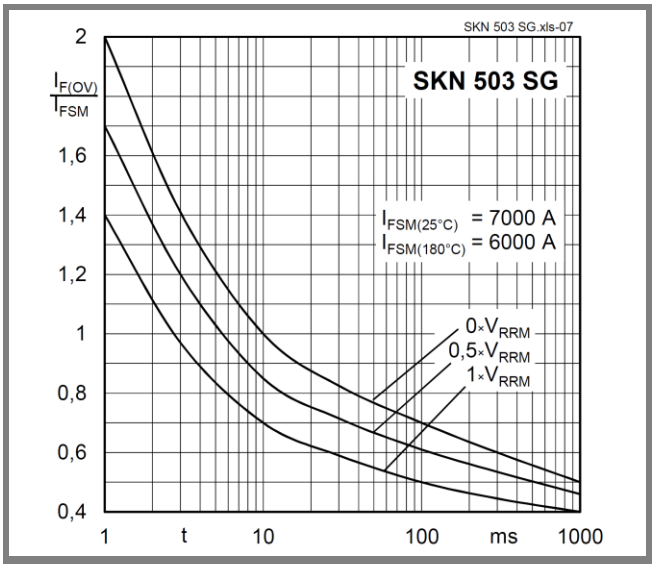
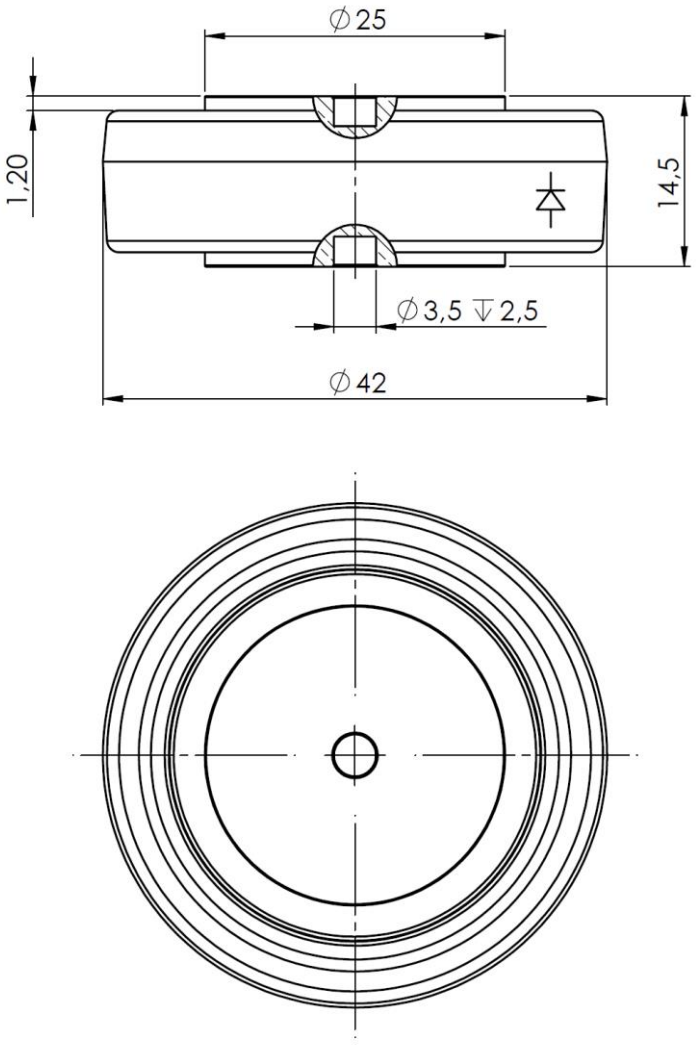


Fig. 7 Transient thermal impedance vs. time

Dimensions in mm



Case E25

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