

SKNa 46, SKRa 46



Stud Diode

Avalanche Diodes

SKNa 46
SKRa 46

Features

- Avalanche type reverse characteristic up to 2000 V
- Hermetic metal case with glass insulator
- Cooling via heatsinks
- Threaded stud ISO M8 or $\frac{1}{4}$ - 28 UNF 2A²⁾
- **SKN:** anode to stud
- **SKR:** cathode to stud

Typical Applications

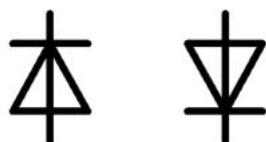
- DC supply for magnets or solenoids (brakes, valves, etc.)
- Field coil supply for DC motors
- Series connections for high voltage applications like dust precipitators

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

2) M8x1,25 is standard; "UNF" should be added in description for $\frac{1}{4}$ - 28 UNF 2A thread

$V_{(BR) \text{ MIN}}$	$I_{\text{FRMS}} = 80 \text{ A}$ (maximum value for continuous operation) $I_{\text{FAV}} = 45 \text{ A}$ (sin. 180; $T_c = 125 \text{ }^\circ\text{C}$)		
1400	SKNa 46/14	SKRa 46/14	
1800	SKNa 46/18	SKRa 46/18	
2000	SKNa 46/20	SKRa 46/20	

Symbol	Condition	Values	Units
I_{FAV}	sin. 180 ; $T_c = 118 \text{ }^\circ\text{C}$	50	A
I_D	$K 5; T_a = 45 \text{ }^\circ\text{C}; B2 / B6$ $K1,1; T_a = 45 \text{ }^\circ\text{C}; B2 / B6$	40 / 57 86 / 120	A A
I_{FSM}	$T_{vj} = 25 \text{ }^\circ\text{C} ; 10 \text{ ms}$ $T_{vj} = 180 \text{ }^\circ\text{C} ; 10 \text{ ms}$	700 600	A A
i^2t	$T_{vj} = 25 \text{ }^\circ\text{C} ; 8,3 \dots 10 \text{ ms}$ $T_{vj} = 180 \text{ }^\circ\text{C} ; 8,3 \dots 10 \text{ ms}$	2500 1800	A^2s A^2s
V_F $V_{(\text{TO})}$	$T_{vj} = 25 \text{ }^\circ\text{C}, I_F = 150 \text{ A}$ $T_{vj} = 180 \text{ }^\circ\text{C}$	max. 1,6 max. 0,85	V V
r_T	$T_{vj} = 180 \text{ }^\circ\text{C}$	max. 5	$\text{m}\Omega$
I_R	$T_{vj} = 180 \text{ }^\circ\text{C} ; V_R = V_{(BR)\text{min}}$	max. 20	mA
P_{RSM}	$T_{vj} = 180 \text{ }^\circ\text{C}, t_p = 10 \mu\text{s}$	12	kW
$R_{\text{th(j-c)}}$ $R_{\text{th(c-s)}}$		0,85 0,25	K/W K/W
T_{vj}		-40...+180	$^\circ\text{C}$
T_{stg}		-55...+180	$^\circ\text{C}$
V_{isol} M_s	M8 Stud $\frac{1}{4}$ - 28 UNF 2A M8 Stud (lubricated) ¹⁾ $\frac{1}{4}$ - 28 UNF 2A (lubricated) ¹⁾	- 4 2,5 3 2 5 * 9,81 18	V~ Nm Nm Nm Nm m/s ² g
a m	approx.		
Case		E 11	



SKN

SKR

SKNa 46, SKRa 46

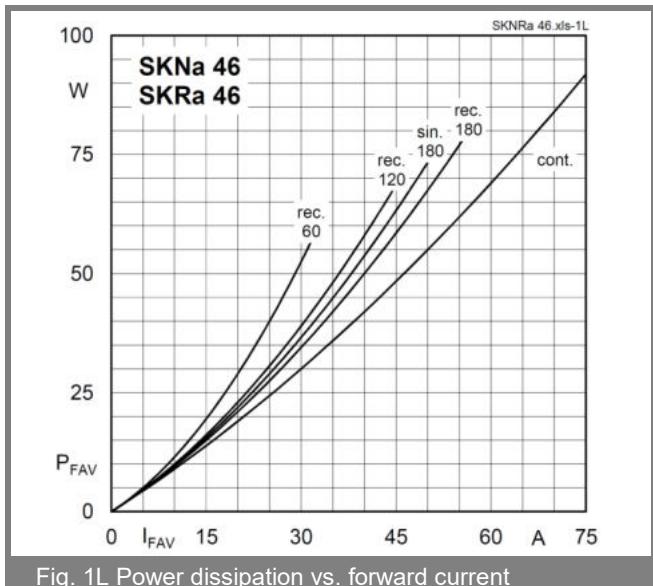


Fig. 1L Power dissipation vs. forward current

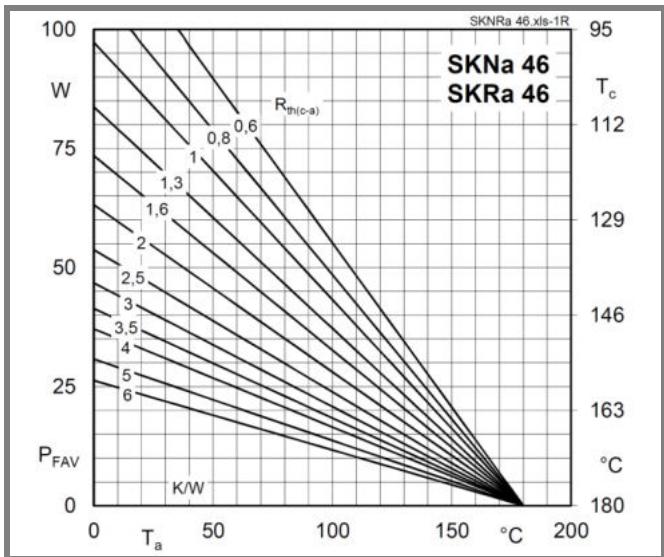


Fig. 1R Power dissipation vs. ambient temperature

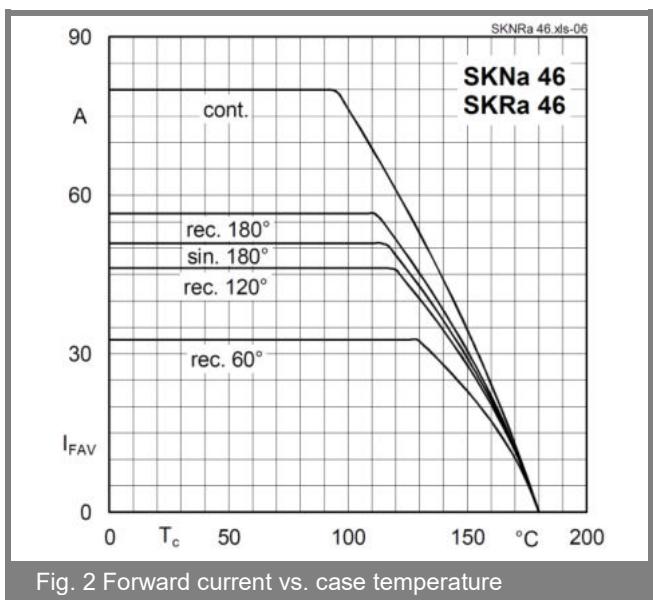


Fig. 2 Forward current vs. case temperature

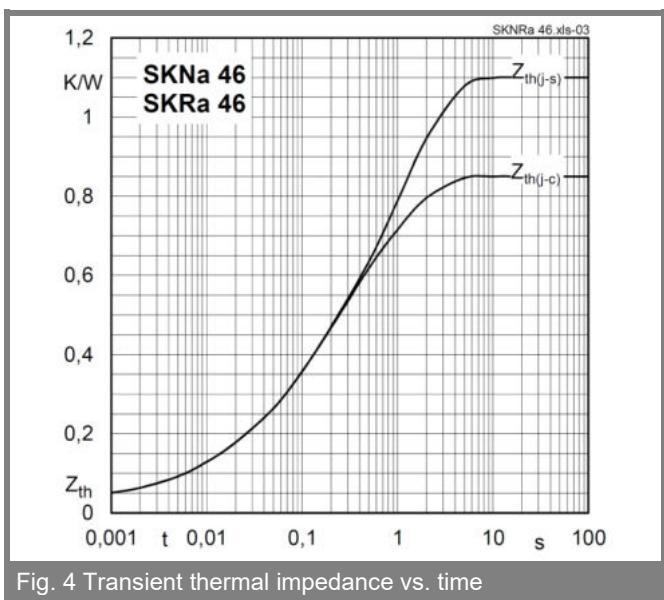


Fig. 4 Transient thermal impedance vs. time

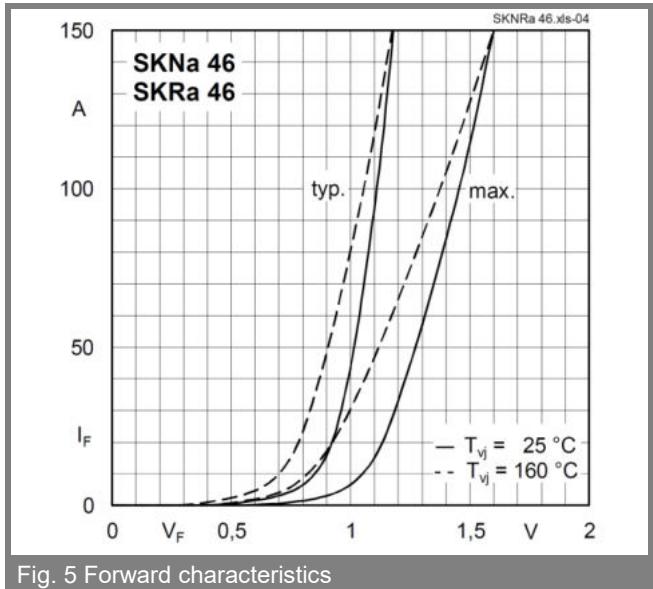


Fig. 5 Forward characteristics

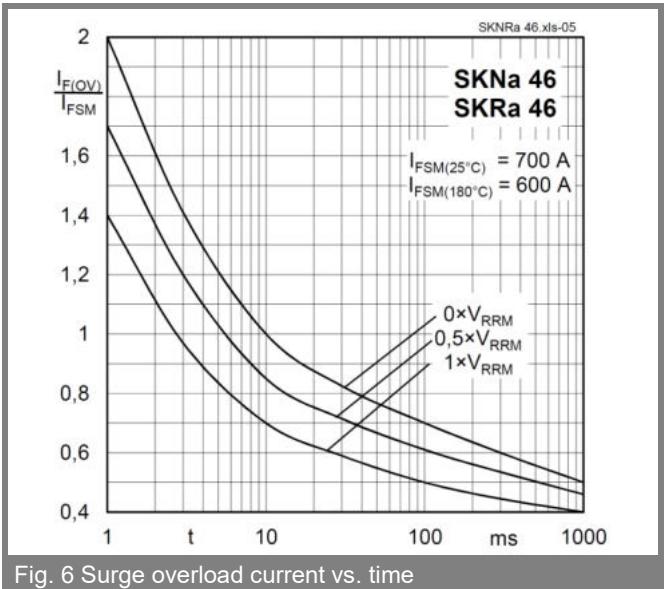
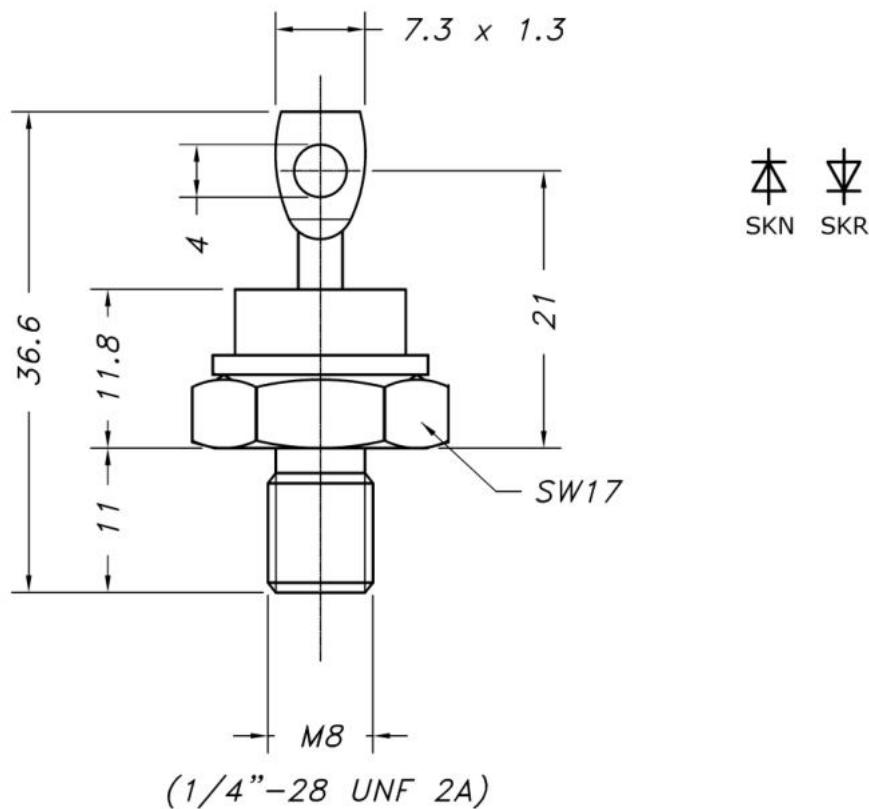


Fig. 6 Surge overload current vs. time

Dimensions in mm



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

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