

SD103A - SD103C

SCHOTTKY BARRIER DIODES

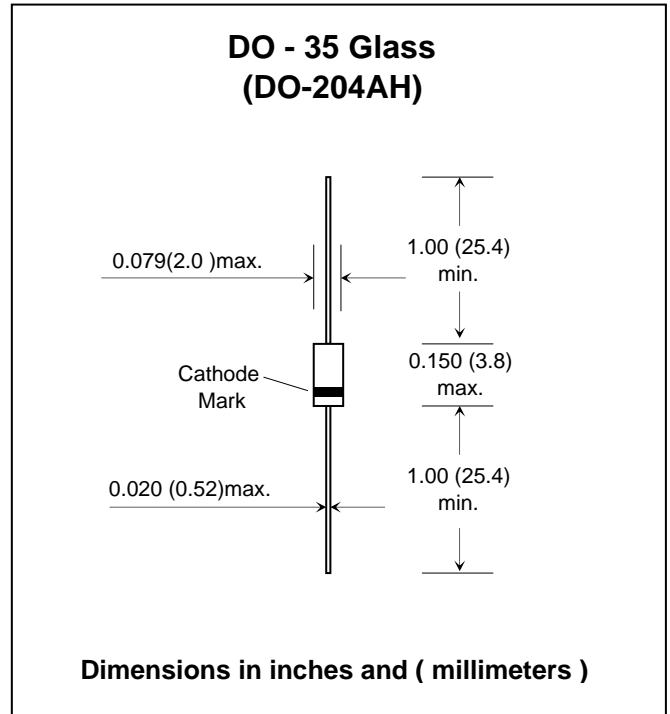
FEATURES :

- 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 MiniMELF case with type designations LL103A thru LL103C.
- Pb / RoHS Free

MECHANICAL DATA :

Case: DO-35 Glass Case

Weight: approx. 0.13g



Maximum Ratings and Thermal Characteristics (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	SD103A	40	V
	SD103B	30	
	SD103C	20	
Single Cycle Surge 60 Hz Sine Wave	I_{FSM}	15	A
Power Dissipation (Infinite Heatsink)	P_D	400 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	0.3 ⁽¹⁾	°C/mW
Junction Temperature	T_J	125 ⁽¹⁾	°C
Storage temperature range	T_S	-55 to + 150 ⁽¹⁾	°C

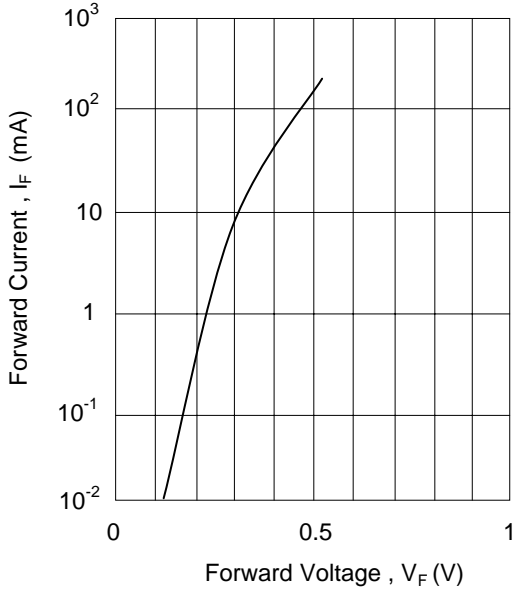
Note: (1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature.

Electrical Characteristics ($T_J = 25\text{ °C}$ unless otherwise noted)

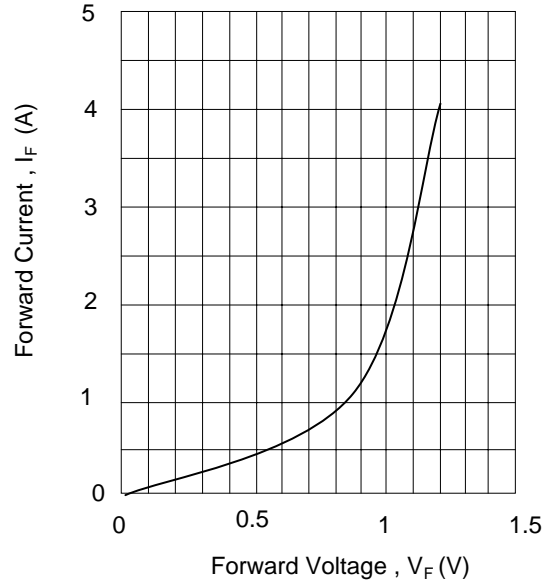
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Current	SD103A	$V_R = 30\text{ V}$	-	-	5	μA
	SD103B	$V_R = 20\text{ V}$	-	-	5	
	SD103C	$V_R = 10\text{ V}$	-	-	5	
Forward Voltage Drop	V_F	$I_F = 20\text{mA}$	-	-	0.37	V
		$I_F = 100\text{mA}$	-	-	0.55	
Junction Capacitance	C_{tot}	$V_R = 0\text{ V}, f = 1\text{MHz}$	-	50	-	pF
Reverse Recovery Time	T_{rr}	$I_F = I_R = 50\text{mA to } 200\text{mA}$ recover to $0.1I_R$	-	10	-	ns

RATING AND CHARACTERISTIC CURVES (SD103A - SD103C)

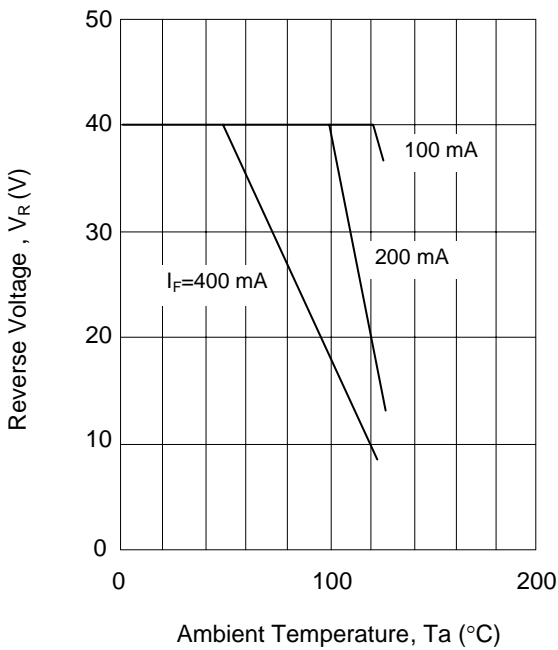
Typical variation of forward current and forward voltage for primary conduction through the schottky barrier



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



Blocking voltage deration versus temperature at various average forward currents



Typical variation of reverse current at various temperatures

