

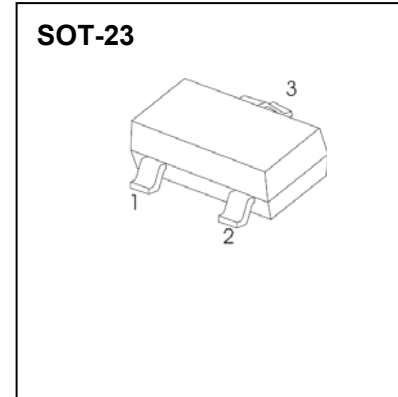
SOT-23 Plastic-Encapsulate Transistors

BAV23A/C/S

SWITCHING DIODE

FEATURES

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



BAV23A	BAV23C	BAV23S
MARKING: KT7	MARKING: KT6	MARKING: KL31

Solid dot = Green molding compound device, if none, the normal device

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

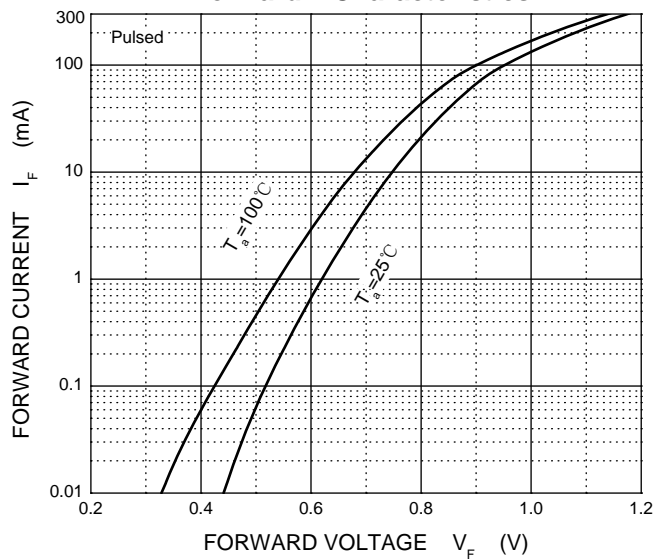
Symbol	Parameter	Value	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	250	V
V_{RWM}	Working Peak Reverse Voltage		
$V_{R(RMS)}$	RMS Reverse Voltage	175	V
I_O	Average Rectified Output Current	225	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	1.7	A
P_D	Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	357	$^\circ\text{C}/\text{W}$
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^\circ\text{C}$

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

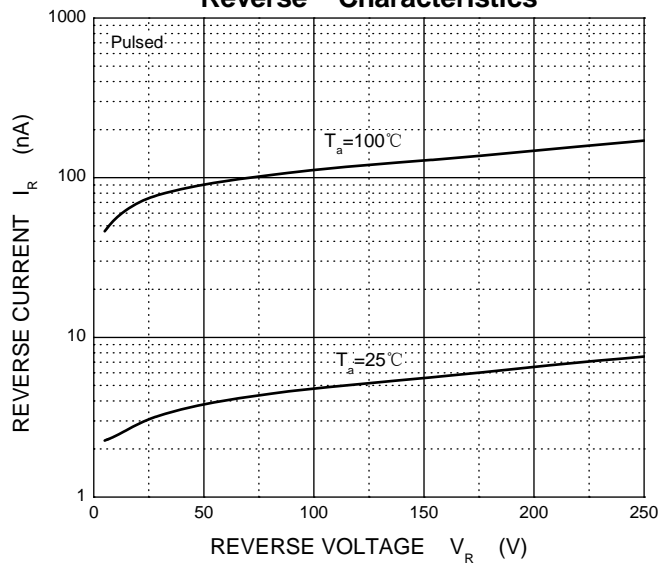
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	250			V
Reverse current	I_R	$V_R=250\text{V}$			0.1	μA
Forward voltage	V_F	$I_F=100\text{mA}$			1	V
		$I_F=200\text{mA}$			1.25	
Total capacitance	C_{tot}	$V_R=0\text{V}, f=1\text{MHz}$			5	pF
Reverse recovery time	t_{rr}	$I_F=I_R=30\text{mA}, I_{rr}=0.1 \times I_R, R_L=100\Omega$			50	ns

Typical Characteristics

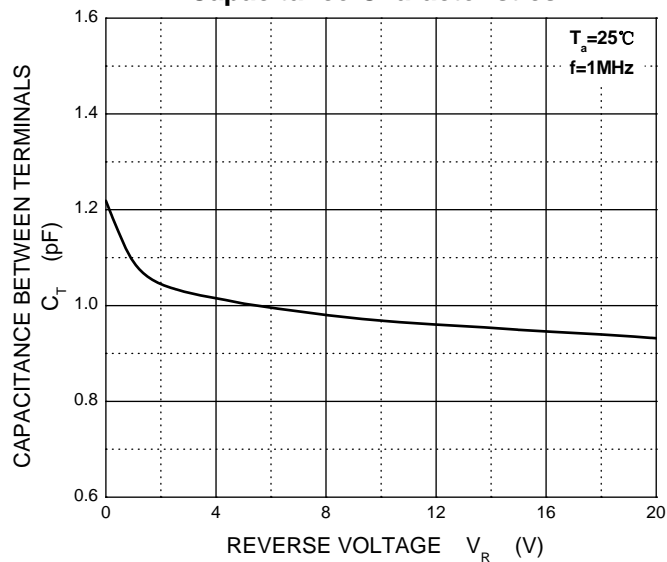
Forward Characteristics



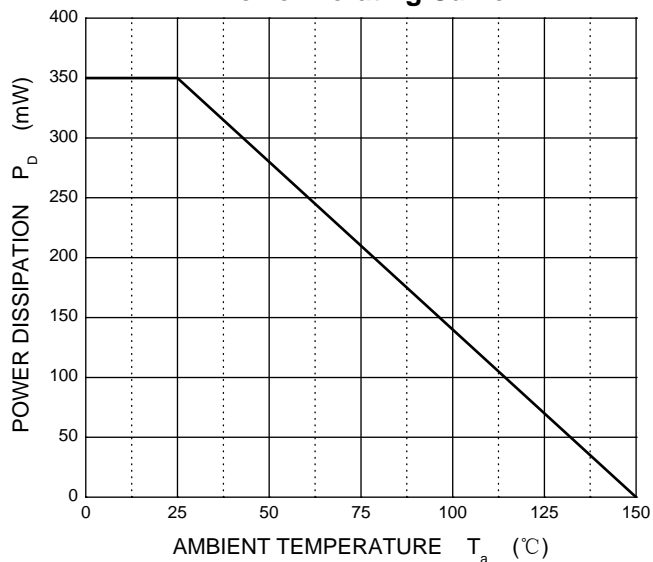
Reverse Characteristics



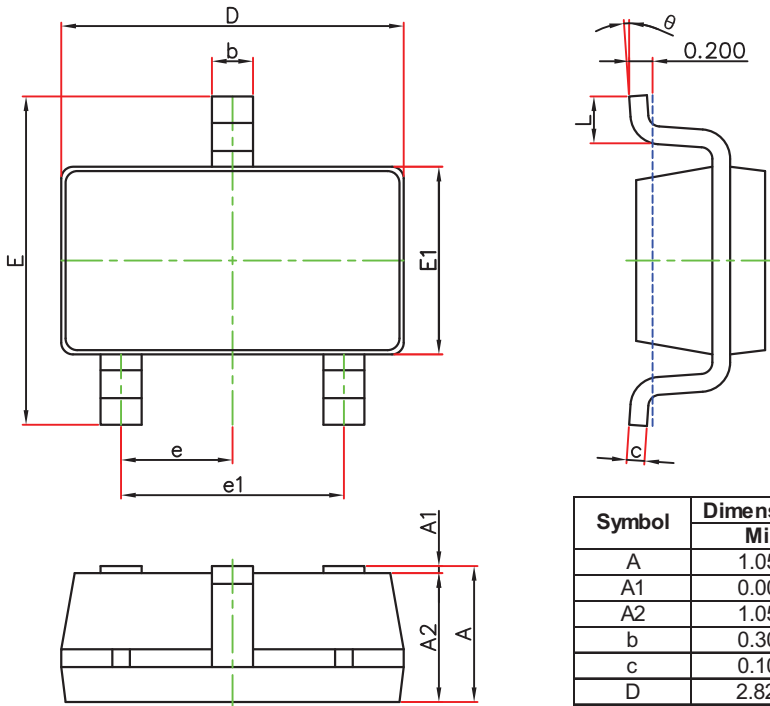
Capacitance Characteristics



Power Derating Curve

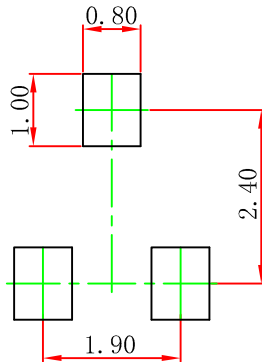


SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

SOT-23-3L Suggested Pad Layout

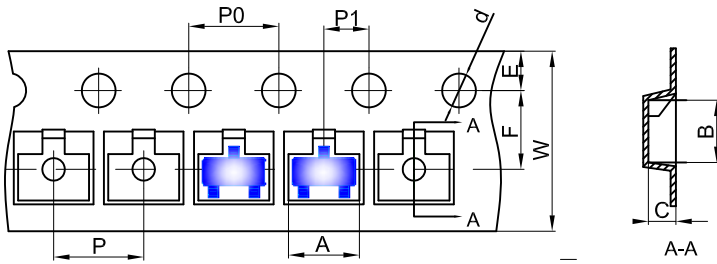


Note:

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

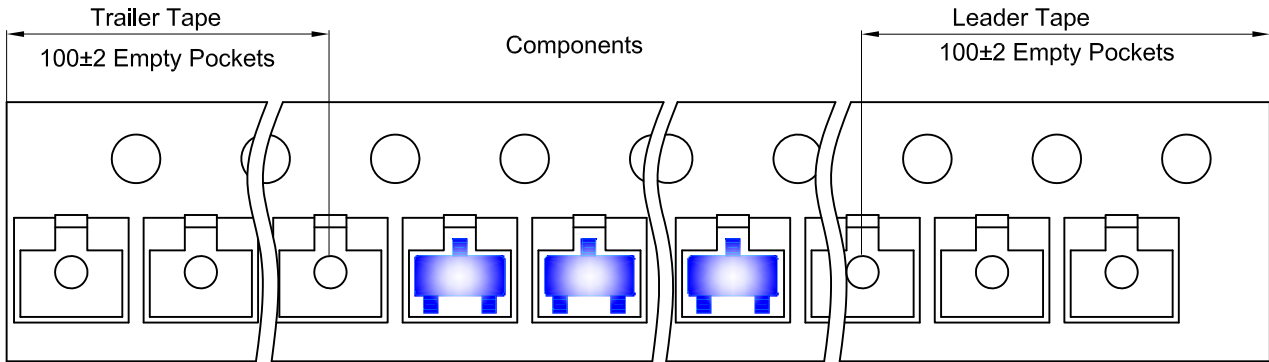
SOT-23-3L Embossed Carrier Tape



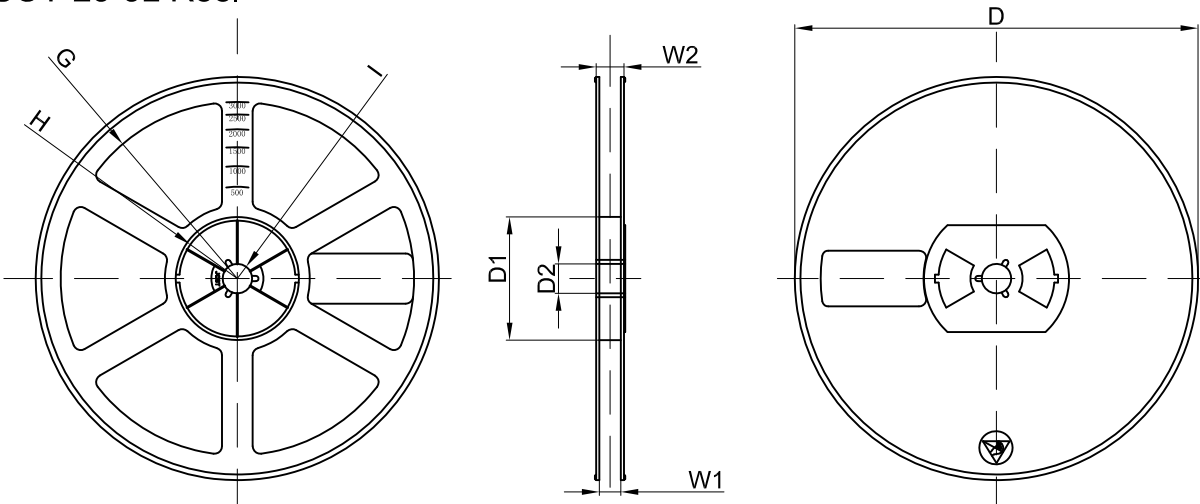
Packaging Description:
 SOT-23-3L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 18.0cm 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-23-3L	3.18	3.28	1.32	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23-3L Tape Leader and Trailer



SOT-23-3L Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø180.00	60.00	13.00	R78.00	R25.60	R6.50	9.50	13.10

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	

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