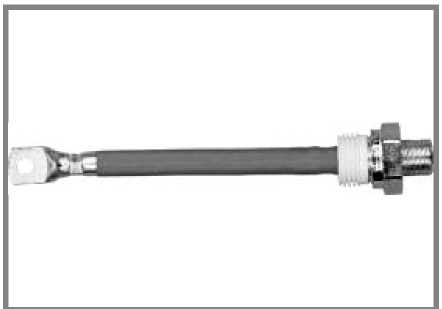
SKN 400



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		
2400	2400	SKN 400/24		
2700	2700	SKN 400/27		
3000	3000	SKN 400/30		

Symbol	Conditions	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 °C; 10 ms	9000	A
	T_{vj} = 160 °C; 10 ms	7500	A
i²t	T_{vj} = 25 °C; 8,3 ... 10 ms	400000	A²s
	T_{vj} = 160 °C; 8,3 ... 10 ms	280000	A²s
V_F	T_{vj} = 25 °C; I_F = 1200 A	max. 1,45	V
$V_{(TO)}$	T_{vj} = 160 °C	max. 0,9	V
r_T	T_{vj} = 160 °C	max. 0,5	mΩ
I_{RD}	T_{vj} = 160 °C; V_{RD} = V_{RRM}	max. 60	mA
Q_{rr}	T_{vj} = 160 °C; - di_F/dt = 10 A/µs	400	µC
$R_{th(j-c)}$		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	60	Nm
a		5 * 9,81	m/s²
m	approx.	500	g
Case		E 17	

Rectifier Diode

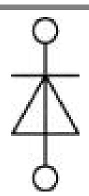
SKN 400

Features

- Reverse voltages up to 3000 V
- Hermetic metal case with ceramic insulator with extra long creepage distances
- Threaded stud ISO M24 x 1,5
- SKN: anode 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 µF, 20 Ω (P_R = 2 W), R_p = 25 kΩ (P_R = 20 W)



SKN

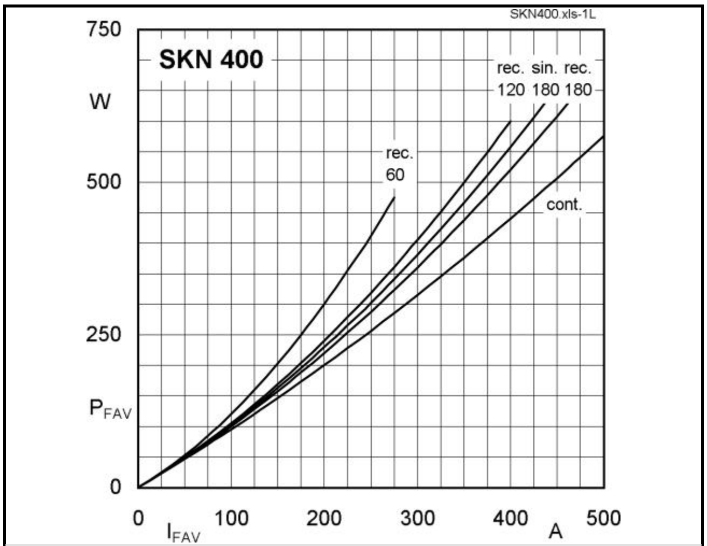


Fig. 1L Power dissipation vs. forward current

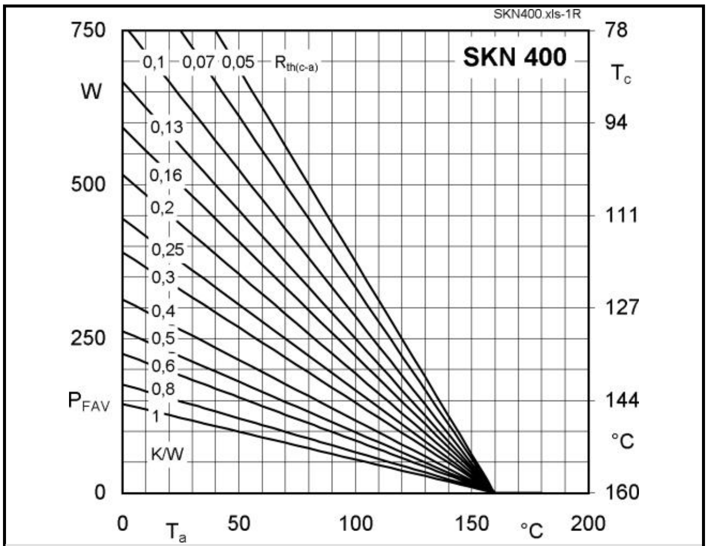


Fig. 1R Power dissipation vs. ambient temperature

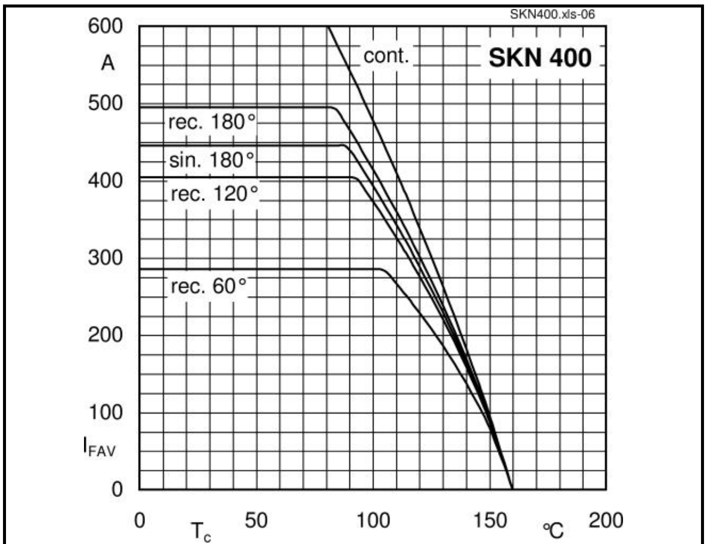


Fig. 2 Forward current vs. case temperature

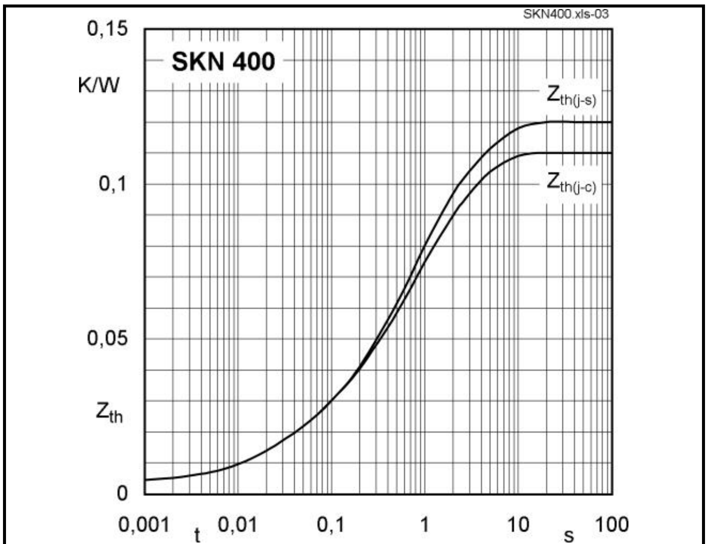


Fig. 4 Transient thermal impedance vs. time

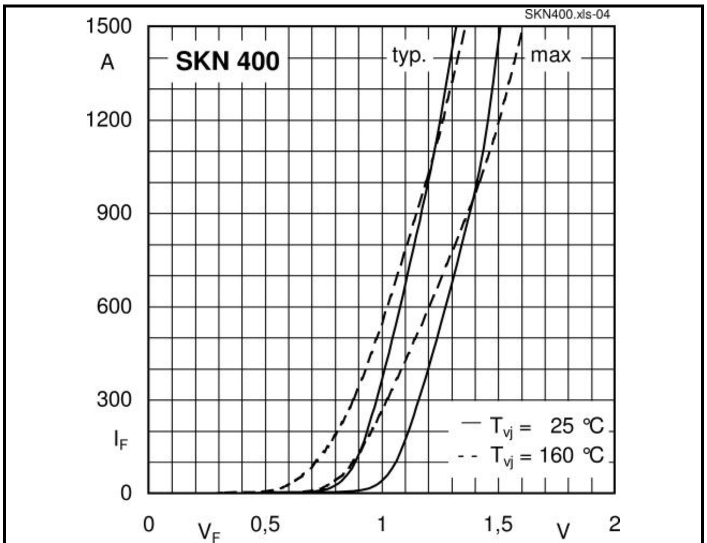


Fig. 5 Forward characteristics

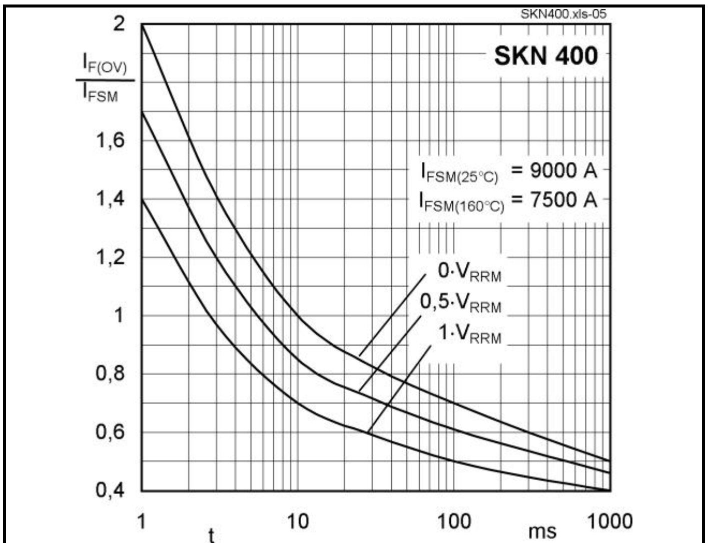
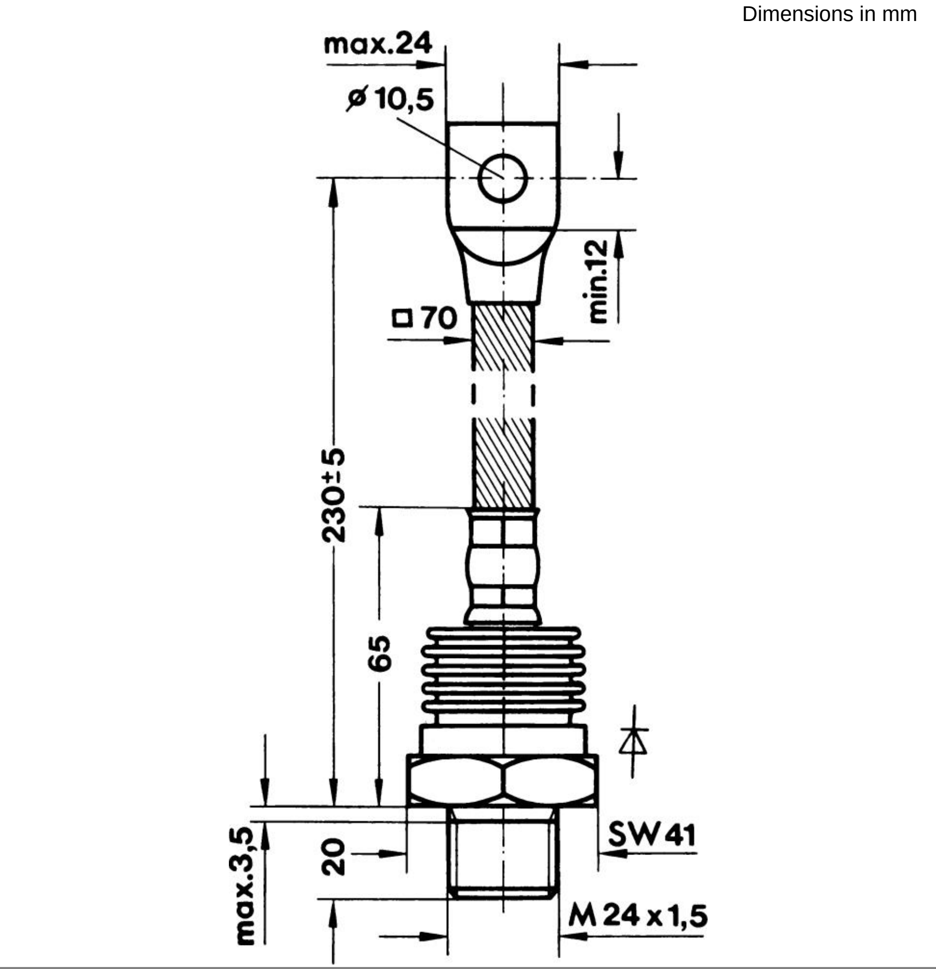


Fig. 6 Surge overload current vs. time



Case E 17 (IEC 60191: A 22 B)

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