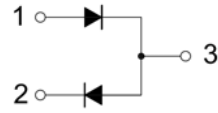
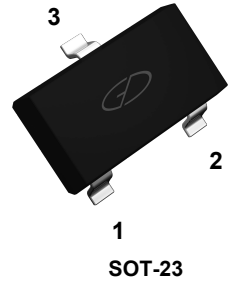


**Features**

- Fast switching speed
- For general purpose switching applications
- High conductance
- Low reverse leakage



Schematic Diagram



1  
SOT-23

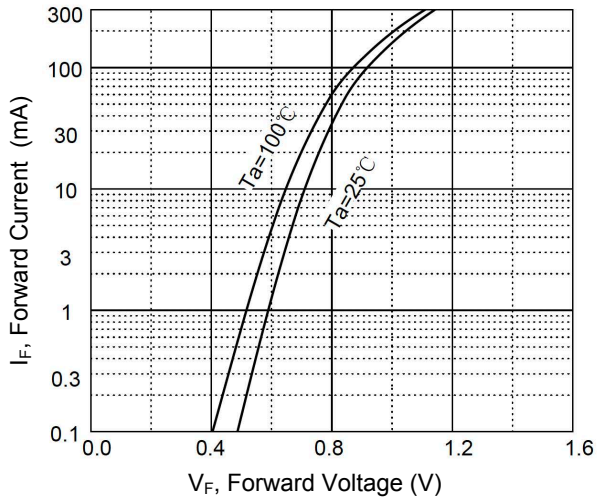
**Absolute Maximum Ratings** ( $T_A=25^{\circ}\text{C}$  unless otherwise specified)

Parameter	Symbol	Value	Unit
Reverse Voltage	$V_R$	70	V
Forward Current	$I_F$	200	mA
Non-Repetitive Peak Forward Surge Current @ $T_p=1\mu\text{s}$	$I_{FSM}$	2	A
Power Dissipation	$P_D$	225	mW
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	500	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	-55 To +150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 To +150	$^{\circ}\text{C}$

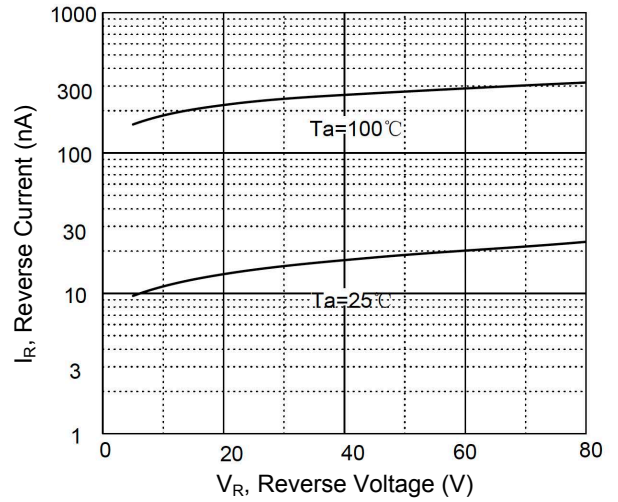
**Electrical Characteristics** ( $T_A=25^{\circ}\text{C}$  unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Max.	Unit
Reverse Breakdown Voltage	$V_R$	$I_R=100\mu\text{A}$	70	-	V
Forward Voltage	$V_F$	$I_F=1\text{mA}$	-	0.72	V
		$I_F=10\text{mA}$	-	0.86	V
		$I_F=50\text{mA}$	-	1	V
		$I_F=150\text{mA}$	-	1.25	V
Reverse Current	$I_R$	$V_R=70\text{V}$	-	2.5	$\mu\text{A}$
Capacitance Between Terminals	$C_T$	$V_R=0, f=1\text{MHz}$	-	1.5	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10\text{mA}, R_L = 100\Omega$ $I_{rr}=0.1 \times I_R$	-	6	ns

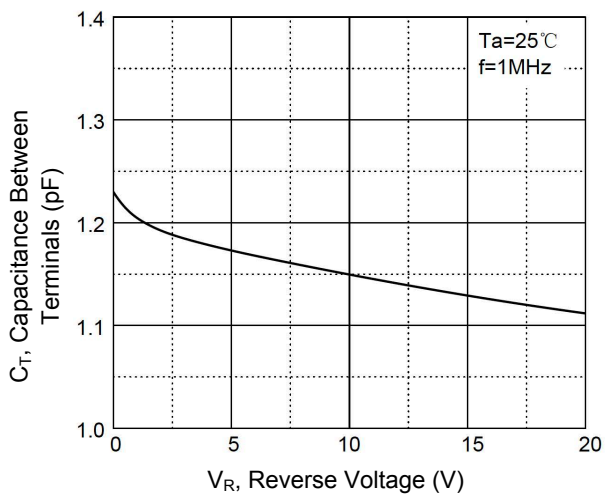
**Ratings and Characteristic Curves**



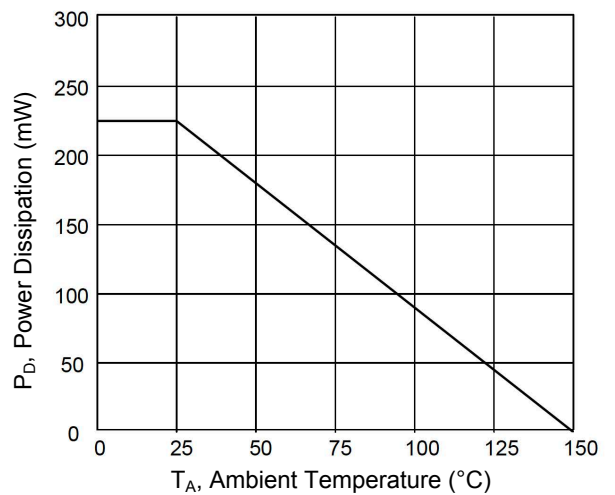
**Figure 1. Forward Characteristics**



**Figure 2. Reverse Characteristics**

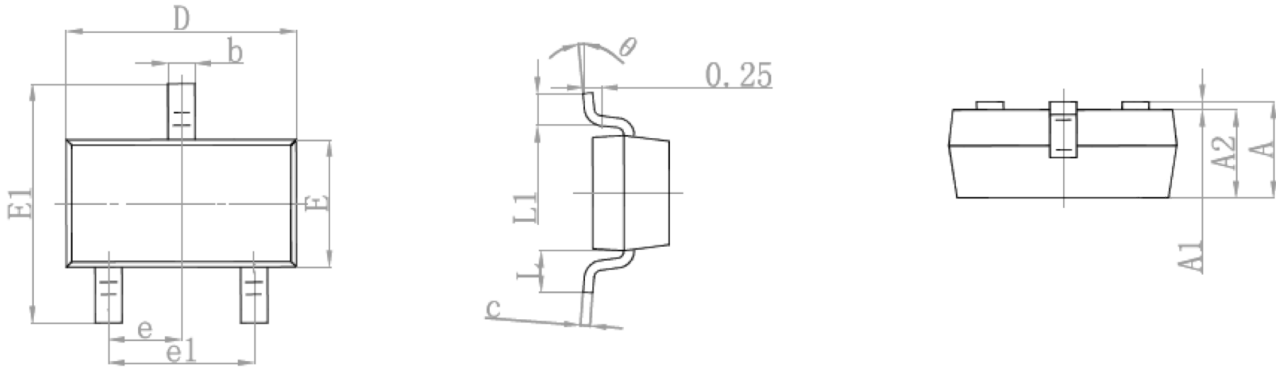


**Figure 3. Capacitance Characteristics**



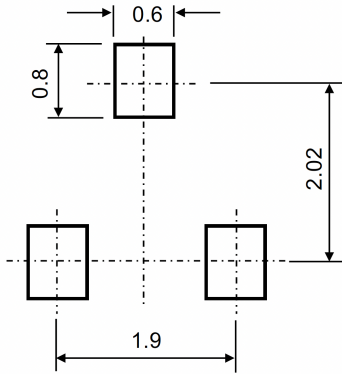
**Figure 4. Power Derating Curve**

**Package Outline Dimensions (SOT-23)**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
$\theta$	0°	8°	0°	8°

### Recommended Pad Layout



**Note:**

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

### Order Information

Device	Package	Marking	Carrier	Quantity
BAV99	SOT-23	A7	Tape & Reel	3,000pcs / Reel