SD103A - SD103C

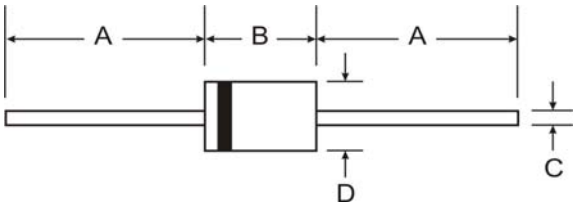
SCHOTTKY BARRIER DIODE

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_A = 25°C unless otherwise specified

Characteristic	Symbol	SD103A	SD103B	SD103C	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	30	20	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	21	14	V
Forward Continuous Current	I_{FM}	350			mA
Repetitive Peak Forward Current (Note 1) @ t ≤ 1.0s	I_{FRM}	1.0			A
Non-Repetitive Peak Forward Surge Current 8.3 ms Half Sine Wave	I_{FSM}	15			A
Power Dissipation (Note 1)	P_d	400			mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	300			°C/W
Operating Junction Temperature	T_j	125			°C
Storage Temperature Range	T_{STG}	-55 to +150			°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 3)	SD103A SD103B SD103C	$V_{(BR)R}$	40 30 20	—	—	V	I_R = 100μA
Maximum Forward Voltage Drop		V_{FM}	—	—	0.37 0.60	V	I_F = 20mA I_F = 200mA
Maximum Peak Reverse Current (Note 3)	SD103A SD103B SD103C	I_{RM}	—	—	5.0	μA	V_R = 30V V_R = 20V V_R = 10V
Total Capacitance		C_T	—	50	—	pF	V_R = 0V, f = 1.0MHz
Reverse Recovery Time		t_{rr}	—	10	—	ns	I_F = I_R = 50mA to 200mA, I_{rr} = 0.1 x I_R, R_L = 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.

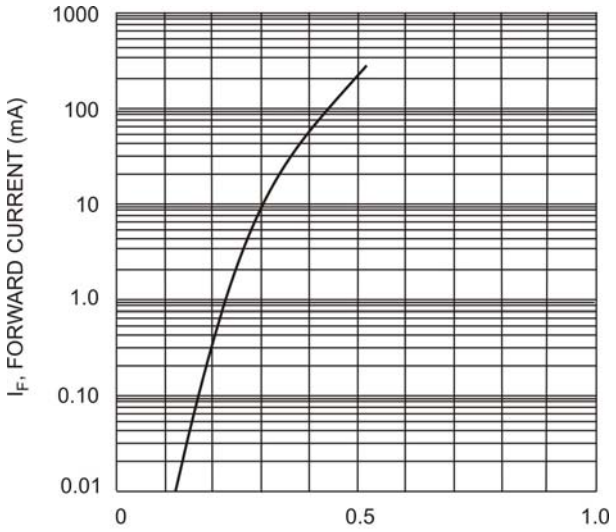


Fig. 1 Typical Forward Characteristics

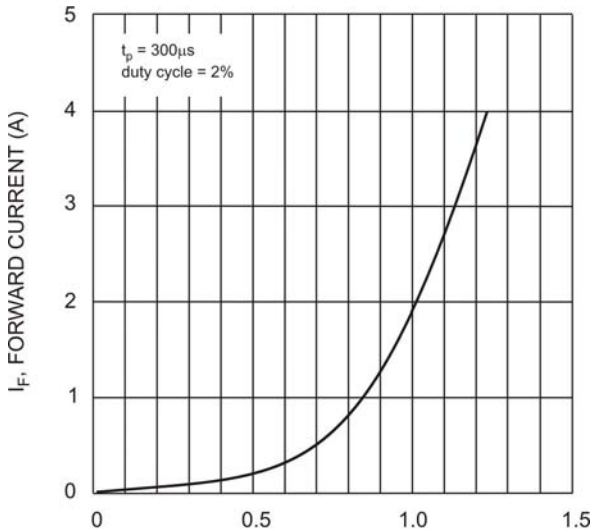


Fig. 2 Typical High Current Fwd Characteristics

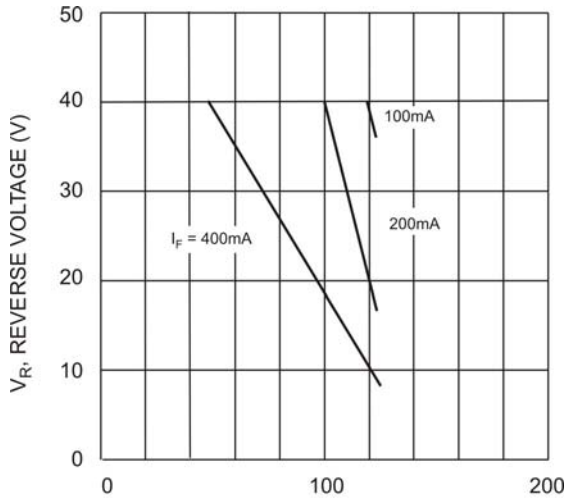


Fig. 3 Blocking Voltage Derating Curves

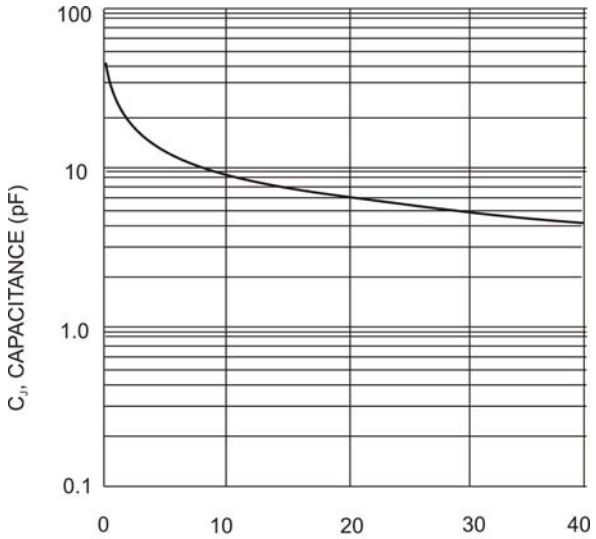


Fig. 4 Typ. Junction Capacitance vs Reverse Voltage

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