



Stud Diode

Avalanche Diode

SKNa 20

Features

- Avalanche type reverse characteristic up to 1700
- Hermetic metal case with glass insulator
- Anode side threaded stud ISO M
- Cooling via metal plates or heat sinks
- SKN: Anode to stud

Typical Applications*

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

$V_{(BR)min}$	$I_{FRMS} = 40 \text{ A}$ (maximum value for continuous operation)	C_{max}	R_{min}
V	$I_{FAV} = 20 \text{ A}$ (sin. 180; $T_c = 93 \text{ }^\circ\text{C}$)	μF	Ω
1300	SKNa 20/13		
1700	SKNa 20/17		

Symbol	Conditions	Values	Units
I_{FAV}	sin. 180; $T_c = 85 \text{ (100) }^\circ\text{C}$	22 (18)	A
I_D	K 9; $T_a = 45 \text{ }^\circ\text{C}$; B2 / B6	17 / 24	A
	K 3; $T_a = 45 \text{ }^\circ\text{C}$; B2 / B6	30 / 42	A
I_{FSM}	$T_{vj} = 25 \text{ }^\circ\text{C}$; 10 ms	375	A
	$T_{vj} = 150 \text{ }^\circ\text{C}$; 10 ms	320	A
i^2t	$T_{vj} = 25 \text{ }^\circ\text{C}$; 8,3 ... 10 ms	700	A^2s
	$T_{vj} = 150 \text{ }^\circ\text{C}$; 8,3 ... 10 ms	510	A^2s
V_F	$T_{vj} = 25 \text{ }^\circ\text{C}$; $I_F = 60 \text{ A}$	max. 1,55	V
$V_{(TO)}$	$T_{vj} = 150 \text{ }^\circ\text{C}$	max. 0,85	V
r_T	$T_{vj} = 150 \text{ }^\circ\text{C}$	max. 11	$\text{m}\Omega$
I_{RD}	$T_{vj} = 25 \text{ }^\circ\text{C}$; $V_{RD} = V_{(BR)min}$	max. 10	μA
P_{RSM}	$T_{vj} = 150 \text{ }^\circ\text{C}$; $t_p = 10 \text{ }\mu\text{s}$	6	kW
$R_{th(j-c)}$		2	K/W
$R_{th(c-s)}$		1	K/W
T_{vj}		- 40 ... + 150	$^\circ\text{C}$
T_{stg}		- 55 ... + 180	$^\circ\text{C}$
V_{isol}		-	V~
M_s		2	Nm
a		5 * 9,81	m/s^2
m	approx.	11	g
Case		E 9	



SKN

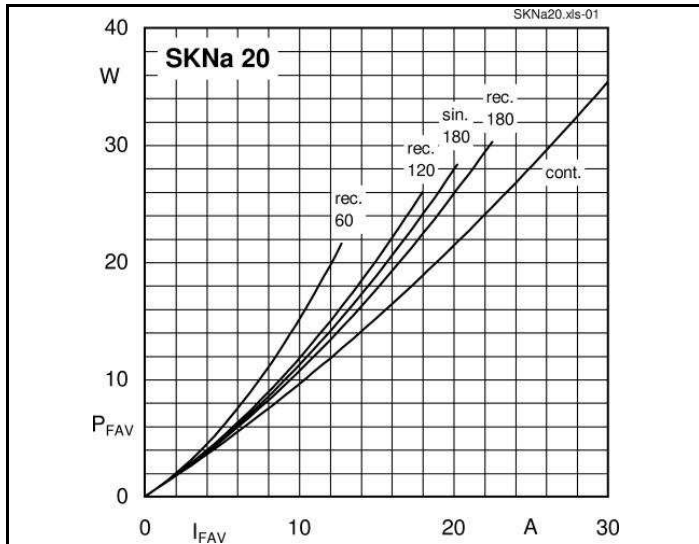


Fig. 1 Power dissipation vs. forward current

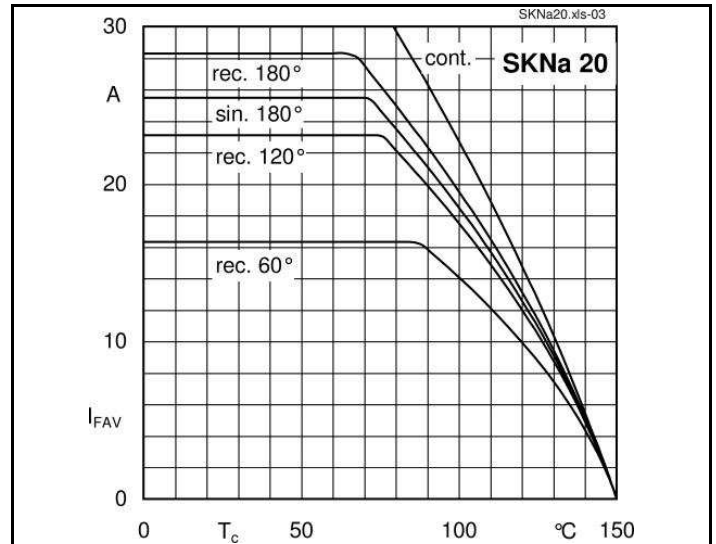


Fig. 2 Forward current vs. case temperature

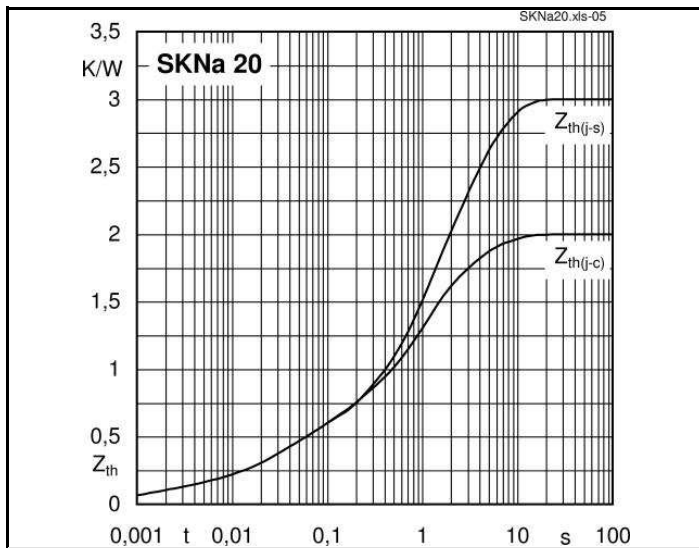


Fig. 4 Transient thermal impedance vs. time

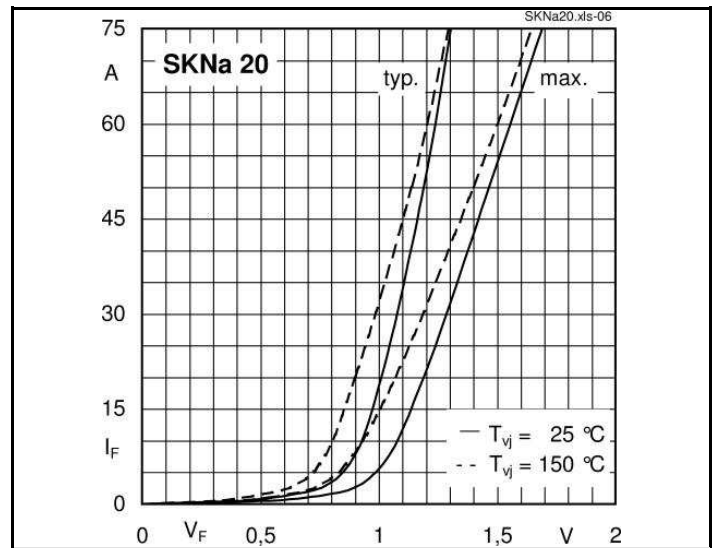


Fig. 5 Forward characteristics

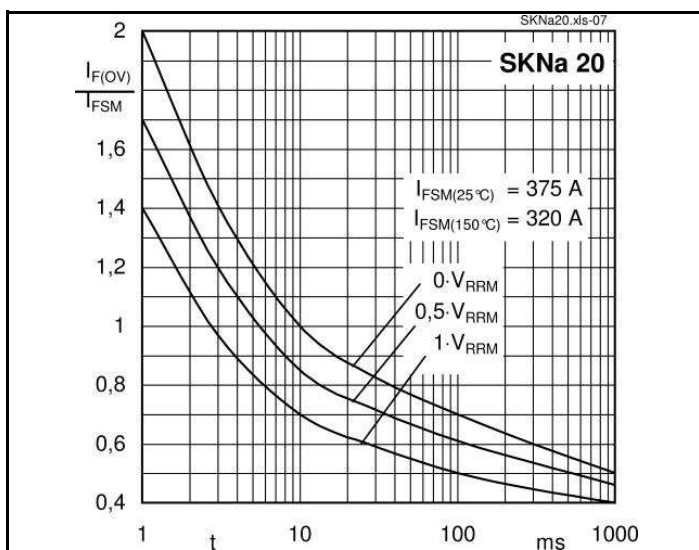


Fig. 6 Rated surge overload current vs. time

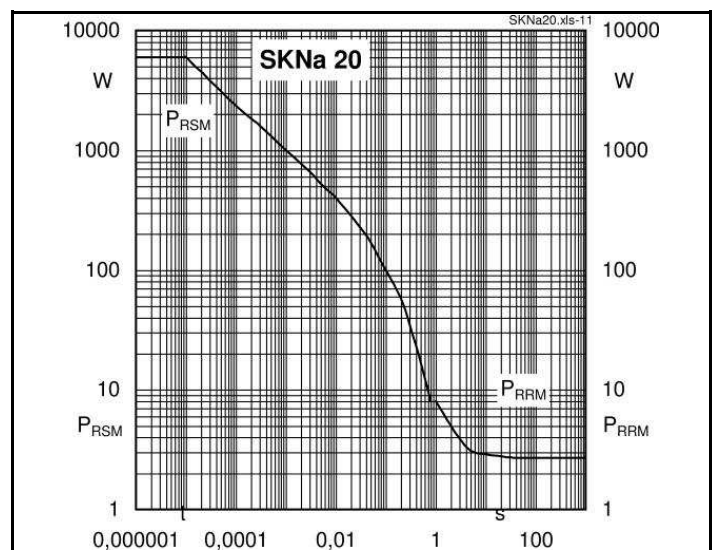


Fig. 9 Reverse power dissipation vs. time

