



VOLTAGE 100Volts POWER 225mWatts

### FEATURES

- Fast switching speed.
- For general purpose switching applications.
- High conductance.



### MECHANICAL DATA

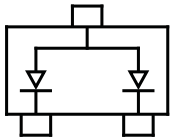
Case: SOT-23, Plastic

Terminals: Solderable per MIL-STD-750, method 2026

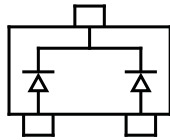
Approx. Weight: 0.008gram

Marking:

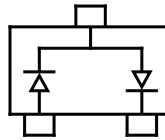
BAW56:A1



BAV70:A4



BAV99:A7



### MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Symbol	Parameter	Vaule	Unit
V <sub>R</sub>	Reverse Voltage	70	V
I <sub>F</sub>	Forward Current	0.2	A
I <sub>FM(SURGE)</sub>	Peak Forward Surge Current	0.5	A
P <sub>D</sub>	Total Device Dissipation	0.225	W
R <sub>θJA</sub>	Thermal Resistance Form Junction to Ambient	556	°C/W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-55~+150	°C

# BAW56/BAV70/BAV99

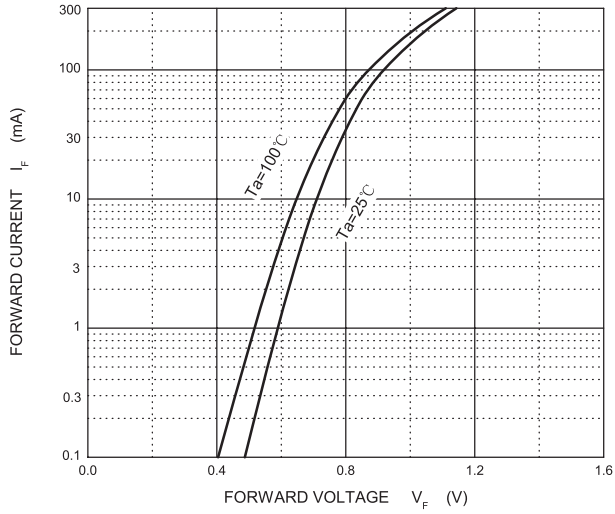
ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Units
Reverse breakdown voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	70			V
Forward voltage	$V_{F2}$	$I_F=1\text{mA}$			0.715	V
	$V_{F3}$	$I_F=10\text{mA}$			0.855	V
	$V_{F4}$	$I_F=50\text{mA}$			1	V
	$V_{F5}$	$I_F=150\text{mA}$			1.25	V
Reverse current	$I_R$	$V_R=25\text{V}$			2.5	$\mu\text{A}$
Diode capacitance	$C_T$	$V_R=1\text{V}, f=1\text{MHz}$			1.5	pF
Reverse recovery time	$t_{rr}$	$I_F=I_R=10\text{mA},$ $I_{RR}=0.1 \times I_R, R_L=100\Omega$			6	nS

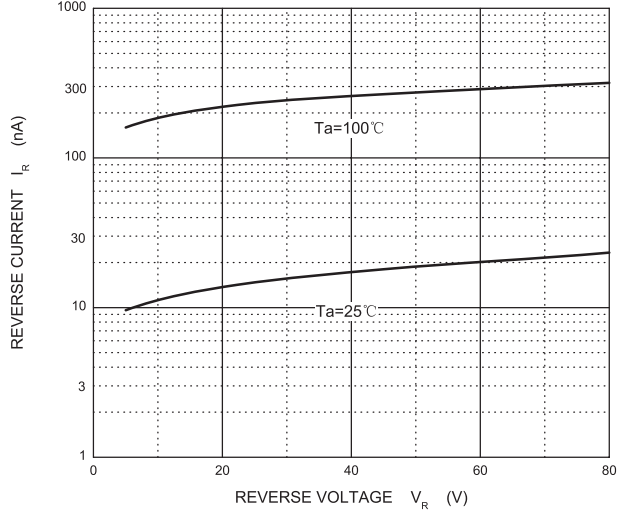
# BAW56/BAV70/BAV99

## ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

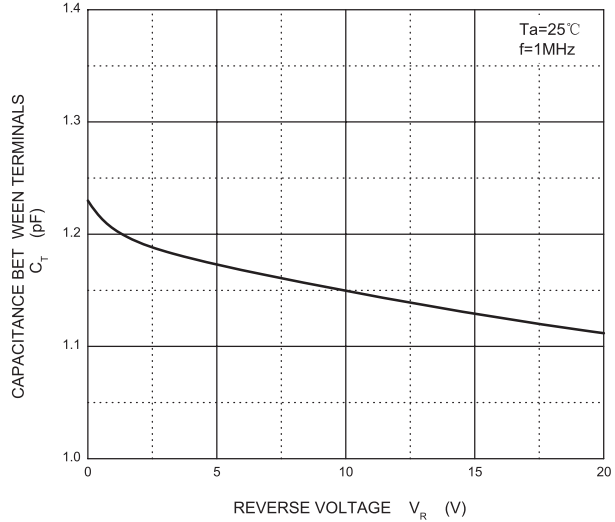
**Forward Characteristics**



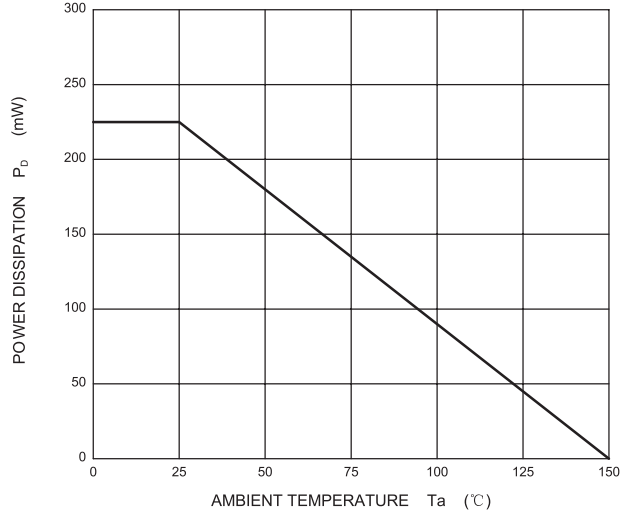
**Reverse Characteristics**



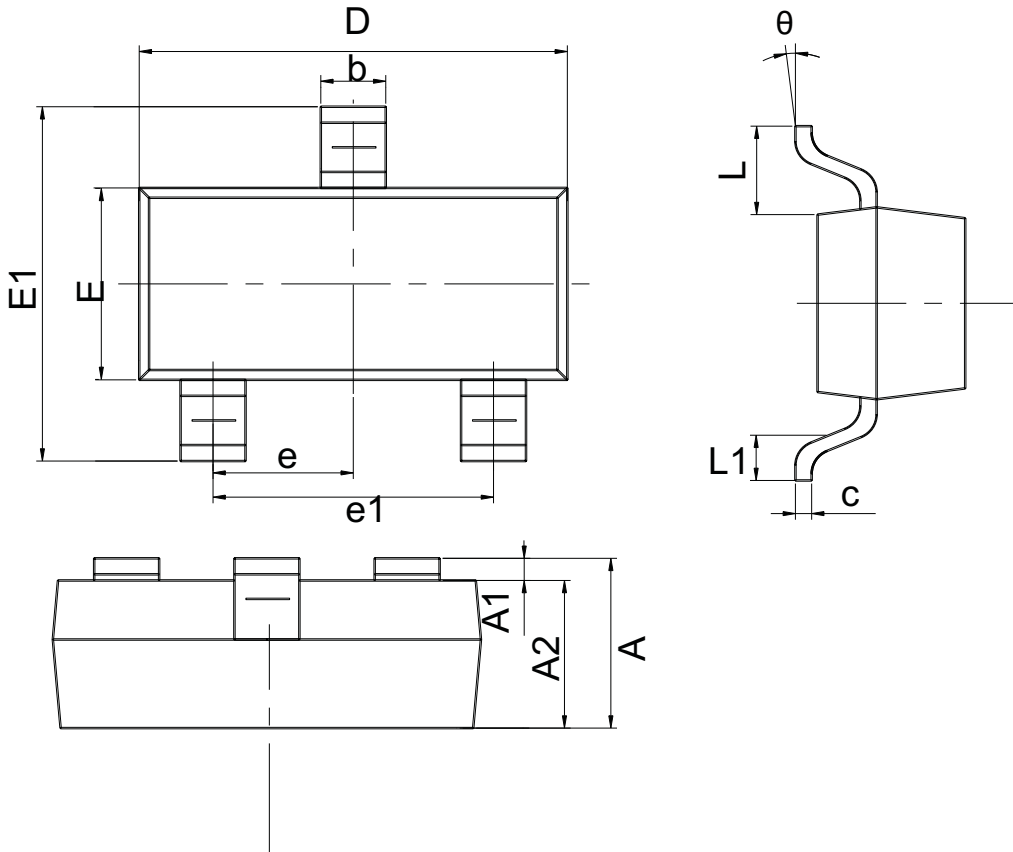
**Capacitance Characteristics**



**Power Derating Curve**



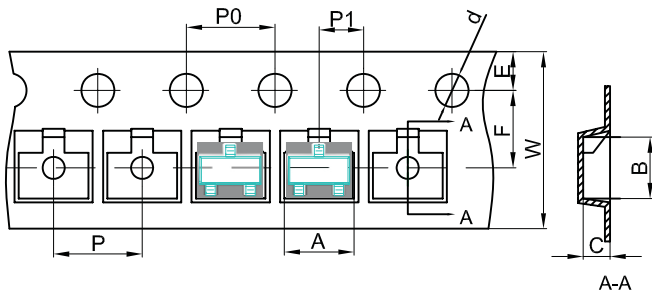
# SOT-23 OUTLINE DIMENSIONS



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	0.950REF.		0.037REF.	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
$\theta$	0°	8°	0°	8°

# SOT-23 Tape and reel

## SOT-23 Embossed Carrier Tape

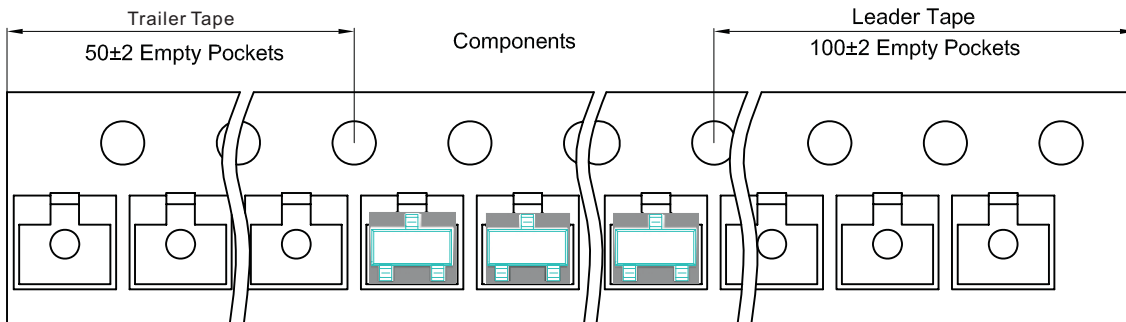


### Packaging Description:

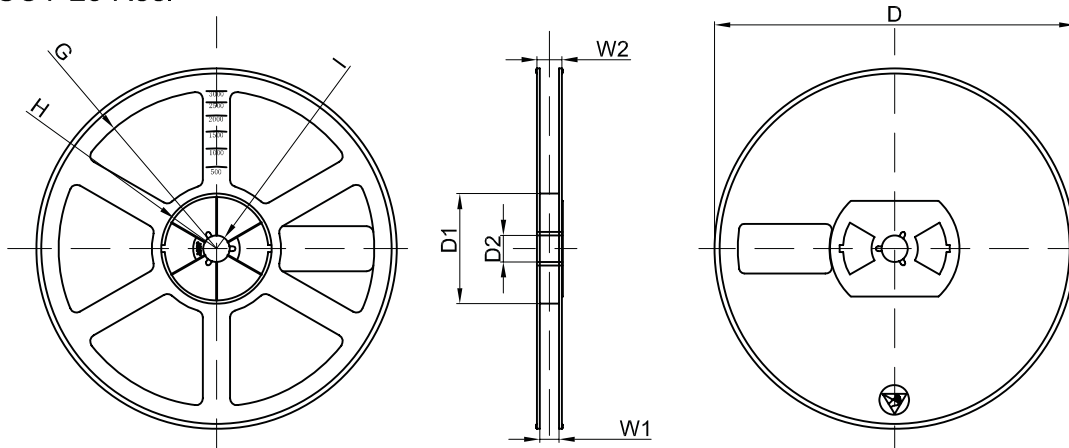
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
(Tolerance)	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+0.3/-0.1

## SOT-23 Tape Leader and Trailer



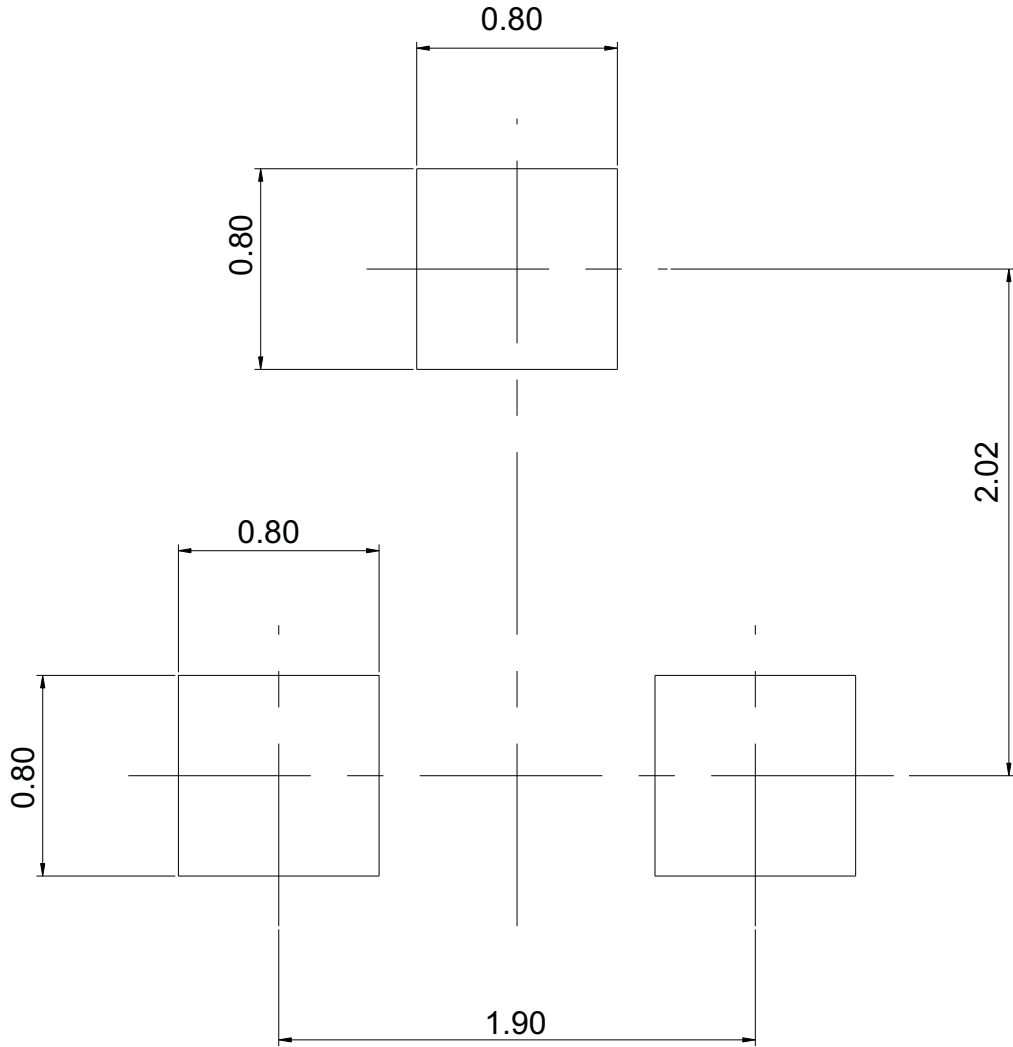
## SOT-23 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	+/-2	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	210x208x203	180,000 pcs	440x440x230	8.45

# SOT-23 Pad size



<b>Center distance</b>		1.90
<b>Lead size</b>	<b>Lead width</b>	0.40
	<b>Lead length</b>	0.55
<b>Pad size</b>	<b>Pad width</b>	0.80
	<b>Pad length</b>	0.80

Unit: mm