

SD103A ... SD103C

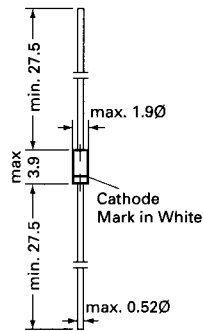
Silicon Schottky Barrier Diodes

for general purpose applications

The SD103A, B, C 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 uses are for click suppression, efficient full wave bridges in telephone subsets, and as blocking diodes in rechargeable low voltage battery system.

This diode is also available in MiniMELF case with type designation LL103A, B, C.

These diodes are delivered taped.
Details see "Taping".

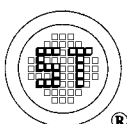


Glass case JEDEC DO-35
54 A 2 according to DIN 41880

Weight approx. 0.13g
Dimensions in mm

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

| | Symbol | Value | Unit |
|--|----------------------------|-------------------|------|
| Peak Reverse Voltage | SD103A V_{RRM} | 40 | V |
| | SD103B V_{RRM} | 30 | V |
| | SD103C V_{RRM} | 20 | V |
| Power Dissipation (Infinite Heatsink) $T_c = 3/8$ " from body derates at 4 mW/°C to 0 at 125 °C | P_{tot} | 400 ¹⁾ | mW |
| Junction Temperature | T_j | 125 | °C |
| Storage Temperature Range | T_s | -55 to + 175 | °C |
| Single Cycle Surge 60 Hz sinewave | I_{FSM} | 15 | A |
| ¹⁾ Valid provided that leads direct at the case are kept at ambient temperature | | | |



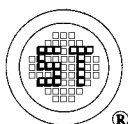
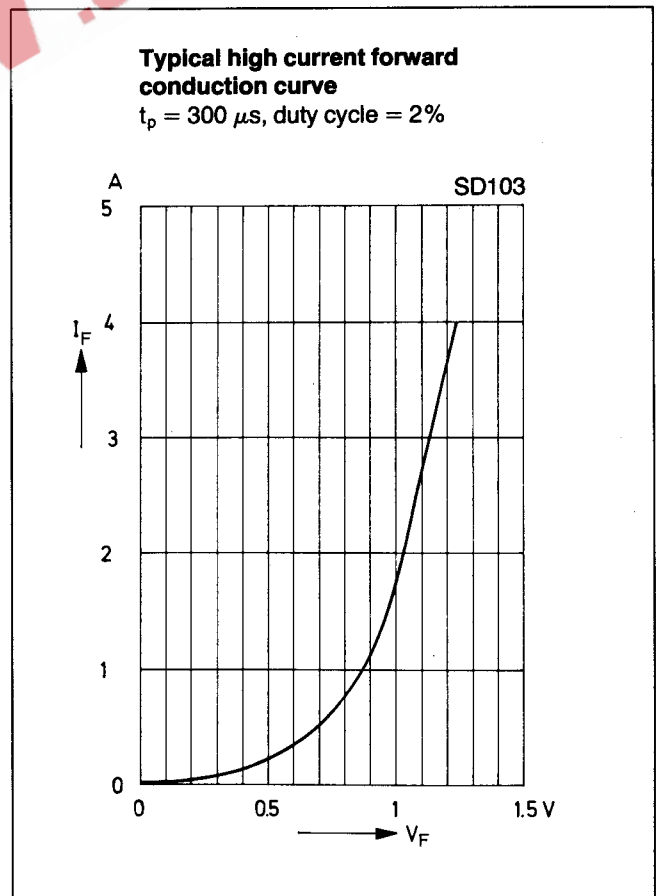
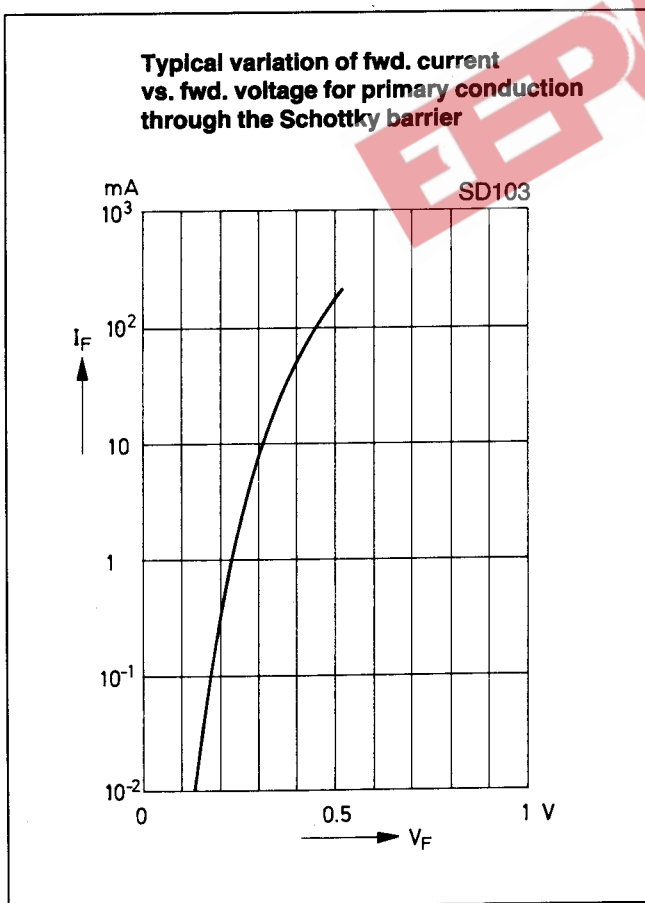
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SD103A ... SD103C

Characteristics at $T_{amb} = 25\text{ }^\circ\text{C}$

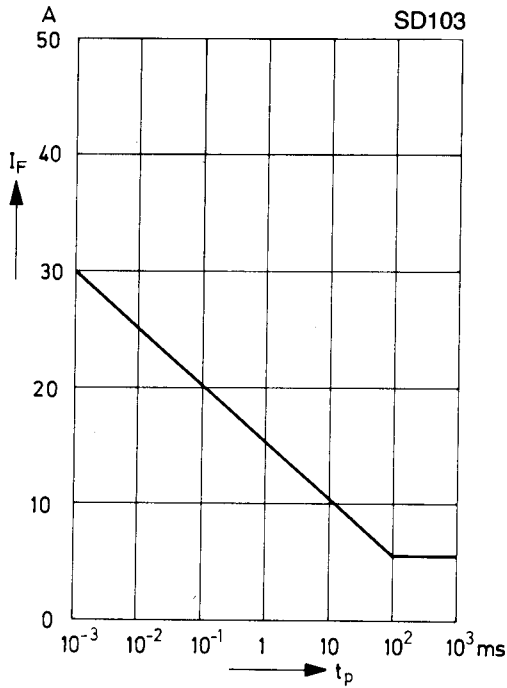
| | Symbol | Min. | Typ. | Max. | Unit |
|---|------------------------|------|------|------|---------------|
| Leakage Current at $V_R = 30\text{ V}$ | SD103A I_R | - | - | 5 | μA |
| at $V_R = 20\text{ V}$ | SD103B I_R | - | - | 5 | μA |
| at $V_R = 10\text{ V}$ | SD103C I_R | - | - | 5 | μA |
| Forward Voltage Drop at $I_F = 20\text{ mA}$ | V_F | - | - | 0.37 | V |
| at $I_F = 200\text{ mA}$ | V_F | - | - | 0.6 | V |
| Junction Capacitance at $V_R = 0\text{ V}$, $f = 1\text{ MHz}$ | C_{tot} | - | 50 | - | pF |
| Reverse Recovery Time at $I_F = I_R = 5\text{ mA}$ to 200 mA , recover to $0.1 I_R$ | t_{rr} | - | 10 | - | ns |



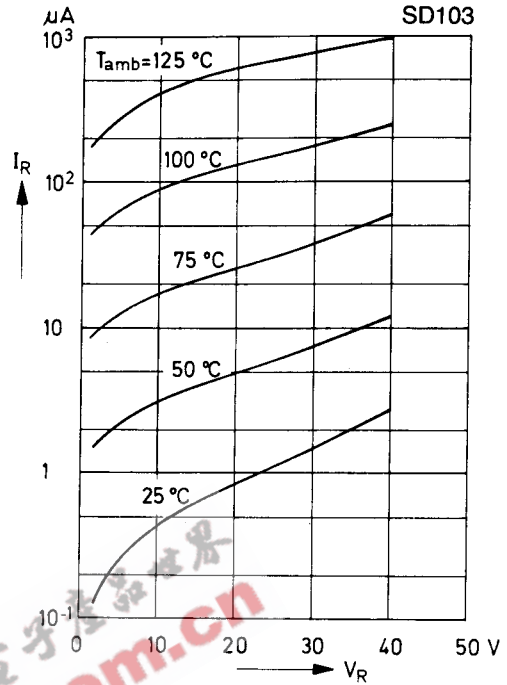
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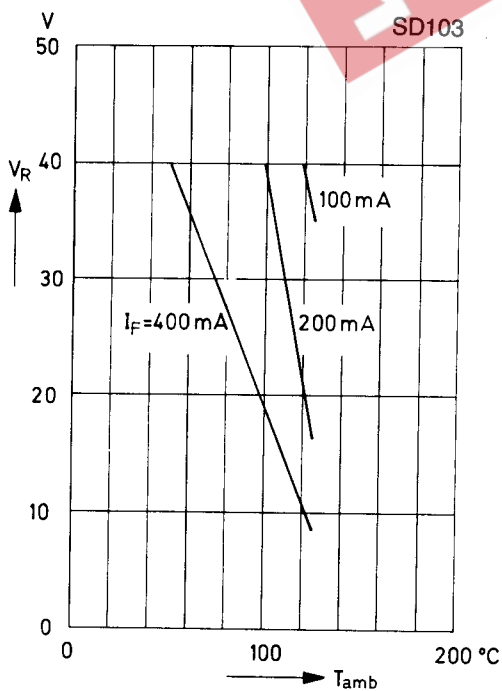
Typical non repetitive forward surge current versus pulse width
Rectangular pulse



Typical variation of reverse current at various temperatures



Blocking voltage deration versus temperature at various average forward currents



Typical capacitance versus reverse voltage

