

## SKN 46, SKR 46



Stud Diode

$V_{RSM}$ V	$V_{RRM}$ V	$I_{F, RMS} = 80 \text{ A}$ (maximum value for continuous operation) $I_{F, AV} = 45 \text{ A}$ (sin. 180; $T_c = 125^\circ \text{C}$ )	
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

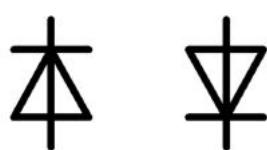
- Reverse voltages up to 1600 V
- Hermetic metal case with glass insulator
- Cooling via heatsinks
- Threaded stud ISO M8 or  $\frac{1}{4}$  - 28 UNF 2A
- **SKN**: anode to stud
- **SKR**: cathode to stud

## Typical Applications \*

- All purpose high power rectifier diode
- Non-controllable and half-controllable rectifiers
- Free-wheeling diodes
- Recommended snubber network:  
RC: 0,1  $\mu\text{F}$ , 100  $\Omega$  ( $P_R = 1\text{W}$ ),  
 $R_p$ : 80 k $\Omega$  ( $P_R = 6\text{ W}$ )

Symbol	Condition	Values	Units
$I_{F, AV}$	$\sin. 180^\circ; T_c = 118^\circ \text{C}$	50	A
$I_D$	$K5; T_a = 45^\circ \text{C}; B2 / B6$	40 / 57	A
	$K1,1; T_a = 45^\circ \text{C}; B2 / B6$	86 / 120	A
$I_{F, SM}$	$T_{vj} = 25^\circ \text{C}; 10 \text{ ms}$	700	A
$i^2t$	$T_{vj} = 180^\circ \text{C}; 10 \text{ ms}$	600	A
	$T_{vj} = 25^\circ \text{C}; 8,3 \dots 10 \text{ ms}$	2500	$\text{A}^2\text{s}$
	$T_{vj} = 180^\circ \text{C}; 8,3 \dots 10 \text{ ms}$	1800	$\text{A}^2\text{s}$
$V_F$	$T_{vj} = 25^\circ \text{C}, I_F = 150 \text{ A}$	max. 1,6	V
$V_{(TO)}$	$T_{vj} = 180^\circ \text{C}$	max. 0,85	V
$r_T$	$T_{vj} = 180^\circ \text{C}$	max. 5	$\text{m}\Omega$
$I_{RD}$	$T_{vj} = 180^\circ \text{C}; V_{RD} = V_{RRM}$	max. 10	mA
$Q_{fr}$	$T_{vj} = 160^\circ \text{C}, -di_F/dt = 10 \text{ A}/\mu\text{s}$	70	$\mu\text{C}$
$R_{th(j-c)}$		0,85	K/W
$R_{th(c-s)}$		0,25	K/W
$T_{vj}$		-40...+180	$^\circ\text{C}$
$T_{stg}$		-55...+180	$^\circ\text{C}$
$V_{isol}$	M8 Stud	-	V~
$M_s$	$\frac{1}{4}$ - 28 UNF 2A	4	Nm
	M8 Stud (lubricated) <sup>1)</sup>	2,5	Nm
	$\frac{1}{4}$ - 28 UNF 2A (lubricated) <sup>1)</sup>	3	Nm
$a$	approx.	2	Nm
$m$		5 * 9,81	$\text{m/s}^2$
		18	g
Case		E 11	

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



SKN

SKR

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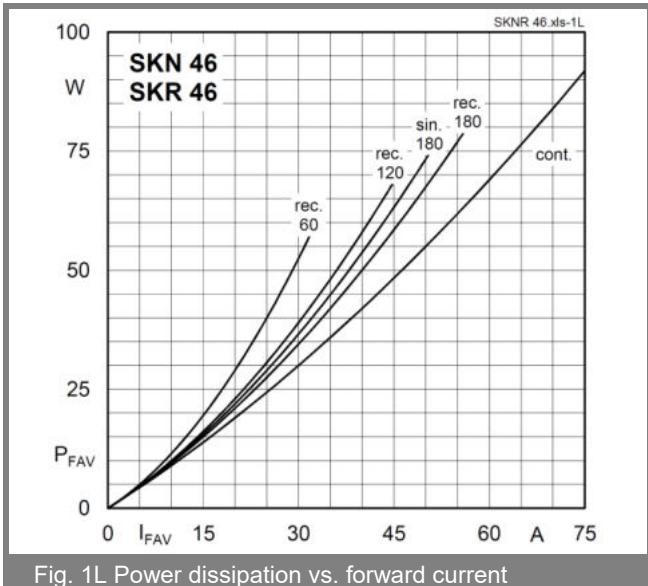


Fig. 1L Power dissipation vs. forward current

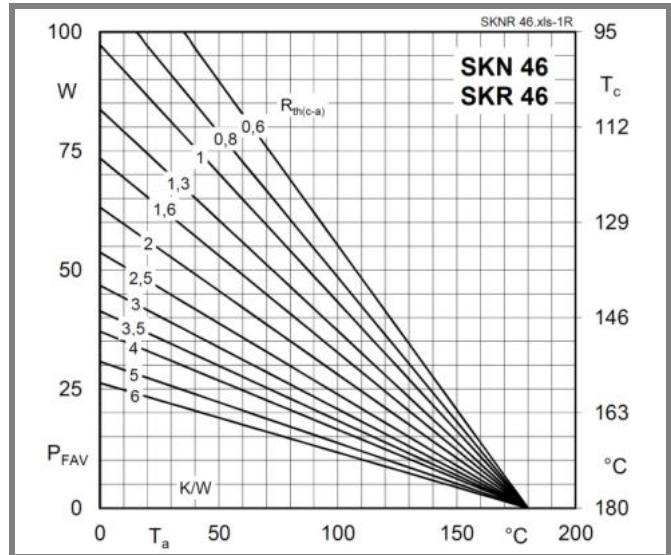


Fig. 1R Power dissipation vs. ambient temperature

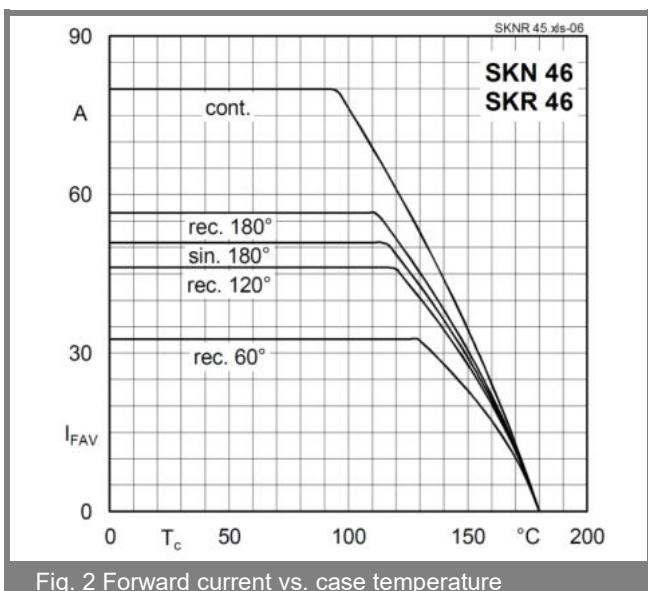


Fig. 2 Forward current vs. case temperature

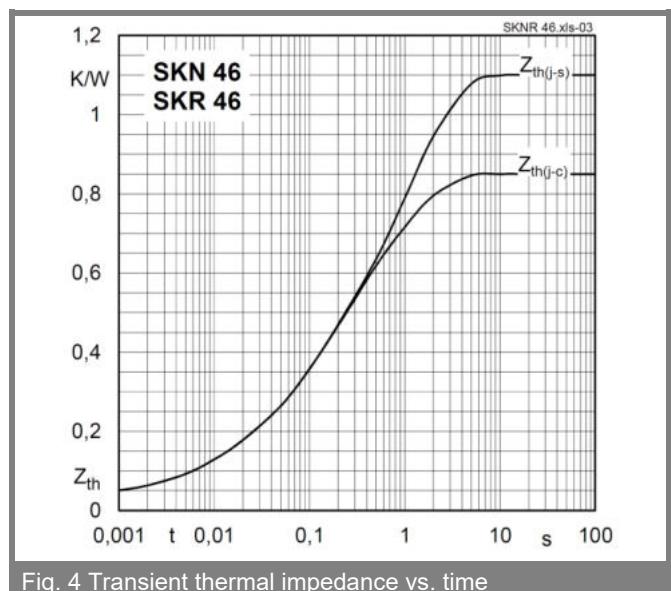


Fig. 4 Transient thermal impedance vs. time

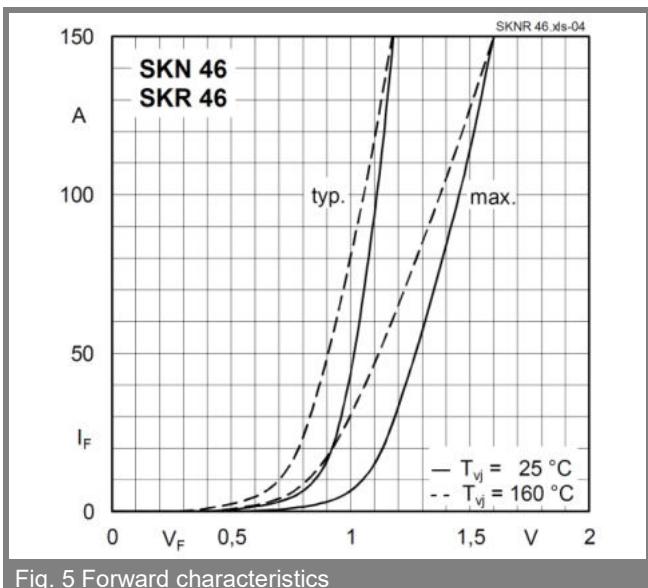


Fig. 5 Forward characteristics

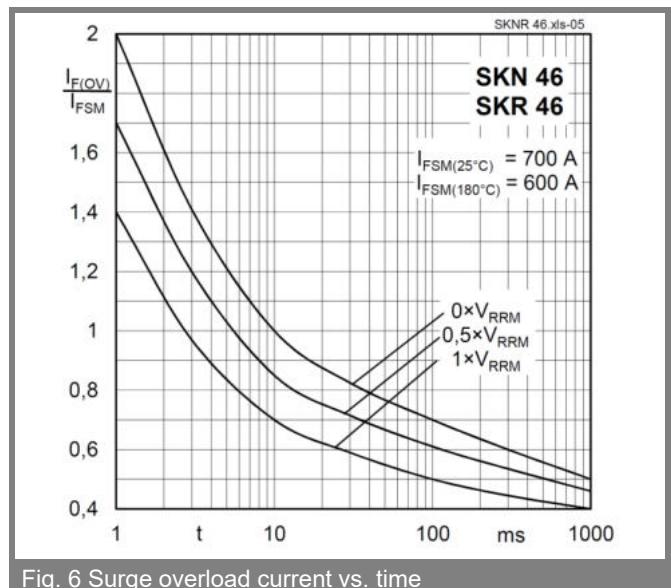
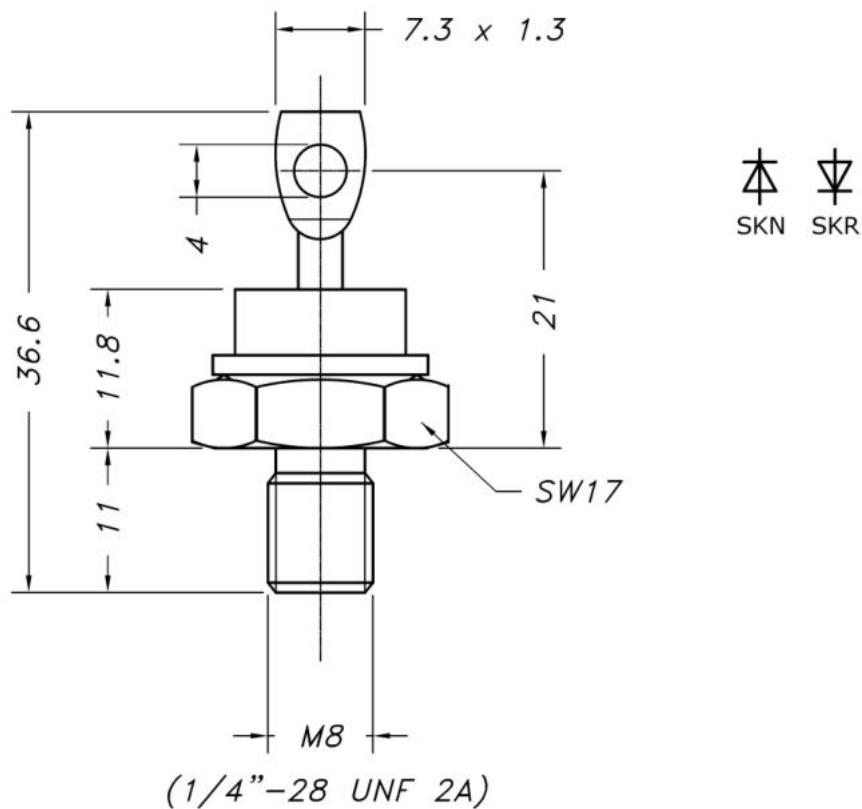


Fig. 6 Surge overload current vs. time

Dimensions in mm



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

**\*IMPORTANT INFORMATION AND WARNINGS**

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