SEMICONDUCTOR

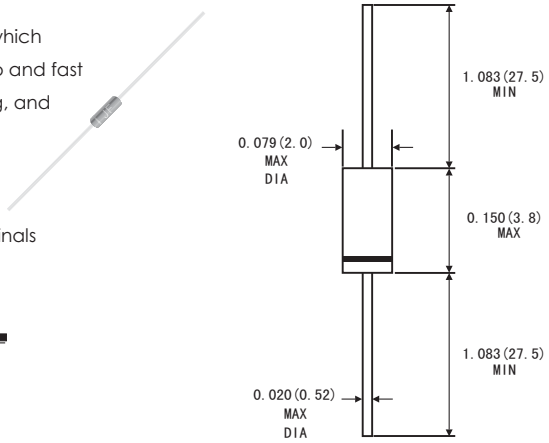
SD101A THUR SD101C

SMALL SIGNAL SCHOTTKY DIODES

FEATURES

- For general purpose applications
- The SD101 series is a Metal-on-silicon junction 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 MiniMELF case with the type designation LL101A to LL101C.
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

DO-35



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: DO-35 glass case
- Polarity: Color band denotes cathode end
- Weight: Approx. 0.05 gram

ABSOLUTE RATINGS(LIMITING VALUES)

		Symbols	Value	Units
Peak Reverse Voltage	SD101A	V_{RRM}	60	V
	SD101B	V_{RRM}	50	V
	SD101C	V_{RRM}	40	
Power Dissipation (infinite Heat Sink)		P_{tot}	400 [1]	mW
Maximum Single cycle surge 10ms square wave		I_{FSM}	2.0	A
Junction temperature		T_J	125	°C
Storage Temperature Range		T_{STG}	-55 to+150	°C
1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature				

ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified)

		Symbols	Min.	Typ.	Max.	Unis
Reverse breakover voltage at I_R=10mA	SD101A	V_R	60			V
	SD101B	V_R	50			V
	SD101C	V_R	40			V
Leakage current at V_R=50V	SD101A	I_R			200	nA
V_R=40V	SD101B	I_R			200	nA
V_R=30V	SD101C	I_R			200	nA
Forward voltage drop at I_F=1mA	SD101A	V_F			0.41	V
	SD101B	V_F			0.4	V
	SD101C	V_F			0.39	V
I_F=15mA	SD101A	V_F			1	V
	SD101B	V_F			0.95	V
	SD101C	V_F			0.9	V
Junction Capacitance at V_R=0V ,f=1MHz	SD101A	C_J			2.0	pF
	SD101B	C_J			2.1	pF
	SD101C	C_J			2.2	pF
Reverse Recovery time at I_F=I_R=5mA,recover to 0.1 I_R		t_{rr}			1	ns
Thermal resistance,junction to Ambient		$R_{\theta JA}$			300 [1]	°C/W
1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature						

RATINS AND CHARACTERISTICS CURVES SD101A THRU SD101C

Figure 1. Typical variation of fwd.current vs.fwd. Voltage for primary conduction through the schottky barrier

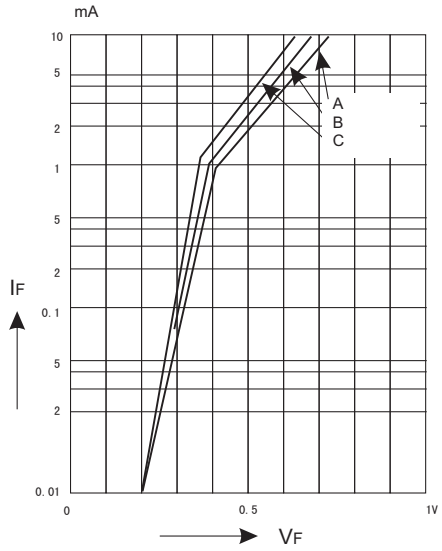


Figure 2. Typical forward conduction curve of combination Schottky barrier and PN junction guard ring

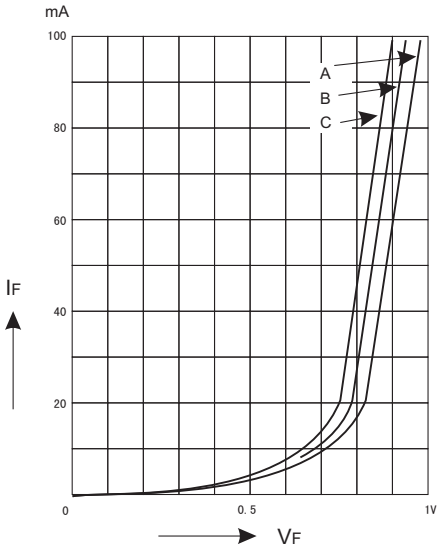


Figure 3.Typical variation of reverse current at various temperatures

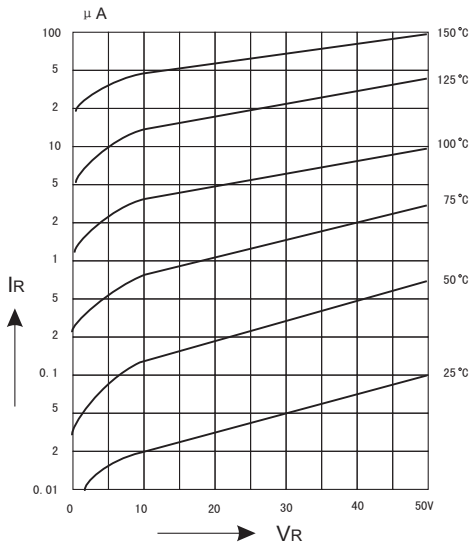


Figure 4. Typical capacitance curve as a function of reverse voltage