
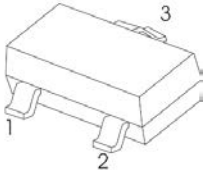


**SOT-23 Plastic-Encapsulate Transistors**

<p>BAW56/BAV70/BAV99</p> <p><b>Features</b></p> <ul style="list-style-type: none"> <li>• Fast Switching Speed</li> <li>• For General Purpose Switching Applications</li> <li>• High Conductance</li> </ul>	<p>SOT-23</p>  
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**Maximum Ratings @Ta=25°C**

Parameter	Symbol	Limit	Unit
Reverse Voltage	$V_R$	70	V
Forward Current	$I_F$	200	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	$I_{FSM}$	2.0	A
Power Dissipation	$P_D$	225	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	556	°C/W
Junction Temperature	$T_J$	150	°C
Storage Temperature range	$T_{STG}$	-55~+150	°C

**Electrical Characteristics @Ta=25°C**

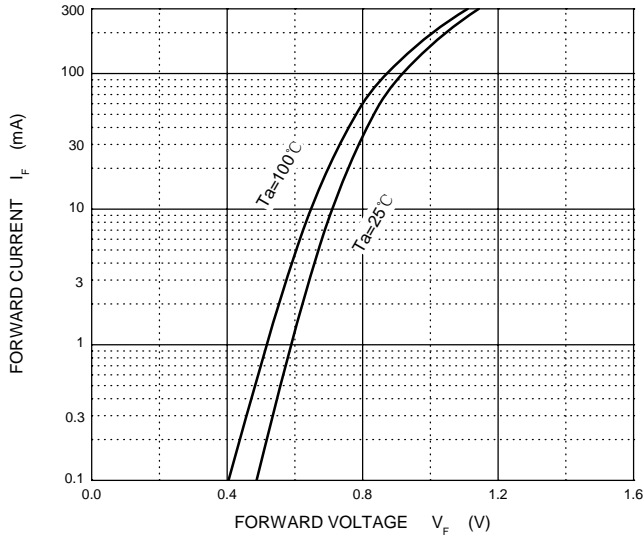
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage	$V_R$	70			V	$I_R=100\mu A$
Forward voltage	$V_{F1}$			0.715	V	$I_F=1mA$
	$V_{F2}$			0.855	V	$I_F=10mA$
	$V_{F3}$			1	V	$I_F=50mA$
	$V_{F4}$			1.25	V	$I_F=150mA$
Reverse current	$I_R$			2.5	$\mu A$	$V_R=70V$
Capacitance between terminals	$C_T$			1.5	pF	$V_R=0, f=1MHz$
Reverse recovery time	$t_{rr}$			6	ns	$I_F = I_R = 10mA,$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$



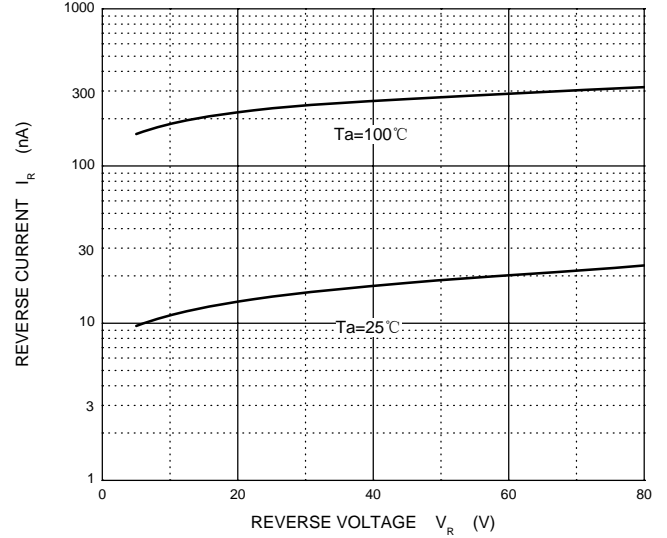
# SOT-23 Plastic-Encapsulate Transistors

## Typical Characteristics

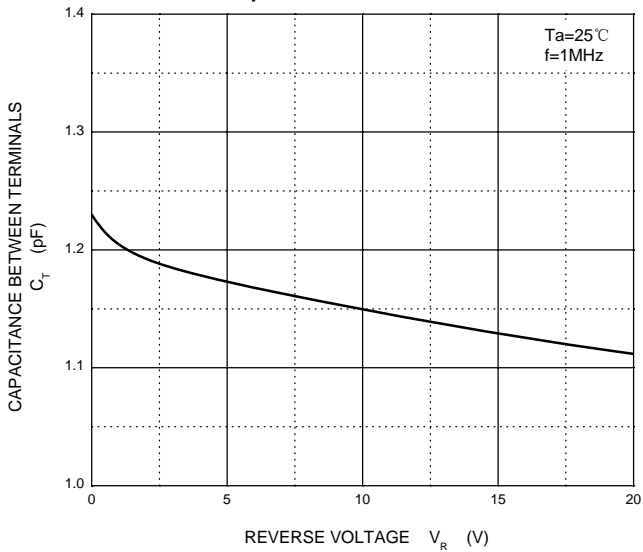
Forward Characteristics



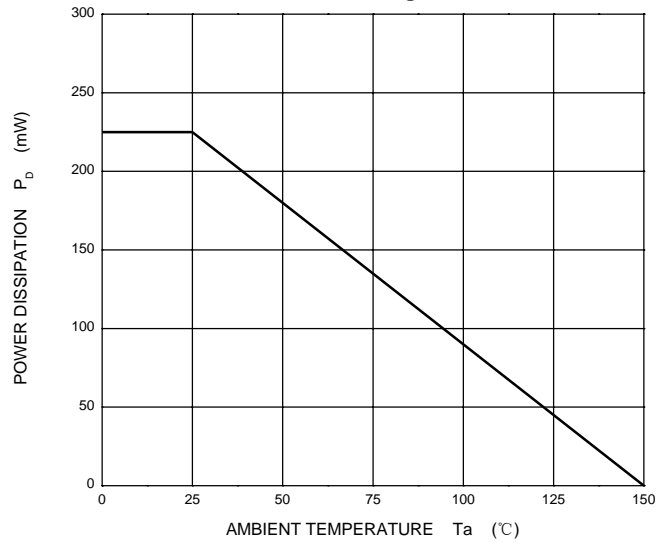
Reverse Characteristics



Capacitance Characteristics



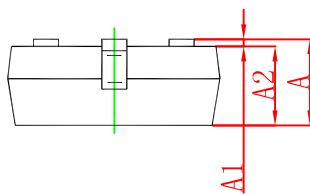
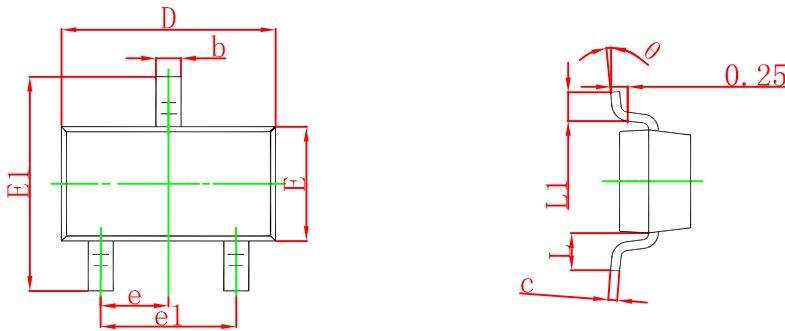
Power Derating Curve





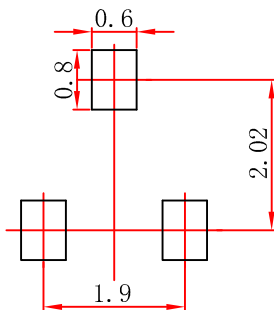
# SOT-23 Plastic-Encapsulate Transistors

## SOT-23 Package Outline Dimensions



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
θ	0°	8°	0°	8°

## SOT-23 Suggested 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.

## MARKING:

BAW56	BAV70	BAV99
<b>MARKING:A1</b>	<b>MARKING:A4</b>	<b>MARKING:A7</b>

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