

SD103A - SD103C

FEATURES :

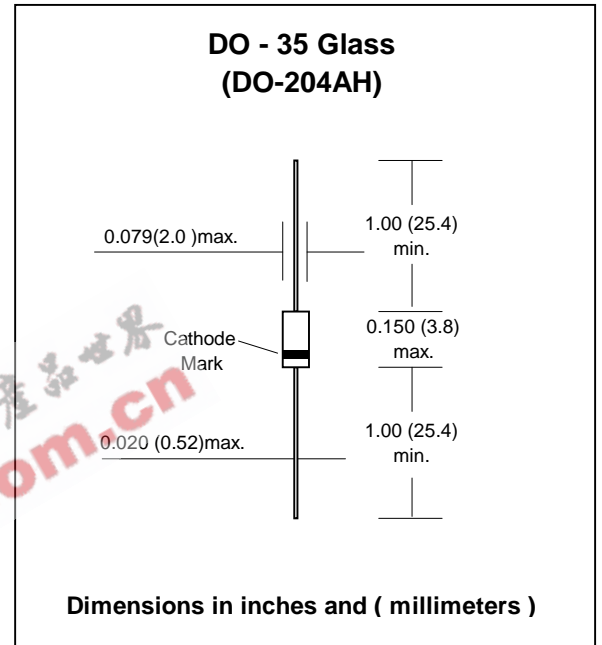
- For general purpose applications
- The SD103 series is a Metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring.
- The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and 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



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 _{θJA}	0.3 ⁽¹⁾	°C/mW
Junction Temperature	T _J	125 ⁽¹⁾	°C
Storage temperature range	T _S	-55 to + 150 ⁽¹⁾	°C

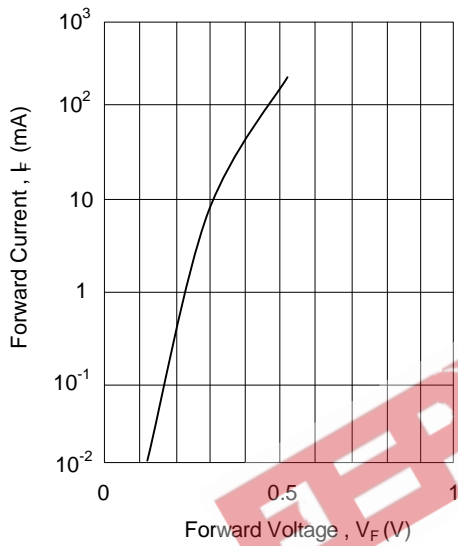
Note: (1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature.

Electrical Characteristics (T_J = 25°C unless otherwise noted)

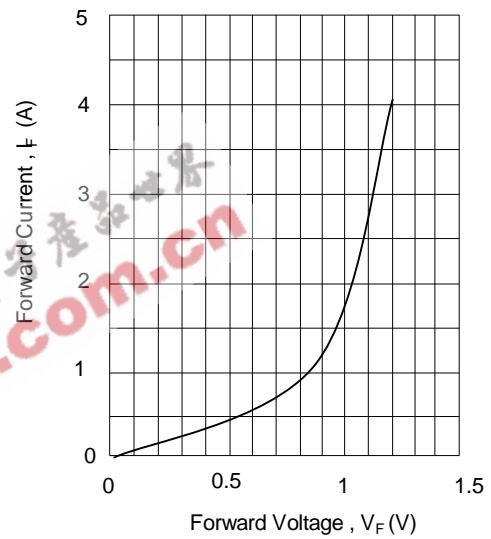
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Current	SD103A	V _R = 30 V	-	-	5	μA
	SD103B	V _R = 20 V	-	-	5	
	SD103C	V _R = 10 V	-	-	5	
Forward Voltage Drop	V _F	I _F = 20mA	-	-	0.37	V
		I _F = 200mA	-	-	0.6	
Junction Capacitance	C _{tot}	V _R = 0 V, f = 1MHz	-	50	-	pF
Reverse Recovery Time	T _{rr}	I _F = I _R = 50mA to 200mA recover to 0.1I _R	-	10	-	ns

RATING AND CHARACTERISTIC CURVES (SD103A - SD103C)

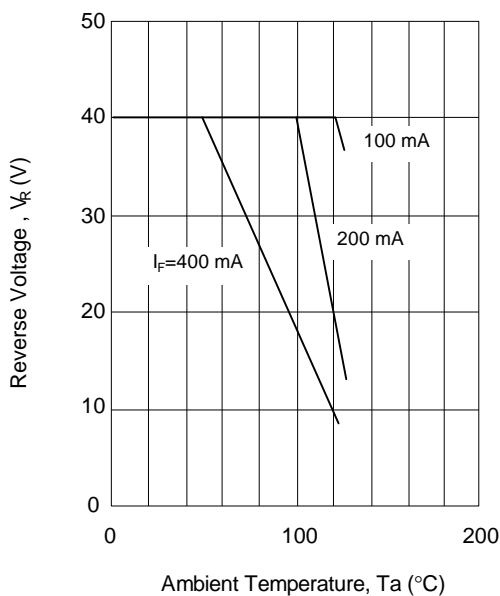
Typical variation of forward current and forward voltage for primary conduction through the schottky barrier



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

