

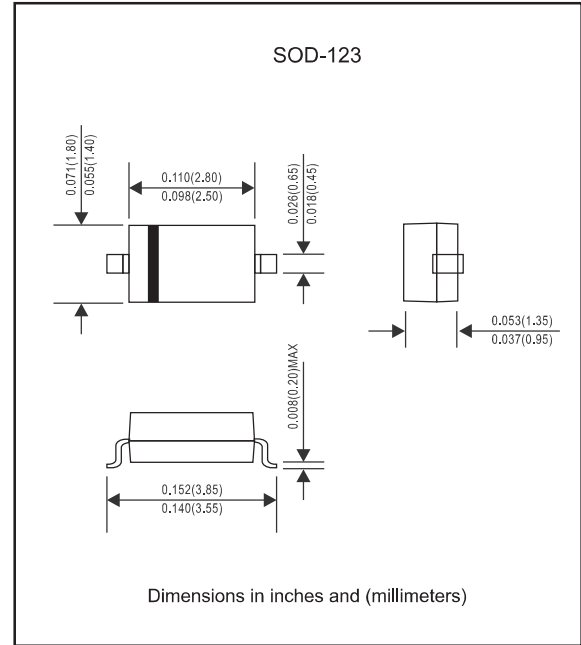
### Features

- Fast speed switching.
- For general purpose switching application.
- High conductance.
- Silicon epitaxial planar chip
- Lead-free parts meet RoHS requirements.
- Compliant to Halogen-free

### Mechanical data

- Epoxy:UL94-VO rated flame retardant
- Case : Molded plastic, SOD-123
- Terminals : Solder plated, 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	BAV19W	BAV20W	BAV21W	UNIT
Non-repetitive peak reverse voltage		$V_{RM}$	120	200	250	V
Peak repetitive reverse voltage		$V_{RRM}$	100	150	200	V
Working peak reverse voltage		$V_{RWM}$				
DC blocking voltage		$V_R$				
Forward Continuous Current (1)		$I_{FM}$	400			mA
Average rectified output current(1)		$I_O$	200			mA
Non-repetitive peak forward surge current	@t = 1.0 ms @t = 1.0 s	$I_{FSM}$	2.5 0.5			A
Power dissipation		$P_D$	250			mW
Typical Thermal resistance	Junction to ambient air(1)	$R_{\theta JA}$	500			$^\circ\text{C}/\text{W}$
Operating temperature		$T_J$	-55 ~ +150			$^\circ\text{C}$
Storage temperature		$T_{STG}$	-65 ~ +150			$^\circ\text{C}$
Maximum Forward voltage	$I_F = 100\text{ mA}$ $I_F = 200\text{ mA}$	$V_F$	1.0 1.25			V
Maximum Reverse leakage	@rated DC blocking voltage, $T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	$I_R$	100 15			nA uA
Maximum Total capacitance	$V_R = 1.0\text{ V}$ , $f = 1.0\text{ MHz}$	$C_J$	5.0			pF
Maximum Reverse recovery time	$I_F = I_R = 30\text{ mA}$ , $I_{RR} = 0.1 \times I_R$ , $R_L = 100_{\text{OHM}}$	$t_{rr}$	50			ns

Note 1. Valid provided that electrodes are kept at ambient temperature.

**Rating and characteristic curves**

FIG.1-POWER DERATING CURVE

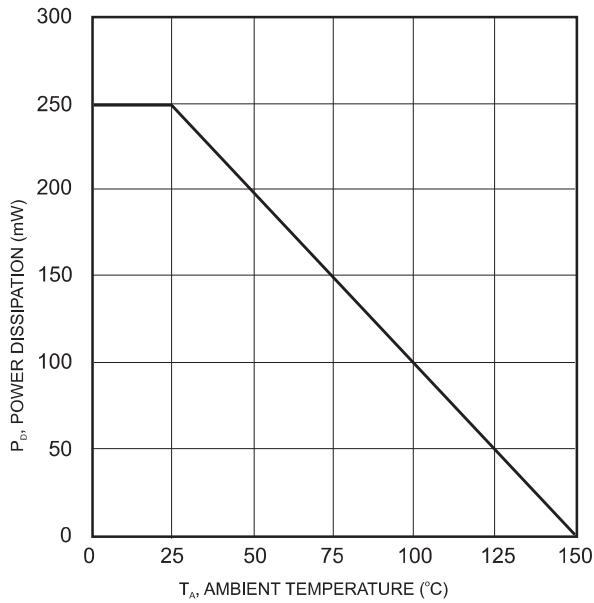


FIG.2-TYPICAL CAPACITANCE VS. REVERSE VOLTAGE

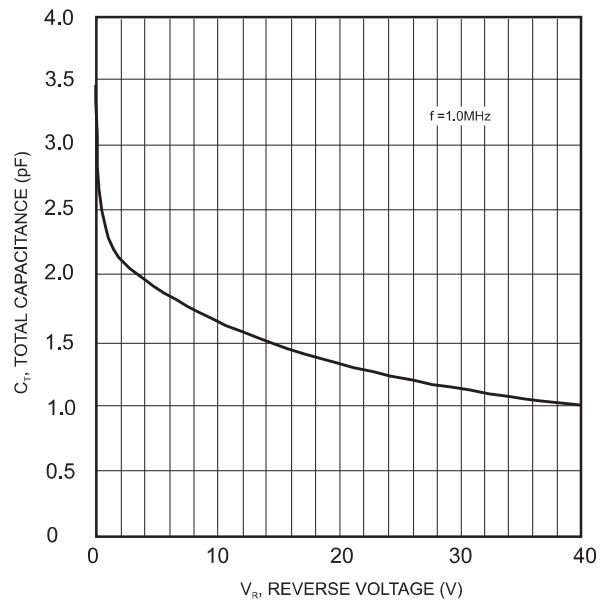


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

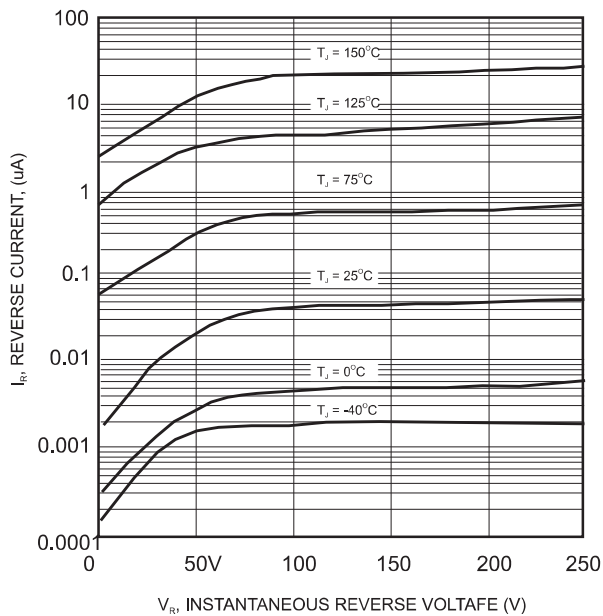
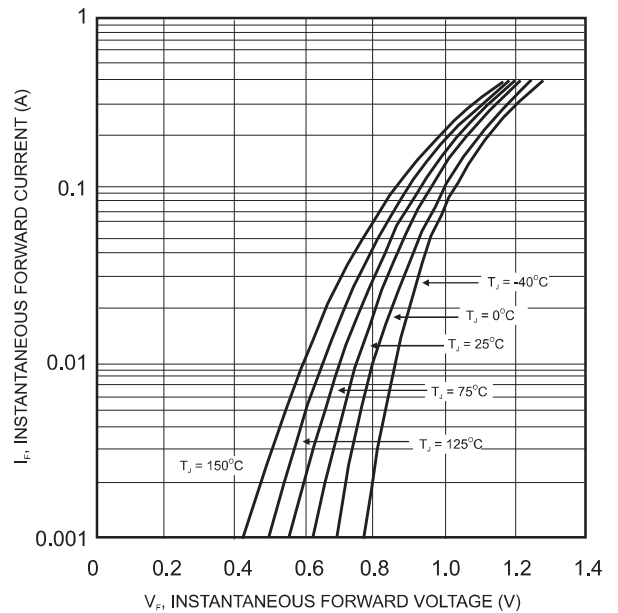




FIG.4-TYPICAL FORWARD CHARACTERISTICS



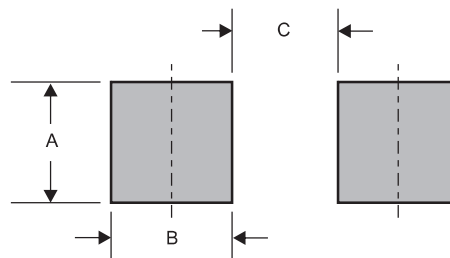
**Pinning information**

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

**Marking**

Type number	Marking code
BAV19W	A8
BAV20W	T2
BAV21W	T3

**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)