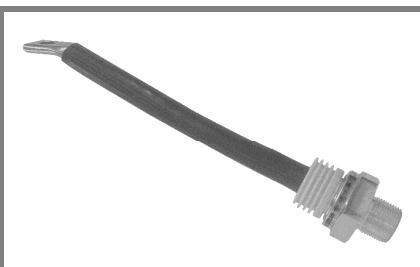


SKN 400, SKR 400



Stud Diode

V_{RSM} V	V_{RRM} V	$I_{FRMS} = 700$ A (maximum value for continuous operation) $I_{FAV} = 400$ A (sin. 180; $T_c = 100$ °C)	
1800	1800	SKN 400/18	SKR 400/18
2000	2000	SKN 400/20	SKR 400/20
2400	2400	SKN 400/24	SKR 400/24
2700	2700	SKN 400/27	SKR 400/27
3000	3000	SKN 400/30	SKR 400/30
3600	3600	SKN 400/36	SKR 400/36

Rectifier Diode

SKN 400
SKR 400

Features

- Reverse voltages up to 3600 V
- Hermetic metal cases with glass insulator
- Threaded stud M24 x 1,5 mm.
- **SKN**: anode to stud
- **SKR**: cathode to stud

Typical Applications *

- High voltage rectifier diode, especially for traction applications
- Cooling via heatsinks
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes
- Recommended snubber network:
RC: 1,0 μ F, 20 Ω ($P_R = 5$ W),
 R_p : 25 K Ω ($P_R = 20$ W)

Symbol	Condition	Values	Units
I_{FAV}	sin. 180 ; $T_c = 85$ (100) °C	445 (400)	A
I_D	K 0,55; $T_a = 45$ °C; B2 / B6	310 / 450	A
	K 0,55F; $T_a = 35$ °C; B2 / B6	700 / 1000	A
I_{FSM}	$T_{vj} = 25^\circ$ C ; 10 ms	9000	A
	$T_{vj} = 160^\circ$ C ; 10 ms	7500	A
i^2t	$T_{vj} = 25^\circ$ C ; 8,3...10 ms	400000	A ² s
	$T_{vj} = 160^\circ$ C ; 8,3...10 ms	280000	A ² s
V_F	$T_{vj} = 25^\circ$ C, $I_F = 1200$ A	max. 1,45	V
$V_{(TO)}$	$T_{vj} = 160^\circ$ C	max. 0,9	V
r_T	$T_{vj} = 160^\circ$ C	max. 0,5	m Ω
I_{RD}	$T_{vj} = 160^\circ$ C ; $V_R = V_{RRM}$	max. 60	mA
Q_{rr}	$T_{vj} = 160^\circ$ C, $-di_F/dt = 10$ A/ μ s	typ. 400	μ C
$R_{th(j-c)}$		0,11	K/W
$R_{th(c-s)}$		0,01	K/W
T_{vj}		-40...+160	°C
T_{stg}		-55...+160	°C
V_{isol}		-	V~
M_s	to heatsink (SI units)	60	Nm
	to heatsink (US units)	531	lb.in.
a		5 * 9,81	m/s ²
m	approx.	500	g
Case		E 17	



SKN



SKR

SKN 400, SKR 400

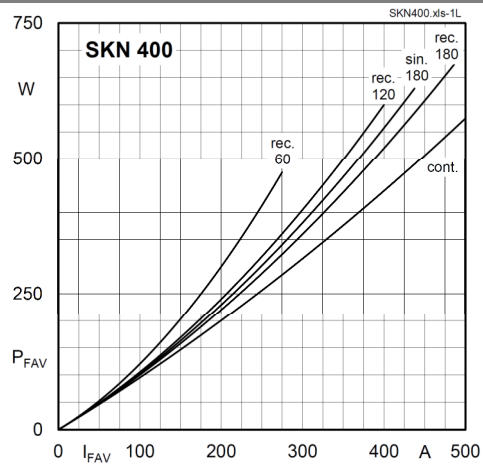


Fig. 1L Power dissipation vs. forward current

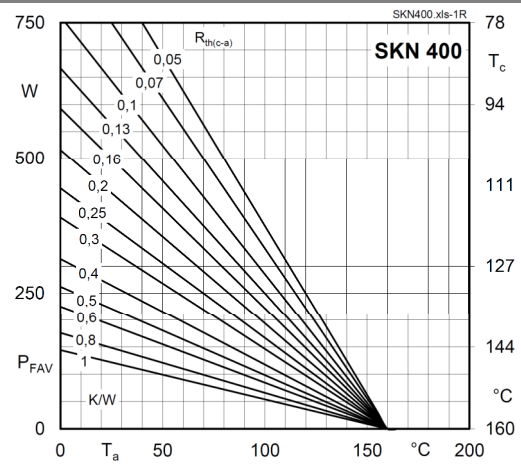


Fig. 1R Power dissipation vs. ambient temperature

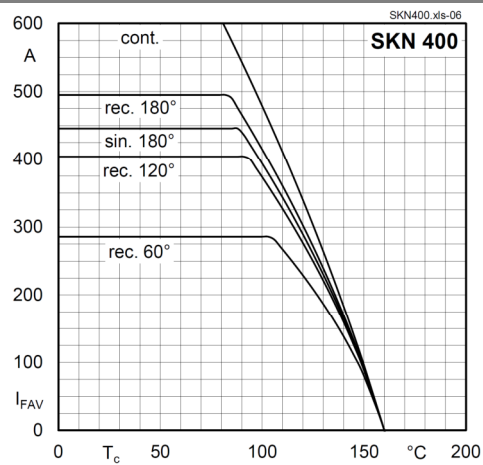


Fig. 2 Forward current vs. case temperature

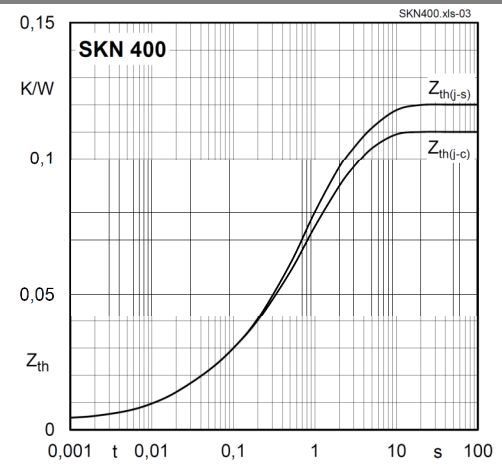


Fig. 4 Transient thermal impedance vs. time

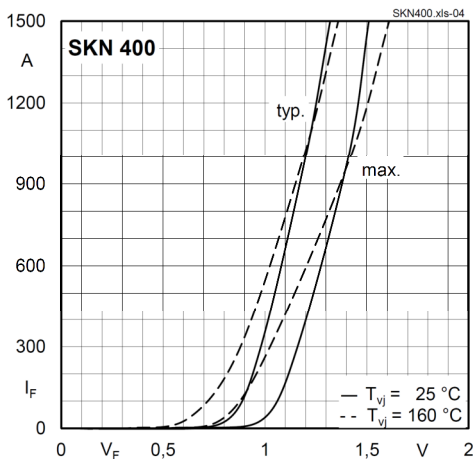


Fig. 5 Forward characteristics

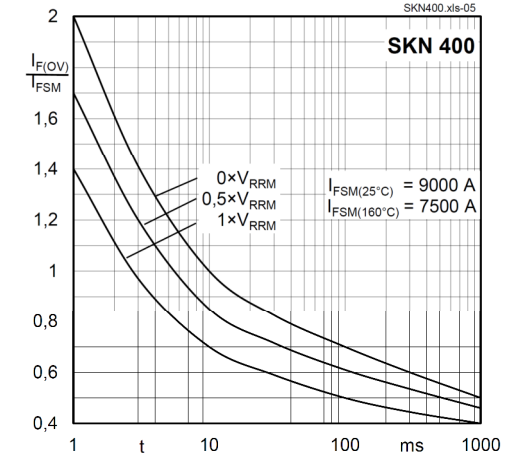
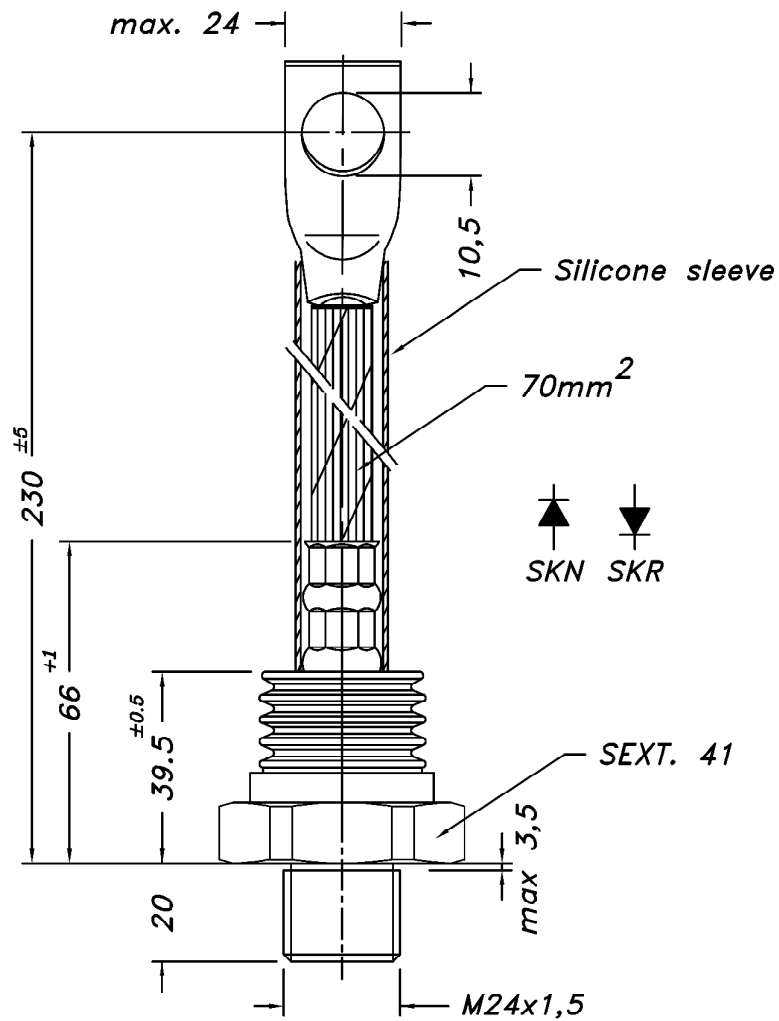


Fig. 6 Surge overload current vs. time



Case E17 (IEC 60191: A 22 B)

* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.