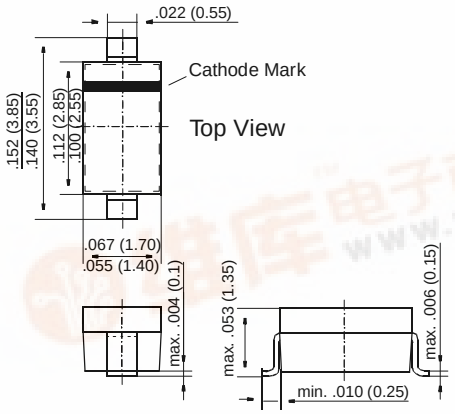
SD103AW THRU SD103CW

Schottky Diodes

SOD-123



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 MiniMELF case with the type designation LL103A ... LL103C and DO-35 case with the type designations SD103A .. SD103C.

MECHANICAL DATA

Case: SOD-123 Plastic Case
Weight: approx. 0.01 g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

		Symbol	Value	Unit
Peak Inverse Voltage	**SD103AW**	V_{RRM}	40	V
	SD103BW	V_{RRM}	30	V
	SD103CW	V_{RRM}	20	V
Power Dissipation (Infinite Heat Sink)		P_{tot}	400 [2]	mW
Single Cycle Surge 10 µs Square Wave		I_{FSM}	2	A
Junction Temperature		T_j	125 [2]	°C
Storage Temperature Range		T_S	–55 to +150 [2]	°C

[2] Valid provided that electrodes are kept at ambient temperature

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SD103AW THRU SD103CW

ELECTRICAL CHARACTERISTICS

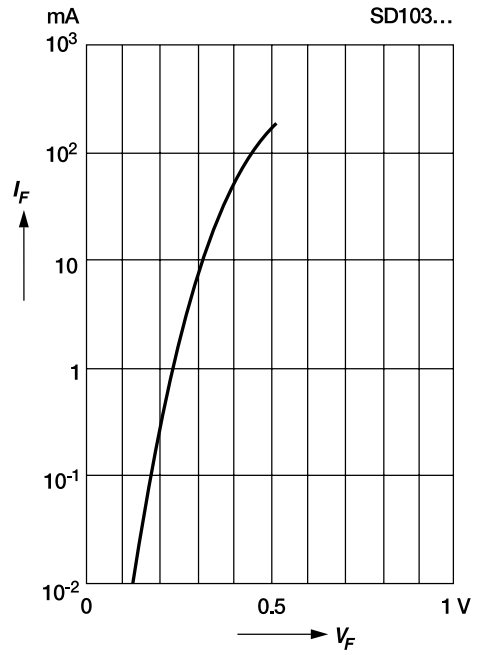
Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
Leakage Current at V_R = 30 V **SD103AW** at V_R = 20 V **SD103BW** at V_R = 10 V **SD103CW**	 I_R I_R I_R	 – – –	 – – –	 5 5 5	 µA µA µA
Forward Voltage Drop at I_F = 20 mA at I_F = 200 mA	 V_F V_F	 – –	 – –	 0.37 0.6	 V 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
Thermal Resistance Junction to Ambient Air	R_{thJA}	–	–	0.3 [2]	K/mW

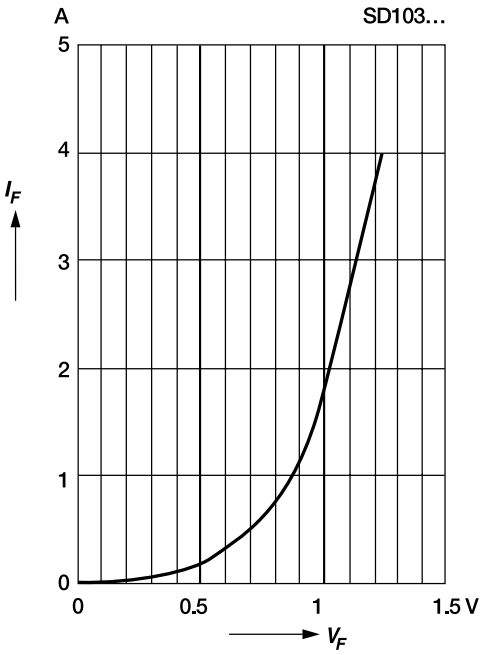
[2] Valid provided that electrodes are kept at ambient temperature (SOD-123)

RATINGS AND CHARACTERISTICS SD103AW THRU SD103CW

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%



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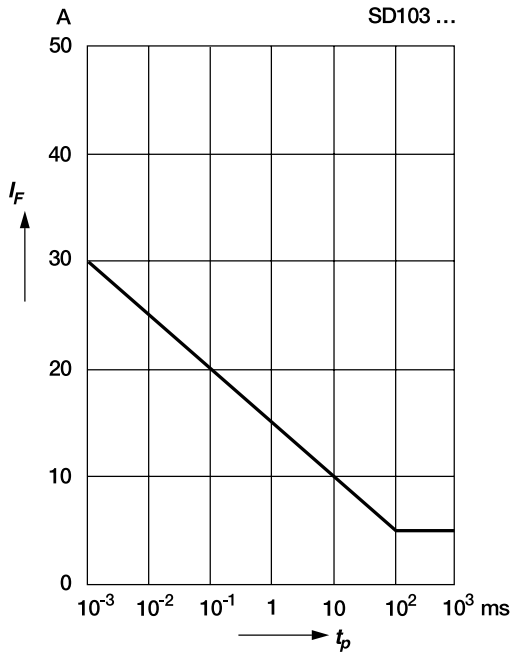
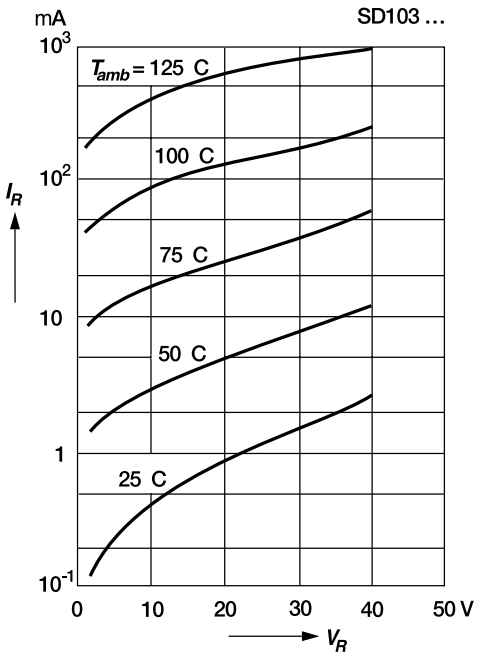
RATINGS AND CHARACTERISTIC CURVES SD103AW THRU SD103CW

Typical non repetitive forward surge current versus pulse width

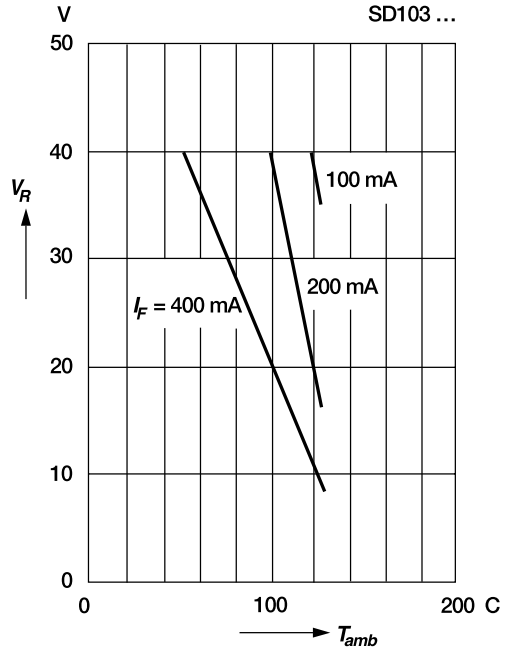
Rectangular pulse



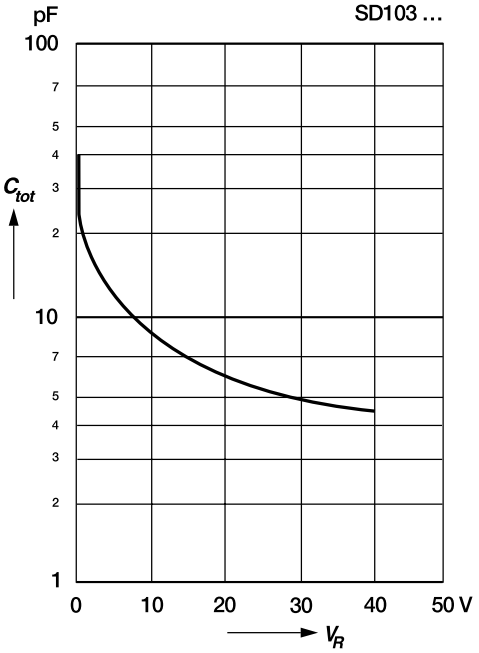
Typical variation of reverse current at various temperatures



Blocking voltage deration versus temperature at various average forward currents



Typical capacitance versus reverse voltage



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