

SD103A - SD103C

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**

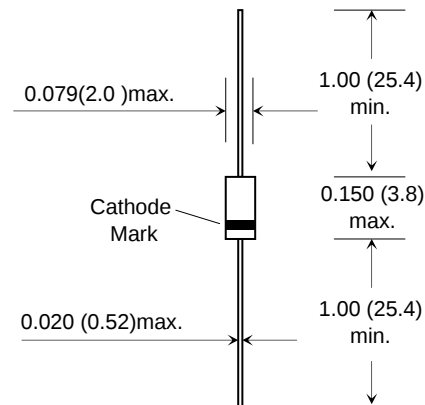
MECHANICAL DATA :

Case: DO-35 Glass Case

Weight: approx. 0.13g

SCHOTTKY BARRIER DIODES

DO - 35 Glass (DO-204AH)



Dimensions in inches and (millimeters)

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	40 30 20	V
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

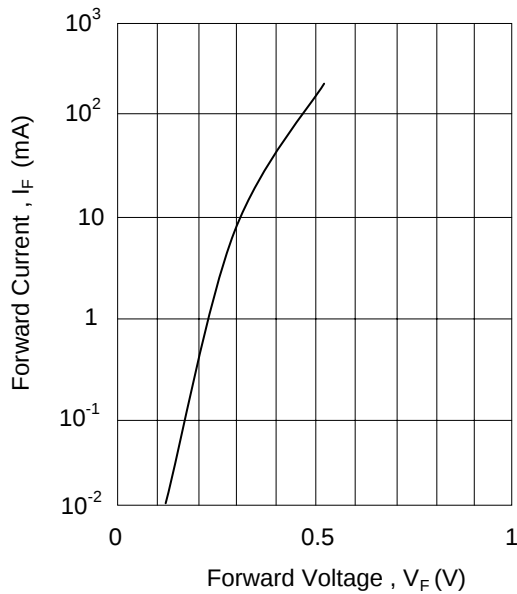
Note: (1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature.

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

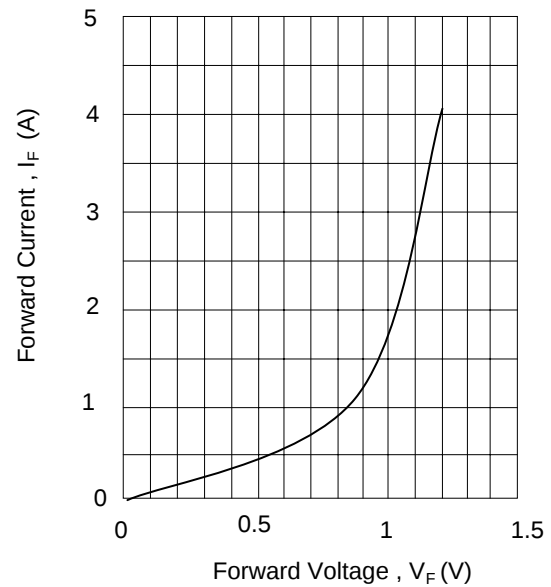
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Current	I_R	$V_R = 30\text{ V}$ $V_R = 20\text{ V}$ $V_R = 10\text{ V}$	-	-	5 5 5	μA
Forward Voltage Drop	V_F	$I_F = 20\text{ mA}$ $I_F = 100\text{ mA}$	-	-	0.37 0.55	V
Junction Capacitance	C_{tot}	$V_R = 0\text{ V}, f = 1\text{ MHz}$	-	50	-	pF
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)

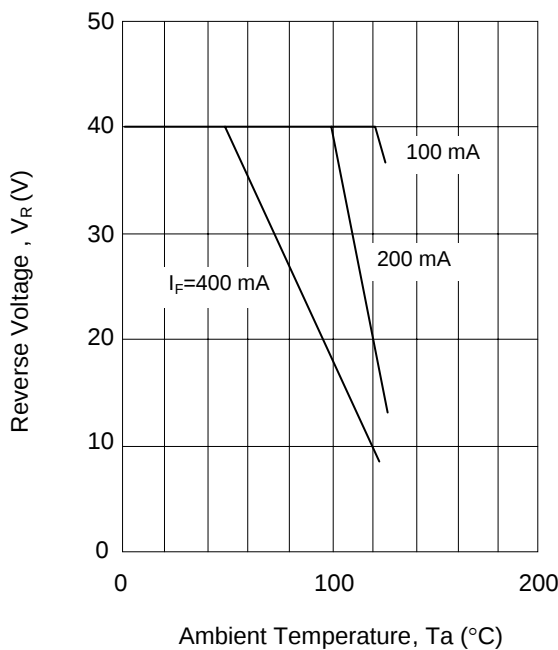
Typical variation of forward current and forward voltage for primary conduction through the schottky barrier



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



Blocking voltage deration versus temperature at various average forward currents



Typical variation of reverse current at various temperatures

