

SKN 1503 SG



Capsule Diode

Diodes

SKN 1503 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

V_{RSM} V	V_{RRM} V	$I_{FAV} = 1500 \text{ A (sin. 180 DSC; } T_c = 87^\circ\text{C)}$
400	400	SKN 1503/04 SG
800	800	SKN 1503/08 SG
1200	1200	SKN 1503/12 SG
1800	1800	SKN 1503/18 SG
2200	2200	SKN 1503/22 SG

Symbol	Condition	Values	Units
I_{FAV}	sin. 180 ; $T_c = 100 (85) ^\circ\text{C}$	1350 (1523)	A
I_D	2 x P8/180; $T_a = 45 ^\circ\text{C}$; B2/B6	750 / 1080	A
	2 x P8/180F; $T_a = 35 ^\circ\text{C}$; B2/B6	1840 / 2600	A
I_{FSM}	$T_{vj} = 25^\circ\text{C}$; 10 ms	19000	A
	$T_{vj} = 175^\circ\text{C}$; 10 ms	16000	A
i^2t	$T_{vj} = 25^\circ\text{C}$; 8,3...10 ms	1800	kA ² s
	$T_{vj} = 175^\circ\text{C}$; 8,3...10 ms	1280	kA ² s
V_F	$T_{vj} = 25^\circ\text{C}$, $I_F = 1800 \text{ A}$	max. 1,3	V
$V_{F(TO)}$	$T_{vj} = 175^\circ\text{C}$	max. 0,85	V
r_T	$T_{vj} = 175^\circ\text{C}$	max. 0,25	mΩ
I_R	$T_{vj} = 25^\circ\text{C}$; $V_R = V_{RRM}$	max. 4	mA
	$T_{vj} = 175^\circ\text{C}$; $V_R = V_{RRM}$	max. 50	mA
$R_{th(j-c)}$	cont.; DSC / SSC	33 / 66	mK/W
$R_{th(c-s)}$	DSC / SSC	7 / 14	mK/W
T_{vj}		-40...+175	°C
T_{stg}		-40...+150	°C
F	Mounting force (SI units)	12 ... 13,5	kN
m	approx.	270	g
Case		E26	



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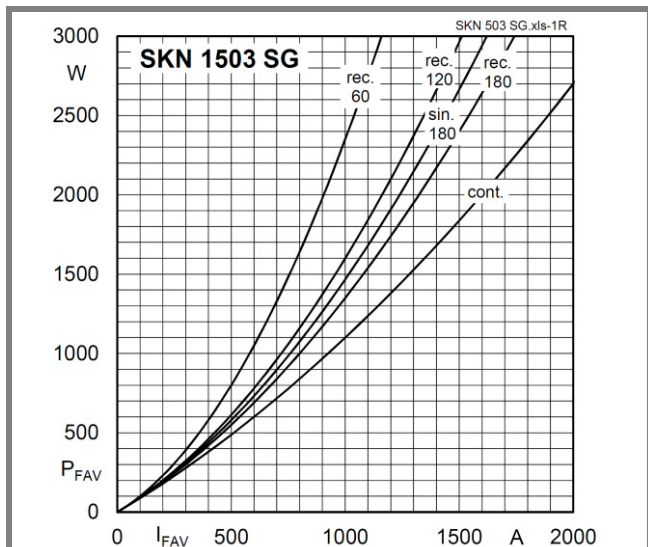


Fig. 1L Power dissipation vs. forward current

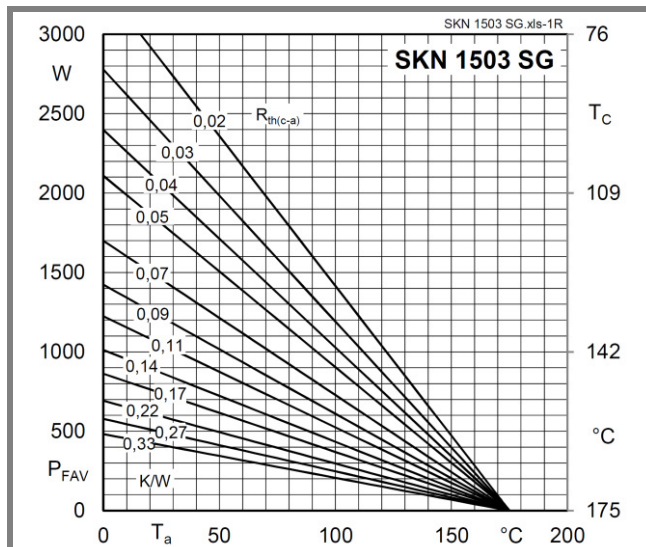


Fig. 1R Power dissipation vs. ambient temperature

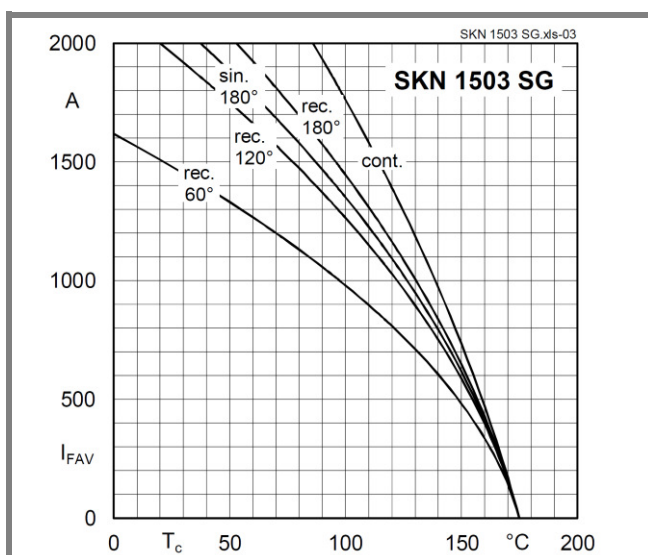


Fig. 3 Forward current vs. case temperature

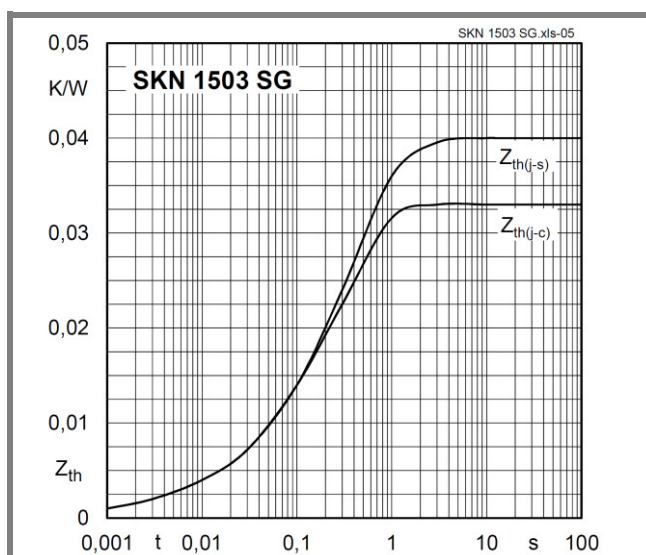


Fig. 5 Surge overload current vs. time

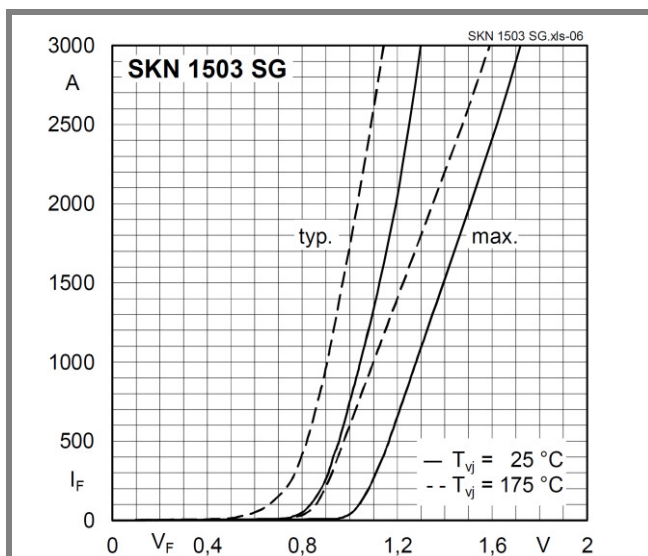


Fig. 6 Forward characteristics

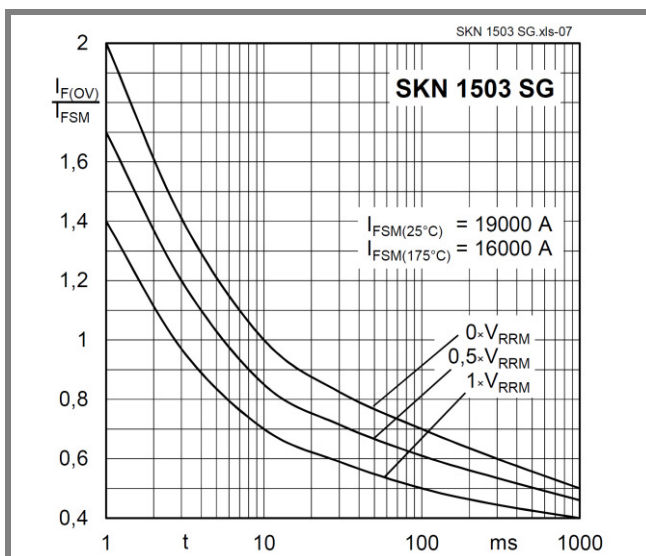
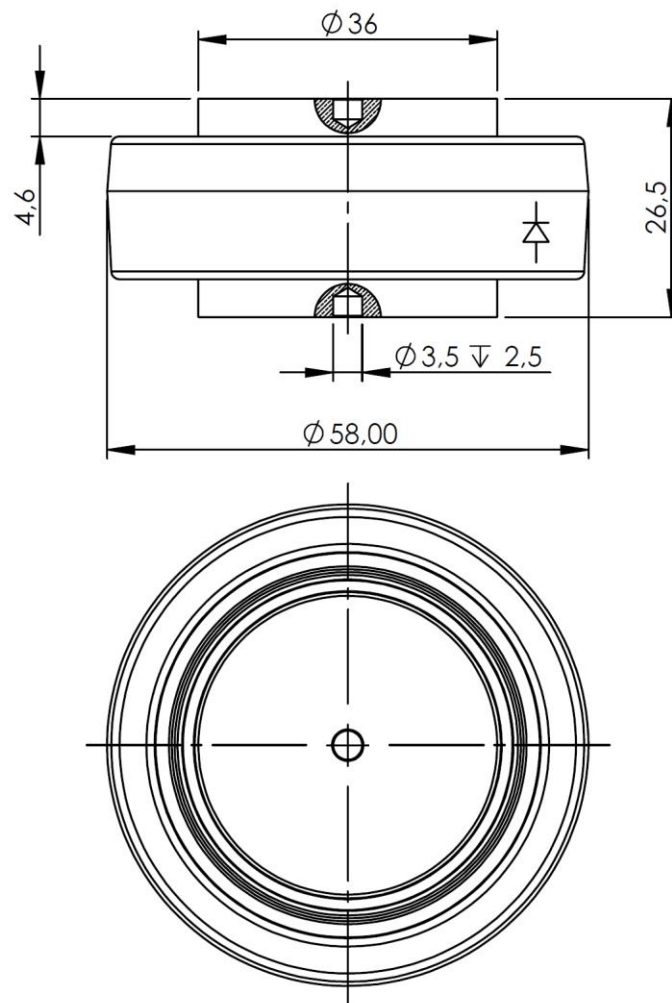


Fig. 7 Transient thermal impedance vs. time



Case E26

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