

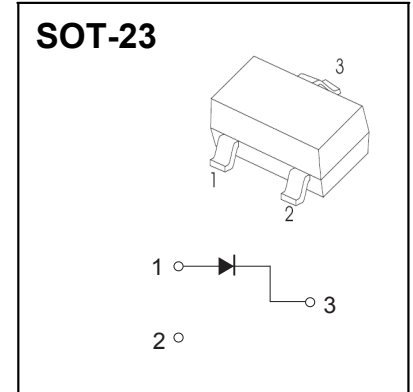
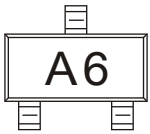
## SOT-23 Plastic-Encapsulate Diodes

### BAS16 SWITCHING DIODE

#### FEATURES

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

Marking: **A6**



#### Maximum Ratings @Ta=25°C

Parameter	Symbol	Limit	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Peak Reverse Voltage	$V_{RRM}$	75	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	$I_{FM}$	300	mA
Average Rectified Output Current	$I_O$	150	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
Operation Junction and Storage Temperature Range	$T_J, T_{STG}$	-55~+150	°C

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

Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=100\mu A$	75		V
Reverse voltage leakage current	$I_R$	$V_R=75V$		1	$\mu A$
Forward voltage	$V_F$	$I_F=1mA$ $I_F=10mA$ $I_F=50mA$ $I_F=150mA$		0.715 0.855 1 1.25	V
Diode capacitance	$C_D$	$V_R=0, f=1MHz$		2	pF
Reverses recovery time	$t_{rr}$	$I_F=I_R=10mA, I_{tr}=0.1 \times I_R,$ $R_L=100\Omega$		6	ns

Typical Characteristics

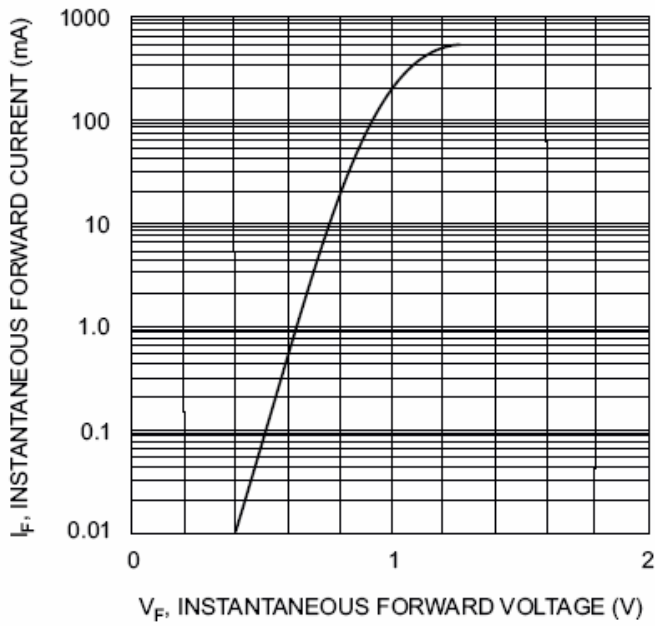


Fig. 1 Forward Characteristics

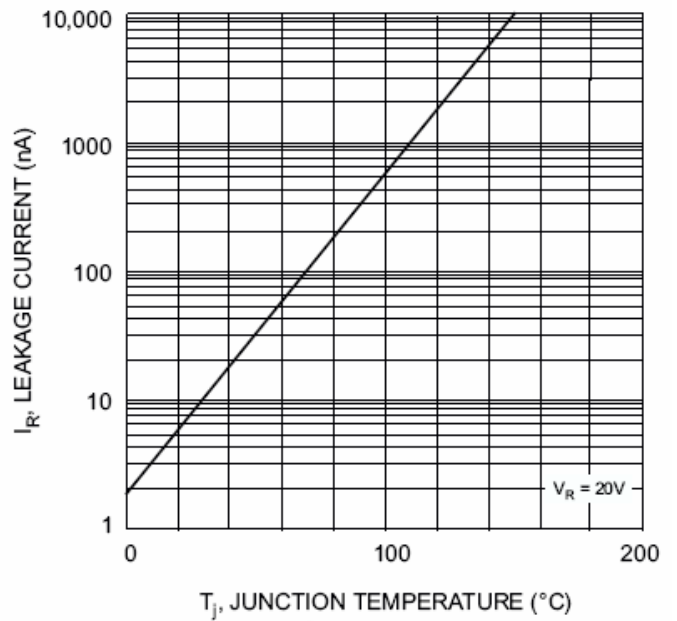
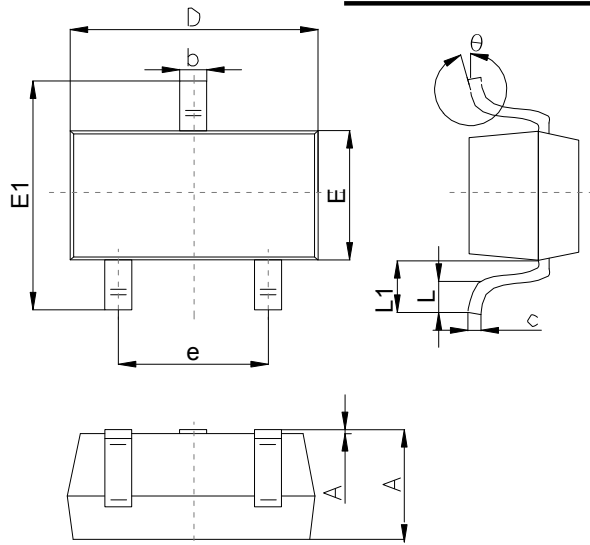


Fig. 2 Leakage Current vs Junction Temperature

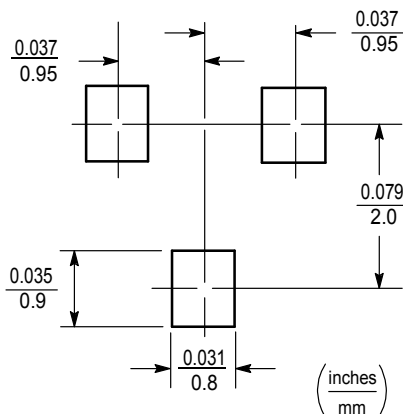
**Outlitne Drawing**

**SOT-23 Package Outline Dimensions**



Symbol	Dimensions In Millimeters		
	Min	Typ	Max
A	1.00		1.40
A1			0.10
b	0.35		0.50
c	0.10		0.20
D	2.70	2.90	3.10
E	1.20		1.60
E1	2.4		2.80
e		1.90	
L	0.10		0.30
L1	0.4		
θ	0°		10°

**Suggested Pad Layout**



- Note:
1. Controlling dimension:in/millimeters.
  2. General tolerance: ±0.05mm.
  3. The pad layout is for reference purposes only.

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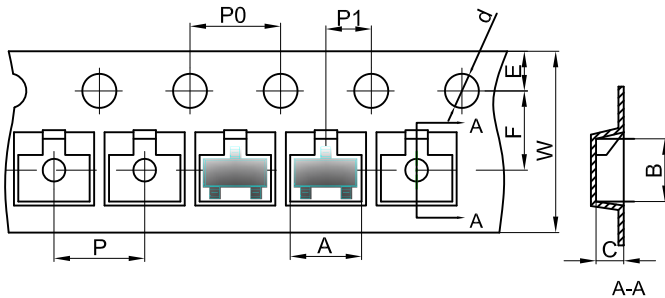
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**SOT-23 Tape and Reel**

**SOT-23 Embossed Carrier Tape**

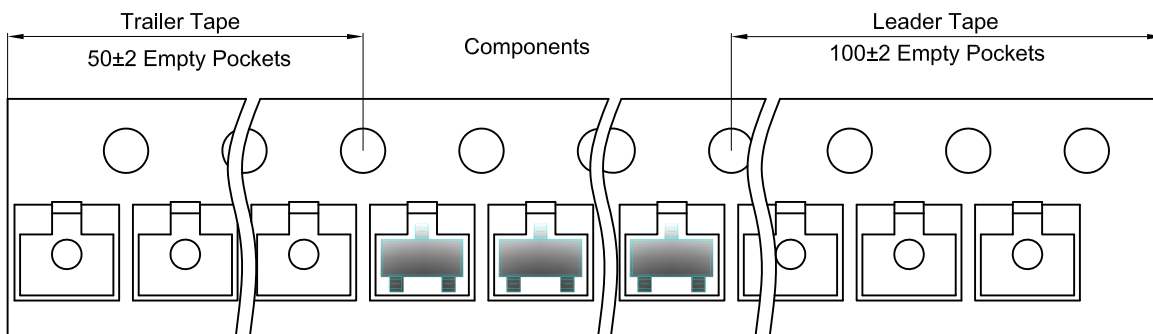


**Packaging Description:**

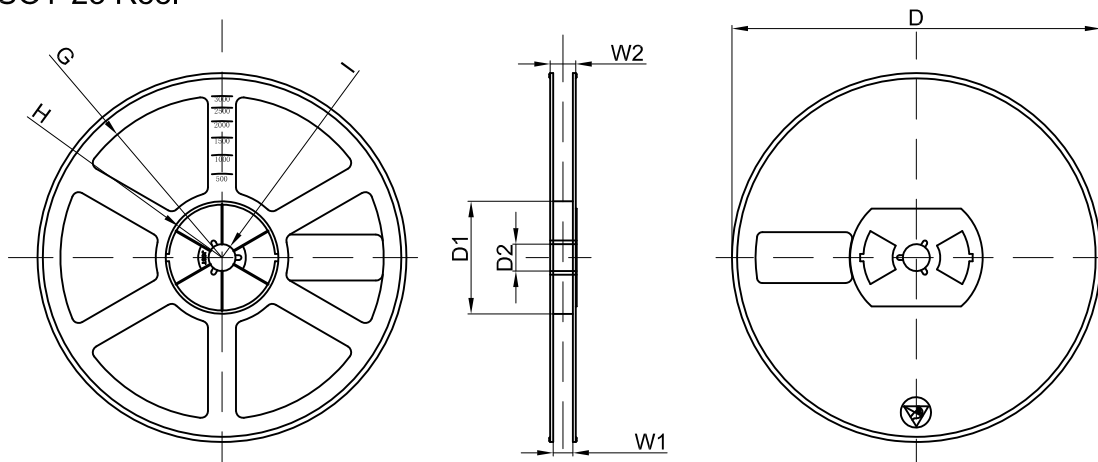
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in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

**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)
3000 pcs	7 Inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	

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