

Rectifier Diodes

SKN 20 SKR 20
SKNa 20
SKN 26 SKR 26



Features

- Reverse voltages up to 1600 V, Avalanche Types to 1700 V
- Hermetic metal cases with glass insulators
- Threaded studs ISO M6 (SKR 26 also 10 – 32 UNF)
- **SKN**: anode to stud
SKR: cathode to stud

Typical Applications

- All-purpose mean power rectifier diodes
 - Cooling via metal plates or heatsinks
 - Non-controllable and half-controllable rectifiers
 - Free-wheeling diodes
- Avalanche Types**
- DC supply for magnets or solenoids (brakes, valves, etc.)
 - Field coil supply for DC motors
 - Series connections for high voltage applications

* available with UNF thread
 10 – 32 UNF 2 A; e.g.
 SKR 26/02 UNF

V _{RSM} V _{RRM}	I _{FRMS} (maximum values for continuous operation) 40 A			
	I _{FAV} (sin. 180; T _{case} = 100 °C) 25 A			
V				
200	SKN 20/02	SKR 20/02	SKN 26/02	SKR 26/02*
400	SKN 20/04	SKR 20/04	SKN 26/04	SKR 26/04*
800	SKN 20/08	SKR 20/08	SKN 26/08	SKR 26/08*
1200	SKN 20/12	SKR 20/12	SKN 26/12	SKR 26/12*
1400	SKN 20/14	SKR 20/14	SKN 26/14	SKR 26/14*
1600	SKN 20/16	SKR 20/16	SKN 26/16	SKR 26/16*
Avalanche Types				
V _{(BR)min} V	I _{FAV} = 25 A (T _{case} = 73 °C)			
1300	SKNa 20/13			
1700	SKNa 20/17			

Symbol	Conditions	SKN 20 SKR 20	SKNa 20	SKN 26 SKR 26
I _{FAV}	sin. 180; T _{case} = 93 °C = 100 °C = 125 °C	– 25 A 20 A	20 A 18 A 11 A	– 25 A 20 A
I _{FSM}	T _{vj} = 25 °C; 10 ms T _{vj} = T _{vjmax} ; 10 ms	375 A 320 A		
i ² t	T _{vj} = 25 °C; 8,3 ... 10 ms T _{vj} = T _{vjmax} ; 8,3 ... 10 ms	700 A ² s 510 A ² s		
P _{RSM}	T _{vj} > 250 °C; t _p = 10 μs	–	6 kW	–
Q _{rr}	T _{vj} = 160 °C; – $\frac{dI_F}{dt} = 10 \frac{A}{\mu s}$	typ. 20 μC		
I _R	T _{vj} = 25 °C; V _R = V _{RRM} V _R = V _{(BR)min} T _{vj} = 180 °C; V _R = V _{RRM}	0,3 mA – 4 mA	– 10 μA –	0,3 mA – 4 mA
V _F	T _{vj} = 25 °C; I _F = 60 A; max.	1,55 V		
V _(TO)	T _{vj} = T _{vjmax}	0,85 V		
r _T	T _{vj} = T _{vjmax}	11 mΩ		
R _{thjc} R _{thch} T _{vjmin} T _{vjmax} T _{stg}		2 °C/W 1 °C/W – 40 °C 180 °C 150 °C 180 °C – 55 ... + 180 °C		
M a w	SI units/US units approx.	2,0 Nm/18 lb. in. 5 · 9,81 m/s ² 10 g 8 g		
RC R _p	P _R = 1 W P _R = 4 W	0,05 μF + 200 Ω 150 kΩ		
Case		E 9		E 8

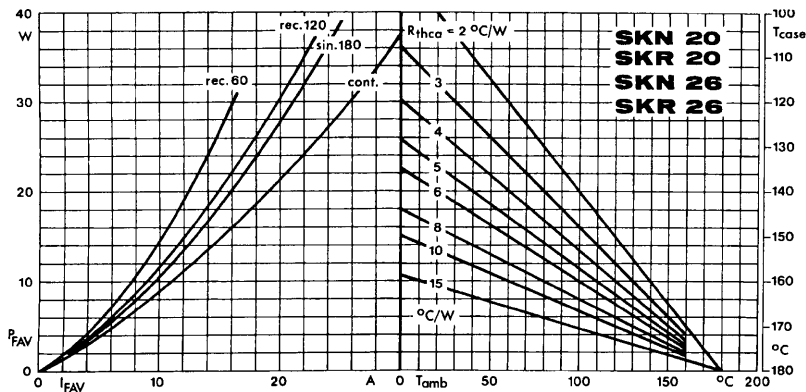


Fig. 1a Power dissipation vs. forward current and case temperature

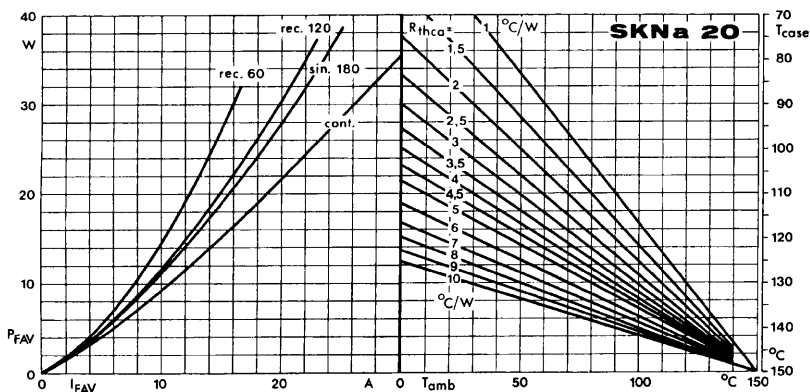


Fig. 1b Power dissipation vs. forward current and case temperature

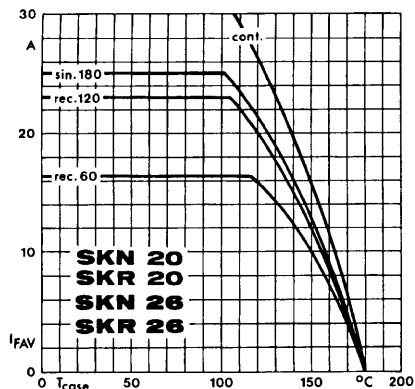


Fig. 3a Rated forward current vs. case temperature

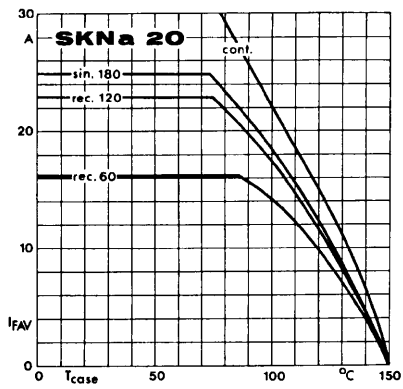


Fig. 3 b Rated forward current vs. case temperature

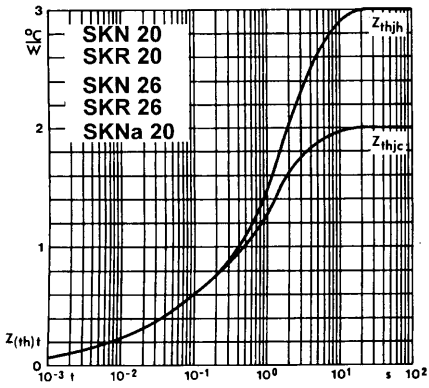


Fig. 5 Transient thermal impedance vs. time

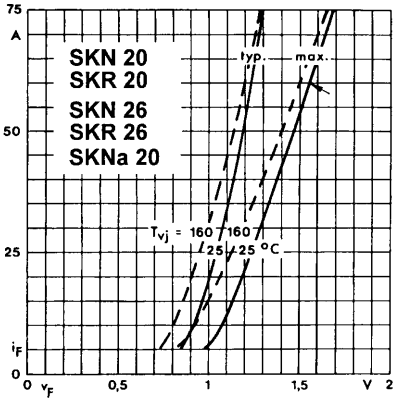


Fig. 6 Forward characteristics

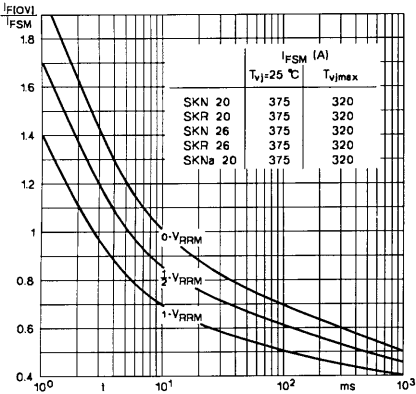


Fig. 7 Surge overload current vs. time

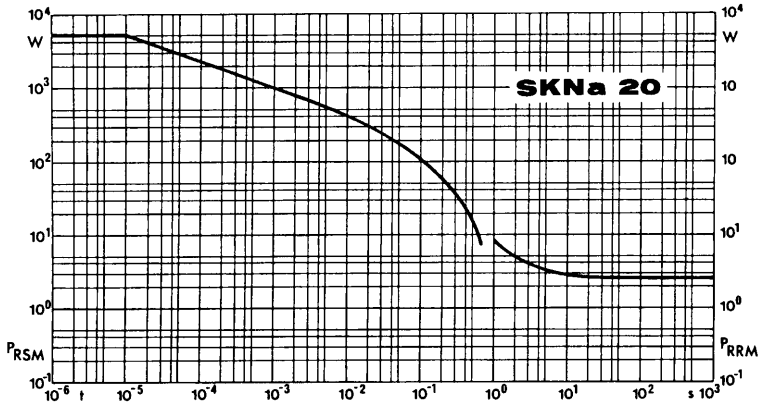


Fig. 11 Rated reverse power dissipation vs. time

