SKNa 46, SKRa 46

Stud Diode

Avalanche Diodes

SKNa 46
SKRa 46

Features

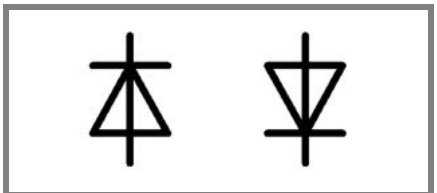
- Avalanche type reverse characteristic up to 2000 V
- Hermetic metal case with glass insulator
- Cooling via heatsinks
- Threaded stud ISO M8 or ¼ - 28 UNF 2A[2)]
- **SKN:** anode to stud
- **SKR:** cathode to stud

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 ¼ - 28 UNF 2A thread



SKN SKR

$V_{(BR)\ MIN}$	I_{FRMS} = 80 A (maximum value for continuous operation) I_{FAV} = 45 A (sin. 180; T_c = 125 °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 °C	50	A
I_D	K 5; T_a = 45°C; B2 / B6	40 / 57	A
	K1,1; 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^2s
	T_{vj} = 180° C ; 8,3...10 ms	1800	A^2s
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	mΩ
I_R	T_{vj} = 180° C ; V_R = $V_{(BR)min}$	max. 20	mA
P_{RSM}	T_{vj} = 180°C, t_p = 10 µs	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	4	Nm
	¼ - 28 UNF 2A	2,5	Nm
	M8 Stud (lubricated)[1)]	3	Nm
	¼ - 28 UNF 2A (lubricated)[1)]	2	Nm
a		5 * 9,81	m/s^2
m	approx.	18	g
Case		E 11	

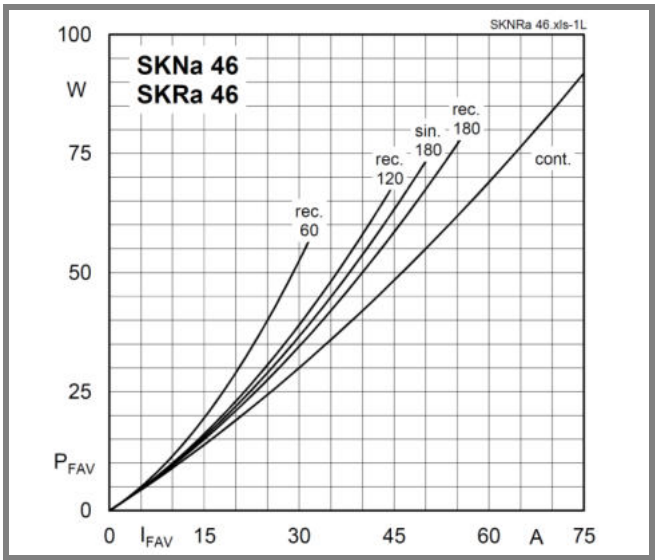


Fig. 1L Power dissipation vs. forward current

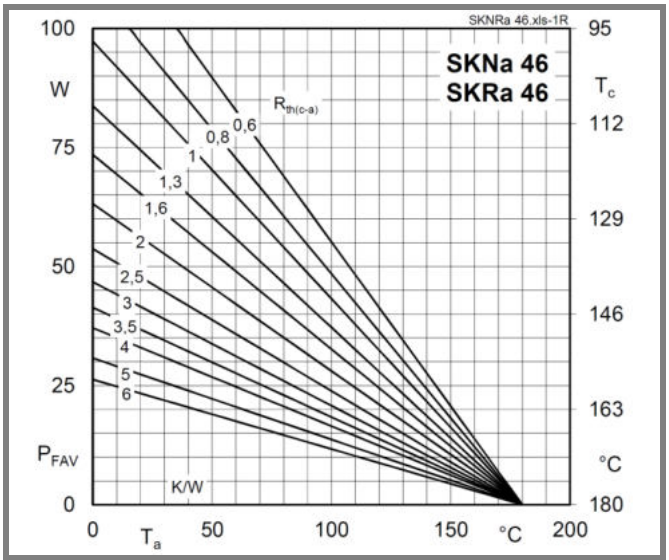


Fig. 1R Power dissipation vs. ambient temperature

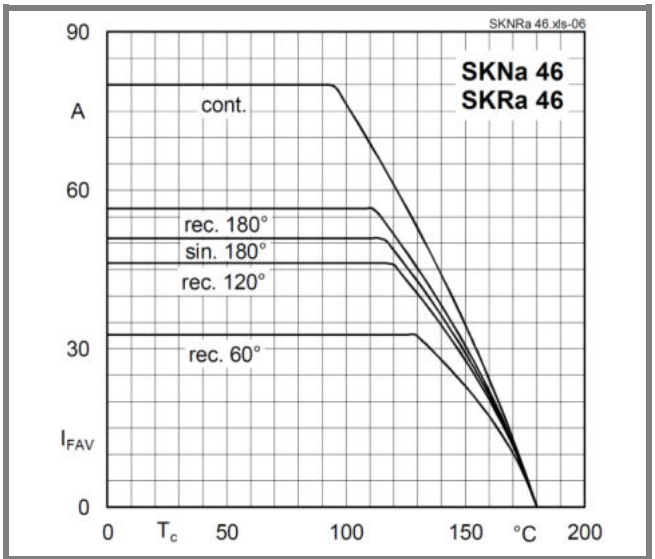


Fig. 2 Forward current vs. case temperature

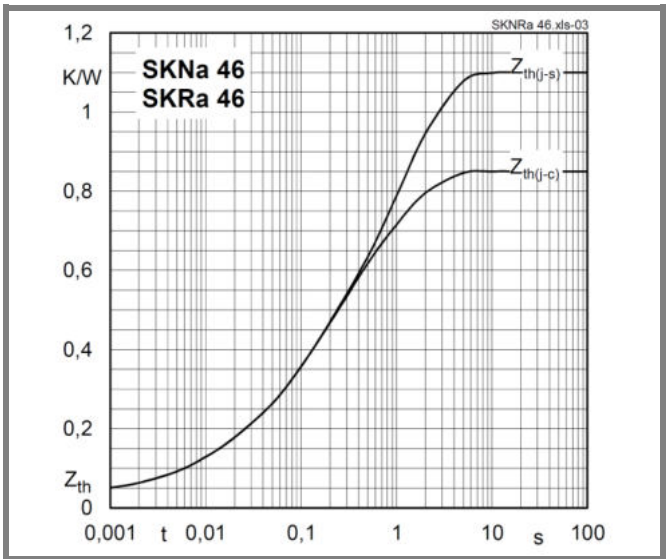


Fig. 4 Transient thermal impedance vs. time

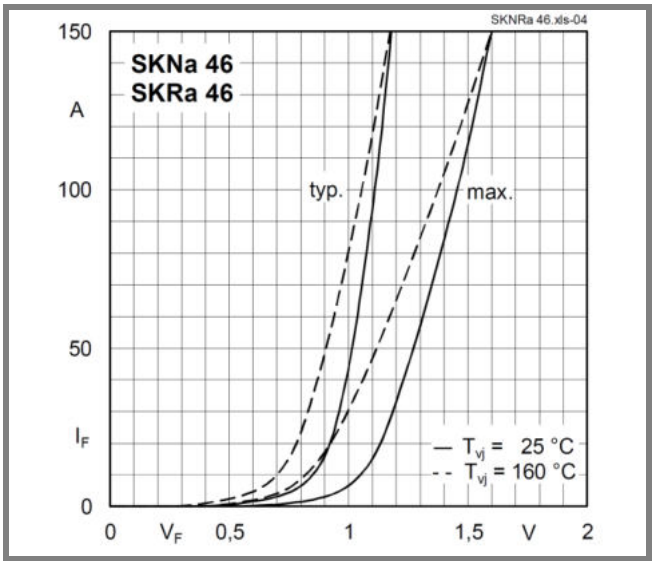


Fig. 5 Forward characteristics

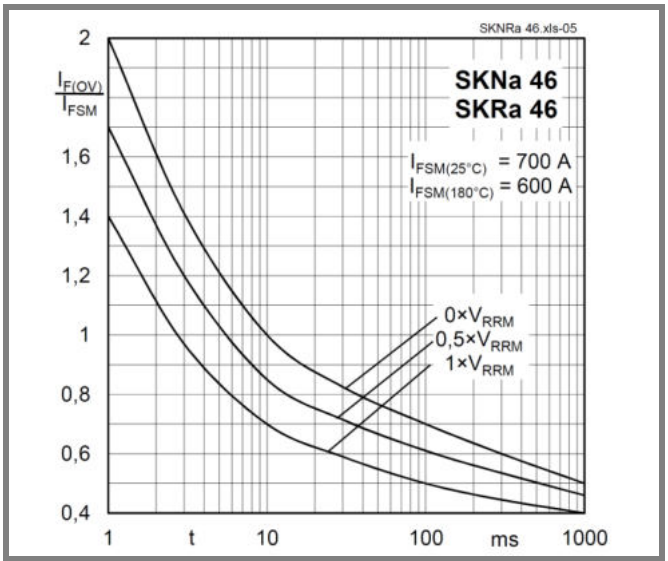
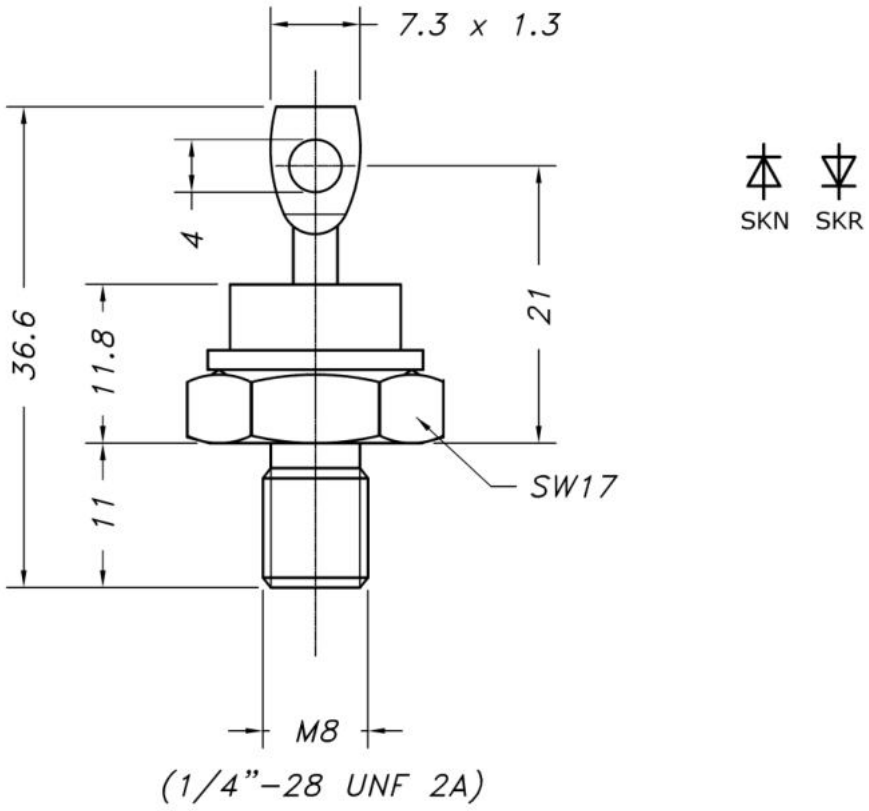


Fig. 6 Surge overload current vs. time

Dimensions in mm



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

