

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; $T_c = 116$ °C)	
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

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 μ F, 20 Ω ($P_R = 2$ W),
 R_D : 25 K Ω ($P_R = 20$ 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)

Symbol	Condition	Values	Units
I_{FAV}	sin. 180 ; $T_c = 116$ (125) °C	395 (355)	A
I_{FSM}	$T_{vj} = 25^\circ$ C ; 10 ms	9000	A
i^2t	$T_{vj} = 180^\circ$ C ; 10 ms	8000	A
	$T_{vj} = 25^\circ$ C ; 8,3...10 ms	405000	A ² s
V_F	$T_{vj} = 25^\circ$ C, $I_F = 1000$ A	max. 1,35	V
	$T_{vj} = 180^\circ$ C	max. 0,80	V
$V_{(TO)}$	$T_{vj} = 180^\circ$ C	max. 0,45	m Ω
r_T	$T_{vj} = 180^\circ$ C	max. 90	mA
I_{RD}	$T_{vj} = 180^\circ$ C ; $V_R = V_{RRM}$	250	μ C
Q_{rr}	$T_{vj} = 160^\circ$ C, $-di_F/dt = 10$ A/ μ s		
$R_{th(j-c)}$		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	



SKN



SKR

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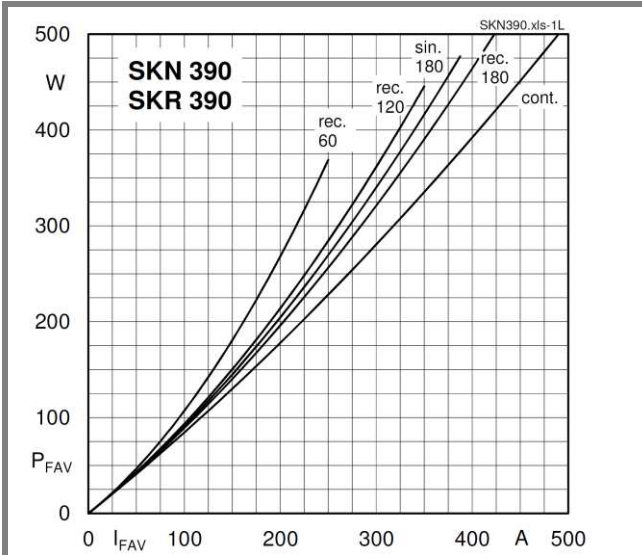


Fig. 1L Power dissipation vs. forward current

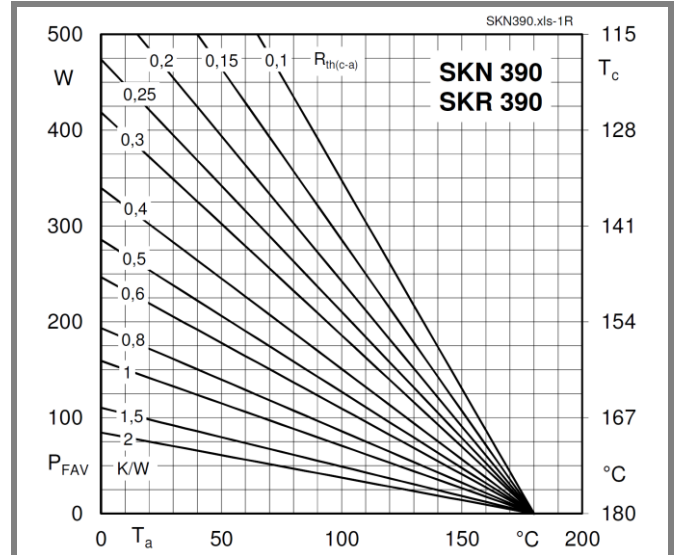


Fig. 1R Power dissipation vs. ambient temperature

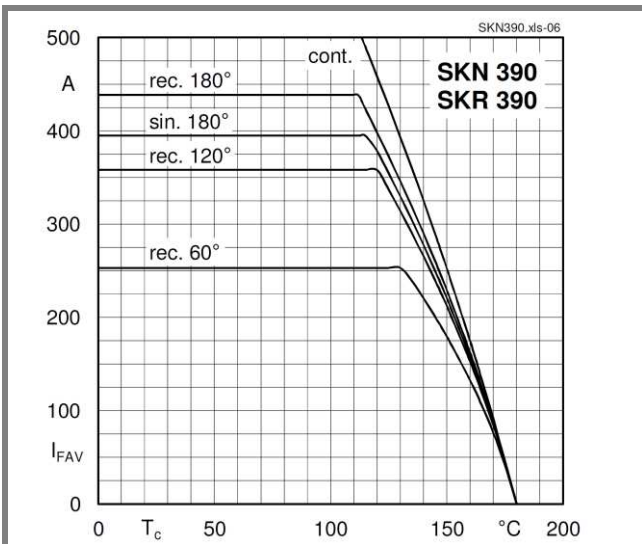


Fig. 2 Forward current vs. case temperature

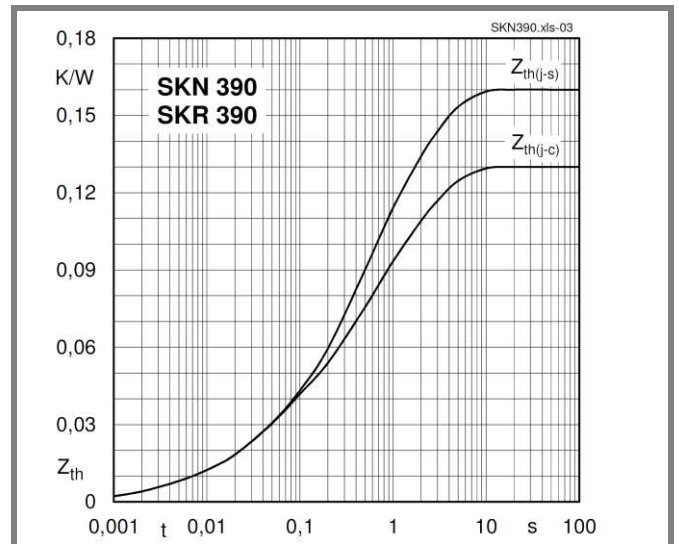


Fig. 4 Transient thermal impedance vs. time

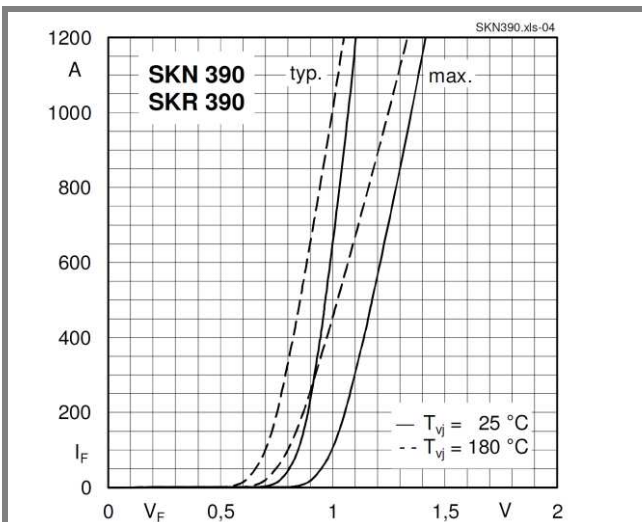


Fig. 5 Forward characteristics

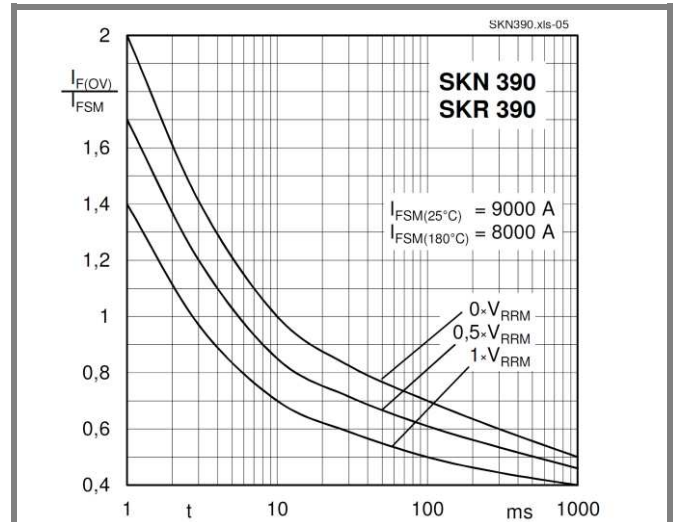
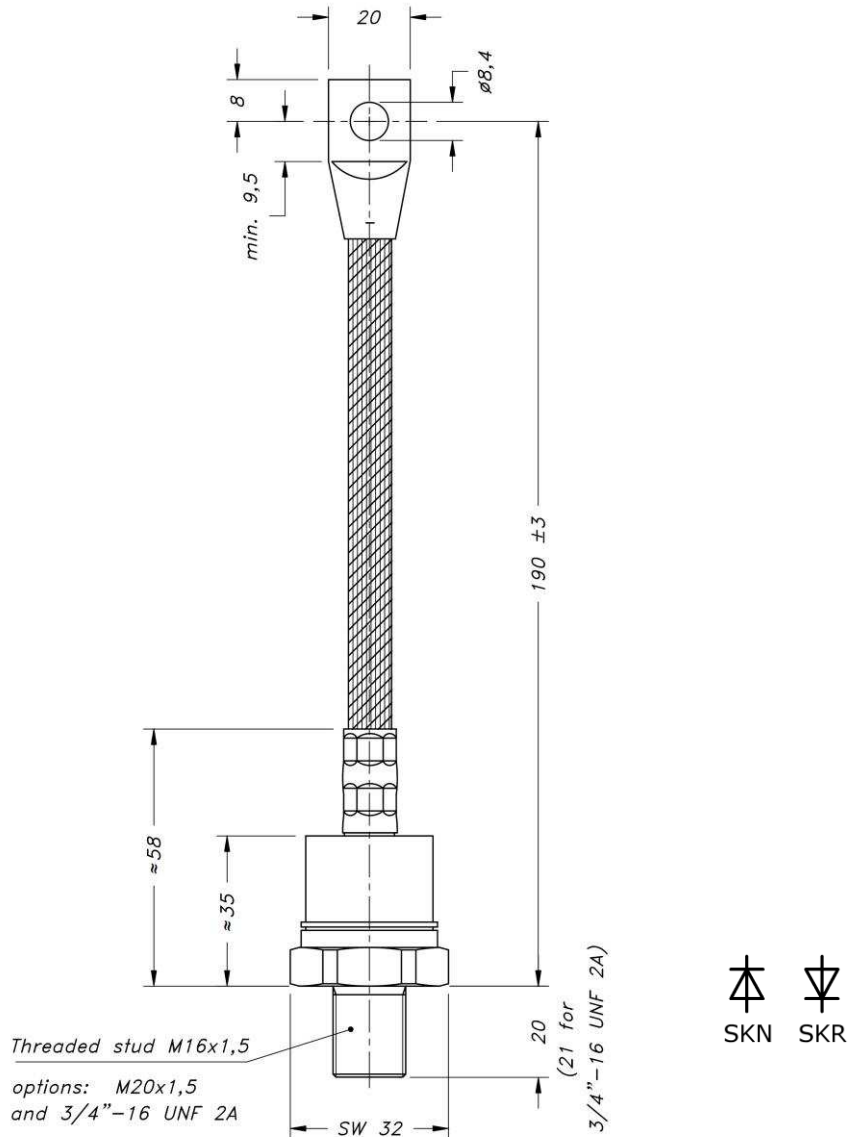


Fig. 6 Surge overload current vs. time



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

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