

## SKN 46, SKR 46



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 46/04	SKR 46/04
800	800	SKN 46/08	SKR 46/08
1200	1200	SKN 46/12	SKR 46/12
1400	1400	SKN 46/14	SKR 46/14
1600	1600	SKN 46/16	SKR 46/16

## Rectifier Diode

SKN 46  
SKR 46

## Features

- Reverse voltages up to 1600 V
- Hermetic metal case with glass insulator
- Cooling via heatsinks
- Threaded stud ISO M8 or 1/4 - 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:  
RC: 0,1  $\mu$ F, 100  $\Omega$  ( $P_R = 1$  W),  
 $R_D$ : 80 k $\Omega$  ( $P_R = 6$  W)

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

Symbol	Condition	Values	Units
$I_{FAV}$	sin. 180 ; $T_c = 118$ °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 <sup>2</sup> s
	$T_{vj} = 180$ °C ; 8,3...10 ms	1800	A <sup>2</sup> 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 $\Omega$
$I_{RD}$	$T_{vj} = 180$ °C ; $V_{RD} = V_{RRM}$	max. 10	mA
$Q_{rr}$	$T_{vj} = 160$ °C, $-di_F/dt = 10$ A/ $\mu$ s	70	$\mu$ C
$R_{th(l-c)}$		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
	1/4 - 28 UNF 2A	2,5	Nm
	M8 Stud (lubricated) <sup>1)</sup>	3	Nm
	1/4 - 28 UNF 2A (lubricated) <sup>1)</sup>	2	Nm
a		5 * 9,81	m/s <sup>2</sup>
m	approx.	18	g
Case		E 11	



SKN



SKR

# SKN 46, SKR 46

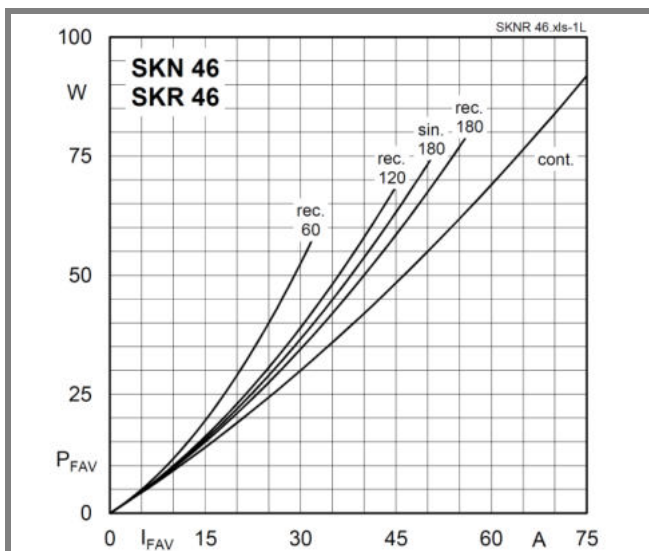


Fig. 1L Power dissipation vs. forward current

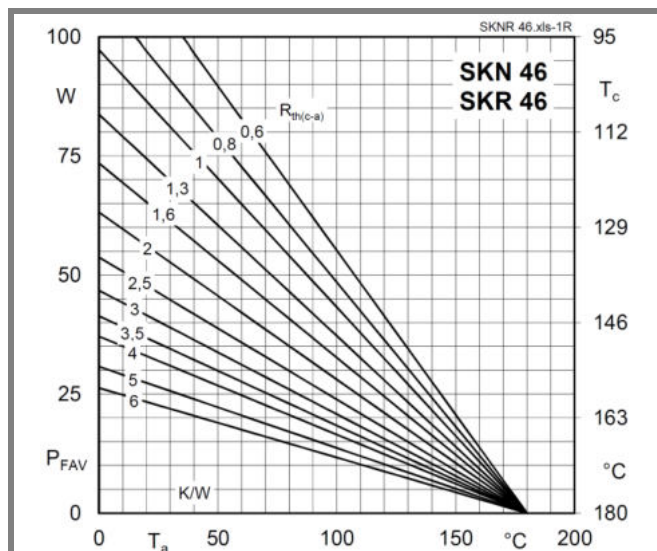


Fig. 1R Power dissipation vs. ambient temperature

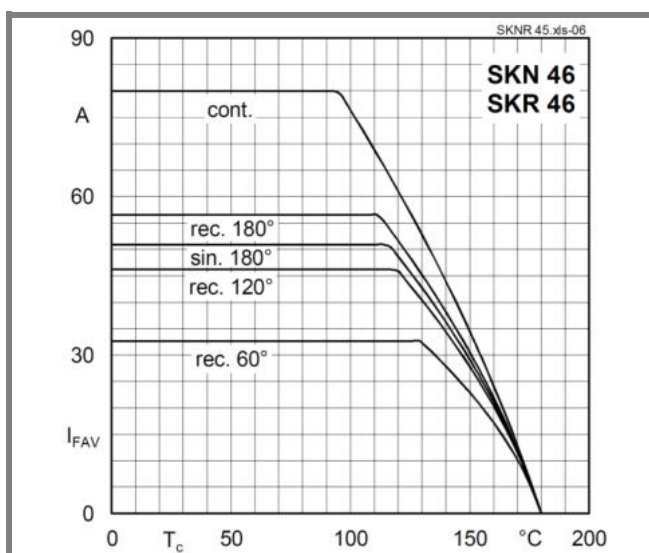


Fig. 2 Forward current vs. case temperature

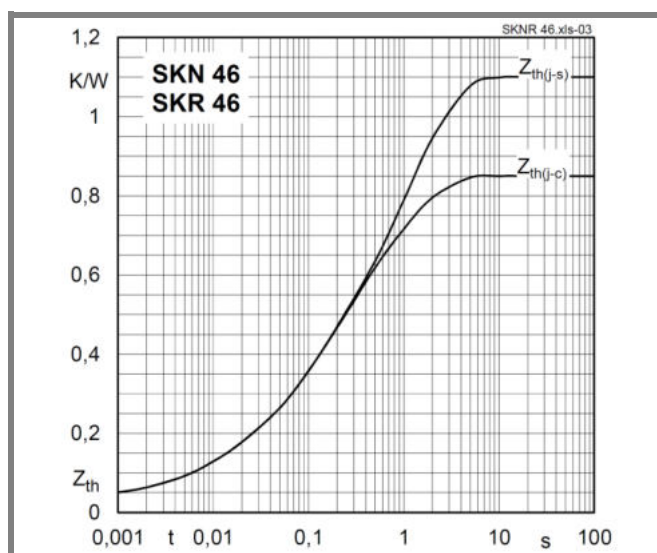


Fig. 4 Transient thermal impedance vs. time

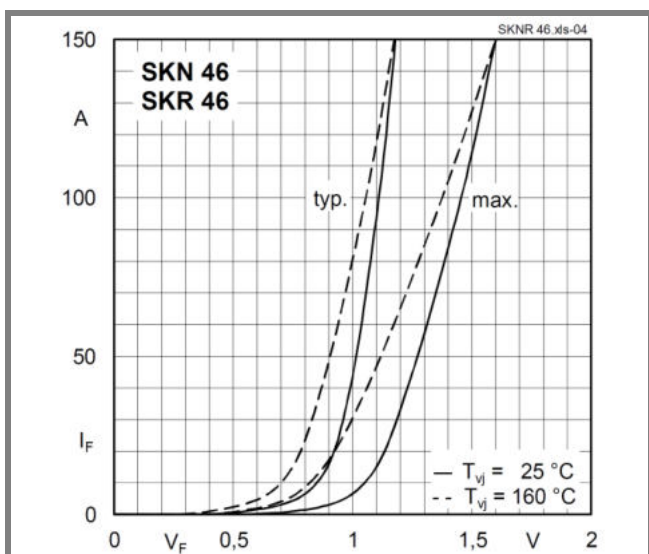


Fig. 5 Forward characteristics

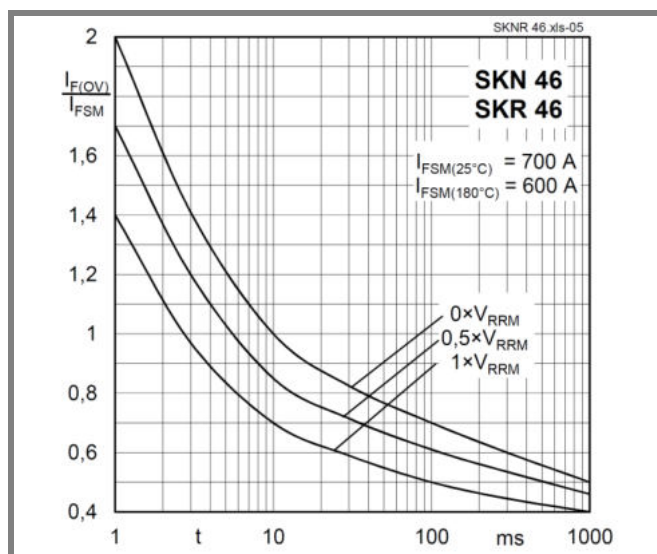
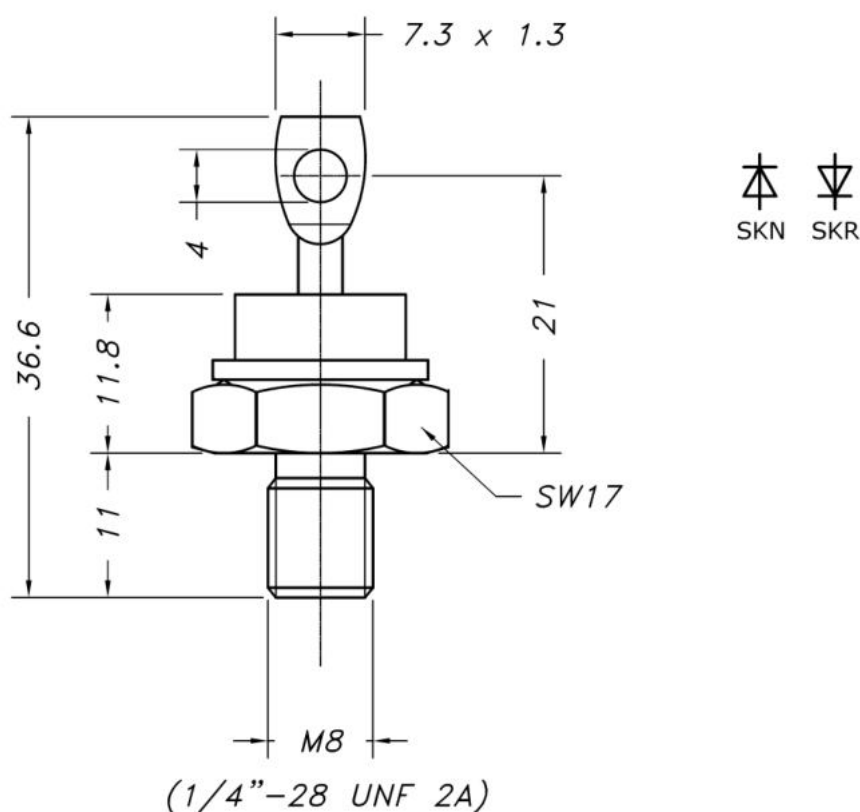


Fig. 6 Surge overload current vs. time

## SKN 46, SKR 46

Dimensions in mm



Case E11 (IEC 60191: A 16 U; A 17 MB 2; JEDEC: DO-203 AB)

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