

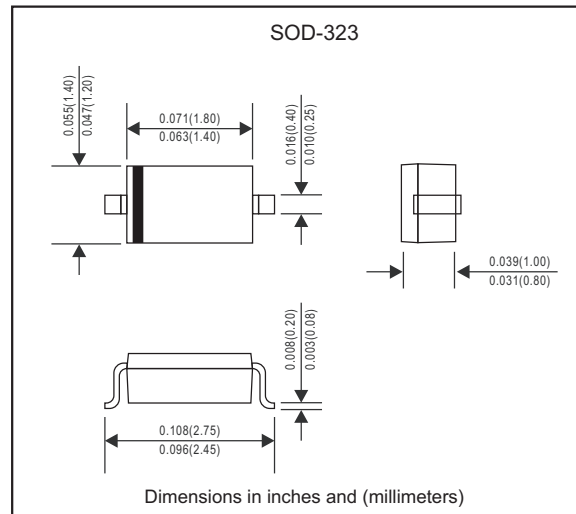
Features

- ◆ For use in low voltage, high frequency inverters
- ◆ Free wheeling, and polarity protection applications

Mechanical data

- ◆ **Case:** JEDEC SOD-323 molded plastic body
- ◆ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any

Package outline



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

Parameter	Symbols	SD103AWS	SD103BWS	SD103CWS	Units
Peak Repetitive Reverse Voltage	V_{RRM}	40	30	20	V
RMS reverse voltage	V_{RMS}	28	21	14	V
Working Peak Reverse Voltage	V_{DC}	40	30	20	V
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	13			A
Maximum Instantaneous Forward Voltage $I_F=20\text{mA}$ $I_F=200\text{mA}$	V_F	0.37			V
		0.60			
Power Dissipation	P_D	200			mW
Reverse current	I_R	SD103AWS, $V_R=30\text{V}$	5	—	uA
		SD103BWS, $V_R=20\text{V}$	—	5	
		SD103CWS, $V_R=10\text{V}$	—	—	
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	300			$^{\circ}\text{C/W}$
Reverse voltage $I_R=100\text{uA}$	$V_{(BR)R}$	SD103AW	40		V
		SD103BW	30		
		SD103CW	20		
Reverse recovery time $I_F=I_R=200\text{mA}, I_{rr}=0.1 \times I_R, R_L=100\Omega$	t_{rr}	10			ns
Forward Continuons Current	I_{FM}	350			mA
Total capacitance $V_R=0\text{V}, f=1\text{MHZ}$	C_{tot}	50			pF
Junction temperature	T_j	125			$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55 ~ +150			$^{\circ}\text{C}$

Rating and characteristic curves

Fig.1 Power Derating Curve

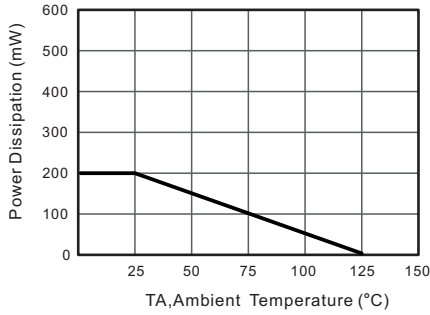


Fig.2 Typical Reverse Characteristics

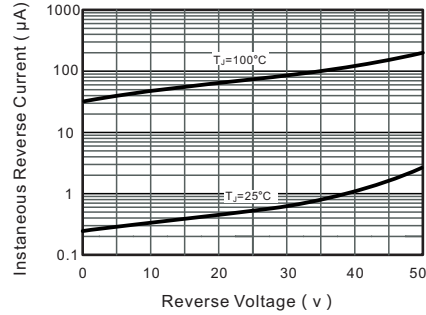


Fig.3 Forward Characteristics

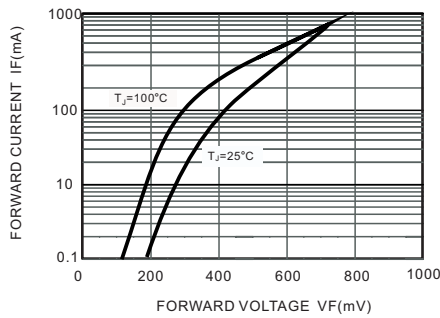


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

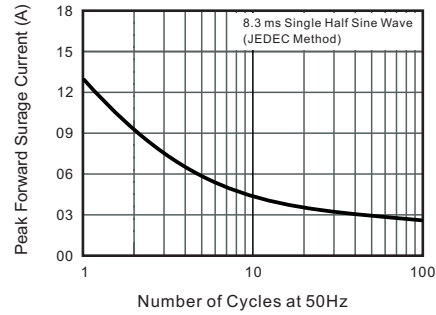


Fig.5 Typical Junction Capacitance

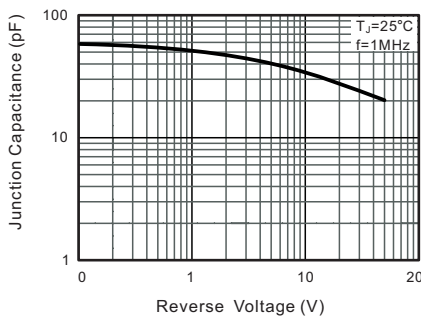
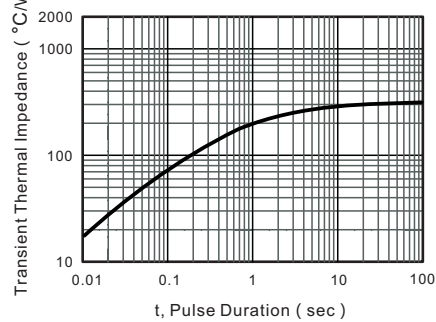


Fig.6 Typical Transient Thermal Impedance



Marking

Type number	Marking code
SD103AWS	S4
SD103BWS	S5
SD103CWS	S6