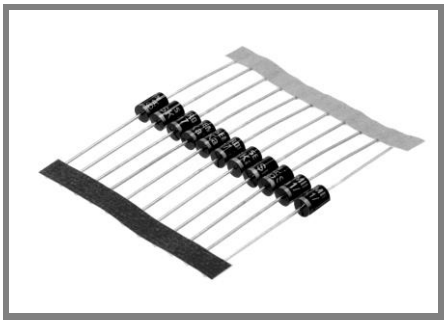
SK 1M16



Axial Lead Diode

Fast Recovery Rectifier Diode

SK 1M16

Features

- Short and soft recovery time
- Blocking voltage up to 1600 V
- Taped for automatic insertion
- Available with formed leads on request
- Plastic material meets UL 94V-0 flammability classification

Typical Applications

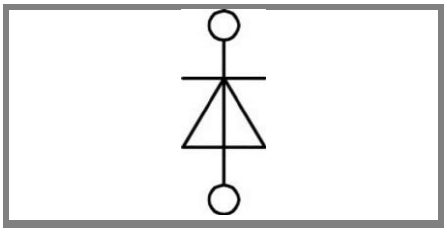
- Free-wheeling diodes
- Inverter / SMPS
- TV sets
- Snubber and clamping diodes

Absolute Maximum Ratings

Symbol	Conditions		Values	Units
Chip				
I_{FAV}	L = 10mm; sin. 180°	T_r = 63 °C	1,45	A
		T_r = 81 °C	1,1	A
I_{FRMS}	maximum value for continuous op.		3	A
I_{FSM}	8,3 … 10ms	T_j = 25°C	60	A
		T_j = 130°C	50	A
i²t	8,3 … 10ms	T_j = 25°C	18	A²s
		T_j = 130°C	12,5	A²s
V_{RSM}			1600	V
V_{RRM}			1600	V
T_j			-40 … 130	°C
Case				
T_{stg}			-40 … 130	°C
T_{sold}	Max. 10s; L > 9mm		250	°C
V_{isol}			-	V

Characteristics

Symbol	Conditions	min.	typ.	max.	Units
Chip					
V_F	T_{vj} = 25°C; I_F = 10A			1,5	V
$V_{(TO)}$	T_{vj} = 130°C			0,95	V
r_T	T_{vj} = 130°C			55	mΩ
I_{RD}	T_{vj} = 25°C, V_{RD} = V_{RRM}			4	µA
t_{rr}	T_{vj} = 25°C, I_F = I_R = 1A; I_{RM} = 0,25 A			1,3	µs
$R_{th(j-r)}$	L = 10mm			40	K/W
$R_{th(j-a)}$	PCB 50 x 50			85	K/W
Case					
a				5*9,81	m/s²
w				0,6	g
Case	3500 diodes per reel		E 33		



SK

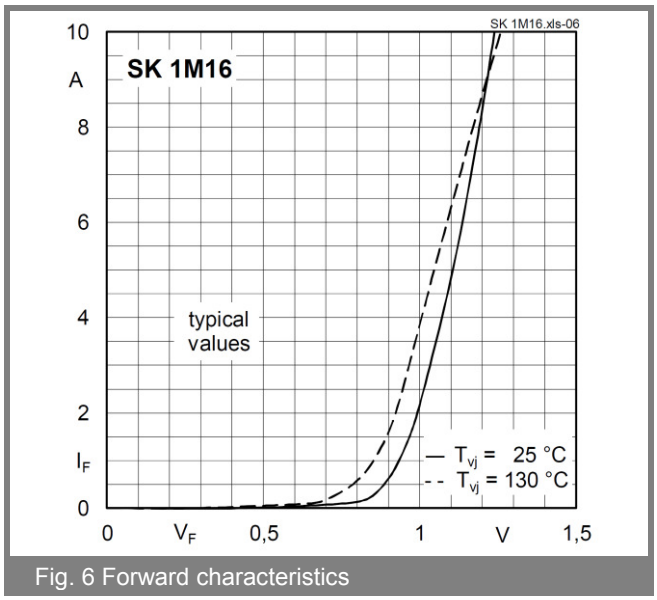


Fig. 6 Forward characteristics

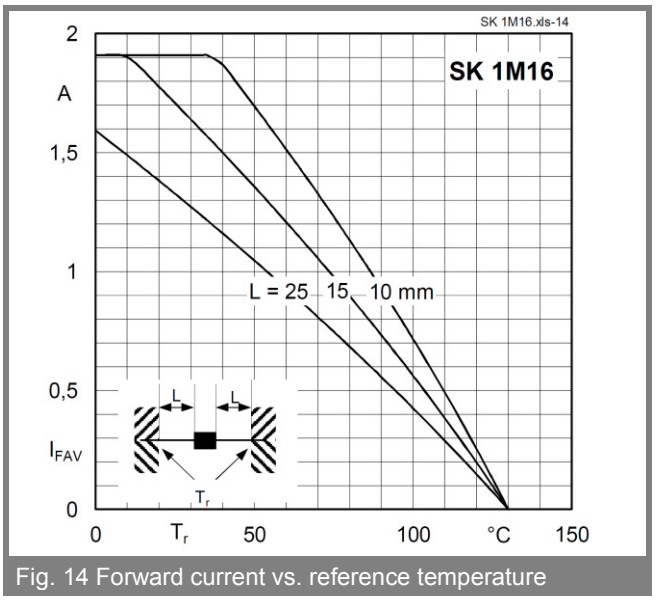


Fig. 14 Forward current vs. reference temperature

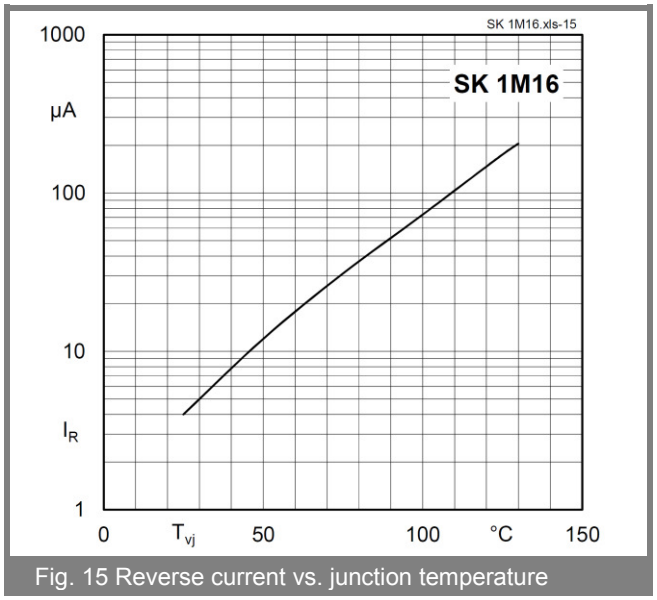


Fig. 15 Reverse current vs. junction temperature

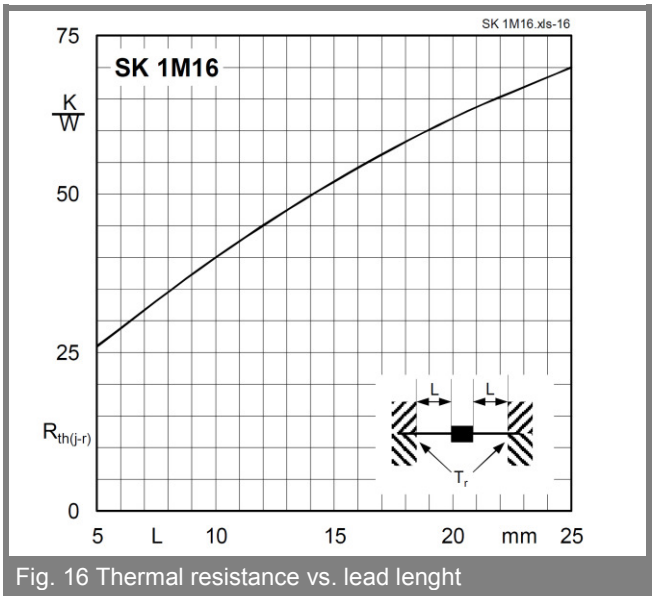
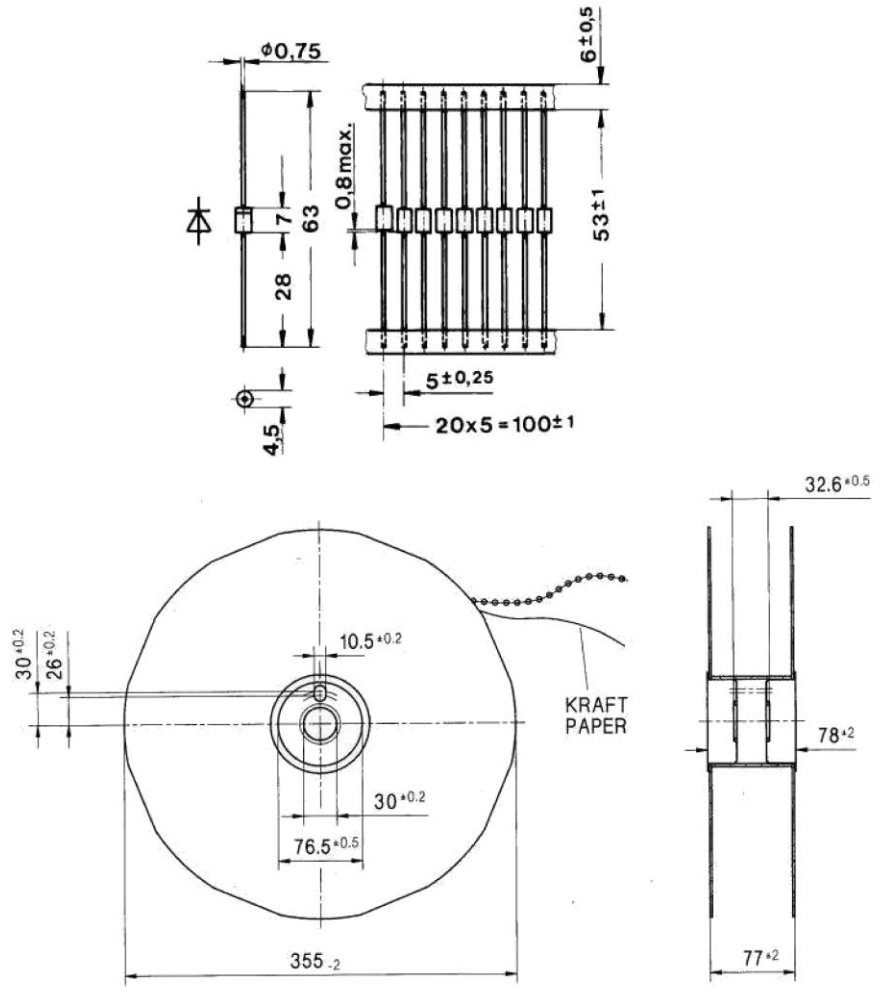


Fig. 16 Thermal resistance vs. lead lenght

Dimensions in millimeters



Case E 33

*IMPORTANT INFORMATION AND WARNINGS

The specifications of SEMIKRON products may not be considered as guarantee or assurance of product characteristics ("Beschaffenheitsgarantie"). The specifications of SEMIKRON products describe only the usual characteristics of products to be expected in typical applications, which may still vary depending on the specific application. Therefore, products must be tested for the respective application in advance. Application adjustments may be necessary. The user of SEMIKRON products is responsible for the safety of their applications embedding SEMIKRON products and must take adequate safety measures to prevent the applications from causing a physical injury, fire or other problem if any of SEMIKRON products become faulty. The user is responsible to make sure that the application design is compliant with all applicable laws, regulations, norms and standards. Except as otherwise explicitly approved by SEMIKRON in a written document signed by authorized representatives of SEMIKRON, SEMIKRON products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury. No representation or warranty is given and no liability is assumed with respect to the accuracy, completeness and/or use of any information herein, including without limitation, warranties of non-infringement of intellectual property rights of any third party. SEMIKRON does not assume any liability arising out of the applications or use of any product; neither does it convey any license under its patent rights, copyrights, trade secrets or other intellectual property rights, nor the rights of others. SEMIKRON makes no representation or warranty of non-infringement or alleged noninfringement of intellectual property rights of any third party which may arise from applications. Due to technical requirements our products may contain dangerous substances. For information on the types in question please contact the nearest SEMIKRON sales office. This document supersedes and replaces all information previously supplied and may be superseded by updates. SEMIKRON reserves the right to make changes.

