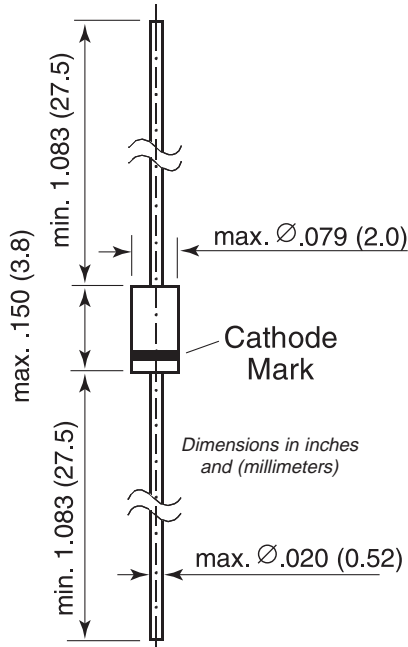


# SD103A thru SD103C

## Schottky Diodes



### DO-35 Glass



### Features

- For general purpose applications
- The SD103 series is a Metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring.
- The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and low logic level applications.
- Other applications are click suppression, efficient full wave bridges in telephone subsets, and blocking diodes in rechargeable low voltage battery systems.
- These diodes are also available in the SOD-123 case with type designations SD103AW...SD103CW and in the MiniMELF case with type designations LL103A thru LL103C.

### Mechanical Data

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13g

### Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit	
Peak Inverse Voltage	SD103A SD103B SD103C	VRRM	40 30 20	V
Power Dissipation (Infinite Heatsink)	P <sub>tot</sub>	400 <sup>(1)</sup>	mW	
Single Cycle Surge 60 Hz Sine Wave	I <sub>FSM</sub>	15	A	
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	0.3 <sup>(1)</sup>	°C/mW	
Junction Temperature	T <sub>j</sub>	125 <sup>(1)</sup>	°C	
Storage Temperature Range	T <sub>s</sub>	-55 to +150 <sup>(1)</sup>	°C	

# SD103A thru SD103C

## Schottky Diodes

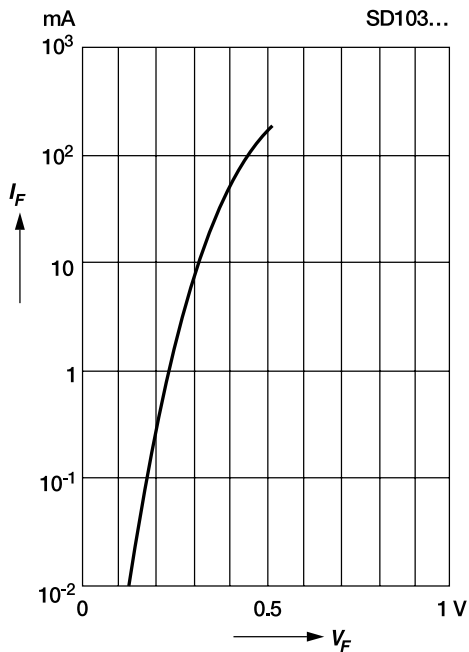


### Electrical Characteristics (T<sub>J</sub> = 25°C unless otherwise noted)

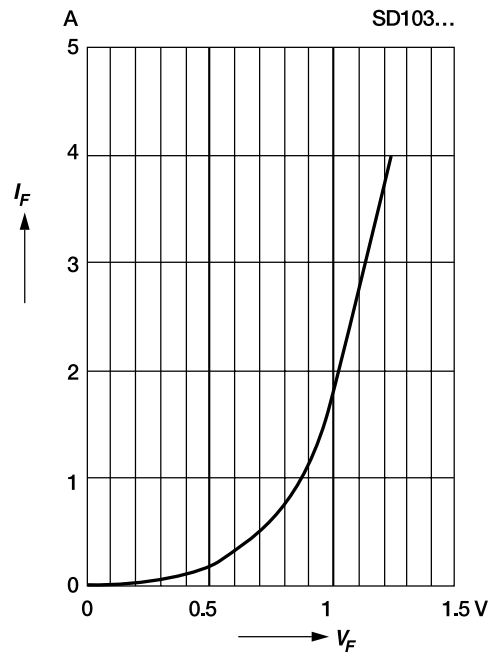
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Leakage Current	SD103A	V <sub>R</sub> = 30V	—	—	5	μA
	SD103B	V <sub>R</sub> = 20V	—	—	5	
	SD103C	V <sub>R</sub> = 10V	—	—	5	
Forward Voltage Drop	V <sub>F</sub>	I <sub>F</sub> = 20mA I <sub>F</sub> = 200mA	— —	— —	0.37 0.6	V
Junction Capacitance	C <sub>tot</sub>	V <sub>R</sub> = 0V, f = 1MHz	—	50	—	pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = I <sub>R</sub> = 50mA to 200mA, recover to 0.1I <sub>R</sub>	—	10	—	ns

### Ratings and Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)

Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier



Typical high current forward conduction curve  
t<sub>p</sub> = 300 ms, duty cycle = 2%



# SD103A thru SD103C

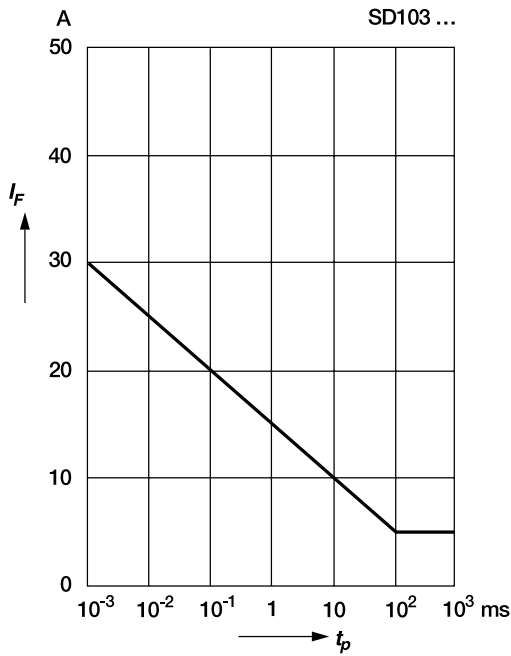
## Schottky Diodes



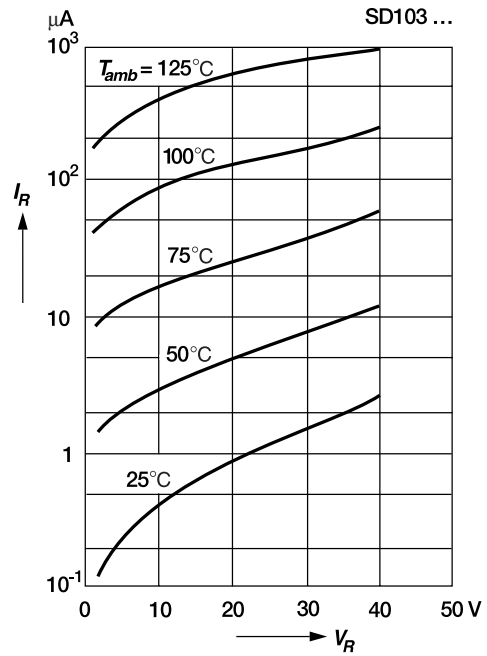
### Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

**Typical non repetitive forward surge current versus pulse width**

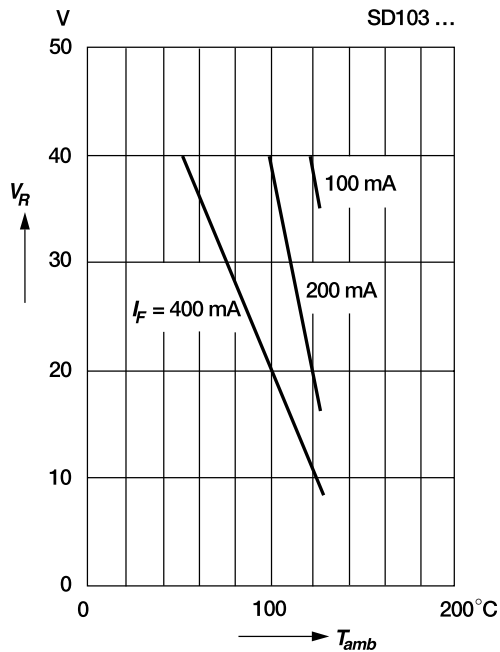
Rectangular pulse



**Typical variation of reverse current at various temperatures**



**Blocking voltage deration versus temperature at various average forward currents**



**Typical capacitance versus reverse voltage**

