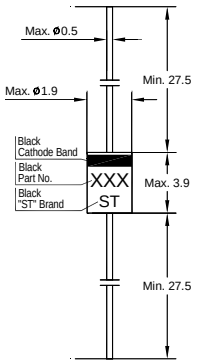
SD103A...SD103C

SILICON SCHOTTKY BARRIER DIODES

for general purpose applications

The SD103A, B, C 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 uses are for click suppression, efficient full wave bridges in telephone subsets, and as blocking diodes in rechargeable low voltage battery system.
This diode is also available in MiniMELF case with type designation LL103A, B, C.



Glass Case DO-35
Dimensions in mm

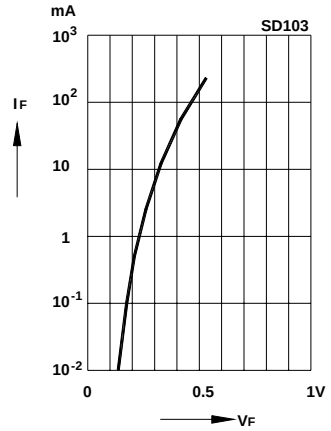
Absolute Maximum Ratings (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Peak Reverse Voltage	SD103A SD103B SD103C	V_{RRM}	40 30 20	V
Power Dissipation		P_{tot}	400 [1)]	mW
Single Cycle Surge 60 Hz Sine Wave		I_{FSM}	15	A
Junction Temperature		T_j	125	°C
Storage Temperature Range		T_S	- 55 to + 175	°C
[1)] Valid provided the leads direct at the case are kept at ambient temperature.				

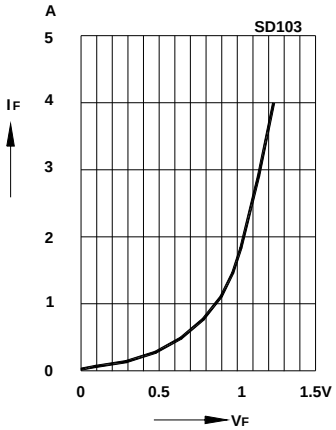
Characteristics at T_a = 25 °C

Parameter		Symbol	Typ.	Max.	Unit
Forward Voltage at I_F = 20 mA at I_F = 200 mA		 V_F V_F	 - -	 0.37 0.6	 V V
Reverse Leakage Current at V_R = 30 V at V_R = 20 V at V_R = 10 V	 SD103A SD103B SD103C	I_R	-	5	µA
Junction Capacitance at V_R = 0 V, f = 1 MHz		C_{tot}	50	-	pF
Reverse Recovery Time at I_F = I_R = 5 mA to 200 mA , recover to 0.1 I_R		t_{rr}	10	-	ns

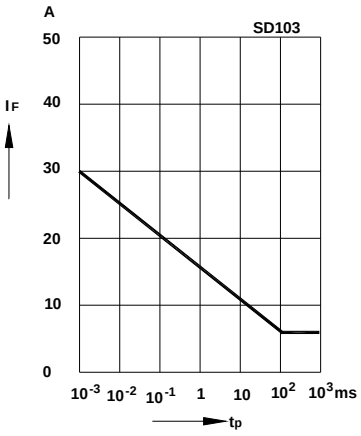
Typical variation of fwd. current vs.fwd.voltage for primary conduction through the Schottky barrier



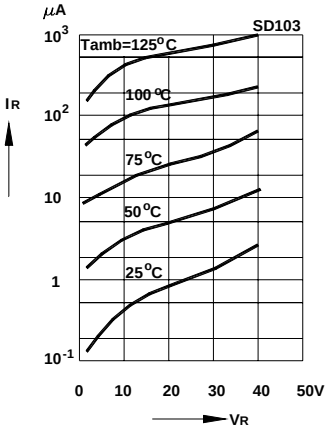
Typical high current forward conduction curve
tp=300μs, duty cycle=2%



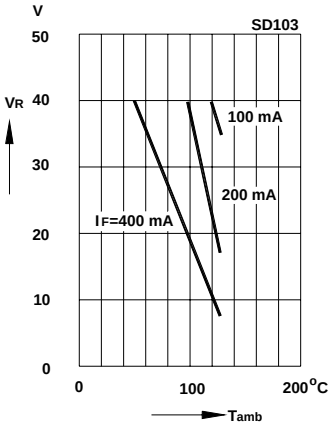
Typical non repetitive forward surge current versus pulse width
Rectangular pulse



Typical variation of reverse current at various temperatures



Blocking voltage deration versus temperature at various average forward currents



Typical capacitance versus reverse voltage