SKN 390, SKR 390

Stud Diode

V_{RSM} V	V_{RRM} V	I_{FRMS} = 620 A (maximum value for continuous operation) I_{FAV} = 395 A (sin. 180; T_c = 116 ºC)	
400	400	SKN 390/04	SKR 390/04
800	800	SKN 390/08	SKR 390/08
1200	1200	SKN 390/12	SKR 390/12
1600	1600	SKN 390/16	SKR 390/16

Symbol	Condition	Values	Units
I_{FAV}	sin. 180 ; T_C = 116 (125) ºC	395 (355)	A
I_{FSM}	T_{vj} = 25º C ; 10 ms	9000	A
	T_{vj} = 180º C ; 10 ms	8000	A
i^2t	T_{vj} = 25º C ; 8,3...10 ms	405000	A^2s
	T_{vj} = 180º C ; 8,3...10 ms	320000	A^2s
V_F	T_{vj} = 25º C, I_F = 1000 A	max. 1,35	V
$V_{(TO)}$	T_{vj} = 180º C	max. 0,80	V
r_T	T_{vj} = 180º C	max. 0,45	mΩ
I_{RD}	T_{vj} = 180º C ; V_R = V_{RRM}	max. 90	mA
Q_{rr}	T_{vj} = 160°C, $-di_F/dt$ = 10 A/µs	250	µC
$R_{th(j-c)}$		0,13	K/W
$R_{th(c-s)}$		0,03	K/W
T_{vj}		-40...+180	°C
T_{stg}		-55...+180	°C
V_{isol}		-	V~
M_s	to heatsink (SI units)	30	Nm
	to heatsink (US units)	270	lb.in.
a		5 * 9,81	m/s^2
m	approx.	250	g
Case		E 15	

Rectifier Diode

SKN 390
SKR 390

Features

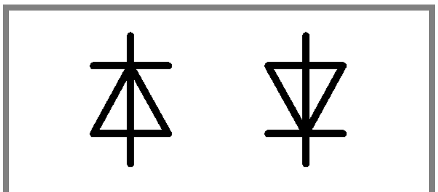
- Reverse voltages up to 1600 V
- Hermetic metal cases with glass insulator
- Threaded stud M16 x 1,5 mm. Also 3/4"–16 UNF 2A and M20 x 1,5 mm options.
- **SKN:** anode to stud
- **SKR:** cathode to stud

Typical Applications *

- All purpose high power rectifier diodes
- Cooling via heatsinks
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes
- Recommended snubber network:
  RC: 1,0 µF, 20 Ω (P_R = 2W),
  R_p: 25 KΩ (P_R = 20 W)

Notes:

for 3/4"-16 UNF thread version add UNF and for M20 x 1,5 mm thread version add M20 at description's end.
(e.g. SKR 390/04 M20)



SKN SKR

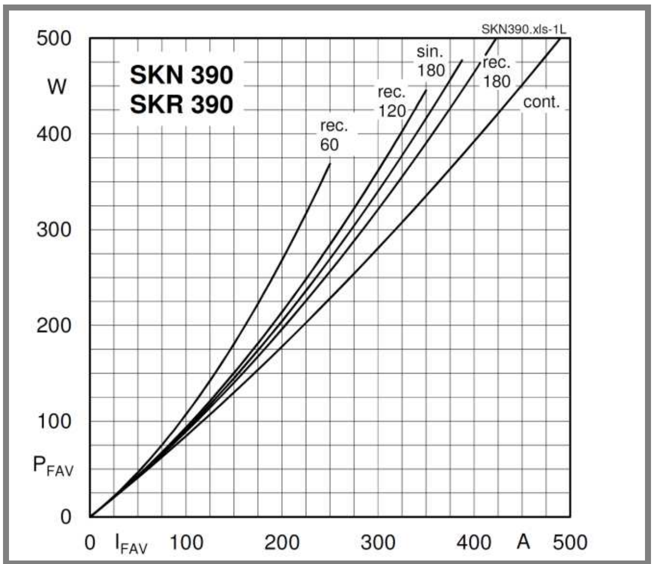


Fig. 1L Power dissipation vs. forward current

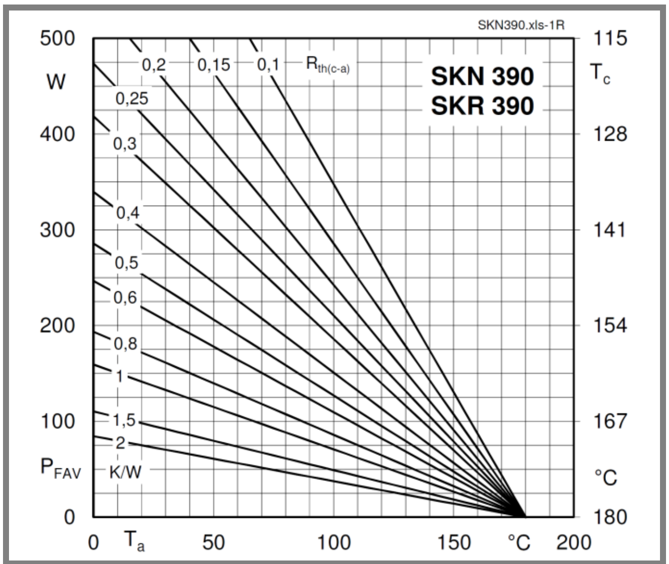


Fig. 1R Power dissipation vs. ambient temperature

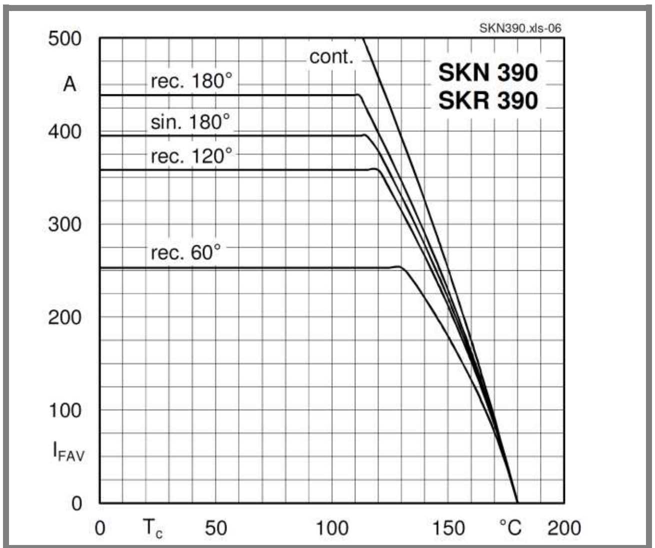


Fig. 2 Forward current vs. case temperature

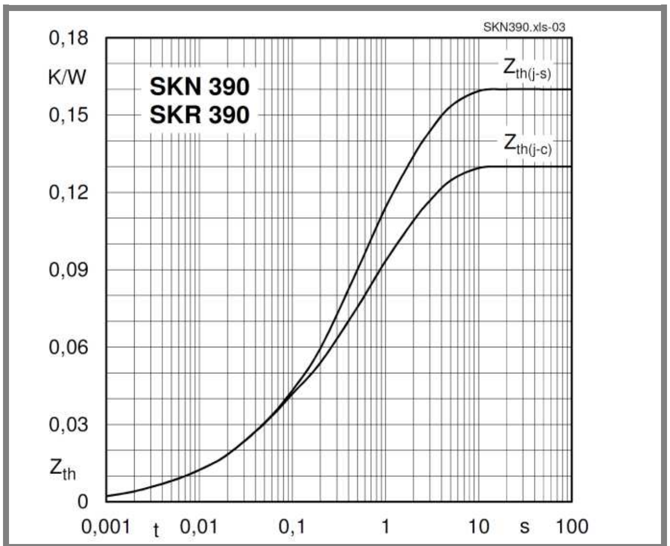


Fig. 4 Transient thermal impedance vs. time

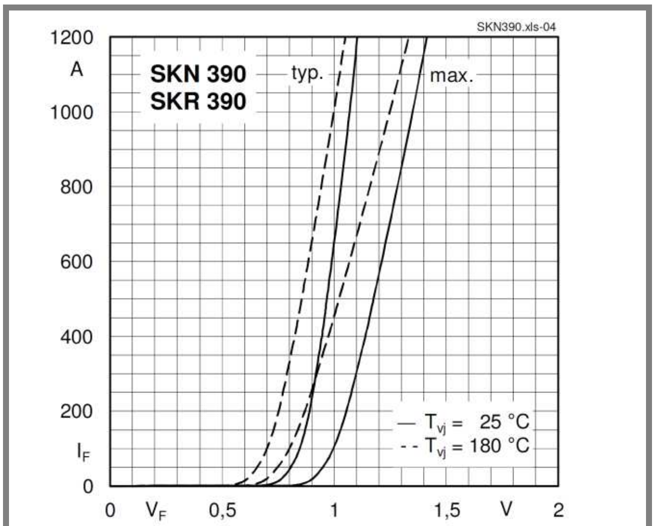


Fig. 5 Forward characteristics

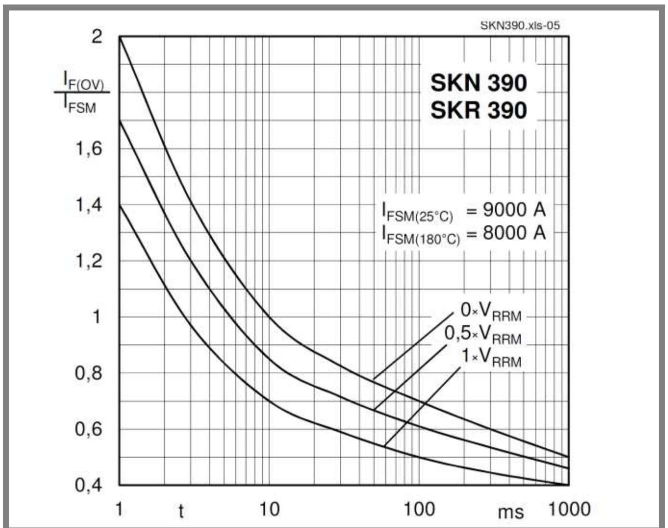
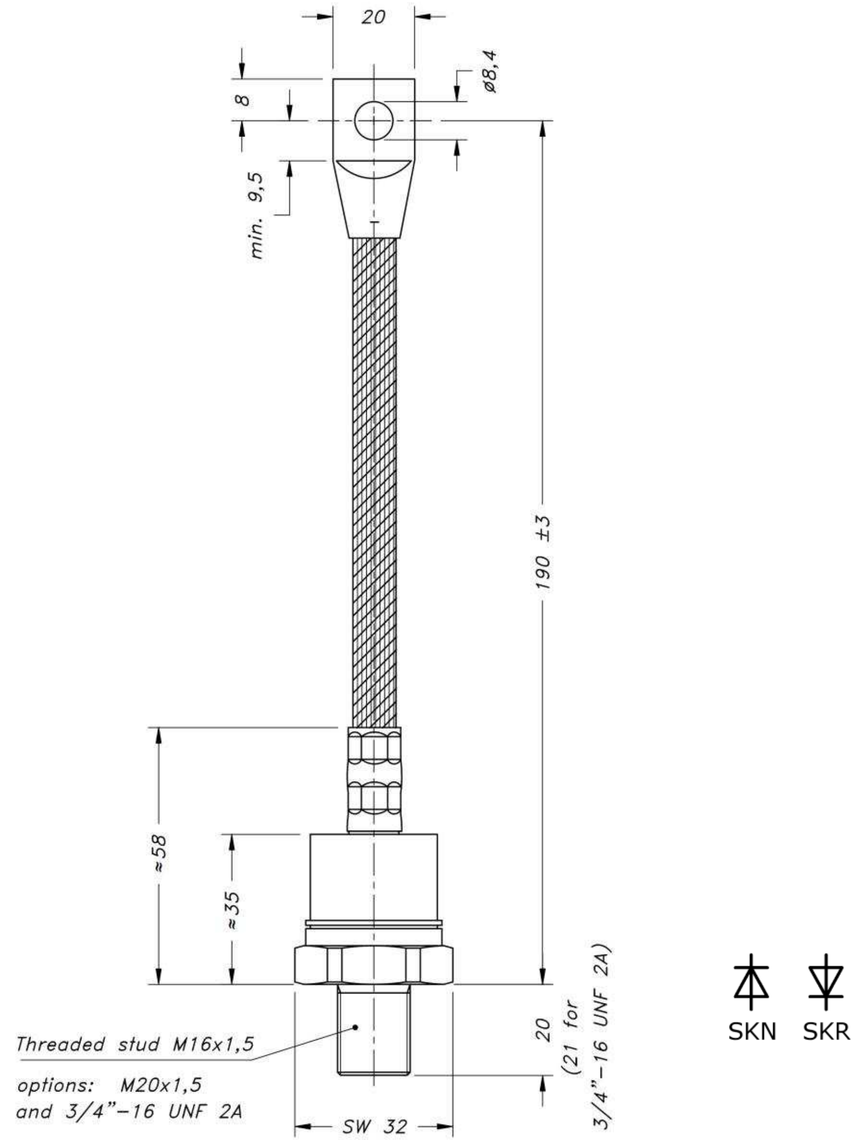


Fig. 6 Surge overload current vs. time

Dimensions in mm



Case E15 (IEC 60191: A 15 M; JEDEC: DO-205 AB)