

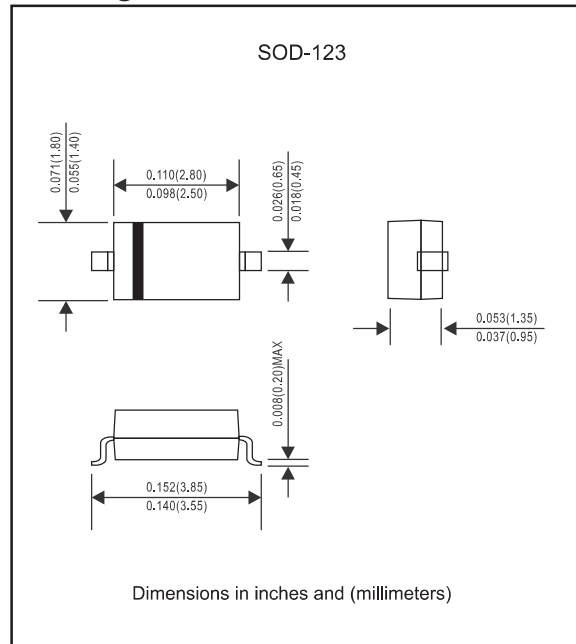
Features

- Low current rectification and high speed switching.
- Extremely small surface mount type.
- Low forward voltage drop.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts for green partner, exceeds environmental standards of MIL-STD-19500 /228
- Compliant to Halogen-free

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

Package Outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	SD103AW	SD103BW	SD103CW	UNIT
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage		V_{RRM} V_{RWM} V_R	40	30	20	V
RMS reverse voltage		$V_{R(RMS)}$	28	21	14	V
Average rectified output current		I_{FAV}	200			mA
Non-repetitive peak forward surge current	@ $t < 1.0\text{s}$	I_{FSM}	1.5			A
Total device dissipation		P_D	400			mW
Thermal resistance junction to ambient	junction to ambient	$R_{\theta JA}$	300			$^\circ\text{C/W}$
Operating temperature		T_J	-55 ~ +125			$^\circ\text{C}$
Storage temperature		T_{STG}	-65 ~ +125			$^\circ\text{C}$
Minimum Reverse breakdown voltage		$V_{(BR)R}$	40	30	20	V
Forward voltage	$I_F = 20\text{mA}$ $I_F = 200\text{mA}$	V_F	0.37 0.60			V
Reverse current	$V_R = 30\text{V}$, SD103AW $V_R = 20\text{V}$, SD103BW $V_R = 10\text{V}$, SD103CW	I_R	5.0			μA
Typical Junction capacitance	$V_R = 0\text{V}$, $f = 1.0\text{MHz}$	C_J	50			pF
Reverse recover time	$I_F = I_R = 200\text{mA}$, $I_{rr} = 0.1 \times I_{R1}$ $R_L = 100_{\Omega}$	t_{rr}	10			ns

Rating and characteristic curves (SD103AW / BW / CW)

Fig. 1 POWER DERATING CURVE

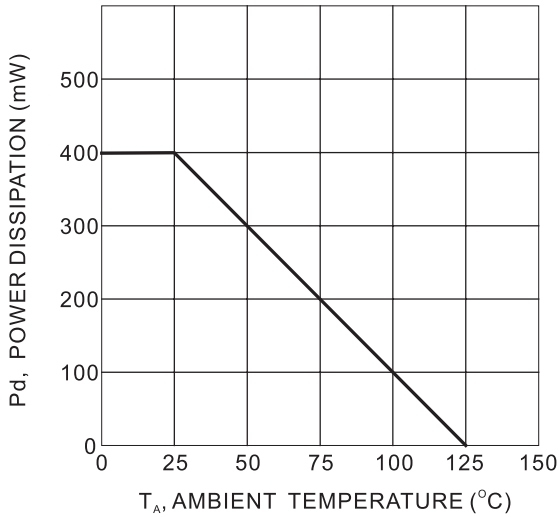


Fig. 2 TYPICAL FORWARD CHARACTERISTIC

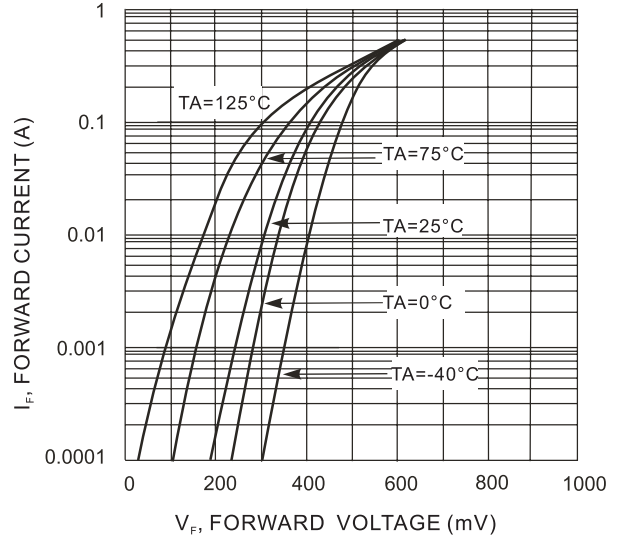


Fig. 3 TYPICAL JUNCTION CAPACITANCE VS REVERSE VOLTAGE

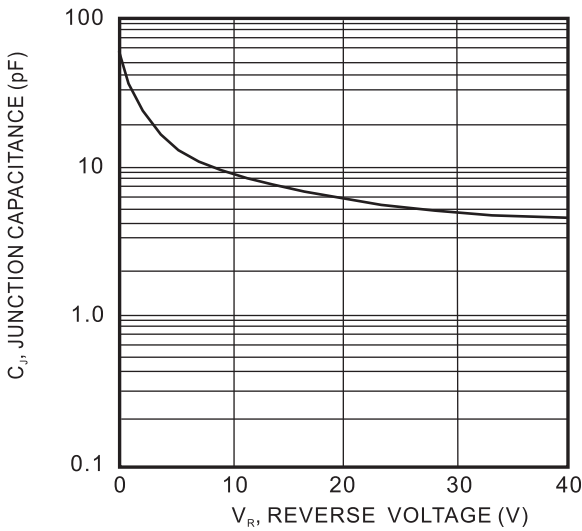
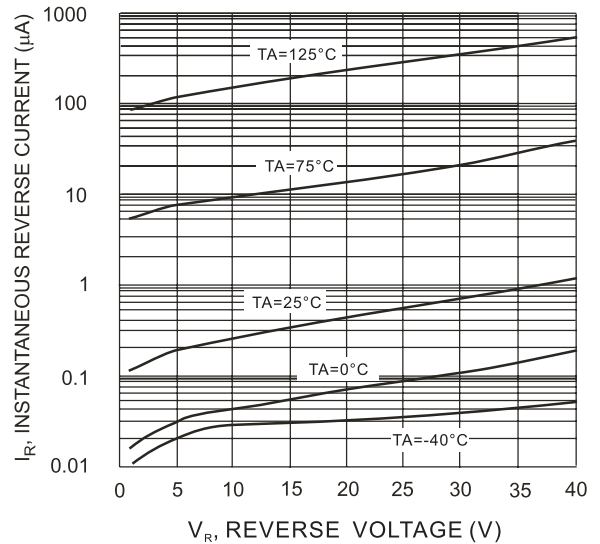




FIG. 4 TYPICAL REVERSE CHARACTERISTICS



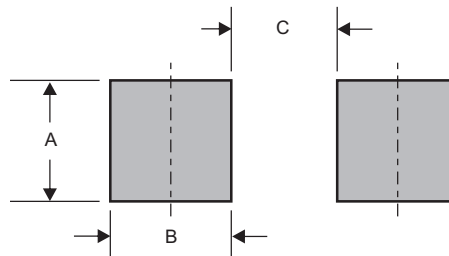
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
SD103AW	S4
SD103BW	S5
SD103CW	S6

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.059 (1.50)	0.059 (1.50)	0.094 (2.40)