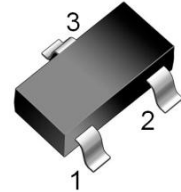
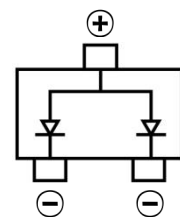


**SWITCHING DIODE**
**FEATURES**

- Fast Switching
- High Conductance
- Surface Mount device
- For General Purpose Switching Applications


**SOT-23**


BAS21A:JS2

**MECHANICAL DATA**

- Case: SOT-23
- Case Material: Molded Plastic. UL Flammability
- Classification Rating: 94V-0
- Weight: 0.008 grams (approximate)

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

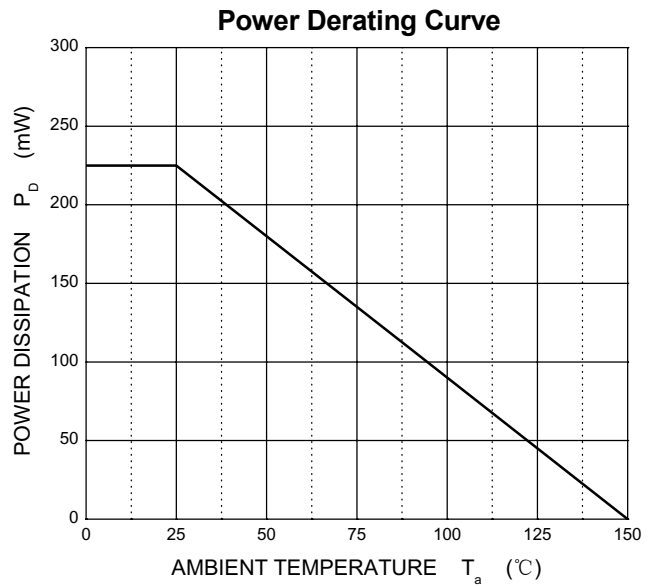
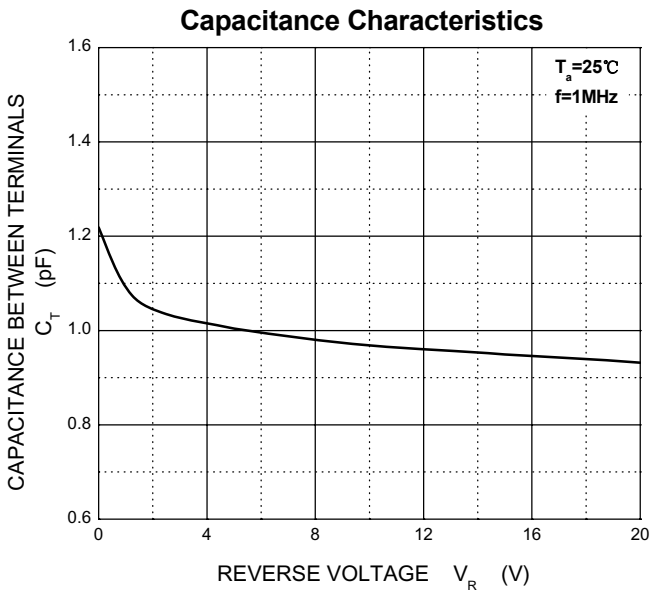
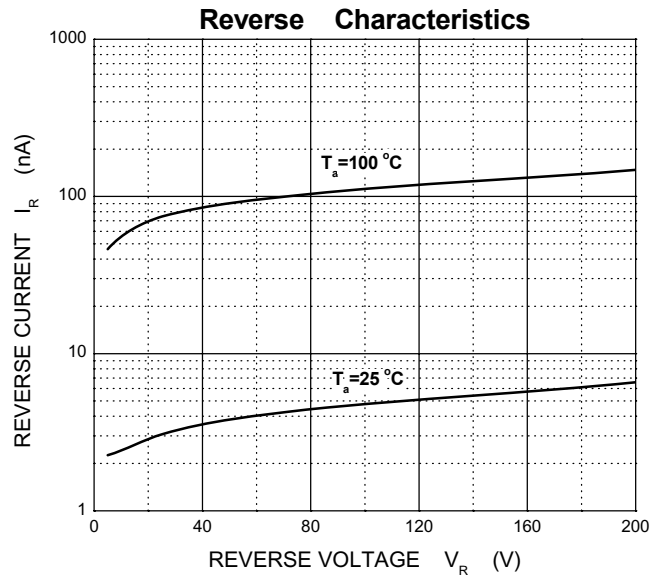
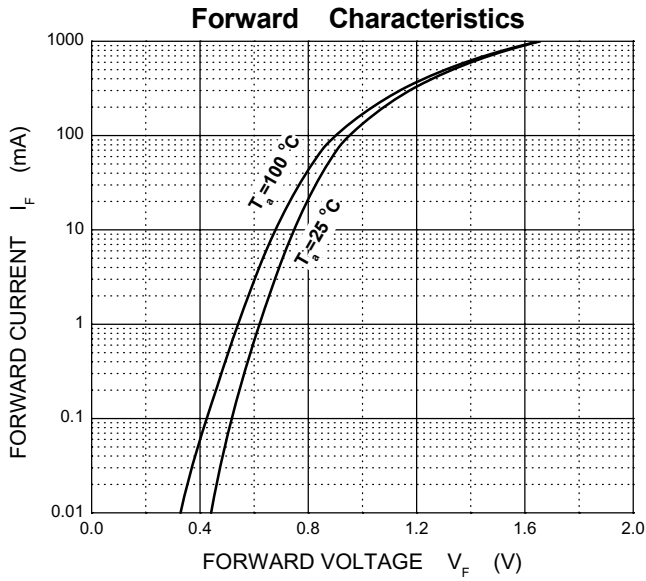
Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	250	V
DC Blocking Reverse Voltage	$V_R$	250	V
Forward Current	$I_F$	400	mA
Average Rectified Output Current	$I_O$	200	mA
Non-Repetitive Peak Forward Surge Current @ $t@=8.3\text{ms}$	$I_{FSM}$	2.5	A
Repetitive Peak Forward Surge Current	$I_{FRM}$	625	mA
Power Dissipation	$P_D$	225	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	555	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 ~+150	$^\circ\text{C}$

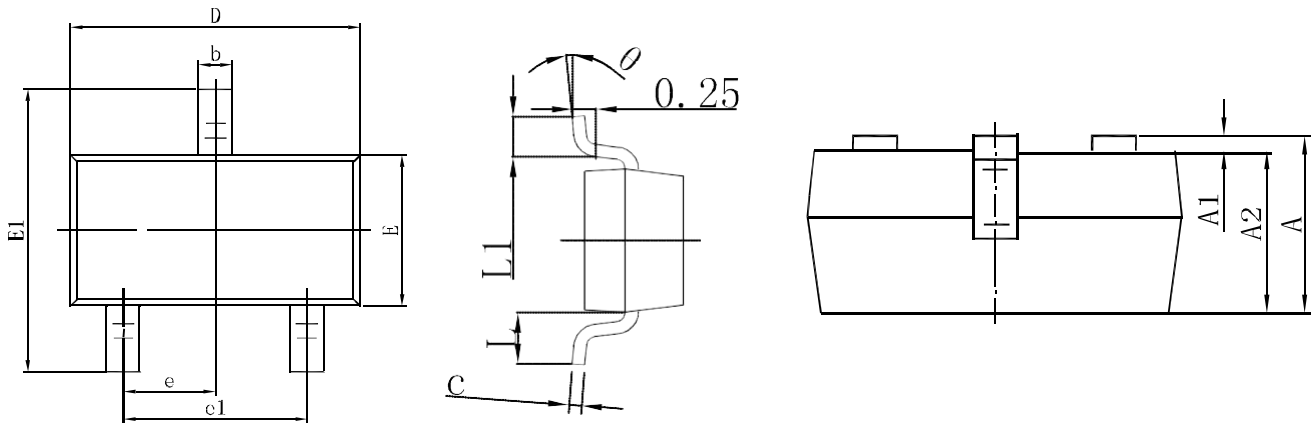
**ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	Min	Max	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)}$	250		V	$I_R=100\mu\text{A}$
Reverse voltage leakage current	$I_R$		0.1	$\mu\text{A}$	$V_R=200\text{V}$
Forward voltage	$V_F$		1	V	$I_F=100\text{mA}$
Diode capacitance	$C_D$		5	pF	$V_R=0\text{V}, f=1\text{MHz}$
Reverse recovery time	$T_{rr}$		50	nS	$I_F=I_R=30\text{mA}$ $I_{rr}=0.1 \times I_R$ $R_L=100\Omega$

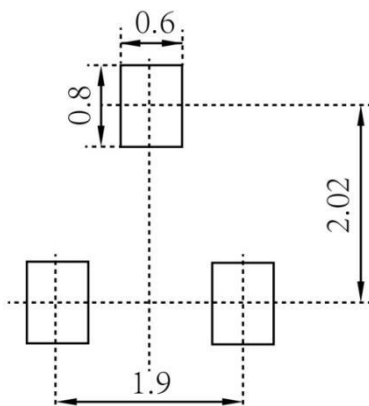
SWITCHING DIODE

Typical Characteristics



**SWITCHING DIODE**
**SOT-23 Package Outline Dimensions**


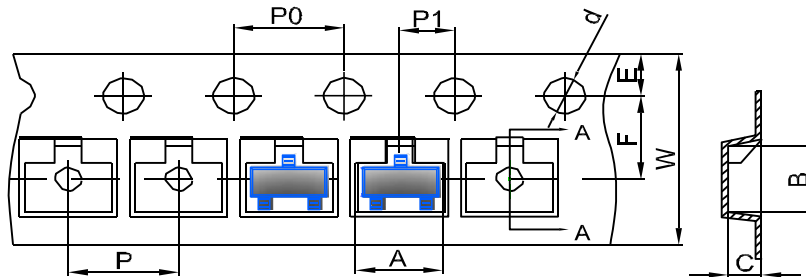
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		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
$\theta$	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

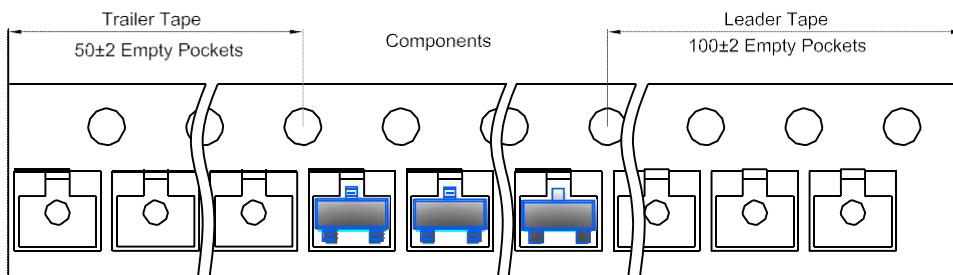
## SOT-23 Tape and Reel

### SOT-23 Embossed Carrier Tape

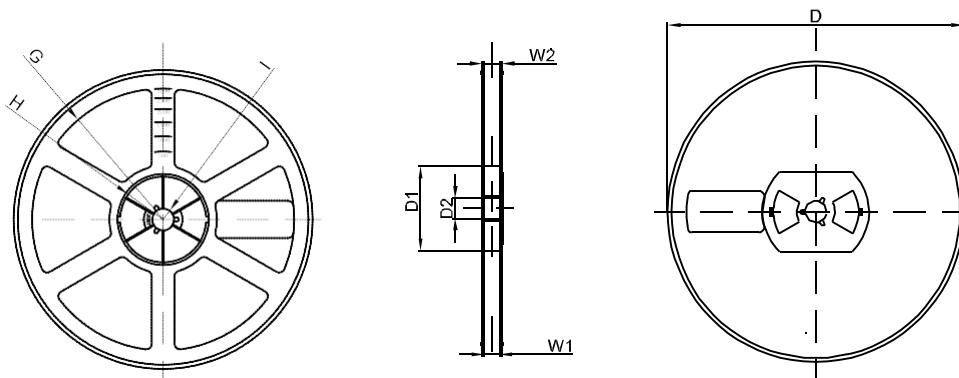


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

### 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	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1