SKN 45, SKR 45

Stud Diode

V_{RSM} V	V_{RRM} V	I_{FRMS} = 80 A (maximum value for continuous operation) I_{FAV} = 45 A (sin. 180; T_c = 125 °C)	
400	400	SKN 45/04	SKR 45/04
800	800	SKN 45/08	SKR 45/08
1200	1200	SKN 45/12	SKR 45/12
1400	1400	SKN 45/14	SKR 45/14
1600	1600	SKN 45/16	SKR 45/16

Rectifier Diode

SKN 45
SKR 45

Features

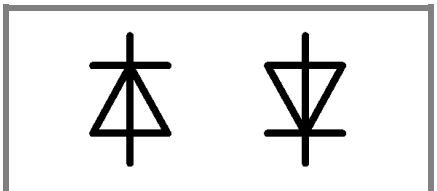
- Reverse voltages up to 1600 V
- Hermetic metal case with glass insulator
- Cooling via heatsinks
- Threaded stud ISO M8 or ¼ - 28 UNF 2A
- **SKN:** anode to stud
- **SKR:** cathode to stud

Typical Applications *

- All purpose high power rectifier diode
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes
- Recommended snubber network:
  R_C: 0,1 µF, 100 Ω (P_R = 1W),
  R_p: 80 kΩ (P_R = 6 W)

1) Mounting with grease-like thermal compound or joint contact compound

Symbol	Condition	Values	Units
I_{FAV}	sin. 180 ; T_C = 117 °C	50	A
I_D	K 5; T_a = 45°C; B2 / B6	40 / 57	A
	K 1,1; T_a = 45°C; B2 / B6	86 / 120	A
I_{FSM}	T_{vj} = 25° C ; 10 ms	700	A
	T_{vj} = 180° C ; 10 ms	600	A
i^2t	T_{vj} = 25° C ; 8,3...10 ms	2500	A^2s
	T_{vj} = 180° C ; 8,3...10 ms	1800	A^2s
V_F	T_{vj} = 25° C, I_F = 150 A	max. 1,6	V
$V_{(TO)}$	T_{vj} = 180° C	max. 0,85	V
r_T	T_{vj} = 180° C	max. 5	mΩ
I_{RD}	T_{vj} = 180° C ; V_{RD} = V_{RRM}	max. 10	mA
Q_{rr}	T_{vj} = 160°C, -di_F/dt = 10 A/µs	70	µC
$R_{th(j-c)}$		0,85	K/W
$R_{th(c-s)}$		0,25	K/W
T_{vj}		-40...+180	°C
T_{stg}		-55...+180	°C
V_{isol}		-	V~
M_s	M8 Stud	4	Nm
	¼ - 28 UNF 2A	2,5	Nm
	M8 Stud (lubricated)[1)]	3	Nm
	¼ - 28 UNF 2A (lubricated)[1)]	2	Nm
a		5 * 9,81	m/s^2
m	approx.	30	g
Case		E 12	



SKN SKR

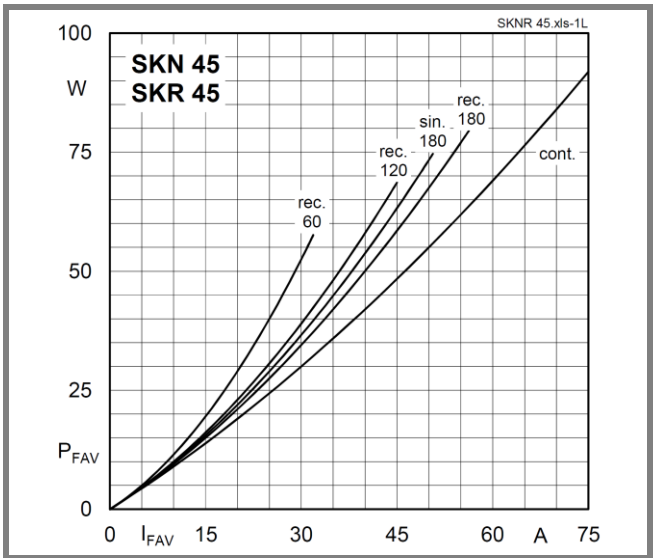


Fig. 1L Power dissipation vs. forward current

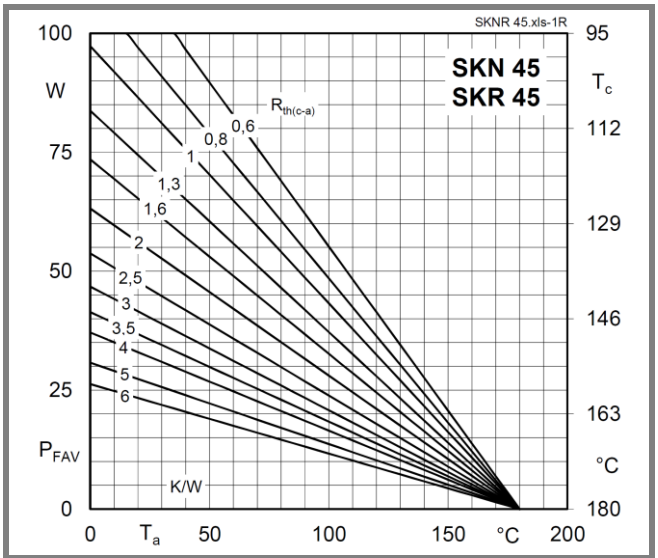


Fig. 1R Power dissipation vs. ambient temperature

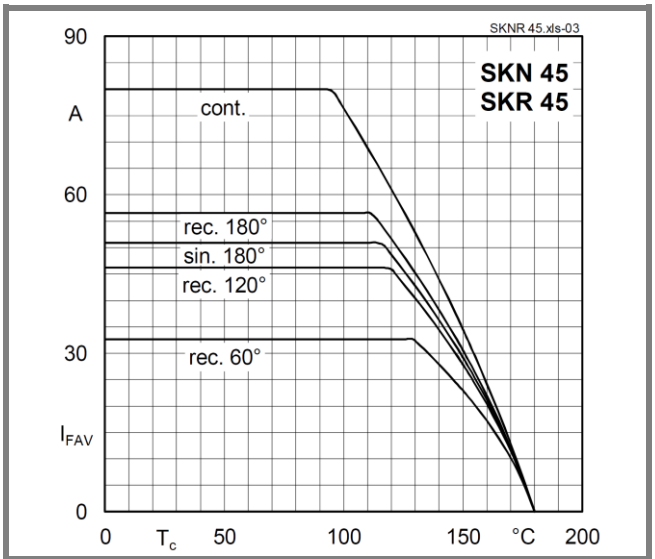


Fig. 3 Forward current vs. case temperature

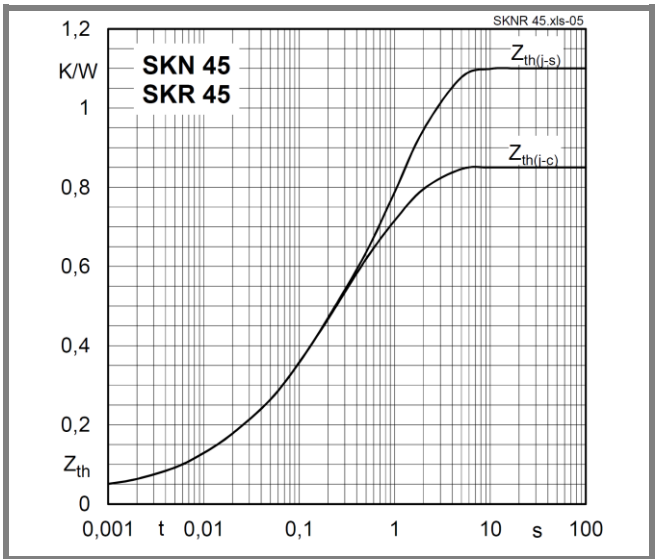


Fig. 5 Transient thermal impedance vs. time

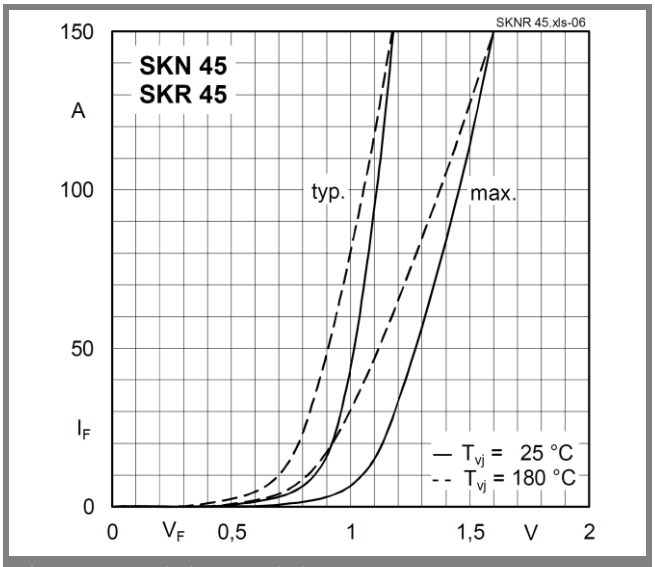


Fig. 6 Forward characteristics

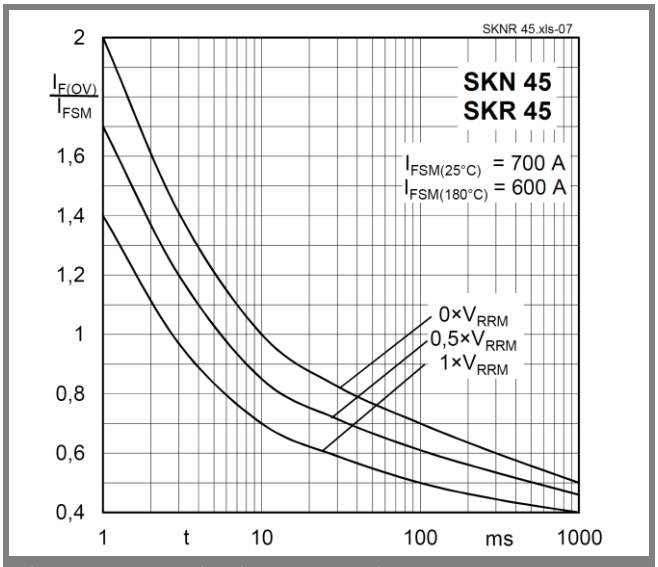
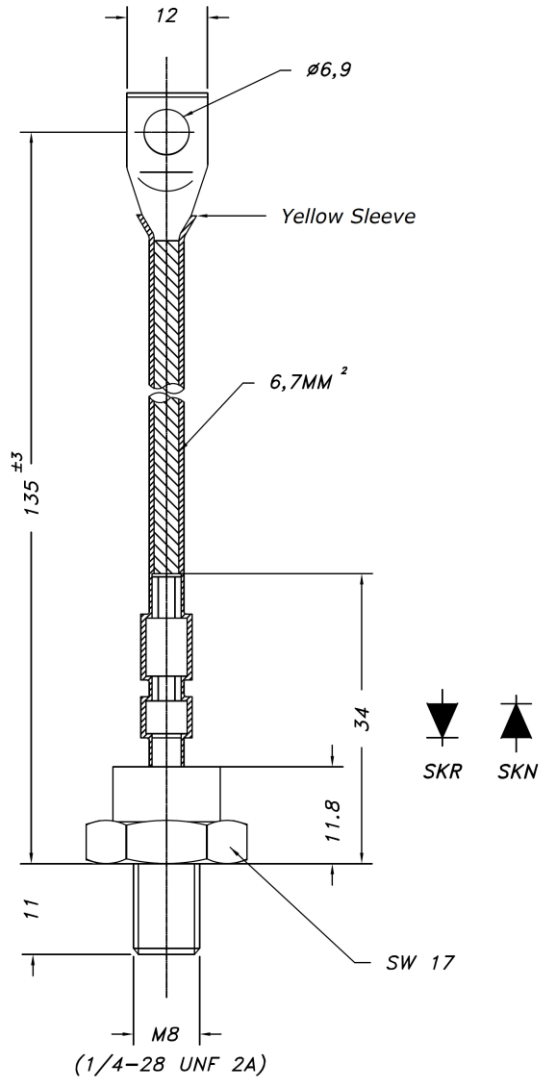


Fig. 7 Surge overload current vs. time

Dimensions in mm



Case E12 (IEC 60191: A 16 U; A 17 MB 2; JEDEC: SO-32B)