

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 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 1/4 - 28 UNF 2A thread

$V_{(BR) MIN}$	$I_{FRMS} = 80 A$ (maximum value for continuous operation) $I_{FAV} = 45 A$ (sin. 180; $T_C = 125^\circ C$)	
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 ; $T_C = 118^\circ C$	50	A
I_D	K 5; $T_a = 45^\circ C$; B2 / B6 K1,1; $T_a = 45^\circ C$; B2 / B6	40 / 57 86 / 120	A A
I_{FSM}	$T_{vj} = 25^\circ C$; 10 ms $T_{vj} = 180^\circ C$; 10 ms	700 600	A A
i^2t	$T_{vj} = 25^\circ C$; 8,3...10 ms $T_{vj} = 180^\circ C$; 8,3...10 ms	2500 1800	A ² s A ² s
V_F	$T_{vj} = 25^\circ C$, $I_F = 150 A$	max. 1,6	V
$V_{(TO)}$	$T_{vj} = 180^\circ C$	max. 0,85	V
r_T	$T_{vj} = 180^\circ C$	max. 5	mΩ
I_R	$T_{vj} = 180^\circ C$; $V_R = V_{(BR)min}$	max. 20	mA
P_{RSM}	$T_{vj} = 180^\circ C$, $t_p = 10 \mu s$	12	kW
$R_{th(j-c)}$		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 1/4 - 28 UNF 2A M8 Stud (lubricated) ¹⁾ 1/4 - 28 UNF 2A (lubricated) ¹⁾	4 2,5 3 2	Nm Nm Nm Nm
a		5 * 9,81	m/s ²
m	approx.	18	g
Case		E 11	



SKN



SKR

SKNa 46, SKRa 46

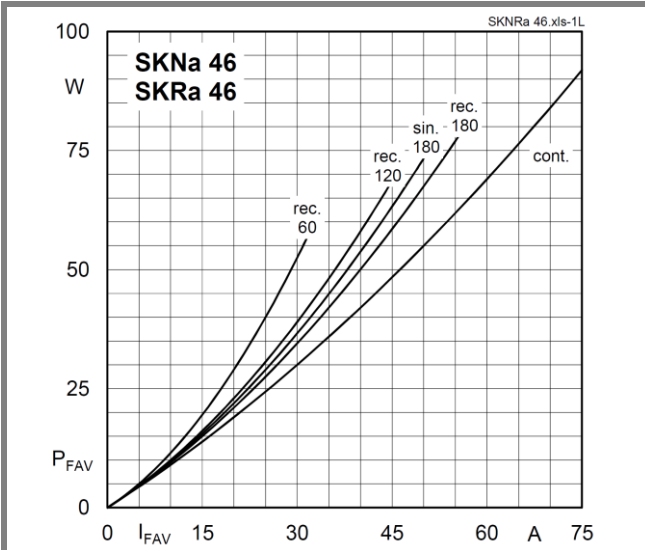


Fig. 1L Power dissipation vs. forward current

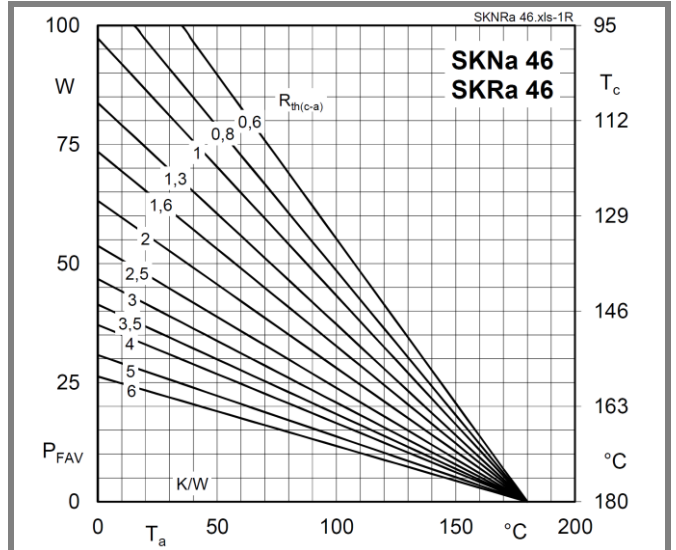


Fig. 1R Power dissipation vs. ambient temperature

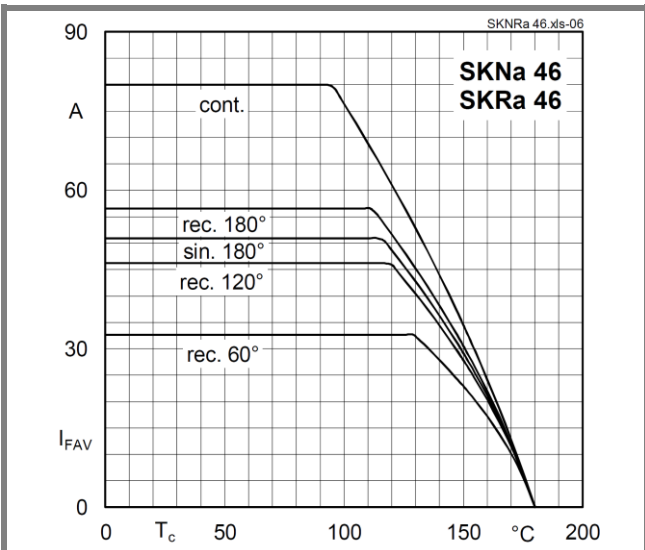


Fig. 2 Forward current vs. case temperature

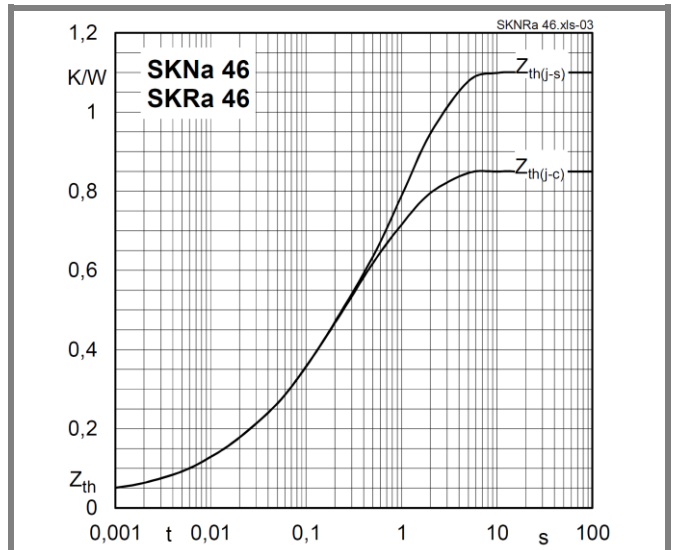


Fig. 4 Transient thermal impedance vs. time

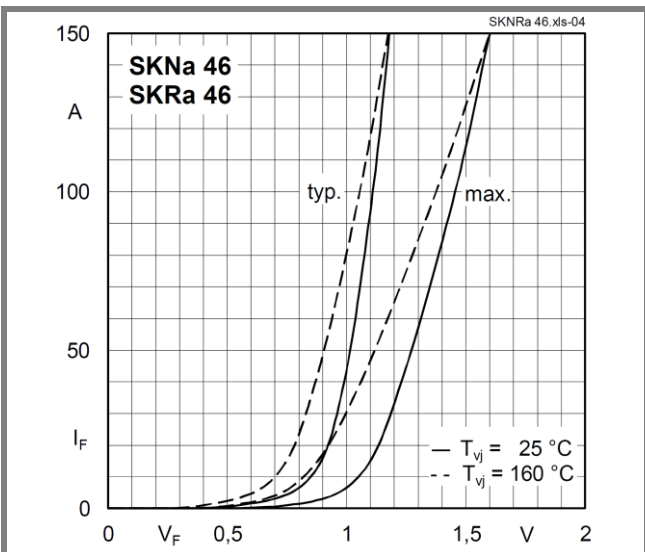


Fig. 5 Forward characteristics

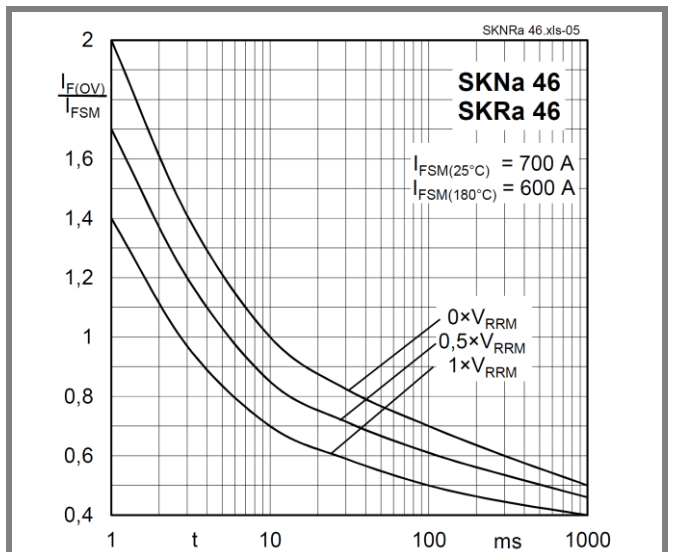
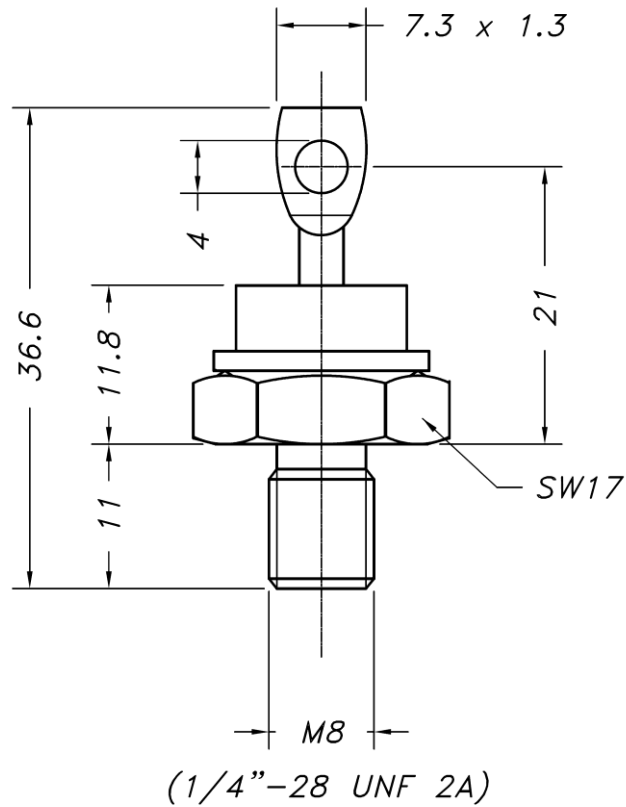


Fig. 6 Surge overload current vs. time

Dimensions in mm



∇ SKN ∇ SKR

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

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