



## SCHOTTKY BARRIER DIODE

### SD103AW THRU SD103CW

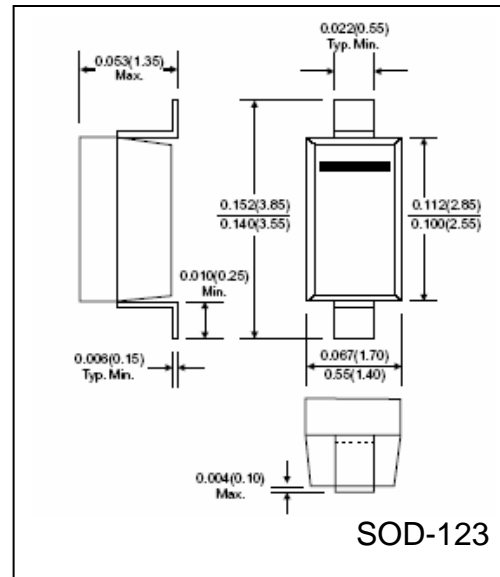
VOLTAGE RANGE 20 To 40 Volts  
CURRENT 350 mA

#### FEATURES

- Fast Switching speed
- Low forward voltage
- Low capacitance
- Guard ring for transient and ESD protection
- Also available in the DO-35 package as SD103A and Mini-Melf as LL103A

#### MECHANICAL DATA

- Case: SOD-123 Plastic
- Terminals: solderable per MIL-STD-202 Method 208
- Polarity: Color band denotes cathode end
- Weight: 0.00035 ounce, 0.01 gram



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified

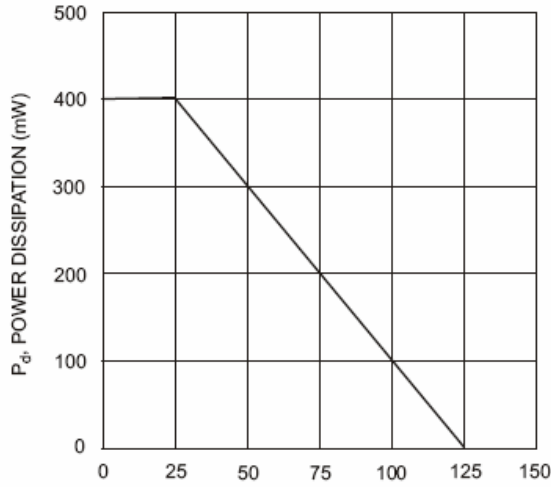
|  | SYMBOLS         | SD103CW              | SD103BW              | SD103CW              | UNIT         |
|--|-----------------|----------------------|----------------------|----------------------|--------------|
| Repetitive Peak Reverse Voltage  | $V_{RRM}$       | 40                   | 30                   | 20                   | Volt         |
| Continuous Reverse Voltage   | $V_R$           | 40                   | 30                   | 20                   | Volt         |
| RMS Reverse Voltage  | $V_{rms}$       | 28                   | 21                   | 14                   | Volt         |
| Forward Continuous Current (Note 1)  | $I_{FM}$        | 350                  |                      |                      | mA           |
| Repetitive Peak Forward Surge Current @ $T = 1.0S$                                       | $I_{FSM}$       | 1.55                 |                      |                      | Amps         |
| Non-Repetitive Peak Forward Surge Current 8.3 mS   | $I_{FSM}$       | 15                   |                      |                      | Amps         |
| Maximum Forward Voltage @ 20mA<br>200mA  | $V_F$           | 0.37<br>0.60         |                      |                      | Volts        |
| Maximum Leakage Current, @ $T_J = 25^\circ$  | $I_R$           | 5.0<br>@ $V_F = 30V$ | 5.0<br>@ $V_F = 20V$ | 5.0<br>@ $V_F = 10V$ | $\mu A$      |
| Maximum Reverse Recovery Time<br>$I_F = 10mA, I_R = 10mA, I_{RR} = 1mA, R_L = 100\Omega$ | $t_{rr}$        | 10                   |                      |                      | nS           |
| Power dissipation (Note 1)   | $P_{TOT}$       | 400                  |                      |                      | mW           |
| Typical Junction Capacitance, $V_F = 1V, f = 1MHz$                                       | $C_J$           | 50                   |                      |                      | pF           |
| Typical Thermal Resistance   | $R_{\theta JA}$ | 300                  |                      |                      | $^\circ C/W$ |
| Operating Junction Temperature Range   | $T_J$           | (-55 to +150)        |                      |                      | $^\circ C$   |
| Storage Temperature Range  | $T_{STG}$       | (-55 to +150)        |                      |                      | $^\circ C$   |

#### Notes:

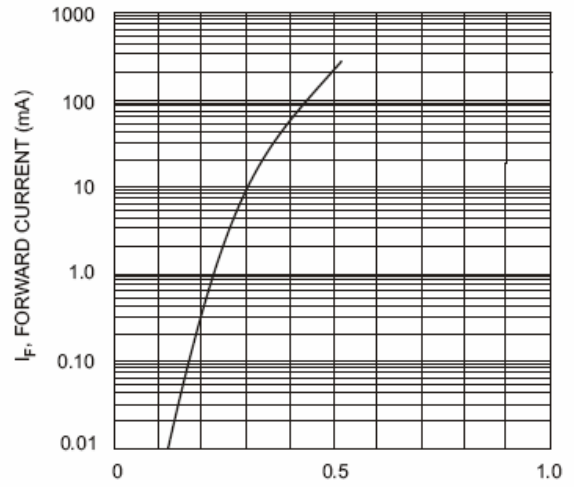
1. Valid provided terminals are kept at ambient



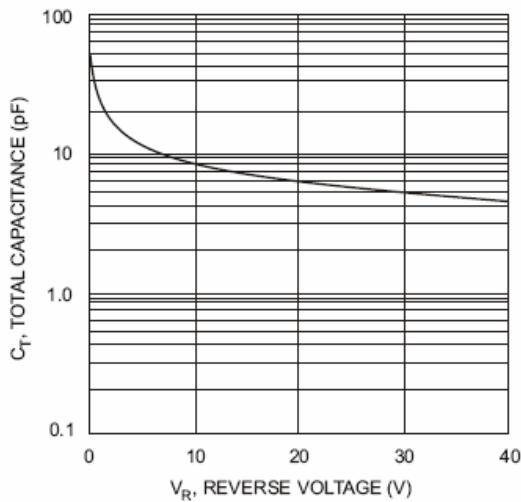
**RATINGS AND CHARACTERISTIC CURVES SD103AW THRU SD103CW**



T<sub>A</sub>, AMBIENT TEMPERATURE (°C)  
Fig.1 Power Derating Curve



V<sub>F</sub>, FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics



V<sub>R</sub>, REVERSE VOLTAGE (V)  
Fig. 3 Typ. Total Capacitance vs Reverse Voltage