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

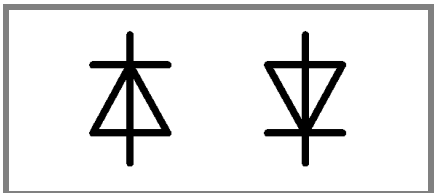
- Reverse voltages up to 1600 V
- Hermetic metal case with glass insulator
- Cooling via heatsinks
- Threaded stud ISO M24 x 1,5 or ¾ - 16 UNF 2A[2)]
- **SKN:** anode to stud
- **SKR:** cathode to stud

Typical Applications *

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

1) Mounting with grease-like thermal compound or joint contact compound
2) M24x1,5 is standard, "UNF" should be added in description for ¾ - 16 UNF thread.
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	263 / 384	A
	P 1/120F; T_a = 40°C; B2 / B6	557 / 798	A
I_{FSM}	T_{vj} = 25° C ; 10 ms	9000	A
	T_{vj} = 180° C ; 10 ms	8000	A
i^2t	T_{vj} = 25° C ; 8,3...10 ms	405000	A^2s
	T_{vj} = 180° C ; 8,3...10 ms	320000	A^2s
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	mΩ
I_{RD}	T_{vj} = 180° C ; V_{RD} = V_{RRM}	max. 100	mA
Q_{rr}	T_{vj} = 160°C, -di_F/dt = 10 A/µs	300	µC
$R_{th(j-c)}$		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	60	Nm
	¾-16 UNF Stud	30	Nm
	M24 Stud (lubricated)[1)]	45	Nm
	¾-16 UNF Stud (lubricated)[1)]	22,5	Nm
a		5 * 9,81	m/s^2
m	approx.	500	g
Case		E 16	



SKN SKR

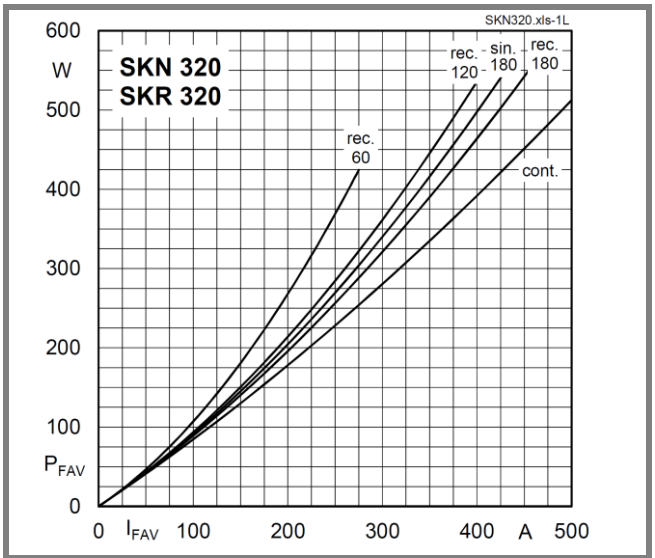


Fig. 1L Power dissipation vs. forward current

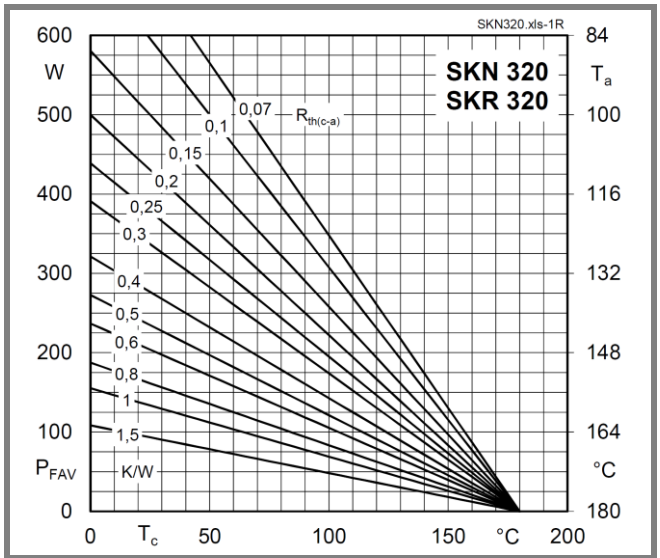


Fig. 1R Power dissipation vs. ambient temperature

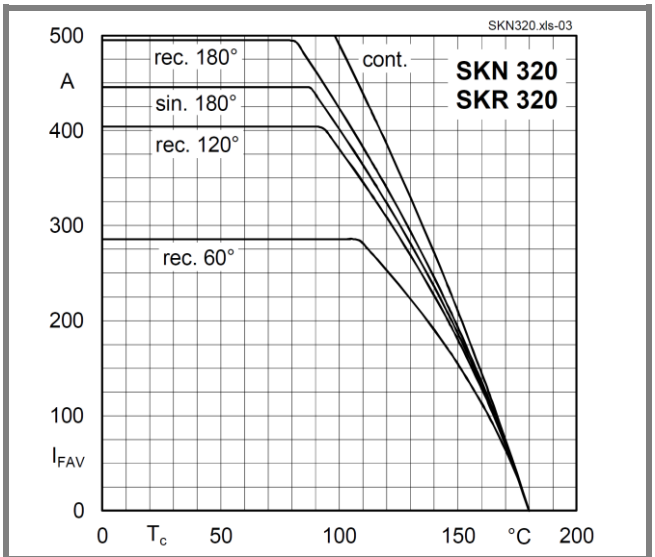


Fig. 3 Forward current vs. case temperature

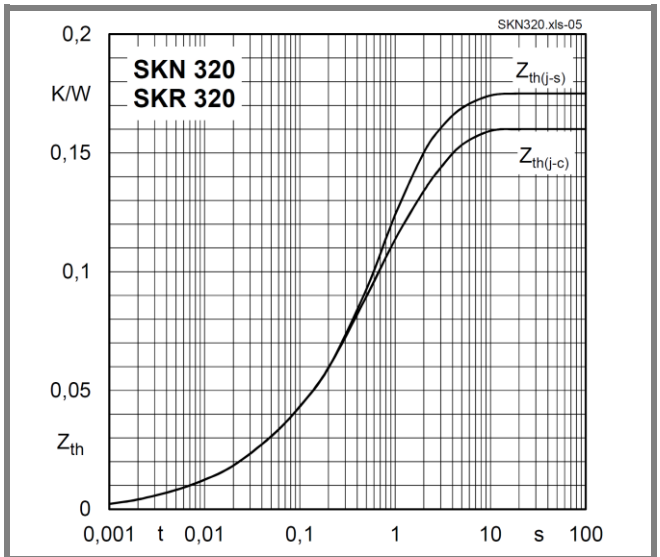


Fig. 5 Transient thermal impedance vs. time

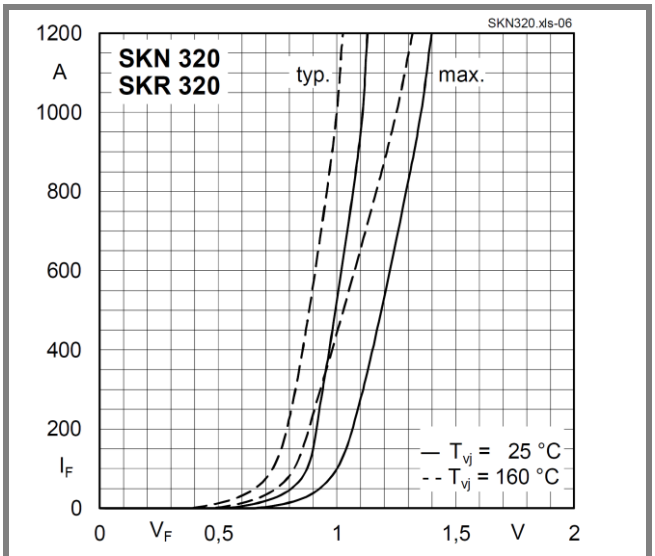


Fig. 6 Forward characteristics

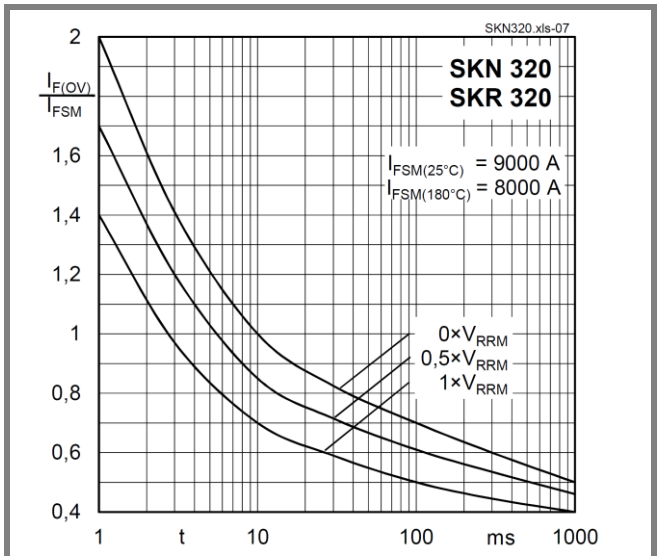
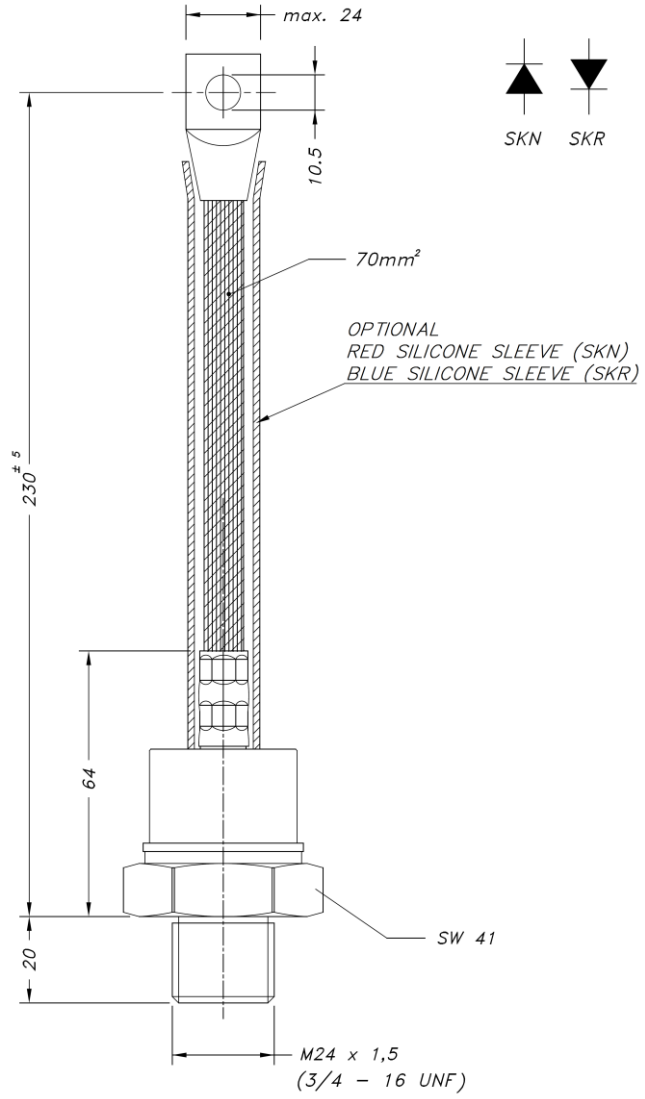


Fig. 7 Surge overload current vs. time

Dimensions in mm



Case E16 (IEC 60191: A 22 B)

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