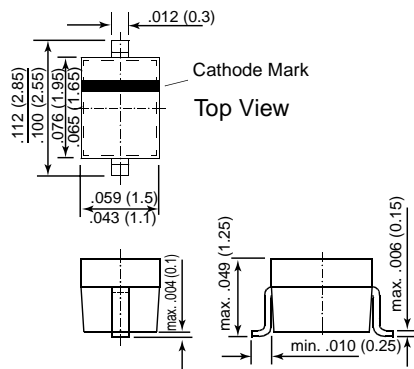


# SD103AWS THRU SD103CWS

## SCHOTTKY DIODES

### SOD-323



Dimensions in inches and (millimeters)

### 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.
- ◆ This diode is also available in Mini-MELF case with the type designation LL103A ... LL103C, DO-35 case with the type designations SD103A .. SD103C and SOD-123 case with type designations SD103W ... SD103CW.



### MECHANICAL DATA

**Case:** SOD-323 Plastic Package

**Weight:** approx. 0.004g

### MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

		SYMBOL	VALUE	UNIT
Peak Inverse Voltage	SD103AWS	$V_{RRM}$	40	Volts
	SD103BWS	$V_{RRM}$	30	Volts
	SD103CWS	$V_{RRM}$	20	Volts
Power Dissipation at $T_{amb} = 25^{\circ}C$		$P_{tot}$	150 <sup>(1)</sup>	mW
Single Cycle Surge 10 $\mu s$ Square Wave		$I_{FSM}$	2	Amps
Junction Temperature		$T_j$	125 <sup>(1)</sup>	$^{\circ}C$
Storage Temperature Range		$T_s$	- 55 to +150 <sup>(1)</sup>	$^{\circ}C$
Thermal Resistance Junction to Ambient Air		$R_{\theta JA}$	650	$^{\circ}C/W$

#### NOTES

(1)Valid provided that electrodes are kept at ambient temperature

# SD103AWS THRU SD103CWS

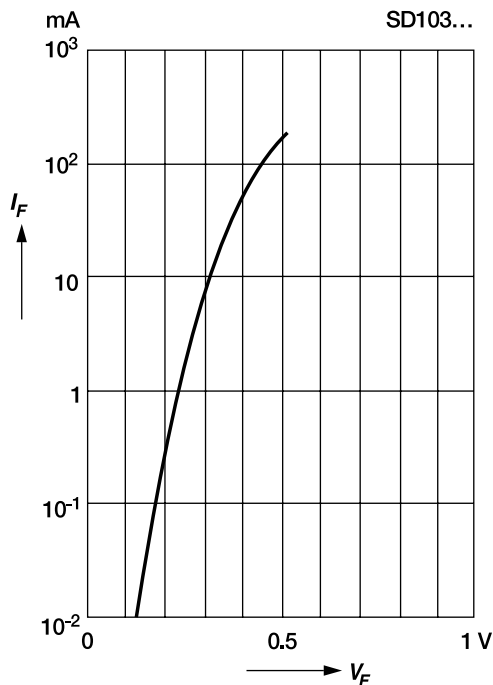
## ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

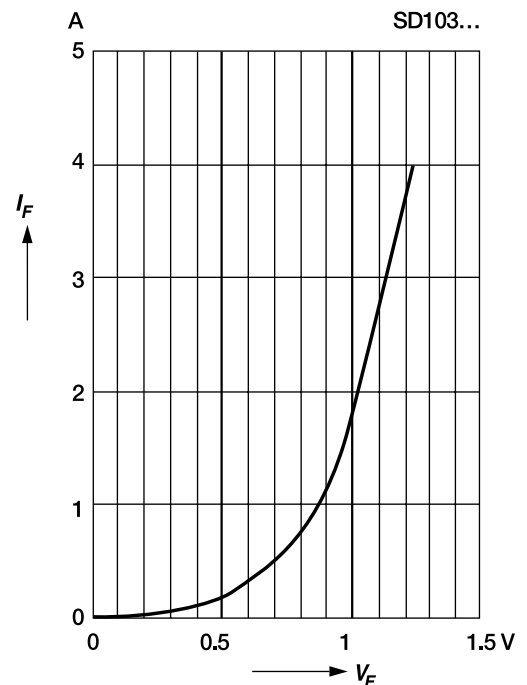
	SYMBOL	MIN.	TYP.	MAX.	UNIT
Leakage Current at $V_R = 30$ V	<b>SD103AWS</b> $I_R$	–	–	5	$\mu$ A
at $V_R = 20$ V	<b>SD103BWS</b> $I_R$	–	–	5	$\mu$ A
at $V_R = 10$ V	<b>SD103CWS</b> $I_R$	–	–	5	$\mu$ A
Forward Voltage Drop at $I_F = 20$ mA	$V_F$	–	–	0.37	V
at $I_F = 200$ mA	$V_F$	–	–	0.6	V
Junction Capacitance at $V_R = 0$ V, $f = 1$ MHz	$C_{tot}$	–	50	–	pF
Reverse Recovery Time at $I_F = I_R = 50$ mA to 200 mA, recover to $0.1 I_R$	$t_{rr}$	–	10	–	ns

## RATINGS AND CHARACTERISTICS SD103AWS THRU SD103CAWS

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



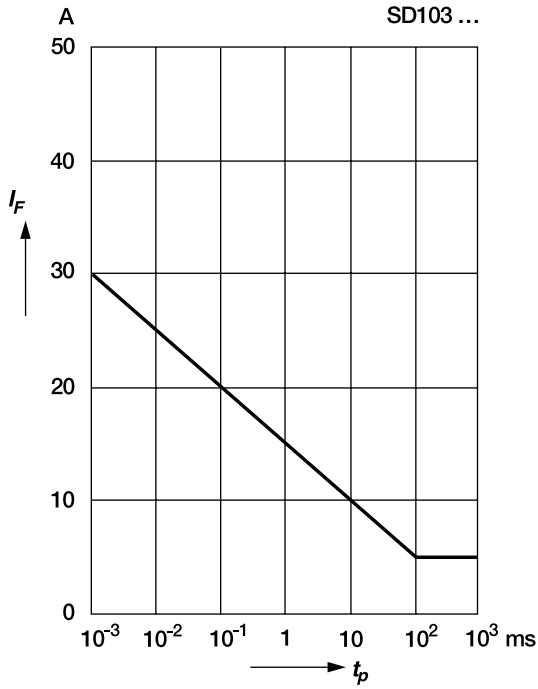
Typical high current forward conduction curve  
 $t_p = 300$  ms, duty cycle = 2%



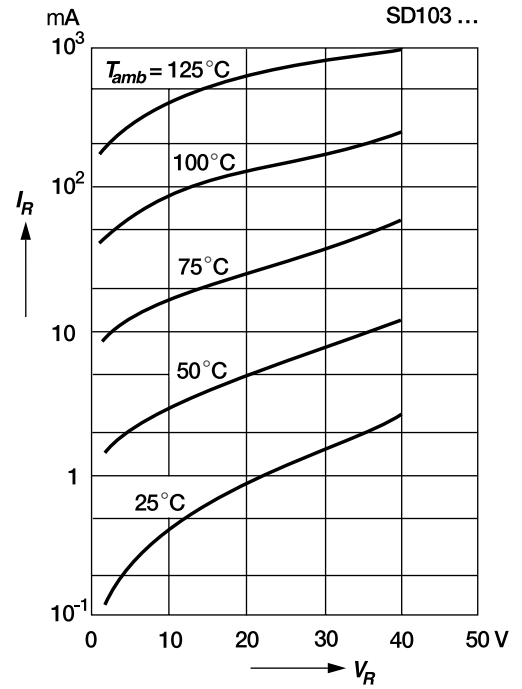
# RATINGS AND CHARACTERISTICS SD103AWS THRU SD103CAWS

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

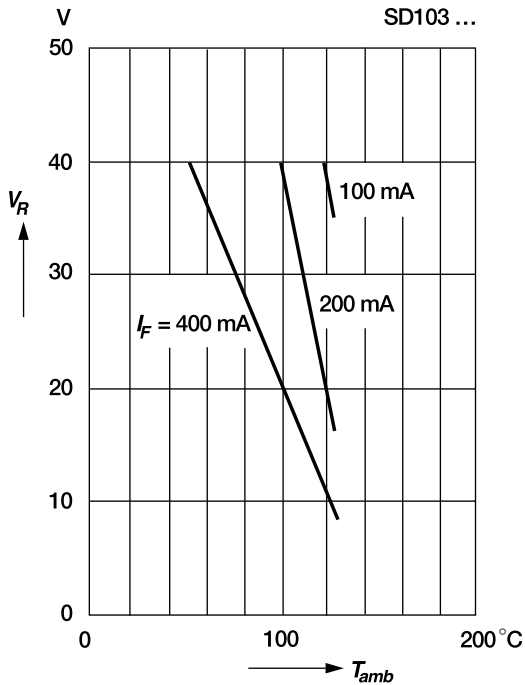
Rectangular pulse



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



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



**Typical capacitance versus reverse voltage**

