

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 26/12 UNF

V_{RSM} V_{RRM}	I_{FRMS} (maximum values for continuous operations) 40 A			
	I_{FAV} (sin. 180; $T_{case} = 100\text{ °C}$) 25 A			
V				
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	$I_{FAV} = 25\text{ A}$ ($T_{case} = 73\text{ °C}$)			
1300	SKNa 20/13			
1700	SKNa 20/17			

Symbol	Conditions	SKN 20 SKR 20	SKNa 20	SKN 26 SKR 26	Units
I_{FAV}	sin. 180; $T_{case} = 73\text{ °C}$ $= 100\text{ °C}$ $= 125\text{ °C}$	– 25 20	20 18 11	– 25 20	A A A
I_{FSM}	$T_{vj} = 25\text{ °C}$; 10 ms $T_{vj} = T_{vjmax}$; 10 ms	375 320			A A
i^2t	$T_{vj} = 25\text{ °C}$; 8,3 ... 10 ms $T_{vj} = T_{vjmax}$; 8,3 ... 10 ms	700 510			A ² s A ² s
P_{RSM}	$T_{vj} > 250\text{ °C}$, $t_p = 10\text{ μs}$	–	6	–	kW
Q_{rr}	$T_{vj} = 160\text{ °C}$; $-di_F/dt = 10\text{ A/μs}$	typ. 20			μC
I_R	$T_{vj} = 25\text{ °C}$; $V_R = V_{RRM}$ $V_R = V_{(BR)min}$ $T_{vj} = 180\text{ °C}$; $V_R = V_{RRM}$	0,3 – 4	– 10 –	0,3 – 4	mA μA mA
V_F	$T_{vj} = 25\text{ °C}$; $I_F = 60\text{ A}$; max.	1,55			V
$V_{(TO)}$	$T_{vj} = T_{vjmax}$	0,85			V
r_T	$T_{vj} = T_{vjmax}$	11			mΩ
R_{thjc}		2			°C/W
R_{thch}		1			°C/W
T_{vjmin}		– 40			°C
T_{vjmax}		180	150	180	°C
T_{stg}		– 55 ... + 180			°C
M	SI units US units	2,0 18			Nm lb.in.
a		5 · 9,81			m/s ²
w	approx.	10		8	g
RC	$P_R = 1\text{ W}$	0,05 200			μF Ω
R_p	$P_R = 4\text{ W}$	150			kΩ
Case		E 9		E 8	

This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.

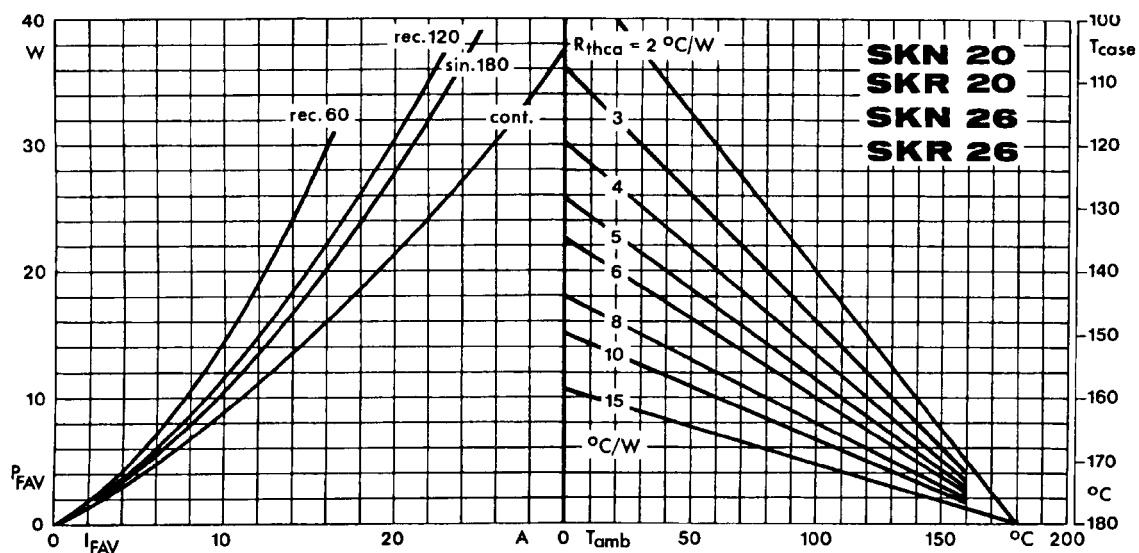


Fig. 1a Power dissipation vs. forward current and case temperature

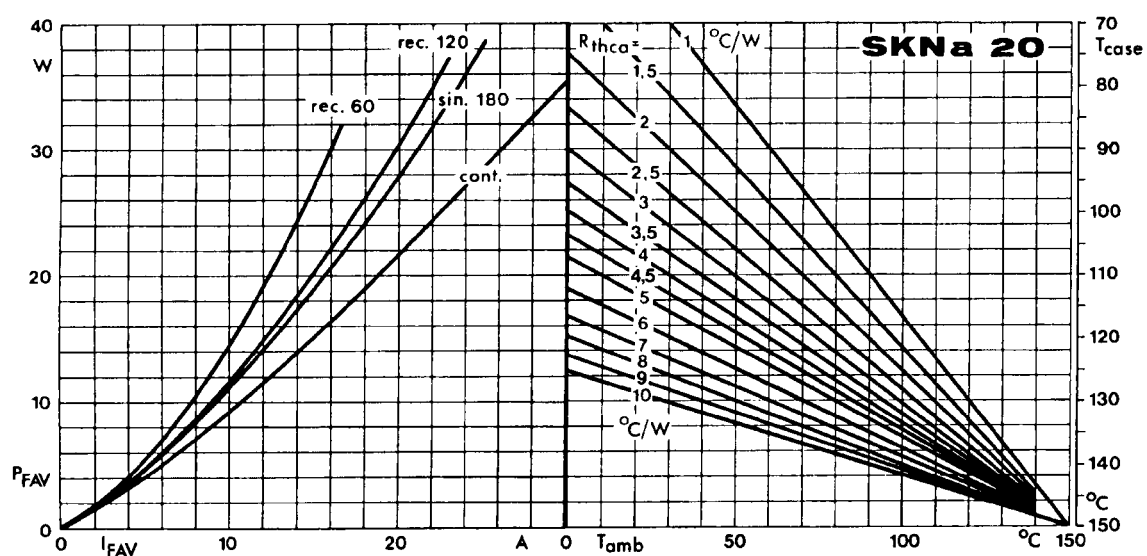


Fig. 1b Power dissipation vs. forward current and case temperature

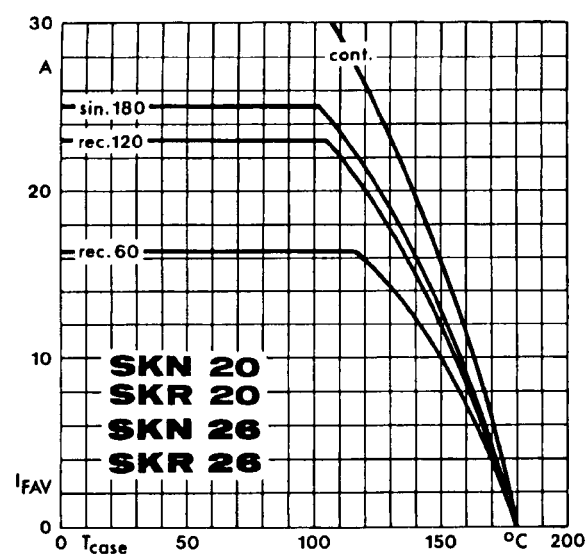


Fig. 3a Rated forward current vs. case temperature

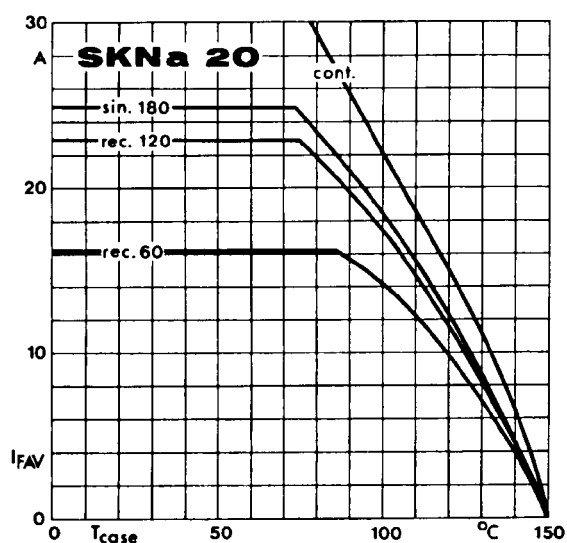


Fig. 3b Rated forward current vs. case temperature

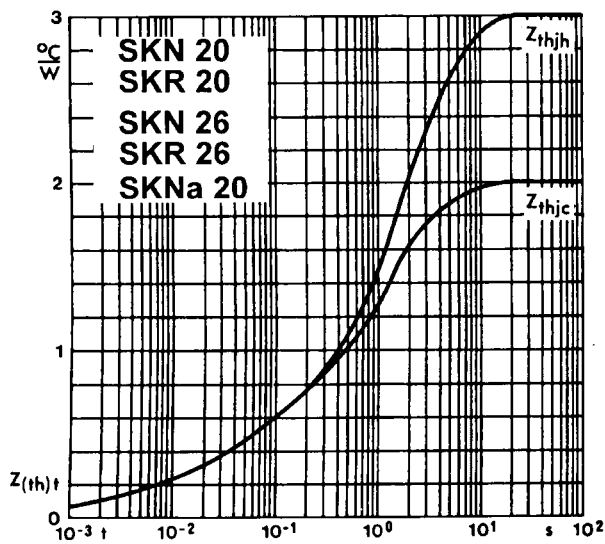


Fig. 5 Transient thermal impedance vs. time

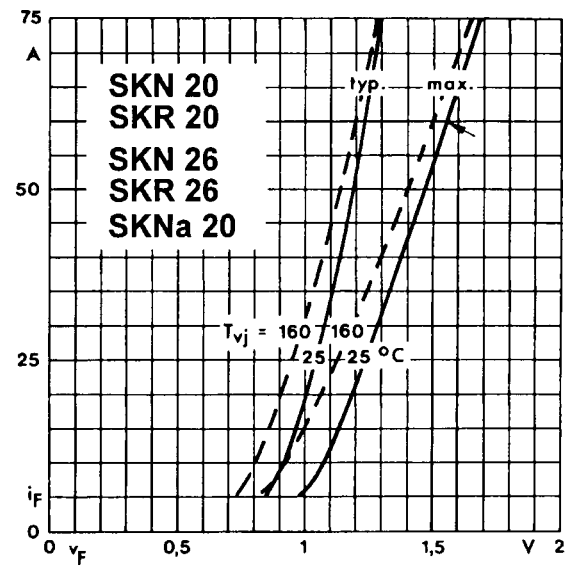


Fig. 6 Forward characteristics

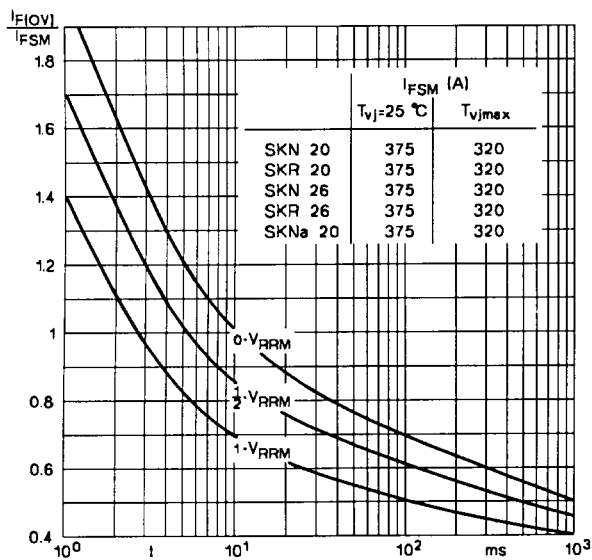


Fig. 7 Surge overload current vs. time

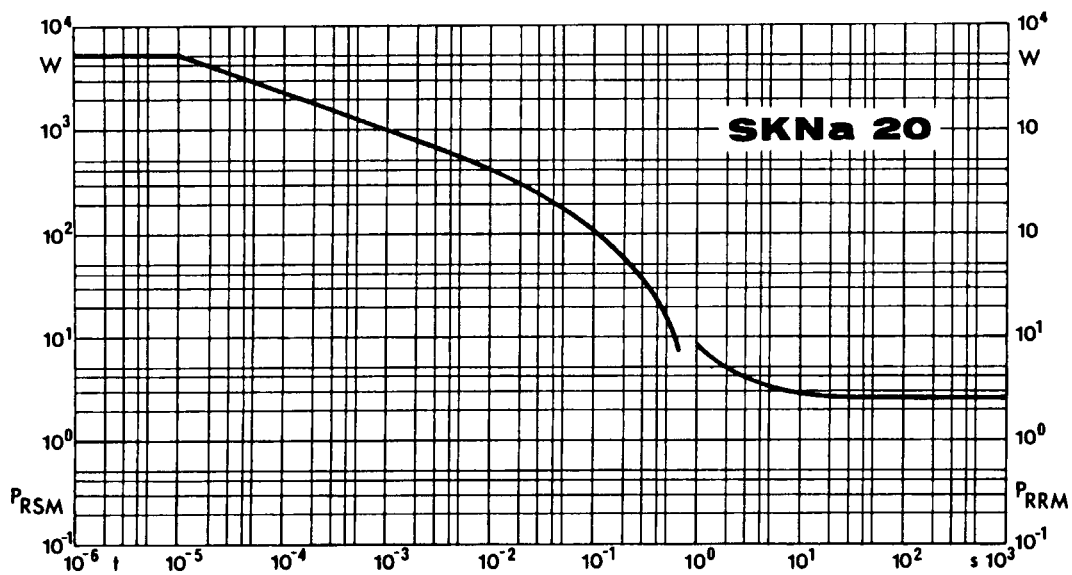
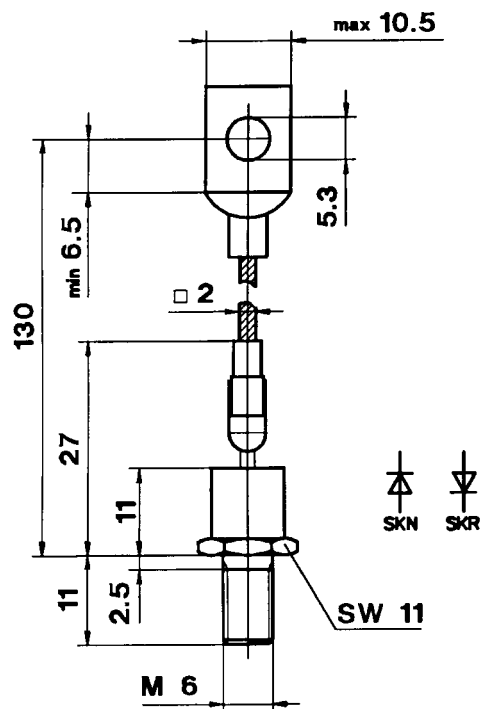


Fig. 11 Rated reverse power dissipation vs. time

IEC: A 16 M*
DIN 41 886: 102 A 2
BS 3934: SO-31



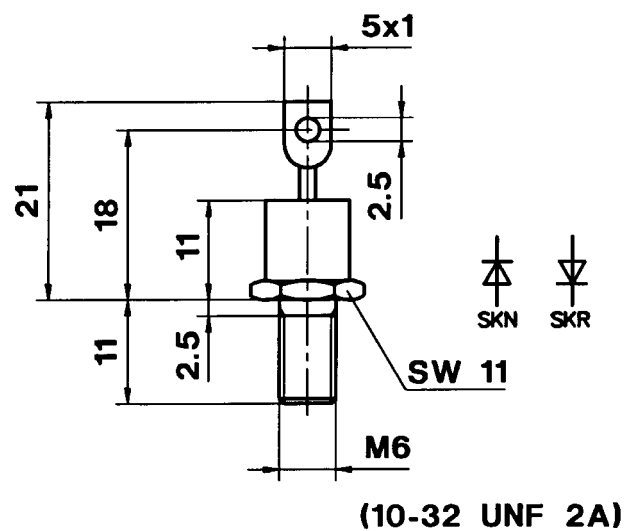
modified

Dimensions in mm

SKN 26
SKR 26

Case E 8

IEC: A 4 M*, A 3 U
DIN 41 886: 102 D 2*
BS 3934: SO-10
JEDEC: DO-203 AA
(DO-4)



* modified

Dimensions in mm