

Surface Mount Schottky Barrier Diode

BAT54T/AT/CT/ST

FEATURES

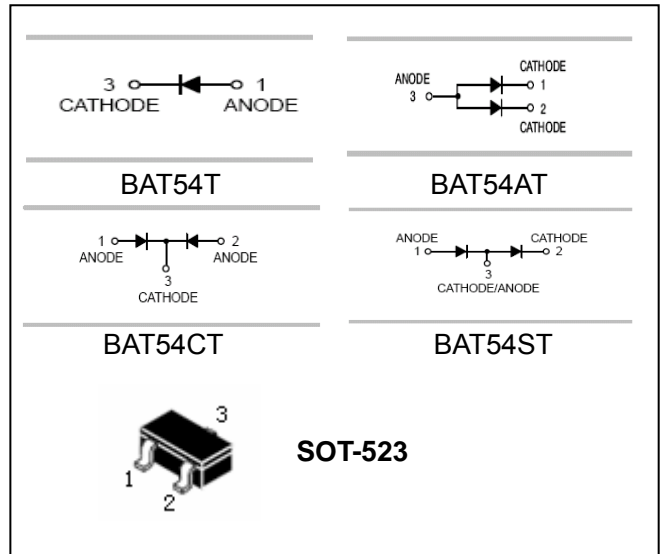
- Low forward voltage drop.
- Fast switching.
- Ultra-small surface mount package.
- PN junction guard ring for transient and ESD protection.



APPLICATIONS

- Schottky barrier diodes.

ORDERING INFORMATION



| Type No. | Marking | Package Code |
|----------|---------|--------------|
| BAT54T | L1 | SOT-523 |
| BAT54AT | L2 | SOT-523 |
| BAT54CT | L3 | SOT-523 |
| BAT54ST | L4 | SOT-523 |

MAXIMUM RATING @ Ta=25°C unless otherwise specified

| Symbol | Parameter | Value | Units |
|-----------------|--|---------|-------|
| V_{RRM} | Peak repetitive reverse voltage | 30 | V |
| V_{RWM} | Working peak reverse voltage | | |
| V_R | DC reverse voltage | | |
| I_F | Forward continuous voltage | 200 | mA |
| I_{FRM} | Repetitive peak forward voltage | 300 | mA |
| I_{FSM} | Non-repetitive peak forward surge current @t<1.0s | 600 | mA |
| 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 |

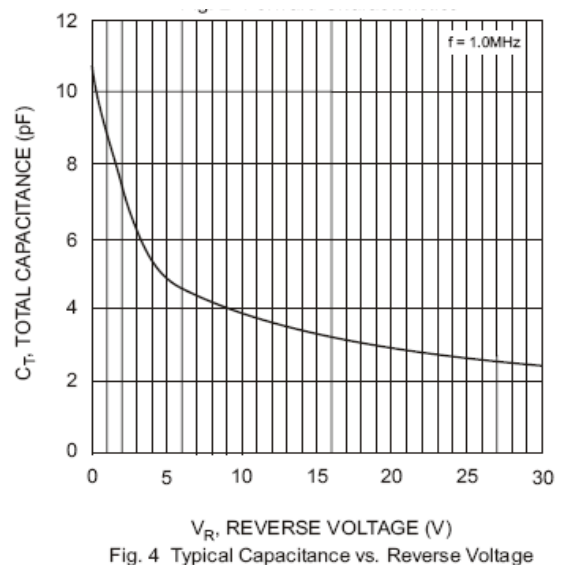
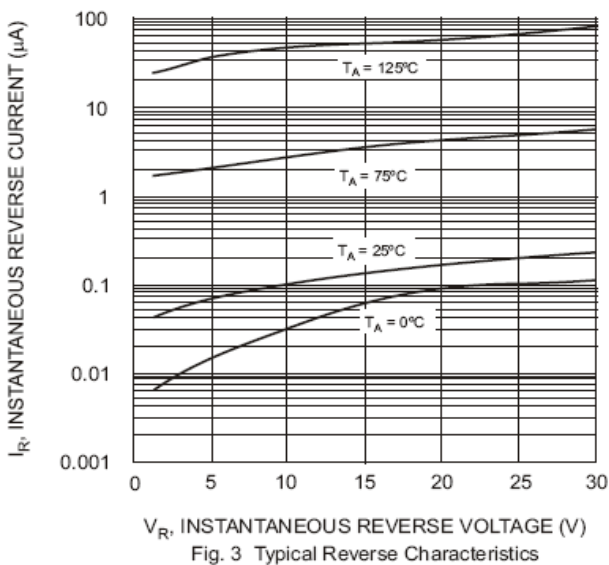
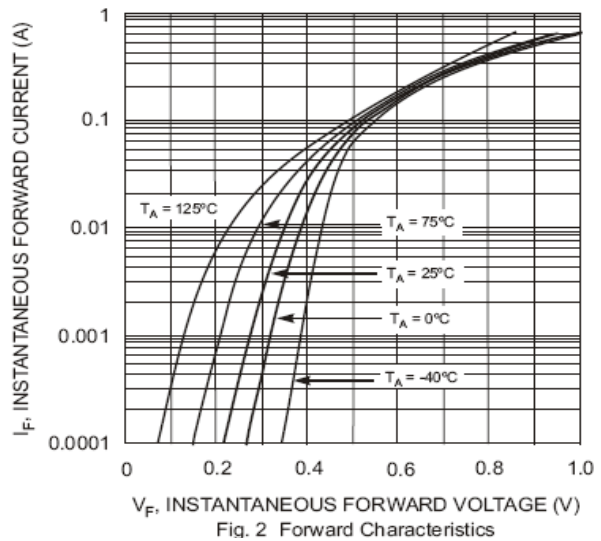
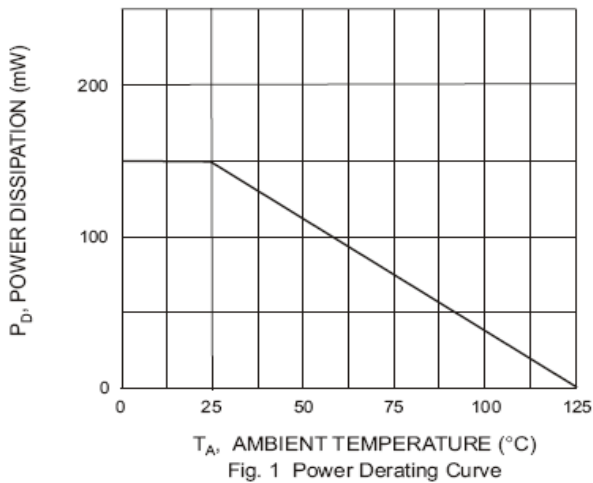
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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Parameter | Symbol | Test conditions | MIN | MAX | UNIT |
|---------------------------|-------------|--|-----|------|---------|
| Reverse breakdown voltage | $V_{(BR)R}$ | $I_R=100\mu A$ | 30 | | V |
| Leakage current | I_R | $V_R=25V$ | | 2.0 | μA |
| Forward voltage | V_F | $I_F=0.1mA$ | | 240 | mV |
| | | $I_F=1.0mA$ | | 320 | |
| | | $I_F=10mA$ | | 400 | |
| | | $I_F=30mA$ | | 500 | |
| | | $I_F=100mA$ | | 1000 | |
| Typical total capacitance | C_T | $V_R=1.0V, f=1MHz$ | | 10 | pF |
| Reverse recovery Time | t_{rr} | $I_F=I_R=10mA, to I_R=1.0mA R_L=100\Omega$ | | 5.0 | ns |

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



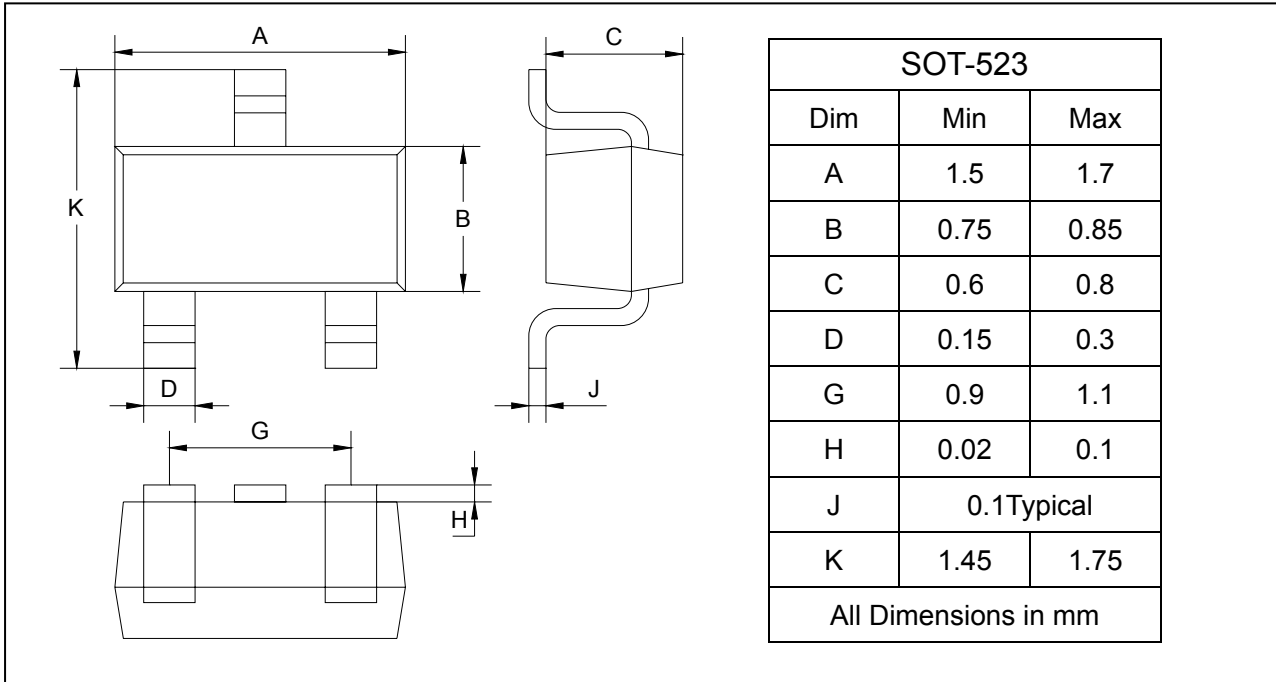
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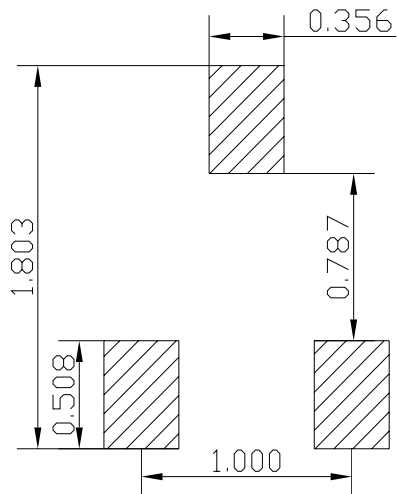
PACKAGE OUTLINE

Plastic surface mounted package

SOT-523



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

| Device | Package | Shipping |
|-----------------|---------|----------------|
| BAT54T/AT/CT/ST | SOT-523 | 3000/Tape&Reel |