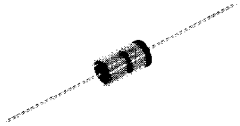
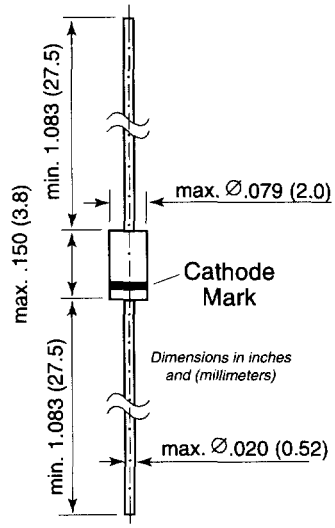
SD101A thru SD101C

Schottky Diodes



DO-204AH (DO-35 Glass)



Features

- For general purpose applications
- The LL101 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.
- These diodes are also available in the SOD-123 case with type designations SD101AW thru SD101CW and in the MiniMELF case with type designations LL101A thru LL101C.

Mechanical Data

Case: DO-35 Glass Case

Weight: approx. 0.13g

Packaging Codes/Options:

D7/10K per 13" reel (52mm tape), 20K/box
D8/10K per Ammo tape (52mm tape), 20K/box

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter		Symbol	Value	Unit
Peak Inverse Voltage	SD101A SD101B SD101C	V_{RRM}	60 50 40	V
Power Dissipation (Infinite Heatsink)		P_{tot}	400(1)	mW
Maximum Single Cycle Surge 10μs Square Wave		I_{FSM}	2	A
Thermal Resistance Junction to Ambient Air		$R_{\Theta JA}$	0.3(1)	°C/mW
Junction Temperature		T_j	125(1)	°C
Storage Temperature Range		T_S	−55 to +150(1)	°C

Note: (1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature.

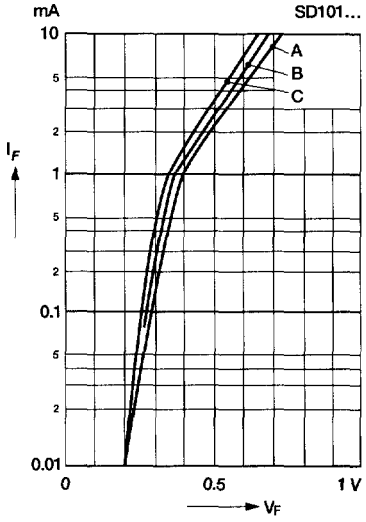
4/14/00

Electrical Characteristics (T_A = 25°C unless otherwise noted)

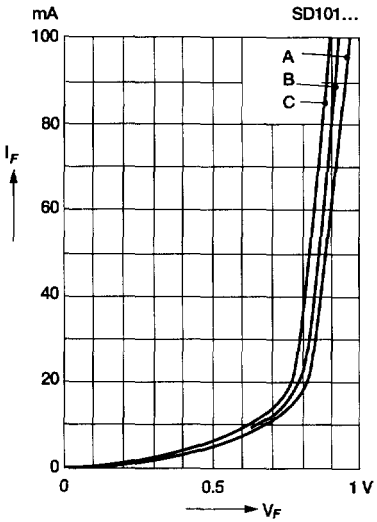
Parameter		Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	SD101A SD101B SD101C	$V_{(BR)R}$	I_R = 10μA	60 50 40	— — —	— — —	V
Leakage Current	SD101A SD101B SD101C	I_R	V_R = 50V V_R = 40V V_R = 30V	— — —	— — —	200 200 200	nA
Forward Voltage Drop	SD101A SD101B SD101C SD101A SD101B SD101C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

Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

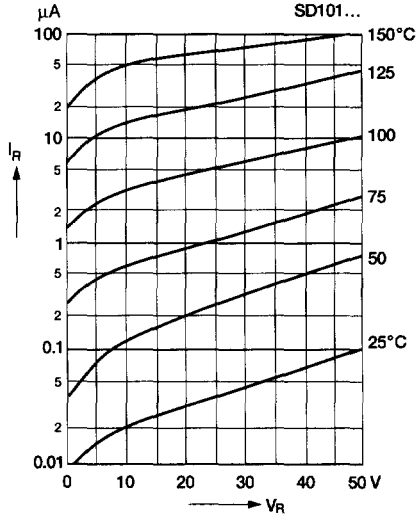
Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier



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