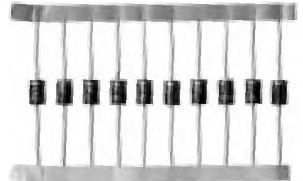


Rectifier Diodes

SK 1 **SK 3**
SKa 1 **SKa 3**



| | | | | | | |
|------------------------|---|-----------------------------|------------------------|-----------------|-----------------------------|------------------------|
| V_{RSM} V_{RRM} | IFRMS (maximum values for continuous operation) | | | | | |
| | 3 A | | | 6,7 A | | |
| V | IFAV (sin. 180; $T_{amb} = 45\text{ °C}$) | | | | | |
| | 1,15 A | | | 1,8 A | | |
| | Types | $C_{max.}$ μF | $R_{min.}$ Ω | Types | $C_{max.}$ μF | $R_{min.}$ Ω |
| 1000 | SK 1/10 | 500 | 4 | SK 3/10 | 2000 | 1 |
| 1200 | SK 1/12 | 400 | 6 | SK 3/12 | 1600 | 2 |
| 1400 | SK 1/14 | 300 | 8 | SK 3/14 | 1200 | 3 |
| 1600 | SK 1/16 | 200 | 10 | SK 3/16 | 800 | 4 |
| $V_{(BR)}$ min | Avalanche Types | | | | | |
| 1300 | SKa 1/13 | 400 | 6 | SKa 3/13 | 1600 | 2 |
| 1700 | SKa 1/17 | 200 | 10 | SKa 3/17 | 800 | 4 |

| Symbol | Conditions | SK 1 SKa 1 | SK 3 SKa 3 | Units |
|--------------|--|----------------|---------------|----------------------|
| IFAV | $T_{ref} = 85\text{ °C}$; L = 10 mm; sin. 180 $T_{amb} = 45\text{ °C}$; p.c.b. 50 x 50 mm | 1,45 | 3,3 | A |
| | | 1,15 | 1,8 | A |
| IFSM | $T_{vj} = 25\text{ °C}$; 10 ms $T_{vj} = 150\text{ °C}$; 10 ms | 60 | 180 | A |
| | | 50 | 150 | A |
| i^2t | $T_{vj} = 25\text{ °C}$; 8,3 ... 10 ms $T_{vj} = 150\text{ °C}$; 8,3 ... 10 ms | 18 | 162 | A^2s |
| | | 12,5 | 112,5 | A^2s |
| Q_{rr} | $T_{vj} = 150\text{ °C}$; $-\frac{di_F}{dt} = 10 \frac{\text{A}}{\mu\text{s}}$; $I_F = 10\text{ A}$; $V_R = 100\text{ V}$; typ. | 10 | 25 | μC |
| I_R | $T_{vj} = 25\text{ °C}$; $V_R = V_{RRM} / V_{(BR)min}$ $T_{vj} = 150\text{ °C}$; $V_R = V_{RRM} / V_{(BR)min}$ | 4 | 4 | μA |
| | | 400 | 600 | μA |
| P_{RSM} | SKa-Types only $T_{vj} = 150\text{ °C}$; $t_p = 10\text{ }\mu\text{s}$ | 1 | 3 | kW |
| V_F | $T_{vj} = 25\text{ °C}$; $I_F = 10\text{ A}$; max. | 1,5 | 1,2 | V |
| $V_{(TO)}$ | $T_{vj} = 150\text{ °C}$ | 0,85 | 0,85 | V |
| r_T | $T_{vj} = 150\text{ °C}$ | 75 | 30 | $\text{m}\Omega$ |
| C_j | $V_R = 0$; $f = 1\text{ MHz}$; typ. | 45 | 110 | pF |
| R_{thjr} | L = 10 mm | 40 | 18 | °C/W |
| R_{thja} | p.c.b. 50 x 50 mm | 85 | 60 | °C/W |
| T_{vj} | | - 40 ... + 150 | | °C |
| T_{stg} | | - 40 ... + 150 | | °C |
| T_{solder} | max. 10 s; L \geq 9 mm | 250 | | °C |
| a | | 5 · 9,81 | | m/s^2 |
| w | approx. | 0,5 | 1 | g |

Features

- Axial lead diodes
- Taped for automatic insertion
- Available with formed leads on request
- Plastic material carries Underwriters Laboratories flammability classification 94V-0

SKa types

- Avalanche type reverse characteristics
- Minimum avalanche breakthrough voltages 1300 V and 1700 V
- Transient voltage proof within specified limits

Typical Applications

- All-purpose rectifier diodes
- For p.c.b. mounting

SKa types

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

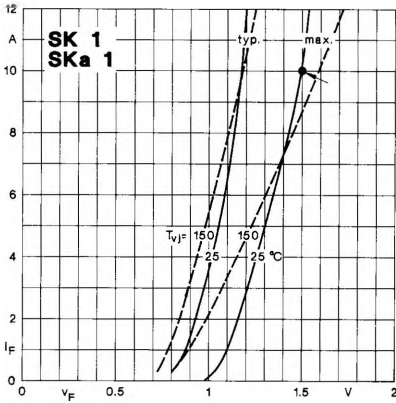


Fig. 6 a Forward characteristics

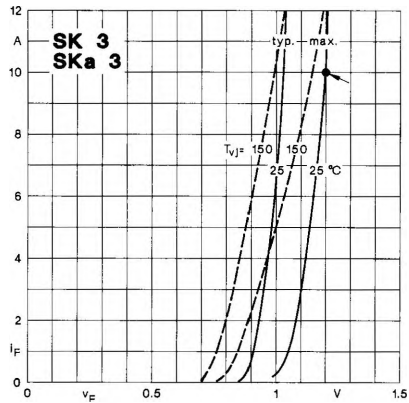


Fig. 6 b Forward characteristics

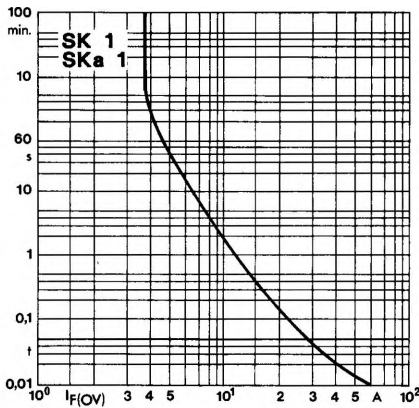


Fig. 10 a Rated overload current vs. time

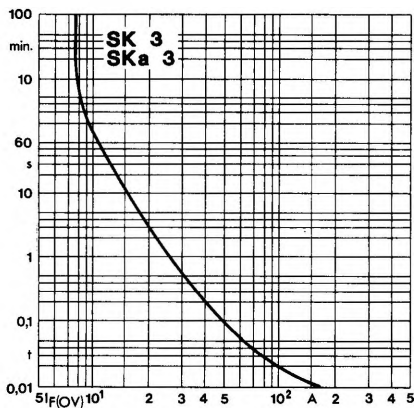


Fig. 10 b Rated overload current vs. time

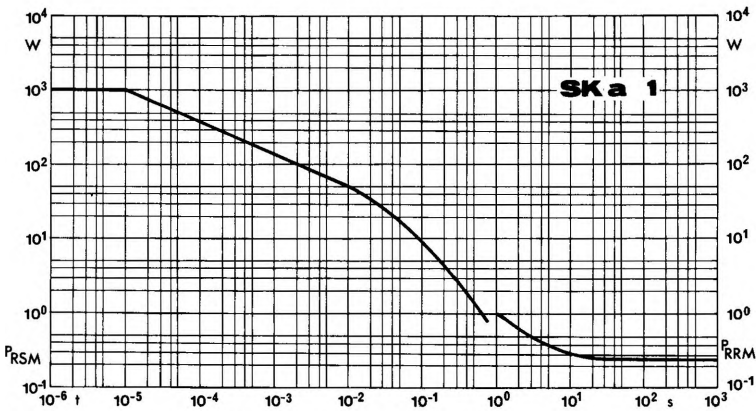


Fig. 11 a Rated reverse power dissipation vs. time

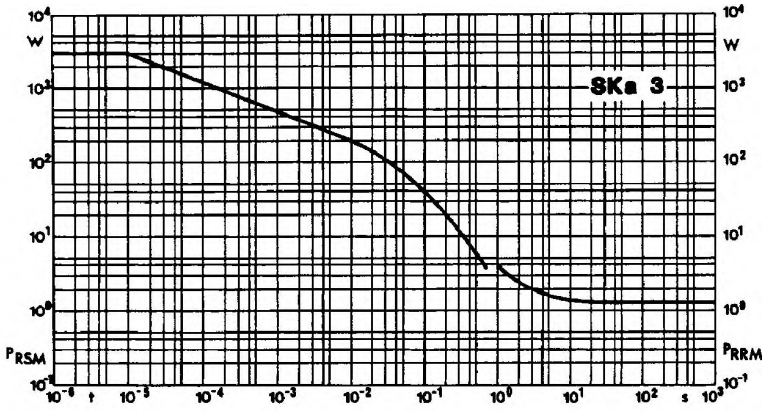


Fig. 11 b Rated reverse power dissipation vs. time

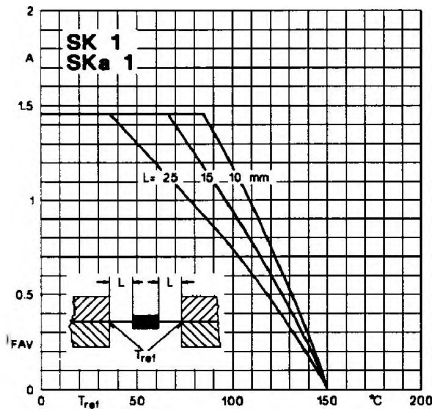


Fig. 14 a Rated forward current vs. reference temp.

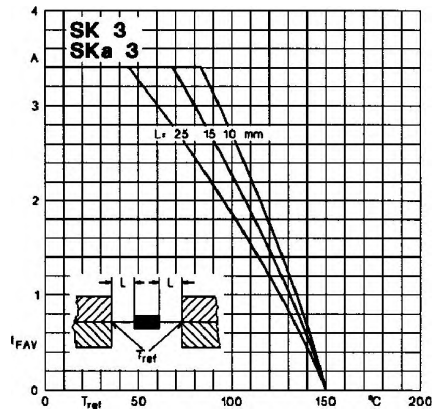


Fig. 14 b Rated forward current vs. reference temp.

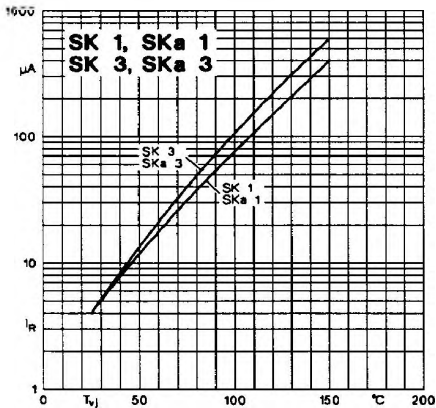


Fig. 15 Reverse current vs. virt. junction temp.

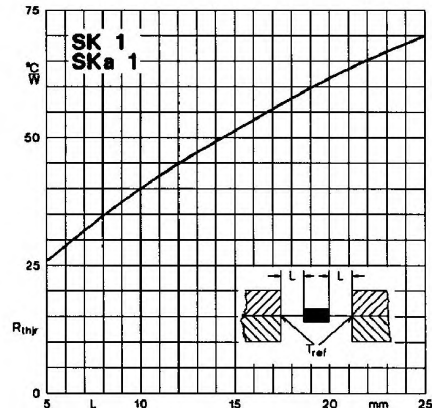


Fig. 16 a Thermal resistance vs. lead length

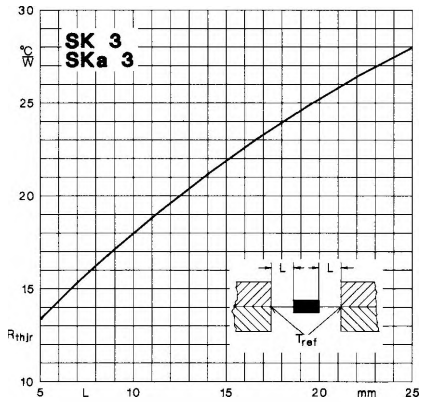
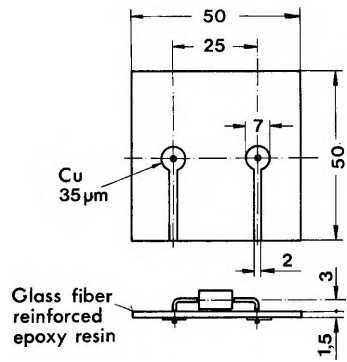
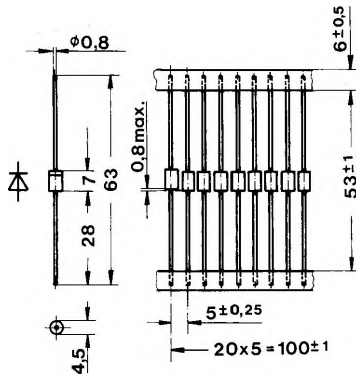


Fig. 16 b Thermal resistance vs. lead length

P.C.B. for $R_{thja} = 85 \text{ }^\circ\text{C/W}$ (SK 1)
 $R_{thja} = 60 \text{ }^\circ\text{C/W}$ (SK 3)

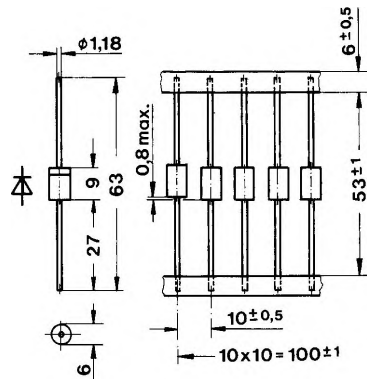


SK 1
SKa 1
Case E 33



3500 diodes per reel

SK 3
SKa 3
Case E 34



1500 diodes per reel

Reel dimensions page B 8 - 2

Dimensions in mm