

Stud Diode

Rectifier Diode

SKN 45

SKR 45

Features

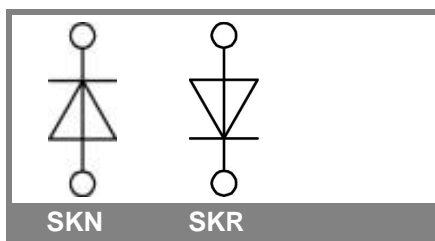
- Reverse voltages up to 1600 V
- Hermetic metal case with glass insulator
- Threaded stud ISO M8
- SKN: anode to stud,
SKR: cathode to stud

Typical Applications*

- All-purpose mean power rectifier diodes
- Cooling via heatsinks
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes
- Recommended snubber network:
RC: 0,1 μ F, 100 Ω ($P_R = 1$ W)
 $R_P = 80$ k Ω ($P_R = 6$ W)

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	SKN 45/14
1600	1600	SKN 45/16	SKR 45/16

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; $T_c = 100$ °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 ² s
	$T_{vj} = 180$ °C; 8,3 ... 10 ms	1800	A ² s
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	m Ω
I_{RD}	$T_{vj} = 180$ °C; $V_{RD} = V_{RRM}$	max. 10	mA
Q_{rr}	$T_{vj} = 160$ °C; $-di_F/dt = 10$ A/ μ s	70	μ C
$R_{th(j-c)}$		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	to heatsink	4	Nm
a		5 * 9,81	m/s ²
m	approx.	30	g
Case		E 12	



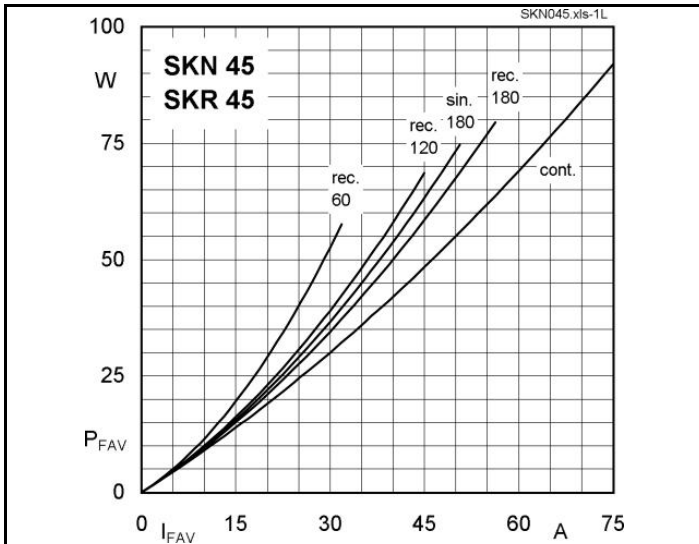


Fig. 1L Power dissipation vs. forward current

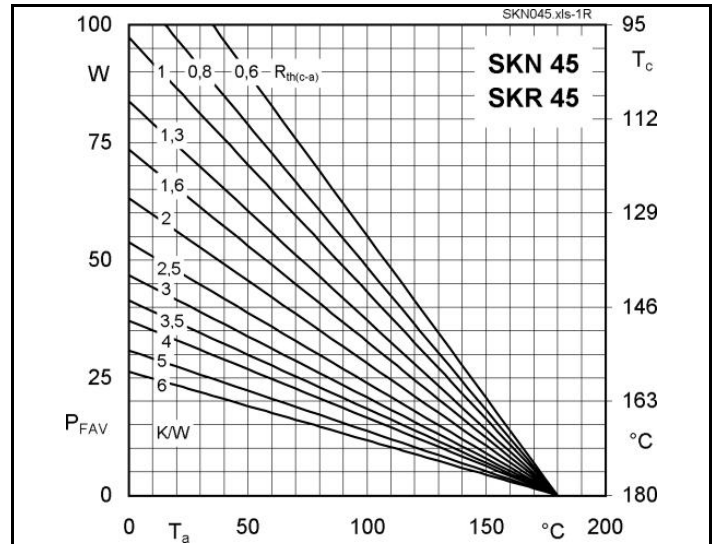


Fig. 1R Power dissipation vs. ambient temperature

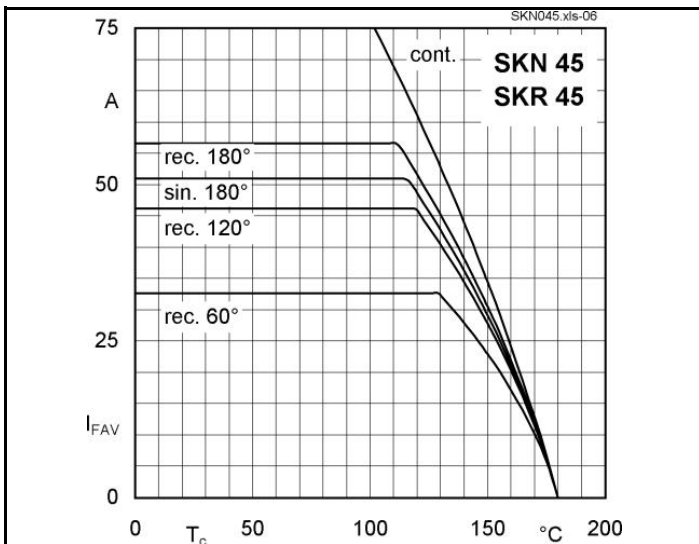


Fig. 2 Forward current vs. case temperature

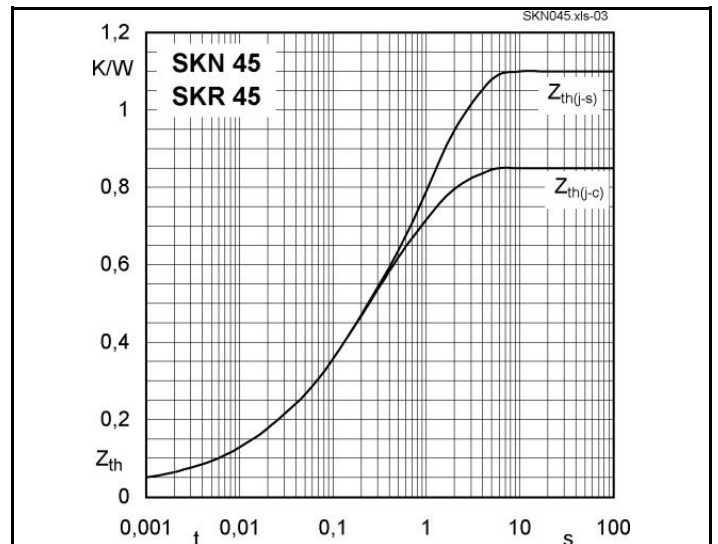


Fig. 4 Transient thermal impedance vs. time

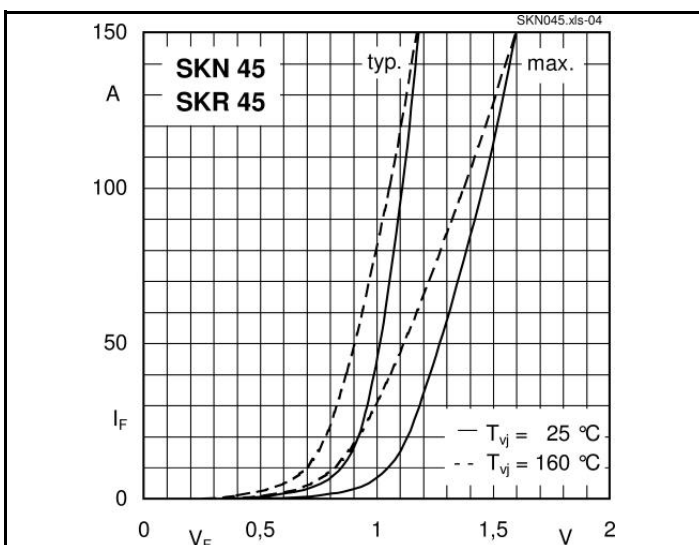


Fig. 5 Forward characteristics

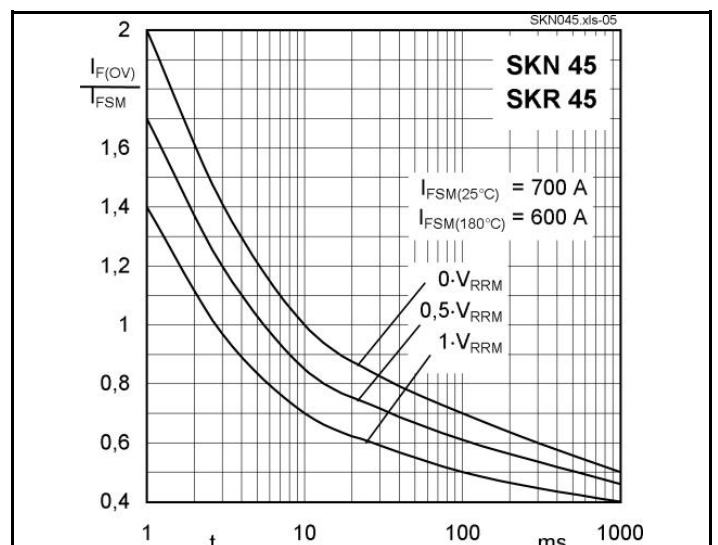
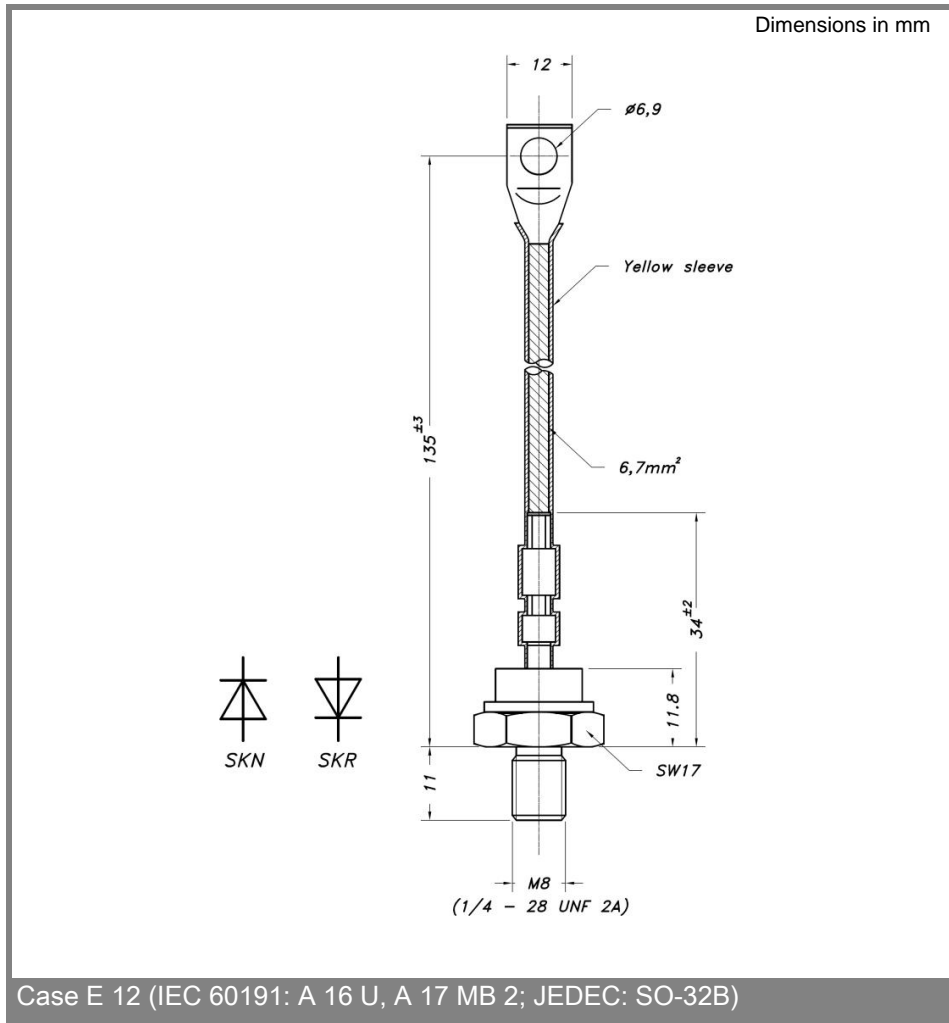


Fig. 6 Surge overload current vs. time



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