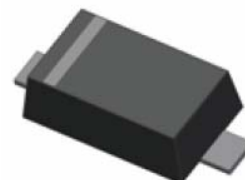
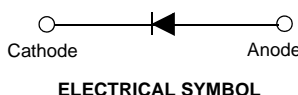


BAT54XV2

Schottky Barrier Diodes

Features

- Low Forward Voltage Drop
- Flat Lead, Surface Mount Device at 0.60mm Height
- Extremely Small Outline Plastic Package SOD523F
- Moisture Level Sensitivity 1
- Pb-free Version and RoHS Compliant
- Matte Tin (Sn) Lead Finish
- Green Mold Compound



SOD-523F
Band Indicates Cathode
BAT54XV2 Marking : 5B

Absolute Maximum Ratings * $T_A=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-------------|------------------------------------|-------------|------------------|
| V_{RRM} | Maximum Repetitive Reverse Voltage | 30 | V |
| V_R | Maximum DC Blocking Voltage | 30 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current | 200 | mA |
| I_{FSM} | Peak Forward Surge Current | 4 | A |
| T_J | Operating Junction Temperature | +125 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature Range | -65 to +125 | $^\circ\text{C}$ |

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------------|---|-------|---------------------------|
| P_D | Power Dissipation | 200 | mW |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 500 | $^\circ\text{C}/\text{W}$ |

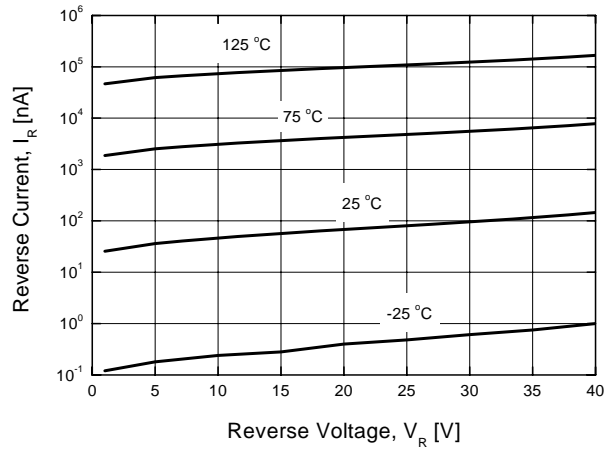
* Device mounted on FR-4 PCB minimum land pad.

Electrical Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

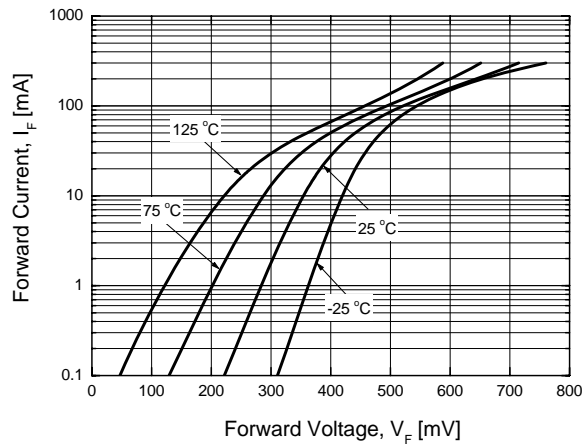
| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|----------|-------------------------|--|------|------|--------------------------------------|---------------|
| BV_R | Breakdown Voltage | $I_R=10\mu\text{A}$ | 30 | | | V |
| I_R | Reverse Leakage Current | $V_R=25\text{V}$ | | | 2 | μA |
| V_F | Forward Voltage | $I_F=0.1\text{mA}$ $I_F=1\text{mA}$ $I_F=10\text{mA}$ $I_F=30\text{mA}$ $I_F=100\text{mA}$ | | | 0.24 0.32 0.40 0.50 0.80 | V |
| T_{RR} | Reverse Recovery Time | $I_F=I_R=10\text{mA}$ $R_L=100\Omega$ $I_{RR}=1\text{mA}$ | | | 5 | nS |
| C | Capacitance | $V_R=1\text{V}$, $f=1\text{MHz}$ | | | 10 | pF |

Typical Performance Characteristics

Reverse Current vs Reverse Voltage

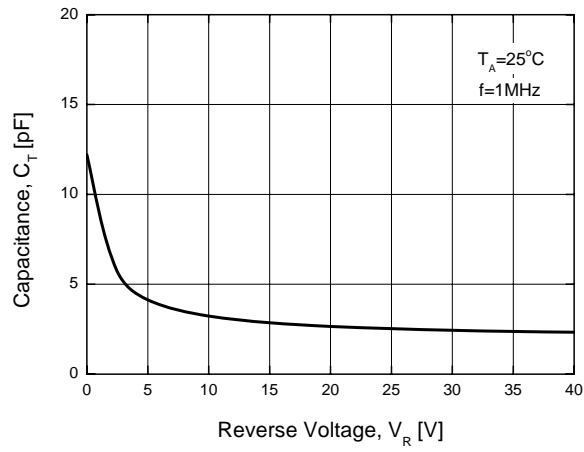


Forward Voltage vs Forward Current

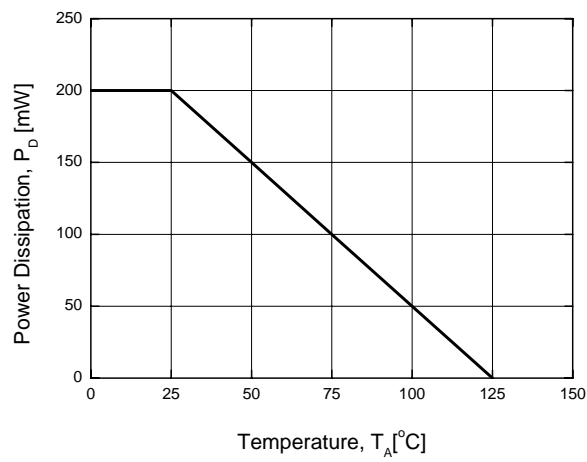


Typical Performance Characteristics (Continued)

Total Capacitance

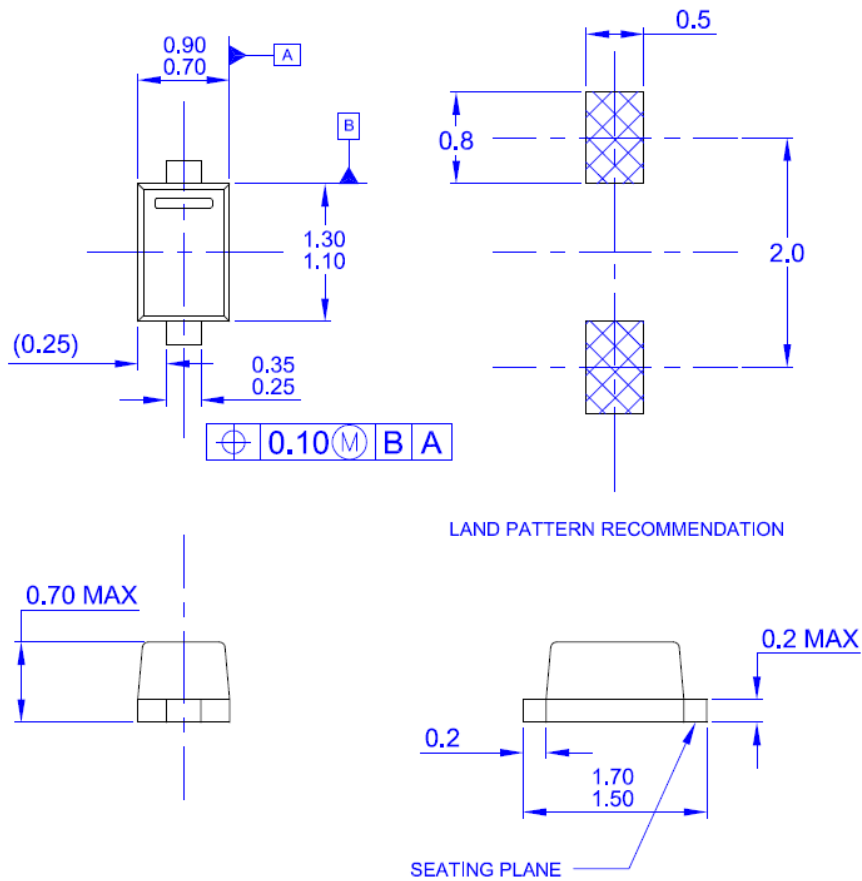


Power Derating Curve



Physical Dimension

SOD-523F









NOTES: UNLESS OTHERWISE SPECIFIED

- A) PACKAGE REFERENCE: THIS PACKAGE OUTLINE CONFORMS TO JEITA SC-79.
- B) ALL DIMENSIONS ARE IN MILLIMETERS.
- C) DRAWING CONFORMS TO ASME Y14.5M - 1994
- D) DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR EXTRUSIONS.
- E) LANDPATTERN RECOMMENDATION IS BASED ON IPC7351A STANDARD SOD1609X65M.
- F) DRAWING NUMBER AND REVISION: MKT-SOD523F1rev1



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| Datasheet Identification | Product Status | Definition |
|--------------------------|-----------------------|---|
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