# SD101A (1N6263) ... SD101C

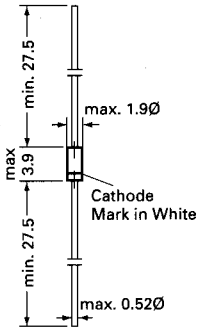
**Silicon Schottky Barrier Diodes**
for general purpose applications

The SD101 Series 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.

**The SD101A is equivalent to the 1N6263.**

This diode is also available in MiniMELF case with type designation LL101A, 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 °C)

| — | | Symbol | Value | Unit |
|---|---|---|---|---|
| Peak Reverse Voltage | **SD101A** | $V_{RRM}$ | 60 | V |
| | **SD101B** | $V_{RRM}$ | 50 | V |
| | **SD101C** | $V_{RRM}$ | 40 | V |
| Power Dissipation at $T_{amb}$ = 25 °C | | $P_{tot}$ | 400 [1] | mW |
| Max. Single Cycle Surge 10 s Squarewave | | $I_{FSM}$ | 2 | A |
| Junction Temperature | | $T_j$ | 200 | °C |
| Storage Temperature Range | | $T_S$ | -55 to + 200 | °C |

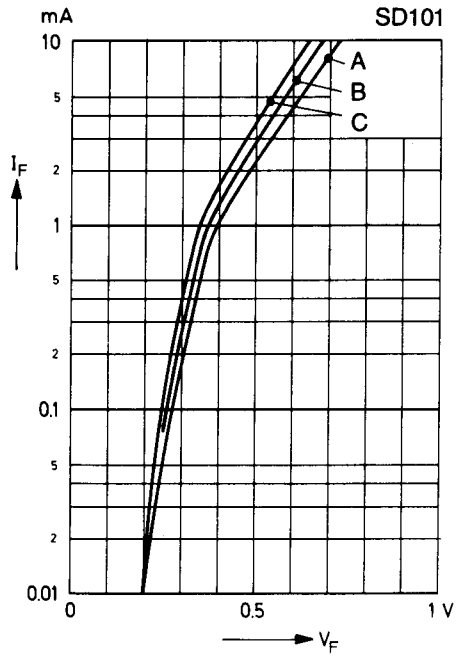
[1] Valid provided that leads direct at the case are kept at ambient temperature

**Characteristics** at $T_{amb}$ =25 °C

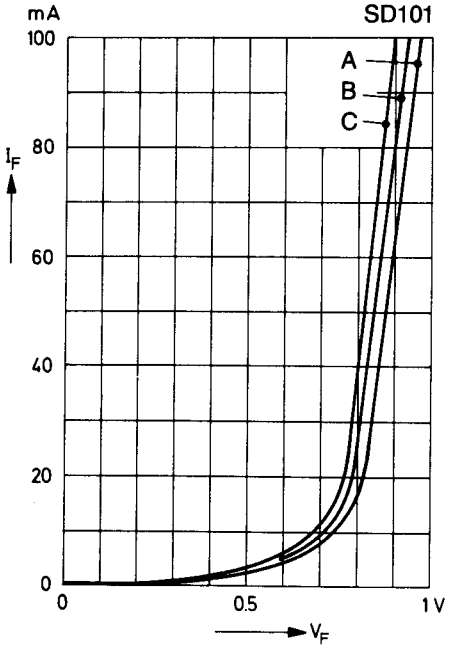
| | | Symbol | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Reverse Breakdown Voltage | | | | | | |
| at $I_R$ = 10 µA | **SD101A** | $V_{(BR)R}$ | 60 | - | - | V |
| | **SD101B** | $V_{(BR)R}$ | 50 | - | - | V |
| | **SD101C** | $V_{(BR)R}$ | 40 | - | - | V |
| Leakage Current | | | | | | |
| at $V_R$ = 50 V | **SD101A** | $I_R$ | - | - | 200 | nA |
| at $V_R$ = 40 V | **SD101B** | $I_R$ | - | - | 200 | nA |
| at $V_R$ = 30 V | **SD101C** | $I_R$ | - | - | 200 | nA |
| Forward Voltage Drop | | | | | | |
| at $I_F$ = 1 mA | **SD101A** | $V_F$ | - | - | 0.41 | V |
| | **SD101B** | $V_F$ | - | - | 0.4 | V |
| | **SD101C** | $V_F$ | - | - | 0.39 | V |
| at $I_F$ = 15 mA | **SD101A** | $V_F$ | - | - | 1 | V |
| | **SD101B** | $V_F$ | - | - | 0.95 | V |
| | **SD101C** | $V_F$ | - | - | 0.9 | V |
| Junction Capacitance | | | | | | |
| at $V_R$ = 0 V, f = 1 MHz | **SD101A** | $C_{tot}$ | - | - | 2.0[1] | pF |
| | **SD101B** | $C_{tot}$ | - | - | 2.1 | pF |
| | **SD101C** | $C_{tot}$ | - | - | 2.2 | pF |
| Reverse Recovery Time | | $t_{rr}$ | - | - | 1 | ns |
| at $I_F$ = $I_R$ = 5 mA, recover to 0.1 $I_R$ | | | | | | |

[1] JEDEC limit specification on capacitance for 1N6263 is 2.2 pF.

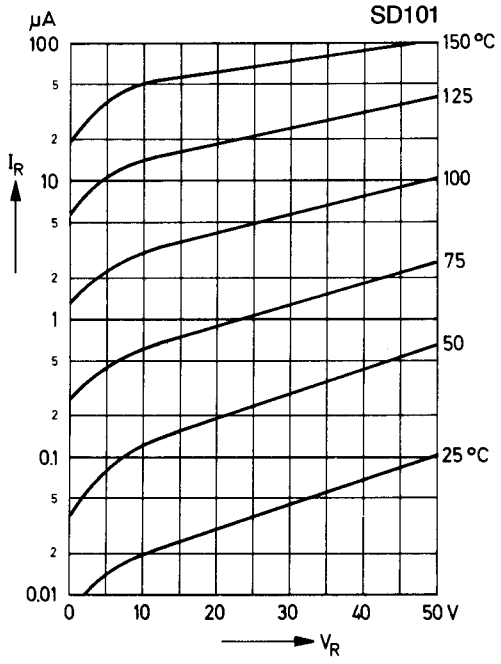
**Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier**




**Typical forward conduction curve of combination Schottky barrier and PN junction guard ring**



**Typical variation of reverse current at various temperatures**




**Typical capacitance curve as a function of reverse voltage**