

Surface Mount Fast Switching Diode

BAS16T/BAW70T/BAW56T/BAV99T

FEATURES

- Ultra-Small surface mount package.
- Fast switching speed.
- For general purpose switching applications.
- High conductance.

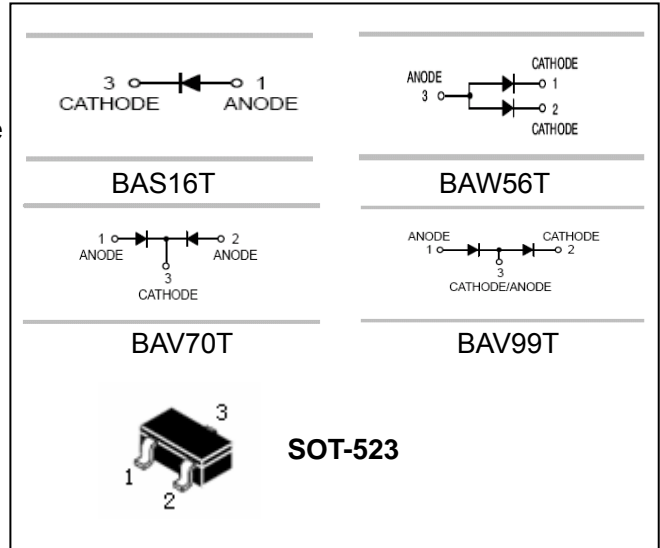


Lead-free

APPLICATIONS

- General purpose switching application.

ORDERING INFORMATION



| Type No. | Marking | Package Code |
|----------|---------|--------------|
| BAS16T | A2 | SOT-523 |
| BAW56T | JD | SOT-523 |
| BAV70T | JJ | SOT-523 |
| BAV99T | JE | SOT-523 |

MAXIMUM RATING @ Ta=25°C unless otherwise specified

| Symbol | Parameter | Value | Units |
|-----------------|---|--------------|-------|
| V_{RRM} | Peak repetitive reverse voltage | 85 | V |
| V_{RWM} | Working peak reverse voltage | | |
| V_R | DC reverse voltage | | |
| $V_{R(RMS)}$ | RMS reverse voltage | 60 | V |
| I_F | Forward continuous voltage | single diode | 155 |
| | | double diode | 75 |
| I_{FRM} | Repetitive peak forward current | 500 | mA |
| I_{FSM} | Non-repetitive peak forward surge current | @t=1.0μs | 4.0 |
| | | @t=1.0ms | 1.0 |
| | | @t=1.0s | 0.5 |
| P_d | Power dissipation | 150 | mW |
| $R_{\theta JA}$ | Thermal resistance junction to ambient | 833 | °C/W |
| T_j, T_{stg} | Junction and Storage Temperature | -65~150 | °C |

Diode Semiconductor Korea

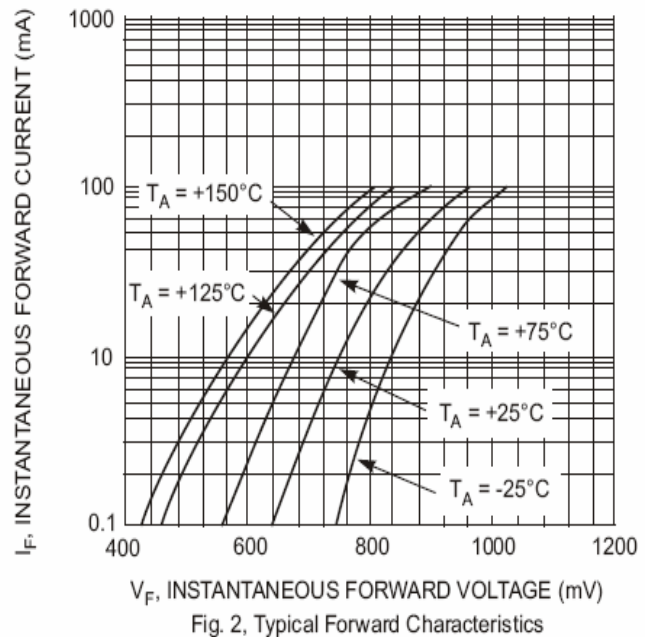
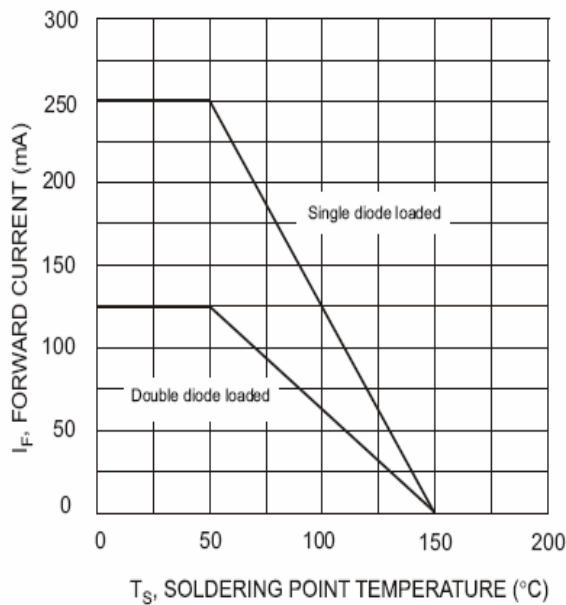
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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Parameter | Symbol | Test conditions | MIN | MAX | UNIT |
|---------------------------|-------------|---|-----|-------|---------|
| Reverse breakdown voltage | $V_{(BR)R}$ | $I_R=100\mu A$ | 85 | | V |
| Leakage current | I_R | $V_R=75V$ | | 2.0 | μA |
| | | $V_R=75V, T_j=150^\circ C$ | | 100 | μA |
| | | $V_R=25V, T_j=150^\circ C$ | | 60 | μA |
| | | $V_R=25V$ | | 30 | nA |
| Forward voltage | V_F | $I_F=1.0mA$ | | 0.715 | V |
| | | $I_F=10mA$ | | 0.855 | |
| | | $I_F=50mA$ | | 1.0 | |
| | | $I_F=150mA$ | | 1.25 | |
| Transition frequency | f_T | $V_{CE}=5V, I_C=10mA, f=100KHz$ | 100 | | MHz |
| Typical total capacitance | C_T | $V_R=0V, f=1MHz$ | | 1.5 | pF |
| Reverse recovery Time | t_{rr} | $I_F=I_R=10mA, I_{rr}=0.1 \cdot I_R, R_L=100\Omega$ | | 4.0 | ns |

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



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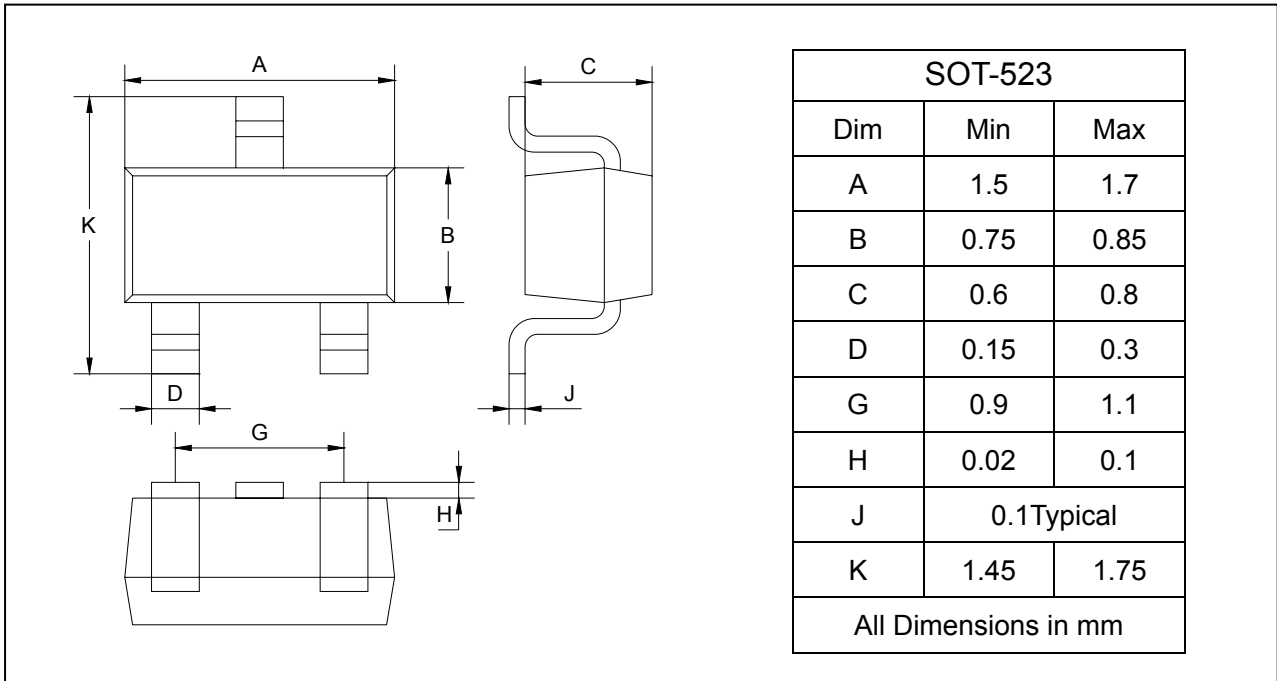
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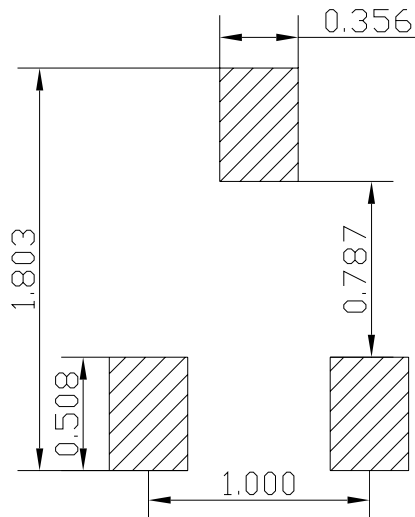
PACKAGE OUTLINE

Plastic surface mounted package

SOT-523



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

| Device | Package | Shipping |
|-----------------------------|---------|----------------|
| BAS16T/BAW56T/BAV70T/BAV99T | SOT-523 | 3000/Tape&Reel |