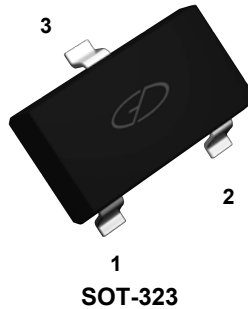
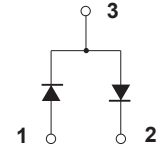


## Features

- Fast switching speed
- Low current leakage
- SOT-323 small package
- Epoxy meets UL 94 V-0 flammability rating



SOT-323



Schematic Diagram

## Applications

High-speed switching in surface mount package.

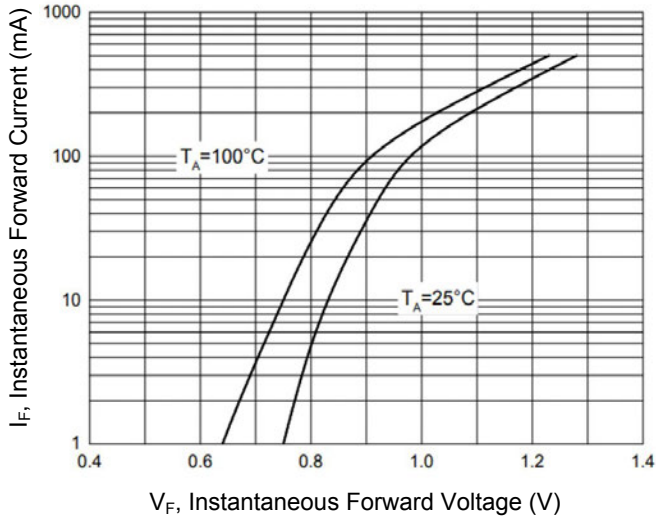
## Maximum Ratings ( $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Units
Non-Repetitive Peak Reverse Voltage	$V_{RSM}$	85	V
Repetitive Peak Reverse Voltage	$V_{RRM}$	85	V
Repetitive Peak Forward Current	$I_{FRM}$	500	mA
Continuous Forward Current	$I_O$	215	mA
Non-Repetitive Peak Forward Surge Current @ $t=1\mu\text{s}$	$I_{FSM}$	4.0	A
Power Dissipation	$P_D$	250	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 to 150	$^\circ\text{C}$
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$

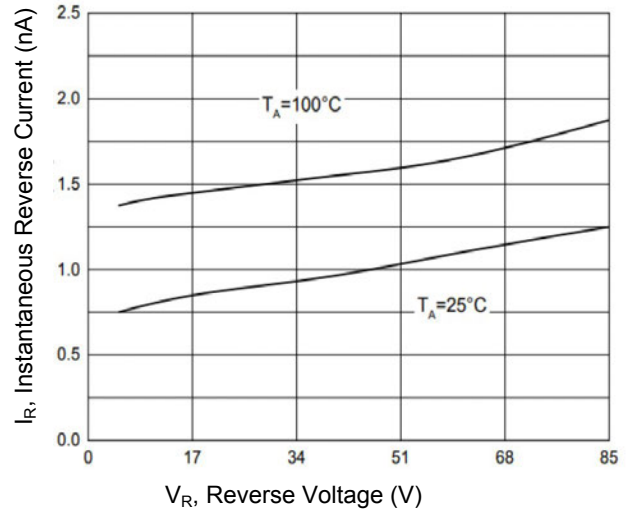
## Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Max	Units
Reverse Breakdown Voltage	$V_{BR}$	$I_R=100\mu\text{A}$	85	-	V
Reverse Voltage Leakage Current	$I_R$	$V_R=75\text{V}$	-	5.0	nA
Forward Voltage	$V_F$	$I_F=1\text{mA}$	-	0.9	V
		$I_F=10\text{mA}$	-	1.0	V
		$I_F=50\text{mA}$	-	1.1	V
		$I_F=150\text{mA}$	-	1.25	V
Diode Capacitance	$C_D$	$V_R=0\text{V}$ , $f=1\text{MHz}$	-	2	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10\text{mA}$ $I_{rr}=0.1 \times I_R$ , $R_L=100\Omega$	-	3	$\mu\text{s}$

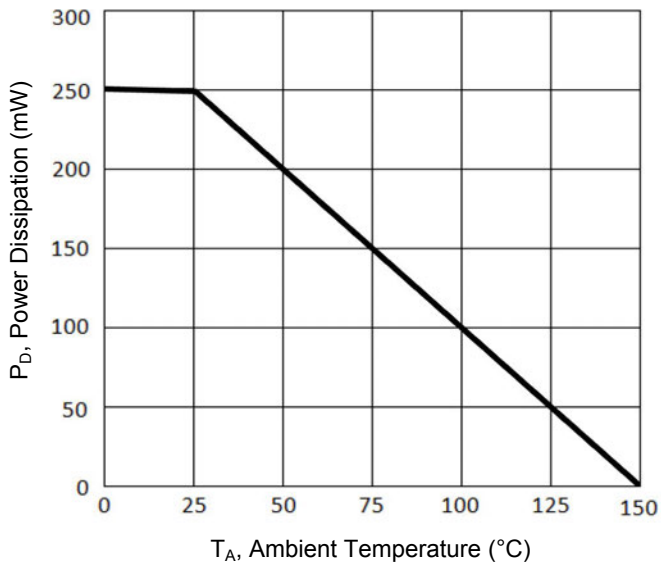
**Typical Characteristic Curves**



**Figure 1. Typical Instantaneous Forward Characteristics**

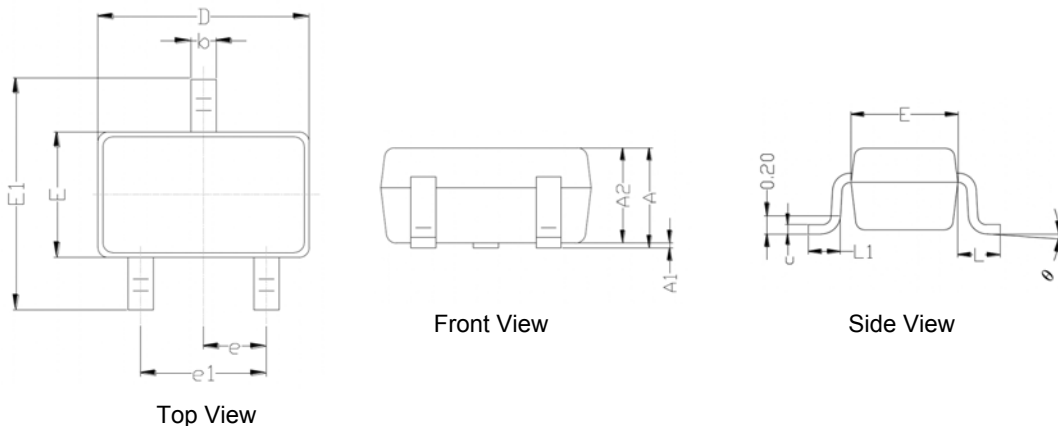


**Figure 2. Typical Reverse Leakage Characteristics**



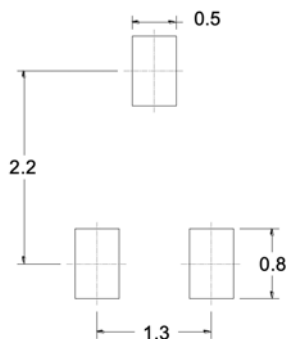
**Figure 3. Power Derating Curve**

**Package Outline Dimensions (SOT-323)**



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 Typ.		0.026 Typ.	
e1	1.200	1.400	0.047	0.055
L	0.525 Typ.		0.021 Ref.	
L1	0.260	0.460	0.010	0.018
$\theta$	0°	8°	0°	8°

**Recommended Pad Layout**



- Note:
1. Dimensions in millimeters
  2. The pad layout is for reference

**Order Information**

Device	Package	Marking	Carrier	Quantity
BAV199W	SOT-323	K52	Tape & Reel	3,000pcs / Reel