

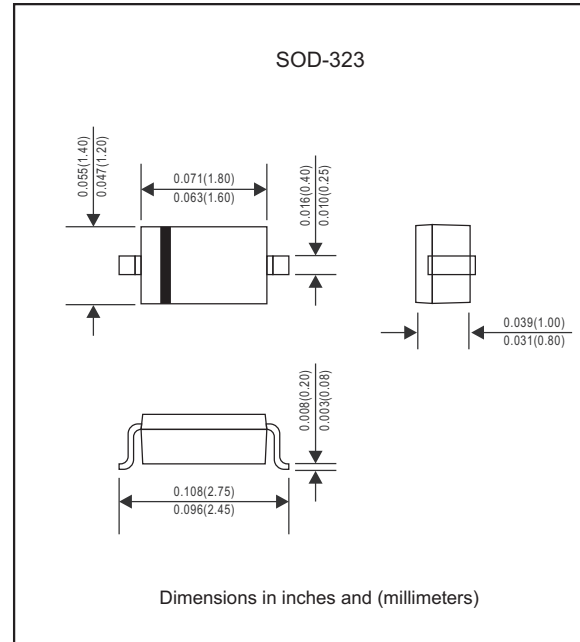
### Features

- 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-323
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

### Package outline



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

PARAMETER	CONDITIONS	Symbol	SD103AWS	SD103BWS	SD103CWS	UNIT
Peak repetitive reverse voltage		$V_{RRM}$	40	30	20	V
Working peak reverse voltage		$V_{RWM}$				
DC blocking voltage		$V_R$				
RMS reverse voltage		$V_{R(RMS)}$	28	21	14	V
Average rectified output current		$I_{F(AV)}$	350			mA
Non-repetitive peak forward surge current	@ t = 8.3ms	$I_{FSM}$	1.5			A
Total device dissipation		$P_D$	200			mW
Thermal resistance	Junction to ambient	$R_{\theta JA}$	625			$^\circ\text{C/W}$
Operating temperature		$T_J$	-55 ~ +125			$^\circ\text{C}$
Storage temperature		$T_{STG}$	-65 ~ +125			$^\circ\text{C}$

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

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 100\mu\text{A}$ , SD103AWS $I_R = 100\mu\text{A}$ , SD103BWS $I_R = 100\mu\text{A}$ , SD103CWS	$V_{(BR)R}$	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	$V_R = 30\text{V}$ , SD103AWS $V_R = 20\text{V}$ , SD103BWS $V_R = 10\text{V}$ , SD103CWS	$I_R$			5.0	$\mu\text{A}$
Typical Junction capacitance	$V_R = 0\text{V}$ , f = 1.0MHz	$C_J$		50		pF
Reverse recover time	$I_F = I_R = 200\text{mA}$ , $I_{rr} = 0.1 \times I_R$ , $R_L = 100_{\text{OHM}}$	$t_{rr}$		10		ns

## Rating and characteristic curves (SD103AWS / BWS / CWS)

Fig. 1 POWER DERATING CURVE

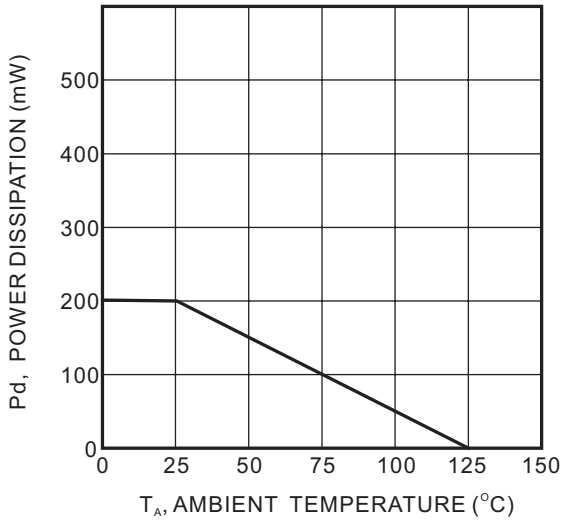


Fig. 2 TYPICAL FORWARD CHARACTERISTIC

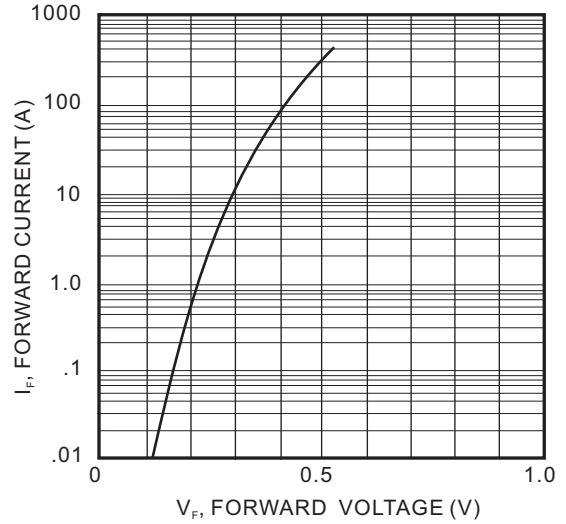
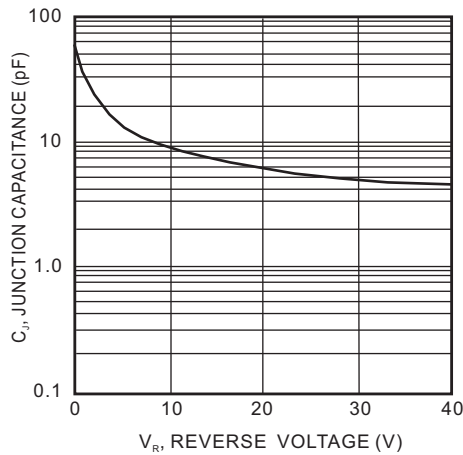




Fig. 3 TYPICAL JUNCTION CAPACITANCE VS REVERSE VOLTAGE



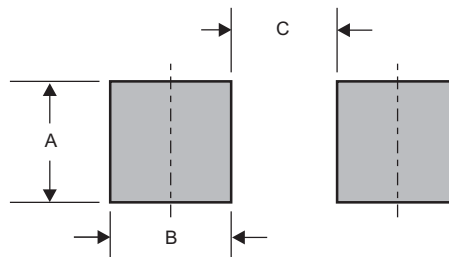
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code
SD103AWS	S4
SD103BWS	S5
SD103CWS	S6

### Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-323	0.033 (0.83)	0.025 (0.63)	0.063 (1.60)