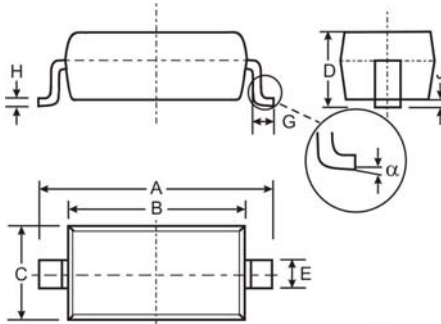


Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Very Low Reverse Capacitance
- Lead Free/RoHS Compliant (Note 3)

Mechanical Data

- Case: SOD-123
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Leads: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe)
- Polarity: Cathode Band
- Marking: Date Code and Type Code, See Page 3
- Type Codes: SD103AW S4
SD103BW S5 or S4
SD103CW S6 or S5 or S4
- Ordering Information: See Page 3
- Weight: 0.01 grams (approximate)



| SOD-123 | | |
|----------------------|--------------|------|
| Dim | Min | Max |
| A | 3.55 | 3.85 |
| B | 2.55 | 2.85 |
| C | 1.40 | 1.70 |
| D | — | 1.35 |
| E | 0.45 | 0.65 |
| | 0.55 Typical | |
| G | 0.25 | — |
| H | 0.11 Typical | |
| J | — | 0.10 |
| α | 0° | 8° |
| All Dimensions in mm | | |

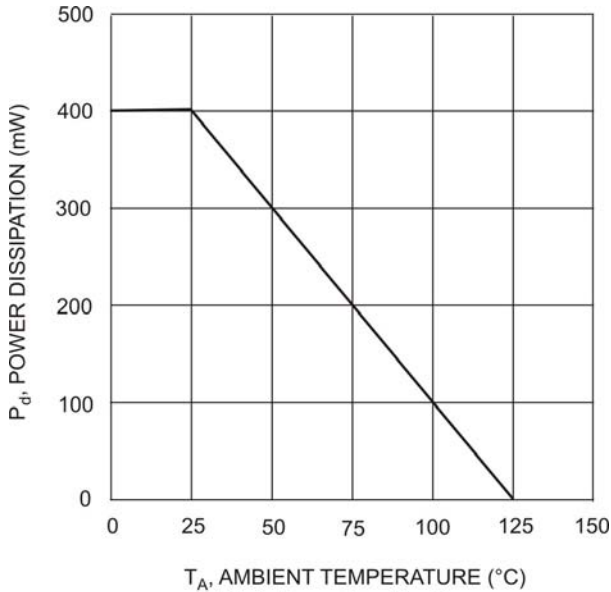
Maximum Ratings @T_A = 25°C unless otherwise specified

| Characteristic | Symbol | SD103AW | SD103BW | SD103CW | Unit |
|--|-----------------------------------|-------------|---------|---------|------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 40 | 30 | 20 | V |
| Working Peak Reverse Voltage | V _{RWM} | — | — | — | — |
| DC Blocking Voltage | V _R | — | — | — | — |
| RMS Reverse Voltage | V _{R(RMS)} | 28 | 21 | 14 | V |
| Forward Continuous Current (Note 1) | I _{FM} | 350 | | | mA |
| Non-Repetitive Peak Forward Surge Current @ t ≤ 1.0s | I _{FSM} | 1.5 | | | A |
| Power Dissipation (Note 1) | P _d | 400 | | | mW |
| Thermal Resistance, Junction to Ambient Air (Note 1) | R _{θJA} | 300 | | | °C/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +125 | | | °C |

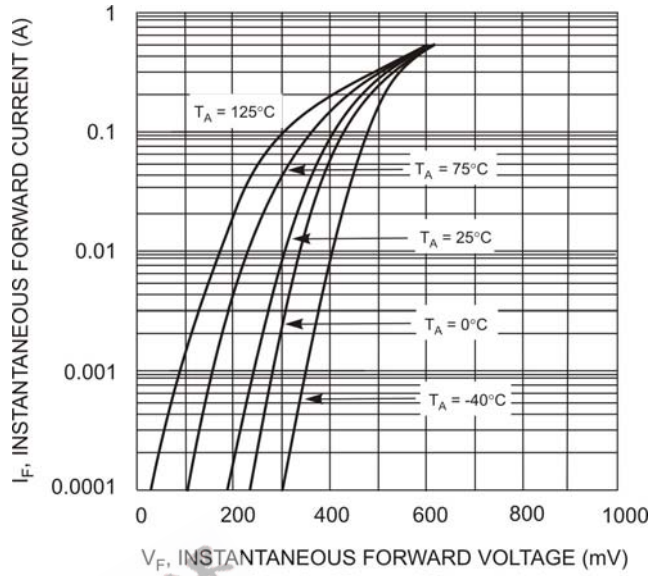
Electrical Characteristics @T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Condition |
|------------------------------------|-----------------|-----|-----|--------------|------|--|
| Reverse Breakdown Voltage (Note 2) | SD103AW | 40 | — | — | V | I _R = 100μA |
| | SD103BW | 30 | — | — | | |
| | SD103CW | 20 | — | — | | |
| Forward Voltage Drop | V _{FM} | — | — | 0.37 0.60 | V | I _F = 20mA I _F = 200mA |
| Peak Reverse Current (Note 2) | I _{RM} | — | — | 5.0 | μA | V _R = 30V V _R = 20V V _R = 10V |
| Total Capacitance | C _T | — | 28 | — | pF | V _R = 0V, f = 1.0MHz |
| Reverse Recovery Time | t _{rr} | — | 10 | — | ns | I _F = I _R = 200mA, I _{rr} = 0.1 x I _R , R _L = 100Ω |

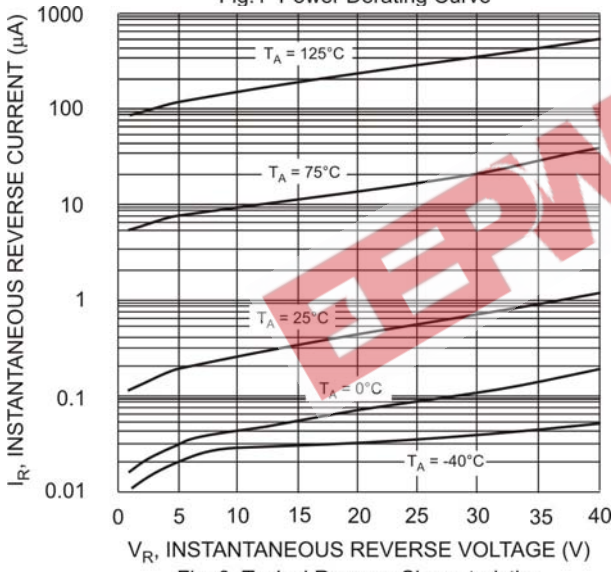
- Notes:
1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 2. Short duration test pulse used to minimize self-heating effect.
 3. No purposefully added lead.



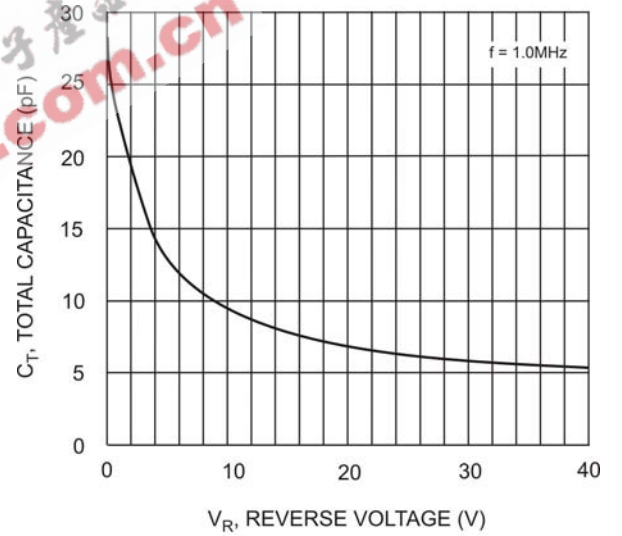
T_A , AMBIENT TEMPERATURE (°C)
Fig. 1 Power Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (mV)
Fig. 2 Typical Forward Characteristics



V_R , INSTANTANEOUS REVERSE VOLTAGE (V)
Fig. 3 Typical Reverse Characteristics



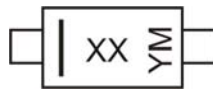
C_T , TOTAL CAPACITANCE (pF)
Fig. 4 Typ. Total Capacitance vs. Reverse Voltage

Ordering Information (Note 4)

| Device | Packaging | Shipping |
|-------------|-----------|--------------------|
| SD103AW-7-F | SOD-123 | 3000/Tape and Reel |
| SD103BW-7-F | SOD-123 | 3000/Tape and Reel |
| SD103CW-7-F | SOD-123 | 3000/Tape and Reel |

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

Marking Information



XX = Product Type Marking Code, See Page 1
 YM = Date Code Marking
 Y = Year (ex: T = 2006)
 M = Month (ex: 9 = September)

Date Code Key

| Year | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Code | J | K | L | M | N | P | R | S | T | U | V | W | X | Y | Z |

| Month | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | O | N | D |

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