

SKN 320, SKR 320



Stud Diode

V_{RSM} V	V_{RRM} V	$I_{FRMS} = 700$ A (maximum value for continuous operation) $I_{FAV} = 320$ A (sin. 180; $T_c = 120$ °C)	
400	400	SKN 320/04	SKR 320/04
800	800	SKN 320/08	SKR 320/08
1200	1200	SKN 320/12	SKR 320/12
1400	1400	SKN 320/14	SKR 320/14
1600	1600	SKN 320/16	SKR 320/16

Rectifier Diode

SKN 320
SKR 320

Features

- Reverse voltages up to 1600 V
- Hermetic metal case with glass insulator
- Cooling via heatsinks
- Threaded stud ISO M24 x 1,5mm (M20 x 1,5mm and 3/4 - 16UNF 2A available)²⁾
- **SKN**: anode to stud
- **SKR**: cathode to stud

Typical Applications *

- All purpose high power rectifier diodes
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes
- Recommended snubber network:
 R_C : 1 μ F, 20 Ω ($P_R = 2$ W),
 R_p : 25 k Ω ($P_R = 20$ W)

1) Mounting with grease-like thermal compound or joint contact compound
2) M24x1,5 is standard, "M20" or "UNF" should be added in description for M20x1,5 mm or 3/4 - 16 UNF threads respectively.
3) To include silicone sleeve, "C/ ESPAG." Should be added in description.

Symbol	Condition	Values	Units
I_{FAV}	sin. 180 ; $T_c = 85$ (100) °C	454 (400)	A
I_D	P 1/120; $T_a = 50$ °C; B2 / B6 P 1/120F; $T_a = 40$ °C; B2 / B6	263 / 384 557 / 798	A A
I_{FSM}	$T_{vj} = 25$ ° C ; 10 ms $T_{vj} = 180$ ° C ; 10 ms	9000 8000	A A
i^2t	$T_{vj} = 25$ ° C ; 8,3...10 ms $T_{vj} = 180$ ° C ; 8,3...10 ms	405000 320000	A ² s A ² s
V_F	$T_{vj} = 25$ ° C, $I_F = 1000$ A	max. 1,35	V
$V_{(TO)}$	$T_{vj} = 180$ ° C	max. 0,8	V
r_T	$T_{vj} = 180$ ° C	max. 0,45	m Ω
I_{RD}	$T_{vj} = 180$ ° C ; $V_{RD} = V_{RRM}$	max. 100	mA
Q_{rr}	$T_{vj} = 160$ °C, $-di_F/dt = 10$ A/ μ s	300	μ C
$R_{th(j-c)}$		0,16	K/W
$R_{th(c-s)}$		0,015	K/W
T_{vj}		-40...+180	°C
T_{stg}		-40...+180	°C
V_{isol}		-	V~
M_s	M24 Stud M20 Stud or 3/4-16 UNF Stud M24 Stud (lubricated) ¹⁾ M20 Stud or 3/4-16 UNF Stud (lubricated) ¹⁾	60 35 48 28	Nm Nm Nm Nm
a		5 * 9,81	m/s ²
m	approx.	500	g
Case		E 16	



SKN



SKR

SKN 320, SKR 320

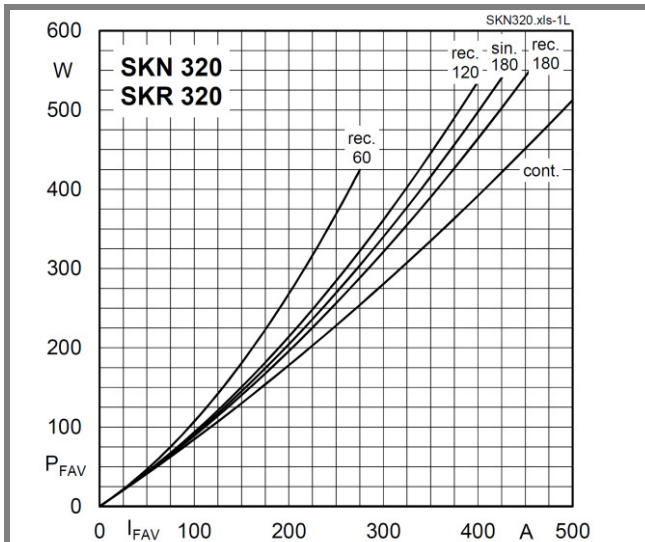


Fig. 1L Power dissipation vs. forward current

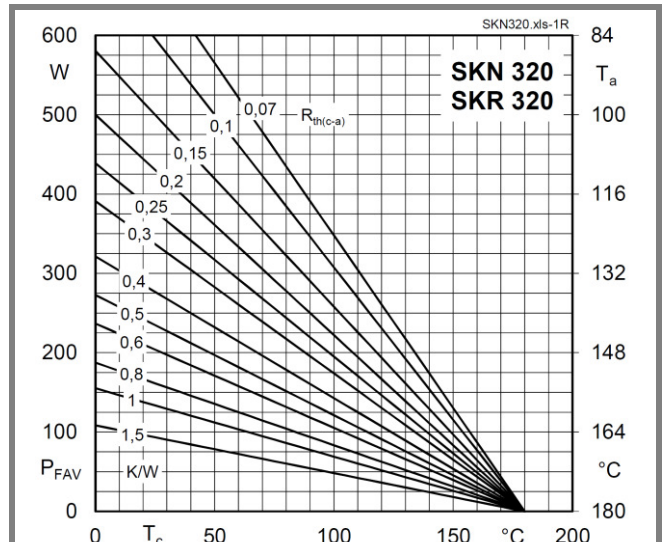


Fig. 1R Power dissipation vs. ambient temperature

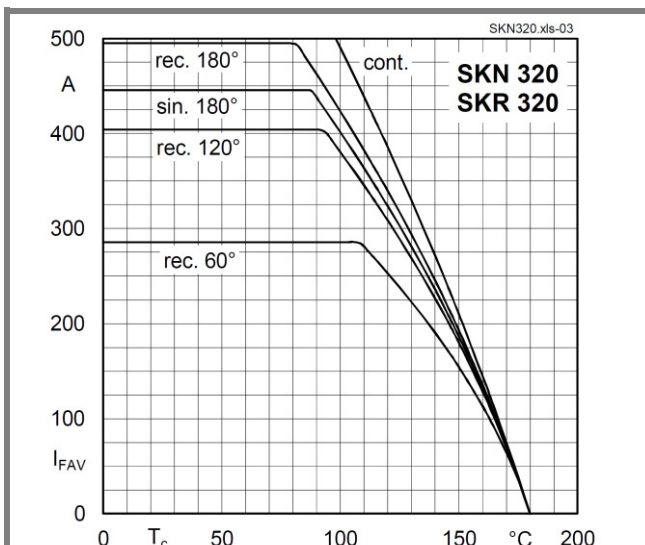


Fig. 3 Forward current vs. case temperature

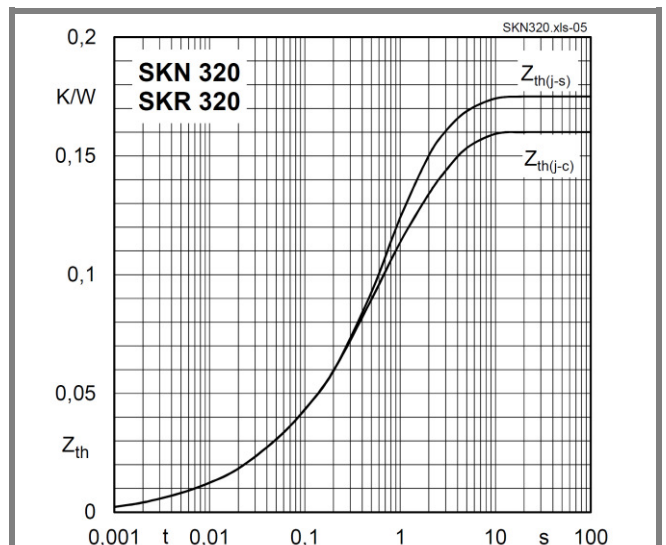


Fig. 5 Transient thermal impedance vs. time

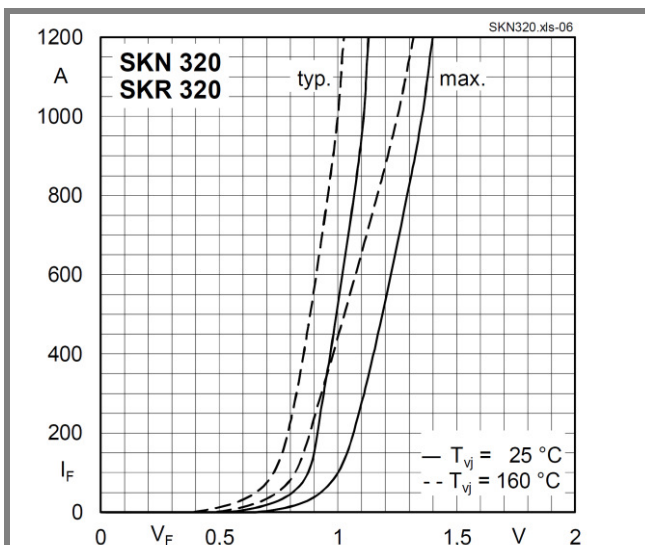


Fig. 6 Forward characteristics

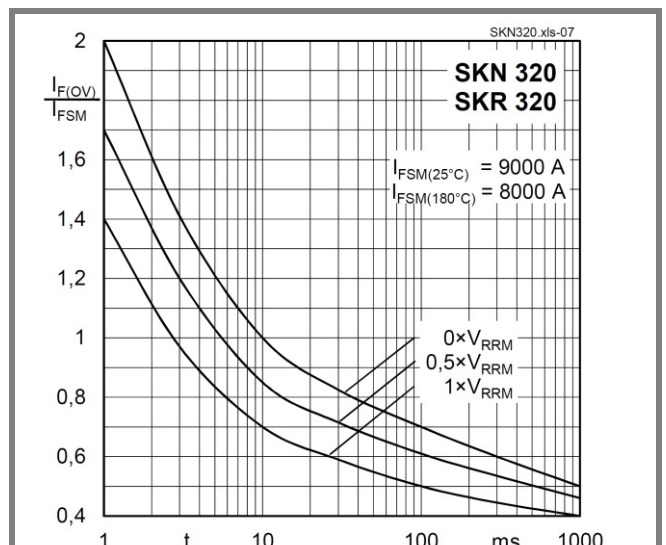
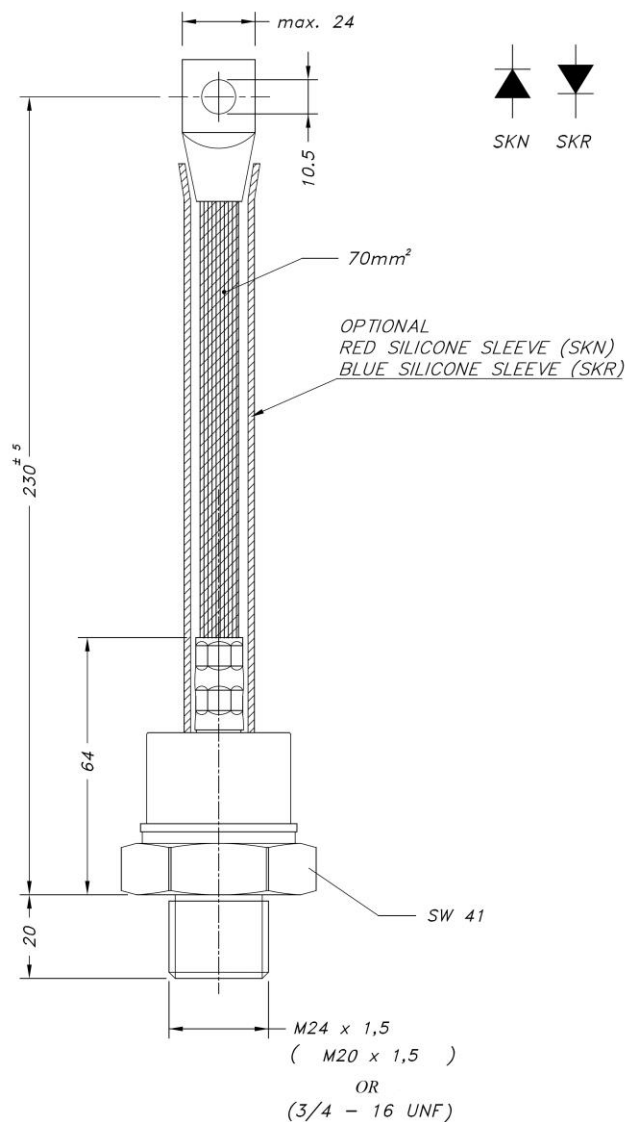


Fig. 7 Surge overload current vs. time



Case E16 (IEC 60191: A 22 B)

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