

SKN 503 SG



Capsule Diode

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)

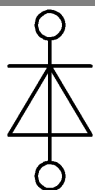
Typical Applications *

- 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 μ F, 20 Ω ($P_R = 5$ W),
RP: 25 k Ω ($P_R = 20$ W)

V_{RSM} V	V_{RRM} V	$I_{FAV} = 507$ A (sin. 180 DSC; $T_c = 125^\circ\text{C}$)
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

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



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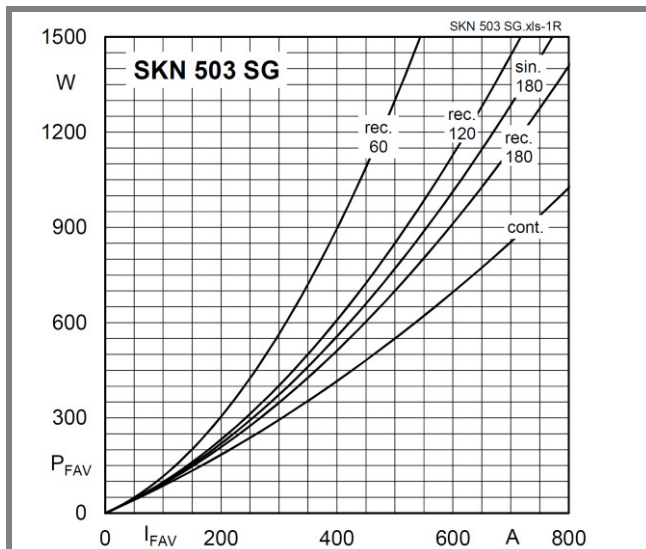


Fig. 1L Power dissipation vs. forward current

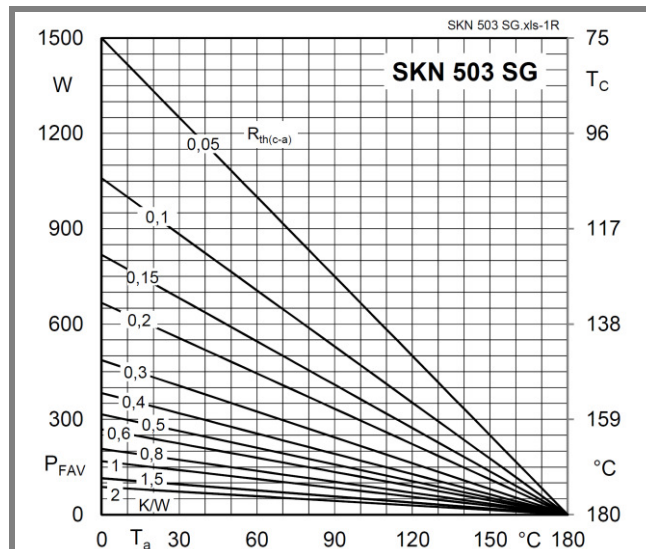


Fig. 1R Power dissipation vs. ambient temperature

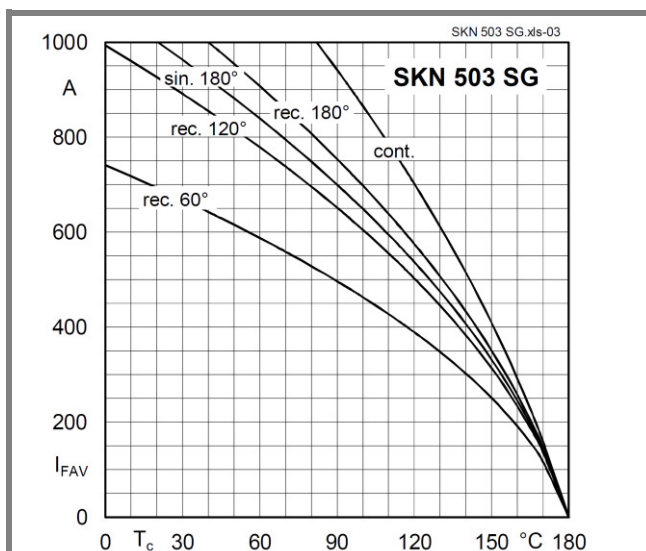


Fig. 3 Forward current vs. case temperature

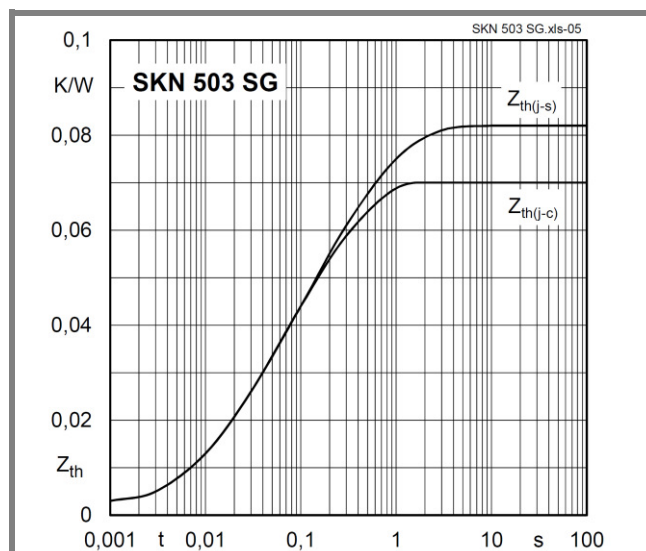


Fig. 5 Surge overload current vs. time

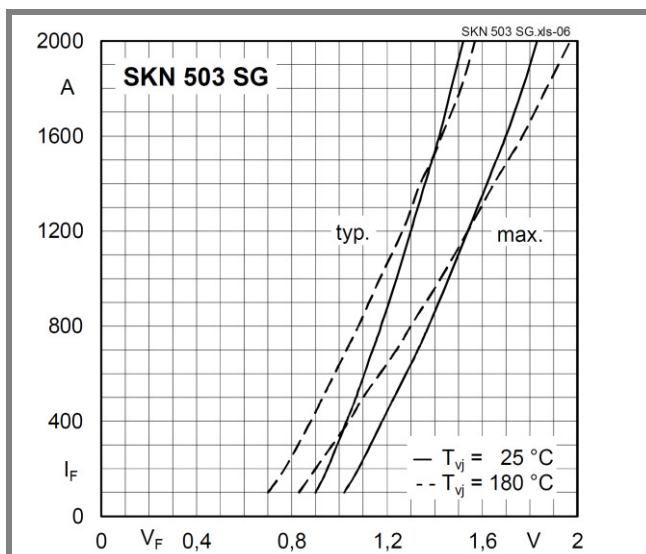


Fig. 6 Forward characteristics

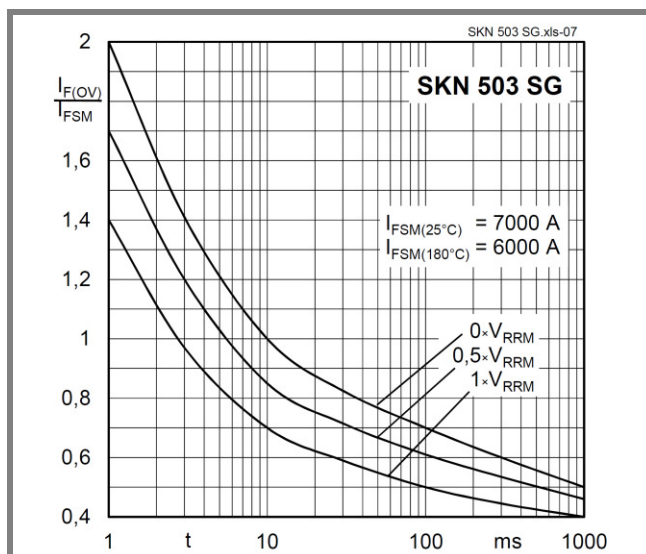
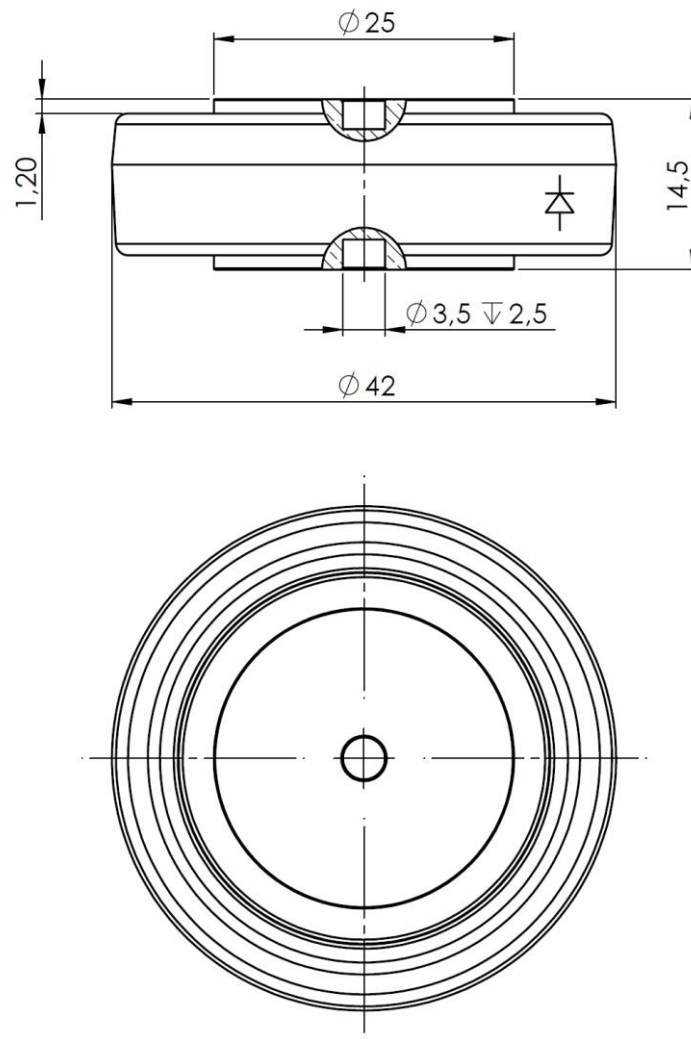


Fig. 7 Transient thermal impedance vs. time



Case E25

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