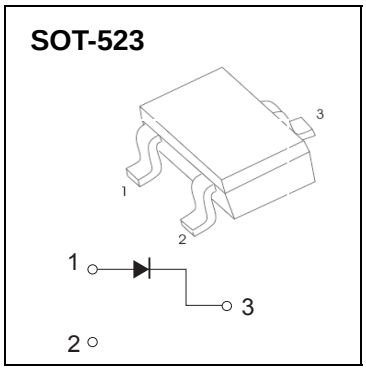
SZCJ

Shenzhen Changji Semiconductor Co., LTD.

# SOT-523 Plastic-Encapsulate Diodes

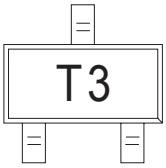
**BAS21T** SWITCHING DIODE




**FEATURES**

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

**MARKING :T3**



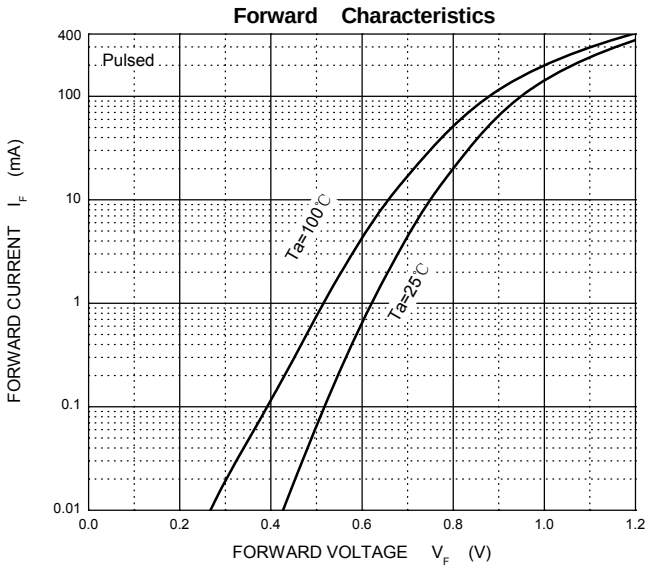

**Maximum Ratings @Ta=25℃**

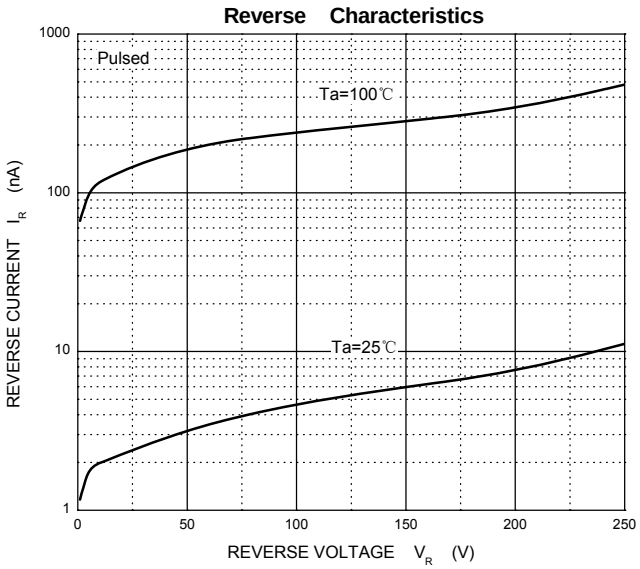
| Parameter | Symbol | Limit | Unit |
|---|---|---|---|
| **Peak Repetitive Peak Reverse Voltage**<br>**Working Peak Reverse Voltage**<br>**DC Blocking Voltage** | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 250 | V |
| **Forward Continuous Current** | $I_{FM}$ | 400 | mA |
| **Average Rectified Output Current** | $I_O$ | 200 | mA |
| **Non-Repetitive Peak Forward Surge Current @t=8.3ms** | $I_{FSM}$ | 2.5 | A |
| **Power Dissipation** | $P_D$ | 150 | mW |
| **Thermal Resistance Junction to Ambient** | $R_{\theta JA}$ | 833 | ℃/W |
| **Operation Junction and Storage Temperature Range** | $T_J$,$T_{STG}$ | -55~+150 | ℃ |

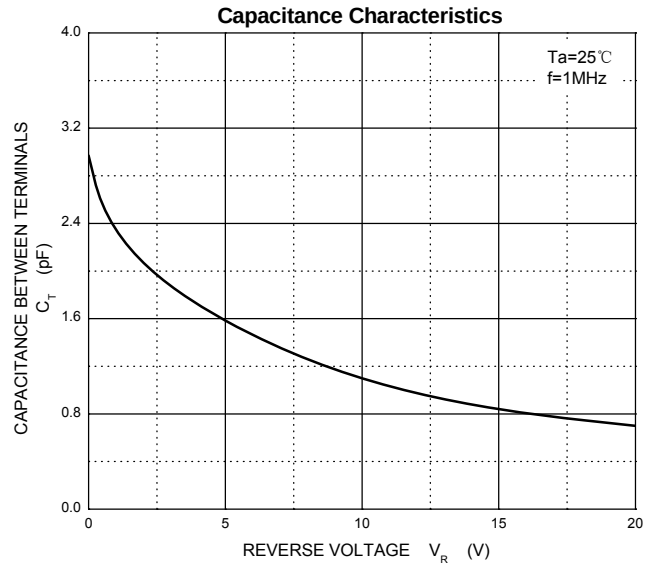
**ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)**

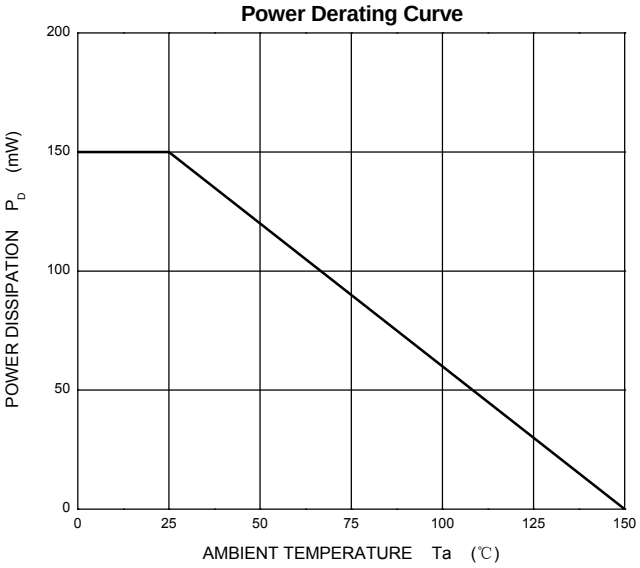
| Parameter | Symbol | Test conditions | Min | Max | Unit |
|---|---|---|---|---|---|
| **Reverse breakdown voltage** | $V_{(BR)}$ | $I_R$= 100μA | 250 | | V |
| **Reverse voltage leakage current** | $I_R$ | $V_R$=200V | | 100 | nA |
| **Forward voltage** | $V_F$ | $I_F$=100mA<br>$I_F$=200mA | | 1<br>1.25 | V |
| **Total capacitance** | $C_T$ | $V_R$=0V,f=1MHz | | 5 | pF |
| **Reverse recovery time** | $t_{rr}$ | $I_F$=$I_R$=30mA,$I_{rr}$=0.1X$I_R$,<br>$R_L$=100Ω | | 50 | ns |

## Typical Characteristics

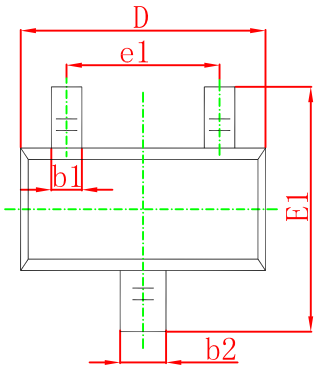


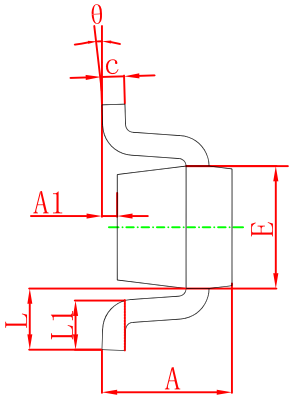



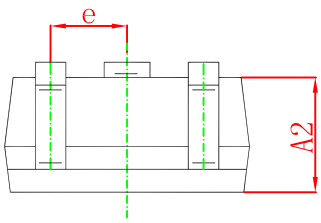



## SOT-523 Package Outline Dimensions

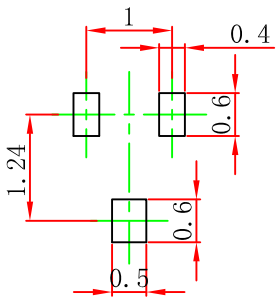



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | Min. | Max. | Min. | Max. |
| A | 0.700 | 0.900 | 0.028 | 0.035 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.700 | 0.800 | 0.028 | 0.031 |
| b1 | 0.150 | 0.250 | 0.006 | 0.010 |
| b2 | 0.250 | 0.350 | 0.010 | 0.014 |
| c | 0.100 | 0.200 | 0.004 | 0.008 |
| D | 1.500 | 1.700 | 0.059 | 0.067 |
| E | 0.700 | 0.900 | 0.028 | 0.035 |
| E1 | 1.450 | 1.750 | 0.057 | 0.069 |
| e | 0.500 TYP. | | 0.020 TYP. | |
| e1 | 0.900 | 1.100 | 0.035 | 0.043 |
| L | 0.400 REF. | | 0.016 REF. | |
| L1 | 0.260 | 0.460 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |

## SOT-523 Suggested Pad Layout



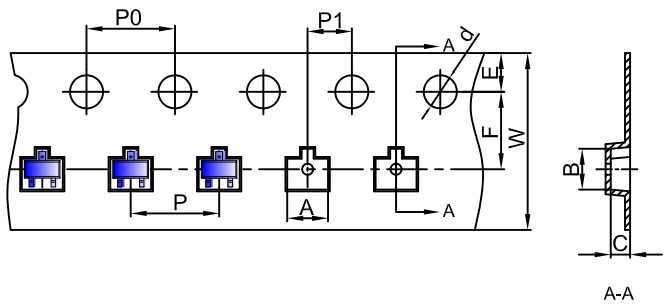

Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

NOTICE

SZCJ reserves the right to make modifications,enhan nts,improvements,corrections or other es without further notice to any product herein. SZCJ does not assume any liability arising out of the application or use of any product described h

# SOT-523 Tape and Reel

## SOT-523 Embossed Carrier Tape

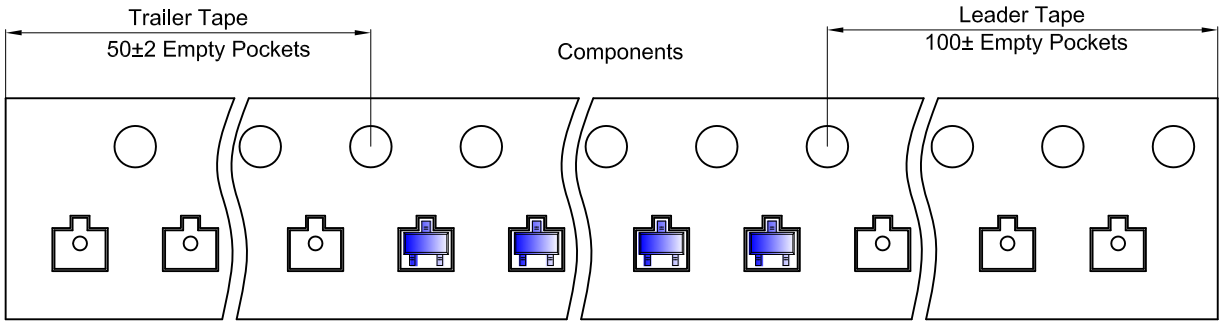



Packaging Description:

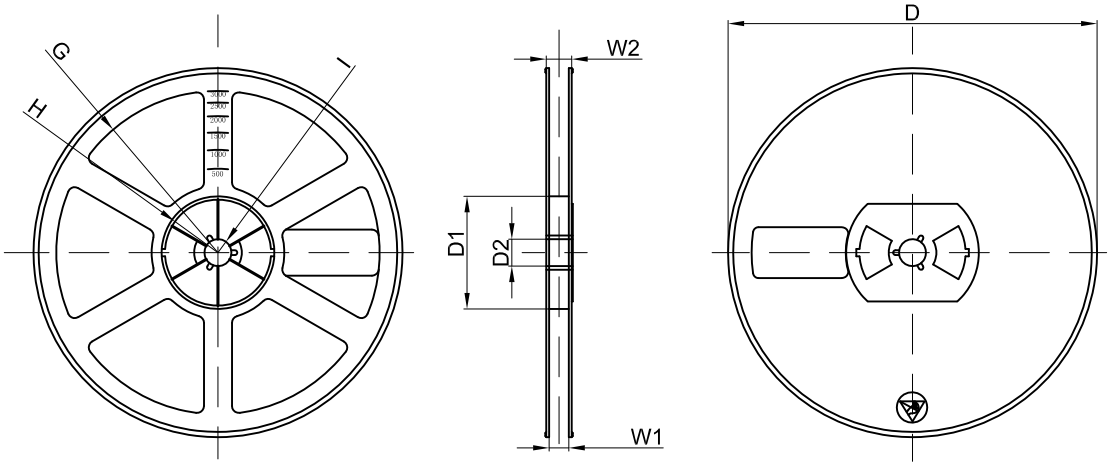
SOT-523 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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-523 | 1.85 | 1.85 | 0.875 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

## SOT-523 Tape Leader and Trailer




## SOT-523 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 | |