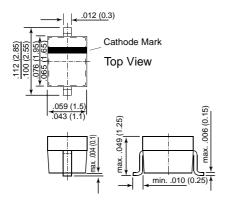
# SD103AWS THRU SD103CWS

### **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 <sub>RRM</sub>	40	Volts
	SD103BWS	Vrrm	30	Volts
	SD103CWS	V <sub>RRM</sub>	20	Volts
Power Dissipation at T <sub>amb</sub> = 25°C		P <sub>tot</sub>	150 <sup>1)</sup>	mW
Single Cycle Surge 10 μs Square Wave		IFSM	2	Amps
Junction Temperature		Tj	125 <sup>1)</sup>	°C
Storage Temperature Range		Ts	– 55 to +150 <sup>1)</sup>	°C
Thermal Resistance Junction to Ambient Air		Rөja	650	°C/W

### NOTES

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



# SD103AWS THRU SD103CWS

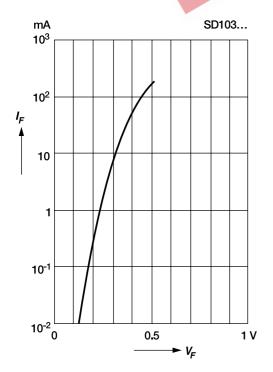
### **ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified

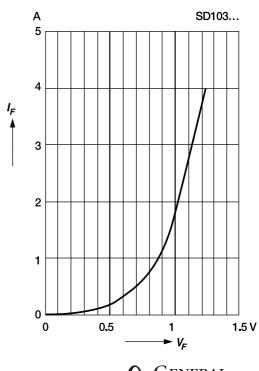
		SYMBOL	MIN.	TYP.	MAX.	UNIT
Leakage Current						
at $V_R = 30 V$	SD103AWS	IR	_	_	5	μΑ
at $V_R = 20 \text{ V}$	SD103BWS	IR	_	_	5	μΑ
at V <sub>R</sub> = 10 V	SD103CWS	IR	_	_	5	μΑ
Forward Voltage Drop						
at IF = 20 mA		VF	_	_	0.37	V
at I <sub>F</sub> = 200 mA		VF	_	-	0.6	V
Junction Capacitance		_		50		
at $VR = 0 V$ , $f = 1 MHz$		Ctot	_	50	_	pF
Reverse Recovery Time at IF = IR = 50 mA to 200 mA, recover to 0.1 IR		t <sub>rr</sub>	_	10	_	ns
			几卷	CL		
		3	3 40.			
			20,			
RATINGS A	ND CHARACTE	RISTICS S	5D103AWS	THRU SI	D103CAW	S
		11				

## 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%

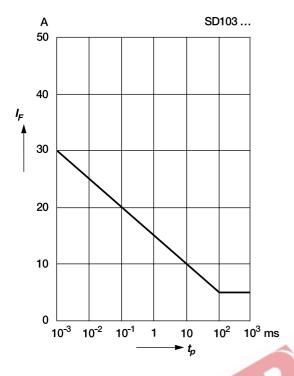




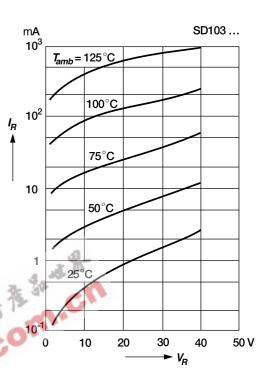
### **RATINGS AND CHARACTERISTICS SD103AWS THRU SD103CAWS**

# Typical non repetitive forward surge current versus pulse width

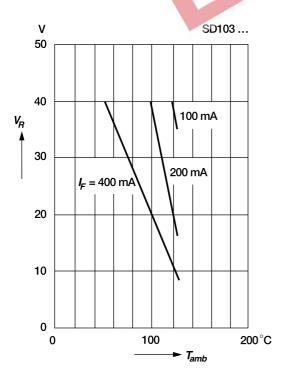
Rectangular pulse



## Typical variation of reverse current at various temperatures



Blocking voltage deration versus temperature at various average forward currents



Typical capacitance versus reverse voltage

