

SOT-23 Plastic-Encapsulate Diodes

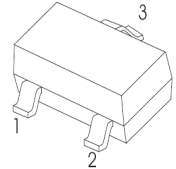
BAV99

SWITCHING DIODE

FEATURES

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance

SOT-23



BAW56	BAV70	BAV99
MARKING:A1	MARKING:A4	MARKING:A7

Maximum Ratings @Ta=25°C

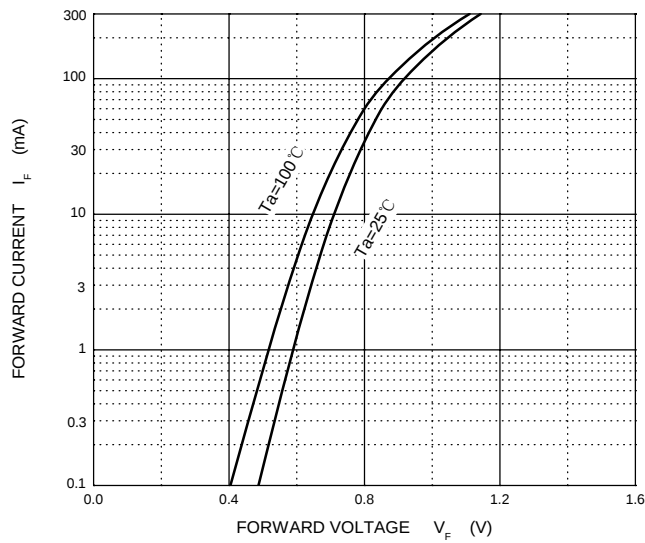
Parameter	Symbol	Limit	Unit
Reverse Voltage	V_R	70	V
Forward Current	I_F	200	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	2.0	A
Power Dissipation	P_D	225	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	556	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature range	T_{STG}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

Electrical Characteristics @Ta=25°C

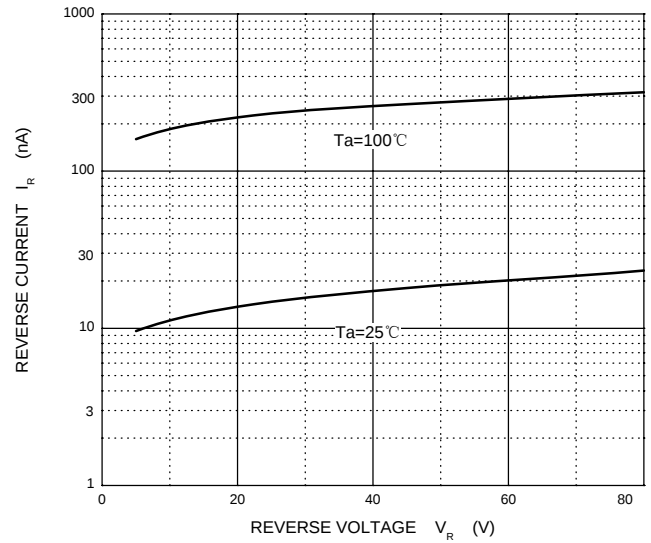
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V_R	$I_R=100\mu A$	70			V
Forward voltage	V_{F1}	$I_F=1mA$			0.715	V
	V_{F2}	$I_F=10mA$			0.855	V
	V_{F3}	$I_F=50mA$			1	V
	V_{F4}	$I_F=150mA$			1.25	V
Reverse current	I_R	$V_R=70V$			2.5	μA
Capacitance between terminals	C_T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

Typical Characteristics

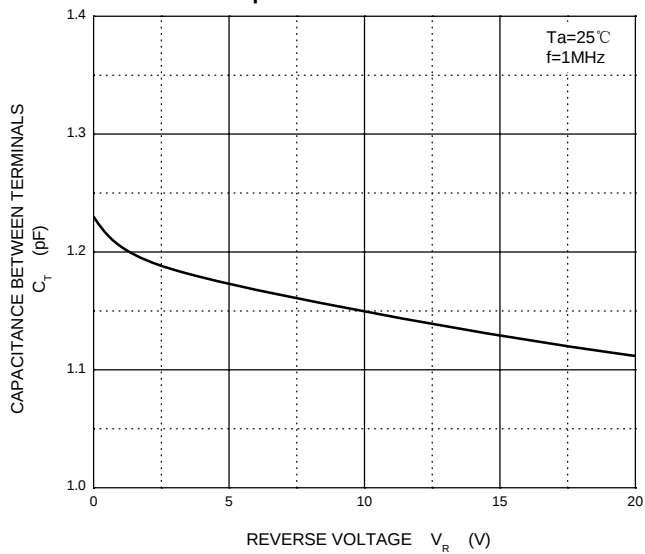
Forward Characteristics



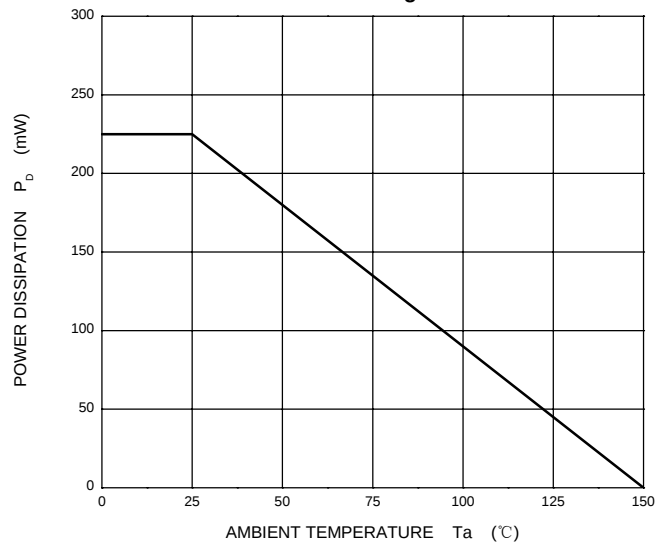
Reverse Characteristics



Capacitance Characteristics

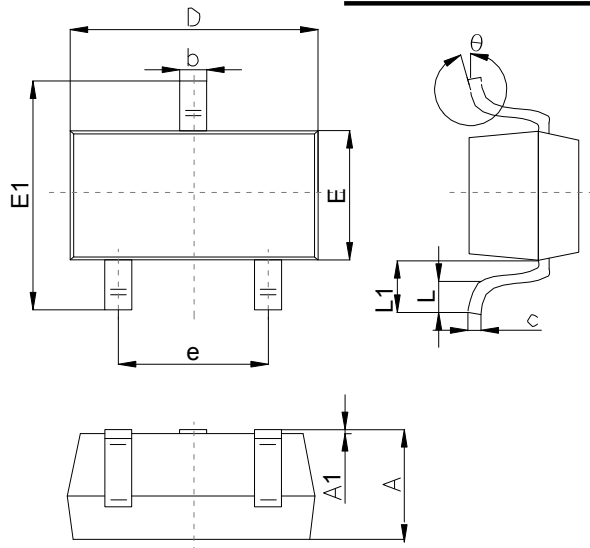


Power Derating Curve



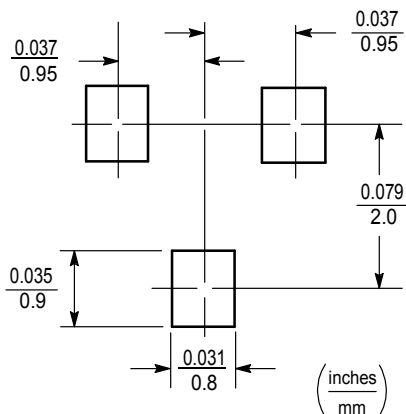
Outlitne Drawing

SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		
	Min	Typ	Max
A	0.65		1.40
A1	0.00		0.20
b	0.30		0.55
c	0.08		0.20
D	2.70		3.10
E	1.15		1.65
E1	2.10		2.80
e	1.70		2.10
L	0.15		0.50
L1	0.35		0.70
θ	0°		12°

Suggested Pad Layout

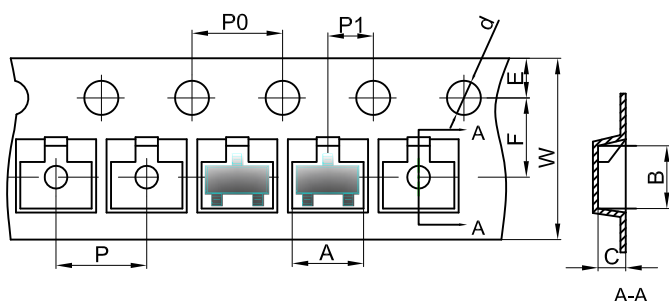


Note:

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

SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

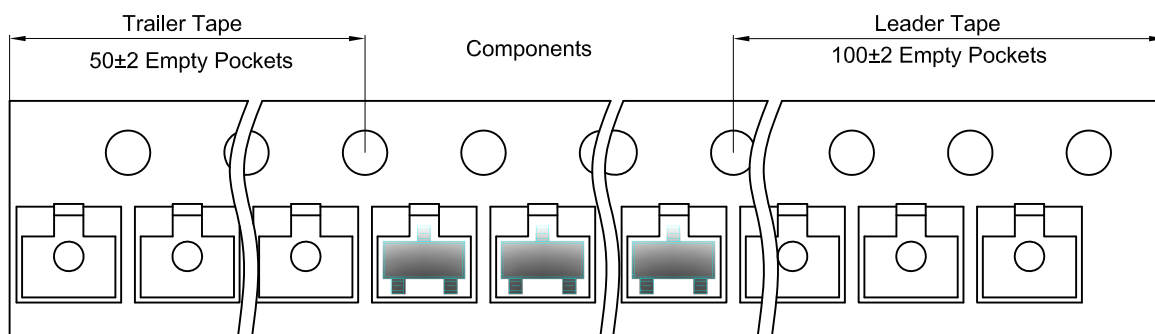


Packaging Description:

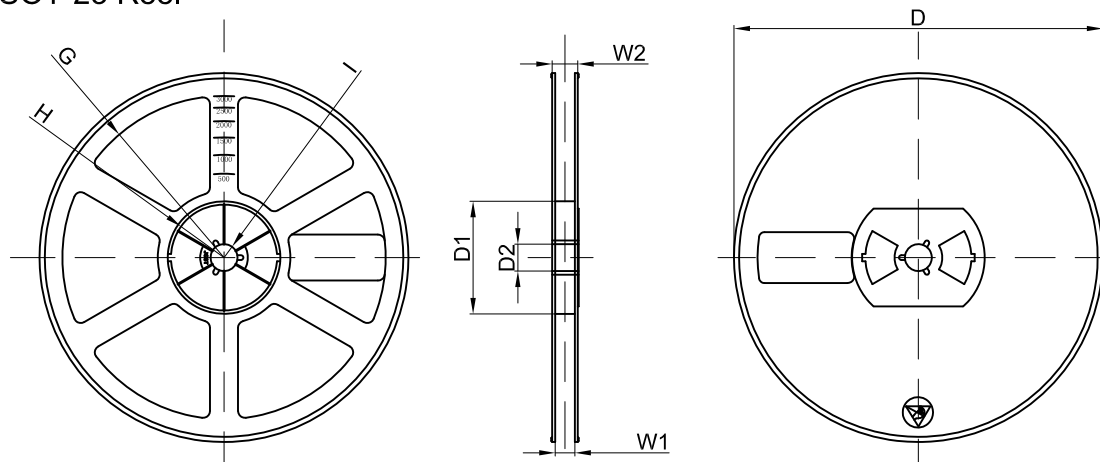
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and are 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

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

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
	7 Inch	45,000 pcs	203×203×195	180,000 pcs		