

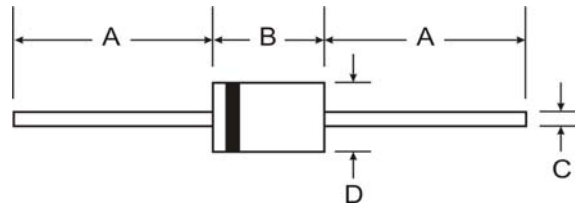


**THE DATASHEET OF  
SD103B-F**



## Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Low Reverse Recovery Time
- Low Reverse Capacitance
- Lead Free Finish, RoHS Compliant (Note 2)



## Mechanical Data

- Case: DO-35
- Case Material: Glass
- Moisture Sensitivity: Level 1 per J-STD-020C
- Leads: Solderable per MIL-STD-202, Method 208
- Terminals: Finish — Sn96.5Ag3.5. Solderable per MIL-STD-202, Method 208 (E3)
- Polarity: Cathode Band
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.13 grams (approximate)

DO-35		
Dim	Min	Max
A	25.40	—
B	—	4.00
C	—	0.60
D	—	2.00
All Dimensions in mm		

## Maximum Ratings @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	SD103A	SD103B	SD103C	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	40	30	20	V
Working Peak Reverse Voltage	V <sub>RWM</sub>				
DC Blocking Voltage	V <sub>R</sub>				
RMS Reverse Voltage	V <sub>R(RMS)</sub>	28	21	14	V
Forward Continuous Current	I <sub>FM</sub>	350			mA
Repetitive Peak Forward Current (Note 1) @ t ≤ 1.0s	I <sub>FRM</sub>	1.0			A
Non-Repetitive Peak Forward Surge Current 8.3 ms Half Sine Wave	I <sub>FSM</sub>	15			A
Power Dissipation (Note 1)	P <sub>d</sub>	400			mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R <sub>θJA</sub>	300			°C/W
Operating Junction Temperature	T <sub>j</sub>	125			°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150			°C

## Electrical Characteristics @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 3)	V <sub>(BR)R</sub>	40 30 20	—	—	V	I <sub>R</sub> = 100μA
Maximum Forward Voltage Drop	V <sub>FM</sub>	—	—	0.37 0.60	V	I <sub>F</sub> = 20mA I <sub>F</sub> = 200mA
Maximum Peak Reverse Current (Note 3)	I <sub>RM</sub>	—	—	5.0	μA	V <sub>R</sub> = 30V V <sub>R</sub> = 20V V <sub>R</sub> = 10V
Total Capacitance	C <sub>T</sub>	—	50	—	pF	V <sub>R</sub> = 0V, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	—	10	—	ns	I <sub>F</sub> = I <sub>R</sub> = 50mA to 200mA, I <sub>tr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω

- Notes:
1. Valid provided that device terminals are kept at ambient temperature.
  2. EC Directive 2002/95/EC (RoHS) revision 13.2.2003. Glass and high temperature solder exemptions applied where applicable, see *EU Directive Annex Notes 5 and 7*.
  3. Short duration test pulse used to minimize self-heating effect.

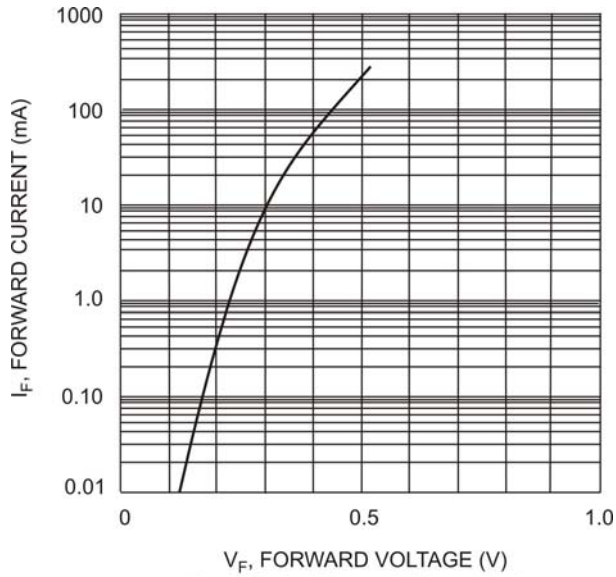


Fig. 1 Typical Forward Characteristics

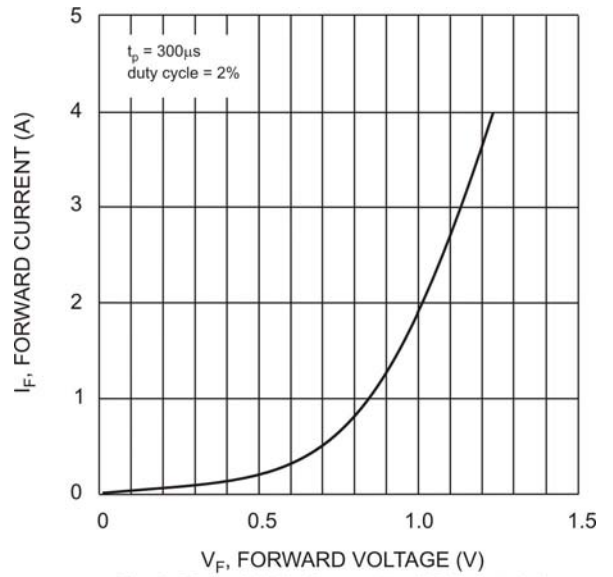


Fig. 2 Typical High Current Fwd Characteristics

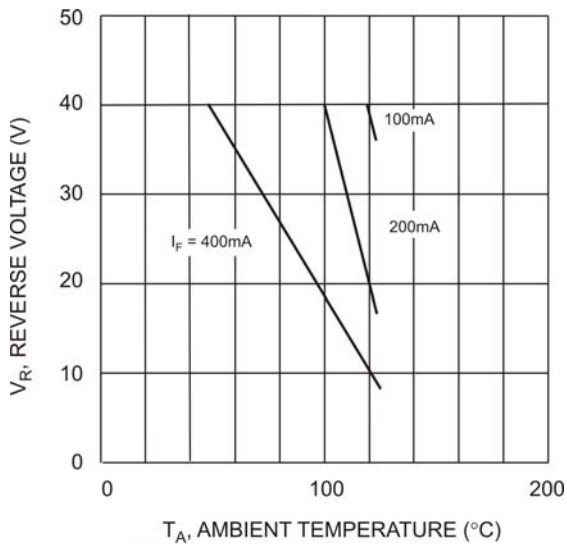


Fig. 3 Blocking Voltage Derating Curves

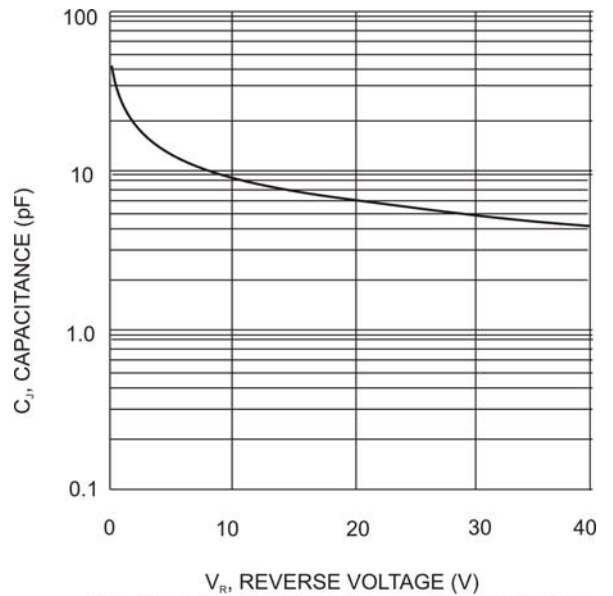


Fig. 4 Typ. Junction Capacitance vs Reverse Voltage

**Ordering Information** (Note 4)

Device	Packaging	Shipping
SD103A-A	DO-35	10,000 / Ammo Pak
SD103A-T	DO-35	10,000 / Tape & Reel
SD103B-A	DO-35	10,000 / Ammo Pak
SD103B-T	DO-35	10,000 / Tape & Reel
SD103C-A	DO-35	10,000 / Ammo Pak
SD103C-T	DO-35	10,000 / Tape & Reel

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



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