T-01-15

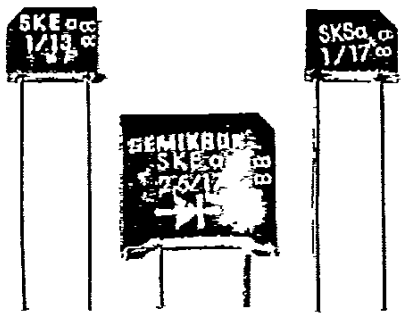
SEMIKRON

$V_{(BR)min.}$	I_{FRMS} (maximum values for continuous operation)								
	2,5 A			3 A			5 A		
	I_{FAV} (sin. 180; T_{amb} = 45 °C)								
	1,2 A			1,3 A			2,5 A		
	Types	$C_{max.}$	$R_{min.}$	Types	$C_{max.}$	$R_{min.}$	Types	$C_{max.}$	$R_{min.}$
V		µF	Ω		µF	Ω		µF	Ω
1300	SKEa 1/13	400	6	SKSa 1/13	800	3	SKEa 2,5/13	1600	2
1700	SKEa 1/17	200	10	SKSa 1/17	400	6	SKEa 2,5/17	800	4

Symbol	Conditions	SKEa 1	SKSa 1	SKEa 2,5
I_{FAV}	sin. 180; T_{amb} = 45 °C	1,2 A	1,3 A	2,5 A
I_{FCL}	T_{amb} = 45 °C	1,0 A	1,1 A	2,0 A
I_{FSM}	T_{vj} = 25 °C; 10 ms	60 A	175 A	190 A
	T_{vj} = 150 °C	50 A	150 A	160 A
i^2t	T_{vj} = 25 °C	18 A^2s	100 A^2s	180 A^2s
	T_{vj} = 150 °C	12,5 A^2s	70 A^2s	130 A^2s
Q_{rr}	T_{vj} = 150 °C; $-\frac{di_F}{dt}$ = 10 $\frac{A}{\mu s}$; typ.	10 µC	15 µC	15 µC
I_R	T_{vj} = 25 °C; $V_R < V_{(BR)}$	4 µA	4 µA	4 µA
	T_{vj} = 150 °C; $V_R < V_{(BR)}$	0,6 mA	0,6 mA	0,6 mA
P_{RSM}	T_{vj} = 150 °C; t = 10 µs	1000 W	2000 W	3000 W
V_F	T_{vj} = 25 °C; I_F = 10 A; max.	1,6 V	1,3 V	1,2 V
$V_{(TO)}$	T_{vj} = 150 °C	0,85 V	0,85 V	0,85 V
r_T	T_{vj} = 150 °C	90 mΩ	50 mΩ	30 mΩ
R_{thja}		80 °C/W	80 °C/W	40 °C/W
T_{vj}			−40 ... +150 °C	
T_{stg}			−55 ... +150 °C	
a			5 · 9,81 m/s^2	
w	approx.	1 g	1 g	2 g
RC	P_R = 1 W	0,01 µF + 500 Ω	0,01 µF + 500 Ω	0,02 µF + 500 Ω
R_p	P_R = 2 W	270 kΩ	270 kΩ	270 kΩ
Case		E 3	E 3	E 4

Avalanche Rectifier Diodes

SKEa 1
SKSa 1
SKEa 2,5



Features

- Avalanche type reverse characteristics
- Minimum avalanche breakthrough voltages 1300 V and 1700 V
- Transient voltage proof within specified limits
- Radial leads with 7,5 and 10 mm pitch
- Polarity indicated by oblique edge

Typical Applications

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

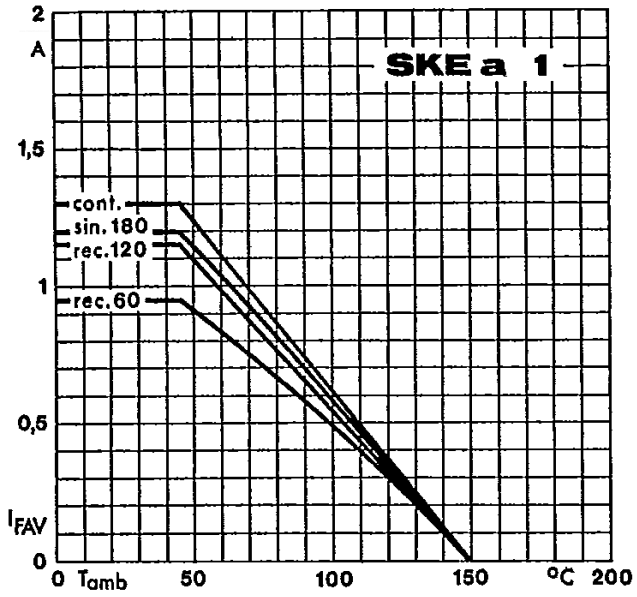


Fig. 4 a Rated forward current vs. ambient temperature

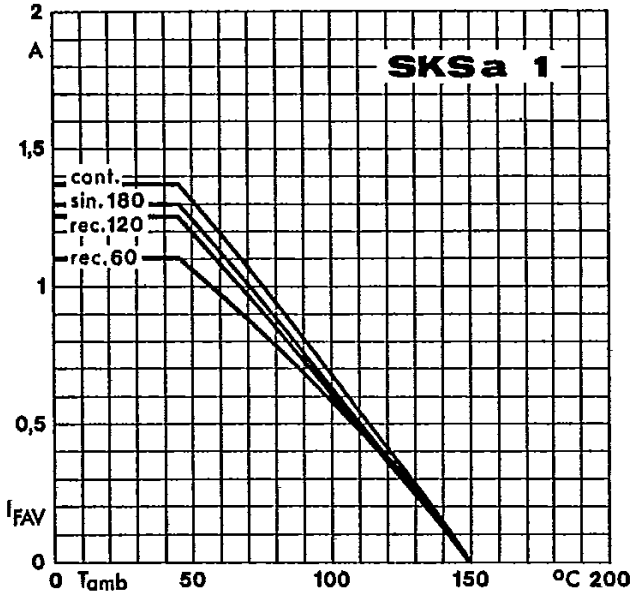


Fig. 4 b Rated forward current vs. ambient temperature

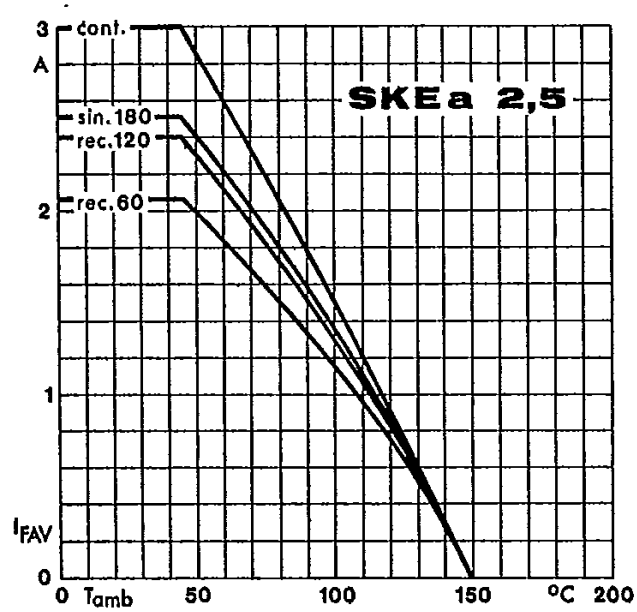


Fig. 4 c Rated forward current vs. ambient temperature

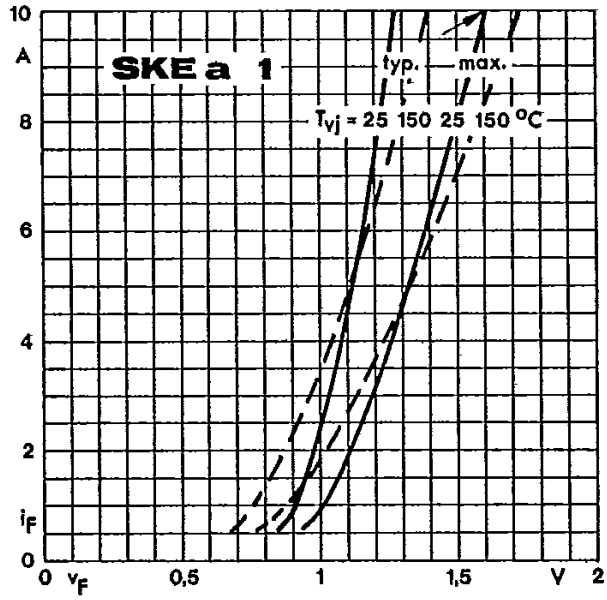


Fig. 6 a Forward characteristics

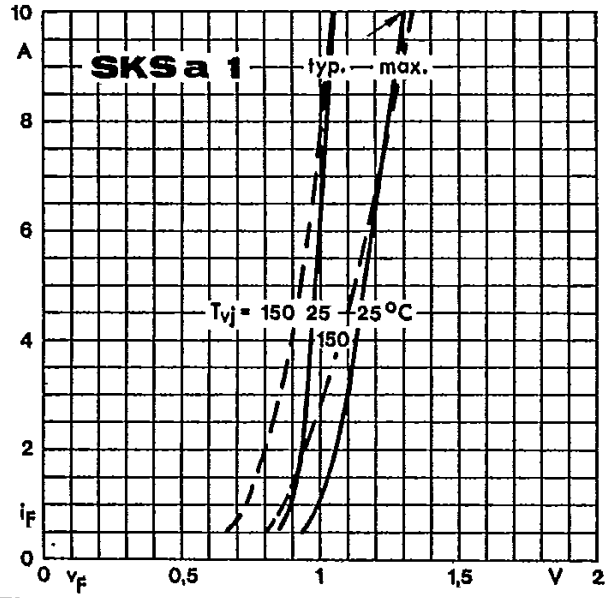


Fig. 6 b Forward characteristics

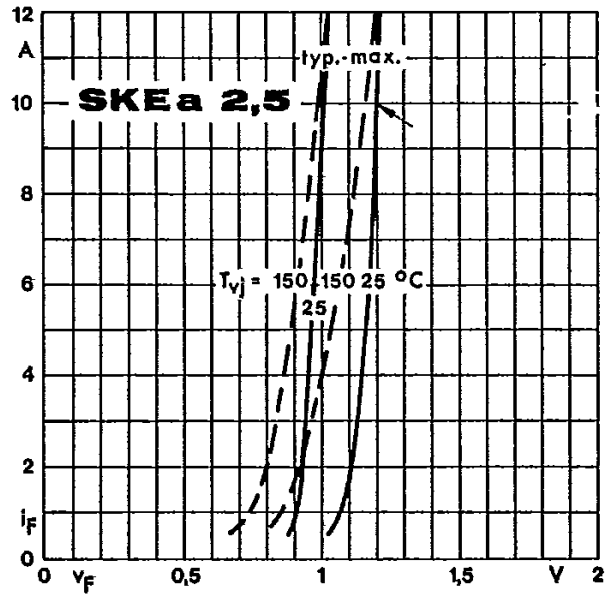


Fig. 6 c Forward characteristics

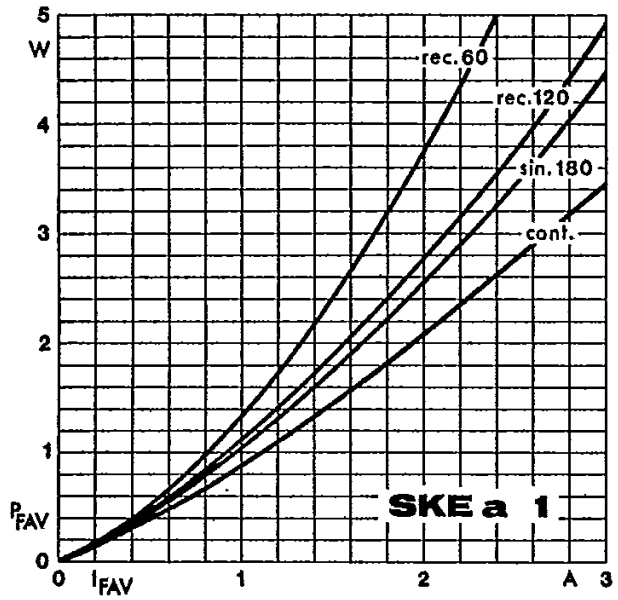


Fig. 8 a Power dissipation vs. forward current

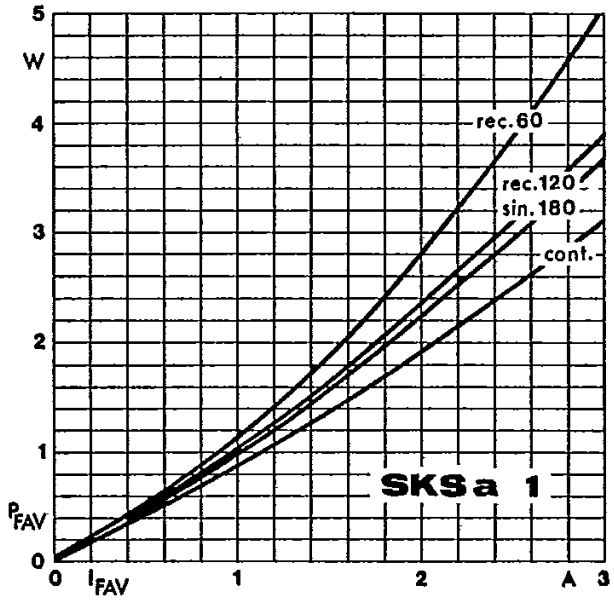


Fig. 8 b Power dissipation vs. forward current

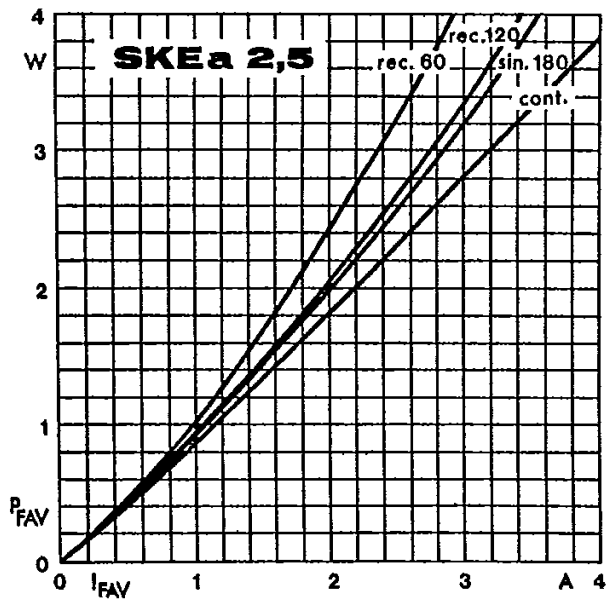


Fig. 8 c Power dissipation vs. forward current

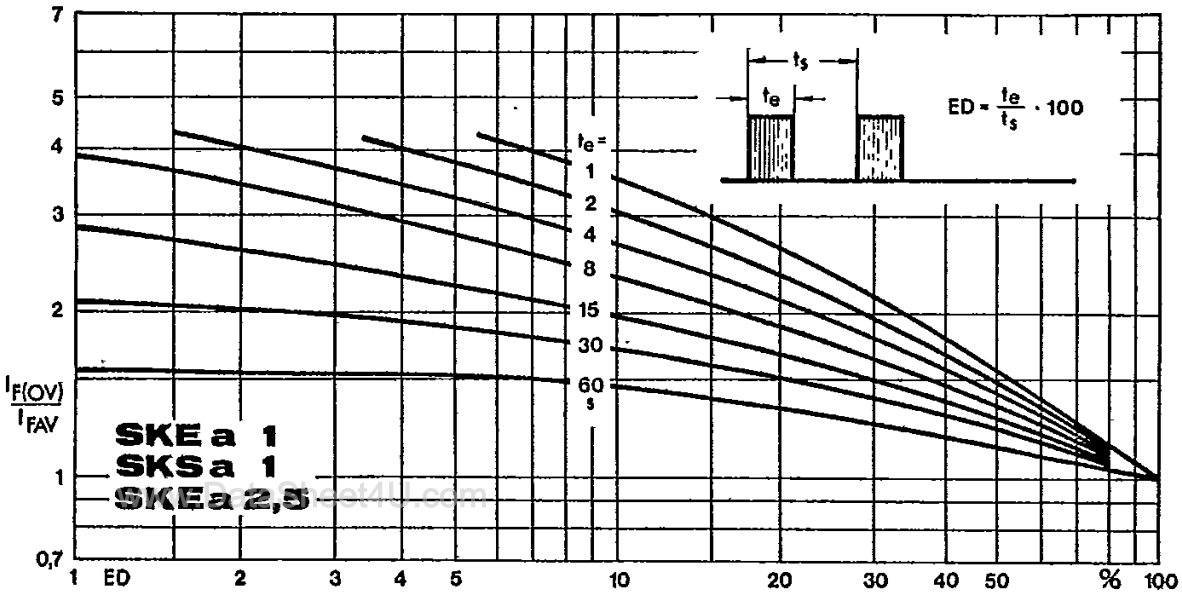


Fig. 9 Rated overload current vs. duty cycle

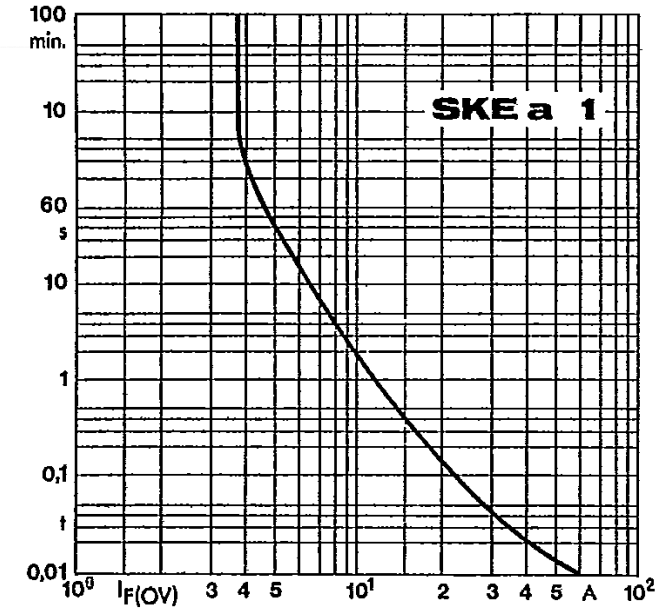


Fig. 10 a Rated overload current vs. time

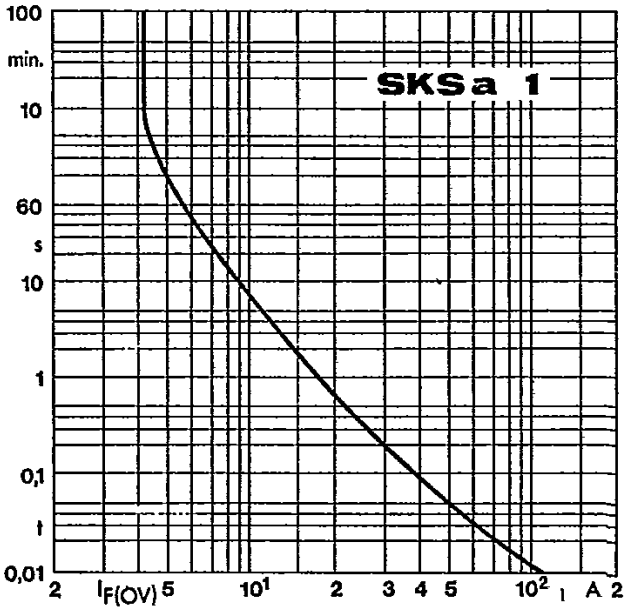


Fig. 10 b Rated overload current vs. time

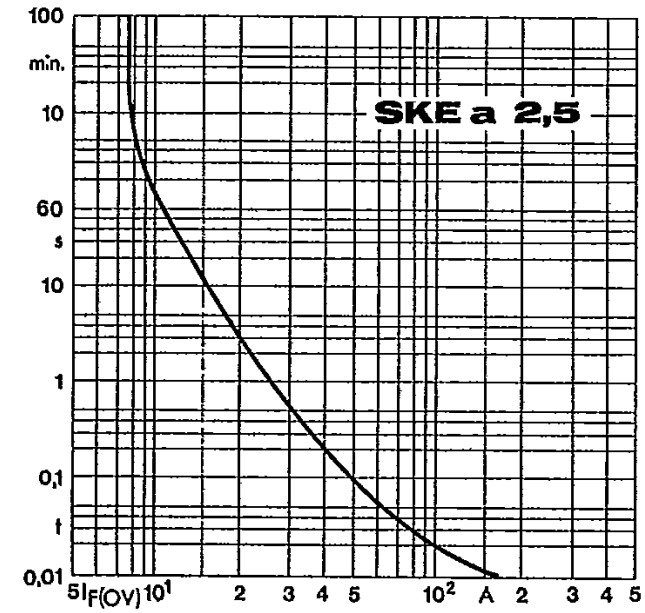


Fig. 10 c Rated overload current vs. time

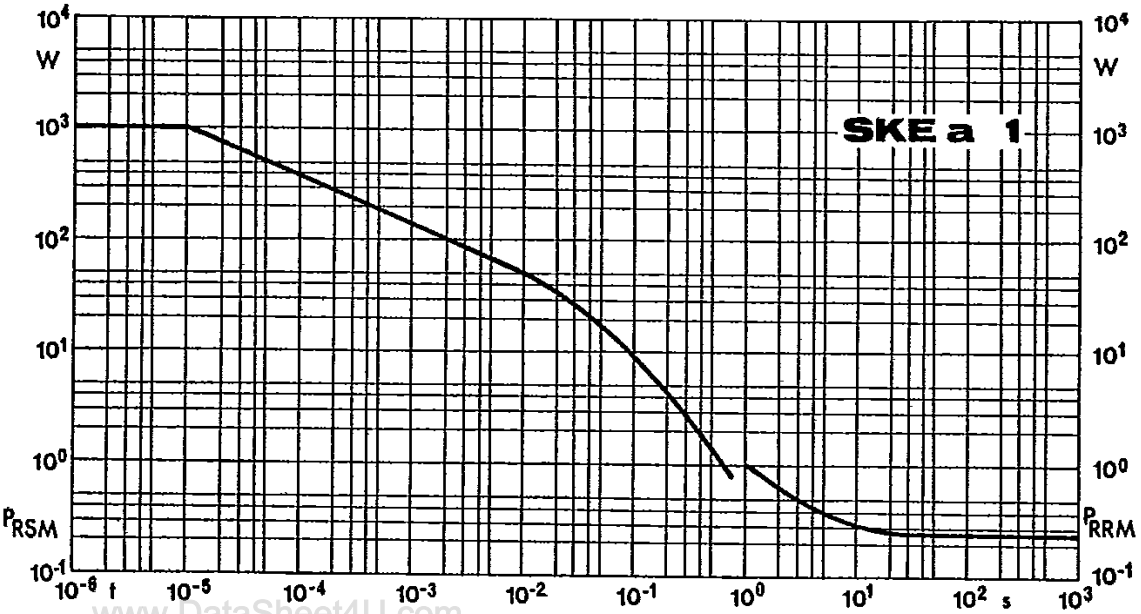


Fig. 11 a Rated reverse power dissipation vs. time

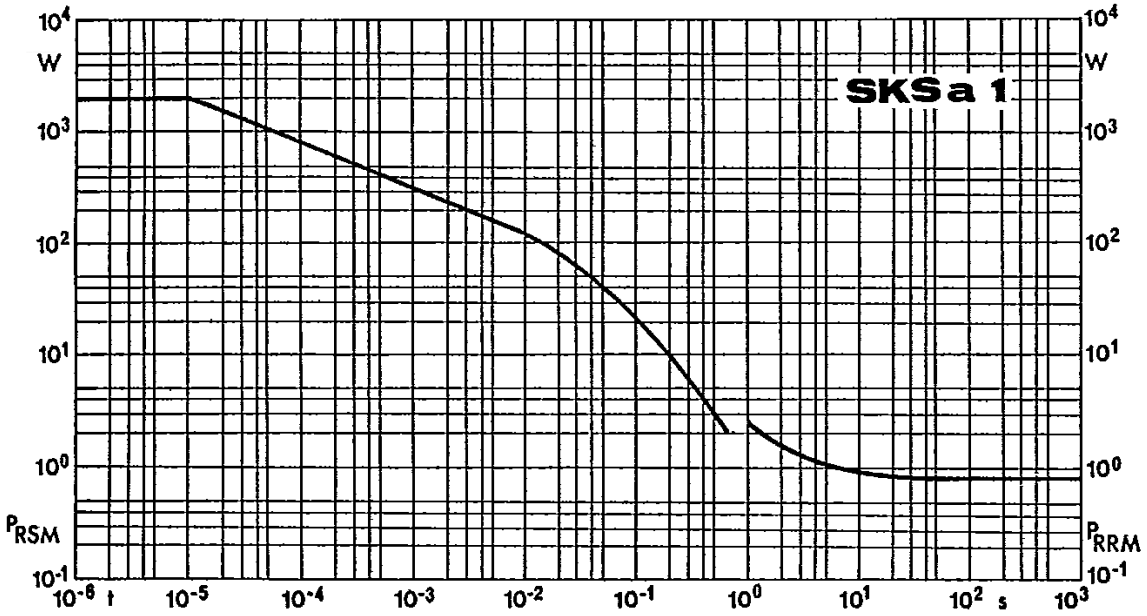


Fig. 11 b Rated reverse power dissipation vs. time

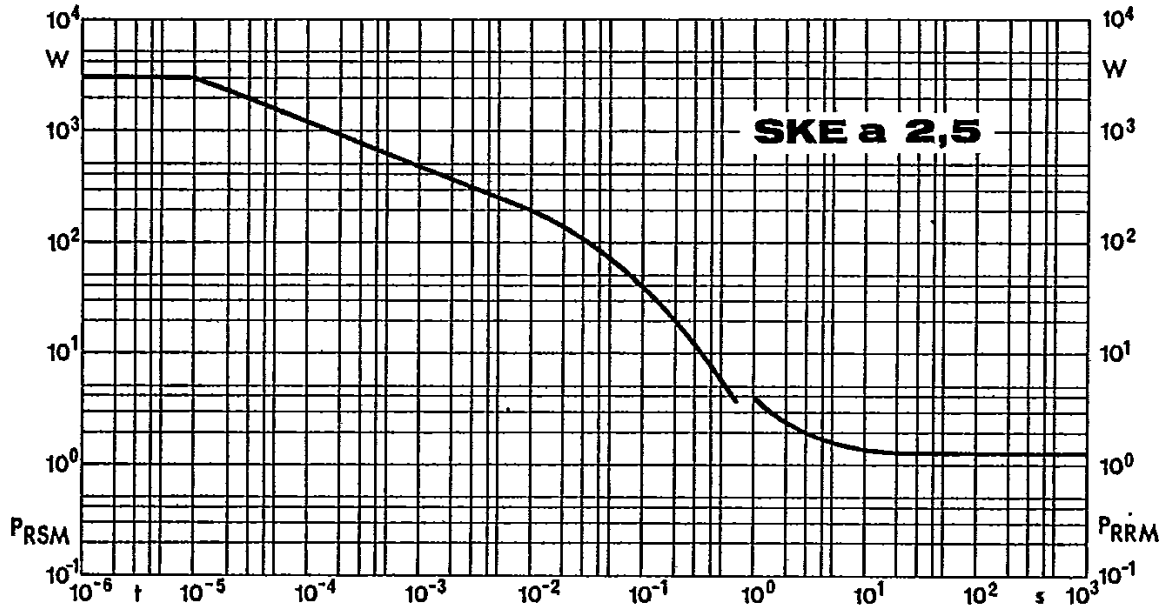
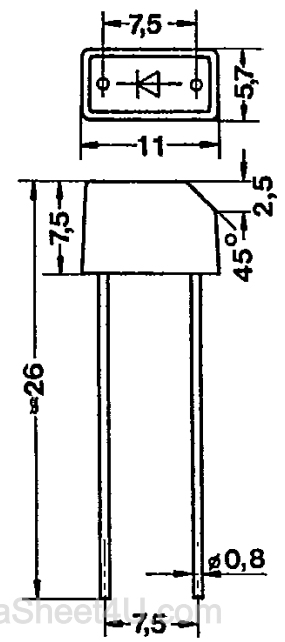


Fig. 11 c Rated reverse power dissipation vs. time

SKEa 1
SKSa 1

Case E 3

DIN 41898: 80 A 2



SKEa 2,5

Case E 4

DIN 41898: 80 B 2